GENERAL AVIATION INDUSTRY
JOINT MEDIA RELEASE

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MEDIA RELEASE

GA Industry Condemns Minister Albanese Over Safety Hypocrisy

Decisions made by Federal Infrastructure and Transport Minister Hon Anthony Albanese have made Brisbane's Archerfield Airport more dangerous. The Minister permitted a development inside the "Public Safety Area" of the airport despite what he told the Australian People in Parliament on 30th September 2010 - the second reading speech for the Airports Amendment Bill 2010 giving effect to the National Aviation Policy Statement.

A "Public Safety Area" is a defined area immediately at the ends of runways at high use airports where development is effectively forbidden. It is designed to protect persons on the ground and in aircraft from the known high risk of aircraft arrival and departure accidents near runways ends, for example, aircraft overrunning / undershooting the runway on take off and landing. To lessen the identified significant risk to the public, state legislation requires there should be no increase in the number of people living, working or congregating in these areas and/or the accumulation of obstacles such as vegetation, (trees), buildings, vehicles, machinery, and signage etc. All such obstacles present a safety hazard to people on the ground as well as aviation.

The National Aviation Policy Statement states "The Australian Government proposes working with State Territory and Local Governments and Industry Stakeholders to undertake a detailed examination of Public Safety Areas in the vicinity of airports" advising that this would substantially improve aviation and community safety.

Without any consultation with users, the Airport Leasing Company, Archerfield Airport Corporation failed to give the necessary community notice about the proposed development on their website nor did they make an application to the Federal Building Control Officer as required by law and self-approved their own development plan in the "Public Safety Area" of the main runway of Archerfield Airport

The Minister despite being sent a safety report and a letter from the lawyers of Archerfield Airport Chamber of Commerce Inc advising of the safety issues in the "public safety area" and that this required his immediate attention acted contrary to what he told the Australian People he would do.

On 1st April 2011 acting on behalf of Minister Anthony Albanese, the section head of Airports responded with correspondence that admitted the development was within the "Public Safety Area" and despite what he had told the Australian public, confirmed that the Federal Government would disregard the State Government "Public Safety Area" legislation.

Further the Minister failed to do anything to stop inappropriate development in non-compliance with other safety laws designed to protect the airport putting lives at risk and further degrading the airport. CASA also needs to be brought to account to show why it is pasting over safety issues for the Federal Government.

This is despite Minister Albanese stating on the record when opening CASA's new Brisbane Headquarters "*And Nothing, I repeat nothing, is as important in aviation as safety*"…. But Archerfield Airport is now dangerous because of what he failed to do.

The Archerfield Airport Draft Master Plan, currently the subject of a Ministerial decision by Mr Albanese to either approve or reject the draft plan proposes that the entire "Public Safety Area" on airport land be developed mainly as industrial land, contrary to Queensland State Planning Laws and safety.

General Aviation Industry Joint Members:

Lindsay Snell – President
Archerfield Airport Chamber of Commerce Inc.

Philip Reiss – President
Aircraft Owners & Pilots Association Ltd

Darrin Ward – President
Save Our Secondary Airports Association Inc.

M.P. [Kim] Rolph-Smith - President
Australian Warbirds Association Limited

Michael Braybrook – President
Jandakot Airport Chamber of Commerce

Michael Keenan – Chairman
Australian Business Aircraft Association Inc.

Dr Richard Gates – President
Evans Head Memorial Aerodrome Committee Inc.

Eugene Reid - President
Recreational Aviation Australia Inc.

6th September 2011

- END -

Media Links - Youtube

"Minister Anthony Albanese - What I Say v What I Do"

"Archerfield Airport – Government & CASA Pasting Over Airport Safety Issues"

Attachments:
A Technical Appraisal of Air Operations from Runway 28R/10L Archerfield Airport - Brisbane
National Aviation Policy Statement- Page 174
Queensland State Planning Policy 1/02 – Development in the Vicinity of Certain Airports and Aviation Facilities

Links:
Minister Albanese's Speech Opening of CASA Building Brisbane
Hansard - House of Representatives 30.9.2010

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www.valleywatchdog.com.au

Safeguarding Airports and Communities

In June 2009, the Government released a discussion paper, *Safeguards for airports and the communities around them*. The discussion paper, which was foreshadowed in the Green Paper, outlined the issues that need to be considered in the development of a unified national framework to safeguard both communities and airports from inappropriate off-airport developments, which could threaten public safety and the current and future viability of aviation operations at Australian airports.

Suitable locations for airports are scarce. In the interests of safety and public amenity there should be minimal development in the vicinity of airport operations. However, there is also a need for airports to be easily accessible to population centres. Inappropriate development around airports can result in unnecessary constraints on airport operations and impacts on community safety. There is hence a need to ensure that construction and development are undertaken in a way that is compatible with airport operations, both in the present and taking into account future growth.

A clear and coordinated national framework for land use planning and development controls will serve both aviation operators and the public. It will ensure that new development in areas near airports does not create unnecessary safety and operational issues, either now or in the future. Such a framework will provide for:

- protection of community safety by ensuring that commercial or residential developments do not occur in areas close to runway ends, where there is a higher risk of damage from aircraft; and
- protection of the safety of aircraft operations by preventing developments that could present a physical obstacle to aircraft, interfere with communications or navigation equipment, or produce significant hazards in the form of smoke or turbulence.

A balanced framework will also provide for the reasonable amenity of areas surrounding airports and under flight paths.

The discussion paper *Safeguards for airports and the communities around them* signalled that the Australian Government will work cooperatively with the states, territories and local planning authorities to develop a risk-based national safeguarding framework. The framework will ensure an appropriate balance is maintained between the social, economic and environmental needs of the community and the effective use of airport sites.

The proposed Planning Coordination Forums for the primary capital city airports will play an important role in the application of a safeguarding framework to off-airport planning. However, safeguarding issues apply not only at the large federal airports, but in respect of large and small airports nationwide. This is particularly so in view of likely future growth in air travel.

The Australian Government received over 90 submissions in response to the discussion paper and is engaged in an ongoing dialogue with stakeholders about how a national framework may be implemented. There is broad agreement across stakeholders that the Australian Government's proposal for a national framework is worth pursuing and would substantially improve aviation and community safety.

Specifically, the Australian Government proposes to work with state, territory and local governments and industry stakeholders to:

- work with jurisdictions on a national land use planning regime near airports and under flight paths, to minimise sensitive developments being located in areas affected by aircraft operations;
- undertake a detailed examination of the implications of public safety zones in the vicinity of airports;
- improve and enhance land use planning arrangements and supplementary public information relating to the impacts of aircraft noise, including to

Scope:

The scope of this technical appraisal report addresses disputed findings of the Australian Transport Safety Bureau Report A1-2008-038 including the efficacy of removal of Instrument Flight Rules [IFR] Departure Operating Restrictions from runway 28R/10L, the Queensland Emergency Services Building's intrusion into runway 04L/22R Obstacle Limitation Surface, runway 10L/28R Public Safety Area violations and the (Unsafe) road culvert in the International Civil Aviation Organisation [ICAO] defined Runway End Safety Area [RESA] of runway 10L.

Summary:

This Report provides unequivocal **evidence of major *systemic* failure** to observe International Civil Aviation Organisation [ICAO] International Standards and Recommended Practices and the enabling Australian Laws for the protection of Airports and Airspace as applied to Archerfield Airport – the sole Secondary Airport for Brisbane.

The development of Aviation Safety Standards over the last 100 years has arisen from the tragic experience of air accidents and incidents and at great human cost. Therefore concessions outside of required Standards can rarely be made against them.

The problems of this report relate to obstacles intruding a defined surface intended to protect aircraft in flight, taking off or landing or areas intended for movement of aircraft.

The writer is of the opinion that **there is likelihood of the Airport Leasing Company, Archerfield Airport Corporation Pty Ltd having breached various laws and agreements with the Commonwealth** including,

The *Airports (Protection of Airspace) Regulations 1998, Civil Aviation Safety Regulations 1998, Air Services Act 1995, Air Services Regulations*, the *Airports Act 1996,* The *Commonwealth Lease* and the *Commonwealth Sale Agreement*

Multimedia:

Online multimedia related to the content of this report may be viewed at the attached links.

"Archerfield Airport – Government & CASA Pasting Over Airport Safety Issues"

"Minister Anthony Albanese - What I Say v What I Do"

1. THE CURRENT STATUS OF THE MAIN runway:

Archerfield is a General Aviation Airport with it's main 28R/10L Code 3 runway currently restricted to aircraft under 5700kg MTOW*. *(See ERSA*, 2nd of June, 2011 – Availability - 1).* Operations involving runway 28R/10L other than visual flight [VFR*] are also restricted *(See current ERSA - RDS Distance Supplement),* with runway 28R being reduced from TORA* 1419m down to 1095m and TODA* 1479m down to 1095m for instrument flight rule [IFR*] runway 28R departures in instrument meteorological conditions [IMC*].

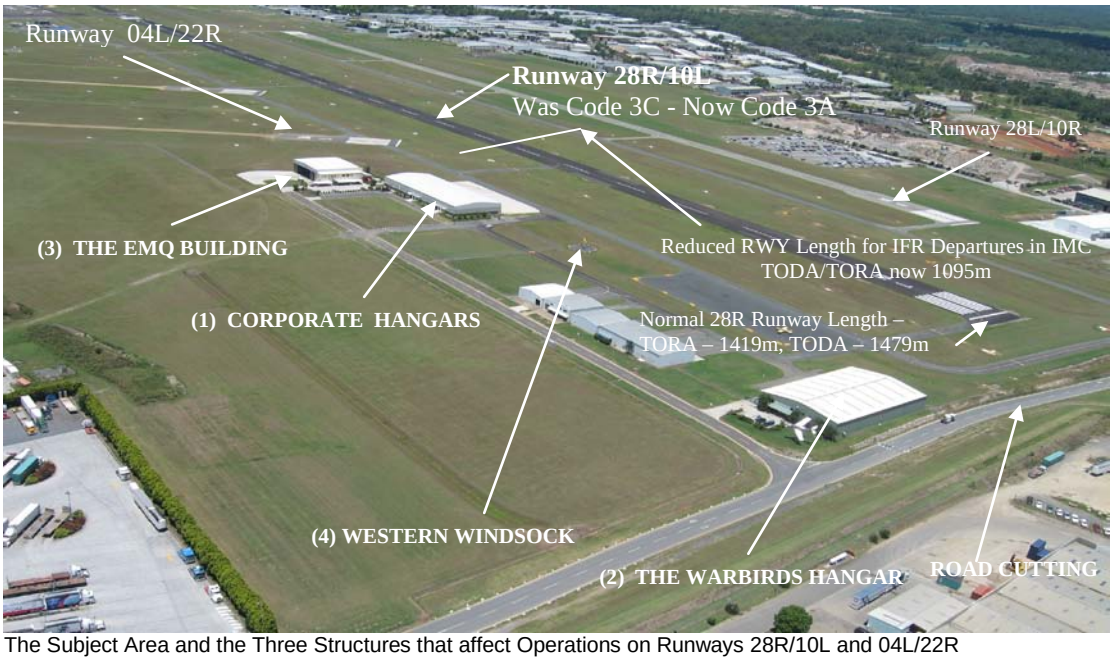


Figure 1

The Subject Area and the Three Structures that affect Operations on Runways 28R/10L and 04L/22R

1.1 Runway 28R

There are no Supplementary Take-Off Distances available for runway 28R in IMC. This is a crucial omission as two obstacles located at the western end of runway 28R/10L penetrate the 28R OLS for 28R Take-Offs in IMC and another penetrates the adjacent runway 04L/22R Obstacle Limitation Surface [OLS*] (The EMQ Building) thus presenting aircraft with unacceptable hazards. The Corporate Hangar and the Warbird's Hangar are located within runway 28R's Public Safety Area [PSA*].

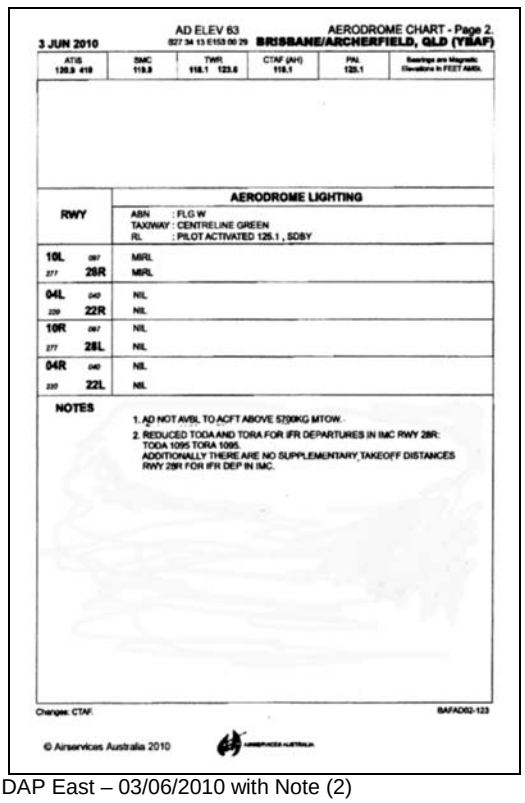
Pilots of instrument flight rule [IFR*] aircraft departing runway 28R in IMC, require obstacle-free surfaces for maximum safety on take-off. By providing Supplementary Distances, a pilot can ascertain if his aircraft can safely negotiate both obstacles – one located parallel to and the other within the 2% gradient, take-off splay. The June 03, 2010 issue of DAP East – Brisbane, Archerfield, (Fig. 2) contained two notes for runway 28R. These were:

(1) AD NOT AVAILABLE TO ACFT ABOVE 5700kg MTOW

(2) REDUCED TODA AND TORA FOR IFR DEPARTURES IN IMC runway 28R TODA 1095 TORA 1095

(3) NO SUPPLEMENTARY TAKE-OFF DISTANCES runway 28R FOR IFR DEP IN IMC.

Figure 2



3 JUN 2010 — AD ELEV 63 — AERODROME CHART - Page 2.
S27 34 13 E153 00 29 **BRISBANE/ARCHERFIELD, QLD (YBAF)**

ATIS 120.9 419	SMC 119.9	TWR 118.1 123.6	CTAF (AH) 118.1	PAL 125.1	Bearings are Magnetic Elevations in FEET AMSL

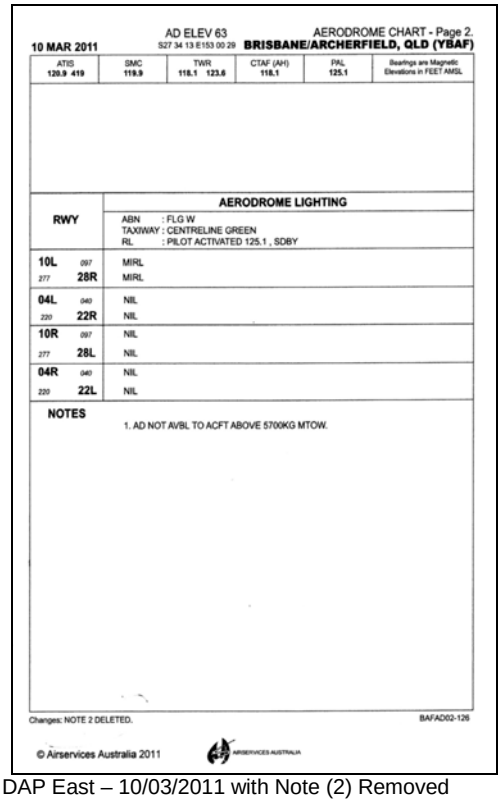
RWY	AERODROME LIGHTING
	ABN : FLG W TAXIWAY : CENTRELINE GREEN RL : PILOT ACTIVATED 125.1 , SDBY
10L 097 / 277 28R	MIRL / MIRL
04L 040 / 220 22R	NIL / NIL
10R 097 / 277 28L	NIL / NIL
04R 040 / 220 22L	NIL / NIL

NOTES
1. AD NOT AVBL TO ACFT ABOVE 5700KG MTOW.
2. REDUCED TODA AND TORA FOR IFR DEPARTURES IN IMC RWY 28R: TODA 1095 TORA 1095. ADDITIONALLY THERE ARE NO SUPPLEMENTARY TAKEOFF DISTANCES RWY 28R FOR IFR DEP IN IMC.

Changes: CTAF. BAFAD02-123

DAP East – 03/06/2010 with Note (2)

Figure 3



10 MAR 2011 — AD ELEV 63 — AERODROME CHART - Page 2.
S27 34 13 E153 00 29 **BRISBANE/ARCHERFIELD, QLD (YBAF)**

ATIS 120.9 419	SMC 119.9	TWR 118.1 123.6	CTAF (AH) 118.1	PAL 125.1	Bearings are Magnetic Elevations in FEET AMSL

RWY	AERODROME LIGHTING
	ABN : FLG W TAXIWAY : CENTRELINE GREEN RL : PILOT ACTIVATED 125.1 , SDBY
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04L 040 / 220 22R	NIL / NIL
10R 097 / 277 28L	NIL / NIL
04R 040 / 220 22L	NIL / NIL

NOTES
1. AD NOT AVBL TO ACFT ABOVE 5700KG MTOW.

Changes: NOTE 2 DELETED. BAFAD02-126

DAP East – 10/03/2011 with Note (2) Removed

In the 10th of March, 2011 Issue of DAP East – Brisbane, Archerfield, (Fig. 3) Item (2) had been deleted. As a consequence, the risks involved with IFR Departures in instrument metrological conditions [IMC] from runway 28R are now considered to be a significant abrogation of International Civil Aviation Organisation [I.C.A.O.] Standards and as such present local and itinerant aircraft operations with a gross lowering of safety standards.

1.2 Runway 10L:
An assessment of runway 10L is not included in this report - although safety relevant to the former Federal Airports Corporation [FAC] promulgated Clear-Way and the Public Safety Area (PSA*) at the eastern end has been unacceptably compromised by the Airport Leasing Company's [Archerfield Airport Corporation] decision to allow a construction vehicle sales and storage area development to occur. *(Known as the Pickles Development)* The decision to allow the Pickles Development to proceed in the writer opinion is in breach of the terms of the Airport Lease and the State Planning Policy 1-02 - *(Public Safety Areas).* Aircraft in distress on take-off from runway 10L or on final approach to runway 28R have had the margin of safety effectively removed together with exposing the public to un-necessary danger - particularly during the frequent auctions that take place in the subject area. *(See Page 5 of this Report)*

2. DISPUTED FINDINGS OF REPORT FROM AUSTRALIAN TRANSPORT SAFETY BUREAU [ATSB]

This report involves a number of operational issues and disputes the findings contained in the ATSB Report A1-2008-038 and is critical of the ATSB and the Civil Aviation Safety Authority [CASA] for approving the Archerfield Airport Corporation's application to erect structures within runway 28R/10L's OLS.

The significant issues are:

- The *apparent* failure of the Federal Government's *Airport Building Controller* (ABC*) *in the first instance* to refer the matter as a Controlled Activity under the *Airport's Act 1996 (cth) s 182,* to the Department of Infrastructure and Transport [DOIAT*] /CASA for determination as it should have been obvious that the proposed structures were located close to busy runways.

- If the ABC *did* refer the matter to the DOIAT*, why did these authorities approve structures that not only were an inconsistent interpretation of the Instrument Departure Procedure Design *(as detailed in the ATSB Report A1-2008-038),* but *clearly* would also prevent any future upgrading of the airport's main runway 28R/10L - including any further expansion of aviation services for the airport - as continually being promoted by Archerfield Airport Corporation.

(Refer Archerfield Airport DMP – 2011-2031– Section 15, Clause 15.2 - Table 5 on Page 139 – 5-10 year Timing – Item 3. Part 1, Section 2, Clause 2.2.1- dot-point 3 suggesting a completely new Runway may be built in the future).* See note in the Summary on Page 8.

- If the Airport Building Controller *did* refer the application to the DOIAT* for determination then the DOIAT* risks being accused of permitting the airport's Archerfield Airport Corporation to achieve an end – that is to further downgrade the airport's main 10L/28R runway to a point where it becomes incapable of supporting aircraft larger than Code "B" at any time in the future. *(Refer MOS Part 139, 2.1.5.5, Table 2.1-1).*

- The writer believes that there are other documented instances of decisions that have been taken by Archerfield Airport Corporation with the *"blind-eye"* approval of the DOIAT* - but are not included in this Report.

- The 2011-2031 Preliminary Draft Master Plan for Archerfield Airport is *seemingly* based on the current Archerfield Airport Corporation's dedication to providing an aviation oriented future for all concerned - but in reality, the exact opposite is occurring.

- As documents already submitted to the Federal Government's Minister for Infrastructure and Transport and/or the Regulator/s CASA *and the DOIAT* have detailed in the past, **the aviation component of Archerfield Airport is in a rapid state of decline.**

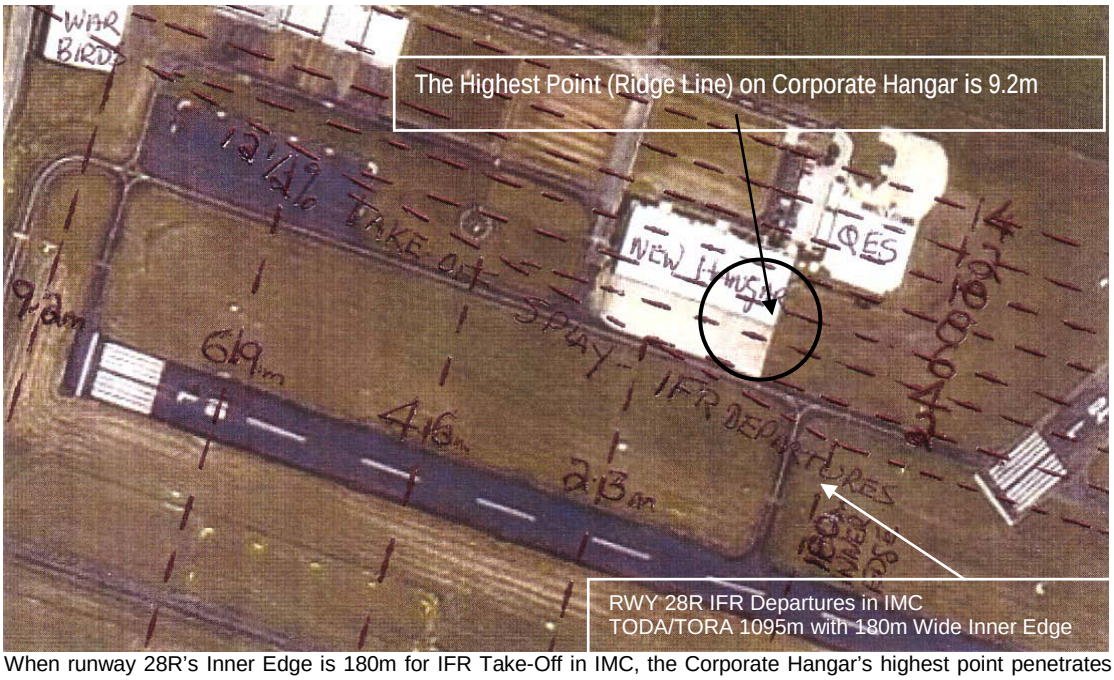
- As this report mainly concerns 28R IFR Departures in IMC, **Two obstacles** have been erected close to the western end of the 28R/10L Runway - one clearly penetrates the runway's Transitional Surface by a significant amount and the other penetrates the 2% Take-Off Gradient required for IFR Departures in IMC.

2.1 OBSTACLES

2.1.1 The First Obstacle: A recent Survey* of **(1) The Corporate Hangar** [Refer Figure 1] plotted the hangar's highest point (Ridge) at 9.2m and penetrating the OLS Transitional

Surface *(when runway 28R Inner Edge is 180m for IFR Departures in IMC)* by some 2.2m - thus breaching not only Australian Standards for IFR Departures in IMC as contained in MOS Part 139, Chapter 7, but I.C.A.O Standards *(to which Australia is a signatory).* (Refer Fig 4)

Figure 4



When runway 28R's Inner Edge is 180m for IFR Take-Off in IMC, the Corporate Hangar's highest point penetrates the Transitional Surface by 2.2m. runway *04L's Transitional Surface is shown on Page 9 and indicates the EMQ Building Penetrates runway 04L/22R Transitional Surface by approx.3m.*

- The ERSA Runway Distance Supplement (RDS B-1) for runway 28R indicates a reduced TODA and TORA for IFR Departures in IMC. When this is applied to the runway physical characteristics for such operations, the Runway Strip changes from 150m to an inner edge of 180m.

  (Refer MOS Part 139, Chapter 7, (Obstacle Restriction and Limitation), Table 7.1-2 - Take-Off Runways, for a Code 3 or 4 Runway). This now places the Corporate Hangar located on the northern side of runway10L threshold in breach of MOS Part 139 standards regarding obstacle penetration.

- For Visual Flight Rule (VFR) operations, RDS B-1 defines runway 28R's Supplementary Take-Off Distance of 1431m with the gradient (slope) shown as being 2.5%.

- Although the Corporate Hangar is located 67m to the highest point (9,2m) from the (published) 150m wide Runway Inner Edge, the height of this obstacle has been recently surveyed* by a registered surveyor at 9.2m and therefore penetrates the runway's 14.3% (1 in 7) Transitional Surface by 0.370m.

2.1.2 The Second Obstacle: (2) The *"Warbirds"* Hangar, is located within the runway 28R (IFR) Take-Off Splay with a surveyed* highest point at 9.3m. This structure not only presents a marginal safety problem for aircraft departing visually, but with the highest point (ridge) of the structure being 9.3m and being 402m from the 28R Runway TODA/TORA length of 1095m for IFR Departures in IMC, at a 2% gradient. A recent survey* found this obstacle's roof line penetrates the runway's Take-Off Gradient by approximately 1m. (Refer Figure 5)

- The Manual of Standards, (MOS) Part 139 Chapter 7, *(Obstacle Restriction and Limitation),* clearly states under Table 7.1-2 - Take-Off Runways, for a Code 3 or 4 runway, **the length of the Inner Edge is to be 180m with a 2% slope.**

Figure 5

The Warbird's Hangar Roof is within the Take-Off Splay for 28R IFR Departures in IMC & Penetrates the 2% Gradient

2.2 WHY BOTH OBSTACLES MUST BE REMOVED

- **The Warbirds (2)** and **the Corporate Hangar (1)** are Structures that have been erected close to the western end of the 28R/10L runway that now compromises movements on runway 10L/ 28R – in particular movements from runway 28R in Instrument conditions. Because of these obstructions, the reduction in the runway's TORA/TODA for IFR Departures in IMC, has placed a further limitation on the size and type of aircraft that can use the runway – particularly at night or during periods of low visibility and considerably exacerbated if a strong cross-wind is included.

- **Both obstacles should be immediately removed** – or the runway reduced in length *again* – which will further downgrade the airport. By the ATSB and the DOIAT ignoring this demand from the aviation community will further reduce the viability of the airport**. It is incomprehensible to understand why these structures were approved in the first place.**

- With the foregoing in mind, the fact that RDS B-1 does not provide Supplementary Distances for runway 28R for IFR Departures in IMC falls into insignificance. RDS B-1 also fails to indicate that the take-off gradient (slope) is only 2% to comply with MOS part 139 which is essential but missing safety information for pilots.

- As an interim measure, this omission must (1) be corrected by Airservices Australia to ensure pilots are made aware of the breach in safety standards until (2*)* both hangars are removed as quickly as possible in the interests of Safety.

- To further illustrate the poor safety standards by the DOIAT and the regulators for safety at Archerfield Airport, *by coincidence* with the removal of the two notes in the

June 03, 2010 issue of DAP East – *(Brisbane, Archerfield, (Page 10) advising reduced TODA and TORA for IFR Departures in IMC and no Supplementary Distances available for IFR departures in IMC),* **a steady Red Hazard Light was placed on the roof of the Corporate Hangar in a naïve attempt to provide a visual clue that an obstacle exists within the Take-off OLS.**

- This installation is contrary to standards by breaching the Omni-directional Instrument Departure Procedures as set out in ICAO Pans-Ops Document 8168 OPS/611 and which the ATSB Report A1-2008-038 describes at length in pages 2, 3 and 4.

- Under MOS Part 139, Chapter 7, Section 7.1.3.5 – Note (e) advises the following:

The operational characteristics of aircraft for which the runway 28R is intended should be examined to see if it is desirable to reduce the slope to cater for critical operating conditions as specified in CAO 20.7.1B and CAO 20.7.4. If the specified slope is reduced, corresponding adjustment in length for take-off climb is to be made so as to provide protection to a height of 300m.

If no object reaches the 2% take-off climb surface, new objects should be limited to preserve the existing obstacle free surface or a surface down to a slope of 1.6%. CAO 20.7.1B specifies Weight and Performance Limitations for Aeroplanes of MTOW* at and above 5700 kg. These limitations are compatible with the performance information supplied with jet aeroplanes, including jet aeroplanes type-certificated by the FAA to an MTOW not above 12,500 lb (5,700 kg). Australia adopted CAO 20.7.1B on the 5th of April, 2011."

Note: Currently, Australian operators and pilots of small jet aeroplanes face uncertainty about how to operate in accordance with CAO 20.7.4. There are inconsistencies in the ways CASA's Regional Offices are applying CAO 20.7.4 to the weight and performance of small jet aeroplanes.

With the forgoing in mind, although the structures referred to above were approved and erected before CAO 20.7.1B and 20.7.4 were Introduced, it is now even more imperative that these obstructions be immediately removed to allow many small corporate jets to continue to operate safely into and out of Archerfield Airport – particularly when departing under Instrument conditions. For the Federal Minister for Infrastructure and Transport and the DOIAT to agree to anything less will further downgrade the airport – the direction in which the Archerfield Airport Corporation appears to betaking the airport.

- As runway 28R at Archerfield Airport is regularly used by small Corporate Jets some of which fall under CAO 20.7.1B and 20.7.4, the erection of both the *Corporate Hangar* and the "Warbirds Hangar" should now, *in the interests of safety,* result in the immediate cessation of these operations – until the Obstructions are removed as quickly as possible.

- The Warbird's Hangar, *in particular* penetrates the 2% Gradient and if the gradient is reduced to 1.6% under CAO 20.7.1B for IFR Departures from runway 28R in IMC, there should be no question about its removal or that of the Corporate Hangar.

2.3 THE ATSB REPORT IS A FLAWED DOCUMENT WITH GROSS ERRORS

It is therefore clear that the ATSB, the Regulators, CASA and Airservices Australia have made gross errors in the Report A1-2008-038 and have acted in concert to cover the actions of the Archerfield Airport Corporation by issuing a document that contains technically irrelevant material as arguments.

The aerial photograph, *Figure 6,* shows the runway 28R Take-off Splays superimposed on the airport's western movement areas clearly illustrates the current situation. It is extremely difficult to understand how the ATSB Report seeks to justify the erection of structures so close to the airport's main runway by providing a *tongue-in cheek* explanation that it is acceptable to place obstacles close to a runway that is also used for ab-initio pilot training as well as emergency, courier, freight and charter operations and expecting the aviation community to accept that it is safe to do so. The relocated Public Safety Area (PSA) relevant to the reduced runway length, (TORA and TODA) is also shown. (See Fig 6)

By reducing the runway 28R TORA and TODA by around 400m to 1095m has not obviated the problem but has effectively denied access to Code "C" IFR Aircraft such as the Jetstream 41, F27-500 *and even the DC3* besides restricting Code B, IFR aircraft operating out of Archerfield Airport.

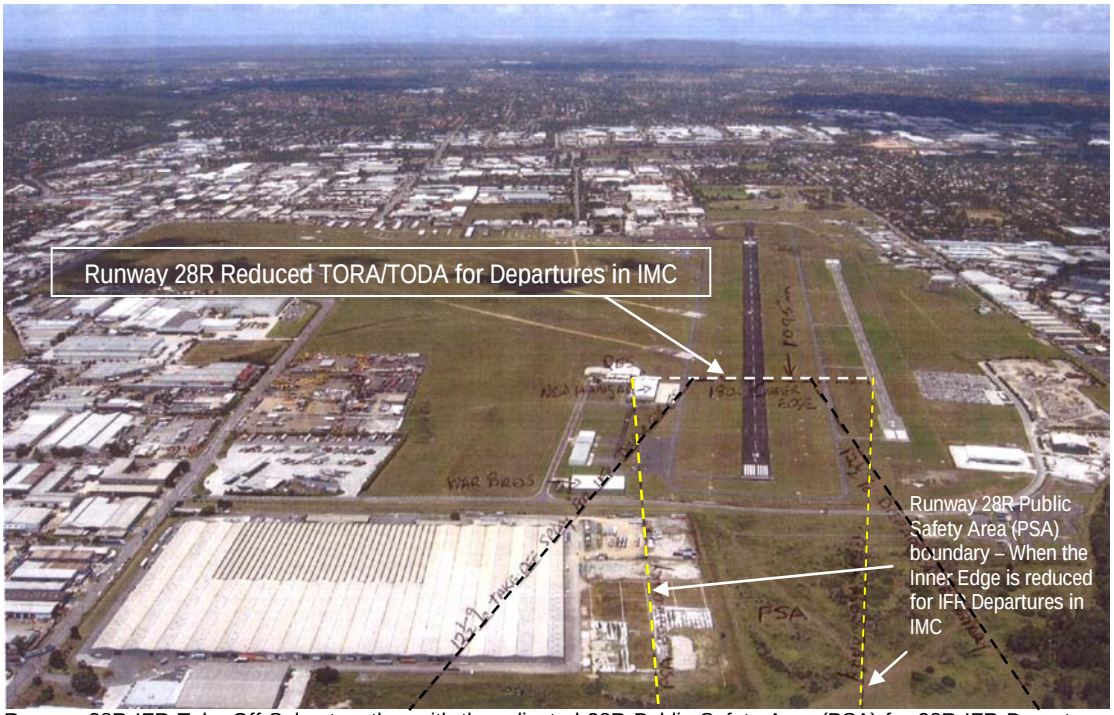


Figure 6

Runway 28R IFR Take-Off Splay together with the adjusted 28R Public Safety Area (PSA) for 28R IFR Departures showing precisely how the Warbirds and the Corporate Hangar breach standards and current PSA* legislation.

The Plan-View of the Archerfield Airport (YBAF) **featured on Page 4 of the ATSB Report** shows the Obstacle Identification Surface (OIS) as applied to runway 28R/10L. As ICAO Pans-Ops does not specify a height but the OIS for YBAF, a width of 300m and a height of 5m commencing from the Departure End of the Runway (DER), extending out at a 15º angle for a distance of 3500m, at a gradient of 2.5%, is required and reinforces the argument that although the requirement is for an aircraft to maintain runway heading on take-off until reaching 900ft, the 300m wide (150m either side of the Centre-Line) design requirement does not take into account the possibility of lateral drift and with an obstacle located within the "rectangular area" as shown on the Page 4 Plan, it is clear that a *potential* Safety problem exists.

The ATSB Report A1-2008-038 itself acknowledges that an *"ambiguity"* exists in the Pans-Ops Procedural requirements with NOTAM C250/07 being issued accordingly. This resulted in the current situation which still does not adequately address the problem of the erection of obstacles within the runway's OLS.

- The ATSB Report mentions the Turn Initiation Area. Although under Pans Ops (ICAO Doc. 8168), Obstacle Identification Surfaces (OIS), each Departure Procedure has to be designed relevant to its own set of Obstacles.

If this is the case, an explanation is required from the DOIAT concerning the reason why the structures in question have been allowed to be erected ***after*** the Departure Design was promulgated by AirServices Australia many years before. The following Statement is extracted from the ATSB Report:

"Risk mitigation procedures are required if any obstacle penetrates an OLS, in order to manage the potential risk of collision of an aircraft with an obstacle when the aircraft is flown in accordance with the Instrument Flight Procedure".

The above extract makes it totally inconceivable that the ATSB can justify the placing of a Steady Red Light on only one of the offending Structures as being all that is required to make the current unacceptable situation safe for 28R IFR Departures in IMC when considering the foregoing statement. With respect to the above and the other structures ***it is likely*** that one of the following scenarios occurred in the past which has led to the current situation:

(a) The Archerfield Airport Corporation ***did not submit*** a proposal to erect these structures to the ABC* in the first Instance - or
(b) The Archerfield Airport Corporation was asked to submit an Application to the ABC* ***after*** the Buildings were erected - or
(c) The ABC* ***acted in error*** by approving the structures without questioning the (glaring) implications in the first Instance - or
(d) The ABC* ***forwarded the application to the DOIAT*** for assessment as it was clear the proposal contained in the application was controversial and warranted closer scrutiny – or
(e) The ***DOIAT issued an approval*** contrary to the ICAO Pans-Ops Doc 8168
(f) The ATSB by its own Report ***acknowledges*** that there is not only one problem, *but* a series of problems.

The Structures at their current locations should never have been approved in the first place and in the *Interests of Safety* must be removed as quickly as possible. Again, with respect to the Hazard Light placed on the Corporate Hangars, off-airport background lighting could make the Hazard Light difficult to discern, and a pilot lining up for take-off on runway 28R may not be able to determine where the Hazard Light is located at the far end of the runway. This ill-conceived stop-gap installation should only be a temporary remedy **and until steps are taken to remove the hangar,** the following action should be immediately undertaken:

(1) Under MOS Part 139, Chapter 8, Section 8.6.18, appropriate "TAKE-OFF RUN AVAILABLE" signage should be erected advising Pilots requiring an IFR take-off in IMC on runway 28R of the greatly reduced Runway's TORA and TODA. The signage should be adjacent to the Holding Point but not so as to obscure other Mandatory Signage.

(2) For Operations in IMC, TODA/TORA markings on the western end of runway 28R to indicate where the reduced 28R, TORA/TODA ends should be provided such as the installation of appropriate visual aids such as strobe Lighting.

The ATSB Report is a 7 page document that to *the uninitiated* is very impressive. However, as most of the report is taken up with a description of what constitutes an Instrument Departure Criteria and other unnecessary tangential arguments, the only outcome from the ATSB Report is that Airservices Australia will:

Remove the requirements of NOTAM C250/07 and will modify the Instrument Departure Procedure at YBAF to require that the Hangar to the right of runway 28R Flight Strip must be visible to a Pilot before commencing Take-Off.

2.4 ADDITIONAL SAFETY ISSUES

The following examples are additional Safety Issues and should also be addressed.

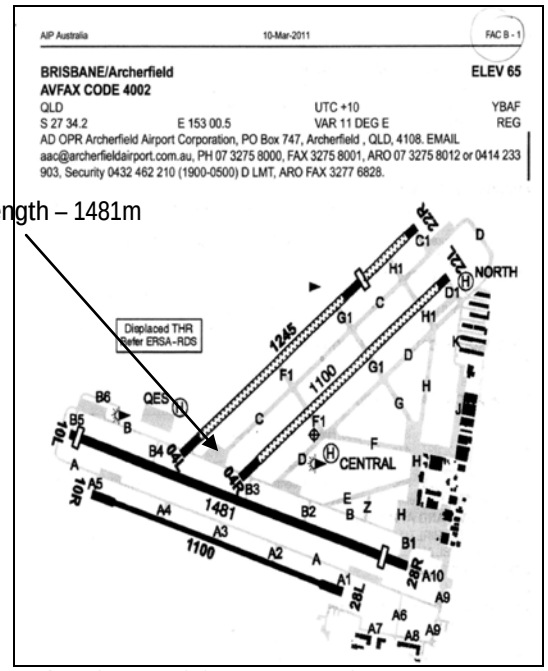
- A discrepancy exists between ERSA 28R/10L Runway Length and DAP East Aerodrome Chart BAFAD01 – 126. The 10L Displaced Threshold of 10m shown on FAC B-1 has not been deducted. (Refer Figs 7 and 8)

- This anomaly together with the 10L/28R Runway Strip actually having Gable Markers fixed in position with a width of only 90m, in the interests of safety, the details in the AIPs should be amended.

- The details published in ERSA indicates the physical characteristics of the 28R/10L Code 3, 28R runway are: width 30m, Runway Strip Width 150m. However, although the Runway Strip Width *(Inner Edge)* is published as being 150m, in reality, the Runway Strip is only marked with Gable Markers to a width of 90m – conforming with Part 139 Table 7.1-1. *(Refer note (a)).* In the interests of Safety, the AIP (ERSA) details should be amended to reflect the positioning of the current visual aids.

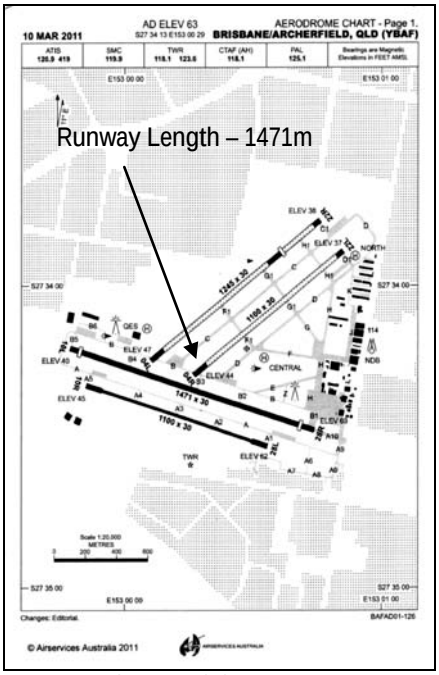
- **The Western Illuminated Wind-Sock (IWI), (4)** is located in an area that is affected by Wind Turbulence. This is contrary to MOS Part 139 (8.7), 8.7.1.5 and I.C.A.O. Standards as the IWI is surrounded by structures including the Corporate Hangar the Warbirds Hangar and the EMQ Building all of which cause turbulence affecting the Wind-sock – again a significant safety problem has been permitted to occur and incidents involving sizeable aircraft (e.g. Metroliner Aircraft) have been officially reported by aircrew

- There is no NOTAM or other advice to users of the airport that caution must be exercised when referring to this IWI – particularly at night or during periods of low visibility.



ERSA - Current 10-04-11 Issue FAC B-1

Figure 7



DAP East – Current 10-04-11

Figure 8

Other relatively minor errors appearing in Operational Documents relevant to YBAF Indicate:

(a) The Archerfield Airport Corporation officer charged with preparing the Operational Data for publication in ERSA could not have performed this task *with due diligence.*

(b) The Regulators, Air Services Australia, CASA and ultimately the ATSB does not provide any oversight to ensure that what is published is correct. It is only after an anomaly is reported that the errors may be rectified.

(c) Air Services Australia should not have removed Item (2) from the current Edition of DAP East - coincidently with the installation of a Steady Red Beacon on the highest point of the closest structure.

2.5 ATSB REPORTING AND GOVERNMENT POLICY INFLUENCE

The ATSB Transport Safety Report – Investigation A1–2008-038, "Instrument Departure Procedure Design", is seeking to justify a mistake made initially by the Federal Government's ABC* in approving the erection of structures close to runways without referral to the DOIAT and/or CASA that by their very location was expected to draw criticism from the Aviation Industry.

Accordingly, the Document is a *"White Wash"* and in reality, condones serious breaches in ICAO and Part 139 Safety Standards.

With the growing controversy concerning the erection of **Hangars (1) and (2)** so close to the airport's main runway, 28R/10L and the erection of the **EMQ Building (3)** within the Transitional Surface of the secondary grass runway 04L/22R, it is clear that a significant problem exists.

(Refer Figure 9)

This problem was clearly evident at the time and should have triggered the Commonwealth Government appointed ABC* to question the Archerfield Airport Corporation's application for approval to erect buildings in such sensitive locations- *(If one was indeed made).*

The initial erection of the QES Building within 5 years of privatisation immediately compromised runway 04L/22R *(refer Figure 9)* as it penetrates the Transitional Surface by approximately 3 metres.

Figure 9

The EMQ Building located 62m from the 04L/22R RWS penetrates the 04L/22R Transitional Surface by approx.3 m.

The ATSB Report A1–2008-038 sweeps under the carpet the actions of not only the Federal Government's ABC* but the DOIAT, ATSB, CASA, Airservices and the Federal Minister for Infrastructure and Transport who have unquestionably assisted the further downgrade Archerfield Airport which in the writer's opinion is in breach of the terms of its Commonwealth Lease of the airport. The following question should be asked:

How can the reduction in length of the Main Runway to allow IFR Aircraft to depart in IMC be described as being anything but an airport downgrade – one of a string of documented downgrades that if not corrected will mean the eventual demise of the airport – Queensland's largest General Aviation Airport.

The *subterfuge* contained within the A1-2008-038 Report is *in reality* an admission by the ATSB that something is indeed wrong. Either Part 139 Section 7.1.3.5 – including Table 7.1-2 **is the Standard or it is not.** The Report cannot simply advise that the Section in question is up for interpretation.

It is patently clear that the structures **(1)** and **(2)** mentioned earlier in this report have been erected within the OLS of runway 28R representing a serious safety Issue **and must be removed.** Archerfield Airport Corporation over the past 12 years since assuming control of the airport appears to have created situations that will ensure the eventual demise of the facility.

The decision to erect the structures so close to the runways has only been possible with the co-operation of the DOIAT, CASA and Airservices Australia. It appears to those within the Aviation Industry **that a malaise exists within the Federal Government and its Regulators to ensure by their discretionary behavior and *at any cost* that each privatised airport will not fail.** The prime real estate on which each airport resides could not have been secured by a better means and with the ready assistance of the Regulators. Each Airport Leasing Company has introduced Master Plans that include proposals *(disguised in flowery proposals)* to inhibit the expansion of aviation and include seemingly innocuous plans to expand non-aviation commercial developments.
Under the Heading *FACTUAL INFORMATION,* the ATSB attempts to justify the intentional erection of structures within the runway's OLS by simply stating that ***"the procedure complied with the extant design requirements but also identified inconsistent interpretation of the available Instrument Departure Procedure Design Standards".***

It is now crucial for the Federal Government and the Regulators to *force* Archerfield Airport Corporation to adhere to the terms *and spirit* of the Commonwealth Lease of the airport and for the Federal Government to *promptly and severely reprimand* the ABC*, DOIAT, ATSB, CASA and Airservices Australia for alleged breaches of their respective duties of care for approving developments not only within runway's 28R/10L and 22R/04Ls OLSs but within 28R/10L PSAs as well.

3. Runway End Safety Areas

Definition:
Runway End Safety Areas [RESAs] are primarily intended to reduce the risk of damage to an aeroplane in undershooting or overshooting the runway. RESAs are located adjacent to the end of the Runway Strip and are symmetrical about the extended Runway Centre Line.

3.1 UNSAFE ROAD CULVERT RUNWAY 28R/10L (RESA at the 10L End)

(Refer Figure 10)

An Unsafe Road Culvert with a depth of more than three (3) metres traverses the approach end of runway 10L contrary to ICAO RESA Safety Standards and is a danger to aircraft.

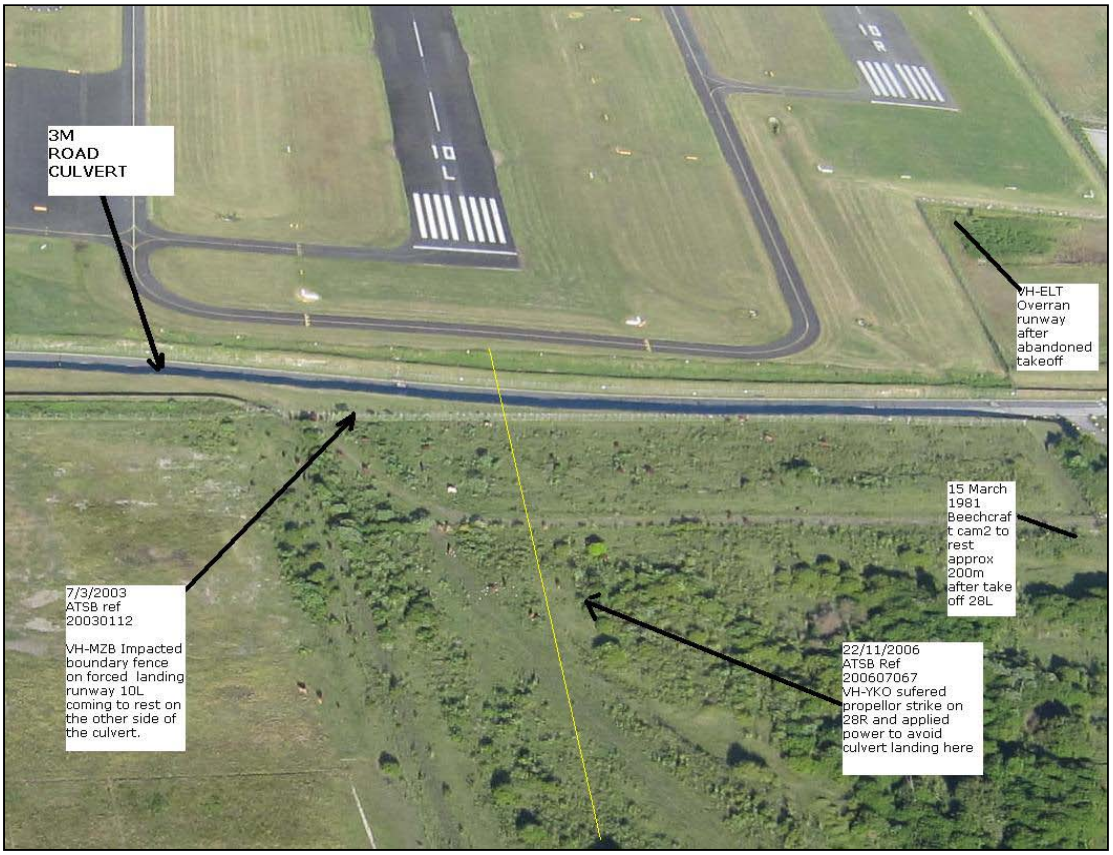


Figure 10

The Road Culvert linking the southern sections of the airport to Boundary Road in the East

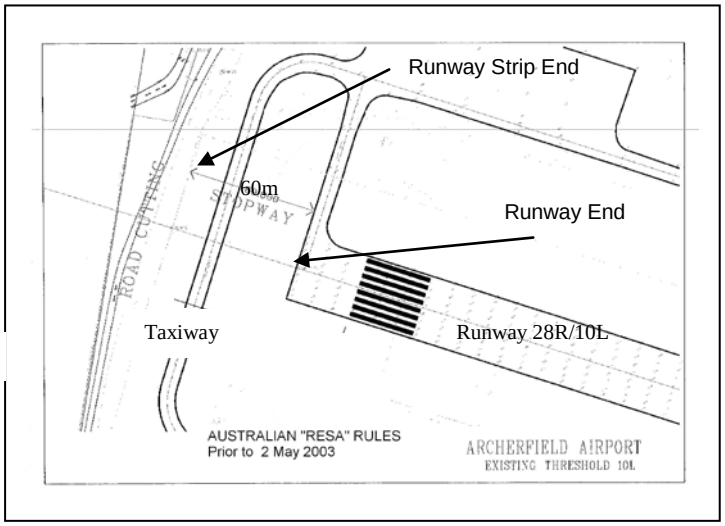
Brief History:
The culvert was originally excavated by the Federal Airport's Corporation (FAC) during 1997 to connect sewerage and stormwater pipe-work from an On-Airport development on the corner of Boundary Rd. and Beaufighter Avenue to existing Brisbane City Council (BCC) systems near Oxley Creek. The works expanded to the modification of the culvert to allow the construction of a service road to provide access to otherwise inaccessible airport land for development. The Civil Aviation Safety Authority (CASA) was consulted and had no objection to the modified plan as it did not infringe any Australian RESA Standard at that time. However, the construction of a bridge over the culvert was planned to eventually allow the

extension of the Main Runway by some 400m to the west - *if negotiations with the BCC were successful.*

A copy of the Former Federal Airports Corporation [FAC] 1997 – 2010 Airport Master Plan *which included the Plan shown in Figure 12* was provided to each party bidding for the Airport Lease as part of the FAC's due diligence requirements, showing the bridge over the Road Culvert *and* to indicate the FAC's proposal to eventually extend runway 10L/28R to the west.

Leading up to the construction of the culvert, *although not infringing Australian Standards,* CASA and the FAC were fully cognitive of possible safety Issues arising due to it's construction, as prior to the start of the excavation of the culvert at least three Aircraft overrun accidents had occurred at this location in the past involving aircraft over-running the 10L Runway End and through the area where the road is currently located. Some aircraft had also continued through the western fence of the airport and into Brisbane City Council land to the west.
Note: *Prior to 2nd May 2003 Australia differed from ICAO in that under Australian Standards, the RESA* ***originated 60m from the end of the Runway*** *- whereas ICAO defined the origin of RESA as* ***60m from the end of the Runway Strip*** *(some further 60 meters from the end of the Runway). The Road Cutting position was determined using the non-ICAO conforming pre-2nd May 2003. The earlier Australian Standard is shown in Figure 11 below*.

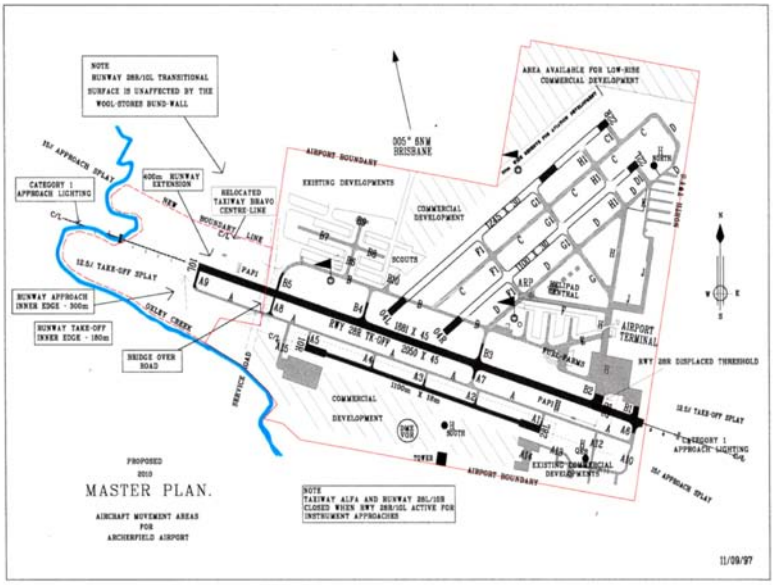
Figure 11



The Situation Prior to 2003.

Post 2nd May 2003, Australia adopted the ICAO "RESA" standards in Civil Aviation Safety Regulations Part 139. This had the effect of placing the culvert within runway 10Ls RESA. The Archerfield Airport 1997-2010 Master Plan (Refer Figure 12) was amended during construction of the culvert in 1997 to include the extension of the main 28R/10L runway into the vacant BCC property to the west. However, although negotiations with the BCC were in progress when the privatisation process ended, and as no Australian Standards *at the time* had been compromised, construction of the bridge was shelved and negotiations with the BCC ended.

Figure 12



The Archerfield Airport 1997 – 2010 Master Plan

Accident Example:
March 2003 *(post construction of the culvert)* an early touch down occurred. Aircraft VH-MZB (ATSB accident reference no 20030112) having suffered engine control issues touched down before the Threshold, impacted the fence (refer to fence line on diagram into the Brisbane City Council land) but had just sufficient lift remaining to negotiate the road crossing and came to rest on the runway side of the Road Culvert. The outcome could easily have been fatal had the aircraft had less inertia and actually fallen into the road culvert.

This current and untenable situation is now legally permitted due to MOS, Part 139 Section 6.2.25.1*. – Note 2.* The interim rule has no sunset clause. Provided Archerfield Airport Corporation does not change the runway's characteristics such as increasing the length, (refer MOS, Part 139, Section 6.2.25.2), there is no requirement to comply with ICAO RESA standards - even if an unsafe situation exists and near fatal incidents have occurred in the recent past.

The Archerfield Airport Corporation has proposed in the 2011-2031 Preliminary Draft Master Plan [PDMP] to increase runway 28R/10Ls length at the Eastern End *(Refer to PDMP, Part 1, Section 2, Clause 2.2.1- dot-point 2 on Page 22).* but has no proposal in the PDMP to conform with MOS Part 139 as required for RESA and as directed in the current Legislation - (Refer MOS, Part 139, Section 6.2.25.2).

3.2 PSA / RESA VIOLATION (at the 28R End) (*See Figure 13)*

Background:
Archerfield Airport Corporation whether by lease or otherwise has permitted a portion of aerodrome land *(The Subject Area)* to be used by Pickles Auctions for use as a Plant and Equipment Storage Area. *(Refer Figures 13 and14).* In order for the Brisbane City Council to have lawfully approved any works on private land or other land subject to state laws there would need to have been a major change to state planning policy (SPP1/02) regarding public safety areas. **There is no public evidence of statutory approval of these works having been given by the Department of Infrastructure and Transport Building Control Officer as is required by law.**

Figure 13

Figure 14

Under rules governing Public Safety Areas, there should be no increase in the number of people living, working or congregating in these areas and/or the accumulation of obstacles such as vegetation, (trees), buildings, vehicles, machinery, and signage etc. All such obstacles present a safety hazard to Aviation *(as well as the people on the ground).* Many hundreds of unsuspecting public are directed to this area on auction days, super concentrating the density of persons into the area on those days.

Under STATE PLANNING POLICY (SPP 1/02) - Annex 3, **Development in the Vicinity of Certain Airports and Aviation Facilities is effectively forbidden.** *(Refer Figure 14 for PSA Details).*

The State Planning Policy 1/02 was made under Schedule 4 of the *Integrated Planning Act 1997, and* took effect on 3 August 2002. This legislation was designed to protect the lives of aircrew and members of the public alike. Archerfield Airport falls within this group.

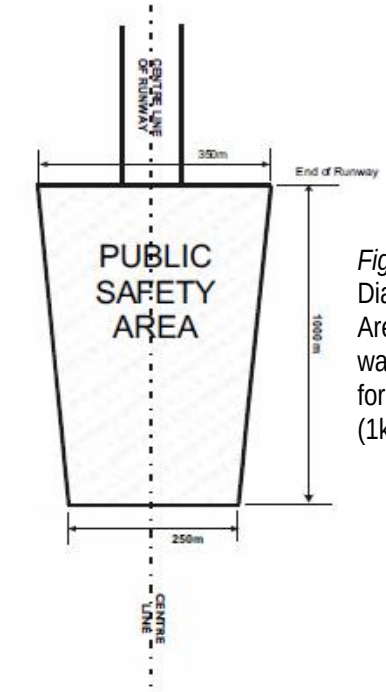
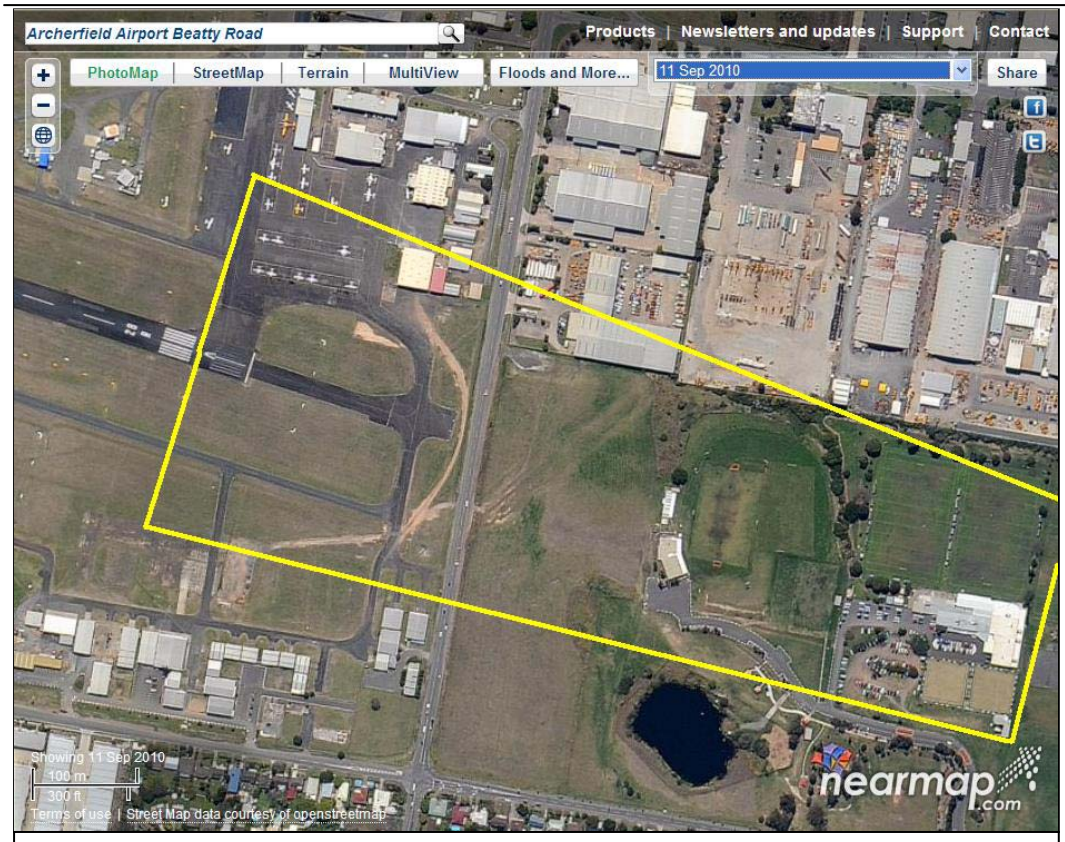


Figure 14:
Diagram of the Public Safety Area which extends outwards from the Runway's end for a distance of 1000m (1klm).



Public Safety Area Runway 28 R End at 11th September 2010 – Before Pickles Development

Public Safety Area Runway 28 R End at 24th March 2011 – After Pickles Development

At Archerfield Airport, in this latest attempt to industrialise airport land not only risks the lives of pilots and the general public, but further downgrades the airport to such an extent that the only remaining way to maintain a reasonable level of safety would be to **again**[i] reduce the length of the airport's main runway to a point that would make it unacceptable for larger aircraft. High performance cabin class twins turbo props and jets require all available runway length.

The fate of Queensland's only major General Aviation Airport will be further sealed if this seemingly innocuous development is not removed. It is apparent that those charged with the responsibility of overseeing proposal applications are placing commercial considerations ahead of safety. To the uninitiated, the approval by the BCC for Pickles Auctions to use the airport land for extra storage seems reasonable enough however; the repercussions of such a move may prove disastrous in the future – particularly for an aircraft in trouble.

Although there are no structures, except fencing in the subject area an aircraft landing short of the runway or over-running the runway end would not be in any less trouble if bull-dozers or similar pieces of heavy equipment were parked in the Subject Area. It is therefore crucial that the Subject Area be preserved as a Clearway as described in MOS Part 139, 6.2.30 in particular Clause 6.2.33.1 (Clearway Slope). Clause 6.2.32.2 (a) defines the width of a Clearway.
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By regulation, although the length of the Clearway must not be more than half the length of the Take- Off Run Available (TORA), the critical determination is predicated on the Clearway's *Slope* which under Clause 6.2.33.1 must not be greater than 1.25% taken from the Runway Strip End. The Subject Area is only 177m (2.21m rise) from the Runway Strip End and 345m (4.31m rise) at its eastern boundary thus making anything higher than between 2.21m and 4.31m on the site illegal. As several pieces of heavy equipment already stored on the site exceed 3.0m in height, the use of the Subject Area for the storage of heavy plant and equipment is totally unacceptable**.**

The Pickles Auctions expansion into the PSA area for the main runway presents an unacceptable safety hazard for users of the airport's main runway and is a dangerous potentially lethal situation for the public attending Pickles Auctions. The Flight Safety Foundation reports from worldwide data that overruns and runway excursions are involved in 20 percent of approach and landing accidents that involve accidents or serious incidents. Archerfield isn't an exception.

Geo-referenced General Aviation Accident Distribution Contour studies in United States show that 80 percent of arrival accidents occur within 650 metres either side of the runway centre line and within 1.6 nautical miles of the runway. Eighty percent of departure accidents are comparatively more dispersed laterally at 800 metres either side of the runway and .9 nautical miles from the runway ends. Any reasonable assessment of risk indicates that this development is at the level of "intolerable" risk as both the anticipated frequency of a negative event is high and the potential consequences associated with the event's occurrence are high.

Accident Example:
Several accidents have occurred at Archerfield Airport over recent years but one in particular stands out as a poignant example of what could occur when obstacles are placed within the Take-Off Splay of the airport's main runway.

On the 5th of January, 1982, VH-AYE, a Cessna 441A, suffered engine failure on take-off from Runway 10L and crashed into a building close to the subject area. There were five fatalities, the pilot and four workmen of Thiess Constructions on the ground in their work building. *(Refer Figure 15).*

Although the subsequent Investigation revealed the accident was due to pilot error, the proximity of developments at the end of runways is crucial for the safety of those who fly. The distance from the runway end in this instance was 455m (Refer Report No.19820005), however, the subject area (Pickles Auctions site) is only 177m from the end of the Runway Strip for runway 28L, that is much closer to the runway than the accident site.

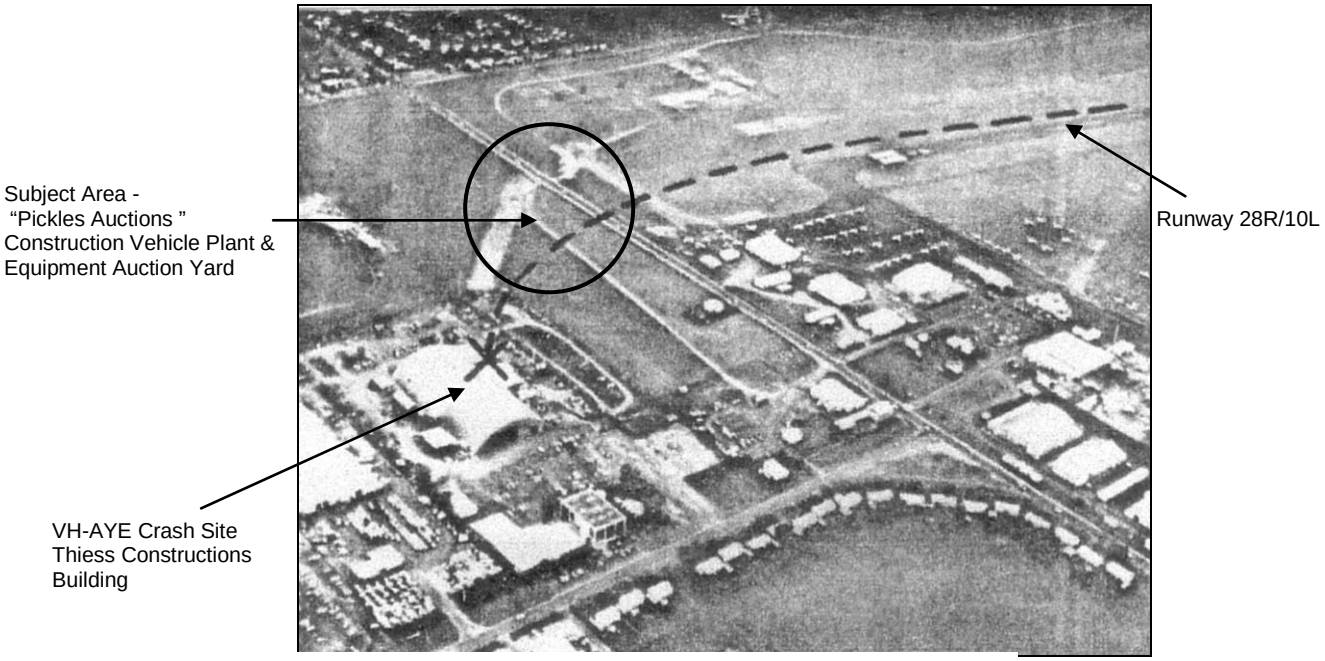


Figure 15 – *A Photograph taken in 1982 by the Crash Investigation Team*.

Had the pilot of the twin engine Cessna VH-AYE, handled the situation differently, he may have been able to save the situation by continuing straight ahead into the area now used by or leased to Pickles Auctions.

3.3 RISK ASSESSMENT OF RESA /PSA

The Risk Assessment of the Road Cutting (Culvert) and the "Pickles Development" is at the highest level of Safety - "Unacceptable". That is, both have a high likely-hood of an accident occurring with significant consequences. Incidents involving Runway Under-Shoot or Overrun are high frequency events, and have regularly occurred at the airport. On the balance of probabilities accidents are certain to occur again.

Historical Accident Data related to excavations at the end of runways reveal that anticipated consequences are more likely to be fatalities, injuries and damage to aircraft. **This is a reasonably foreseeable event requiring immediate correction.** Although there may be considerable financial consequences to both the Archerfield Airport Corporation and the Commonwealth due to potential liability claims for payment of compensation to injured persons and aircraft losses while the Road Culvert remains, of greater importance is the **ATSB's failure** to recognise a significant safety Issue exists at Archerfield Airport and that appropriate and immediate action must be taken.

Conclusion:
It is therefore clear that Commonwealth legislative action is required to address a situation within a runway's RESA that presents a clear and potential safety hazard. A sunset clause should be written into the MOS covering such works undertaken within a runway's RESA to require immediate remedial action by Airport Leasing Companies. In the case of Archerfield Airport, the current Archerfield Airport Corporation should be required to immediately conform with MOS Part 139 standards and either fill in the Road Culvert or construct a conforming bridge over the road to maintain compliance with Part 139/ICAO Standards regarding RESA.
It is crucial that the matter of preserving laws governing PSAs and Clear-Ways *in particular* are brought to the attention of the Federal/State Governments and the regulator to have this unacceptable approval rescinded, thus removing a potentially dangerous safety situation at this Airport.

3.4 THE 2011-2031 PRELIMINARY DRAFT MASTER PLAN

Part 1, Section 2, Clause 2.2.1- dot-point 3 on Page 22 of the PDMP suggests Archerfield Airport Corporation will maintain an option to construct a new, longer runway between the existing 10/28 parallel runways, potentially crossing Beaufighter Avenue.

The writer is of the view that this is a statement designed to provide comfort to those reading the PDMP by stating Archerfield Airport Corporation *may* expand the Airport's Movement Areas by *possibly* constructing a new longer runway *sometime in the future* between the existing 10/28 parallel runways.

This surely is an attempt to address its critics by including a *tongue-in-cheek* solution for obviating the problems already identified within these pages. A cursory examination will expose Archerfield Airport Corporation's proposal for what it is – a nebulous plan that is unlikely toever see the light of day.

The removal of the offending hangars for minimal cost is far more realistic than constructing a new main runway which would, in the end be exactly the same as that which already exists.

However, Part 15, Clause 15.2 - Table 5 on Page 139 – **5-10 year Timing** – Item 3 – under the heading ***"Key Initiatives",*** Archerfield Airport Corporation programs the upgrading of the existing runway 28R/10L and associated taxiways. The catalyst is described as being a *"Commitment to RPT, Freight or larger Corporate Aircraft".*

This may never happen.

Unfortunately, with, the downgrading to date, this is a real possibility.

The Minister for Infrastructure and Transport should therefore not approve any Master Plan for Archerfield Airport without a requirement that the Road Culvert be made safe within a specified time-frame – in this case *immediately.*

END

Explanation of Abbreviations

AAC	*Archerfield Airport Corporation Pty Ltd*
ABC	*Airport Building Controller – a Federal Government Appointee charged with the responsibility of ensuring all airport development works on Federal Airports, the subject of the Airports Act 1996 conform with current standards, the terms of Airport Lease and the Airports Act 1996 and associated regulations - where applicable.*
AHD	*Australian Height Datum – (usually High Water Mark).*
ALC	*Airport Leasing Company – (with respect to Archerfield Airport, AAC)*
ALC	*Airport Leasing Company*
ASDA	*Accelerate Stop Distance Available*
BOLT	*A steel bolt set in concrete marking a particular point (Usually including a Height Value).*
CAO	*Civil Aviation Orders – (CAO are issued by CASA under regulation 5 of the CARs. They include information on technical standards and specifications intended to amplify the generalised regulations contained in CARs)*
CAR	*Civil Aviation Safety Regulations 1998*
DAP	*Departure and Approach Procedures – A document prepared by Airservices Australia for pilots*
DER	*Departure End of the Runway*
DMP	*Draft Master Plan – Archerfield Airport Corporation's (2011 – 2031 Draft Master Plan for Archerfield Airport*
DOIAT	*The Federal Government Department of Infrastructure and Transport*
ERSA	*En Route Supplement Australia*
IFR	*Instrument Flight Rules – (Flight at night or at times of low visibility with reference only to instruments)*
IMC	*Instrument Meteorological Conditions - (Flight at times when visibility is restricted due to weather)*
IWI	*Illuminated Wind Indicator*
LDA	*Landing Distance Available*
MOS	*Manual of Standards – Australian standards based on International Civil Aviation Organisation (I.C.A.O.) standards and given legal effect by Part 139 of the Civil Aviation Safety Regulations 1998*
MTOW	*Maximum Take-Off Weight*
OIS	*Obstacle Identification Surface*
OLS	*Obstacle Limitation Surface*
PANS OPS	*Procedures for Air Navigation Services*
PSA	*Public Safety Area - A Queensland State Government requirement made pursuant to State Planning Policy 1-02, and given effect by schedule 4 to the Integrated Planning Act 1997 and designed to lessen risks to the public near the ends of airport runways.*
PSM	*Permanent Survey Mark – (usually including a Height Value)*
RESA	*Runway End Safety Area – Once measured from the Runway End, Now measured from the End of the*
RL	*Reduced Level - (usually expressed in metres as a Point Height Value).*
Runway Strip	*A defined area including the runway and stopway: intended to reduce the risk of damage to aircraft running off a runway; and to protect aircraft flying over it during take- off or landing operations.*
RWY	*Runway*
SURVEY	*Survey by Goodwin Midson, [Registered Surveyors] for work undertaken from 4th -28th May, 2011*
TIA	*Turn Initiation Area*
TODA	*Take-Off Distance Available*
TORA	*Take-Off Run Available*
VFR	*Visual Flight Rules – (Flight only in daylight and/or clear weather conditions with good visibility)*
YBAF	*The International Airport Identification Code for Archerfield Airport*

THE AIRSPACE OPERATORS, REGULATORS & SAFETY REVIEW GOVERNMENT BODIES:

AA	*Airservices Australia*
ATSB	*Australian Transport Safety Bureau*
CASA	*Civil Aviation Safety Authority*

Reduction of 374M from the original main runway length of 1471M for IFR Operations due to building of Corporate Hangars too close to the main runway.

contemplated as OIS for turns that commenced before the DER; however, there is no height specified in PANS-OPS for those areas to be considered as constituting OIS.

Implications for an instrument departure procedure

The opening paragraph to ICAO Document 8168, Volume II, Part 1, Section 3, Chapter 1 stated that:

> (a)… [a] departure procedure designed in accordance with this section provides obstacle clearance immediately after take-off until the aircraft intercepts the en-route segment.

Chapter 2, section 2.3.1.1 of that document stated that:

> The departure procedure begins at the departure end of the runway (DER), which is the end of the area declared suitable for take-off (i.e. the end of the runway or clearway as appropriate.)

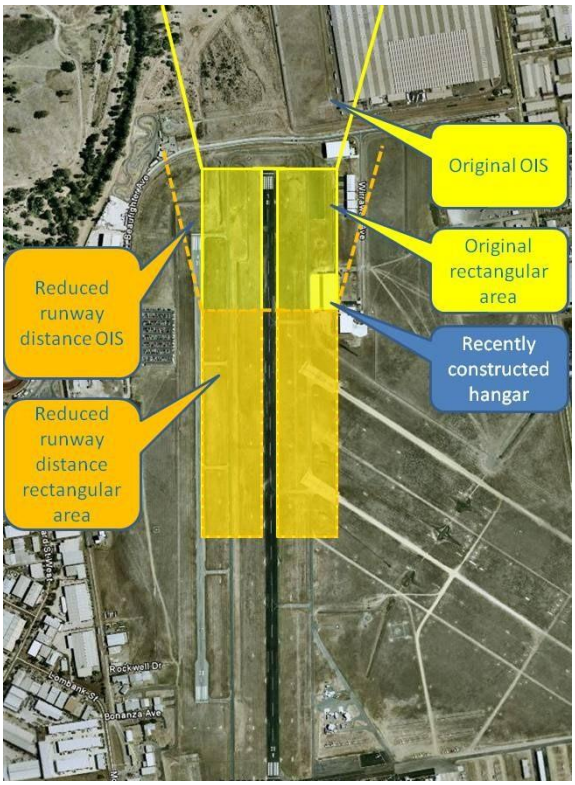
Aircraft were required to be airborne before the DER when taking off, so the two statements provided for different starting points for an instrument departure procedure.

Archerfield Airport runway 28 SID

The Archerfield Airport runway 28 SID required an aircraft to continue tracking on the runway heading until the aircraft had climbed to 900 ft above mean sea level (AMSL) (a height of 837 ft above the runway), and had passed the DER; which was originally 1,479 m from the runway threshold. Few IFR aircraft could climb 837 ft from a standing start in less than 1,500 m, so a departing aircraft could be expected to normally continue tracking on the runway heading until some distance after the DER.

Airservices Australia (Airservices) was the responsible agency for designing the Archerfield Airport runway 28 SID procedure. When Airservices became aware of a potential ambiguity in the PANS-OPS procedural requirements, the runway 28R SID procedure was redesigned to ensure it complied with a 'conservative approach' to the interpretation of the PANS-OPS requirements at that time. As a result, Airservices issued NOTAM[8] C250/07 on 15 October 2007, to implement the redesigned procedure. The NOTAM reduced the take-off run and distance available on runway 28R for instrument departures from over 1,400 m to 1,095 m. The reduced runway length ended abeam the start of the recently constructed hangar, which was located to the north of the runway strip (Figure 1). Shortening the available runway excluded the hangar from the 150 m rectangular area associated with the SID design requirements (see Figure 4).

Figure 4: OIS and TIA (plan view) for Archerfield runway 28 SID before and after the issue of NOTAM C250/07



Following a request from Airservices, the modification was agreed to by the Civil Aviation Safety Authority (CASA).

CASA has since provided a letter to Airservices clarifying the interpretation and application of the standards when designing instrument departure procedures. CASA indicated that it considered the

8 A NOTAM is a 'Notice to Airmen'. It is widely disseminated to give information on the establishment, condition or change in any aeronautical facility, service, procedure or hazard.

Archerfield – Runway 10L/28R VFR

Archerfield Runway 10I/28R Instrument

Table 7.1-1: Approach Runways

OLS & Dimensions (in metres and percentages)	Runway Classification									
	Non-instrument				Instrument					
					Non-precision			Precision		
	Code No				Code No			I Code No		II & III Code No
	1*	2	3	4	1, 2	3	4	1, 2	3, 4	3, 4
OUTER HORIZONTAL										
Height (m)									150	150
Radius (m)									15000	15000
CONICAL										
Slope	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Height (m)	35	55	75	100	60	75	100	60	100	100
INNER HORIZONTAL										
Height (m)	45	45	45	45	45	45	45	45	45	45
Radius (m)	2000	2500	4000	4000	3500	4000	4000	3500	4000	4000
APPROACH										
Length of inner edge (m)	60	80	150[a]	150	90	150	300[b]	150	300	300
Distance from threshold (m)	30	60	60	60	60	60	60	60	60	60
Divergence each side	10%	10%	10%	10%	15%	15%	15%	15%	15%	15%
First section length (m)	1600	2500	3000	3000	2500	3000	3000	3000	3000	3000
Slope	5%	4%	3.33%	2.5%	3.33%	3.33%	2%	2.5%	2%	2%
Second section length (m)	-	-	-	-	-	3600[c]	3600	12000	3600	3600
Slope	-	-	-	-	-	2.5%[c]	2.5%	3%	2.5%	2.5%
Horizontal section length (m)	-	-	-	-	-	8400[c]	8400	-	8400	8400
Total length (m)	1600	2500	3000	3000	2500	15000[c]	15000	15000	15000	15000
INNER APPROACH										
Width (m)								90	120	120
Distance from threshold (m)								60	60	60
Length (m)								900	900	900
Slope								2.5%	2%	2%
TRANSITIONAL										
Slope	20%	20%	14.3%	14.3%	20%	14.3%	14.3%	14.3%	14.3%	14.3%
INNER TRANSITIONAL										
Slope								40%	33.3%	33.3%
BAULKED LANDING										
Length of inner edge (m)								90	120	120
Distance from threshold (m)								[e]	1800[f]	1800
Divergence each side								10%	10%	10%
Slope								4%	3.3%	3.3%

Archerfield – Runway 22L/04R VFR DAY

All distances are measured horizontally unless otherwise specified.

* Runways used for RPT operations at night by aircraft with maximum take-off mass not exceeding 5,700 kg are required to meet code 2 standards.

[a] 90 m where width of runway is 30 m.

[b] 150 m if only used by aeroplanes requiring 30 m wide runway.

[c] No actual ground survey required unless specifically required by procedure designer. Procedure designer will use topographical maps and tall structure databank to determine minimum altitudes.

[d] Approach area up to this distance needs to be monitored for new obstacles. Refer to procedure designer's advice on significant high ground or tall structure that needs monitoring.

[e] Distance to end of runway strip.

[f] Or to the end of the runway strip, whichever is less.

7.1.3.5 The physical dimensions of the OLS surfaces, for take-off runways, must be determined using Table 7.1-2.

Archerfield Runway 10l/28R

Table 7.1-2: Take-off runways

Take-off climb surface – Dimensions (in metres and percentages)	Take-off Runways Code number		
	1*	2[a]	3 or 4
Length of inner edge	60	80	180 [b]
Minimum distance of inner edge from runway end [c]	30	60	60
Rate of divergence (each side)	10%	10%	12.5%
Final width	380	580	1800 [d]
Overall length	1600	2500	15000
Slope	5%	4%	2%[e]

Archerfield Runway 22L / 04R

All dimensions are measured horizontally unless otherwise specified.

* Runways used for RPT operations at night by aircraft with maximum take-off mass not exceeding 5,700 kg are required to meet code 2 standards.

[a] For aircraft above 5,700 kg the survey area does not cover full extent of obstacle clearance required as specified in CAO 20.7.1B.

[b] The length of the inner edge may be reduced to 90 m if the runway is intended to be used by aeroplanes having an mass less than 22,700 kg and operating in VMC by day. In this case the final width may be 600 m, unless the flight path may involve a change of heading in excess of 15°.

[c] The take-off climb starts from the end of clearway if a clearway is provided.

[d] The final width may be reduced to 1200 m if the runway is used only by aircraft with take-off procedure which does not include changes of heading greater than 15° for operations conducted in IMC or at night.

[e] The operational characteristics of aircraft for which the runway is intended should be examined to see if it is desirable to reduce the slope to cater for critical operating conditions as specified in CAO 20.7.1B. If the specified slope is reduced, corresponding adjustment in length for take-off climb is to be made so as to provide protection to a height of 300 m. If no object reaches the 2% take-off climb surface, new objects should be limited to preserve the existing obstacle free surface or a surface down to a slope of 1.6%.

7.1.3.6 Where two OLS surfaces overlap, the lower surface must be used as the controlling OLS.

GOODWIN MIDSON

SURVEYING | TOWN PLANNING | MAPPING

Our Ref: 14261:SJG
110614

14th June 2011

Archerfield Chamber of Commerce & Industry
GPO Box 2511
BRISBANE QLD 4001

Attention: Mr Clement Grehan

Dear Sir

Re: Building Heights
Wirraway Avenue, Archerfield Airfield

Further to your instructions in regard to this matter, we advise that we have undertaken remote determinations of the locations and elevations of three building structures; Warbirds Hangar, New Hangar & Qld Emergency Services Hangar, situated within the secured area of the Archerfield Airfield by a combination of both terrestrial and satellite surveying methods.

The following is a summary of the results of our survey based on the Geodetic Datum of Australia coordinate system and the Australian Height Datum from coordinated Permanent Survey Marks Nos. 52560 & 168234.

Warbirds Hangar (situated at the intersection of Wirraway & Beaufighter Avenues)

Corner	*Easting*	*Northing*	*Roof Height*
South-west	499703.55	6950539.38	18.3
South-east	499738.12	6950531.59	18.26
Southern ridge	499720.73	6950535.48	20.5
North west	499715.4	6950592.25	n/m

New Hangar (situated about the south-eastern end of Wirraway Avenue)

Corner	*Easting*	*Northing*	*Roof Height*
North-west	500005.43	6950466.27	21.29
South-west	499996.10	6950437.27	21.31
South-east	500076.30	6950411.70	21.28
South-west	499996.10	6950437.27	14.1 grd
South-east	500076.30	6950411.70	14.1 grd

The rounded ridge line of the **New Hangar** has been determined as follows:-

Ridge	*Easting*	*Northing*	*Roof Height*
Western	500000.62	6950451.62	23.26
Eastern	500080.59	6950426.13	23.26

We have further established by remote methods the distance of the New Hangar from the centre-line of the runway nominated as Runway 10L.

However, the accuracy of the distance determination is limited by the fact that we could not physically occupy the centre-line of the runway and are relying on the production of the broadly painted centre line to establish the offset to the structure.

The accuracy is therefore limited to the width of the painted line estimated to be of the order of 0.5 metre.

The airside facade of the New Hangar is 126.1 metres offset from the centre line of Runway 10L as qualified above.

Qld Emergency Services Hangar (situated at the eastern end of Wirraway Ave)

Corner	*Easting*	*Northing*	*Roof Height*
South-west	500106.85	6950441.83	23.27
North-west	500115.47	6950468.58	23.30
North-east	500148.08	6950458.14	23.35
Parapet south-east	500139.43	6950431.27	23.67
Parapet south-west	500101.69	6950443.36	23.72
Parapet centre west	500107.07	6950441.62	24.37
Parapet centre east	500134.09	6950432.98	24.32
Ridge line	500131.85	6950463.34	24.19

We trust the information satisfies your immediate queries in regard to this matter.

Yours faithfully
Goodwin Midson

Steve Grehan
Registered Surveyor/Director

GOODWIN MIDSON

STATE PLANNING POLICY 1/02

Development in the Vicinity of Certain Airports and Aviation Facilities

Integrated Planning Act 1997

STATE PLANNING POLICY 2/92
Planning for Aerodromes and Other Aeronautical Facilities

Repeal of State Planning Policy

The Minister for Local Government and Planning decided on 9 May 2002 to repeal State Planning Policy 2/92 **with effect from 2 August 2002**.

The State Planning Policy was repealed under s.2.4.6 of the *Integrated Planning Act 1997.*

Integrated Planning Act 1997

STATE PLANNING POLICY 1/02
Development in the Vicinity of Certain Airports and Aviation Facilities

The Minister for Local Government and Planning adopted State Planning Policy 1/02 on 9 May 2002.

Making of the State Planning Policy

State Planning Policy 1/02 was made under Schedule 4 of the *Integrated Planning Act 1997.*

Commencement

State Planning Policy 1/02 **took effect on 3 August 2002**.

POSITION STATEMENT

The Queensland Government considers that development in the vicinity of those airports and aviation facilities essential for the State's transport infrastructure or the national defence system should avoid:

- **adversely affecting the safety and operational efficiency of those airports and aviation facilities;**
- **large increases in the numbers of people adversely affected by significant aircraft noise; and**
- **increasing the risk to public safety near the ends of airport runways.**

1. PURPOSE OF THE POLICY

1.1 This State Planning Policy ('the SPP') sets out the State's interest concerning development in the vicinity of those airports and aviation facilities considered essential for the State's transport infrastructure or the national defence system.

2. APPLICATION OF THE POLICY

2.1 Under the *Integrated Planning Act 1997* (IPA), the SPP has effect when development applications are assessed, when planning schemes are made or amended, and when land is designated for community infrastructure[1].

Area to which the Policy applies

2.2 The SPP applies in the vicinity of those civil, military and joint-use airports[2] and aviation facilities[2] identified in Annex 1, but does not apply to those airports or aviation facilities themselves.

2.3 The specific areas to which the SPP applies vary with the issue being addressed and the particular airport or aviation facility, but are generally:

- beneath, or in the vicinity of, the airports' operational airspace[2];
- in the vicinity of the aviation facilities;
- within areas defined by the 20 Australian Noise Exposure Forecast (ANEF)[2] contour at and around each airport; and
- the public safety areas identified in Annex 3.

[1] SPP 1/02 Guideline: *Development in the Vicinity of Certain Airports and Aviation Facilities* describes in more detail how the SPP applies.

[2] See Section 9, Glossary.

Development to which the Policy applies

2.4 The SPP applies to development that:

- involves the actions or activities described in Annex 2 where these could adversely affect the safety and operational efficiency of operational airspace or the functioning of aviation facilities; or
- has the potential to increase the number of people living, working, congregating or attending education establishments, hospitals or public buildings within areas defined by the 20 Australian Noise Exposure Forecast (ANEF)[3] contour; or
- has the potential to increase the number of people or the use/storage of hazardous materials within public safety areas.

3. USING THE POLICY

3.1 The main outcome statements are depicted in bold within text boxes (Outcomes 1 to 7) and must be read in conjunction with the rest of the text.

3.2 Technical terms are explained or defined in Section 9, Glossary.

3.3 The following documents provide advice about implementing this SPP and are declared to be 'extrinsic material' under the *Statutory Instruments Act 1992*:

- SPP 1/02 Guideline: *Development in the Vicinity of Certain Airports and Aviation Facilities* (SPP 1/02 Guideline), as amended from time to time; and
- Australian Standard AS 2021- 2000: *Acoustics – Aircraft Noise Intrusion – Building Siting and Construction* (AS 2021) or any Australian Standard that supersedes AS 2021.

4. COMMONWEALTH REQUIREMENTS

4.1 Under the *Civil Aviation Act 1988* and supporting *Civil Aviation Regulations*, certain airports are licensed and the Civil Aviation Safety Authority (CASA) exercises powers to protect operational airspace[3] around those airports[4]. In addition, the Commonwealth Government's *Airports Act 1996* and the supporting *Airports (Protection of Airspace) Regulations* provides additional powers to protect the former Commonwealth airports of Archerfield, Brisbane, Coolangatta, Mount Isa and Townsville (civil component only). Although these five airports are leased to private operators, they are 'Commonwealth places' and therefore remain under the jurisdiction of the Commonwealth.

4.2 The Department of Defence operates military airports at Amberley, Oakey and Scherger, and is a joint operator of the civil/military airport at Townsville under the *Defence Act 1903* and the *Defence Act (Areas Control Regulation)*. This legislation, either alone or in conjunction with the *Airports Act 1996*, provides for the protection of operational airspace around these airports.

[3] See Section 9, Glossary.

[4] When this SPP was adopted, all the airports listed in Annex 1 except Bamaga/Injinoo were licensed.

4.3 The SPP needs to be considered **in addition to** the requirements of all relevant Commonwealth legislation[5].

5. THE NEED TO PROTECT AIRPORTS AND THE NEARBY COMMUNITY

Protecting Airports and Aviation Facilities

5.1 The airports and aviation facilities to which this SPP applies are essential elements of the National and State air transport network or the national defence system, and comprise a considerable investment. It is therefore essential that these airports together with those aviation facilities, be protected from development that could undermine their safety or operational efficiency. Development can adversely affect airports, aircraft operations and the functioning of aviation facilities both directly and indirectly.

Direct Impacts

5.2 The direct impacts involve development that has the potential to adversely affect an airport's operational airspace. The safety and efficiency of operational airspace can be compromised not only by buildings and structures, but also by 'outputs' (such as smoke, plumes and lighting) and congregations of wildlife, particularly birds or bats.

5.3 The functioning of navigation, communication or surveillance aviation facilities, some of which are considerable distances from airports, can be affected by physical 'line of sight' obstructions and 'outputs' such as significant electrical or electro-magnetic emissions. Annex 2 lists the actions and activities likely to compromise the operational integrity of operational airspace and aviation facilities.

Indirect Impacts

5.4 The indirect impacts of development arise when people living in, working in, or visiting that development perceive aircraft noise as a significant problem and consequently campaign to curtail aircraft operations to reduce the noise impacts. Therefore, encroachment by incompatible development may ultimately compromise the future of the airports to which this SPP applies[6].

Protecting the Community

5.5 Incompatible development encroaching on airports also has implications for community amenity and public safety.

Community Amenity

5.6 People living, working and congregating in areas adversely affected by significant aircraft noise experience a reduction in amenity. Therefore, development in the vicinity of airports needs to be compatible with forecast levels of aircraft noise.

[5] SPP 1/02 Guideline provides more information about Commonwealth requirements.

[6] See Annex 1.

Public Safety

5.7 While past experience demonstrates that air transport is safe, an increased risk of an aircraft accident exists at, and immediately beyond, the ends of runways. Decisions about development need to reflect that risk to protect the safety of people in the aircraft and on the ground.

6. DEVELOPMENT OUTCOMES AND DEVELOPMENT ASSESSMENT

6.1 This section sets out the development outcomes expected in the vicinity of those airports and aviation facilities considered essential for the State's transport infrastructure or the national defence system. When development applications are assessed against this SPP or land is being designated for community infrastructure, regard must be had to Outcomes 1 to 4 and the remainder of Section 6. However, this SPP is not to be used when assessing development applications for building work assessable only against the *Standard Building Regulation*.

Operational Airspace and Aviation Facilities

Outcome 1: When undertaking development to which this SPP applies[7], adverse effects on the safety and operational efficiency of operational airspace[8] and the functioning of aviation facilities[8] are avoided by:

- **not including the actions and activities listed in Annex 2; or**
- **including appropriate site planning and management plans that avoid the potential adverse effects of such activities.**

6.2 Where not depicted in the planning scheme, the areas and dimensions of an airport's operational airspace can be obtained from the airport operator and are found in the airport master plans[8].

6.3 For each type of aviation facility described in Annex 1, there is a differing defined sensitive area within which development involving certain actions and activities could have adverse effects on the aviation facility concerned[9].

6.4 When assessing development applications, the assessment manager will need to confirm whether the proposed development includes actions and activities that have the potential to adversely affect operational airspace or the functioning of aviation facilities. Where further clarification is necessary, it should be the subject of an information request under IDAS[8].

[7] See Section 2.

[8] See Section 9, Glossary.

[9] The differing dimensions of the sensitive areas are set out in the SPP 1/02 Guideline.

Areas affected by Significant Aircraft Noise

Outcome 2: Within areas defined by the 20 ANEF[10] contour around airports to which this SPP applies, material changes of use are compatible with forecast levels of aircraft noise except where:

- **the proposed development is a development commitment[10]; or**
- **there is an overriding need for the development in the public interest, and no other site is suitable and reasonably available for the proposal.**

6.5 Areas affected by significant aircraft noise are those within the 20 ANEF contour. The ANEF system underpins AS 2021[11], which addresses aircraft noise, its compatibility with land uses, and standards of noise attenuation. An airport's ANEF chart can be found in the airport's master plan or by contacting the airport operator.

Compatible Development

6.6 Material changes of use within the 20 ANEF contour are compatible with forecast levels of aircraft noise when consistent with the SPP 1/02 Guideline's classification of land use compatibility within specific ANEF contours[12].

6.7 Development applications for material changes of use in the vicinity of an airport should identify their location in relation to the airport's ANEF chart to help establish whether the proposed use is compatible with the relevant ANEF contour. Where that information is not provided, it should be the subject of an information request under IDAS.

Development Commitments and Overriding Need

6.8 This SPP aims to avoid large increases in the numbers of people exposed to particular levels of aircraft noise. However, this objective may not be achievable in certain circumstances.

- First, existing development commitments for particular material changes of use should not be nullified by applying this SPP. Nevertheless, the adverse impacts of aircraft noise should be mitigated where practicable by the use of appropriate conditions on development permits to achieve Outcome 3.
- Second, in some cases it may be possible to demonstrate that a proposed development would fulfil a particular public interest to an extent that would override the public interest in the development being compatible with forecast levels of aircraft noise.

[10] See Section 9, Glossary.

[11] See Paragraph 3.3 above.

[12] This classification is derived from AS 2021 and is set out in the SPP 1/02 Guideline.

6.9 Determining an overriding need in the public interest will depend on the circumstances of the particular development proposal. The proposal should result in a significant overall benefit to the community in social or economic terms that outweighs:

- the adverse environmental impacts arising from the development's exposure to aircraft noise; and
- the potential risk that occupiers of the development would at some future time pressure the airport to limit aircraft operations for environmental reasons, thereby prejudicing the airport's efficiency and ultimately, its viability.

Also, it should be shown that a similar benefit could not be achieved by developing other suitable and reasonably available sites[13].

Outcome 3: Within particular ANEF contours around airports to which this SPP applies[14], certain development includes noise attenuation measures.

6.10 Noise attenuation measures should be required for buildings associated with material changes of use that SPP 1/02 Guideline states are:

- compatible subject to conditions within the applicable ANEF contour; or
- incompatible within the applicable ANEF contour.

Material changes of use that are incompatible should only be permitted as a development commitment or on the grounds of overriding need in accordance with Outcome 2.

6.11 Where the development is compatible subject to conditions, or incompatible, the noise attenuation measures should be required to achieve the desired indoor noise levels specified in the SPP 1/02 Guideline[15].

Public Safety Areas

6.12 Public safety areas are located at both ends of those airport runways specified in Annex 3 and have the dimensions also specified in Annex 3.

Outcome 4: Except where the proposed development is a development commitment[16], development within the public safety areas at the ends of airport runways avoids:

- **significant increases in people living, working or congregating in those areas; and**
- **the use or storage of hazardous materials.**

[13] SPP 1/02 Guideline provides advice about interpreting 'overriding need'.

[14] See Annex 1.

[15] These standards are derived from AS 2021 and are set out in Chapter 4 of the Guideline. However, if a Queensland code is prepared under the *Standard Building Regulation* addressing the attenuation of aircraft noise in buildings, that code will supersede the standards set out in the SPP 1/02 Guideline for aircraft noise attenuation.

[16] See Section 9, Glossary.

6.13 In the public safety areas, the risk of an accident involving aircraft landing and taking off is sufficient to justify restrictions on development within those areas. Increased risks to public safety can arise from development that involves the following:

- residential uses;
- the manufacture or bulk storage of flammable, explosive or noxious materials;
- uses that attract large numbers of people (e.g. sports stadium, shopping centre, industrial or commercial uses involving large numbers of workers or customers); or
- institutional uses (e.g. education establishments, hospitals).

6.14 Development commitments stand and should not be nullified by applying this SPP, except where owners/developers agree by negotiation to reduce the scale of the public risk within the public safety areas. However, conditions on development permits should be used to minimise the risk where such conditions are consistent with the development commitment[17].

7. MAKING AND AMENDING A PLANNING SCHEME

7.1 Planning schemes should aim to achieve Outcomes 1 to 4 in Section 6 by identifying particular information, and containing appropriate planning strategies and development assessment measures.

Identifying relevant information in the Planning Scheme

Outcome 5: The planning scheme identifies:

a) for each of the airports identified in Annex 1:
- **the operational airspace; and**
- **areas within the 20 ANEF[18] contour;**

b) the sensitive areas for the aviation facilities described in Annex 1; and

c) public safety areas at both ends of those runways as shown in Annex 3.

Operational Airspace and Aviation Facilities

7.2 Operational airspace should be identified in the planning scheme using information from the airport's master plan and, for military and joint civil/military airports, the *Defence Act (Areas Control Regulation)* under the *Defence Act 1903*. Where there is no airport master plan, operational airspace should be identified in consultation with the airport operator.

7.3 SPP 1/02 Guideline contains information on the types of aviation facilities that occur in the relevant local government areas. For each type of facility, the dimensions of sensitive areas within which development has the potential to affect the functioning of aviation facilities are described in the Guideline.

[17] SPP 1/02 Guideline provides advice about such use of conditions.

[18] See Section 9, Glossary.

Areas affected by Significant Aircraft Noise

7.4 The planning scheme should identify the ANEF contours derived from an airport's ANEF chart, which identifies a series of ANEF contours from 20 upwards. An airport's ANEF chart can be found in the airport master plan[19] or by contacting the airport operator.

Public Safety Areas

7.5 Annex 3 specifies the airports and runways for which public safety areas should be identified, and the dimensions of those public safety areas.

Reflecting the SPP in Planning Strategies

Outcome 6: For areas to which this SPP applies[20], the planning scheme contains planning strategies that give preference to development that:

a) avoids adversely affecting the safety and efficiency of an airport's operational airspace or the functioning of aviation facilities;

b) is compatible with forecast levels of aircraft noise within the 20 ANEF contour; and

c) avoids increasing risks to public safety near the ends of airport runways.

Operational Airspace and Aviation Facilities

7.6 Allocated land uses and associated development in the vicinity of airports and aviation facilities should be consistent with Outcome 1.

Areas affected by Significant Aircraft Noise

7.7 Allocated land uses and associated development within the 20 ANEF contour should be consistent with Outcome 2 and SPP 1/02 Guideline regarding the suitability of particular land uses within specific ANEF contours.

Public Safety Areas

7.8 Allocated land uses and associated development within public safety areas should be consistent with Outcome 4.

[19] See Section 9, Glossary.

[20] See Section 2.

Reflecting the SPP in detailed Planning Scheme measures

Outcome 7: The planning scheme contains detailed measures that:

a) include a code(s) designed to achieve development outcomes that are consistent with Section 6; and

b) ensure that development to which this SPP applies is assessable or self-assessable against that planning scheme code(s).

The planning scheme, or planning scheme policy(s), specifies the information expected to be submitted with development applications subject to the code(s).

7.9 The combination of development assessment tables and code(s) in the scheme need to ensure that all relevant development is assessed against specific development standards that are consistent with Section 6.

7.10 Section 6 describes the information that should be submitted with development applications that are to be assessed against the code(s). The planning scheme or supporting planning scheme policy(s) should make it clear that where such information is not provided with a development application, that information will be subject to an information request under IDAS[21].

8. INFORMATION AND ADVICE ON THE POLICY

8.1 The Queensland Department of Transport can provide advice on the interpretation and implementation of the policy, and the relevant contacts in appropriate agencies for specific aviation issues.

8.2 The Queensland Department of Local Government and Planning can provide advice about reflecting the SPP in planning schemes and the operation of IDAS.

9. GLOSSARY

9.1 The following terms are used in the SPP as defined below.

Airport: refers to the airports (civil, military or joint civil/military) listed in Annex 1. The term includes all site facilities and any building, installation and equipment used for the control of aircraft operations and any facility provided at such premises for the housing, servicing, maintenance and repair of aircraft, and for the assembly of passengers or goods.

Airport master plan: sets out the future development and operational parameters of the airport. The plans are prepared and adopted by the airport operator and various components are endorsed by the relevant Commonwealth agencies.

[21] See Section 9, Glossary.

Airport master plan: sets out the future development and operational parameters of the airport. The plans are prepared and adopted by the airport operator and various components are endorsed by the relevant Commonwealth agencies.

Australian Noise Exposure Forecast (ANEF): a single number index (expressed on an ANEF chart as a series of contours) that predicts for a particular future year (usually 10 or 20 years ahead) the cumulative exposure to aircraft noise likely to be experienced by communities near airports during a specified time period (usually one year). [**NB:** A detailed definition and explanation is set out in the SPP 1/02 Guideline].

Aviation facilities: navigation, communication or surveillance installations provided to assist the safe and efficient movement of aircraft. Such facilities may be located either on or off airport.

Development commitment: includes any of the following:

- development with a valid development approval;
- exempt development, self-assessable development or development only assessable against the *Standard Building Regulation*;
- development clearly consistent with the relevant zone (or equivalent) in a planning scheme;
- development for a land use that is allocated in a transitional planning scheme (e.g. strategic plan, development control plan) where the development intent is clear and unqualified;
- a subdivision or other reconfiguration of allotment boundaries consistent with the requirements of the relevant planning scheme; or
- development consistent with a designation for community infrastructure.

Integrated Development Assessment System (IDAS): IDAS is a framework that establishes a common statutory system under the IPA for making, assessing and deciding development applications – regardless of the nature of development, its location in Queensland or the authority administrating the regulatory control.

Operational airspace:

a) for civilian airports:
the areas and vertical dimensions of the Obstacle Limitation Surface (OLS) and the Procedures for Air Navigation Services - Aircraft Operational Surfaces (PANS-OPS); and

b) for military airports:
the areas and vertical dimensions of the Obstruction Clearance Surfaces (OCS) and the height restriction zones defined in the *Defence Act (Areas Control Regulation)* under the *Defence Act 1903*; and

c) for airports operating as joint civil and military airports:
the Joint Obstruction Clearance Surfaces (combination of the military OCSs, height restriction zones and the civilian OLS and PANS-OPS) as depicted in the *Defence Act (Areas Control Regulation)* under the *Defence Act 1903*.

Public safety area: an area defined in this SPP immediately beyond the end of a runway and having a relatively high risk from an aircraft incident. The dimensions of the public safety areas are set out in Annex 3.

ANNEX 1

Airports and Aviation Facilities to which the SPP applies

Airports

A1.1 The following airports have been determined as being of State significance on the basis that they meet one or more of the following criteria:

- is used as an international gateway or international alternate;
- is used regularly for military purposes;
- is under the control of a State agency as trustee;
- is a key regional hub;
- is an economic, industry, mining or tourism centre;
- is likely to influence major growth, environmental or land use decisions;
- plays a key emergency service role; or
- has a significant number of aircraft movements.

Amberley*	Mackay
Archerfield+	Mareeba
Bamaga / Injinoo	Maroochydore / Sunshine Coast
Brisbane+	Maryborough
Bundaberg	Mount Isa+
Cairns	Oakey*
Coolangatta / Gold Coast+	Proserpine
Emerald	Rockhampton
Gladstone	Scherger*
Hamilton Island	Toowoomba
Hervey Bay	Townsville*+
Horn Island	Weipa
Longreach	

* Military airports that are subject to the *Defence Act (Areas Control Regulation)* implemented by the Commonwealth Department of Defence under the *Defence Act 1903*. Proposed works that would be taller than the height shown in the height restriction zones for these airports require the approval of the Department of Defence.

\+ Although leased to private operators (or part leased in the case of the joint civil/military airports), these airports are 'Commonwealth places' within the meaning of the *Commonwealth Places (Application of Laws) Act 1970* and come under the regulatory regime of the Commonwealth *Airports Act 1996*. Part 12 of the *Airports Act 1996*, and the *Airports (Protection of Airspace) Regulations* made under this Part provide for the protection of airspace around these airports.

Aviation Facilities

A1.2 The SPP applies to aviation facilities that have a navigation, communication or surveillance function and are:

- directly associated with the operations of an airport listed above and operated by the airport owner; or
- a system-wide (or en-route) aviation facility operated by Airservices Australia, the Commonwealth Department of Defence, or another agency under contract to the Commonwealth.

A1.3 The SPP 1/02 Guideline contains a list of the aviation facilities to which the SPP applies, together with the type of facility and the local government areas in which they are located.

A1.4 Regard should also be given to Commonwealth legislation covering aviation facilities, in particular the *Air Services Act 1995*, *Civil Aviation Act 1988* and the *Defence Act 1903*.

ANNEX 2

Adverse Effects on Operational Airspace and Aviation Facilities

Operational Airspace

A2.1 Adverse effects on operational airspace can arise from development that involves the following (includes 'Controlled Activities' as per Section 182 of the *Airports Act 1996*):

- a permanent or temporary physical obstruction (natural or man-made) of operational airspace;
- a gaseous plume with a high velocity (exceeding 4.3m per second) that penetrates operational airspace;
- transient intrusions into operational airspace of aviation activities (e.g. parachuting or hot air ballooning);
- a propensity to attract wildlife, in particular flying vertebrates (e.g. birds or bats), into operational airspace (from land uses such as landfill [waste management], race tracks or food processing plants);
- lighting that could:
  a) distract or temporarily interfere with a pilot's visibility while in control of approaching or departing aircraft; or
  b) confuse pilots through similarities with approach or runway lighting; or
- the generation and emission of airborne particulate, which may impair the visual conditions in the vicinity of an airport.

Aviation Facilities

A2.2 Adverse effects on the functioning of aviation facilities can arise from development that penetrates a facility's sensitive area by:

- physical 'line of sight' obstructions;
- electrical or electro-magnetic emissions; or
- structures containing a reflective surface.

Note: SPP 1/02 Guideline provides more detail on the actions and activities listed above, including the circumstances where adverse impacts on operational airspace and aviation facilities should be addressed.

ANNEX 3

Airport Runways for which a Public Safety Area applies

A3.1 A public safety area is identified for the main runways at the airports listed below:

a)
Amberley
Archerfield
Brisbane
Cairns
Coolangatta / Gold Coast
Gladstone
Longreach
Mackay
Maroochydore / Sunshine Coast
Oakey
Rockhampton
Townsville
Scherger

And

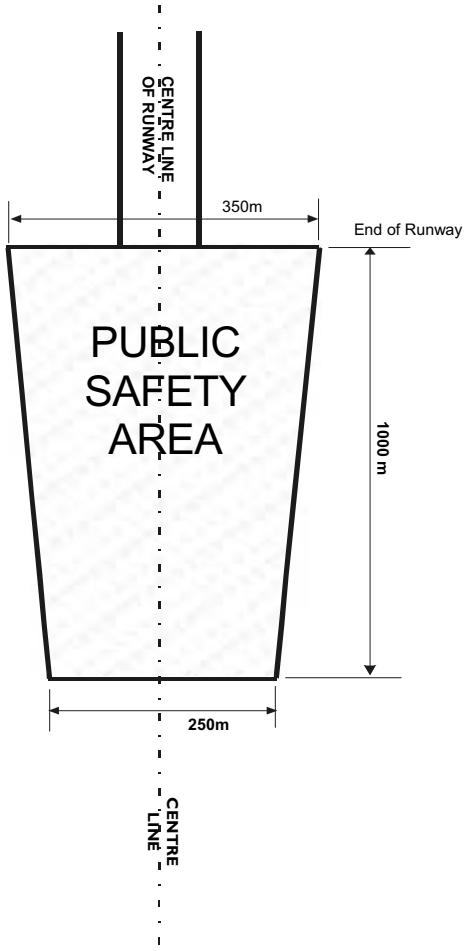
b) Other runways for the airports listed in a) above or for the airports listed in Annex 1 where:

- regular public transport jet aircraft services are provided; or
- where a high level of aircraft movements exist (i.e. greater than 10,000 per year, excluding light aircraft movements)[22].

A3.2 The Queensland Department of Transport can advise which airports are expected to experience such a level of traffic movements.

[22] At the time this SPP was adopted, no runways other than those listed in a) met either of these criteria.

DIMENSIONS FOR A PUBLIC SAFETY AREA



Note: Applies to each runway end.

Explanatory Notes:

1. The dimensions above indicate an area where the risk per year, resulting from an aircraft crash, to a representative individual (individual risk) is of the order of 1 in 10,000 (10^{-4}).

2. The dimensions also partially enclose an area of individual risk of the order of 1 in 100,000 (10^{-5}). As general guidance, it would be inappropriate for a use described in Section 6.13 of the SPP to be exposed to a higher individual risk than 1 in 10,000 (10^{-4}).

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Copies of the State Planning Policy 1/02 – *Development in the Vicinity of Certain Airports and Aviation Facilities* are available on the Department of Local Government and Planning's website at www.dlgp.qld.gov.au as well as Queensland Transport's website at www.transport.qld.gov.au

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