

AEF Planning & Aviation Seminar,  
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# ***Public Safety Zones***

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# Public Safety Zones (PSZ)

Current policy and the case for change

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AEF Workshop, 19 March, 2008

# Agenda

1. Introduction
2. Policy objectives
3. Evolution of current Policy
4. Policy flaws and solutions
5. Conclusions

# Introduction

Health & Safety Executive (HSE) publication entitled “Quantified Risk Assessment (QRA)” notes that:

- Predictions based on QRA “are not hard and fast figures as in a balance sheet.... They are useful guides to policy making, but their limitations must be made clear to the policy maker”
- It is important that the public has confidence in Government, regulatory authority and expert advice
- Where safety is concerned the decision making process must be transparent
- The question for today is, “Has this advice been heeded by the Government when it formulated and promulgated PSZ policy”?

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# Policy objectives

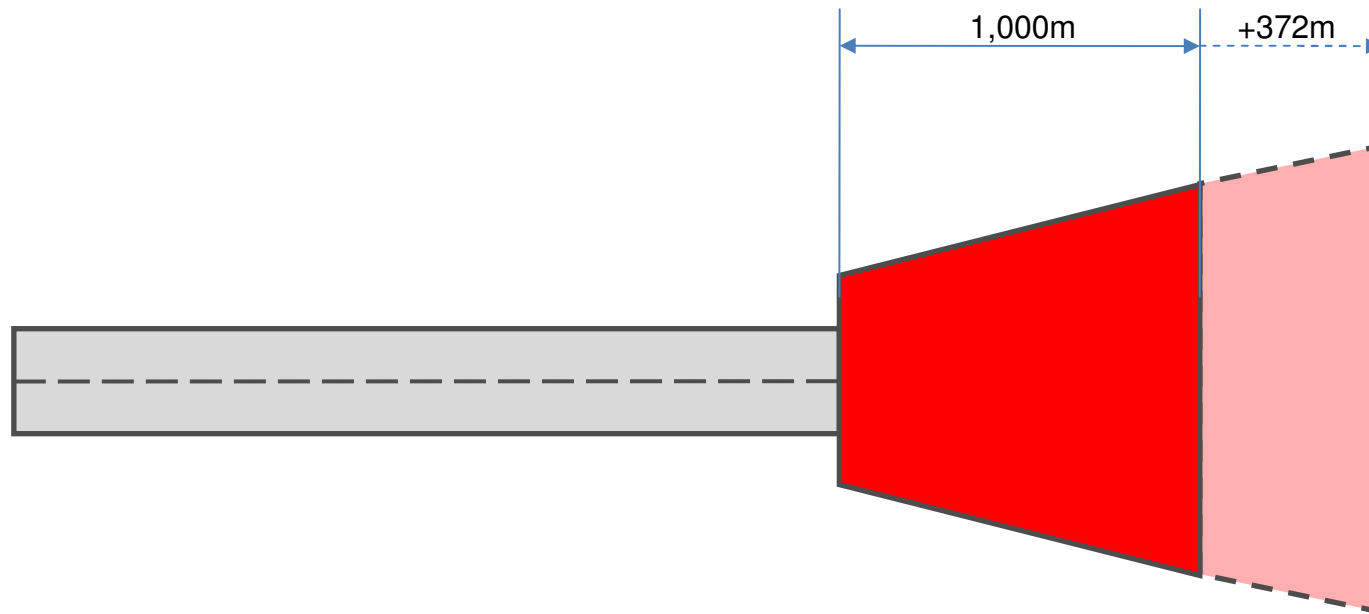
“To minimise the number of people on the ground at risk of death or injury in the event of an air crash on take off or landing, while not imposing unduly onerous controls on the use of land around airports, which will have an economic cost associated with it.”

“The sky’s the limit”, Institute of Public Policy Research (IPPR).

# Agenda

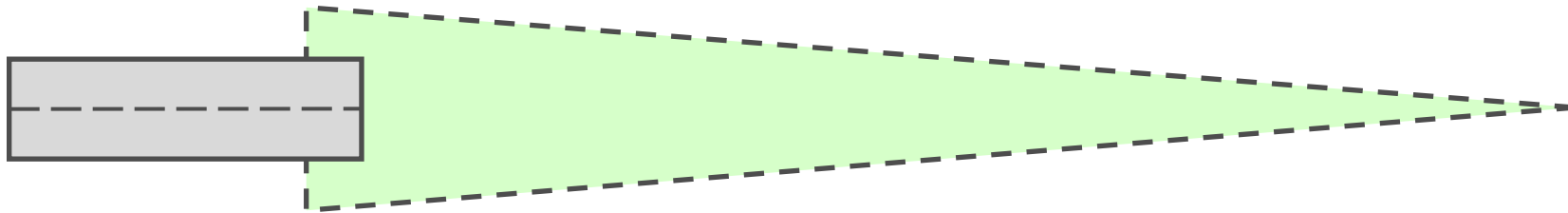
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# Original PSZs



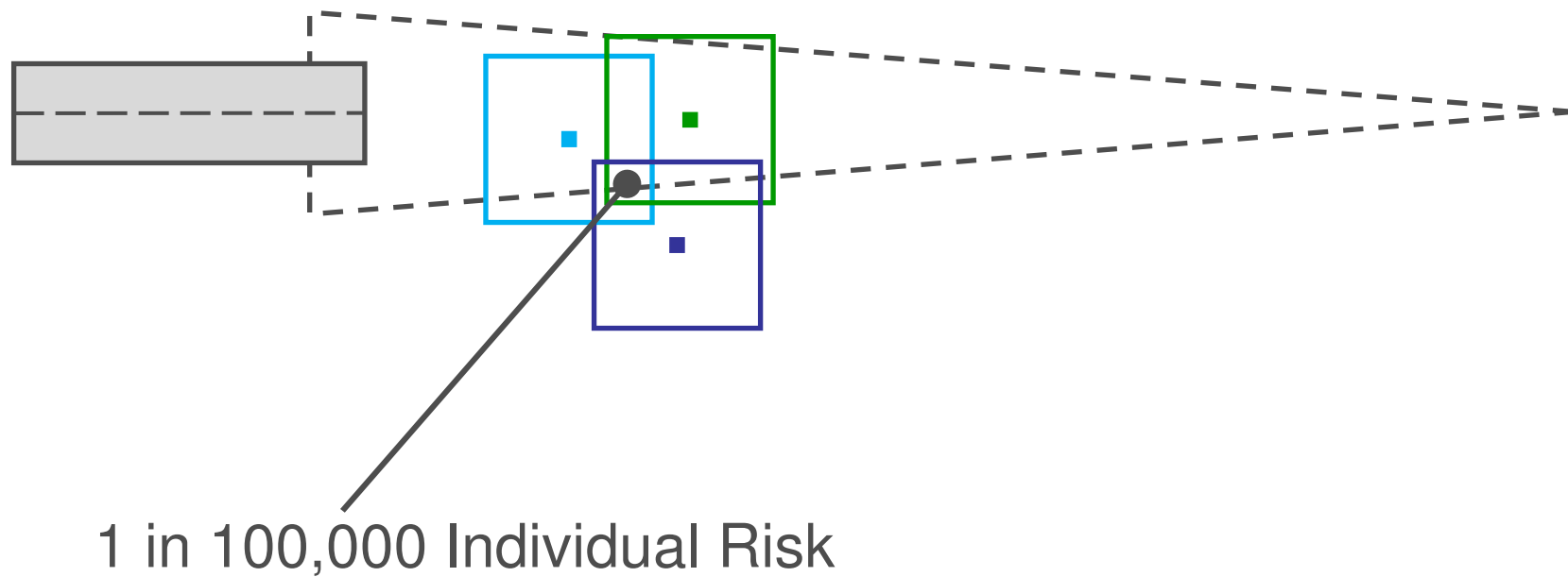
- Broadly based upon a plan view of the CAA's safeguarded surface
- Two areas, the smaller area 1,000 meters long for movements less than 45,000, the larger area for movements 1,372 meters long for movements greater than that number

# Illustrative Individual Risk (IR) contour

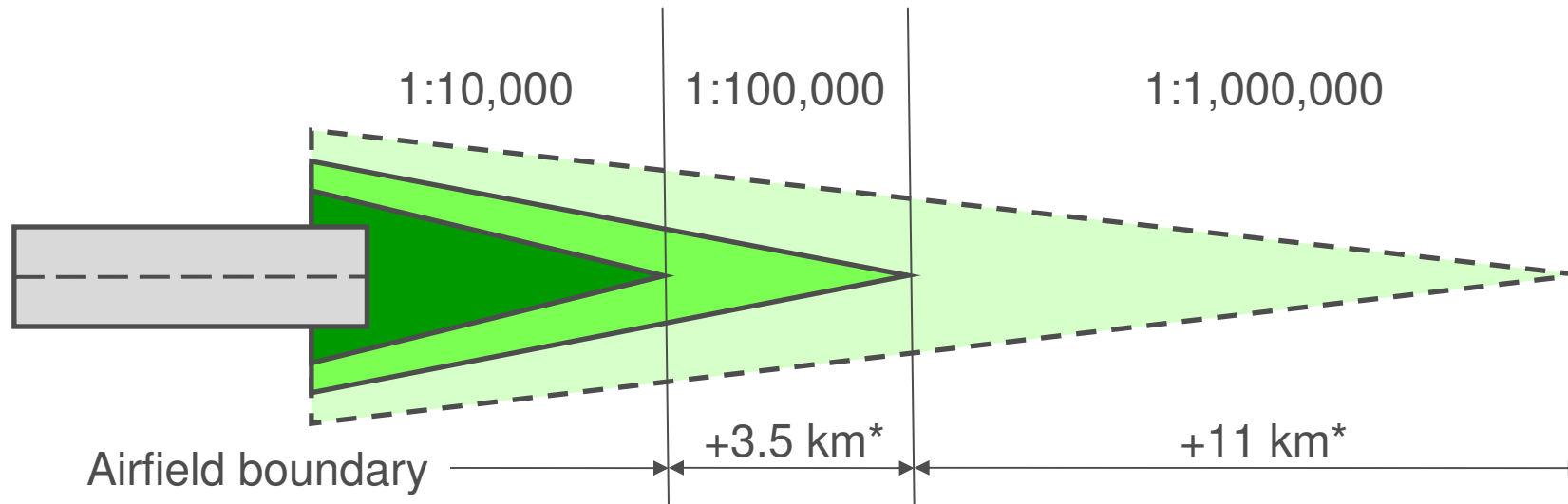


- DfT interest in mathematical modelling of risk triggered by evidence submitted to the Manchester R2 Enquiry in 1994?
- Model parameters are:
  - area of damage (crash consequence model)
  - statistical crash rate (number of crashes per million movements)
  - the probability of a crash at particular locations (the crash location model)
- The contour joins points on the ground that are subject to the same calculated individual risk

# Graphical representation of IR modelling



# Draft PSZ Policy 1998 – July 2002

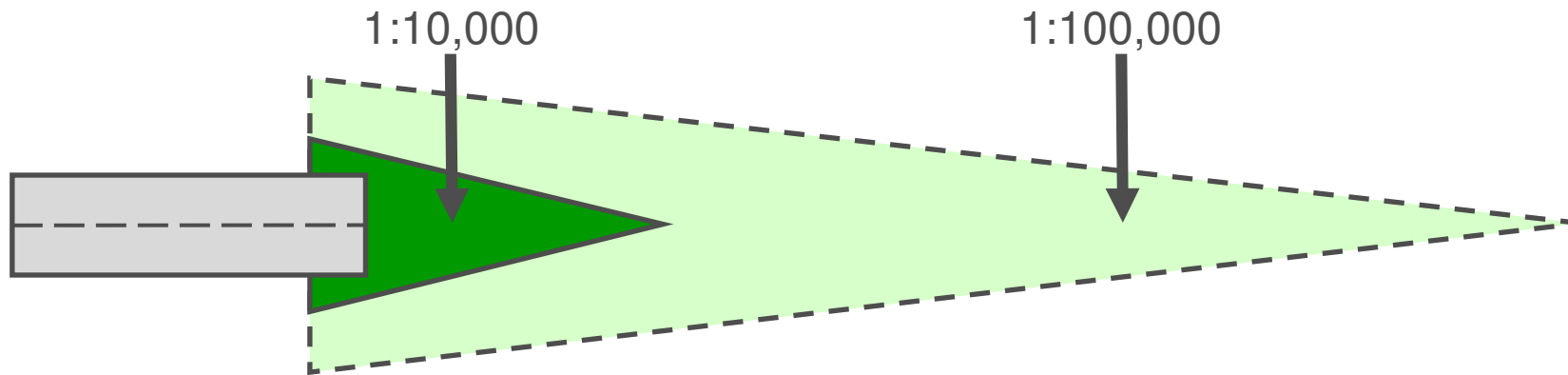


- 1 in 10,000 contour - IR deemed intolerable, area to be unpopulated
- 1 in 100,000 contour - IR begins to merge with risk from non-aviation activities; relocation of existing developments to be considered on a case-by-case basis
- 1 in 1,000,000 - No further development such as schools or hospitals

\* Farnborough PSZs - based on 28,000 business aviation movements

Graphics not to scale

# Current Policy July 2002



- 1 in 1,000,000 contour dropped. Reason unclear.
- 1 in 100,000. Existing development no longer to be considered on a case-by-case basis?
- Existing development to be relocated as suitable opportunities arise.

# DfT 'clarification' of its Policy

Letter dated 19<sup>th</sup> December 2001 (ref. APD/13/3/3):

- *“Public Safety Zone policy is intended to control development close to existing airports, and not specifically to address the circumstances which arise when a new airport, or significant development at an existing airport, is proposed.”*
- *“In such cases, the Department would not regard the fact that existing development would fall with any revised Public Safety Zones which might be introduced as sufficient reason, in itself, for not permitting the proposed airport development.”*
- *“It would instead regard third party risk as a factor to be taken into account by a local planning authority when considering airport development proposals, to be weighed with other matters such as job creation and other economic benefits, noise and surface access.”*

# Further DfT 'clarification' of Policy

Letter dated 28<sup>th</sup> May 2002 (ref. APD/13/3/3):

- *“The principle of constrained cost benefit analysis underlies the specific guidance contained in the circular, and consequently local planning authorities need not carry out risk assessments in considering individual planning applications for sites within Public Safety Zones; nor need they consider, when PSZs are established, whether any properties within them, but beyond the 1 in 10,000 risk contour, are subject to an intolerable level of risk and need be removed.”*
- *“As I stated in my earlier letter, the Department regards third party risk as a factor which should be taken into account by a LPA when considering a planning application for the establishment or expansion of an airport.”*
- *“Expects an LPA to be satisfied that it had attached sufficient weight to matters of public safety, access to sufficient information to enable it to reach an informed decision and that the decision was sufficiently robust to withstand scrutiny.”*

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# Flaws and solutions

- Question 1
  - Does PSZ Policy make sense if PSZs can grow, as airports grow, to subsume development (particularly new development) in areas bordering an existing PSZ?
- Answer
  - No. A new development in an area bordering a PSZ could be granted today and subsumed by an expanded PSZ tomorrow. If the sequence of events were the other way round PSZ policy would have precluded development.
- The solution
  - To establish PSZs on the basis of a finite airport capacity?

# Flaws and solutions

- Question 2
  - Is PSZ Policy robust if the PSZ is based on an operator's forecast and not on an approved level of flying?
- Answer
  - Probably not. Land use restrictions would apply in an area where the IR is below 1 in 100,000.
- The solution
  - To establish a PSZ based on the airport's capacity, as restrictions on land use would be underpinned by the Government's overarching aviation policies.

# Flaws and solutions

- Question 3
  - If the restriction on further development is justified why does the policy appear to allow existing development to remain in situ?
- Answer
  - Because the PSZ Policy Circular fails to make it clear that the establishment of a PSZ or an extension of an existing PSZ follows a planning approval. This approval should specify, as a condition of the planning approval, the properties that are to be relocated at the operator's expense (the IPPR recommendation).
- The solution
  - To amend the policy circular to make it clear that it is 'residual' development and not 'existing' development that is allowed to remain in situ until relocation opportunities arise.

# Flaws and solutions

- Question 4
  - Should Societal Risk be addressed in areas beyond a PSZ?
- Answer
  - This depends on the probability of a crash on take off or landing being contained within a PSZ. This probability can vary depending upon local circumstances. If the probability is low than the answer to the question is yes.
- The solution
  - To invoke the HSE's 'As Low As Reasonably Practicable' (ALARP) process.

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# Conclusions

The Policy should:

- Require the establishment of finite PSZs.
- Confirm that the approving authority is required to assess third party risk and to weigh it in the balance with the economic benefits of an airport, and to justify its decision in the public domain.
- Specify best practice in the weighing of risks and benefits.
- Require Planning Authorities to have regard for societal risk in the area beyond a PSZ should this risk fall within the HSE ALARP region.
- When? As soon as possible... because we have been lucky so far (e.g. Heathrow, January, 2008).