



# Introduction of Do Minimum Options and Baselines changes for BOH

ACP 2019-43

# Abbreviations

## Abbreviation

ACP

CAA

DE

Do-Min

ENR

NE / E / SE / S / NW

NTK

OS

RWY

## Definition

Airspace Change Proposal

Civil Aviation Authority

Design Envelope

Do-Minimum Option

En-Route Chart

North East / East / South East /  
South / North West

Noise and Track-Keeping

Ordnance Survey

Runway

# Baseline and New Do Minimum options and further updates

## Content

- Following CAA feedback, we have:
  - Redefined baselines to reflect actual traffic patterns.
  - Introduced Do-Minimum options for all design envelopes, providing a clear benchmark against baselines.
  - Removed unused baselines (e.g. North-West) where no commercial demand exists\*.
  - Refined existing baselines where necessary to improve accuracy.
- This presentation shows how design envelopes evolved between engagements, and how baselines and Do-Minimums have been set.
- Purpose: to provide transparency, consistency, and a clear basis for stakeholder feedback.

\* However, the NW DE options (A–E) remain documented within the report for completeness and historical reference, reflecting earlier design iterations considered during initial development.

# Defining the Baseline (or ‘Do-Nothing’) and ‘Do-Minimum’ Options

## Departures

- Do-Nothing Baseline:
  - Represents today’s operation, with existing airspace and procedures.
  - Defined using Noise and Track-Keeping (NTK) data, current procedures, and input from operational Air Traffic Controllers.
  - Shows how operations would remain if no changes were introduced.
- Do-Minimum Option:
  - A refinement of the Do-Nothing baseline, introducing RNAV (Area Navigation) capability.
  - Demonstrates how today’s operations would look with modernised RNAV Standard Instrument Departure (SID) procedures. This may require amendments to Airspace Dimensions to contain the new procedures.



# Defining the Baseline (or ‘Do-Nothing’) and ‘Do-Minimum’ Options

## Arrivals

- Current Do-Nothing baselines are already well integrated with the en-route network.
- The Do-Minimum enhances this by reducing ATC coordination and improving network integration.
- A geographical swathe has been created to illustrate these refinements, representing the highest concentration of tracks from baseline data.
- In essence, the Do-Minimum arrival swathes replicate today’s operations using improved navigation technology and connectivity, this may require amendments to Airspace Dimensions to contain the new procedures.

# How the Options Evolved

*Changes between engagements, baselines, and introduction of Do-Minimum options.*

## Departures RWY 08

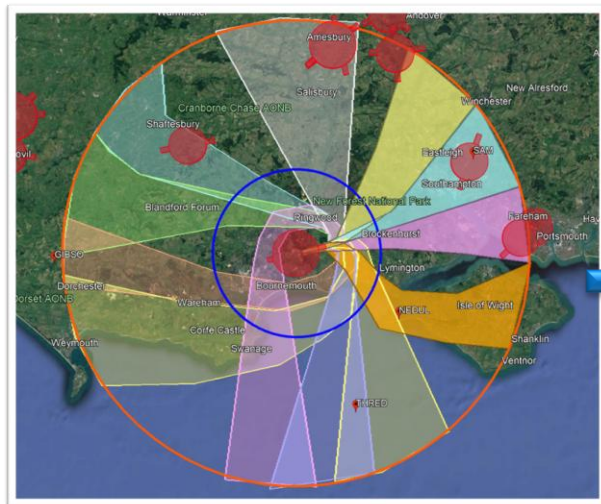
During the refinement of the design envelopes, several changes were made:

- **East & South East DE**
  - Split into **North East (Options A & B)** and **East (Options C & D)**.
  - **Option B** updated to reflect traffic → now **North East Baseline**.
  - **Option C** remains the **East Baseline**.
  - Option lettering (A–D) unchanged.
- **North West DE**
  - Baseline removed due to **lack of demand** and minimal traffic.
- **South DE**
  - **Option A** unchanged.
  - New **Baseline B** created (replacing former Baseline C).
- **Do-Minimum Options**
  - Introduced for **North East, East, and South DEs**.
  - Ensures consistency with CAA requirements and clear baseline comparison.

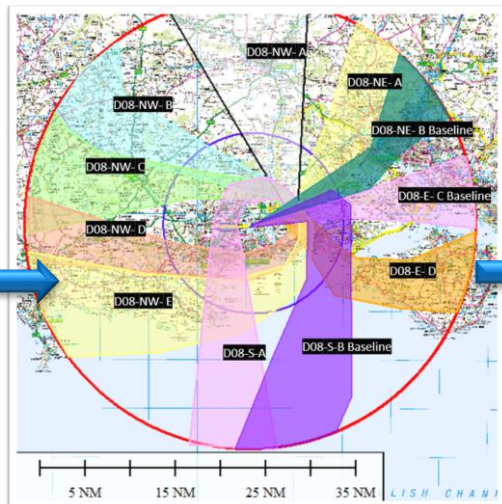
# Design Envelope Evolution

## Departures RWY 08

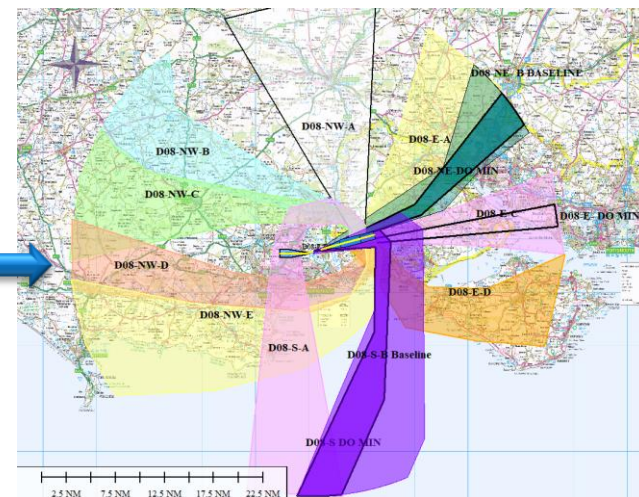
### 1<sup>st</sup> Engagement



### 2<sup>nd</sup> Engagement



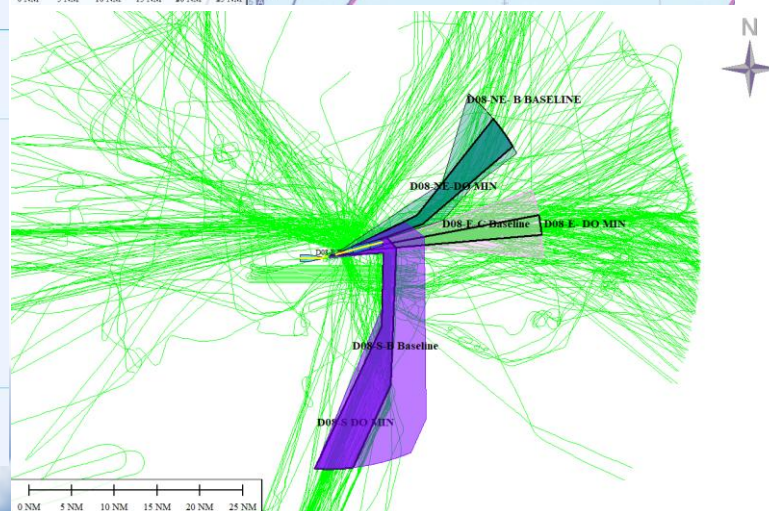
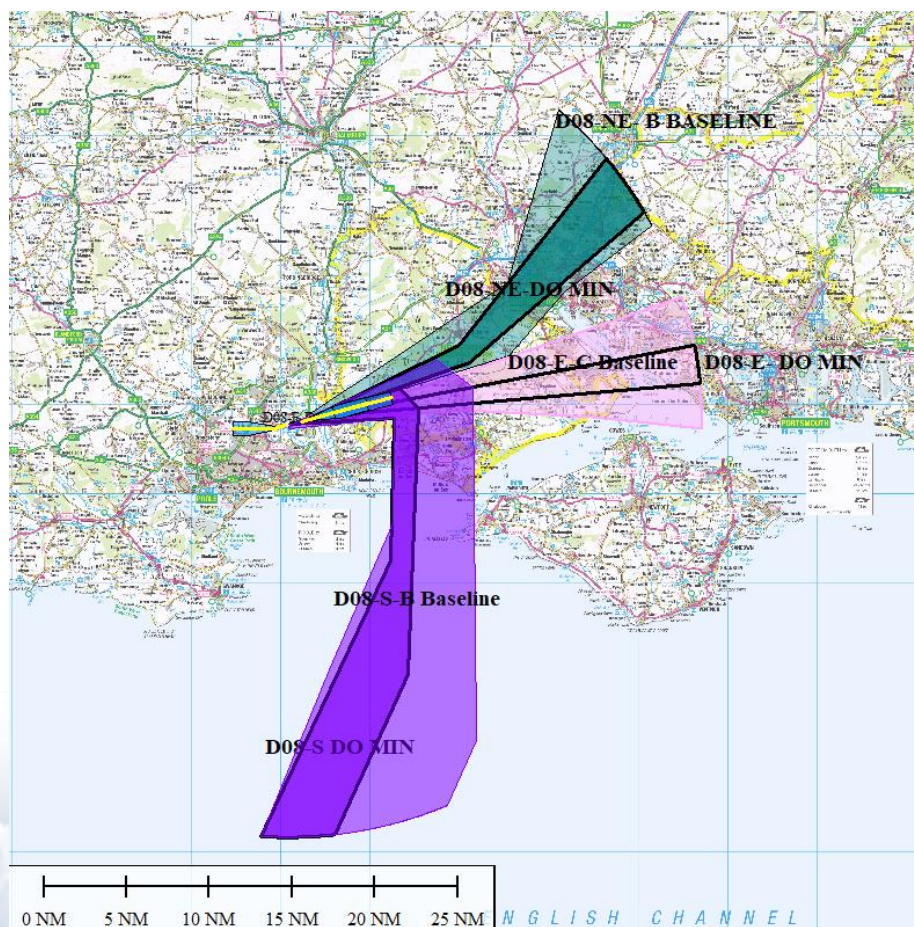
### 2025 Evaluation





# Departures from RWY 08 Baselines and Do-Min options

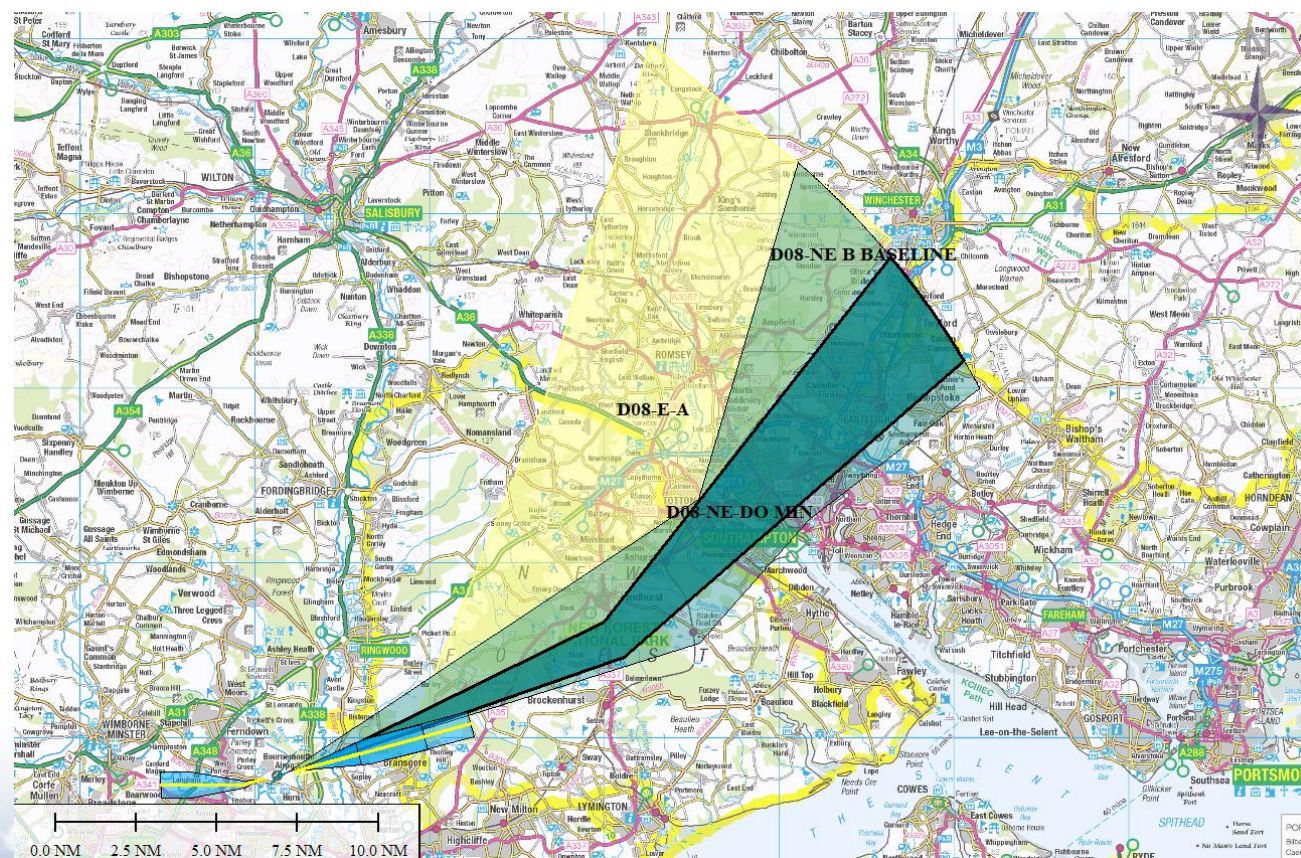
Overview: all baselines and Do Min over OS, ENR chart and tracks





# Departures from RWY 08 Baselines and Do-Min options

## North East Design Envelope over OS map

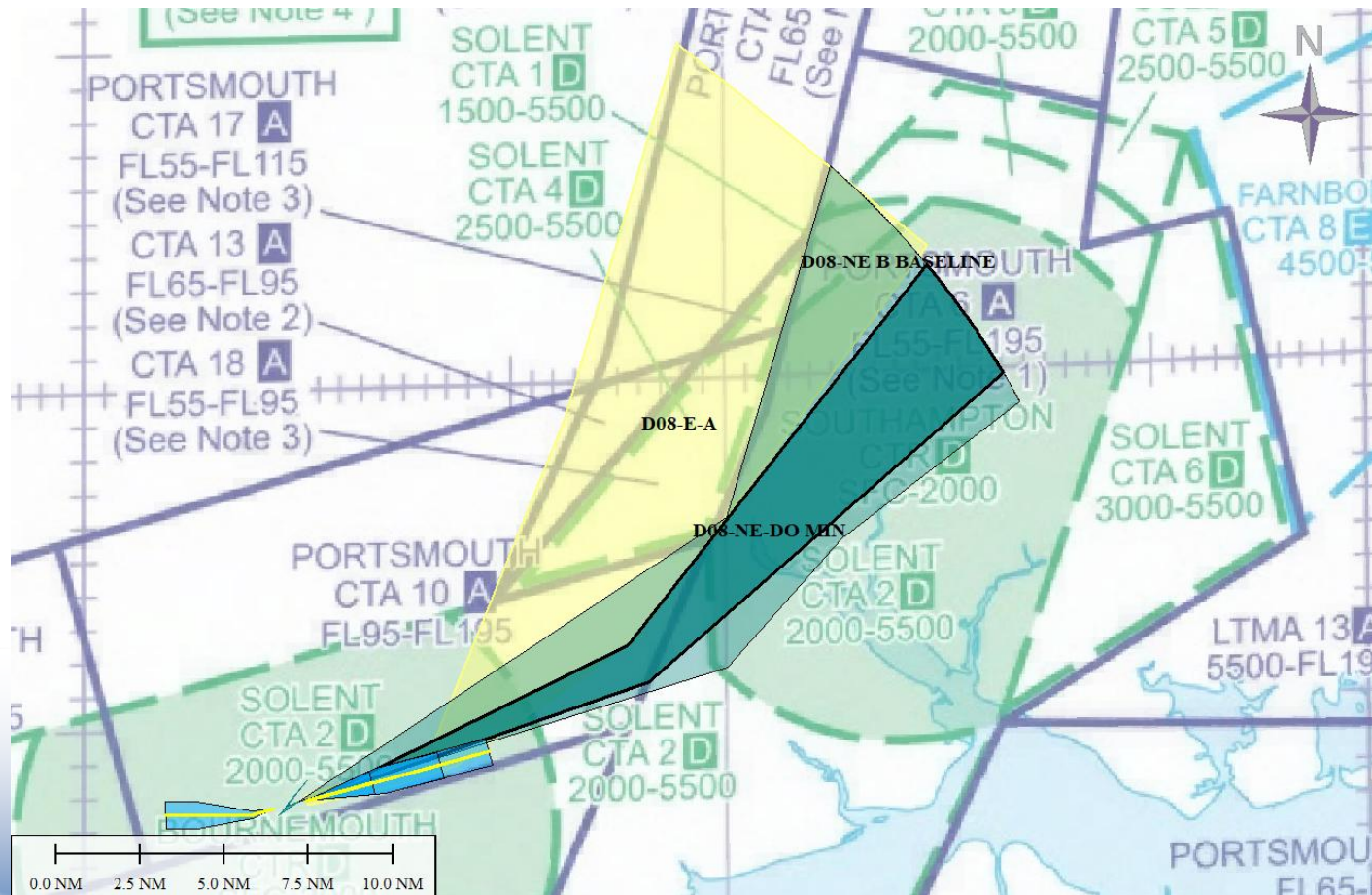


Option	Change
D08-NE-A	No change
A08-NE-B BASELINE	No Change
A08-NE-DO MIN	New



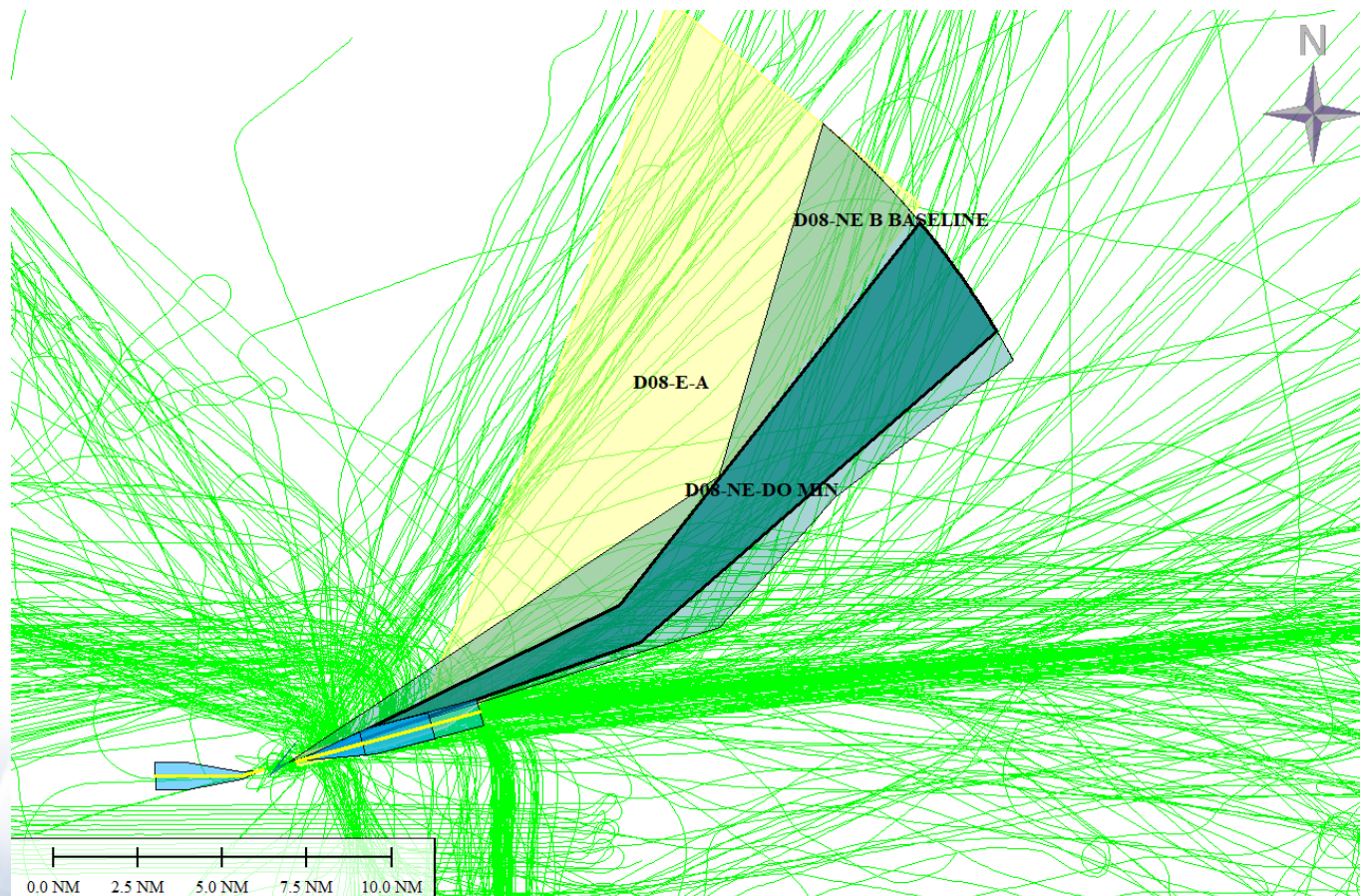
# Departures from RWY 08 Baselines and Do-Min options

North East Design Envelope over ENR



# Departures from RWY 08 Baselines and Do-Min options

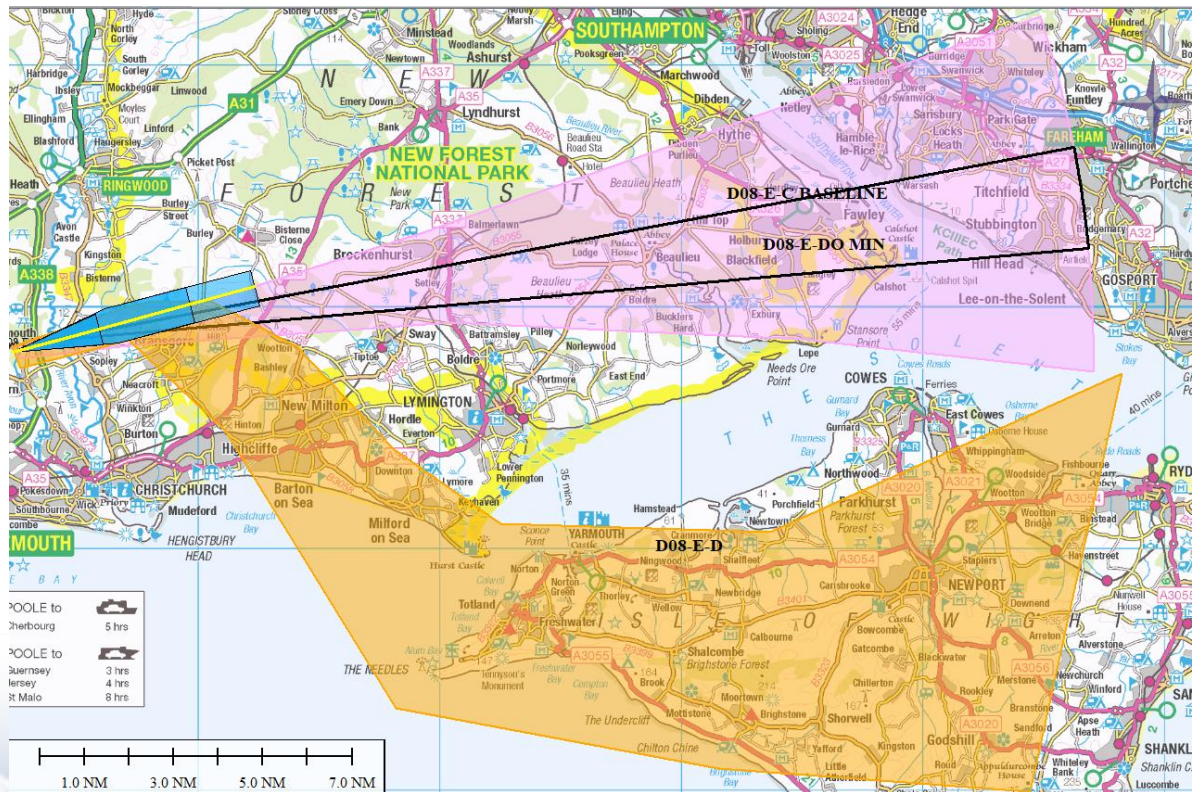
North East Design Envelope over track





# Departures from RWY 08 Baselines and Do-Min options

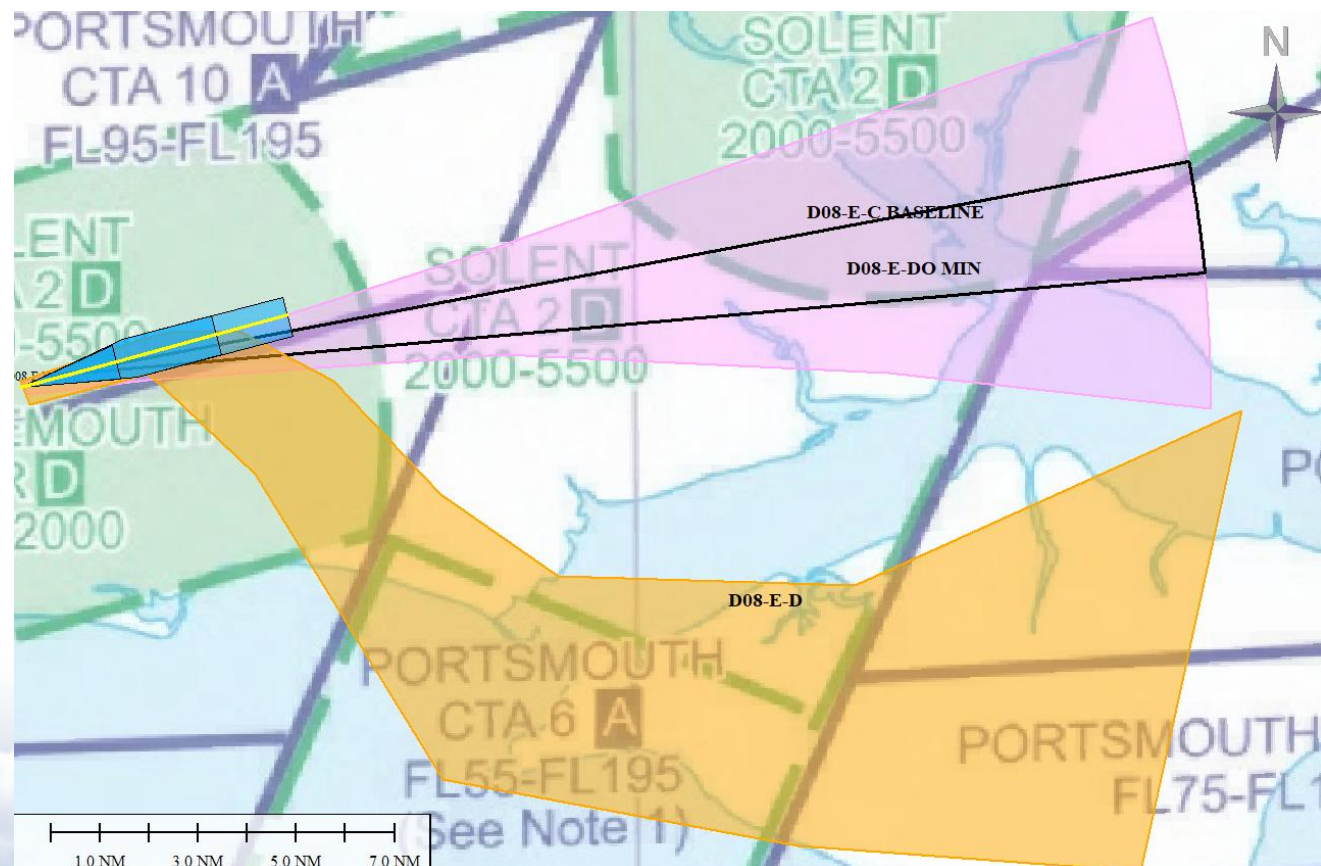
East Design Envelope over OS map



Option	Change
D08-E-D	No change
A08-E-C BASELINE	No Change
A08-E-DO MIN	New

# Departures from RWY 08 Baselines and Do-Min options

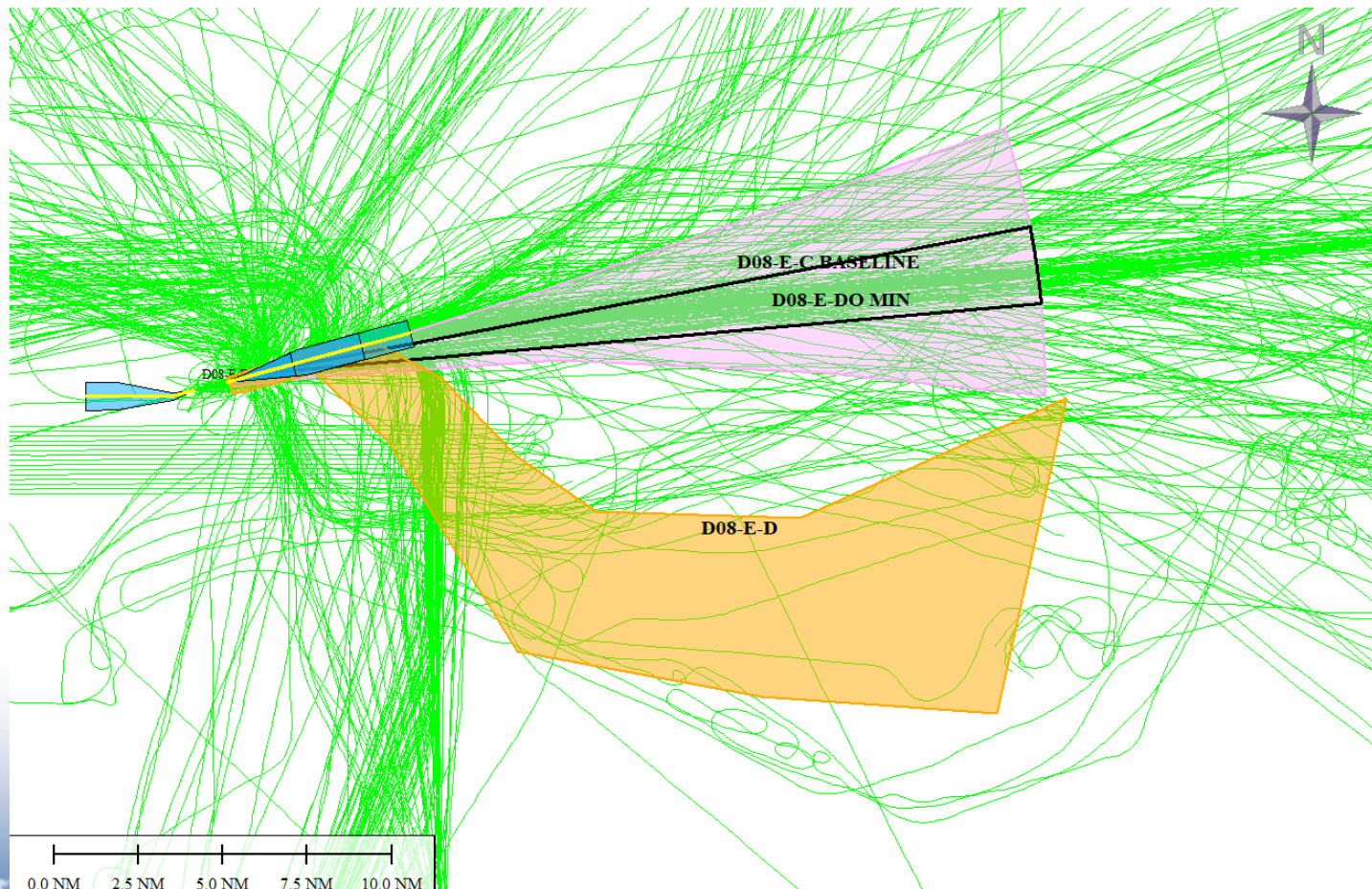
East Design Envelope over ENR chart





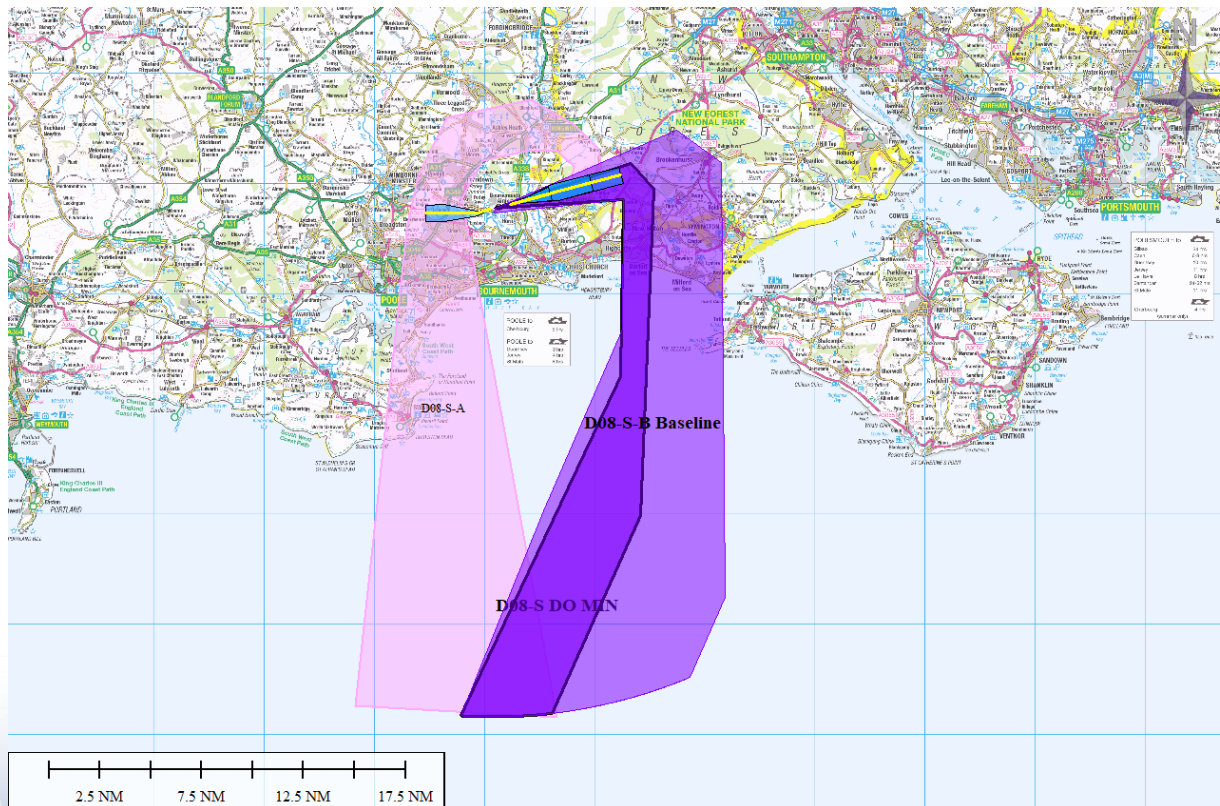
# Departures from RWY 08 Baselines and Do-Min options

East Design Envelope over tracks



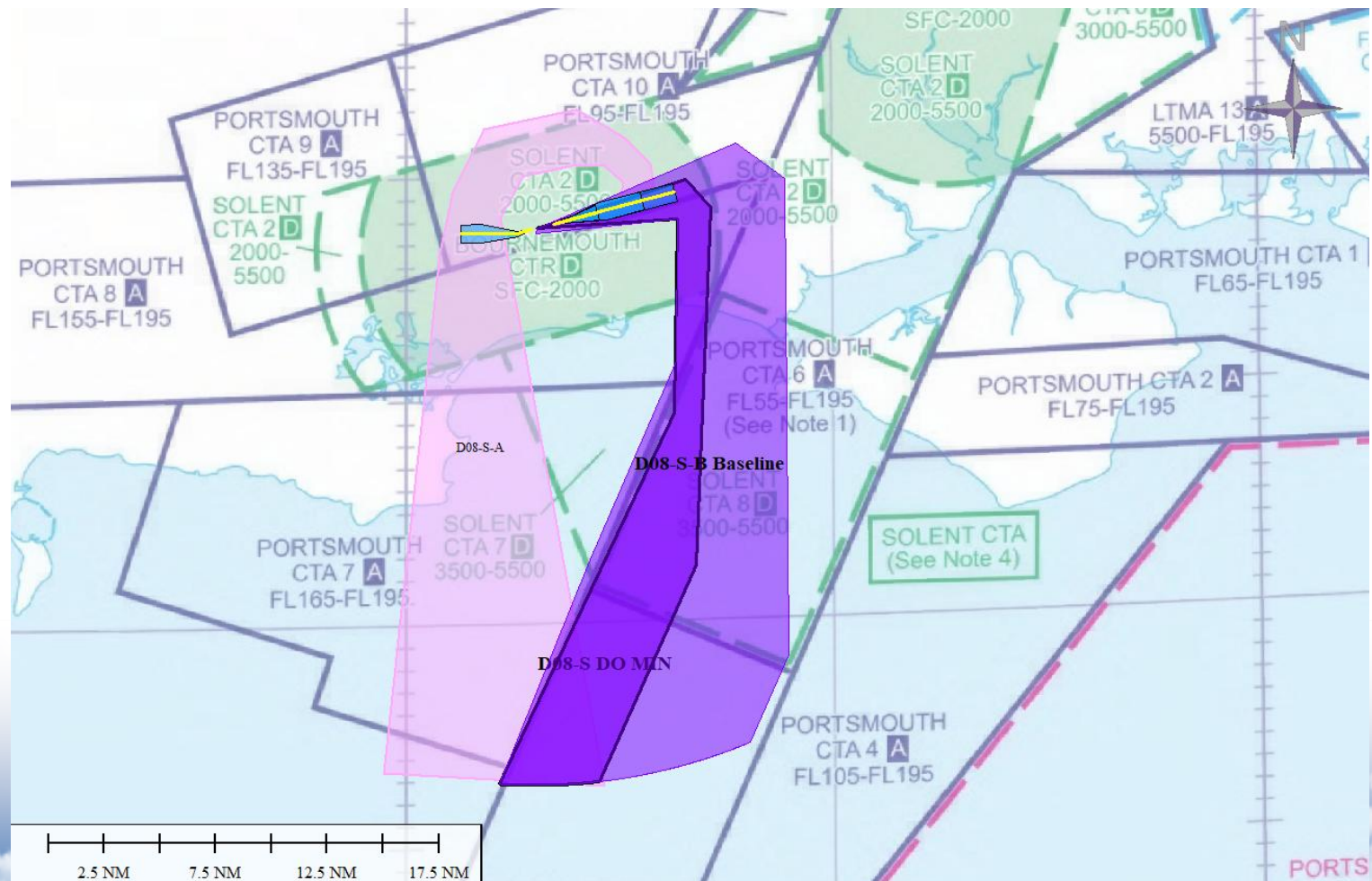
# Departures from RWY 08 Baselines and Do-Min options

South Design Envelope over OS map



Option	Change
D08-S-A	No change
A08-S-B BASELINE	No Change
A08-S-DO MIN	New

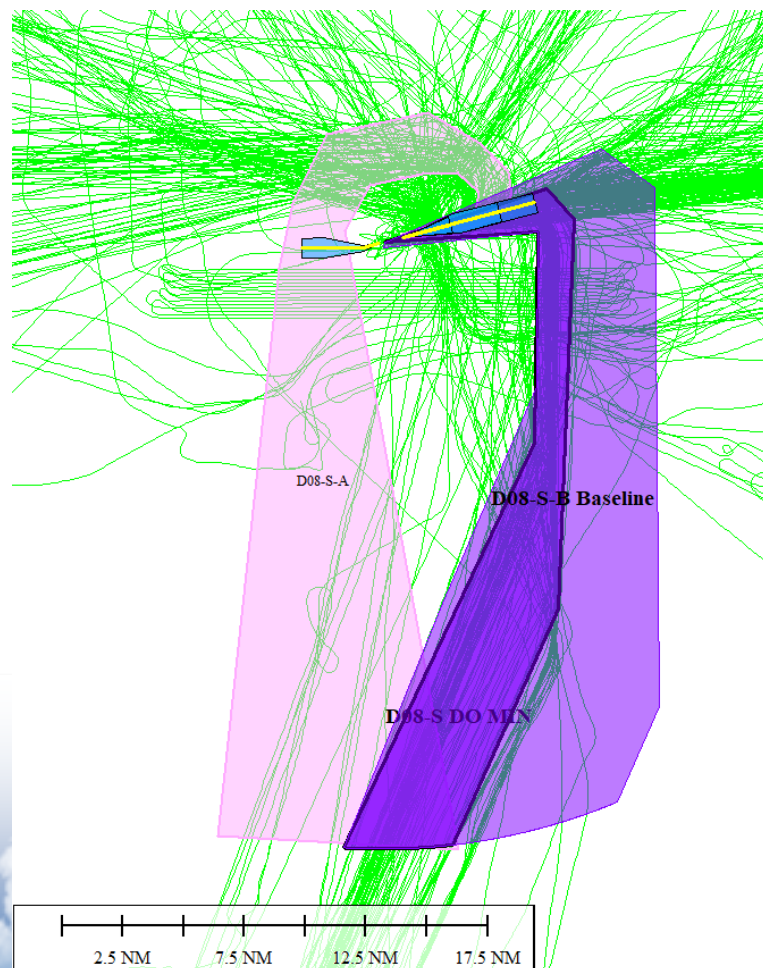
## South Design Envelope over ENR chart





# Departures from RWY 08 Baselines and Do-Min options

South Design Envelope over tracks



# How the Options Evolved

*Changes between engagements, baselines, and introduction of Do-Minimum options.*

## Arrivals RWY 08

During the refinement of the design envelopes, no changes were made except:

- **Introduction of Do-Minimum Options**
  - Do-Minimum options have been added for both the North East, South East and South DEs.
  - This ensures consistency with CAA requirements and provides a clear comparison against baselines.

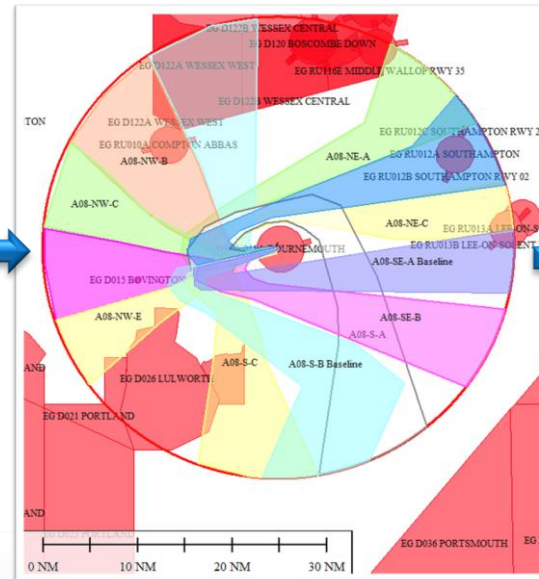


## Arrivals RWY 08

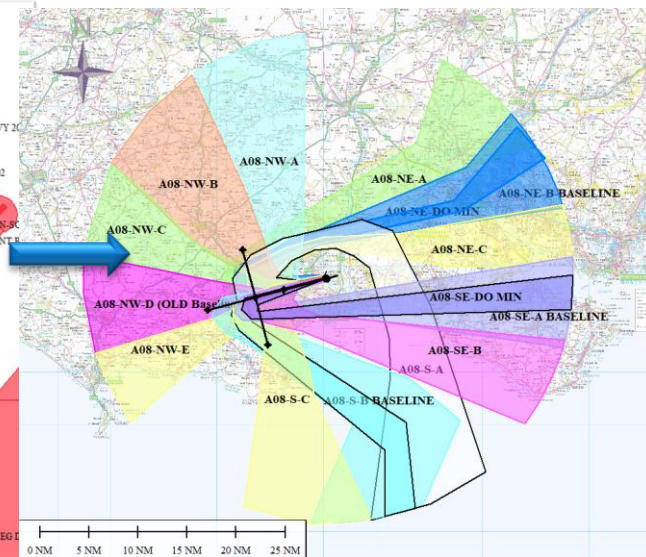
## 1<sup>st</sup> Engagement



## 2<sup>nd</sup> Engagement

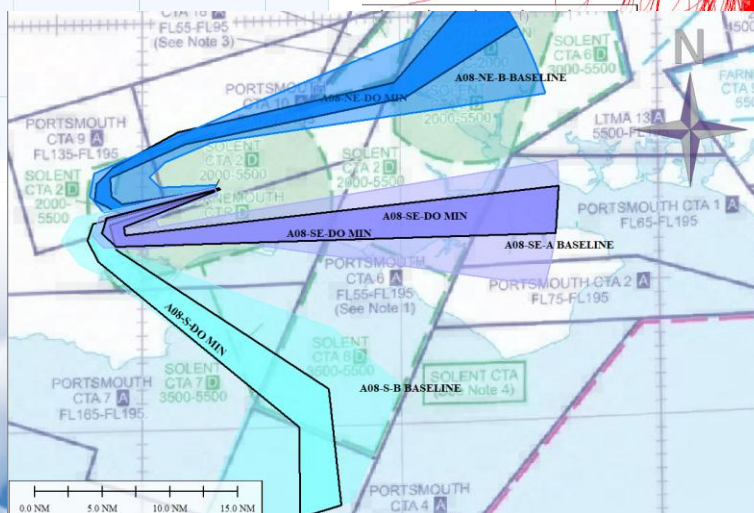
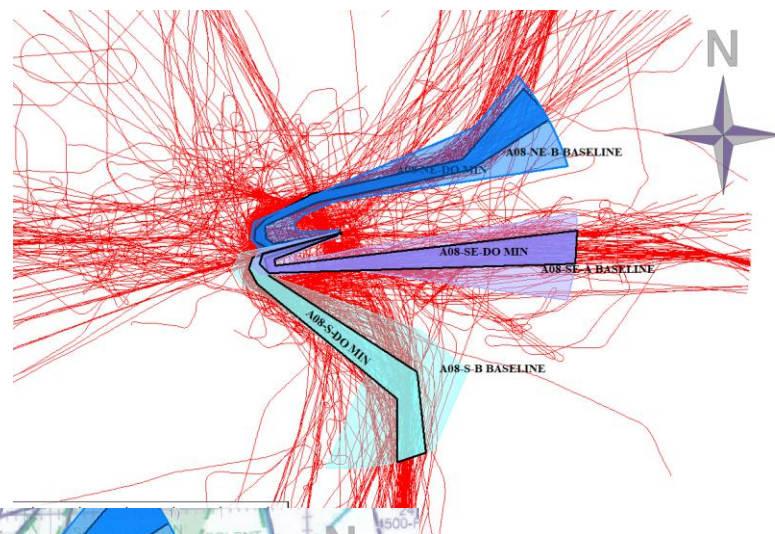
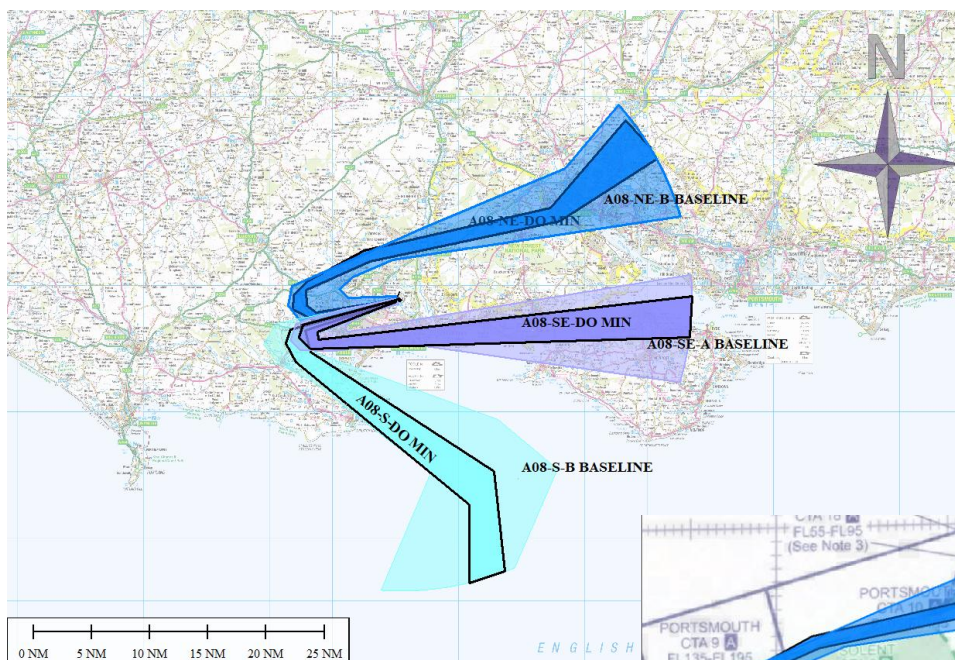


## 2025 Evaluation



# Arrivals to RWY 08 Baselines and Do-Min options

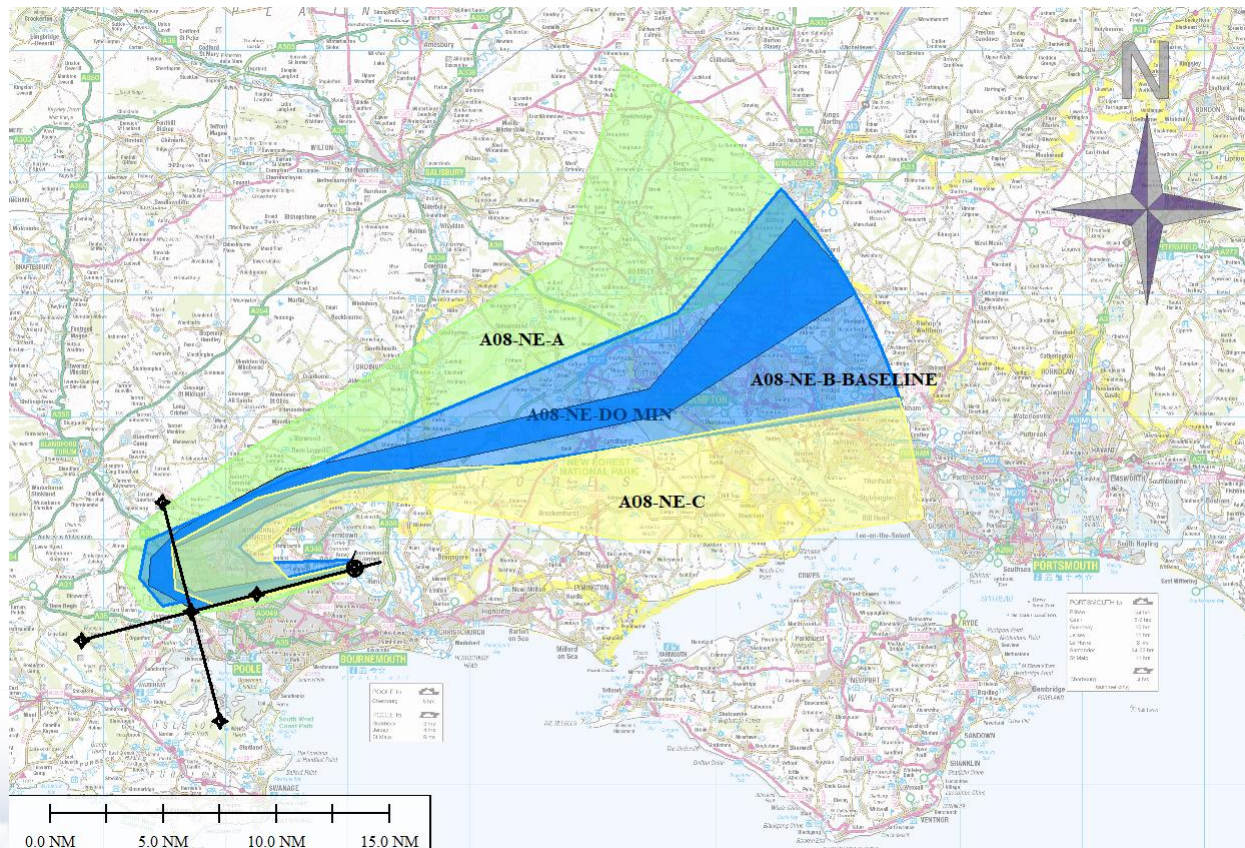
Overview: all baselines and Do Min over OS, ENR chart and tracks





# Arrivals to RWY 08 Baselines and Do-Min options

## North East Design Envelope over OS map

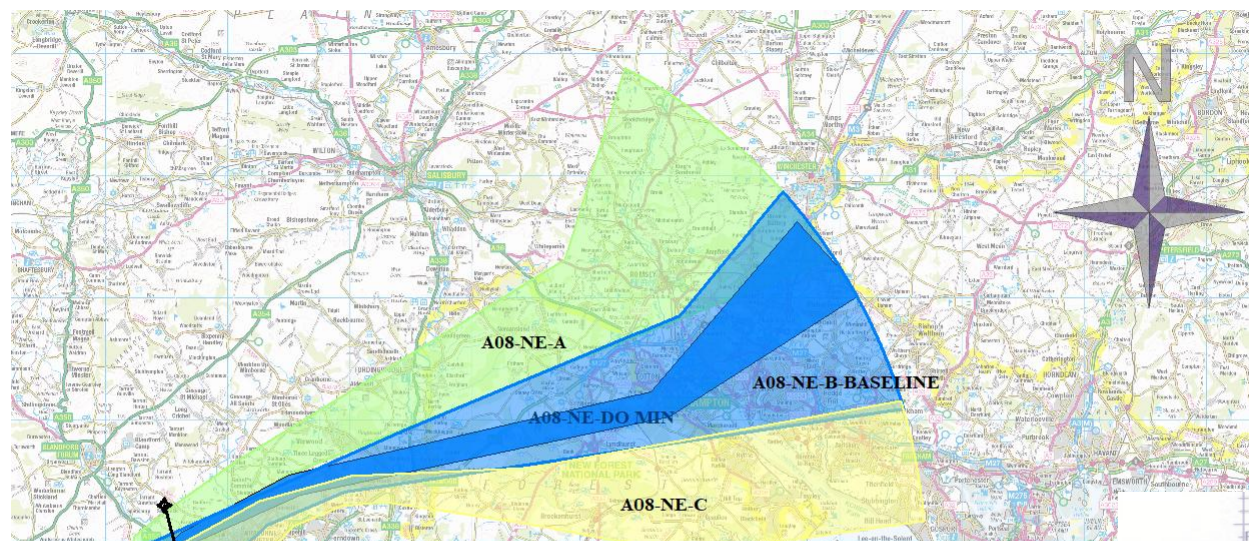


Option	Change
A08-NE-A	No change
A08-NE-B BASELINE	No Change
A08-NE-DO MIN	New
A08-NE-C	No change

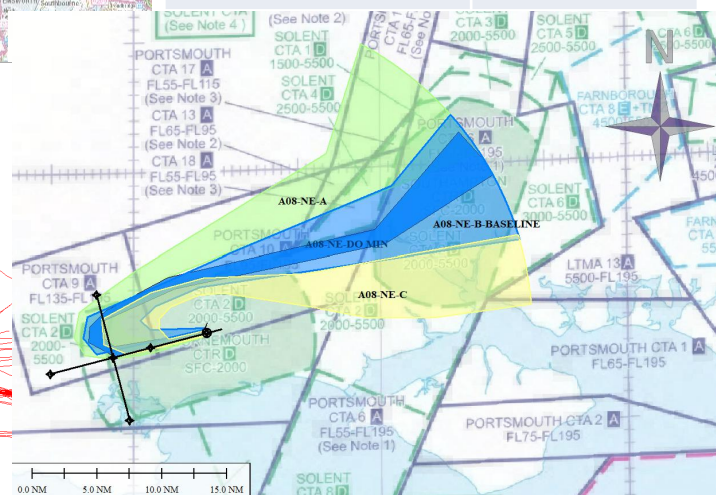
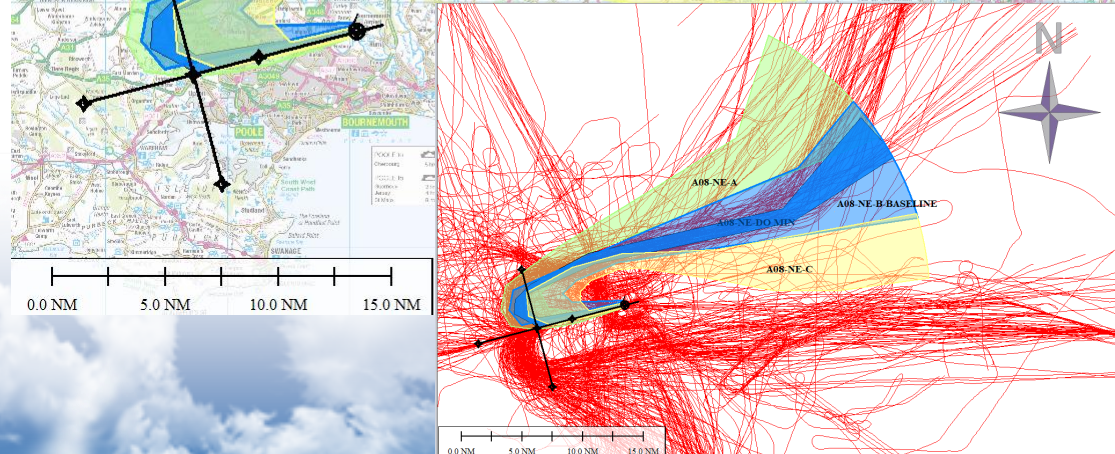


# Arrivals to RWY 08 Baselines and Do-Min options

## North East Design Envelope over OS map



Option	Change
A08-NE-A	No change
A08-NE-B BASELINE	No Change
A08-NE-DO MIN	New
A08-NE-C	No change



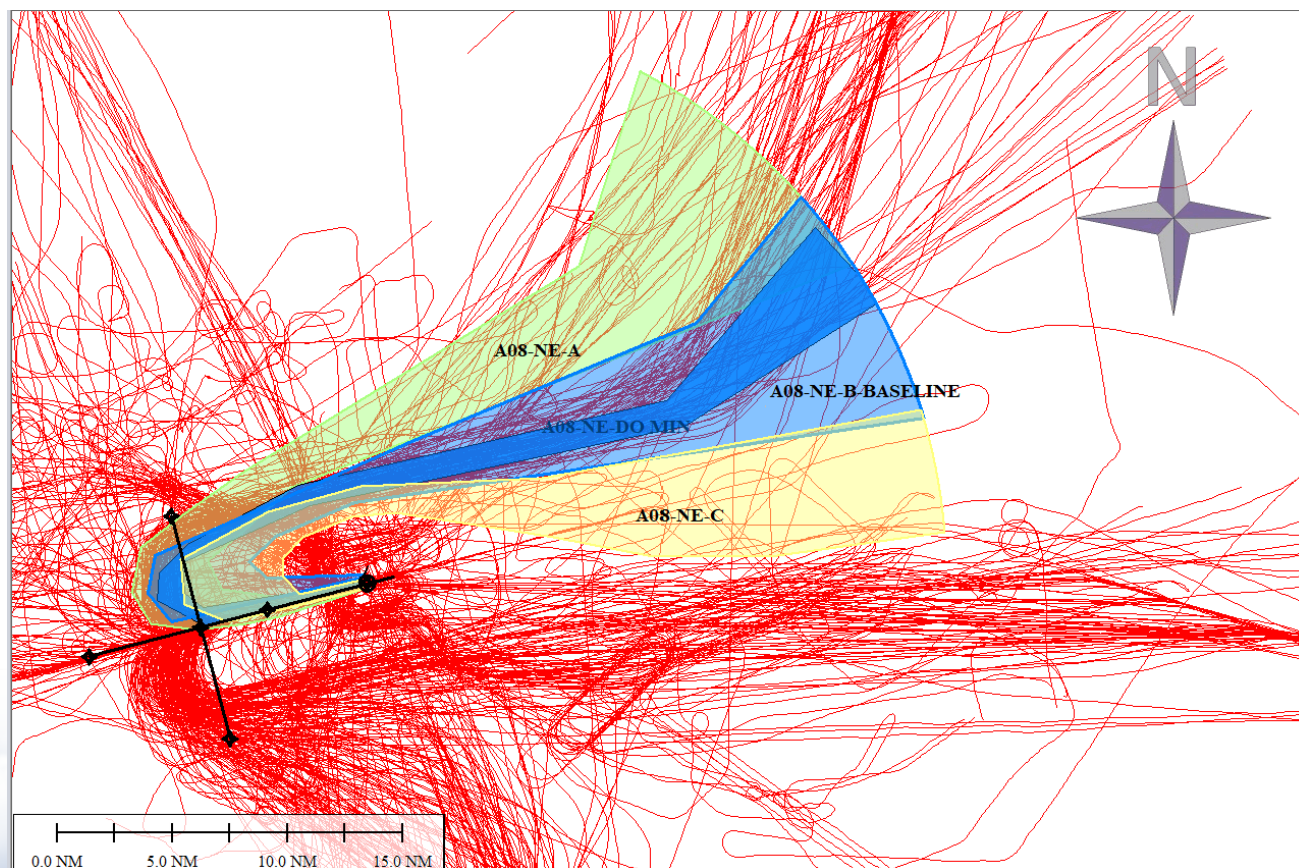


## North East Design Envelope over ENR chart



# Arrivals to RWY 08 Baselines and Do-Min options

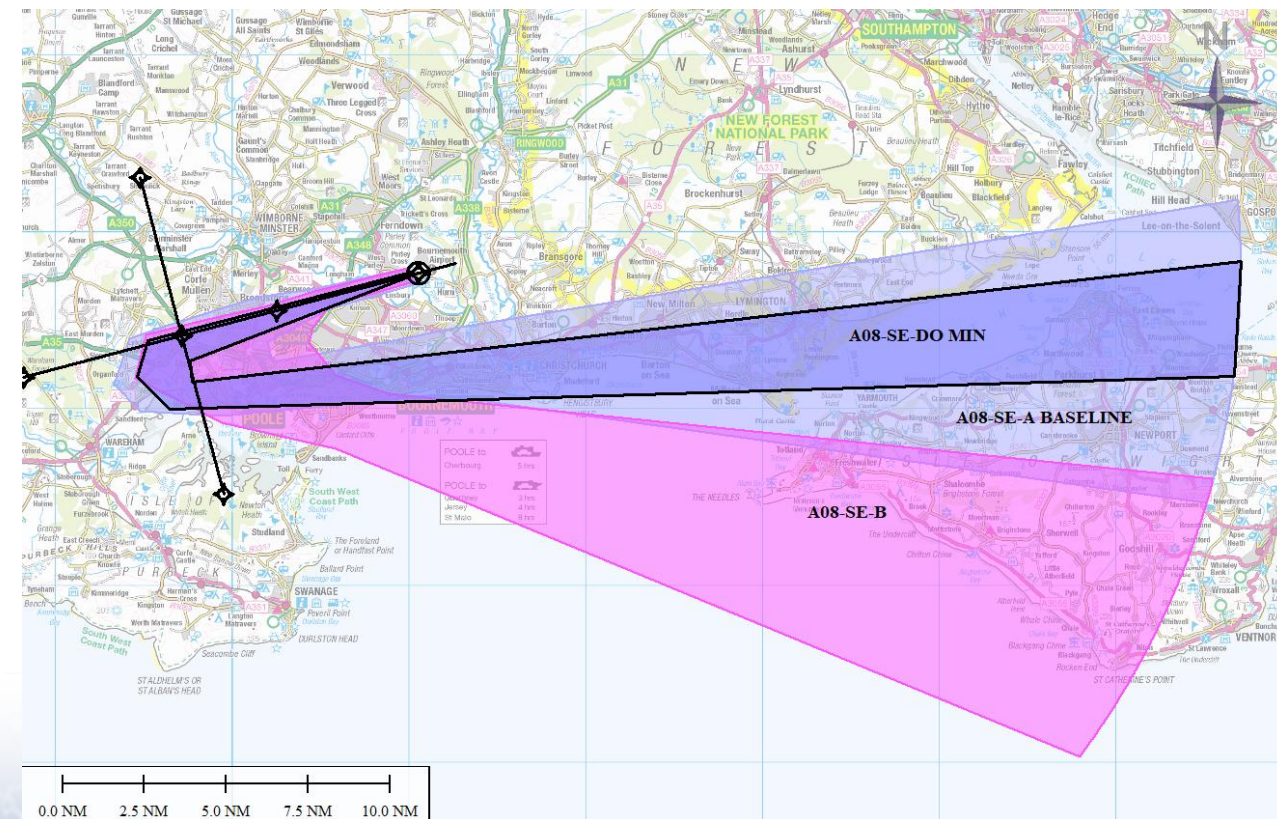
North East Design Envelope over tracks





# Arrivals to RWY 08 Baselines and Do-Min options

## South East Design Envelope over OS map

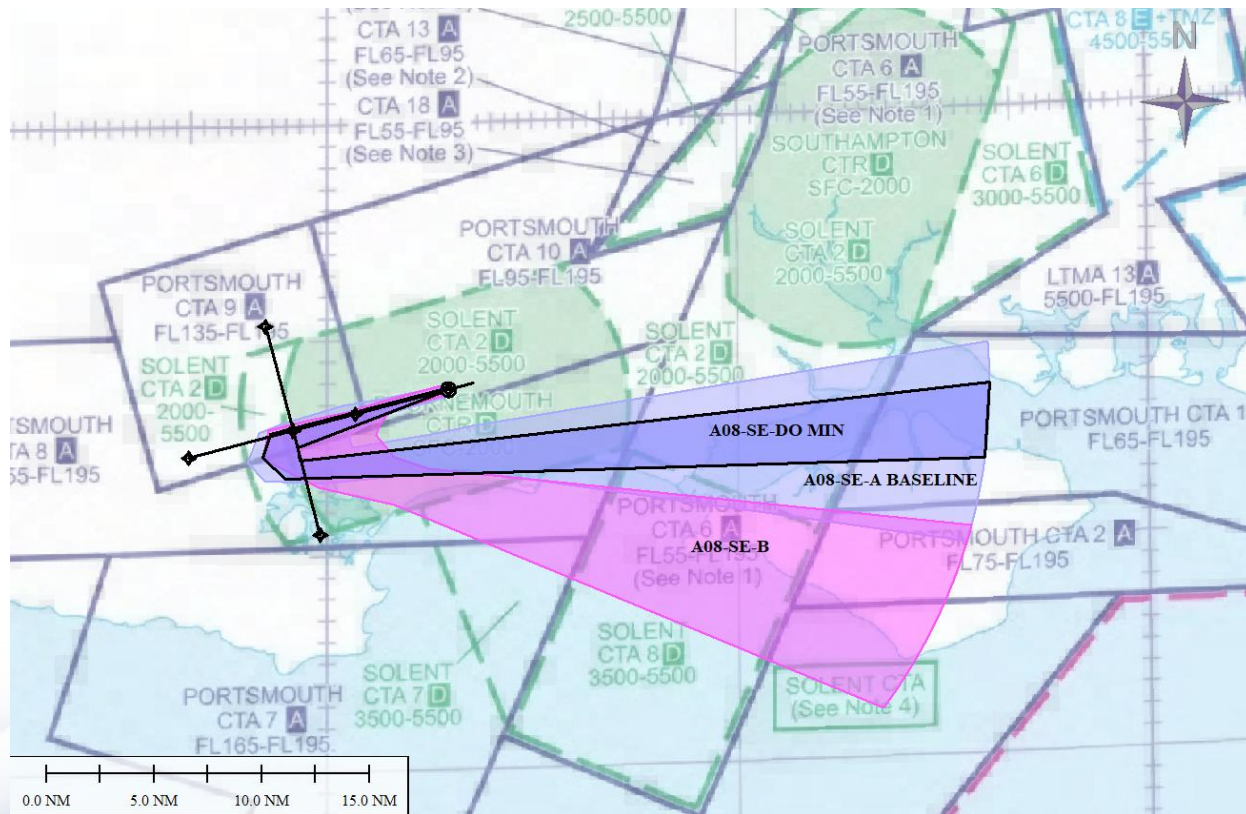


Option	Change
A08-SE-A BASELINE	No Change
A08-SE-B	No Change
A08-SE DO MIN	New



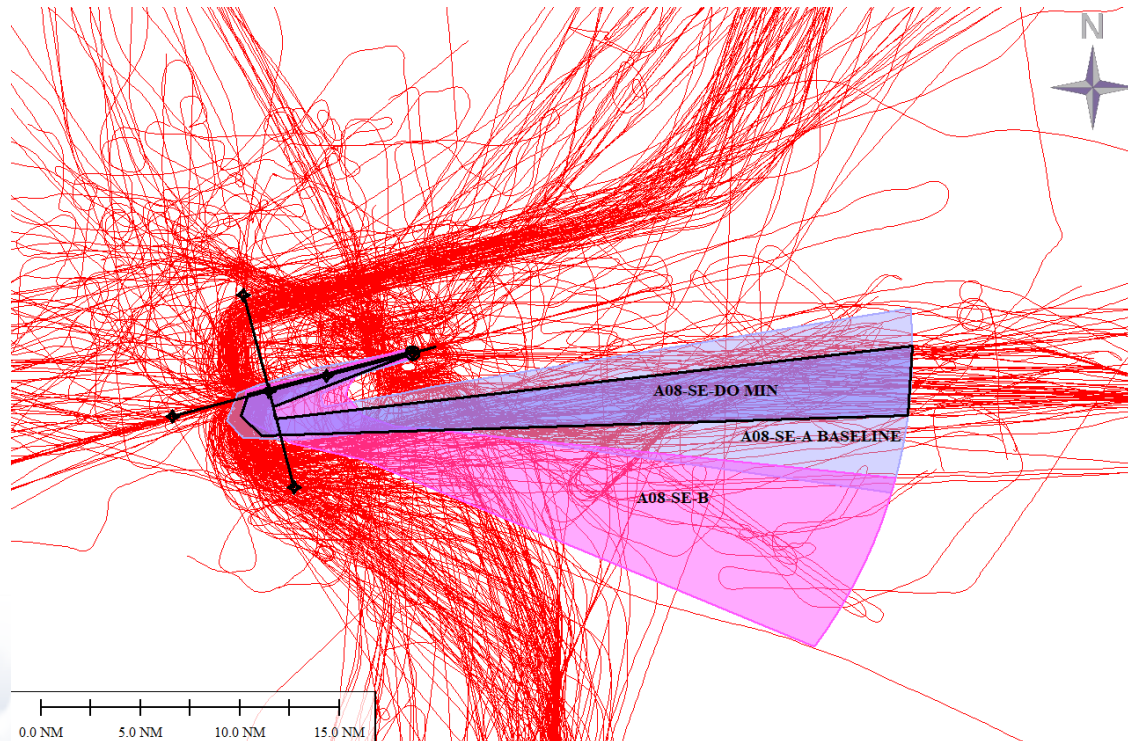
# Arrivals to RWY 08 Baselines and Do-Min options

South East Design Envelope over ENR chart



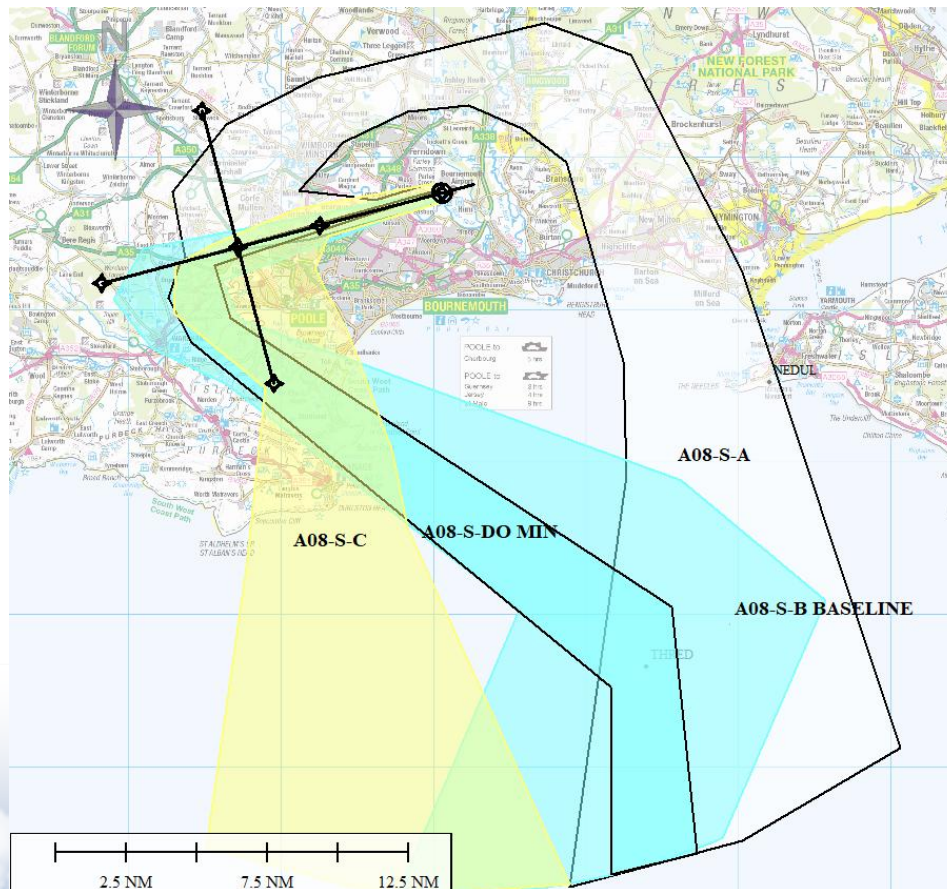
# Arrivals to RWY 08 Baselines and Do-Min options

South East Design Envelope over tracks



# Arrivals to RWY 08 Baselines and Do-Min options

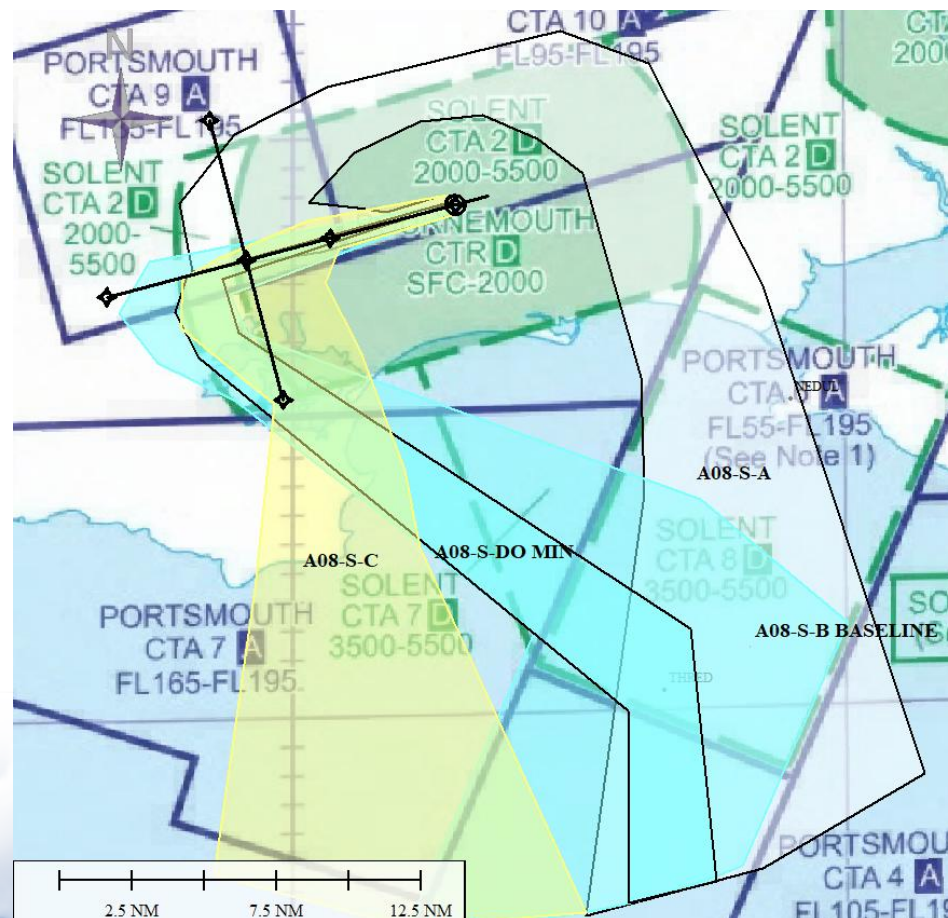
South Design Envelope over OS map



Option	Change
A08-SE-A BASELINE	No Change
A08-SE-B	No Change
A08-SE DO MIN	New
A08-S-C	No Change



## South Design Envelope over ENR chart



# Arrivals to RWY 08 Baselines and Do-Min options

South Design Envelope over tracks



# How the Options Evolved

*Changes between engagements, baselines, and introduction of Do-Minimum options.*

## Departures RWY 26

During the refinement of the design envelopes, several changes were made:

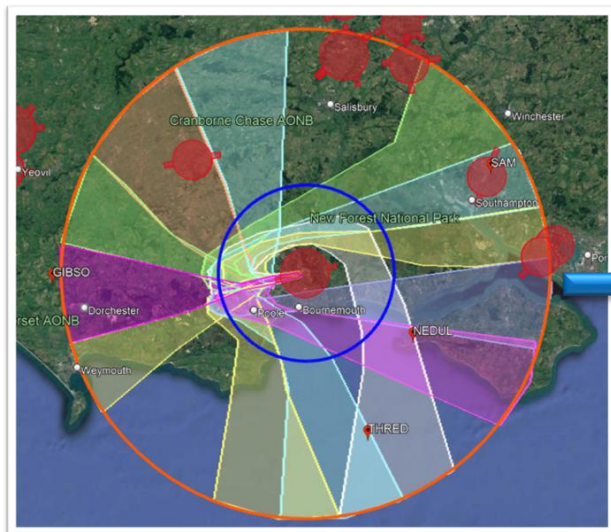
- **East DE**
  - Baseline extended slightly to the north.
  - All other options remain unchanged.
- **South DE**
  - Baseline adjusted marginally to better reflect traffic patterns.
  - All other options remain unchanged between 2<sup>nd</sup> and 2025 Evaluation;
- **Introduction of Do-Minimum Options**
  - Do-Minimum options have been added for both the East and South DEs.
  - This ensures consistency with CAA requirements and provides a clear comparison against baselines.



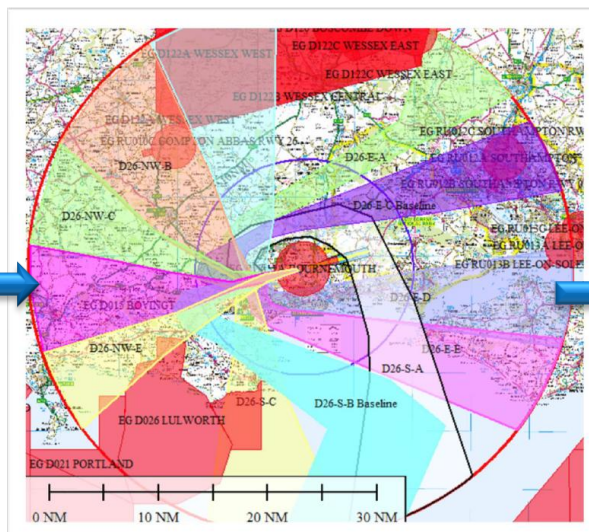
# Design Envelope Evolution

## Departures RWY 26

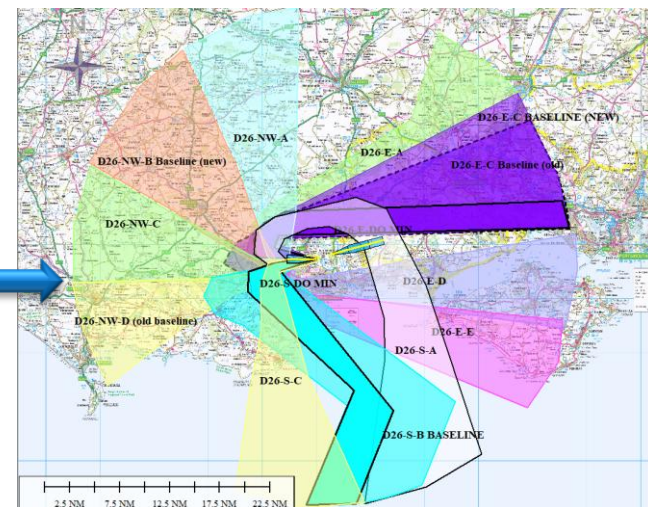
### 1<sup>st</sup> Engagement



### 2<sup>nd</sup> Engagement



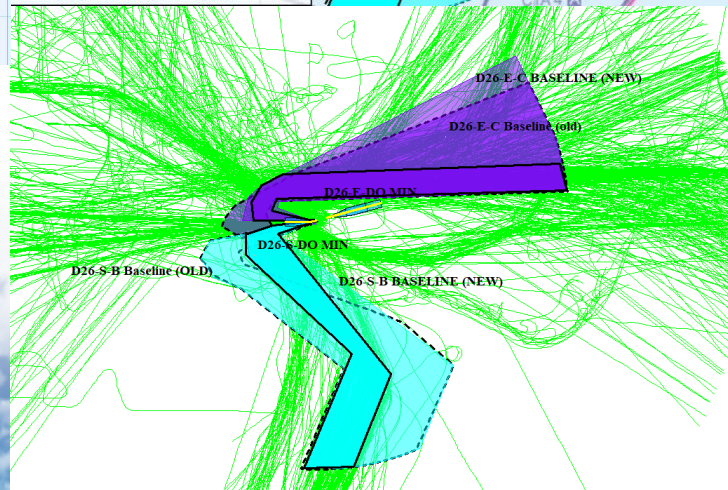
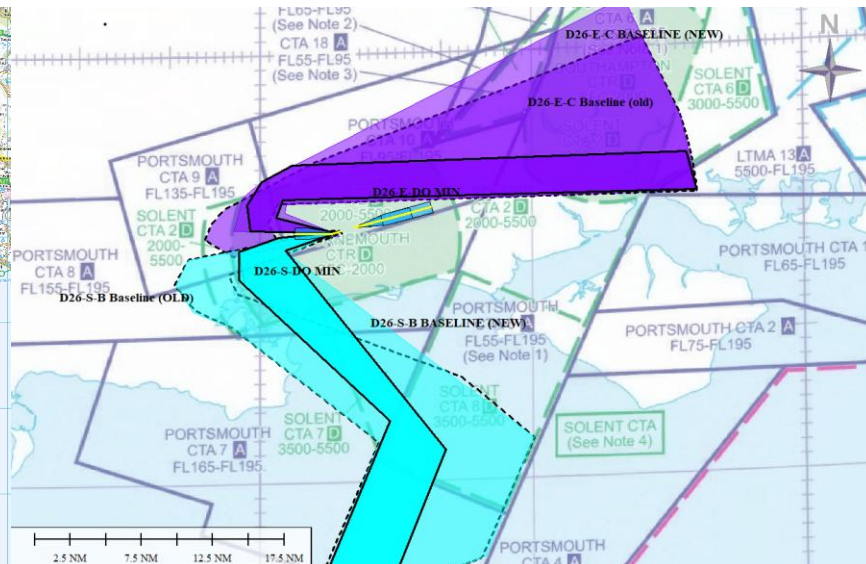
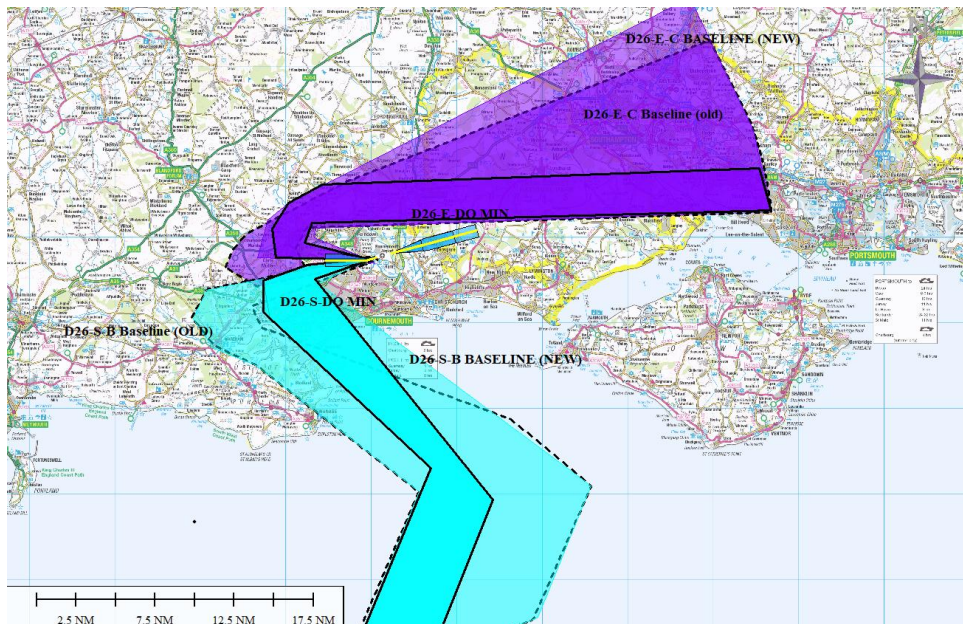
### 2025 Evaluation





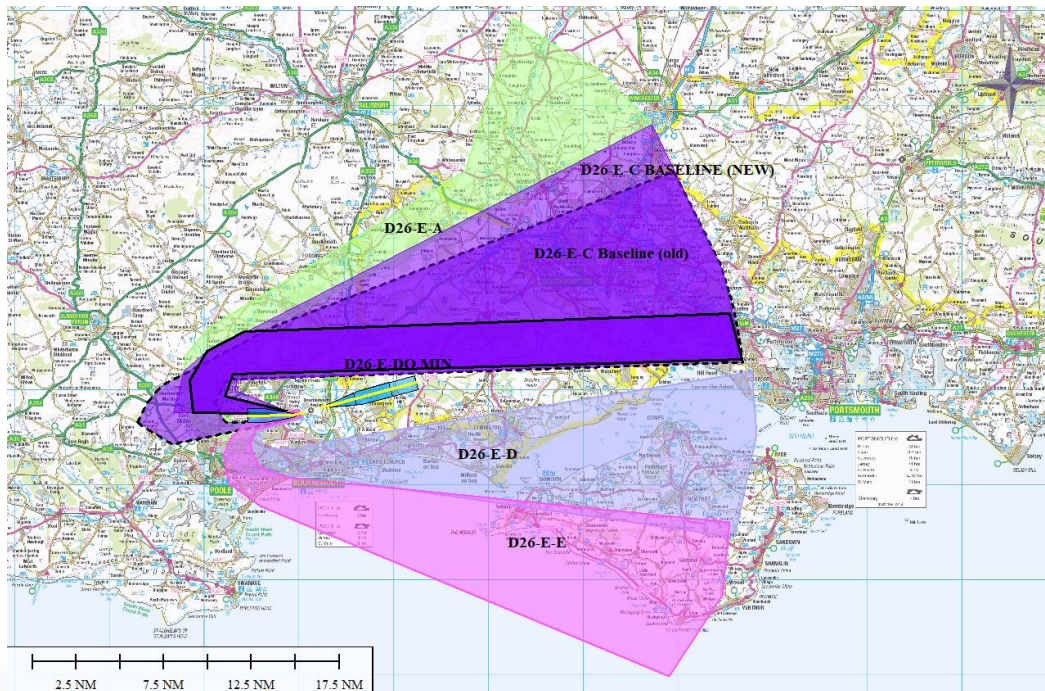
# Departures from RWY 26 Baselines and Do-Min options

Overview: introduction of Do Minimum and both baselines have been changed slightly



# Departures from RWY 26 Baselines and Do-Min options

East Design Envelope over OS map

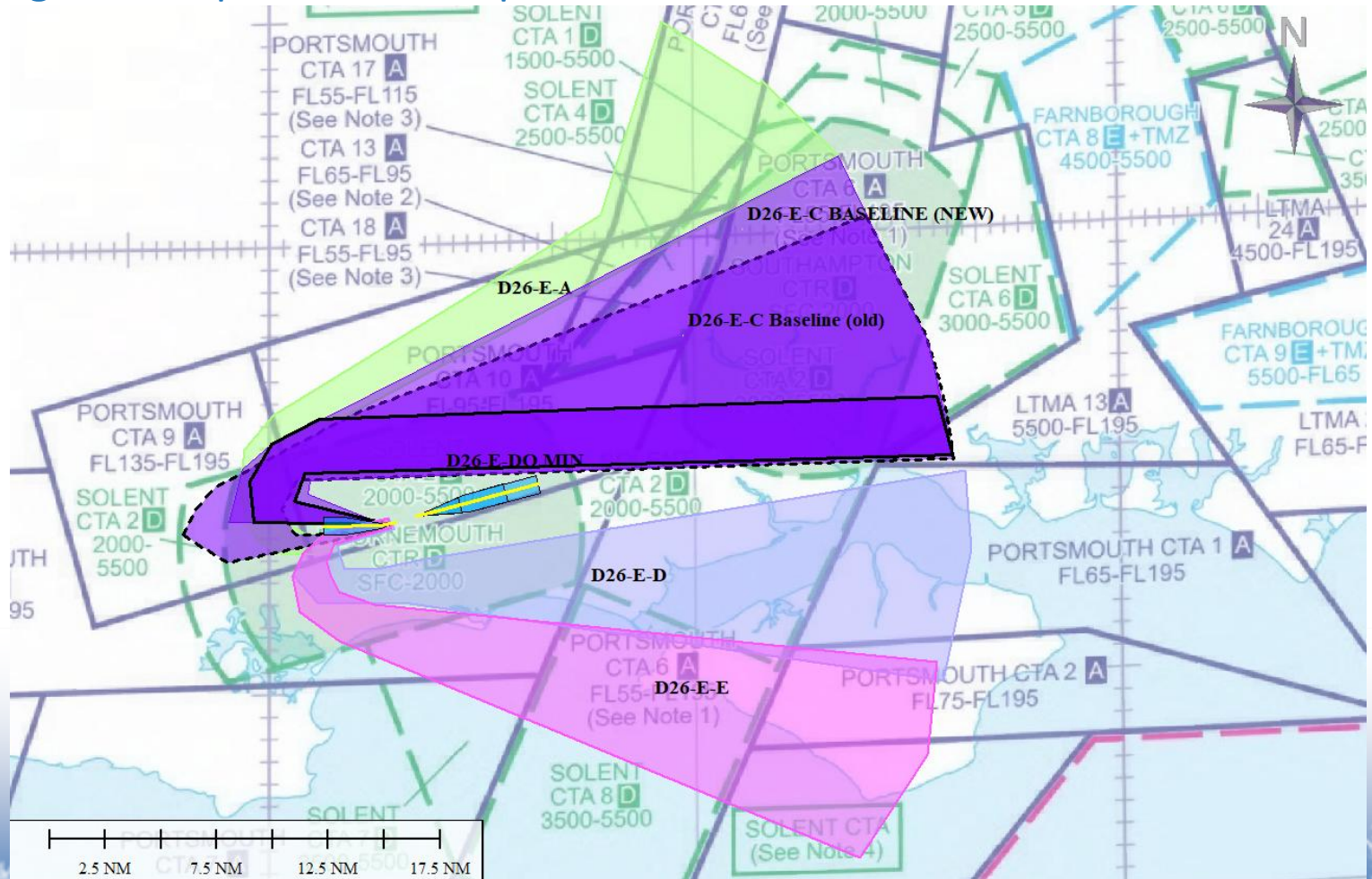


Option	Change
A08-E-A	No Change
A08-E-C BASELINE	Changed to reflect traffic patterns and gap between option A
A08-E-DO MIN	New
A08-E-D	No Change
A08-E-E	No Change



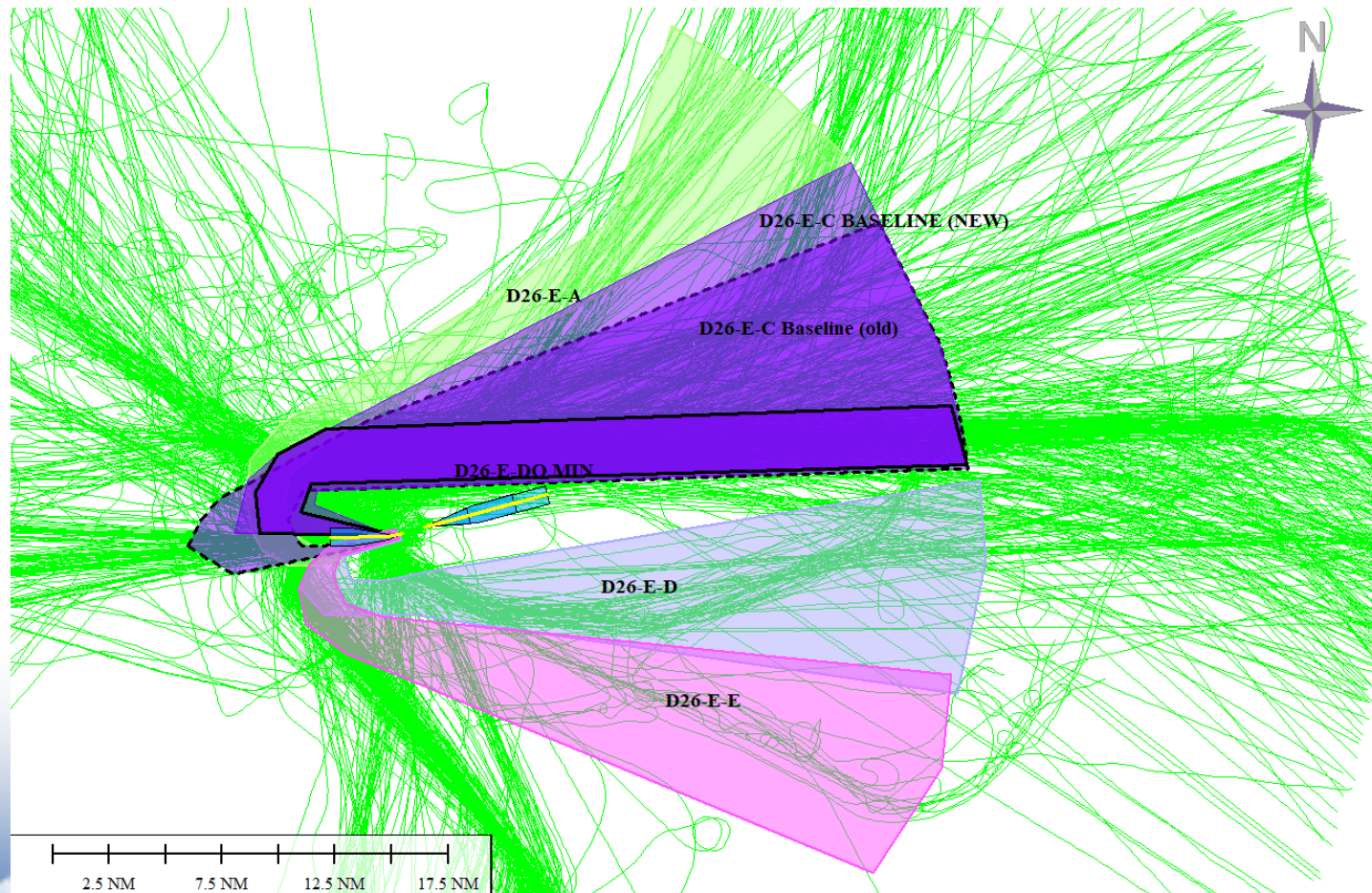
# Departures from RWY 26 Baselines and Do-Min options

East Design Envelope over OS map



# Departures from RWY 26 Baselines and Do-Min options

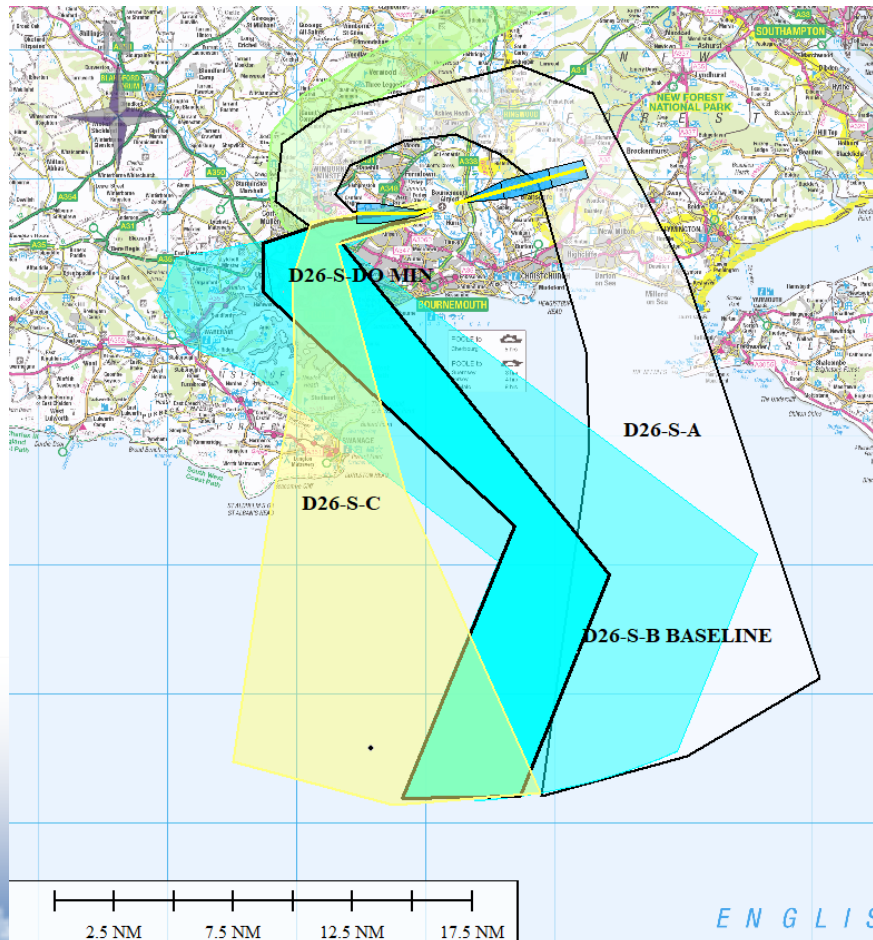
East Design Envelope over tracks





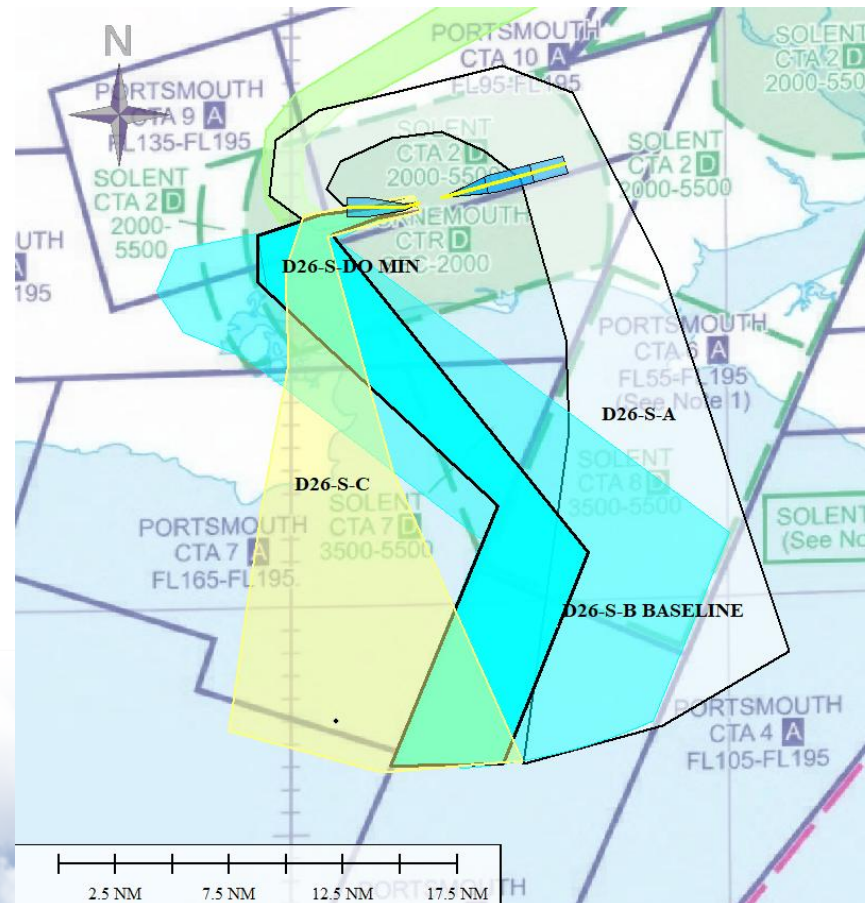
# Departures from RWY 26 Baselines and Do-Min options

South Design Envelope over OS map



Option	Change
A08-S-A	No change
A08-S-B BASELINE	Changed to reflect traffic patterns
A08-S-DO MIN	New
A08-S-C	No change

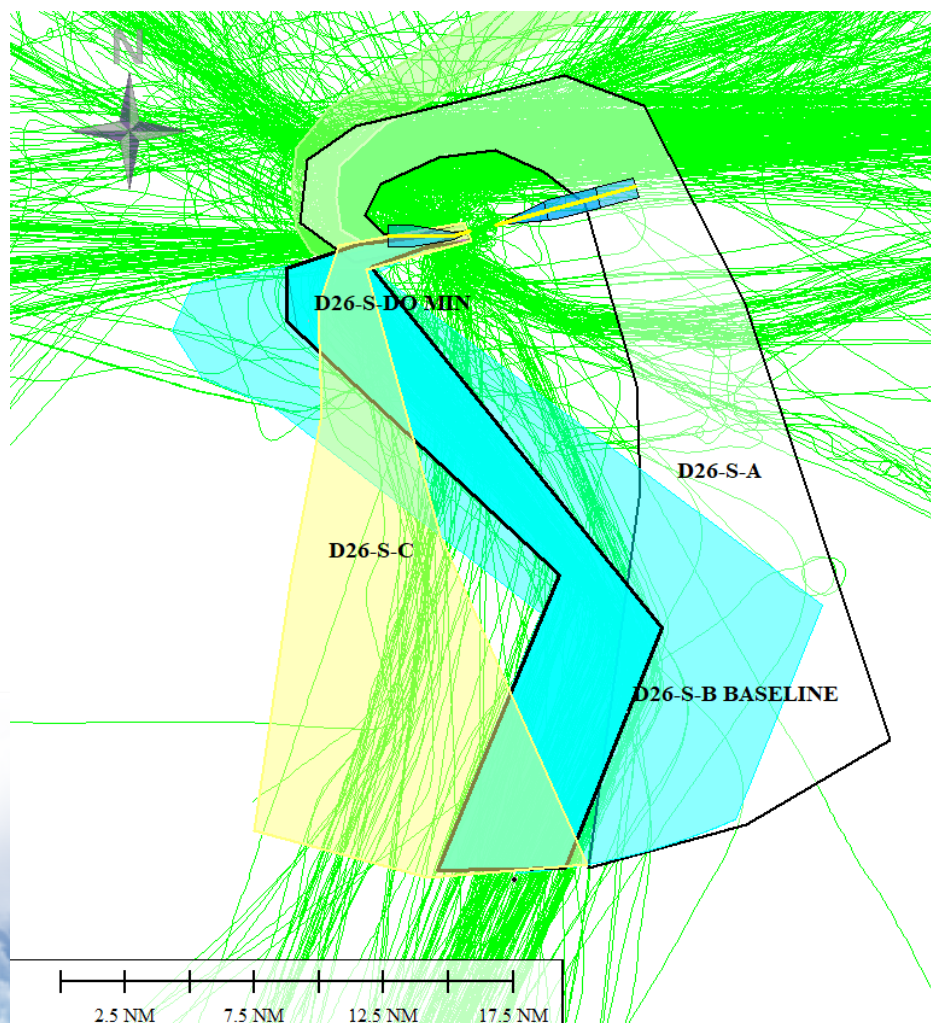
## South Design Envelope over ENR chart





# Departures from RWY 26 Baselines and Do-Min options

South Design Envelope over tracks



# How the Options Evolved

*Changes between engagements, baselines, and introduction of Do-Minimum options.*

## Arrivals RWY 26

During the refinement of the design envelopes, some changes were made:

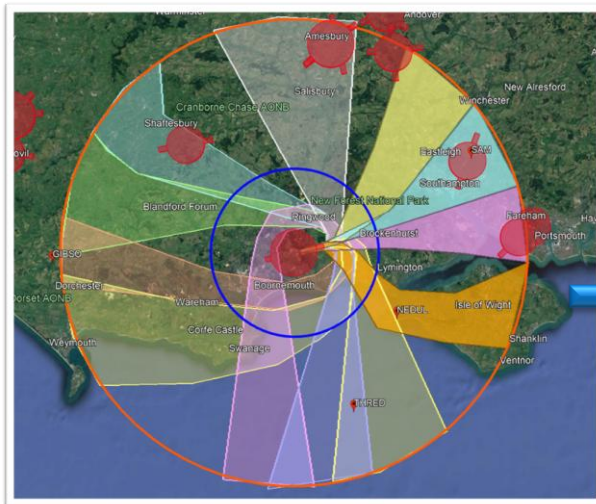
- Option A26 ESE – C removed and A26 ESE A BASELINE extended to the north and south
- **Introduction of Do-Minimum Options**
  - Do-Minimum options have been added for both the North East, East South East and South DEs.
  - This ensures consistency with CAA requirements and provides a clear comparison against baselines.



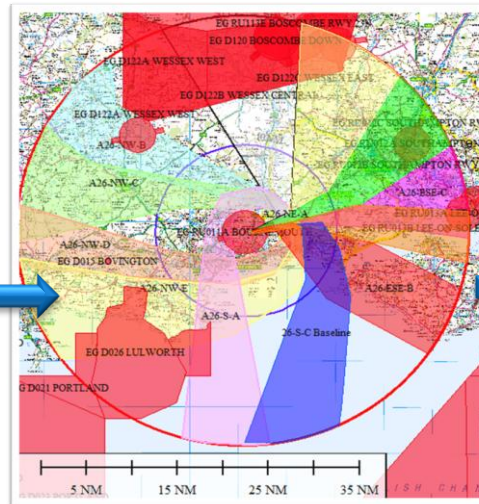
# Design Envelope Evolution

## Arrivals RWY 26

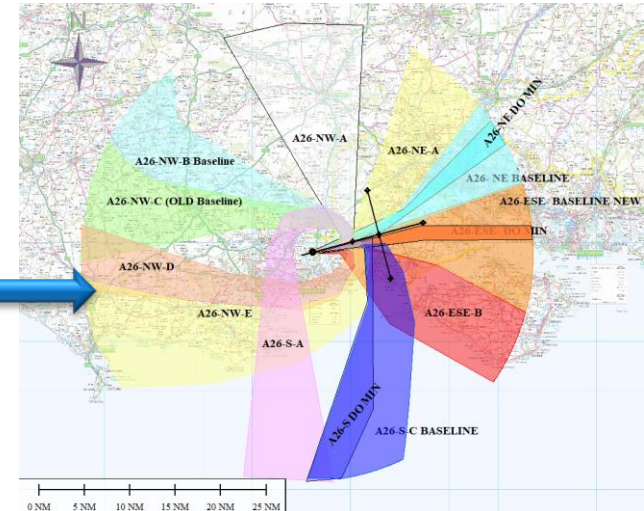
### 1<sup>st</sup> Engagement



### 2<sup>nd</sup> Engagement

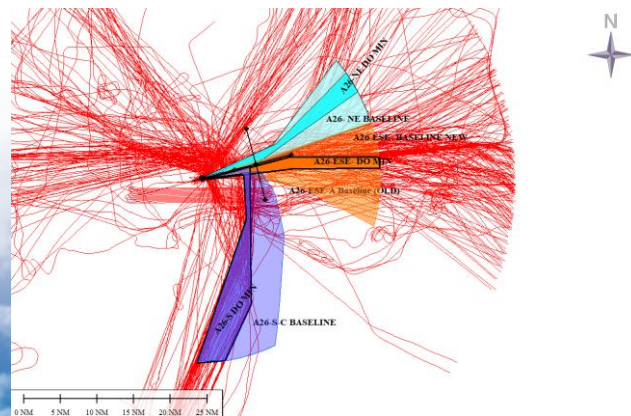
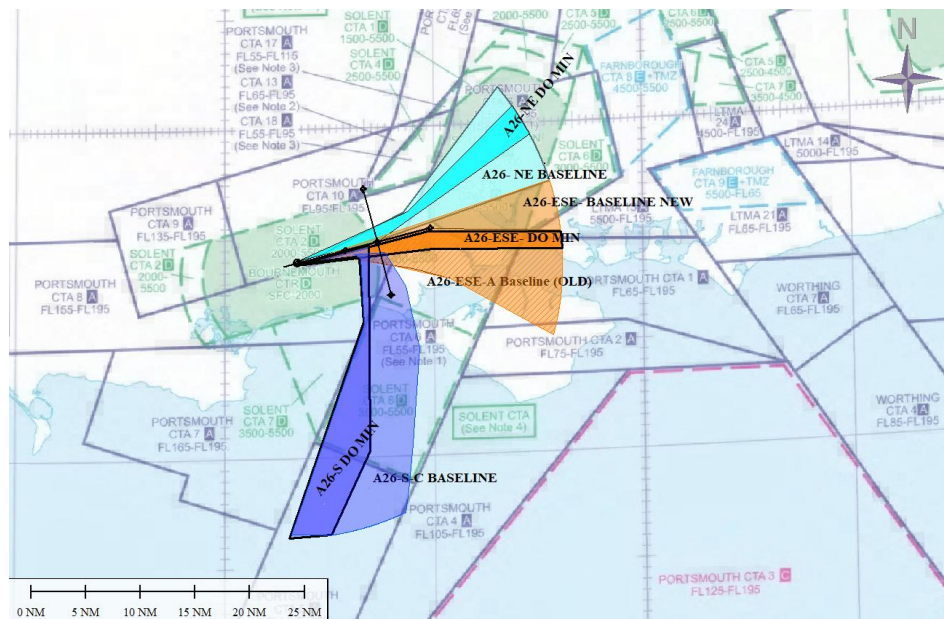
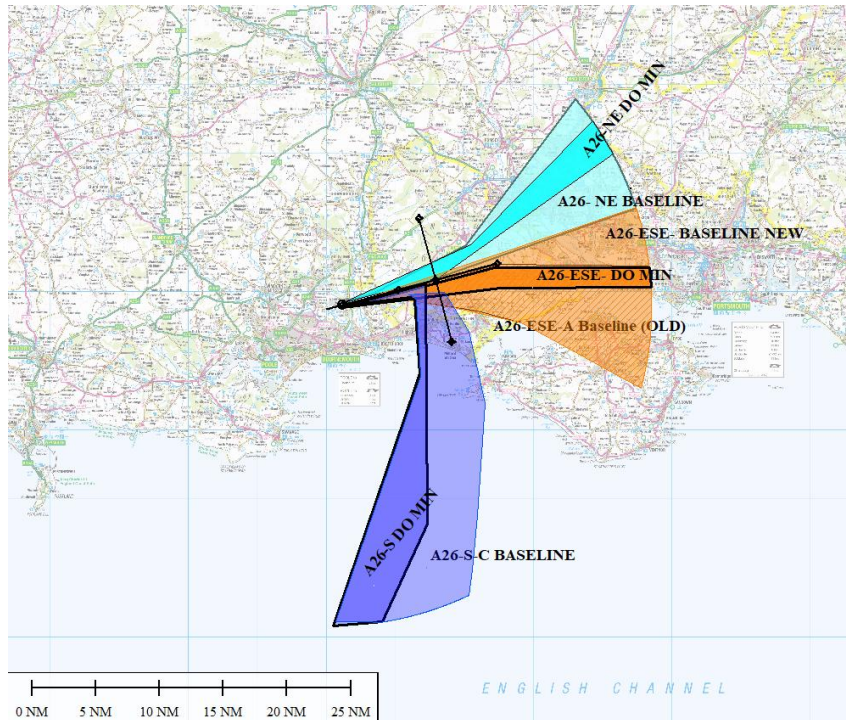


### 2025 Evaluation



# Arrivals to RWY 26 Baselines and Do-Min options

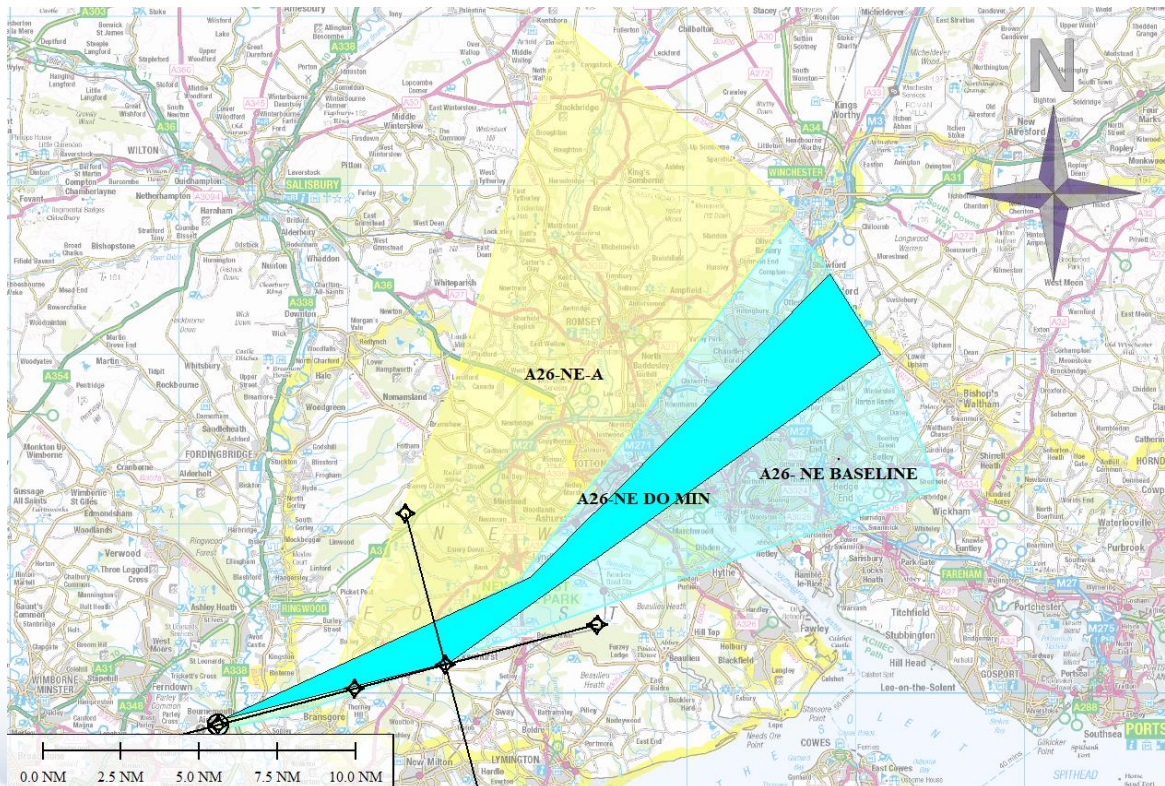
## Overview





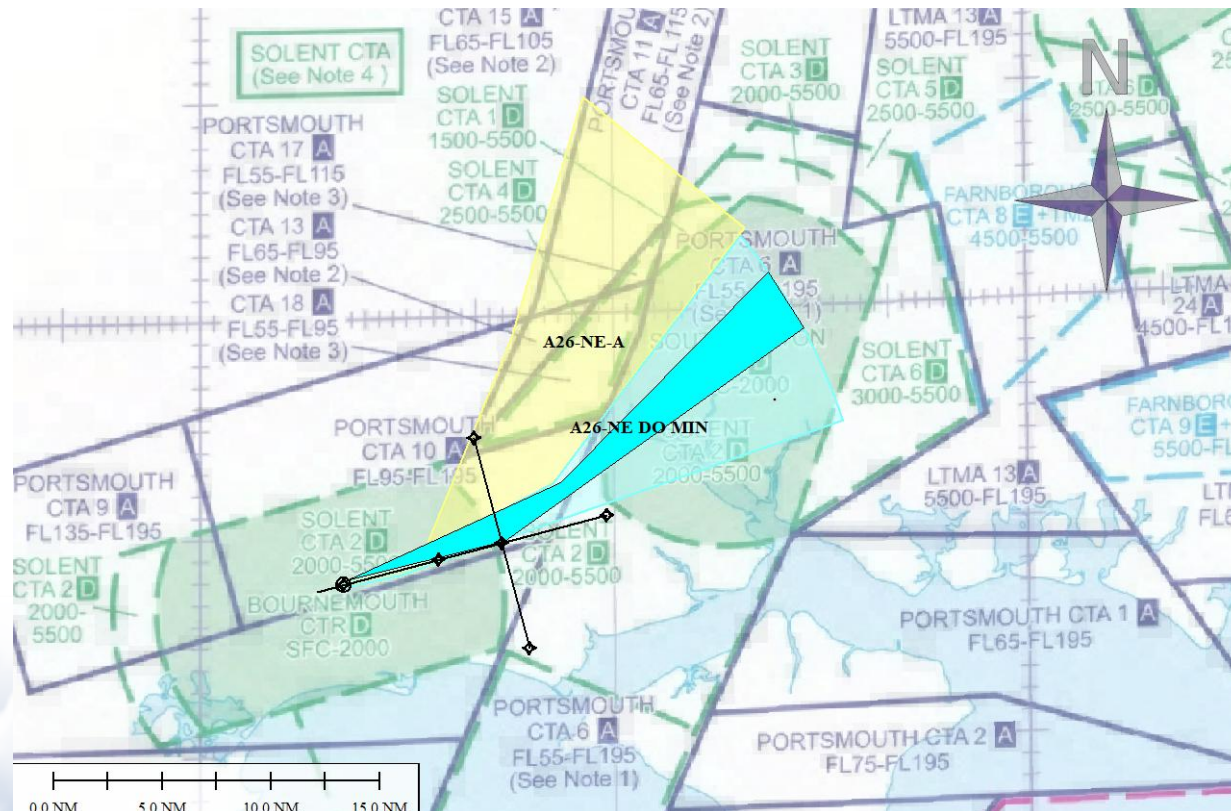
# Arrivals to RWY 26 Baselines and Do-Min options

North East Design Envelope over OS map



Option	Change
A26-NE-A	No Change
A26-NE- BASELINE	No Change
A26-NE-DO MIN	New

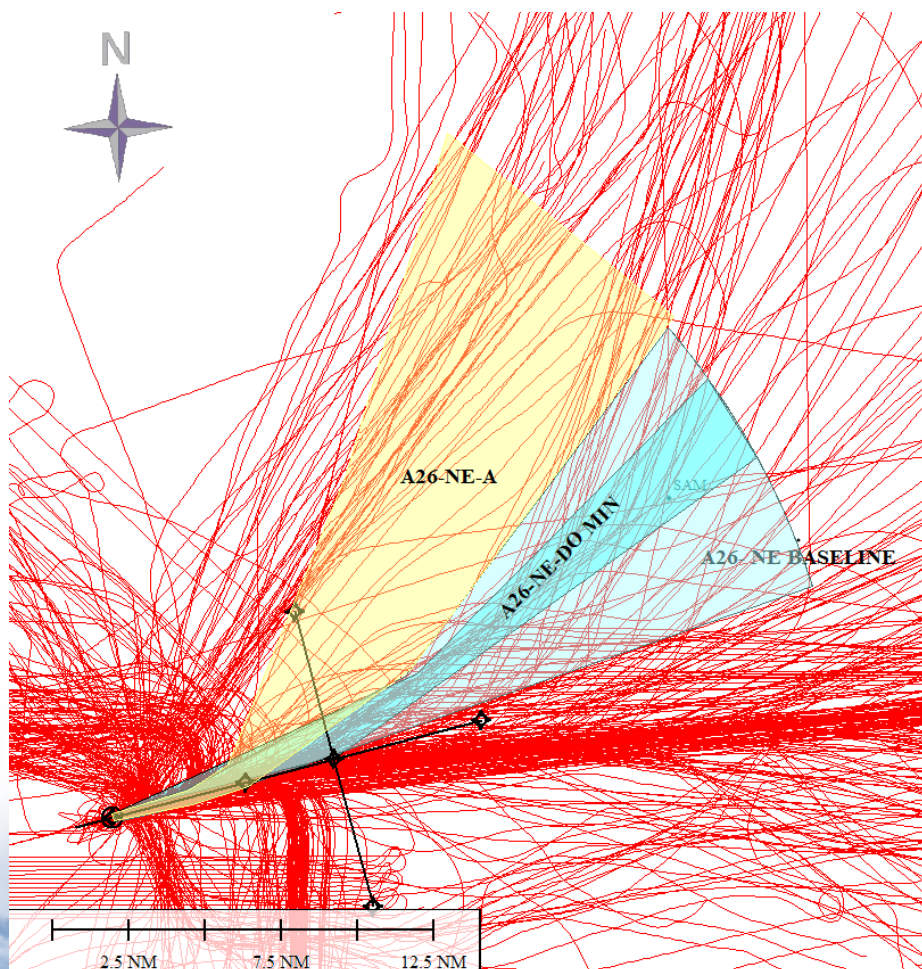
## North East Design Envelope over ENR chart





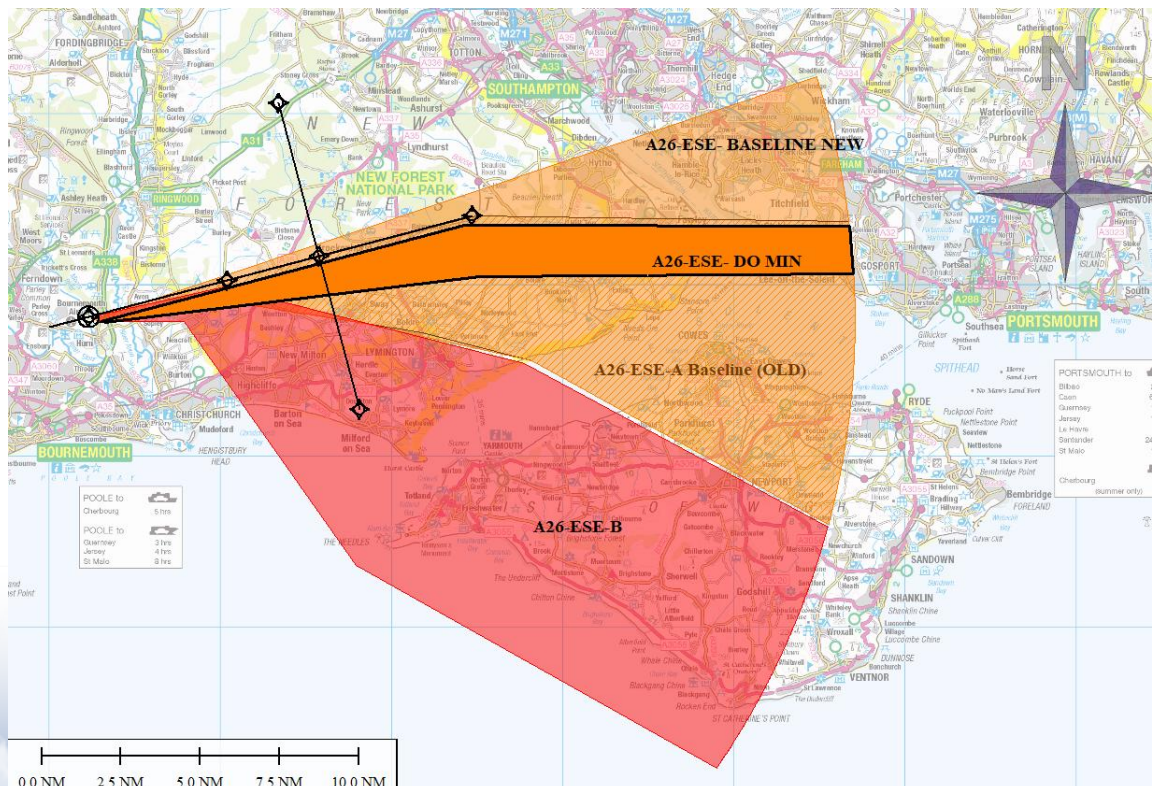
# Arrivals to RWY 26 Baselines and Do-Min options

North East Design Envelope over tracks



# Arrivals to RWY 26 Baselines and Do-Min options

East Southeast Design envelope over OS map

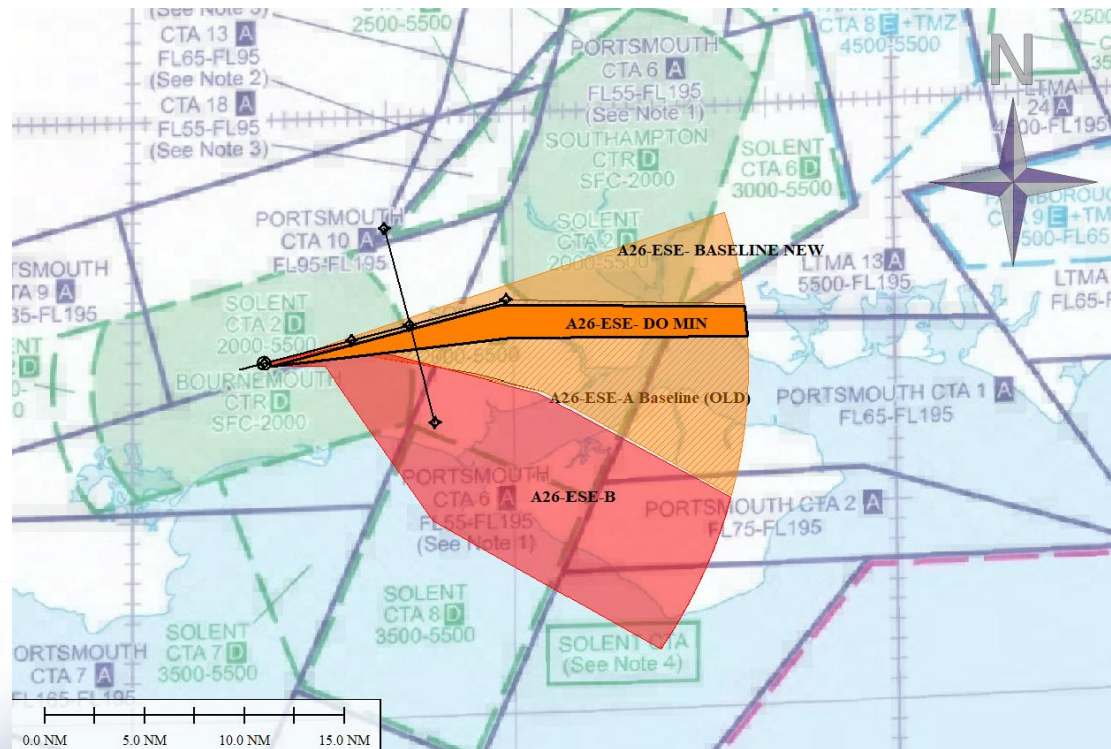


Option	Change
A26-ESE-A BASELINE	Changed to include northerly gap
A26-ESE DO MIN	NEW
A26-ESE-B	No change



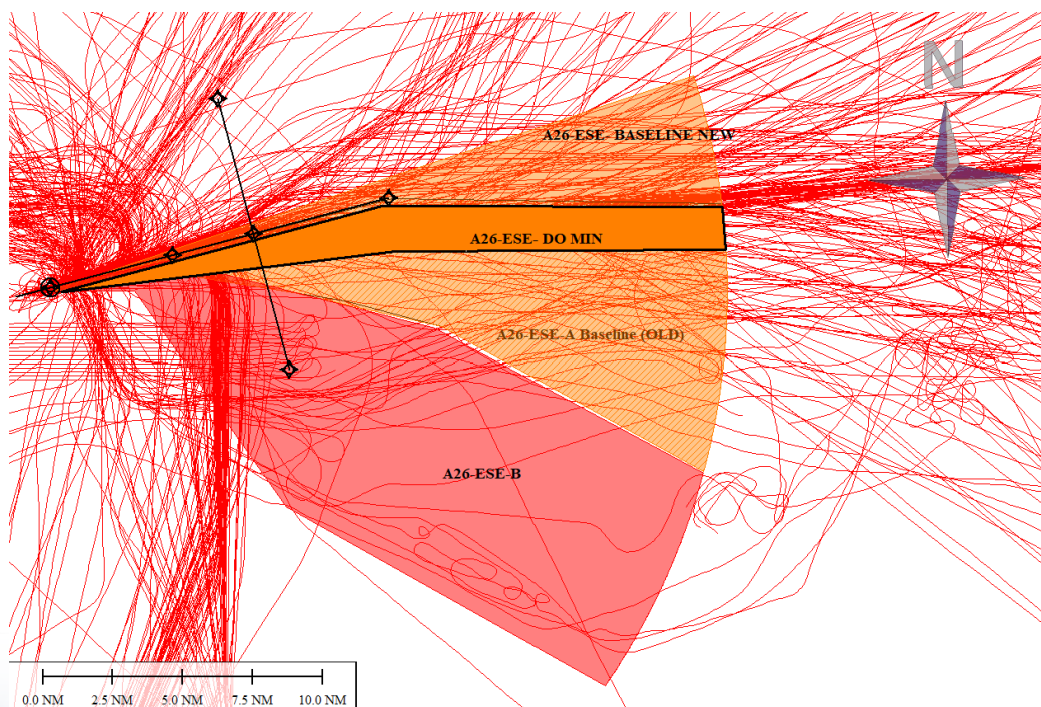
# Arrivals to RWY 26 Baselines and Do-Min options

East Southeast Design envelope over ENR chart



# Arrivals to RWY 26 Baselines and Do-Min options

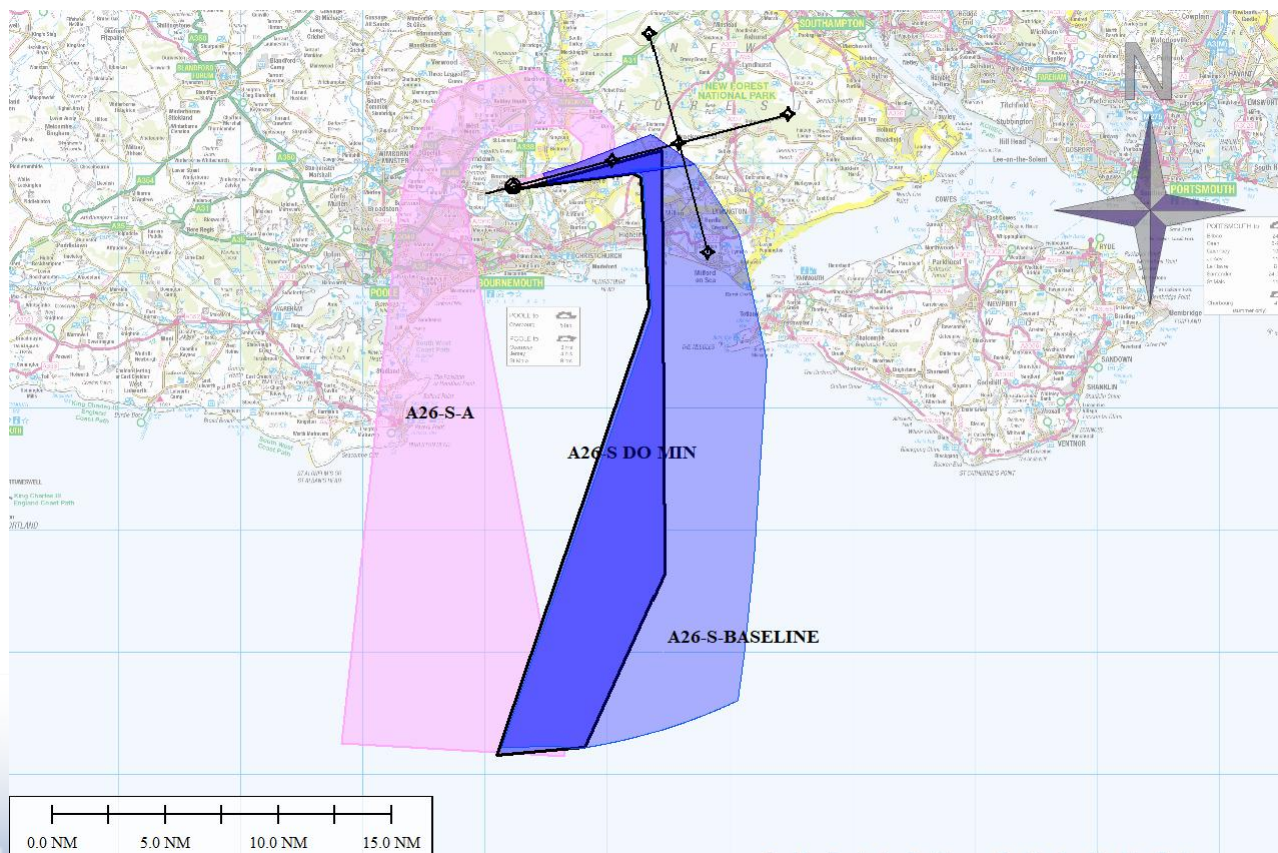
East Southeast Design envelope over tracks





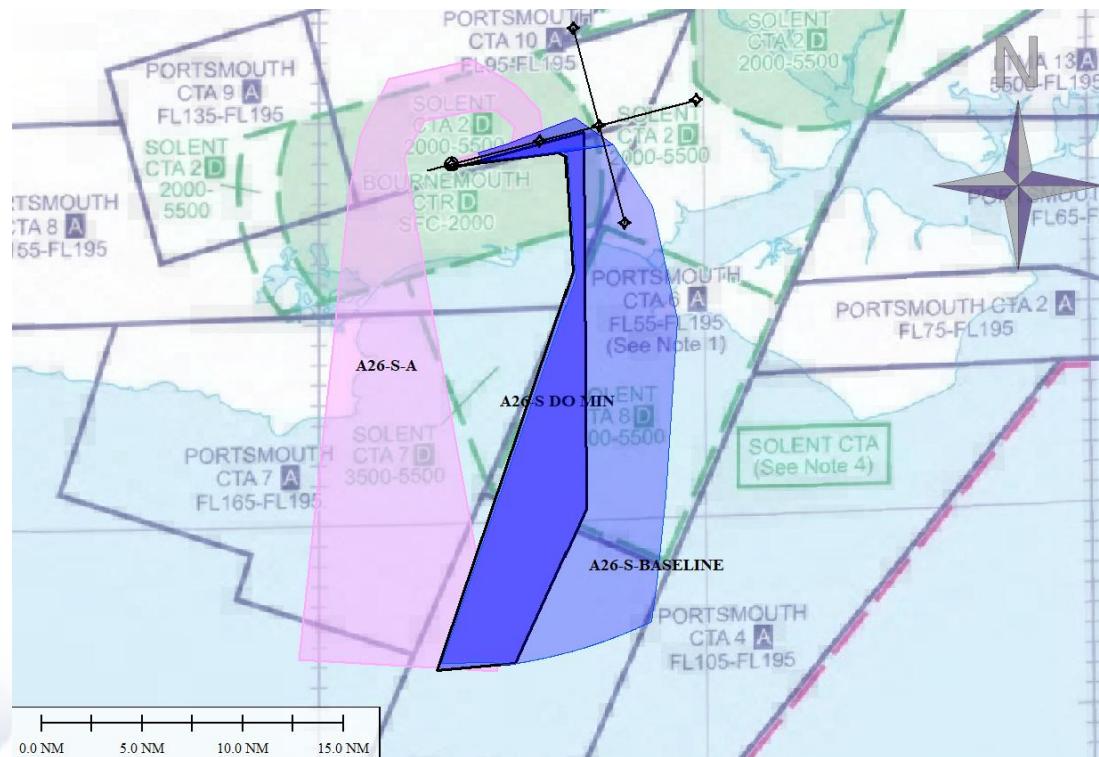
# Arrivals to RWY 26 Baselines and Do-Min options

South design envelope over OS map



Option	Change
A26-S-A	No change
A26-S-BASELINE	No change
A26-S-DO MIN	New

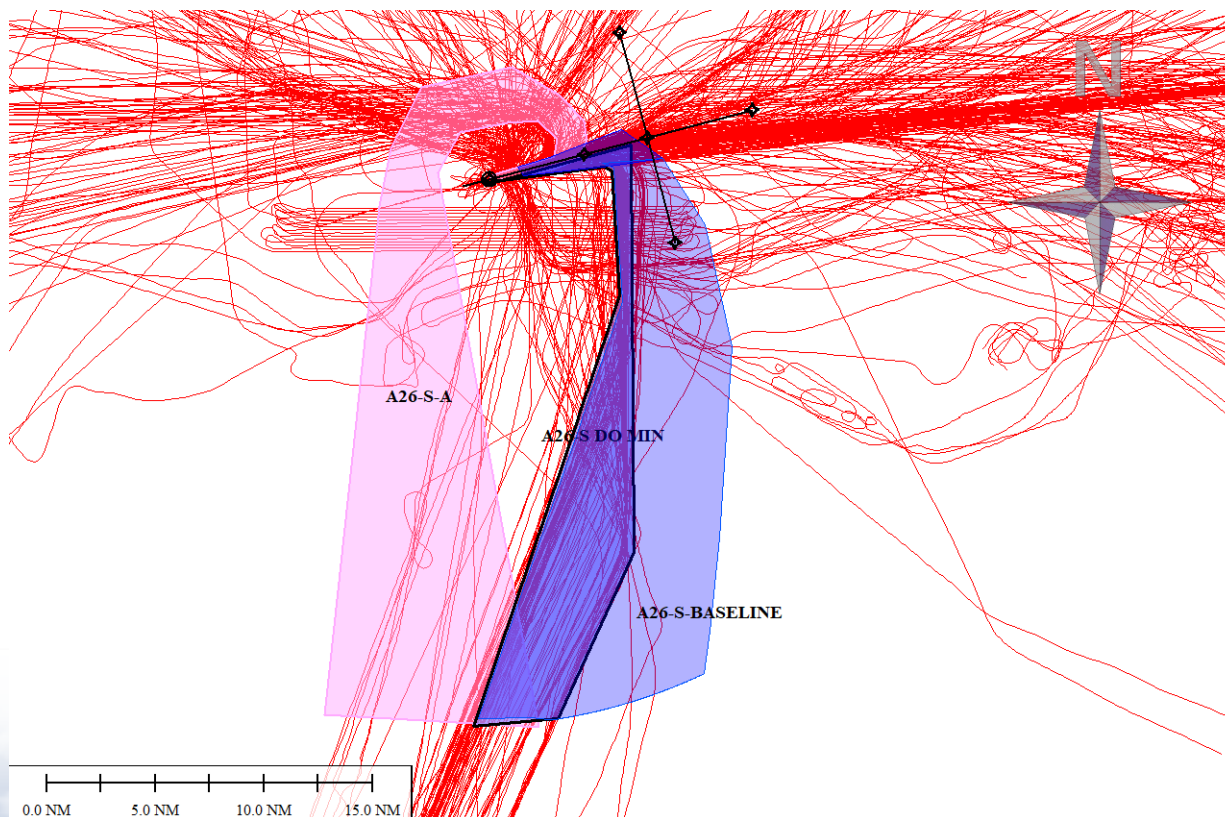
## South design envelope over ENR chart





# Arrivals to RWY 26 Baselines and Do-Min options

South design envelope over tracks



## Summary & Next Steps

- Baselines updated to match traffic demand and flight patterns.
- Do-Minimum options introduced across all relevant DEs.
- Provides a CAA-compliant foundation for future engagement.
- Next step: share with stakeholders, gather feedback, and refine options before moving to formal appraisal.

If you wish to provide feedback please email us at [BOH.ACP.FASI@cyrrus.co.uk](mailto:BOH.ACP.FASI@cyrrus.co.uk)

Thank you for your continued support during this process