CAP1616 STEP 1B – DESIGN PRINCIPLES

VERSION 1.0

10TH APRIL 2019

HELIOS

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INTRODUCTION

1. Bournemouth Airport has initiated a CAA CAP1616 Airspace Change Process (ACP).
2. The CAP1616 Stage 1A Assessment Meeting was held with the CAA on the 28th February 2019 and all supporting documentation was uploaded to the CAA's airspace change portal.
3. These slides form our submission for CAP1616 Step 1B to the CAA.

CONTEXT FOR THE CHANGE

1. Bournemouth Airport currently has ILS on both RWY ends
   - 08 (Cat I) – 25% of landings
   - 26 (Cat III) – 75% of landings
2. RWY 08 ILS is obsolete
   - Installed second hand in 1984/5
   - Maintenance support at end of life
   - Irrecoverable failure will have serious operational consequences
3. There is a legal requirement to implement RNP approaches by 2024
   - Could provide 3D capability to both RWYs
   - Could improve resilience to Runway 26 operations.

CONTEXT FOR THE CHANGE

4. BIA's agreed Noise Action Plan includes a Section 106 agreement related to aircraft landing noise:

   "3. Aircraft making an approach to land at the Airport shall follow a descent path which will not result in their being lower at any time than the descent path that would be followed by aircraft using the Instrument Landing System.

   4. Without prejudice to paragraph 1 of the Third Schedule the use of reverse thrust (above idle power) after landing is minimised, consistent with the safe operation of the Aircraft at all times.

   5. To develop protocols to facilitate and encourage the use of Continuous Descent Approaches by aircraft making an approach to land at the Airport."

5. These points from the Section 106 have been reflected in BIA's Noise Abatement Procedures:

   "When using the ILS in IMC or VMC, all turbine powered aircraft and all other aircraft with a MTWA of 5700 KG or more, shall not descend below 2000 FT QNH before intercepting the glidepath, nor thereafter fly below it. Aircraft approaching without assistance from the ILS or radar shall not at any time follow a descent path lower than that which would result from an approach using guidance from the ILS. Aircraft may be routinely vectored or execute procedural approaches below this level within the SMAA, according to ATC procedures"

THE AIRSPACE CHANGE PROCESS – STEP 1B

These slides present BIA's submission as per the CAP1616 Step 1B of the ACP process and provide evidence for compliance with its requirements, which are:

1. Design principles chosen;
2. An explanation of the engagement methods employed;
3. A chronology of the engagement activity;
4. The issues raised during the engagement process and evidence of a two-way conversation;
5. The rationale behind the decision to adopt those principles including evidence, and
6. List of engaged stakeholders.

DESIGN PRINCIPLES CHOSEN

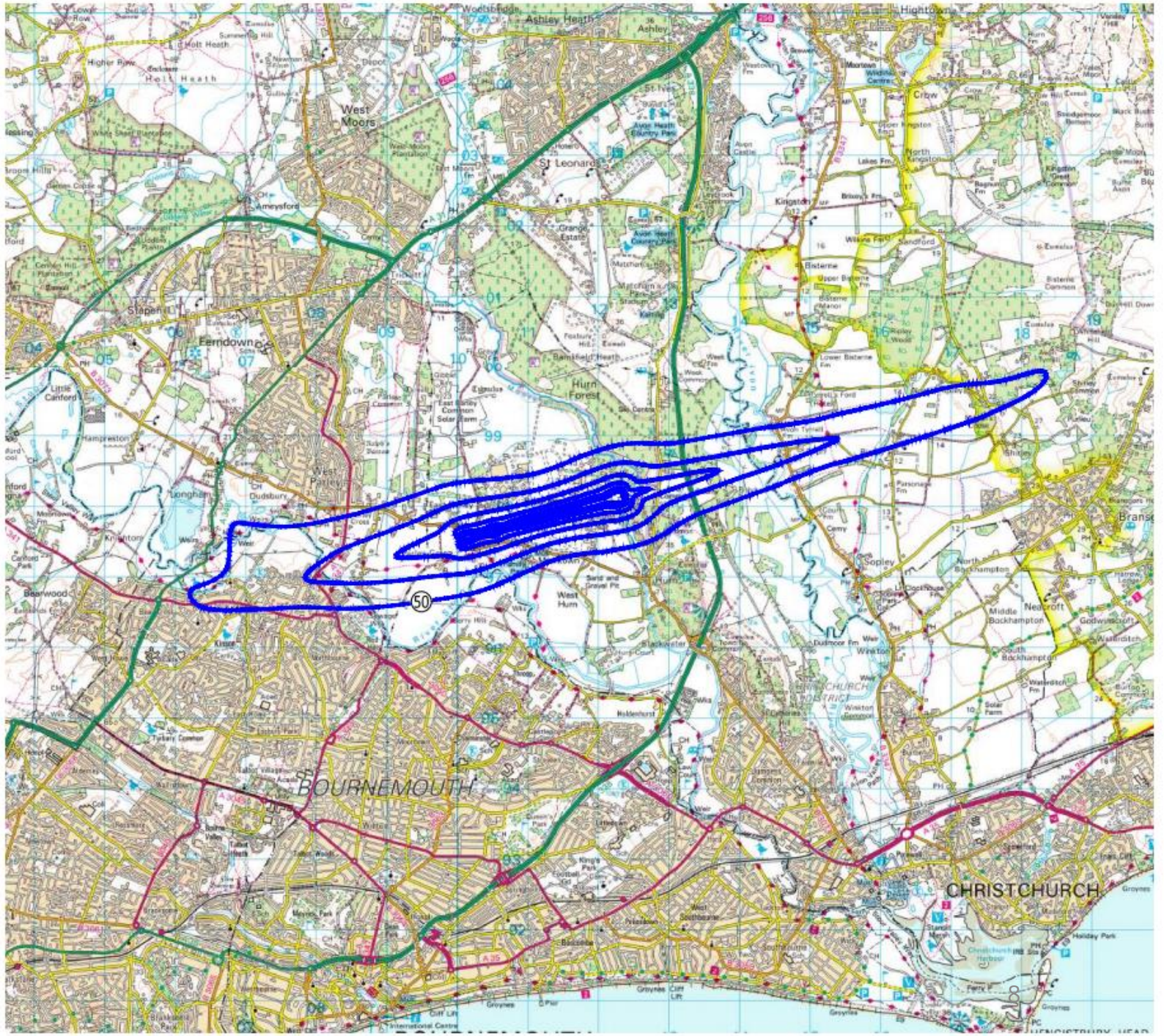
DESIGN PRINCIPLES

1. The new procedures should not increase the number of people overflown by aircraft participating in the approach. **(Community/Environmental)**
2. The new procedures should not increase the noise footprint of the existing airport operation, for similar aircraft types and traffic levels, as detailed in the LAeq 16 Hr map in the current Noise Action Plan. **(Community/Environmental)**
3. Implementation should minimise disturbance to the Moors River System SSSI. **(Community/Environmental)**
4. The new approaches shall be standardised by ICAO and acceptable to EASA and CAA and the implementation shall be in compliance with all applicable legislation and regulations, **(Technical)**
5. The design shall be fully compliant with the design criteria stated in ICAO Doc 8168 (PANS OPS) and be flyable by all aircraft types in approach Speed Categories A through D. **(Technical)**
6. The approach procedures shall be of a type for which the majority of Bournemouth aircraft operators are equipped and authorised to fly. **(Technical)**
7. The designs shall seamlessly integrate with extant instrument approach procedures at Bournemouth International Airport **(Technical)**
8. The procedures should address the needs of flight training operators at Bournemouth. **(Operational)**
9. The design shall support continued use of existing radar vectored arrival procedures provided by Solent Radar. **(Operational)**
10. The new procedures shall be implemented in a cost-effective manner. **(Financial)**

DESIGN PRINCIPLE 1-2

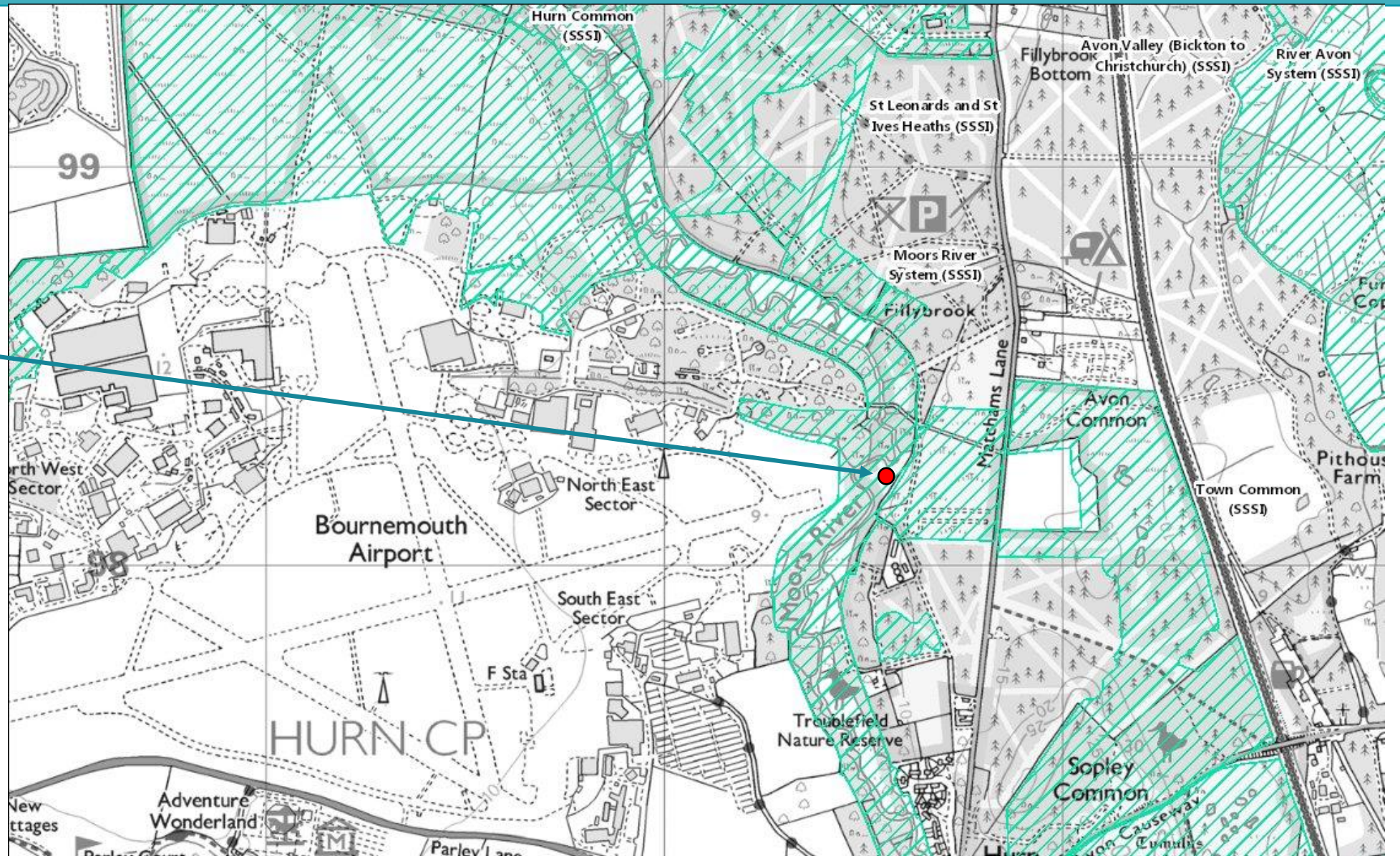
CURRENT BOURNEMOUTH NOISE CONTOUR MAP

50 to 75 dB L Aeq,16hin 5 dB step



DESIGN PRINCIPLE 3 (SSSI)

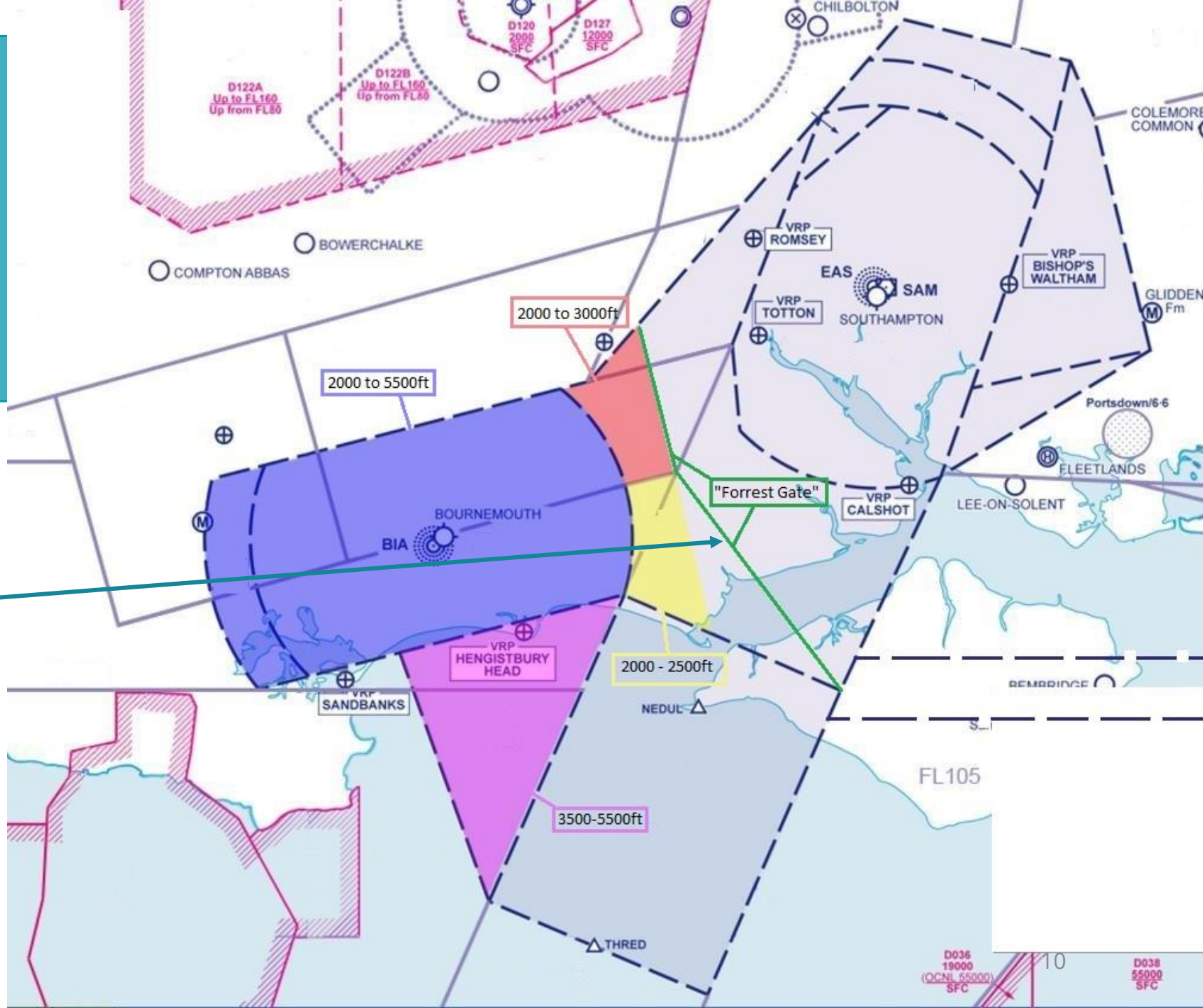
ILS 08, Localiser



COMPLEX AIRSPACE

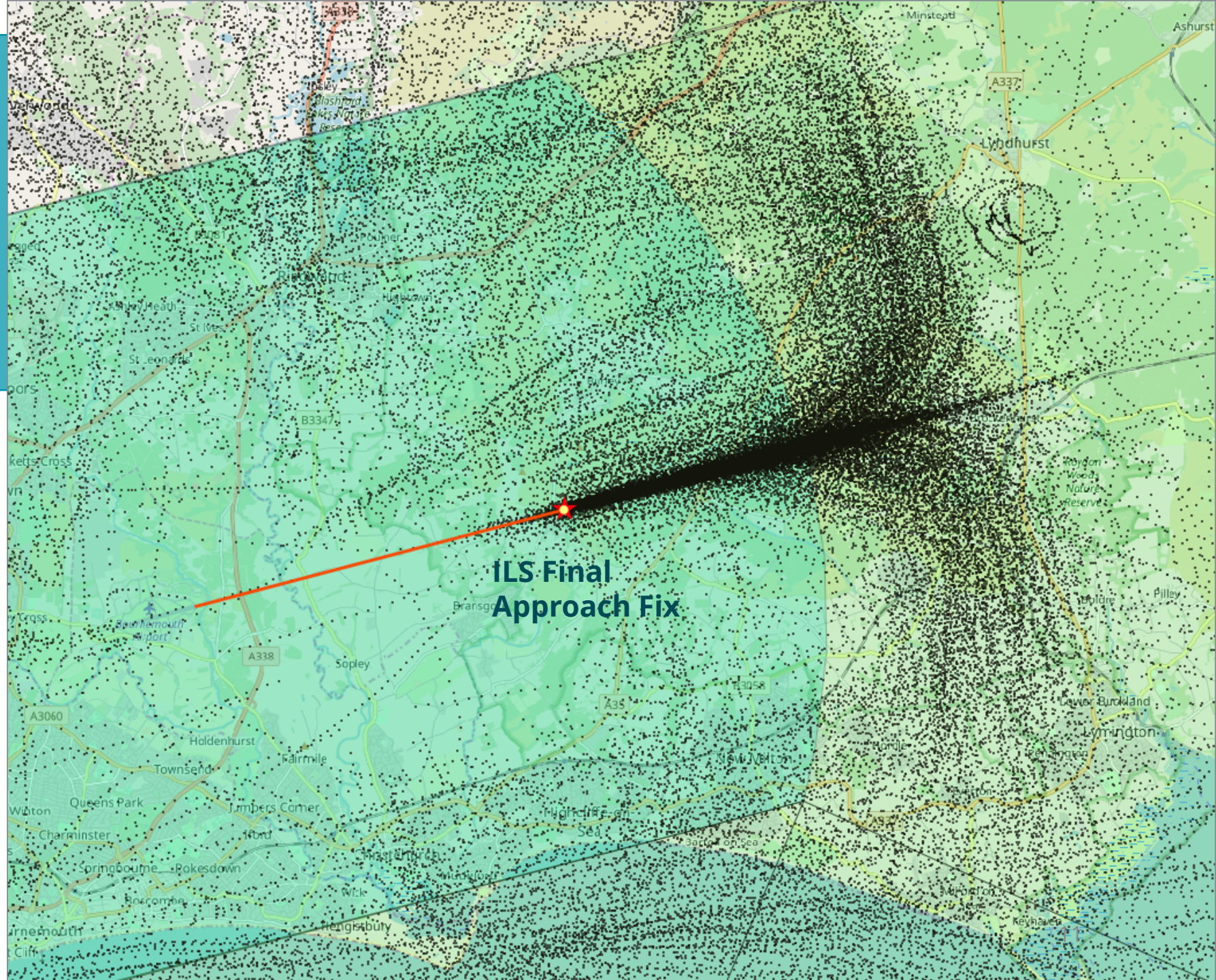
PRINCIPLE 9

Forest Gate is the interface between Solent Radar and Bournemouth Radar detailed in the LoA between the units.



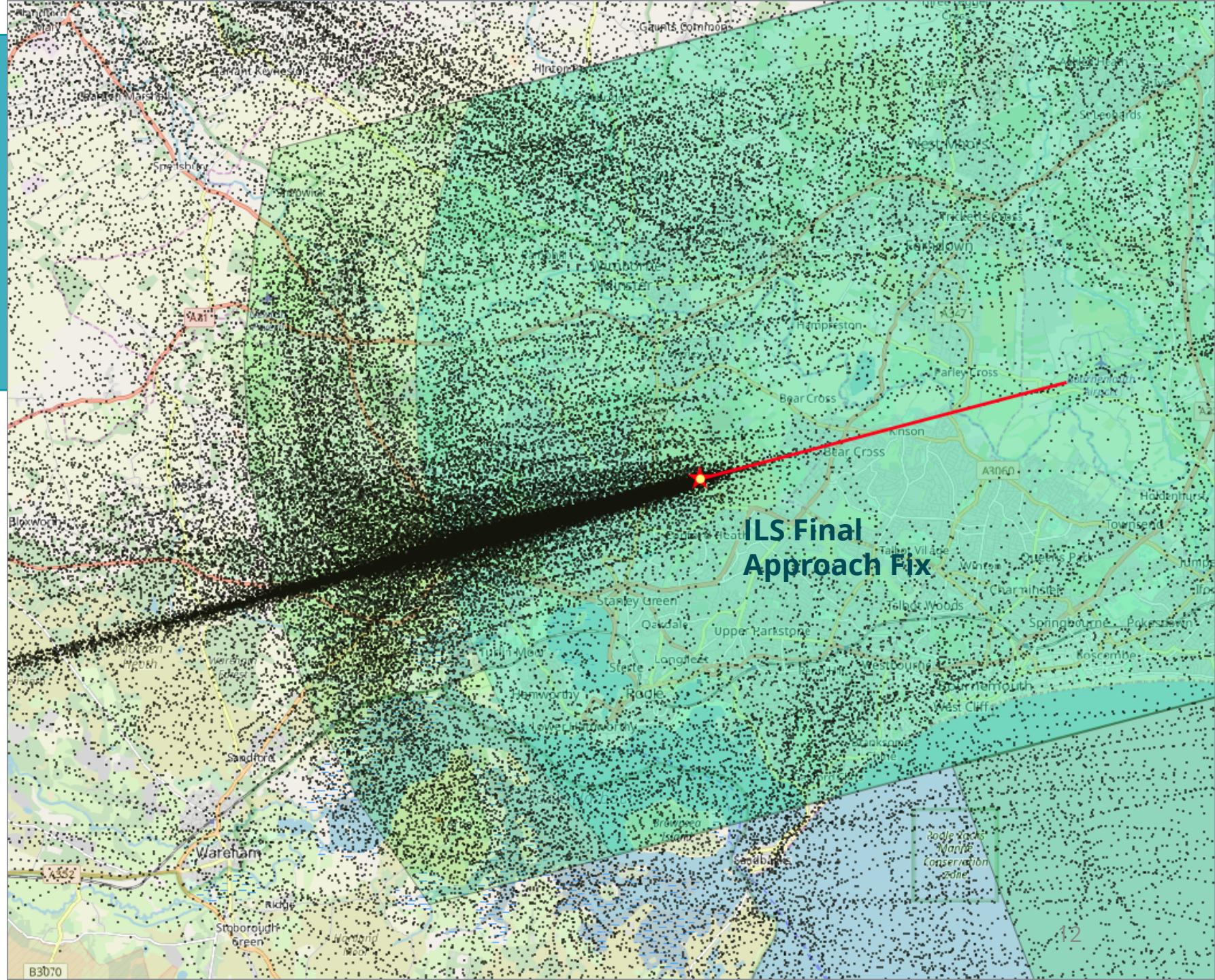
RWY 26 – TRAFFIC PATTERNS ZOOM

(1,500-2,500 FT) (PRINCIPLE 7 & 9)



RWY 08- TRAFFIC PATTERNS ZOOM

(1,500-2,500 FT) (PRINCIPLE 7 & 9)



EXPLANATION OF THE ENGAGEMENT METHODS EMPLOYED

ENGAGEMENT METHODS EMPLOYED

- BIA is aware that any change on the airport will have an impact on all airport stakeholders, local communities and adjacent airspace users.
- In March 2018 the Bournemouth Airport Noise Action Plan that introduced the potential to implement RNAV Instrument Approach Procedures was presented to the Consultative Committee Meeting with a 12 week review and consultation period.
- In December 2018 BIA held a meeting with local aeronautical stakeholders that would be affected by any change. The aim of this meeting was to introduce the CAP1616 process and discuss the stakeholders' challenges, opportunities and requirements associated with the ACP proposal. On the basis of this meeting draft Design Principles were prepared and sent to all participating stakeholders for review and comment.
- In March 2019 , the draft Design Principles were presented to the Airport Consultative Committee. The objective of the airspace change, the CAP1616 process and each of the draft Design Principles and their purpose were fully explained to the Committee. The Committee sent its feedback stating full agreement with proposed principles.
- The draft Design Principles were also sent via email to selected NATMAC organisations. Those responding supported the draft Design Principles with no negative comments.

CHRONOLOGY OF THE ENGAGEMENT ACTIVITY

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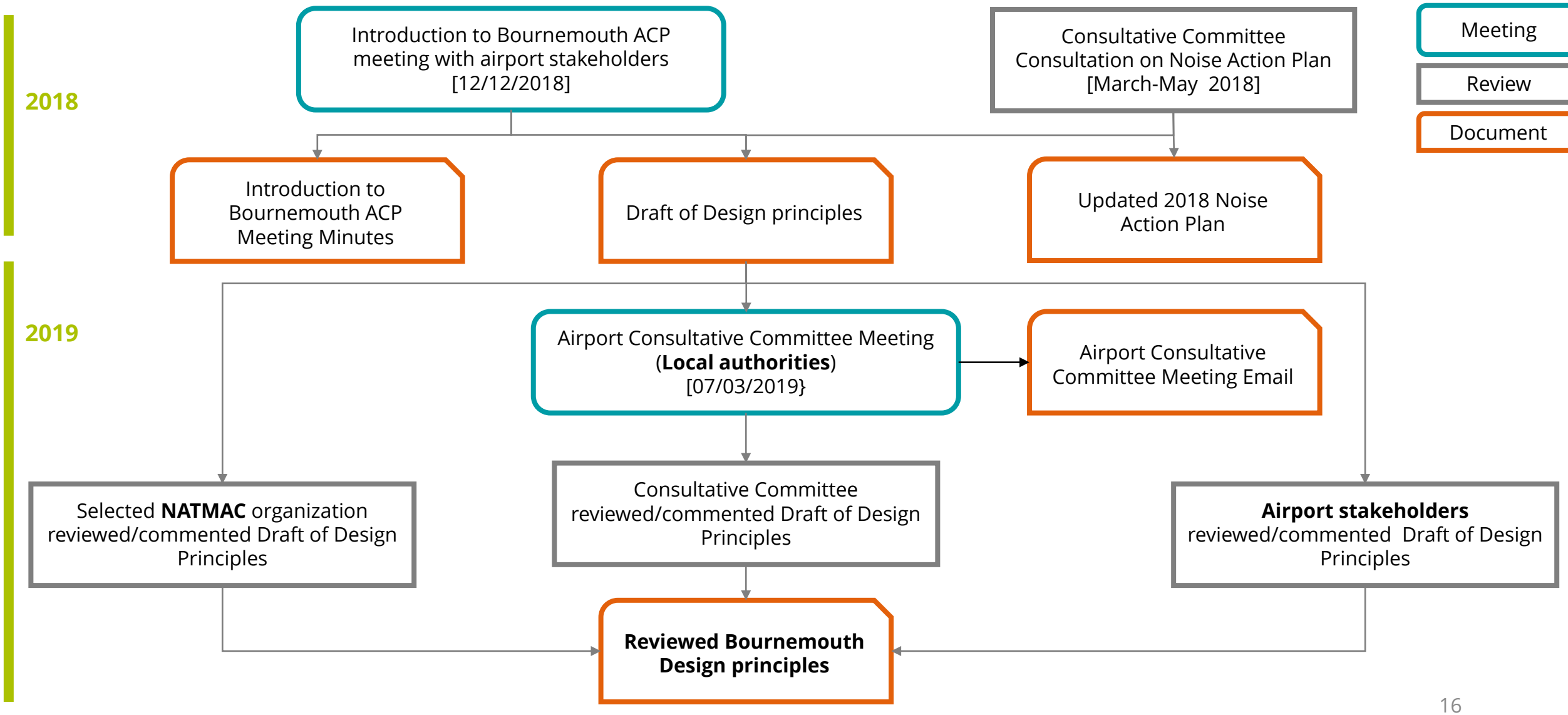

ISSUES RAISED DURING THE ENGAGEMENT PROCESS AND EVIDENCE OF A TWO-WAY CONVERSATION

THE ISSUES RAISED DURING THE ENGAGEMENT PROCESS

1. There were no comments or issues raised during the engagement process with stakeholders at this Stage of the CAP1616 process that required revision of the proposed Design Principles.
   - The BMAA noted that the ACP should consider the possibility of reducing BIA controlled airspace. This will not be taken into account as a new design principle as the controlled airspace (Class D) is there to protect existing vectoring of traffic; operations which will remain unchanged by the proposal of this ACP.
2. Minutes from the Introduction to Bournemouth ACP meeting are included as a separate document.

RESPONSE FROM CONSULTATIVE COMMITTEE

At the Bournemouth Airport Consultative Committee meeting held on the 7th March, a presentation was delivered to the members by Cathy Willoughby-Crisp in respect of the Airports plan to replace the ILS on Runway 08.

The aim of the project and the required process was fully explained and as stakeholders we understand the part that we have in the delivery of the project.

Each of the proposed Design principles , and their purpose in the process, were explained. We fully agree with the criteria suggested; which we believe address all aspects that need to be considered, to assess all the possible options to achieve the optimum solution of the project aim.

This feedback was sent to yourselves at the request of, and on behalf of, the members after the presentation.

Regards

[redacted]

Vice Chair
Bournemouth Airport Consultative Committee

RESPONSE FROM BMAA

On behalf of the British Microlight Aircraft Association.
In response to your initial consultation on design principles for the Bournemouth ACP we ask that you note the following:

- *We have no comment that would not support the proposed design principles.*
- *We would like to see the ACP consider whether it presents the opportunity to reduce the volume of any existing airspace.*

If during development the ACP proposes to establish any additional airspace, the ACP must demonstrate that it has considered the effect of any new airspace on aircraft movements outside that airspace, and has demonstrated that any new airspace will not reduce safety with respect to those aircraft by, for example, creating pinch points.

Regards.

[redacted]

British Microlight Aircraft Association

RESPONSE FROM AOPA

Dear Sir/madam,

The aircraft owners and pilots association (AOPA) is a NGO that represents the views of pilots, aircraft owners and the flight training industry in the UK and we have over 3500 members.

The proposal is supported by AOPA because there is a growing need for GA pilots to train for RNP/PBN procedures and Bournemouth has been and we hope will continue to be a regional airport that continues to welcome General Aviation operations.
It should also be noted that at a future date all GNSS approaches will need to have vertical guidance so again this proposal is very timely.
There are thousand of instrument rated pilots not all of whom have access to simulators for training and renewal of IR ratings. We see this proposal as an overall modernisation of the airports facilities and we look forward to seeing the next stage.
We have nothing to add with respect to the design principles.

Apologies for being late in the reply - mix up of consultation dates.

Yours faithfully

RATIONALE BEHIND THE DECISION TO ADOPT THOSE PRINCIPLES INCLUDING EVIDENCE

DESIGN PRINCIPLES AND RATIONALE

No	Category	Design Principle	Rationale	Comments
1	Community/ Environmental	The new procedures should not increase the number of people overflown by aircraft participating in the approach.	The aim of the new procedures is to replicate existing aircraft tracks and to not overfly new areas or population to the maximum extent possible.	Supported
2	Community/ Environmental	The new procedures should not increase the noise footprint of the existing airport operation, for similar aircraft types and traffic levels, as detailed in the LAeq 16 Hr map in the current Noise Action Plan.	The aim of the new procedures is to replicate existing aircraft tracks and to remain within the existing noise footprint to the maximum extent possible.	Supported
3	Community/ Environmental	Implementation should minimise disturbance to the Moors River System SSSI.	The aim is to minimize disturbance to the Moors River System SSSI where the current ILS Localizer is located by avoiding replacement of the 08 ILS. Any ILS replacement construction works within would most likely involve significant disruption to local flora and fauna.	Supported
4	Technical	The new approaches shall be standardised by ICAO and acceptable to EASA and CAA and the implementation shall be in compliance with all applicable legislation and regulations.	The new procedures are required to be standardized by ICAO and acceptable to EASA and CAA. The implementation shall be in compliance with all applicable legislation and regulations.	Supported
5	Technical	The design shall be fully compliant with the design criteria stated in ICAO Doc 8168 (PANS OPS) and be flyable by all aircraft types in approach Speed Categories A through D.	The procedure is required to be designed by a CAA Approved Procedure Design Organization and it will be in compliance with PANS – OPS criteria.	Supported

DESIGN PRINCIPLES AND RATIONALE

No	Category	Design Principle	Rationale	Comments
6	Technical	The approach procedures shall be of a type for which the majority of Bournemouth aircraft operators are equipped and authorized to fly.	The new procedures must be suitable to be flown by the majority of aircraft operators at Bournemouth. The aircraft have to be equipped with appropriate equipment compliant with EASA and CAA regulations.	Supported
7	Technical	The designs shall seamlessly integrate with extant instrument approach procedures at Bournemouth International Airport .	The aim is to minimize the impact on the current operation at Bournemouth, allowing Bournemouth ATC to interact with aircraft flying the current and new procedures in a common manner.	Supported
8	Operational	The procedures should address the needs of flight training operators at Bournemouth.	Flight training organizations at Bournemouth Airport perform more movements than commercial operators. Training of commercial pilots is an important business activity for the airport.	Supported
9	Operational	The design shall support continued use of existing radar vectored arrival procedures provided by Solent Radar.	The aim is to maintain the existing radar vector procedures and do the minimal changes in current Letter of Agreement between Solent Radar (Southampton ATC) and Bournemouth ATC. This will retain current operational procedures at Bournemouth and Solent Radar ATC units, thereby minimizing training requirements.	Supported
10	Operational	The new procedures shall be implemented in a cost-effective manner.	The aim is to replace the obsolete 08 ILS with new instrument approach procedures which have a positive economic business case. It is necessary to mention that the PBN Implementing Rule (IR) 2018/1048 requires RNP Approaches by January 2024. (If the 08 ILS fails irreparably, the RNP Procedures would be needed by December 2020). Beyond 2030 foresees RNP approaches in preference to ILS CAT I operations	Supported

LIST OF ENGAGED STAKEHOLDERS

ENGAGED STAKEHOLDERS

Airport Consultative Committee Stakeholders	Selected NATMAC Stakeholders	Airport Operator Stakeholders
Christchurch & District Chamber of Trade & Com	Aircraft Owners and Pilots Association (AOPA)	Easyjet
Hurn Parish	Aviation Environment Federation (AEF)	Ryanair
Verwood Town Council	British Business and General Aviation Association (BBGA)	NATS
New Forest District Council	British Gliding Association (BGA)	TUI
Poole Borough Council	British Microlight Aircraft Association (BMAA)	Bournemouth Commercial Flight Training (BCFT)
East Dorset District Council	General Aviation Safety Council (GASCo)	L3 Commerical Training Solutions (L3CTS)
Dorset Federation of Residents' Associations	General Aviation Alliance (GAA)	CAE Oxford
Broadstone Residents' Association	Light Aircraft Association (LAA)	
West Parley Parish & Deputy East Dorset District	Low Fare Airlines	Blackbushe Aviation
Hampshire County Council & New Forest Nat Park	NATS	Compton Abbas Airport
Bournemouth Chamber of Trade & Commerce	PPL/IR (Europe)	
Crowhill Res' Association / Burley Parish Council		
Prestige Holidays		
Dorset Chamber of Commerce & Industry		

CONCLUSIONS

CONCLUSION

1. BIA has followed the CAP 1616 Stage 1B Process.

2. At the March 2018 (Pre-ACP) meeting, the Airport Consultative Committee was presented with the draft 2018 Noise Action Plan that introduced the potential implementation of RNAV Instrument Approach Procedures.

3. BIA engaged with its local airport stakeholders in a workshop on 12th Dec 2018, on the basis of which a set of draft Design Principles were developed.

4. The draft Design Principles were:
   - presented to the Airport Consultative Committee meeting on 7th March 2019 and were fully supported.
   - distributed for comment to local Air Transport and Training operators, selected NATMAC members and the Airport Consultative Committee Stakeholders.

5. No Negative Comments or observations received.

6. No changes to the draft Design Principles arose through the engagement process.

29 Hercules Way
Aerospace Boulevard
AeroPark
Farnborough I Hampshire
GU14 6UU I UK
Tel: +44 1252 451 651
www.askhelios.com

HELIOS
an egis company