DUBBO
CITY COUNCIL

AREA PLAN 1

DUBBO RESIDENTIAL ESTATE

Lot 301 DP 1123136
Hennessy Drive, Dubbo

Adopted: 25 February 2013

Contents

Part 1 Introduction

1.1 Name of Plan

This Development Control Plan is known as Area Plan 1 Dubbo Residential Estate Lot 301 DP 1123136 Hennessy Drive, Dubbo, Residential Development and Subdivision.

1.2 Statutory context

This Plan has been prepared by Council in accordance with Section 74C of the Environmental Planning and Assessment Act 1979 (the Act) and Part 3 of the Environmental Planning and Assessment Regulation 2000 (the Regulation). This Area Plan is a Development Control Plan under the provisions of the Environmental Planning and Assessment Act, 1979.

The Plan was adopted by Council at the meeting on 25 February 2013.

The Plan commenced on 7 March 2013.

The Plan must be read on conjunction with the Dubbo Development Control Plan 2013 and Dubbo Local Environmental Plan (LEP) 2011, gazetted on 11 November 2011 as amended.

1.3 Land to which this Plan applies

This Plan applies to Lot 301 in DP 1123136 Hennessy Drive, Dubbo. It provides detailed information as to the intent of the site, the scope of permissible development and guidance to those wishing to submit a development application (DA) in relation to this land.

1.4 Relationship to other plans and documents

Under the Environmental Planning and Assessment Act, 1979, Council is required to take into consideration the relevant provisions of the Area Plan in determining an application for development on land to which the Plan applies.

In the event of any inconsistency between any Environmental Planning Instrument (EPI) and this Area Plan, the provisions of the EPI will prevail.

Council in the assessment of a development application will consider all matters specified in Section 79C of the Environmental Planning and Assessment Act 1979. Compliance with any Environmental Planning Instrument or this Plan does not infer development consent will be granted.

1.5 Background

This Plan has been written to guide residential development of the subject land. The development controls provided here rely on proponents demonstrating how development of the land meets the objectives of each relevant element and the associated performance criteria.

The Area Plan has been designed to assist residential development to be undertaken on the land.

The Aims of the Plan are the following:

- Provide guidance to developers/applicants in the design of development proposals for land situated within the subject Estate.
- Promote residential amenity and an attractive neighbourhood.
- Reinforce the aims and objectives of the R2 Low Density Residential Zone and RE1 Public Recreation Zone under the Dubbo Local Environmental Plan 2011.
- Actively promote and achieve sustainable development.

1.6 How to use this Plan

When preparing a development application, all relevant sections of the Plan are required to be considered.

The majority of sections in the Plan incorporate design elements that are required to be considered and addressed by a proponent in the design process.

Each section of this Plan has a consistent format to that of the Comprehensive Dubbo Development Control Plan. The objectives of each section are stated at the top of the page and the proposed development is required to focus on satisfying these objectives.

Below the objectives is a table with two columns. The column on the left outlines the aim of the design element, while the column on the right offers default design guidelines that an applicant can choose to use in their development in lieu of designing to satisfy the intent of the column on the left.

In summary, the column on the left provides more flexibility in designs, while the column on the right provides standard solutions that are acceptable to Council.

If the proponent chooses not to use the 'Acceptable Solutions' in the right hand column, written detail must be provided of how the design satisfies the 'Performance Criteria' in the left hand column.

An example of how an element of the Plan is structured is provided on the following page:

Performance criteria	Acceptable Solution The acceptable solutions illustrate one way of meeting the associated performance criteria:
Built form	
P1 The frontage of buildings and their entries are readily apparent from the street.	A1.1 Buildings adjacent to the public street, address the street by having a front door or living room window facing the street. A1.2 Where dual occupancies or multi-dwelling housing are situated on corner blocks (where one is not a lane), the development is designed to face each street frontage.
P2 Building height at the street frontage maintains a compatible scale with adjacent development.	A2.1 Differences in building height between existing buildings and new development is not more than one storey when viewed from the public street and adjoining properties. A2.2 Where a building is adjoined on either side by a single storey building, the second storey is setback a minimum of 3 m from the front of the building to achieve a stepped height. A2.3 The design includes attic rooms which provide additional floor space with minimal streetscape impact.

1.7 Strategic context

The Dubbo Urban Areas Development Strategy 1996 has facilitated the creation of a range of lifestyle options for the urban area of the city. Through the restriction of urban development to a defined area, Council is seeking to protect the long-term future of agricultural land located beyond the urban area.

These lifestyle options have been developed through the Dubbo Urban Areas Development Strategy (UADS) adopted by Council in 1996 and the Review of the UADS adopted by Council in 2007. Dubbo LEP 2011 facilitates the achievements of the Strategy components in zoning lands for the sustainable development of the city.

The following figure details the context of the planning documents applicable to residential lands.

Urban Areas Development Strategy
1996 – 2015

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Review of the Urban Areas Development Strategy 2007

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Dubbo Local Environmental Plan 2011

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Dubbo Development Control Plan 2013

The Urban Areas Development Strategy consists of the following components:

- Residential Areas Development Strategy;
- Commercial Areas Development Strategy;
- Industrial Areas Development Strategy;
- Institutional Areas Development Strategy;
- Recreational Areas Development Strategy; and
- Future Directions and Structure Plan

The Urban Areas Development Strategy was created to manage the development and conservation of land within the urban area of the city through ensuring the Central Business District is the centre of the city.

Re-centralisation of the Dubbo Central Business District will be facilitated by further residential development being undertaken in west Dubbo. The Strategy includes extensive areas in north-west and south-west Dubbo as being suitable for further residential development to incorporate the following:

North- west sector – 2,600 lots (approximately)
South- west sector – 3,281 lots (approximately)

Dubbo LEP 2011 offers a range of lot sizes in the West Dubbo Urban Release Areas, ranging from 600 square metres to 10 Ha. This ensures a variety of lifestyle opportunities can be provided in close proximity to the city centre.

The Strategy also allows for infill subdivision opportunities in the south- east sector with the Dubbo LEP 2011 allowing for the potential development of 1,059 lots within this sector. The subdivision considered by this Area Plan is within the south- east sector.

The Strategy does not provide for any further reduction in the minimum lot size for subdivision in the eastern sector of the city based on centralisation of the Central Business District to the west, environmental constraints, infrastructure provision and transport requirements.

Please contact Council's Environmental Services Division if you require any further information in relation to the Dubbo Urban Areas Development Strategy.

1.8 Urban Release Areas

Development of the subdivision considered in this Area Plan has been undertaken in accordance with Part 6 of the Dubbo LEP 2011. The relevant Clauses contained in Part 6 of the Dubbo LEP 2011 are provided below:

Clause 6.1 Arrangements for designated State public infrastructure

(1) The objective of this clause is to require satisfactory arrangements to be made for the provision of designated State public infrastructure before the subdivision of land in an urban release area to satisfy needs that arise from development on the land, but only if the land is developed intensively for urban purposes.

(2) Development consent must not be granted for the subdivision of land in an urban release area unless the Director-General has certified in writing to the consent authority that satisfactory arrangements have been made to contribute to the provision of designated State public infrastructure in relation to that land.

The Department of Planning and Infrastructure has undertaken consultation with State Public Agencies to consider the provision of State infrastructure in the South- East Urban Release Area.

Council was provided with certification from the Director General of the Department of Planning and Infrastructure on 17 December 2012 for the provision of State infrastructure. This certification does not require the provision of any further State infrastructure in the South- East Urban Release Area.

Clause 6.2 Public Utility Infrastructure

(1) Development consent must not be granted for development on land in an urban release area unless the Council is satisfied that any public utility infrastructure that is essential for the proposed development is available or that adequate arrangements have been made to make that infrastructure available when it is required.

Subdivision of the land has provided all urban infrastructure for residential development, including road infrastructure, power, sewerage, reticulated water, stormwater drainage and telecommunications.

The local energy provider has provided a new power sub-station within close proximity to the site for the purpose of accommodating future residential development in the vicinity.

Clause 6.3 Development Control Plan

(1) The objective of this clause is to ensure that development on land in an urban release area occurs in a logical and cost-effective manner, in accordance with a staging plan and only after a development control plan that includes specific controls has been prepared for the land

(2) Development consent must not be granted for development on land in an urban release area unless a development control plan that provides for the matters specified in subclause (3) has been prepared for the land.

(3) The development control plan must provide for all of the following:

a) a staging plan for the timely and efficient release of urban land, making provision for necessary infrastructure and sequencing,

b) an overall transport movement hierarchy showing the major circulation routes and connections to achieve a simple and safe movement system for private vehicles, public transport, pedestrians and cyclists,

c) an overall landscaping strategy for the protection and enhancement of riparian areas and remnant vegetation, including visually prominent locations, and detailed landscaping requirements for both the public and private domain,

d) a network of passive and active recreational areas,

e) stormwater and water quality management controls,

f) amelioration of natural and environmental hazards, including bush fire, flooding and site contamination and, in relation to natural hazards, the safe occupation of, and the evacuation from, any land so affected,

g) detailed urban design controls for significant development sites,

h) measures to encourage higher density living around transport, open space and service nodes,

i) measures to accommodate and control appropriate neighbourhood commercial and retail uses,

j) suitably located public facilities and services, including provision for appropriate traffic management facilities and parking.

This Plan has been prepared in accordance with Clause 6.3 and contains all applicable information required.

1.9 Notification of Development

Council will generally not publicly notify any development applications for residential accommodation within the Estate. However, if in the opinion of the Council a proposed development could impact the amenity of surrounding development, Council may publicly notify and/or advertise the development application in the local newspaper.

Any development application received by Council for non-residential development will be publicly notified to adjoining and adjacent property owners in the immediate locality who in the opinion of Council may be impacted by the proposed development in accordance with Chapter 1.2 Notification of Development (Dubbo Development Control Plan 2013), once it is adopted and commenced.

Part 2 Subject Site

2.1 Land to which the Plan applies

This Plan applies to Lot 301 in DP 1123136, Hennessy Drive, Dubbo and any allotment resulting from subdivision of the land. The land is shown in Figure 1 below.

Figure 1 - Subject land shown in blue outline

The land is located 3.5 kilometres south-east of the Dubbo Central Business District (CBD) and is situated in the South- Eastern Sub-District Urban Release Area. The site is bound by the Magnolia Grove Estate to the north, Holmwood Estate to the east, Hennessy Drive to the south and the Dubbo-Molong railway reserve to the west.

The land comprises of 45.04 hectares and is vacant of development. The land features a general slope from north to south. The land has been previously used for agricultural purposes (grazing) and as is cleared of any major vegetation with the exception of a number of scattered trees. The adjoining Lot 302 DP 1123136 to the south of the subject land contains the Holmwood Homestead, which is listed in the Dubbo LEP 2011 as a heritage item of local significance. The Macquarie River is located within 500m of the southern site boundary.

The surrounding development is predominantly residential, featuring established suburban areas to the north of Boundary Road and to the west of the rail reserve. Residential development is underway to the east of the site adjoining Wheelers Lane.

2.2 Land Zoning

The majority of the site is zoned R2 Low Density Residential under the Dubbo Local Environmental Plan 2011. A small section of the land traversing from east to west is zoned RE1 Public Recreation. This area of the site contains existing electricity infrastructure. The zoning of the land is shown in Figure 2 below.

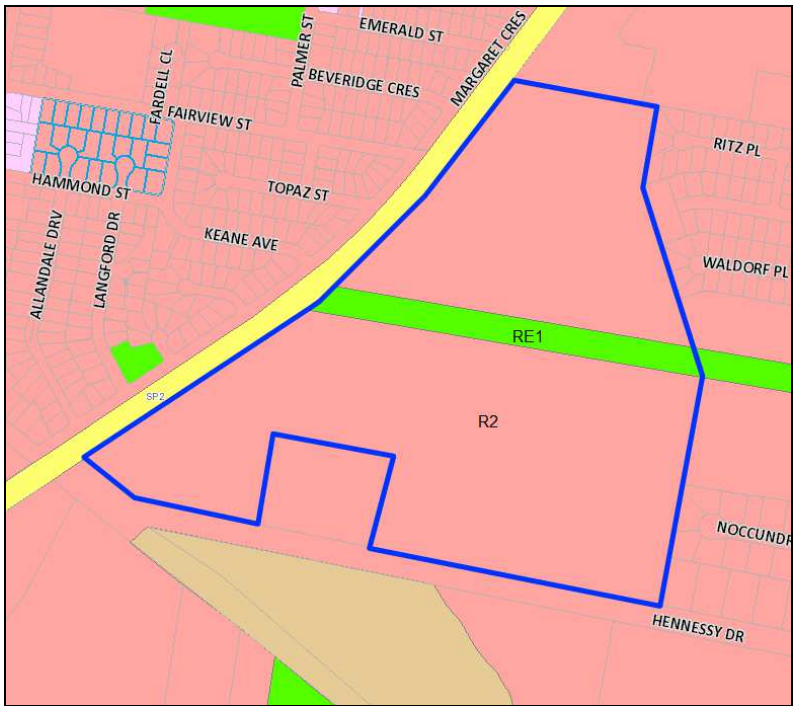


Figure 2 - Dubbo Local Environmental Plan land use zoning

Minimum Lot Sizes

The land is divided into three (3) minimum lot size zones as provided in Figure 3 below:

Yellow - 600 m^2

Red - 2,000 m^2

Maroon - 4,000 m^2

Figure 3 - Dubbo Local Environmental Plan minimum lot size

2.3 Physical Characteristics

Flora and Fauna

The site is located on a disturbed pasture area currently used for the purposes of grazing. The site contains a number of trees consisting of exotics and natives. The isolated nature and lack of native understorey significantly lowers the habitat potential of the site. Prior and existing land management practices have also significantly lowered habitat quality and availability for both native flora and fauna.

A field survey and flora and fauna study (Geolyse 2011) established that no rare or regionally significant native flora species (ROTAP) or fauna are likely to be present on the study area or to use the site as preferred habitat. Development of the site is therefore unlikely to result in a significant effect on threatened species, populations or ecological communities, or their habitats.

Contamination

The site has been utilised in the past for cropping and pasture grazing. A preliminary contamination investigation (Envirowest Consultants Pty Ltd 2010) did not detect elevated levels of any analysed materials. All substances evaluated on the land were consistent with background environmental levels and below investigation threshold for residential land-use.

There was no contamination found and the site has been deemed suitable for residential land use with no further action required.

Groundwater and Salinity

There is no evidence of salinity or elevated water tables from the vegetation growth on the site or from the presence of salinity indicators (Groundwater and Salinity Study, Envirowest Consulting Pty Ltd 2010). It is considered that any potential infiltration of water into the profile will not leach salt into the aquifer as the soils are non- saline.

An assessment by Envirowest Consulting Pty Ltd (2012) calculated the infiltration rate for the site at 112mm per year. Groundwater is located at a depth greater than 40m below the surface. With an infiltration rate of 112mm per year, this will require a time period of 357 years to reach the water table. Over this time period any contamination will be absorbed by the soil matrix and will not reach the water table. The additional impact of establishing shrubs and trees around houses will reduce infiltration over time.

Local bores that supply drinking water are located to the north and north east of the site. The drinking water aquifer is not recharged from the locality and is recharged from areas upslope and to the east and north. The movement of groundwater is south towards the Macquarie River. The site does not impact the bore field as groundwater flows are away from the nearby drinking water bores.

The main potential source of contamination associated with residential land use is over fertilising of lawns and gardens. However the potential impacts of nutrient infiltration associated with residential land-use will be less than under agricultural land use.

The assessment found that residential development of the site will have an insignificant impact on groundwater and will not impact the quality of water in the drinking water bore field.

Flooding

A Flooding Assessment was undertaken by Civil and Forensic Pty Ltd (2011) and determined the following flood levels for the site:

- 1% AEP level of 264.4m AHD (Flood Standard Reference Level - FSRL).
- 1% + 0.5m level of 264.9m AHD (Flood Planning Level - FPL).
- Extreme flood level of 269.2m AHD.

The entire site is located above the Flood Standard Reference Level. A small component of the southern section of the site is affected by the 1 in 100 year flood event and the extreme flood event.

Non Indigenous Heritage

The subject land shares three (3) boundaries with the site of the Holmwood homestead (Lot 302 DP 1123136). The homestead is a rural style dwelling dating back to the 1870s featuring a strong Georgian influence. The site is locally significant and is listed as a heritage item in the Dubbo Local Environmental Plan 2011. The Holmwood homestead is located 45m south of the southern boundary of the land.

Aboriginal Archaeology

An archaeological survey prepared by J Kelton of Central West Archaeological and Heritage Services in 1996 identified three sites (K-OS-1, K-ST-1 and K-IF-1) of Aboriginal archaeological significance in the area of the subject land, two of which were located on the site and the other on the adjacent ('Holmwood' homestead) Lot 302. The following provides a summary of these items:

> *Open camp site K-OS-1 is located on elevated floodplain approximately 100 metres south west of "Holmwood" homestead and consists of a scatter of stone artefacts over an area of approximately 832 square metres. The site occurs in close association with a "possible" Aboriginal scarred tree (K-ST-1) and is given a low to moderate significance assessment* (Hoynes Wheeler and Thorne Pty Ltd 1996:15).
>
> *As indicated above scarred tree site K-ST-1 is located near open camp site K-OS-1 on "Holmwood", in the south western corner of the study area. The scarred tree is a live, old growth Yellow Box (Eucalyptus melliodora). The scar, which is elongated and irregular in shape is rated as of "possible" Aboriginal origin due mainly to the poor definition of the scar, absence of axe marks consistent with Aboriginal removal and lack of any known Aboriginal history or specific significance. However, the scarred tree site is given a slightly higher moderate significance assessment due to the site's associated with an open camp site and due to the low number of previously recorded scarred tree sites in this area of the Macquarie River* (Hoynes Wheeler & Thorne Pty Ltd 1996:16).

At the time the archaeological survey was undertaken, the isolated artefact (K-IF-1), did not constitute a site under the NSW National Parks and Wildlife Act 1967 (amended 1974).

The strategy recommended that the open camp site (K-OS-1) and scarred tree site (K-ST-1) be incorporated into the adjacent homestead allotment to eliminate the potential for disturbance from the future development of Lot 301. This has been undertaken.

Noise

The subject site is situated immediately east of the Molong – Dubbo railway line which forms an open reserve to the east of Margaret Crescent. Although the line is currently disused, the corridor has not been abandoned. Therefore the future potential reinstatement of the rail may lead to associated noise impacts for surrounding development.

Railway land

Future housing adjoining the railway corridor must be developed so as to attenuate noise impacts associated with possible future reinstatement of the Dubbo-Molong railway line.

The *Development near rail corridors and busy roads - Interim Guideline* applies to development of the land by application of Clause 87 of State Environmental Planning Policy (Infrastructure) 2007. Part C of the interim Guideline considers development impacted by rail corridors.

Traffic

The development site is bound by Boundary Road to the north, Wheelers Lane to the east, Hennessy Drive to the south and the Molong -Dubbo railway line to the west.

Hennessy Drive, Wheelers Lane and Boundary Road are all sub-arterial roads. The site fronts Hennessy Drive, which is a two lane undivided road. There is no other existing road access to the site and access from the west is restricted by the presence of the railway line.

Traffic conditions to Boundary Road are characterised by local access for dwellings fronting Boundary road and through-traffic from established residential areas west of the railway to Wheelers Lane. It is expected that the completed Magnolia Estate development will add approximately 193 traffic movements to the adjacent road network, with connections to Boundary Road and Wheelers Lane. It is assumed that about half of the vehicular traffic will travel via Boundary Road.

The majority of traffic to Wheelers Lane (south of Boundary Road) is attributed to the Holmwood Estate and the developing Southlakes Estate to the east. Hennessy Drive accommodates mainly local traffic, and provides access between Wheelers Lane and Old Dubbo Road.

2.4 Servicing

Water, sewer, power, gas and telecommunications connections (predominantly as extensions from the surrounding residential development) are to be made available to the residential development.

Part 3 Development

Part 4 of the Plan provides minimum requirements for residential development in the subdivision.

3.1 Building Location and Design

3.1.1 Setbacks

Objective

- To provide setbacks that promote residential amenity and create a preferred pattern and layout for development.

Performance criteria Compliance with the performance criteria is the basic requirement.	**Acceptable Solution** The acceptable solutions illustrate one way of meeting the associated performance criteria:
P1 The setback of the development from the primary street frontage of the allotment is consistent with the desired amenity of the locality and the preferred neighbourhood character. **Note:** The setback is measured from the property boundary and the wall face of the development.	A1.1 Development on the primary street (longer frontage) shall be set back a minimum of 4.5m from the front property boundary (single dwellings). A1.2 Development (single dwellings) on the secondary setback (shorter) frontage shall be set back a minimum of 3.0m from the secondary property boundary. A1.3 Development (dual occupancy) on the secondary street frontage shall be set back a minimum of 4.5 m from the secondary property boundary.
P2 Development shall be provided with an adequate setback from the Dubbo to Molong Rail Corridor to provide a suitable level of visual and acoustic privacy for residents.	A2.1 A Section 88B Restriction requires residential development to be provided with a setback of six (6) metres from the rear or western boundary. **Note:** This Section 88B Restriction cannot be amended without the approval of both the Developer and Council, with the provision of supporting justification from a qualified acoustic professional.
P3 Side and rear setbacks ensure the amenity of adjoining properties is not adversely affected via loss of privacy or loss of solar access to habitable rooms or private open space.	A3.1 A wall built within 0.9m of a side boundary: – Has a maximum height of 3m unless it adjoins a higher existing or a simultaneously constructed wall; or – Has a maximum length of 15m where it does not adjoin an existing boundary wall.

Performance criteria Compliance with the performance criteria is the basic requirement.	Acceptable Solution The acceptable solutions illustrate one way of meeting the associated performance criteria:
	Note: Where a wall built within 0.9m of the boundary has a height less than 2.0m measured on the adjacent property, the wall can extend the full length of the boundary, less any front or rear boundary setback. **Note:** Minimum setbacks do not apply to eaves and sun shading devices below 2 m in height.
P4 Side and rear setbacks are sufficient to adequately address the potential impact of fire on adjoining properties.	A4.1 Developments are setback from side and rear boundaries to achieve compliance with the requirements of the BCA.
Garages and Carports P5 The location of carports and garages does not diminish the attractiveness of the streetscape, does not dominate views of the dwelling from the street and integrates with features of the associated dwelling.	A5.1 Garages and carports are setback a minimum of 5.5m from the front property boundary and in line with or behind the alignment of the front facade of the dwelling. Garages and carports are only permitted forward of the alignment of the front facade of the dwelling when they are setback a minimum of 7.5m from the front property boundary.
P6 Garages and parking structures are sited and designed to ensure they do not dominate the street frontage and are integrated with features of the dwelling.	A6.1 The width of a garage door facing the street shall: – not be greater than 50% of the total frontage (width) of the dwelling; and – Not have a width greater than 5.5m in a single plane. A6.2 The design and appearance of garages and carports shall include the following: – Integration of the design of the carport/garage design with the dwelling house. – Setting the garage/carport back from the main façade of the dwelling house. – Lots with a narrow frontage of 15m or less have only a single width garage/carport. – Parking is located so that the front windows of a dwelling are not

Performance criteria Compliance with the performance criteria is the basic requirement.	Acceptable Solution The acceptable solutions illustrate one way of meeting the associated performance criteria:
	obscured. – The dwelling design highlights the entry and front rooms rather than the garage. – The garage is located under the roof of two-storey dwellings. – Double garages are designed to divide the elevation into two (eg. use of separating columns, stepping one garage back, use of roof-form, providing interest in colour treatments etc).

3.1.2 Dwelling Design and Solar Access

Objective

- To ensure the design and orientation of dwelling houses are in keeping with the intended character of the locality and that dwellings are designed to promote and preserve residential amenity and privacy.

Performance criteria Compliance with the performance criteria is the basic requirement.	Acceptable Solution The acceptable solutions illustrate one way of meeting the associated performance criteria:
Building size and orientation P1 Development is orientated to the street and facilitates casual surveillance of the street.	A1.1 The front elevation of the building is parallel to the front allotment boundary. A1.2 The building has windows from habitable rooms facing the street.
P2 Building size shall reflect the desired amenity of the subdivision as a low density residential environment.	A2.1 The building height should not exceed two-storeys above ground level. A2.2 Buildings have a maximum site coverage of 60%. This site coverage includes outbuildings, garages, carports and patios. The site coverage does not include pools or associated paving within the pool curtilage.
P3 The appearance of building bulk is reduced by design elements.	A3.1 Building bulk is reduced by a combination of variations in material and building form. A3.2 Roofs include pitches, gables, skillions or other features.

Performance criteria Compliance with the performance criteria is the basic requirement.	**Acceptable Solution** The acceptable solutions illustrate one way of meeting the associated performance criteria:
Utilities and services P4 Waste disposal and collection areas are unobtrusive and ensure associated adverse impacts on neighbouring properties are minimised.	A4.1 Garbage bin storage and collection areas are located behind the front building line and are screened from view.
P5 Roofs are attractive and are not provided with a clutter of plant and equipment.	A5.1 Service structures and mechanical plant are designed as part of the building or are screened effectively and concealed from street views. A5.2 Building caps and roofs contribute to the design of the building.
P6 Fenestration and sun control devices are used effectively to: – shade buildings; – reduce glare; – assist in maintaining comfortable indoor temperatures.	A6.1 Sun shading devices are provided to west facing windows.
Specular reflectively P7 Buildings shall not incorporate any type of glass or other surface likely to reflect specular rays that could impact the amenity of development in the immediate locality.	A7.1 Any reflective glass material: – has a level of light reflectivity of not greater than 20%; and – has a level of heat transmission of not less than 20%.
Managing light impacts P8 Light nuisance is minimised.	A8.1 Outdoor lighting complies with the requirements of Australian Standard 4282 – Control of the Obtrusive Effects of Outdoor Lighting.
Managing Noise Impacts P9 Noise from the development does not adversely affect existing or likely future development on adjacent land.	A9.1 Compliance with the requirements of the Protection of the Environment Operations Act, 1997.

Performance criteria Compliance with the performance criteria is the basic requirement.	**Acceptable Solution** The acceptable solutions illustrate one way of meeting the associated performance criteria:
Rail Noise Impacts P10 Development of the land is not unreasonably impacted by noise associated with use of the Dubbo-Molong Rail Corridor	A10.1 The development complies with the requirements of State Environmental Planning Policy (Infrastructure) 2007 and the Development near Rail Corridors and Busy Roads – Interim Guideline (2008). A10.2 All residential buildings located within 25 m of the rail corridor (Zone B) require standard noise mitigation measures consistent with Category 2 Noise Control treatments (Interim Guideline Appendix C) which include: - Windows/Sliding Doors – Openable with minimum 6 mm monolithic glass and full perimeter acoustic seals. - Wall Construction – 110 mm brick, 90 mm timber stud frame or 92 mm metal stud frame, minimum 50 mm clearance between masonry and stud frame, 10 mm standard plasterboard internally. - Roof – Pitched concrete or terracotta tile or metal sheet roof sheeting with sarking, 10 mm plasterboard ceiling fixed to ceiling joists, R2 insulation batts in roof cavity. - Entry Door – 40 mm solid core timber door fitted with full perimeter acoustic seals. - Floor – 1 layer of 19 mm structural floor boards, timber joists on piers, or Concrete slab floor on ground.

Performance criteria Compliance with the performance criteria is the basic requirement.	**Acceptable Solution** The acceptable solutions illustrate one way of meeting the associated performance criteria:
Solar access P11 The proposed development is designed to ensure that solar access is available to habitable rooms, solar collectors (photovoltaic panels, solar hot water systems etc.) private open space and clothes drying facilities. **Note:** Council will require the submission of a shadow diagram to demonstrate the impact of overshadowing on adjoining and adjacent allotments for any 2 storey development. Shadow diagrams are to be prepared for 9.00 am, 12 noon and 3.00 pm on 22 June. The shadow diagrams are to demonstrate the extent of overshadowing of both the proposed and the existing development on the subject land and adjacent sites.	A11.1 On east/west facing lots, the setback on the northern elevation is sufficient to allow for solar access to habitable rooms located on the northern side of the dwelling. A11.2A roof area sufficient to meet the space requirements for a solar hot water service is provided where it faces within 20^0 of north and receives direct sunlight between the hours of 9.00 am and 3.00 pm on 22 June. A11.3 Outdoor clothes drying areas are located so as to ensure that they have sunlight and ventilation between the hours of 9.00 am and 3.00 pm on 22 June to a plane of 1.0m above the finished ground-levels under the drying lines.
P12 The proposed development does not reduce the level of solar access currently enjoyed by the adjoining or adjacent allotments.	A12.1 Habitable rooms and the principle private open space of adjoining development receive a minimum of 4 hours solar access between the hours of 9.00 am and 3.00 pm on 22 June.

3.1.3 Heritage

Objective

- To ensure new development adjacent to the Holmwood Homestead is sympathetic to the significance and character of the local heritage item.

Performance criteria Compliance with the performance criteria is the basic requirement.	**Acceptable Solution** The acceptable solutions illustrate one way of meeting the associated performance criteria:
Bulk, setbacks and curtilage P1 A curtilage is maintained around the heritage item to preserve the appearance and heritage character of the site.	A1.1 Development of lots with at least one boundary adjoining the heritage item shall be provided with a minimum boundary setback of 10 m to the heritage item. A1.2 Development of lots with at least one boundary adjoining the heritage item shall consist of a single storey.
Design Detail P2 New development should not mimic or try to replicate heritage fabric.	A2.1 New development should be recognisable as a product of its time. Historical details such as small paned windows, cast-iron decoration, ornate decorative details, original window glazing etc shall not be applied.
Fencing P3 Fencing should not detract from the appearance or value of the heritage item.	A3.1 New fencing that adjoins a heritage item should be simple and compatible in height and design with adjoining fences. A3.2 Boundary fencing of Lot 302 (containing the heritage item) and the subject land shall not be provided with colorbond or metal materials.

3.1.4 Private Open Space and Privacy

Objective

- To provide private outdoor open space sufficient to meet the needs of occupants and to promote a safe and attractive level of residential amenity and privacy.

Performance criteria Compliance with the performance criteria is the basic requirement.	**Acceptable Solution** The acceptable solutions illustrate one way of meeting the associated performance criteria:
Design and setting P1 Balconies and screens are designed to protect the privacy of adjoining dwellings without resulting in unattractive buildings or an appearance of excessive bulk.	A1.1 Screening of balconies to a height of 1.7 m above finished floor level is limited to the side and rear of the dwelling and the sides of balconies where required to prevent noise and overlooking of other dwellings and recreation areas.
Private open space P2 Private open space is of an area and dimension which facilitates its intended use and the needs of its users.	A1.2 Residential accommodation is provided with a Principle Private Open Space (PPOS) area: - Having a minimum area equating to 50% of the Gross Floor Area (GFA) of the dwelling. - To be included in PPOS calculations, the area shall have a minimum dimension of 3 m. - Having a single area, contiguous to an internal living area, that has dimensions of 5m by 5m. This area can include covered (but not enclosed) outdoor entertainment areas.
P3 Private open space is easily accessible by the occupants of the development and provides an acceptable level of privacy.	A3.1 Principal Private Open Space (PPOS) is directly accessible from the main living area. A3.2 All private open space is located behind the front building line and is screened to provide for the privacy of the occupants and the occupants of adjoining and adjacent properties.
Landscaping P4 Landscaping is consistent with the preferred landscape character of the area.	A4.1 Landscaping contributes in a positive way to neighbourhood character.
P5 Landscaping is provided at a scale and density which is appropriate for the development.	A5.1 The height and density of vegetation at maturity will be suitable to screen and soften the development.

Performance criteria Compliance with the performance criteria is the basic requirement.	Acceptable Solution The acceptable solutions illustrate one way of meeting the associated performance criteria:
P6 Landscaping is located so as to not adversely impact upon: infrastructure; development on adjacent or adjoining the site; or the amenity of the area.	A6.1 Species are selected and located taking into consideration the size of the root zone of the tree at maturity, the likelihood of potential for the tree to shed/drop branches. A6.2 Species are selected and located to ensure that the solar access and amenity of adjoining and adjacent properties is not adversely affected.
P7 Landscaping is undertaken in an environmentally sustainable manner which limits the time and costs associated with maintenance.	A7.1 Species selected, including turf, are suitable for Dubbo's climate. A7.2 An area no greater than 40% of the site area shall be provided with lawn (turf). A7.3 Species selected require a minimal amount of watering (Waterwise Garden). A7.4 Landscaping does not adversely impact on groundwater levels by way of over-watering resulting in groundwater level increases, or the pollution of groundwater. A7.5 Landscaping is provided with a timed watering system and moisture meter to determine if watering is required. A7.6 Sensors are used to control watering systems.

3.1.5 Fencing

Objective

- Fencing serves to protect the visual privacy of dwellings while maintaining an appropriate level of neighbourhood amenity and opportunities for passive surveillance.

Performance criteria Compliance with the performance criteria is the basic requirement.	Acceptable Solution The acceptable solutions illustrate one way of meeting the associated performance criteria:
P1 Front boundary fencing is of a suitable style and scale as to not impact the streetscape.	A1.1 The front boundary fence shall be no higher than 1.2 metres in height, not be constructed of colorbond and be more than 50% open.
P2 The height and materials of side and rear fencing will not cause overshadowing or adverse amenity impacts upon adjoining development.	A2.1 Side and rear fences do not exceed 1.8 metres above ground level and are constructed of solid materials appropriate for a residential area, such as timber slats.

Performance criteria Compliance with the performance criteria is the basic requirement.	Acceptable Solution The acceptable solutions illustrate one way of meeting the associated performance criteria:
P3 Fencing of the western boundary of the land within the Dubbo to Molong Rail Corridor and open space areas shall be consistent with the nature of development in the locality.	A3.1 Boundary fencing of allotments and public open space within the subdivision is constructed of open wire fencing with steel posts not exceeding a height of 1.8 metres.

3.1.6 Parking and Access

Objective

- To provide safe and convenient parking for residents and visitors and to avoid parking difficulties in the neighbourhood.

Performance criteria Compliance with the performance criteria is the basic requirement.	Acceptable Solution The acceptable solutions illustrate one way of meeting the associated performance criteria:
Parking provision P1 Car parking is provided on-site according to projected needs. P2 Vehicle access and parking is safe and convenient for residents, visitors and service providers.	A1.1 Residential accommodation is provided with one parking space per one to two bedrooms and two parking space per three or more bedrooms on site. A1.2 For other development types, the vehicle parking provision to be provided on the land in accordance with table 1 below. A2.1 All required vehicle parking is provided behind the building line.
Design P3 Vehicle parking design and location shall minimise impacts on neighbouring dwellings. Noise disturbance shall be mitigated by parking area location and fencing.	A3.1 Vehicle parking is: – screened to minimise reflection of car headlights onto dwelling windows and to attenuate noise; – separated from habitable windows to minimise noise and fumes.

Performance criteria Compliance with the performance criteria is the basic requirement.	**Acceptable Solution** The acceptable solutions illustrate one way of meeting the associated performance criteria:
P4 Car parking facilities are designed and located to: – conveniently and safely serve users including pedestrians, cyclists and vehicles; – enable efficient use of car spaces and accessways, including manoeuvrability for vehicles between the street and the dwelling; – conform to the adopted street network hierarchy and objectives of the hierarchy, along with any related local traffic management plans; and – achieve relevant streetscape objectives.	A4.1 The minimum dimensions of a car space are 5.5 m x 2.4 m. A4.2 Car spaces and access are provided in compliance with Chapter 3.5 Parking of the Dubbo Comprehensive Development Control Plan 2013. A4.3 Accessways and driveways are designed to enable vehicles to enter the designated parking space in a single turning movement and leave the space in no more than two turning movements.
Driveways and access points P5 Driveways and access points are designed for maximum safety to resident motorists, passing motorists and pedestrians.	A5.1 Driveways are not less than 3.0m wide and: – Not within 6.0m of a road intersection; and – The access points are located so that stopping sight distances are adequate for the design speed of the road (i.e. in accordance with AUSTROADS Guidelines 'Guide to Traffic Engineering Practice, Part 5 – Intersections at Grade').
Surface treatment P6 The surface treatment of driveways and car parks shall be a hard wearing all weather seal.	A6.1 Car spaces, accessways and driveways are formed, defined and drained to a Council drainage system, and surfaced with: – an all-weather seal such as concrete, coloured concrete, asphalt or mortared pavers; or – stable, smooth, semi-porous paving material (such as brick, stone or concrete pavers) laid to the paving standard of light vehicle use.

References
• AUSTROADS Guidelines 'Guide to Traffic Engineering Practice, Part 5 – Intersections at Grade'. • Aus-Spec (DCC version) Development Series – Design and Development Specification Series – Construction. • AMCORD.

Table 1 - Required rate of vehicle parking

Column 1 Land and building use	Column 2 Rate of provision
Bed and breakfast accommodation	One space per lettable bedroom plus two spaces for the permanent occupants of the dwelling. Note: Space(s) shall be provided behind the building line.
Health consulting rooms	One space per 25 m^2 of NLA
Hospitals and the like	One space per 10 beds plus one space per each resident or staff doctor plus one space for each employee on duty at any one time plus ambulance parking.
Medical centres	One space per 25 m^2 of NLA
Infants and primary schools and secondary schools	One space per 1.5 staff plus one space per 10 students in year 12 plus adequate student set-down/pick-up areas, bus turning areas plus parking for auditoriums and sports stadia.
Higher education establishments, tertiary schools and colleges	One space per 1.5 staff plus one space per five students plus one space per five live-in students plus parking and turning areas for auditoriums and sports stadia.
Child care centres	One space per four children
Community facility (where a use is not specified)	One space per 20 m^2 of public area.
Place of public worship, funeral homes, mortuaries and the like	One space per five seats plus additional provision for overflow parking onsite.

3.1.7 Flood Prone Land

Objectives

- To ensure development is compatible with the flood risk of the area;
- To minimise the flood risk to life and property; and
- To ensure that development does not exacerbate flood impacts or adversely affect flood behaviour.

Performance criteria The environment management objective may be achieved where:		Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:	
P1	The impact of flooding is reduced.	A1.1	Avoid siting buildings near depressions and watercourses or on flood-prone land.

3.2 Subdivision of land

3.2.1 Neighbourhood design

Introduction

Successful neighbourhoods have a sense of community, are designed to promote social interaction, are pleasant and have a high level of safety for residents and visitors. Good neighbourhood design assesses how the residents will interact within the neighbourhood and considers the street and pedestrian networks in addition to housing.

Objectives

- To provide neighbourhoods that offer opportunity for social interaction;
- Are aesthetically pleasing and cater for a broad diversity of housing needs;
- The neighbourhood design ensures motor vehicles do not dominate the neighbourhood; and
- Walking and cycling are encouraged.

Performance criteria The neighbourhood design objectives may be achieved where:		Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:	
P1	Street design and lot density minimises motor vehicle use and promote walking and cycling.	A1.1	Recreational areas and facilities are located within walking distance (400 m) of residences.
P2	Natural and cultural features in the area are emphasised and enhanced in the neighbourhood design.	A2.1	Watercourses, natural vegetation and heritage items are retained and emphasised in the design.

Performance criteria The neighbourhood design objectives may be achieved where:		Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:	
P3	The layout provides for community focal points and public open space that promotes social interaction and caters for a range of uses by the community.	A3.1	If the subdivision is located in an Urban Release Area under the provisions of the Dubbo LEP 2011, the design of the subdivision complies with the relevant Residential Release Strategy.
P4	Neighbourhood densities are closer to public transport nodes, neighbourhood centres and the like.	A4.1	If the subdivision is located in an Urban Release Area under the provisions of Dubbo LEP 2011, the design of the subdivision complies with the relevant Residential Release Strategy.
P5	Neighbourhood design provides for passive surveillance of residences and public areas to enhance personal safety and minimise the potential for crime.	A5.1	Battle-axe lots are minimised in the subdivision design.
P6	Street networks provide good external connections for local vehicle, pedestrian and cycle movements. Their design promotes functional movement while limiting speed and detours through traffic.	A6.1 A6.2 A6.3	Refer to 3.2.5 Street Design and Road Hierarchy. If the subdivision is located in an Urban Release Area under the provisions of Dubbo LEP 2011, the design of the subdivision complies with the relevant Residential Release Strategy. Cul-de-sacs are designed to provide for functional allotments with on-street parking (see Figure 7). A cul-de-sac shall have a minimum of ten (10) and maximum of twenty (20) allotments.

References
• Dubbo LEP 2011; and • AMCORD (1995) Section 1 – Neighbourhood Planning and Movement Networks.

3.2.2 Lot layout

Introduction

Lot layout cannot be seen in isolation from its later use. The arrangement of future dwellings will have an important influence on the quality of the neighbourhood that develops and should be considered as part of the lot design.

Objective

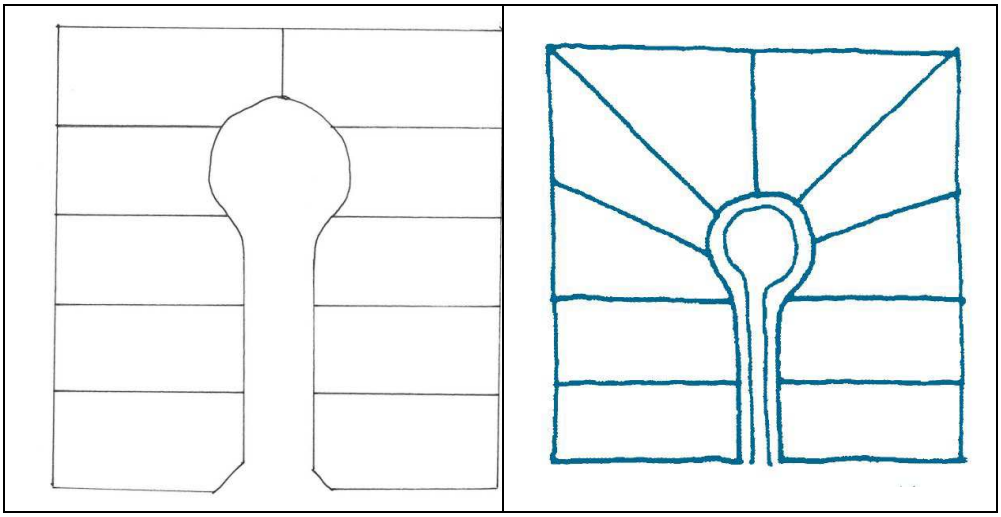
- To provide a range of lot sizes to suit a variety of household types and user requirements whilst considering the surrounding established area.

Performance criteria The lot layout objectives may be achieved where:	**Acceptable solutions** The acceptable solutions illustrate one way of meeting the associated performance criteria:
Size P1 Lots are of appropriate area and dimensions for the siting and construction of a dwelling and ancillary outbuildings, the provision of private outdoor open space, convenient vehicle access and parking.	A1.1 Lot size complies with Dubbo LEP 2011. A1.2 Lot size and dimensions take into account the slope of the land and minimise earthworks/retaining walls associated with dwelling construction.
	A1.3 Lot size and dimensions enable residential development to be sited to: – Protect natural or cultural features; – Acknowledge site constraints including soil erosion; and – Retain special features such as trees and views (developers are encouraged to identify significant trees at subdivision stage and ensure provision of an adequate building envelope). A1.4 Cul-de-sacs are designed to provide for functional allotments with on-street parking (see Figure 7). A cul-de-sac shall have a minimum of ten (10) and maximum of twenty (20) allotments. A1.5 Battle-axe subdivisions provide a minimum width of 4.3 m (ie. 2.5 m wide driveway plus 900 mm on both sides to a boundary fence).
User requirements P2 Lot frontages are orientated to enable maximum residential security.	A2.1 Lot frontages are orientated toward streets and open spaces so that personal and property security, deterrence of crime, vandalism and surveillance of footpaths and public open space are facilitated.

Performance criteria The lot layout objectives may be achieved where:	Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:
Solar access P3 Lots are orientated and have dimensions to allow adequate solar access.	A3.1 Lots are orientated so that one axis is within 30^0 east or 20^0 west of true north. **Note:** – North-facing slopes improve opportunities for solar access; – Small lots are best suited to north-facing slopes with gradients of less than 15%; – South-facing slopes reduce solar access; and – Large lots/lowest densities are therefore best suited to south-facing slopes.
Transport links P4 The design and location of transport links and access facilitates pedestrian and cyclist activity and the use of public transport.	A4.1 Footpaths are provided and designed to access public transport routes. A4.2 Subdivision design includes: – Clearly marked bicycle networks; – Marked kerbside bike lanes; and – Dedicated cycle ways and links to city-wide cycle ways.

References

- AMCORD (1995) Section 2 – Site Planning and Building Design;
- Dubbo LEP 2011; and
- Urban Areas Development Strategy.



Functional lot layout Awkward and inefficient lot layout

Figure 7 - Cul-de-sac design

3.2.3 Public open space and landscaping

Objectives

- To provide public open space that meets user requirements for outdoor recreational social activities and for landscaping that contributes to the identity and environmental health of the community; and
- To ensure that streetscape components do not detrimentally affect solar access to individual dwellings.

Performance criteria The public open space and landscaping objectives may be achieved where:	**Acceptable solutions** The acceptable solutions illustrate one way of meeting the associated performance criteria:
P1 Public open space provides opportunities for: – Recreation - both active and passive forms. – Conservation - protection or integration of natural features and cultural sites. – Amenity - greening of the urban environment and a spatial setting for housing. – Utility - stormwater management, buffers between different land uses and repair of degraded land.	A1.1 Provision and location of public open space complies with the requirements of the Dubbo City Park and Open Space System Plan. A1.2 Public open space infrastructure is provided in accordance with the requirements of Council's Parks and Landcare Services Division. A1.3 Drainage systems will be integrated into the public open space. A1.4 Walking and cycling trails are developed along drainage networks incorporated into the public open space. A1.5 Watercourses will be retained in new urban release areas to benefit the preservation of animal and bird habitats.
P2 Public open space provides adequate facilities to meet the needs of the community as reflected by indicators such as population density and demographic structure.	A2.1 Linkage of public open space into a legible network.
Dedication, embellishment and maintenance P3 Land dedicated to Council for the purpose of open space/public reserve shall be of a satisfactory standard to facilitate its use for open space purposes in accordance with Council's requirements. The land shall be maintained to ensure that it is sufficiently established and to Council's satisfaction.	A3.1 The location of land dedicated shall be in accordance with Council's Defined Asset Management Plan (DAMP). A3.2 A condition of consent and/ or a Deed of Agreement shall require the proponent to maintain the subject land in accordance with the standard included in Schedule 4 of Council's DAMP. A3.3 'District level' land shall be maintained by the proponent/owner for a minimum period of ten (10) years from the date of dedication to Council.

Performance criteria The public open space and landscaping objectives may be achieved where:	**Acceptable solutions** The acceptable solutions illustrate one way of meeting the associated performance criteria:
	A3.4 The costs and expenses incurred with the maintenance of the land shall be borne by the proponent during the ten (10) year period specified in A3.3.
	A3.5 In the event that the proponent transfers, leases or otherwise disposes of the land, any transferee, lessee or assignee (other than Council) will enter into a legally binding agreement to maintain the land as previously agreed. A3.6 Council shall be indemnified to the full extent permitted by law from any claim, action, liability or suit resulting from any accident, damage, loss, death or injury occurring upon the land.
Landscaping – general P4 Landscaping is designed and located to not negatively impact on the built infrastructure.	A4.1 Landscaping is provided in accordance with the requirements of a landscaping schedule (below) that has been approved by Council's Parks and Landcare Services Division.
P5 Landscaping is undertaken in an environmentally sustainable manner which limits the time and costs associated with maintenance.	A5.1 Existing native trees are retained wherever possible. A5.2 Species selected are suitable for the local climate. A5.3 Species selected require a minimal amount of watering. A5.4 Landscaping does not impact ground-water levels by encouraging over-watering resulting in ground-water level increases or the pollution of waters.
Street trees P6 Street trees are selected to provide summer shading while not impeding solar access to dwellings in winter.	A6.1 Street trees are provided in accordance with the requirements of Council's Parks and Landcare Services Division generally and Council's Tree Planting Standards. A6.2 Deciduous trees are selected where shadows adversely impact solar access. A6.3 Taller tree species are planted on the northern side of east-west aligned streets, shorter species are planted on the southern side.

Performance criteria The public open space and landscaping objectives may be achieved where:	Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:
	A6.4 Select indigenous species or species with a proven tolerance to the local climate and conditions that preserve solar access of adjoining properties. A6.5 Select plantings with low maintenance and low water consumption. A6.6 Select evergreen species for windbreaks and plant along south or west side of area being protected against the wind.
Security and surveillance P7 A clear relationship between public open space and adjoining land is established by appropriate treatment including alignment, fencing, landscaping and lighting.	A7.1 Parks include provision for lighting where appropriate in accordance with Australian and New Zealand Standard AS/NZ 1158.1. A7.2 Lots do not back onto public open space. A7.3 Parks are located so that at least 50% of their perimeter length has frontage to a public road.
Fencing P8 Avoidance of continual lengths of solid fencing along open space areas for security, surveillance, aesthetics and ease of maintenance.	A8.1 Pool style fencing, low hedges and permeable vegetation will delineate private boundaries.

References

- Dubbo City Council's Section 94 Plan for Open Space and Recreation Facilities;
- Urban Areas Development Strategy;
- Recreational Areas Strategy;
- SEDA NSW Energy Smart Homes Model Policy;
- AS 1158.1 (1986); and
- Dubbo City Council's Parks and Landcare Division – list of recommended plantings for the Dubbo district.

Landscaping schedule

A landscape plan is required to be submitted with development applications for dual occupancy developments requires a landscape plan based on Category 1. For subdivision developments requiring or proposing the dedication of land to Council, the standard of landscape plan is based on Category 2. The table shown below specifies the level of information required to be included for Category 1 and 2 landscape plans:

Category number	Minimum information standard
1	Details of ground-cover and landscaping shown on the site plan including the following: 1. Location of the landscaping on the site. 2. Scientific name of all plant material. 3. Height and characteristics of plant material at maturity. 4. Status of landscaping at planting. 5. Specification of a maintenance regime. 6. The plan shall be drawn to a recognised scale, such as 1:100. The landscape plan shall be prepared by a building design professional or appropriately qualified and experienced professional preparing the development plans.
2	A separate landscape plan and planting schedule including the following: 1. The land to be dedicated to Council and the location of the landscaping on that site. 2. Scientific name of all plant material. 3. Height and characteristics of plant material at maturity. 4. Status of landscaping at planting. 5. Specification of a maintenance regime. 6. Specification of irrigation systems for maintenance of landscaping referencing Council's current standards. 7. Planting specifications showing staking, hole preparation, depth and root control devices. 8. Provision for mulching. 9. Specification that a horticultural professional will supervise implementation of the works in the landscape plan. 10. Written certification from the horticultural professional supervising the works that all required works have been undertaken in accordance with the approved landscape plan. 11. The plan shall be drawn to a recognised scale. The landscape plan and supporting information shall be prepared by a suitably qualified and experienced horticultural professional or landscape architect.

3.2.4 Infrastructure

Objectives

- To ensure that residential areas are serviced with essential services in a cost-effective and timely manner; and
- To ensure that residential areas are adequately serviced with water and sewerage infrastructure.

Performance criteria The infrastructure objectives may be achieved where:	**Acceptable solutions** The acceptable solutions illustrate one way of meeting the associated performance criteria:
Utilities P1 Design and provision of utility services including sewerage, water, electricity, gas, street lighting and communication services are cost-effective over their life-cycle and incorporate provisions to minimise adverse environmental impact in the short and long term.	A1.1 The design and provision of utility services conforms to the requirements of the relevant service authorities. A1.2 Water and sewerage services are to be provided to each allotment at the full cost of the developer. A1.3 Water and sewerage services are to be designed and constructed in accordance with the requirements of NAT-SPEC (DCC version) Development Specification Series – Design and Development Specification Services – Construction. A1.4 Electricity supply is provided via underground trenching in accordance with the requirements of the energy supply authority.
Common trenching P2 Compatible public utility services are located in common trenching in order to minimise the land required and the costs for underground services.	A2.1 Services are located next to each other in accordance with Council's policy for trenching allocation in footways (Standard Drawing 5268).
Availability of services P3 Water supply and sewerage networks are available, accessible, easy to maintain and are cost-effective based on life-cycle costs.	A3.1 Council will not consent to the subdivision of any land until it is satisfied that an adequate water supply and adequate facilities for sewage and drainage are available or until arrangements satisfactory to Council have been made for the provision of such supply and facilities. A3.2 Development is to be carried out within the water supply and sewer catchments as described by Council's Section 64 Policy for Water and Sewerage. **Note:** Where water and/or sewer are available, any new allotments will be connected to the system. Where not available refer to A3.1.

References

- Australian Rainfall and Runoff (1987);
- Aus-Spec (DCC version) Development Specification Series – Design and Development Specification Series – Construction; and
- AMCORD (1995) Part 3 Stormwater and Integrated Catchment Management Standard Diagram 5268.

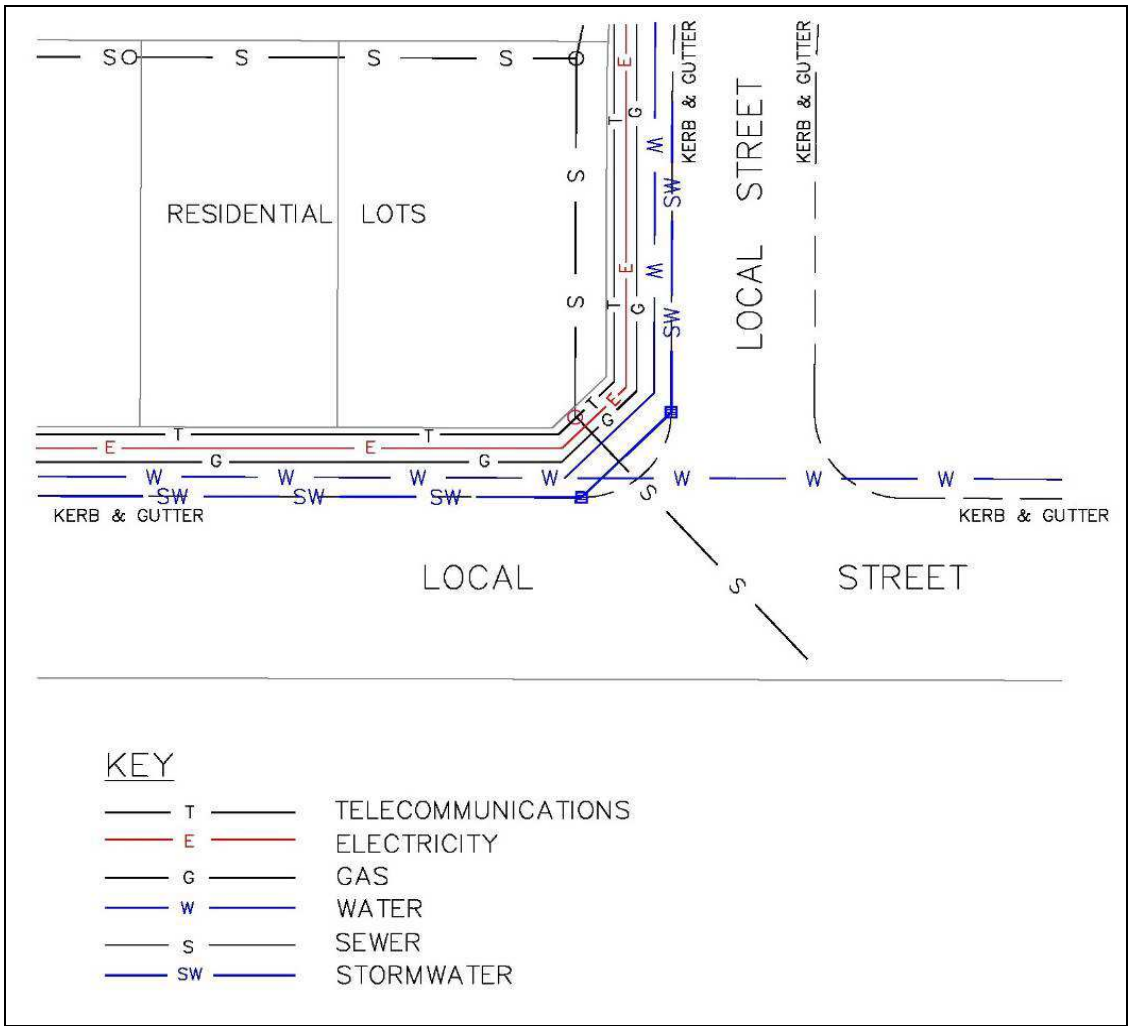


Figure 8 - Common trenching

3.2.5 Street design and road hierarchy

Objectives

To provide for streets that:

- Fulfil their designated functions within the street network;
- Accommodate public utility services;
- Accommodate drainage systems; and
- Create a safe and attractive environment.

Performance criteria The street design and road hierarchy objectives may be achieved where:	**Acceptable solutions** The acceptable solutions illustrate one way of meeting the associated performance criteria:
Function and width	
P1 The street reserve width is sufficient to cater for all street functions, including: – Safe and efficient movement of all users, including pedestrians and cyclists; – Provision for parked vehicles; – Provision for landscaping; and – Location, construction and maintenance of public utilities.	A1.1 The road hierarchy complies with the relevant Residential Release Strategy. A1.2 The road hierarchy is designed and constructed in accordance with AusSpec (DCC version) A1.3 Road reserve widths are in conformity with the Dubbo Road Transportation Strategy to 2045. A1.4 Road layouts ensure connectivity between adjoining residential estates is maintained for both vehicular and pedestrian movement.
P2 The verge width is sufficient to provide for special site conditions and future requirements.	A2.1 The verge width is increased where necessary to allow space for: – Larger scale landscaping; – Indented parking; – Future carriageway widening; – Retaining walls; – Cycle paths; and – Overland flow paths.
Design for safety	
P3 Street design caters for all pedestrian users including the elderly, disabled and children by designing streets to limit the speed motorists can travel.	P3.1 Limit the length of straight streets to between 200 to 250 m for a control speed of 50 km/hr. P3.2 Incorporating speed control devices (mostly for redesigning existing streets) such as: – Horizontal deflection devices: – Roundabouts; – Slow points; – Median islands; – Street narrowing; – Vertical deflection devices; – Speed humps and dips; and – Raised platforms at pedestrian crossings or thresholds.

Performance criteria The street design and road hierarchy objectives may be achieved where:	**Acceptable solutions** The acceptable solutions illustrate one way of meeting the associated performance criteria:
Driveway access	
P4 Driveway egress movements do not create a safety hazard.	A4.1 Motorists can enter or reverse from a residential lot in a single movement. A4.2 Motorists enter and leave medium density and non-residential developments in a forward motion. A4.3 Lot design enables driveways on major collector streets and streets which carry more than 3,000 vpd to be designed to promote forward movement of vehicles across the verge.
Geometric design	
P5 Bus routes have a carriageway width that: – Allows for the movement of buses unimpeded by parked cars; – Safely accommodates cyclists; and – Avoids cars overtaking parked buses.	A5.1 The geometry of streets identified as bus routes provides suitable turning, stopping sight distance, grade and parking for buses.
P6 Geometric design for intersections, roundabouts and slow points is consistent with the vehicle speed intended for each street.	A6.1 Sufficient area is provided at the head of cul-de-sacs for waste disposal vehicles to make a three-point turn.
On-street parking	
P7 Car parking is provided in accordance with projected needs which are determined by: – The number and size of probable future dwellings; – The car parking requirements of likely future residents; – Availability of public transport; – Likely future onsite parking provisions; and – Locations of non-residential uses such as schools and neighbourhood shops.	A7.1 One on-street parking space is to be provided per dwelling. These are to be located against the kerb or in pairs in parking bays constructed within the verge, located within 60 m of each allotment.

Performance criteria The street design and road hierarchy objectives may be achieved where:	Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:
Design P8 Car parking is designed and located to ensure street efficiency and connectivity.	Car parking is: – Conveniently and safely serve users, including pedestrians, cyclists and motorists; – Enable efficient use of car spaces and accessways including adequate manoeuvrability between the street and lots; – Fit in with any adopted street network and hierarchy objectives and any related traffic movement plans; – Be cost effective; and – Achieves relevant streetscape objectives.

References
• AMCORD (1995) Part 1 Neighbouring Planning and Movement Networks 'Residential Standards Manual' published by the Local Government Association of NSW and Shires Association of NSW 1982; • AS 1428 – Design for Access and Mobility; and • Aus-Spec (DCC version) Development Specification Series – Design, and Development Specification Series – Construction.

3.2.6 Pedestrian and cycle links

Objective

To encourage walking and cycling by providing safe and convenient movement networks to points of attraction and beyond the development.

Performance criteria The pedestrian and cycle links objectives may be achieved where:	Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:
Planning P1 The residential street and path network provides a network of pedestrian and cyclist routes, with connections to adjoining streets, open spaces and activity centres.	A1.1 Where a Traffic Calming Plan or an approved Pedestrian and Cyclist Plan exists, pedestrian and cyclist paths are provided in accordance with that Plan. A1.2 Pedestrian and cycle paths are provided in accordance with Council's Strategic Open Space Master Plan.

Performance criteria The pedestrian and cycle links objectives may be achieved where:	**Acceptable solutions** The acceptable solutions illustrate one way of meeting the associated performance criteria:
	A1.3 A network of footpaths and cycle routes is provided that accounts for: – The need to encourage walking and cycling; – Likely users (eg school children, parents with prams, the aged and people with disabilities, commuter and recreational cyclists); – Opportunities to link open space networks and community facilities including public transport, local activity centres, schools and neighbouring shopping centres; – Topography; and – Cyclist and pedestrian safety.
Location and design P2 The alignment of paths allows safe and convenient use by pedestrians and cyclists and is varied to preserve trees and other significant features. A focus on vistas and landmarks adds visual interest where they exist.	
P3 Footpaths and cycle ways are well-lit and located where there is casual surveillance.	P3.1 Lighting conforms to AS/NZ 1158.1.
P4 Footpaths or shared paths are designed and constructed at appropriate widths, longitudinal gradient and sight distance to cater for the number of projected pedestrians and cyclists and user types (eg the aged, the very young, people with prams and people with disabilities).	A4.1 Collector streets on which there is access to lots or where there is a planned pedestrian or cyclist path are provided with a separate path on each side clear of the carriageway pavement. A4.2 A pedestrian (only) footpath, where required, is 1.2 m wide and is constructed of concrete or paving block for the full width and is located central to the existing or proposed kerb. Shared pedestrian and cyclist paths shall be 2.5 metres in width. A4.3 Footpaths are widened to full width in the vicinity of meeting points, schools, neighbourhood shops and other activity centres.
	P4.4 Maximum longitudinal gradient of cycle paths is no greater than that at any adjacent street pavement.

Performance criteria The pedestrian and cycle links objectives may be achieved where:		Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:	
P5	Provision is made for the location of seats in appropriate places.		
P6	There is adequate provision for passing with paths widened at potential conflict points or junctions on high-use facilities to allow for passing of pedestrians/cyclists.	A6.1	Paths are widened at potential conflict points or junctions in areas of high use such as schools, neighbourhood shops, etc (see above).
Safe crossings			
P7	Safe street crossings are provided for all street users with safe sight distances and adequate pavement markings, warning signs and safety rails (where appropriate for cyclists).	A7.1	Where traffic volumes exceed 3,000 vpd or speeds exceed 50 km/hr, safe crossings are created with the use of pedestrian refuges, slow points, thresholds or other appropriate mechanisms (Picture 1).
		A7.2	Pram and wheelchair crossings are provided at all kerbs and are adequately designed for this purpose as well as assisting sight-impaired people.
Construction			
P8	Pedestrian and cyclist paths are constructed to provide a stable surface for projected users and are easily maintained.		

References
• AMCORD (1995) Section 1 – Neighbourhood Planning and Movement Networks; • Aus-Spec (DCC version) Development Specification Series – Design and Development Specification Series – Construction; and • AS/NZ 1158.1. – Lighting for Roads and Public Spaces.

Picture 1 - Traffic calming devices

3.2.7 Stormwater management

Objectives

- To provide major and minor drainage systems which:
  - Adequately protect people and the natural and built environments to an acceptable level of risk and in a cost effective manner in terms of initial costs and maintenance; and
  - Contribute positively to environmental enhancement of catchment areas.
- To manage any water leaving the site (during construction and operation) with stormwater treatment measures.

Performance criteria The stormwater management objectives may be achieved where:		**Acceptable solutions** The acceptable solutions illustrate one way of meeting the associated performance criteria:	
P1	Post development peak flows (up to 100 year ARI storm events) are limited to 'pre-development' levels.	A1.1	Water sensitive urban design or onsite bio-retention in the form of rain gardens, swales and absorption trenches amalgamated into the design of the road network.
		A1.2	In areas where there is high salinity, infiltration shall not be used.
P2	The stormwater drainage system has the capacity to safely convey stormwater flows resulting from the relevant design storm under normal	A2.1	The design and construction of storm drainage systems in accordance with the requirements of Australian Rainfall and Runoff 1987 and Aus-Spec (DCC version)

Performance criteria The stormwater management objectives may be achieved where:		Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:	
	operating conditions, taking partial minor system blockage into account.		Development Specification Series – Design and Development Specification Series – Construction.
		A2.2	Construction Certificate plans for subdivision all minor and major stormwater systems are clearly defined and identified. Minor systems for residential areas are designed to cater for the 1 in 100 year storm event. These systems are to be evident as 'self-draining' without impacting on flooding of residential houses etc.
P3	Natural streams and vegetation are retained wherever practicable and safe, to maximise community benefit.	A3.1	The natural streams and vegetation are incorporated into the stormwater drainage system for the subdivision and open space requirements.
P4	The stormwater system/drainage network is designed to ensure that there are no flow paths which would increase risk to public safety and property.	A4.1	While addressing the statutory requirements stated above, the incorporation of sports grounds and other less flood-sensitive land uses into the drainage corridor and the appropriate placement of detention basins.
P5	The system design allows for the safe passage of vehicles at reduced speeds on streets which have been affected by run-off from the relevant design storm.	A5.1	The system allows for the safe passage of vehicles at reduced speeds on streets which have been affected by run-off from a 20% AEP event.
Site drainage			
P6	Subdivision design and layout provides for adequate site drainage.	A6.1	Where site topography prevents the discharge of stormwater directly to the street gutter or a Council controlled piped system, inter-allotment drainage is provided to accept run-off from all existing or future impervious areas that are likely to be directly connected.
		A6.2	The design and construction of the inter-allotment drainage system are in accordance with the requirements of Australian Rainfall and Runoff (1987) and Aus-Spec (DCC version) Development Specification Series – Design and Development Specification Series – Construction.

Performance criteria The stormwater management objectives may be achieved where:		Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:	
Flooding			
P7.1	Where residences (new or existing) are proposed in flood-affected areas, these shall be protected from flood waters.	A7.1	Ground floors of residences are located at or above the 'flood planning level' to provide protection to life and property in accordance with the accepted level of risk.
P7.2	Flood-ways are developed in a manner which ensures that there is a low risk of property damage.		

References
• Australian Rainfall and Runoff 1987; • Aus-Spec (DCC version) Development Specification Series – Design and Development Specification Series – Construction; and • AMCORD (1995) Part 3 – Stormwater and Integrated Catchment Management.

3.2.8 Water quality management

Objective

To provide water quality management systems which:

- Ensure that disturbance to natural stream systems is minimised; and
- Stormwater discharge to surface and underground receiving waters, during construction and in developing catchments, does not degrade the quality of water in the receiving areas.

Performance criteria The water quality management objectives may be achieved where:		Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:	
P1	Adequate provision is made for measures during construction to ensure that the land form is stabilised and erosion is controlled.	A1.1	An Erosion and Sediment Control Plan is prepared using the 'Blue Book – Managing Urban Stormwater: Soils and Construction'.
P2	The system design optimises the interception, retention and removal of water-borne pollutants through the use of appropriate criteria prior to their discharge to receiving waters.	A2.1	The Erosion and Sediment Control Plan is to comply with the document 'Managing Urban Stormwater: Soils and Construction', produced by NSW Department of Housing.
P3	The system design minimises the environmental impact of urban run-off on surfaces receiving water quality and on other aspects of the natural environment, such as creek	A3.1	Water pollution control ponds or wetlands are developed (where appropriate) for final treatment before discharge to the wider environment and should be sited to minimise impacts on the natural

Performance criteria The water quality management objectives may be achieved where:	Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:
configuration and existing vegetation, by employing techniques which are appropriate and effective in reducing run-off and pollution travel.	environment. A3.2 Sensors are used to control watering systems.

References
• AMCORD (1995) Part 3 – Stormwater and Integrated Catchment Management; • 'Blue Book – Managing Urban Stormwater: Soils and Construction' NSW Department of Housing; and • Current Council policies on the salinity issue.

3.2.9 Environmental management

Objective

To enhance, improve and protect the natural elements through sustainable land management practices, as applicable.

Performance criteria The environmental management objective may be achieved where:	Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:
Habitat wildlife management P1 Existing wildlife habitats are managed, enhanced and protected by adopting environmentally sustainable management principles.	A1.1 Avoid developing in or near areas of existing native vegetation, limit the extent of clearing required by development proposals and undertake assessment of the development proposed in accordance with the requirements of the Threatened Species Conservation Act 1996.
Prevailing wind P2 Development is located and designed to address prevailing winds and solar orientation.	A2.1 Orient and design developments to eliminate adverse effects of seasonal winds and solar exposure. A2.2 Windbreaks around development to mitigate adverse effect of prevailing winds.
Natural hazards P3 The impact of natural hazards such as fire, flood and wind storms are reduced.	A3.1 Avoid siting buildings near depressions and watercourses or on flood-prone land. A3.2 Consult with Council's Environmental Services Division, the Department of Environment and Heritage and local residents regarding the available information on previous flood events.

Performance criteria The environmental management objective may be achieved where:	Acceptable solutions The acceptable solutions illustrate one way of meeting the associated performance criteria:
Erosion management P4 Effective erosion and soil management techniques are adopted.	A4.1 The preparation and implementation of an Erosion and Sediment Control Plan (ESCP) in accordance with Council's Urban Stormwater Management Guidelines - Volume 2 - Erosion and Sedimentation and Managing Urban Stormwater Soils and Construction produced by the NSW Department of Housing. A4.2 Limit the amount of land disturbed during construction phase of development. A4.3 Ensure property access is located where it will not cause or contribute to erosion.
Aquifer protection P5 Development is appropriately located so to avoid contamination of ground-water.	A5.1 Identify land situated over an aquifer and avoid locating potentially polluting land uses such as effluent disposal.
Heritage protection P6 European and Aboriginal heritage sites are identified, assessed and preserved.	A6.1 Consult with the NPWS, Dubbo Ga LALC and Wirrimbah Direct Descendants Aboriginal Corporation regarding identification and preservation of any Aboriginal archaeological sites. A6.2 Undertake an archaeological assessment of the proposed development site and submit with the development application.
	A6.3 Obtain specialist advice on the preservation of historic buildings and the design of any new dwellings in the vicinity. Note: Council's Heritage Advisor is available by phoning the Environmental Services Division to arrange an appointment.

References

- AMCORD (1995) Part 3 – Stormwater and Integrated Catchment Management; and
- 'Blue Book – Managing Urban Stormwater: Soils and Construction' NSW Dept Housing.

Note: The issue of flooding and floodplain management is addressed in more detail Council Policy for Flood Prone Land. Contact Council's Environmental Services Division on telephone (02) 6801 4000 for further information.

Part 4 Site Specific Infrastructure

4.1 Transport System

Roads

The subdivision includes road access to Boundary Road (north), Wheelers Lane (east) and Hennessy Drive (south).

The road connection to Hennessy Drive includes a 'T' intersection through extension of Holmwood Drive as well as a service road for allotments fronting Hennessy Drive.

Through extension of Holmwood Drive, the subject subdivision will also achieve access to Wheelers Lane. Access to Boundary Road (northern access) will occur through a road connection with the adjoining Olympus Estate.

The vast majority of residential allotments front internal roads. Four (4) lots front the Hennessy Drive service road.

It is expected that the majority of traffic travelling to or from the subdivision will utilise the Boundary Road access via Olympus Estate to the north or the eastern access from Wheelers Lane via Holmwood Drive.

Pedestrian Systems and Cycleways

A pedestrian footpath network will be provided within the subdivision in accordance with Council's requirements. A shared pedestrian and bicycle path is proposed to the central open space network which dissects the subdivision and which extends along the railway reserve.

Public Transport

There is potential for establishment of a bus route through the subdivision, the most appropriate route between Hennessy Drive and Road 3 to connect with the Magnolia Grove Estate and Boundary Road to the north.

4.2 Open Space

Open space is provided in the form of a network extending east-west through the centre of the site and southward along the railway corridor. This area utilises the land zoned RE1 Public Recreation for the combined provision of drainage reserves and open space.

Additional open space drainage reserves are located to the east of the Holmwood Homestead allotment, which allows use of the area of the site prone to both the 1 in 100 year flood event and the extreme flood event.

Figure 4 - Open space network throughout the land

4.3 Stormwater Drainage

The existing catchment of the site drains into the northern table drain of Hennessy Drive which discharges onto Lot 1412 DP 802001 via an easement. Run-off is then directed across Old Dubbo Road into a reserve to allow overland flow into the Macquarie River.

The stormwater drainage system of the subdivision will maintain this existing flow path and will also be connected with the external catchment of Magnolia Estate to the north.

4.4 Sewer and Water

Sewerage services on the land will gravitate to a sewer pump station constructed by Council, which is immediately to the south- west of the subject land. The sewer pump station and Council's infrastructure is of a suitable size to accommodate subdivision and development on the land.

Reticulated water will be connected to the subdivision in accordance with Council's requirements.

4.5 Flood Mitigation

The area of the site subject to the 1 in 100 year flood event has been located within the proposed drainage reserve adjoining Hennessy Drive.

A Flooding Assessment study conducted by Civil and Forensic P/L (2011) found that of the 10 lots affected by the extreme flood, the potential risk of structural damage to property would be low and relatively slow rising water levels would allow for timely evacuation and ease of access to the road network by residents and emergency services. The majority of these lots are only partially affected by the extreme flood event. As a result, development within extreme flood affected areas would not result in a significant dependency on emergency services.

The layout of the subdivision (including the location of drainage reserves) has been designed to ensure that future development does not impede or increase the flow or level of floodwater, does not imperil the safety of persons and does not increase the risk of damage to property.

4.6 Noise Impacts

The *Development near rail corridors and busy roads - Interim Guideline* applies to future development by application of Clause 87 of State Environmental Planning Policy (Infrastructure) 2007. Part C of the Interim Guideline considers development impacted by rail corridors.

The Interim Guideline considers the assessment of noise generated by passenger and freight trains in terms of Acoustic Assessment Zones – Zone A (within 25m of an operational track) and Zone B (within 60m of an operational track). Rail traffic, in the case of any future use of the line, has been determined as 'Passenger and Freight Services (<80km/h)'.

Figure 5 below shows the impact of Zone A and Zone B across the site.

There are 21 residential lots affected by the Acoustic Assessment Zones.

Zone A – A 'no building' restriction applies to all building within this area of the subdivision.

Zone B – All residential development located within this area will require standard noise mitigation measures consistent with Category 2 Noise Control treatments (Interim Guideline Appendix C). Such measures include:

- Windows/Sliding Doors – Openable with minimum 6 mm monolithic glass and full perimeter acoustic seals.
- Wall Construction – 110 mm brick, 90 mm timber stud frame or 92 mm metal stud frame, minimum 50 mm clearance between masonry and stud frame, 10 mm standard plasterboard internally.
- Roof – Pitched concrete or terracotta tile or metal sheet roof sheeting with sarking, 10 mm plasterboard ceiling fixed to ceiling joists, R2 insulation batts in roof cavity.
- Entry Door – 40 mm solid core timber door fitted with full perimeter acoustic seals.
- Floor – 1 layer of 19 mm structural floor boards, timber joists on piers, or Concrete slab floor on ground.

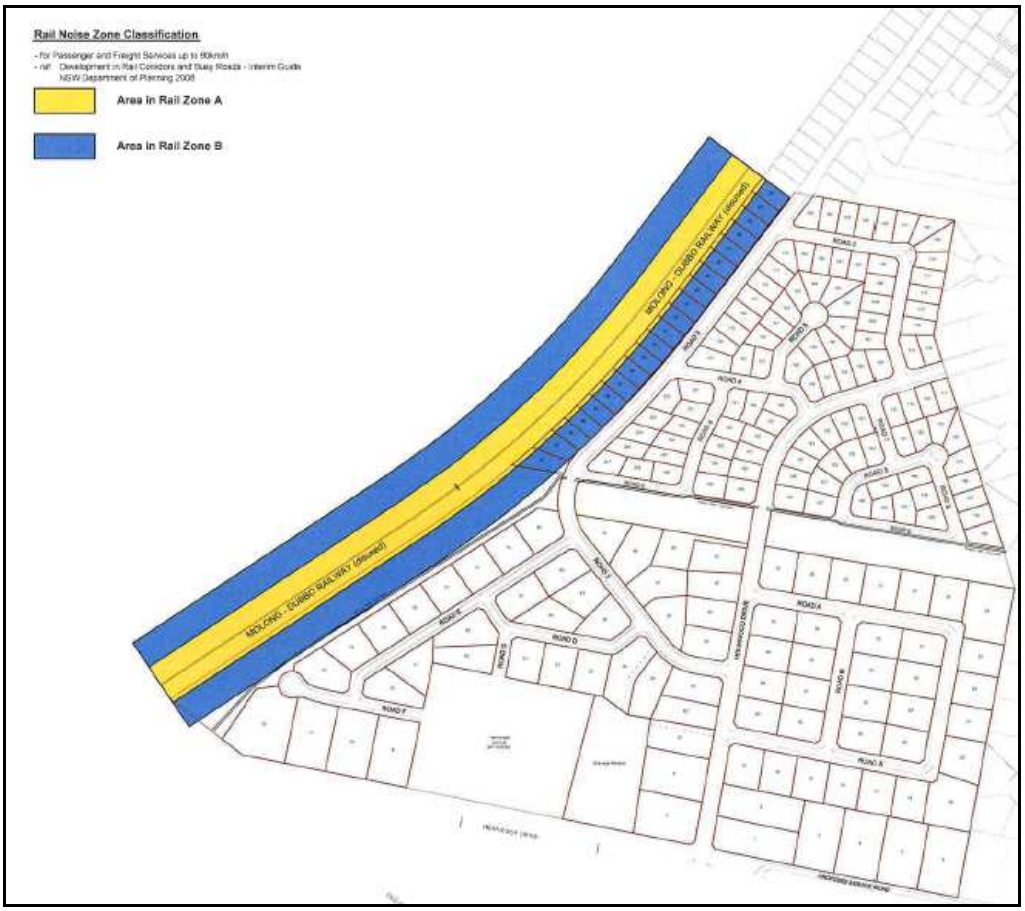


Figure 5 - Acoustic zones

Additional measures may include:

- Windows/Sliding Doors – Openable with minimum 6.38mm laminated glass and full perimeter acoustic seals.
- Roof – Pitched concrete or terracotta tile or metal sheet roof sheeting with sarking, 1 layer of 13 mm sound-rated plasterboard fixed to ceiling joists, R2 insulation batts in roof cavity.
- Entry Door – 45 mm solid core timber door fitted with full perimeter acoustic seals.
- Floor – Concrete slab floor on ground.

The remainder of the subdivision located outside Zone A and Zone B is not considered to be at risk of adverse noise impacts caused by future potential reinstatement of the rail.

4.7 Lot Sizes

The residential allotments range from 694m² to 4,035m² and are sized in accordance with the requirements of the Dubbo Local Environmental Plan 2011.

4.8 South-East Residential Release Strategy

The subject land forms part of Dubbo's South-Eastern Sub District Residential Release Area under the Dubbo South-East Residential Release Strategy 2011. The subject site is the preferred Stage 1 development area in the Strategy.

Part 5 Subdivision – Acceptable Solution

Residential subdivision of the land has been designed in response to the physical characteristics of the site and its land use context. The 207 lot subdivision comprises:

- 127 residential allotments with a minimum lot size of 600m².
- 68 large lot residential allotments with a minimum lot size of 2,000m².
- 12 large lot residential allotments with a minimum lot size of 4,000m².
- Four open space allotments.
- Five stormwater retention basins.

The subdivision is subject to a seven stage release plan, shown below:

	LOT YIELD			
STAGE	SMALL	2000m²	4000m²	TOTAL
1	14	13	4	31
2	15	14	0	29
3	13	14	4	31
4	15	12	0	27
5	29	0	0	29
6	20	10	0	30
7	21	5	4	30
TOTAL	127	68	12	207

Figure 4 - Indicative staging of the subdivision

Part 6 Further Information and Consultation

If you require any further information in relation to the provisions of the Area Plan and Council's requirements for the lodgement of a development application, please contact Council's Environmental Services Division on (02) 6801 4000 or Council's website at www.dubbo.nsw.gov.au.

Council also offers a development application pre-lodgement service to proponents prior to lodging a development application. A pre-lodgement meeting may include and provide input from Council's Environment and Health officers, Building officers and Technical Services officers.