Chapter 5 f)
Narromine Aerodrome

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Narromine Aerodrome

Narromine's Aerodrome is a recreational aerodrome which also houses commercial operators. The Aerodrome plays host to a number of flying events every year and houses aviation businesses, hangars and the Gliding Club, the Aero Club and Narromine's Aviation Museum. As such, the protection of this land for current and future aviation uses is of utmost importance.

Council will not grant consent for the carrying out of development on land within or near the aerodrome unless the application has, via the statement of environmental effects, made an assessment of the following:

- The effect of aircraft noise on the development;
- The effect of the development on aerodrome height limitations (with reference to the Narromine Obstacle Limitation Surface Plan) and runway surface conditions;
- The effect of the lighting associated with carrying out the development on local night-time flying operations; and
- Any bird or other hazard (for example, reflection from development - see below) likely to be generated by carrying out the development in respect of the aerodrome.

Aircraft Noise

Council will consider the impact of aircraft noise on the proposed development in accordance with the latest version of Australian Standard AS 2021 (Acoustics – Aircraft noise intrusion – Building siting and construction). In all scenarios, protection of the aviation uses at the Aerodrome comes first and if a noise-sensitive land use is proposed within 5 kilometres of the Narromine Aerodrome, consideration is to be given to the potential conflict of this development with the existing and future aviation uses at the Aerodrome.

Note 1: For this section, a noise-sensitive land use is residential, rural residential and any other developments where a person may reside on a permanent or intermittent basis.

Note 2: Due to its low frequency of flights, the Narromine Aerodrome has not had an Australian Noise Exposure Forecast (ANEF) assessment and map completed. In the absence of this assessment, the above mentioned Australian Standard is a useful guide for assessing noise-sensitive developments in close proximity to Aerodromes where needed.

Height Limitations

Council will consider the impact of tall structures associated with the development on the operation of the airport. Clause 6.9 of the Narromine LEP refers to developments which may exceed the Obstacle Limitation Surface

(OLS) of the Aerodrome. For developments which are close to exceeding the OLS, these are to be referred to the Aerodrome Operations Manager for feedback on whether the development is to be referred to the Civil Aviation Safety Authority (CASA) for feedback and advice.

Note: Tall structures within an Aerodrome includes temporary structures including booms and pumps used in construction.

Lighting/reflective material

Council will consider the impact of lighting and use of reflective materials on the operation of the airport. Solar panels, use of reflective materials, ground lights, street lighting and sports fields have the potential to cause confusion, distraction or glare by colour, position, direction, pattern or intensity of light emission upwards towards aircraft accessing the airport. The following standards are to be assessed for developments within 6 kilometres of the centreline of the runways at the Aerodrome. It is noted that this covers all of the town of Narromine as seen in Figure 6.

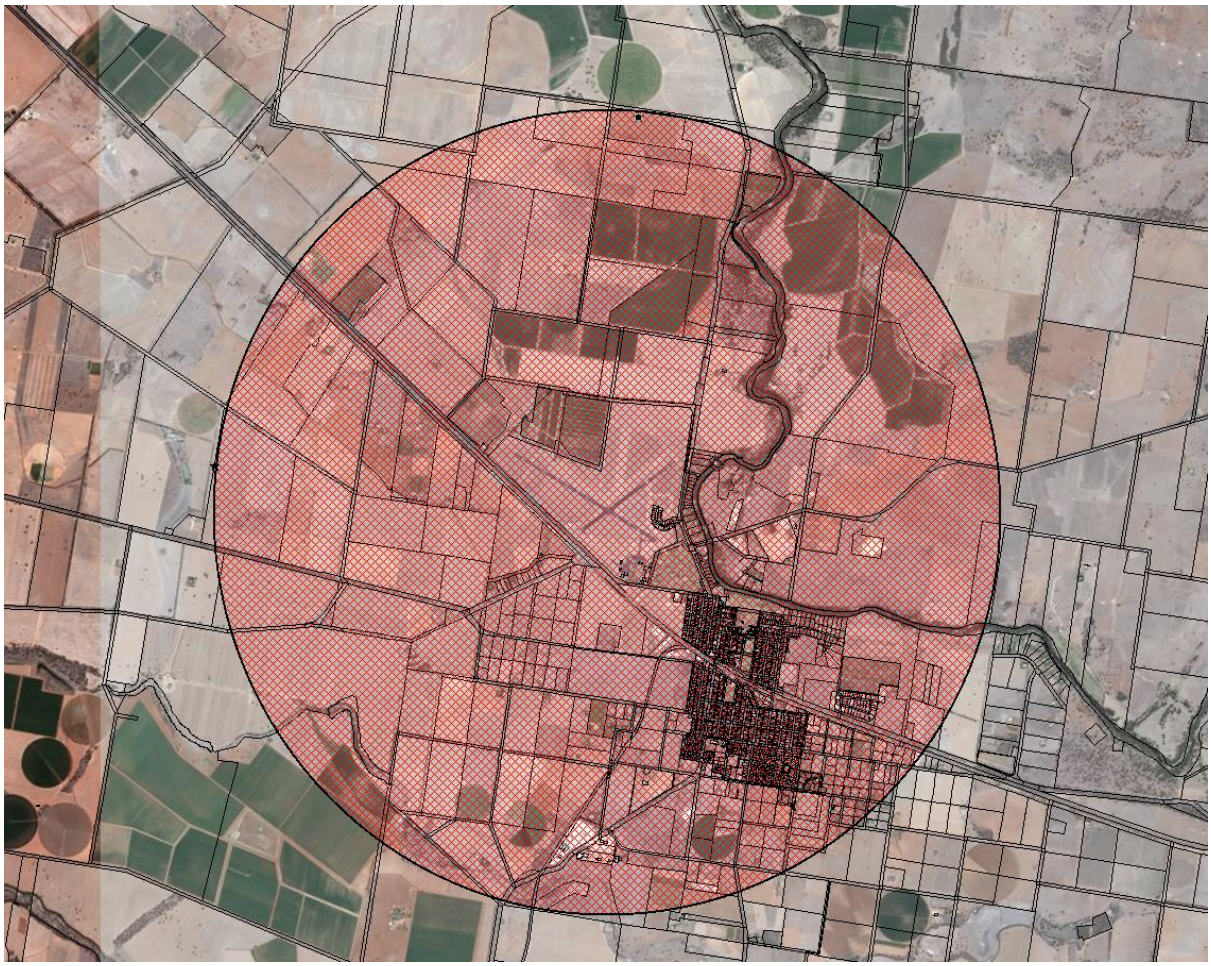
- Lights are to be installed pointing downwards on all properties;
- Where lights must be installed higher than 45 degrees to horizontal, a screen or shield is to be installed above the light to ensure to limit light emitted above horizontal;
- Coloured lights which extend above horizontal within the boundaries of the Aerodrome including Skypark are to be given additional assessment, possibly by CASA, because coloured lights are used to identify different aerodrome facilities, in particular, runway boundaries.

New and permanent significant sources of lighting which require consultation with CASA include the following:

- New/additional highway lighting;
- Stadium or recreational oval flood lighting;
- Construction lighting

Note: The reference to 6 kilometres in this subsection is taken from the National Airports Safeguarding Framework (NASF), Guideline E.

Figure 6: Radius of six km around centreline of Aerodrome runways



Source: www.sixmaps.nsw.gov.au

Restricted development near aerodrome

Near the aerodrome in this section means: land within the aerodrome boundaries and any land within three (3) kilometres of the aerodrome's centreline of the runways. The following types of development in the vicinity of the aerodrome require careful consideration in terms of the operation of the aerodrome:

- A dam or reservoir;
- The handling or storage of grain;
- The disposal of refuse and food garbage disposal;
- A sewage treatment plant or effluent ponds;
- An abattoir and freezing works;
- Fish processing plants;
- Bird sanctuaries;
- Outdoor theatres; and
- A stock yard complex.

In the SP1 and SP2 land use zones within the Narromine Aerodrome boundaries, the above land uses are restricted and further wildlife assessment by the

applicant is required to ensure the development does not create a wildlife problem in and around the Aerodrome.

A contamination report for part of the Aerodrome site was conducted in June 2015 and identified that the level of contaminants in the soil is appropriate for new industrial/commercial developments. If new residential components at the site are proposed, further investigation will be required to confirm that contaminant levels at the individual site are at appropriate levels.

Building Layout & Design

Site Area

Minimum site area is determined by the proposed use from the land and the type and requirements of the industry.

Scale

All new development must be of a scale that is proportionate to the existing development and character of the locality.

Site Layout

Where possible, the layout of building(s) on a site should maximize environmentally sustainable design principles, while recognising and enhancing the character of the locality.

Setbacks

The setback requirements will be subject to the design of the development and the onsite vehicle manoeuvrability required for each development. The specified setback area is to be kept clear and maintained in an accessible manner at all times.

Building Aesthetics

As well as being functional, industrial developments should also be aesthetically pleasing. This is particularly important for businesses with highway frontages. Council will consider the use of materials such as timber panelling, pre coloured metal cladding and glazing used in conjunction with brick, masonry block and concrete panels. Proper attention is to be paid to aesthetics and design, especially when visible from the highway. Storage and scrap areas should not accumulate on the highway side of developments for aesthetic reasons.

Landscaping

Landscaping can also play a major role in beautifying a site. A landscaping plan, including location and species type, must be submitted with a development application for new development and applications for major extensions/alterations to an existing building. Minor modifications to

developments do not require new or revised landscaping plans. Landscaping should include a variety lawn (not more than 50% of the landscaped area and where basix permits) and low maintenance trees, shrubs (non-flowering natives preferred) and ground covers etc. Species should be selected to ensure they do not attract bird life. Flowering natives are therefore discouraged. A landscape plan must also contain the following provisions:

- Landscaping to screen service and waste areas;
- Landscaping to assist in the energy efficiency of the building;
- Low water usage and native vegetation is encouraged (but not mandatory) on all allotments;
- Landscaping must not include species which are identified as prolific weeds;
- Landscaped areas must be at least 1.5 metres wide (where provided along boundaries) and include water-efficient watering measures such as drip systems;
- A buffer between differing commercial uses if appropriate;
- Landscaping must minimize the effects to overhead and underground services and utilities; and
- Lighting to walkways and entries to manage safety and security.

Site landscaping must be provided in accordance with the approved plan prior to the occupation of the building.

Species appropriate for Landscaping at the Aerodrome

Common Name	Species Name	Description
La Petite	Baeckea virgata	Dense compact shrub with soft green foliage and small white flowers. Moderately frost and drought hardy. Easy care, rarely needs pruning.
Flax lily	Dianella spp	Strappy plant with tall narrow upright leaves in a clump and small tight blue flowers in sprays at the ends of tall thin stalks. Frost and drought hardy. Will self-seed to form new clumps.
Cordyline varieties	Cordyline australis Red star, Black Knight and Kaspar	Elegant long strappy leaves, more hardy and robust in cooler climates and under tough conditions. Makes a bold look when massed together.
Buxus	Buxus 'Faulker', Harlandii, microphylla (Japanese box)	Small evergreen shrub with dark glossy green leaves with tight foliage. Perfect low hedging plant for small gardens. Mostly

		drought tolerant once established.
Lomandra varieties	Lomandra - hystrix, longifolia, Little con	Green strappy foliage, native to Australia. Low maintenance with a grass tree look.
Juniperus varieties	Conferta, pyramidalis, all gold, spartan	Conifer small tree – shrub depending on variety, topiary & hedging plants, slow growing evergreens. Tolerates frost.

Note: Not all species listed are native as many natives flower and attract bird life.

Hangar Development Landscaping

Due to the potential intermittent use of private hangars fronting the new taxiway D, landscaping on these allotments may be kept to a minimum. The use of gravelled surfaces outside of the hangars to limit the need for mowing in the summer months is appropriate with softening incorporated through shrubbery and non-bird attracting plants. See above for species selections.

Car Parking

The Roads and Maritime Services (NSW) *Guide to Traffic Generating Developments* identifies the generation rates for determining car parking demand. On-site parking is to be calculated in accordance with the following table. Where the land use is not specified, it is to be categorised into one of the like headings and the number of spaces calculated accordingly. This includes car parking provision for people with a disability and service vehicles.

Land use	Car parking requirements
Catering and reception centre	1 space per 3 seats plus 1 designated space for loading/unloading vehicles.
Hangar (new hangar development at Aerodrome)	1 space per hangar to be provided either inside or outside of the hangar wholly within the property boundaries
Office	1 space per 40m^2 of GFA
Outdoor displays and sales	1.5 spaces per 200m^2 of external site area for storage and sale of goods.
Restaurant	1 space per 3 seats for restaurants 100m^2 or greater or 1 space per 40m^2 of GFA for restaurants less than 100m^2 GFA
Take away food outlet	12 spaces per 100m^2 of NLS plus 1 space per 3 seats plus development with drive through facilities a queuing area for 5 to 12 cars

	measured from pick up point and a separate area of vehicles waiting pickup.
Training Rooms	1 space per trainer/consultant plus 1 space per 2 attendees (average numbers may be used)
Industrial buildings	1 space per 100m2 of GFA plus 1 space per 40m2 of office space GFA plus 1 space per 37m2 of retail GFA

Note: The above table is a guide and permissibility of the above land uses at the Aerodrome are to be verified in the Narromine Local Environmental Plan.

Larger development applications (such as major commercial or industrial developments, traffic generation development as defined by State Environmental Planning Policy (Infrastructure) 2007 may require a specific Parking Study or Traffic Impact Assessment to justify the proposed development in terms of access, provision of car parking and impact on the local road network. Certain development will require a referral and concurrence from the NSW Roads and Maritime Services (RMS). Development with direct access to a classified road or within the vicinity of a classified road will be referred to the RMS for their concurrence.

For commercial developments, provision is to be made for service vehicles and for loading and unloading of goods and waste collections. Such facilities should not conflict with on-site car parking.

Parking for People with a Disability

Where access for persons with a disability is required as part of the development, the requirements of the Building Code of Australia (BCA) and Commonwealth Disability (Access to Premises – Buildings) Standards will need to be complied with. At least one (1) of the required car parking spaces for a building which can be accessed by the public are to be provided on site and in close proximity to the main access to the building. Disabled car parking must be designated as such and in accordance with the relevant Australian Standard.

Advertising and Signage

The State Environmental Planning Policy No. 64 – Advertising and signage provides guidelines in relation to advertising structures and signage. An advertising strategy for the site is to be submitted with the development application detailing all proposed advertising signs.

Council recognises that businesses located on the Mitchell Highway would intend to take advantage of such highway frontage and advertise their business. Council would like to work with these businesses to create an inviting and clean image to the relevant area while promoting businesses in the Estate.

Crime Prevention through Environmental Design

All development proposals on public and private land must incorporate these controls, however, it is primarily aimed at commercial areas, shopping centres, recreational areas and where people may gather or travel, especially after dark. Please refer to the Commercial development section of this DCP for further information relevant to your proposal regarding crime prevention through environmental design.

Waste Removal and Storage

Provision is to be made for the storage on-site and disposal of all trade waste and refuse. A minimum hardstand area of 3 m by 2.4 m is to be allocated specifically for the storage of on-site waste containers and such area is to be located behind the building line (where possible) and accessible by waste service vehicles. All waste receptacles must be fitted with a closing lid to ensure minimised access by bird life.

Windshear and Turbulence Mitigation

Siting of buildings in close proximity to the touchdown zones of runways requires careful consideration to limit the potential for windshear and turbulence. Guideline B which assesses the risk of building generated windshear and turbulence at Airports from the NASF Guidelines, is to be referenced for any greenfield or brownfield developments at the Aerodrome.

A quick reference guide to the location of buildings in close proximity to the Aerodrome is as follows:

- Any buildings proposed within 200 metres of the runways at the Aerodrome must be assessed for windshear and turbulence effects
- The 1:35 rule is to be applied to buildings proposed where the horizontal distance of the building's closest point from the edge of the runway is more than 35 times the height of the building. This is a minimum requirement to limit windshear effects on approaches to runways.
- Where the developer is unsure of the effects of windshear and turbulence on runways, increased distance from the runways is preferred.
- Where buildings must be located within 200m of runways or they impinge on the 1:35 rule, additional assessment will be required by the applicant to prove that windshear and turbulence, particularly on approaches to runways, will not pose a problem for pilots. For guidance on additional assessment requirements, refer to Guideline C of the NASF Guidelines.

Managing Risk of Wildlife Strikes

The risk of wildlife or bird strike, although always present, can be minimised by the inclusion of certain development controls. Wildlife strikes, including land animals, can cause major damage to aircraft and reduce safety in and around aerodromes. The Narromine Aerodrome Manual, under CASA requirements, includes a wildlife hazard management plan which aims to reduce the potential for wildlife to locate within or near the Aerodrome. Acting with these operational requirements, attached Guideline C Attachment 1 from the NASAF guidelines is adopted for the purposes of this DCP.

Prepared by the Australian Aviation Wildlife Hazard Group

Guideline C
Attachment 1 to Wildlife Strike Guidelines

Land Use	Wildlife Attraction Risk	Actions for Existing Developments			Actions for Proposed Developments/ Changes to Existing Developments		
		3 km radius (Area A)	8 km radius (Area B)	13 km radius (Area C)	3 km radius (Area A)	8 km radius (Area B)	13 km radius (Area C)
Agriculture							
Turf farm	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Piggery	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Fruit tree farm	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Fish processing /packing plant	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Cattle /dairy farm	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Poultry farm	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Forestry	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Plant nursery	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Conservation							
Wildlife sanctuary / conservation area - wetland	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Wildlife sanctuary / conservation area - dryland	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Recreation							
Showground	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Racetrack / horse riding school	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Golf course	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Sports facility (tennis, bowls, etc)	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Park / Playground	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Picnic / camping ground	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Commercial							
Food processing plant	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Warehouse (food storage)	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Fast food / drive-in / outdoor restaurant	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Shopping centre	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Office building	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Hotel / motel	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Car park	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Cinemas	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Warehouse (non-food storage)	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Petrol station	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Utilities							
Food / organic waste facility	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Putrescible waste facility - landfill	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Putrescible waste facility - transfer station	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Non-putrescible waste facility - landfill	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Non-putrescible waste facility - transfer station	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Sewage / wastewater treatment facility	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Potable water treatment facility	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action

Heritage considerations at the Aerodrome

The whole of the Narromine Aerodrome is captured as item I14 in the Narromine LEP's list of heritage items. This is briefly because of the rich aviation history associated with the Narromine Aerodrome, its use as a WW2 air force training facility and barracks and the historic buildings located on site. The objectives of this subsection are as follows:

Narromine Aerodrome Heritage Objectives

1. To protect the significance and setting of heritage items within the Narromine Aerodrome through the establishment of heritage guidelines and controls;

2. To integrate heritage conservation into the development application process;

3. To allow sympathetic changes to occur; including where appropriate adaptive re-use and redevelopment of significant buildings within the aerodrome;

4. To provide detailed guidelines which encourage well-designed extensions and infill development.

Conservation Principles

The Conservation Principles from the Burra Charter are summarized briefly below. Before preparing a development application, it is recommended that these principles be carefully considered.

1. Retain what is important about a place;
2. Provide for current and future maintenance;
3. Respect original fabric, past uses, associations and meanings;
4. Understand and retain evidence of changes which are part of the history;
5. Understand the place before making decisions;
6. Use traditional techniques and materials to conserve original materials;
7. Retain the use of a place if it is important, or ensure a compatible new use;
8. Involve minimal change to allow new uses, respect the original fabric, associations and uses;
9. Retain an appropriate visual setting for heritage places;
10. Keep a building, work or other component in its historical location as far as possible. This is because the physical location of a heritage item or place is part of its heritage significance and relocation is a last resort to ensure survival of the building or safety around the building or place;
11. Keep contents, fixtures and objects which are part of a place's heritage significance at that place;

12. Retain related buildings and objects as they are also important; and
13. Enable people who have special associations and meanings with a place in its care and future management to be involved.

Legislative Framework

Under the provisions of the Narromine Local Environmental Plan 2011 development consent is required for subdivision or development within the Narromine aerodrome site.

As mentioned above, the aerodrome site is listed under Schedule 5 of the LEP as an item of environmental heritage. All buildings within the aerodrome are affected by the listing and depending on their individual significance as well as how they contribute to the overall context of the site will determine how much assessment is involved if they are proposed to be altered/adapted. Please refer to Figure 7 which shows historic and new buildings at the Aerodrome.

Clause 5.10 of the Narromine LEP 2011 applies to heritage items and should be read in conjunction with this DCP.

Development Application Pre Lodgement Advice

It is recommended that intending development applicants consult with Council's planning department prior to submitting any development application within the aerodrome site. The pre-lodgement advice request should be accompanied by preliminary plans and details outlining the proposed development or subdivision and identifying the relationship of proposed works with existing aerodrome buildings on the subject site. Council's planner will then use the pre-lodgement details to advise whether a heritage management document (heritage impact assessment) or heritage conservation management plan is required to accompany the development application. Council planning staff are available to speak to intending applicants at this and any stage of the development application process.

Development and Design Principles

Design Element	Design Principles
General Context	It is important that alterations, new additions or new buildings are 'good neighbours' and are consistent with the character of the locality. Understanding this context helps when designing a new building or alterations.
Sympathetic Change	Heritage protection is not intended to freeze historic properties in time. The need to upgrade buildings to modern standards is accepted but these changes should take place in the most sympathetic way possible. Those elements which led to a property being considered of historic significance must be maintained.
Basic principles to be observed:	1. Maintain the general scale, height, bulk, roof pitch and proportions of traditional buildings within the aerodrome. 2. Do not overwhelm an original building with an unsympathetic extension. Consider where practical creating a separate new building with a linkage. This helps retain the integrity of the original. 3. It is preferred that the original front facades of buildings in conservation areas be unaltered. Where alterations are proposed any application must be accompanied by a heritage statement justifying the need for the alterations and how the alterations will not significantly adversely affect the heritage significance of the building. 4. Proposed floor levels should be kept similar to adjoining buildings (except where minimum floor levels in accordance with the flood policy applies). 5. Avoid making a replica copy of a heritage building for infill development, but follow proportions and scale.
Building materials	Use matching materials for restoration and

	additions to existing historic buildings.
Colours	Use external colours to match existing buildings within the aerodrome, primarily light colours.
Signage and advertising	Use signs of an appropriate size and in appropriate locations, e.g. hanging signs or signs within a fascia. Use colour schemes that are effective and readable through the use of contrast.

Hangar Development

Council is embarking on a hangar development at the Narromine Aerodrome. The hangar development is a planned subdivision of approximately 20 lots, each providing adequate area for hangars for commercial and private usage. Built into the SP1 zoning, it is intended that sleep outs or mezzanine accommodation areas be permissible within the bounds of the hangar to enable those with hangars to fly in, stay overnight within the hangar and leave over short periods of time. Residential uses within the hangar will be a subsidiary use to the primary one being aircraft storage.

The permissible uses within the SP1 zone are set in the relevant zoning table in the Narromine LEP. The types of developments Council intends to encourage at the Aerodrome are seen below:

Aeronautical business
Pilot training facility/flight school
Aircraft repair/parts/electrical businesses
Charter & tourism/joy flights business
Aircraft sales representatives
Crop spraying enterprises
Aircraft hire businesses
Aircraft including glider storage
Aviation fuel businesses
Accommodation relating to Aviation uses on the site