

# Framework Briefing Minutes and Record of Agreement

CAA House February 15<sup>th</sup> 2013

Farnborough Airspace Change proposal

## Present:



DAP  
DAP  
DAP  
DAP  
DAP  
DAP



NATS  
NATS  
NATS  
NATS  
NATS (observer)

Meeting commenced at 1100

█ gave a presentation on the Farnborough ACP proposal (section of presentation in brackets). There were a number of questions, conversations and comments during the formal proposal presentation. These were –

### **(Objective of the ACP)**

Question from █ regarding mix of traffic and runway utilisation – █ responded that runway 24 was utilised 78% of the time, and outlined aircraft size increases. █ explained that the types of aircraft were now more Bombardier Challenger-sized (MTOW 20 tonnes) up to BBJ (MTOW 77 tonnes).

Discussion ensued on the Olympic operation and the impact on GA traffic in the region. It was agreed that the temporary use of a Class D CTR during this period resulted in a fraction of one percent (something in the region of 2 out of 800) of transit requests being denied & forced to route around, though it is acknowledged that ATLAS would have had an effect (difficult to quantify). Some gliders were refused in the NW region due to interaction with the Heathrow RMA.

■ asked about the relationship between Farnborough and Lasham operationally. DF explained the operational relationship and practices between Farnborough and the three parts of Lasham: Gliding, Engineering and ATC.

### **(Airspace sketch)**

■ asked about arrival levels.

Discussion about departure routes.

Discussion about Fair Oaks and Brooklands LFA and airspace classifications.

Discussion about GA access and SVFR clearances.

Mutual benefit for all users was discussed and agreed as a fundamental cornerstone of this project.

### **(Safety)**

■ outlined current operational practices and the types of mitigating measures that were commonly used to ensure safety. ■ was keen to emphasise that there was low awareness of the measures and concessions that Farnborough ATC regularly made in order to allow many GA operators to operate in ways which would otherwise not be possible. Essentially, safety is not compromised in any way, but Farnborough often disadvantaged themselves and their traffic in order to mitigate risks. It was agreed that this would be a useful point to make to the GA community during the pre-engagement and consultation work.

Discussion around the LAMP and related projects and how compatibility with the Farnborough project was being ensured.

In response to a query, ■ outlined the process for managing Blackbushe and Fair Oaks traffic.

■ had a subsequent commitment, placing a time restriction for his participation, so the focus of the briefing switched to environmental aspects.

### **(Environmental)**

Discussion ensued about the proposed early left turn from runway 24. This was agreed as a benefit in terms of noise reduction to the local community due to the sparsely populated area over which this proposed departure route would fly, with the caveat that procedure design criteria would need scrutiny.

■ explained the runway 24 departures in relation to Odiham. ■ saw no obvious flaws in the environmental arguments being put forward as part of this proposal. As the project progresses, he was keen that CO<sub>2</sub> and noise analysis is used in order to quantify environmental claims, as is standard for such proposals. ■ left the meeting at this point.

### **(Benefits for Farnborough traffic)**

■ outlined the pilot workload issues that are presently experienced in the Class G environment. These issues have been raised by some operators and ■ felt that these were important enough to be included in the consultation for this ACP. This was agreed.

### **(Benefits for military aviation)**

There was a discussion about Odiham operations, including how runway direction was an important and sometimes limiting factor in Farnborough operations. Odiham operations were likely to increase under the JHC and when their assets return from theatre shortly, and it was agreed that this would add congestion.

### **(List of affected units)**

The presentation gave a preliminary list of those adjacent units that would likely be affected by this proposal. It was noted that a large list of likely stakeholders has already been compiled, but there was no need to discuss each one.

There was a discussion about the Lasham Gliding/Farnborough relationship. DF acknowledged that this was sometimes challenging given the nature of the operational interaction but made it clear that Farnborough were fully committed to Lasham's issues and concerns. ■ stated that the aim of having PBN approaches to runway 06 was a key part of all early design options. After many internal and external workshops and stakeholder meetings, it became apparent that PBN approaches could not be constructed without unacceptable restrictions being placed on Lasham. Therefore, more conventional approaches would be proposed. It was agreed by NATS and DAP ■ that Lasham's concerns were being considered and acted upon in early design configurations, and this should be explained within the consultation.

### **(Impacts)**

■ described for the group the LARS West functions as well as the issue of frequency congestion. He also outlined the efforts that were being made to reduce controller workload.

■ and ■ talked about the BGA and the large, perceived impact upon the groups and individuals represented by them. Again, the concession on the 06 PBN approach routes was agreed to be a positive reaction to concerns.

■ outlined his thoughts on the pre-engagement process and agreed that it was important that the BGA issues and all other impacts are discussed with key stakeholders in the pre-consultation phase, as was already being done. Formal consultation should not come as a shock to stakeholders. NATS representatives advised that the first round of pre-consultation meetings was complete and that second and third meetings were planned for March onwards, as well as widening the scope of this phase to meet

with other stakeholders for the first time. DAP agreed that this was a sensible plan.

■ stressed the fact that although the plan is to introduce some form of controlled airspace, this is not necessarily restrictive, but has clear benefits for many users. There is no intention to restrict or prevent transiting aircraft. DAP understood and agreed with this point.

■ had a question regarding use of CDA (Continuous Descent Approaches) and CCO (Continuous Climb Operations) and whether this terminology was the best to use. ■ responded that, given the low levels within which Farnborough control traffic, the environmental benefits are more likely to accrue from the overall improvements to the efficiency of the airspace environment and that this would lead to more predictable, more efficient arrivals and departures.

A question arose about PBN routes during the presentation and these routes were outlined as possible tracks on a map. Detailed discussion of some specific technical aspects of the applicability of certain PBN routes and procedures was to take place in a meeting after the framework briefing meeting.

### **(Consultation)**

An outline consultation plan was presented and it was agreed that there was no expectation of any deviation from the standard CAP 725 minimum consultation periods. Depending on the time of year or any other relevant factors, it was understood and agreed by all that an extension of a week or two to the standard 12 week consultation period may well be appropriate.

The consultation strategy was discussed and NATS stated that both they and TAG Farnborough were committed to delivering a first class consultation and ACP process.

It was agreed that a double AIRAC publication cycle would be required.

There was a discussion around the different perspectives of aviation groups categorised as "GA" – General Aviation and "S&RA" – Sports and Recreational Aviation. It was agreed that these different perspectives were relevant to the engagement process.

It was agreed by all that a record of evidence of all options and design decisions is essential.

RMZ – Radio Mandatory Zones were discussed. Concept is still under evaluation and consultation within CAA. From the ACP perspective, use of RMZ is actively being considered as part of an overall solution. ■ to provide timelines for the consultation currently under way on this topic.

Airshow – The assumption was made that no ACP would be required in the future and that the existing RA(T) for the airshow would continue. This was agreed as "airshow business as usual" by DAP.

## **Conclusions and questions**

It was agreed by NATS and DAP that, given the complexity and nature of the proposal, it would be useful to have one or more future framework briefing meetings.

DAP expressed a desire to visit Farnborough ATC and ■ volunteered to facilitate this.

■ asked about the status of changing an ATZ shape – after short discussion, it was agreed that this needed further consideration and investigation by both NATS and DAP.

In response to a query, it was agreed by DAP that, normally, no ACP would be required to make changes to a Local Flying Area (LFA).

Meeting closed at 1400.

# Framework Brief

Friday 15<sup>th</sup> February 2013

CAA House

## Farnborough Area

## Airspace Efficiency Proposal

REDACTED

NATS LiveLink Reference 11749887

# Framework Brief: Farnborough Airspace Efficiency

- > **Objective**
  - > Enhanced safety, predictability and efficiency of Farnborough Area traffic
  - > Minimum possible impact on GA and MoD
- > **Description**
  - > Establishment of PBN arrival and departure routes (except 06 arrivals)
  - > Associated minimum-sized Class D CTR and CTAs for these routes to work
  - > Possible RMZ protection
- > **Impacts**
  - > ATC, Civil traffic, MoD, GA/S&RA traffic
  - > Environmental (CO<sub>2</sub> and local)
- > **Issues**
  - > PBN Routes
  - > Consultation & Engagement
  - > Local Airspace Geography
  - > RMZ
  - > Airshow
- > Discussion and questions as we go along
- > AOB

# Framework Brief: Farnborough Airspace Efficiency

## > **Objective**

- > Efficient, predictable use of airspace to benefit all users
- > Enhanced safety benefits for all users
- > Noise benefit for Farnborough Rwy 24 departures (Rwy 24 in use 75%+)

## > How do we intend to achieve this?

- > PBN arrival and departure routes would make the tracks predictable (without preventing tactical vectoring as appropriate) and would cause a seamless transition to & from the en route phase – sustainable beyond ground based nav aids
- > Establishing CAS would protect these routes – the CAS would disappear when Farnborough is closed (ATZ would remain H24)
- > ATS delegation between Farnborough, LTC and other parties would be agreed

## > “Do nothing” is not a sustainable option –

- > Planning consent allows expansion to 50,000 flights p.a. at LF
- > Average tonnage per flight is already increasing
- > RAF Odiham return of assets, plus JHC consolidation potential
- > Efficiency for all users is compromised



# Framework Brief: Farnborough Airspace Efficiency

## > **How do we intend to show that this is the best way?**

- > A “known traffic, known intent” environment (Class D) would not preclude GA operations or transits (e.g. Olympics)
  - > Minimum equipage would be a radio, or a telephone clearance for non-radio aircraft
- > Class D CAS volumes would be calculated to be the minimum practical volume for the safe operation of the proposed PBN routes where possible
  - > PBN routes would “future proof” against removal of ground based nav aids
  - > Tactical shortcut vectoring would continue where appropriate
  - > Airspace design would support planning consent of up to 50,000 flights p.a.
- > Comprehensive engagement exercise with those potentially affected, pre- and during the consultation

## > **Any restrictions / blockers to overcome?**

- > Local airspace geographical constraints: Farnborough area is tightly bounded by Heathrow, Gatwick, Southampton and the MoD, compounded by very strong demand from local and national GA/S&RA. This limits options for routes/CAS
- > Heathrow CTR & SIDs
- > Gatwick CTA & SIDs
- > Local units have requirements e.g. Blackbushe, Fairoaks, Lasham
- > MoD operations (RAF Odiham)
- > Likely to be strongly challenged by GA/S&RA organisations

# Framework Brief: Farnborough Airspace Efficiency

## > **Scope (Included):**

- > PBN innovation (to be discussed)
- > Heathrow CTR SW corner discussion – SVFR/Thames are on board with the principle, further negotiation re: specifics
- > Gatwick CTA NW corner discussion – LTC Gatwick are on board with the principle, further negotiation re: specifics
- > RMZ operation
- > Airshow airspace

## > **Scope (Not included):**

- > Inbound traffic to Solent and Farnborough from the NW (CPT/KENET area) – current procedures continue until a wider network solution is worked up (no change yet)
- > Dependent on Heathrow SID gradients as per ongoing work, but outside scope of this proposal
  - > Gatwick SIDs could be raised beneath the Heathrow SIDs

## > **Proposed implementation**

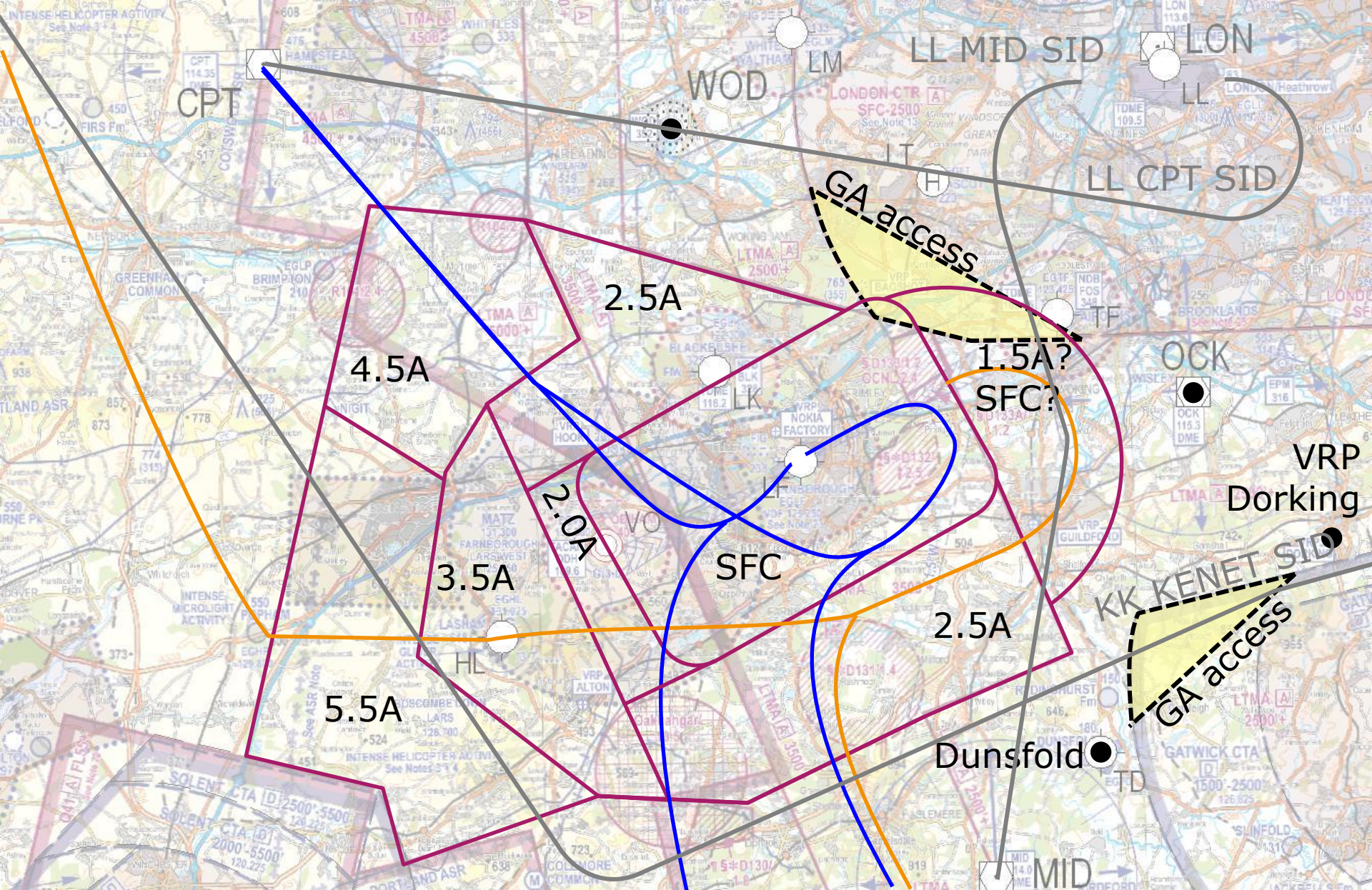
- > Late May 2014 (pre-Airshow) if feasible
- > Otherwise, after summer 2014

# Framework Brief: Farnborough Airspace Efficiency

## > **Basic Premise**

- > Establish a Class D CTR and associated CTAs – minimum airspace requirements to mitigate the effect on local users and also to be capable of supporting PBN routes
  - > Clearances to cross CTR/CTAs are expected to be given routinely as per the Olympics – no intent to exclude or severely restrict GA traffic
  - > Notified Route potential + pre-determined VFR routes
  - > Non-Radio aircraft access provision
- > PBN routes to follow current traffic patterns as much as possible to reduce impact over the ground (whilst being higher than today)
- > Consider the effects of rearranging SW corner of LL CTR and NW corner of KK CTA for the benefit of GA





**Illustrative sketch of proposed Farnborough CTR/CTA/route concept  
DRAFT not for navigation**

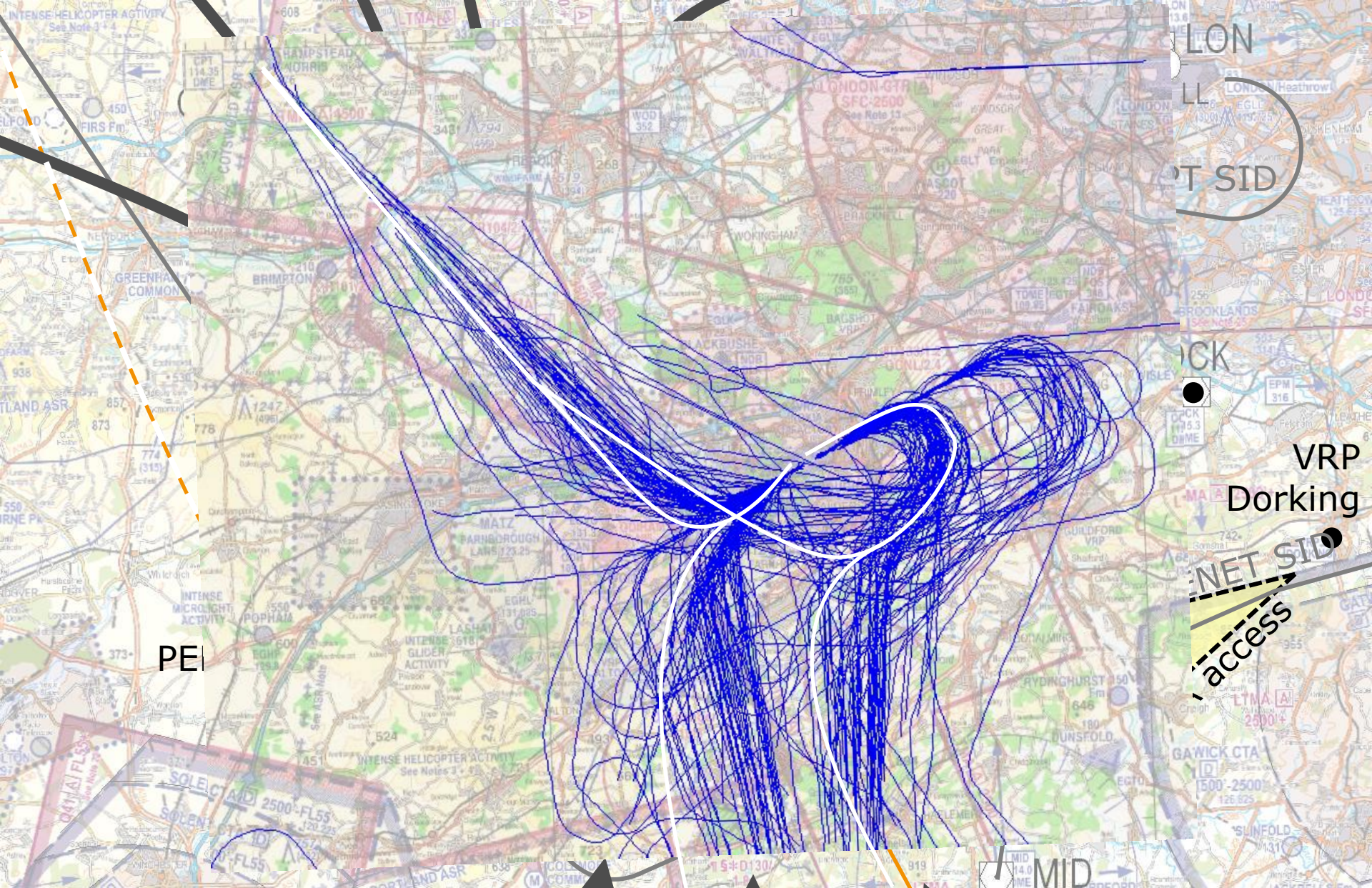


# Farnborough Arrival Utilisation June 2010 – Runway 24 – Density Map



Slide from previous Farnborough FWB showing Rwy 24 arrivals





Example of rwy 24 Arrivals – very similar to today.

All current arrival routes (06/24) are published via PEPIS (Popham on this chart) – tactical shortcuts would continue, even though the proposed arrival routes from NW imply much longer track  
 Rwy 06 and 24 departures shown against today's typical tracks – similar/same



# Benefits: Farnborough Airspace Efficiency

- › **Civil Aviation Safety Benefits – primary justification**

- › **Farnborough Area**

- › Balance maximum safe and unimpeded use for all users, especially for the S&RA aircraft, operating in the vicinity of high speed/high tonnage commercial aircraft
    - › Airspace design is about creating the best, safest, most efficient environment for all users, not just Farnborough IFR traffic: the current airspace interactions with the extant volumes create risk disproportionate to the airspace usage for all users

- › **Farnborough Airways Traffic**

- › Class D CAS and RNAV/RNP routes would reduce pilot and controller workload (also future proofs against navaid withdrawal)
    - › The current (and interim) airspace situation would not be able to safely handle the airport's planning application approval for 50,000 flights (currently c. 26,000) – this proposal, when fully developed, would allow for that number, and the average tonnage per flight is increasing

# Benefits: Farnborough Airspace Efficiency

- › **Civil Aviation Safety Benefits – primary justification**

- › **LTC (including LAMP)**

- › Improved predictability of handover to/from Farnborough reduces the potential for LTC overloads
    - › TC SW sector monitoring values potentially could be increased (current & interim situation would keep MVs relatively low compared to similar TC sectors due complexity of Farnborough group traffic)
    - › LAMP team are close collaborators and are on board
    - › Heathrow CTR classification change project – team are aware & supportive

- › **Blackbushe and Fairoaks airways traffic**

- › ...could remain within CAS for the majority of the flight (except for approach or departure phases)



# Benefits: Farnborough Airspace Efficiency

- › **Military Aviation Safety Benefits – secondary justification**
  - › RAF Odiham – Heli training unit also supporting AAC (VP, UB)
    - › Improved predictability of traffic would be mutually beneficial
    - › Enhanced protection for ILS tyro training traffic
    - › Increased operational freedom for RAF gliding (weekends)

# Benefits: Farnborough Airspace Efficiency

- > **Civil Aviation Noise Potential Benefits**
  - > Opportunity to design an early left turn after Rwy 24 takeoff
    - > Would then overfly Army tank training ground and avoid noise-sensitive area
  - > Opportunity to remove “noise cancellation” departures
    - > These occur primarily at weekends due gliding activity
- > **Civil Aviation Fuel/CO<sub>2</sub> Potential Benefits**
  - > Farnborough Group and LTC
    - > CCAs, CCDs as far as possible
    - > Reduced track mileage (lack of avoiding action turns – difficult to measure)
    - > Kept higher for longer, climb higher earlier
- > Fuel and noise analysis to be performed in due course

# Impacts: Farnborough Airspace Efficiency

- > Affected Units
  - > LL
  - > KK
  - > VO
  - > LK
  - > TF
  - > VP
  - > HL
  - > SVFR LTC
  - > HP
  - > HR
  - > Parham
  - > HI
  - > KB
  - > Kenley
- > Examples of engagement
  - > Fair Oaks TF
    - > Three meetings so far, more planned, having discussed
      - > ATZ shape & functionality
      - > Access routes
      - > LFA modification
      - > Freedom from "PET" time
      - > Access through LL CTR
      - > LL CTR reclassification
      - > Airways traffic
      - > Noise & implications thereof
  - > Lasham Gliding HL
    - > One meeting so far, more planned, having discussed
      - > Design challenges
      - > Requirements capture
      - > Thermals in vicinity of Odiham
      - > Continuing engagement with HL Gliding Society & now BGA

# Impacts: Farnborough Airspace Efficiency

## > GA / S&RA / Military

- > Class D does not preclude these flights (e.g. Olympics)
- > Longstanding record of being fully engaged with, and supportive of, such users
- > LARS West would be retained, with more potential GA capacity:
  - > More predictable GA flows means a reduced coordination workload
- > LAA engagement: progress made and good points to consider on both sides
- > BGA
  - > *Perceived* large impact due to change
  - > PBN route designs for Rwy 06 have been conceded, due to impact on Lasham
- > Pre-engagement planned with national groups representing helis, balloons, microlights etc
- > Design team are extremely aware of these users
  - > Farnborough area is seen as the last “CAS gap” in the LTMA
  - > No intent to close this gap to transiting GA and will work to mitigate the effect as far as practicable

# Impacts: Farnborough Airspace Efficiency

## > **Environmental (CO<sub>2</sub> and local)**

- > Current vectoring would continue, to join the PBN routes at an appropriate intermediate point (Draft proposal is RNAV1 routes apart from RNP1 for an RF turn onto Rwy 24 FAF – to be discussed in separate tech meeting)
- > Arrivals Rwy 06:
  - > Similar to today's dispersion (potentially slightly higher) – no PBN routes
- > Departures Rwy 06:
  - > Dispersion likely to tighten around the PBN routes (but a similar track to today)
  - > Faster climb to higher altitude is likely to diminish overall noise pattern. CCDs being explored subject to KK/LL SIDs
- > Arrivals Rwy 24:
  - > From S, dispersion likely to be similar to today, higher with a likely CDA
  - > From N, dispersion likely to tighten slightly westwards, higher with a likely CDA
  - > For all 24 arrivals, dispersion is likely to concentrate from approx late downwind onto the RF base turn to final (but higher than today)
- > Departures Rwy 24:
  - > Dispersion likely to tighten around PBN routes
  - > Would now avoid a noise-sensitive area via built-in early left kink after takeoff
  - > CCDs being explored subject to KK/LL SIDs
  
- > Measurable fuel & noise impacts – analysis in due course

# Expectations: Farnborough Airspace Efficiency

- > **PBN Routes**
  - > Discussions & actions to take from the meeting scheduled immediately after this one
- > **Consultation**
  - > MoD, NATMAC, local units, local airspace users
  - > FACC, which includes parish councils, unitary authorities and local interest groups
  - > Councils not covered by FACC (parish and county/borough)
  - > Standard 12 weeks consultation with subsequent feedback report & associated design amendments
- > **Stage 5 Decision Period**
  - > Standard 16+1 weeks?
- > **Stage 6 Implementation, if approved**
  - > Double AIRAC

# Issues: Farnborough Airspace Efficiency

## > **PBN Routes**

- > Highly technical subject
- > Innovative design plans to leverage the technology
- > Meeting subsequent to this presentation

## > **Consultation & Engagement**

- > Negotiations with GA/S&RA organisations are likely to be particularly challenging

## > **Lack of Airspace Flexibility**

- > Farnborough area's hemmed-in airspace geography doesn't allow many design options

## > **RMZ**

- > What does one look like? How would it operate?

## > **Airshow**

- > Not compatible with this minimal airspace concept – fast military displays need more room to manoeuvre
- > Need to replace the proposed minimal airspace with standard RA(T) for airshow period
- > Current agreement is that no ACP is required for the airshow airspace (applied in 2010 and 2012) – we see no reason why this agreement couldn't continue past implementation (if approved)

# Framework Brief: Farnborough Airspace Efficiency

- > Questions?
- > Next steps:
  - > Technical meeting re: PBN
  - > FWB Record of Agreement
  - > Pre-engagement with identified stakeholders
  - > Consultation material
- > AOB?