

## Airspace Change Proposal Stage 2a

### Options Development and Design Principle Evaluation

Bournemouth Airport FASI-S  
ACP-2019-43

08<sup>th</sup> November 2024  
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1.0	Initial Issue	8 <sup>th</sup> November 2024	Initial Issue

## Executive Summary

The Civil Aviation Authority wrote to twenty-one airports in the Southeast of England, including Bournemouth Airport, to advise them that it is essential they participate in a programme of airspace modernisation. This programme consists of a coordinated attempt to improve the efficiency of airspace usage across the region, whilst implementing the latest technology. It aims to reduce the Environmental impacts associated with aviation.

Bournemouth Airport passed the Civil Aviation Authority CAP 1616 Stage 1 Gateway in October 2022 and commenced Stage 2 activities. A comprehensive list of options was developed through internal workshops and stakeholder engagement. These options were assessed against the Design Principles developed during Stage 1 of the ACP process.

Workshops were held on the 22 November 2022, which introduced the List of options to the Stakeholders and our assessment of the Options against the Design Principles they helped develop. A further online event was organised due to technical difficulties in one of the in-person events. Following these workshops stakeholders were invited to take part in an online survey. The survey asked whether the Stakeholders considered that the Design Principles were correctly applied and consistent in each option. It also provided an opportunity for stakeholders to comment if they considered this was not the case.

The baselines were later reassessed and further engagement activities took place, these were a survey accompanied by a presentation and a further information document, sent on 01 November 2023. This was followed by an information session on the 17 November 2023 with further opportunity to feedback, via the survey or email up until the 23 November 2023.

The Feedback from the Stakeholders is incorporated into the Design Principle Evaluation which is in Section 6 of this document.

Bournemouth Airport would like to thank stakeholders for their time, consideration, and valuable input and look forward to continuing to work with them to improve our system of flight procedures and our airspace configuration.

## Abbreviations

ACOG	Airspace Change Organising Group
ACP	Airspace Change Proposal
AIP	Aeronautical Information Publication
AMS	Airspace Modernisation Strategy
AMSL	Above Mean Sea Level
ANSP	Air Navigation Service Provider
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
ATC	Air Traffic Control
ATCO	Air Traffic Control Officer
ATS	Air Traffic Service
ATM	Air Traffic Management
BOH	Bournemouth Airport
CAA	Civil Aviation Authority
CAP	Civil Aviation Publication
CAS	Controlled Airspace
CAT	Commercial Air Transport
CCO	Continuous Climb Operations
CDO	Continuous Descent Arrival
CCAONB	Cranborne Chase Area of Outstanding Natural Beauty
CTA	Control Areas
CTR	Control Zones
DA	Danger Area
DAATM	Danger Area Air Traffic Management
DFT	Department for Transport
DME	Distance Measuring Equipment
DP	Design Principle
DPE	Design Principle Evaluation
ENR	En-route
FAS	Future Airspace Strategy
FASI-S	Future Airspace Implementation South
FASI-N	Future Airspace Implementation North
GA	General Aviation



GNSS	Global Navigation Satellite Systems
IAP	Instrument Approach Procedure
ICAO	International Civil Aviation Organisation
IOA	Initial Options Appraisal
IoW	Isle of Wight
ILS	Instrument Landing System
LTMA	London Terminal Manoeuvring Area
LNAV	Lateral Navigation
MAG	Manchester Airport Group
MoD	Ministry of Defence
MTWA	Maximum Take-Off Weight Authorised
NAP	Noise Abatement Procedures
NDB	Non-directional Beacon
NERL	NATS En-Route Plc
NM	Nautical Mile
NOTAM	Notice to Air Mission
NPR	Noise Preferential Route
NTK	Noise and Track Keeping
OS	Ordnance Survey
PBN	Performance-Based Navigation
PDP	Preferential Departure Route
RAF	Royal Air Force
RAG	Red, Amber, Green
RNAS	Royal Naval Air Station
RNAV	Area Navigation
RNP	Required Navigation Performance
RTF	Radiotelephony
RWY	Runway
SAC	Special Areas of Conservation
SID	Standard Instrument Departures
SSSI	Sites of Special Scientific Interest
SME	Subject Matter Expert
SOU	Southampton Airport
SPA	Special Protection Areas

STAR	Standard Arrival
VLOS	Unmanned Aircraft System
VNAV	Vertical Navigation
VOR	VHF Omnidirectional Range
WEB TAG	Web-Based Transport Analysis Guidance

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## 1. Introduction

### 1.1. Overview

- 1.1.1. The Civil Aviation Authority (CAA) is the regulator for UK airspace and is the organisation that authorises changes to the structure of airspace. The CAA is a public corporation of the Department of Transport (DfT) who are responsible for transport policy, including aviation. The CAA's statutory duties and functions in relation to airspace change are contained in the [Transport Act 2000](#) and [the Civil Aviation Authority \(Air Navigation\) Directions 2023](#).
- 1.1.2. Following the DfT's publication of [Upgrading UK Airspace: Strategic Rationale](#) (2017), the Secretary of State tasked the CAA with creating and maintaining a coordinated strategy and plan for the use of UK airspace. This resulted in the publication of the [Airspace Modernisation Strategy \(AMS\)](#)<sup>1</sup> (2018) and subsequent review document [Airspace Modernisation Strategy Review](#) (2021). The latter sets out the Stakeholder Engagement Plan and Process. The most recent [AMS \(CAP1711\)](#) was published in January 2023.
- 1.1.3. One of the aims of the Airspace Modernisation Strategy (AMS) is to make airspace more efficient; saving time and fuel and reducing emissions. Key to achieving this is improving the accuracy of where aircraft fly by using the Performance Based Navigation (PBN) capability of aircraft which places much greater reliance on satellite navigation (SatNav); some ground-based navigation aids will be retained for resilience and contingency purposes.
- 1.1.4. The UK airspace Air Traffic Management (ATM) structures require modernisation to accommodate increasing demand for commercial air travel whilst safely accommodating increasing demands for airspace access from other users. The AMS sets out a shared objective between the Civil Aviation Authority (CAA) and the Department for Transport (DfT) for modernising airspace which is to deliver quicker, quieter, and cleaner journeys and more capacity for the benefit of those who use and are affected by UK airspace.
- 1.1.5. The CAA published guidance on the regulatory process for changing the notified airspace design and planned and permanent redistribution of air traffic, this is published in [CAP 1616](#).
- 1.1.6. This document provides the background and motivation for Bournemouth Airports Airspace Change Proposal (ACP), a detailed description of the current situation (the baseline), and an overview of the conceptual options proposed for this ACP. It further describes the engagement activities with stakeholders and presents the Design Principle Evaluation (DPE) against the options presented and highlights where stakeholders have had an input into this process.

### 1.2. CAP1616

- 1.2.1. Airspace Change Proposals (ACPs) are developed using an established process laid down by [CAP 1616](#). The airspace change process is designed to be transparent, comprehensible and proportionate, and is aligned to the [Government's policy](#) on managing airspace.

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<sup>1</sup> The AMS replaced the Future Airspace Strategy (FAS) (2011)

- 1.2.2. The 7-stage process contains 14 'Steps' and 4 'Gateways'. The Change Sponsor<sup>2</sup> must satisfy the CAA at each of these 'Gateways' that it has followed the process. Failure to do so results in the need to conduct further work until such time as the CAA is satisfied.
- 1.2.3. Figure 1 illustrates the stages and steps and identifies the process gateways at which an ACP may not progress until approval is gained from the CAA. The red arrow indicates where Bournemouth Airport are in the process.

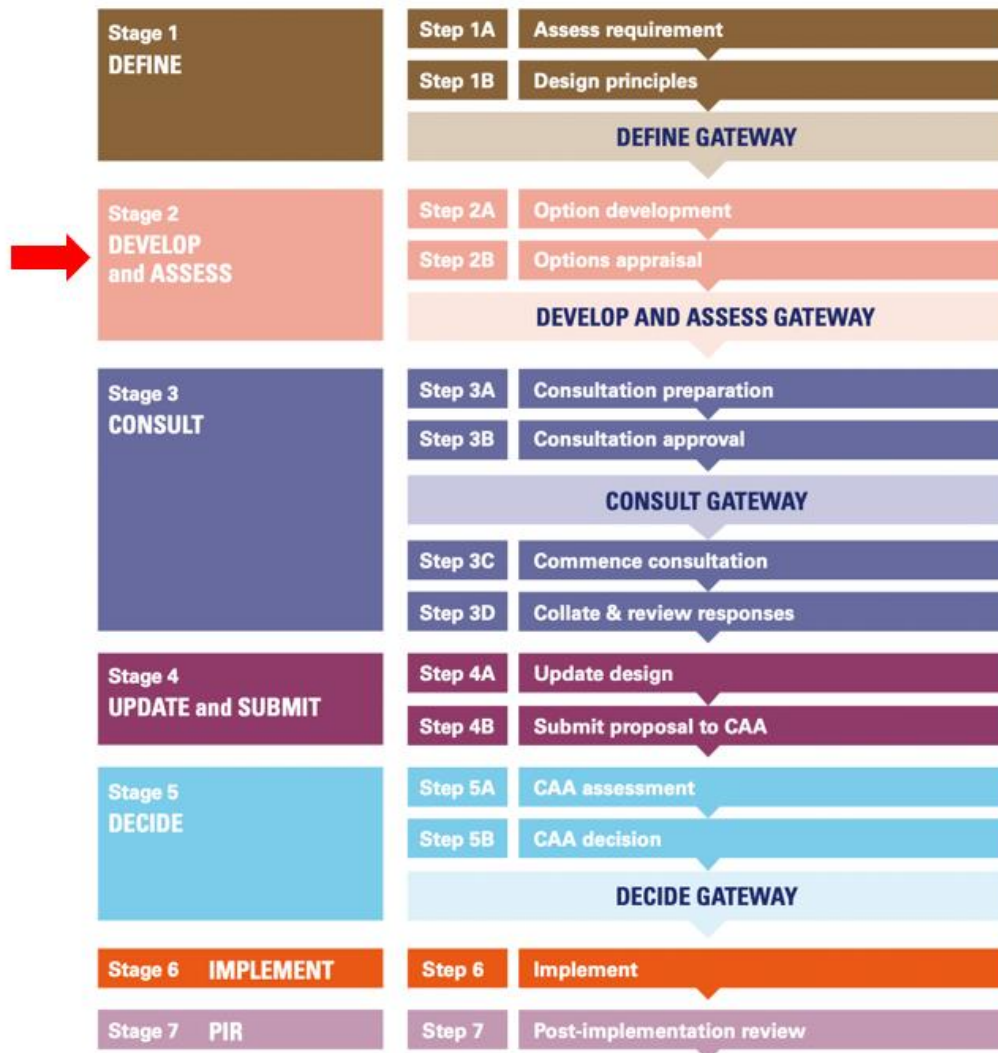


Figure 1: CAP1616 Process

<sup>2</sup> A Change Sponsor is usually an airport or a provider of air navigation services (including air traffic control) which requests a change to an airspace design.



### 1.3. Statement of Need

- 1.3.1. The CAA require change sponsors to clearly set out the identified need as to why an airspace change is being considered.
- 1.3.2. Bournemouth Airport's Statement of Need (SoN) states:

“As part of the Airspace Modernisation Strategy for the south of England, Bournemouth Airport believe it is necessary to look to redesign the Airspace, to facilitate revised departure and arrival routes, in association with the FASI-South Programme; linking with other key airports identified in the Programme, to modernise the overall airspace structure and route network.”
- 1.3.3. This document aims to address this SoN by developing an initial comprehensive list of options and aligning them to the Design Principles (DP) developed in stage 1.

### 1.4. Progress so far

- 1.4.1. Stage 1: Bournemouth Airport began their ACP in September 2021 and subsequently passed through the Stage 1 Gateway of the CAP 1616 process in October 2022. The Stage 1 documentation can be found on the ACP Portal: [Bournemouth FASI \(ACP-2019-43\)](#).
- 1.4.2. Bournemouth Airport completed the activities associated with Step 1 of the process and produced a Statement of Need (see Section 1.3) and developed a set of design principles (see Section 1.5) in conjunction with stakeholders.
- 1.4.3. Stage 2: This document describes the Options Development and Design Principles Evaluation (DPE) completed by Bournemouth Airport to comply with step 2a of the CAP1616 process. It further identifies key stakeholders, provides an account of engagement activities and an overview of the feedback from these activities.

### 1.5. Design Principles

- 1.5.1. The Design Principles (DP) encompass the safety, environmental and operational criteria and the strategic policy objectives that Bournemouth Airport seeks to achieve in developing this airspace change proposal.
- 1.5.2. Whilst the DPs are naturally based around fundamentals such as safety, traffic and environmental impacts, they also describe qualities this ACP seeks to achieve, including local priorities and trade-offs regarding the distribution of noise.
- 1.5.3. The DPs were developed through engagement with local communities, operational and other relevant stakeholders. The result of this two-way engagement is a comprehensive list of DPs (Table 1), against which the options will be assessed in Section 6 of this document (see also Section 2 for methodology).
- 1.5.4. The rationale for accepting or rejecting DPs was based on compatibility with the SoN, safety and regulatory requirements, and to encompass feedback from stakeholders.



Design Principle Number & Title	Description
1- Safety	The airspace design and its operation must maintain or, where possible enhance, current levels of safety.
2- Overflight	The new procedures should not increase the number of people overflown by aircraft using the Airport.
3- Noise Footprint	The design should limit, and where practicable reduce, the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and, where possible, periods of built-in respite should be considered.
4- Tranquillity	Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.
5- Emissions and Air Quality	The proposed design should minimise CO <sub>2</sub> emissions per flight.
6- Airspace Dimensions	The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.
7- Airspace Complexity	The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.
8- Technical Requirements	The design shall be acceptably compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.
9- Systemisation	The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.
10- Independence	Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.
11- Operational Cost	Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.
12- AMS Realisation	This ACP must serve to further, and not conflict with, the realisation of the AMS.
13- PBN	The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.

**Table 1: Design Principles**

## 1.6. AMS Strategic Objectives

- 1.6.1. The AMS objectives are explained in CAP1711. AMS realisation is one of the DPs for this ACP (DP12) and is further considered in the Options Appraisal.

- 1.6.2. Below is a summary of the AMS Strategic Objectives which can be found on the CAA's website and CAP1711 Part 1<sup>3</sup>. These are referenced throughout this ACP, particularly in the (DPE) assessment of DP12 – AMS Realisation and the Initial Options Appraisal (IOA) assessment of AMS Realisation.



Figure 2: Airspace Modernisation Strategy Strategic Objectives

- **Safety:** Maintaining and, where possible, improving the UK's high levels of aviation safety has priority over all other 'ends' to be achieved by airspace modernisation;
  - **Integration of diverse users:** Airspace modernisation should, wherever possible, satisfy the requirements of operators and owners of all classes of aircraft, including the accommodation of existing users (such as commercial, General Aviation, military, taking into account interests of national security) and new or rapidly developing users (such as remotely piloted aircraft systems, advanced air mobility, spacecraft, high-altitude platform systems);
  - **Simplification, reducing complexity and improving efficiency:** Consistent with the safe operation of aircraft, airspace modernisation should wherever possible secure the most efficient use of airspace and the expeditious flow of traffic, accommodating new demand and improving system resilience to the benefit of airspace users, thus improving choice and value for money for consumers;
  - **Environmental sustainability:** Environmental sustainability will be an overarching principle applied through all airspace modernisation activities. Modernisation should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance and, in doing so will take account of the interests of all stakeholders affected by the use of airspace.
- 1.6.3. In order to assess DP12 for this ACP, the above objectives are used to qualitatively assess AMS realisation. Note that other DPs, such as DP1 (Safety), DPs 6 and 7 (Airspace dimensions and complexity), DP5 (Emissions and Air Quality) are separately assessed but relevant to AMS objectives. Other environmental factors, for example biodiversity is not a specific DP but is assessed in the IOA document.

## 1.7. Airspace Change Masterplan

- 1.7.1. In 2019, the Airspace Change Organising Group (ACOG) was established at the request of the DfT and CAA to coordinate the delivery of key elements of the UK's AMS. ACOG have

<sup>3</sup> CAP 1711 Part 1: [CAP1711: Airspace Modernisation Strategy 2023–2040 Part 1: Strategic objectives and enablers](#)  
[| Civil Aviation Authority \(caa.co.uk\)](#)

devised the Airspace Masterplan which identifies where airspace changes are needed and coordinates implementations.

- 1.7.2. The Masterplan considers potential conflicts, trade-offs and interdependencies that exist between airports and the associated airspace, as well as the concepts that might be used to resolve them. The plan will not show the detail of proposed airspace changes such as flight paths. These will be publicly consulted on separately over the next few years by airports and NATS<sup>4</sup>, as the sponsors of the airspace changes.
- 1.7.3. ACOG's Masterplan Iteration 2 was accepted by CAA in 2022. The purpose of Iteration 2 is to provide a system-wide view of the scope of the constituent ACPs and identify the potential interdependencies between the proposals, a third iteration is expected shortly and will include a description of the proposed airspace structure and route network envisaged by the interdependent airspace change proposals when viewed as a collective. Any future iterations will build on this and take into account the output of the consultation stages of each individual airport airspace change proposal.
- 1.7.4. Collectively, the ACPs that are included in the Masterplan are referred to as the 'constituent airspace change proposals'. Each individual ACP is developed following the same detailed process steps laid out in the CAA's guidance for changing the airspace design described above (Section 1.2). The CAA evaluates the progress of every ACP through each stage of the process and make decisions on whether to approve further development and ultimately the implementation of the proposed changes. Progress of all proposed changes to UK airspace can be monitored via the [Airspace change portal](#).

## 1.8. Performance-Based Navigation

- 1.8.1. One of the major aims of the AMS is to optimise future airspace designs by considering modern aircraft performance and functional capabilities. This will improve efficiency, saving time, fuel and reduce emissions.
- 1.8.2. Key to achieving the AMS aims is the application of Performance-Based Navigation (PBN). In parallel, the UK Navigation Infrastructure will also be optimised to take advantage of the Lateral Navigation accuracy from Global Navigation Satellite Systems (GNSS). Conventional Ground-Based navigation aids will be retained for resilience.
- 1.8.3. PBN is being adopted world-wide. International Civil Aviation Organisation (ICAO) States are expected to modernise airspace 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 IAPs.
- 1.8.4. European-wide legislation<sup>5</sup> was developed to drive the deployment of PBN in the European region to meet the international vision laid down by ICAO.

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<sup>4</sup> NATS - provides en-route air traffic control services to flights within the UK flight information regions and the Shanwick Oceanic Control Area. It also provides air traffic control services to 14 UK airports.

<sup>5</sup> Commission Implementing Regulation EU 2018/1048, PBN-IR

## 1.9. Altitude-Based Priorities for Environmental Impacts

1.9.1. The Government's priorities for consideration of the environmental impacts arising from airspace change proposals are set out in its Air Navigation Guidance. For the purposes of assessing environmental impacts of ACPs the CAA should apply the following altitude-based priorities:

- 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;
- In the airspace at or above 4,000 feet to below 7,000 feet, the environmental priority should continue to be minimising the impact of aviation noise in a manner consistent with the Government's overall policy on aviation noise, unless the CAA is satisfied that the evidence presented by the sponsor demonstrates this would disproportionately increase CO<sub>2</sub> emissions;
- In the airspace at or above 7,000 feet, the CAA should prioritise the reduction of aircraft CO<sub>2</sub> emissions and the minimising of noise is no longer the priority;
- Where practicable, it is desirable that airspace routes below 7,000 feet should seek to avoid flying over Area of Outstanding Natural beauty (AONB) and National Parks (NPs); and,
- All changes below 7,000 feet should take into account local circumstances in the development of the airspace design, including the actual height of the ground level being overflown, and should not be agreed to by the CAA before appropriate community engagement has been conducted by the sponsor.

1.9.2. This ACP concerns changes being made from the surface to 7,000 feet and accordingly, five of the above bullets apply.

## 1.10. Bournemouth Airport's Airspace Modernisation Strategy

1.10.1. ACOG coordinates the delivery of two major national airspace change programmes known as Future Airspace Implementation South (FASI-S) and Future Airspace Implementation North (FASI-N). FASI-S is a complete redesign of the existing airspace structure in Southern England and Bournemouth Airport is one of several key airports included within this programme. Our neighbour, Southampton Airport, is also included.

1.10.2. Bournemouth Airport must ensure that modernisation proposals are aligned with neighbouring airports and connect efficiently with the network above. FASI-S airports are responsible for modernising or upgrading their individual arrival and departure routes up to 7,000ft. NERL<sup>6</sup> are responsible for redesigning the route network above 7,000ft. FASI-S also includes low-level airport changes led by change sponsors. These are focussed on low-level

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<sup>6</sup> NATS is split into two main service provision companies: **NATS En-Route PLC** (NERL) and NATS Services Ltd (NSL). NERL is the sole provider of civilian en-route air traffic control over the UK and is regulated by the CAA which, for example, determines the charges NERL can make.

designs including the better management of noise impact and reduction of environmental impacts.

## 2. Methodology

### 2.1. Introduction

2.1.1. This Section describes the methodologies used in this ACP in line with guidance from the CAA and DfT. It begins with how the baseline was assessed in terms of the current day situation followed by the environmental assessments for noise, emissions, air quality, tranquillity and biodiversity. The last three Sections describe the methodology used for developing the options, the process for engaging stakeholders for the purpose of validating (or not) the DPs.

2.1.2. The Government have altitude-based priorities for consideration with regards to environmental impacts, these priorities are summarised below, were considered in the development of the DPs and are evaluated in each environmental Section where appropriate:

- To limit and, where possible, reduce the total adverse effects on people in the airspace between the ground and 4,000ft.
- Preference should be given to the option which is most consistent with existing published airspace arrangements, 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.
- In the airspace between 4,000ft and 7,000ft, the environmental priority should be noise reduction unless there is evidence that changes would disproportionately increase CO<sub>2</sub> emissions.
- The airspace above 7,000ft, priority should be given to the reduction of aircraft CO<sub>2</sub> emissions as the minimising of noise is no longer the priority.
- Where practicable, it is desirable that airspace routes below 7,000ft should seek to avoid flying over Areas of Outstanding Natural Beauty (AONB) and National Parks.
- Airspace changes below 7,000ft should consider local circumstances in the development of the airspace design, including the actual height of the ground level being overflown, appropriate community engagement also must be conducted by the sponsor.

### 2.2. Baseline Assessment

2.2.1. A baseline is required in order to assess the environmental impacts, the costs and/or benefits of any change and to assess any safety implications. This is to reflect a 'do-nothing' scenario and will represent the current situation. However, it will also consider any known anticipated factors, such as developments in planning near the airport, forecast growth in air traffic or expected changes in airlines' fleet mix.

2.2.2. The baseline (or 'Do Nothing' option) of the arrival and departure routes will be further covered in the Initial Options Appraisal (IOA)<sup>7</sup> document along with the analysis of the options against the baselines for each design envelope<sup>8</sup>. This Section aims to describe the

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<sup>7</sup> This can be found on the CAA portal here: [Airspace change proposal public view \(caa.co.uk\)](https://www.caa.co.uk/airspace-change-proposal-public-view)

<sup>8</sup> A design envelope is a block of airspace and includes the flight procedures and routes within them; they are defined in this ACP by direction.

baseline, or current state, of the environmental aspects (noise, CO<sub>2</sub> emissions, air quality, tranquillity and biodiversity) with a view to a comparison of potential impacts for each option. These assessments will be carried out using the principles of the Government's Green Book<sup>9</sup>, and the Department for Transport's (DfT) Transport Analysis Guidance (TAG) and associated toolkit Web-based Transport Analysis Guidance (formally known as WebTAG).

- 2.2.3. [TAG](#) is the DfT's suite of guidance on how to assess the expected impacts of transport policy proposals and projects. The guidance covers various transport modes including rail, road, aviation, walking and cycling. ACPs that require government approval are expected to make use of this guidance in a manner appropriate for that ACP. Airspace change options are assessed using TAG. The DfT have published [guidance](#) explaining what TAG is and how it can be used to assess environmental impacts. This will be covered in more detail in the IOA document associated with this ACP.
- 2.2.4. For this ACP, and to provide an indication of aircraft height, the design boundaries for options development have been designed at 10 Nautical Miles (NM) to represent aircraft height of 4000ft and 25 NM to represent 7000ft. This is simply a rough estimate and will be further defined at stage 3 of the ACP process and once further investigation has been carried out regarding the capability of the airlines operating from the airport. See Section 4.1.3 for an illustration of the design boundaries.

## 2.3. Noise

- 2.3.1. The CAA has published its [Policy on Minimum Standards of Noise Modelling](#) (CAP 2091). This document defines categories of noise modelling sophistication and describes the different situations where the CAA require noise calculations to be provided. Moreover, it sets out requirements for the minimum category which different stakeholder or sponsor groups should use when providing noise calculations to the CAA for them to carry out their regulatory duties.
- 2.3.2. The current situation with regards to noise is described in Section 3.7 and draws on data from the Noise Preferential Routes (NPR) published in the Aeronautical Information Publication (AIP), the airport's Noise Action Plan (NAP), Bournemouth Airport's Strategic Noise Mapping Report (2021) and the Section 106 agreement with Christchurch Borough Council. The noise category was assessed by Bickerdike Allen, the full report can be found on the [ACP portal](#) 'Bournemouth Airport CAP2021 Categorisation'.
- 2.3.3. Bournemouth Airport was one of the first in the UK to introduce the WebTrak<sup>10</sup> radar replay service, which allows members of the public to replay aircraft operations and to display their identity and altitude. A few important amendments were made to the WebTrak system in response to the comments received during the consultation of the Noise Action Plan (NAP)<sup>11</sup>.
- 2.3.4. Data to support WebTrak is sourced from the Bournemouth radar and includes all aircraft operations within a 30-mile radius of the airport, except for aircraft operating above

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<sup>9</sup> The Green Book is guidance issued by HM Treasury on how to appraise policies, programmes and projects.

<sup>10</sup> WebTrak can be accessed via the Bournemouth Airport website.

<sup>11</sup> [Bournemouth Airport NAP](#)



15,000ft. The public can interrogate the system to obtain information such as the aircraft's track, altitude, airline and aircraft type. Flight information is updated daily and is displayed with a 24-hour time delay to maintain aviation security.

- 2.3.5. Bickerdike Allen Partners produced the current (2023) and future (2032) summer day and night airborne aircraft noise contours, to assess the population contained within, and consequently to determine the noise modelling category of Bournemouth Airport. Alongside the resultant noise contours and population counts, the report sets out the methodology and assumptions used in their calculation.

## 2.4. CO<sub>2</sub> emissions

- 2.4.1. Bournemouth Airport will undertake environmental assessments (quantitative and/or qualitative, according to the scale of the change options and the nature of the potential environmental impacts) as part of the next stage of this ACP (see IOA document). Additionally, a longer term (10-year) forecast scenario will also be provided.
- 2.4.2. One of the desired environmental outcomes for this ACP is reflected in Bournemouth Airport's DPs. DP5 states that the proposed design should minimise CO<sub>2</sub> emissions per flight (see Section 1.5).
- 2.4.3. For the purposes of this stage of the ACP, CO<sub>2</sub> emissions are qualitatively assessed using track length, and therefor estimated fuel burn, to determine any changes from current day movements.

## 2.5. Local air quality (if any options include changes below 1,000 feet)

- 2.5.1. CAP 1616 states that 'due to the effects of mixing and dispersion, emissions from aircraft above 1,000ft are unlikely to have a significant impact on local air quality'. Therefore, the impact of airspace design on local air quality is generally negligible compared with other factors such as changes in the volume of air traffic, and local transport infrastructures feeding the airport. However, sponsors must still show explicit consideration of whether local air quality could be impacted when developing airspace change proposals.
- 2.5.2. The CAA have also stated that they will continue to consider the impact of airspace changes to local air quality, in addition to biodiversity and tranquillity, as part of their regulatory role<sup>12</sup>. The UK Airspace Change Masterplan will also consider non-CO<sub>2</sub> warming effects as part of their work in other areas, such as in relation to sustainable aviation fuels and novel technologies, whilst considering the latest scientific research.
- 2.5.3. Air Quality Management Area (AQMA) boundaries are identified using DEFRA's UK Air Information Resource [interactive map](#). These are detailed in Section 3.8. An AQMA is a designated area where air quality does not meet the standards set by the government for specific air pollutants, such as Nitrogen Dioxide (NO<sub>2</sub>), particulate matter (PM<sub>10</sub>) or Sulphur dioxide (SO<sub>2</sub>). AQMAs are designated by local authorities to address air pollution and

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<sup>12</sup> See CAA' Environmental sustainability Strategy, Our areas of Work.



implement plans to improve air quality. Bournemouth Airport conducted a desktop survey using DEFRA's UK Air Information Resource to identify any AQMAs in the vicinity.

## 2.6. Tranquillity

- 2.6.1. Tranquillity refers to the remoteness and sense of isolation, or lack of it, within the landscape. This can be affected and often determined by noise levels and visual amenity resulting from the absence of built development and intrusion from traffic.
- 2.6.2. Impacts upon tranquillity must be considered with specific reference to Areas of Outstanding Natural Beauty (AONB) and National Parks in addition to other areas for consideration identified through community engagement.
- 2.6.3. In line with [TAG Unit A3 \(Section 5\)](#) Step 1: Scoping and identification of study area is detailed in this document. This provides baseline information regarding tranquillity and satisfies the initial step in the determination of any changes to the tranquillity of the environment for all options taken forward.
- 2.6.4. Tranquillity is specified in Bournemouth Airport's DPs, see Section 1.5, DP 4.
- 2.6.5. Qualitative assessment of tranquillity impacts will be undertaken as part of the options appraisal.
- 2.6.6. In TAG, the Landscape Appraisal Worksheet identifies the features Pattern, Tranquillity, Cultural, and Land Cover, each of which is described and assessed against the following indicators: Scale it Matters, Rarity, Importance and Substitutability. The impact is recorded in the final column. The assessment score is derived from Table 4 which gives a seven-point scale based on the schemes fit with the landscape or landform, visual amenity, loss of character, degree of mitigation and effect on policies. This will be completed in stage 3 of this ACP.
- 2.6.7. Scoping and identification of AONBs, National Parks and other local areas for consideration was completed using the [DEFRA MAGIC Map application](#); MAGIC website provides authoritative geographic information about the natural environment from across government. The information covers a variety of environments and is presented in an interactive map which can be explored using various mapping tools.
- 2.6.8. A Tranquillity Map was produced with Bournemouth Airport at the centre and areas for consideration were identified within a 25nm radius. See Section 3.9 and Figure 16.

## 2.7. Biodiversity

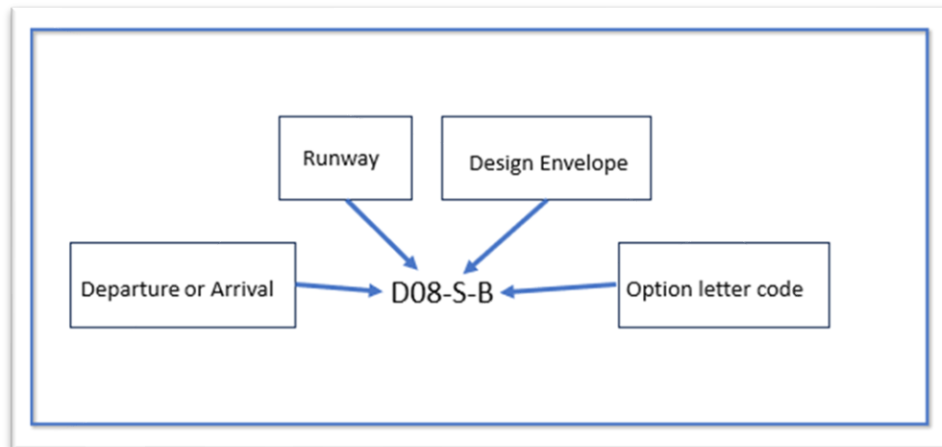
- 2.7.1. Consideration was given to relevant legislation regarding biodiversity, such as Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2010.
- 2.7.2. CAP1616 states that all changes below 7,000 feet should consider local circumstances in the development of airspace structures, the change sponsor should include in its consultations and engagement, potential biodiversity implications associated with design options under

consideration and should be mindful of such potential impacts as are identified by stakeholders.

- 2.7.3. Whilst ACPs are unlikely to have an impact upon biodiversity because they do not involve ground-based infrastructure, biodiversity was considered during the development of the DPs (stage 1b) and our stakeholders had the opportunity to include biodiversity as a principle in questions 3, 9 and 26.
- 2.7.4. Stakeholders did not identify biodiversity concerns during the engagement or in feedback in stage 1b of this ACP process.
- 2.7.5. Note: for Bournemouth Airport RNAV Approaches ACP (ACP-2018-40), DP3 takes into consideration the Moors River System SSSI in relation to the ILS localiser for runway 08; the impact of decommissioning the localiser was discussed in detail with Hampshire County Council, Natural England, and the New Forest National Park during decommissioning to minimise any disturbance to local flora and fauna.
- 2.7.6. Given the above statements and considerations, no further quantitative assessment is considered necessary for this stage of the ACP. This will be given further consideration at stage 3 of this ACP.
- 2.7.7. DEFRA's MAGIC maps were used to identify any environmentally sensitive areas and areas of conservation, these are Ramsar sites, Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA) and Special Areas of Conservation (SAC). These can be used to further assess any potential changes in biodiversity once options have been refined at a later stage of the ACP process.

## 2.8. Options Development

- 2.8.1. Bournemouth Airport is required to develop an initial list of options that address the SoN (Section 1.2) and align with the DPs (Section 1.4).
- 2.8.2. Bournemouth Airport carried out preliminary tests on the initial list of options with the same stakeholders engaged with in Step 1B to ensure that they are satisfied that the design options are aligned with the DPs and that Bournemouth Airport has properly understood and accounted for any concerns specifically related to the design options.
- 2.8.3. During the engagement process it is vital that the airport identifies any critical interdependencies with neighbouring air navigation service providers (operational, technical or training), and establishes plans to resolve any issues that arise.
- 2.8.4. The options were developed using broad areas, or 'swathes,' to create design options and these options were coded by Arrival/Departure, runway, design envelope and individual letter to identify each option within each design envelope. This is illustrated in Figure 3 below.



**Figure 3 Illustration of Design Option code**

- 2.8.5. Bournemouth Airport initially sought feedback from stakeholders on the DPE of options in December 2022. However, since then we have reassessed the baseline, or current situation, based on new data and minor changes in operations. As there were some minor adjustments to these baselines, it was necessary to reassess the options. The changes were communicated to the stakeholders during the engagement process and can be found in ACP Stage 2 Stakeholder Information Session presentation on the portal. This document began with a description of the baseline changes; the new baselines are shown over track data to illustrate why these changes have been made. It also describes the design envelope and options changes.
- 2.8.6. For Departures, 4 design envelopes were developed for runway 08 (RWY08) and 3 for runway 26 (RWY26).

**Departures:**

**Runway 08**

North and West	Northeast	East	South
D08-NW-A	D08-NE-A	D08-E-C Baseline	D08-S-A
D08-NW-B	D08-NE-B Baseline	D08-E-D	D08-S-B Baseline
D08-NW-C			
D08-NW-D			
D08-NW-E			

**Table 2: RWY08 Departure Design Envelopes**

**Runway 26**

North and West	East	South
D26-NW-A	D26-NE-A	D26-S-A
D26-NW-B	D26-NE-C Baseline	D26-S-B Baseline
D26-NW-C	D26-NE-D	D26-S-C
D26-NW-D	D26-NE-E	
D26-NW-E		

**Table 3: RWY26 Departure Design Envelopes**

2.8.7. For Arrivals there were 4 design envelopes for each runway. They are as follows:

**Arrivals:**

Runway 08

North and West	Northeast	Southeast	South
A08-NW-A	A08-NE-A	A08-SE-B	A08-S-A
A08-NW-B	A08-NE-B Baseline	A08-SE-C Baseline	A08-S-B
A08-NW-C	A08-NE-C		A08-S-C Baseline
A08-NW-D			
A08-NW-E			

**Table 4: RWY08 Arrival Design Envelopes**

Runway 26

North and West	Northeast	East Southeast	South
A26-NW-A	A26-NE-A	A26-ESE-A Baseline	A26-S-A
A26-NW-B	A26-NE-B Baseline	A26-ESE-B	A26-S-C Baseline
A26-NW-C			
A26-NW-D			
A26-NW-E			

**Table 5: RWY26 Arrival Design Envelopes**

- 2.8.8. Once the design boundary was determined (see Section 4.1), local factors that could impact safety were identified by analysing the airspace within the LTMA with a focus on the Southwest corner. Whilst Bournemouth Airport is adjacent to the LTMA it is included in the LTMA stakeholder engagement for the FASI-S ACP process.
- 2.8.9. The constraints and considerations were identified by recognising local considerations within the design boundary for environmental, airspace and local population aspects.
- 2.8.10. Where factors were identified they were categorised as either constraints or considerations. Constraints were defined as aspects that have a direct impact on designs or limit the placement of arrival and departure route options. Considerations were defined as aspects that do not limit designs, but which needed to be taken account of in designing options.
- 2.8.11. Constraints and considerations conceptual diagrams were developed with this information and further information regarding arrival and departure constraints from neighbouring airport SOU.
- 2.8.12. In the Options Development Sections of this report (Section 4), each sub-Section begins with a description of the current situation, or baseline. The baseline was also presented to stakeholders for feedback as the 'do nothing' option and therefore given an option identification for evaluation and for compatibility with the DPs.
- 2.8.13. Bournemouth Airport initially sought feedback from stakeholders on the DPE of options in December 2022. However, we have since reassessed the baseline based on new data and

- minor changes in operations. As there were some minor adjustments to these baselines, it was necessary to reassess the options.
- 2.8.14. A document was produced and sent to all stakeholders with a summary of these changes, beginning with a description of the baseline changes; the new baselines are shown over track data to illustrate why these changes have been made.
- 2.8.15. This document also described the design envelope and options changes and provided a series of images illustrating the old options alongside the new options. Additionally, it provided other information and maps in relation to the considerations, such as noise, environmental and airspace to assist stakeholders with the assessment of the DPs against the options.
- 2.8.16. The Options conceived for each design envelope are depicted in Section 4 of this report in three ways. The three representations are intended to illustrate:
- Geographical grounding of each option,
  - How each option interacts with the airspace around it,
  - Provide a clearer picture of the populations overflowed and environmental considerations.
- 2.8.17. The three maps for each design envelope displayed on:
- Ordinance Survey map
  - En-Route chart
  - Google Earth, showing AONBs and National Parks
- 2.8.18. The relative pros and cons of each option are not considered at this stage; the Options are simply presented and explained with a view to accepting or rejecting options at the next stage after further stakeholder engagement. Some options may be discounted at the Design Principle Evaluation stage based on safety or connectivity issues. The extent to which all option do or do not meet the DPs is covered in Design Principle Evaluation Section 6.
- 2.8.19. It is possible more than one option may be progressed, for each departure and arrival direction, through to implementation. Such a scenario would facilitate dispersion of impacts and the potential for relief and respite.
- 2.8.20. The list of options described hereafter, will be refined to a short list through a process of:
- Design Principle Evaluation;
  - Stakeholder Engagement; and
  - Options Appraisal (Step 2b).
- 2.8.21. The Options developed are purely swathes at this stage (i.e. areas within which a final departure or arrival nominal track might ultimately be designed). It is intended that the fine tuning from swathes to definitive options (actual tracks) will take place during Stage 3 of the ACP process ahead of the Formal consultation.

- 2.8.22. It is accepted that not all available options may have been identified in the work done by our consultants. Therefore, stakeholders were invited to provide any other options for consideration in the Options Development Workshops. This is discussed further in Section 5.

## 2.9. Stakeholder Engagement

- 2.9.1. An engagement plan was developed, and records kept ensuring that the airport maintains and develops its relationship with stakeholders. Moreover, it was important to ensure that targeted stakeholder engagement activities, were recorded and feedback analysed. It was considered imperative to initiate this process at a formative stage of this ACP and to ensure that sufficient information and enough time was provided for stakeholders to consider all options. Bournemouth Airport has given, and will continue to give, conscientious consideration to stakeholder feedback before options are either discounted or taken forward for CAA approval. The engagement plan thus follows the Gunning principles<sup>13</sup>, a set of consultation principles with a strong legal foundation for the assessment of public consultations. Similarly, the consultation and engagement plan was developed with the Government's consultation principles (2018) in mind.
- 2.9.2. In stage 1b, and in preparation for this stage (2a) of the ACP, Bournemouth Airport sent a 'Design Principle Survey' to stakeholders with the objective of receiving stakeholder opinions regarding the most important aspects to consider when developing the DPs. Participants were asked to rank statements relating to a range of aspects including environmental considerations, cultural heritage, land use, other airspace use, noise and safety from least important to most important. It was vital to develop principles that describe the qualities airspace change seeks to achieved, such as (but not limited to) local priorities and trade-offs regarding the distribution of noise. A set of 13 DPs were developed, and a further survey was issued to consult on the wording of each DP. Participants were asked if they agreed with DP and if not were required to give further feedback. Full survey details and feedback is available on the [CAA portal](#).
- 2.9.3. Two separate Stakeholder Workshops were held on the 22nd of November 2022,<sup>14</sup> with stakeholders invited to attend either in person or online. The purpose of this engagement was to introduce stakeholders to the airspace design options and our approach to assessing them against the DPs they helped us to shape. A further online event was organised due to technical difficulties in one of the in-person events.
- 2.9.4. Due to lack of resources the time between stakeholder engagement activities was 11 months. Whilst there was no formal communication of this (with the exception of the Airspace Portal update), most stakeholders were aware of the situation and the reason for delay. Furthermore, stakeholders were also aware of the change in Bournemouth Airports gateway date.
- 2.9.5. When the baselines were reassessed further engagement activities took place, these were a survey accompanied by a presentation and a further information document, sent on 1<sup>st</sup>

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<sup>13</sup> More information about the Gunning Principles can be found [here](#).

<sup>14</sup> One in the morning and one in the afternoon.

November 2023. This was followed by an information session on the 17<sup>th</sup> of November 2023 with further opportunity to feedback, via the survey or email up until the 23<sup>rd</sup> of November 2023.

- 2.9.6. Prior to the workshops the stakeholders were split into two groups of technical and non-technical stakeholders (see stakeholder engagement record and categories described above). Each group received the same presentation with the same information; one group in the morning and the other in the afternoon. Learning from stage 1b stakeholder feedback, it was considered important to provide two groups to facilitate discussions relevant to each group. For example, it was clear from stage 1 that noise, tranquillity and overflight were emotive issues for non-technical stakeholders and the technical group were more interested in airspace issues, such as complexity and airspace dimensions. This allowed a more in-depth discussion and better representation of the concerns and feedback of each group.
- 2.9.7. A presentation was delivered which outlined the options development process. It included the Comprehensive List of Options and our initial assessment of these options against the DPs established in Stage 1. The presentation can be found on the [ACP Portal](#) titled 'Bournemouth Airport Stakeholder Workshop Stage 2a Presentation'. A second meeting was held on 17<sup>th</sup> of November 2023, this was called an information session, and all stakeholders were invited to attend. This meeting covered the same information as the first with further explanations as to the changes to the baselines. There were four participants at this meeting, two representing Southampton Airport, one representing the General Aviation community and one representing an environmental body. The minutes from this meeting can be found in on the [ACP Portal](#) titled 'Meeting Minutes BOH stage 2 Information session November23' and the feedback from this session was also considered for the Design Principle Evaluation (Section 6).
- 2.9.8. Stakeholders were invited to take part in an online survey from the 23<sup>rd</sup> of December 2022 to the 3<sup>rd</sup> of February 2023. For the second engagement, stakeholders were invited to respond between 1<sup>st</sup> and 23<sup>rd</sup> November 2023. This survey asked whether the stakeholders felt the DPs had been applied correctly and consistently to each of the options, and then again, the new/changed options. It provided an opportunity to comment on areas where they felt this may not have been the case.
- 2.9.9. The stakeholders who responded to the survey were grouped into categories according to industry or community sectors and assigned an individual number to identify the type of respondent whilst preserving anonymity (see Table 6). This is particularly useful when analysing the responses in relation to the DOs and DPs as it identifies the sector, and therefore the level of aviation knowledge, or other expertise, in addition to their individual perspectives and motivation. For example, 03AV is a participant representing NERL and therefore has expert knowledge and is likely to be responding to the survey questions from a technical aviation perspective. 05EB is from New Forest National Park Authority, coded as an Environmental body; their knowledge of the aviation sector is not expected to be high; however, they will likely have expert knowledge in environmental issues. Whilst the responses to these surveys was relatively low (n7 and n11), including email responses, the next round of stakeholder engagement (stage 3) is anticipated to be much greater and adopting this methodology at this stage will help to analyse and compare responses at different stages of the ACP process.



- 2.9.10. The following tables provide information regarding the organisation, sector code and individual stakeholder code for both engagements. These are used in Section 6 where feedback is used to inform the DPE.

Organisation	Sector code	Individual code
European Cargo	AV	01
Draken	AV	02
NATS (NERL)	AV	03
Ministry of Defence (MOD)	MI	04
New Forest National Park Authority	EB	05
Lasham Gliding Society	GA	06
Southampton Airport	AP	07

**Table 6: First Stakeholder Engagement participant codes**

Organisation	Sector code	Individual code
Cranborne Chase Area of Outstanding Natural Beauty	EB	08
Burley Parish Council	LC	09
Ryanair	AV	10
Bournemouth University (Vice Chair Bournemouth Airport ACC)	LO	11
NATS (NERL)	AV	12
Ministry of Defence (MOD)	MI	13
New Forest National Park Authority	EB	14
British Helicopter Association	AV	15

**Table 7: Second Stakeholder Engagement participant codes**

## 2.10. Design Principle Evaluation

- 2.10.1. The Design Principle Evaluation (DPE) takes each of the options and qualitatively assesses them against the DPs developed in Stage 1 (Section 6). The Team at Cyrrus and Bournemouth Airport conducted an internal Design Principle evaluation on all the Options. Feedback from the stakeholder engagement exercises was also used to inform the DPE.
- 2.10.2. This basic assessment of the Options, where each swathe was assessed against each Design Principle and assigned a colour depending on whether it was deemed to meet the Design Principle adopted the following:
- Fully met (Green).
  - Partially met (Amber).
  - Not met (Red).
- 2.10.3. Based on the assessment, a report is produced for each design option (DO). Table 8 illustrates the template used, this highlights where each DP has been met, partially met or



not met. Moreover, it includes a summary of the qualitative assessment for each DO. This template has been adapted from the proforma in the CAP1616 document (Appendix E, pp208). The DPE can be found in Section 6 of this document.

Design Principle Evaluation	Option No:		
Option Name	Accept/Reject		
Description of option			
Design Principle	NOT MET	PARTIAL	MET
Summary of qualitative assessment			

Table 8: DPE template

2.10.4. This initial assessment RAG can be seen in the Design Principle Evaluation document in a column titled 'BOH Eval.' The initial assessment was presented to the Stakeholders through the survey and their feedback was also requested, the results feedback can be seen in the column 'post evaluation'. Additionally, stakeholder's comments are detailed in each options Section of the DPE (Section 6). The third column provides the final evaluation, this was introduced following a change in the assessment criteria resulting from feedback from the CAA to another change sponsor.

2.10.5. Design Principle Evaluation Assessment Criteria dictates that each option is approached in a consistent manner and the feedback from stakeholders is considered in the evaluation of each option in addition to the DPs. To provide further clarity and consistency, the costs and benefits are quantified where possible in the Options Appraisal document for this ACP available on the [CAA portal](#). This provides greater transparency in line with regulatory principles.

## 2.11. Design Principle Evaluation Criteria

2.11.1. The following table, Table 9, details the criteria for meeting the Green, Amber or Red score by design principle. Each design principle is defined alongside a statement regarding the qualitative assessment followed by the definition of how each RAG score will meet, or not, the criteria. In Section 6, each option is assessed against these criteria.

Design Principle		Qualitative Assessment	Green	Amber	Red
1	<b>Safety</b> – The airspace design and its operation must maintain or, where	Initial qualitative assessment to determine any potential safety concerns. A more detailed assessment will be conducted in	<b>Fully Met:</b> No safety issues identified.	<b>Partially Met:</b> Issues identified that would require	<b>Not Met:</b> Issues identified that are unlikely to

Design Principle		Qualitative Assessment	Green	Amber	Red
	possible enhance, current levels of safety.	Stage 2B in the IOA Section Safety Assurance		a more robust safety argument than today's operation.	be overcome without prohibitively restrictive safety mitigations.
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	High level qualitative assessment of people overflown, utilising population density maps and identifying new areas affected. A more detailed assessment will be conducted in Stage 2B in the IOA section 'Noise impact on health and quality of life'	<b>Fully Met:</b> Limits or has the potential to reduce the number of people overflown.	<b>Partially Met:</b> Number of people overflown is broadly similar but could be different communities to today.	<b>Not Met:</b> Has the potential to increase the number of people overflown.
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce, the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and, where possible, periods of built-in respite should be considered.	Initial high level qualitative assessment of noise impact to stakeholders on the ground (approximately 4000ft and below). Noise strategic maps provided. An assessment will be conducted in Stage 2B in the IOA Section 'Noise impact on health and quality of life'.	<b>Fully Met:</b> Limits or has the potential to reduce the number of people overflown.	<b>Partially Met:</b> Number of people overflown is broadly similar but could be different communities to today.	<b>Not Met:</b> Has the potential to increase the number of people overflown.
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Initial high level qualitative assessment. A more detailed assessment will be conducted in Stage 2B in the IOA sections 'Tranquillity' and 'Biodiversity'. Reference to sites of care or education, cultural or historic assets have not been included at this stage due to the 'swathe approach' covering too large an area to be useful when assessing individual sites– these will be fully assessed later in the options appraisal stages when the swathes are refined to more precise routes - 'lines on the map'.	<b>Fully Met:</b> Limits effects on Noise Sensitive Areas and does not result in any overflight of a AONB or a NP below 7000ft.	<b>Partially Met:</b> May result in overflight of a portion of an AONB or a NP, also may result in overflight of tranquil areas important to local communities such as reservoirs or parks.	<b>Not Met:</b> Results in direct and significant overflight of AONBs or NPs and/or various tranquil areas important to local communities.
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO <sub>2</sub> emissions per flight.	Initial high level qualitative assessment. A further assessment will be conducted in Stage 2B in the IOA Sections 'Greenhouse gas impact' and 'Fuel burn'.	<b>Fully Met:</b> Has potential to minimise CO <sub>2</sub> emissions.	<b>Partially Met:</b> CO <sub>2</sub> emissions likely to be the same or similar to today's operation.	<b>Not Met:</b> Has the potential to increase CO <sub>2</sub> emissions.
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both	High level qualitative assessment of the airspace required for each option. A more detailed assessment will be conducted in Stage 2B in the IOA Section 'Access'. This DP will also be assessed more thoroughly in Stage 3 when the options are refined to give more precise routes..	<b>Fully Met:</b> Allows for either a reduction in the volume of CAS required or does not require any additional CAS.	<b>Partially Met:</b> May require more controlled airspace but the minimum necessary.	<b>Not Met:</b> Significant additional volumes of CAS are required to contain the proposed option.

Design Principle		Qualitative Assessment	Green	Amber	Red
	runways, enabling safe, efficient airspace design which considers the needs of all airspace users.				
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements	High level qualitative assessment against the baseline option. Further assessment will be conducted in Stage 2B in the IOA Section ‘Capacity/resilience’.	<b>Fully Met:</b> Does not result in a complex CTA/CTR configuration with numerous different base levels likely to lead to inadvertent CAS penetrations.	<b>Partially Met:</b> Results in changes to the CAS configuration that may cause other aviators some minor challenges.	<b>Not Met:</b> Results in a highly complex CAS configuration.
8	<b>Technical Requirements</b> – The design shall be acceptably compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	High level qualitative assessment of whether the options meet the technical requirements of all airspace users including aircraft types, equipment and performance. This DP will also be assessed more thoroughly in Stage 3 when the options are refined to give more precise routes.	<b>Fully Met:</b> Meets the technical requirements of almost all airport operators.	<b>Partially Met:</b> Meets the technical requirements of most airport operators.	<b>Not Met:</b> Does not meet the technical requirements of airport operators.
9	<b>Systemisation</b> - The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Initial high level qualitative assessment of the systemisation potential of the swathe. Further assessment will be conducted in Stage 2B in the IOA section ‘Capacity/resilience’.	<b>Fully Met:</b> Integrates with the en-route network and is likely to reduce the need for tactical coordination and vectoring within the CTA/CTR.	<b>Partially Met:</b> Integrates with the en-route network but may not reduce the need for tactical coordination and vectoring within the CTA/CTR.	<b>Not Met:</b> Does not integrate with the en-route network and will not decrease the need for tactical coordination and vectoring within the CTA/CTR.
10	<b>Independence</b> - Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Qualitative assessment at this stage, further consideration in the IOA general Aviation, Access, and Impact from increased effective capacity. A more detailed analysis will be carried out in stage 3 of this ACP	<b>Fully Met:</b> Allows for access to controlled airspace independently of Southampton Radar service	<b>Partially Met:</b> The same as the current situation, i.e. service provision still required from SOU radar	<b>Not Met:</b> Greater service provision from Southampton Radar service would be required

Design Principle		Qualitative Assessment	Green	Amber	Red
11	<b>Operational Cost</b> - Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed similarly to DP5 - Emissions and Air Quality, more track miles will incur more fuel cost. Initial high level qualitative assessment. Further assessment relating to this DP will be conducted in Stage 2B in the IOA section 'Fuel burn'.	<b>Fully Met:</b> Fuel efficiency is optimal without an adverse impact on local communities.	<b>Partially Met:</b> Fuel efficiency is optimal however there is some impact on local communities.	<b>Not Met:</b> Fuel efficiency not optimised.
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Initial high level qualitative assessment on whether the swathe aligns with the strategic objectives of the AMS. Where an option meets the AMS objective but does not provide any improvement from today then this has been noted in the assessment.	<b>Fully Met:</b> Aligned with the AMS.	<b>Partially Met:</b> Partially aligned with the AMS.	<b>Not Met:</b> Not aligned with the AMS.
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Initial high level qualitative assessment on whether the options for routes will utilise PBN and its benefits, e.g. simplifying route integration, more direct routes and less track mileage.	<b>Fully Met:</b> Fully compliant with the latest navigational standards.	<b>Partially Met:</b> Some PBN benefits utilised but potential to not be fully compliant.	<b>Not Met:</b> PBN not utilised.

**Table 9: Design Principle Evaluation Criteria**

### 3. The Baseline

#### 3.1. Baseline Introduction

- 3.1.1. This section explains the baseline, or current situation, at Bournemouth airport. It begins by describing current airspace arrangements and operational factors relevant to the airport. It also illustrates the constraints and considerations relevant to today and for any changes which may take place. The departures and arrival procedures are explained in addition to the environmental considerations, such as noise, emissions, air quality, tranquillity and biodiversity.

#### 3.2. Current Situation

- 3.2.1. The following description of the airspace, including arrivals and departures, around Bournemouth Airport is the 'Do Nothing' option where if no airspace changes were to take place.
- 3.2.2. Bournemouth Airport is part of Regional & City Airports, a business within the Rigby Group, the UK's leading regional airport operator. Regional & City Airports owns Bournemouth, Coventry, Exeter and Norwich Airports, and operates Blackpool Airport, and Solent Airport Daedalus on behalf of their owners. Regional & City Airport also operates XLR Executive Jet Centres, a fixed-base operator having operation centres at Birmingham, Bournemouth, Exeter and Liverpool airport.
- 3.2.3. Many of the commercial flights from Bournemouth Airport are seasonal operations providing travel to European holiday destinations. This means that operations tend to peak during the summer months. There are also several charter flights from Bournemouth to significant sporting events.
- 3.2.4. Bournemouth Airport is well equipped and able to accommodate most types of aircraft and helicopters from single-engine light aircraft, used for initial pilot training and pleasure flying, up to large transport aircraft. Over the last few months, the Airport has seen an increase in air cargo operations.
- 3.2.5. In addition to operators who provide services to or from Bournemouth it is an important location for many aircraft operators who include Bournemouth Airport in their flight planning and training as an Alternate, or Diversion airfield<sup>15</sup>, due to its location, runway and aerodrome infrastructure.
- 3.2.6. Bournemouth Airport supports the execution of the following types of operation:
- Commercial Air Transport (CAT) operations providing scheduled and charter services.
  - Cargo Operations.
  - Non-Commercial operations, which include business aviation, military training and refuelling, private and commercial pilot training and skill testing and private recreational flying.

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<sup>15</sup> An alternate or diversion airfield is used if the plane arrived at its destination, but the destination airport has become unavailable for landing.

- Emergency services (Police and Air Ambulance).
  - An annual Air Festival.
- 3.2.7. Bournemouth Airport supported 29,186 movements in 2022<sup>16</sup>, 5729 of which were commercial movements. In 2023 there were a total of 20,650 movements, 4847 commercial<sup>17</sup>. CAT operators include EasyJet, Ryanair and Tui Airways. Bournemouth Airport's busiest routes are Palma de Mallorca, Alicante and Málaga.
- 3.2.8. Movement figures expected to increase over coming years. Passenger numbers projected to increase beyond one million. Continued growth is anticipated in cargo operations. The volume of General Aviation (GA) traffic is likely to remain static.
- 3.2.9. The following table presents the future traffic forecasts<sup>18</sup> for the next 10 years (shown as financial years) for Bournemouth Airport.

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Movements	21,501	23,685	23,893	24,371	24,803	25,099	25,381	25,381	25,971	26,389

**Table 10: Future Traffic Forecast**

- 3.2.10. The published operational hours of BOH are 08:00-20:00, outside of these hours' aircraft operations are only permitted by prior arrangement. From April 1st, 2025, these will change to 06:30 local to 21:30.
- 3.2.11. Bournemouth Airport has two runways known as '08' and '26'; these are given their names as their true bearing is rounded to two figures, e.g., Runway 08 has a true bearing of 075.3 degrees. The magnetic variation of the runway will change to 250 and 070 degrees when the runway is resurfaced in 2026-2027.
- 3.2.12. The terminal airspace surrounding Bournemouth Airport is quite complex and it is shared with Southampton Airport. The Solent Control Area (CTA) and the respective Control Zones (CTRs) are depicted in Figure 4.
- 3.2.13. Bournemouth has a CTR that only extends from the surface to 2,000ft above mean sea level (amsl). It relies upon Southampton Airport being open to benefit from the additional volume of controlled airspace above it, namely the Solent Control Area (CTA). This extends from 2,000ft to 5,500ft amsl.
- 3.2.14. There is insufficient controlled airspace for the vectoring of arrivals/approaches to Bournemouth Airport RWY08 and, keeping aircraft within controlled airspace on departure on continuous climb profiles also presents a challenge for Bournemouth Airport Radar. As a result, aircraft are often outside controlled airspace for part of their arrival or departure to/from Bournemouth Airport. Accordingly, the Airport would like controlled airspace containment to form part of the discussion on change.

<sup>16</sup> Source: [CAA Aircraft Movements 2022](#)

<sup>17</sup> Source : [CAA Aircraft Movements 2023](#)

<sup>18</sup> Source: Bournemouth airport Financial controller (received 31/01/2024)

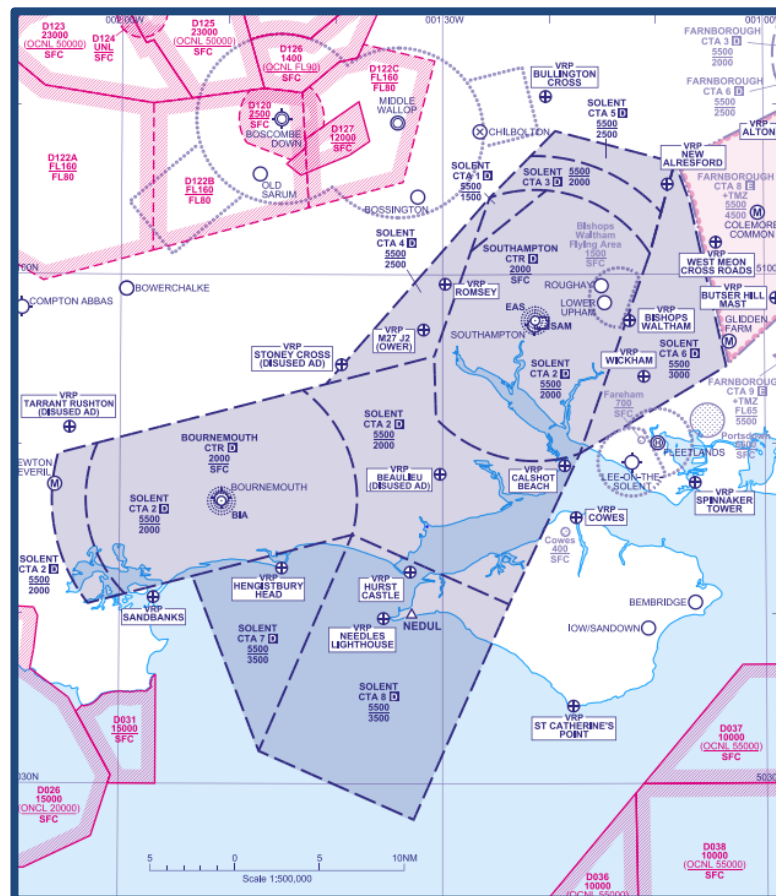


Figure 4 Map showing Solent Control Area (CTA) and Bournemouth and Southampton Control Zone (CTR)

### 3.3. Adjacent Air Navigation Service Providers (ANSP)

- 3.3.1. Bournemouth Airport is adjacent to the London Terminal Manoeuvring Area (LTMA), however included in the LTMA stakeholder engagement for the FASI-S ACP process. The LTMA is a specific area of controlled airspace that covers the Greater London region and its surrounding airports. The LTMA is one of the busiest and most complex areas of controlled airspace in the UK and Europe.
- 3.3.2. Bournemouth Airport is 21NM (39KM) away from Southampton Airport, the next closest from the LTMA is Farnborough which is 50NM (93KM) away. The other airports in the LTMA are farther than 65NM (120KM) away.
- 3.3.3. Bournemouth Airport currently has a Standing Agreement with Southampton for the presentation of Bournemouth Airport inbound and outbound airways traffic to ensure a safe and coordinated transfer of traffic. During the hours where Bournemouth and Southampton Radar are available this is achieved via Silent Handover procedures, outside these times by verbal coordination. Liaison between the two units is via standard RTF comms systems with two available direct lines. In addition, both units have a good working relationship with regular meetings and communication. In addition to neighbouring airports, NERL manage the higher route network.



### 3.4. Constraints and Considerations

- 3.4.1. Bournemouth Airport has a series of existing constraints and limitations, for example: Noise abatement procedures published in the AIP for both Runway 26 and Runway 08. No circuit training during Nighttime (defined as between 23:30 – 06:00). No aircraft with a Quota Count value of 8 or 16 will be allowed to arrive at or depart the airport at Nighttime nor shall an Aircraft with a Quota Count value of 4 be scheduled to arrive or depart the Airport at Nighttime. The Nighttime Quota Period shall be a Quota Count of 3100 points per Noise Year save that aircraft listed in Schedule 3 para 5 shall not count. In addition, there are a number of Danger Areas in the vicinity of Bournemouth notably to the South West over the sea, a number of AONB's and Ramsar. Bournemouth itself has Class D airspace with Class A starting at FL 95 above and Class A to the East and South of the airfield. Class G airspace to the north is extremely busy with GA and Military traffic with high energy manoeuvring in the area between Boscombe Down and Yeovilton. Within the design boundary, local factors were considered where safety could be impacted or where there should be environmental considerations. Once identified, these factors were categorised by constraints or considerations.
- **Constraints** are defined as aspects that have a direct impact on the options designs or limit the placement of arrival and departure routes.
  - **Considerations** are defined as those aspects that do not limit the design options; however, they need to be taken into account when during the design process.
- 3.4.2. Figure 5: Considerations for Bournemouth Airport
- 3.4.3. The Lulworth DA is a military firing range located near Lulworth Cove. It's primarily used by the British Army for live firing exercises and training activities. Portsmouth DA is used by the military for ordnance, munitions and explosives, and parachute exercises amongst other military activities. Bovington is used for ordnance, munitions and explosives and Unmanned Aircraft System (VLOS). Wessex and Boscombe Down are both used for VLOS<sup>19</sup>.
- 3.4.4. AONBs and National Parks are discussed in more detail in Section 3.9. Surrounding Towns and Cities are discussed in relation to population density in Section 3.7. Consideration of nearby Airports was discussed above in 3.3.

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<sup>19</sup> For more information about these DAs, including operational hours, visit [NATS eAIS](#) Package for UK



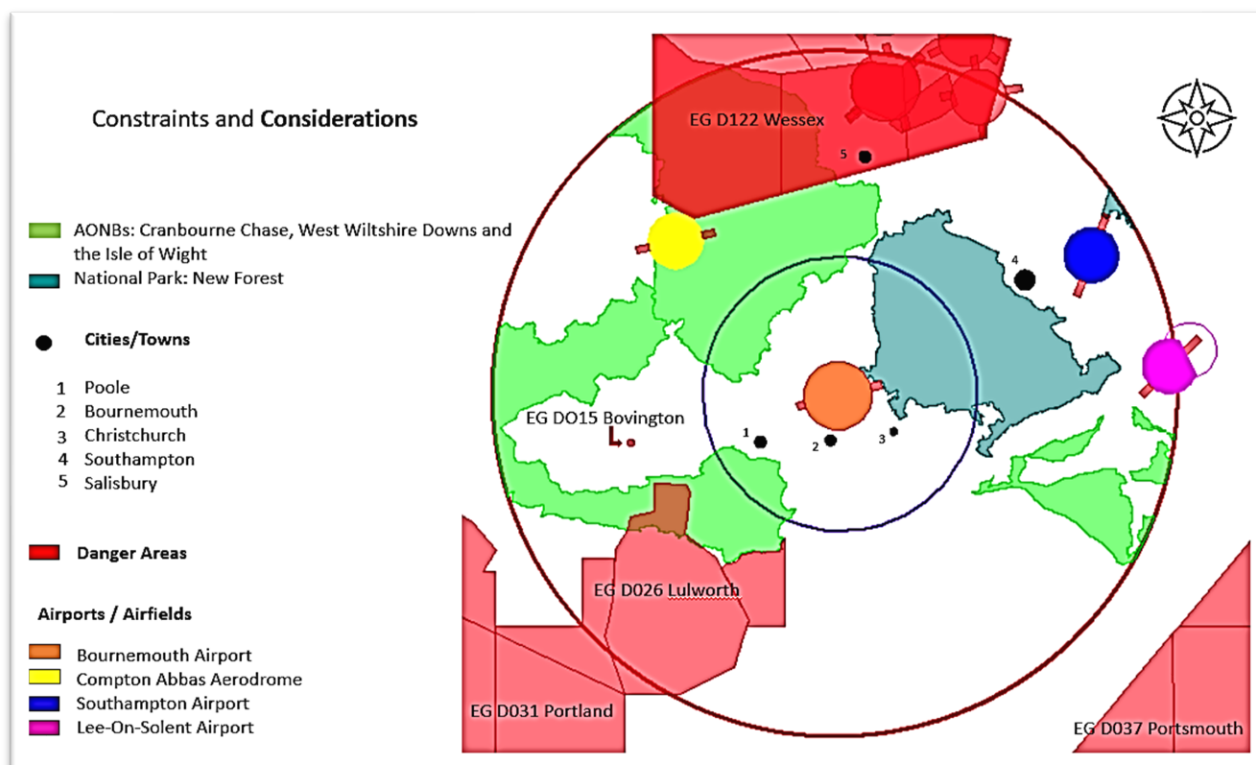


Figure 5: Considerations for Bournemouth Airport

- 3.4.5. Constraints for Bournemouth Airport include the Danger Areas (DAs) of Salisbury Plain, Portsmouth and Portland Danger Area. Due to the frequency of activations it is not appropriate to consider an arrival structure. Additionally, there is no connection to the en-route network to the north, west and northwest.

### 3.5. Departures

- 3.5.1. Bournemouth Airport does not have Standard Instrument Departures (SIDs) but has initial departure routes which join with the ATS route network at designated waypoints (Table 11), these routes may be varied at the discretion of Air Traffic Control (ATC). These routes utilise conventional navigation that rely upon ground-based navigation aids, this results typically in a broader swathe of tracks over time as the routes are not flown as precisely as a charted procedure.

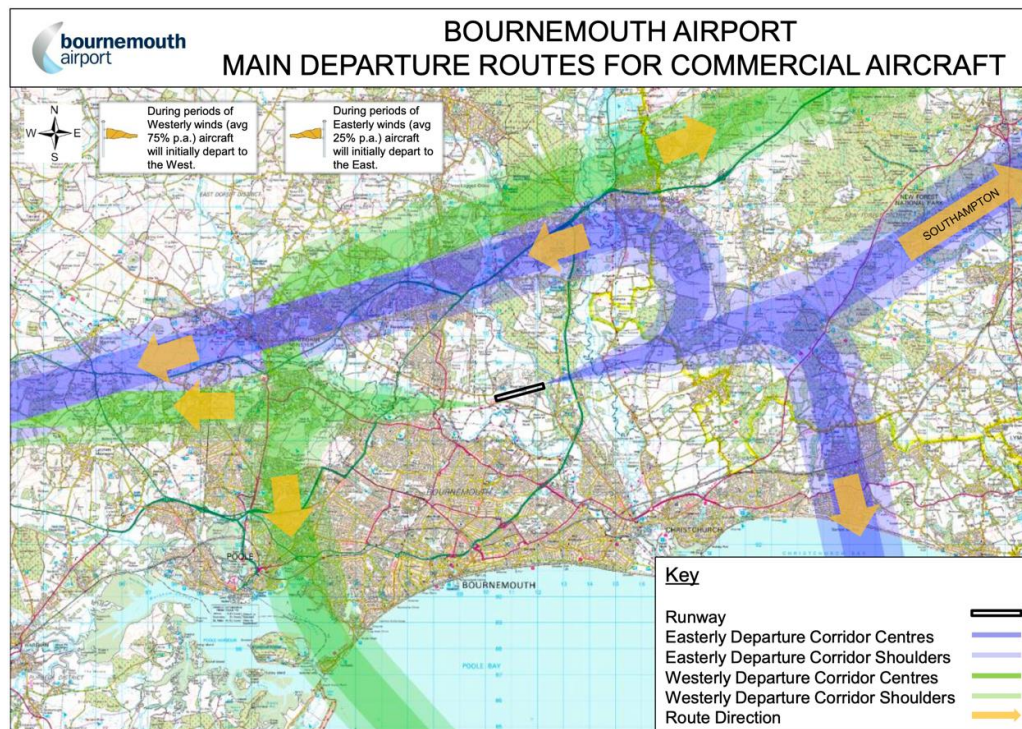
Departure to	Via	Route
North or Northwest	Q41/Q63	SAM-Q41-PEPIS-NUBRI
Northeast, East or Southeast	GWC	SAM – Y8 - GWC
South	Q41	THRED – Q41 – ORTAC THRED – Z171 - LELNA
West	FIR	N/A

Table 11: ATS route network at designated waypoints

- 3.5.2. The current departure routes rely upon two ground-based aids: The Southampton (SAM) and Goodwood (GWC) VOR-DMEs. These are part of the national rationalisation of the

country's ground-based navigational infrastructure and airports will be required to remove any such dependency on these in the near future.

- 3.5.3. Bournemouth Airport's main departure routes used by CAT are depicted in Figure 6. Whilst these do not represent heat maps developed using Noise and Track Keeping (NTK) data, the darker purple and green shading is representative of where most of the CAT aircraft route on departure.



**Figure 6: Main Departure Routes for Commercial Aircraft**

- 3.5.4. Despite not having formally charted departure procedures, aircraft greater than 5700kg Maximum Take-Off Weight Authorised (MTWA) are required to follow the Noise Preferential Routes (NPRs) detailed in the UK AIP (Aeronautical Information Publication).
- 3.5.5. Each departure is managed tactically by the Bournemouth Radar Controller, in co-ordination with Solent Radar and London Control, taking into consideration other vectored, holding, and transit traffic in the Solent CTA, and en-route traffic in the Airways and in the LTMA. Some departures can route directly to their designated VOR or 'Waypoint' with continuous climb; whereas others are instructed to fly headings and/or are required to climb in steps to achieve separation with other aircraft. This extended routing on headings often requires the Bournemouth Radar Controller to use all the available controlled airspace, and to route the departing aircraft outside controlled airspace for a brief period.
- 3.5.6. To modernise and systemise the airspace, the link between the Airport and access to the en-route system can be designed, or formalised. Consideration of these standardised procedures, or SIDs will form part of this ACP.

### 3.6. Arrivals

3.6.1. Aircraft arriving at Bournemouth Airport and Southampton Airport initially follow identical Standard Arrival procedures (STARs) (Table 12). During this phase of flight, aircraft are descended from the en-route system and their speed is typically reduced. If required, the aircraft enter holding patterns overhead Southampton Airport (SAM) or to the west of the Isle of Wight at NEDUL.

3.6.2. Beyond the STARs and holding patterns, the route taken by aircraft into Bournemouth Airport is not defined by fixed lines on a chart. Instead, aircraft are radar vectored by Air Traffic Control (ATC) 'Bournemouth Radar' or given procedural instructions by 'Bournemouth Approach'. In both the radar vectored and procedural operation, individual aircraft do not follow identical paths, but over time, aircraft occupy a broad 'swathe' (a trend) that focuses into a single track along the extended runway centreline at the Airport.

Hold	STARs	Associated ATS routes
SAM	BUGUP 1S, THRED 1S, ELDAX 1S, UMBUR 2S, CPT 1S, COWLY 1S	L8, Y322, Q41, Y110, N20, M8, M40, Q63, Q41

**Table 12: Standard Arrival Procedures**

3.6.3. During the operational hours of Bournemouth Radar service, aircraft are radar vectored to the extended runway centrelines at approximately 8 miles to start the Instrument Landing System (ILS) or Non-Directional Beacon (NDB) approaches.

3.6.4. Outside of operational hours when Bournemouth Radar service is not available, aircraft will follow the published charted approach procedure which starts overhead the airfield. The aircraft then follows an outbound course before turning to line up with the runway. Additionally, aircraft can request to self-position on to the ILS when procedural rather than fly the full procedure.

3.6.5. The tracks of aircraft following the published initial approach procedure are highlighted in Figure 9 and Figure 10. These are from arrivals during the busy summer months of 2023.

3.6.6. 2-Dimensional approach guidance is provided by the ILS that defines both horizontal and vertical guidance to each runway, assisting pilots to fly a stabilised approach.

- Runway 08: Has an ILS CAT I allowing aircraft to descend only to a minimum height of 200 feet above the runway and then complete the landing visually.
- Runway 26: Has an ILS CAT III allowing suitably equipped aircraft to complete an automatic landing.

3.6.7. Approach guidance provided by an NDB and Distance Measuring Equipment (DME) provides horizontal guidance only. The pilot manages the aircraft's vertical descent based on aircraft altimetry to a minimum height of 432 feet on Runway 08, and 379 feet on Runway 26.

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<sup>20</sup> For a clear explanation of LNAV and VNAV visit the CAA's publication [Clued Up: GA Update](#)





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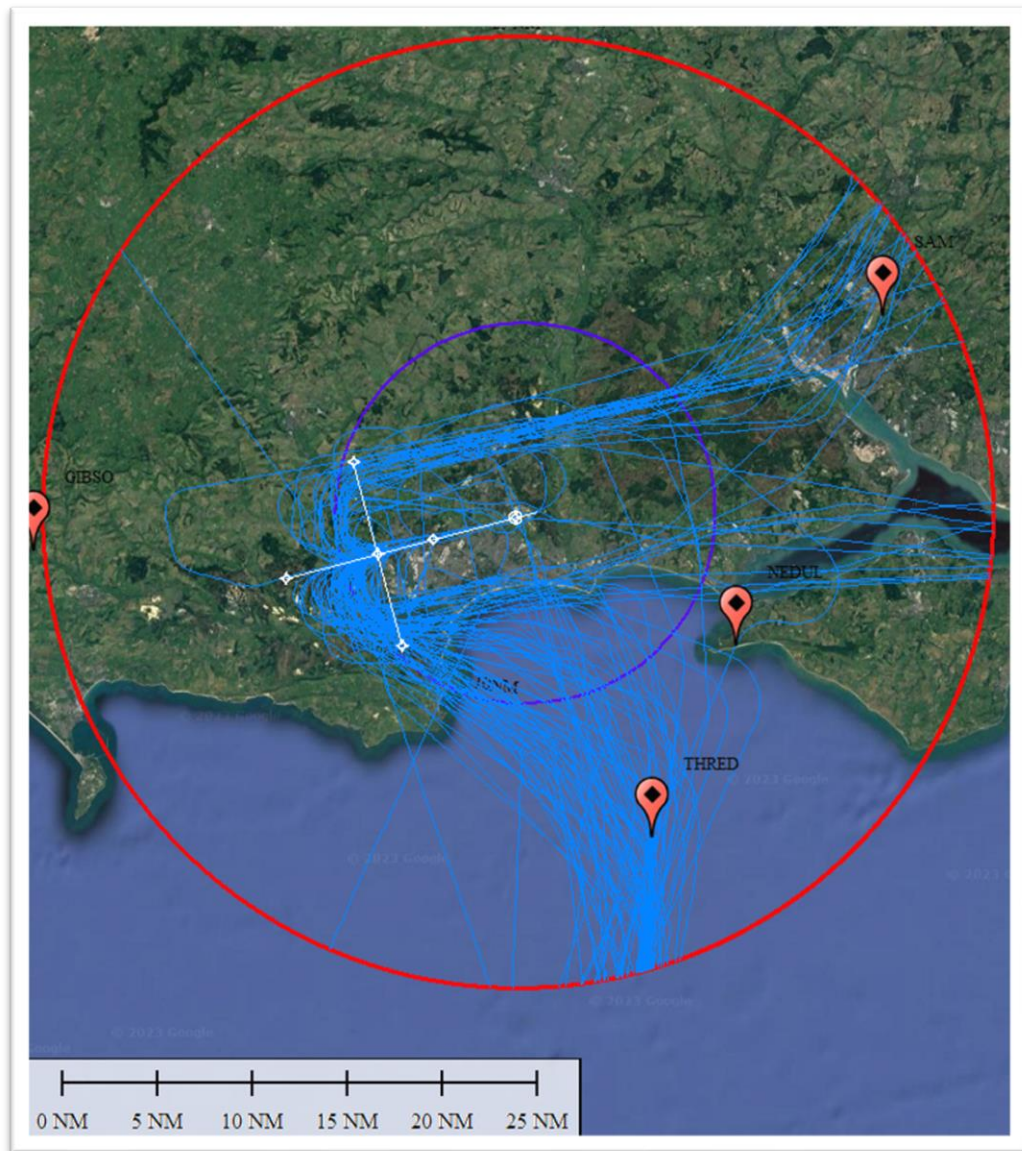


Figure 9 Arrival flows RWY08 Commercial Airlines

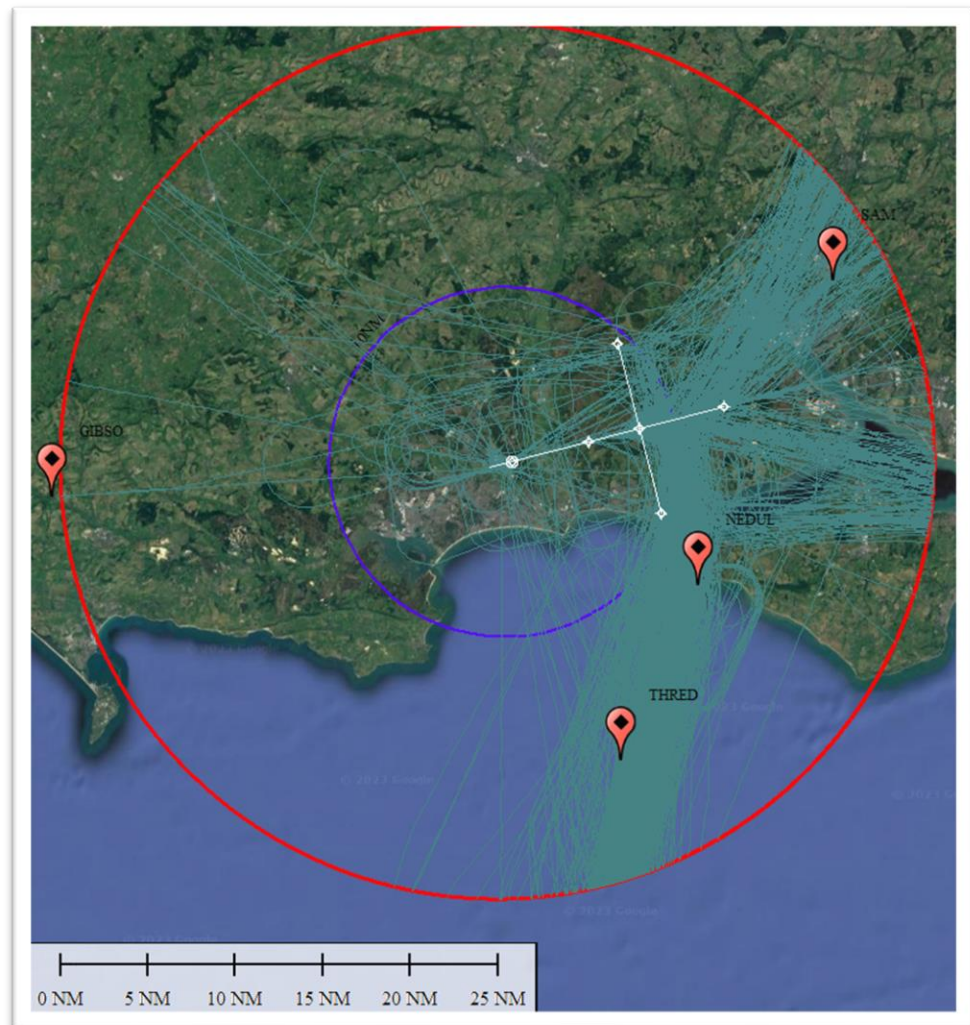


Figure 10 Arrival Flows RWY26 Commercial Airlines

### 3.7. Noise

- 3.7.1. Routing instructions are published in the Aeronautical Information Publication (AIP) instructing pilots of departing aircraft to fly a track that avoids, as far as is possible, the more densely populated areas, to minimise the impact of noise. In the Noise Action Plan (NAP) Review (2018), these instructions were changed as a direct result of the comments received during the consultation of the draft NAP. In further reviews, the wording of these instructions has been updated to enable greater pilot understanding.
- 3.7.2. Bournemouth Airport has a Section 106 agreement with Christchurch Borough Council that requires the following:
- Departing aircraft are required to follow specified departure routings (Noise Preferential Routings (NPRs)). Commercial aircraft are not permitted to make any turn below 2,000 feet and it is the intention of the departure routings that aircraft avoid flying over built up areas where possible. The effect of the routings is to minimise impact to Parley and



the Bournemouth agglomeration when aircraft depart to the west (Runway 26) and to minimise the impact to Bransgore when aircraft depart to the east (Runway 08) ; and

- Departing aircraft are required to climb as steeply as is compatible with safety, in an effort to maximise altitude and thereby reduce noise.

3.7.3. There is no requirement to seek change to the Section 106 and NPRs as part of this ACP.

3.7.4. The following Noise Preferential Routes (see Figure 11) shall apply to all turbine powered/jet aircraft and all other aircraft with a MTWA greater than 5700 KG, unless specifically otherwise instructed by ATC, or deviation required for safety reasons.

- Take-off Runway 26:
  - Climb straight ahead to 0.6 DME, then track 270° MAG to 3.1 DME, before commencing any turn. (This also applies to LH and RH Visual Circuits).
- Take-off Runway 08:
  - Required track between 001° and 079° MAG: Climb straight ahead to 1.0 DME, then track 075° MAG to 5.6 DME before commencing any turn.
  - Required track between 080° and 259° MAG: Climb straight ahead to 1.0 DME, then track 075° MAG to 4.1 DME before commencing any turn. (This also applies to RH Visual Circuits).
  - Required track between 260° and 360° MAG: Climb straight ahead to 2.0 DME, to be no lower than 1500 FT QNH before commencing any turn. (This also applies to LH Visual Circuits).



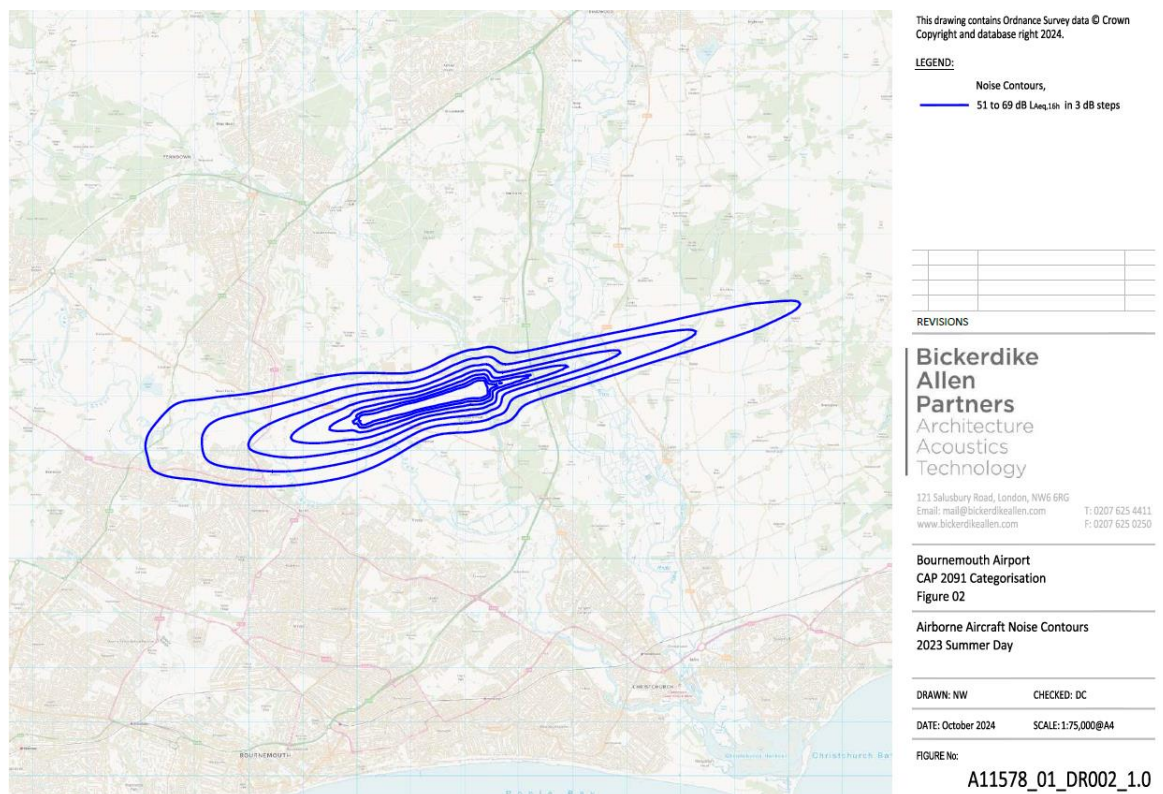
Figure 11 Bournemouth Airport Noise Preferential Routes (NPR)



3.7.5. The following strategic noise maps provide noise contours for Bournemouth Airport. The noise contours have been produced based on actual aircraft movements at the airport for summer 2023 and forecast for 2032. The noise contours are presented in terms of the LAeq,16h summer day and LAeq,8h summer night metrics. These are the A-weighted average daytime (07:00 – 23:00) and night-time (23:00 – 07:00) noise levels respectively for the summer period (16th June – 15th September inclusive).

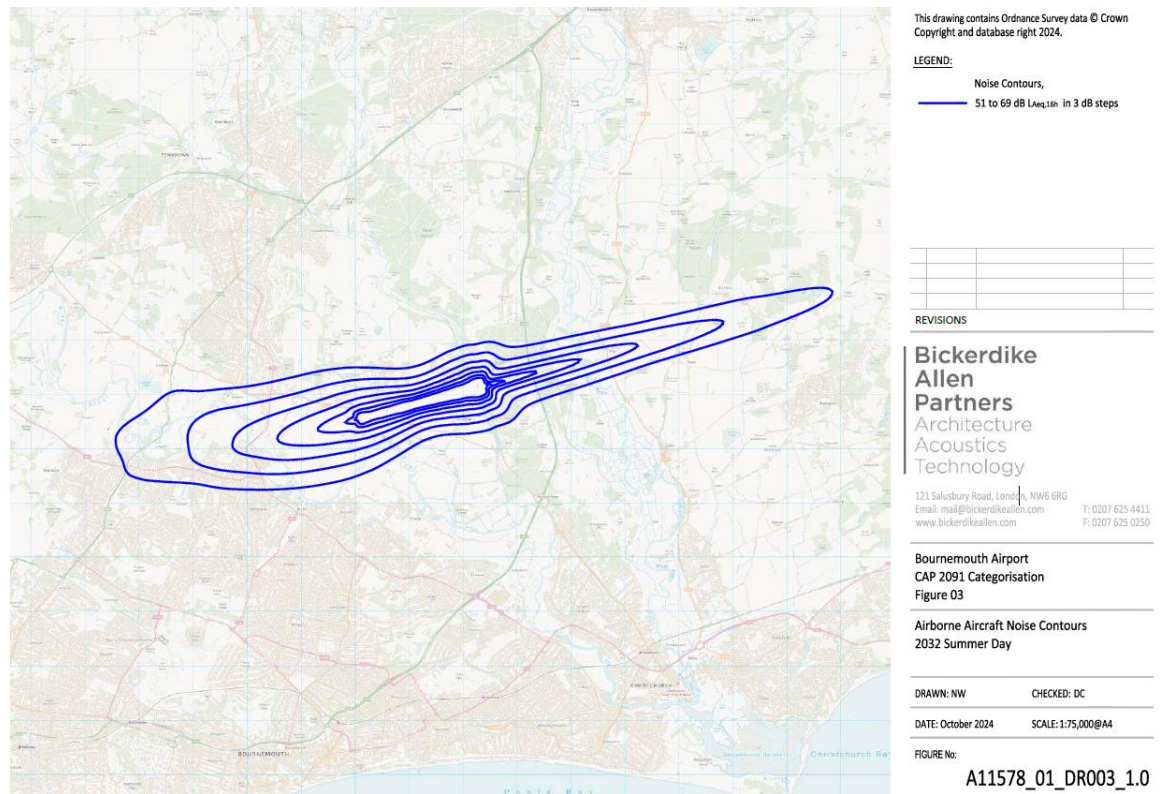
3.7.6. Noise indices definitions:<sup>21</sup>

- Lden: day-evening-night noise level, the A-weighted, Leq (equivalent noise level) over a whole day, but with a penalty of 10 dB(A) for night-time noise (23:00-07:00) and 5 dB(A) for evening noise (19:00-23:00), also known as the day evening night noise indicator.
- LAeq,16h (UK Government Environmental Noise Definition): the equivalent continuous sound level in dB(A) that, over the period 07:00-23:00 hours, contains the same sound energy as the actual fluctuating sound that occurred in that period.
- Lnight, the A-weighted, Leq (equivalent noise level) over the 8-hour night period of 23:00 to 07:00 hours, also known as the night noise indicator.

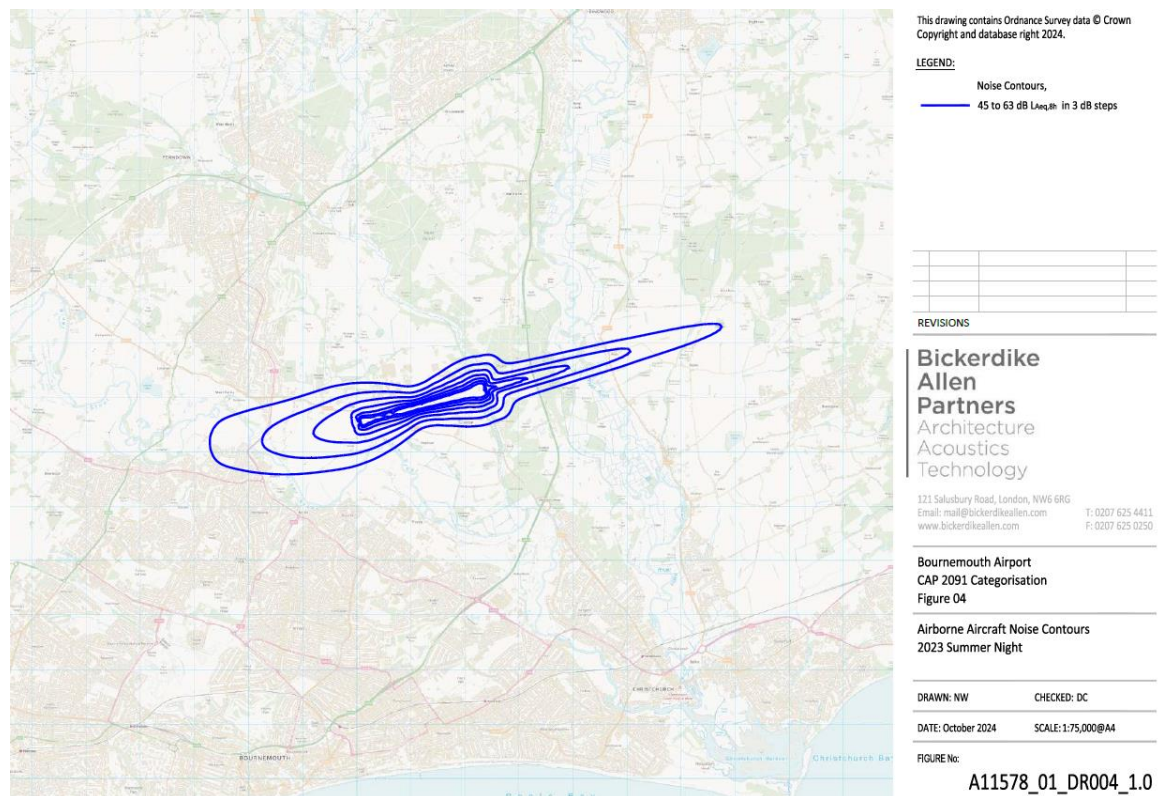


**Figure 12: Airborne Aircraft Noise Contours 2023 Summer Day**

<sup>21</sup> [L : Sound and Vibration Terms and Definitions \(acoustic-glossary.co.uk\)](https://www.acoustic-glossary.co.uk/)

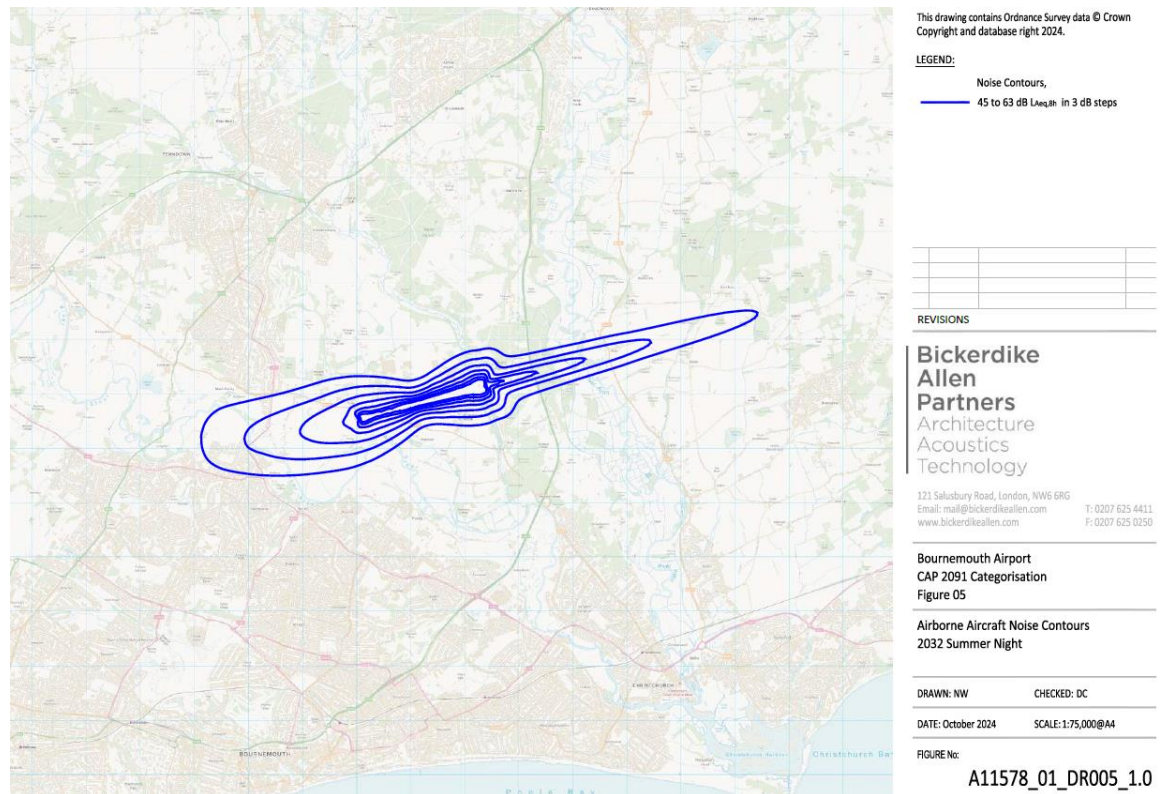


**Figure 13: Airborne Aircraft Noise Contours 2032 Summer Day**



**Figure 14 Airborne Aircraft Noise Contours 2032 Summer Night**





**Figure 15: Airborne Aircraft Noise Contours 2032 Summer Night**

- 3.7.7. Bickerdike Allen Partners LLP (BAP) have produced current (2023) and future (2032) summer day airborne aircraft noise contours (Figure 12, Figure 13, Figure 14, Figure 15) based on inputs provide by Bournemouth Airport.
- 3.7.8. The population contained within the 51 dB LAeq,16h and 45 dB LAeq,8h noise contours has been estimated for both years and this has been used to determine the noise modelling category of Bournemouth Airport as defined by CAP2091.
- 3.7.9. Bournemouth Airport currently falls into Category D, and this is not expected to change by 2032.
- 3.7.10. The full report is available on the [ACP portal](#) titled 'Bournemouth Airport CAP 2091 Categorisation'.
- 3.8. **Local air quality (if any options include changes below 1,000 feet)**
- 3.8.1. As mentioned in Section 2.6 AQMAs have been identified using the DEFRA Air Information Resource map. Bournemouth Airport has one AQMA approximately 7 nm from the airport, this is located at Upper Parkstone.

### 3.9. Tranquillity

- 3.9.1. Bournemouth Airport is surrounded by several environmentally sensitive areas that are important for biodiversity, natural beauty, and ecological conservation. There are some notable areas including some that are statutory designations such as AONBs and National Parks. Other areas are identified in Section 3.10.
- 3.9.2. As stated in Section 2.6, scoping and identification of study areas is the first step in assessing any potential changes in tranquillity. We have identified the important areas that should be assessed for potential impacts in the following stages of this ACP and are qualitatively assessed at this stage and discussed further in Section 6, Design Principle Evaluation.
- 3.9.3. Figure 16 identifies the Area of Outstanding Natural Beauty (AONBs) and National Parks surrounding Bournemouth Airport and within a 25NM radius.

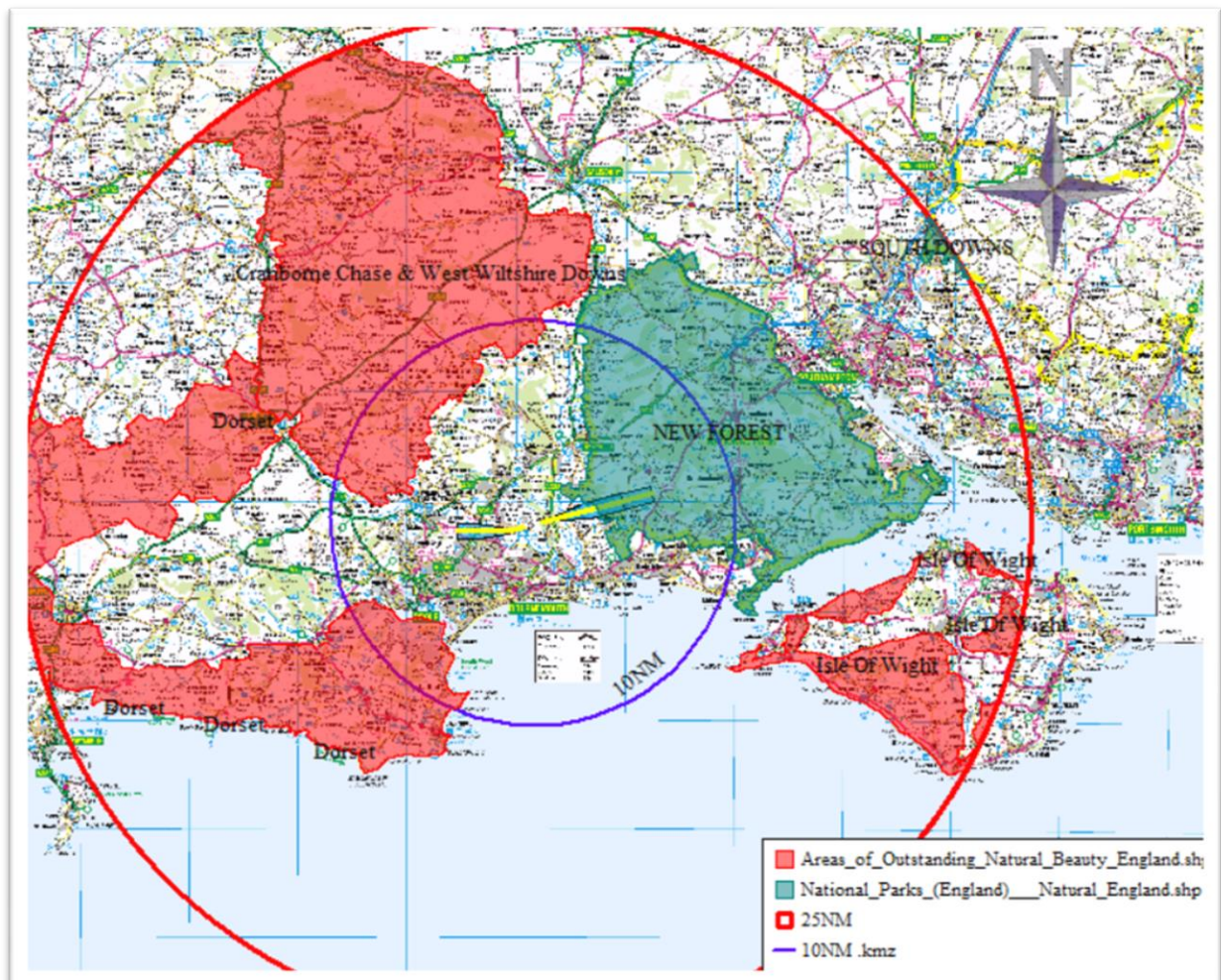


Figure 16: Tranquillity map featuring AONBs and National Parks surrounding Bournemouth Airport (with NPRs)

- 3.9.4. Cranborne Chase AONB is a cherished landscape that combines natural beauty with cultural significance. Its designation as an AONB ensures that the area's unique qualities are protected and that sustainable practices are encouraged to preserve it for future generations to enjoy.
- 3.9.5. The New Forest National Park is a designated protected area located primarily in the counties of Hampshire and Wiltshire. It is renowned for its natural beauty, rich ecological diversity, cultural heritage, and outdoor recreational opportunities.
- 3.9.6. In the following stages of this ACP, impacts upon tranquillity will be given explicit consideration of any changes to routes and/or traffic patterns that may affect any of the areas above.
- 3.9.7. According to CAP1616, and in line with altitude-based priorities, when sponsors are developing airspace change proposals that have the potential to change overflights of National Parks or AONBs below 7,000 feet (amsl) sponsors must show how they have considered and taken account of this impact as part of their option development and final design.
- 3.9.8. Design Principle 4 (DP4) is concerned with tranquillity and each design option is therefore assessed against this DP, see Section 6.

### 3.10. Biodiversity

- 3.10.1. When considering impacts on biodiversity, Bournemouth Airport believes that the changes are unlikely to have an impact on Biodiversity as there are no ground-based infrastructure changes proposed.
- 3.10.2. Biodiversity was considered during the design principle stage however stakeholders did not identify biodiversity as a concern. Therefore, biodiversity was not specifically factored as a design principle.
- 3.10.3. Efforts to balance the operations of Bournemouth Airport with the preservation of environmentally sensitive areas are nevertheless considered crucial. The airport has environmental policies in place to minimise its impact on these areas, such as noise abatement procedures and wildlife management initiatives<sup>22</sup>. Bournemouth Airport work with Local Authorities and environmental organisations to ensure the long-term sustainability and protection of these ecologically significant regions.
- 3.10.4. We have conducted a desktop scoping exercise to identify environmentally sensitive areas in relation to biodiversity. This includes identifying Ramsar sites, Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA) and Special Areas of Conservation (SAC). The following paragraphs explain the results of this research.
- 3.10.5. Ramsar sites are designated wetlands of international importance under the Ramsar Convention, and they typically cover a wide range of wetland types, including lakes, rivers,

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<sup>22</sup> For example, [Wildlife Hazard Management](#)



marshes, and coastal areas. See Figure 17 for map of Ramsar sites within a close proximity of the airport.

3.10.6. Ramsar sites near Bournemouth Airport are:

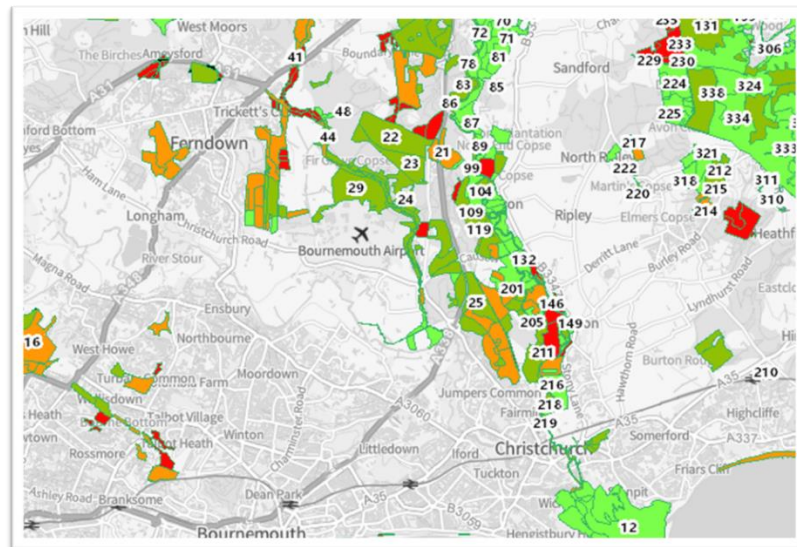
- Avon Valley
- Poole Harbour
- Dorset Heathlands
- New Forest
- Solent and Southampton Water



Figure 17 Ramsar Sites

3.10.7. Sites of Special Scientific Interest, or SSSIs, are designated areas that are recognised for their ecological, geological, or geomorphological importance. These areas are legally protected to conserve and protect their unique features and the species that inhabit them. SSSIs are considered some of the most valuable and sensitive natural and geological sites in the UK.

3.10.8. There are numerous SSSIs near Bournemouth airport, a detailed list can be found on [Natural England's website](#). Figure 18 highlights the number of SSSIs in close proximity to the airport.



**Figure 18 Sites of Special Scientific Interest (SSSI)**

- 3.10.9. Special Protection Areas (SPAs) are designated protected areas in the European Union that are chosen for their importance as habitats for certain bird species. These areas are designated under the EU Birds Directive and are intended to protect and conserve the habitats of wild birds, especially migratory and vulnerable species. SPAs are shown in Figure 19. The protection afforded to SPAs remain unchanged following the UK EU Exit <sup>15</sup>.
- 3.10.10. SPAs in the vicinity of Bournemouth airport include, but not limited to:
- Avon Valley
  - Dorset Heathlands
  - Poole Harbour
  - New Forest

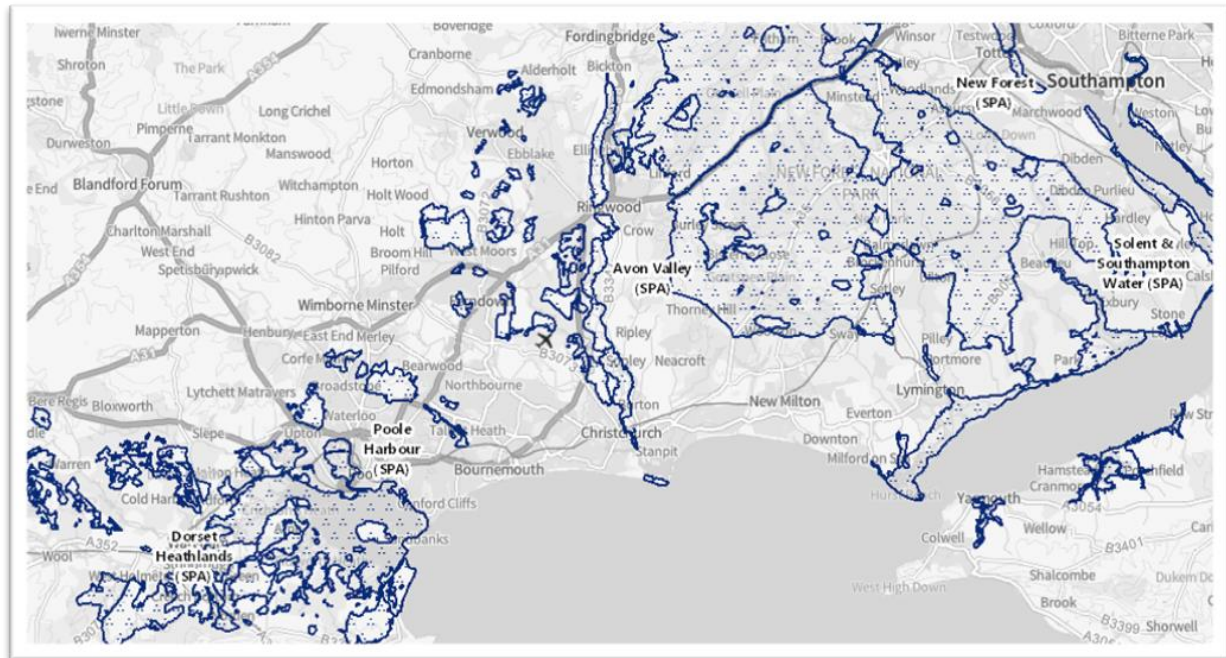


Figure 19 Special Protection Areas (SPA)

3.10.11. Special Areas of Conservation (SACs) are designated protected areas in the European Union that are chosen for their ecological significance and conservation value. SACs are designated under the European Union's Habitats Directive and aim to protect habitats and species of European importance. Figure 20 shows the SACs surrounding the airport. The protection afforded to SACs remain unchanged following the UK EU Exit <sup>23</sup>.

SACs surrounding the airport include (but not limited to):

- The New Forest (to the northeast)
- Great Yews (close to the airport)
- Dorset Heaths (southwest)
- St Albans Head (southwest)
- Isle of Wight (southeast)

<sup>23</sup> For further information see The Department of Agriculture, Environment and Rural Affairs website: [Biodiversity and EU Exit](#)



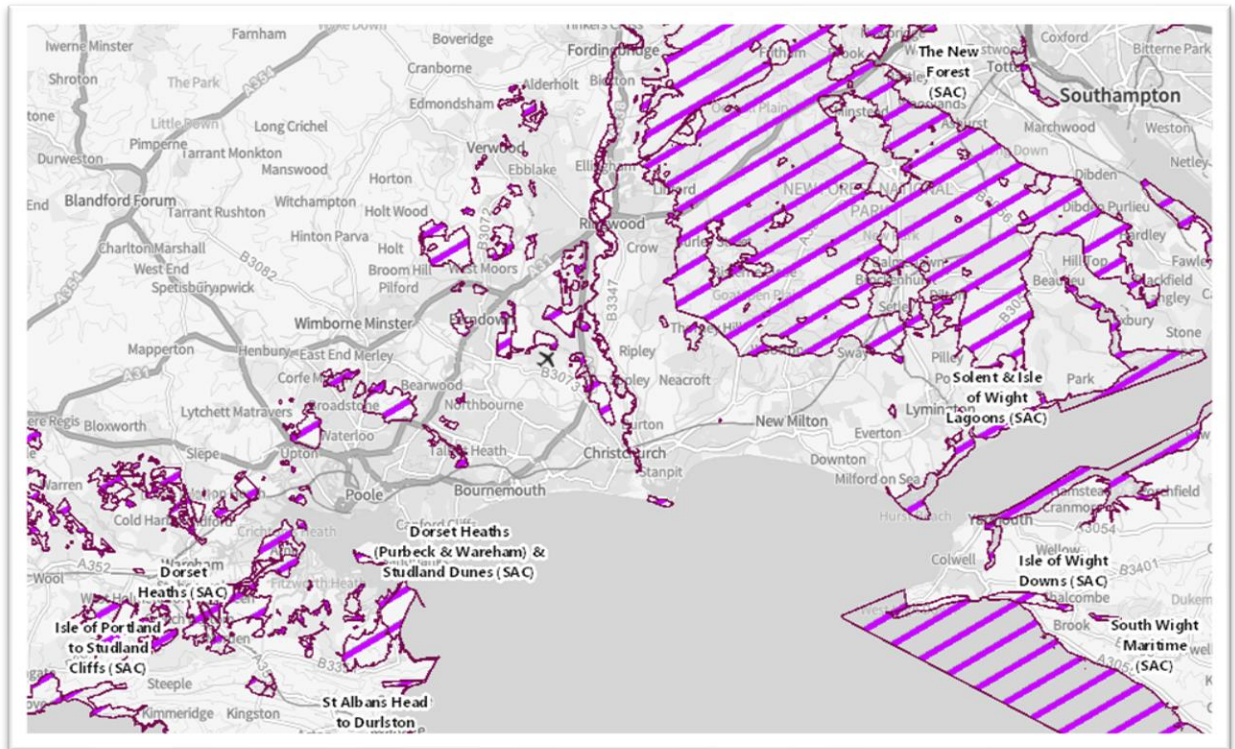


Figure 20 Special Areas of Conservation (SAC)

## 4. Options Development

### 4.1. Overview

- 4.1.1. This Section describes the proposed options for departures and arrivals on both RWY08 and RWY26. The current situation, or baseline, is described in the previous Section 3 and is represented in this Section as the baseline for each design envelope.
- 4.1.2. The options design methodology is presented in Section 2.2. and includes a description of the design development including any restrictions and considerations (see Figure 5)
- 4.1.3. The following image is a base map indicating the area of concern and further illustrates the boundaries for option development; 10NM (blue circle) and 25NM (red circle). The two distances provide an opportunity to describe the approximate height of aircraft for each option using average (or min/max) ascent/decent data for Bournemouth Airport. The blue circle represents where aircraft will be 4000ft or over, and the red circle is where aircraft are expected to be over 7000ft. It further shows the areas overflown<sup>24</sup>. The star in the centre indicates the location of the airport.

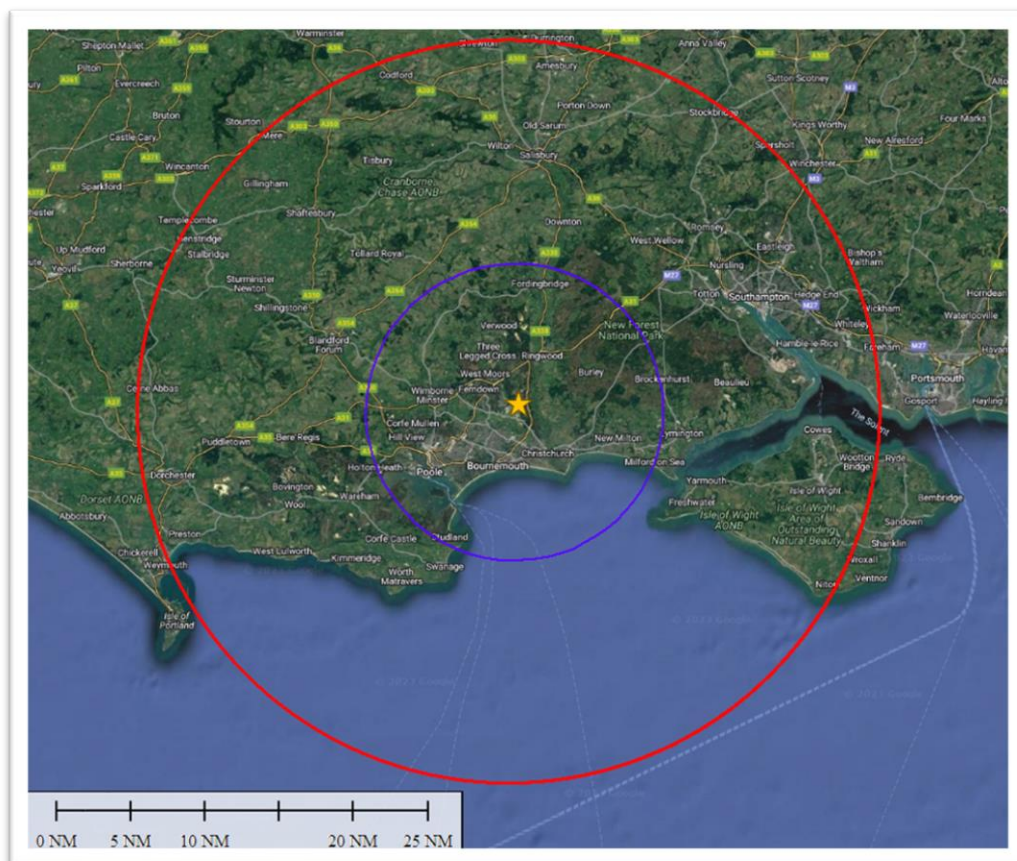


Figure 21 – Map of Airport vicinity showing 10NM and 25NM radii.

<sup>24</sup> BOH used an indicative climb gradient of 6% to calculate the distance aircraft are likely to be at 4000ft and 7000ft, a 5nm buffer is included for 7000ft to ensure all potential areas impacted are captured.



## 4.2. D08 All Options

North and West	Northeast	East	South
D08-NW-A	D08-NE-A	D08-E-C Baseline	D08-S-A
D08-NW-B	D08-NE-B Baseline	D08-E-D	D08-S-B Baseline
D08-NW-C			
D08-NW-D			
D08-NW-E			

Table 13 - Runway 08 Options Design Envelope Departures

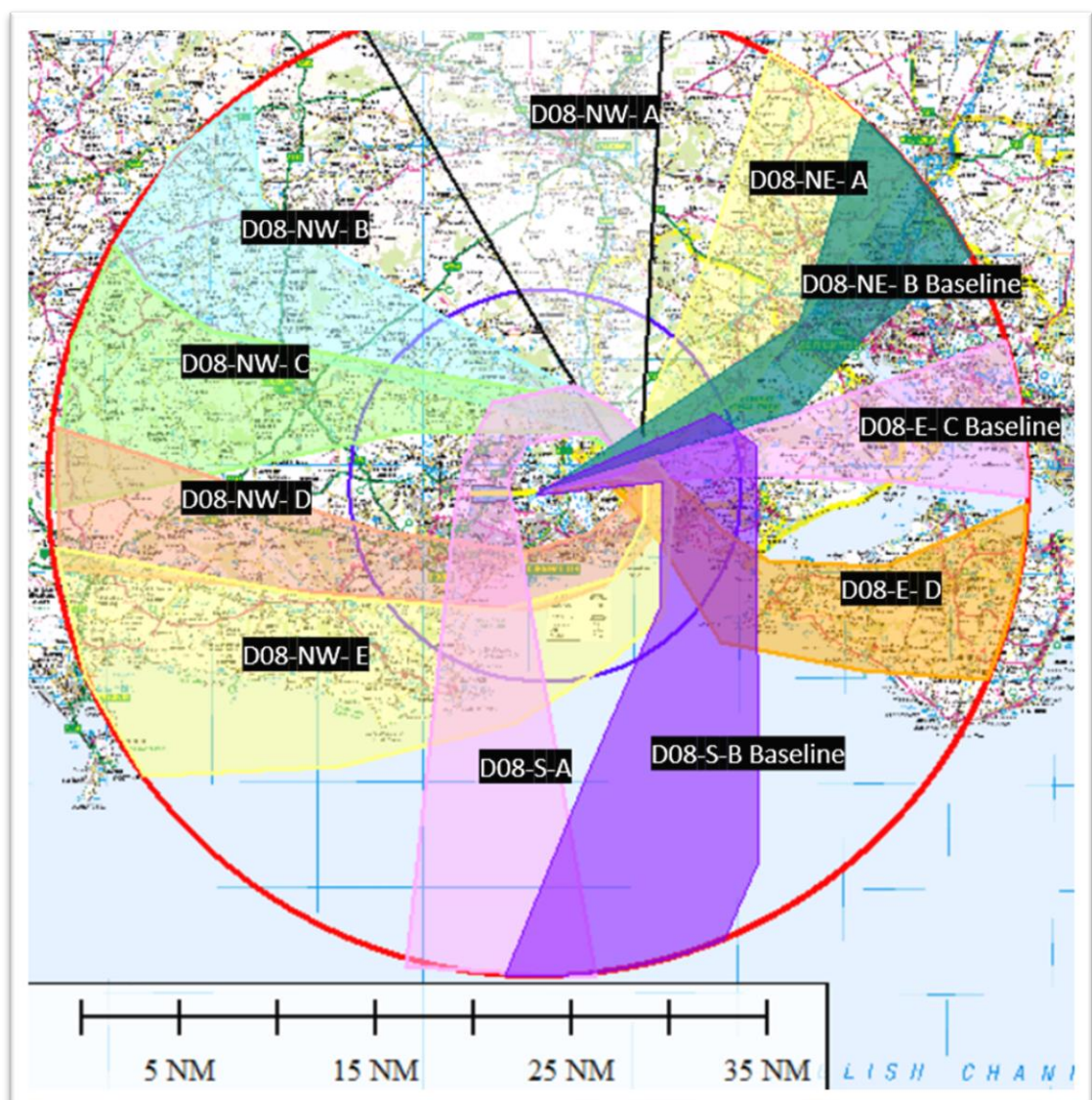


Figure 22 - Map showing all options for departures from Runway 08 over OS map.

### 4.3. D08 Northwest Design Envelope

- 4.3.1. Northwest design envelope does not have a baseline and the 'do nothing' option is therefore no operation. There is no baseline as there is very little traffic currently in a northwest direction. The following images show this envelope over the OS map (Figure 23) the ENR chart (Figure 24) and over Google Earth imagery showing the AONB and NP (Figure 25).

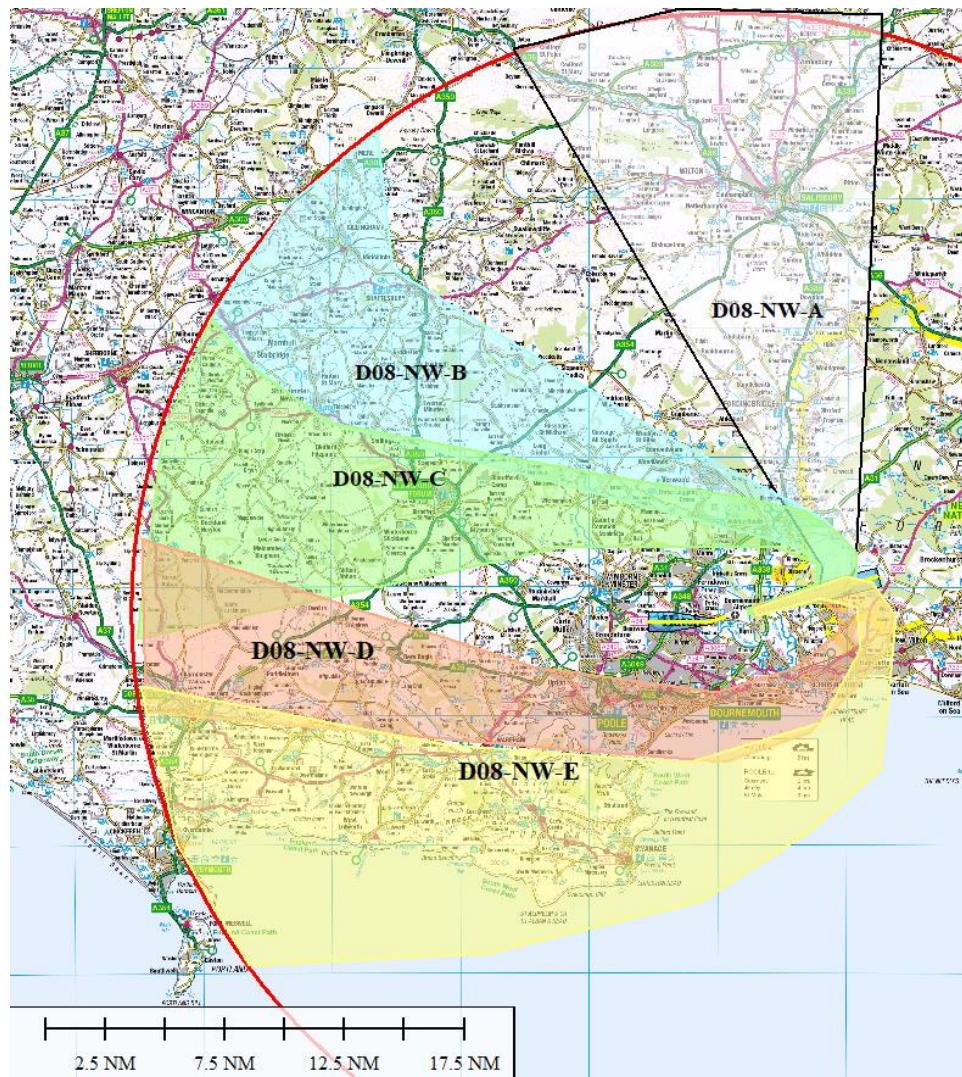


Figure 23 - Map of Northwest Design Envelope over OS map

- 4.3.2. There are several conflicts with danger areas (DA) and areas of high traffic for this design envelope; option E penetrates the Lulworth DA, option A Wessex DA, option B overflies Compton Abbas option D overflies Bovington DA. Bovington is activated by NOTAM and has an upper limit of 3600ft and aircraft departing Bournemouth Airport are likely to be over this height at the point of overflying Bovington (see Section 3.4). Similarly, the upper limit of Compton Abbas is 2000ft and aircraft will be over this height when departing Bournemouth Airport. Map shows options over the ENR chart (Figure 24).





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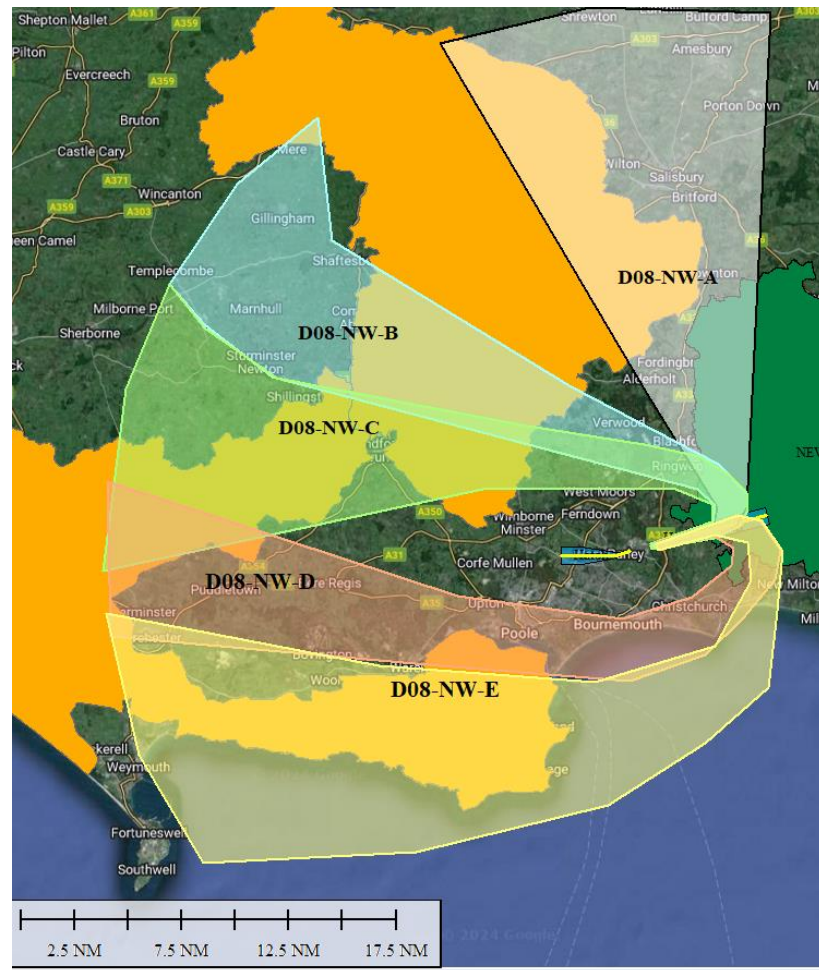


Figure 25 Northeast Design Envelope over Google Earth showing NP and AONB.

#### 4.4. D08 Northeast Design Envelope

- 4.4.1. Since engagement with stakeholders in December 2022 this design envelope has changed; the C and D options are now in a new 'East design envelope' (see next paragraph). The baseline for this design envelope is B to reflect current operations and procedures.
- 4.4.2. The following images show this envelope over the OS map (Figure 26) the ENR chart (Figure 27) and over Google Earth imagery showing AONB and National Park. (Figure 28).

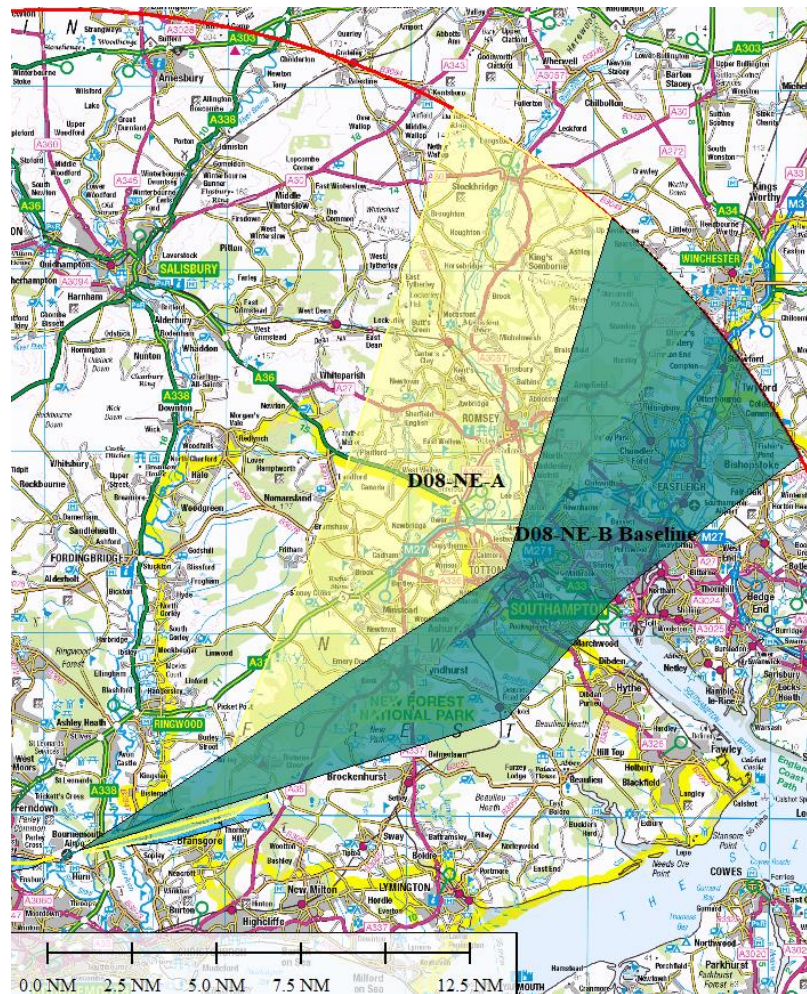


Figure 26 - Map of Northeast Design Envelope over OS Map



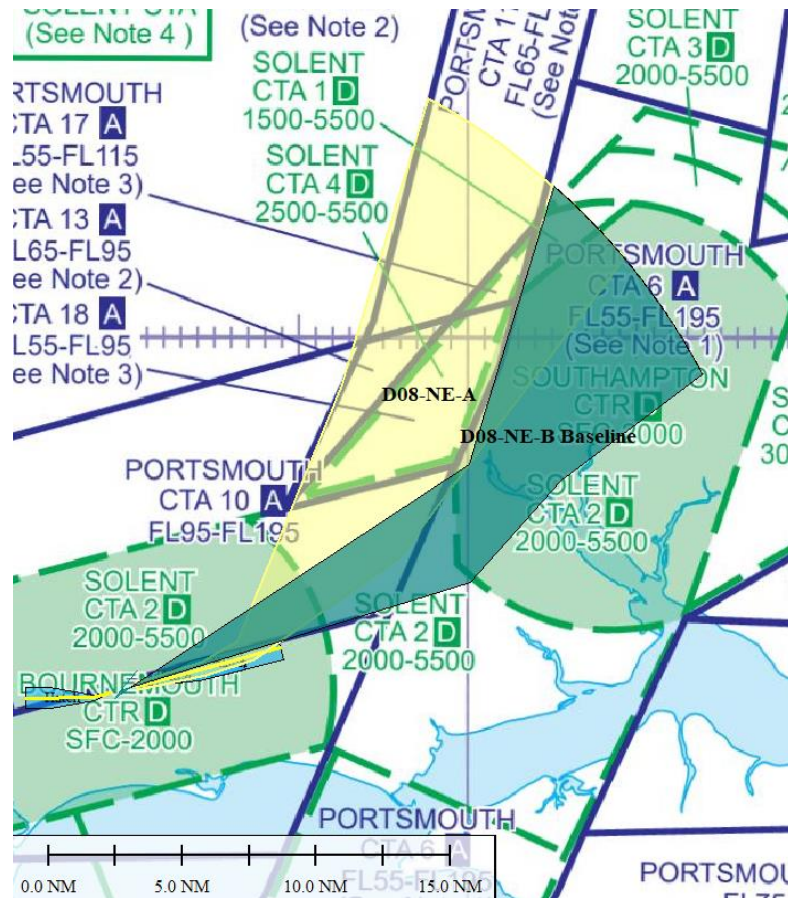


Figure 27 - Map of Northeast Design Envelope over ENR Chart



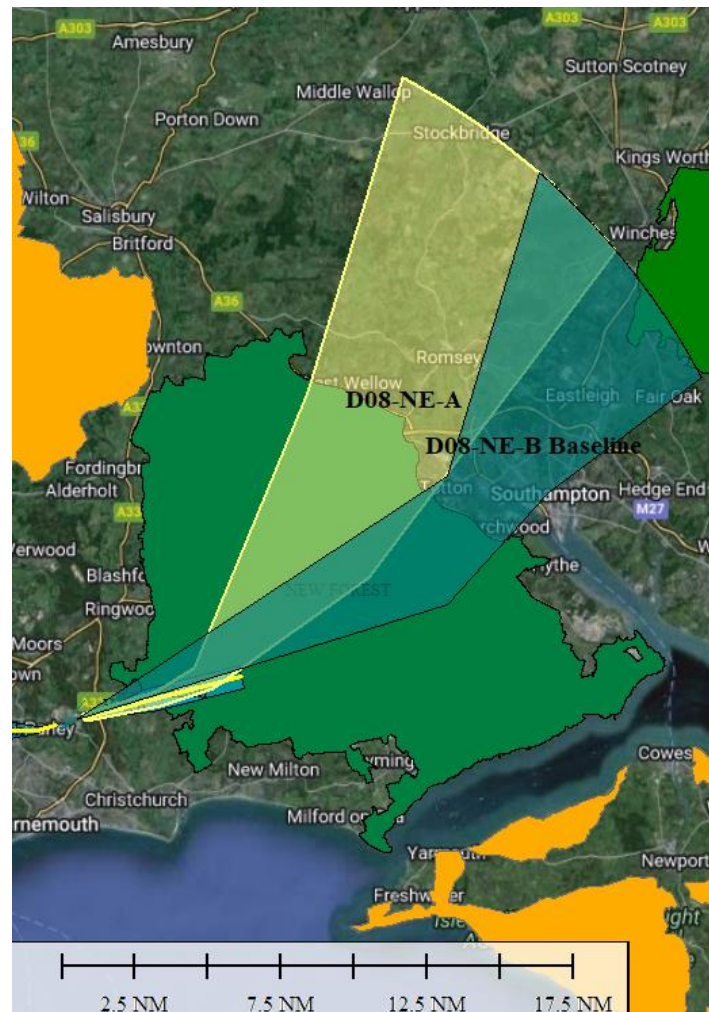


Figure 28 - Map of Northeast Design Envelope over Google Earth showing AONB and National Park.

- 4.4.3. Both options in the Northeast design envelope overfly the New Forest national Park, this includes the baseline (option B). Furthermore, option B overflies the most densely populated areas of Southampton although aircraft are likely to be above 6000ft at this point. Option B flies over the South Downs however at this point aircraft are likely to be over 7000ft.

## 4.5. D08 East Design Envelope

- 4.5.1. Since engagement with stakeholders in December 2022 this design envelope has changed; the A and B options are now in a new 'Northeast design envelope' (see previous paragraph). The baseline for this design envelope remains C as it still reflects current operations and procedures.
- 4.5.2. The following images show this envelope over the OS map (Figure 29) the ENR chart (Figure 30) and over Google Earth imagery showing AONB and National Park. (Figure 31).

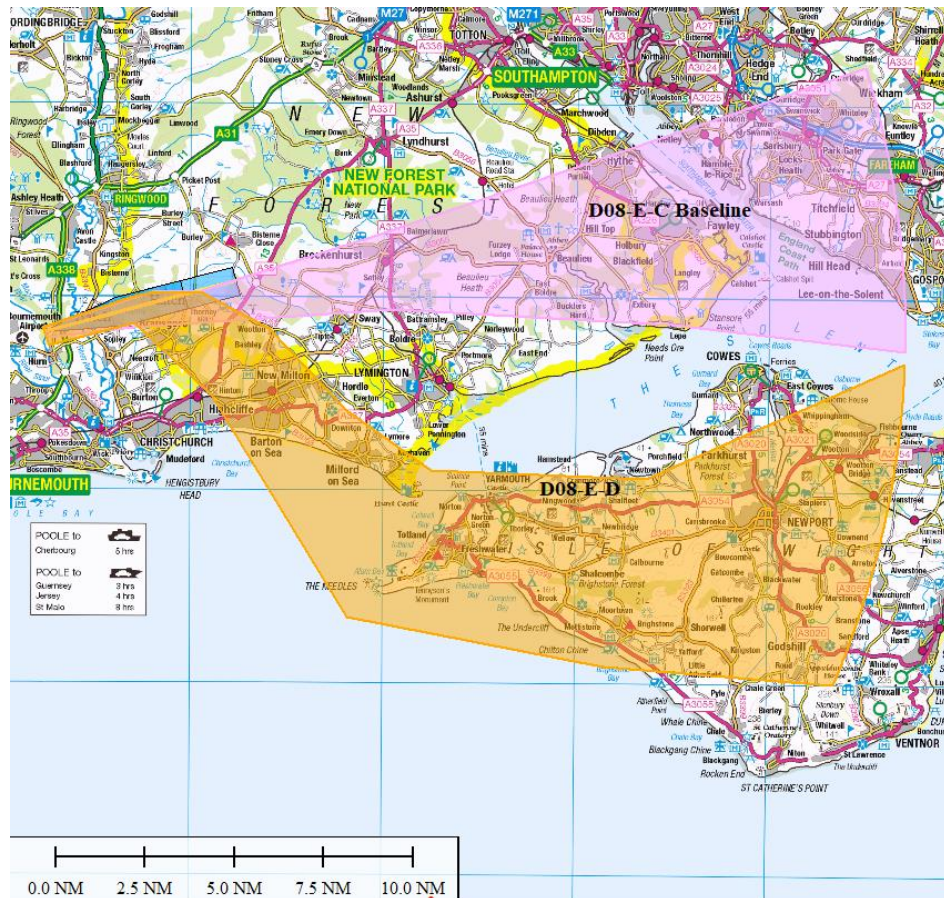


Figure 29 - Map of East Design Envelope over OS map

- 4.5.3. Option C (baseline) overflies the DA of Lee-On-Solent however aircraft will be over the 2000ft upper limit and are likely to be over 7000ft at this point. Option C also overflies the New Forest National Park.
- 4.5.4. Option D flies over the isle of Wight AONB, however this would not be a low altitude. It does overfly the New Forest National Park at a lower altitude in addition to the communities of Highcliffe, New Milton, Barton on Sea and Milford on Sea.

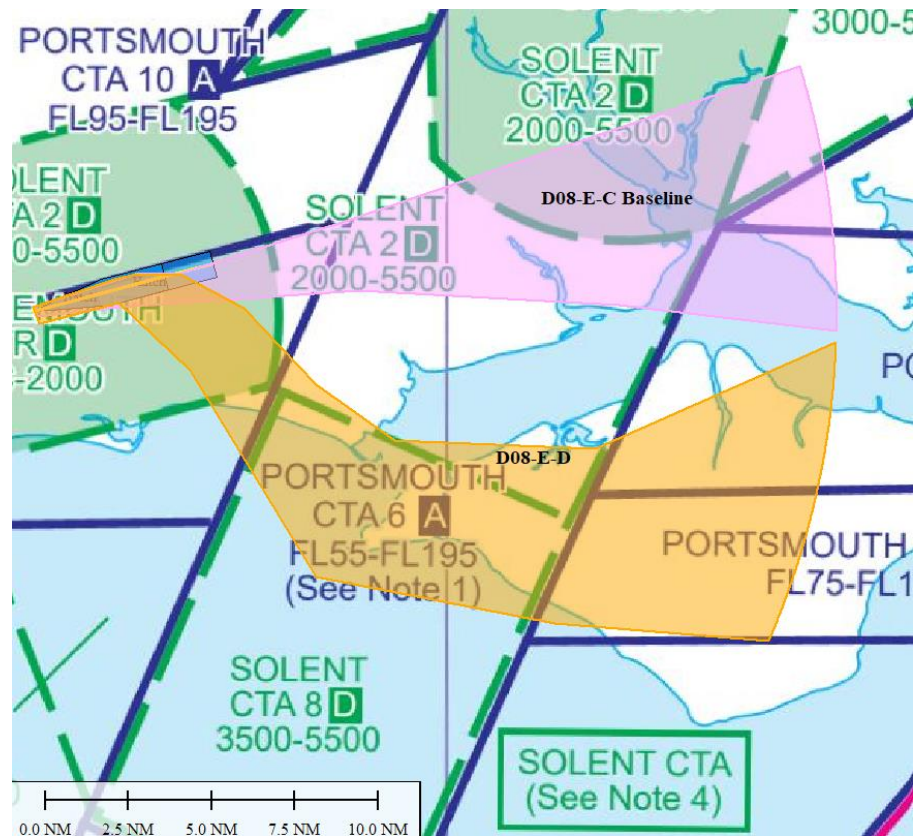


Figure 30 - Map of East Design Envelope over ENR chart





Figure 31 - Map of East Design Envelope over Google Earth showing AONB and National Park.

## 4.6. D08 South Design Envelope

- 4.6.1. Since engagement with stakeholders in December 2022 this design envelope has changed; option A remains the same. The new baseline B has been redrawn to reflect current operations and procedures. Option C (previous baseline) has been removed; this area is largely covered by the current baseline.
- 4.6.2. The following images show this envelope over the OS map (Figure 32) the ENR chart (Figure 33) and over Google Earth imagery showing AONB and National Park. (Figure 34).
- 4.6.3. Option A penetrates the Portland DA at the western end of the option. Option A also is a 'wraparound' as it departs the runway to the left before turning south, this means it will further flyover the Dorset AONB and more communities close to the airport, such as Ringwood, Ashley Heath, Stapehill to the north and west and Newtown, Branksome and Westbourne to the south.
- 4.6.4. Option B, the baseline offers the fastest route over the sea for southern departures from RWY 08.

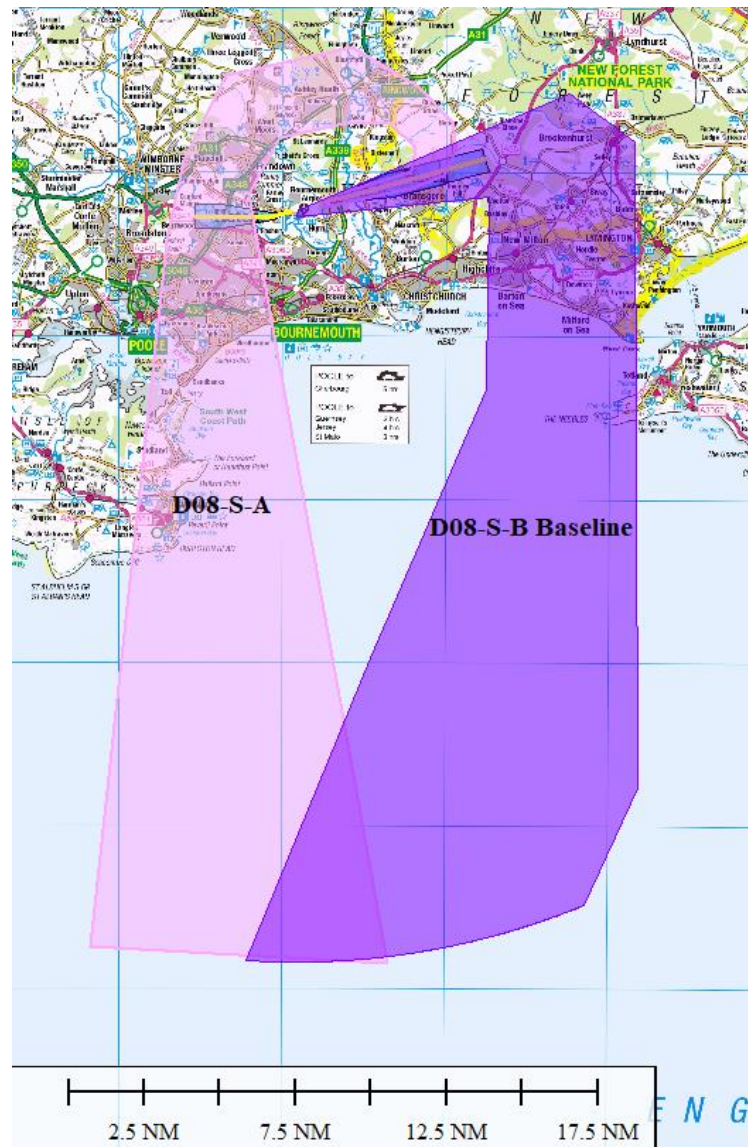


Figure 32 - Map of South Design Envelope over OS map

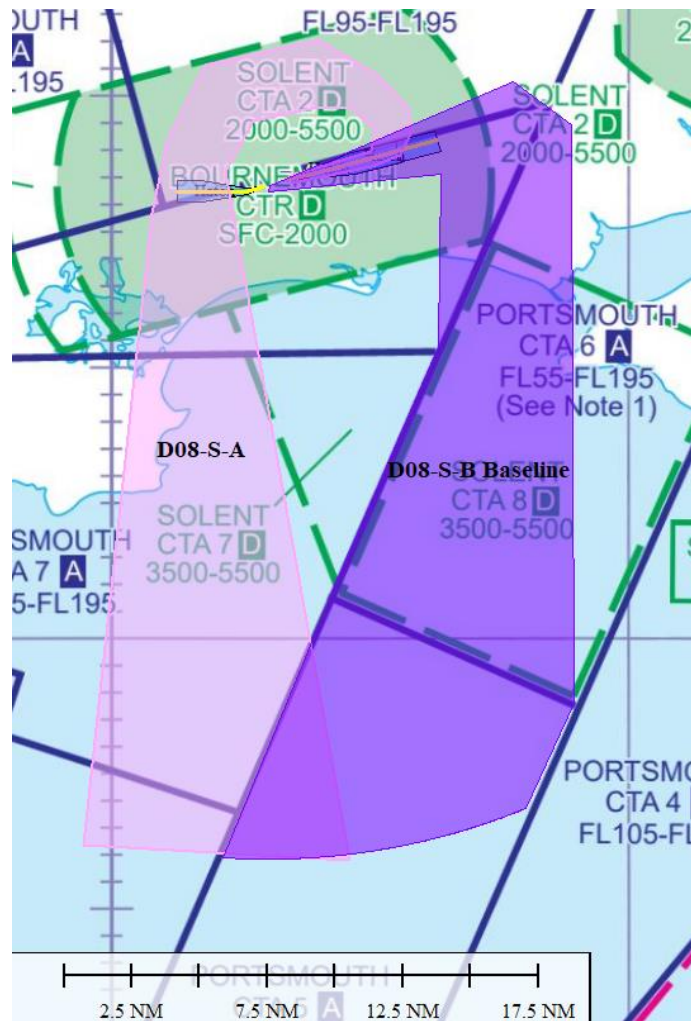


Figure 33 - Map of South Design Envelope over ENR chart



Figure 34 - Map of South Design Envelope over Google Earth showing AONB and National Park.

#### 4.7. A08 All options A08

North and West	Northeast	Southeast	South
A08-NW-A	A08-NE-A	A08-SE-B	A08-S-A
A08-NW-B	A08-NE-B Baseline	A08-SE-C Baseline	A08-S-B
A08-NW-C	A08-NE-C		A08-S-C Baseline
A08-NW-D			
A08-NW-E			

Table 14 - Runway 08 Options Design Envelopes Arrivals



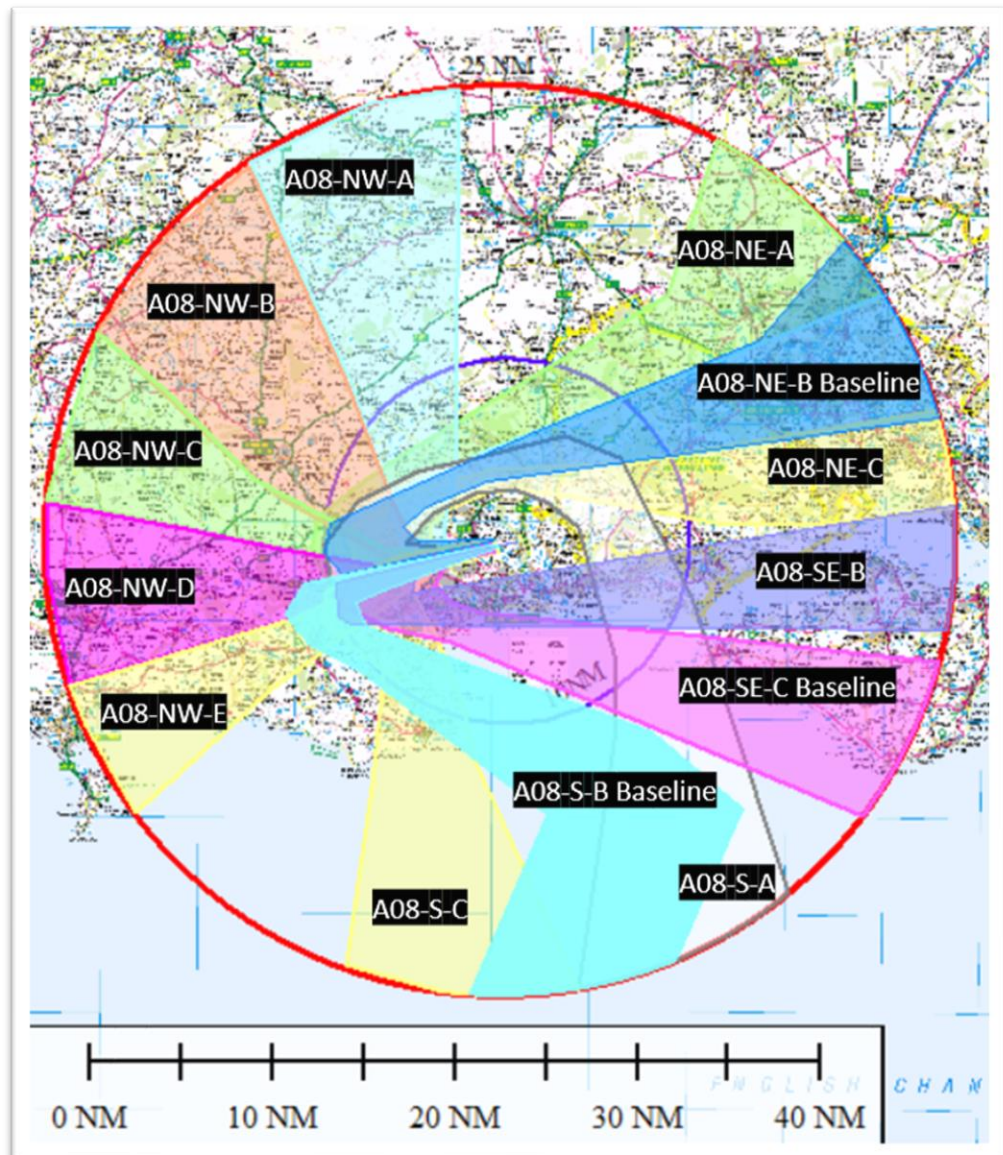


Figure 35 - Map showing all options for arrivals to runway 08.

## 4.8. A08 Northwest Design Envelope

- 4.8.1. Northwest design envelope does not have a baseline and the 'do nothing' option is therefore no operation. The following images show this envelope over the OS map (Figure 36) the ENR chart (Figure 37) and over Google Earth imagery showing AONB and National Park. (Figure 38).
- 4.8.2. There are several conflicts with danger areas (DA) and areas of high traffic for this design envelope (see Figure 5 in Section 3); option E penetrates the Lulworth DA, option A Wessex DA, option B overflies Compton Abbas option D overflies Bovington DA. Bovington is activated by NOTAM and has an upper limit of 3600ft and aircraft departing Bournemouth Airport are likely to be over this height at the point of overflying Bovington. Similarly, the upper limit of Compton Abbas is 2000ft and aircraft will be over this height when arriving at Bournemouth Airport.



- 4.8.3. Options A-D fly over the AONB Cranbourne Chase and West Wiltshire Downs, and options D and E overfly Dorset AONB (Figure 38) The populated areas include Salisbury (option A), Blandford Forum (option C), Poole and Bournemouth (option D). However, the densely populated areas are largely avoided at low altitude in this design envelope, with the exception of option D.

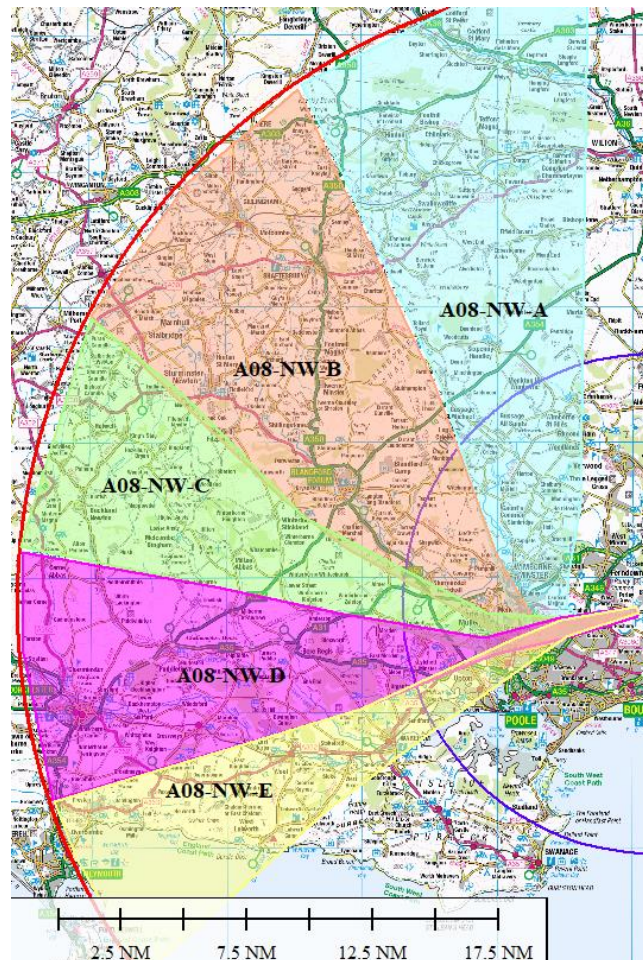


Figure 36 - Map of Northwest Design Envelope over OS map

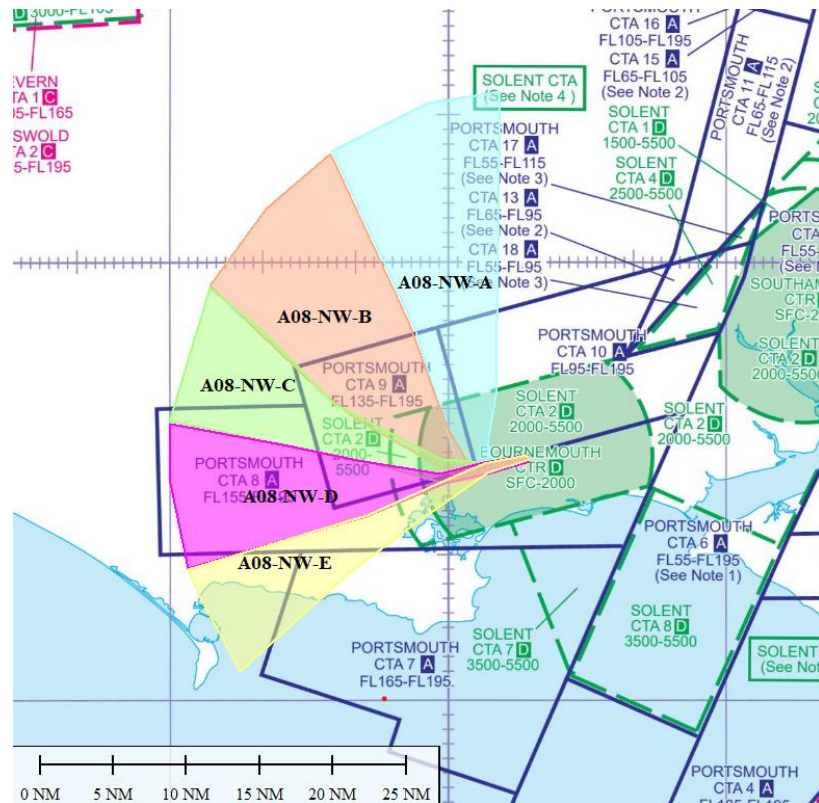


Figure 37 - Map of Northwest Design Envelope over ENR Chart



Figure 38 - Map of Northwest Design Envelope over Google Earth showing AONB and National Park.



## 4.9. A08 Northeast Design Envelope

- 4.9.1. The following images show this envelope over the OS map (Figure 39) the ENR chart (Figure 40) and over Google Earth imagery showing AONB and National Park. (Figure 41).
- 4.9.2. All three options in this design envelope avoid AONBs, however all do fly over the New Forest National Park. The most densely populated areas include Southampton, although aircraft are likely to still be at a high altitude at this point. Closer to the airport Ringwood, Wimborne Minster and Corfe Mullen would be flown over at a lower altitude for flights arriving at runway 08 in the option C scenario.

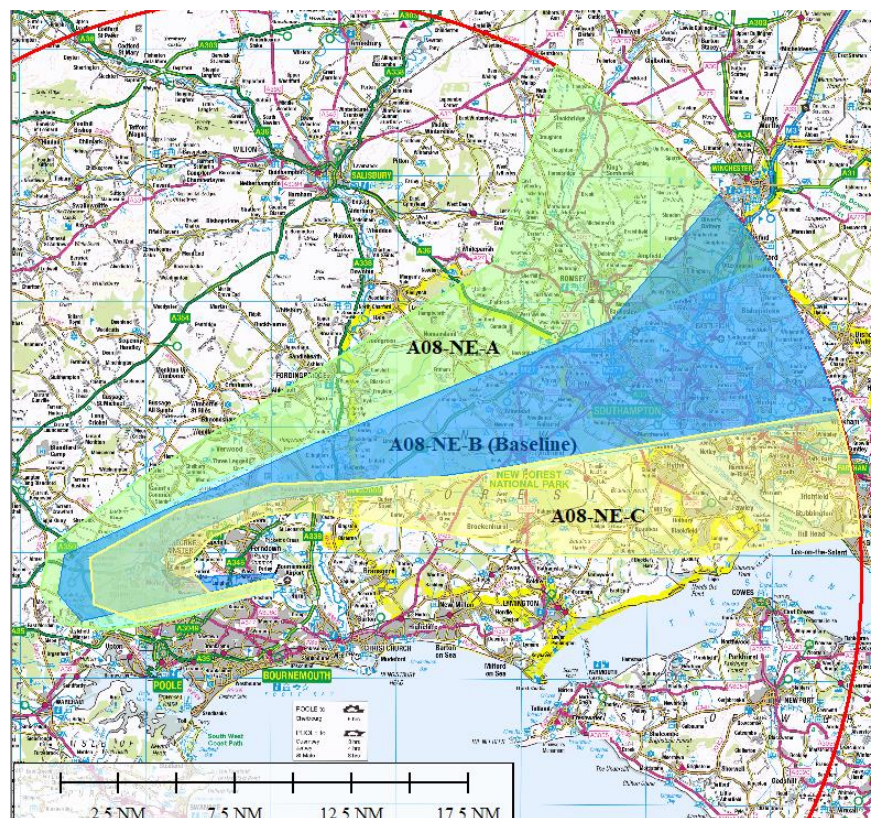


Figure 39 - Map of Northeast Design Envelope over OS Map

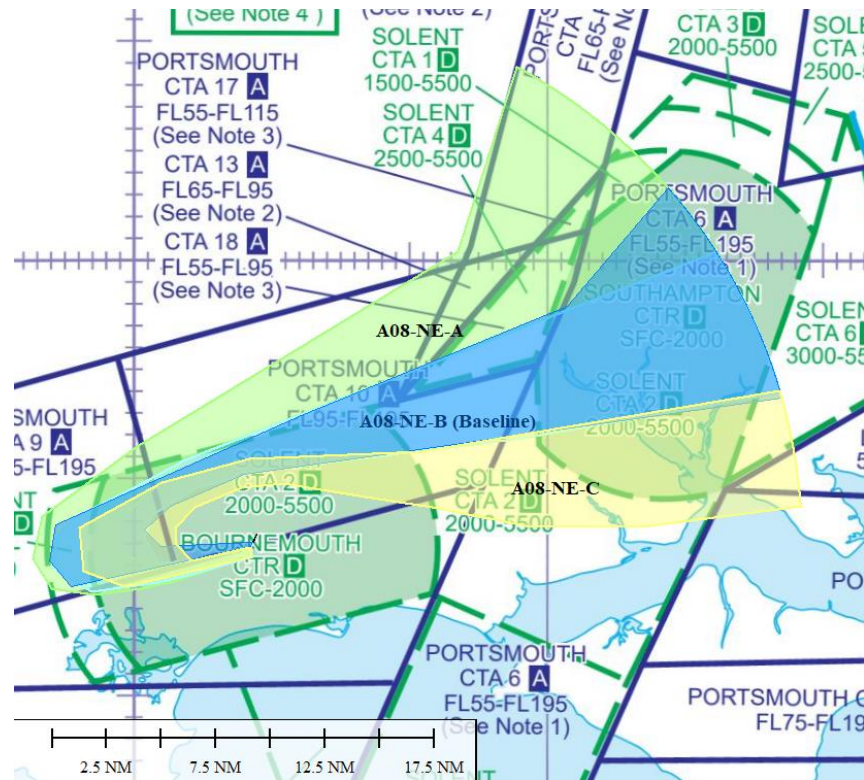


Figure 40 - Map of Northeast Design Envelope over ENR Chart

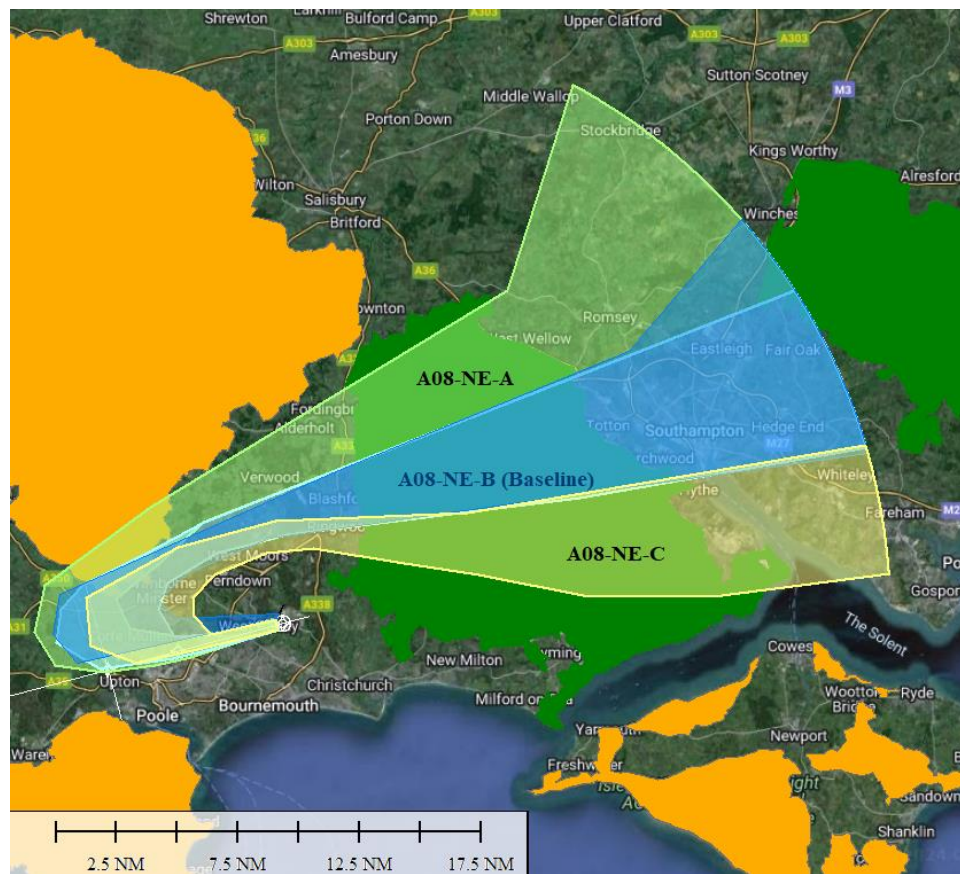


Figure 41 - Map of Northeast Design Envelope over Google Earth showing AONB and National Park.



## 4.10. A08 Southeast Design Envelope

- 4.10.1. Option C, the baseline, overflies a greater number of communities (Figure 44), including Poole, Bournemouth and Christchurch, than option B. Both options overfly the AONB of the Isle of Wight, however option B overflies a greater portion of it, option C overflies both the AONB and the National Park. Furthermore, option B flies over the Portsmouth DA (EG D037), which has upper limits of 55000ft, aircraft are likely to be within this boundary at this point.

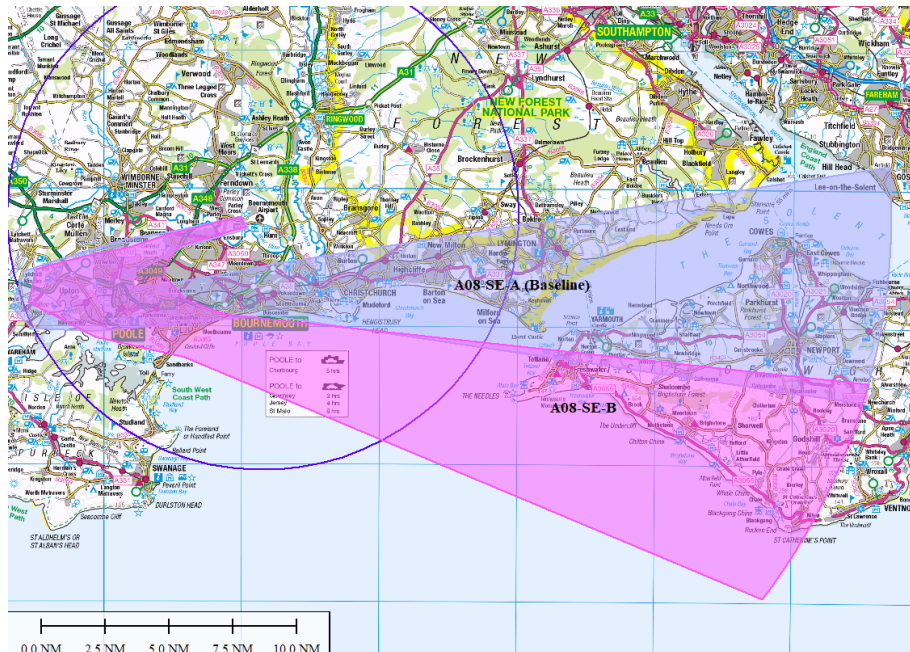


Figure 42 - Map of Southeast Design Envelope over OS map

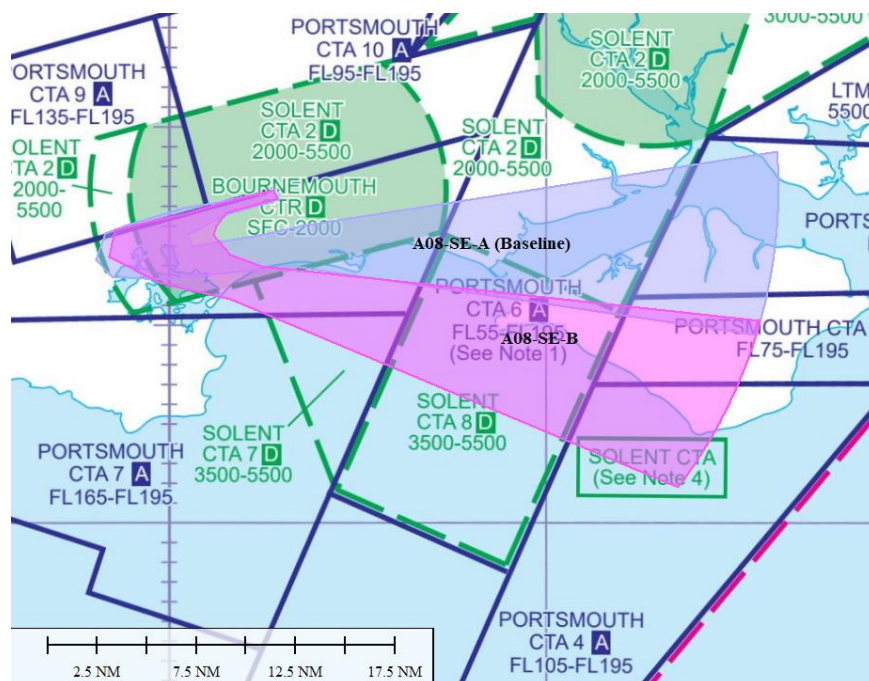


Figure 43 - Map of Southeast Design Envelope over ENR Chart



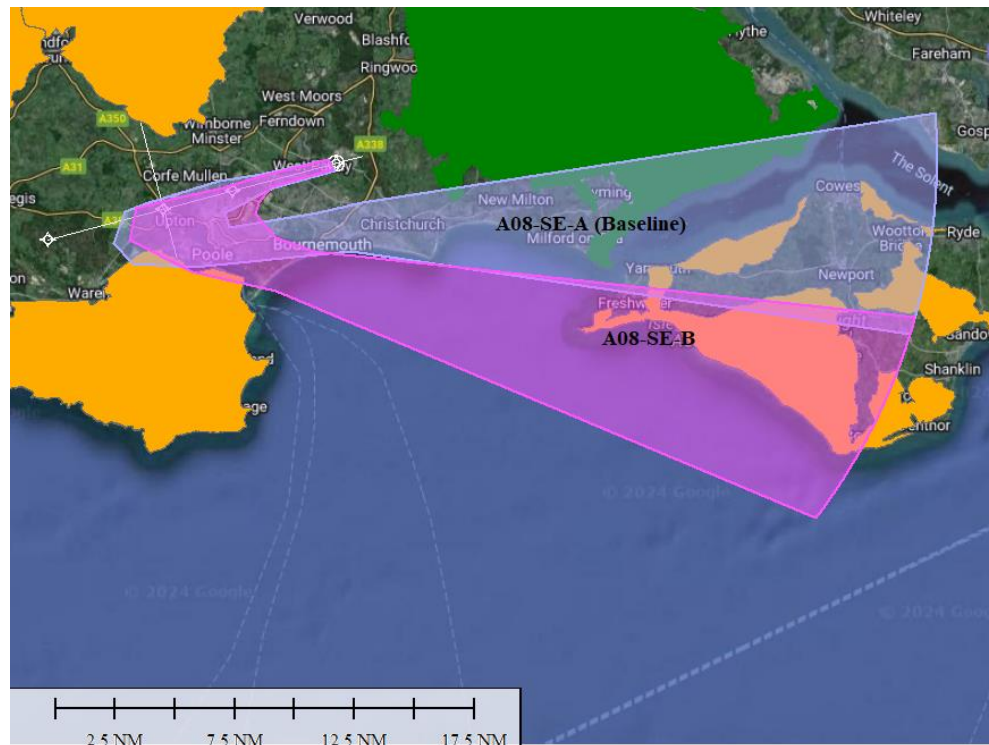


Figure 44 - Map of Southeast Design Envelope over Google Earth Showing AONB and National Park.

#### 4.11. A08 South Design Envelope

- 4.11.1. Since engagement with stakeholders in December 2022 this design envelope has changed; options A and C remain the same. The baseline B has been redrawn to reflect current operations and procedures.
- 4.11.2. The following images show this envelope over the OS map (Figure 45) the ENR chart (Figure 46) and over Google Earth imagery showing AONB and National Park. (Figure 47).
- 4.11.3. Option A penetrates the Portsmouth DA at the eastern end, and are published as active up to 55,000ft. Option A also is a 'wraparound' as it arrives from the east and turns right, this means it arrives over the New Forest National Park, a small portion of the AONB, and more communities close to the airport, such as Wimborne Minster and Corfe Mullen.
- 4.11.4. Option B, the baseline offers the fastest route for southern arrivals to RWY 08, traffic is routed via the THRED waypoint.



Figure 45 - Map of South Design Envelope over OS map

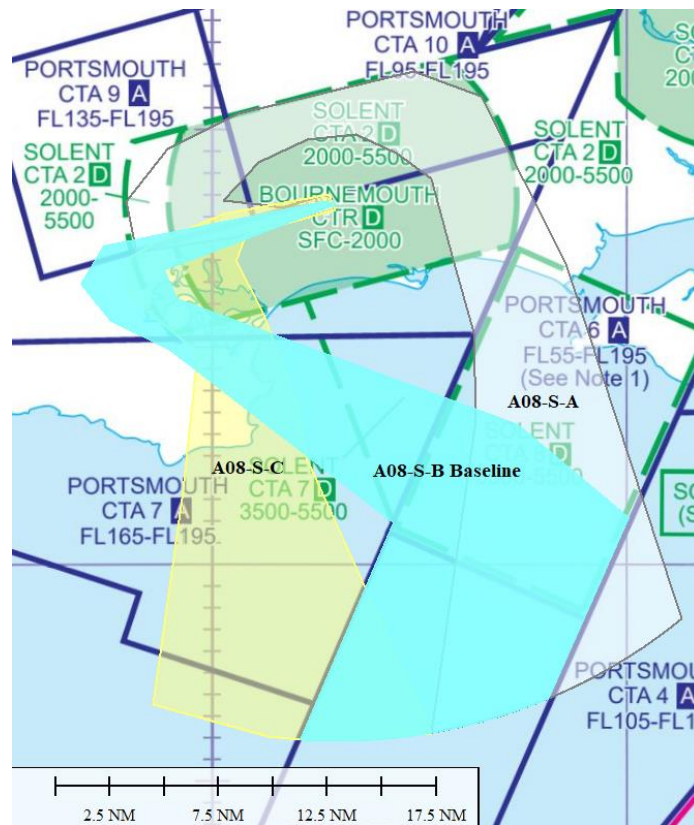


Figure 46 - Map of South design Envelope over ENR Chart

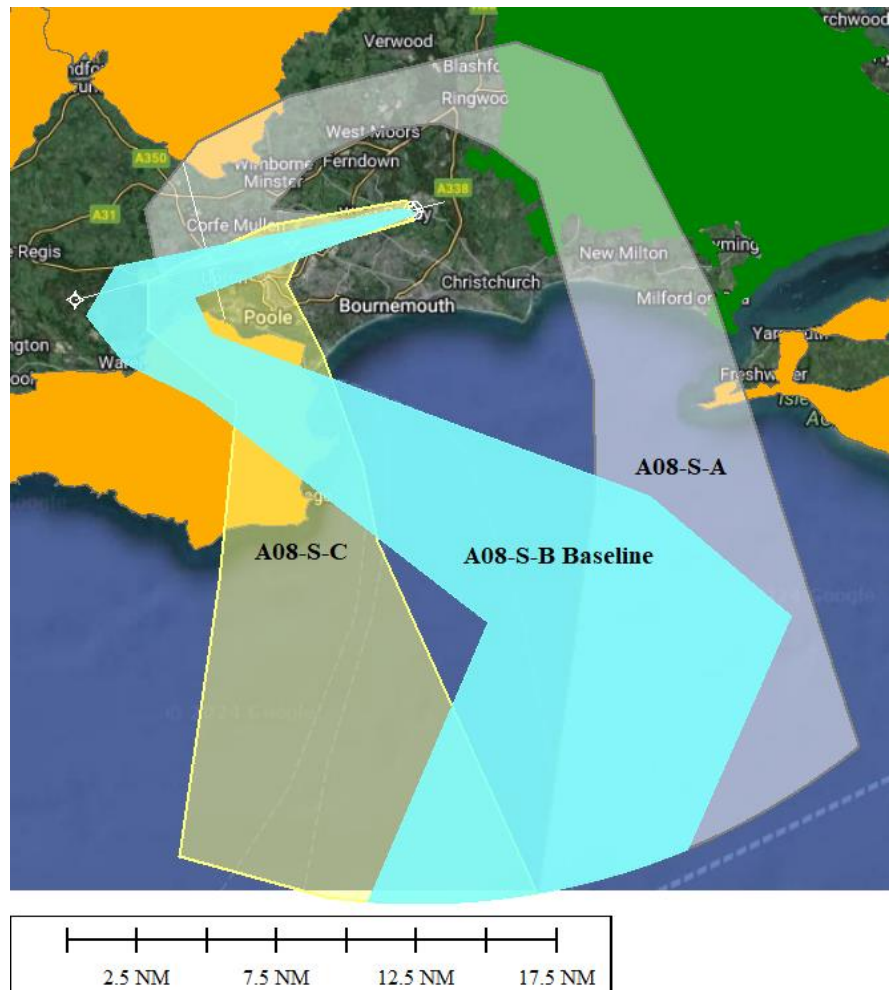


Figure 47 - Map of South Design Envelope over Google Earth showing AONB and National Park.

#### 4.12. D26 All options D26

North and West	East	South
D26-NW-A	D26-E-A	D26-S-A
D26-NW-B	D26-E-C Baseline	D26-S-B Baseline
D26-NW-C	D26-E-D	D26-S-C
D26-NW-D	D26-E-E	
D26-NW-E		

Table 15 : Runway 26 Options Design Envelopes Departures



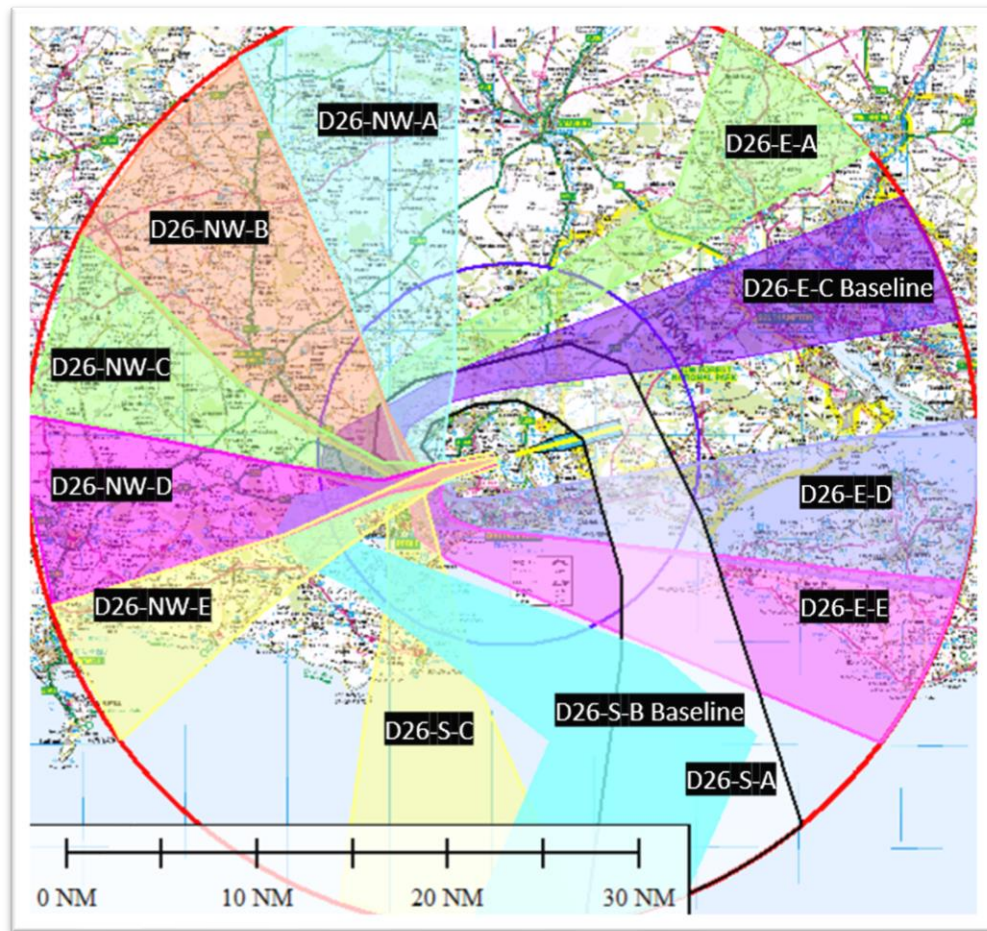


Figure 48 - All options for departures from runway 26

### 4.13. D26 Northwest Design Envelope

- 4.13.1. Northwest design envelope does not have a baseline and the 'do nothing' option is therefore no operation. The following images show this envelope over the OS map (Figure 49) the ENR chart (Figure 50) and over Google Earth imagery showing AONB and National Park. (Figure 51).
- 4.13.2. There are several conflicts with danger areas (DA) and areas of high traffic for this design envelope (see Figure 5 in Section 3); option E penetrates the Lulworth DA, option A Wessex DA, option B overflies Compton Abbas option D overflies Bovington DA. Bovington is activated by NOTAM and has an upper limit of 3600ft and aircraft departing Bournemouth Airport are likely to be over this height at the point of overflying Bovington. Similarly, the upper limit of Compton Abbas is 2000ft and aircraft will be over this height when departing Bournemouth Airport.
- 4.13.3. Options A-D fly over the AONB Cranbourne Chase and West Wiltshire Downs, and options D and E overfly Dorset AONB (Figure 51).



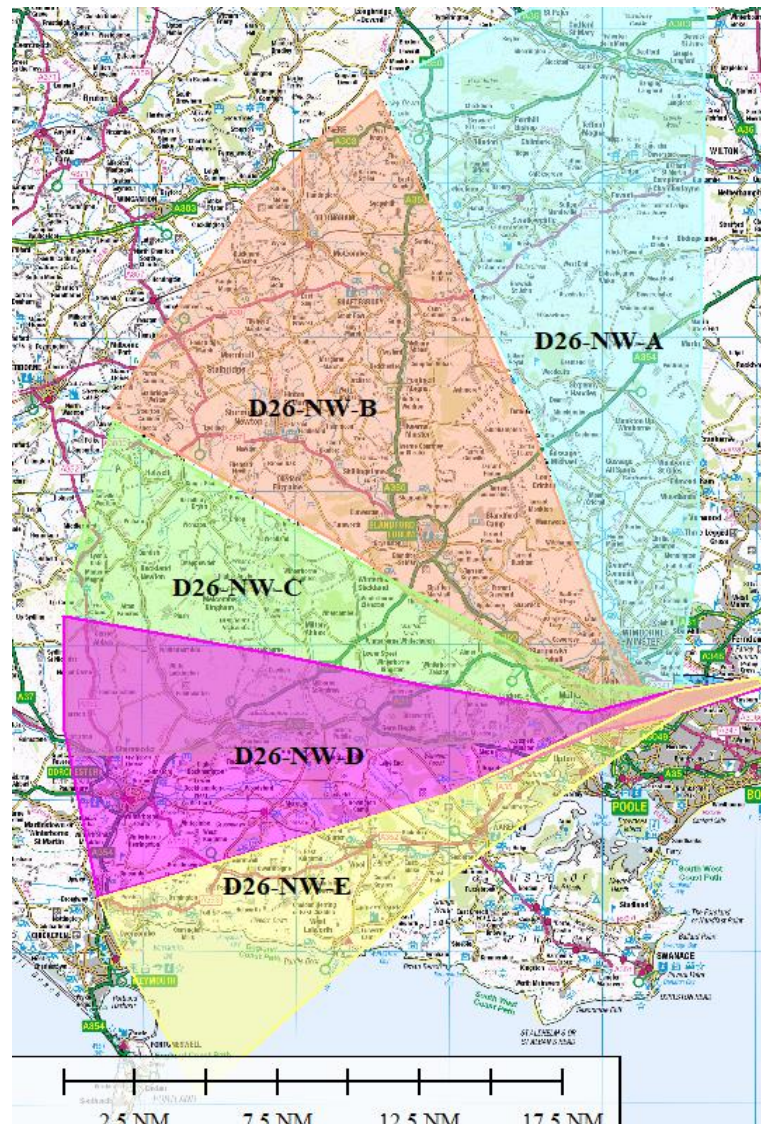


Figure 49 - Map of Northwest Design Envelope over OS map



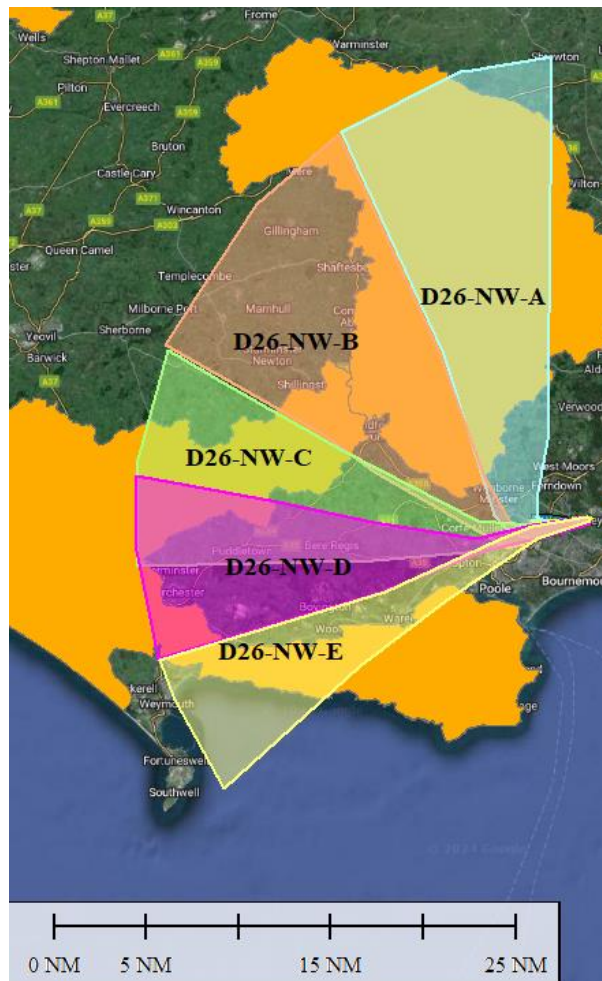


Figure 51 - Map of Northwest Design Envelope over Google Earth showing AONB.

#### 4.14. D26 East Design Envelope

- 4.14.1. Since initial engagement with stakeholders in December 2022 there is now one design envelope for the East. The previous 'Southeast A' baseline has been removed as there is no evidence of departures turning left for the southeast. New options D and E have been created; however, these are the same as the old A and B options for the Southeast. The new baseline C has been changed slightly to reflect current operations and option B (Northeast) has been removed.
- 4.14.2. All options in the East design envelope overfly the New Forest National Park, option C (the baseline overflies the greatest part. Options D and E overfly a greater number of communities with high population density, including Bournemouth, option D also overflies Christchurch.
- 4.14.2.1.1. Option E overflies the Portsmouth DA; however, this is published as having a 55000ft upper limit, aircraft are unlikely to be above this height at this point after departure from runway 26.



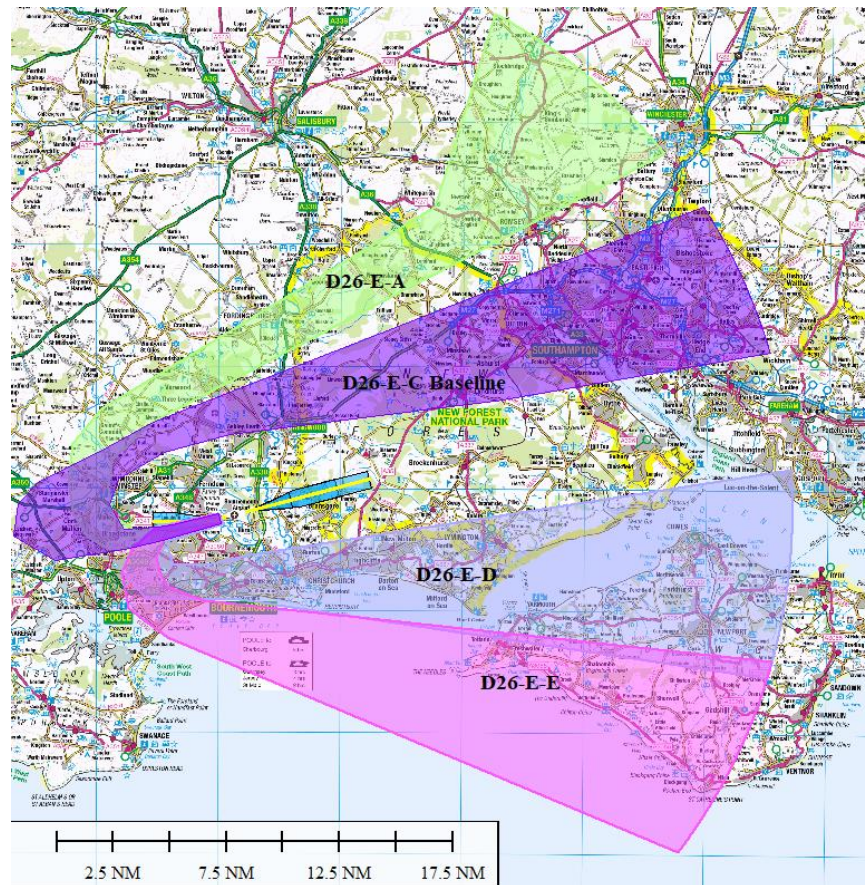


Figure 52 - Map of East Design Envelope over OS map





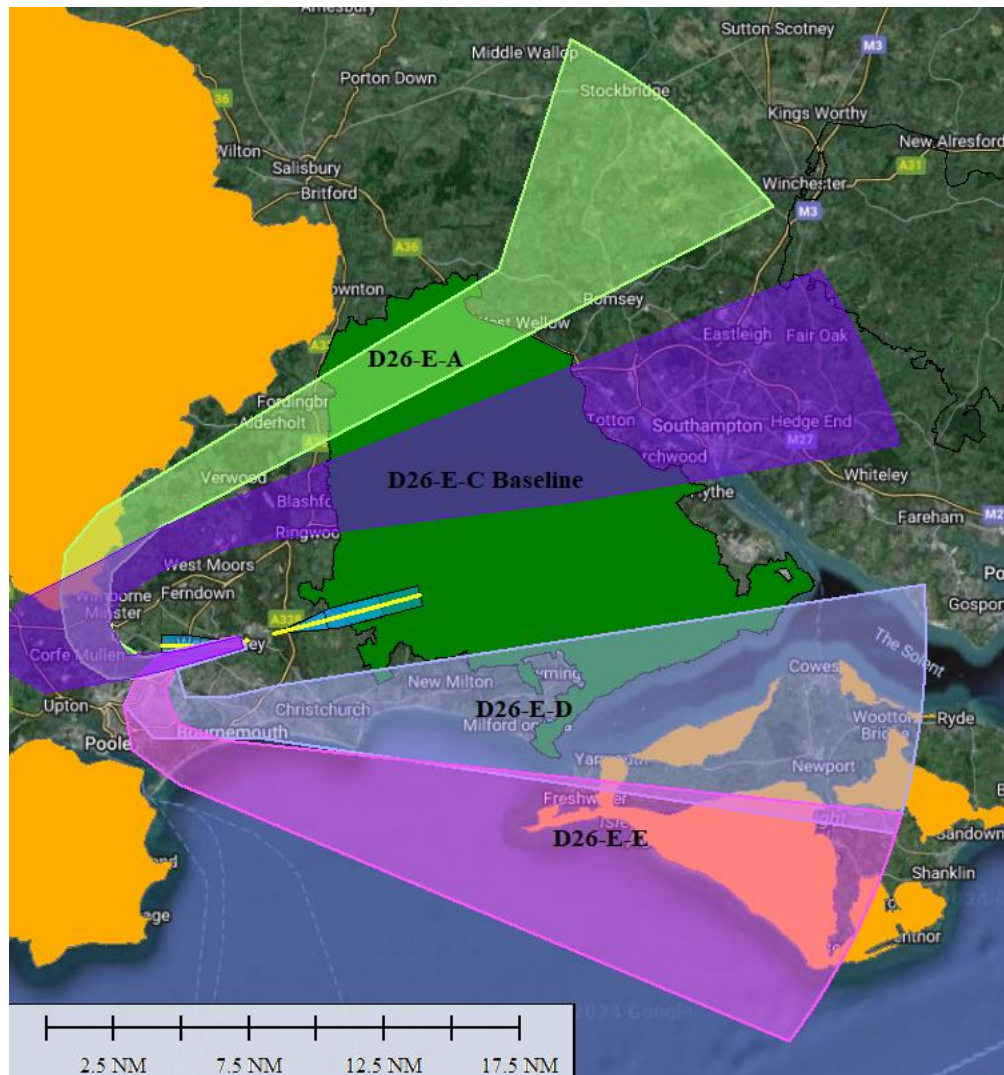


Figure 54 - Map of East Design Envelope over Google Earth showing AONB and National Park.

#### 4.15. D26 South Design Envelope

- 4.15.1. Since engagement with stakeholders in December 2022 this design envelope has changed; options A and C remain the same. The baseline B has been redrawn to reflect current operations and procedures.
- 4.15.2. The following images show this envelope over the OS map (Figure 55) the ENR chart (Figure 56) and over Google Earth imagery showing AONB and National Park. (Figure 57).
- 4.15.3. Option A penetrates the Portsmouth DA at the eastern end, aircraft would not be above the upper limits of the DA (55000ft). Option A also is a 'wraparound' as it departs the runway to the right before turning south, this means it will further flyover the New Forest National Park, a small portion of the AONB, and more communities close to the airport, such as Wimborne Minster and Corfe Mullen.
- 4.15.4. Option B, the baseline offers the fastest route for southern departures from 08 runway, traffic is routed via the THRED waypoint.

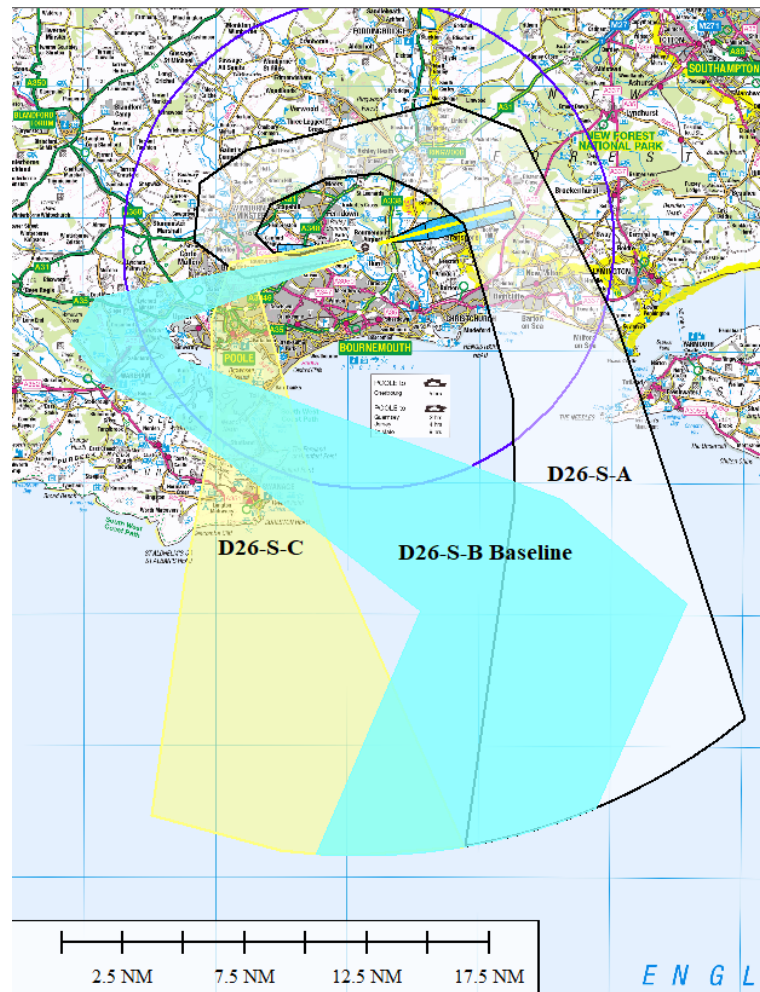


Figure 55 - Map of South Design Envelope over OS Map





Figure 57 - Map of East Design Envelope over Google Earth showing AONBs and National Park.

#### 4.16. A26 All options A26

North and West	Northeast	East Southeast	South
A26-NW-A	A26-NE-A	A26-ESE-A Baseline	A26-S-A
A26-NW-B	A26-NE-B Baseline	A26-ESE-B	A26-S-C Baseline
A26-NW-C			
A26-NW-D			
A26-NW-E			

Table 16: Runway 26 Options Design Envelopes Arrivals



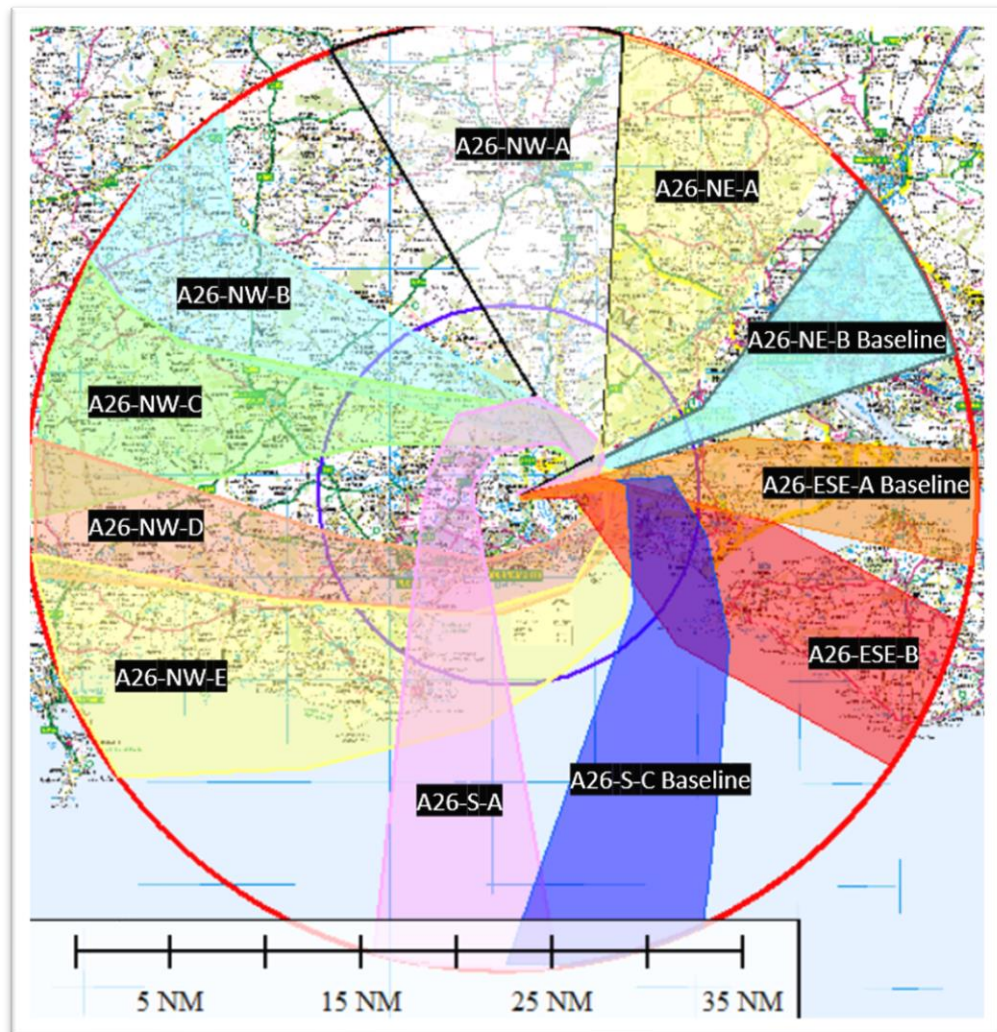


Figure 58 - All options for arrivals to runway 26

## 4.17. A26 Northwest Design Envelope

- 4.17.1. Northwest design envelope does not have a baseline and the 'do nothing' option is therefore no operation. The following images show this envelope over the OS map (Figure 59) the ENR chart (Figure 60) and over Google Earth imagery showing AONB and National Park. (Figure 61).
- 4.17.2. There are several conflicts with danger areas (DA) and areas of high traffic for this design envelope (see Figure 5 in Section 3); option E penetrates the Lulworth DA, option A Wessex DA, option B overflies Compton Abbas option D overflies Bovington DA. Bovington is activated by NOTAM and has an upper limit of 3600ft and aircraft departing Bournemouth Airport are likely to be over this height at the point of overflying Bovington. Similarly, the upper limit of Compton Abbas is 2000ft and aircraft will be over this height when departing Bournemouth Airport.
  - 4.17.2.1.1. Options A-D fly over the AONB Cranbourne Chase and West Wiltshire Downs, and options D and E overfly Dorset AONB (Figure 61).

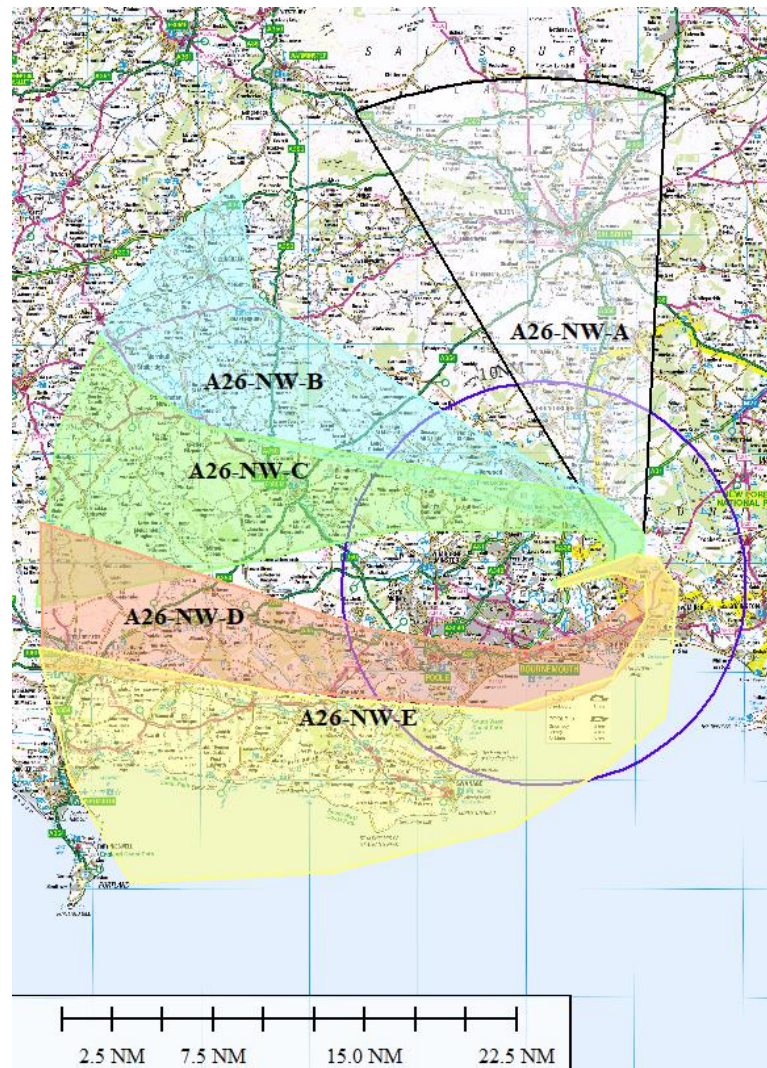


Figure 59 - Map of Northwest Design Envelope over OS map

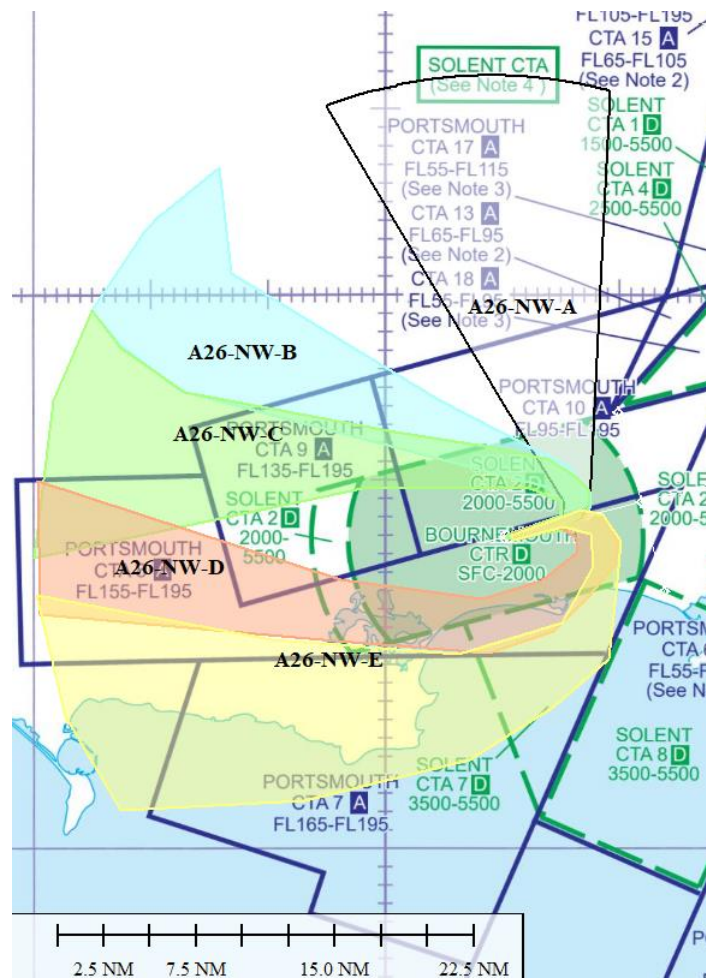


Figure 60 - Map of Northwest Design Envelope over ENR chart





Figure 61 - Map of Northwest Design Envelope over Google Earth with AONB and National Park

## 4.18. A26 Northeast Design Envelope

- 4.18.1. Since engaging with stakeholders in December 2022, the Northeast design envelope has been split into two, Northeast (this Section) and East Southeast (next Section). The original baseline for Northeast has been retained for the East-Southeast envelope and a new northeast baseline has been created to reflect current arrivals. Option C has been removed and option B for the East Southeast has been created.
- 4.18.2. Both options in this design envelope avoid AONBs, however both do fly over the New Forest National Park. The most densely populated areas include Southampton, although aircraft are likely to still be at a high altitude at this point. There are no densely populated areas close to the airport in this design envelope (Figure 64).
- 4.18.3. Option A would penetrate the easterly side of the Wessex DA.





Figure 62 - Map of Northeast Design Envelope over OS map





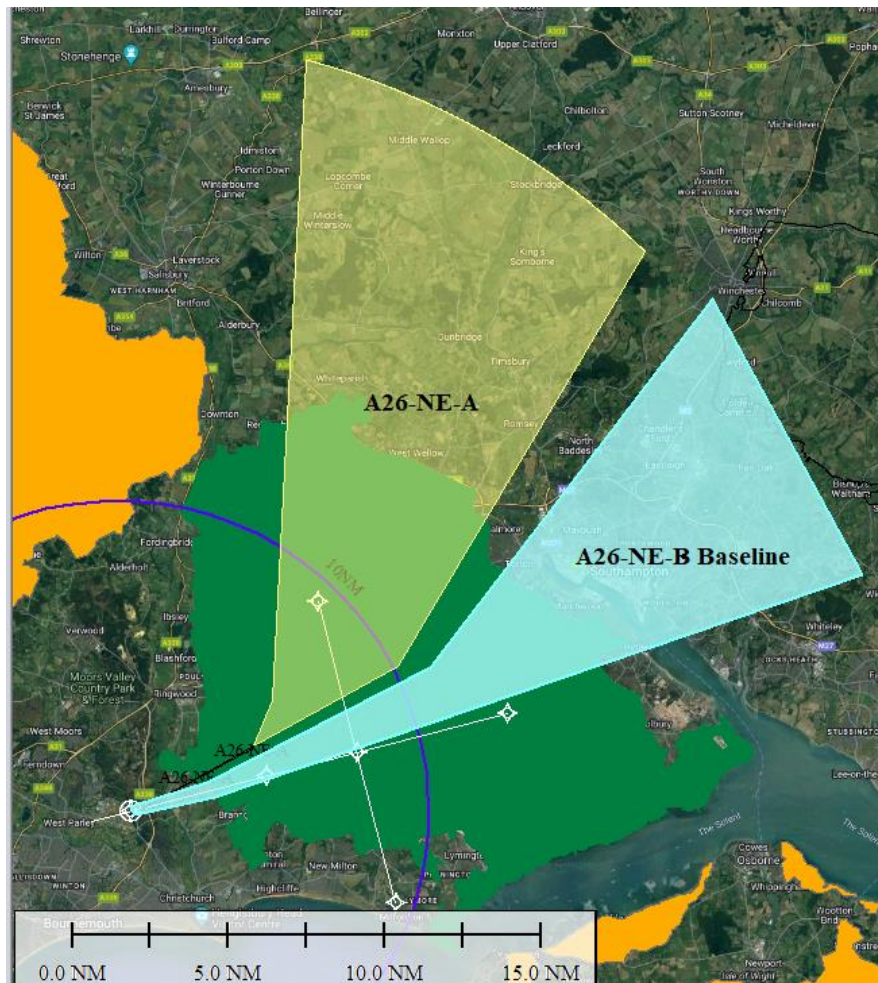


Figure 64 - Map of Northwest Design Envelope over Google Earth showing National Park.

## 4.19. A26 East Southeast Design Envelope

- 4.19.1. Since engaging with stakeholders in December 2022, the Northeast design envelope has been split into two, Northeast (previous Section) and East Southeast (this Section). The original baseline for Northeast has been retained for the East-Southeast envelope and a new Northeast baseline has been created to reflect current arrivals. Option C has been removed and option B for the East Southeast has been created.
- 4.19.2. Option A, the baseline, overflies the southerly Section of the National Park, option B would overfly the AONB of the Isle of Wight. Option B would newly overfly the towns of Highcliffe, New Milton and Lymington which are densely populated.
- 4.19.3. Option B overflies the Portsmouth DA; aircraft are unlikely be over the upper 55000ft limit on arrival to runway 26.

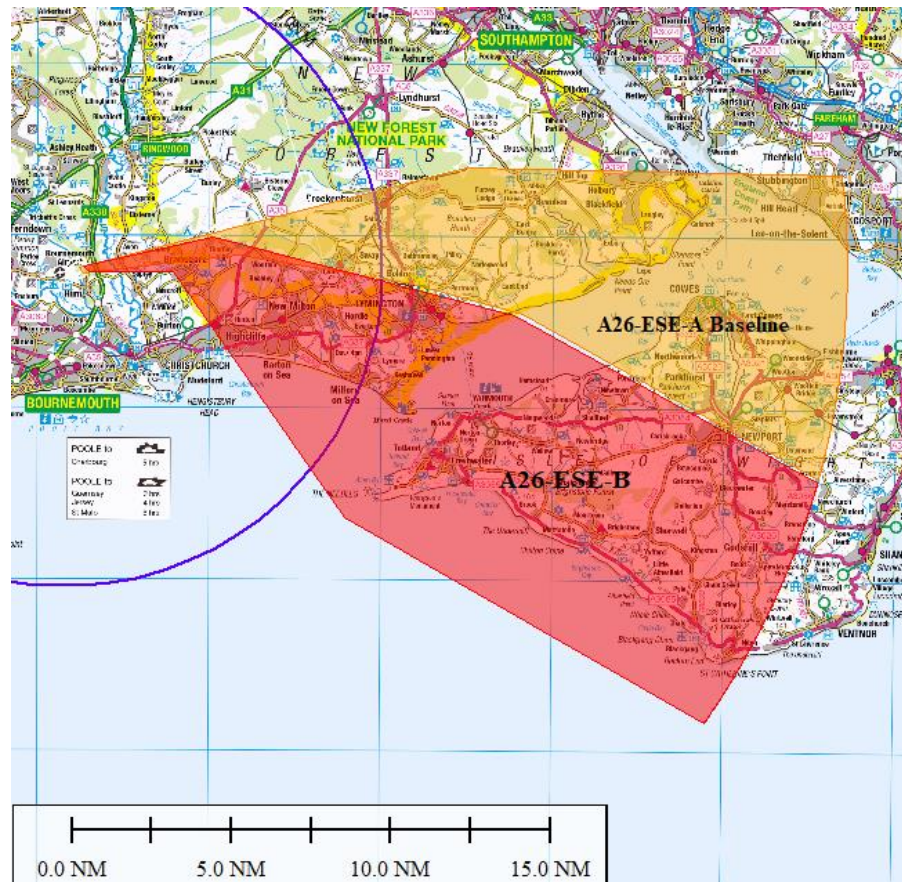


Figure 65 - Map of East-Southeast Design Envelope over OS ma

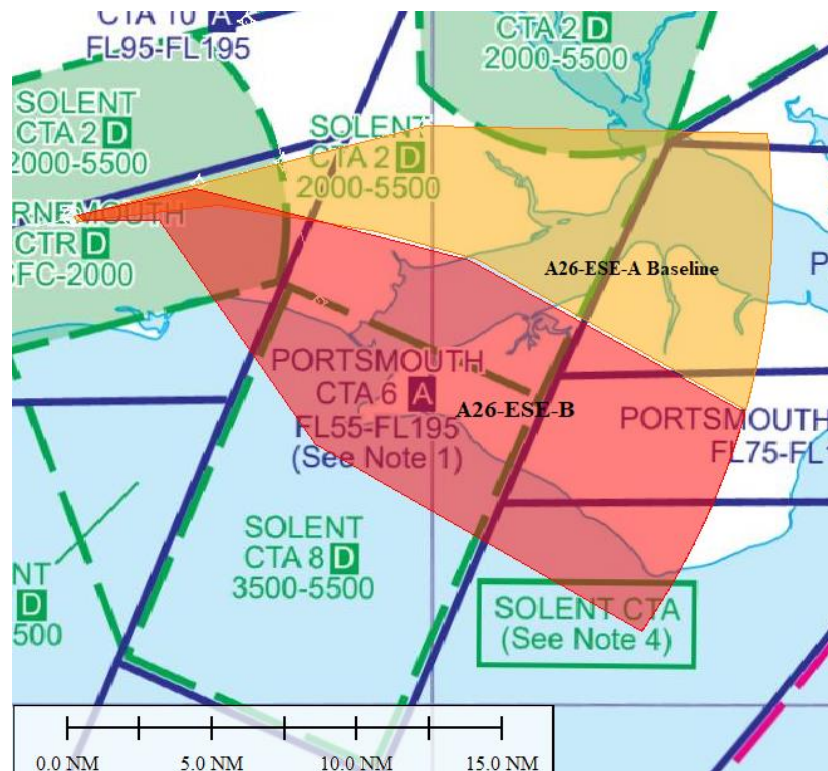


Figure 66 - Map of East-Southeast Design Envelope over ENR chart



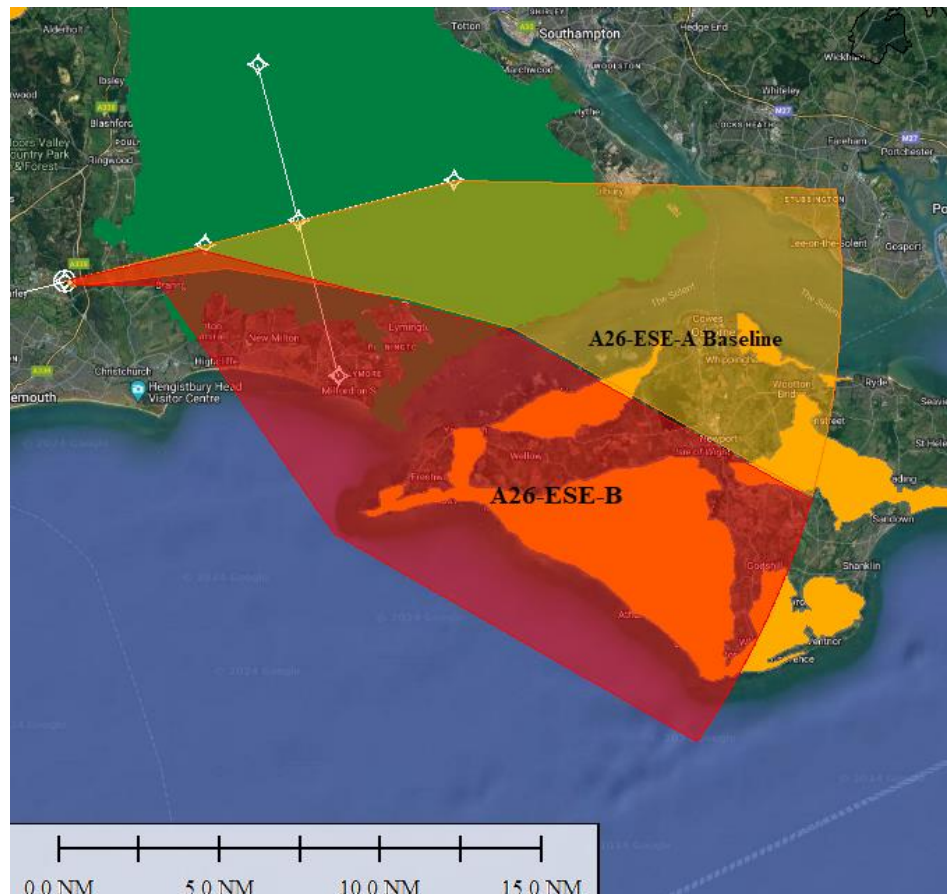


Figure 67 - Map of East-Southeast Design Envelope over Google Earth showing AONB and National Park.

## 4.20. A26 South Design Envelope

- 4.20.1. Since engagement with stakeholders in December 2022 this design envelope has changed; options A remains the same, option B has been removed and baseline C has been redrawn to reflect current operations and procedures and largely covers the original baseline and the removed option B.
- 4.20.2. The following images show this envelope over the OS map (Figure 68) the ENR chart (Figure 69) and over Google Earth imagery showing AONB and National Park. (Figure 70).
- 4.20.3. Option A penetrates the Lulworth DA at the eastern end, the upper limit of this DA is 15,000ft and therefore aircraft could encroach this area. This option is also a wraparound and as such will overfly more communities (Figure 70).

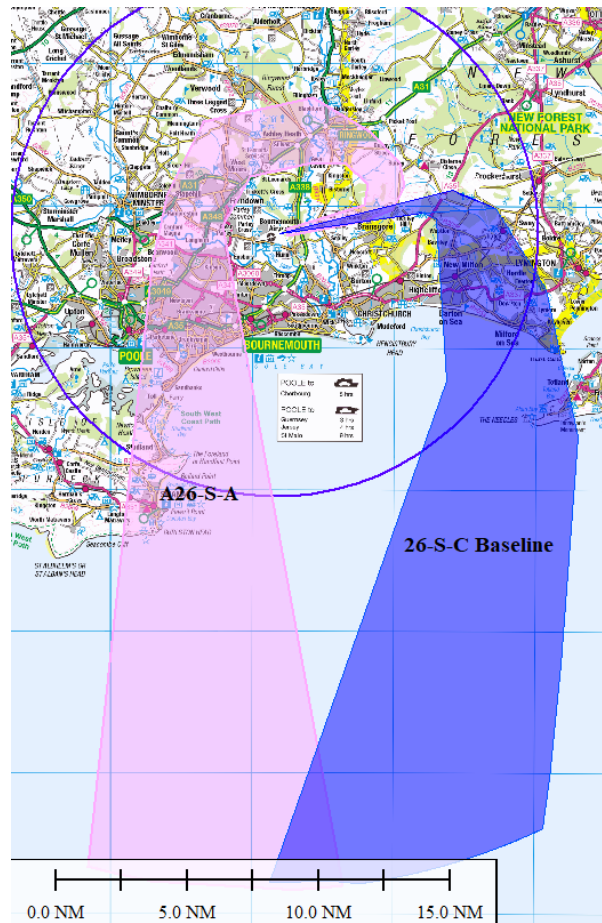


Figure 68 - Map of South Design Envelope over OS map





Figure 70 - Map of South Design Envelope over Google Earth showing AONB and National Park.



## 5. Stakeholder Engagement

### 5.1. Overview

5.1.1. This Section describes the stakeholder engagement conducted by Bournemouth Airport for Step 2A of the ACP process. It describes the stakeholder qualification process and engagement activities. The methodology used for stakeholder engagement are explained along with the workshop, survey and information session activities, in Section 2.9 of this document.

5.1.2. This Section also aims to:

- Provide evidence that engagement with stakeholders has created a good understanding of the options development process, including the need for the options to be aligned with the DPs in a fair, consistent and inclusive manner.
- Demonstrate how the stakeholder engagement conducted by Bournemouth Airport and the feedback received has helped to influence the options development process and furthermore, influence the Design Principle Evaluation.

### 5.2. Pre-Engagement Activities

5.2.1. A desktop stakeholder mapping exercise was conducted to identify stakeholders that are affected by Bournemouth Airport's current operations and those that may be affected by any changes regarding this ACP. Stakeholders' details were recorded, such as name, organisation, and contact information; this information is securely stored in line with General Data Protection Regulation (GDPR). Stakeholder details were sorted into the following categories:

- Local councils
- Airport Consultative Committee Members
- Environmental and cultural heritage organisations
- Technical stakeholders, such as airports, airlines, NATS En-Route (NERL), military
- Local aviation representatives
- National Air Traffic Management Advisory Committee
- Other relevant stakeholders.

### 5.3. Workshops, Information Sessions, and Surveys

5.3.1. In total, 21 individuals attended the first workshops representing 17 organisations. The local community were represented by Burley Parish Council, Broadstone Forum, Bournemouth, Christchurch and Poole (BCP) Council, Ferndown Town Council, and Longham Residents Association. Other community and business sectors were represented by Bournemouth University and Bournemouth Chamber of Trade & Commerce. Environmental and cultural heritage sectors were represented by New Forest National Park Authority and the National Trust. Participants in the technical group included NATS (NERL), Trax (Southampton), Southampton Airport and Draken EU. The Military was represented by Royal Air Force (RAF)

- Boscombe Down ATC and representing the General Aviation (GA) community were Bath Wilts and North Dorset Gliding Club and Lasham Gliding Society.
- 5.3.2. Whilst the focus group was attended by a good range and number of representatives, Bournemouth Airport acknowledges that greater community engagement should be sought for the next stage of this ACP, for example more residents' associations, interested individuals and members of the GA community.
- 5.3.3. The presentation outlined the options development process. It included the comprehensive list of options and an initial assessment of these options against the DPs established in Stage 1. The presentation can be found on the ACP Portal titled 'Bournemouth Airport Stakeholder Workshop Stage 2a Presentation'.
- 5.3.4. Following the workshops an email was sent to all the Stakeholders on the 23rd of December 2022 asking to provide feedback on the Design Principle Evaluation (DPE) and add additional comments through an online Survey. The responses were requested by Friday 3rd February 2023. A reminder email was sent to all stakeholders on Monday 16th January 2023.
- 5.3.5. A total of 6 responses were received from stakeholders via the online survey and 1 response via email. The online responses were from European Cargo, Draken, NAT's (NERL) the Ministry of Defence (MOD), New Forest National Park and Lasham Gliding Society. The email response was from Southampton Airport.
- 5.3.6. Bournemouth Airport acknowledges that, except for the response from the representative of New Forest National Park, feedback from the non-technical group representing the community has not been forthcoming. The stakeholder engagement team is working on a strategy to improve this for the next stage, as discussed above.
- 5.3.7. The second round of engagement involved a re-engagement survey sent to stakeholders on the 1<sup>st</sup> November 2023 with a deadline of the 23<sup>rd</sup> November, an accompanying presentation named 'ACP Stage 2 Stakeholder Information Session (Re) Engagement'<sup>25</sup>, and an additional information document to assist stakeholders in understanding how options were derived and considerations related to the DPs entitled 'Design Options Development and Considerations'<sup>22</sup>.
- 5.3.8. On the 17<sup>th</sup> November 2023 an Information session was held; this meeting is detailed in Section 2.9 of this document including number of participants.
- 5.3.9. On 7<sup>th</sup> December 2023 neighbouring airports and NATS were invited to a Safety Assurance meeting to discuss safety and connectivity issues regarding the conceptual options. The feedback from this session was recorded in the minutes and can be found on the [ACP Portal](#), the document is titled 'Meeting Minutes BOH Stage 2 Safety Assurance meeting' This feedback was used to inform the IOA.
- 5.3.10. On 8<sup>th</sup> October 2024 an update was sent to stakeholders informing them of the criteria change for the DPE assessment. This presentation can be found on the [ACP Portal](#), the

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<sup>25</sup> Available on the [CAA portal](#)

document is titled 'BOH Stakeholder Update Stage 2 DPE Criteria Change Presentation'. These changes were made as a result of feedback from the CAA to another change sponsor.

## 5.4. Feedback

- 5.4.1. The Survey questions related to the baselines and design options for each runway and orientation. Details of the engagement activities can be found in Section 2.9.
- 5.4.2. A total of twelve options were presented for runway 08; five for the direction North and West, four for East and two for South, see figure 1. A total of thirteen options, or swathes, were presented for runway 26: five for Northwest, three for Northeast, three South and two South East.
- 5.4.3. Where participants did not agree that the DP had been correctly applied, they were asked to provide the reason along with the DP number. These responses can be found in the feedback tables in each section along with the response from Bournemouth Airport.
- 5.4.4. In the first round of engagement there were three responses from the Aviation sector (AV), one from the Military (MI), one representing an environmental organisation (EB), one from General Aviation (GA) and the final respondent (by email) was a neighbouring airport (AP).
- 5.4.5. For the second, a total of nine responses from Local Council (LC), Local Organisation/business (LO), Environmental bodies (EB), Aviation sector (AV) and a further response from a neighbouring airport stating that they had no further comments from the first engagement. One response was discounted as no information was given except to answer yes to the question 'would you like to attend the information session?'. A further response was a duplicate; this was from a local council who completed the survey again upon receipt of further information regarding their locality, provided by the ACP consultant. There were therefore seven useful responses.
- 5.4.6. In the first round of engagement two general questions were posed at the beginning of the survey:
- Do you agree with our options development approach? And;
  - Do you think we have captured all of the available options at this Stage of the process?
- 5.4.7. Of the six respondents five agreed with the first question and EB05 commented 'The 'Options Development Consideration' currently makes no reference to the statutory duty on the CAA to consider impacts on the National Park'. Bournemouth airport agree and have included mention of the National Park (NP) where relevant.
- 5.4.8. Four responded with 'yes' for the second question, one left the field blank and AV03 responded 'NATS has reviewed the swathes with specific reference to departures only. It was unclear from the documents where arrivals would connect. Furthermore NERL would like additional clarification whether swathes are likely to be used in combination i.e. RWY 08 East and South East is the option to have swathe A or B or C or D, could there be two routes one in A and also one in C?' Bournemouth airport has responded stating at this stage in the process both options are a possibility. Depending on the outcome of the evaluations, it may be necessary to have more than one route option from the East and South Easterly

- direction in order to satisfy demand for aircraft arriving from the north, via SAM or arriving from the east, along the south coast. Alternatively, a more central route that would satisfy both requirements would be considered.
- 5.4.9. In the second round of engagement, the general question was: Do you agree with the new baselines and the removal of the North West baseline? Of the eight respondents, seven agreed, 1 replied TBC; this stakeholder replied TBC to all questions and therefore feedback removed from the table. No further feedback was received from this stakeholder for the second round.
- 5.4.10. In addition to the feedback via the surveys, Bournemouth Airport received emails from Southampton Airport in response to both engagement rounds. The feedback from the first round is included in the tables where relevant for the options. The email from the second round stated, 'We have no feedback different to last time but once you are in Stage 3 let's work closely together to understand what your proposed route centrelines, CAS and operating procedures will look like to ensure both airports can operate as independently as possible from one another.'
- 5.4.11. A further response was received from Natural England however the letter stated, '*Natural England is not able to fully assess the potential impacts of this proposal on statutory nature conservation sites or protected landscapes or, provide detailed advice on the application*' and further that it is for the local authority to determine if the proposed changes impact environmental policies.
- 5.4.12. A representative of the Cranborne Chase Area of Outstanding Natural Beauty (CCAONB) sent an email in addition to completing the survey stating that the proposed removal of the northwest design envelope would be welcome as it would avoid overflight of the CCAONB. They further questioned the departures and arrivals in the northeast and offered only partial support if these impact the southeasterly section of the AONB.
- 5.4.13. One stakeholder, a representative of a town council responded by saying they had had no feedback from the survey, and they felt there was insufficient time for this. They also stated that as their town is '*very much on edge of envelope relating to questions*' that this may be the reason for no engagement.
- 5.4.14. NERL provided additional feedback in addition to completing the survey. This included highlighting the importance of the NPs, addressed above. Comments were made regarding the map resolutions in the presentation. This has been resolved where possible in this document. Further comments related to track lengths, NERL suggested that these should be adjusted to show 4000ft and 7000ft estimates for swathes, rather than just circles from the airport. Bournemouth Airport feel that as they are swathes, and as such tracks may be placed anywhere with a swathe, that circles gave a rough estimate of where aircraft may be at each circle. This will be more accurately portrayed at Stage 3 when routes have been defined. Two questions regarding potential errors, Bournemouth Airport confirms that these are not errors; the arrivals for one runway mirror closely the departures from the other.
- 5.4.15. Bournemouth Airport shared a link to NERL's stakeholder engagement representing connectivity to the en route network. NERL subsequently asked for this to be removed as it was not public and may change. Bournemouth Airport removed the link in the supporting documentation.



- 5.4.16. The National Trust was unable to make the information session and requested further information which was provided in addition to a link to the recording of the session.

## 5.5. FASI –(S) and Masterplan Coordination

- 5.5.1. ACOGs role was introduced in Section 1 (1.7). They are an important stakeholder in this ACP. Bournemouth Airport has engaged with them and the other LTMA Airports throughout this ACP process through bilateral, monthly meetings and other regular communications. These include but are not limited to:

Meetings	Date
LTMA Technical coordination group meeting.	26.01.23
	23.03.23
	04.05.23
	25.05.23
	27.07.23
	28.09.23
	26.10.23
	23.11.23
	25.01.24
	27.06.24
ACOG FASI Programme Board.	11.07.24
	12.01.22
	16.03.22
	11.05.22
	13.07.22
	14.09.22
	16.11.22
	11.01.23
	15.03.23
	10.05.23
	19.07.23
	13.09.23
	20.03.24
	22.05.24
	17.07.24
LTMA Workshop.	28.10.21
LTMA Next Steps.	15.06.23
LTMA Programme Update.	13.07.23

Meetings	Date
LTMA Programme Co-ordination Meeting.	09.08.23
LTMA Next Steps.	16.08.23
Taking the Network to the Next Level.	27.04.23
SOU and BOH Indicative interactions technical bilateral	13.3.24
LTMA Step 3 Planning and Methodology	16.11.23
Build 6 Update Bournemouth	04.06.24
Pre Brief on Indicative interactions and activities	13.03.24
Farnborough Stage Two Engagement	04.12.23
Stakeholder Engagement - LTMA First Deployment	16.01.24
	19.01.24
LTMA Deployment Workshop 2	23.05.24
UKADS LTMA Engagement Meeting	08.08.24
LTMA Programme Coordination Group	11.08.24
	13.06.24
	09.05.24
	14.12.23

**Table 17: Meetings**

## 6. Design Principle Evaluation

### 6.1. Overview

- 6.1.1. This Section contains the Detailed Design Principle Evaluation for Bournemouth Airport's FASI(S) Airspace Change Proposal (ACP) and associated stakeholder feedback.
- 6.1.2. A detailed descriptions of the methodology and process applied to this Section can be found in Section 2.12. Section 2.12.2 provides an explanation of the Red, Amber and Green (RAG) score definitions for each DP. In this Section, each option will be assessed against these criteria.
- 6.1.3. Comparison of old and new baselines and options can be found in 'Design Options Development and Considerations' document on the [ACP Portal](#), this document was also sent to stakeholders as an aid for completing the survey feedback form in the second feedback round.
- 6.1.4. The survey textual feedback is presented in a table for each Section. The comments are copied in their entirety with responses to each comment, feedback is summarised at the end of each Section.
- 6.1.5. As there were two stakeholder information sessions and surveys the feedback is presented in two tables. The first information session asked for feedback on each swathe in each design envelope, the feedback is therefore presented in each option Section. Feedback was sought in the second survey and information session on each design envelope, with a note to mention any individual swathe(s), and DP(s), in the feedback response box. This feedback is therefore presented at the beginning of each design envelope.
- 6.1.6. Each feedback table provides comments and states the stakeholder code in the right-hand column. The explanation of these codes can be found in Section 2.11. This is to aid understanding of who made each comment, for example a comment with code beginning AV is a comment made by a member of the aviation community, comments with an EB code were made by a representative of an environmental body.

### 6.2. Northwest Design Envelope Departures 08

- 6.2.1. The Northwest design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.
- 6.2.2. Following the DPE for each Design Envelope, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).

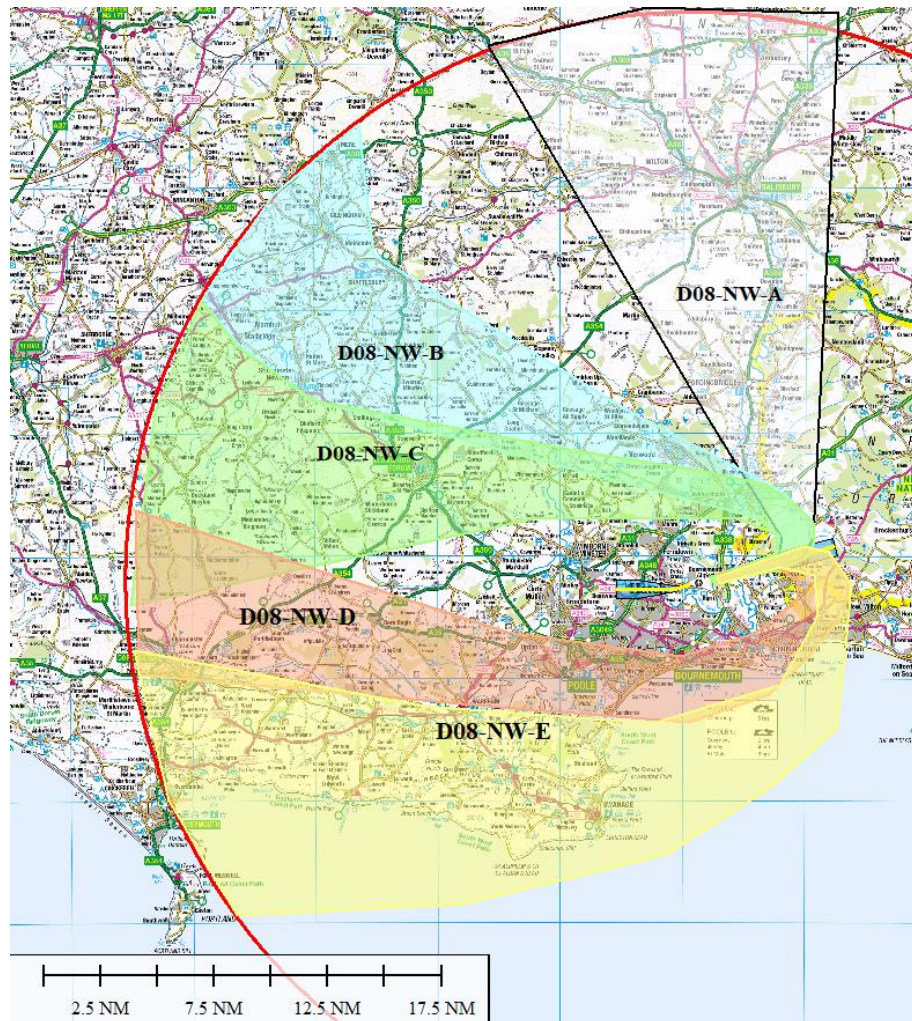


Figure 71: Northwest Design Envelope – 08 Departures

6.2.3. The questions posed for the North West design envelope in the second round were as follows:

1. Do you have any questions about the options?
2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1. A, B and C impact on CCAONB. 2. The AONB overfly appears correct.	Noted	EB08
1 None. 2 Yes.	Noted	LO11



Comment	Response	Stakeholder
1. Swathes D and E would require additional CAS. Swathes A-C would require additional CAS and the use of FUA. DA activity may also apply to swathe B. 2. DA activity may also apply to swathe B.	BOH agree and this has been included in the assessments.	AV12
1. No Comments. 2. Yes	Noted	EB14
1. IF the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular those that operate from RNAS Yeovilton, MOD Boscombe Down and RAF Odiham and Benson. IT could also affect existing MOD Danger Areas. 2. Yes, but wouldn't B and C also require more CAS to contain?	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1. Although there is no NW baseline proposal now, ATC will use this area as and when during certain time periods. 2. Yes.	Yes, this is always a possibility, this is the current situation also.	LC09

**Table 18: Stakeholder feedback design envelope Northwest– November 2023**

6.2.5. Option **D08-NW-A**

**Survey Question**

'Runway 08 – Northwest

Do you think we have correctly applied the Design Principles to swathe **08-NW-A**?

Three stakeholders answered no, two yes and EB05 provided an explanation, see table.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP11 extra track miles departing west.	BOH agree and have adjusted the assessment accordingly.	AV02
No; DP6 There is currently no connectivity to the route network in this direction.	BOH agree and have adjusted the assessment accordingly.	AV03
Yes	Noted	MI04
The assessment of Runway 08 Northwest Option A highlights it would involve overflying a greater proportion of the National Park than options B – E. We would highlight that all 5 options involve the overflying of the National Park to some extent. The of the National Park includes some of the most tranquil areas of the New Forest National Park – see Tranquillity Mapping at Tranquillity mapping - New Forest National Park Authority ( <a href="http://newforestnpa.gov.uk">newforestnpa.gov.uk</a> ) – where impacts would be more noticeable.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description. .	EB05
Yes; It has correctly been identified that three of the proposed routes would require more airspace in areas that would impact the current GA traffic.	Noted	GA06

**Table 19: Stakeholder feedback Northwest design envelope Swathe A - December 2022**

**Full Design Principle Assessment**

D08-NW-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as not met as depending on final track placement, this option could see penetration of danger areas EG D122. Additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown, although the area to the north of the airport is much less densely populated than the area to the south.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to potential increase in track miles meaning this option has the potential to increase CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as not met as additional controlled airspace and amendments to the current FUA would be required with this option, impacting on current GA traffic			

D08-NW-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as this option would increase complexity as there is currently no connectivity to the route network in this direction			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 20: Option D08-NW-A DP Assessment**



6.2.6. Option **D08-NW-B**

**Survey Question**

‘Runway 08 – Northwest

Do you think we have correctly applied the Design Principles to swathe **08-NW-B**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP11 extra track miles west;	BOH agree and have adjusted the assessment accordingly.	AV02
No; DP1 amber - close proximity to DA. DP6 There is currently no connectivity to route network in this direction.	BOH agree and have adjusted the assessment accordingly.	AV03
Yes	Noted	MI04
The assessment of Runway 08 Northwest Option A highlights it would involve overflying a greater proportion of the National Park than options B – E. We would highlight that all 5 options involve the overflying of the National Park to some extent. The North West of the National Park includes some of the most tranquil areas of the New Forest National Park – see Tranquillity Mapping at Tranquillity mapping - New Forest National Park Authority (newforestnpa.gov.uk) – where impacts would be more noticeable.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05

Comment	Response	Stakeholder
Yes; More CAS would be an issue for GA and Gliding, so we would object to the route.	DP6 has been amended to Amber as a result of this feedback.	GA06

**Table 21: Stakeholder feedback Northwest design envelope Swathe B - December 2022**

### Full Design Principle Assessment

D08-NW-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as depending on final track placement, this option could see aircraft operating in close proximity to danger area EG D122. Additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown, although the area to the northwest of the airport is much less densely populated than the area to the south.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions. This route would be reasonably direct for westbound departures so would meet the requirements for this DP.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace and amendments to the current FUA would be required with this option, impacting on current GA traffic			

D08-NW-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as this option would increase complexity as there is currently no connectivity to the route network in this direction.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 22: Option D08-NW-B DP Assessment**

#### 6.2.7. Option **D08-NW-C**

##### Survey Question

‘Runway 08 –



Do you think we have correctly applied the Design Principles to swathe **08-NW-C**?  
If no, please provide the Design Principle number and reason in the free text 'other' field.'

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes	Noted	AV02
No; DP6 - No connectivity to CAS from 7000ft to FL155, or ATS route network.	BOH agree and have adjusted the assessment accordingly.	AV03
Yes	Noted	MI04
The assessment of Runway 08 Northwest Option A highlights it would involve overflying a greater proportion of the National Park than options B – E. We would highlight that all 5 options involve the overflying of the National Park to some extent. The North West of the National Park includes some of the most tranquil areas of the New Forest National Park – see Tranquillity Mapping at Tranquillity mapping - New Forest National Park Authority ( <a href="http://newforestnpa.gov.uk">newforestnpa.gov.uk</a> ) – where impacts would be more noticeable	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes; More CAS would be an issue for GA and Gliding, so we would object to the route,	Any changes to CAS will be carried out in consultation with the GA community.	GA06

**Table 23: Stakeholder feedback Northwest design envelope Swathe C - December 2022**

**Full Design Principle Assessment**

D08-NW-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown, although the area to the northwest of the airport is much less densely populated than the area to the south.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2).  As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions. This route would be reasonably direct for westbound departures so would meet the requirements for this DP.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace and amendments to the current FUA would be required with this option, impacting on current GA traffic			

D08-NW-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as this option would increase complexity as there is currently no connectivity to the route network in this direction..			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 24: Option D08-NW-C DP Assessment**

#### 6.2.8. Option **D08-NW-D**

##### Survey Question

‘Runway 08 – Northwest

Do you think we have correctly applied the Design Principles to swathe **08-NW-D**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP2 increased communities overflown.	BOH agree however DP2 is already assessed as Red to reflect the increased communities.	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The assessment of Runway 08 Northwest Option A highlights it would involve overflying a greater proportion of the National Park than options B – E. We would highlight that all 5 options involve the overflying of the National Park to some extent. The North West of the National Park includes some of the most tranquil areas of the New Forest National Park – see Tranquillity Mapping at Tranquillity mapping - New Forest National Park Authority ( <a href="http://newforestnpa.gov.uk">newforestnpa.gov.uk</a> ) – where impacts would be more noticeable.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes	Noted	GA06

**Table 25: Stakeholder feedback Northwest design envelope Swathe D - December 2022**



**Full Design Principle Assessment**

D08-NW-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as additional controlled airspace may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown. This option would also fly over the densely populated areas of Bournemouth and Poole.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2).  As there are currently no routes departing to the west of the airport there would be an increased noise impact.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions. This route would be reasonably direct for westbound departures so would meet the requirements for this DP.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace would be required with this option, impacting on current GA traffic			

D08-NW-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as this option would increase complexity as there is currently no connectivity to the route network in this direction.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 26: Option D08-NW-D DP Assessment**

#### 6.2.9. Option **D08-NW-E**

##### Survey Question

‘Runway 08 – Northwest

Do you think we have correctly applied the Design Principles to swathe **08-NW-E**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP1- D031,D026 penetration.	BOH agree however DP1 is already assessed as Red to reflect penetration of the DAs.	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The assessment of Runway 08 Northwest Option A highlights it would involve overflying a greater proportion of the National Park than options B – E. We would highlight that all 5 options involve the overflying of the National Park to some extent. The North West of the National Park includes some of the most tranquil areas of the New Forest National Park – see Tranquillity Mapping at Tranquillity mapping - New Forest National Park Authority ( <a href="http://newforestnpa.gov.uk">newforestnpa.gov.uk</a> ) – where impacts would be more noticeable.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes	Noted	GA06

**Table 27: : Stakeholder feedback Northwest design envelope Swathe E - December 2022**

**Full Design Principle Assessment**

D08-NW-E	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as not met as depending on final track placement, this option could see penetration of danger areas D21/D31 Portland and EG D26 Lulworth. Additional controlled airspace may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to potential increase in track miles meaning this option has the potential to increase CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as not met as additional controlled airspace would be required with this option, impacting on current GA traffic			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as this option would increase complexity as there is currently no connectivity to the route network in this direction.			



D08-NW-E	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

Table 28: Option D08-NW-E DP Assessment

## 6.2.10. Summary of Stakeholder Feedback D08 NW

6.2.11. In summary, stakeholders felt that DPE is correctly assessed with regards to tranquillity; most options in this design envelope are assessed as amber due to the fact that all options in this design envelope fly over an AONB (EB08). Stakeholders also highlighted that all of the options also fly over the NP to a greater or lesser extent (EB14), option A having the greatest impact on the NP, and at a greater altitude the AONB; Bournemouth Airport therefore has assessed option A Red due to direct and significant overflight of various tranquil areas important to local communities.

- 6.2.12. Other stakeholders (AV12, MI13, AV12, GA06) highlighted the need for additional CAS in all options, additionally some options (A-C) would require use of FUA, and that option B may impact the DA.
- 6.2.13. Extra track miles was raised as a concern (AV02) for options A and B, and AV03 highlighted the lack of connectivity to the route network for the northwest.
- 6.2.14. AV01 mentioned 'widebody manoeuvring' in relation to DPs 1 (safety) and 8 (technical requirements), Bournemouth Airport feel that it would be more appropriate to investigate this once individual routes have been designed. All swathes have the potential for a viable route, however once these routes have been designed by a by an IFP Designer SME, further engagement with stakeholders will take place.
- 6.2.15. Feedback from the Stakeholder Safety assurance meeting for the Northwest was as follows: *From a network perspective there is no connectivity, the proximity to the SUAs is a challenge, there is no driver from the en-route environment to progress these options. Very little consequence if these are not progressed* <sup>26</sup>.

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<sup>26</sup> See Meeting Minutes BOH Stage 2 Safety Assurance meeting (Annex A)

### 6.3. Northeast Design Envelope Departures 08

- 6.3.1. The Northeast design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.
- 6.3.2. Since engagement with stakeholders in December 2022 this design envelope has changed; the C and D options are now in a new 'East design envelope'. The baseline for this design envelope is B to reflect current operations and procedures. The feedback shown in the tables for December 2022 may therefore seem mislabelled, however Bournemouth Airport have taken steps to ensure the feedback is relevant to the newly named option.
- 6.3.3. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).

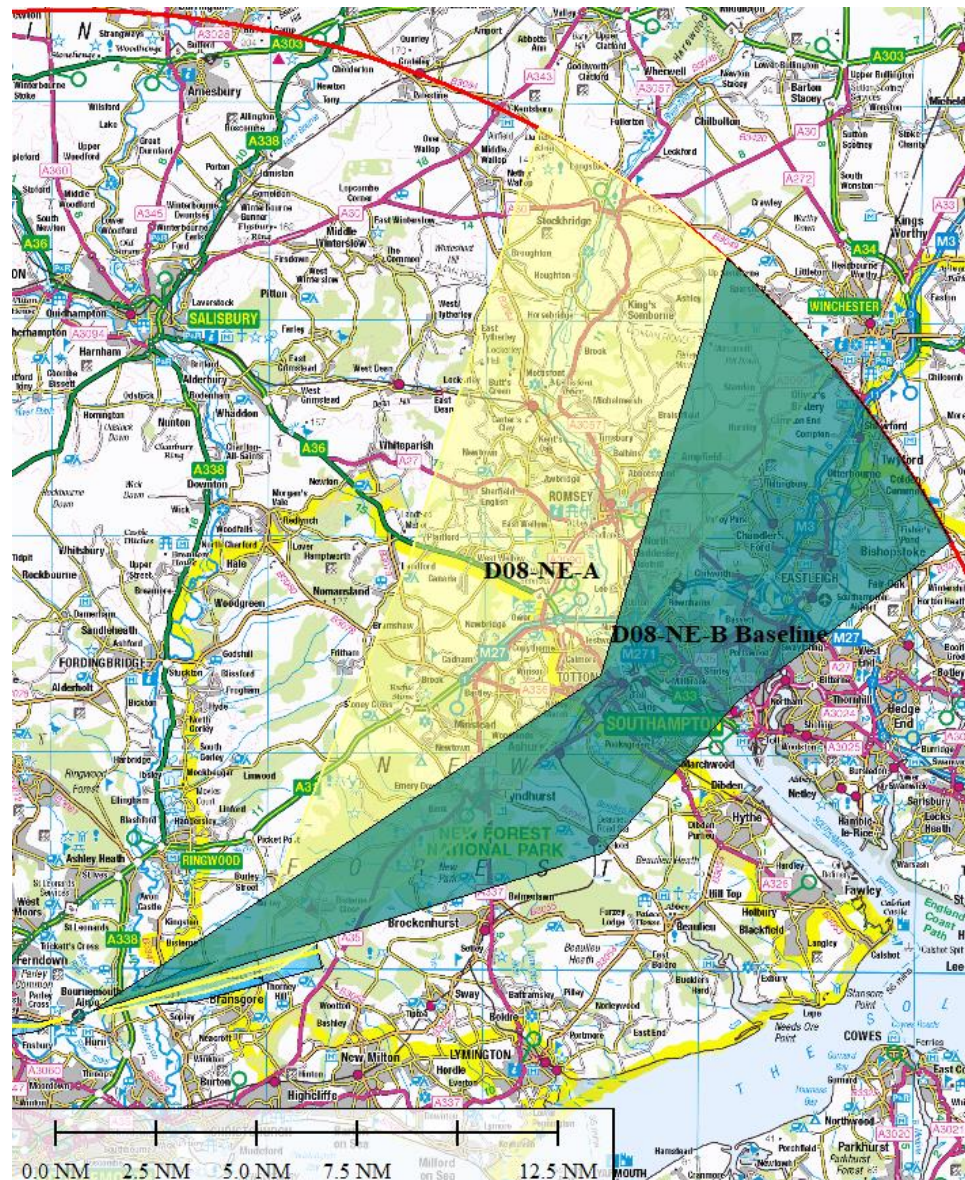


Figure 72: Northeast Design Envelope – D08 Departures

6.3.4. The questions posed for the Northeast design envelope in the second round were as follows:

1. Do you have any questions about the options?
2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1. Flights to and from this direction avoid CCAONB.	BOH agree.	EB08
1. None. 2. Yes.	Noted	LO11



Comment	Response	Stakeholder
1. Swathe A may require additional CAS and amendments to the current FUA. 2. Yes.	BOH agree and have adjusted the assessment to Amber accordingly.	AV12
1. Option D08-NE-A involves overflying of the New Forest National Park below 7,000 feet. Parts of the National Park north of the A31 are in the more tranquil areas of the Park as illustrated at <sup>27</sup> 2. Yes.	The assessment remains Amber to reflect overflight of tranquil areas, further consideration to preferable areas of the NP for routes will be given in stage 3 when routes are more precise.	EB14
1. The only likely impact on MOD users would be if levels of existing controlled airspace were to be lowered. 2. Yes.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1. D08 NE B and A has more departures over Burley and Crow which is not currently happening. This is the New Forest National Park – AONB. Tracks North of the A31 has less settlement areas. Burley is just over 7 miles track miles from the Airport which means they will also be lower overhead. 2. No.	Both options have been assessed as Amber (DP2&3) as the same number of people would be flown over, BOH accept that option A would involve new communities, however not necessarily more people.	LC09

**Table 29: Stakeholder feedback design envelope Northeast– November 2023**

<sup>27</sup> <https://www.newforestnpa.gov.uk/documents/conservation/tranquillity-mapping/>.

6.3.5. Option **D08-NE-A**

**Survey Question**

‘Runway 08 – East

Do you think we have correctly applied the Design Principles to swathe **08-E-A**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes	Noted	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The assessment of Runway 08 East & Southeast Option A highlights it would involve overflying a greater proportion of the New Forest National Park. It should be noted that all four options (A – D) involve the overflying of the New Forest National Park to some extent. The differences between options A - D are therefore to some degree similar in terms of impacts on people’s enjoyment of the tranquillity of the National Park.	The assessment remains Amber to reflect overflight of tranquil areas, This option would overfly a different section but a similar amount of the NP. Further analysis and stakeholder engagement will take place at stage 3.	EB05
No; The option of this route would require more airspace.	BOH agree and have adjusted the assessment to Amber accordingly.	GA06

**Table 30: Stakeholder feedback East design envelope Swathe A - December 2022**

### Full Design Principle Assessment

D08-NE-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today. There would be no increase in the number of people overflown with this option although different communities will be overflown compared to the baseline.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met as the impact of aircraft noise is no different than today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.  This option would see traffic overflying a greater and more tranquil area of the New Forest National Park.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as this option could help to reduce complexity as it moves traffic further north, away from Southampton Airport and LTMA traffic.			

D08-NE-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help improve systemisation as it moves traffic further north, away from Southampton Airport and the congested area surrounding it associated with the LTMA traffic., reducing the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 31: Option D08-NE-A DP Assessment**



6.3.6. Option **D08-NE-B Baseline**

**Survey Question**

‘Runway 08 – East

Do you think we have correctly applied the Design Principles to swathe **08-E-B**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
Yes	Noted	AV01
Yes	Noted	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The assessment of Runway 08 East & Southeast Option A highlights it would involve overflying a greater proportion of the New Forest National Park. It should be noted that all four options (A – D) involve the overflying of the New Forest National Park to some extent. The differences between options A - D are therefore to some degree similar in terms of impacts on people’s enjoyment of the tranquillity of the National Park.	The assessment has been adjusted to Amber to reflect the overflight of the NP. Further analysis and stakeholder engagement will take place at stage 3	EB05
Yes; It looks like this routing remains within the current airspace foot print.	Noted	GA06

Comment	Response	Stakeholder
DP9 - Noting you only have the FRZ depicted and Southampton's routes and airspace is much larger than that, significant potential impacts requiring deconfliction for Option B. If you can enable guaranteed CCO CDO to stay c.FL90 and above over Southampton that would be optimal. DP10- It may be difficult with Option B to develop procedures and agreements to allow truly independent operations.	BOH agree and significant work will need to be carried out to allow independent operations.	AP07

**Table 32: Stakeholder feedback Northeast design envelope Swathe B - December 2022**

### Full Design Principle Assessment

D08-NE-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified..			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met as the impact of aircraft noise is no different than today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			

D08-NE-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as fully met as no new volume of controlled airspace would be required..			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without any additional adverse impact on local communities as the same communities would be flown over.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			

D08-NE-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 33: Option D08-NE-B Baseline DP Assessment**

### 6.3.7. Summary of Stakeholder Feedback D08 NE

- 6.3.8. All aviation, military and GA stakeholders agreed that the DPs had been correctly applied for this design envelope (AV01, AV02, AV03, MI04 & GA06). Stakeholders highlighted Option A involves overflying a greater portion of the NP below 7,000 feet (EB05, EB14) and avoids the AONB (EB08). Other comments related to the possibility of additional or lowered CAS (AV12, MI13, GA06), although it was acknowledged that option B remains within the current airspace; this is the baseline option and so therefore the current situation.
- 6.3.9. It was noted that the options are similar in terms of the number of people overflown (EB05).
- 6.3.10. AV01 mentioned ‘widebody manoeuvring’ in relation to DPs 1 (safety) and 8 (technical requirements), Bournemouth Airport feel that it would be more appropriate to investigate this once individual routes have been designed. All swathes have the potential for a viable route, however once these routes have been designed by a by an IFP Designer SME, further engagement with stakeholders will take place.
- 6.3.11. One stakeholder noted that there could be significant potential impacts for Option B requiring deconfliction and that DP10 may be difficult for this option with regards to developing procedures and agreements to allow for independence.
- 6.3.12. Feedback from the Stakeholder Safety assurance meeting for the Northeast was as follows: *Option A takes aircraft out of CAS. Unless FUA is a reality. Option A will be progressed. From a safety perspective no issues. Option may also benefit SOU. Also considered deconfliction with LHR.*



## 6.4. East Design Envelope Departures 08

6.4.1. The East design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.

6.4.2. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).



Figure 73: East Design Envelope – D08 Departures

6.4.3. The questions posed for the East design envelope in the second round were as follows:

1. Do you have any questions about the options?
2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1. This would avoid CCAONB. Flight to and from this direction avoid CCAONB.	BOH agree	EB08
1. None. 2 Yes.	Noted	LO11
1. No comments. 2. IOW has an AONB which is not referenced.	Qualitative assessment has been amended to include mention of IOW AONB	AV12
1. Forrest National Park, which includes some of the more tranquil areas of the National Park – see <sup>28</sup> 2 Yes.	The assessment has been adjusted to Amber to reflect the overflight of the NP. Further analysis and stakeholder engagement will take place at stage 3	EB14
1. The only likely impact on MOD users would be if new controlled airspace was to be introduced, or levels of existing airspace lowered. It is difficult to make further assessment without greater detail. 2 Yes, on the assumption that more controlled airspace is not required.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1. No. 2 Yes.	Noted	LC09

**Table 34: Stakeholder feedback design envelope East– November 2023**

<sup>28</sup> <https://www.newforestnpa.gov.uk/documents/conservation/tranquillity-mapping/>.

#### 6.4.4. Option D08-E-C Baseline

##### Survey Question

‘Runway 08 – East

Do you think we have correctly applied the Design Principles to swathe **08-E-C**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
Yes	Noted	AV01
Yes	Noted	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The assessment of Runway 08 East & Southeast Option A highlights it would involve overflying a greater proportion of the New Forest National Park. It should be noted that all four options (A – D) involve the overflying of the New Forest National Park to some extent. The differences between options A - D are therefore to some degree similar in terms of impacts on people’s enjoyment of the tranquillity of the National Park.	The assessment has been adjusted to Amber to reflect the overflight of the NP. Further analysis and stakeholder engagement will take place at stage 3	EB05
Yes	Noted	GA06

**Table 35: Stakeholder feedback East design envelope Swathe C - December 2022**

##### Full Design Principle Assessment

D08-E-C Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			

D08-E-C Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met as the impact of aircraft noise is no different than today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as fully met as no new volume of controlled airspace would be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			



D08-E-C Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without any additional adverse impact on local communities as the same communities would be flown over.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 36: Option D08-E-C Baseline DP Assessment**

6.4.5. Option **D08-E-D**

**Survey Question**

‘Runway 08 – East

Do you think we have correctly applied the Design Principles to swathe **08-E-D**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP2 Greater overflight of communities.	BOH agree and have adjusted the assessment to Red to reflect the additional communities.	AV02
Why is swathe D not designed to be even more over water to avoid communities overflown?	Swathes were designed with a number of objectives (DPs) in mind. DP2 & 3 have been reassessed as Red to reflect this feedback. additional communities	AV03
Yes	Noted	MI04
The assessment of Runway 08 East & Southeast Option A highlights it would involve overflying a greater proportion of the New Forest National Park. It should be noted that all four options (A – D) involve the overflying of the New Forest National Park to some extent. The differences between options A - D are therefore to some degree similar in terms of impacts on people’s enjoyment of the tranquillity of the National Park.	The assessment has been adjusted to Amber to reflect the overflight of the NP. Further analysis and stakeholder engagement will take place at stage 3	EB05

Comment	Response	Stakeholder
Yes	Noted	GA06

**Table 37: Stakeholder feedback East design envelope Swathe D - December 2022**

**Full Design Principle Assessment**

D08-E-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2).			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as fully met as no new volume of controlled airspace would be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as this option could help to reduce complexity as it moves traffic further South, away from Southampton Airport and LTMA traffic.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

D08-E-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help to improve systemisation as it moves traffic further South, away from Southampton Airport and LTMA traffic, reducing the need for coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

Table 38: Option D08-E-D DP Assessment

## 6.4.6. Summary of Stakeholder Feedback D08 E

- 6.4.7. Most stakeholders agreed that the DPs had been correctly applied to option C, further EB05 highlighted that, for options C compared to A and B in the previous envelope, are to some degree similar in terms of impacts on enjoyment of the tranquillity of the National Park, option D would avoid overflying the southern coastal area of the New Forest National Park, which includes some of the more tranquil areas of the National Park. However it was pointed out that the Isle of Wight AONB had not been referenced and therefore the DP not correctly applied to option D (AV12), Bournemouth Airport agree and have amended the assessment to include mention of the AONB.
- 6.4.8. Many stakeholders did not agree that the DPs had been correctly applied to option D. One questioned the technical capability of larger aircraft within this option. Another pointed out this would involve greater overflight of more communities, Bournemouth Airport agree and have amended the assessment to Red accordingly. MI13 Agree with the DP provided more CAS was not required, otherwise there may be an impact on MOD activities.
- 6.4.9. Feedback from the Stakeholder Safety assurance meeting for the East was as follows: *No comments in terms of safety, D flies over the Isle of Wight, may interact with inbound flows. If there is a vertical or lateral solution, then it shouldn't be discounted. Option will be taken forward to stage 3.*



## 6.5. South Design Envelope Departures 08

- 6.5.1. The South design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.
- 6.5.2. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).

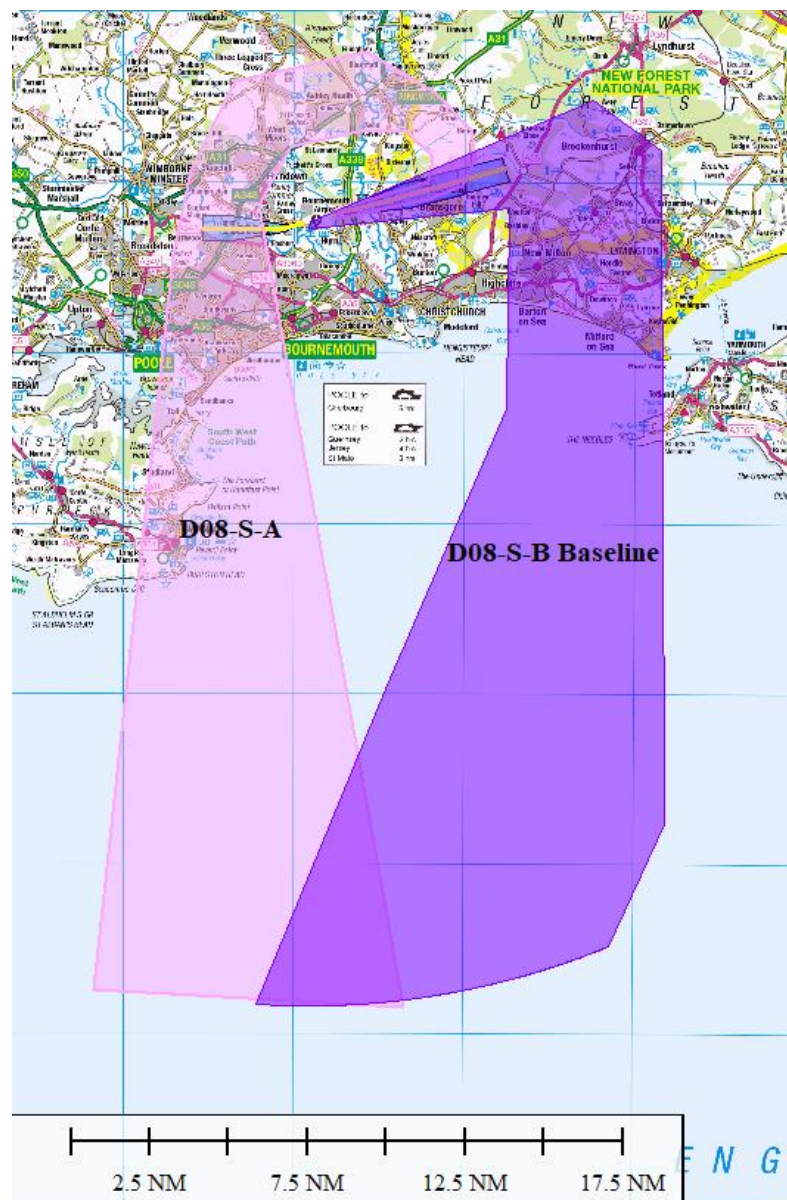


Figure 74: South Design Envelope – D08 Departures

6.5.3. The questions posed for the South design envelope in the second round were as follows:

1. Do you have any questions about the options?
2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1 These largely avoid CCAONB although A appears to have the capacity to loop over this AONB. 2. See 13 above.	The assessment has been adjusted to Amber to reflect the potential overflight of the AONB. Further analysis and stakeholder engagement will take place at stage 3	EB08
1 None. 2. Yes.	Noted	LO11
1 Swathe A may require additional CAS at certain levels, western edge is proximate to DA031. DP4 does not consider New Forest National Park.	BOH agree and have adjusted the assessment to Amber accordingly. the NP has been included in the qualitative assessment description.	AV12
1 No. 2. Yes.	Noted	EB14
1 Could affect the South Coast RN Danger Areas, depending on routes and the levels that the areas are active to. 2. Yes.	This is reflected in the qualitative assessment and DP Safety is assessed as Red.	MI13
1 I do not agree with aircraft turning left doing a wraparound to the south D08 S-A. More Fuel consumption (less green), over more populated areas and more noise to more residents. 2. Yes	BOH agree, DPs 2, 3, 5 & 11 have been adjusted Red to reflect this feedback.	LC09

**Table 39: Stakeholder feedback design envelope South– November 2023**

6.5.4. Option **D08-S-A**

**Survey Question**

‘Runway 08 – South

Do you think we have correctly applied the Design Principles to swathe **08-S-A**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP11 increased track miles DP1 DO31 infringement	DP1 & 5 are assessed as Red to reflect these issues.	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The options identified for Runway 08 South all involve overflying of the New Forest National Park (currently this is only identified against Design Principle 4 (Tranquillity) for Option B). In our view Options A and B involve a similar degree of overflying of the National Park and so for consistency the assessment should highlight this against Design Principle 4 for both options.	BOH agree and have adjusted the assessment accordingly.	EB05
Yes	Noted	GA06

**Table 40: Stakeholder feedback South design envelope Swathe A - December 2022**

**Full Design Principle Assessment**

D08-S-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as depending on final route placements, this option could penetrate danger area EG D31 Portland.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2).			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP. This option would see a much smaller portion of the New Forest National Park overflown. Depending on final track placement..			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to potential increase in track miles meaning this option has the potential to increase CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as not met as significant additional volumes of CAS are required to contain the proposed option.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as will result in changes to the controlled airspace configuration.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			



D08-S-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help to improve systemisation by routing traffic to the west of Bournemouth Airport, away from Southampton Airport and LTMA traffic, reducing the need for coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 41: Option D08-S-A DP Assessment**

6.5.5. Option **D08-S-B**

**Survey Question**

‘Runway 08 – South

Do you think we have correctly applied the Design Principles to swathe **08-S-B**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes	Noted	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The options identified for Runway 08 South all involve overflying of the New Forest National Park (currently this is only identified against Design Principle 4 (Tranquillity) for Option B). In our view Options A and B involve a similar degree of overflying of the National Park and so for consistency the assessment should highlight this against Design Principle 4 for both options.	The assessment has been adjusted to Amber to reflect the overflight of the NP. Further analysis and stakeholder engagement will take place at stage 3	EB05
Yes	Noted	GA06
DP9- With Option B, inbound and outbound routes may need careful coordination.	Deconfliction of arrivals and departures is not assessed at this stage, it will be considered in stage 3.	AP07

**Table 42: Stakeholder feedback South design envelope Swathe B - December 2022**

**Full Design Principle Assessment**

D08-S-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified..			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2).			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as fully met as no new volume of controlled airspace would be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels..			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

D08-S-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without any additional adverse impact on local communities as the same communities would be flown over.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 43: Option D08-S-B Baseline DP Assessment**

## 6.5.6. Summary of Stakeholder feedback D08 S

- 6.5.7. This design envelope was previously presented with three options, the feedback for Option C is used to inform option B in the new design envelope, it should be noted that the feedback was the same for the previous option B and C as the current option B, this is because it covers the same area. The feedback has been removed from this section and can be found in Annex B for transparency.
- 6.5.8. AV01 mentioned ‘widebody manoeuvring’ in relation to DPs 1 (safety) and 8 (technical requirements), Bournemouth Airport feel that it would be more appropriate to investigate this once individual routes have been designed. All swathes have the potential for a viable route, however once these routes have been designed by a by an IFP Designer SME, further engagement with stakeholders will take place.
- 6.5.9. Most stakeholders agreed that the DPs have been correctly assessed. Others felt that option A would increase track miles (AV2), and potentially use more fuel and fly over more people

(LC09). Additionally concern was raised that option A would require more CAS (AV12) as a result of proximity to the DA (MI13).

- 6.5.10. It was further noted that the NP would continue to be overflowed to a similar extent and as such DP4 should be highlighted for both options.
- 6.5.11. Feedback from the Stakeholder Safety Assurance meeting for the South was as follows: *CAS issue and the hold is in the overhead then fuel burn is an issue. Also issue with D031. If CAS volume is addressed then there will not be a safety reason to not progress this issue. This option could be progressed.*



## 6.6. Northwest Design Envelope Arrivals 08

- 6.6.1. The Northwest design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.
- 6.6.2. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).

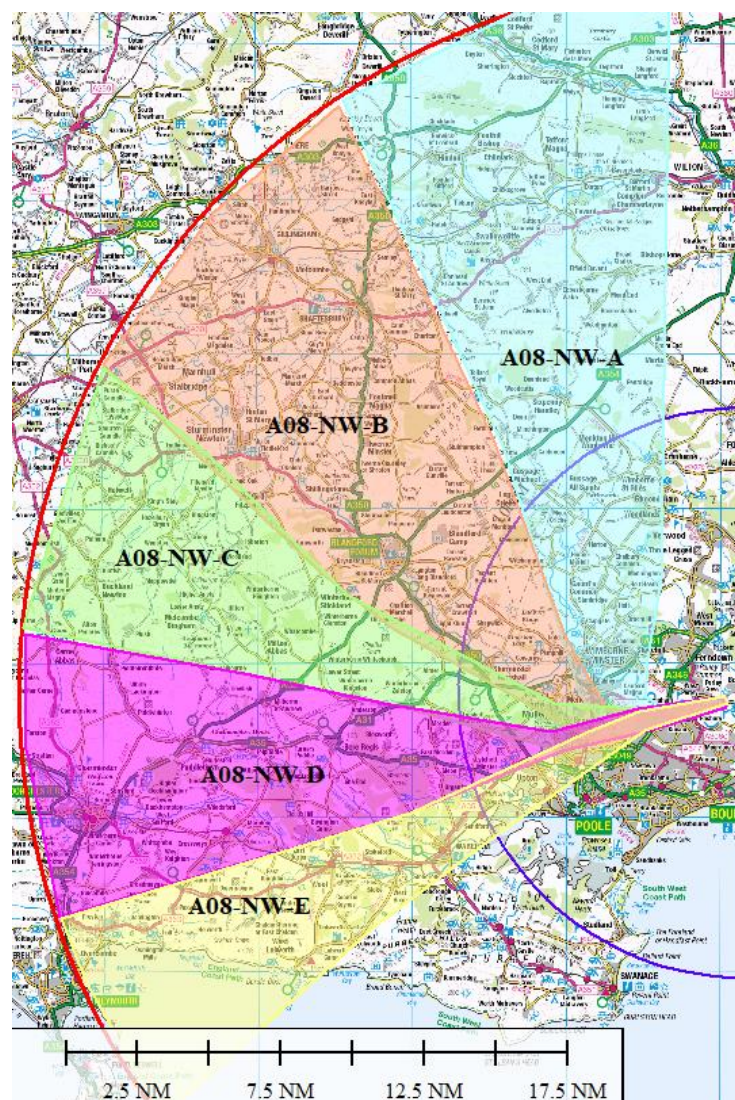


Figure 75: Northwest Design Envelope – 08 Arrivals

- 6.6.3. The questions posed for the North West design envelope in the second round were as follows:
1. Do you have any questions about the options?
  2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1. See previous comments. Actually, rather than potentially, overfly CCAONB. (A, B and C impact on CCAONB.)	Assessed as Amber due to the potential overflight of some sensitive areas, such as AONBs and/or NP.	EB14
1 No. 2 Yes.	Noted	LO11
1 Would have been helpful to display this on a current airspace map to consider the adjacent SUAs. All options will require additional CAS. 2 No; DP6 would need additional CAS.	BOH agree and have adjusted the assessment accordingly. Options over ENR charts can be found in the Section 4.	AV12
1 No. 2 Yes.	Noted	EB14
1 If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular those that operate from RNAS Yeovilton, MOD Boscombe Down and RAF Odiham and Benson. It could also affect existing MOD Danger Areas. 2 Yes, under the assumption that no further controlled airspace is required.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1 No. 2 Yes.	Noted	LC09

**Table 44: Stakeholder feedback design envelope Northwest– November 2023**

6.6.4. Option **A08-NW-A**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP11- additional track miles departing West. DP1 -Salisbury Danger areas.	DP1 & 11 have been assessed as Red. DP 11 as a result of this feedback.	AV02
Yes; DP4 incorrectly labelled, should be Cranborne Chase	Noted, qualitative assessment wording changed to reflect AONB and/or NP.	AV03
Yes	Noted	MI04
No; The Design Principles assessment for the five options North West highlight potential impacts on the New Forest National Park for Options A and B against DP4. However, none of the options presented (A – E) involve overflying of the New Forest National Park and we therefore suggest this is corrected – the Cranborne Chase & West Wiltshire Downs AONB would be overflown under Options A & B for example.	Noted, qualitative assessment wording changed to reflect AONB and/or NP.	EB05
Yes	Noted	GA06

**Table 45: Stakeholder feedback Northwest design envelope Swathe A - December 2022**

**Full Design Principle Assessment**

A08-NW-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as not met as depending on final track placement, this option could see penetration of danger areas EG D122. Additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown, although the area to the north of the airport is much less densely populated than the area to the south.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to potential increase in track miles meaning this option has the potential to increase CO2 emissions. This option would mean extra track miles for any westbound departures.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as not met as additional controlled airspace and amendments to the current FUA would be required with this option, impacting on current GA traffic			

A08-NW-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as will result in changes to the controlled airspace configuration. This option would increase complexity as there is currently no connectivity to the route network in this direction.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 46: Option A08-NW-A DP Assessment**



6.6.5. Option **A08-NW-B**

Comment	Response	Stakeholder
Yes.	Noted	AV01
No; DP11- additional track miles departing West. DP1 - Salisbury Danger areas.	DP1 & 11 have been assessed as Red. DP 11 as a result of this feedback.	AV02
DP4 incorrectly labelled, should be Cranborne Chase.	Noted, qualitative assessment wording changed to reflect AONB and/or NP.	AV03
Yes.	Noted	MI04
No; The Design Principles assessment for the five options for Runway 26 North West highlight potential impacts on the New Forest National Park for Options A and B against DP4. However, none of the options presented (A – E) involve overflying of the New Forest National Park and we therefore suggest this is corrected – the Cranborne Chase & West Wiltshire Downs AONB would be overflowed under Options A & B for example.	Noted, qualitative assessment wording changed to reflect AONB and/or NP.	EB05
Yes.	Noted	GA06

**Table 47: Stakeholder feedback South design envelope Swathe B - December 2022**

**Full Design Principle Assessment**

A08-NW-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as not met as depending on final track placement, this option could see penetration of danger areas EG D122. Additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown, although the area to the north of the airport is much less densely populated than the area to the south.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to potential increase in track miles meaning this option has the potential to increase CO2 emissions. This option would mean extra track miles for any westbound departures.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as not met as significant additional controlled airspace would be required to contain the option. Additional controlled airspace and amendments to the current FUA would be required with this option, impacting on current GA traffic			

A08-NW-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as will result in changes to the controlled airspace configuration. This option would increase complexity as there is currently no connectivity to the route network in this direction.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 48: Option A08-NW-B DP Assessment**

6.6.6. Option **A08-NW-C**

Comment	Response	Stakeholder
Yes.	Noted	AV01
Yes.	Noted	AV02
No; DP6 Amber - may require additional CAS.	DP6 has remained Amber as additional CAS requirement is recognised.	AV03
Yes	Noted	MI04
No; The Design Principles assessment for the five options for Runway 26 North West highlight potential impacts on the New Forest National Park for Options A and B against DP4. However, none of the options presented (A – E) involve overflying of the New Forest National Park and we therefore suggest this is corrected – the Cranborne Chase & West Wiltshire Downs AONB would be overflown under Options A & B for example.	Noted, qualitative assessment wording changed to reflect AONB and/or NP.	EB05
Yes.	Noted	GA06

**Table 49: Stakeholder feedback South design envelope Swathe C - December 2022**

**Full Design Principle Assessment**

A08-NW-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			

A08-NW-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown, although the area to the north of the airport is much less densely populated than the area to the south.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required. Additional controlled airspace and amendments to the current FUA may be required with this option, impacting on current GA traffic			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration. This option would increase complexity as there is currently no connectivity to the route network in this direction			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			



A08-NW-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal, and potentially improved, however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 50: Option A08-NW-C DP Assessment**

6.6.7. Option **A08-NW-D**

Comment	Response	Stakeholder
Yes.	Noted	AV01
Yes.	Noted	AV02
No; DP6 Amber - may require additional CAS.		AV03
Yes.	Noted	MI04
No; The Design Principles assessment for the five options for Runway 26 North West highlight potential impacts on the New Forest National Park for Options A and B against DP4. However, none of the options presented (A – E) involve overflying of the New Forest National Park and we therefore suggest this is corrected – the Cranborne Chase & West Wiltshire Downs AONB would be overflowed under Options A & B for example.	Noted, qualitative assessment wording changed to reflect AONB and/or NP.	EB05
Yes.	Noted	GA06

Table 51: Stakeholder feedback South design envelope Swathe D - December 2022

**Full Design Principle Assessment**

A08-NW-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as additional controlled airspace may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			

A08-NW-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace would be required with this option, impacting on current GA traffic			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration. This option would increase complexity as there is currently no connectivity to the route network in this direction.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

A08-NW-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal, and potentially improved, however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 52: Option A08-NW-D DP Assessment**

6.6.8. Option **A08-NW-E**

Comment	Response	Stakeholder
Yes.	Noted	AV01
Yes.	Noted	AV02
No; DP1 Red- Beyond the orange line the route would extend directly into the Portland Danger Area.	BOH agree and have adjusted the assessment accordingly.	AV03
Yes.	Noted	MI04
No; The Design Principles assessment for the five options for North West highlight potential impacts on the New Forest National Park for Options.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes.	Noted	GA06

**Table 53: Stakeholder feedback South design envelope Swathe E - December 2022**

**Full Design Principle Assessment**

A08-NW-E	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as not met as depending on final track placement, this option could see penetration of danger areas D21/D31 Portland and EG D26 Lulworth. Additional controlled airspace may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown.			



A08-NW-E	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to potential increase in track miles meaning this option has the potential to increase CO2 emissions. This option would mean extra track miles for any northbound departures.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace would be required with this option, impacting on current GA traffic			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration. This option would increase complexity as there is currently no connectivity to the route network in this direction.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			

A08-NW-E	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

Table 54: Option A08-NW-E DP Assessment

## 6.6.9. Summary of Stakeholder Feedback A08 NW

- 6.6.9.1. Some stakeholders agreed that the DPs were correctly assessed for the design envelope (LO11, EB14, MI13 & LC09). Others further commented that these options would require additional CAS (AV12 & MI13).
- 6.6.10. AV01 mentioned ‘widebody manoeuvring’ in relation to DPs 1 (safety) and 8 (technical requirements), Bournemouth Airport feel that it would be more appropriate to investigate this once individual routes have been designed. All swathes have the potential for a viable route, however once these routes have been designed by a by an IFP Designer SME, further engagement with stakeholders will take place.
- 6.6.10.1. Concerns were raised with regards to these options, particularly A B and C flying over the AONB. As the assessment criteria has changed these options have now been assessed as Red.
- 6.6.10.2. Two stakeholders highlighted an incorrect labelling of the NP in the presentation of this design envelope, this has now been corrected (EB05, AV03).
- 6.6.10.3. For options A and B it was suggested that these would require additional track miles and could be a safety issue due to the DA (AV02).
- 6.6.11. Feedback from the Stakeholder Safety Assurance meeting for the Northwest was as follows: *From a network perspective there is no connectivity, the proximity to the SUAs is a challenge, there is no driver from the en-route environment to progress these options. Very little consequence if these are not progressed.*

## 6.7. Northeast Design Envelope Arrivals 08

6.7.1. The Northeast design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.

6.7.2. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).

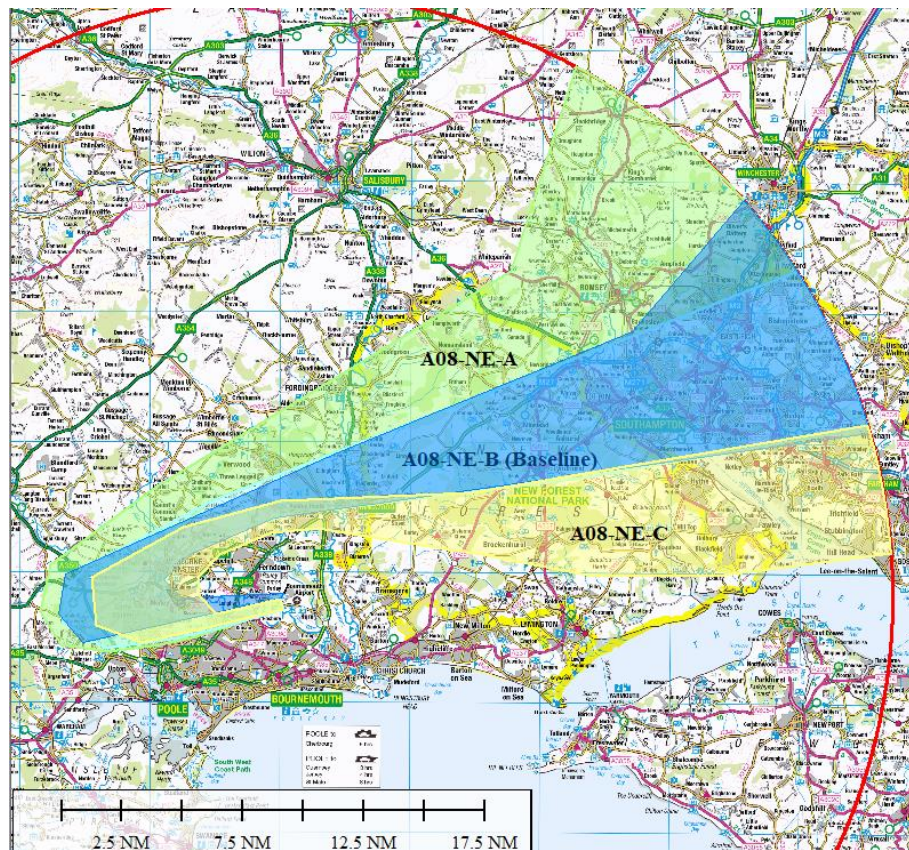


Figure 76: Northeast Design Envelope – 08 Arrivals

6.7.3. The questions posed for the Northeast design envelope in the second round were as follows:

1. Do you have any questions about the options?
2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1. Arrival / departure still appear to involve turning over this AONB.	BOH agree and have adjusted the assessment accordingly.	EB08
1 No. 2 Yes.	Noted	LO11
1. No comments. 2. DP4: overflight of New Forest National Park not considered.	BOH agree and have adjusted the assessment accordingly.	AV12
1. No. 2. Arrival options 26-NE-A and 26-NE-C should both highlight overflying of the New Forest National Park below 7,000 feet for arrivals under design principle 4.	BOH agree and have adjusted the assessment accordingly. Options B & C have been assessed as Amber and option A as Red due to previous feedback noting this is a more tranquil part of the NP.	EB14
1. If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular those that operate from RNAS Yeovilton, MOD Boscombe Down and RAF Odiham and Benson. 2. Yes.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1. Look at what kind of final approach track is required. A08 NE A should be more east rather than NE. 2. No.	The final approach track is unlikely to change from the current situation. Options are swathes at this stage.	LC09

**Table 55: Stakeholder feedback design envelope Northeast– November 2023**

6.7.4. Option **A08-NE-A**

Comment	Response	Stakeholder
Yes.	Noted	AV01
Yes.	Noted	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Options A, B and C for Runway 26 North East involve overflying of the New Forest National Park, although aircraft would be at a higher altitude for this runway than for the options presented for Runway 08. The three options presented are all likely to have similar impacts on the Design Principle 4 and people's enjoyment of the tranquillity of the New Forest.	BOH agree and have adjusted the assessment accordingly.	EB05
Yes; More CAS would be an issue for GA and Gliding, so we would object to this route.	DP6 remains Amber to reflect the requirement for additional CAS.	GA06

Table 56: Stakeholder feedback Northeast design envelope Swathe A - December 2022

**Full Design Principle Assessment**

A08-NE-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			



A08-NE-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met as the impact of aircraft noise is no different than today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as not met due to direct and significant overflight of some sensitive areas, such as AONBs and/or NP. This option would see traffic overflying a different and more tranquil area of the New Forest National Park, a larger portion of the CCAONB could also be overflowed.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe..			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as this option could help to reduce complexity as it moves traffic further north, away from Southampton Airport and the congested area around SAM			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help improve systemisation as it moves traffic further north, away from Southampton Airport and the congested area surrounding it associated with the LTMA traffic, reducing the need for coordination.			

A08-NE-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 57: Option A08-NE-A DP Assessment**

6.7.5. Option **A08-NE-B Baseline**

Comment	Response	Stakeholder
Yes.	Noted	AV01
Yes.	Noted	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Options A, B and C for Runway 26 North East involve overflying of the New Forest National Park, although aircraft would be at a higher altitude for this runway than for the options presented for Runway 08. The three options presented are all likely to have similar impacts on the Design Principle 4 and people's enjoyment of the tranquillity of the New Forest.	BOH agree and have adjusted the assessment accordingly.	EB05
Yes; More CAS would be an issue for GA and Gliding, so we would object to the route.	DP6 remains Amber to reflect the requirement for additional CAS.	GA06
DP9/DP10- if you progress Option B and you can enable guaranteed CCO CDO to stay c.FL90 and above over Southampton that would be optimal. This should be easier when Bournemouth is on easterlies.	BOH agree and this is reflected in the assessment.	AP07

**Table 58: Stakeholder feedback Northeast design envelope Swathe B - December 2022**

**Full Design Principle Assessment**

A08-NE-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			

A08-NE-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met due to the same number of people being overflown as today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as fully met as no new volume of controlled airspace would be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels..			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination.			

A08-NE-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without any additional adverse impact on local communities as the same communities would be flown over.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 59: Option A08-NE-B Baseline DP Assessment**



6.7.6. Option **A08-NE-C**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes	Noted	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Options A, B and C for Runway 26 North East involve overflying of the New Forest National Park, although aircraft would be at a higher altitude for this runway than for the options presented for Runway 08. The three options presented are all likely to have similar impacts on the Design Principle 4 and people's enjoyment of the tranquillity of the New Forest.	BOH agree and have adjusted the assessment accordingly.	EB05
Yes; More CAS would be an issue for GA and Gliding, so we would object to the route.	DP6 has been amended to Amber as a result of this feedback.	GA06

**Table 60: Stakeholder feedback Northeast design envelope Swathe A - December 2022**

**Full Design Principle Assessment**

A08-NE-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			

A08-NE-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met due to the same number of people being overflown as today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			

A08-NE-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

Table 61: Option A08-NE-C DP Assessment

### 6.7.7. Summary of Stakeholder Feedback A08 NE

- 6.7.8. Stakeholders highlighted the importance of the considering the impact on the NP and AONBs (EB05, EB08, AV12 & EB14). Bournemouth Airport have amended the RAG score following feedback and again for options B and A following the criteria change. Option A has been assessed as Red due to the overflight of the AONB.
- 6.7.9. Although the DPs were assessed as correctly applied, the MOD highlighted that If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular those that operate from RNAS Yeovilton, MOD Boscombe Down and RAF Odiham and Benson (MI04, MI13), this comment was with specific reference to options A and C in the first engagement round (MI04). Bournemouth Airport confirm that any changes to CAS will be carried out in consultation with the MOD and GA community.
- 6.7.10. A local council stakeholder queried the final approach for option A, stating that it should be more east rather than northeast. The final approach track is unlikely to change from the current situation. Options are swathes at this stage.
- 6.7.11. The GA community were concerned that all options may require CAS which may be an issue for the gliding community and as such objected to the options. AV01 mentioned ‘widebody manoeuvring’ in relation to DPs 1 (safety) and 8 (technical requirements), Bournemouth Airport feel that it would be more appropriate to investigate this once individual routes have been designed. All swathes have the potential for a viable route, however once these routes have been designed by a by an IFP Designer SME, further engagement with stakeholders will take place.
- 6.7.12. Additional comment from SOU stated that if Option B (baseline) is progressed and Bournemouth Airport can enable guaranteed CCO CDO to stay c.FL90 and above over Southampton that would be optimal, and furthermore that this should be easier when Bournemouth is on easterlies. Bournemouth Airport agree and this is reflected in the assessment.

6.7.13. Feedback from the Stakeholder Safety Assurance meeting for the Northeast was as follows: *Option A – FUA and CAS issues again. Not a safety issue. Option C, low level interaction with SOU. From a network level no issues. Climb gradients realistically achieved, up to 5.5 gradient is acceptable for most aircraft, above this airlines need to be engaged with. All options in this design envelope will be progressed.*

## 6.8. Southeast Design Envelope Arrivals 08

6.8.1. The Southeast design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.

6.8.2. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).

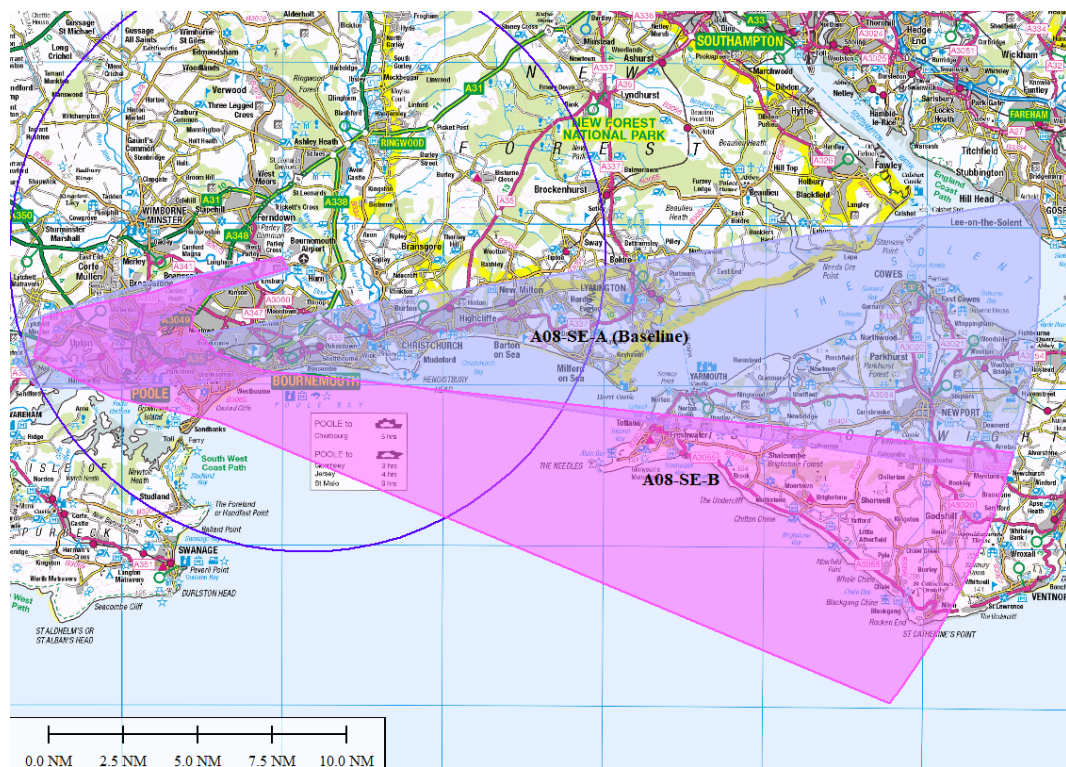


Figure 77: Southeast Design Envelope – 08 Arrivals

6.8.3. The questions posed for the Southeast design envelope in the second round were as follows:

1. Do you have any questions about the options?
2. Do you think the Design Principles have been correctly applied for the options?

Comment		Stakeholder
1 Appear to involve turns west of the airport but in these cases they appear to be south of CCAONB.	DP6 has been amended to Amber as a result of this feedback.	EB08
1 No. 2 Yes.	Noted	LO11
1 No comments. 2 DP4: no mention of National Park or AONB.	NP has not been included in the qualitative assessment for DP4.	AV12
1 No. 2 Yes.	Noted	EB14
1 If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular Royal Navy rotary wing aircraft. 2 Yes.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1 No. 2 Yes.	Noted	LC09

**Table 62: Stakeholder feedback design envelope Southeast– November 2023**



**6.8.4. Option A08-SE-A Baseline**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes.	Noted	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Option A South East would involve directing aircraft over the southern coastal area of the National Park (as well as parts of the Isle of Wight AONB). This area is identified as including some of the more tranquil areas of the National Park in the Tranquillity Mapping. Option A also involves overflying more populated areas along the coast (including Christchurch, New Milton and Lymington) compared to Option B, but this is not captured in the current assessment information.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description	EB05
Yes.	Noted	GA06
Low impact for Southampton especially if you can guarantee CCO/CDO above FL90	BOH agree and this is reflected in the assessment.	AP07

**Table 63: Stakeholder feedback Southeast design envelope Swathe C - December 2022**

**Full Design Principle Assessment**

A08-SE-A Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met due to the same number of people being overflown as today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required..			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

A08-SE-A Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without any additional adverse impact on local communities as the same communities would be flown over.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 64: Option A08-SE-A Baseline DP Assessment**

6.8.5. Option **A08-SE-B**

Comment	Response	Stakeholder
Yes.	Noted	AV01
Yes.	Noted	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Option A South East would involve directing aircraft over the southern coastal area of the National Park (as well as parts of the Isle of Wight AONB). This area is identified as including some of the more tranquil areas of the National Park in the Tranquillity Mapping. Option A also involves overflying more populated areas along the coast (including Christchurch, New Milton and Lymington) compared to Option B, but this is not captured in the current assessment information.	The assessment is changed to Amber to reflect overflight of tranquil areas, however this option (B) does not fly over the NP. BOH disagree that option B would fly over more populated areas. Using Population Centroid data (see IOA for more information) option B overflies significantly fewer communities than the baseline (A).	EB05
Low impact for Southampton especially if you can guarantee CCO/CDO above FL90	BOH agree and this is reflected in the assessment.	GA06

Table 65: Stakeholder feedback Southeast design envelope Swathe D - December 2022

**Full Design Principle Assessment**

A08-SE-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as fully met as the number of people overflown has the potential to be reduced. . There would be a much lower population density overflown at higher altitudes.			

A08-SE-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as fully met as the number of people overflown has the potential to be reduced. There would be a much lower population density overflown at higher altitudes.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required depending on final route placements within this swathe.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help improve systemisation as it moves traffic further south, away from Southampton Airport and LTMA traffic, reducing the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged.			



A08-SE-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without an adverse impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 66: Option A08-SE-B DP Assessment**

## 6.8.6. Summary of Stakeholder Feedback A08 SE

- 6.8.7. Stakeholders commented on the impact on the NPs and AONBs. Option C would fly over the NP and parts of the IoW AONB (EB05, EB08, AV12). BOH agree and have adjusted the DPE accordingly.
- 6.8.8. MOD agreed that the DPs have been correctly applied, however commented that If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular Royal Navy rotary wing aircraft (MI13). Bournemouth Airport confirm that any changes to CAS will be carried out in consultation with the MOD and GA community.
- 6.8.9. AV01 mentioned ‘widebody manoeuvring’ in relation to DPs 1 (safety) and 8 (technical requirements), Bournemouth Airport feel that it would be more appropriate to investigate this once individual routes have been designed. All swathes have the potential for a viable route, however once these routes have been designed by a by an IFP Designer SME, further engagement with stakeholders will take place.
- 6.8.10. Feedback from the Stakeholder Safety Assurance meeting for the Southeast was as follows: *Option B is a strange orientation against the DA. This is the main consideration. If arrivals come from a south-westerly position, then this could be progressed.*

## 6.9. South Design Envelope Arrivals 08

- 6.9.1. The South design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.
- 6.9.2. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).



Figure 78: South Design Envelope – 08 Arrivals

6.9.3. The questions posed for the South design envelope in the second round were as follows:

1. Do you have any questions about the options?
2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1 & 2 See above 29. (These largely avoid CCAONB although A appears to have the capacity to loop over this AONB.)	The assessment has been adjusted to Amber to reflect the potential overflight of the AONB. Further analysis and stakeholder engagement will take place at stage 3	EB08
1. No. 2. Yes.	Noted	LO11
1. No comments. 2. Yes.	Noted	AV12
1. No. 2. No.	Noted	EB14

Comment	Response	Stakeholder
<p>1. If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular Royal Navy aircraft. It could also affect existing MOD Danger Areas.</p> <p>2. Yes.</p>	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
<p>1. Again, wrap around approaches need more careful consideration.</p> <p>2. Yes.</p>	BOH agree and this is reflected in the assessment.	LC09

**Table 67: Stakeholder feedback design envelope South – November 2023**

6.9.4. Option **A08-S-A**

Comment	Response	Stakeholder
Yes.	Noted	AV01
No; DP11-extra track miles,DP2 increased overflight.	DP2 already assessed as Red due to overflight, DP11 changed to Red due to feedback.	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Option A for Runway 26 South would involve overflying parts of the south west of the National Park, yet this is not identified against Design Principle 4 in the assessment. Instead, the Option A assessment refers to the overflying of Moors Valley Country Park, which is not within a National Park or AONB and should not be afforded the same level of consideration as the National Park according to paragraph B76 of CAP 1616. Our view is that Option A would impact on the National Park and should therefore be highlighted in the assessment.	BOH agree and have adjusted the assessment accordingly, the NP has been included in the qualitative assessment description.	EB05
Yes; Design option 26-S-A should be a non-starter due to the track miles, extra airspace and that there are better options available.	DP 5 & 11 have been assessed as Red due to extra track miles.	GA06
DP9/DP10- Staying west of Lymington could/would be optimal.	Options are presented as swathes at this stage, further in the process when the options are refined to routes, this will be considered.	AP07

**Table 68: Stakeholder feedback South design envelope Swathe A - December 2022**

**Full Design Principle Assessment**

A08-S-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as not met as penetrates EG D036 Portsmouth			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	This option would overfly more communities due to the wrap around.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). This option would overfly more communities due to the wrap around.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as not met due to direct and significant overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to the significant increase in track miles meaning this option has the potential to increase CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as fully met as no new volume of controlled airspace would be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration. This option is likely to contribute to an increase in complexity, as the airspace to the east of Bournemouth Airport sees more traffic than to the west.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			



A08-S-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination due to the wrap around creating a significantly longer route and taking traffic to the east of Bournemouth Airport in closer proximity to Southampton Airport and LTMA traffic.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged. This option would provide limited opportunity to establish independence from Southampton Airport and Solent Radar.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 69: Option A08-S-A DP Assessment**

6.9.5. Option **A08-S-B Baseline**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes	Noted	AV02
No; DP6 Amber - may need additional CAS to the west to prevent aircraft leaving CAS as they pass 5500ft.	BOH agree and this has been included in the assessment.	AV03
Yes.	Noted	MI04
Option A for Runway 26 South would involve overflying parts of the south west of the National Park, yet this is not identified against Design Principle 4 in the assessment. Instead the Option A assessment refers to the overflying of Moors Valley Country Park, which is not within a National Park or AONB and should not be afforded the same level of consideration as the National Park according to paragraph B76 of CAP 1616. Our view is that Option A would impact on the National Park and should therefore be highlighted in the assessment.	BOH agree and have adjusted the assessment accordingly, the NP has been included in the qualitative assessment description.	EB05
Yes.	Noted	GA06

**Table 70: Stakeholder feedback South design envelope Swathe B - December 2022**

**Full Design Principle Assessment**

A08-S-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met due to the same number of people being overflown as today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

A08-S-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged. This option would provide limited opportunity to establish independence from Southampton Airport and Solent Radar.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without any additional adverse impact on local communities as the same communities would be flown over.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 71: Option A08-S-B Baseline DP Assessment**

6.9.6. Option **A08-S-C**

Comment	Response	Stakeholder
Yes	Noted	AV01
Yes.	Noted	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Option A for Runway 26 South would involve overflying parts of the south west of the National Park, yet this is not identified against Design Principle 4 in the assessment. Instead the Option A assessment refers to the overflying of Moors Valley Country Park, which is not within a National Park or AONB and should not be afforded the same level of consideration as the National Park according to paragraph B76 of CAP 1616. Our view is that Option A would impact on the National Park and should therefore be highlighted in the assessment.	BOH agree and have adjusted the assessment accordingly, the NP has been included in the qualitative assessment description.	EB05
Yes; More CAS would be an issue for GA and Gliding(Dorset Gliding Club), so we would object to the route.	BOH agree however DP6 is already assessed as Amber to reflect the increased CAS requirement.	GA06

**Table 72: Stakeholder feedback South design envelope Swathe C - December 2022**

**Full Design Principle Assessment**

A08-S-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as depending on final track placement, this option could see penetration of danger areas - EG D31 Portland and EG D26 Lulworth.			



A08-S-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased. This option would overfly more and different communities at lower level.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2).			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions. Possible benefit due to more direct route to the south.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help improve systemisation as it moves traffic further to the west of Bournemouth Airport which sees less operational traffic and could reduce the need for tactical coordination.			

A08-S-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal, and potentially improved, however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

Table 73: Option A08-S-C DP Assessment

### 6.9.7. Summary of Stakeholder Feedback A08 S

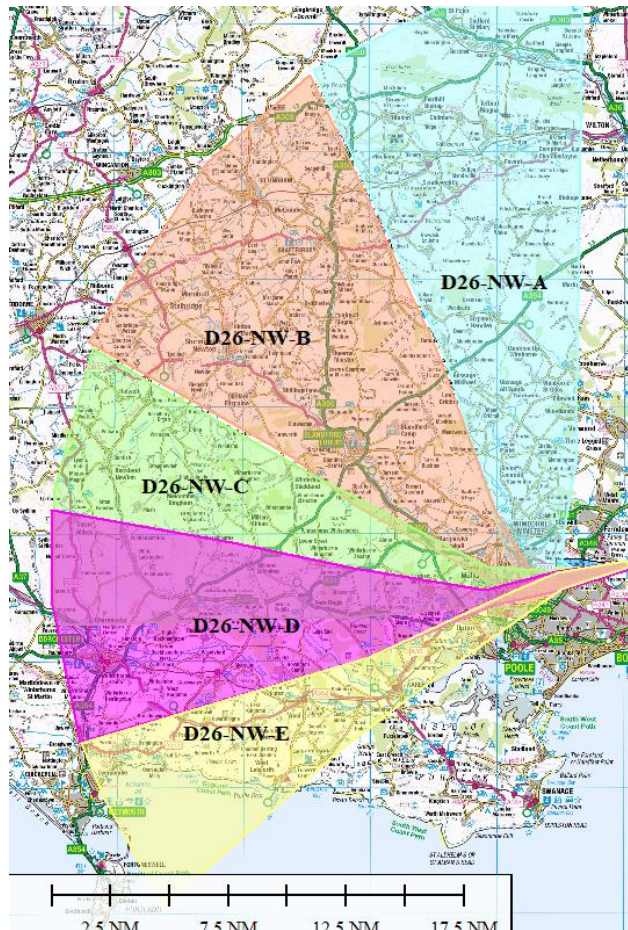
- 6.9.8. Stakeholders commented that the options largely avoid the AONBs, however all have the capacity to loop over the AONBs (EB08). It was also highlighted that Option A overflies the southern part of the NP and this was not mentioned in the DP assessment, Bournemouth Airport accepts this and have amended the assessment to include mention of the NP and have adjusted the RAG score to Red.
- 6.9.9. The MOD commented that if the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular Royal Navy aircraft. It could also affect existing MOD Danger Areas (MI13). Bournemouth Airport confirm that any changes to CAS will be carried out in consultation with the MOD and GA community.
- 6.9.10. Two stakeholders pointed out that for option A there would be additional track miles (GA06, AV02). Another warned that wrap around options should be given careful consideration (LC09).
- 6.9.11. Feedback from the Stakeholder Safety Assurance meeting for the South was as follows: *Option C same applies as earlier with the departure of 26. Option will probably rule itself out as is probably not achievable. Also issues with C regarding the DA.*

### 6.10. Northwest Design Envelope Departures 26

- 6.10.1. The Northwest design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of

this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.

- 6.10.2. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).



**Figure 79: Northwest Design Envelope – D26 Departures**

- 6.10.3. The questions posed for the Northwest design envelope in the second round were as follows:
1. Do you have any questions about the options?
  2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1. It is unclear whether this diagram proposes continued overflying of CCAONB in sectors A, B, and C. If that is the case then CCAONB Partnership cannot unlimited flying over the AONB as that would conflict with a key characteristic of this AONB, tranquillity. The routes actually, rather than potentially, overfly CCAONB.;	Assessed as Amber due to the potential overflight of some sensitive areas, such as AONBs and/or NP.	EB08
1. No. 2 Yes.	Noted	LO11
1. Would have been helpful to display this on the current airspace map to consider the adjacent SUAs. All options will require additional CAS. 2 No; DP6 additional CAS not referenced.	BOH agree and have adjusted the assessment accordingly. Options over ENR charts can be found in the Section 4.	AV12
1. No. 2 Yes.	Noted	EB14
1. If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular those that operate from NAS Yeovilton, MOD Boscombe Down and RAF Odiham and Benson. It could also affect existing MOD Danger Areas.  2 Yes, under the assumption that there is no more controlled airspace required.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1. No. 2 Yes	Noted	LC09

**Table 74: Stakeholder feedback design envelope Northwest– November 2023**

6.10.4. Option **D26-NW-A**

**Survey Question**

‘Runway 26 – Northwest

Do you think we have correctly applied the Design Principles to swathe **26-NW-A**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP11- additional track miles departing West. DP1 -Salisbury Danger areas.	BOH agree and have adjusted the assessment accordingly.	AV02
Yes; DP4 incorrectly labelled, should be Cranborne Chase	Label has been corrected to reflect AONB.	AV03
Yes	Noted	MI04
No; The Design Principles assessment for the five options for Runway 26 North West highlight potential impacts on the New Forest National Park for Options A and B against DP4. However, none of the options presented (A – E) involve overflying of the New Forest National Park and we therefore suggest this is corrected – the Cranborne Chase & West Wiltshire Downs AONB would be overflowed under Options A & B for example.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes	Noted	GA06

**Table 75: Stakeholder feedback Northwest design envelope Swathe A - December 2022**



**Full Design Principle Assessment**

D26-NW-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as not met as depending on final track placement, this option could see penetration of danger areas EG D122. Additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown, although the area to the north of the airport is much less densely populated than the area to the south.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to potential increase in track miles meaning this option has the potential to increase CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as not met as additional controlled airspace and amendments to the current FUA would be required with this option, impacting on current GA traffic			

D26-NW-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as will result in changes to the controlled airspace configuration. This option would increase complexity as there is currently no connectivity to the route network in this direction.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 76: Option D26-NW-A DP Assessment**

6.10.5. Option **D26-NW-B**

**Survey Question**

‘Runway 26 – Northwest

Do you think we have correctly applied the Design Principles to swathe **26-NW-B**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
Yes.	Noted	AV01
No; DP11- additional track miles departing West. DP1 - Salisbury Danger areas.	BOH agree and have adjusted the assessment accordingly.	AV02
DP4 incorrectly labelled, should be Cranborne Chase.	Noted, qualitative assessment wording changed to reflect AONB and/or NP.	AV03
Yes.	Noted	MI04
No; The Design Principles assessment for the five options for Runway 26 North West highlight potential impacts on the New Forest National Park for Options A and B against DP4. However, none of the options presented (A – E) involve overflying of the New Forest National Park and we therefore suggest this is corrected – the Cranborne Chase & West Wiltshire Downs AONB would be overflown under Options A & B for example.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes.	Noted	GA06

**Table 77: Stakeholder feedback Northwest design envelope Swathe B - December 2022**

**Full Design Principle Assessment**

D26-NW-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as not met as depending on final track placement, this option could see penetration of danger areas EG D122. Additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown, although the area to the north of the airport is much less densely populated than the area to the south.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to potential increase in track miles meaning this option has the potential to increase CO2 emissions. This option would mean extra track miles for any westbound departures.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as not met as significant additional controlled airspace would be required to contain the option. Additional controlled airspace and amendments to the current FUA would be required with this option, impacting on current GA traffic			

D26-NW-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as will result in changes to the controlled airspace configuration. This option would increase complexity as there is currently no connectivity to the route network in this direction.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 78: Option D26-NW-B DP Assessment**



6.10.6. Option **D26-NW-C**

**Survey Question**

'Runway 26 – Northwest

Do you think we have correctly applied the Design Principles to swathe **26-NW-C**?

If no, please provide the Design Principle number and reason in the free text 'other' field.'

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
Yes.	Noted	AV01
Yes.	Noted	AV02
No; DP6 Amber - may require additional CAS.	BOH agree and this has been included in the assessment of DP6.	AV03
Yes	Noted	MI04
No; The Design Principles assessment for the five options for Runway 26 North West highlight potential impacts on the New Forest National Park for Options A and B against DP4. However, none of the options presented (A – E) involve overflying of the New Forest National Park and we therefore suggest this is corrected – the Cranborne Chase & West Wiltshire Downs AONB would be overflowed under Options A & B for example.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes.	Noted	GA06

**Table 79: Stakeholder feedback Northwest design envelope Swathe C - December 2022**

**Full Design Principle Assessment**

D26-NW-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions. This route would be reasonably direct for westbound departures so would meet the requirements for this DP.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required. Additional controlled airspace and amendments to the current FUA may be required with this option, impacting on current GA traffic			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration.			

D26-NW-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal, and potentially improved, however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

Table 80: Option D26-NW-C DP Assessment

6.10.7. Option **D26-NW-D**

**Survey Question**

'Runway 26 – Northwest

Do you think we have correctly applied the Design Principles to swathe **26-NW-D**?

If no, please provide the Design Principle number and reason in the free text 'other' field.'

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
Yes.	Noted	AV01
Yes.	Noted	AV02
No; DP6 Amber - may require additional CAS.	BOH agree and this has been included in the assessment of DP6.	AV03
Yes.	Noted	MI04
No; The Design Principles assessment for the five options for Runway 26 North West highlight potential impacts on the New Forest National Park for Options A and B against DP4. However, none of the options presented (A – E) involve overflying of the New Forest National Park and we therefore suggest this is corrected – the Cranborne Chase & West Wiltshire Downs AONB would be overflowed under Options A & B for example.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes.	Noted	GA06

**Table 81: Stakeholder feedback Northwest design envelope Swathe D - December 2022**

**Full Design Principle Assessment**

D26-NW-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as additional controlled airspace may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions. This route would be reasonably direct for westbound departures so would meet the requirements for this DP.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace would be required with this option, impacting on current GA traffic			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration. This option would increase complexity as there is currently no connectivity to the route network in this direction.			



D26-NW-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal, and potentially improved, however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 82: Option D26-NW-D DP Assessment**

6.10.8. Option **D26-NW-E**

**Survey Question**

'Runway 26 – Northwest

Do you think we have correctly applied the Design Principles to swathe **26-NW-E**?

If no, please provide the Design Principle number and reason in the free text 'other' field.'

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
Yes.	Noted	AV01
Yes.	Noted	AV02
No; DP1 Red- Beyond the orange line the route would extend directly into the Portland Danger Area.	BOH agree and have adjusted the assessment accordingly.	AV03
Yes.	Noted	MI04
No; The Design Principles assessment for the five options for Runway 26 North West highlight potential impacts on the New Forest National Park for Options.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes.	Noted	GA06

**Table 83: Stakeholder feedback Northwest design envelope Swathe E - December 2022**

**Full Design Principle Assessment**

D26-NW-E	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as not met as depending on final track placement, this option could see penetration of danger areas D21/D31 Portland and EG D26 Lulworth. Additional controlled airspace may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased. As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to potential increase in track miles meaning this option has the potential to increase CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace would be required with this option, impacting on current GA traffic			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration. This option would increase complexity as there is currently no connectivity to the route network in this direction.			

D26-NW-E	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

Table 84: Option D26-NW-E DP Assessment

### 6.10.9. Summary of Stakeholder feedback D26 NW

- 6.10.10. Some stakeholders agreed that the DPs were correctly assessed for the design envelope (LO11, EB14, MI13 & LC09). Others further commented that these options would require additional CAS (AV12 & MI13).
- 6.10.11. AV01 mentioned ‘widebody manoeuvring’ in relation to DPs 1 (safety) and 8 (technical requirements), Bournemouth Airport feel that it would be more appropriate to investigate this once individual routes have been designed. All swathes have the potential for a viable route, however once these routes have been designed by a by an IFP Designer SME, further engagement with stakeholders will take place.

- 6.10.12. Concerns were raised with regards to these options, particularly A B and C flying over the AONB. As the assessment criteria has changed these options have now been assessed as Red.
- 6.10.13. Two stakeholders highlighted an incorrect labelling of the NP in the presentation of this design envelope, this has now been corrected (EB05, AV03).
- 6.10.14. For options A and B it was suggested that these would require additional track miles and could be a safety issue due to the DA (AV02).
- 6.10.15. Feedback from the Stakeholder Safety Assurance meeting for the Northwest was as follows:  
*From a network perspective there is no connectivity, the proximity to the SUAs is a challenge, there is no driver from the en-route environment to progress these options. Very little consequence if these are not progressed.*

## 6.11. East Design Envelope Departures 26

- 6.11.1. Options A and C were formerly on the Northeast envelope, options D and E were formally in the Southeast envelope. This envelope has been merged to form one East envelope. Option A in the former SE envelope is now option D in the new East envelope, and Option B from the former SE envelope is now option E in the new East envelope. Option B from the former NE envelope is now option C (there is no option B in this design envelope). The feedback has been carefully managed to ensure the correct feedback is examined for the correct option.
- 6.11.2. The swathes for the East design envelope were presented to stakeholders (note 6.11.2) at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.
- 6.11.3. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).



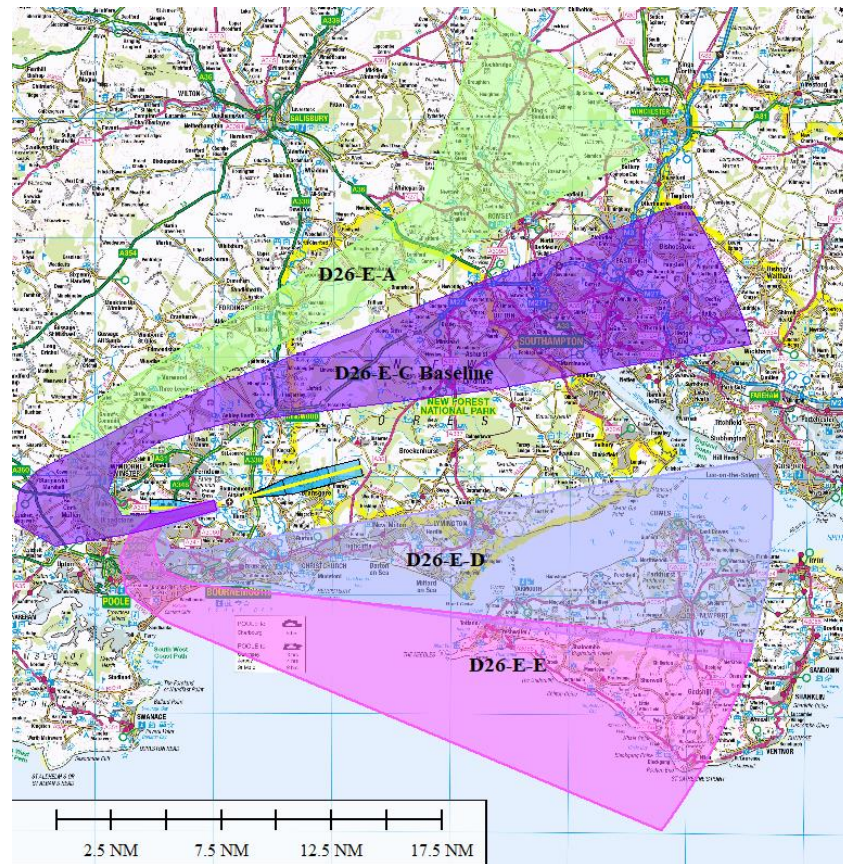


Figure 80: East Design Envelope – D26 Departures

6.11.4. The questions posed for the East design envelope in the second round were as follows:

1. Do you have any questions about the options?
2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1. There still appear to be overflights of CCAONB in the turning areas west of the airport.	BOH agree and have adjusted the assessment accordingly.	EB08
1. None. 2. Yes	Noted	LO11
1. General Comment: Use of White to highlight a swathe make it challenging to interpret to the maps. 2 No; with no assessment criteria this is difficult to assess.	There is no white in this design envelope, however there was a swathe from another design envelope visible in the images presented to stakeholders, is has been removed for clarity.	AV12

Comment	Response	Stakeholder
1. Given the degree of overflying of the New Forest National Park below 7,000 feet under various options and so consideration of impacts under design principle 4 will be important. Option 26-E-D also involves overflying of the New Forest National Park and this should be recorded alongside overflying of the AONB and nature conservation designations.	BOH agree, the NP has been included in the qualitative assessment description. The assessment has been changed to Amber, except for A (Red) to reflect overflight of tranquil areas. Option A is assessed as Red due to previous feedback noting this is a more tranquil part of the NP	EB14
1. If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular those that operate from RNAS Yeovilton, MOD Boscombe Down and RAF Odiham and Benson. 2 Yes.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1. See above comment. 2 Yes.	Noted	LC09

**Table 85: Stakeholder feedback design envelope East– November 2023**

6.11.5. Option **D26-E-A**

**Survey Question**

'Runway 26 – Northeast

Do you think we have correctly applied the Design Principles to swathe **26-NE-A**?

If no, please provide the Design Principle number and reason in the free text 'other' field.'

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
Yes.	Noted	AV01
Yes.	Noted	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Options A, B and C for Runway 26 North East involve overflying of the New Forest National Park, although aircraft would be at a higher altitude for this runway than for the options presented for Runway 08. The three options presented are all likely to have similar impacts on the Design Principle 4 and people's enjoyment of the tranquillity of the New Forest.	BOH agree and have adjusted the assessment accordingly.	EB05
Yes; More CAS would be an issue for GA and Gliding, so we would object to this route.	BOH agree and this is reflected in the assessment. Objection is noted.	GA06

**Table 86: Stakeholder feedback East design envelope Swathe A - December 2022**

**Full Design Principle Assessment**

D26-E-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today. There would be no increase in the number of people overflown however the communities overflown would be different with this option from the baseline option.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met due to the same number of people being overflown as today..			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as not met due to direct and significant overflight of some sensitive areas, such as AONBs and/or NP. This option would see traffic overflying a different and more tranquil area of the New Forest National Park, a larger portion of the CCAONB could also be overflown.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as this option could help to reduce complexity as it moves traffic further north, away from Southampton Airport and the congested area around SAM.			

D26-E-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help improve systemisation as it moves traffic further north, away from Southampton Airport and the congested area surrounding it associated with the LTMA traffic, reducing the need for coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

Table 87: Option D26-E-A DP Assessment



**6.11.6. Option D26-E-C Baseline**

**Survey Question**

‘Runway 26 – Northeast (now East)

Do you think we have correctly applied the Design Principles to swathe **26-NE-C**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes	Noted	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Options A, B and C for Runway 26 North East involve overflying of the New Forest National Park, although aircraft would be at a higher altitude for this runway than for the options presented for Runway 08. The three options presented are all likely to have similar impacts on the Design Principle 4 and people’s enjoyment of the tranquillity of the New Forest.	BOH agree and have adjusted the assessment accordingly.	EB05
Yes; More CAS would be an issue for GA and Gliding, so we would object to the route.	BOH agree and this is reflected in the assessment. Objection is noted.	GA06

**Table 88: Stakeholder feedback East design envelope Swathe C - December 2022**

**Full Design Principle Assessment**

D26-E-C Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met due to the same number of people being overflown as today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as fully met as no new volume of controlled airspace would be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

D26-E-C Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination..			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without any additional adverse impact on local communities as the same communities would be flown over.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 89: Option D26-E-C Baseline DP Assessment**

Comment	Response	Stakeholder
There still appear to be overflights of CCAONB in the turning areas west of the airport.	BOH agree and have adjusted the assessment accordingly.	EB08
General comment: Use of White to highlight a swathe make it challenging to interpret to the maps. With no assessment criteria this is difficult to assess.	Noted.	AV12

Comment	Response	Stakeholder
Given the degree of overflying of the New Forest National Park below 7,000 feet under various options and so consideration of impacts under design principle 4 will be important. Option 26-E-D also involves overflying of the New Forest National Park and this should be recorded alongside overflying of the AONB and nature conservation designations.	BOH agree and have adjusted the assessment accordingly.	EB14
If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular those that operate from RNAS Yeovilton, MOD Boscombe Down and RAF Odiham and Benson.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
DP9/DP10- f you progress Option B <sup>29</sup> and you can enable guaranteed CCO CDO to stay c.FL90 and above over Southampton that would be optimal. This should be easier when Bournemouth is on easterlies.	BOH agree and this is reflected in the assessment.	AP07

**Table 90: Stakeholder feedback East design envelope Swathe D - December 2022**

<sup>29</sup> The area in question now refers to option C.

**6.11.7. Option D26-E-D**

**Survey Question**

‘Runway 26 – Southeast

Do you think we have correctly applied the Design Principles to swathe **26-SE-A? (now 26-E-D)**

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes.	Noted	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Option A for Runway 26 South East would involve directing aircraft over the southern coastal area of the National Park (as well as parts of the Isle of Wight AONB). This area is identified as including some of the more tranquil areas of the National Park in the Tranquillity Mapping. Option A also involves overflying more populated areas along the coast (including Christchurch, New Milton and Lymington) compared to Option B, but this is not captured in the current assessment information.	The assessment changed to Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes.	Noted	GA06
Low impact for Southampton especially if you can guarantee CCO/CDO above FL90	BOH agree and this is reflected in the assessment.	AP07

**Table 91: Stakeholder feedback East design envelope Swathe D - December 2022**



**Full Design Principle Assessment**

D26-E-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased. This option would overfly more and different communities due to the left turn out on departure.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). This option would overfly more and different communities due to the left turn out on departure having a greater impact on noise.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP. This option would see traffic overflying a smaller area of the New Forest National Park than current operations.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels. This option could help to reduce complexity as it moves traffic further south, away from Southampton Airport and LTMA traffic.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

D26-E-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help improve systemisation as it moves traffic further south, away from Southampton Airport and LTMA traffic, reducing the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 92: Option D26-E-D DP Assessment**

6.11.8. Option **D26-E-E**

**Survey Question**

'Runway 26 – Southeast

Do you think we have correctly applied the Design Principles to swathe **26-SE-B?** (now **26-E-E**)  
If no, please provide the Design Principle number and reason in the free text 'other' field.'

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
Yes.	Noted	AV01
Yes.	Noted	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Option A for Runway 26 South East would involve directing aircraft over the southern coastal area of the National Park (as well as parts of the Isle of Wight AONB). This area is identified as including some of the more tranquil areas of the National Park in the Tranquillity Mapping. Option A also involves overflying more populated areas along the coast (including Christchurch, New Milton and Lymington) compared to Option B ( <i>now E</i> ), but this is not captured in the current assessment information.	The assessment has changed Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Low impact for Southampton especially if you can guarantee CCO/CDO above FL90	BOH agree and this is reflected in the assessment.	GA06

**Table 93: Stakeholder feedback East design envelope Swathe E - December 2022**

**Full Design Principle Assessment**

D26-E-E	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as this option would route outside controlled airspace and interact with the Portsmouth DAs.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased. This option would overfly more and different communities due to the left turn out on departure.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). This option would overfly more and different communities due to the left turn out on departure having a greater impact on noise.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP. Although, this option would see a decrease in impact to sites of tranquillity. The New Forest National Park would no longer be overflown. The IoW could see an increase but traffic is expected to be at much higher altitudes.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required depending on final route placements within this swathe.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels. This option could help to reduce complexity as it moves traffic further south, away from Southampton Airport and LTMA traffic.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

D26-E-E	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help improve systemisation as it moves traffic further south, away from Southampton Airport and LTMA traffic, reducing the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 94: Option D26-E-E DP Assessment**

### 6.11.9. Summary of Stakeholder feedback D26 E

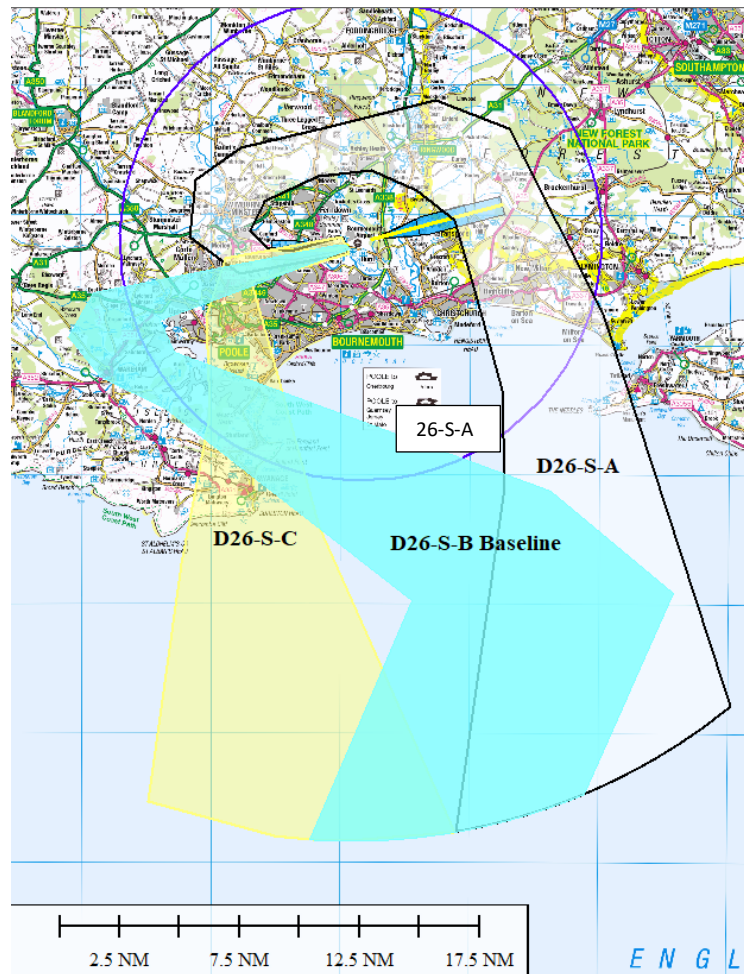
- 6.11.10. Stakeholders commented that there is still an overflight of the AONB which is not captured in the DP (EB08, EB14), Bournemouth Airport agree and have amended the DPE to reflect the overflight of the AONB in addition to the NP. Bournemouth Airport also note options D and E fly over the loW AONB. The importance of DP 4 for option D as it flies over the southern part of the NP (EB14). It was also highlighted that option A involves flying over more people than option B.
- 6.11.11. Although the DPs were assessed as correctly applied, the MOD highlighted that If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular those that operate from RNAS Yeovilton, MOD Boscombe Down and RAF Odiham and Benson (MI04, MI13), this comment was with specific reference to options A and C in the first engagement round (MI04). Bournemouth Airport confirm that any changes to CAS will be carried out in consultation with the MOD and GA community.
- 6.11.12. Stakeholders from the GA community objected to option E as more CAS may be required and would be an issue for the gliding community (GA06).



- 6.11.13. Southampton commented that D and E are low impact for SOU if CCO/CDO above FL90 can be guaranteed.
- 6.11.14. Feedback from the Stakeholder Safety Assurance meeting for the East was as follows: *Option A More significantly outside CAS unless there's an airspace change, same conversation regarding FUA. Option D no safety concerns as managed tactically, needs conversation with SOU. To be in keeping with AMS we should be looking to proceduralise. Option E - the proximity to the SUA is very close, option E should be further considered but no safety reason why all should not be progressed.*

## 6.12. South Design Envelope Departures 26

- 6.12.1. The South design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.
- 6.12.2. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).



**Figure 81: South Design Envelope – D26 Departures**

6.12.3. The questions posed for the South design envelope in the second round were as follows:

1. Do you have any questions about the options?
2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1. The sector outlined in black appears to loop north over the airport and then turn over CCAONB to have arrivals / departures in a westerly direction. 2 Yes.	The assessment remains Red, the qualitative assessment has been amended to include the AONB.	EB08
1. No. 2 Yes.	Noted	LO11
1. See comments about baseline. 2 Yes.	BOH are unsure what this is referring to. This question was posed for the whole design envelope, including the baseline.	AV12
1. No. 2 Yes.	Noted	EB14

Comment	Response	Stakeholder
<p>1. If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular Royal Navy rotary wing aircraft. It could also affect existing MOD Danger Areas.</p> <p>2 Yes.</p>	<p>Any changes to CAS will be carried out in consultation with the MOD and GA community.</p>	<p>MI13</p>
<p>1. Do not agree with a wrap around departure turning right then being vectored south. See below, agree with comments made. It also increases ATC workload and a potential with Pilot and ATC error.</p> <p>2 Yes.</p>	<p>At this stage of the process all potential options are being considered, the extra track miles, work load and complexity of the wrap around have been recognised and included in the assessment.</p>	<p>LC09</p>

**Table 95: Stakeholder feedback design envelope East– November 2023**

6.12.4. Option **D26-S-A**

**Survey Question**

'Runway 26 – South

Do you think we have correctly applied the Design Principles to swathe **26-S-A**?

If no, please provide the Design Principle number and reason in the free text 'other' field.'

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
Yes.	Noted	AV01
No; DP11-extra track miles,DP2 increased overflight.	DP2 already assessed as Red due to overflight, DP11 changed to Red due to feedback.	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Option A for Runway 26 South would involve overflying parts of the south west of the National Park, yet this is not identified against Design Principle 4 in the assessment. Instead, the Option A assessment refers to the overflying of Moors Valley Country Park, which is not within a National Park or AONB and should not be afforded the same level of consideration as the National Park according to paragraph B76 of CAP 1616. Our view is that Option A would impact on the National Park and should therefore be highlighted in the assessment.	BOH agree and have adjusted the assessment accordingly, the NP has been included in the qualitative assessment description.	EB05
Yes; Design option 26-S-A should be a non-starter due to the track miles, extra airspace and that there are better options available.	DP 5 & 11 have been assessed as Red due to extra track miles. Additional airspace is not considered necessary for this option.	GA06

Comment	Response	Stakeholder
DP9/DP10- Staying west of Lymington could/would be optimal.	Options are presented as swathes at this stage, further in the process when the options are refined to routes, this will be considered.	AP07

Table 96: Stakeholder feedback South design envelope Swathe A - December 2022

### Full Design Principle Assessment

D26-S-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as depending on final track placement the route could interact with the Portsmouth DAs.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased. This option would overfly more communities due to the wrap around.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). This option would overfly more communities due to the wrap around, having a greater impact to noise, further Aircraft would need to be kept lower for longer and therefore more noise implications.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as not met due to direct and significant overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to the significant increase in track miles meaning this option has the potential to increase CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in CAS could be required.			



D26-S-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration. This option could see an increase in complexity due to the wrap around creating a significantly longer route and taking traffic to the east of Bournemouth Airport in closer proximity to Southampton Airport and LTMA traffic.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination due to the wrap around creating a significantly longer route and taking traffic to the east of Bournemouth Airport in closer proximity to Southampton Airport and LTMA traffic			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged. This option would provide limited opportunity to establish independence from Southampton Airport and Solent Radar.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 97: Option D26-S-A DP Assessment**

6.12.5. Option **D26-S-B – Baseline**

**Survey Question**

‘Runway 26 – South

Do you think we have correctly applied the Design Principles to swathe **26-S-B**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes	Noted	AV02
No; DP6 Amber - may need additional CAS to the west to prevent aircraft leaving CAS as they pass 5500ft.	BOH agree and this has been included in the assessment of DP6.	AV03
Yes.	Noted	MI04
Option A for Runway 26 South would involve overflying parts of the south west of the National Park, yet this is not identified against Design Principle 4 in the assessment. Instead the Option A assessment refers to the overflying of Moors Valley Country Park, which is not within a National Park or AONB and should not be afforded the same level of consideration as the National Park according to paragraph B76 of CAP 1616. Our view is that Option A would impact on the National Park and should therefore be highlighted in the assessment.	BOH agree and have adjusted the assessment accordingly, the NP has been included in the qualitative assessment description.	EB05
Yes.	Noted	GA06

**Table 98: Stakeholder feedback South design envelope Swathe B - December 2022**

**Full Design Principle Assessment**

D26-S-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met due to the same number of people being overflown as today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

D26-S-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged. This option would provide limited opportunity to establish independence from Southampton Airport and Solent Radar.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without any additional adverse impact on local communities as the same communities would be flown over.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 99: Option D26-S-B Baseline DP Assessment**

6.12.6. Option **D26-S-C**

**Survey Question**

‘Runway 26 – South

Do you think we have correctly applied the Design Principles to swathe **26-S-C**?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

The stakeholder feedback from this question is detailed in the table below along with the response from BOH.

Comment	Response	Stakeholder
Yes	Noted	AV01
Yes.	Noted	AV02
Yes.	Noted	AV03
Yes.	Noted	MI04
Option A for Runway 26 South would involve overflying parts of the south west of the National Park, yet this is not identified against Design Principle 4 in the assessment. Instead the Option A assessment refers to the overflying of Moors Valley Country Park, which is not within a National Park or AONB and should not be afforded the same level of consideration as the National Park according to paragraph B76 of CAP 1616. Our view is that Option A would impact on the National Park and should therefore be highlighted in the assessment.	BOH agree and have adjusted the assessment accordingly, the NP has been included in the qualitative assessment description.	EB05
Yes; More CAS would be an issue for GA and Gliding(Dorset Gliding Club), so we would object to the route.	BOH agree and this is reflected in the assessment. Objection is noted.	GA06

**Table 100: Stakeholder feedback South design envelope Swathe C - December 2022**



**Full Design Principle Assessment**

26-S-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as depending on final track placement, this option could see penetration of danger areas EG D31 Portland, EG D26 Lulworth.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased. This option would overfly more and different communities at lower level.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). This option would overfly more and different communities at lower level having a greater impact on noise.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions. Possible benefit due to more direct route to the south.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as may result in changes to the controlled airspace configuration			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

26-S-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help improve systemisation as it moves traffic further west, away from Southampton Airport and LTMA traffic, reducing the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

Table 101: Option D26-S-C DP Assessment

### 6.12.7. Summary of Stakeholder feedback D26 S

- 6.12.8. Stakeholders commented that the options largely avoid the AONBs, however all have the capacity to loop over the AONBs (EB08). It was also highlighted that Option A overflies the southern part of the NP and this was not mentioned in the DP assessment, Bournemouth Airport accepts this and have amended the assessment to include mention of the NP and have adjusted the RAG score to Red.
- 6.12.9. The MOD commented that If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular Royal Navy aircraft. It could also affect existing MOD Danger Areas (MI13). Bournemouth Airport confirm that any changes to CAS will be carried out in consultation with the MOD and GA community.
- 6.12.10. Two stakeholders pointed out that for option A there would be additional track miles (GA06, AV02). Another warned that wrap around options should be given careful consideration (LC09).
- 6.12.11. Feedback from the Stakeholder Safety Assurance meeting for the South was as follows: *Option A, issues with wraparound as previously discussed. Airspace containment is an issue. GA are busy to the north of BOH. This is not a reason to discount. Option C not in CAS and issues with DA. Not clear how clear of the eastern extremity of SUA proximity. Could the baseline be expanded to cover the eastern extremity of option C. C seems to be aiming to*

*achieve a shorter route and should therefore still be considered. B is already outside CAS. It is possible to create a hybrid, i.e., begin with the B route and end up with the C route. Note that the GA density there is quite high.*

## 6.13. Northwest Design Envelope Arrivals 26

- 6.13.1. The Northwest design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.
- 6.13.2. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).

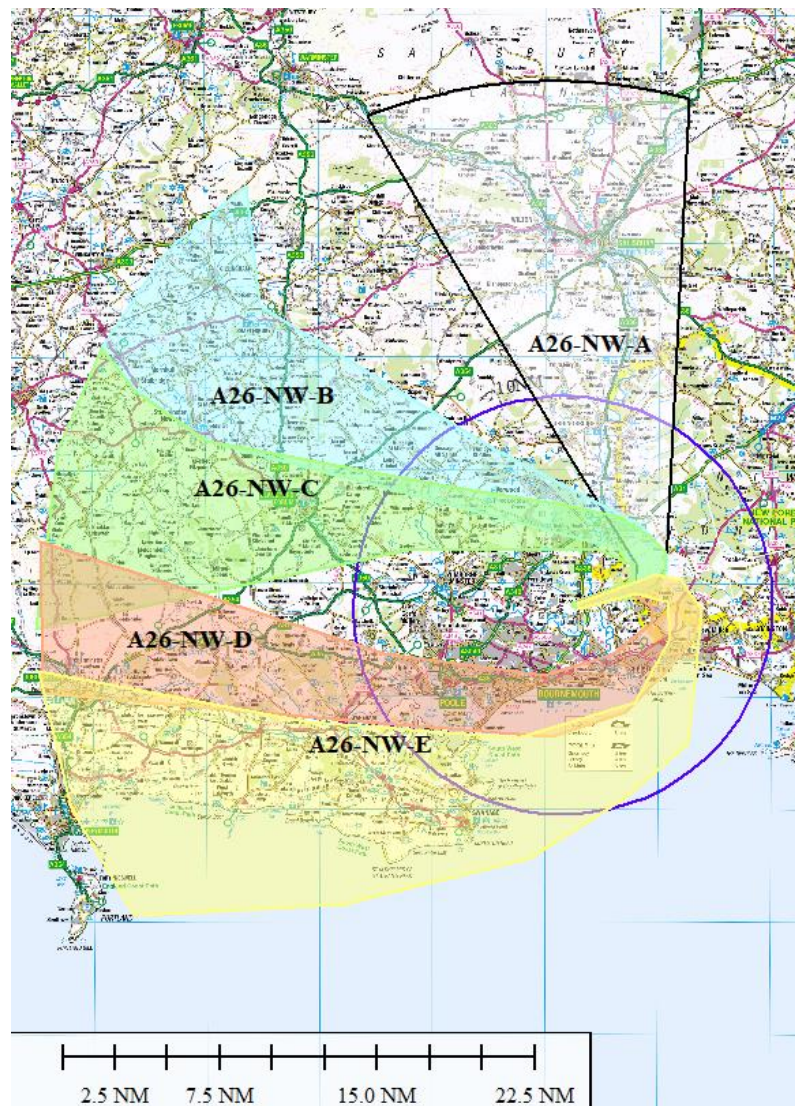


Figure 82: Northwest Design Envelope – 26 Arrivals

6.13.3. The questions posed for the North West design envelope in the second round were as follows:

1. Do you have any questions about the options?
2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1. A, B, and C still appear to overfly CCAONB. 2 Actually, rather than potentially, overfly CCAONB.	Assessed as Amber due to the potential overflight of some sensitive areas, such as AONBs and/or NP.	EB08
1. No. 2 Yes.	Noted	LO11
1. Would have been helpful to display this on a current airspace map to consider the adjacent SUAs. All options will require additional CAS. 2 Yes; No mention of national parks;	BOH agree and have adjusted the assessment accordingly. Options over ENR charts can be found in the Section 4. the NP has been included in the qualitative assessment description.	AV12
1. No. 2 Yes.	Noted	EB14
1. If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular those that operate from RNAS Yeovilton, MOD Boscombe Down and RAF Odiham and Benson. It could also affect existing MOD Danger Areas. 2 Yes.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1. No. 2 Yes.	Noted	LC09

**Table 102: Stakeholder feedback design envelope Northwest– November 2023**

6.13.4. Option **A26-NW-A**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP11 extra track miles departing west.	BOH agree and have adjusted the assessment accordingly.	AV02
No; DP6 There is currently no connectivity to the route network in this direction.	BOH agree and have adjusted the assessment accordingly.	AV03
Yes	Noted	MI04
The assessment of Runway 08 Northwest Option A highlights it would involve overflying a greater proportion of the National Park than options B – E. We would highlight that all 5 options involve the overflying of the National Park to some extent. The of the National Park includes some of the most tranquil areas of the New Forest – see Tranquillity Mapping at Tranquillity mapping - New Forest National Park Authority ( <a href="http://newforestnpa.gov.uk">newforestnpa.gov.uk</a> ) – where impacts would be more noticeable.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes; It has correctly been identified that three of the proposed routes would require more airspace in areas that would impact the current GA traffic.	Noted	GA06

**Table 103: Stakeholder feedback Northwest design envelope Swathe A - December 2022**



**Full Design Principle Assessment**

A26-NW-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as not met as depending on final track placement, this option could see penetration of danger areas EG D122. Additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown, although the area to the north of the airport is much less densely populated than the area to the south.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to the significant increase in track miles meaning this option has the potential to increase CO2 emissions. This option would mean extra track miles for any westbound departures.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as not met as additional controlled airspace and amendments to the current FUA would be required with this option, impacting on current GA traffic			

A26-NW-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as this option would increase complexity as there is currently no connectivity to the route network in this direction.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 104: Option A26-NW-A DP Assessment**

**6.13.5. Option A26-NW-B**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes;	Noted	AV02
No; DP1 amber - close proximity to DA. DP6 There is currently no connectivity to route network in this direction.	BOH agree and have adjusted the assessment accordingly.	AV03
Yes	Noted	MI04
The assessment of Runway 08 Northwest Option A highlights it would involve overflying a greater proportion of the National Park than options B – E. We would highlight that all 5 options involve the overflying of the National Park to some extent. The North West of the National Park includes some of the most tranquil areas of the New Forest – see Tranquillity Mapping at Tranquillity mapping - New Forest National Park Authority ( <a href="http://newforestnpa.gov.uk">newforestnpa.gov.uk</a> ) – where impacts would be more noticeable.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes; More CAS would be an issue for GA and Gliding, so we would object to the route.	BOH agree and this is reflected in the assessment. Objection is noted.	GA06

**Table 105: Stakeholder feedback Northwest design envelope Swathe B - December 2022**

### Full Design Principle Assessment

A26-NW-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as depending on final track placement, this option could see aircraft operating in close proximity to danger area EG D122. Additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown, although the area to the north of the airport is much less densely populated than the area to the south.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace and amendments to the current FUA would be required with this option, impacting on current GA traffic			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as this option would increase complexity as there is currently no connectivity to the route network in this direction..			

A26-NW-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal, and potentially improved, however there is some additional impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 106: Option A26-NW-B DP Assessment**



6.13.6. Option **A26-NW-C**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes	Noted	AV02
No; DP6 - No connectivity to CAS from 7000ft to FL155, or ATS route network.	BOH agree and have adjusted the assessment accordingly.	AV03
Yes	Noted	MI04
The assessment of Runway 08 Northwest Option A highlights it would involve overflying a greater proportion of the National Park than options B – E. We would highlight that all 5 options involve the overflying of the National Park to some extent. The North West of the National Park includes some of the most tranquil areas of the New Forest – see Tranquillity Mapping at Tranquillity mapping - New Forest National Park Authority ( <a href="http://newforestnpa.gov.uk">newforestnpa.gov.uk</a> ) – where impacts would be more noticeable	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes; More CAS would be an issue for GA and Gliding, so we would object to the route,	BOH agree and this is reflected in the assessment. Objection is noted.	GA06

**Table 107: Stakeholder feedback Northwest design envelope Swathe C - December 2022**

**Full Design Principle Assessment**

A26-NW-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> – The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown, although the area to the north of the airport is much less densely populated than the area to the south.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact, although the area to the north of the airport is much less densely populated than the area to the south.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace and amendments to the current FUA would be required with this option, impacting on current GA traffic			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as this option would increase complexity as there is currently no connectivity to the route network in this direction.			

A26-NW-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 108: Option A26-NW-C DP Assessment**

6.13.7. Option **A26-NW-D**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP2 increased communities overflow.	BOH agree however DP2 is already assessed as Red to reflect the increased communities.	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The assessment of Runway 08 Northwest Option A highlights it would involve overflying a greater proportion of the National Park than options B – E. We would highlight that all 5 options involve the overflying of the National Park to some extent. The North West of the National Park includes some of the most tranquil areas of the New Forest – see Tranquillity Mapping at Tranquillity mapping - New Forest National Park Authority ( <a href="http://newforestnpa.gov.uk">newforestnpa.gov.uk</a> ) – where impacts would be more noticeable.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes	Noted	GA06

**Table 109: Stakeholder feedback Northwest design envelope Swathe D - December 2022**

**Full Design Principle Assessment**

A26-NW-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as additional controlled airspace may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace..			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflowed by aircraft using the Airport.	Assessed as not met as the number of people overflowed would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflowed.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as fully met as the more direct route has the potential to reduce CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace would be required with this option, impacting on current GA traffic			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as this option would increase complexity as there is currently no connectivity to the route network in this direction.			



A26-NW-D	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal, and potentially improved, however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

Table 110: Option A26-NW-D DP Assessment

6.13.8. Option **A26-NW-E**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP1- D031,D026 penetration.	BOH agree however DP1 is already assessed as Red to reflect penetration of the DAs	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The assessment of Runway 08 Northwest Option A highlights it would involve overflying a greater proportion of the National Park than options B – E. We would highlight that all 5 options involve the overflying of the National Park to some extent. The North West of the National Park includes some of the most tranquil areas of the New Forest – see Tranquillity Mapping at Tranquillity mapping - New Forest National Park Authority ( <a href="http://newforestnpa.gov.uk">newforestnpa.gov.uk</a> ) – where impacts would be more noticeable.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes	Noted	GA06

**Table 111: Stakeholder feedback Northwest design envelope Swathe E - December 2022**

**Full Design Principle Assessment**

A26-NW-E	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as not met as depending on final track placement, this option could see penetration of danger areas D21/D31 Portland and EG D26 Lulworth. Additional controlled airspace may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  As there are currently no routes departing to the west of the airport there would be an increase in the number of people overflown.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). As there are currently no routes departing to the west of the airport there would be an increased noise impact.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to potential increase in track miles meaning this option has the potential to increase CO2 emissions. This option would mean extra track miles for any northbound departures.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as not met as additional controlled airspace would be required with this option, impacting on current GA traffic			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as this option would increase complexity as there is currently no connectivity to the route network in this direction.			

A26-NW-E	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as not met as there is currently no connectivity to the route network in this direction, there would be no systemisation benefits associated with this option.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 112: Option A26-NW-E DP Assessment**

### 6.13.9. Summary of Stakeholder feedback A26 NW

6.13.10. In summary, stakeholders felt that DPE is correctly assessed with regards to tranquillity; most options in this design envelope are assessed as amber due to the fact that all options in this design envelope fly over an AONB (EB08). Stakeholders also highlighted that all of the options also fly over the NP to a greater or lesser extent (EB14), option A having the greatest impact on the NP, and at a greater altitude the AONB; Bournemouth Airport therefore has assessed option A Red due to direct and significant overflight of various tranquil areas important to local communities.

- 6.13.11. Other stakeholders (AV12, MI13, AV12, GA06) highlighted the need for additional CAS in all options, additionally some options (A-C) would require use of FUA, and that option B may impact the DA.
- 6.13.12. Extra track miles was raised as a concern (AV02) for options A and B, and AV03 highlighted the lack of connectivity to the route network for the northwest.
- 6.13.13. AV01 mentioned 'widebody manoeuvring' in relation to DPs 1 (safety) and 8 (technical requirements), Bournemouth Airport feel that it would be more appropriate to investigate this once individual routes have been designed. All swathes have the potential for a viable route, however once these routes have been designed by a by an IFP Designer SME, further engagement with stakeholders will take place.
- 6.13.14. Feedback from the Stakeholder Safety Assurance meeting for the Northwest was as follows:  
*From a network perspective there is no connectivity, the proximity to the SUAs is a challenge, there is no driver from the en-route environment to progress these options. Very little consequence if these are not progressed.*



## 6.14. Northeast Design Envelope Arrivals 26

- 6.14.1. The Northeast design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.
- 6.14.2. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).



Figure 83: Northeast Design Envelope – 26 Arrivals

- 6.14.3. The questions posed for the North East design envelope in the second round were as follows:
1. Do you have any questions about the options?
  2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
-	N/A	EB08
1. No. 2 Yes.	Noted	LO11
1. Without a clear airspace map it is difficult to comment. Swathe A potentially requires expanded use of Q41 FUA. Yes.	Options over ENR charts can be found in the Section 4. DP1 already assessed as Amber to reflect controlled airspace and potential amendments to the current FUA.	AV12
1. Option A26-NE-A involves overflying a significant swathe of the New Forest National Park - and the internationally designated sites within it (SAC, SPA and Ramsar) below 7,000 feet. This should be carefully considered under design principle 4. 2 Yes.	The assessment changed to Red to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB14
1. If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular those that operate from MOD Boscombe Down and RAF Odiham and Benson. 2 Yes.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1. Regarding A26 NE A. What range will the aircraft be established inbound, Including light jets as well as commercial and Cargo. There are too many tracks from the North. 2 Yes.	Options are presented as swathes at this stage, further in the process when the options are refined to routes, this will be addressed.	LC09

**Table 113: Stakeholder feedback design envelope Northeast– November 2023**

6.14.4. Option **A26-NE-A**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes	Noted	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The assessment of Runway 08 East & Southeast Option A highlights it would involve overflying a greater proportion of the New Forest National Park. It should be noted that all four options (A – D) involve the overflying of the New Forest National Park to some extent. The differences between options A - D are therefore to some degree similar in terms of impacts on people's enjoyment of the tranquillity of the National Park.	BOH agree and have adjusted the assessment to Red due to the feedback.	EB05
No; The option of this route would require more airspace.	BOH agree the assessment remains Amber to reflect potential requirement for more CAS.	GA06

**Table 114: Stakeholder feedback Northeast design envelope Swathe A - December 2022**

### Full Design Principle Assessment

A26-NE-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe, if this is not possible then there would be safety ramifications for the route transiting uncontrolled airspace..			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today, however different communities would be overflown.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met due to the same number of people being overflown as today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as not met due to direct and significant overflight of some sensitive areas, such as AONBs and/or NP. This option would see traffic overflying a greater and more tranquil area of the New Forest National Park.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as additional controlled airspace and amendments to the current FUA may be required depending on final route placements within this swathe.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as this option could help to reduce complexity as it moves traffic further north, away from Southampton Airport and LTMA traffic.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

A26-NE-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help improve systemisation as it moves traffic further north, away from Southampton Airport and the congested area surrounding it associated with the LTMA traffic., reducing the need for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as partially met as fuel efficiency is optimal however there is some impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 115: Option A26-NE-A DP Assessment**



**6.14.5. Option A26-NE-B Baseline**

Comment	Response	Stakeholder
Yes	Noted	AV01
Yes	Noted	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The assessment of Runway 08 East & Southeast Option A highlights it would involve overflying a greater proportion of the New Forest National Park. It should be noted that all four options (A – D) involve the overflying of the New Forest National Park to some extent. The differences between options A - D are therefore to some degree similar in terms of impacts on people's enjoyment of the tranquillity of the National Park.	The assessment remains Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes; It looks like this routing remains within the current airspace foot print.	Noted	GA06
DP9 - Noting you only have the FRZ depicted and Southampton's routes and airspace is much larger than that, significant potential impacts requiring deconfliction for Option B. If you can enable guaranteed CCO CDO to stay c.FL90 and above over Southampton that would be optimal. DP10- It may be difficult with Option B to develop procedures and agreements to allow truly independent operations.	BOH agree and significant work will need to be carried out to allow independent operations.	AP07

**Table 116: Stakeholder feedback Northeast design envelope Swathe B - December 2022**

**Full Design Principle Assessment**

A26-NE-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met due to the same number of people being overflown as today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as fully met as no new volume of controlled airspace would be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

A26-NE-B Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination..			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without any additional adverse impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

Table 117: Option A26-NE-B Baseline DP Assessment

#### 6.14.6. Summary of Stakeholder feedback A26 NE

- 6.14.7. All aviation, military and GA stakeholders agreed that the DPs had been correctly applied for this design envelope (AV01, AV02, AV03, MI04 & GA06). Stakeholders highlighted Option A involves overflying a greater portion of the NP below 7,000 feet (EB05, EB14) and avoids the AONB (EB08). Other comments related to the possibility of additional or lowered CAS (AV12, MI13, GA06), although it was acknowledged that option B remains within the current airspace; this is the baseline option and so therefore the current situation.
- 6.14.8. It was noted that the options are similar in terms of the number of people overflown (EB05).
- 6.14.9. AV01 mentioned ‘widebody manoeuvring’ in relation to DPs 1 (safety) and 8 (technical requirements), Bournemouth Airport feel that it would be more appropriate to investigate this once individual routes have been designed. All swathes have the potential for a viable route, however once these routes have been designed by a by an IFP Designer SME, further engagement with stakeholders will take place.

- 6.14.10. One stakeholder noted that there could be significant potential impacts for Option B requiring deconfliction and that DP10 may be difficult for this option with regards to developing procedures and agreements to allow for independence.
- 6.14.11. Feedback from the Stakeholder Safety Assurance meeting for the Northeast was as follows:  
*Options A extends beyond what we have been discussing with this direction on other envelopes with regards to the FUA. No other issues other than the CAS issue again.*

## 6.15. East Southeast Design Envelope Arrivals 26

- 6.15.1. The East-Southeast design envelope was formerly part of a single design envelope for the first round of engagement. Due to re defining the baselines this was split into two: NE and ESE. In the first round of engagement the swathes were labelled C and D (in East and Southeast), C (baseline) became A-26-ESE A Baseline and the area covered is marginally south of the original swathe. D became A26-ESE-B, this option is broadly similar to the original swathe. Comparisons can be made in the supporting document entitled ‘Design Options Development and Considerations’ available on the [ACP Portal](#). The feedback for both areas is captured.
- 6.15.2. The area covered in the East-Southeast design envelope was presented to stakeholders at both engagement sessions, (December 2022 and November 2023) see 6.15.1 for explanation of the changes. The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.
- 6.15.3. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).

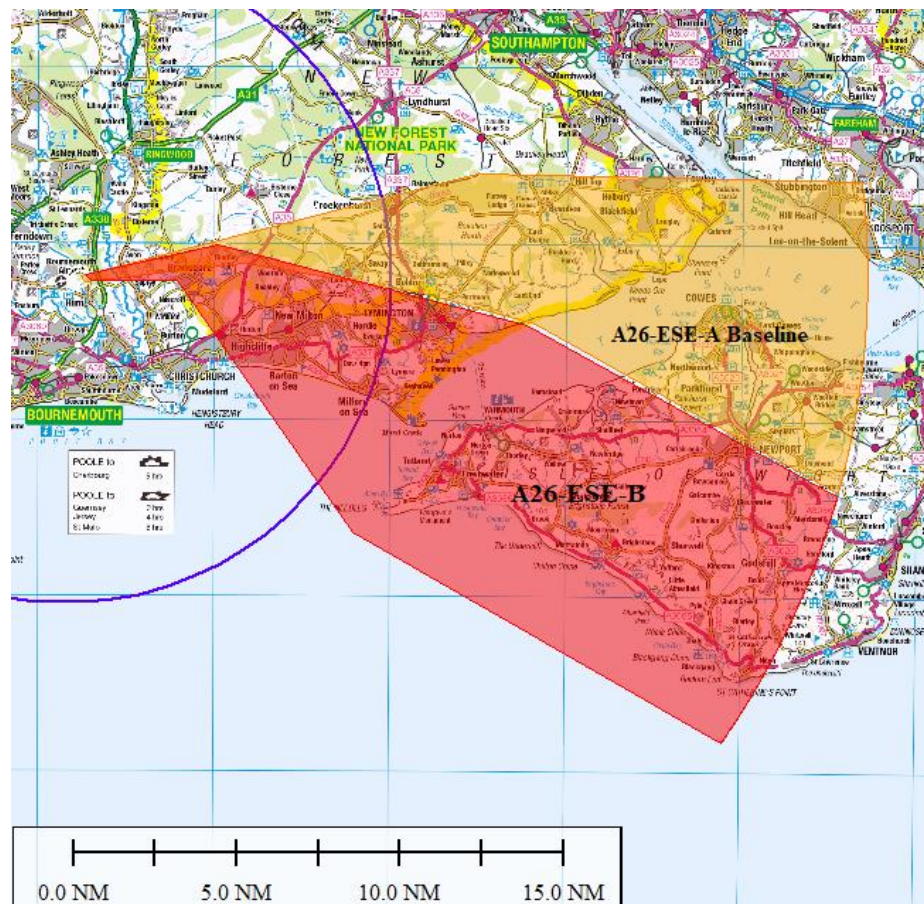


Figure 84: East Design Envelope – 26 Arrivals



6.15.4. The questions posed for the Southeast design envelope in the second round were as follows:

1. Do you have any questions about the options?
2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
-	N/A	EB08
1. No. 2 Yes.	Noted	LO11
1. No comments. 2 Yes	Noted	AV12
1. No. 2 Yes	Noted	EB14
1. If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular Royal Navy aircraft. 2 Yes.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1. Provided ATC remain inside A26 ESE A and do not vector too far north of it. 2 Yes.	Options are presented as swathes at this stage, further in the process when the options are refined to routes, this will be considered.	LC09

**Table 118: Stakeholder feedback design envelope East Southeast– November 2023**

**6.15.5. Option A26-ESE-A Baseline**

Comment	Response	Stakeholder
Yes	Noted	AV01
Yes	Noted	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The assessment of Runway 08 East & Southeast Option A highlights it would involve overflying a greater proportion of the New Forest National Park. It should be noted that all four options (A – D) <sup>30</sup> involve the overflying of the New Forest National Park to some extent. The differences between options A - D are therefore to some degree similar in terms of impacts on people's enjoyment of the tranquillity of the National Park.	The assessment has changed to Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes	Noted	GA06

**Table 119: Stakeholder feedback East Southeast design envelope Swathe A - December 2022**

**Full Design Principle Assessment**

A26-ESE-A Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			

<sup>30</sup> Note A and B referred to here is feedback for the NE design envelope.

A26-ESE-A Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met due to the same number of people being overflown as today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as fully met as no new volume of controlled airspace would be required..			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination.			

A26-ESE-A Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without any additional adverse impact on local communities.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 120: Option A26-ESE-A Baseline DP Assessment**

6.15.6. Option **A26-ESE-B**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP2 Greater overflight of communities.	BOH agree and adjusted DP2 to Red to reflect the increased communities potentially flown over.	AV02
Why is swathe D not designed to be even more over water to avoid communities overflown?	Swathes were designed with a number of objectives (DPs) in mind. DP2 & 3 have been reassessed as Red to reflect this feedback. additional communities	AV03
Yes	Noted	MI04
The assessment of Runway 08 East & Southeast Option A highlights it would involve overflying a greater proportion of the New Forest National Park. It should be noted that all four options (A – D) involve the overflying of the New Forest National Park to some extent. The differences between options A - D are therefore to some degree similar in terms of impacts on people's enjoyment of the tranquillity of the National Park.	The assessment has been changed to Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes	Noted	GA06

**Table 121: Stakeholder feedback East Southeast design envelope Swathe B - December 2022**

**Full Design Principle Assessment**

A26-ESE-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as this option would route outside controlled airspace and interact with the Portsmouth DAs.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased.  This option would overfly different and more communities.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). This option would overfly more communities. These communities would also be of a much greater population density and have a greater impact to noise.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as partially met as an increase in controlled airspace may be required depending on final track placement.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as this option could help to reduce complexity as it moves traffic further south, away from Southampton Airport and LTMA traffic.			



A26-ESE-B	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process. Note: the south part of this swathe may be technically challenging due to the interception with ILS at approximately 6miles; north Section of swathe viable.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as fully met as this option could help to improve systemisation as it moves traffic further South, away from Southampton Airport and LTMA traffic, reducing the need for coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 122: Option A26-ESE-B DP Assessment**

### 6.15.7. Summary of Stakeholder feedback A26 E

- 6.15.7.1. It was highlighted that both options in this design envelope fly over the NP (EB05), this feedback plus the overflight of the IoW AONB, in addition to the change in criteria, this DP has been amended accordingly.
- 6.15.7.2. The MOD commented that If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular Royal

Navy aircraft. It could also affect existing MOD Danger Areas (MI13). A local council also commented that they agreed with the DPE provided ATC remain inside A26 ESE A and do not vector too far north. Bournemouth Airport confirm that any changes to CAS will be carried out in consultation with the MOD and GA community.

- 6.15.7.3. Some stakeholders highlighted that option B would fly over more communities and questioned if the option could be designed to fly over more water (AV02, AV03).
- 6.15.8. AV01 mentioned 'widebody manoeuvring' in relation to DPs 1 (safety) and 8 (technical requirements), Bournemouth Airport feel that it would be more appropriate to investigate this once individual routes have been designed. All swathes have the potential for a viable route, however once these routes have been designed by a by an IFP Designer SME, further engagement with stakeholders will take place.
- 6.15.9. Feedback from the Stakeholder Safety Assurance meeting for the East Southeast was as follows: *Options B is problematic because of its orientation to the DA but it is not impossible as it is possible to connect. Other issues are that it will require additional low-level CAS, possibly a driver for en-route level airspace to serve the B swathe.*

## 6.16. South Design Envelope Arrivals 26

- 6.16.1. The South design envelope was presented to stakeholders at both engagement sessions (December 2022 and November 2023). The survey for the first engagement requested feedback on each option whereas the second engagement requested feedback by design envelope. Therefore, the feedback for the design envelope is presented in the first table of this section. The feedback for the second round is presented before the DPE for each design option, this includes feedback from the first round.
- 6.16.2. Following the DPE for each option, a summary is provided of the stakeholder feedback (what we heard) followed by the response from Bournemouth airport (what we did).

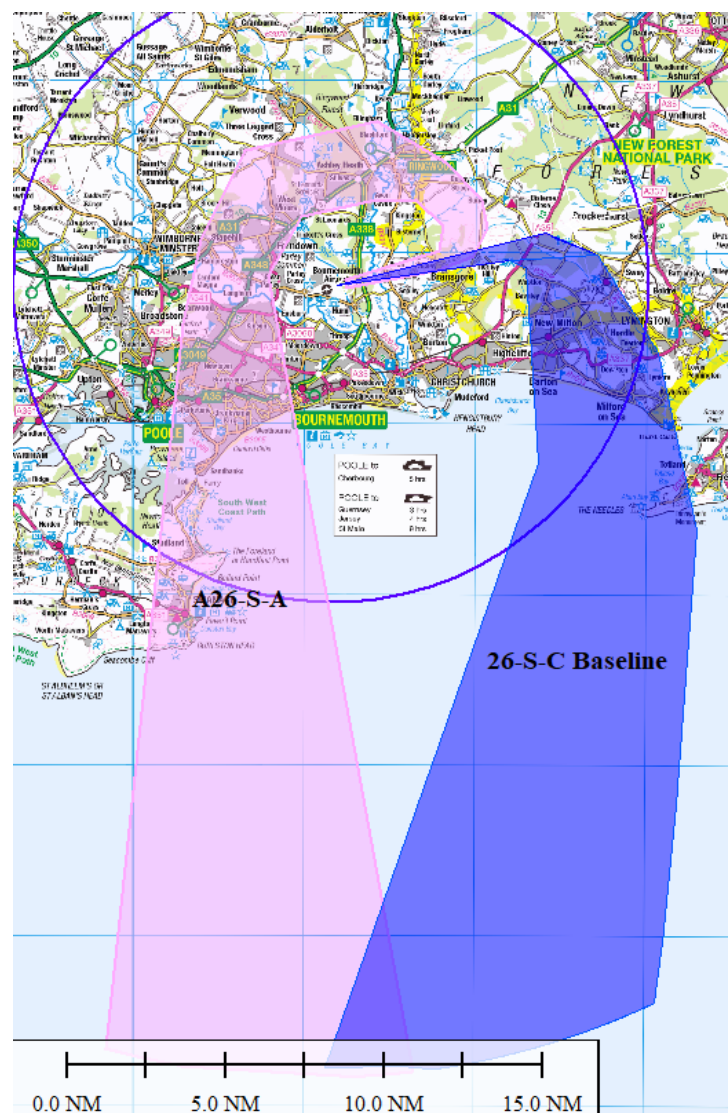


Figure 85: South Design Envelope – 26 Arrivals

- 6.16.3. The questions posed for the South design envelope in the second round were as follows:
1. Do you have any questions about the options?
  2. Do you think the Design Principles have been correctly applied for the options?

Comment	Response	Stakeholder
1. S-A appears to involve a turn slightly to the south-east of CCAONB.	Option A has been assessed as Amber to reflect the potential overflight of CCAONB.	EB08
1. No. 2 Option 1.	If 'option 1' refers to A, this option has been assessed as Amber for DP1.	LO11
1. Swathe A appears to be a wrap around arrival route. This would be considered unsafe. 2 Unable to comment.	Wrap around would not be unsafe provided the procedures are robust and satisfy the safety case. Options are only presented as swathes at this stage.	AV12
1. No. 2 Yes.	Noted	EB14
1. If the options result in an increase in controlled airspace in the swathes it could limit the freedom of manoeuvre of MOD airspace users, in particular Royal Navy aircraft and it could also affect existing MOD Danger Areas. 2 Yes.	Any changes to CAS will be carried out in consultation with the MOD and GA community.	MI13
1. Do not agree with 26 S A. See below as well as previous comments about wrap arounds. 2 Yes.	Many DPs have been assessed as Red or Amber as a result of the wraparound nature of this option.	LC09

**Table 123: Stakeholder feedback design envelope East– November 2023**

6.16.4. Option **A26-S-A**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
No; DP11 increased track miles DP1 DO31 infringement	DP1 & 5 are assessed as Red to reflect these issues.	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The options identified for South all involve overflying of the New Forest National Park (currently this is only identified against Design Principle 4 (Tranquillity) for Option B). In our view Options A and B involve a similar degree of overflying of the National Park and so for consistency the assessment should highlight this against Design Principle 4 for both options.	The assessment changed to Amber to reflect overflight of tranquil areas, the NP has been included in the qualitative assessment description.	EB05
Yes	Noted	GA06

**Table 124: Stakeholder feedback South design envelope Swathe A - December 2022**

**Full Design Principle Assessment**

A26-S-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as partially met as depending on final track placement, this option could see penetration of danger area EG D31 Portland and Lulworth EG D026			

A26-S-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as not met as the number of people overflown would potentially be increased. This option would overfly significantly more communities due to the wrap around.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as not met as the impact of aircraft noise on local communities may be increased. (See DP2). This option would overfly more communities due to the wrap around. These communities would also be of a much greater population density and have a greater impact to noise.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as not met due to the significant increase in track miles meaning this option has the potential to increase CO2 emissions.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as not met as significant additional volumes of CAS are required to contain the proposed option.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as partially met as will result in changes to the controlled airspace configuration.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as work would need to be done to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			



A26-S-A	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as fully met as this option has the potential to deconflict routes from Southampton Airport and Solent Radar, allowing access to controlled airspace independently of Southampton Radar Service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as not met as fuel efficiency is not optimised due to the indirect route.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as not met as fails to achieve any AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 125: Option A26-S-A DP Assessment**

6.16.5. Option **A26-S-C Baseline**

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes	Noted	AV02
Yes	Noted	AV03
Yes	Noted	MI04
The options identified for South all involve overflying of the New Forest National Park (currently this is only identified against Design Principle 4 (Tranquillity) for Option B). In our view Options A and B involve a similar degree of overflying of the National Park and so for consistency the assessment should highlight this against Design Principle 4 for both options.	The assessment changed to Amber to reflect overflight of tranquil areas; the NP has been included in the qualitative assessment description.	EB05
Yes	Noted	GA06
DP9- With Option B, inbound and outbound routes may need careful coordination.	(note B refers to new option C) Deconfliction of arrivals and departures is not assessed at this stage, it will be considered in stage 3.	AP07

**Table 126: Stakeholder feedback South design envelope Swathe C - December 2022**

### Full Design Principle Assessment

A26-S-C Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.	Assessed as fully met as no safety issues identified.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.	Assessed as partially met due to the same number of people being overflown as today.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.	Assessed as partially met due to the same number of people being overflown as today.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.	Assessed as partially met due to the potential overflight of some sensitive areas, such as AONBs and/or NP.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.	Assessed as partially met as emissions will be the same or similar as today.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.	Assessed as fully met as no new volume of controlled airspace would be required.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.	Assessed as fully met as it should not result in a complex airspace configuration with numerous different base levels..			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.	All the swathes have been assessed by a IFP Designer SME and have the potential to contain a fully compliant route. This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.			

A26-S-C Baseline	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback	New Eval Criteria
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FASI(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.	Assessed as partially met as integrates with the enroute network but may not reduce the need for tactical coordination..			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.	Assessed as partially met as the current situation would remain unchanged.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.	Assessed as fully met as fuel efficiency is optimal without any additional adverse impact on local communities as the same communities would be flown over.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.	Assessed as partially met as does not meet all AMS objectives.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.	Assessed as fully met due to current high-level options. Furthermore, detailed analysis to be conducted at Stage 3 of the CAP1616 process.			

**Table 127: Option A26-S-C Baseline DP Assessment**

### 6.16.6. Summary of Stakeholder feedback A26 S

- 6.16.7. This design envelope was previously presented with three options, the feedback for Option C is used to inform option B in the new design envelope, it should be noted that the feedback was the same for the previous option B and C as the current option B, this is because it covers the same area. The feedback has been removed from this section and can be found in Annex B for transparency.
- 6.16.8. AV01 mentioned ‘widebody manoeuvring’ in relation to DPs 1 (safety) and 8 (technical requirements), Bournemouth Airport feel that it would be more appropriate to investigate this once individual routes have been designed. All swathes have the potential for a viable route, however once these routes have been designed by a by an IFP Designer SME, further engagement with stakeholders will take place.
- 6.16.9. Most stakeholders agreed that the DPs have been correctly assessed. Others felt that option A would increase track miles (AV2), and potentially use more fuel and fly over more people (LC09). Additionally concern was raised that option A would require more CAS (AV12) as a

result of proximity to the DA (MI13). Another commented that option A appears to be a wraparound arrival route and would therefore be unsafe.

- 6.16.10. It was further noted that the NP would continue to be overflowed to a similar extent and as such DP4 should be highlighted for both options.
- 6.16.11. Feedback from the Stakeholder Safety Assurance meeting for the South was as follows:  
*Option A regarding the DA, outside CAS and the joining point is close in which is potentially destabilises approaches and therefore maybe a liability issue.*

## 7. Design Principle Evaluation Summary

### 7.1. Assessments

7.1.1. Full details of the Design Principle Evaluation can be found in Section 6. Design Principle Evaluation.

### 7.2. Departures Runway

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
D08-NW-A	Red	Red	Red	Yellow	Red	Red	Yellow	Green	Red	Green	Red	Red	Green
D08-NW-B	Yellow	Red	Red	Yellow	Green	Yellow	Yellow	Green	Red	Green	Yellow	Yellow	Green
D08-NW-C	Yellow	Red	Red	Yellow	Green	Yellow	Yellow	Green	Red	Green	Yellow	Yellow	Green
D08-NW-D	Yellow	Red	Red	Yellow	Green	Yellow	Yellow	Green	Red	Green	Yellow	Yellow	Green
D08-NW-E	Red	Red	Red	Yellow	Red	Red	Yellow	Green	Red	Green	Red	Red	Green

Table 128: Departures Runway 08 – Northwest Design Envelope DP Assessment

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
D08-NE-A	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Red	Red	Green
D08-NE-B BASELINE	Green	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Yellow	Green	Yellow	Green

Table 129: Departures Runway 08 – Northeast Design Envelope DP Assessment

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
D08-E-C BASELINE	Green	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Yellow	Green	Yellow	Green
D08-E-D	Green	Red	Red	Yellow	Yellow	Green	Green	Green	Green	Yellow	Red	Yellow	Green

Table 130: Departures Runway 08 – East Design Envelope DP Assessment



Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
D08-S-A	Yellow	Red	Red	Yellow	Red	Red	Yellow	Green	Green	Yellow	Red	Red	Green
D08-S-B BASELINE	Green	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Yellow	Green	Yellow	Green

**Table 131: Departures Runway 08 – South Design Envelope DP Assessment**

### 7.3. Arrivals Runway 08

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
A08-NW-A	Red	Red	Red	Yellow	Red	Red	Yellow	Green	Red	Green	Red	Red	Green
A08-NW-B	Red	Red	Red	Yellow	Red	Red	Yellow	Green	Red	Green	Red	Red	Green
A08-NW-C	Yellow	Red	Red	Yellow	Green	Yellow	Yellow	Green	Red	Green	Yellow	Yellow	Green
A08-NW-D	Yellow	Red	Red	Yellow	Green	Yellow	Yellow	Green	Red	Green	Yellow	Yellow	Green
A08-NW-E	Red	Red	Red	Yellow	Red	Yellow	Yellow	Green	Red	Green	Red	Red	Green

**Table 132: Arrivals Runway 08 – Northwest Design Envelope DP Assessment**

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
A08-NE-A	Yellow	Yellow	Yellow	Red	Yellow	Yellow	Green	Green	Green	Yellow	Yellow	Yellow	Green
A08-NE-B BASELINE	Green	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Yellow	Green	Yellow	Green
A08-NE-C	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow	Yellow	Green

**Table 133: Arrivals Runway 08 – Northeast Design Envelope DP Assessment**

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
A08-SE-A BASELINE	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Yellow	Yellow	Green	Yellow	Green
A08-SE-B	Green	Green	Green	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Green	Yellow	Green

**Table 134: Arrivals Runway 08 – Southeast Design Envelope DP Assessment**

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
A08-S-A	Red	Red	Red	Red	Red	Green	Yellow	Green	Yellow	Yellow	Red	Yellow	Green
A08-S-B BASELINE	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Green	Yellow	Green
A08-S-C	Yellow	Red	Red	Yellow	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow	Green

Table 135: Arrivals Runway 08 – South Design Envelope DP Assessment

## 7.4. Departures Runway 26

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
D26-NW-A	Red	Red	Red	Yellow	Red	Red	Yellow	Green	Red	Green	Red	Red	Green
D26-NW-B	Red	Red	Red	Yellow	Red	Red	Yellow	Green	Red	Green	Red	Red	Green
D26-NW-C	Yellow	Red	Red	Yellow	Green	Yellow	Yellow	Green	Red	Green	Yellow	Yellow	Green
D26-NW-D	Yellow	Red	Red	Yellow	Green	Yellow	Yellow	Green	Red	Green	Yellow	Yellow	Green
D26-NW-E	Red	Red	Red	Yellow	Red	Yellow	Yellow	Green	Red	Green	Red	Yellow	Green

Table 136: Departures Runway 26 – Northwest Design Envelope DP Assessment

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
D26-E-A	Yellow	Yellow	Yellow	Red	Yellow	Yellow	Green	Green	Green	Yellow	Red	Yellow	Green
D26-E-C BASELINE	Green	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Yellow	Green	Yellow	Green
D26-E-D	Green	Red	Red	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Yellow	Yellow	Green
D26-E-E	Yellow	Red	Red	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Red	Yellow	Green

Table 137: Departures Runway 26 – East Design Envelope DP Assessment

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
D26-S-A													
D26-S-B BASELINE													
D26-S-C													

**Table 138: Departures Runway 26 – South Design Envelope DP Assessment**

## 7.5. Arrivals Runway 26

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
A26-NW-A													
A26-NW-B													
A26-NW-C													
A26-NW-D													
A26-NW-E													

**Table 139: Arrivals Runway 26 – Northwest Design Envelope DP Assessment**

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
A26-NE-A													
A26-NE-B BASELINE													

**Table 140: Arrivals Runway 26 – Northeast Design Envelope DP Assessment**

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
A26-ESE-A BASELINE													
A26-ESE-B													

**Table 141: Arrivals Runway 26 – East Southeast Design Envelope DP Assessment**

Option	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13
A26-S-A	Yellow	Red	Red	Yellow	Red	Red	Yellow	Green	Yellow	Yellow	Red	Red	Green
A26-S-C BASELINE	Green	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Yellow	Green	Yellow	Green

**Table 142: Arrivals Runway 26 – South Design Envelope DP Assessment**

## 8. Discounting Options

- 8.1.1. Originally it was perceived that there was a requirement to depart and arrive in a variety of directions off each runway. Accordingly, each direction was considered in turn with the conception of a variety of options and their associated DPE. It subsequently became clear that there is insufficient demand for SIDs and STARs to the Northwest. There is also currently no connectivity to the enroute network and insufficient CAS to contain any proposed procedures in that direction.
- 8.1.2. Additionally, there is no business or operator requirement for SIDs and STARs to the Northwest and while options in these directions were initially explored the impact to new communities, and communities already impacted by the airport, along with the disruption to other airspace users was deemed unnecessary with the lack of requirement.
- 8.1.3. As a result, the following 20 options will not be carried forward to Stage 2b, the Initial Options Appraisal.
- Departures Runway 08 – Northwest Design Envelope – All options
  - Arrivals Runway 08 - Northwest Design Envelope – All Options
  - Departures Runway 26 - Northwest Design Envelope - All Options
  - Arrivals Runway 26 - Northwest Design Envelope - All Options
- 8.1.4. The remaining 27 options are retained for the Initial Options Appraisal and further analysis.
- 8.1.5. Due to our high-level approach using swathes, it was decided that none of the remaining 27 options will be discounted on the basis of the DPE alone. The assessment of the DPs has been carried forward to the IOA and included in the relevant sections, this allowed us for one overall assessment of the options to decide which will be taken forward to Stage 3. The assessment criteria Table 9 in Section 2.11 describes where and when the DPE assessments will be utilised<sup>31</sup>.

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<sup>31</sup> In the document titled 'Initial Options Appraisal' Section 2, available on the ACP Portal, the IOA assessment methodology also describes which DPs are considered and where.

## 9. Next Steps

- 9.1. The next step of this ACP is to conduct an Initial Appraisal of the impacts of all the options identified in this document. The Initial Options Appraisal document (step 2b) can be found on the [CAA portal](#) and should be read in conjunction with this report. This appraisal of options is a series of qualitative assessments of each option and provides relative differences between the impacts, both positive and negative, of each option against the baseline.
- 9.2. The impacts assessed in stage 2b are as follows:
- Noise impact on health and quality of life on communities.
  - Anticipated air quality changes to local communities.
  - Greenhouse gas impact on wider society.
  - Capacity and resilience<sup>32</sup> on wider society.
  - Tranquillity on wider society; specifically related to AONBs and National Parks.
  - Access for general aviation communities.
  - Economic impact from increased effective capacity on general aviation and commercial airlines, including a forecast increase in air transport movements and estimated passenger numbers or cargo tonnage carried.
  - Fuel burn changes or impacts on general aviation and commercial airlines.
  - Training and other potential costs on commercial airlines.
  - Infrastructure, operational and deployment costs on the airport.
  - Safety on all groups; an initial indication of safety will be appraised. A more detailed assessment will be carried out in stage 3.
- 9.3. As discussed in section 3.7, results from the report carried out by Bickerdike Allen Partners conclude that Bournemouth Airport currently falls into Category D and is expected to remain in Category D in the future<sup>33</sup>.
- 9.4. Stage 2 submission for the Bournemouth Airport FASI(S) ACP is scheduled for 8<sup>th</sup> November 2024 and will include this document along with the Initial Options Appraisal, step 2b, document. In addition, all supporting documentation such as the presentations used for stakeholder engagement and the engagement record will be available on the ACP Portal.

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<sup>32</sup> Capacity and resilience refers to the effect of each option on the overall UK infrastructure (see Appendix E of [CAP1616](#))

<sup>33</sup> Full report, including Population within 51 dB LAeq, 16h or 45 dB LAeq, 8h Noise Contour, can be found on the ACP Portal 'Bournemouth Airport CAP 2091 Categorisation', Table 4.



- 9.5. Once successfully through the Stage 2 'Develop and Assess' gateway, Bournemouth Airport will begin Step 3 'Consult' process, beginning with consultation preparation and development of a consultation strategy. This involves planning and preparation for stakeholder consultation and engagement, preparing documents, including the second phase of options appraisal. The Full Options Appraisal will involve a more rigorous assessment with evidence for the chosen options. Once the CAA have approved the consultation strategy and documentation, consultation will commence.

## A. Annex A - ACP Stage 2 Stakeholder Safety

<b>Project Title/No:</b>	<b>ACP Stage 2 Stakeholder Safety Assurance meeting – Initial Options Appraisal</b>	<b>Meeting Ref:</b>	CPJ-5663-MIN-025
<b>Purpose:</b>	Discuss safety and connectivity issues with conceptual options.	<b>Date:</b>	7/12/2023
<b>Venue:</b>	Teams	<b>Time:</b>	12:00-13:00
<b>Attendees:</b>	Cyrrus Cyrrus MATS Bournemouth (BOH) Airfields Services Manager – BOH NATS NATS NATS Compliance officer BOH AGS ACP technical lead rep Southampton Airport NATS		
<b>Apologies:</b>	None		
<b>Distribution:</b>	ACP Stage 2 Airspace Safety Considerations		

Reference	Description
Introduction	Purpose of meeting is to look at any safety and connectivity issues regarding the conceptual options presented for BOH ACP stage 2.
D08 Northwest	From a network perspective there is no connectivity, the proximity to the SUAs is a challenge, there is no driver from the en-route environment to progress these options. Very little consequence if these are not progressed.
D08 East	No comments in terms of safety, D flies over the Isle of Wight, may interact with inbound flows. If there is a vertical or lateral solution, then it shouldn't be discounted. Option will be taken forward to stage 3.
D08 Northeast	Option A takes aircraft out of CAS. Unless FUA is a reality. Option A will be progressed. From a safety perspective no issues. Option may also benefit SOU. Also considered deconfliction with LHR.

Reference	Description
D08 South	CAS issue and the hold is in the overhead then fuel burn is an issue. Also issue with D031. If CAS volume is addressed then there will not be a safety reason to not progress this issue. This option could be progressed.
D26 Northwest	From a network perspective there is no connectivity, the proximity to the SUAs is a challenge, there is no driver from the en-route environment to progress these options. Very little consequence if these are not progressed.
D26 East	Option A More significantly outside CAS unless there's an airspace change, same conversation regarding FUA. Option D no safety concerns as managed tactically, needs conversation with SOU. To be in keeping with AMS we should be looking to proceduralise. Option E - the proximity to the SUA is very close, option E should be further considered but no safety reason why all should not be progressed.
D26 South	Option A, issues with wraparound as previously discussed. Airspace containment is an issue. GA are busy to the north of BOH. This is not a reason to discount. Option C not in CAS and issues with DA. Not clear how clear of the eastern extremity of SUA proximity. Could the baseline be expanded to cover the eastern extremity of option C. C seems to be aiming to achieve a shorter route and should therefore still be considered. B is already outside CAS. It is possible to create a hybrid, i.e., begin with the B route and end up with the C route. Note that the GA density there is quite high.
A08 Northwest	From a network perspective there is no connectivity, the proximity to the SUAs is a challenge, there is no driver from the en-route environment to progress these options. Very little consequence if these are not progressed.
A08 Northeast	Option A – FUA and CAS issues again. Not a safety issue. Option C, low level interaction with SOU. From a network level no issues. Climb gradients realistically achieved, up to 5.5 gradient is acceptable for most aircraft, above this airlines need to be engaged with. All options in this design envelope will be progressed.
A08 Southeast	Option B is a strange orientation against the DA. This is the main consideration. If arrivals come from a south-westerly position, then this could be progressed.
A08 South	Option C same applies as earlier with the departure of 26. Option will probably rule itself out as it is probably not achievable. Also issues with C regarding the DA.
A26 Northwest	From a network perspective there is no connectivity, the proximity to the SUAs is a challenge, there is no driver from the en-route environment to progress these options. Very little consequence if these are not progressed.

Reference	Description
A26 Northeast	Options A extends beyond what we have been discussing with this direction on other envelopes with regards to the FUA. No other issues other than the CAS issue again.
A26 East Southeast	Options B is problematic because of its orientation to the DA but it is not impossible as it is possible to connect. Other issues are that it will require additional low-level CAS, possibly a driver for en-route level airspace to serve the B swathe.
A26 South	Option A regarding the DA, outside CAS and the joining point is close in which is potentially destabilises approaches and therefore maybe a liability issue.
Conclusions	All Northwest design envelopes will be discounted. All the other options are taken forward to stage 3 with notes about safety and connectivity where appropriate.

## B. Annex B - DPE and Feedback for Options removed

### B.1. Removed Option 08-S-C Feedback

#### Survey Question

‘Runway 08 – South

Do you think we have correctly applied the Design Principles to swathe 08-S-C?

If no, please provide the Design Principle number and reason in the free text 'other' field.’

#### Response

Stakeholder feedback with our responses in response column

Comment	Response	Stakeholder
No; DP1 and DP8. Widebody manoeuvring requirements not or only partially met.	This will be investigated more closely once individual routes are assessed within the options carried forward to the next stage of the CAP1616 process.	AV01
Yes		AV02
Yes		AV03
Yes		MI04
he options identified for Runway 08 South all involve overflying of the New Forest National Park (currently this is only identified against Design Principle 4 (Tranquillity) for Option B). In our view Options A and B involve a similar degree of overflying of the National Park and so for consistency the assessment should highlight this against Design Principle 4 for both options.		EB05
Yes		GA06

**Full Design Principle Assessment**

08-S-C	Design Principle	Qualitative Assessment	BOH Eval.	Post Feedback
1	<b>Safety</b> – The airspace design and its operation must maintain or where possible, enhance current levels of safety.			
2	<b>Overflight</b> - The new procedures should not increase the number of people overflown by aircraft using the Airport.			
3	<b>Noise Footprint</b> – The design should limit, and where practicable reduce the impact of noise to stakeholders on the ground, in line with the Bournemouth Airport Noise Action Plan and where possible periods of built-in respite should be considered.			
4	<b>Tranquillity</b> - Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.			
5	<b>Emissions and Air Quality</b> – The proposed design should minimise CO2 emissions per flight.			
6	<b>Airspace Dimensions</b> – The volume and classification of controlled airspace required for Bournemouth Airport should afford the appropriate volume to contain and support commercial air transport for both runways, enabling safe, efficient airspace design which considers the needs of all airspace users.			
7	<b>Airspace Complexity</b> – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.			
8	<b>Technical Requirements</b> – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.			
9	<b>Systemisation</b> – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network and Southampton Airport, as per the FAS(S) programme. Arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.			
10	<b>Independence</b> – Where possible, the new procedures and airspace configuration should enable Bournemouth Airport to access controlled airspace independently of service provision from the Southampton Radar service.			
11	<b>Operational Cost</b> – Provided it does not have an adverse impact to community disturbance and other airspace users, procedures should be designed to optimise fuel efficiency.			
12	<b>AMS Realisation</b> – This ACP must serve to further, and not conflict with, the realisation of the AMS.			
13	<b>PBN</b> – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.			





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