

NATS
SAIP AD1 CAA Framework Brief
Hurn Systemisation Part One

Wednesday 22nd March 2017

NATS Private

The NATS logo is located in the bottom right corner of the slide. It consists of the word "NATS" in a bold, italicized, white sans-serif font. The background of the slide is dark teal with a large, abstract, light teal graphic element on the right side that resembles a stylized swoosh or a series of overlapping curved lines.

SAIP AD1 Proposal



Swanwick Airspace Improvement Programme (SAIP) Airspace Deployment 1 (AD1)

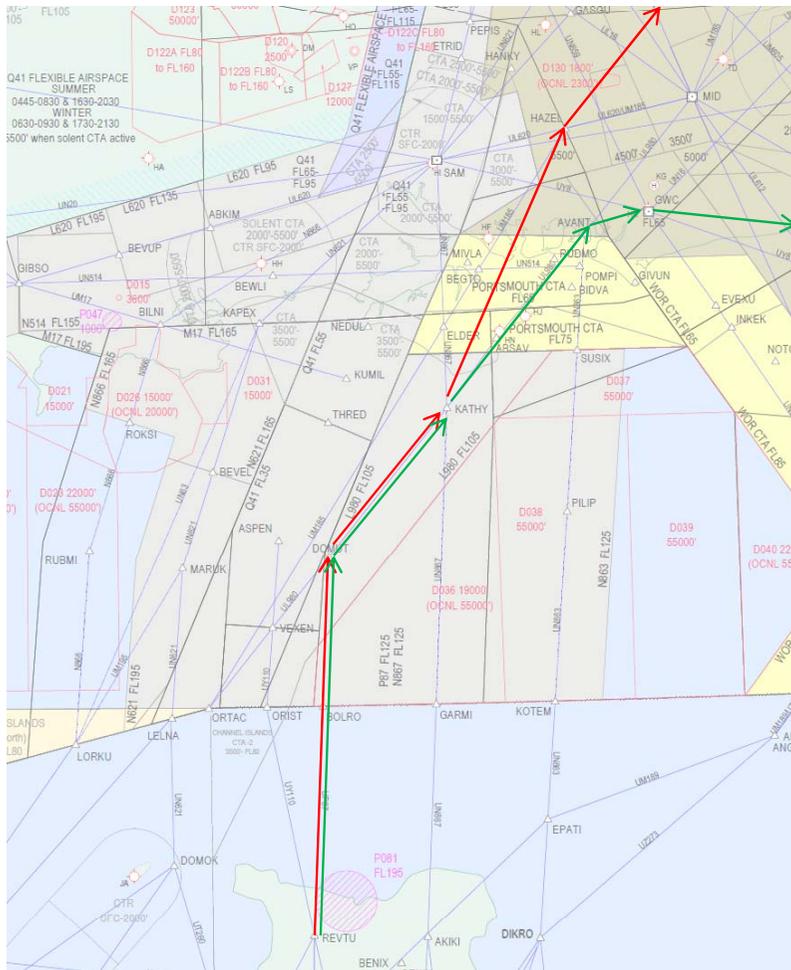
- Includes original SAOP Module 1 proposal with some additions
- Target 'O' date 9th November 2017
- ACP submission week commencing 3rd April 2017

Differences Between SAOP Module 1 and SAIP AD1



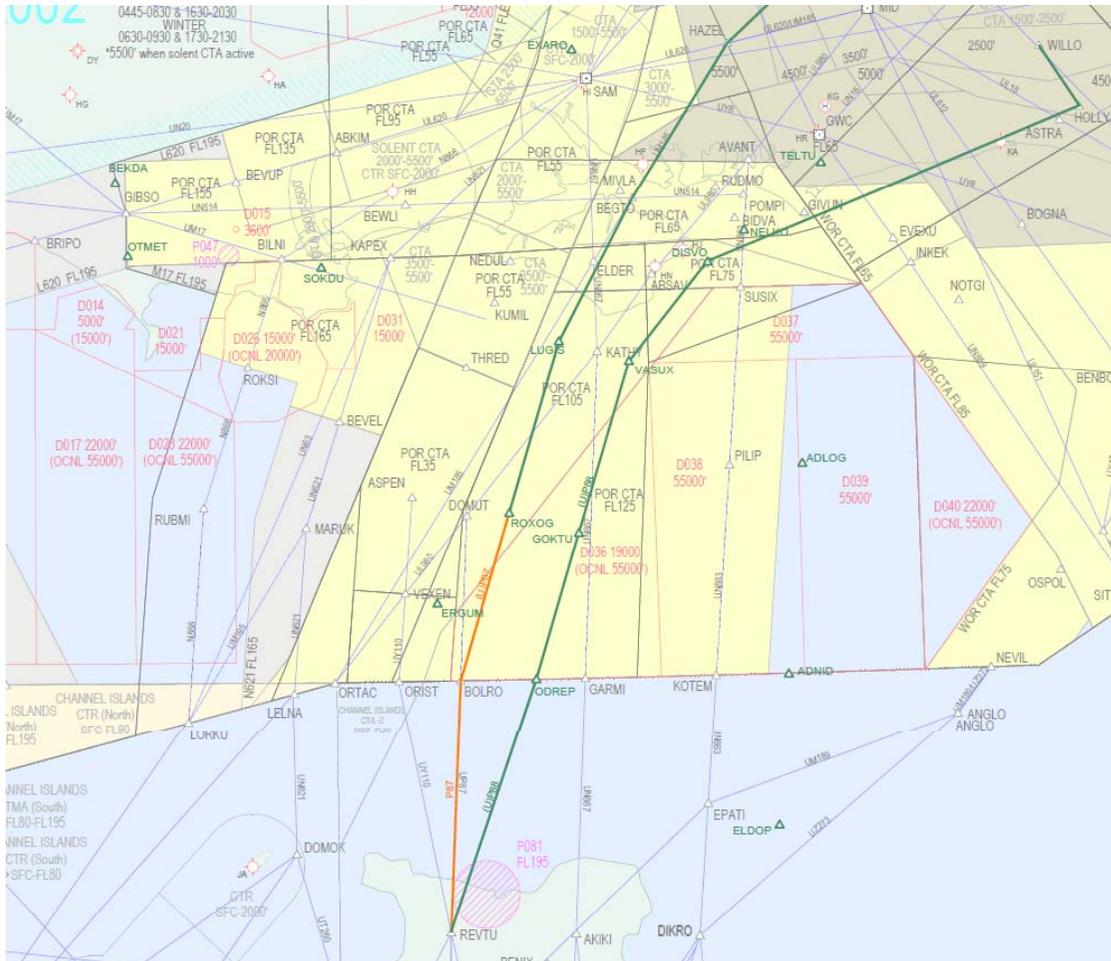
- No changes to originally proposed EGLL and EGKK STARs
- 1 additional STAR for RNAV-1 LOREL traffic (drawn, checked and submitted by NATS PDG)
- Wherever possible aimed to realign existing RNAV-5 ATS route network utilising existing ATS route designators (some currently RNAV-5 routes becoming RNAV-1)
- SAOP Module 1 included 9 new ATS routes
- SAIP AD1 includes 8 new ATS routes and 12 realigned ATS routes
- Most ATS routes unchanged from those proposed in SAOP Module 1
- M18 designator no longer required (M17 realigned to originally proposed M18 route)
- P86 designator used elsewhere in SAIP AD1

Existing EGLL and EGKK Inbound Routes



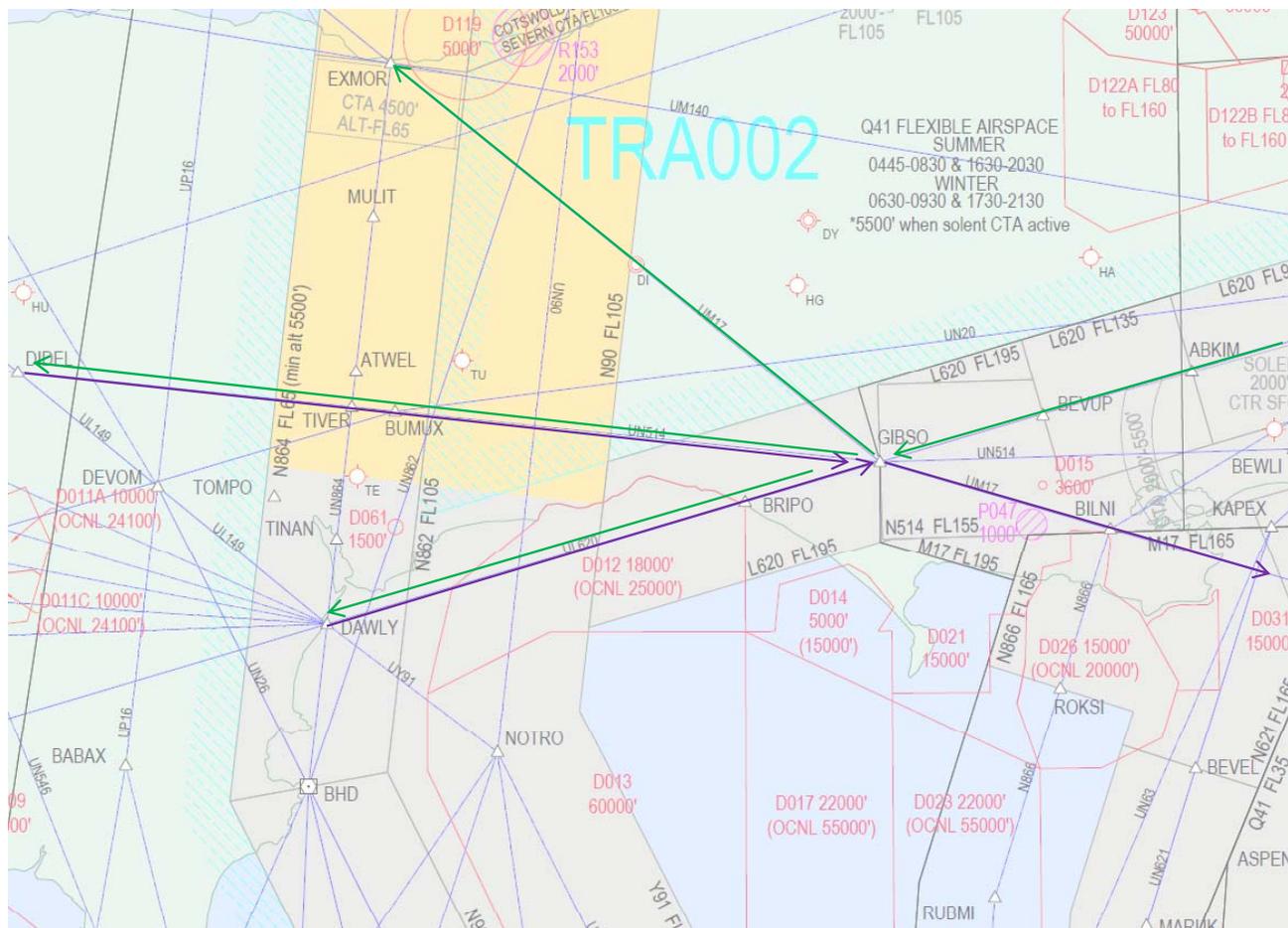
- EGLL (red) and EGKK (green) share the same inbound routing from the Brest FIR
- LAC required to split aircraft onto parallel headings regularly
- Multiple heading changes required to vector parallel aircraft around danger areas
- Route length excessive for deemed separation of RNAV-5 routes (U)P87 and (U)N867

Proposed EGLL/EGKK RNAV-1 Routes from the South



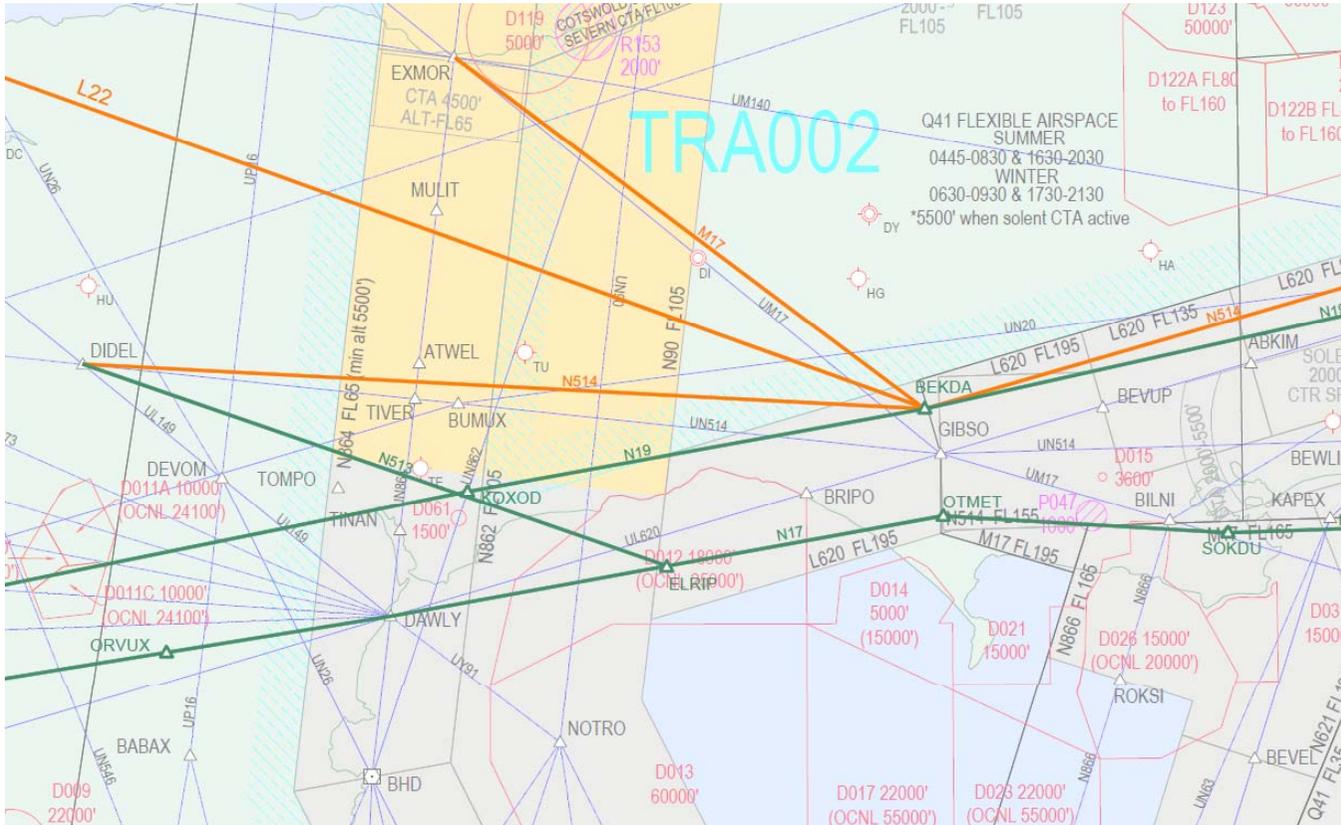
- LL and KK routes split at REVUTU in Brest FIR into (U)P87 and (U)P88
- (U)P87 and (U)P88 are RNAV-1 and spaced by 7nm from London FIR boundary
- LL OCK1Z STAR starts at ROXOG
- KK WILLO1Z STAR starts at VASUX
- Benign parallel turn at LUGIS/VASUX around D037
- Route lengths reduced

Existing Eastbound/Westbound Conflict Point at GIBSO



- Pinch-point in existing ATS route network at GIBSO
- Eastbound LTMA arrivals (purple) opposite direction to Westbound LTMA departures (green)
- Westbound traffic put on headings on North side
- Eastbound traffic put on headings on South side
- Very long EGLL and EGKK arrival route penalising for operators

Proposed LTMA Eastbound/Westbound RNAV-1 Routes



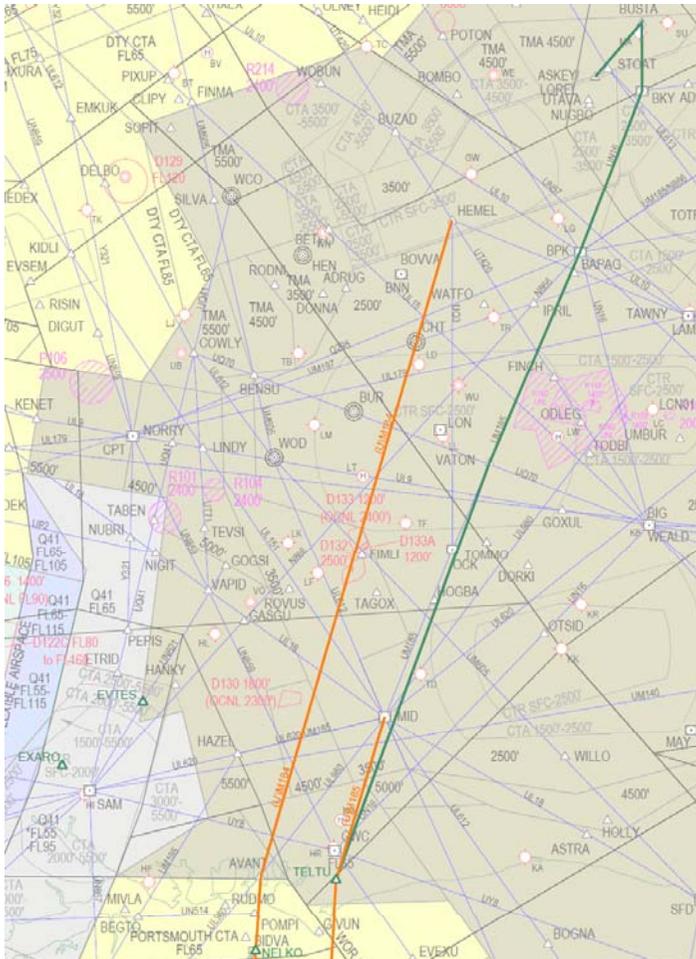
- Westbound RNAV-1 LTMA departures to use N514/N19
- Eastbound RNAV-1 LTMA arrivals to use N513/N17
- N17 and N19 spaced by at least 7nm East of KOXOD
- Routes not separated West of KOXOD
- EGLL OCK1Y and EGKK WILLO1Y STARs start at OTMET
- Route lengths reduced

Proposed EGBB/NX and EGSS/GW PBN Route

St



Proposed EGBB/NX and EGSS/GW RNAV-1 Routes



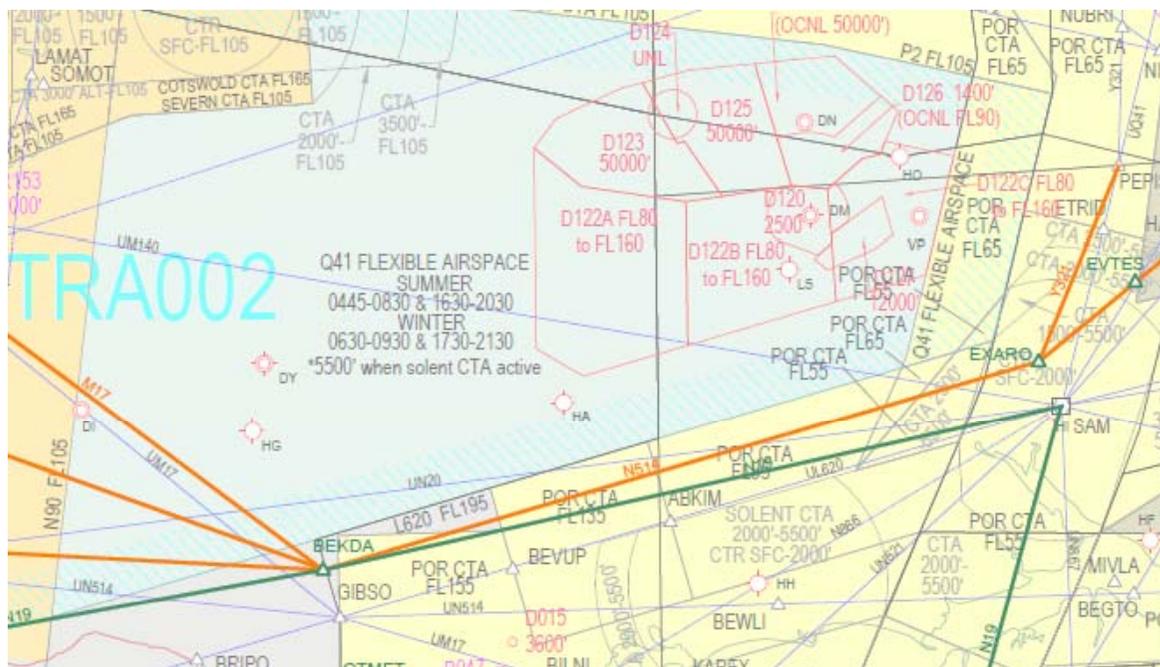
- LOREL1Z STAR and (U)M184 remain spaced by at least 7nm North of TELTU
- Enables “when ready” descents from cruise altitudes when ATC workload permits

RNAV-1 Routes Close To D036/D037/D038/CAS



- (U)P88 and (U)N867 spaced 2nm from D038 at the closest point
- L982 and WILLO1Z spaced 2nm from D036, D037 and D038
- L982 and WILLO1Z spaced 2nm from the edge of CAS FL105-FL125

RNAV-1 Routes Against TRA002



- N514 (FL195-FL460 East of BEKDA) spaced 2nm from the edge of TRA002
- N19 (FL195-FL460 East of BEKDA) spaced 2nm from the edge of TRA002 at its closest point
- Y321 (FL245-FL460) available for EGSS/BB/NX/MC departures for access N514 at EXARO
- All routes West of BEKDA only available FL245-FL460

New STARs



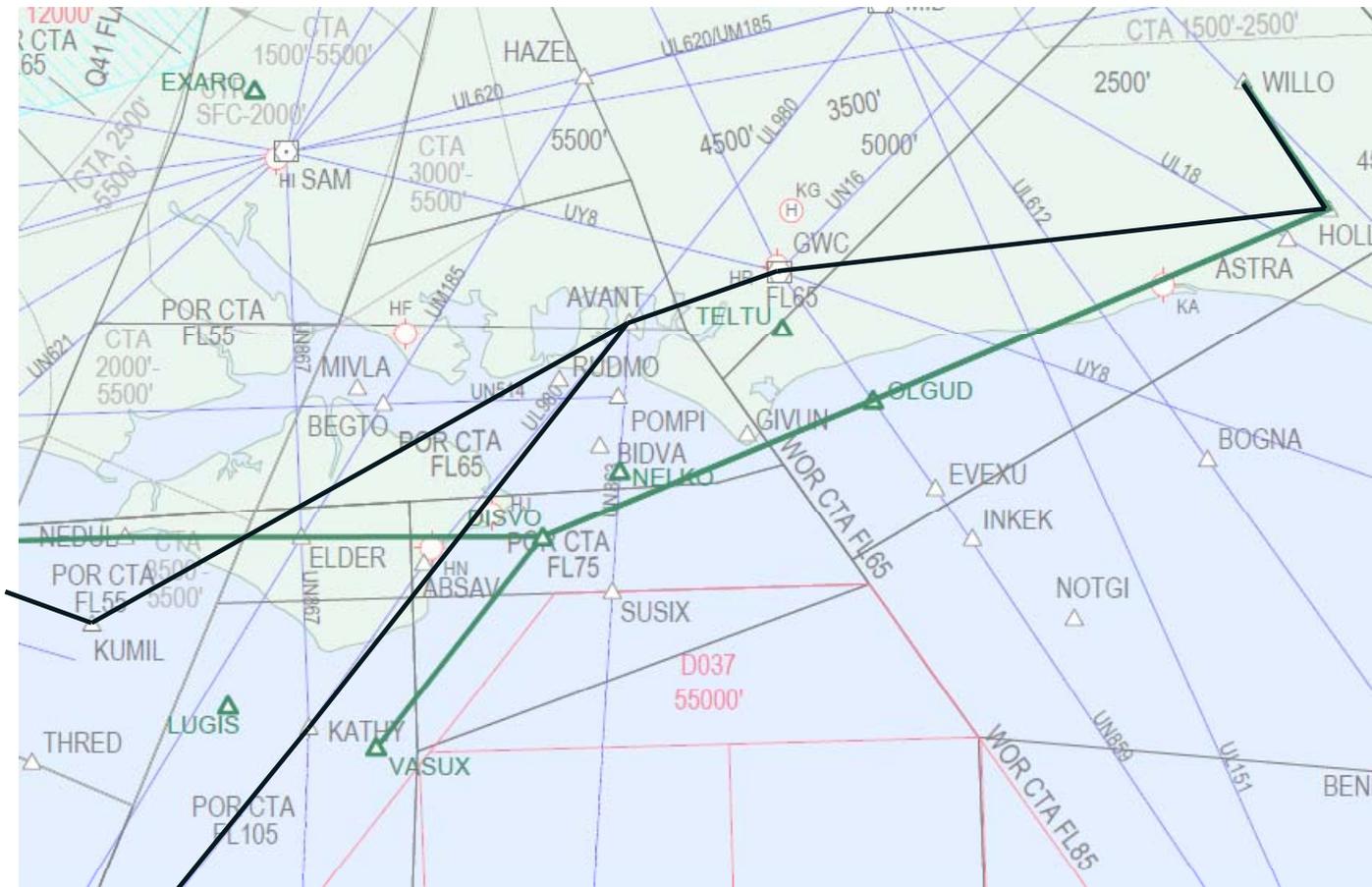
- OCK1Y RNAV-1 EGLL/WU arrivals via OTMET
- OCK1Z RNAV-1 EGLL/WU arrivals via ROXOG

- WILLO1Y RNAV-1 EGKK arrivals via OTMET
- WILLO1Z RNAV-1 EGKK arrivals via VASUX

- WILLO1M Stack swap STAR from TIMBA to WILLO
- WILLO1N Stack swap STAR from TIMBA to WILLO
- TIMBA1E Stack swap STAR from WILLO to TIMBA

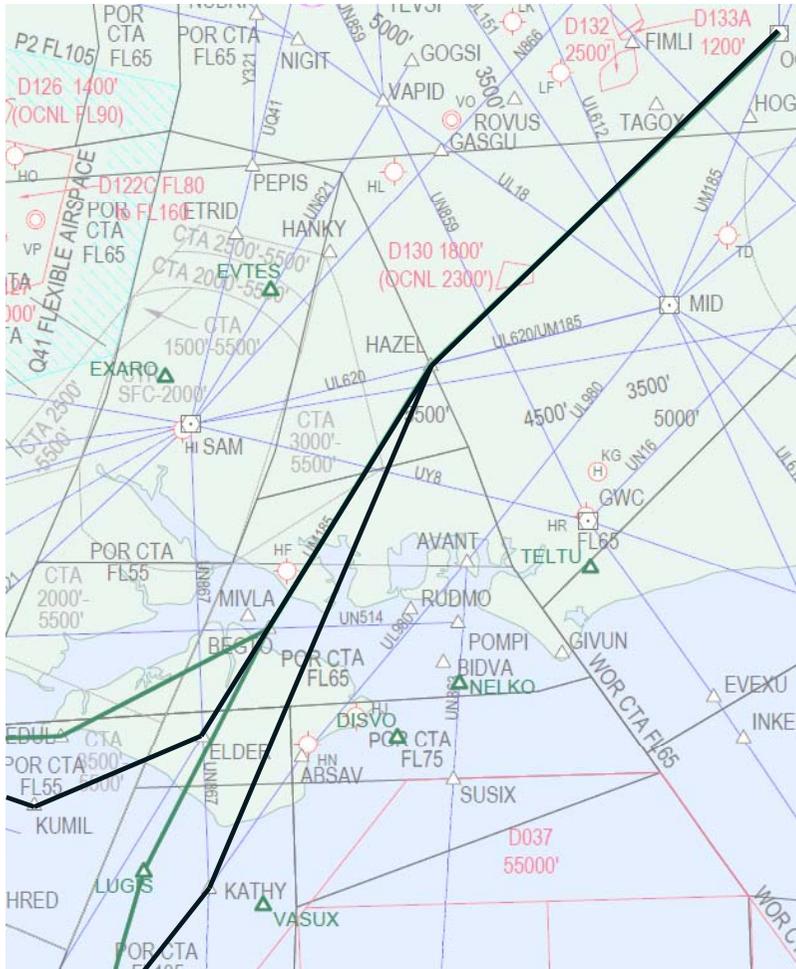
- LOREL1Z RNAV-1 EGSS/SC/GW arrivals via TELTU

RNAV-1 WILLO STAR Tracks Over Ground



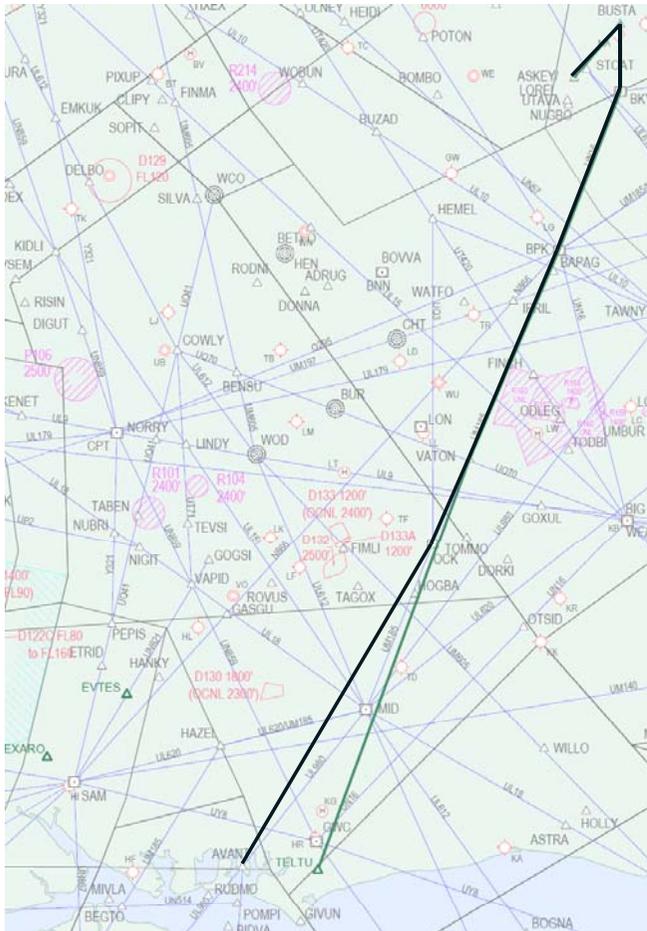
- Existing WILLO STARs in black
- RNAV-1 WILLO STARs in green
- More aircraft will route over the sea
- Aircraft above 7000ft until HOLLY
- No changes at and below 7000ft
- Previously determined no low level consultation required

RNAV-1 OCK STAR Tracks Over Ground



- Existing OCK STARs in black
- RNAV-1 OCK STARs in green
- Aircraft not below FL130 until HAZEL
- No changes at and below 7000ft
- Previously determined no low level consultation required

RNAV-1 LOREL STAR Tracks Over Ground



- Existing LOREL STAR in black
- RNAV-1 LOREL STAR in green
- Aircraft FL190 at AVANT/TELTU
- Aircraft not below FL140 until VATON
- No changes at and below 7000ft

RNAV Holds and Other STAR Changes



RNAV Holds

OCK
WILLO
LOREL
VATON
KATHY
BILNI
DOMUT

Withdrawn STARs

All TOMMO STARs
All ASTRA STARs
All ASKEY STARs
LOREL2M
LOREL2N
LOREL2P
WILLO3J (Night time STAR)
OCK3J (Night time STAR)

Amended STARs

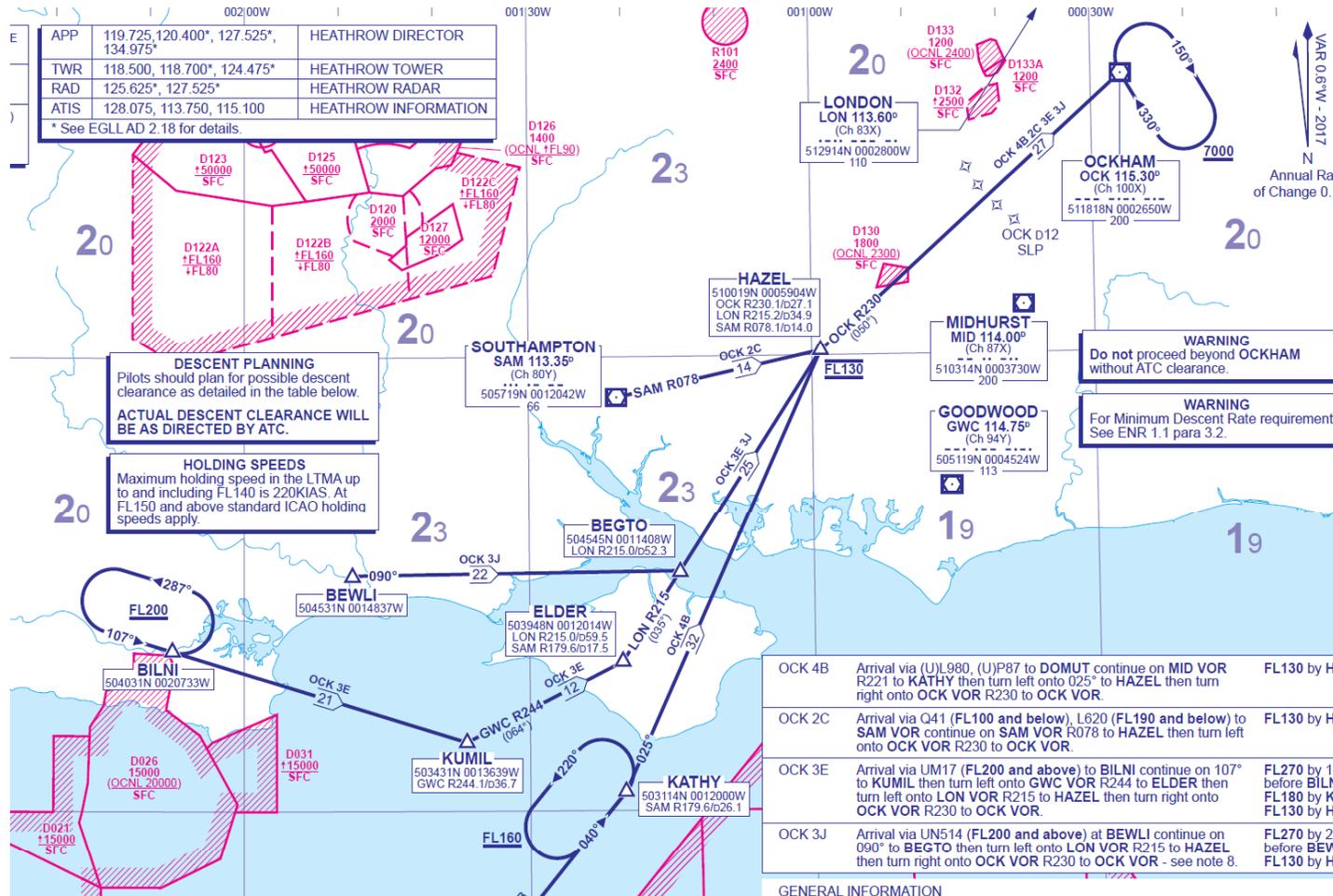
All remaining OCK, WILLO and LOREL STARs to be amended:

- Remove references to offload STARs
- Amendment to expected levels to match ATC procedures

RNAV Holds

Not possible to have RNAV-1 STAR terminating at a conventional hold, therefore OCK, WILLO and LOREL becoming RNAV holds.

Conventional STAR into RNAV Hold?



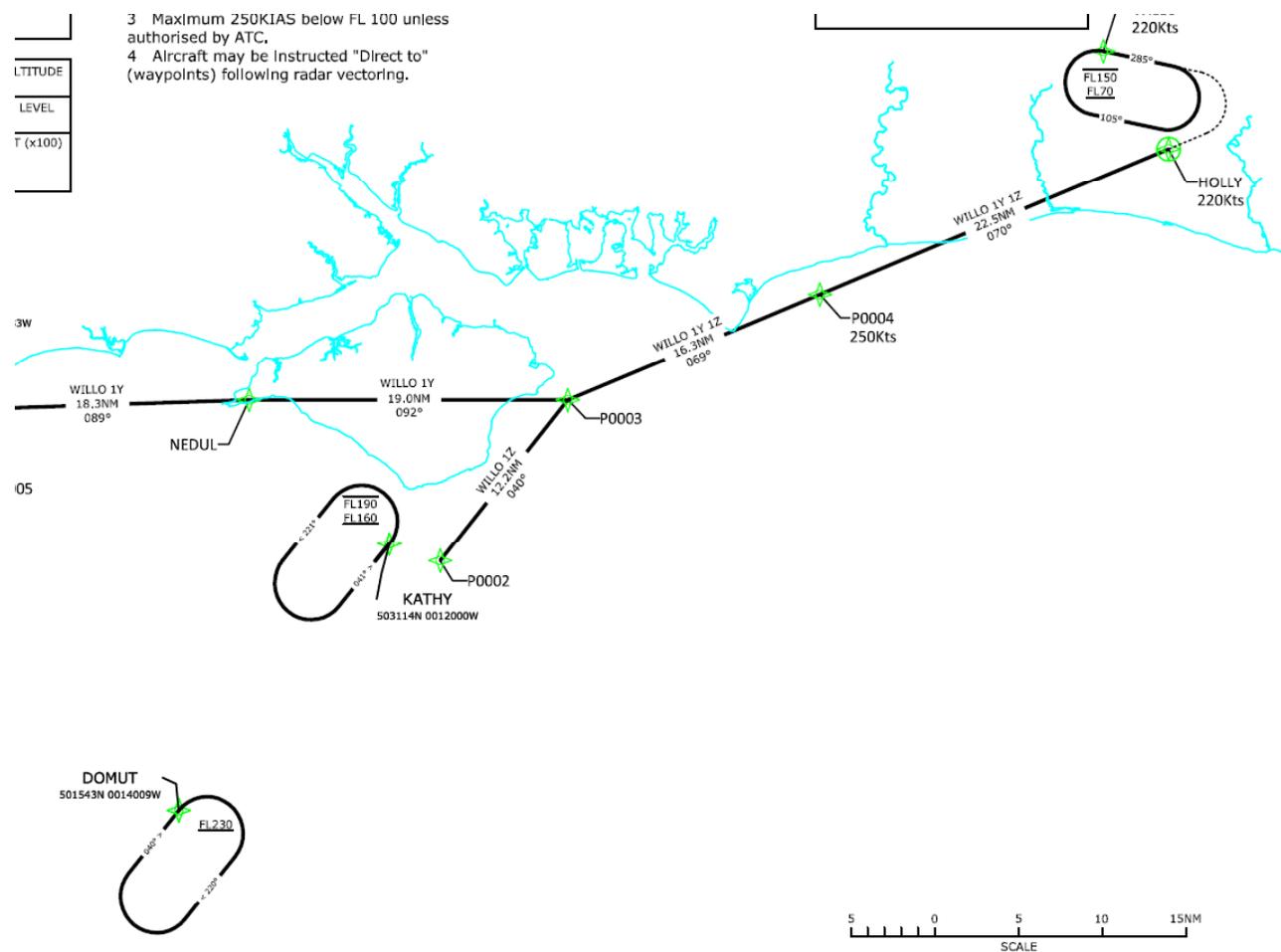
Remaining OCK STARS

- Conventional STAR routing
- RNAV Hold
- When OCK u/s use an RNAV overlay

Other Changes

- 8 new ATS routes
- 12 realigned ATS routes (some becoming RNAV-1)
- 22 new waypoints
- At least 4 waypoints removed
- Sector boundary adjustments (TC SW, TC CPT, WOR, BHD) – DOCs to be checked
- 'U' removal from as many ATS routes as feasible in the area of change
- Realignment of night time fuel saving routes from KATHY to VASUX

“Floating” Holds



“Floating” Holds – Lead Operator Carrier Panel

- Airlines agreed holds should be depicted somewhere (i.e. on the STAR chart)
- Waypoint would need to be looked up in FMC or manually input
- Pilot would need to check for multiple holds on the same fix or multiple instances of fixes with the same name, as well as hold orientation
- ATCO would need to give a “route direct” clearance to the hold and inform left or right holding pattern if not coded
- Controller may have to instruct aircraft to hold tactically
- Most FMS’s cannot store more than one hold per fix

Action

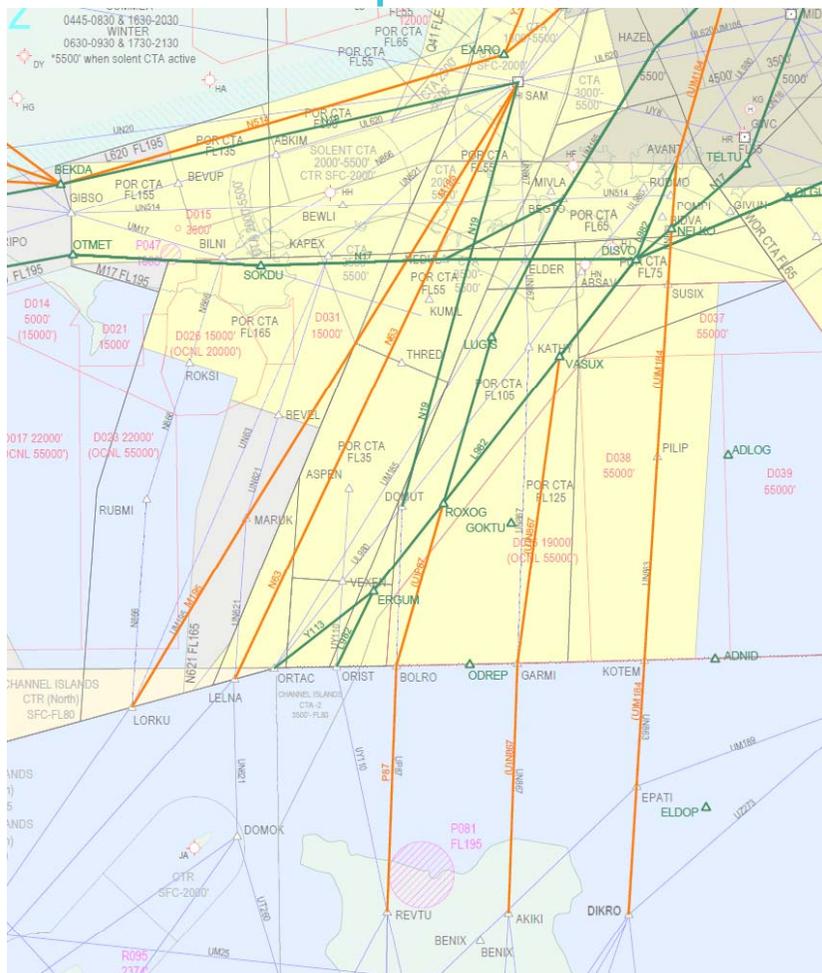
NATS needs to provide the CAA with assurance that there are not multiple holds coded per waypoint and that these holds will only be used as contingency rather than as part of standard practice.

Stakeholder Consultation



• DAATM	Consultation on change	Formal MOD response by 31 st March 2017
• DSNA	LoA Drafted	Approval received
• IAA	LoA Drafted	Approval sought
• Jersey ATC	LoA Drafted	Approval sought
• Airlines	Lead Operator Carrier Panel	No specific objections
• Heathrow Airport	Briefed on date change	Approval sought
• Gatwick Airport	Briefed on date change	Approval received
• Luton Airport	Briefed	Approval received
• Stansted Airport	Briefed	Approval received
• Cambridge Airport	To be briefed	
• RAF Northolt	To be briefed	

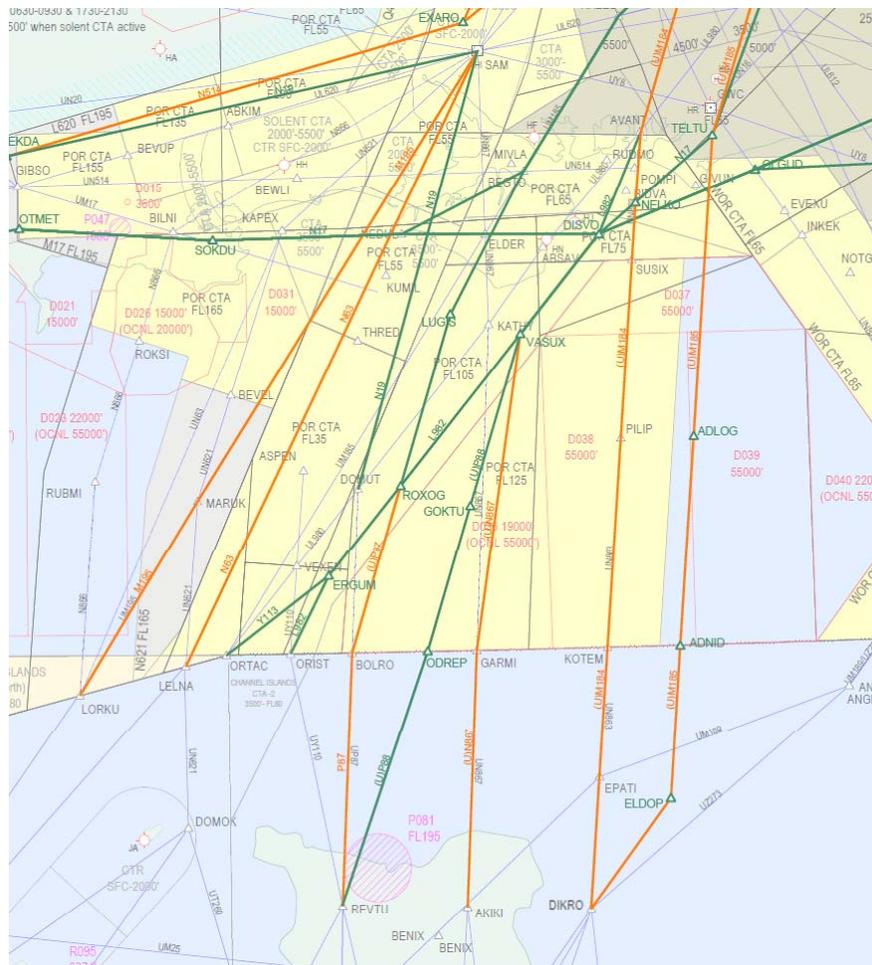
SAIP AD1 Implementation Plan



9th November 2017

- Deploy all SAIP AD1 changes in UK airspace
- Temporary LoA in place between Brest and LAC to detail route changes North of the FIR boundary
- NOTAM (U)M185 and (U)P88 as closed
- EGKK inbounds via REVТУ route
REVТУ – (U)P87 – ROXOG – L982 – VASUX – WILLO1Z
- EGGW/SS/SC inbounds via DIKRO route
DIKRO – (U)M184 – PILIP – (U)N6 – TELTU – LOREL1Z
- No procedure change for Brest/LAC interface

SAIP AD1 Implementation Plan



7th December 2017

- Permanent LoA comes in between Brest and LAC
- (U)M185 and (U)P88 open

SAIP AD1 Timeline



Initial ACP

- Initial Framework Brief 17th August 2016
- Supplementary Framework Brief 22nd March 2017
- ACP Submission by 7th April
- AIP Submission 11th August
- Deployment 9th November 2017 without DSNA changes
- DSNA changes deployed 7th December 2017

Additional ACP (new CAS)

- Framework Brief TBD
- Consultation begins w/c 10th April 2017 (12 weeks)
- ACP Submission w/c 10th July 2017
- AIP Submission 24th November 2017
- Deployment 1st March 2018

Questions
?

NATS

NATS Private