

Proposed Phraseology

P-RNAV Arrival transitions

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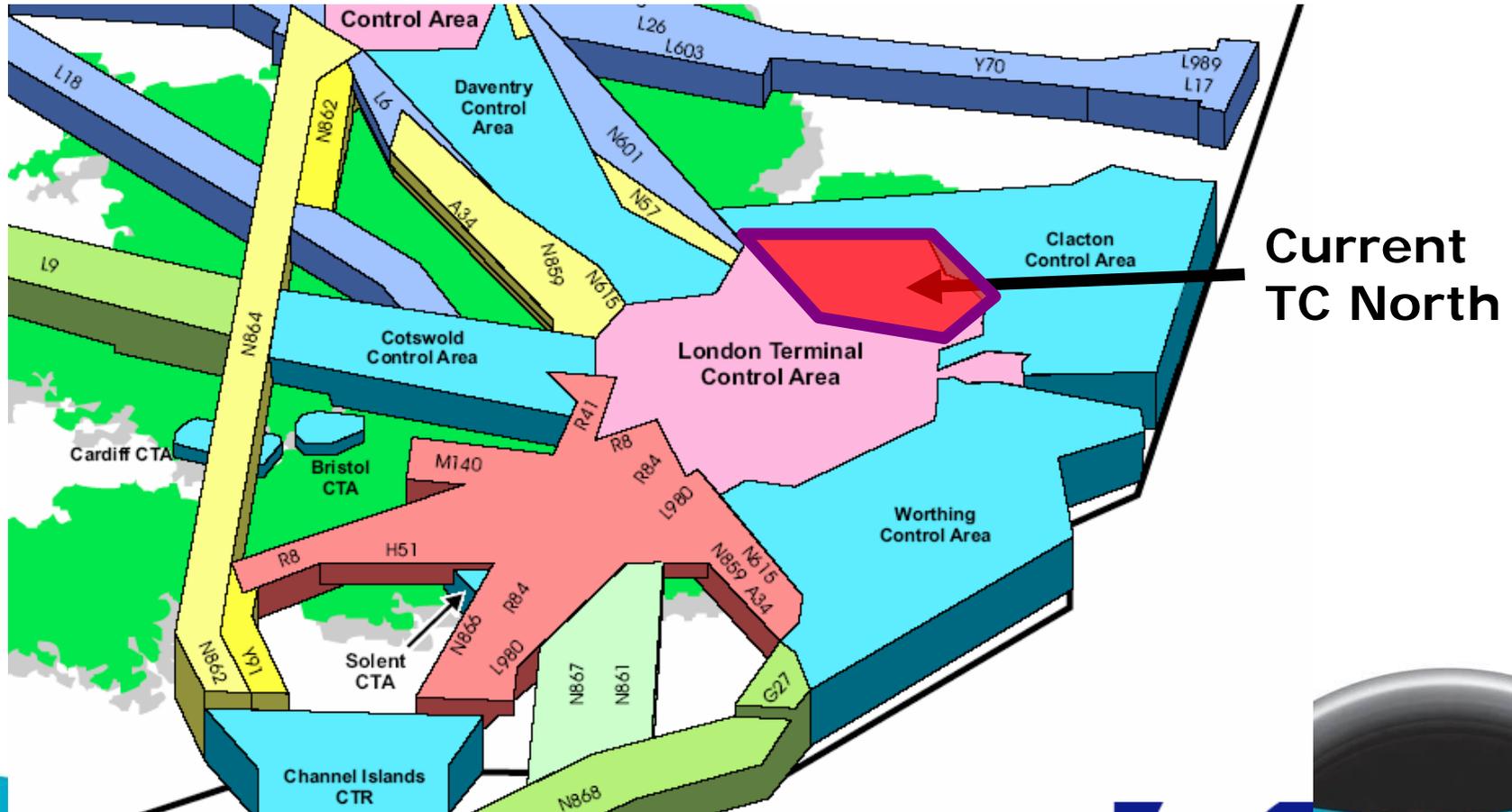
Content

- Scene setting for TC North and P-RNAV
- The 2D/3D concept
 - Example: Stansted transition
- Proposed phraseology for P-RNAV Arrival Transitions
- Discussion



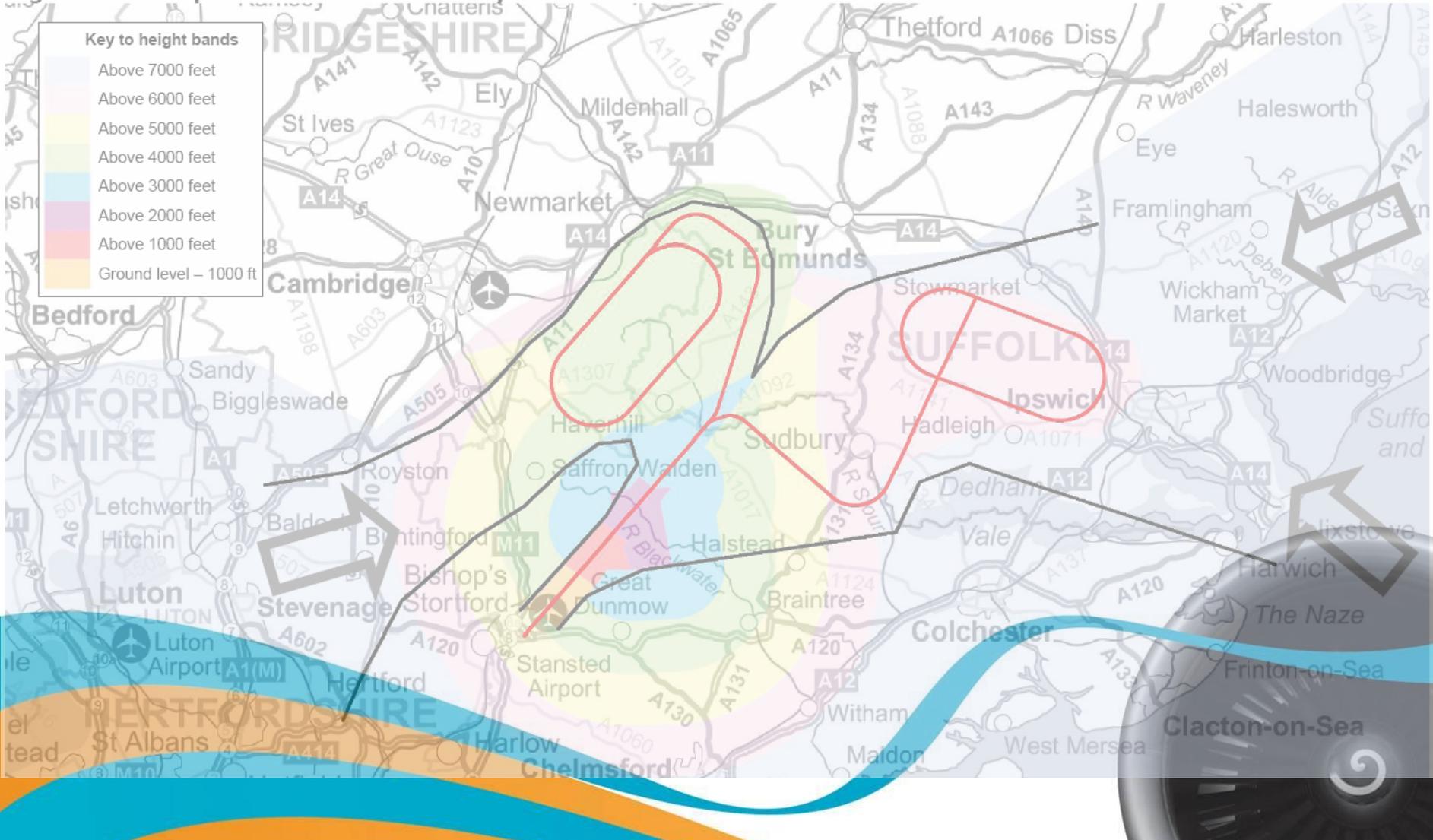
TC North Airspace

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Stansted Arrivals

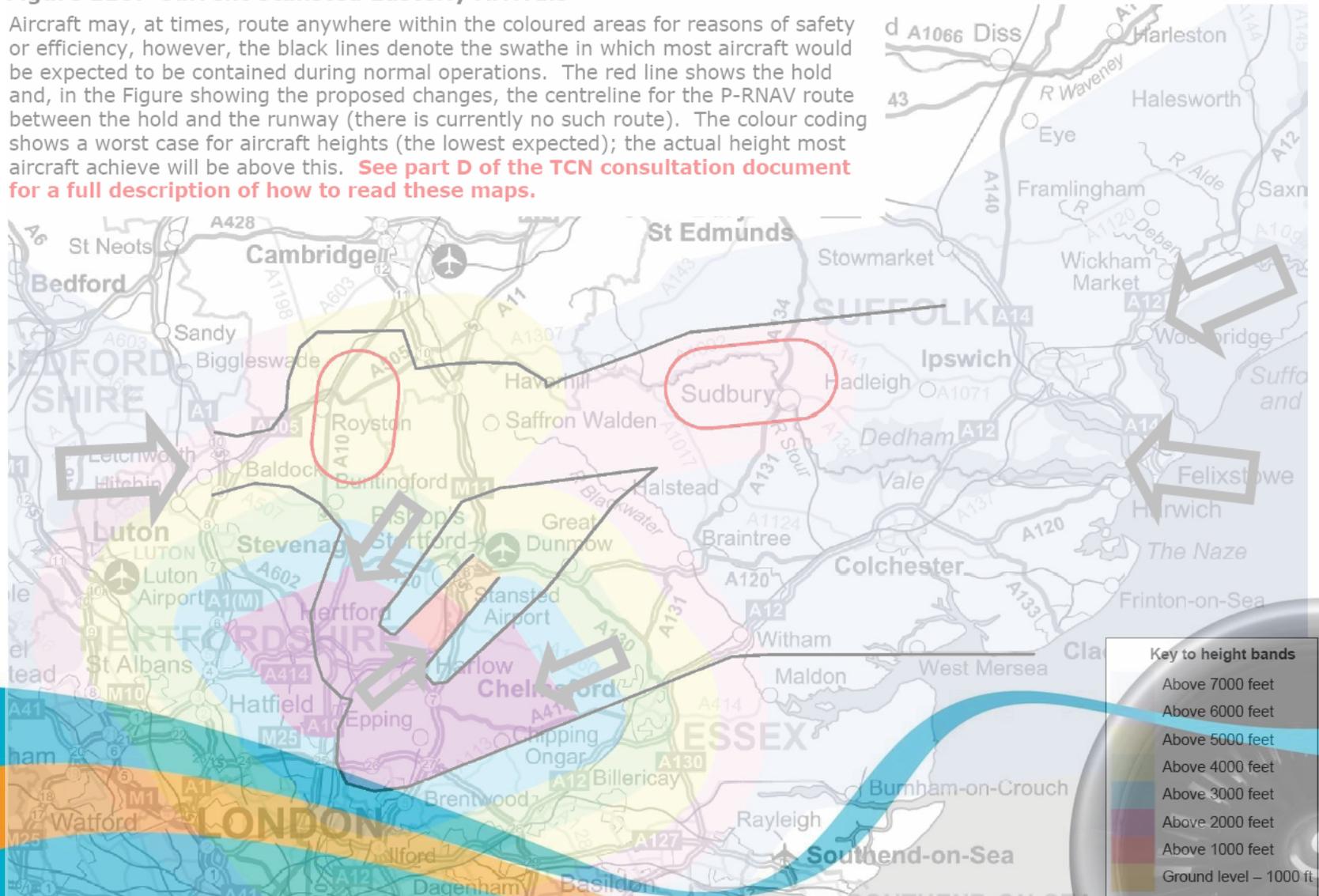
Figure E9: Proposed Stansted Westerly Arrivals



Stansted Arrivals

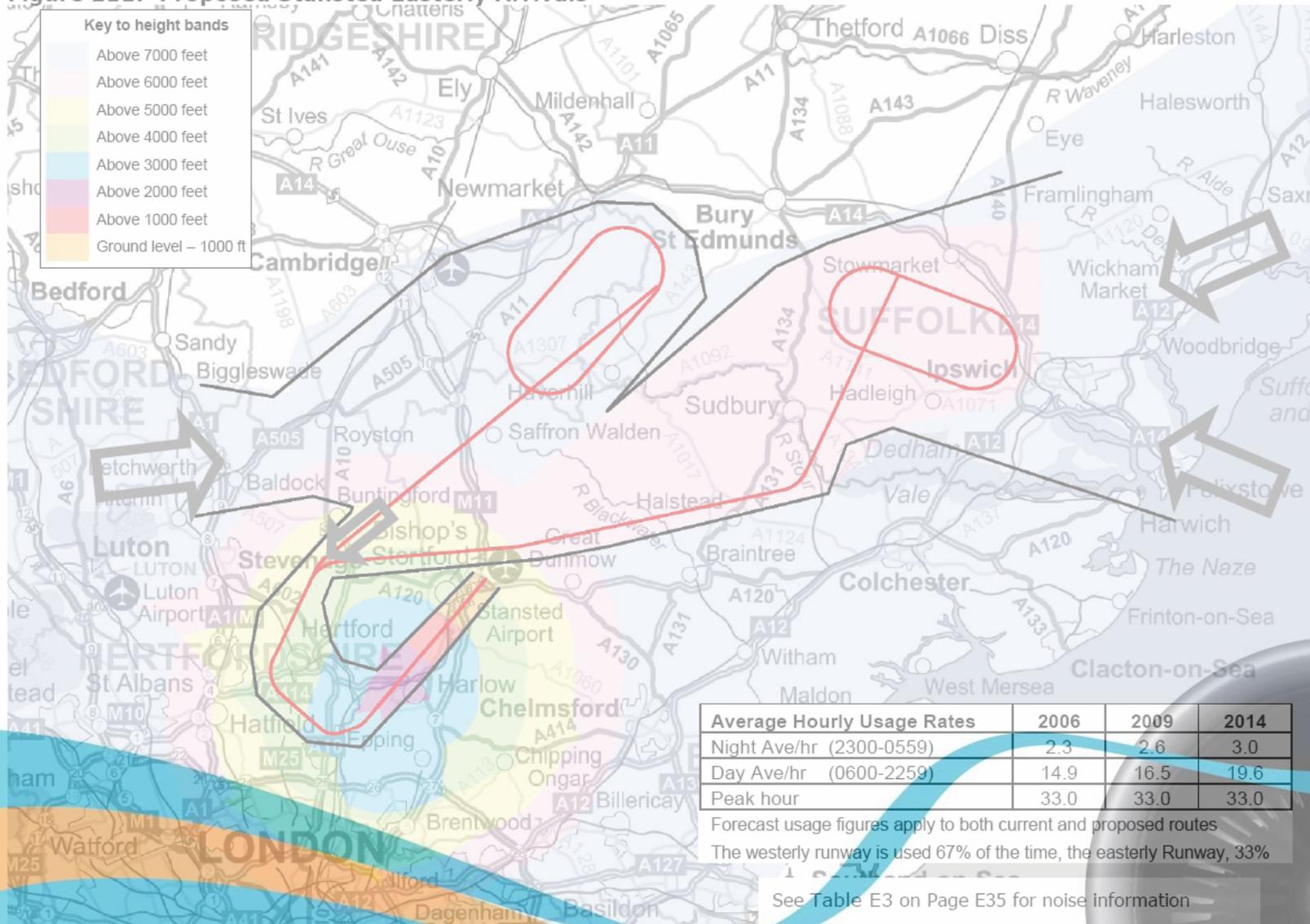
Figure E10: Current Stansted Easterly Arrivals

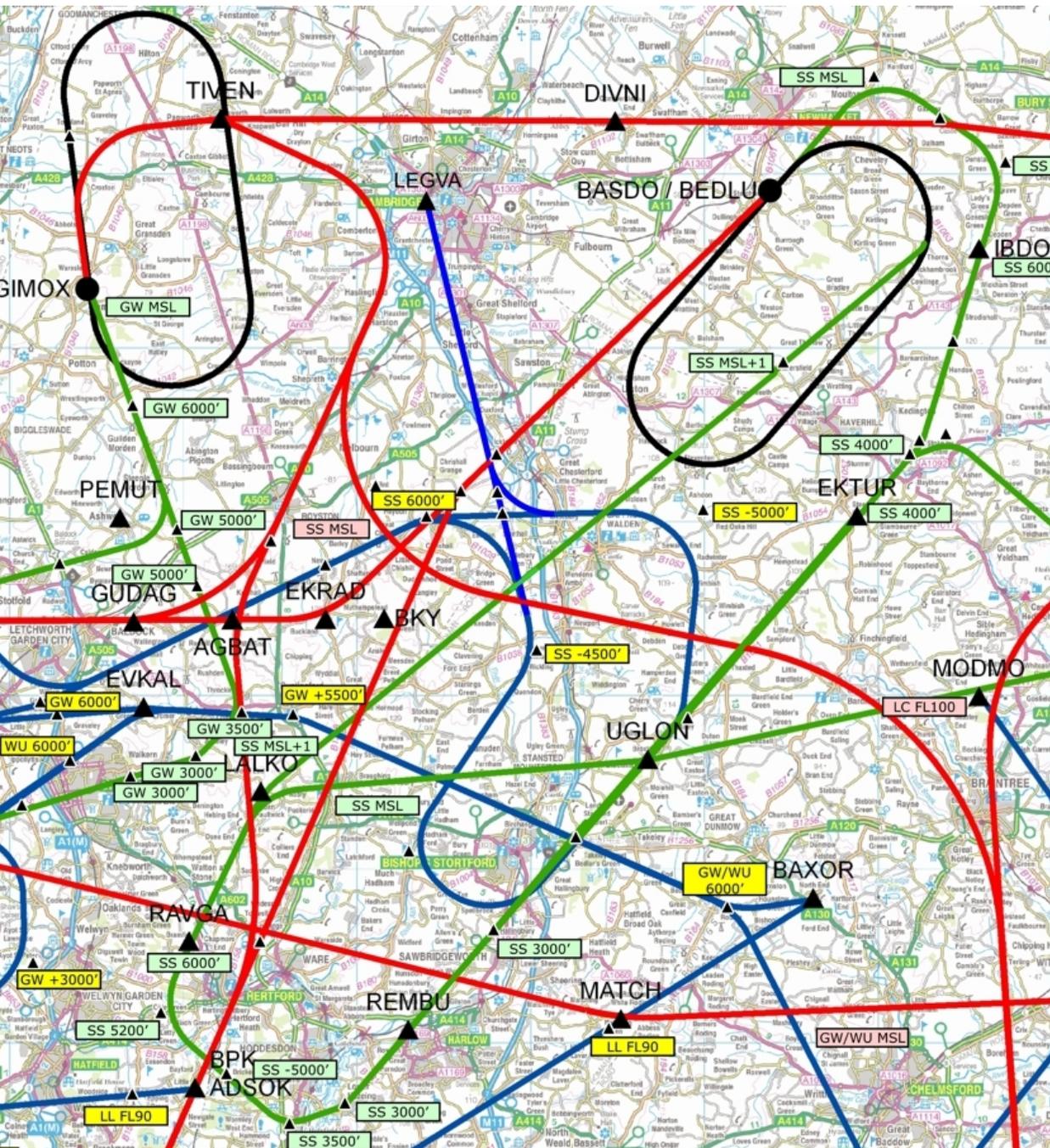
Aircraft may, at times, route anywhere within the coloured areas for reasons of safety or efficiency, however, the black lines denote the swathe in which most aircraft would be expected to be contained during normal operations. The red line shows the hold and, in the Figure showing the proposed changes, the centreline for the P-RNAV route between the hold and the runway (there is currently no such route). The colour coding shows a worst case for aircraft heights (the lowest expected); the actual height most aircraft achieve will be above this. **See part D of the TCN consultation document for a full description of how to read these maps.**



Stansted Arrivals

Figure E11: Proposed Stansted Easterly Arrivals

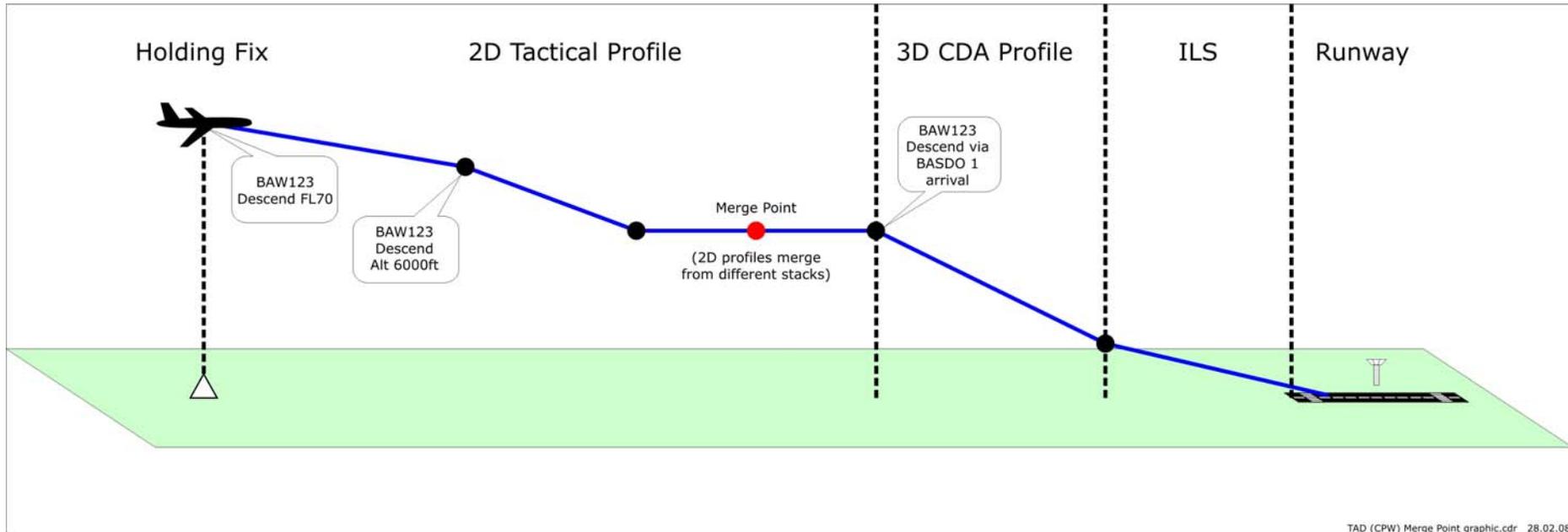




Plan view of
2D/3D
transitions



Cross section of 2D/3D transition



Phraseology

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Methodology

- 'Descend Via' was proposed to the CAA as it has been in use in the United States for a few years.
- CAA rejected the adoption of the FAA phraseology 'Descend Via'.
- Alternatives are now being developed
 - Further work is required
 - To be presented to CAA on 1st May
 - Your feedback is sought



Phraseology

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Clearance to fly the 2D element

- Instruction to vertically navigate on a STAR/ P-RNAV Arrival Transition with published restrictions
- Phraseology
 - En-Route: CLEARED (STAR / P-RNAV Arrival Transition name and number), DESCEND AND MAINTAIN (Flight Level)
 - Approach: CLEARED (STAR / P-RNAV Arrival Transition name and number and runway number), DESCEND AND MAINTAIN (Flight Level / Altitude), QNH (value) [if appropriate]



Phraseology

Clearance to fly the 2D element

- Example

- En-Route: “Cleared BASDO One Alpha, descend and maintain flight level eight zero.”
- Approach: “Cleared BASDO One Alpha, descend and maintain altitude six thousand feet, QNH 1011.”



Phraseology

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2D element note

- Clearance on the STAR or P-RNAV transition:
 - Authorises pilots to laterally navigate on a STAR / P-RNAV Arrival Transition.
 - The use of “descend and maintain” is proposed to make the tactical vertical instruction explicit and to avoid potential confusion with the 3D clearance.
 - ATC is responsible for obstacle clearance when issuing a "descend and maintain" instruction.



Phraseology

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Clearance to fly the 3D element

- Instruction to vertically navigate on a STAR/ P-RNAV Arrival Transition with published restrictions
- Phraseology
 - En-Route: DESCEND ON PROFILE (STAR / P-RNAV Arrival Transition name and number)
 - Approach: DESCEND ON PROFILE (STAR / P-RNAV Arrival Transition name and number and runway number, QNH if required)



Phraseology

Clearance to fly the 3D element

- Example

- En-Route: "Descend on profile BASDO One Alpha."
- Approach: "Descend on profile BASDO One Alpha, Runway 05."



Phraseology

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3D element note

- Clearance to "descend on profile" authorises pilots:
 - To vertically and laterally navigate on a STAR / P-RNAV Arrival Transition.
 - When cleared to a waypoint depicted on a STAR / P-RNAV Arrival Transition, to navigate laterally and vertically to meet all published restrictions.
 - ATC is responsible for obstacle clearance when issuing a "descend on profile" clearance from a previously assigned altitude.



3D element note (2)

- Pilots navigating on a STAR / P-RNAV Arrival Transition shall maintain last assigned altitude until receiving clearance to "descend on profile."
- Pilots cleared for vertical navigation using the phraseology "descend on profile" shall inform ATC upon initial contact.
- **EXAMPLE**
"Ryanair Three One Two leaving flight level nine zero, descending on profile the BASDO One arrival."



Phraseology

Instructions to assign an altitude to cross the waypoint for aircraft on a direct routing to a waypoint to join a STAR/P-RNAV Arrival Transition

➤ **EXAMPLE**

"Proceed direct LALKO, cross LALKO at flight level nine zero, after LALKO descend on profile BASDO One Arrival."



Phraseology

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- NOTES

- A descend on profile clearance shall not be used where procedures contain published "expect" altitude restrictions.
- Pilots are not expected to comply with published "expect" restrictions in the event of lost communications, unless ATC has specifically advised the pilot to utilise these restrictions as part of a further clearance.



ANY

QUESTIONS

???



Phraseology

Instructions to assign a crossing altitude which differs from published constraint on the STAR/P-RNAV Arrival Transition

- PHRASEOLOGY
DESCEND ON PROFILE (STAR / P-RNAV Arrival Transition) EXCEPT CROSS (fix, point, waypoint) (revised altitude information).



Phraseology

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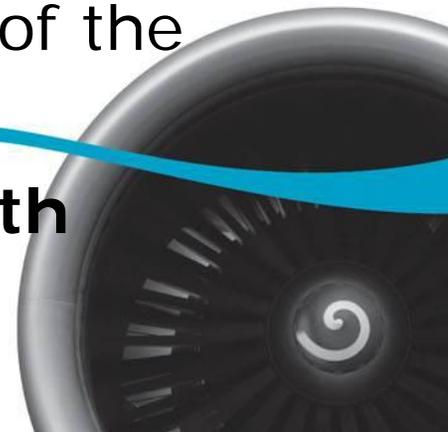
- EXAMPLE

- "Air Berlin 454 descend on profile BASDO One Alpha, except cross RAVGA at flight level seven zero."

- NOTE

- The aircraft should track laterally and vertically on the BASDO One Arrival and should descend so as to cross BASDO at flight level seven zero; remainder of the arrival shall be flown as published.

- **Not proposed for use in TC North**



Phraseology

Instructions to assign an interim altitude, or assign a final altitude not contained on a STAR/P-RNAV Arrival Transition

- PHRASEOLOGY
DESCEND ON PROFILE (STAR/ P-RNAV Arrival Transition) EXCEPT AFTER (fix) MAINTAIN (revised altitude information).



Phraseology

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- EXAMPLE

- "FedEx 373 descend on profile BASDO One Alpha, except after LALKO maintain flight level eight zero."

- NOTE

- **Not proposed for TC North.**

- ATC would intervene with tactical descent instructions if required.

