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### A SUBMISSION

*To the Federal Government's Review of  
 AUSTRALIA'S AVIATION INDUSTRY*

## A REVIEW OF SAFEGUARDS FOR AIRPORTS AND SURROUNDING COMMUNITIES.

### CONTENTS:

*Note: There are 30 Preliminary Findings which have been identified in the Discussions Paper. All Issues are addressed in this Submission with the Responses numbered from 1 to 30 in consecutive order and matching those listed in the Discussion Paper. Responses are of a Generalised Nature for the sake of Brevity:*

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**DISCLAIMER:**

***Whilst every effort has been made to ensure the material contained herein is accurate and correct as much as possible, the nature of this Submission – although comprehensive in its scope, is intended only as a Overview Document and as such should be regarded as a Starting Point for further Investigation using Data which may only be obtainable from Sources not available to the Author***

***Consequently, although all care has been exercised in its preparation, no responsibility can be assumed by the Recipient for the accuracy of the material contained within these Pages.***



G. Graham Banks

## 1.0 Part A

### SAFEGUARDS FOR OPERATIONS AT AIRPORTS

#### Overview:

The current ANEF System is based on the American NEF System and is a Scientific Measure of the Noise Exposure on the ground around Airports.

- The Australian ANEF System is a variant of the US System but achieves essentially the same outcomes.
- Any proposed improvements to the existing System may not produce the desired results as **all** major Airports are now deeply imbedded in Suburbia thus making any improvement very marginal at best.

However, if the Federal Government is serious about addressing the current and serious decline in the Australian Aviation Industry, (as evidenced by the questions posed in the Issues Paper), consideration should be given to:

- Encouraging New Airports or Relocating existing Major Airports to areas that are relatively free from Residential Development.
  - Producing ANEC, ANEI and the ANEF charts pertinent to a New Airport **before** Developments are approved in the new/relocated Airports vicinity.
  - Ensuring Local Authorities do not allow Developments within the ANEF Contours through a requirement that all such Developments first receive Approval from the Federal Government's Regulator.
- (a) The State of Queensland has the Integrated Planning Act 1997 (IPA), which includes the State Planning policy (SPP 1/02 with Annexures), Environment Relevant Activity (ERA), and a Building Referral System all of which covers proposed or existing Developments adjacent to Airports,

The IPA through the IDAS Assessment Process is essentially aimed at providing Local Authorities with Guidelines to control Activities (including the Management of Noise) close to Airports. Other States and Territories forming the Australian Federation also have similar Legislation.

However, instances around the Country in which a Local Authority has ignored State and Federal Laws and proceeded to approve Developments close to an Airport – particularly after the handing over of the Facility to the Local Authority under a Deed of Agreement via the 1992 ALOP Process. (*ie: the Evan's Head Fiasco*).

The Federal Government should as a matter of urgency, extend their involvement in the Assessment and Approval Process by:

- Ensuring Uniformity of Legislation exists between States
- Ensuring that the Relevant Federal Regulator over-views the Assessment Process with the Power to over-rule decisions made by the State's EPA with respect to Applications made and Approvals given by Local Government covering Developments near Airports.
- Ensuring all Decisions made by the Regulator are based on Existing Standards and not to satisfy Commercial Vested Interests).

- (b) Ex-Federal Airports – *in particular*, are completely dependent on Local Governments and ultimately State Governments to ensure that the Airport’s ANEF, the Airport’s OLS and the Airport’s Pans-Ops Surfaces are protected from certain types of Developments.
- However, Airports *per se*, are sometimes “*hamstrung*” by Local Vested Interests who in some cases have been able to influence Local Authorities to approve high-rise or inappropriate Residential or Commercial Developments that effectively compromises Operations and hence Safety on the Airport especially if the Development is a Residential Development, which *ultimately* may generate considerable Public agitation concerning Aircraft noise. (Refer to Item 23)
  - The Airport can do very little in response as the Airport’s Viability depends on it’s Users and to restrict Operations because of a Noise Complaint emanating from a Resident who has just moved into a house located at the end of the Runway, makes life very difficult for the Airport Operator who can do nothing but blame the Local Council for approving such a Development at that location.
  - To overcome the Problem, the same involvement by the Federal Government as described in (b), should be adopted.

Experience has shown that a scheduled Community Consultative Process is the preferred option over “*big-stick*” Legislative approach to addressing Community concerns.

However, the problem could have been avoided in the first instance if those originally responsible for Regional and Local Town planning had displayed sufficient “*vision*” to recognise a future problem and accordingly place the location of a potentially large Airport well away from future City Residential Expansion Corridors.

However, over recent years, having accepted the Airport’s evolution from it’s original site, to what it has become, the Local Authority must now recognise that the Facility has to be either protected from further Residential encroachment or moved to a more appropriate location before Operational Restrictions or Public Agitation make it’s future viability in doubt.

## **2.0 PART B: ISSUES AND OPTIONS FOR SAFEGUARDS**

### *2.1 – Options:*

- (1) *Does the ANEF System provide an effective basis for planning in noise affected areas?*
- (2) *How effective is the ANEF System as a Land-Use Planning Standard for Greenfield Developments around Airports?*
- (3) *Are the acceptable levels of Aircraft noise for particular Developments identified in AS2021 consistent with current Community expectations?*
- (4) *How can the current Planning arrangements to address Developments in noise-affected areas around Airports and under Flight-Paths be improved to take account of Community expectations, while also providing for the reasonable growth of Aviation activity at Airports?*
- (5) *For Developments around the Major Capital City and Freight Airports, should State Governments have to refer Residential Development within a defined Buffer Zone to the Commonwealth Transport Minister or Secretary for Approval?*

**RESPONSE:**

## Question 1:

Most Residents and/or those living or working in close proximity to an Airport, or Persons seeking advice from Authorities before purchasing/Leasing a Property that Aircraft Noise Levels emanating from an adjacent Airport are not going to affect their Quality of Life - need to have an easily accessed and easily understood Document/s to make their decision making Process acceptable. The Airport's current ANEF - although *not the best* System available, is considered to be the *simplest* Mechanism available to the General Public in order that Individuals can make a rational determination of how they may be affected by the Subject Airport's Operations. However, for New Airports, the production of an ANEC (Concept) Chart may assist those already in the general area to make a determination of how the new Facility may affect their day-to-day lives.

With respect to Planning Authorities such as Local or Regional Councils and State Government Departments and Planning Authority, an additional and more comprehensive Mechanism may be necessary such as referring to AS2021.

## Question 2:

The ANEF System with respect to Planning requirements should be regarded as a basic tool when used for Land-Use Planning Purposes. The ANEF System together with AS202, various pieces of existing Legislation including the CASA - MOS Part 139 should for the basis for all land-Planning purposes.

## Question 3:

Although it would be easy to provide a simplistic answer to the question of Community expectations with respect to AS2021, the real issue lies with the location of both Australia's Primary and Secondary Airports.

It is apparent that the need to find a solution to the Noise Problem currently affecting every Australian Major Airport has been brought about by the expansion of the adjacent City up to and around the Airport effectively creating a problem not only for the affected Residential Population but for the Airport as well. The only realistic solution is to encourage the relocation of each Airport to an area that is free from Residential Development and then ensure that effective Planning by all levels of Government ensures the Airport functions with minimum restrictions.

However, to be realistic, until such a decision is made by Governments, the existing Standards should be used as the criteria by which affected Persons can assess the impact of noise on their various Interests.

## Question 4:

To support growth of each of the existing Australian Airports, without seriously affecting the Communities in which they are located **will be impossible to achieve**. It is time that the various levels of Government recognise this Glaring Fact. No matter solution is implemented by the Authorities to address the problem, it is guaranteed that the Airport will be severely restricted in operational efficiency and the Population that is currently affected will still be affected by noise albeit to a lesser extent. Many Overseas Countries have "bitten the bullet" and relocated their Major Airports well away from the City and then instituted appropriate plans to protect the Facility from Residential encroachment.

## Question 5:

In the interim, Each State Government (Under it's State Planning Laws and current Federal Legislation) should be responsible for the Approval or Rejection of Developments within:

- The Airport's OLS
- The Airport's ANEF and AS2021
- Federal Legislation Airports (Airspace Protection) and (Buildings Control) etc.
- The CASA Part 139

If it became mandatory for the Provisions of the above to be used in the Assessment of Development Applications that fall within the contours of each of the above Surfaces, then Applicants and affected Persons would know with reasonable certainty where they stood when submitting a Development Application or (preferably) knowing beforehand the implications that may arise which may affect the success or otherwise of the Submission.

- (6) *Should the current protection of Airspace regulatory Provisions be strengthened and broadened to cover all CASA-Certified and Registered Aerodromes.*
- (7) *How might State, Territory and Local Government Planning Rules help protect Airports from encroachment by unsafe intrusions into Airspace.*

**RESPONSE:**

## Question 6:

Yes – but it is crucial that each State, Territory and Local Government be required to adopt the Laws and attendant pieces of Federal Government Legislation covering all aspects of Developments occurring in the vicinity of all Airports – whether they be Primary, Secondary or General Aviation. Where State Laws are not in accord with Federal Laws then the State Laws should be modified to reflect the Federal Laws. In other words, consistency should be the aim for all Levels of Government.

Each State, Territory and Local Government should adopt **as a matter of urgency** National Standards covering Development Approvals in the Vicinity of Major, Secondary Airports and General Aviation Aerodromes.

## Question 7:

Currently, State, Territory and Local Government Planning Rules are not being used to stop unsafe intrusions into the Airspace surrounding Airports – particularly Airspace protecting the Nation's Primary International Airports ie: Sydney, Brisbane, Melbourne, Adelaide, Perth etc.

With respect to adjacent Non-Aviation Commercial Developments, the following example of how Brisbane Airport's location relative to Brisbane's CBD may present some problems for all concerned in the future.

To allow Brisbane's International Airport to evolve without restriction, a "Blind-Eye" approach by Government with respect to the approval of High-Rise Development in the City's CBD has been allowed to occur.

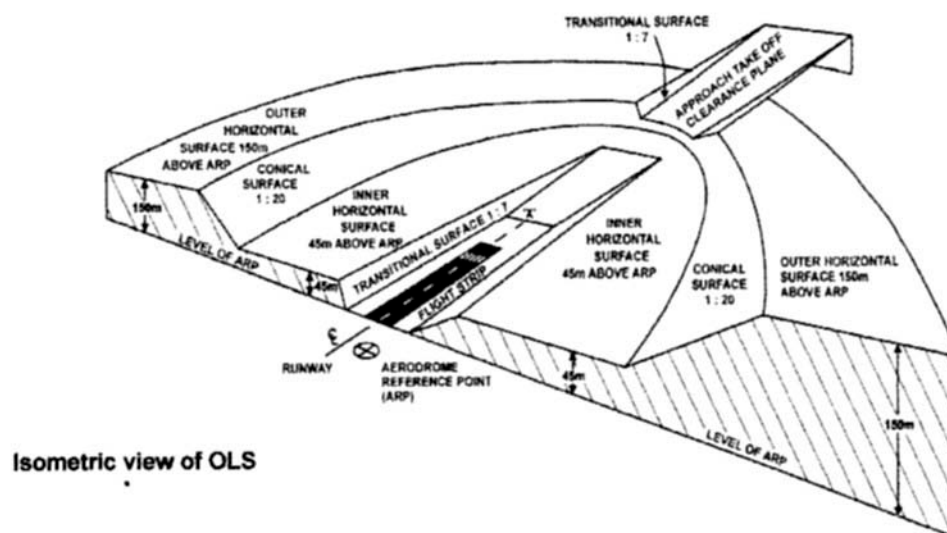
Currently there are Five Tower-Blocks in the City ranging in height from the *Brisbane Square* at 152m to the *Aurora* at 207m. Even higher structures are planned for the future. The Brisbane Airport's OLS – (Outer Horizontal) extends outward for a distance of 15,000m from the southern end of the 01/19 main Runway. (Refer MOS Part 139 Table 7.1-1).

The Outer Horizontal Surface has a Height of 152.5m. (AHD) - ( $150m + \text{Airport RL } 2.5 = 152.5m$ ). The Tower-Blocks in question are approximately 11,300m from the Threshold of RWY 01 – meaning that the *Aurora* penetrates the Outer Horizontal Surface by some 54.5m with the remaining four penetrating by smaller amounts.

Should an Aircraft run into any one of these five Buildings, it will be interesting to find out who will be blamed for approving their Construction in the first place.

Another example is the cynical approval by the previous Federal Government of the Brisbane Airport's Proposed Parallel Runway. (now *thankfully* deferred until 2015). Not only would the new Runway have generated more noise over Brisbane Residential Suburbs to the West of the Airport, but would have seriously enhanced the unsafe intrusion of existing and planned high-rise CBD Developments into the Airport's protected Airspace.

The Isometric View a typical OLS as contained within the Discussion paper



It can be clearly seen that most of the High Rise Structures in the Brisbane CBD penetrate the Outer Horizontal of Brisbane Airport's OLS.

There is absolutely no excuse for the abrogation of Responsibility by the Brisbane City Council of allowing the construction of the abovementioned Tower Blocks that intrude into Brisbane Airport's OLS.

Equally, the Federal Government should be concerned that Safety is being daily compromised by the location of the Airport relative to the Cities CBD. Not only is the City's Evolution being compromised but the safety of Operations into the Airport is also questionable.

**Unless the Federal Government enforces the provisions already available through it's existing Legislative Framework, then the Questions asked in this Discussion Paper will be meaningless.**

- (8) Should there be a consistent Industry Standard for mechanical turbulence and wind-shear? If so, should the Standard be proscriptive or allow for a case by case Assessment?
- (9) Should Expert Modeling reports on Turbulance and Wind-Shear be mandatory for Developments in close proximity to Runways and who should bear the cost?

**RESPONSE:**

**Question 8:**

As a first consideration, it is crucial that the height of structures erected close to a Runway remain outside the OLS. As the Transitional Surface usually rises at 14.3% from the Runway Strip edge, it is clear that a structure rising some 10m in height would need to be located at least 70m from the Runway Strip edge. If it is an Instrument Approach Runway, the Runway Strip would need to have an Inner Edge of 300m. This would then mean a further 150m would be added to the 70m making the total distance from the Runway Centre-Line to the Structure would be 220m – which may result in turbulence, *(unless meteorological conditions are really abnormal)* that would not be a hazard to Aircraft on Approach.

If the Structure conforms with I.C.A.O. Standards and does not penetrate the Runway's OLS, the next consideration is the shape, direction from the Runway relative to the prevailing winds and distance to the Runway. As every Airport Operation's Staff has data on Wind Speed, Wind Direction and recorded Wind Speeds over a long period of time, it is relatively simple to determine if a structure at a certain location relevant to the Airport presents a potential to generate Wind-Shear under certain meteorological conditions.

As a result, it is suggested that Applications to a Local Authority for the erection of Structures close to an Airport be assessed by the Airport Technical Staff in the first instance before proceeding to the next stage of Council Approval. This should be proscriptive for any structure that is submitted to a Local Authority for Approval provided the Structure is to be erected within 4klms of the Airport.

As a start, If all Airport structures were erected in accordance with I.C.A.O. Standards, (Part 139 is based on I.C.A.O Annex 14), windshear incidents occurring as a result of on-Airport Structures erected close to a Runway Threshold would be minimised.

With respect to off-Airport Structures, most States control Developments around Airports through a range of Legislative measures similar to the Integrated Development Assessment System (IDAS) that currently exists in Queensland.

The Queensland Government's IDAS provides a Check-List (including Maps and Charts) for Developers and Local Government Planning Departments alike to ensure that Development Approvals in the vicinity of Airports do not interfere with Airport Operations. The Check-List aims to assist Building and Development Applicants to prepare the required information for their Submission.

The information so provided may generate a response to the submission from Queensland Transport along the following referral triggers:

- Permanent or temporary encroachment into Airport Operational Airspace – Material Change of Use (MCU), Operational Work (OW) or Building Work (BW).

- Residential Development within the 25 Australian Noise Exposure Forecast (ANEF) contour for an Airport – (MCU), Reconfiguration of a Lot (ROL).
- Hotel Motel Hostel or Public Buildings within the 30 ANEF contour for an Airport – (MCU).
- Land completely or partly within Airport Public Safety Areas – (MCU), (ROL).

Other States have similar requirements imposed on the Planning Departments of Local Governments that require them to assess Development Proposals in the vicinity of Airports. To introduce further measures may mean duplication – however, the Federal Government should involve the ATSB and/or CASA in the Assessment and Approval Process of Developments adjacent to Airports **after** the Local Authority has completed it's Assessment based on the State's Legislative criteria and **before** the Local Authority issues the appropriate Approval Certificate or otherwise.

This requirement should obviate any future problems arising from inappropriate Developments within a specified distance of the Airports Reference Point (ARP). Depending on the height of a structure this distance could range from 4000m to 15,000m. With respect to noise, the Airport's ANEF should determine where Approvals for Residential Developments can be given by the Local Authority.

**Question 9:**

If an Applicant for an Approval to erect a Structure over (say) 10m in height within 4klms of an Airport and outside the Airport's OLS, is:

- (1) Aware of the close proximity of the Airport to the proposed site and.
- (2) that there may be restrictions placed on the dimensions and design of the Structure because of such proximity,

Then all costs associated with such Expert Determination together with the costs of any modelling necessary to ascertain the effect the Structure will have on Airport Operations, then such **costs should be borne by the Developer.**

- (10) *Given variable regional circumstances for Birds and Flying Foxes, would a recommended Standard Zone (eg; 15klm radius) be appropriate?*
- (11) *What other Planning Issues might arise in safeguarding against Bird-Strike?*

**RESPONSE:**

**Question 10:**

To keep Birds and Flying-Foxes away from Airports is extremely difficult without resorting to the engagement of Professional Shooters. This move would guarantee an immediate and adverse reaction from the Environment Movement together with many other Wild Life Protection Organisations. Accordingly, the tried and proven method of keeping such creatures away from the Airport is to deny them food.

As most major Australian Airports are located on low-lying Estuarine type land, flocking Birds and Flying Foxes become a significant Hazard. However, apart from the foregoing, the need to keep seeding grasses and fruit tress etc under control is paramount. Although Dumps and Land-Fill areas usually attract large numbers of Birds, with their removal and the regular cutting of grasses on and around the Airport usually has the desired effect.

To promulgate a 15klm radius Bird-Free Zone would be impossible and with the recent EPA

and “Green” reaction to the shooting of Flying Foxes in North Queensland by Farmers in an endeavour to protect their crops is any guide, the chances of reducing the numbers of Flying Foxes and flocking Birds within a 15klm radius of an Airport is unachievable. The current and most successful methods for reducing Bird-Strikes on Airports is limited to:

- Regular Cutting of Grass and removal of Seeding Vegetation around Airports.
- Replacing On-Airport Bird-Attracting Vegetation with other species.
- Relocation of existing Food Waste Dumps and Land-Fill Sites close to Airports.
- Trained Dogs
- Pyrotechnics
- “Bird-Frite” cartridges fired from an appropriate weapon
- Amplified Predatory Bird calls
- Trained Predatory Birds
- Visual deterrents
- Audio deterrents (non-Bird Call).
- Professional Shooters

There are very few Airports around the World that do not have a Bird Problem. The problem exists because most Australian Airports are located on flat, low terrain clear of obstacles and usually close to major centres of population which means an abundance of food. As no new major Airports have been constructed in Australia since it was decided to construct Melbourne Tullamarine International Airport in 1958, virtually all the remaining major Australian Airports occupy sites that were selected during the 1920’s and 30’s which were, at that time far removed from built-up areas and high density Suburban Residential Developments. As a result, we are now faced with a number of problems one of which is the presence of flocking birds attracted by an abundance of easy food.

In the interests of Safety, the only successful method to address the situation is to plan for the Airport to be relocated to a site as soon as practical that could be protected from peripheral Developments such as Residential and certain types of Commercial Developments. However, in the interim, the methods listed above should be considered to minimise the presence of Flocking Birds and Flying Foxes.

Question 11:

As described above, the only way to minimise the danger of Bird-Strikes is to move the Airport further away from areas of Development as quickly as practical. There are too many Conservation and Environmental Issues at stake to try to overcome this significant Safety Hazard by means other than relocating the Airport to a more appropriate location.

This may seem to be a costly solution - massively out of proportion to the benefits gained. However, it should be accepted that when each of Australia’s Major Airports is placed under an Environmental microscope, Federal Governments should not simply place the obvious problems in the “*too hard basket*” but genuinely set about planning a replacement Facility at a location that will guarantee maximum utilisation and efficiency – free as much as possible from the constraints each of the existing Airports currently face.

If this had been recognised many years ago – before expanding Cities engulfed the existing Airports, much of what is currently causing significant Safety Issues and undesirable Environmental problems could have been avoided. A classic example being Sydney International Airport which should have been relocated to Badgeries Creek many years ago. As a result, Australia’s Premier Airport cannot now be expanded and has so many Operational restrictions and other impediments that stifle efficient Operations to such an extent that many Carriers only fly into Sydney because there is no where else to go.

- (12) *What guidance do State, territory and Local Governments require on the siting of Wind-Farms and the potential impacts on Aviation?*
- (13) *Should Developers of Wind-Farms be required to provide CASA with a Report on the potential impacts on Aviation and Aviation Infrastructure of the Turbines?*

**RESPONSE:**

Question 12:

As identified in the Discussion Paper, applications to construct Wind Turbines in a particular location should be referred to CASA by the Local Authorities in which the Turbine/s are to be erected.

In particular, if the proposed Turbine is part of a Wind-Farm that is within 15klms of an Airport or Aerodrome. Under the current system, the Aerodrome Operator could be the last to know that such structures are to be erected.

It is therefore suggested that the standard procedures for any structure in the vicinity of an Airport/Aerodrome be adhered to with the Application being first lodged with the Local Authority. The Authority should then notify the Airport/Aerodrome Operator of the Proposal and request an assessment – from the Airport’s perspective.

The Authority should simultaneously forward the Application to CASA for Assessment from the Regulators perspective. The State Government’s Planning Section should then receive a copy of all Assessments for their input and if necessary a final decision by the EPA and/or Planning Authority.

Question 13:

Yes. As with most - if not all major pieces of Infrastructure, the Developers of a significant Wind-Farm Development should be required to provide an Environmental Impact Statement (EIS) which should satisfy not only CASA but the requirements of the Local Authorities, other affected Parties and the Community in general.

- (14) *Should Development of Technical Facilities near Aerodromes (Say within 5klms) require automatic Referral to CASA for Assessment of Impact on Radar and Navigation Systems?*
- (15) *What additional guidance do State, Territory and Local Governments require on the siting of Technical Sites and the potential impacts on Radar and Navigation Systems?*

**RESPONSE:**

Question 14

If the Technical Facilities referred to in the question are non-Aviation related, then the answer is yes. If the Facilities are Aviation related, (ie: under the auspices of AirServices Australia), then it can be readily assumed that CASA is already aware of the Development and has already completed an Assessment.

All such Developments whether Technical Structures or not should therefore follow the system described under the answer to Question 12 in particular.

## Question 15:

It is unquestionable that the Technical Staff of both CASA and AirServices Australia are of sufficient calibre to be able to assess and recommend the optimum siting requirements on or adjacent to an Airport for any proposed Technical Structure such as a Navigational Aid, (VOR, NDB, DME, TACAN etc), RADAR Facility or Ground Station such as ADS-B etc.

The Technical Staff would be well aware of the limitations of the equipment to be installed and the affect such equipment would have on adjacent (non-Aviation) electronic systems. Similarly, the effect of the Aviation related equipment on non-Aviation installations (ie: adjacent AM Radio Stations, VHF/UHF radio communication installations and HF Taxi Control Stations etc) would be identified and appropriate measures taken to overcome the particular problem. The same applies if the Aviation related Technical Structure is located en-route or well away from an Airport or Aerodrome.

*(16) Are CASA's current requirements sufficient, and what additional guidance might State, Territory and Local Governments require regarding Lighting and Pilot Distractions?*

**RESPONSE:**

## Question 16

MOS Part 139 contains Standards (including Tables and Diagrams) covering Light Emissions from a variety of sources – either on or within 6klms of the Airport. Provided the Regulator (CASA) has inspected and approved such light emissions, no further actions should be necessary unless Fittings have been changed or new unapproved Fittings installed which allow emissions to distract Air-Crew usually on Approach to the Airport. Under MOS Part 139, 9.21, the emissions should not exceed 3° above the Horizontal.

It is therefore regarded that the current Standards regarding light emissions either on or in the vicinity of an Airport are adequate. Referring to recent Police Action in which the persons responsible for directing hand-held Laser beams at Pilots during the last section of the Landing Phase were arrested and charged, it is believed adequate Civil Laws are already in place to address such behaviour.

- (17) Should an approach based on the identification of Public Safety Zones be introduced to help ensure that new Developments around the ends of Runways do not lead to undue levels of risk?*
- (18) For which Airports might such Public Safety Zones be identified – all Airports or only Airports with Regular Airline Traffic?*
- (19) What methodology and criteria should be applied in defining the boundaries of a PDZ?*
- (20) What sort of additional controls might be imposed for new Developments in identified PSZ's*
- (21) What sort of steps might be taken to ensure the identification of a PSZ does not unduly affect the value and enjoyment of existing properties within the Zone?*

**RESPONSE:**

## Question 17:

PSZs (Sometimes referred to as Public Safety Areas, (PSAs)) have already been adopted by most Local Authorities in Queensland and monitored under the State Planning Policy 1/02, Section 6, Annex 3. The monitoring of Applications for Developments within PSZs should continue to be a function of each Local Authority but with State Government Approval or Rejection.

The dimensions of a PSZ are such that it is a trapezoidal in shape and extends outwards from the Runway's end for a distance of 1000m. The Area is centred on the Runway Centre-Line with the Runway end being 350m wide tapering to 250m wide at the outermost end.

The Queensland Legislation allows existing Airports to retain existing Developments located within the PSZ such as Residential. However, Manufacturing and Storage of Flammable Material. Stadiums and Places of Public Assembly, Institutional Developments such as Hospitals, Schools etc should be precluded. For new or upgraded Runways, the PSZ has to be enforced and all the above Developments should be precluded.

**It is crucial in the interests of Safety that any form of Private or Commercial Development located within each Airport's PSZ should be removed. (Apart from Approach Lighting or any other Airport Related Structure). This requirement should be enshrined in Federal Legislation with the Owners of existing Developments that are located within existing PSZs issued with a Notice to remove or to Demolish such Developments within a reasonable time-frame (say 12 months). Compensation based on current Valuations should then be offered to affected Owners. Following the final clearing of the PSZ, under no circumstances should any new Development be allowed to occur within the PSZ.**

Question 18:

- (1) All Certified or Registered Airports.
- (2) Optional at all other Aerodromes - but if promulgated by the Local Authority, to conform with the same Criteria as applied to Certified or Registered Airports/Aerodromes.

Question 19:

The Australian Methodology for determining the shape and area of the PSZ has been described in the previous Answer. This is different from the English method of determining' it's area. The English PSZ is triangular in shape with the apex furthest away from the Runway. The calculation required to determine the English individual risk contours requires three basic quantities:

- (1) The annual probability of a crash occurring near a given airport (crash frequency);
- (2) The distribution of such crashes with respect to location (crash location model);
- (3) The size of the crash area and the proportion of people likely to be killed within this area (crash consequence model).

It is believed that the Australian Model provides better protection for Communities with the application of the standard (Trapezoidal shaped) area to the end of each Runway of qualifying Airports which provides a far better margin of Safety than the English model, which, it is believed was adopted because the triangular shape does not "lock away" as much land as the Australian Model does.

Question 20:

As suggested above, the determination of the size, shape and area of the PSZ by the application of a set of parameters may not result in a PSZ that will provide the level of Safety required. The Australian pre-determined, fixed "one size fits all" approach is considered to be "fool-proof" and avoids a situation where some of the criteria needed to complete the calculation may slant against one Airport because of one serious crash whereas another

Airport may have a number of smaller crashes dotted across the subject area and for reasons that do not fit the criterion.

Accordingly, it is recommended that the Australian Trapezoidal shape be retained as the preferred model for all qualifying Airports and that no additional controls are necessary to provide an area at the end of each Runway clear of Development to ensure casualties are minimised in the event of an Aircraft landing short or an Aircraft overshooting the Runway End following an aborted Take-Off or an Aircraft Landing long and unable to stop within the RESA.

#### Question 21

There are certain sacrifices that need to be made by:

- The Local Authority (Rates and Taxes),
- Commercial Interests (Desirable and Economically Priced Sites),
- Community Groups (Sporting Fields etc) and
- The General Public (Cheaper Land Values for Residential Construction).

In order to provide the local Community with a reasonable degree of Security. The enforcement of the requirement to promulgate PSZs at the end of Certified or is the only answer. Whilst the incidence of accidents occurring within the PSZs is extremely low, it is demonstrable by referring to overseas Accidents that when an Accident does occur, the casualty rate is high. ie: the 2007, B737 Crash at Adisucipto Airport, Indonesia, in which 21 were killed and at Congonhas Airport, Sao Paulo Brazil during 2007 in which 189 persons lost their lives.

Of recent times, and closer to home was the incident at Melbourne International Airport on the 20<sup>th</sup> of March this year where an Emirates A345 almost crashed near the end of the main Runway after experiencing difficulty on take-off.

This clearly indicates the virtues of providing a suitable area at the end of each Runway in case an accident occurs on take-off or landing. This may not save the Aircraft, it's Crew or Passengers, but it will avoid or minimise any damage, death or injury to property and people located on the ground who live or work in close proximity to the end of an Airport's Runway.

### **EXECUTIVE SUMMARY**

**During the latter part of July, 2009, the Queensland State Government released the latest (amended) South East Queensland Regional Plan 2009 – 2031. An examination of the Plan indicates a significant focus has been placed on the expected increase in the Population of the Region.**

**To address this problem, the Government made a decision to retain the existing Urban Footprint but requiring *“higher density residential development focused within and around regional activity centres and public transport nodes and corridors”*.**

**To achieve this end, the State Government plans to allow Urban Developments to increase the proportion of *additional Urban Dwellings* by some 50% by 2031. (Page 91, Section 8.1 – *Compact Development*). This could mean that the expected increase in the population Urban Footprint will now be satisfied by allowing the construction of **High-Rise Structures**.**

**With respect to Queensland's South East Corner, the Urban Footprint extends up to and virtually surrounds Brisbane International Airport. Not only will Structures in the Brisbane CBD continue to grow in number *and in height*, but Developments within the Urban Footprint will also encompass high-rise Structures to accommodate the exploding population. (Refer to Page 7 of this Response Paper). It is expected that High-Density Tower Blocks within Prime Minister Kevin Rudd's own electorate of Mt. Gravatt will be approved for Construction - which will certainly penetrate Brisbane Airport's OLS and create further noise problems.**

**Nowhere in the new Regional Plan is reference made to the proximity of the Brisbane International Airport to the Urban Footprint (*or for that matter any Queensland Airport or Aerodrome*) which means that the requirement for Consultations between the Regulator CASA, the State Government, Local Government (Brisbane City Council) the surrounding Community and the Airport Operator is not included- *or better still*, not considered to be important.**

**Again, it is evident that in spite of the points raised about this problem in Submissions made to last year's Federal Government's *Review of Australian Aviation*, nothing has been done and a gross lack of communication still exists between Airport Operators and Government at all levels.**

**There is absolutely no mention of or a diagram included in the Document to identify the need to restrict certain types of Development in areas close to Airports – particularly where the potential exists for Structures to penetrate the Airport's Obstacle Limitation Surface (OLS). The Document could have at least mentioned that Developments – particularly High-Rise, have to comply with Part 5 of the Airport's Act, 1996 and attendant pieces of State Legislation.**

**It is therefore suggested that the Federal Minister *through his Regulator (CASA)*, insist that the SEQld Regional Plan be again amended to include those areas that surround Certified and/or Registered Airports and that such areas preclude High-Rise Structures that may penetrate the Airport's OLS and to protect not only operations on all Airports, but the surrounding Communities as well.**

**It is also suggested that valid points raised in this and other Submissions regarding the Answers to the Questions raised in the "*Safeguards for Airports and the Communities Around Them*" Discussion Paper be followed through by the Federal Government to give weight to their concerns about the declining health of Australian Aviation, Airports and the Community at large.**

As a former Federal Airport Corporation's Manager, (*Operations*), Aviation in General and Airports in particular are the Author's particular field of expertise. This Submission has sought to indicate to the Federal Government that it is one thing to ask for assistance in framing Legislation or how to address matters of concern within the Aviation Industry, but it is another to do something about the problem.

## **END OF SUBMISSION**

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