

## Farnborough Airport Public Safety Zone - briefing note

### Summary

- 1.1 Public Safety Zones (PSZs) are established at all airports that traffic more than 18,000 commercial air transport movements per year. There are PSZs at either end of the runway at Farnborough Airport and within these zones' development may be restricted. The Civil Aviation Authority (CAA) is responsible for putting in place these Public Safety Zones.
- 1.2 In November 2020 the Civil Aviation Authority (CAA) [consulted](#) on proposals to adopt a standardised zone profile for Public Safety Zones (PSZs), to be applied to all airports with over 18,000 air traffic movements a year. The standardized zones would replace the modelled third-party risk assessment for individual airports that were produced by the National Air Traffic Control Service (NATS) on behalf of the Department for Transport (DfT).
- 1.3 Following the consultation the DfT published an updated [Control of Development in Airport Public Safety Zones](#) policy paper in October 2021. This revised policy paper has introduced the adopted standardized zone profiles for PSZs and as a result the extent of the PSZ at Farnborough Airport has reduced substantially.
- 1.4 It is important to note that changes only impact the extent of the Public Safety Zones and do not impact upon other matters or constraints imposed as part of the planning consent, such as limits to aircraft movements or the defined risk contours. In addition, the changes to the PSZ do not impact on the management of airspace around the airport.

### What are PSZs

- 2.1. Public Safety Zones (PSZs) are areas of land at the end of runways within which development is restricted. The basic policy objective is to restrict new development to control the number of people on the ground at risk of death or injury should an aircraft accident occur during take-off or landing. This means that there is a general presumption against new or replacement development, or changes of use of existing buildings within the PSZ. In particular, it means that no new or replacement dwellings, mobile homes, caravan sites or other residential building should be allowed. However, extensions or alterations to properties in this zone can be approved where it is for the benefit of the existing household.
- 2.2. The responsibility for PSZ policy rests with the DfT but the CAA has administrative responsibility for implementing new PSZs and the review and update of existing PSZs, as instructed by DfT. It is the airport operator who produces the PSZ maps and provide copies to the local planning authority and the CAA.
- 2.3. The revised PSZ policy contained within the Policy Paper '[Control of development in airport public safety zones](#)', outlines the necessary procedures and conditions required to establish public safety zones at the end of airport runways. The policy contains guidance for local planning authorities to enable us to determine planning applications within PSZs. Deviating from the policy would put the Council at risk of challenge.

### Superseded PSZ policy – based on modelled third-party risk assessment

- 3.1. Up to October 2021, PSZs were defined using NATS computer-based individual risk modelling, specific for each airport of significance. This modelling looked at three main factors:
- Crash frequency;
  - Crash location;
  - Crash consequence
- 3.2 PSZs were based on the risk to an individual on the ground from an aircraft accident over a year. The modelling used historic aircraft accident data from around the world<sup>1</sup>, together with details of what the traffic forecasts and likely aircraft mix would be at the airport in 15 years' time, to derive the contour maps.
- 3.3 At Farnborough Airport, these forecasts were based on 50,000 annual business movements, which included the 1,500 permitted between 50-80 tonnes, together with a number of flying club and diplomatic movements.
- 3.4 There was an outer zone, the 1 in 100,000 risk contour (shown in red in Figure 1), and an inner one based on the 1 in 10,000 risk contour (shown in blue). Most of the inner contour was contained within the boundary of the airport. The small part that extended over the boundary did not contain any residential premises.
- 3.5 It was Government policy that PSZs would be updated approximately every seven years to make sure that the contours were based on the most reliable data available<sup>2</sup>.



**Figure 1 – Former PSZ boundaries at Farnborough Airport**

<sup>1</sup> Use of worldwide aircraft accident data meant that the level of risk was likely overestimated. If the modelling only used data on aircraft accidents in Europe and North America, where there are fewer accidents than in some other parts of the world, the level of risk assessed is likely to have been lower. However, it is also likely that there would not be enough data in the model to make a reasonably reliable risk assessment, hence the need to use worldwide data.

<sup>2</sup> It should be noted that in the event that there were no planning proposals to change the pattern, nature and/or number of movements at Farnborough Airport, these 7 yearly updates would have led to the PSZs and the 3<sup>rd</sup> Party risk contours defined in the 2011 planning consent deviating from each other over time in terms of size and extent.

### New PSZ policy – standardised zones

- 4.1 Following the publication of the Department for Transport's updated [Control of Development in Airport Public Safety Zones](#), the method for calculating the extent of PSZs has been changed. Standardised shapes now replace the risk-based model profiles at all airports with more than 18,000 commercial air transport movements per year. They comprise an outer boundary, now called the Public Safety Controlled Zone (PSCZ) and an inner, higher risk zone, called the Public Safety Restricted Zone (PSRZ).
- 4.2 The size of the Public Safety Restricted Zone (PSRZ) is the same for all airports with more than 18,000 movements:
- Length has been set at 500 metres from the landing threshold
  - Width has been set as 75 metres either side of the runway centerline
- 4.3 For an aerodrome with more than 18,000 ATMs but fewer than 45,000 commercial ATMs per year, the Public Safety Controlled Zone (PSCZ) is as such:
- Length has been set at 1,000 metres from the landing threshold.
  - Width has been set as 140 metres either side of the runway centreline
- 4.4 For an aerodrome with greater than 45,000 commercial ATMs, the PSCZ follows the same lateral plan but extends to 1,500 metres.
- Length has been set at 1,500 metres from the landing threshold.
  - Width has been set as 140 metres either side of the runway centreline
- 4.5 The standardised shape that replaces the risk-based model profile has been defined using the latest data on accidents shown to be located outside the aerodrome boundary. The CAA advise that the revised policy is designed to simplify the PSZ process and shift the focus of resources from development of PSZ maps, to monitoring activity within the PSZ itself. As such, while the PSZ is not bespoke to each airport, the CAA believe it is an appropriate response to meeting this policy aim, while taking into account advances in aviation safety, which have resulted in an overall reduction in the likelihood of an accident occurring around the end of a runway. The resultant shape of a PSZ is that of an elongated isosceles triangle. The policy will be reviewed on a 10-year basis using the latest accident data from industry sources.

### The PSZ changes at Farnborough Airport

- 5.1 Based on the planning consent for up to 50,000 annual movements at Farnborough Airport the dimensions of the two PSZs that now apply are:
- Public Safety Restricted Zone (PSRZ) (marked out in blue in Figures 2 and 3).
    - Length has been set at 500 metres from the landing threshold
    - Width has been set as 75 metres either side of the runway centerline
  - Public Safety Controlled Zone (PSCZ) (marked out in red in Figures 2 and 3).
    - Length has been set at 1,500 metres from the landing threshold.
    - Width has been set as 140 metres either side of the runway centreline

Figures 2 and 3 show the extent of the revised PSZs for runways 24 and 06 respectively. The revised Public Safety Zones issued to the Council by Farnborough Airport can be found on our website at: <https://www.rushmoor.gov.uk/planning-and-building-control/farnborough-airport/public-safety-zones/>

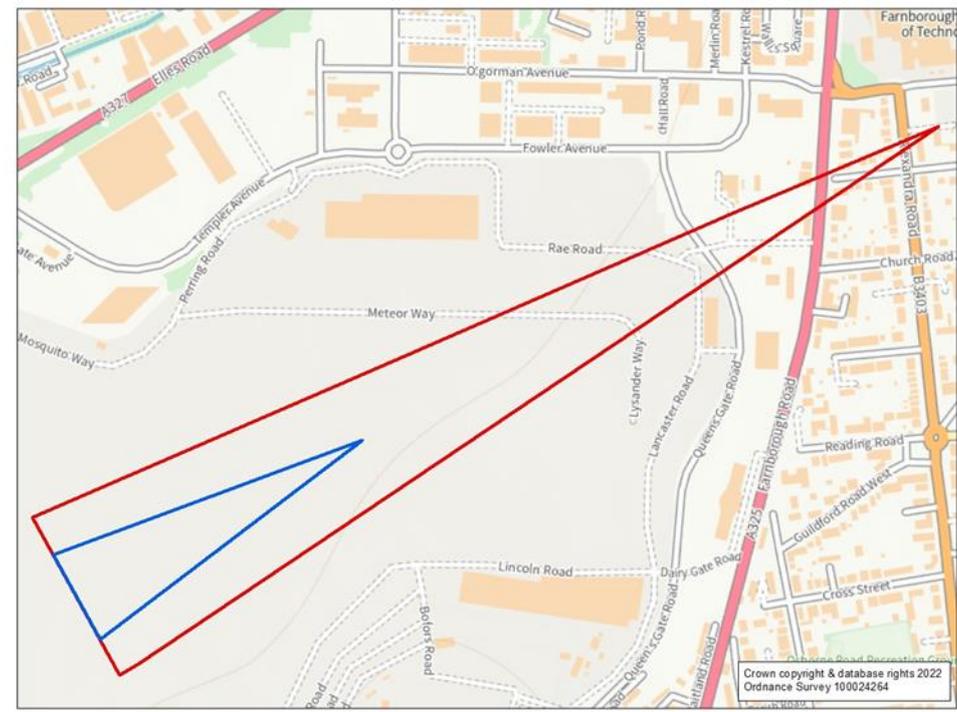


Figure 2 – new PSZ boundaries for Farnborough Airport Runway 24

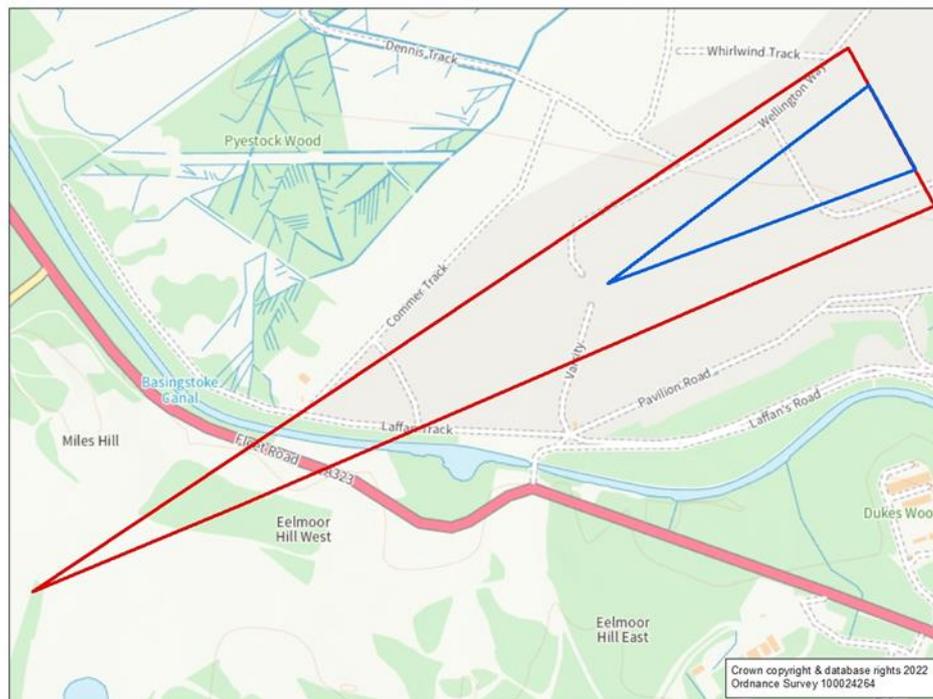


Figure 3 – new PSZs boundaries for Farnborough Airport Runway 06

### PSZs and risk contours defined in the 2011 planning consent

- 6.1 PSZs are used to control development close to existing airports. They were never intended to be used to address circumstances where a new airport, or significant development at an existing airport, is proposed. As part of any such application, the local planning authority needs to consider the level of risk to which areas of existing development will be exposed and weigh this in the balance with other considerations. Given that there is no formal national policy that deals explicitly with safety when a new airport, or significant development at an existing airport, is proposed, the Council have historically applied the general principles on which PSZs were based (airport specific individual risk contour modelling) as an appropriate method for determining the level of risk associated with proposals to increase business aviation flying at Farnborough Airport.
- 6.2 This approach was originally informed by comments made by the Inspector at the Rushmoor Local Plan Review 1996-2011 examination, who concluded that the issues of risk to third parties should be addressed by reference to a constraint on the geographic extent of the 1:10,000 risk contour sourced from the PSZs in place at the time.
- 6.3 This approach was further endorsed by the Inspector at the planning appeal into the 2009 planning application to increase the number of annual business aviation flight movements to 50,000, who considered that, in the absence of a national policy, the extent and nature of development covered by the PSZs in place at the time (based on individual risk contours) could be taken as a rough proxy for the quantum of third party risk.
- 6.4 The recently adopted Rushmoor Local Plan (February 2019) contains detailed policy for future development at Farnborough Airport, and includes Policy SP4.4 that deals specifically with safety that refers to annual risk contours.
- 6.5 Given that there is no national policy that deals with third party risk in relation to development at airports, and that PSZs are no longer defined using Third-Party Risk modelling methodology, as part of the Council's consultation response to the DfT, the Council requested the publication of further guidance on how third party risk should be considered at airports as part of the land use planning regime. No formal guidance has yet been provided. The Rushmoor Local Plan (para 7.129) provides commentary on what would be expected from the applicant in the event of a planning proposal to change the pattern, nature and/or number of movements at Farnborough Airport:

*The Council will consult the Civil Aviation Authority and the Health and Safety Executive on any proposals to change the pattern, nature and/or number of movements. It will require the applicant to submit an independent risk assessment of the implications of the changes for the 1:10,000 and 1:100,000 individual risk contours against the baseline set in Policy SP4.4 in support of any such proposals. Modelling will be based on the best available information at the time of an application and undertaken using a recognised methodology in accordance with best practice.*

### What hasn't changed

- 7.1 The recently published guidance only effects how PSZ boundaries are defined, and does not affect any aspects of the airport planning consent such as annual flight movement limits or limits on the types of aircraft that can operate (e.g. weight limits). The status of these revised

PSZs in no way impinges on the status of the 1:100,000 per annum annual risk contour defined under the current planning permission.

- 7.2 In addition, the changes to the PSZs does not impact on the management of airspace around the airport.

## **Conclusion**

- 8.1 The publication of updated PSZ policy paper has resulted in the PSZs for Farnborough airport reducing substantially meaning that fewer properties are now impacted by the associated constraints. As noted, historically the Council have used the PSZ boundaries based on airport specific modelling to define third party risk and this has been endorsed by the Planning Inspectorate. However, given the recent changes to the methodology for calculating PSZs we do not consider that such an approach is now appropriate and as a result we have requested further guidance from the Civil Aviation Authority and DfT to provide clarity on this matter. At the time of writing this guidance has not been published.