

DVOR Rationalisation
Removal of Enroute Dependencies
Trent (TNT) Deployment

DVOR TNT Holds and STARs

Reference 5: Stakeholder Evidence for Stage 2
As summarised in Annex H of Stage 2 Documentation

V1.2

Email exchanges with East Midlands Airport

1. Email trail with East Midlands Airport to discuss RNAV 21/12/20

From: [REDACTED]
Sent: 21 December 2020 14:49
To: [REDACTED]
Cc: [REDACTED]
Subject: TNT DVOR Replication

[REDACTED]

Following on from the request regarding Manchester RNAV airline equipage do you have any data to for East Midlands traffic (essentially from the north/north west)?

The current plan from a DVOR replication perspective is to push towards replicating the existing STARs to an RNAV 1 standard but also provide support for RNAV 5 where appropriate either via a single RNAV 5 STAR or use of DCT /existing ATS structure.

Unfortunately as the Statement of Need is around replication CAA will not allow us to make required changes which could have eliminated further work under PLAS/FASI N.

Regards

[REDACTED]

NATS

[REDACTED]

Manager Systemised Airspace Development

Prestwick Centre

D: [REDACTED]
M: [REDACTED]
E: [REDACTED]

From: [REDACTED]
Sent: 22 December 2020 13:27
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: TNT DVOR Replication

Hi [REDACTED]

Are these what you were looking for?

We have just completed a similar process with TC as they have changed the STAR's from the south and the PIGOT hold to RNAV ones. It's caused us no issues.

Kind regards

[REDACTED]

[REDACTED]

Air Navigation Services Manager

East Midlands Airport

Castle Donington

DE74 2SA

[REDACTED]

[REDACTED]

From: [REDACTED]
Sent: 22 December 2020 14:06
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: TNT DVOR Replication

[REDACTED]

Thanks for this , I presume there are however, potentially more aircraft from the north which would be only RNAV 5 and hence a requirement to provide access for these aircraft for the moment?

Regards

[REDACTED]

NATS

[REDACTED]

Manager Systemised Airspace Development

Prestwick Centre

D: [REDACTED]
M: [REDACTED]
E: [REDACTED]

From: [REDACTED]

Sent: 22 December 2020 15:17

To: [REDACTED]

[REDACTED]

Cc: [REDACTED]

Subject: RE: TNT DVOR Replication

I'm not sure [REDACTED] I think that you have a fair spread of operators there that operate to the north and south.

Once you have any formal plans, let me have them and I'll send a note out to the PLG community and see if there are any potential issues.

Kind regards

[REDACTED]

[REDACTED]

Air Navigation Services Manager

East Midlands Airport

Castle Donington

DE74 2SA

[REDACTED]

[REDACTED]

2. Email trail with East Midlands Airport to discuss ROKUP/DIPSO Hold options

From: [REDACTED]

Sent: 26 February 2021 10:12

To: [REDACTED]

Cc: [REDACTED]

Subject: RE: TNT DVOR Replication

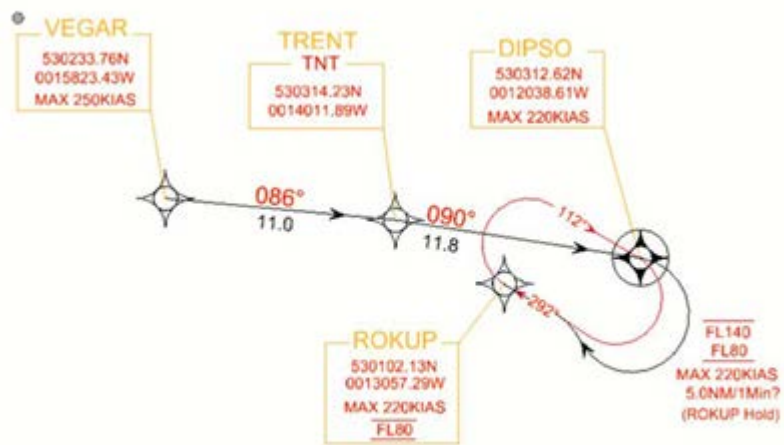
Hi [REDACTED]

Hope you are well .

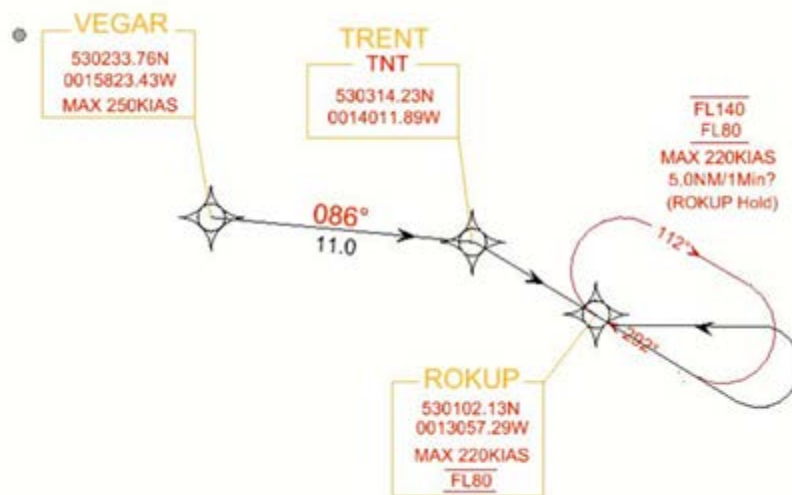
A couple of questions around the ROKUP hold.

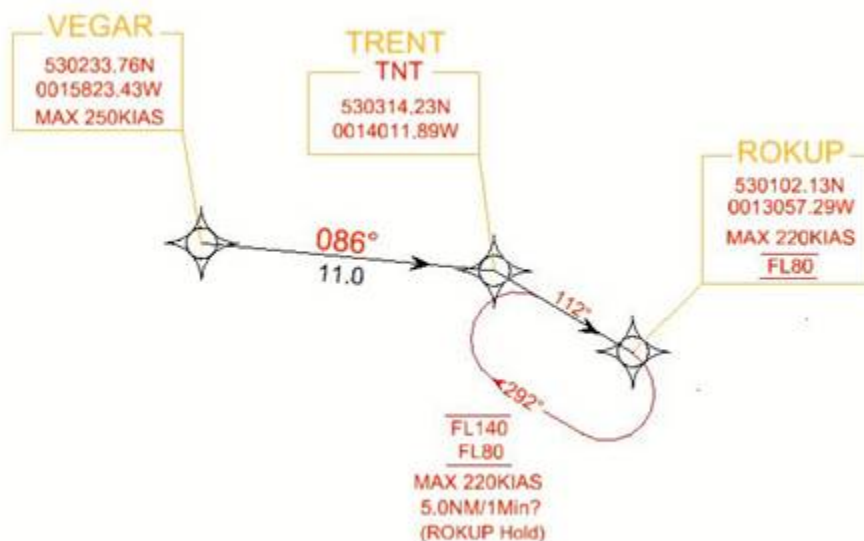
The existing entry via DIPSO is quite convoluted and entry could be shortened (subject to CAA approval within the spirit of replication)

Existing



If the teardrop entry through ROKUP was utilised would this cause issues?





The other option not shown would be to use DIPSO as the hold with distance or time based as this will also generate enable fuel savings and remove reference to ROKUP . However, I'm aware that you have non radar procedures based on the current holds and but would need to be amended either in chart form and/or textual . In addition I presume an EFPS update may be required?

The other argument is holding is relatively rare at ROKUP and mainly confined to the evening arrivals on rare occasions (You did hold recently when I was on an afternoon shift after my nice streaming but you did go into LVPs' at the wrong time!)

All options would need to satisfy CAA IFP regulator but we are trying to provide the best option.

Thoughts or happy to discuss via Teams



NATS



Manager Systemised Airspace Development

Prestwick Centre

D: [Redacted]
M: [Redacted]
E: [Redacted]

From: [REDACTED]
Sent: 15 March 2021 11:46
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: TNT DVOR Replication

Hi [REDACTED]

Good to hear from you.

I'll start off by saying that the option for DIPSO is a non-starter as it will involve major work on our EFPS and this will be timely and costly and so there is no appetite for that at present. That will obviously change once we re-start our ACP at some point.

With regards to the other options, it would be good to see what quantifiable difference this would make to our operators. As you say, the holds are very rarely used and so I am of the opinion to leave them be at present and again see where we are with the ACP.

Kind regards

[REDACTED]

[REDACTED]

Air Navigation Services Manager

East Midlands Airport

Castle Donington

DE74 2SA

Tel: [REDACTED]

Mob: [REDACTED]

3. Email trail with East Midlands Airport providing summary of changes

From: [REDACTED]
Sent: 11 May 2021 11:38
To: [REDACTED]
Cc: [REDACTED]
Subject: TNT DVOR Changes
Importance: High

Good Morning [REDACTED]

I wanted to follow up on previous discussions you've had with [REDACTED] around the DVOR project. We are due to submit the next stages of the ACP documentation for the TNT changes in the near future. I want to check you were happy with what's been discussed and what we have proposed in order that we can advise the CAA that all the impacted airfields have been engaged and are supportive of the changes.

I'm sure you're aware but a brief summary of the changes for each is below:

TNT Changes

Current STAR Designator	New STAR Designator	Notes
New STAR (extension of AMPIT 1E)	MALUD 1E	STAR extended to commence at MALUD, incorporating existing level restriction. Created using RNAV design criteria to align as closely as possible with the existing conventional procedure.
New STAR (extension of AMPIT 1E)	DOLOP 1E	STAR extended to commence at DOLOP, incorporating existing level restriction. Created using RNAV design criteria to align as closely as possible with the existing conventional procedure.
New STAR (extension of AMPIT 1E)	MAKUX 1E	STAR extended to commence at MAKUX, incorporating existing level restriction. Created using RNAV design criteria to align as closely as possible with the existing conventional procedure.

AMPIT 1E	AMPIT 2E	STAR re-designated. Created using RNAV design criteria to align as closely as possible with the existing conventional procedure.
WAL 1E	WAL 2E	Hold created using RNAV design criteria to match as closely as possible the existing conventional ROKUP hold.

If you could provide a response this week it would be greatly appreciated and as we proceed with the ACP I'll provide details of AIP amendments we need to make, with some possible changes to the EGNX section as well.

Regards,

[REDACTED]

NATS

[REDACTED]

Manager ATC Development

Systemised Airspace Delivery

M: [REDACTED]
E: [REDACTED]

From: [REDACTED]

Sent: 14 May 2021 14:11

To: [REDACTED]

Cc: [REDACTED]

[REDACTED]

Subject: RE: TNT DVOR Changes

Hi [REDACTED]

Thanks for your time today and your explanation of the changes proposed for the EMA STAR's.

I can confirm that EMA have no objections to these changes through TNT and MCT.

As discussed, it may be a good idea to have you give an overview of these changes around November time when I have our next Pilots Liaison Group meeting.

Kind regards

[REDACTED]

[REDACTED]

Air Navigation Services Manager

East Midlands Airport

Castle Donington

DE74 2SA

Tel: [REDACTED]

Mob: [REDACTED]

Email exchange with Liverpool Airport

1. Email trail discussing summary of changes, with approval

From: [REDACTED]
Sent: 11 May 2021 11:50
To: [REDACTED]
Cc: [REDACTED]
Subject: TNT DVOR Changes
Importance: High

Good Morning [REDACTED]

I wanted to follow up on previous discussions you've had with [REDACTED] and myself around the DVOR project. We are due to submit the next stages of the ACP documentation for the TNT changes in the near future. I want to check you were happy with what's been discussed and what we have proposed in order that we can advise the CAA that all the impacted airfields have been engaged and are supportive of the changes.

I'm sure you're aware but a brief summary of the changes for each is below:

TNT Changes

Current STAR Designator	New STAR Designator	Notes
KEGUN 2A	LESTA 1L	STAR re-designated and truncated at KEGUN. Created using RNAV design criteria to align as closely as possible with the existing conventional procedure.
KEGUN 2B	ELVOS 1L	STAR re-designated and extended to commence at ELVOS, incorporating existing level restriction. Truncated at KEGUN. Created using RNAV design criteria to align as closely as possible with the existing conventional procedure.
KEGUN 1D	OKTEM 1L	STAR re-designated and extended to commence at OKTEM, incorporating existing level restriction. Created using RNAV design criteria to align as closely as possible with the existing conventional procedure.
KEGUN HOLD	KEGUN HOLD	Hold created using RNAV design criteria. Based on existing conventional KEGUN hold, realigned to remain clear of the Valley ATA.

The following STAR's are then withdrawn, KEGUN 2C, TIPOD 2F/2G/2H/1J.

If you could provide a response this week it would be greatly appreciated and as we proceed with the ACP I'll provide details of AIP amendments we need to make, with some possible changes to the EGGP section as well.

Regards,

[REDACTED]

NATS

[REDACTED]

Manager ATC Development
Systemised Airspace Delivery

M: [REDACTED]
E: [REDACTED]

From: [REDACTED]
Sent: 17 May 2021 17:42
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: TNT DVOR Changes

Hi [REDACTED]

My apologies I have been busy the last week and it doesn't seem to be stopping.

No issues raised from our side.

Thanks,

[REDACTED]

[REDACTED]

Air Traffic Services Manager

T: [REDACTED] | M: [REDACTED]

2. Further email explaining revision of KEGUN Hold option

From: [REDACTED]

Sent: 02 July 2021 16:35

To: [REDACTED]

Subject: KEGUN HOLD & STARS

[REDACTED]

It appears that CAA will not allow the KEGUN hold to be 'flipped' or rotated but the existing hold retained albeit with an improved entry procedure. If the KEGUN STAR is therefore retained without the corresponding TIPOD STARS from the South/south east, would you be content with the current MATS 2 procedures with the minor change shown in red? Trent hold will be depicted as an optional hold available to ATC within the revised STAR chart.

2.4.4.4.10 Holds

KEGUN Hold

Between the hours of 2000-0700UTC an additional fillet of CAS (FL55 - FL105) is designated to the west of KEGUN to provide for full holding area containment for aircraft holding at KEGUN. See WAL

Chapter 4 Figure 4.1.

Outside of the hours listed above, when the additional fillet of CAS is not available, Wallasey cannot

tactically hold at KEGUN (because they are not able to radar monitor the traffic whilst within the hold).

In the event that inbounds via KEGUN are still high with conflicting traffic against them, it will be

necessary for Wallasey to agree a tactical resolution with Liverpool Radar.

When the additional fillet of CAS is not available, outside the hours listed above, the following restrictions apply:

- Liverpool Radar are permitted to hold a maximum of 2 aircraft at a time (including both Liverpool and/or Hawarden traffic) provided that, as a high priority task, Liverpool Radar radar monitor the aircraft and ensure that they remain within CAS.
- If Hawarden are required to hold inbound traffic destined for them, they have approval to hold

not more than 1 aircraft at a time provided that the aircraft is at or descending to the MSL.

- The above restrictions mean that at any one time there can only be a maximum of 2 aircraft in the KEGUN hold. Wallasey cannot clear traffic into the KEGUN hold if there are 2 aircraft already in the hold. In this case the traffic may have to be tactically routed to TIPOD subject to coordination or held at Trent.

Wallasey must be informed when it is intended that traffic will hold. They must also be notified when all holding, other than for traffic reasons has finished.
An aircraft entering the hold is required to be at speed 210kt or less at the Speed Limiting Points (SLP)
to avoid overshooting the entry and possible routeing outside CAS

If you could a response before the end of next week that would be great!
Myself and [REDACTED] are on leave next week but [REDACTED] (ACP Team)is available next week .

Thanks

[REDACTED]

NATS

[REDACTED]

Airspace Implementation Manager
Prestwick Centre
D: [REDACTED]
M: [REDACTED]
E: [REDACTED]

4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk

Hi [REDACTED]

More than happy with the wording in red. The Trent hold makes perfect sense as well to allow the network to deal with any capacity issues, so happy with that as well.

Hope you have enjoyed your leave...as you will return to this email!

[REDACTED] – in all week now until Saturday, so anything else just let me know.

[REDACTED]

[REDACTED]

Air Traffic Services Manager

T: [REDACTED] | M: [REDACTED]

Email exchange with Manchester Airport

1. Email trail discussing options/changes to relevant procedures, with approval confirmation

From: [REDACTED]
Sent: 11 May 2021 14:18
To: [REDACTED]
Cc: [REDACTED]
Subject: TNT DVOR Changes

Good Afternoon [REDACTED],

I wanted to follow up on previous discussions you've had with [REDACTED] around the DVOR project. We are due to submit the next stages of the ACP documentation for the TNT changes in the near future. I want to check you were happy with what's been discussed and what we have proposed in order that we can advise the CAA that all the impacted airfields have been engaged and are supportive of the changes. I will add there will be a similar email soon regarding the changes relating to the MCT DVOR ACP.

I'm sure you're aware but a brief summary of the changes for each is below:

TNT Changes

Current STAR Designator	New STAR Designator	Notes
DAYNE 2A	ELVOS 1M	STAR re-designated and extended to commence at ELVOS, incorporating existing level restriction. Created using RNAV design criteria to align as closely as possible with the existing conventional procedure.
DAYNE 1B	LESTA 1M	STAR re-designated. Created using RNAV design criteria to align as closely as possible with the existing conventional procedure.
DAYNE HOLD	DAYNE HOLD	Hold created using RNAV design criteria to match as closely as possible the existing conventional DAYNE hold.
TNT HOLD	TNT HOLD	Hold created using RNAV design criteria to match as closely as possible the existing ATC hold based on MATS Pt2 (SE Section).

If you could provide a response this week it would be greatly appreciated and as we proceed with the ACP I'll provide details of AIP amendments we need to make, with some possible changes to the EGCC section as well.

Regards,

[REDACTED]

NATS

[REDACTED]

Manager ATC Development

Systemised Airspace Delivery

M: [REDACTED]

E: [REDACTED]

From: [REDACTED]

Sent: 17 May 2021 13:28

To: [REDACTED]

Cc: [REDACTED]

Subject: RE: TNT DVOR Changes

Importance: High

Hi Again,

We submitted the Stage 2 documents on Friday for MCT and TNT. The CAA have come back already saying we need evidence that you are happy with the proposed changes. The ACP team had said we'd discussed it via TEAMs calls but they aren't happy with that.

Below are the changes for Manchester as a result of the MCT changes. They are as close to replication of the existing as they could be and made RNAV1. The RNAV5 aircraft will file a series of

DCT's to the holds. Again it doesn't impact handovers etc, and the MCT will still be operational for all the SIDs and other airport procedures.

If you are able to get back to me today with any questions/queries etc, I can answer them, and then if I could get an email stating you are supportive of the changes for both TNT and MCT (if you are!), that would be great. We'll upload that with the other paperwork and hopefully it will address the CAA's issues.

Manchester	STAR	ROSUN 2A	Not Dependent on MCT	RNAV1 replicated, SLP at new waypoint DIZZE and re-named LAKEY 1M
Manchester	STAR	ROSUN 2B	Dependent on MCT	RNAV1 replicated, and re-named SETEL 1M
Manchester	STAR	ROSUN 4D	Dependent on MCT	RNAV1 replicated, and re-named TILNI 1M
Manchester	STAR	ROSUN 2E	Dependent on MCT	Withdraw
Manchester	STAR	ROSUN 1F	Dependent on MCT	RNAV1 replicated, extended and re-named OTBED 1M
Manchester	STAR	ROSUN 1G	Dependent on MCT	RNAV1 replicated, extended and re-named LIBSO 1M
Manchester	Hold	ROSUN	Dependent on MCT	RNAV replicated, Levels reduced to FL70 – FL140
Manchester	STAR	DALEY 2A	Not Dependent on MCT	Withdraw
Manchester	STAR	DALEY 2B	Not Dependent on MCT	Withdraw
Manchester	STAR	DALEY 4D	Not Dependent on MCT	Withdraw
Manchester	STAR	DALEY 2E	Not Dependent on MCT	Withdraw
Manchester	STAR	DALEY 1F	Not Dependent on MCT	Withdraw
Manchester	STAR	DALEY 1G	Not Dependent on MCT	Withdraw
MANCHESTER	Hold	DALEY	Not Dependent on MCT	Withdraw

Kind Regards,



NATS



Manager ATC Development

Systemised Airspace Delivery

M: [REDACTED]
E: [REDACTED]

From: [REDACTED]

Sent: 17 May 2021 17:20

To: [REDACTED]
[REDACTED]

Subject: RE: TNT DVOR Changes

Hi [REDACTED] can you clarify that the DCT waypoints beyond the start of each STAR will remain as currently named? I have a concern with regard to EFPS as I believe it looks at the flight plan final waypoint and then appends it with the appropriate hold.

Regards,

[REDACTED]

NATS

[REDACTED]
Manager ATC

D: [REDACTED]
M: [REDACTED]
E: [REDACTED]

From: [REDACTED]

Sent: 17 May 2021 18:12

To: [REDACTED]
Cc: [REDACTED]

[REDACTED]
Subject: RE: TNT DVOR Changes

Hi [REDACTED]

I've not 100% on the EFPS adaptation to be honest, it's a few years now since I was an EFPS expert! Do you get the HOLD name and estimate for the Hold on the strip? (I haven't seen any airport who gets the STAR name so far as you tend to get it near the end of that). I suspect it will be sorted by the NAS adaptation, but I'll find out.

I do know I've had no feedback on previous changes at places like Birmingham, Edinburgh and Glasgow who are also on EFPS. If points already exist, they will remain in existence (probably except MCT which is renamed NUJOB) there may just be some new additional points as well for SLP's if required. I'll certainly look into it and get an answer for you from the engineering side of things.

That query aside are you happy with the proposals?

Regards,

[REDACTED]

NATS

[REDACTED]

Manager ATC Development

Systemised Airspace Delivery

M: [REDACTED]

E: [REDACTED]

From: [REDACTED]

Sent: 18 May 2021 09:46

To: [REDACTED]

Cc: [REDACTED]

Subject: Re: TNT DVOR Changes

Morning [REDACTED] having slept on it [REDACTED] and I are concerned about the MCT change, this has significantly more ramifications than those you have listed. I appreciate that [REDACTED] and I have had some conversations, but it feels like a lot of decisions have now been made.

You describe your list below as the changes for Manchester as a result of the MCT change however we have VOR/DME approaches to all 4 runways, all SID's have the MCT named in them, our ILS procedures include an option to use the MCT and the missed approaches also use it. Whilst I appreciate the MCT remains in service can you confirm the renaming to NUJOB(!) you mention below will be captured in all of our AIP entries and procedures or can we continue with MCT - will this remain on charts etc once it is also known as NUJOB?

You also say that routes are 'as close to replication of the existing as they could be' can you explain where there are any differences to the existing?

Sorry to sound obstructive and we do support the move to RNAV but we are very conscious that even a simple re-naming will create a huge amount of work.

If you could also get an answer about EPFS that would be appreciated.

Regards,

[REDACTED]

[REDACTED]

Manager ATC

Manchester Airport

D: [REDACTED]

M: [REDACTED]

e: [REDACTED]

From: [REDACTED]

Sent: 18 May 2021 12:08

To: [REDACTED]

Cc: [REDACTED]

Subject: RE: TNT DVOR Changes

Hi [REDACTED]

Thanks for getting back to me. I can absolutely put your mind at rest with the changes. I appreciate these are the first to impact Manchester but we have RNAV'd almost every STAR in the country prior to these. MCT/ TNT are in the last group in the whole country, so we have learned lots of lessons as a project, so from that point of view we have seen most of the issues that can arise.

The ACP is only at Stage 2 which is relatively early in the process. We are basically informing the CAA of what the plan is for the STAR's and why we have made the design decisions we have made. The project as a whole is set up to deliver the changes with the minimum impact to the operation, that's why we replicate the procedures, unless there is either a real reason to change something (safety/flyability issue or an easily deliverable saving for the airlines). I'm happy to set up another call to go over the changes if that would help, although I think my comments below will address your concerns.

VOR/DME approaches to all 4 runways, all SID's have the MCT named in them, our ILS procedures include an option to use the MCT and the missed approaches also use it.

-We are only changing the STAR's which are effectively En-Route procedures. Nothing changes in terms of your own procedures for the airport. VOR/DME apps, ILS procedures, Missed approaches will all still be available and flyable, as the MCT isn't being switched off at this time. We are only RNAV replicating the STAR's and part of that is to put a new point (NUJOB) right next to the MCT so that MCT isn't on the STAR chart any more.

You also say that routes are 'as close to replication of the existing as they could be' can you explain where there are any differences to the existing?

- I don't have the design report from NATS Design yet, but typically we may need to add a new point if the existing SLP is a distance from somewhere. RNAV procedures specify exact points rather than a distance from somewhere else. Additionally we often need to extend STAR's as they may have level restrictions noted which are before the Start point. In this case we extend the STAR back to ensure those levels can be captured. So whilst this replicates what is done today, the STAR is not exactly the same. When I have the exact detail of the STAR's I'm happy to brief your/ your team and as I have at other places the Flight ops meeting to cover the changes nearer the implementation time.

Sorry to sound obstructive and we do support the move to RNAV but we are very conscious that even a simple re-naming will create a huge amount of work.

- Its not obstructive at all, its easy as a project to assume everyone knows what you are doing and that's not the case. I'm more than happy to go in to detail to put your mind at ease. There should be no huge amount of work for Manchester to do. We've done this at every other major airport in the U.K and the changes are barely noticed! I'll take care of all the AIP changes and agreeing them with the CAA in consultation with yourselves. I can either submit them on Manchester's behalf with the relevant approval, or send them to the relevant authority at the airport for them to submit. Often its been the last day we can submit the

change to the AIS before the CAA have given us a decision and that's when its useful for the project to submit the AIP changes on behalf of the airport to ensure people are available and its done in time. *(comment redacted)*.

Again, happy to set up a call to cover this if that's a better way to do it, just let me know,

Kind Regards,

[REDACTED]

NATS

[REDACTED]

Manager ATC Development
Systemised Airspace Delivery

M: [REDACTED]

E: [REDACTED]

From: [REDACTED]

Sent: 25 May 2021 07:56

To: [REDACTED]

Cc: [REDACTED]

Subject: Re: TNT DVOR Changes

Hi [REDACTED] thanks for the comprehensive reply and the conversation last week. Based on all of that and as you say the ACP being at stage 2 then yes, we are content for you to continue with the process.

Thanks also for the regular meetings you have set up, these will be useful to be kept in the loop, the MCT change will need a lot of updates to our local documentation so we will gladly accept your offer of help with AIP updates etc.

Based on your reply it doesn't look like an update to EFPS will be required, I have asked our EFPS lead to confirm what waypoints the system looks at to determine the hold so should be able to confirm soon.

Regards,

[REDACTED]



NATS

Manager ATC

Manchester Airport

D: 

M: 

e: 