

Narromine Aerodrome Strategic & Master Plan

November
2015

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Narromine Shire Council (2015)

Revision History

Date	Version	Auth.
	1.0	K Rowe
4.11.15	2.0	M Ward

Narromine Aerodrome Strategic and Master Plan 2015

Discussion Document

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Executive Summary

This document is known as the Narromine Aerodrome Strategic and Master Plan which will form the basis for development and management of the Aerodrome over the next 25 years. The Plan should be reviewed every 5 years and amended if necessary.

A Master Plan proposes suitable land uses for an area, based on planning and environmental constraints. A Strategic Plan is a more illustrative version of a land use plan, which also identifies infrastructure works and stages for development. The outcomes are divided into short, medium and long-term time frames.

These plans were based on a discussion document which presented base information and data relating to the current situation of the Narromine Aerodrome. The Discussion Document was used as a consultation tool to collect data and generate discussions on proposals suitable for the future development of the Narromine Aerodrome.

This project aims to provide further strategic direction for the Narromine Aerodrome based on the history and potential of the site. The data and recommendations from these plans is intended to feed into Councils Integrated Planning and Asset Management documentation as well as development controls and planning policies.

Purpose of the Plans

The purpose of the Strategic and Master Plan is to provide long-term direction for the development and operation of the Aerodrome.

The Narromine Aerodrome Strategic and Master Plan aims to:

1. Investigate options for short, medium and long-term development on the Aerodrome.
2. Identify and assess the planning constraints surrounding the development.
3. Provide recommendations on potential development areas, desired development types and development control measures for the area to ensure the long term viability of the site and to ensure it best serves the community.
4. Provide the nexus between Council's strategic direction and the local Economic Development Group to facilitate economic growth in the Narromine Local Government Area.
5. Assist Council in determining the level of service needed to support and grow the site.

Relationship with other Plans

This Plan provides the strategic framework for the development of the Narromine Aerodrome as well as forming a basis for the Asset Management Plan for the Narromine Aerodrome and fulfils requirements E2.1 of Councils Community Strategic Plan and E2.2.4.1 of Councils Operational Plan 2013-2014.

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Background

Narromine Shire Council has conducted two previous reports into the use of the Narromine Aerodrome; one in 1995 and a review in 2004. A further strategy was drafted in 2009; however Council did not formally adopt the 1995 and 2009 documents.

Consultation

In terms of consultation, this study aimed to engage not only the current aerodrome users, but also:

- Adjoining land owners
- Business owners (both within and out of Narromine)
- Committees of Council
- Council's Engineering Department
- Council's Finance & Corporate Strategy Department
- Real estate agents (both within and out of Narromine)
- The wider Narromine community

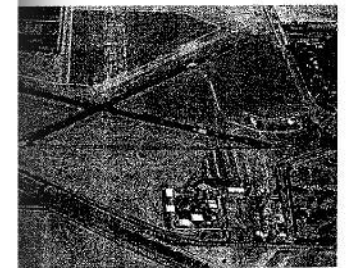
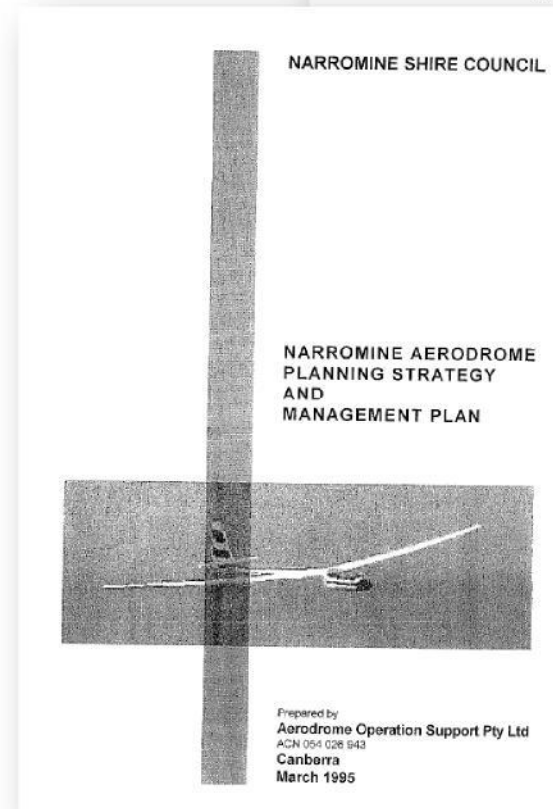
Consultation was conducted through a number of workshops, surveys, stalls, interviews and submissions over the drafting period in accordance with Council's Community Engagement Strategy (2010). The level of response was overwhelming with 20 interviews, 17 surveys, 11 case studies and 55 individuals and businesses interested in being kept on a consultation list for future updates on the Aerodrome Strategies.

Council would like to thank the parties involved in the discussion and consultation process for their input.

Narromine Aerodrome Planning Strategy

And

Management Plan



April, 2004

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Regional Characteristics

From the Narromine Community Strategic Plan:

Narromine, known as the "Gliding Capital of Australia", is considered to be the best gliding area in Australia, and one of the three best in the world. With beautiful weather and thermals, along with no airspace restrictions, pilots from around the world visit regularly to participate in recreational flying, gliding and to take part in the National and State Gliding Championships. In 2015 the Gliding Club hosted the 8th Junior World Gliding Championship. This is an amazing achievement as it is the first time the event has been held outside of Europe.

The characteristics of the Narromine Aerodrome, which make the site preferable for aviation, have been reported as being:

- Relatively flat terrain;
- An aviation conducive climate;
- A central location in the State;
- Sited within walking proximity to town; and
- Refuelling and accommodation facilities on site.



Narromine - "Blue Sky Country"

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Current Position

Site Location and Zoning (Ref Appendix 1)

From the Narromine Community Strategic Plan:

"Located in the heart of New South Wales between Dubbo and Nyngan, Narromine Shire covers an area of 5,224km² with a population of 6800, living in three urban centres of Narromine (3500), Trangie (800) and Tomingley (50) as well as the surrounding rural areas. The Shire is the 37th largest region by area in New South Wales and is 225 metres above sea level.*

* The census results of 2011 indicate that the population of the Narromine Shire has increased to 6,996 residents.

The Aerodrome is located on the North Western edge of Narromine and is zoned SP2 Infrastructure – Aerodrome. The site occupies 322.3 hectares and is surrounded by agricultural, recreational and residential land uses.

The Objectives of the SP2 Infrastructure Zoning (Narromine LEP, 2011) are:

- *To provide for infrastructure and related uses.*
- *To prevent development that is not compatible with or that may detract from the provision of infrastructure.*



Narromine Town & Narromine Aerodrome (NW Corner)

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Economic Environment

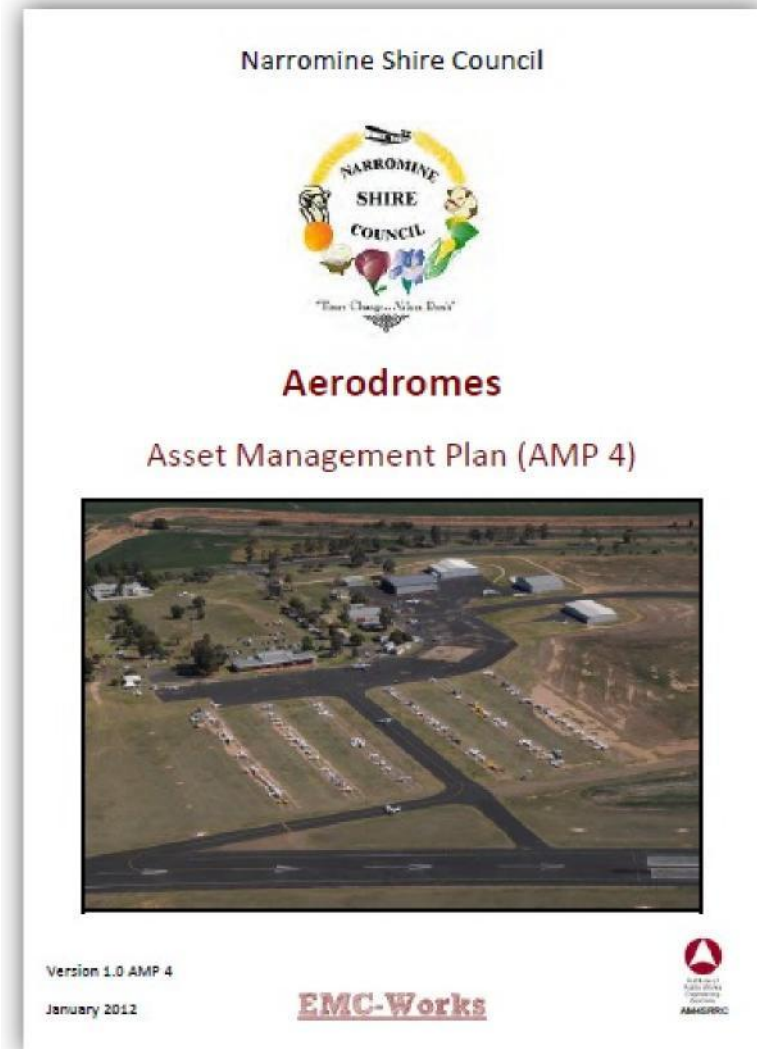
As stated in the Aerodromes Asset Management Plan (2012), Council's goal in managing infrastructure assets is to "meet the required level of service in the most cost effective manner for present and future users".

The primary income collected from the site is from leases on Council buildings, rates and land sales from the Skypark development.

The primary expenses attributed to the aerodrome are due to the maintenance and operation of the site. These expenses total approximately \$169,000 per year. This figure does not include capital works or depreciation.

Current funding commitments are for the purposes of the maintenance, renewal and upgrade of tarmac, hangars and aerodrome buildings, the resealing and remarking of runways and installation of groundwater monitoring equipment at the fuel bowzers.

The Aerodromes Asset Management Plan (2012) estimates the Narromine Aerodrome has an asset replacement value of \$14.1 million.



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A Brief History of the Narromine Aerodrome

The Narromine aerodrome has seen many changes over the years. Formed as an airstrip for a farmer in 1919, the Narromine aerodrome became the home of the first regional Aero Club in Australia in 1929. In 1940, the Royal Australian Air Force established No 5 Elementary Flying Training School, instructing pilots to fly the Tiger Moth aircraft. Shortly after, the original runways were sealed in 1942.

The RAAF, in the form of many units remained at the site until 1947. QANTAS briefly set up a training base at Narromine in 1967 and in 1974, the Aerodrome was handed over to Narromine Municipal Council, which following amalgamation with Timbregongie Shire Council in December 1980, became Narromine Shire Council.

Evidence of the history of the aerodrome is evident on the site in the form of buildings, runways, layout and plaques.



ABOVE: RAAF Narromine (Approximately 1940)

BELOW LEFT: The original Customs Pole

BELOW RIGHT: The former Narromine Aero Club Building



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Current Uses

The Narromine Aerodrome is currently owned and operated by Narromine Shire Council. Private operations on the site include agricultural activities, gliders, private and recreational aircraft, ultralight aircraft, as well as emergency services. The Aerodrome is home to the Narromine Aviation Museum, Narromine Aero Club, Narromine Gliding Club, the Sport Aircraft Association of Australia and other private operations in agriculture, gliding and ultralight training.



ABOVE: Glider flying over Narromine



ABOVE: The Wright Flyer



ABOVE: Display aircraft at Ausfly 2012

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Aviation Activity

Aircraft Movements

The site experiences regular private aviation activities involving light to medium aircraft all year round. The peak gliding season is throughout the summer months.

Larger events tend to be held from spring through to autumn, taking advantage of the favourable weather conditions.

Runway Capacity

The runways and taxiways on site are capable of catering for medium sized, long winged aircraft. It is noted that taxiway C is restricted up to a maximum all up weight (MAUW) of 5700kg as noted in EW Route Supplement Australia (ERSA) for the aerodrome, as published by Air Services Australia.

Runway Characteristics

The site includes two bitumen sealed runways, 04/22 and 11/29, and three grassed runways, 04/22 grass left, 11/29 grass right, and 36/18. Note that the grass runways are identified as glider runways.

Table: Runway Characteristics

Identification	Length	Width	Construction
04/22	1100m	45m	Bitumen Seal
11/29	1521m	45m	Bitumen Seal
04/22 Grass L	1040m	90m	Grass
11/29 Grass R	814m	60m	Grass
36/18	848m	90m	Grass



LEFT: Aerial View of Narromine Aerodrome 2010

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The Built Environment

The site is sparsely covered by buildings including hangars, office space and light industry buildings with an average age of approximately 30 years. The buildings are currently a combination of leased and privately owned by private operators and related businesses. However, all land on the site is owned by Narromine Shire Council.



The Original Narromine Aero Club Hangar



Narromine Aviation Museum, Narromine Gliding Club & Narromine Aero Club Below: Hangars and Workshops on Narromine Aerodrome



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Traffic and Transport

Access is gained from a dual direction driveway; however only one side is generally used for access and egress with the other side open for larger events only. One of the access gates also has a cattle grid installed.

The site's arterial road is 3m wide sealed which extends onto the site and through to the Aviation Museum. A series of gravel roads provide access around the runways on the airside area.

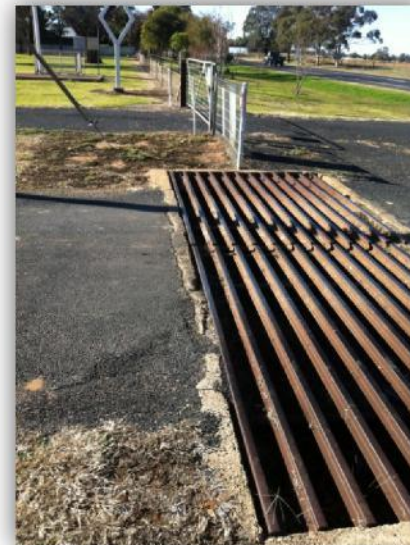
A designated car parking area is located adjacent to the museum building. Informal car parking is also located alongside the arterial road.



Formal car parking area outside the museum building



Driveway access to the Aerodrome



Cattle grid in driveway



Road signage

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Utilities and Services

The Aerodrome is currently serviced with electricity, telephone, water and sewerage mains. The residential Skypark area also has access to mains gas. A public amenities block on the aerodrome is now owned by the Narromine Tourist Park.

Recreational Opportunities

There are currently limited public recreational and open space opportunities on the site; one exception being an informal walking track along an irrigation channel.

Connections with the Community

The aerodrome is a historical site and major tourist attraction for the Shire. However it is seen as 'separated' from the local community, being primarily an aviation site, not directly catering for the wider community. The community does attend events where displays such as aerobatics or military aircraft are held.

There are ancillary benefits identified with organised events and attractions on the aerodrome site; these include increased tourism and revenue generated for local businesses.



ABOVE: Public Attendance at Ausfly 2012

BELOW: Aerobatic Display



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Skypark

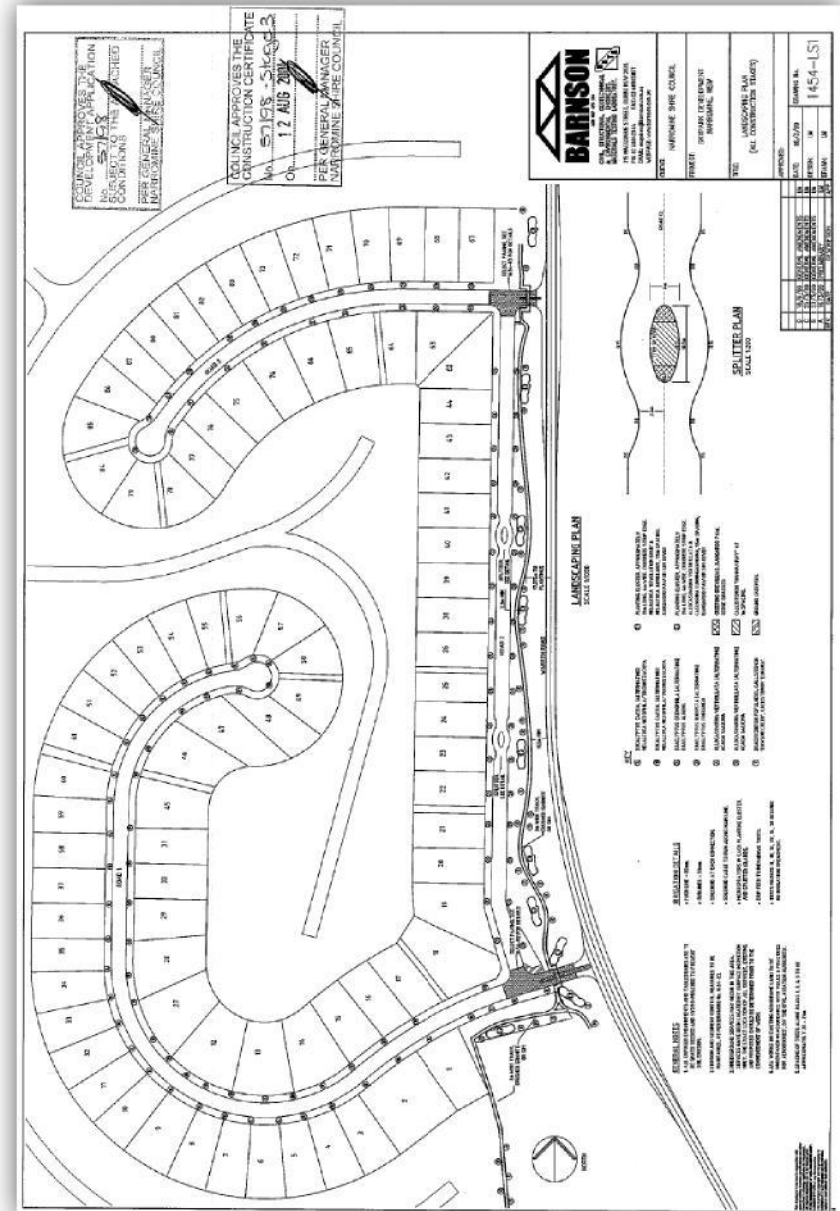
The Narromine Skypark is a residential estate that is closely connected with the aerodrome and is a unique development situated between the two runways allowing aircraft owners to 'park their aircraft in their backyard' with direct access to a taxiway and the runways. This development is ideal for pilots and people with an interest in aviation. Additionally, the development benefits from larger lots, a location slightly removed from the town centre and land adjoining the Narromine Golf Club.

Specific development controls are required for the residences in Skypark to ensure ongoing compatibility with the aerodrome and its operations.



ABOVE: Narromine Skypark 2011

RIGHT: Skypark Subdivision Plans



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Adjoining Land Uses

The adjoining land uses and industries around the site include: recreational, residential rural residential, intensive plant agriculture and rural activity.

This mix of adjoining land uses is due to the position of the Aerodrome being on the fringe of the Narromine Township. This characteristic however, also provides opportunity for compatible mixed-use development on the site.

Any further development on and around the site should take into consideration the potential impacts on the neighbouring land uses and the aerodrome.



RIGHT: An aerial view of Narromine Aerodrome with adjoining land uses 2010

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Constraints Identification & Analysis

(Ref Appendix 1)

Flooding & Drainage

The site is identified as flood prone according to the Narromine Floodplain Risk Management Study and Plan (2011). Any development on the site would be required to comply with the controls listed in the Narromine Flood Policy. A localised flood study has been done to identify specific levels of flooding across part of the site. Additionally, the proposed extension of the Narromine Levee Bank may also affect the flood liability on the site. Areas of high flood affectation should be avoided for development.

Due to the size of the site, stormwater should be carefully managed to ensure minimal impact on development from inefficient drainage systems. These considerations may require alternative solutions for stormwater management such as water sensitive design, particularly onsite collection, storage and reuse of storm water.

Groundwater Vulnerability

The site is identified as a high groundwater vulnerability risk. This risk can be mitigated through appropriate controls in relation to effective management of effluent and other potentially hazardous land uses. These controls would entail connection to sewer mains or aerated wastewater treatment systems.

Heritage

The site is currently listed as a heritage item in the Narromine Local Environmental Plan 2011. Any development should be sympathetic to the heritage values of the site as identified in the Community Based Heritage Study and the site's associated statement of significance.

Waste

The site is serviced by Councils contract waste collection service.

Contamination

Based on the past history of the site, there is potential for contamination in the Skypark, apron and runway areas. Further investigations would need to be conducted on the site to determine the most suitable land use and if any remediation works are required. These investigations can be undertaken on a case-by-case basis, dependant on the type of the proposed development in an area.

Traffic

Currently, the traffic usage on the site is low, with the exception of large events, in which traffic and parking becomes difficult to manage. Any further development on the site should consider the requirement for traffic impact studies to determine applicable construction and maintenance to cater for increased traffic movements. These requirements may include dedicated car parking areas and traffic management systems.

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Existing Infrastructure

Water & Sewer

The current water and sewer systems at the aerodrome are sufficient for the existing level of development, however any further developments will necessitate the upgrading of these systems. The anticipated increased consumption of water and usage of sewer will need to be considered and quantified prior to any works.

Power

Electricity is primarily delivered to the site via aboveground services. The exception to this is the Skypark site and hangar sites beyond the main access road.

Telephone/Internet

The site has access to existing telephone and Internet services as provided by relevant telecommunications companies.

Noise and Vibration

With increased activity on site, it is anticipated the ambient noise levels will increase moderately over time. While a dramatic increase in noise and vibration is not expected as a result of development on site, building design and construction should encompass noise and vibration mitigation measures.

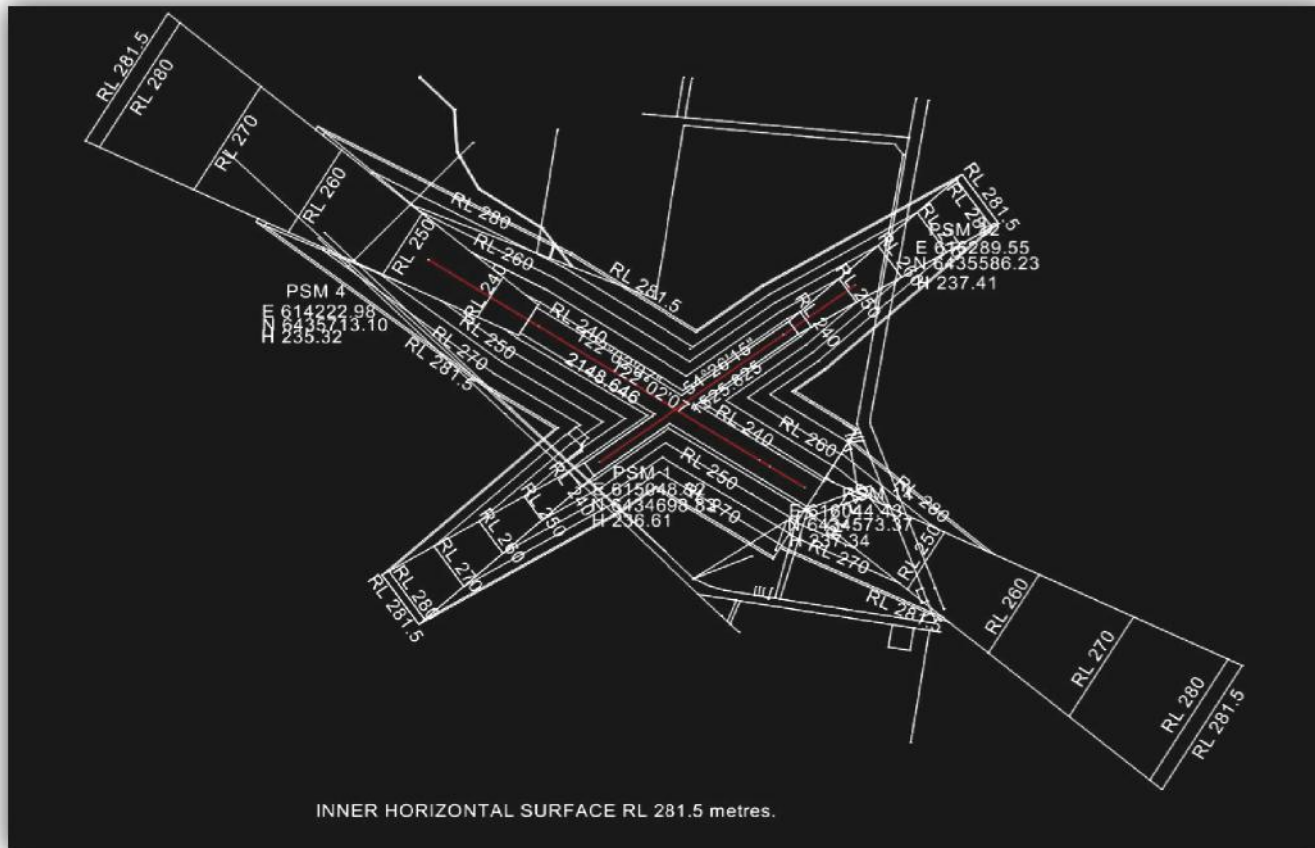
Amenity

The site enjoys low ambient noise levels and a scenic outlook. Consideration should be given to maintaining these elements in the design of proposed building works and facilities. The proximity to the golf club and the Macquarie River adds to the scenic outlook and recreational opportunities for the site.

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Obstacle Limitation Surfaces

The Obstacle Limitation Surfaces are the heights at which development in the area is not to exceed. This is to reduce the risk of obstruction to aircraft flight paths. Any development on or around the aerodrome site must consider these height limitations.



Narromine Obstacle Limitation Surfaces

Note: This image is an extract only of the OLS plan held at Council.

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Instrument Approaches

The aerodrome includes a Non-Directional Beacon (NDB) to assist pilots in navigation and two windsocks to indicate wind speed and direction. Additionally, pilots may also utilise a GPS approach.

Lighting

Pilot activated runway edge lighting is installed along runway 11/29 and taxiway centre lighting on the bitumen sealed taxiway.

Security

The site consists of security measures such as restricted access gates, fencing and signs delineating the public and airside areas. As part of the Narromine Aerodrome Manual and CASA Regulations, security measures must be installed on the site, dependant on the classification and operations on the site.

Refuelling Facilities

A 24 hour Avgas fuel bowser is managed on site by a private operator under lease from Council. Additionally, an unused facility is located in the apron area. These facilities are required to comply with the Underground Petroleum Storage System Regulation 2008 in terms of monitoring and protection systems.



LEFT: One of the two windsocks
BELOW: Restricted access gates
FAR BELOW: Avgas fuel facility



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Regulatory Framework

The Aerodrome is required to comply with the Civil Aviation Legislation and Regulations.

As a Registered Aerodrome, the Narromine Aerodrome must comply with Part 139 in the Civil Aviation Safety Authority (CASA) Manual of Standards. Although an Aerodrome Manual is not required, the site must comply with the physical standards identified and ensure the data in the En-Route Supplement Australia (ERSA) is accurate and current.

Planning Framework

The planning framework governs land use and is identified by the Environmental Planning & Assessment Act 1979 which is administered by the NSW Department of Planning & Infrastructure.

Locally, the Narromine Local Environmental Plan 2011, the Narromine Development Control Plan 2011, and the Section 94A Development Contributions Plan are the principle planning documents for new developments in the Shire. These documents apply to the aerodrome site. Council has also undertaken various land use strategies to assist in the development of future planning instruments.

All of these documents combine to guide development and minimise negative impacts in terms of environment, economy, public health and safety and social interaction.

Narromine Local Environmental Plan (LEP) 2011

The LEP is a legislative document which, based on land use zones, determines permissible and prohibited development in various areas of the Shire and nominates selected development standards. The Land Use Table for the SP2 zone is included below. The applicable clause to this document from the LEP relates to airspace operations

Land Use Table – SP2 Zone
Permitted without consent
Roads
Permitted with consent
The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose
Prohibited
Any development not specified in item 2 or 3

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6.9 Airspace operations

(1) The objectives of this clause are as follows:

- (a) to provide for the effective and ongoing operation of the Narromine Airport by ensuring that such operation is not compromised by proposed development that penetrates the Limitation or Operations Surface for that airport,
- (b) to protect the community from undue risk from that operation.

(2) If a development application is received and the consent authority is satisfied that the proposed development will penetrate the Limitation or Operations Surface, the consent authority must not grant development consent unless it has consulted with the relevant Commonwealth body about the application.

(3) The consent authority may grant development consent for the development if the relevant Commonwealth body advises that:

- (a) the development will penetrate the Limitation or Operations Surface but it has no objection to its construction, or
- (b) the development will not penetrate the Limitation or Operations Surface.

(4) The consent authority must not grant development consent for the development if the relevant Commonwealth body advises that the development will penetrate the Limitation or Operations Surface and should not be constructed.

(5) In this clause:

Limitation or Operations Surface means the Obstacle Limitation Surface or the Procedures for Air Navigation Services Operations Surface as shown on the Obstacle Limitation Surface Map or the Procedures for Air Navigation Services Operations Surface Map for the Narromine Airport.

relevant Commonwealth body means the body, under Commonwealth legislation, that is responsible for development approvals for development that penetrates the Limitation or Operations Surface for the Narromine Airport.

air transport facility means an airport or a heliport that is not part of an airport, and includes associated communication and air traffic control facilities or structures.

airport means a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes, and includes associated buildings, installations, facilities and movement areas and any heliport that is part of the airport.

The applicable clauses from the Narromine DCP 2011 include guidance on aircraft noise, height limitations, reflective materials, and certain restricted developments.

Council Policy

Council must demonstrate responsible management of assets, compliance with regulatory requirements and identify funding needed to provide the required services.

Narromine Section 94A Development Contributions Plan

This contributions Plan, adopted by Council in February 2014, sets out a framework for council to levy developments to contribute to ongoing costs associated with infrastructure service provision and necessary upgrades. The Aerodrome and Skypark are included in this plan and are therefore subject to these levies.

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Master Plan

This Master Plan provides detail on desired land uses and development objectives. It provides an 'entire picture' approach to ensure all facets of development are complementary and reduce land use conflicts.

The objectives of development on the site are:

- *To provide a range of mixed-use development including business, industrial and community and accommodation land uses*
- *To encourage employment and economic development through business opportunities, tourism activities*
- *To encourage development that is innovative while being sympathetic with the character of the area*



ABOVE: Perimeter road

Development is guided by Land Use Zones, which identify permissible development in the area and development objectives. The Land Use Zones recommended in this Plan are:

SP2 Infrastructure – This zone is utilised on land that is unlikely to be used for a different purpose in the future. The type of infrastructure applicable to this land is also listed in the Local Environmental Plan (LEP), which in this case, is 'Air Transport Facilities'.

R1 General Residential – This zone allows for a range of housing types and densities, as well as development, which is consistent with residential housing such as neighbourhood shops and community facilities. This is the current zoning for 'Skypark'

SP1 Special Purpose Zone – This zone is generally intended for land uses or sites with special characteristics that cannot be accommodated in other zones. The permitted use is annotated on the map along with any development that is ordinarily ancillary to that use.

IN1 General Industrial – This zone is intended to be used for a wide range of industrial and warehouse uses. These uses may be light industrial, or heavy industry activities such as depots and warehouses.

RE1 Public Recreation – This zone is used for land reserved for recreational and community facilities.

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The site is divided up into precincts, depending on primary land use and objectives. The intentions of these precincts are as follows:

Precinct 1: Skypark Residential Estate

This area is currently and is suggested to be retained as R1 General Residential Zoning, with possibly a small area of public open space zoned RE1. The intent of the area is to be an aviation-compatible residential estate. Proposed development controls would ensure compatibility with the aerodrome operations, as well as maintaining the desirability of the

Precinct 2: Active Airside

This area is to remain an active airside area and subject to all civil aviation requirements. The proposed land use zoning is as current, SP2 Infrastructure.

Precinct 3: Community and Commercial

This area is central to the connections between the local aviation and non-aviation communities. The proposed land use zoning for this area is SP1 Special Activities or Purpose Zone, which allows for a combination of aviation-related, and commercial uses. This area will form the 'hub' of the public interface with the aerodrome. Development controls for this area will encourage active use of the site, generate community interest and provide opportunity for the establishment of aviation related businesses.

Precinct 4: Aviation related commercial uses and Hanger Area

The objective of this area is to provide opportunity for aviation related commercial businesses to establish including aircraft construction and maintenance, and hangars. The suggested land use zone in this precinct is SP1, as for precinct 3 and development controls, are to be implemented in relation to compatibility, amenity and public access.

Precinct 5: Industrial and Transport

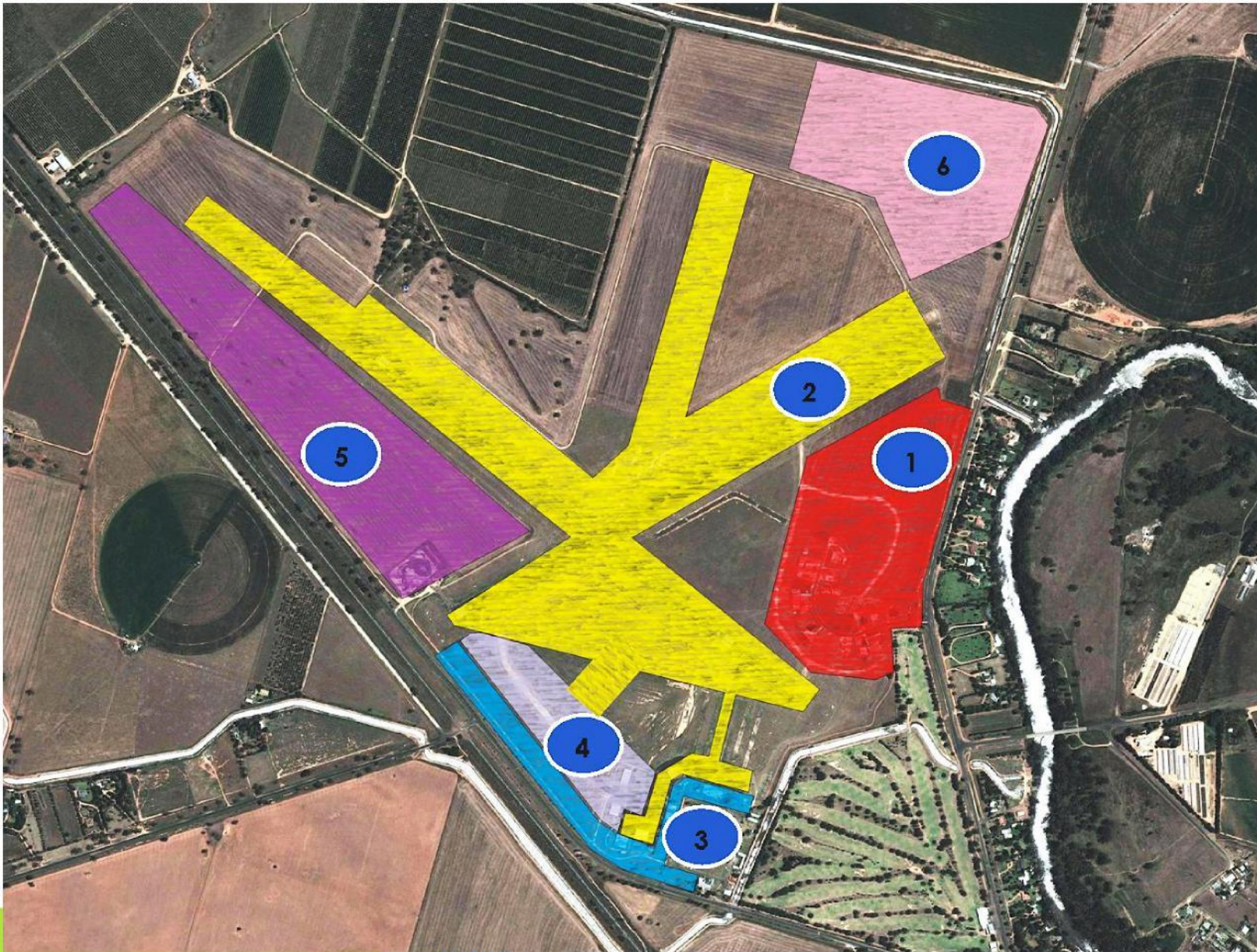
The desired land uses of the industrial and transport precinct include storage, transport and construction to take advantage of the adjoining transport networks of road, rail, and air traffic. This is a long term vision and site-specific studies incorporating supply and demand for such land would be required prior to developing this precinct.

Precinct 6: Expansion Reserve

This area is reserved for compatible rural and residential land uses, subject to obstacle limitation surfaces and potential flight paths. It is not considered an immediate to medium term priority for the strategy, however may be considered in conjunction with long-term development strategies for the township of Narromine.

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Master Plan



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Strategic Plan

The recommendations discussed in this document were collected from previous aerodrome plans and as suggestions during the Discussion Document consultation phase. The recommendations were then assessed against the constraints as identified in pages 18-23 of this document; the accepted results are presented below as actions.

It should be noted that all development is subject to individual development assessment. Considerations include: aviation interface, operations, natural hazards and adjoining land uses. Hence, the final results may differ from those described in this plan.

The actions are divided into categories, depending on context and given a reference number. This number is further utilised in the Staging Plan which assigns a time frame for the completion of that aspect, the responsible party and a suggested funding option. Depending on external influences and dependencies, these suggestions may change following timely review of the Plan.

RIGHT: Aerobatic Display



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Actions

1. Planning & Regulatory Framework

Item No.	Description	Details
1.1	Reassess land use zoning on the site	Establish an industrial/commercial precinct in South/Western sector of the site to facilitate industrial style development in that area of the site to attract independent business. Implement a SP1 land use zone over the existing development area to concentrate smaller businesses and community uses, including ancillary residential uses. Industry and transport facilities can be located towards the Western edge of the site to take advantage of the adjacent transport connections.
1.2	Subdivide land for individual ownership	Facilitate development through the subdivision and sale of existing buildings (such as hangars, offices and ablutions block) and surrounding land. Additionally, new, serviced development sites should be offered for sale. It is suggested however, that Council maintain ownership of the 'Aviation Museum' building for the purpose of assisting community organisations and the provision of public toilets.
1.3	Enforce covenants and restrictions	To mitigate land use conflicts and improvement of amenity through appropriate development controls. These site-specific controls can be detailed in the Development Control Plan.
1.4	Asset Management Planning	To ensure consistent management of the site in accordance with CASA, Air Services Australia and Council requirements, the most effective option is for the CASA requirements of aerodrome operation to be included in a management plan for the aerodrome. These requirements include: security, navigation and safety compliance. This document would replace the current Aerodrome Manual.

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2. Aviation Activity

Item No.	Description	Details
2.1	Rationalise runway requirements	1. Reduce length of runway 04/22 by 100m to 1010m. 2. Reduce width of runway 04/22 to 30m. Maintaining runway 11/29 as the primary runway, and reducing 04/22 to the secondary runway can reduce maintenance costs while maintaining operational effectiveness. This change is consistent with a number of similar sites in the area. While further maintenance would be restricted to the amended dimensions, further buffers may be provided through low maintenance activities such as weed spraying.
2.2	Improve aircraft access to the runways	Complete taxiway D to adopted future usage standards to encourage use and development on the Western fringe of the site. The construction standard adopted should reflect the proposed aircraft usage of the site.
2.3	Amend ERSA with updated information	With constant changes taking place on the site, the ERSA (En Route Supplement Australia) is required to be maintained with current information.
2.4	Draft obstacle limitation surfaces	Draft Obstacle Limitation Surfaces for glider and aerobatic operations for use with development planning, aviation activities and events planning



Above: Aircraft tie down area- Ausfly 2012

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3. Built Environment

Item No.	Description	Details
3.1	Private hangarage options	1. Individual hangar sites for glider storage 2. Additional hangar sites for larger aircraft 3. Combination of private and business hangar sites 4. Hangar sites with 'weekender' accommodation options While Council is not in a position to construct individual hangars, it can facilitate the subdivision and sale of land for the purpose of this and other development such as flying schools and aircraft maintenance facilities.
3.2	Continue Skypark development	Continue to provide accommodation options in the designated Skypark area. The future stages are required to be redesigned to cater for some larger lot sizes, the provision of public open space, subsequent land sales and required easements.
3.3	Establish a formal glider trailer storage area	To facilitate convenient and orderly glider trailer tie down and storage.
3.4	Adopt sustainable development initiatives	Developing a 'Greenfields' site with known stormwater issues presents Council with an opportunity to be a community leader in adopting sustainable development initiatives such as water sensitive design and energy efficient measures.
3.5	Events facilities and infrastructure	To encourage aviation events to the site, preparation should be made to incorporate the necessary facilities required for these events. These facilities include amenities, car parking, undercover display areas, control towers, and viewing areas.
3.6	Heritage Conservation	Based on the rich history of the site, Council should consider carefully managing the heritage significance through conservation and adaptive reuse initiatives.

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4. Traffic & Transport

Item No.	Description	Details
4.1	Improve access/egress	1. Increase width of existing entrance 2. Create a secondary access for heavy vehicles approximately 1000m west of the existing entrance
4.2	Improve and extend internal road network	1. Gazette Tom Perry Drive for addressing purposes. Note: This has been completed. 2. Consider traffic volume and purpose of the road in future road constructions.
4.3	Car parking facilities	Additional car parking facilities along road sides and near tourist sites should be constructed to cater for current and anticipated traffic volumes. These facilities should consider disabled access parking, coach and taxi stands, as well as overflow parking for events.



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5. Community Connections

Item No.	Description	Details
5.1	Community benefits	Assets and facilities of Council provide benefit to the community by direct use of the item, however these facilities can provide indirect benefits to the local economy through the accommodation and catering of visitors/events etc. Calculation of these indirect benefits can provide valuable data to Council and the community for decision-making purposes and grant funding applications. Ideally, this task would be based on accurate data such as: number of visitors, vehicles, aircraft (number, type and origin) etc.
5.2	Public Open Space	The provision of public open space and recreational facilities provides for additional uses on the site and increased community and user connections. Open space facilities encourage healthy, active living and improve amenity. This can be done by negotiating the purchase of private buildings and removal of Council buildings (5, 6 and 8) adjacent to museum apron to establish a public open space area
5.3	Events Planning	The drafting of an events plan would ensure that facilities and infrastructure for the site are integrated with the needs for conducting and management of events on the site.



LEFT: Public attendance at Ausfly 2012

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6. Infrastructure

Item No.	Description	Details
6.1	Roads	Increase width of Tom Perry Drive to accommodate two-lane traffic.
6.2	Stormwater Drainage	Improve stormwater management across the site, particularly on internal roads and parking areas.
6.3	Air Navigation Equipment	With the changing needs of the aviation industry, Council can reconsider the necessity for superseded air navigation equipment. The NDB is currently under a 40-year lease to the Civil Aviation Safety Authority, due to end in 2036. When this lease is terminated/expires, an agreement has been made with Narromine Tourist Park Pty Ltd, that a portion of the land, holding the NDB antenna is to be transferred into their ownership at cost.
6.4	Water/Sewer Services	Council would be required to anticipate water consumption and sewer usage associated with further development to determine required upgrades and expansion works.
6.5	Electricity Supply	Due to the nature of the aerodrome, it is necessary to consider underground electricity supply for future development on the site.
6.6	Telephone/Internet Access	With the anticipated increase of businesses on the site and the changing demographics of the Narromine community, it is suggested that adequate telecommunications infrastructure is installed in future expansion areas to cater for increased demand for these services.
6.7	Public Transport Connections	With the anticipated increase in visitors and residents to the aerodrome, it is important to maintain public transport links with the town centre. These links should be in the form of bus stops (in the aerodrome and Skypark) and taxi stands.
6.8	Underground Petroleum Storage Systems	There are currently two existing fuel storage facilities on the site, only one currently in use. Council is responsible for the compliance of these facilities with the UPSS Regulations and is subsequently required to install monitoring equipment around the facilities. Issues to be considered in this action include: the current use of the facility, the cost of installing the monitoring equipment, the impacts of Council absolving responsibility of the units and the possible costs of installing alternative systems.

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7. Economic Development

Item Description No.	Details
7.1 Funding Options	Council to reassess income avenues from the site to ensure a fair system, which benefits the aerodrome and the community. This revenue is suggested to go into a funding reserve specifically for the use of the aerodrome development projects. Options include: - Proceeds from sale of land - S94A Development Contributions - User pays on events - Site lease/hire fees - Suitable land rates from lots sold It should be noted that landing fees are not considered an option for revenue due to the possible discouragement of aircraft to the site, the cost prohibitive nature of the management of the system and the aim to remain competitive with other similar aerodromes. Additionally, the Skypark lots were advertised for sale, stating 'no landing fees' were incurred on the site.
7.2 Advertising and Signage	To encourage visitors and businesses to the site, Council should actively undertake advertising of the site. 1. The production of a 'prospectus' for businesses and residents interested in relocating to the site, once the developments are serviced. This prospectus should include information on the likelihood of noise from the activities on the site, including aerobatics. Note: this has now been completed. 2. Improved directional and business identification signage on and around the site. 3. Formulation of a communications strategy for the site to ensure maximum exposure of the site to potential residents, and investors.

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8. Amenity

Item No.	Description	Details
8.1	Landscaping	The amenity of the site can be improved through appropriate landscaping including: trees, shrubs, fencing, mowing and weeding. These actions provide opportunity for community involvement in the shaping and maintenance of the site.

9. Natural Environment

Item No.	Description	Details
9.1	Flooding	To ensure minimal impact from flooding, a flood impact study should be conducted on the site. This study will indicate relevant development controls and subdivision layout. Council is in the process of investigating the expansion of the town levee bank to mitigate flood impacts from a 1% AEP flood event in the area. It is recommended that, where cost-benefits are positive, that the levee be extended to protect the aerodrome from flooding. This results in a two-fold benefit: 1. It protects new and existing development on the site, providing assurance to new developers who invest in the site of protection from flood events; and 2. It maintains the aerodrome as a critical site for evacuation and supply delivery in the event of a disaster.
9.2	Contamination	Based on the history of the site, a stage one contamination investigation would be required prior to any development to assess the feasibility of certain development types.

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Actions Staging Plan

Short Term - Years 1-5

Item No.	Description	Responsibility	Funding Source
7.1	Set Council direction for project funding options	Narromine Shire Council Council	
7.1	Draft and adopt S94A Development Contributions Plan. Note: This has been completed	Narromine Shire Council Council	
1.2/3.1	Subdivision of existing lots to facilitate privatisation of existing development on the site	Narromine Shire Council Council	
1.3	Amend the Narromine Development Control Plan to reflect suggested development controls	Narromine Shire Council Council	
2.1	Realign and reseal runways	Narromine Shire Council Council	
3.2/7.2	Redesign Bowden Fletcher Drive extension. Note: This has been completed	Narromine Shire Council Council	
3.2/7.2	Continue with following stages of the Skypark development. Note: Currently underway	Narromine Shire Council Council	
6.8	Conduct UPSS Investigations	Narromine Shire Council Council	
6.8	Depending on the results of the UPSS investigations, install monitoring equipment and recommission or decommission UPSS units	Narromine Shire Council Council	
5.1	Conduct 'Direct and Indirect community benefits' study	Narromine Shire Council Council / Grant funding	
9.1	Commission Flood impact study. Note partially completed for Hanger Development site	Narromine Shire Council Council / Grant funding	
3.3	Establish formal glider trailer area	Narromine Shire Council Council	
7.2/8.1	Establish entrance signage and landscaping	Narromine Shire Council Council	
4.2	Gazette Tom Perry Drive. Note: Completed	Narromine Shire Council Council	
3.4/6.2	Commission Water Sensitive Design study	Narromine Shire Council Council / Grant funding	
9.2	Commission Stage One Contamination Study	Narromine Shire Council Council	
3.6	Commission heritage conservation plan	Narromine Shire Council Council / Grant funding	
2.2	Complete construction of Taxiway D	Narromine Shire Council Council	
2.3	Amend the ERSA with updated information	Narromine Shire Council Council	
3.1	Commence rezoning in commercial and light industrial areas. Note: Currently Underway	Narromine Shire Council Council	
1.4	Draft Asset/Aerodrome Management Plan. Note: Currently underway.	Narromine Shire Council Council	
5.3	Draft Events Master Plan	Narromine Shire Council Council/Grant Funding	
2.4	Draft Obstacle Limitation Surfaces survey for glider and aerobatic operations	Narromine Shire Council Council	

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Medium Term - Years 5-10

Item No.	Description	Responsibility	Funding Source
7.2	Formulate a communications strategy for the advertising and promotion of the site	Narromine Shire Council	Council
4.1	Design and reconstruct existing entrance	Narromine Shire Council	Council
8.1	Establish landscaping in new development areas	Narromine Shire Council	Council
4.2/4.3/6.1/6.7	Extend internal road network, including widening of Tom Perry Drive and construction of car parking areas and public transport connections	Narromine Shire Council	Council
1.1/3.1/6.4/6.5/6.6	Design and facilitate staged commercial/industrial rezoning and subdivisions – including servicing and road works	Narromine Shire Council	Council / S94A contributions
6.2	Construct stormwater management infrastructure	Narromine Shire Council	Council / S94A contributions
5.2	Establish a public open space area	Narromine Shire Council	Council / S94A contributions
3.5	Events facilities and infrastructure	Council / Community	Grant funding

Long Term - Years 10- 25

Item No.	Description	Responsibility	Funding Source
4.1	In conjunction with the relevant roads authority, Narromine Shire Council construct secondary access from Mitchell Highway, including associated road works.	Narromine Shire Council	Council
1.1/3.1/6.4/6.5/6.6	Design and facilitate staged Industrial rezoning and subdivisions – including servicing and road works	Narromine Shire Council	Council

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Strategic Plan: Site Plan

The diagram to the left illustrates a whole-of-site view of the Aerodrome, with the documented recommendations, as numbered.





Inset Area

The diagram to the left illustrates an inset view of the Aerodrome, over the current public area, with the documented recommendations, as numbered.



References

Aerodrome Operation Support Pty Ltd. (1995). *Narromine Aerodrome Planning Strategy and Management Plan*. Narromine: Narromine Shire Council.

Narromine Shire Council. (2012). *Community Strategic Plan: Narromine Shire 2022*. Narromine: Narromine Shire Council.

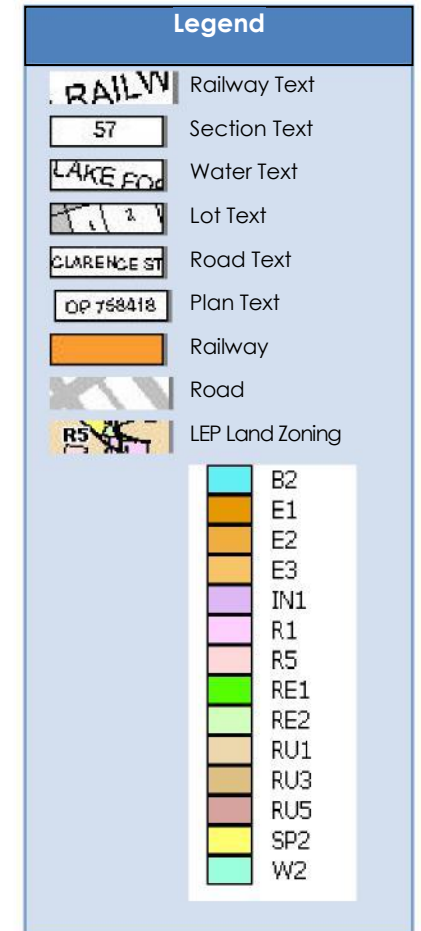
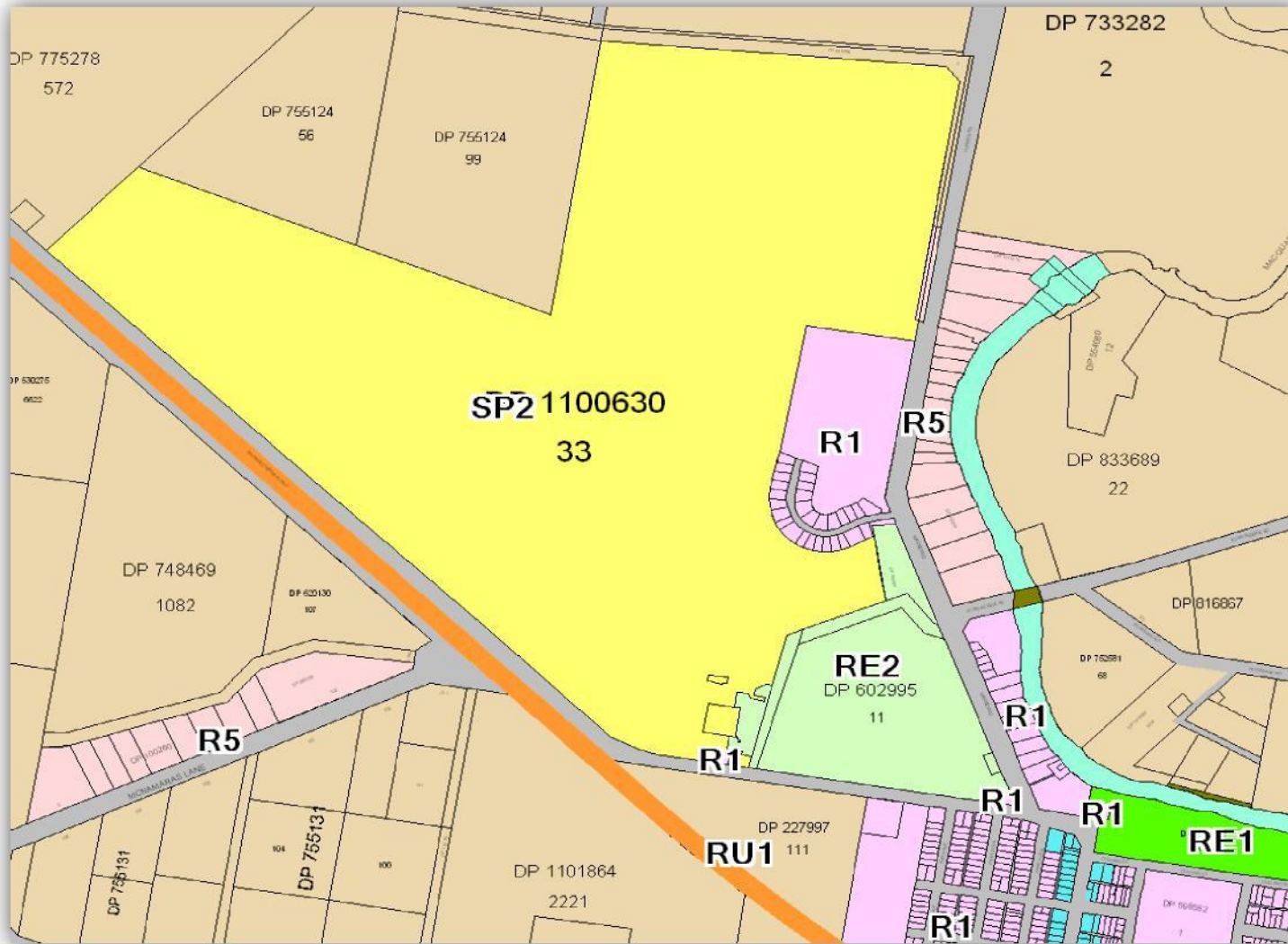
Narromine Shire Council. (2004). *Narromine Aerodrome Planning Strategy and Management Plan*. Narromine: Narromine Shire Council.



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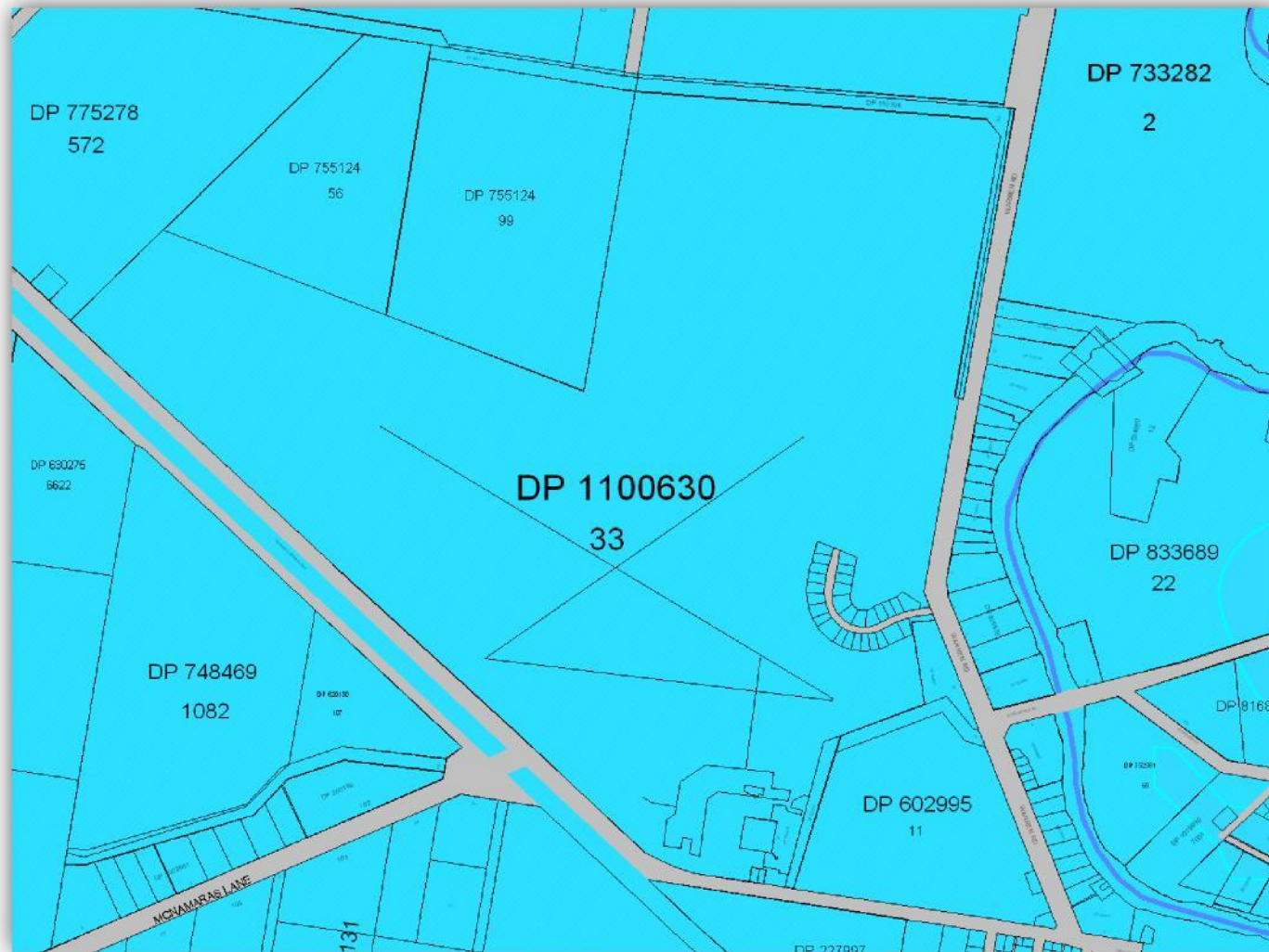
Appendix 1 Land Use Maps

Narromine Land Zoning Mapping



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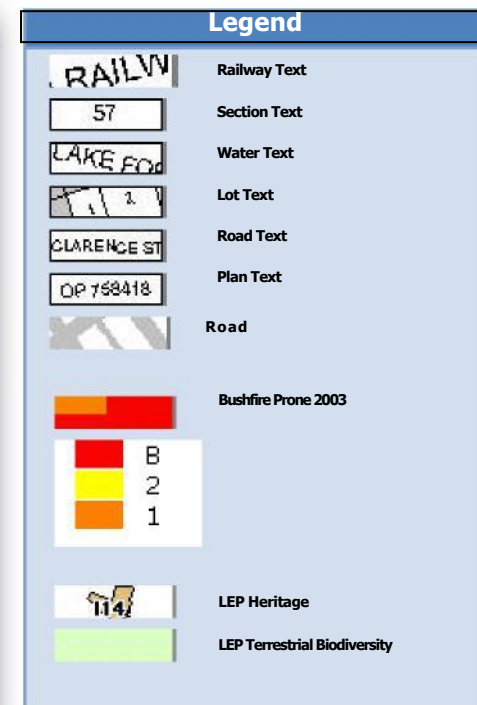
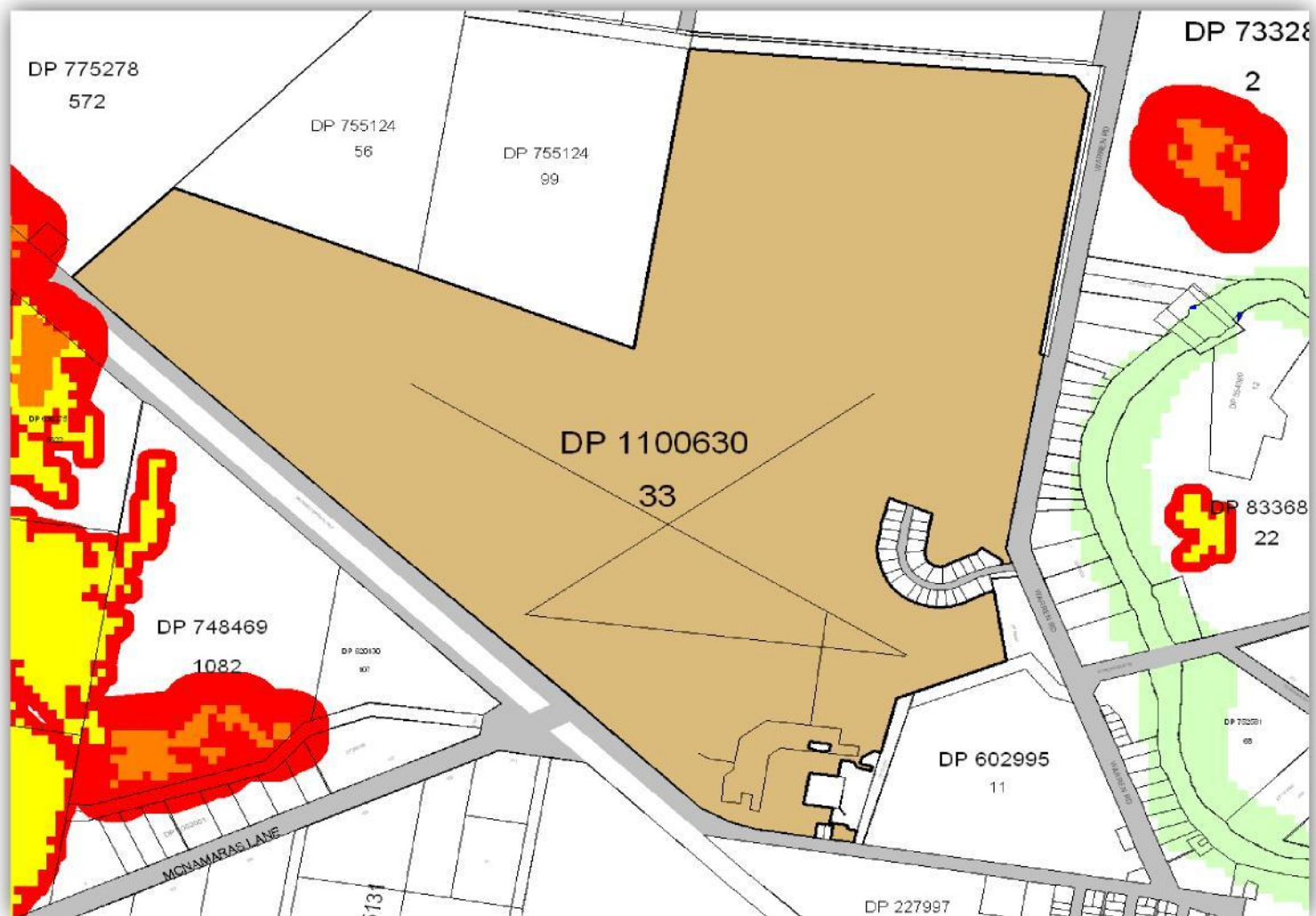
Flooding and Groundwater Vulnerability Mapping



Legend	
	Railway Text
	Section Text
	Water Text
	Lot Text
	Road Text
	Plan Text
	Road
	LEP Terrestrial Disturbance
	LEP Watercourse
	LEP Flood
	LEP Groundwater
	Water

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Narromine Heritage Mapping



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