

**STATE PLANNING POLICY 1/02  
GUIDELINE**

**Development in the  
Vicinity of Certain Airports  
and Aviation Facilities**



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## 1. PURPOSE OF THE GUIDELINE

- 1.1 The purpose of this Guideline is to provide information and advice on interpreting and implementing State Planning Policy 1/02: *Development in the Vicinity of Certain Airports and Aviation Facilities* (SPP 1/02).

## 2. APPLICATION OF THE SPP

### Effect of the SPP

- 2.1 Under the *Integrated Planning Act 1997* (IPA), SPP 1/02 has the following effects.

#### *Development Assessment*

- 2.2 SPP 1/02 applies to assessable development, except building work only assessable under the *Standard Building Regulation*<sup>1</sup>, in the following ways:

- i) *IPA Planning Schemes*: Where an IPA planning scheme is in force, the assessment manager must have regard to SPP 1/02 when assessing development applications under IDAS<sup>2</sup>.

**[NB: The *Integrated Planning & Other Amendments Act 2001* amended the role of SPP's in development assessment, but when this Guideline was written the amendments were not expected to take effect until late in 2002 or in 2003. Therefore, SPP 1/02 applies to development applications made before those amendments take effect in the following ways:**

- where SPP 1/02 has been appropriately reflected in the planning scheme<sup>3</sup>, SPP 1/02 is not considered separately in development assessments; and
- where SPP 1/02 has not been appropriately reflected in the planning scheme, the assessment manager must have regard to SPP 1/02 when assessing development applications subject to impact assessment under IDAS<sup>2</sup>.]

- ii) *Transitional Planning Schemes*: Where a transitional planning scheme is in force, the assessment manager must have regard to SPP 1/02 when assessing development applications requiring a development approval under the planning scheme.

#### *Making or Amending the Planning Scheme*

- 2.3 SPP 1/02 should be appropriately reflected in planning schemes for those local governments with airports and aviation facilities subject to SPP 1/02 to ensure the State's interests are interpreted in the local context when planning for future development and making decisions on development applications.

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<sup>1</sup> See Paragraph 6.1 of SPP 1/02.

<sup>2</sup> See Section 8, Glossary.

<sup>3</sup> Each planning scheme must identify those State Planning Policies that have been appropriately reflected.

- 2.4** SPP 1/02 is appropriately reflected when it is integrated with those planning schemes to the extent that the State's interests are not adversely affected. Essentially, this means that the planning scheme seeks the same outcomes as SPP 1/02 to an extent that satisfies the Minister for Local Government and Planning (acting for the State Government on the advice of the Queensland Department of Transport and the Department of Local Government and Planning), and all aspects of the planning scheme are consistent with those outcomes.

#### ***Land designated for Community Infrastructure***

- 2.5** SPP 1/02 must be considered when designating land for community infrastructure. Community infrastructure is defined in the IPA, which also prescribes the designation process.

#### ***Other Considerations***

- 2.6** SPP 1/02 sets out the expected development outcomes for the issues it addresses. However, a local government, in consultation with its local community, may choose to adopt higher standards in the planning scheme.
- 2.7** Also, for those airports and aviation facilities not listed in Annex 1 of SPP 1/02, a local government may choose to incorporate in its planning scheme the same, or similar, outcomes as those in SPP 1/02. However, such action is not required by SPP 1/02.

#### **Areas to which the SPP applies**

- 2.8** SPP 1/02 applies to areas in the vicinity of those civil, military and joint-user airports and aviation facilities identified in Annex 1 of SPP 1/02, although the list of specific aviation facilities covered by the SPP is contained in Appendix 2 of this Guideline. These areas necessarily vary depending on the issue being addressed, and are defined as land:
- beneath an airport's operational airspace;
  - within and/or beneath an aviation facility's sensitive area;
  - within an airport's 20 Australian Noise Exposure Forecast (ANEF) contour; or
  - within public safety areas at the end of airport runways as specified by Annex 3 of SPP 1/02.

#### ***Operational Airspace***

- 2.9** An airport's operational airspace varies with each airport, but can extend for approximately 15km from the airport runways<sup>4</sup>. However, the further from the airport (depending on local terrain), the less likely development is to affect operational airspace directly because the height of operational airspace above level ground increases with increased distance from the airport runways. Nevertheless, development that has significant external lighting or attracts significant numbers of wildlife (particularly birds and bats) has the potential to have adverse impacts on operational airspace at distances up to 6km and 13km respectively from the runways.

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<sup>4</sup> See Appendix 1.

### ***Sensitive Areas around Aviation Facilities***

- 2.10** An aviation facility's sensitive area varies with the type of facility. Appendix 3 provides information on the dimensions and form of the differing sensitive areas.

### ***Areas affected by Significant Aircraft Noise***

- 2.11** The land within an airport's 20 ANEF contour has an irregular shape (generally reflecting the layout of the airport's runways) and can extend for some distance from the ends of runways. Appendix 4 gives an example of the extent of an airport's ANEF chart, which delineates a series of ANEF contours starting at 20 and increasing in value with the intensity of noise.

### ***Public Safety Area***

- 2.12** The land within the public safety area at the ends of airport runways is specified in Annex 3 of SPP 1/02.

### **Development to which the SPP applies**

- 2.13** SPP 1/02 applies to development described in paragraph 2.4 of the SPP.

## **3. KEY AIRPORT AND AVIATION OPERATIONAL ISSUES FOR DEVELOPMENT ASSESSMENT AND PLANNING**

### **Protecting Operational Airspace**

- 3.1** Airports require airspace in their vicinity to allow for aircraft landing, take-off or manoeuvring operations to be undertaken safely and efficiently. This airspace is described as operational airspace. During these operations, pilot workload is greatest and the aircraft is least manoeuvrable. Different airspace requirements are defined for visual and non-visual flight conditions. This depends on whether or not a pilot has the scope to operate below cloud with sufficient visibility to see and avoid other aircraft and/or obstacles while completing landing or take-off manoeuvres.
- 3.2** Operational airspace is defined in SPP 1/02 as follows:
- 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 depicted in the *Defence Act (Areas Control Regulation)* under the *Defence Act 1903*; and
  - c) for airports operating as a joint civil and military airport:**  
the Joint Obstruction Clearance Surfaces (combination of the military OCS, height restriction zones and the civilian OLS and PANS-OPS) as depicted in the *Defence Act (Areas Control Regulation)* under the *Defence Act 1903*.

### ***Obstacle Limitation Surfaces (OLS)***

- 3.3** The OLS is defined by the Civil Aviation Safety Authority (CASA) and depends on factors such as runway length (which determines likely aircraft use) and whether a runway has an instrument approach/departure procedure. The OLS may extend to a radius of approximately 15km from the airport and may require objects to be restricted below defined elevations. An airport master plan should include an OLS chart, and Appendix 1 shows how an OLS is usually depicted.
- 3.4** The OLS comprises a set of surfaces defined by reference to the runway strip(s)<sup>5</sup> or to the airport itself. The OLS primarily assists pilots by limiting obstacles that may affect the approach to landing. The OLS recognises the conventional circuit pattern used by pilots to manoeuvre for the runway in use, to line up for the final approach, and make an approach to land. It also allows for the possibility of a missed approach.
- 3.5** These manoeuvres are catered for by the inverted conical-shaped, inner horizontal, approach and transitional surface components of the OLS. At larger airports, the possibility of wide visual circuits by larger aircraft is allowed for by providing an outer horizontal surface. The take-off is catered for by the take-off climb component of the OLS.
- 3.6** The OLS is used to determine when an intrusion into airspace is an obstacle to an aircraft operating to or from the airport. The individual surfaces are each used to assess the implications of a particular obstacle. The intrusion of some obstacles may be considered acceptable provided they are either shielded by an existing obstacle or made conspicuous with marking and/or lighting.

### ***Procedures for Air Navigation Services – Aircraft Operations Surfaces (PANS-OPS)***

- 3.7** Airservices Australia, or in some cases the airport operator, provide a range of aircraft navigation aids to assist pilots making an instrument approach to land at an airport when weather conditions limit visibility. The development of PANS-OPS charts is necessary at busy airports to maintain a regular scheduled airline service. An airport master plan should include a PANS-OPS chart.
- 3.8** In PANS-OPS charts, surfaces are identified for non-visual approaches and departures. These are laid over the existing airspace intrusions to establish the minimum safe altitude to which an aircraft can descend or manoeuvre in making an approach to land. PANS-OPS surfaces are aligned with the direction in which a pilot makes an approach to land, and with the track specified for a missed approach. They will normally be higher than the OLS and cannot be penetrated by man-made or natural objects, including terrain and trees.

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<sup>5</sup> Each runway is located within a runway strip, which is a prepared and usually grassed area extending either side of the runway and around each end.



### ***Obstruction Clearance Surfaces (OCS) and Height Restriction Zones***

- 3.9** For military airports, OCS and height restriction zones are similar in design and purpose to the civilian OLS. The OCS and height restriction zones are depicted in the *Defence Act (Areas Control Regulation)* for the relevant airport. Appendix 1 provides an example of the height restriction zones.

### ***Joint Obstruction Clearance Surfaces (JOCS)***

- 3.10** For airports operating as joint civil and military airports, Joint Obstruction Clearance Surfaces (JOCS) combine the civilian OLS, the military OCS and the height restriction zones. The JOCS are also depicted in the *Defence Act (Areas Control Regulation)* under the *Defence Act 1903*.

### **Protecting Aviation Facilities**

- 3.11** Aviation facilities are navigation, communication or surveillance facilities provided to allow:
- pilots to navigate while en-route between airports;
  - pilots to utilise terminal area navigation aids to conduct instrument approach procedures;
  - dialogue between pilots and air traffic control (ATC); and
  - ATC to monitor and confirm an aircraft location.
- Appendix 2 lists those aviation facilities to which the SPP applies.

### ***Sensitive Areas around Aviation Facilities***

- 3.12** Aviation facilities need airspace in their vicinity to be clear from physical obstructions, competing radio transmissions and significant electrical/electromagnetic emissions, to function effectively. This airspace around aviation facilities is defined as the “sensitive area”. These facilities are usually situated so they are unlikely to be affected by nearby development (e.g. on land owned/controlled by Airservices Australia or the airport owner and located in open rural areas, in conservation/recreation reserves, or within airport boundaries). However, where there is scope for development to encroach on a facility, any development should not impair the facility’s functioning. Appendix 3 provides for each type of aviation facility information on:
- the form and dimensions of the sensitive areas; and
  - development/activities that could adversely affect the functioning of the aviation facility.

### ***Navigation Facilities***

- 3.13** A network of ground-based navigation aids is used for instrument navigation by pilots of suitably equipped aircraft. Generally, navigation aids are located at airports or at key points on air routes. The most common aids are:
- the instrument landing system (ILS) including associated locators and marker beacons;
  - the non-directional beacon (NDB);
  - the VHF omnidirectional range (VOR);
  - the satellite ground station (SGS); and
  - distance measuring equipment (DME).

### ***Communication Facilities***

- 3.14** Communication facilities enable air-to-ground communications between pilots and ATC and may include ultra high frequency (UHF), very high frequency (VHF), and high frequency (HF) radio transmitters and receivers. Signal reception between the aircraft and the ground may be line of sight or via a satellite link. A radio and microwave link also exists between particular ground transmitters and other navigational facilities (e.g. radar).

### ***Surveillance Facilities***

- 3.15** Surveillance equipment, in the form of radar and automatic dependent surveillance systems, monitor busy air routes and busy airports to assist ATC with more accurate information on aircraft position. This reduces the need for voice communications between ATC and the pilot.

### **Areas affected by Significant Aircraft Noise**

- 3.16** Noise from aircraft operations is the most common source of public complaint about airports. These complaints can be a significant factor inhibiting the expansion of airports, and can seriously constrain the efficient and economic operation of existing runways. Therefore, local government and airport operators need to take into account the implications of changes in land use within areas affected by significant aircraft noise.
- 3.17** Aircraft noise can be particularly annoying because of its tone and pitch, and can be highly repetitive. This applies especially at busy airports or those with a high proportion of flying training activity. The level of annoyance also depends on the frequency of operations by day or night and the relationship to the ambient noise levels.

### ***The Australian Noise Exposure Forecast (ANEF) system***

- 3.18** The ANEF system predicts for a particular future year (usually 10 or 20 years ahead) the cumulative exposure to aircraft noise during a specified time period (usually one year) likely to be experienced by communities near airports<sup>6</sup>. In essence, the computation of the ANEF includes:
- measurements of aircraft noise;
  - estimates and generalisations of aircraft type groups and mix, number of operations, runway utilisation, flight paths and operational procedures; and
  - time of day – day or night.

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<sup>6</sup> See Section 8, Glossary for a full technical definition.

- 3.19** ANEF information should be prepared in accordance with the Australian Standard AS 2021-2000: *Acoustics – Aircraft noise intrusion – Building siting and construction* (AS 2021)<sup>7</sup>. ANEF information has in the past been prepared on the basis of medium term (7 to 10 years) air traffic forecasts. More recently, the ANEF has been based on a 20 year forecast or on the practical maximum operational capacity of the airport. This recent approach to ANEF calculation is more consistent with the desired outcomes of SPP 1/02 to protect the long-term operation and capacity of airports, and to maintain the amenity of surrounding communities in the future. However, for military airports the forecast remains at 10 years.
- 3.20** It should be recognised that the effects of noise from aircraft are not confined to areas defined as being within the 20 ANEF contour. AS 2021 notes that if the site is outside the 20 ANEF contour, aircraft noise may be present but noise from sources other than aircraft may generally be more dominant.

### **Public Safety Areas**

- 3.21** Although air travel is relatively very safe and the probability of an incident during any single operation is very low, the highest risk of an accident occurs during take-off or landing. This is when the aircraft is aligned with the extended runway centreline and relatively close to the end of the runway. An analysis of aircraft accidents reported to the International Civil Aviation Organisation (ICAO) since 1970 suggests most of these accidents occur within 1,000m before the runway on arrival or within 500m beyond the runway end on departure. Consideration should therefore be given to restricting development within this vicinity on the grounds of public safety.
- 3.22** UK research undertaken for the Department of the Environment, Transport and the Regions (in particular R&D Report 9636<sup>8</sup> and R&D Report 9705<sup>9</sup>) suggests the public safety area should take the form of an isosceles triangle, tapering in width away from the runway end, having a base line of 350m and extending up to 3,500m from the runway end.
- 3.23** At less busy airports, such as those in Queensland, with a higher proportion of light general aviation movements, the risk contour reduces to around 1,000m. The public safety area defined in Annex 3 of SPP 1/02 therefore reflects the international findings and standards modified for the Queensland situation.

## **4. DEVELOPMENT ASSESSMENT**

- 4.1** This section provides advice on achieving SPP 1/02's Outcomes 1 to 4, regarding operational airspace, aviation facilities, areas affected by significant aircraft noise, and public safety areas.

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<sup>7</sup> Or any Australian Standard that supersedes AS 2021.

<sup>8</sup> Evans AW et al: *Third Party Risk Near Airports and Public Safety Zone Policy*: NATS R&D Report 9636: June 1997.

<sup>9</sup> Cowell P et al: *A Crash Model for Use in the Vicinity of Airports*: NATS R&D Report 9705: 1997.

## Operational Airspace

- 4.2** In terms of protecting the safety and operational integrity of operational airspace, the development outcomes focus on:
- avoiding activities (described below) that could adversely affect operational airspace; or
  - including appropriate site planning and management plans that avoid the potential adverse effects of such activities.

Development applications should contain sufficient information about the site and development proposal (together with management plans if appropriate) for the assessment manager to be able to establish that the proposed use would not adversely affect operational airspace. [NB: Under Commonwealth legislation, CASA and Department of Defence have powers intended to protect operational airspace. These powers are described in Section 7.]

### ***a) A permanent or temporary physical obstruction (natural or man-made) of operational airspace.***

- 4.3** When considering height restrictions for buildings or structures, the boundaries of operational airspace in relation to local topography need to be taken into account. As a general guide, buildings and structures exceeding 12m in height should be assessed for their potential impact on operational airspace. However, depending on local topography, the further the distance from the runway(s), the higher any structure can be without impinging on operational airspace because the height of operational airspace above level ground increases with increased distance from the airport runways<sup>10</sup>. The appropriate height restrictions need to be determined following advice from the airport operator.
- 4.4** Consideration should also be given to any ancillary objects (e.g. antennae or satellite dishes) on buildings and any cranes that are likely to be used during construction, for which CASA may consider imposing short-term restrictions on aircraft operations. Close to runway ends, land uses involving plantings of tree species with the potential to constitute an obstruction within operational airspace would be inappropriate.
- 4.5** Height restrictions may be relaxed if the impacts of a proposed development are shielded by existing structures. The airport operator can identify areas of ‘blanket shielding’ where buildings or other structures to an agreed height would not cause an obstruction in operational airspace (e.g. within a central business district with existing tall buildings and structures). This shielding enables those developments that would otherwise impact on operational airspace to be considered as consistent with the SPP.

### ***b) A gaseous plume with a velocity exceeding 4.3m per second.***

- 4.6** Development incorporating stacks or vents that would emit high velocity gases has the potential to cause air turbulence and would be inappropriate unless measures are included to prevent such a plume intruding into operational airspace.

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<sup>10</sup> See Appendix 1 for illustrations of operational airspace and its relationship with local topography.

***c) The emission of airborne particulates that may impair the visual conditions in the vicinity of an airport***

- 4.7** Development with the potential to produce sources of steam, dust, smoke, ash and other airborne particles or pollutants into operational airspace may affect visibility and so require a change from visual to instrument flight rules. A change of flight rules caused by such intrusions can reduce the handling capacity of the airspace by as much as 50 percent. Such development would therefore be incompatible with operational safety and efficiency.
- 4.8** For example, extractive industries causing significant increases in airborne particulates may affect aircraft safety by reducing pilot or air traffic control visibility, or by impacting on engine operation. The assessment of such development on land beneath operational airspace should include the potential impacts on aircraft operations.

***d) Transient intrusions by aviation activities into operational airspace***

- 4.9** Such intrusions by sporting and recreational aviation activities (e.g. parachuting, hot air ballooning or hang gliding) may cause restrictions on aircraft within an airport's operational airspace. Material changes of use for 'permanent' sites including such activities may need to include operational restrictions to prevent intrusions into an airport's operational airspace.

***e) A propensity to attract wildlife (notably birds or bats) into operational airspace***

- 4.10** All wildlife on or around an airport should be regarded as a potential hazard to aircraft safety. In particular, flying vertebrates (e.g. birds or bats) are hazardous to aircraft in the vicinity of airports. Birds and bats mainly use airspace within 300m of the ground so are likely to conflict with aircraft when they are at their most vulnerable: immediately after take-off and during landing approaches or other low flying manoeuvres.
- 4.11** Land uses with the potential for wildlife impacts on airports are:

<b><i>Group A</i></b>	<b><i>Group B</i></b>	<b><i>Group C</i></b>
<ul style="list-style-type: none"> <li>• Putrescible waste disposal sites</li> </ul>	<ul style="list-style-type: none"> <li>• Commercial fish processing</li> <li>• Bird sanctuaries and fauna reserves</li> <li>• Aquaculture</li> <li>• Turf farming</li> <li>• Piggeries</li> <li>• Fruit farming</li> <li>• Food processing plants</li> </ul>	<ul style="list-style-type: none"> <li>• Riding schools</li> <li>• Race tracks</li> <li>• Fair grounds</li> <li>• Outdoor theatres</li> <li>• Drive-in restaurants</li> </ul>

**4.12** Material changes of use within 13km of airport runways should be consistent with the following:

<i>Land Uses in Group A</i>	<i>Land Uses in Group B</i>	<i>Land Uses in Group C</i>
<ul style="list-style-type: none"> <li>• should be avoided within 13km of airport runways</li> </ul>	<ul style="list-style-type: none"> <li>• should be avoided within 3km of airport runways</li> <li>• when located between 3km and 8km of airport runways, should include measures that prevent waste and other food sources attracting wildlife</li> </ul>	<ul style="list-style-type: none"> <li>• within 3km of airport runways should include measures to manage waste disposal</li> </ul>

[NB: If **exceptional** circumstances justify approving a Group A or Group B development within 13km and 3km respectively of an airport’s runways, rigorous wildlife management measures with certainty of avoiding attracting wildlife should be required and its implementation made a condition of any development approval.]

**4.13** Further information on addressing wildlife issues is set out in Appendix 5.

***f) Lighting that could distract or confuse pilots.***

**4.14** Development would have adverse effects on operational airspace where that development is within 6km of the airport runway and has lighting with the potential to:

- confuse pilots because of similarities with approach or runway lighting; or
- distract or interfere with a pilot’s visibility through brightness or glare while in control of approaching or departing aircraft.

**4.15** Configurations of lights in straight parallel lines 500m to 1000m long, particularly in the vicinity of large unlit areas, can replicate the appearance of airport runways at night. Such lighting configurations could be associated with roads, large parking/storage handling areas, container parks, wharves and sporting fields. Glare or flashes from sporting stadia, flare plumes, refineries, upward shining lights, flashing or sodium (yellow) lighting can distract pilots at critical moments.

**4.16** Therefore, development involving significant external lighting, flare plumes and other such bright light sources within 6km of an airport needs to be designed so that the lighting does not increase the risk of an aircraft incident. CASA guidelines: *Lighting in the vicinity of aerodromes: Advice to lighting designers* provides advice on how to meet aviation safety requirements.

## Sensitive Areas around Aviation Facilities

- 4.17** Aviation facilities that depend on radio or electromagnetic waves for their operation may be affected if the following penetrates an aviation facility's sensitive area:
- obstructions to the "line of site" between transmitting and receiving devices (e.g. buildings, other structures or trees);
  - objects that act as reflectors, or deflect signals used by aviation facilities;
  - significant radio frequency interference; and
  - significant electromagnetic emissions, such as those emitted by arc welding associated with steel fabrication.

Appendix 3 sets out for each type of aviation facility the dimensions of the sensitive area and associated constraints on development. [NB: Radio frequency interference is regulated by the Australian Communications Authority and need not be addressed under SPP 1/02.]

- 4.18** The development outcomes therefore focus on:
- avoiding those activities that could adversely affect the functioning of aviation facilities by introducing a form of interference within the facility's sensitive area; or
  - including appropriate design or management measures that avoid the potential adverse effects of such activities.

Applications for development within an aviation facility's sensitive area should contain sufficient information about the site and development proposal for the assessment manager to be able to establish that the proposed use would not adversely affect the functioning of aviation facilities.

- 4.19** Height limits for development within/beneath an aviation facility's sensitive area may be relaxed if the impacts of any proposed use are shielded by existing structures. Airservices Australia can identify areas of 'blanket shielding' where buildings or other structures to an agreed height would not cause an obstruction in sensitive areas.

- 4.20** Applying SPP 1/02 will generally not be as complicated as Appendix 3 implies, because a significant portion of each sensitive area is owned and/or controlled by the facility's owner/operator (either Airservices Australia or the airport operator<sup>11</sup>). Also, many of the development constraints listed in Appendix 3 comprise buildings or structures that are not assessable development, or are only assessable against the *Standard Building Regulation*, so SPP 1/02 will not apply to such development.

- 4.21** Given the complex technical issues involved, local governments are strongly recommended to seek advice from Airservices Australia when assessing applications for development located within the sensitive areas of aviation facilities. **Also, future changes in technology are likely to result in changes to the number and operation of aviation facilities, leading to the list in Appendix 2 and the specifications being amended.** [NB: Under Commonwealth legislation, Airservices Australia, in concert with powers available through the Australian Communications Authority, has obligations to ensure that the functioning of Australia's network of aviation facilities is not compromised. Refer also to Section 7 below.]

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<sup>11</sup> Appendix 2 includes information on the owner/operator for each listed aviation facility.

## Areas affected by Significant Aircraft Noise

- 4.22** For areas within the 20 ANEF contour and higher, the development outcome is that material changes of use are compatible with forecast levels of aircraft noise. Therefore, material changes of use should be consistent with Table 1 below except where:
- the proposed development is a development commitment<sup>12</sup>; 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.
- 4.23** Where Table 1 classifies a land use as ‘compatible subject to conditions’, development approvals for material changes of use should be subject to a condition requiring associated building work to incorporate aircraft noise attenuation measures that achieve the indoor design sound levels set out in Table 2. An appropriately qualified acoustic practitioner should determine these attenuation measures<sup>13</sup>.
- 4.24** The same condition should be placed on development permits for any material change of use that is inconsistent with Table 1 but approved on the grounds of it being a development commitment or there being an overriding need for the development in the public interest.

**Table 1. Compatible and Incompatible Land Uses within ANEF contours**

Uses	Compatibility of Use within ANEF contour of site		
	Compatible	Compatible subject to conditions	Incompatible
Residential (all forms including caravan parks)	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Hotel, motel, hostels (short-stay)	Less than 25 ANEF	25 to 30 ANEF	Greater than 30 ANEF
School, university	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Hospital, nursing home	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 20 ANEF	20 to 30 ANEF	Greater than 30 ANEF
Commercial	Less than 25 ANEF	25 to 35 ANEF	Greater than 35 ANEF
Light industrial	Less than 30 ANEF	30 to 40 ANEF	Greater than 40 ANEF
Other industrial	Acceptable in all ANEF zones		

*Source: Derived from AS 2021.*

**Note:**

1. Table 1 excludes consideration of aircraft noise impacts on outdoor spaces specifically. However, the table does reflect the extent/frequency of outdoor space use associated with particular uses.
2. AS 2021 should be referred to by those seeking information / background on the basis for Table 1.

<sup>12</sup> See Section 8, Glossary.

<sup>13</sup> For the purposes of this Guideline, an acoustic practitioner is appropriately qualified when eligible for membership of the *Australian Acoustical Society* by virtue of experience and qualifications.



**Table 2: Desirable Indoor Design Sound Levels for Building Type and Activity**

Building Type and Activity	Indoor Design Sound Level dB(A)
<i>Houses, home units, flats, caravan parks</i>	
Sleeping areas, dedicated lounges	50
Other habitable spaces	55
Bathrooms, toilets, laundries	60
<i>Hotels, motels, hostels</i>	
Relaxing, sleeping	55
Social activities	70
Service activities	75
<i>Schools, universities</i>	
Libraries, study areas	50
Teaching areas, assembly areas	55
Workshop, gymnasium	75
<i>Hospitals, nursing homes</i>	
Wards, theatres, treatment and consulting rooms	50
Laboratories	65
Service areas	75
<i>Public buildings</i>	
Churches, religious activities	50
Theatres, cinemas, recording studios	40
Court houses, libraries, galleries	50
<i>Commercial buildings, offices and shops</i>	
Private offices, conference rooms	55
Drafting, open offices	65
Typing, data processing	70
Shops, supermarkets, showrooms	75
<i>Industrial</i>	
Inspection, analysis, precision work	75
Light machinery, assembly, bench work	80
Heavy machinery, warehouse, maintenance	85

*Source: Derived from AS 2021.*

**Note:**

1. **It is intended to prepare a Queensland-specific code (or similar) addressing standards and requirements for attenuating aircraft noise in buildings, operating under the *Standard Building Regulation*. When prepared, that code should be used instead of Table 2.**
2. AS 2021 should be referred to for advice and information about the indoor design sound levels in Table 2, including identifying the relevant scale of aircraft noise from the ANEF information.

***Establishing Overriding Need in the Public Interest***

**4.25** SPP 1/02 provides for a material change of use that is incompatible with forecast levels of aircraft noise to be justified on the grounds of overriding need in the public interest. Determining such overriding need, will necessarily depend on the circumstances of the particular development proposal. Paragraphs 4.26 to 4.29 below set out the main principles for evaluating an overriding need in the public interest.

**4.26** Firstly, the degree of net economic and/or social benefits to the community should be established and secondly, if there are net community benefits, the likelihood of suitable alternative sites being generally available should be assessed.

***a) Assessing social and economic benefits to the community.***

**4.27** The overall social and economic benefits of a proposed development located within an ANEF contour for which that use is incompatible should be weighed against the consequences of the proposed development's exposure to aircraft noise. Such development should either serve an essential community need (e.g. a health-care or emergency services facility) or provide other significant long-term economic benefit (e.g. a major new employment opportunity, a new industry with the potential to attract/generate other related enterprises, or an industry with synergies with existing industries in the area).

**4.28** SPP 1/02 specifically states that for the community benefit to be "overriding", it must outweigh:

- 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.

***b) Assessing alternative sites.***

**4.29** A broad assessment of specific alternative sites should be undertaken comprising the following 4 steps.

**Step 1:** Identify the site requirements of the proposed development, including location needs, physical site characteristics, access, and servicing.

**Step 2:** Identify sites or general locations that meet those site requirements and are situated:

- outside the area defined by the 20 ANEF contour; or
- within an ANEF contour for which Table 1 states the proposed use is compatible.

**Step 3:** Evaluate identified sites/locations in terms of their consistency with the planning scheme (or adjoining planning scheme if suitable sites can be identified in an adjoining local government area).

**Step 4:** Consider in general terms whether land ownership of any preferred alternative site(s) is likely to present a major obstacle to assembling an appropriate parcel of land for the proposed development.

[**NB:** The fact that the applicant owns, or has an option on, the site that is the subject of the development application and that it is consequently available for the proposed development does not in itself justify an "overriding need".]

## Public Safety Areas

- 4-30** Development within public safety areas should not increase the risk to public safety from an aircraft accident near the ends of airport runways where past experience shows that the risk of an incident is highest<sup>14</sup>. Therefore, material changes of use involving the following should be avoided:
- increases in the numbers of people living, working or congregating in the public safety areas; or
  - the use of noxious or hazardous materials.
- 4-31** Nevertheless, existing development commitments<sup>15</sup> should stand, although the scale of the public risk should be reduced by appropriate conditions on development approvals where the type of development commitment allows such opportunities (e.g. a condition preventing the storage of hazardous materials in an industrial development on land zoned for industry). Also, some reduction in public risk by modifying uses might be achieved through negotiation with owners/developers.
- 4-32** Any assessment of a development's compatibility with public safety areas should consider:
- the direct impacts to people in the aircraft and on ground; and
  - the secondary incidents arising from damage to ground facilities such as storage facilities for explosive, flammable or other hazardous materials.
- 4-33** *Incompatible development* within the public safety areas includes:
- residential uses (e.g. single or multi-unit developments, mobile home or caravan parks, retirement villages);
  - uses that attract large numbers of people (e.g. commercial or industrial activities involving large numbers of workers or customers such as shopping centres, libraries, community centres, recreation centres, casinos, churches, sports stadia and clubhouses);
  - institutional uses (e.g. education facilities such as kindergartens, schools, TAFE's and universities; hospitals; nursing homes; and detention centres);
  - uses involving the manufacture or depot storage of hazardous materials (e.g. fuel, lubricants and other flammable materials; chemicals; explosives; and poisonous or noxious gases); and
  - transport terminals.

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<sup>14</sup> See Paragraphs 3.21 to 3.23 above.

<sup>15</sup> See Section 8, Glossary.

**4-34** *Compatible development* includes:

- extensions to existing residences (e.g. for the purpose of enlarging or improving the living accommodation for the benefit of the people living in it, such people forming a single household, or which is for the purpose of a ‘relative’s apartment’);
- an extension to a property (not being for a single dwelling or other residential building) which could not reasonably be expected to increase the number of people working or congregating in or at the property (e.g. warehouse/storage facility);
- agriculture, mineral extraction, land fill (other than wildlife-attracting), open space, recreational areas with low concentrations of people (not children’s playgrounds), golf courses and sporting fields (but not associated clubhouses or stadiums);
- long-term vehicle parking, storage depots (for non-hazardous materials), and warehousing (except for retail purposes);
- consolidation or distribution centres, equipment sales and display yards; and
- roads/railways, although specific frequent, high occupancy links (such as multi-lane high use arterial roads or railway stations) should be risk assessed.

### **Information Requirements**

**4-35** Certain information is necessary to assess development applications against the SPP outcomes. The assessment manager should therefore obtain some or all of the following information depending on the nature of the proposed development and its location relative to the airport:

- whether the development is likely to penetrate operational airspace by way of:
  - a) the height of any physical structures (including trees close to runway ends);
  - b) the emission of plumes or airborne particulates;
  - c) aviation activities such as parachuting or hot air ballooning;
  - d) a propensity to attract wildlife, particularly birds and bats, into operational airspace;or
  - e) significant external lighting, including street lighting;
- whether the development is likely to impair the functioning of aviation facilities by resulting in the following penetrating a facility’s sensitive area:
  - a) physical structures;
  - b) reflective surfaces on structures; or
  - c) significant electro-magnetic transmissions such as those associated with arc welding;
- the location of the site relative to ANEF contours;
- whether the development is within a public safety area; and
- any strategies intended to manage any potential adverse effects of the development proposal on operational airspace, or the functioning of aviation facilities.

**4-36** If the appropriate information is not provided with the development application, the assessment manager should make the information the subject of an information request under IDAS.

## **5. MAKING AND AMENDING PLANNING SCHEMES**

- 5.1** In order to meet the outcomes of SPP 1/02 (Outcomes 5 to 7), the planning scheme should identify particular information, and contain appropriate planning strategies and development assessment measures.

### **Identifying Relevant Information in Planning Schemes**

- 5.2** The identification of relevant information in the planning scheme is a necessary step in devising both planning strategies and development assessment measures that achieve the outcomes of SPP 1/02. The information is best identified by the planning scheme copying information from the relevant technical sources (e.g. airport master plan, the ANEF chart, the Obstacle Limitation Surface). The mapped information is likely to be best presented on one or more overlays to which specific detailed measures apply, although the most appropriate way of presenting the mapped information will depend on the structure of the particular planning scheme.

### ***Identifying Operational Airspace***

- 5.3** An overlay should depict the OLS and PANS-OPS for civilian airports, the OCS for military airports, or the JOCS for joint military/civilian airports. The areas and dimensions of the OLS, PANS-OPS, OCS and JOCS can be obtained from airport operators and are generally found in airport master plans. The overlay should also depict areas within 3, 6, 8 and 13km of the airport's runways to identify areas where wildlife and external lighting are relevant in protecting operational airspace<sup>16</sup>.
- 5.4** Appendix 1 contains examples of how an OLS and the Department of Defence's height restriction zones are depicted.

### ***Identifying Sensitive Areas around Aviation Facilities***

- 5.5** The relevant sensitive areas for those aviation facilities listed in Appendix 2 should be identified in an overlay in accordance with the advice and information set out in Appendix 3, which also contains the dimensions and form of the sensitive areas for each type of facility. This information has been provided by Airservices Australia. For reasons explained in Appendix 3, only a portion of the sensitive areas need be identified by the planning scheme.

### ***Identifying Areas affected by Significant Aircraft Noise***

- 5.6** Areas affected by 'significant levels of aircraft noise' should be identified by depicting the ANEF contours for the airport on an overlay. ANEF information can generally be found in airport master plans prepared by airport operators. When prepared, ANEF charts require the endorsement of the relevant Commonwealth agency, currently either Airservices Australia, or the Department of Defence (for military airports).

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<sup>16</sup> See Paragraphs 4.10 to 4.16 above.

### ***Identifying Public Safety Areas***

- 5.7** Annex 3 of SPP 1/02 identifies the airports and runways whose traffic type and volumes justify the identification of public safety areas. The public safety area should be depicted on an overlay. The Annex also specifies and depicts the dimensions for public safety areas based on international research and practice. [**NB:** Although not a requirement of the SPP, a local government may wish to include a larger area than that recommended by Annex 3 as the public safety area. The justification for a larger public safety area would need to be prepared by the local government, and should be based on a suitable risk assessment.]

### **Planning Strategies**

- 5.8** Where practicable, the planning scheme's land use strategies should give preference to future land uses that would achieve the development outcomes (Outcomes 1 to 4) in Section 6 of SPP 1/02<sup>17</sup>.

### ***Operational Airspace***

- 5.9** When allocating land uses in areas where development has the potential to impact upon operational airspace, planning schemes should give preference to those uses that are unlikely to adversely affect operational airspace. Adverse effects on operational airspace can arise from development that involves any of the activities listed in paragraphs 4.3 to 4.16 above. That list includes those activities defined as "controlled activities" under the *Airports Act 1996* and its supporting *Airport (Protection of Airspace) Regulations*.

### ***Sensitive Areas around Aviation Facilities***

- 5.10** When allocating land uses in areas where development has the potential to impact upon the functioning of aviation facilities, planning schemes should give preference to those uses that are unlikely to penetrate a facility's sensitive area. Adverse effects on functioning of aviation facilities can arise from development that involves any of the activities listed in paragraphs 4.17 to 4.20 above.

### ***Areas affected by Significant Aircraft Noise***

- 5.11** Allocated land uses in areas affected by significant aircraft noise should be consistent with Table 1 in Section 4 above.
- 5.12** The planning strategy may allocate land uses that Table 1 states are 'compatible subject to conditions'. In such cases, the planning scheme should make it clear that appropriate noise attenuation measures designed to achieve the standards set out in Table 2 will be required to be incorporated in any buildings associated with material changes of use, to those uses.

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<sup>17</sup> Section 4 of SPP 1/02 Guideline provides advice about achieving the development outcomes.

## ***Public Safety Areas***

- 5.13** Land use strategies should aim to minimise increases in the numbers of people living, working or congregating in public safety areas and avoid the use or storage of hazardous materials in those areas. Where existing development commitments<sup>18</sup> are inconsistent with this aim, strategies that modify those commitments without creating a liability for compensation should be considered. Paragraphs 4.32 to 4.34 above provide advice on the compatibility of land uses within public safety areas.

## **Detailed Planning Scheme Measures**

### ***Preparing a Code(s)***

- 5.14** SPP 1/02 requires planning schemes to include a code(s) against which to assess or self-assess development to which the SPP applies<sup>19</sup>.
- 5.15** Including specific development requirements in a code(s) will ensure that all relevant development can be assessed, or self-assessed, against those requirements, irrespective of the assessment process prescribed by the planning scheme. The code(s) may be a specific issue-related code or a code(s) that includes the above-mentioned issues as one of its components.
- 5.16** The code(s) should reference the overlays identifying the relevant information described in paragraphs 5.2 to 5.7 above, and should contain assessment criteria that are consistent with the advice in Section 4 on achieving appropriate development outcomes. Appendix 6 provides detailed advice on devising assessment criteria that are consistent with those outcomes. Any criteria need to be integrated and consistent with, other scheme measures, so these examples are not considered necessarily appropriate as precise ‘models’ for all planning schemes.
- 5.17** The code(s) for material changes of use within ANEF contours should ensure that noise attenuation complying with Table 2<sup>20</sup> is addressed when any **associated** building work is assessed against the *Standard Building Regulation*<sup>21</sup>. The code(s) for assessable development should include such a criterion to provide a clear basis for imposing a condition about noise attenuation on development approvals. The code(s) for self-assessable development should state that a material change of use is self-assessable where associated building work includes noise attenuation measures that comply with standards in Table 2<sup>20</sup> above.
- 5.18** When developing a code(s) to manage development in the vicinity of airports, a local government should obtain advice from the Queensland Department of Transport, the Civil Aviation Safety Authority, Airservices Australia, and the airport operator.

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<sup>18</sup> See Section 8, Glossary.

<sup>19</sup> See Section 2 of SPP 1/02.

<sup>20</sup> See Section 4 above.

<sup>21</sup> Appendix 6 contains more detailed advice on addressing this issue in a code.

## **Making Development Self-assessable or Assessable**

- 5.19** The planning scheme should make any relevant development either assessable or self-assessable against the code(s) addressing airports/aircraft issues<sup>22</sup>. Development should be made self-assessable against that code(s) where precise criteria requiring no interpretation by development proponents can be devised. Appendix 6 sets out advice about devising assessment ‘triggers’ to help achieve the SPP’s outcomes.

### ***Operational Airspace***

- 5.20** For operational airspace the planning scheme should make the following types of development assessable or self-assessable:
- material changes of use where carrying out any of the activities listed in Annex 2 of SPP 1/02 is an intrinsic component of the proposed use; and
  - works involving any of the characteristics or activities in Annex 2 of SPP 1/02<sup>23</sup>.

### ***Sensitive Areas around Aviation Facilities***

- 5.21** Significant portions of the sensitive areas shown in Appendix 3 will be owned and/or controlled by Airservices Australia or the airport operators. Therefore, those portions need not be regulated by the planning scheme as far as the protection of the aviation facilities is concerned. The assessment triggers, together with the parts of the sensitive areas for each facility to be shown in the planning scheme, will **need to be determined following consultation with the owner/operator of the facility** (as indicated in Appendix 2).
- 5.22** The planning scheme should make the following types of development assessable or self-assessable for those parts of the sensitive areas to be regulated by the planning scheme:
- material changes of use where carrying out the activities listed in Annex 2 of SPP 1/02 is an intrinsic component of the proposed use, and those activities are relevant for the sensitive area and the particular facility concerned; and
  - works involving any of the characteristics or activities in Annex 2 of SPP 1/02<sup>24</sup> where relevant for the sensitive area and the particular facility concerned.
- However, the planning scheme is not expected to regulate minor buildings and structures, such as fences, that are not normally regulated by schemes.

### ***Areas affected by Significant Aircraft Noise***

- 5.23** For land within the 20 ANEF contour, the planning scheme should make:
- self-assessable those material changes of use that Table 1<sup>25</sup> states are “compatible subject to conditions”; and
  - assessable those material changes of use that Table 1<sup>25</sup> states are “incompatible” within a specified ANEF contour.

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<sup>22</sup> The category of assessment must also be consistent with Schedules 8 and 9 of the IPA.

<sup>23</sup> Also see Sections 4.3 to 4.16 above.

<sup>24</sup> Also see Sections 4.17 to 4.21 above.

<sup>25</sup> See Section 4 above.



**5.24** The planning scheme should not make any building work assessable against the planning scheme on the grounds of addressing aircraft noise. It is proposed that where building work is required to include noise attenuation measures<sup>26</sup>, the requirement will be addressed when the building work is assessed against the *Standard Building Regulation*<sup>27</sup>.

### ***Public Safety Areas***

**5.25** For public safety areas, the planning scheme should make assessable or self-assessable material changes of use for those land uses listed in paragraph 4.33 above as being incompatible, except where:

- the use is a development commitment<sup>28</sup>; and
- the incompatibility of the use cannot be reasonably reduced by specific requirements or conditions on development approvals.

#### **For Example:**

Preventing the storage of hazardous materials in development on land historically zoned for industry would be a reasonable requirement that would improve the compatibility of a development commitment. Therefore, material changes of use to industry should be assessable or self-assessable against the code setting out requirements for public safety areas.

In contrast, on land historically zoned residential, the residential use as a single dwelling on an existing lot need not be assessable against the code addressing public safety areas because no additional requirements can reasonably be imposed on the use as far as public safety areas are concerned.

### **Specifying the Information expected to be provided with Development Applications**

**5.26** SPP 1/02 requires the planning scheme or supporting planning scheme policy(s) to specify the information the assessment manager needs to assess a development application adequately<sup>29</sup>. The scheme or planning scheme policy should also make it clear that when this information does not accompany the development application, it will be made the subject of an information request under IDAS. In this way, prospective development proponents are forewarned about the information that will be sought by the assessment manager, thereby increasing the likelihood of such information being provided with the development application.

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<sup>26</sup> See Table 1 and Paragraph 4.23 above.

<sup>27</sup> Formal assessments under the *Standard Building Regulation* will occur when a code addressing aircraft noise attenuation under the *Standard Building Regulation* has been prepared.

<sup>28</sup> See Section 8, Glossary.

<sup>29</sup> Paragraph 4.35 above describes the information that an assessment manager may need to undertake an adequate assessment.

## 6. ADDITIONAL INFORMATION

### *Protecting Operational Airspace*

- 6.1** CASA has responsibility for defining and maintaining standards of aviation safety in and around the OLS. CASA needs to evaluate buildings or structures under Commonwealth legislation to determine whether they would, or do, intrude into PANS-OPS. Local governments are therefore advised to consult CASA on development proposals that are likely to penetrate the OLS and/or PANS-OPS. While not a requirement of SPP 1/02, this responsibility includes assessing under the *Civil Aviation Regulations 1988* the hazard potential of any building or structure of 110 m or higher above ground level. CASA has also published *CAAP 89W-2(0): Reporting Tall Structures*, which asks all "...persons involved in the planning, construction or provision of tall structures..." to notify the Royal Australian Air Force (RAAF) of the following:
- any structures higher than 30m within 30km of an airport; and
  - any structures higher than 45m anywhere else.
- This notification enables the RAAF to maintain a national database of tall structures so that low flying manoeuvres can be carried out safely.
- 6.2** The Department of Defence has responsibility for defining and maintaining standards of aviation safety at military airports outside the OCS and JOCS as depicted by the *Defence Act (Area Control Regulation)*. Again while not a requirement of SPP 1/02, the Department of Defence is required to assess any building or structure of 60m or higher above ground level in terms of its hazard potential.
- 6.3** Both CASA and the Department of Defence have powers to deal with lights that can be considered dangerous to aviation. However, it is clearly preferable if these issues are resolved early in the development assessment process, rather than requiring modifications after the lights have been installed.
- 6.4** The Department of Defence also delineates areas in the vicinity of explosives ordnance facilities where construction or public access should be controlled at Amberley, Oakey, Scherger and Townsville airports. There are three safeguarding lines within which Defence would not like to see specific types of development to occur. The lines, and their corresponding types of development that should not be within these areas, are detailed below.
- Green Line:** Defines the minimum distance from an explosives facility that public traffic routes and recreational areas should be located.
- Yellow Line:** Defines the minimum distance from an explosives facility that inhabited buildings or major public roads should be located.
- Purple Line:** Defines the minimum distance from an explosives facility that major public structures should be located.

- 6.5** Both CASA and the Queensland Police Service have interests in the siting of small arms ranges in the vicinity of airports. Bullets, shot or pellets associated with small arms ranges should not penetrate operational airspace. CASA, through its Manual of Operational Standards under the *Civil Aviation Act 1988* provides advice on safety areas, distances and range orientation. The Queensland Police Service under the *Weapons Act 1990* has powers to issue licences for new small arms ranges and can also provide advice on operational safety issues. For new small arms ranges proposed beneath an airport's operational airspace, CASA and the Queensland Police Service should be contacted.

### ***Aircraft Noise***

- 6.6** If a local government wishes to identify areas affected by significant aircraft noise for airports that are not identified in Annex 1 of SPP 1/02, these areas should be defined in accordance with the requirements of AS 2021 by means of an ANEF chart or suitable alternative information. This technical exercise should be done in consultation with the airport operator.
- 6.7** At some airports additional aircraft noise can be generated by on-ground aircraft operations such as engine run-ups during maintenance. **The noises generated by these operations are not factored into ANEF charts.** Where such activities occur, local governments should consult with the airport operator on the aircraft types and noise levels, the frequency, duration and location of such activities, and the criteria to be used for noise assessment. If deemed to be of sufficient impact, the planning scheme could identify areas adversely affected by these activities and incorporate planning strategies and measures similar to that required by SPP 1/02 for areas within the 20 ANEF contour.
- 6.8** A document entitled *Guidelines for the Production of Noise Contours for Australian Airports* is available on the Airservices Australia website ([www.airservices.gov.au](http://www.airservices.gov.au)).

## **7. ROLES AND RESPONSIBILITIES**

### ***Airport Operator***

- 7.1** The airport operator (owner or lessee) manages, maintains and improves the airport and can provide details of operational airspace, aviation facility requirements and ANEF information.
- 7.2** Most airports will have an airport master plan. While master plans are mandatory for Commonwealth airports privatised under the *Airports Act 1996*, operators of all large airports, or those displaying significant growth potential, are encouraged to prepare master plans.
- 7.3** Master plans are prepared in a consultative framework by airport operators and have ANEF's, OLS and PANS-OPS, OCS and JOCS endorsed by the relevant Commonwealth agency.

### ***Airservices Australia***

- 7.4** Airservices Australia has responsibility under the *Air Services Act 1995* as delegated from the *Civil Aviation Act 1988*, to manage airspace and air traffic, and to provide Australia's network of aviation facilities used in aircraft navigation, communication and surveillance. Interference with Airservices Australia's communications can invoke powers available under the *Australian Communications Authority Act 1997* and its regulations. Local governments are encouraged to seek advice from Airservices Australia on any development that has the potential to impact an aviation facility's sensitive area as defined by Appendix 3.
- 7.5** Airservices Australia currently provides an endorsement service of ANEF charts for airport operators.
- 7.6** Airservices Australia can provide assistance in identifying the location and specific protection requirements for aviation facilities within its jurisdiction.

### ***Civil Aviation Safety Authority (CASA)***

- 7.7** CASA has responsibility under the *Civil Aviation Act 1988* and *Civil Aviation Regulations 1988* for the safety regulation of civil aviation in Australia. Among other things, CASA conducts surveillance to ensure airport and aircraft operators meet their responsibilities under Civil Aviation legislation. In the interest of aviation safety, CASA has powers under Commonwealth legislation to require the removal of a building or other structure that penetrates operational airspace, require such obstacles to be lit, and/or curtail aircraft operations.

### ***Commonwealth Government***

- 7.8** The Commonwealth is responsible for implementing the standards and recommended practices adopted by the International Civil Aviation Organisation (ICAO). This responsibility is primarily delegated to CASA and Airservices Australia, through the Commonwealth Department of Transport and Regional Services. The Commonwealth also maintains the Australian Transport Safety Bureau's investigation of aircraft accidents and incidents.
- 7.9** The Commonwealth has sold long-term leases (up to 99 years) to private operators at certain airports under the *Airports Act 1996*. In Queensland, these airports include: Archerfield, Brisbane, Coolangatta, Mount Isa and Townsville (civil airport component only).

### ***Commonwealth Department of Transport and Regional Services***

- 7.10** The Department has responsibility under the *Air Navigation Act 1920* for civil aviation policy, aviation security and air safety investigation. In addition, the Department has overriding responsibility for the development of policy settings and regulatory arrangements for environmental matters such as: aircraft noise, aircraft engine emissions and fuel spillage from aircraft. The Department's role also includes regulation, under the *Airports Act 1996*, of the privatised Commonwealth airports, to ensure they are operated in a safe, efficient and environmentally sustainable manner.

- 7.11** The Department can advise on policy requirements of prescribed airspace and controlled activities around airports regulated under Commonwealth legislation.

***Commonwealth Department of Defence***

- 7.12** The Department of Defence operates military airports or is a joint operator of military/civil airports. The Department can advise on the requirements to protect military airports and facilities, and implements the *Defence Act (Areas Control Regulation)* under the *Defence Act 1903* to ensure obstruction free approaches to the airports. If structures, which would be taller than the height shown in the height limitation zones, are proposed, approval for these structures would be required from the Department. In relation to military airports and joint military/civil airports, local governments should liaise with the Department to ensure the height restriction zones are appropriately reflected in planning schemes.
- 7.13** The Department prepares, endorses and provides ANEF information for military airports and can provide information to local governments on explosive ordnance safeguarding where applicable.
- 7.14** The Department can also provide advice about specific protection requirements for aviation facilities within its jurisdiction.

***Local Governments***

- 7.15** SPP 1/02 is to be appropriately reflected into new planning schemes by including suitable provisions to achieve the SPP's outcomes. Local government should also have regard to SPP 1/02 during the assessment of development applications.
- 7.16** Local government must advise airport operators of Commonwealth privatised airports of development applications made for controlled activities under Commonwealth legislation.

***Queensland Department of Transport***

- 7.17** Queensland Transport provides advice on the interpretation and implementation of SPP 1/02, and should be consulted by local governments about integrating the SPP into planning schemes.
- 7.18** Queensland Transport can also provide advice on the appropriate agencies and officers to contact in relation to specific aviation and safety issues.

***Queensland Department of Local Government and Planning***

- 7.19** The Department, in conjunction with other State agencies, reviews planning schemes and amendments to ensure that SPP 1/02 has been appropriately reflected in those schemes.

## 8. GLOSSARY

**8.1** All definitions listed below, except the one for Australian Noise Exposure Forecast (ANEF), **are the same as those in SPP 1/02**. The definition of ANEF provided below is a full, technical definition whereas the definition in SPP 1/02 is a summary.

**Airport:** refers to the airports (civil, military or joint civil/military) listed in Annex 1 of the SPP. 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.

**Australian Noise Exposure Forecast (ANEF):** A single number index for predicting 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). The computation of this index includes: measurements of aircraft noise; estimates and generalisations of aircraft type groups and mix, number of operations, runway utilisation, flight paths, operational procedures; and time of day – day or night.

This index is useful for rating the compatibility, or otherwise, of land uses with respect to aircraft noise. Equivalent ANEF values around an airport are combined on a chart to form noise contours for a particular future year, usually 10 or 20 years from the date of issue, or sometimes at a major airport for its “ultimate capacity”.

An ANEF chart will have the official endorsement of the relevant approval agency and there will be only one current ANEF chart for a given airport at any one time. Australian Standard AS 2021 refers to the ANEF or noise contours in providing guidance on siting and construction of buildings in the vicinity of airports in order to minimise aircraft noise intrusion.

**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 administering the regulatory control.

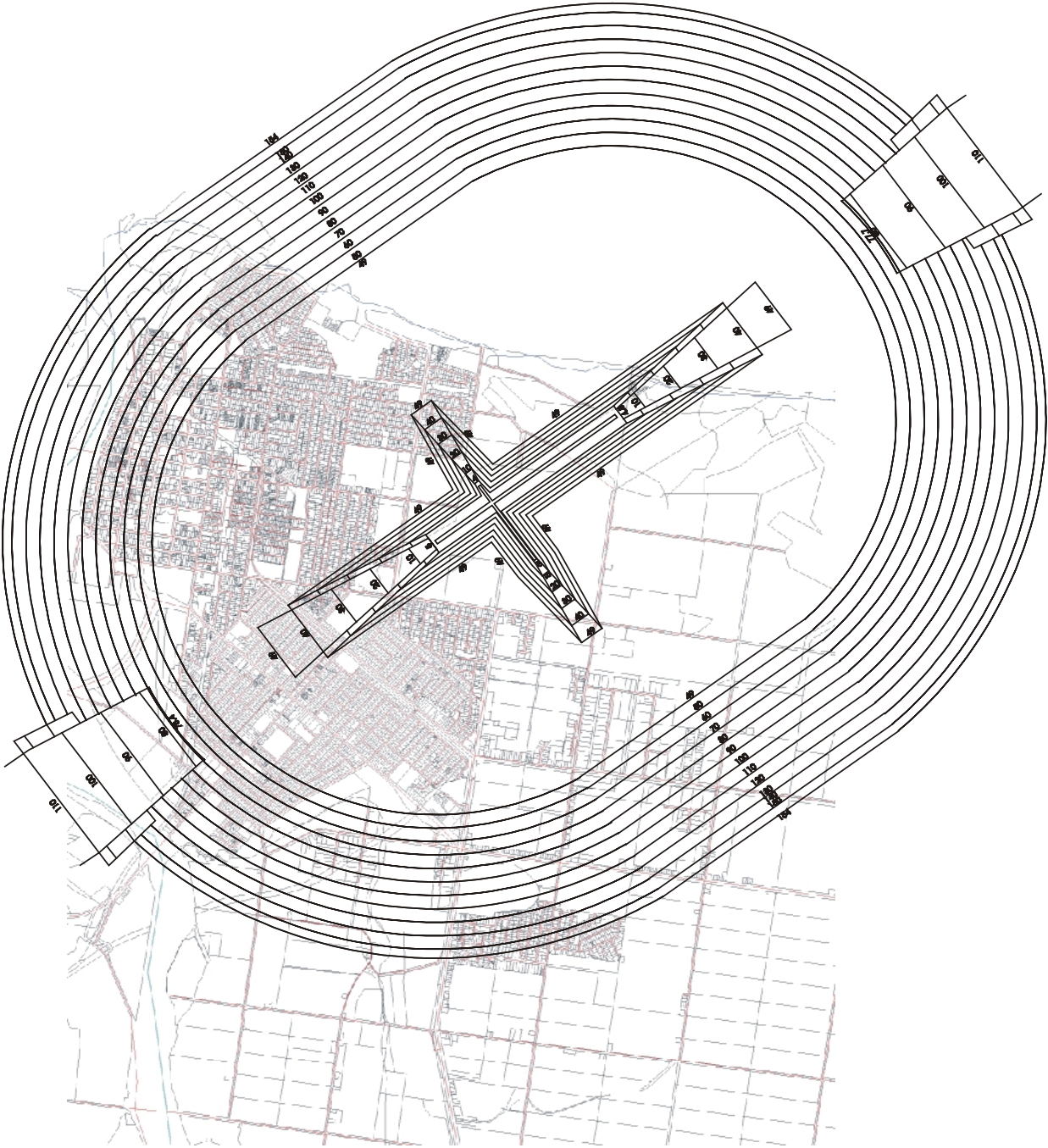
***IPA planning scheme:*** An IPA planning scheme is a scheme prepared under the *Integrated Planning Act 1997*.

***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 of SPP 1/02.

***Transitional planning scheme:*** A planning scheme prepared under the former *Local Government (Planning & Environment) Act*, although that scheme might be amended under the *Integrated Planning Act 1997*.

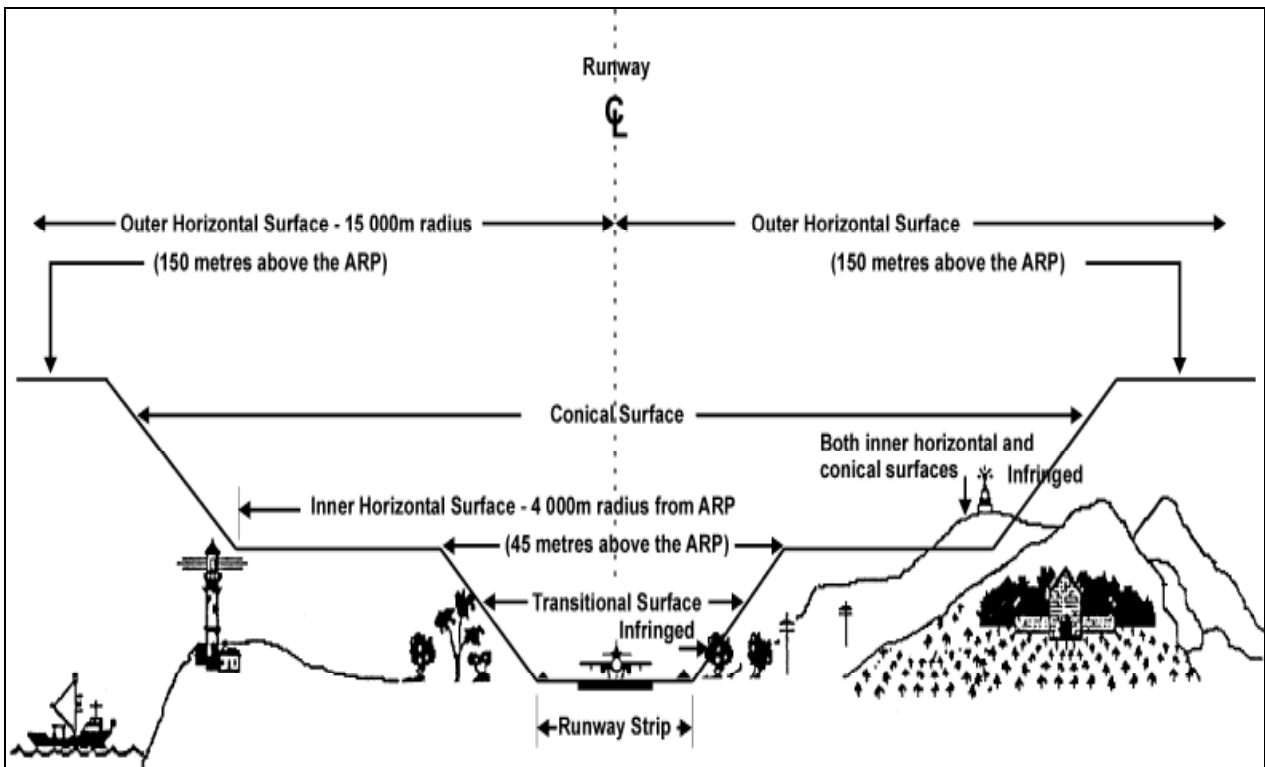
# APPENDIX 1: OPERATIONAL AIRSPACE

Example Plan -      **Obstacle Limitation Surface (OLS)**  
                         **Obstruction Clearance Surfaces (OCS)**  
                         **Joint Obstruction Clearance Surfaces (JOCS)**

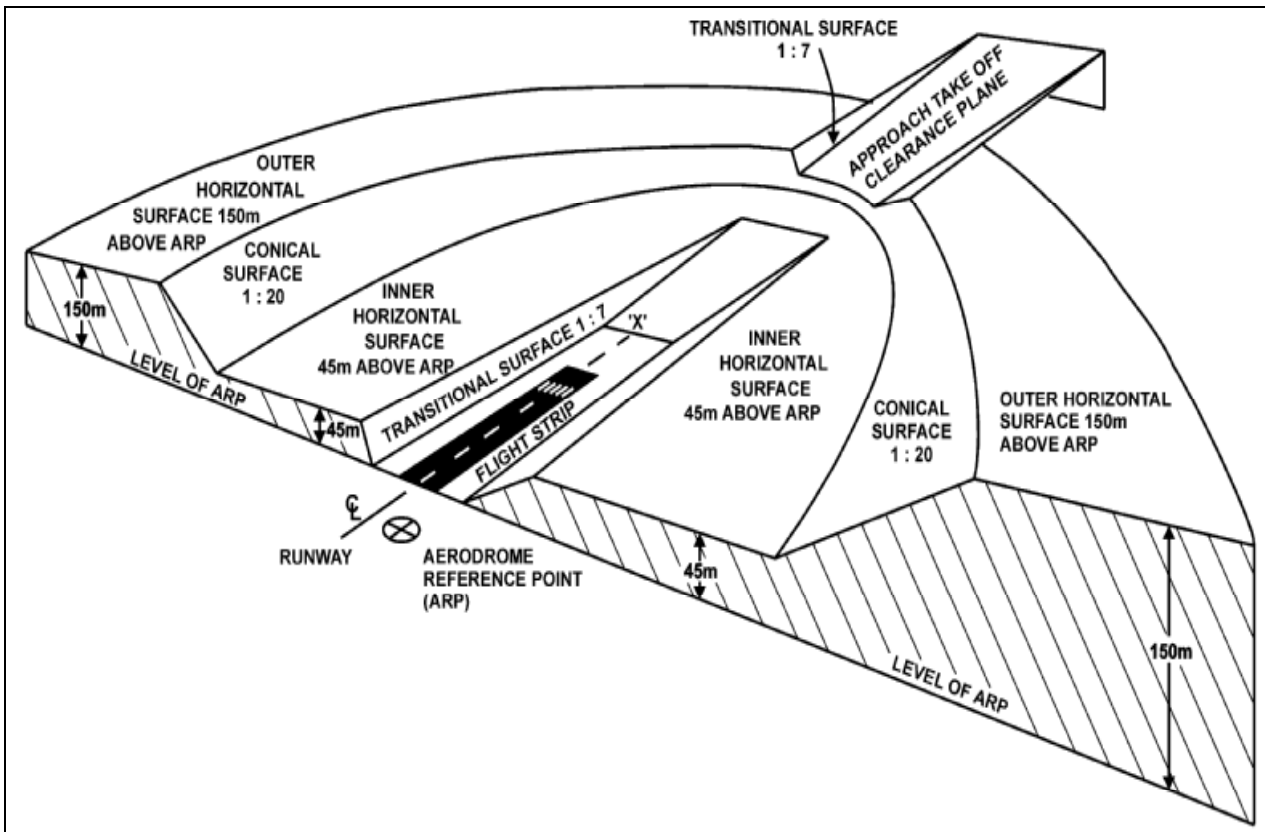




### Cross section of OLS

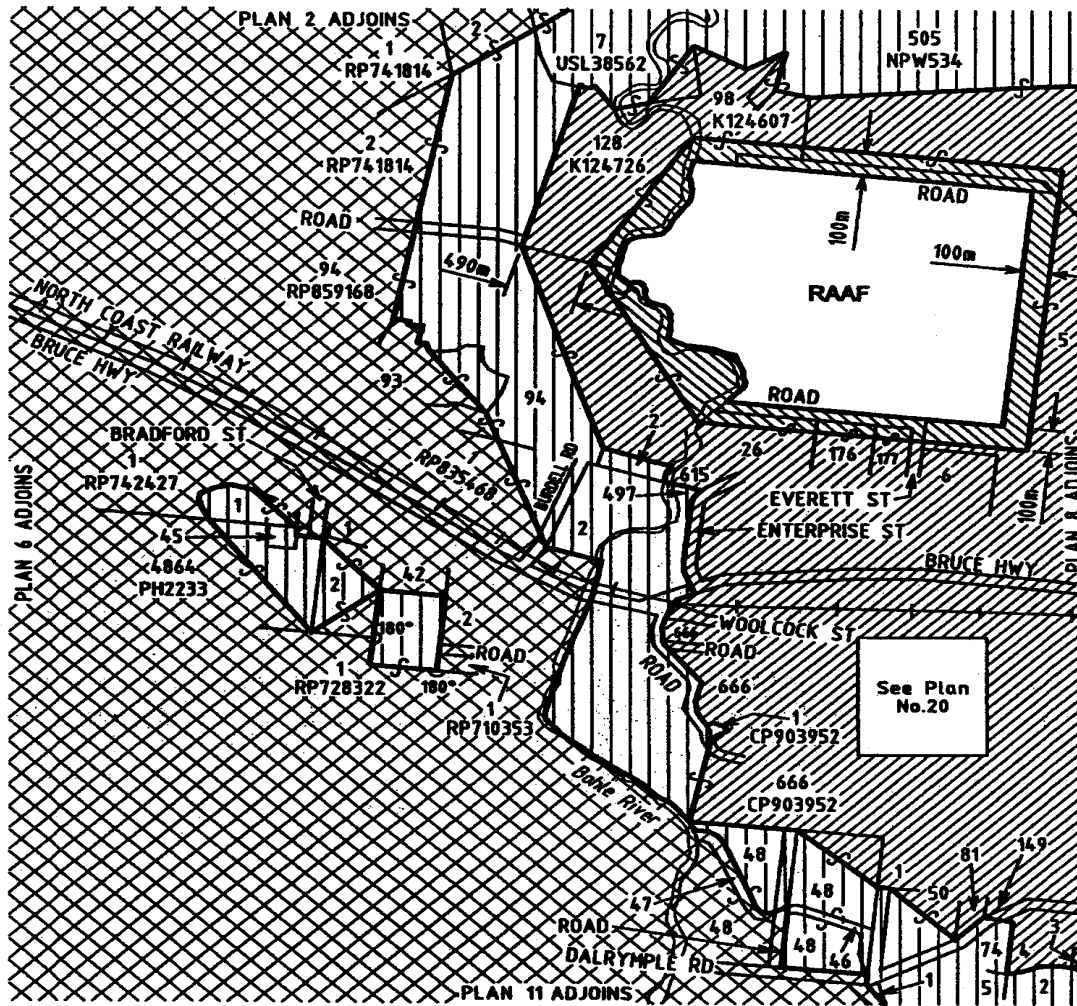


### Isometric view of OLS



Example – Height Restriction Zones – Department Of Defence – Defence Act  
(Areas Control Regulation)

Schedule 1 Amendments



INDEX TO ADJOINING PLANS

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0 1 2 km

**PLAN No 7 - RAAF BASE TOWNSVILLE - QLD**

**LEGEND**

- All structures require approval
- Structures higher than 7.5m require approval
- Structures higher than 15m require approval
- Structures higher than 45m require approval
- Structures higher than 90m require approval

## APPENDIX 2: AVIATION FACILITIES TO WHICH THE SPP APPLIES

[NB: List correct at 1 February 2002].

The list below is likely to change over time. Changes in technology may result in facilities being added, deleted, or specifications being amended. For updated information contact Airservices Australia, the Department of Defence and airport operators.

### (A) On Airport Facilities (under control of Airservices Australia or Department of Defence)

Local Government	AsA Location Name	AsA Ref No	Facility Type	Facility Description
Balonne	Saint George	567	Navigation	NDB/SGS
Banana	Thangool	574	Navigation	NDB/DME
Barcaldine	Barcaldine	383	Navigation	NDB
Barcoo	Windsorah	597	Navigation	NDB
Belyando	Clermont	478	Navigation	NDB
Blackall	Blackall	388	Navigation	NDB
Boulia	Boulia	389	Navigation	NDB
Bowen	Bowen	390	Navigation	NDB
Brisbane	Archerfield	381	Communication	Control Tower Complex
Brisbane	Brisbane	392	Navigation	Anemometer (1)
Brisbane	Brisbane	393	Navigation	Anemometer (2)
Brisbane	Brisbane	394	Navigation	Anemometer (3)
Brisbane	Brisbane	395	Communication	ATSC (bldg 104/demount./p/hous)
Brisbane	Brisbane	400	Communication	Office - Control Tower
Brisbane	Brisbane	402	Navigation	DME/VOR
Brisbane	Brisbane	405	Navigation	Glidepath 01
Brisbane	Brisbane	406	Navigation	Glidepath 19
Brisbane	Brisbane	408	Navigation	Localiser 01 (a)
Brisbane	Brisbane	409	Navigation	Localiser 01 (b)
Brisbane	Brisbane	410	Navigation	Localiser 19 (a)
Brisbane	Brisbane	411	Navigation	Localiser 19 (b)
Brisbane	Brisbane	412	Navigation	Marker Middle 01
Brisbane	Brisbane	413	Navigation	Marker Middle 19
Brisbane	Brisbane	414	Navigation	Remote Temp Indicator
Brisbane	Brisbane	423	Communication	ATSC - TAAATS
Brisbane	Brisbane	426	Surveillance	Radar - TAR
Brisbane	Brisbane	427	Communication	Transmitter - Deep Creek
Brisbane	Brisbane	1229	Communication	Control Tower - Airport Service
Bulloo	Thargomindah	575	Navigation	NDB
Bundaberg	Bundaberg	442	Navigation	NDB
Bundaberg	Bundaberg	444	Communication	SGS
Burke	Burketown	445	Navigation	NDB
Cairns	Cairns	447	Navigation	Anemometer
Cairns	Cairns	448	Communication	Control Tower Complex
Cairns	Cairns	452	Navigation	Glidepath
Cairns	Cairns	453	Communication	Transmitter
Cairns	Cairns	454	Navigation	Localiser 5 - South
Cairns	Cairns	455	Navigation	Marker Middle
Cairns	Cairns	456	Communication	Powerhouse - CTC
Cairns	Cairns	1180	Navigation	Localiser 33 - North
Carpentaria	Normanton	552	Navigation	NDB/SGS
Cloncurry	Cloncurry	480	Navigation	NDB
Cook	Coen	481	Navigation	NDB
Cook	Lockhart River	518	Navigation	NDB
Cook	Weipa	591	Navigation	DME/VOR
Cook	Weipa	593	Navigation	NDB
Cook	Weipa	595	Communication	SGS

**(A) On Airport Facilities (under control of Airservices Australia or Department of Defence) [continued]**

Local Government	AsA Location Name	AsA Ref No	Facility Type	Facility Description
Cook	Weipa	596	Communication	Transmitter/powerhouse
Emerald	Emerald	495	Navigation/Com	NDB/SGS
Flinders	Hughenden	508	Navigation	NDB
Flinders	Hughenden	509	Navigation	VOR
Gladstone	Gladstone	499	Navigation	NDB
Gold Coast	Coolangatta	485	Communication	Control Tower Complex
Gold Coast	Coolangatta	487	Navigation	NDB
Gold Coast	Coolangatta	578	Navigation	DME/VOR
Gold Coast	Coolangatta	1171	Navigation	Anemometer - Screen
Ipswich	Amberley	Defence	Navigation	NDB
Jondaryan	Oakey	579	Navigation	NDB
Jondaryan	Oakey / Brymaroo	Defence	Navigation	NDB
Kowanyama	Kowanyama	515	Navigation	NDB
Longreach	Longreach	519	Navigation/Com	SGS/Receiver/NDB
Longreach	Longreach	520	Navigation	VOR
Mackay	Mackay	521	Communication	Control Tower Complex / DME
Mackay	Mackay	524	Communication	SGS
Mackay	Mackay	525	Navigation	VOR
Maroochy	Maroochydore	527	Communication	Control Tower Complex
Maroochy	Maroochydore	528	Navigation	NDB/VOR/DME
Maryborough	Maryborough	529	Navigation	NDB
McKinlay	Julia Creek	512	Navigation	NDB
Mornington	Mornington Island	530	Navigation	NDB
Mornington	Mornington Island	531	Communication	SGS
Mount Isa	Camooweal	468	Navigation	NDB
Mount Isa	Mount Isa	540	Communication	Control Tower
Mount Isa	Mount Isa	541	Navigation	DME/VOR
Mount Isa	Mount Isa	543	Communication	Transmitter - Emergency
Mount Isa	Mount Isa	545	Navigation	NDB
Mount Isa	Mount Isa	546	Communication	Receiver
Mount Isa	Mount Isa	547	Communication	SGS
Mount Isa	Mount Isa	548	Communication	Transmitter
Murweh	Charleville	470	Navigation	Equipment Room - NDB etc.
Murweh	Charleville	473	Communication	SGS
Murweh	Charleville	476	Navigation	VOR
Paroo	Cunnamulla	493	Navigation	NDB
Paroo	Cunnamulla	494	Navigation	VOR
Richmond	Richmond	580	Navigation	NDB
Rockhampton	Rockhampton	559	Communication	Control Tower Complex
Rockhampton	Rockhampton	560	Navigation	DME/VOR
Rockhampton	Rockhampton	561	Navigation	Transmitter/NDB
Rockhampton	Rockhampton	1174	Communication	Link Dish Pole
Roma	Roma	564	Navigation	NDB
Roma	Roma	565	Communication	SGS
Torres	Horn Island	507	Navigation	NDB
Townsville	Townsville	Defence	Navigation	NDB
Townsville	Townsville	582	Navigation	DME/VOR
Townsville	Townsville	584	Navigation	Glidepath
Townsville	Townsville	585	Navigation	Localiser
Townsville	Townsville	586	Navigation	Marker Middle
Townsville	Townsville	587	Navigation	Marker - Outer
Townsville	Townsville	588	Communication	SGS
Townsville	Townsville	589	Communication	Transmitter
Waggamba	Goondiwindi	501	Navigation	NDB
Whitsunday	Proserpine	554	Navigation	DME/VOR
Whitsunday	Proserpine	556	Navigation	NDB
Winton	Winton	598	Navigation	NDB

**(B) Off Airport Facilities (under control of Airservices Australia)**

Local Government	AsA Location Name	AsA Ref No	Facility Type	Facility Description	Locality
Banana	Specimen Hill	581	Surveillance	Radar	Specimen Hill Rd, off Coal Rd via Biloela
Beaudesert	Bromelton	440	Navigation	NDB	Beaudesert Road
Beaudesert	Laravale	517	Navigation	VOR	Mount Lindsay Highway
Bowen	Collinsville	482	Navigation	VOR	Birrilee Rd/Pelican Ck, Farmers Road, Scotsville
Brisbane	Archerfield	382	Navigation	NDB	Cnr Kerry & Beatty Road
Brisbane	Brisbane - Morningside	436	Navigation	Marker - Outer	533 Lytton Road
Brisbane	Brisbane - Mount Coot-tha	437	Communication	VHF	Paten Road (closed), Via The Gap
Bulloo	Jackson	510	Communication	SGS - SOLAR	Gunna Hill
Burnett	Sloping Hummock	568	Communication	VHF	Telstra compound
Cairns	Cairns - Holloways Beach	462A	Navigation	NDB	Wisteria Street
Cairns	Cairns - Machans Beach	463	Navigation	DME/VOR	Prior & Marshall Streets
Cairns	Cairns - Mount Bellenden Ker	464	Communication	VHF	Mount Bellenden Ker
Cairns	Cairns - Yorkeys Knob	467A	Navigation	Marker - Outer	Tee Street
Cairns	Redden Creek	557	Surveillance	Radar	Barron River Esplanade, Machans Beach
Calliope	Mount Alma	534	Surveillance	Radar	Ambrose Bracewell Road, Raglan
Caloundra	Maleny	526	Navigation	VOR	354 Corke Pocket Road
Cook	Cooktown	484	Navigation	NDB	Hope Street
Cook	Kintore	514	Communication	SGS - SOLAR	Development Road
Crow's Nest	Barnes Hill	384	Communication	VHF	Anduramba Road, Barnes Hill
Dalrymple	Tabletop	572	Surveillance	Radar	Pretty Mtn Via Tabletop, Herveys Range
Dalrymple	Tabletop	1173	Surveillance	Radar	
Diamantina	Bedourie	385	Communication	SGS	Herbert Street
Diamantina	Birdsville	387	Navigation	NDB/SGS	Graham Street
Etheridge	Georgetown	498	Navigation	NDB	Low & George Streets
Flinders	Cheviot Hills	477	Communication	SGS	Kennedy Development Road
Gayndah	Gayndah	497	Navigation	NDB	Burnett Highway
Gladstone	Gladstone	500	Navigation	VOR	Bellye Hill
Gold Coast	Jacobs Well	511	Navigation	VOR	Behms Road
Gold Coast	Springbrook	569	Communication	VHF	Repeater Station Road
Kilcoy	Kilcoy	513	Navigation	NDB	Mount Kilcoy Road
Kingaroy	Mount Mowbullian	550	Communication	VHF	Bunya Mountain Road, Bunya Mountains
Logan	Greenbank	502	Communication	VHF	Paradise Road, Forestdale
Mackay	Mackay	522	Navigation	NDB	Bridge Road
Mackay	Mount Blackwood	536	Communication	VHF	Mount Blackwood Via Mackay
Mareeba	Biboohra	386A	Navigation	VOR	Peninsular Development Road
Mareeba	Biboohra	386B	Surveillance	Radar	Peninsular Development Road
Mareeba	Hann Tableland	506	Surveillance	Radar	Springs - Fassio Road
Mareeba	Saddle Mountain	566	Communication	VHF	Saddle Mountain
Maryborough	Copenhagen Bend	492	Communication	VHF	Copenhagen Bend Via Maryborough
McKinlay	Kynuna	516	Communication	SGS	Julia Creek Road
Mirani	Eungella - Crediton	496	Communication	SGS	Plateau (Crediton)
Mirani	Mount Macartney	1233	Communication	VHF/UHF	Mount Macartney Repeater Site
Mirani	Swampy Ridge	571	Surveillance	Radar	Schumann's Road, Dalrymple Heights, Via Mackay
Mount Isa	Mount Isa	549	Communication	VHF - DCA Hill	Pamela Street 'DCA Hill'
Murweh	Charleville	474	Communication	Transmitter	Central Highway
Pine Rivers	Mount Glorious	537	Communication	VHF	Mount Glorious Road
Redland	Capalaba	469	Communication	Receiver	Old Cleveland Road East

**(B) Off Airport Facilities (under control of Airservices Australia) [continued]**

<b>Local Government</b>	<b>AsA Location Name</b>	<b>AsA Ref No</b>	<b>Facility Type</b>	<b>Facility Description</b>	<b>Locality</b>
Redland	Mount Hardgrave	538	Surveillance	Radar	Cross Island Rd, North Stradbroke Island
Rockhampton	Mount Archer	535	Communication	VHF	Mount Archer Via Nth Rockhampton
Stanthorpe	Passchendaele	553	Communication	VHF	Passchendaele
Taroom	Taroom	573	Navigation	NDB/VOR	Leichhardt Highway
Thuringowa	Clevedon	479	Communication	Receiver	Alligator Creek Road
Torres	Thursday Island	576	Communication	SGS	Telstra Compound
Whitsunday	Hamilton Island	503	Communication	SGS	

**Note:** Satellite Ground Stations (SGS) are included in the above list for comprehensiveness, but there are **no** development constraints around these particular facilities as far as SPP 1/02 is concerned.

## APPENDIX 3: SENSITIVE AREAS FOR AVIATION FACILITIES

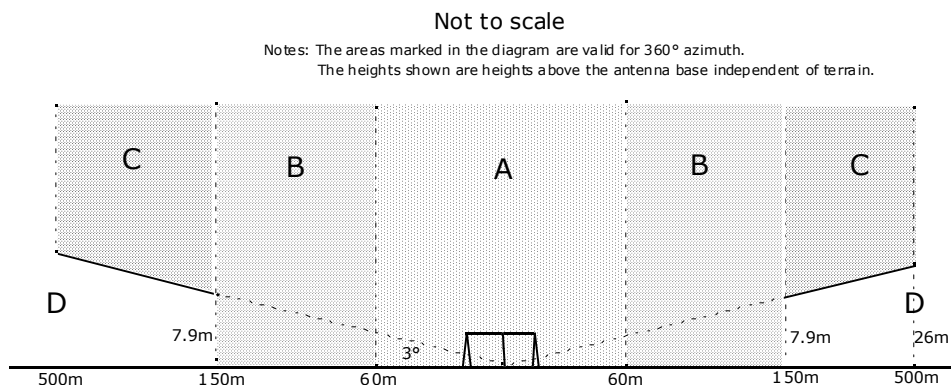
**A3.1** The information in this Appendix was provided by Airservices Australia and provides details of the development constraints within the sensitive areas for the differing types of aviation facility. **Therefore, enquiries and/or further information should be obtained from Airservices Australia.**

### Mapping the Sensitive Areas in Planning Schemes

**A3.2** The information below provides a comprehensive list of development constraints, including some that will be outside the scope of the planning scheme and will be controlled by Airservices Australia or airport owners as landowners around each facility.

**A3.3** Therefore, **the planning scheme need only depict those parts of the sensitive areas that lie outside the ownership/control of Airservices Australia or the airport owner.** Those parts need to be depicted at a scale that adequately shows the detail of the 'sub-areas' (i.e. the areas shown as A, B, C etc. on the diagrams below). The information is likely to be best depicted on an overlay (see Appendix 6), and the mapped area should also be accompanied by the relevant parts of the cross-section for the particular facility as shown below.

## NDB



### Development Constraints

- A:** All buildings, structures, trees, fences and any other physical obstructions are incompatible.
- B:** Only small non-metallic buildings less than 2.5m in any dimension may be compatible.
- C:** Steel masts and towers below 3° from the base of the NDB drop wire are compatible.
- D:** No constraints.