

2018

MID-WESTERN REGIONAL COUNCIL
COUNCIL BUSINESS PAPERS

ORDINARY MEETING
WEDNESDAY 12 DECEMBER 2018

SEPARATELY ATTACHED ATTACHMENTS



*A prosperous and progressive community,
we proudly call home*

ATTACHMENTS

Report 8.4 Attachment 1 DCP Amendment 3 as exhibited with minor amendment 3
Attachment 2 DCP Amendment 3 Submissions..... 102

Development Control Plan 2013

Amendment No. 3

Further information email council@midwestern.nsw.gov.au or telephone 1300 765 002

DRAFT



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PART 1 INTRODUCTION

1.1 PURPOSE OF THE PLAN

This Plan contains more detailed guidelines to complement the provisions contained in the Mid-Western Regional Local Environmental Plan 2012 which applies to all land within the Mid-Western Regional Local Government Area.

1.2 AIM OF THE PLAN

The aims of this Plan are to:

- Implement and support the objectives of the Local Environmental Plan (Mid-Western Regional LEP 2012);
- Define development standards that deliver the outcomes desired by the community and Council;
- Provide clear and concise development guidelines for various forms of development;
- Encourage innovation in design and development by not over-specifying development controls;
- Expedite development approvals by providing clear direction of Council's intent and criteria; and
- Provide certainty of development outcomes for developers and the community.

1.3 HOW THE PLAN WORKS

The Development Control Plan (DCP) provides specific criteria for local development within the Mid-Western Local Government Area, including the "deemed-to satisfy" criteria that will facilitate *fast – tracking* of certain development applications (DA).

The four different assessment streams for development are outlined in figure 1.

Under Section 79c of the Environmental Planning and Assessment Act 1979 (EP&A Act), Council is required to consider a range of issues in the evaluation of a DA including the DCP. Therefore compliance with this DCP does not guarantee development approval will be issued. However, in relation to certain development types, Council has adopted "non-discretionary" development controls that establish a "deemed-to satisfy" standard of development. Where this standard is achieved, Council will not:

- Further consider those standards in determining the DA; or
- Give weight to objections received relating to those standards; or
- Refuse the DA on the grounds that the development does not comply with those standards; or
- Impose a condition of consent that has the same, or substantially the same, effect as those standards but is more onerous than those standards.

Where the "deemed to satisfy" standard is not achieved, the DA cannot be *fast-tracked*, and the DA must provide justification in line with the Discretionary Development Standards.

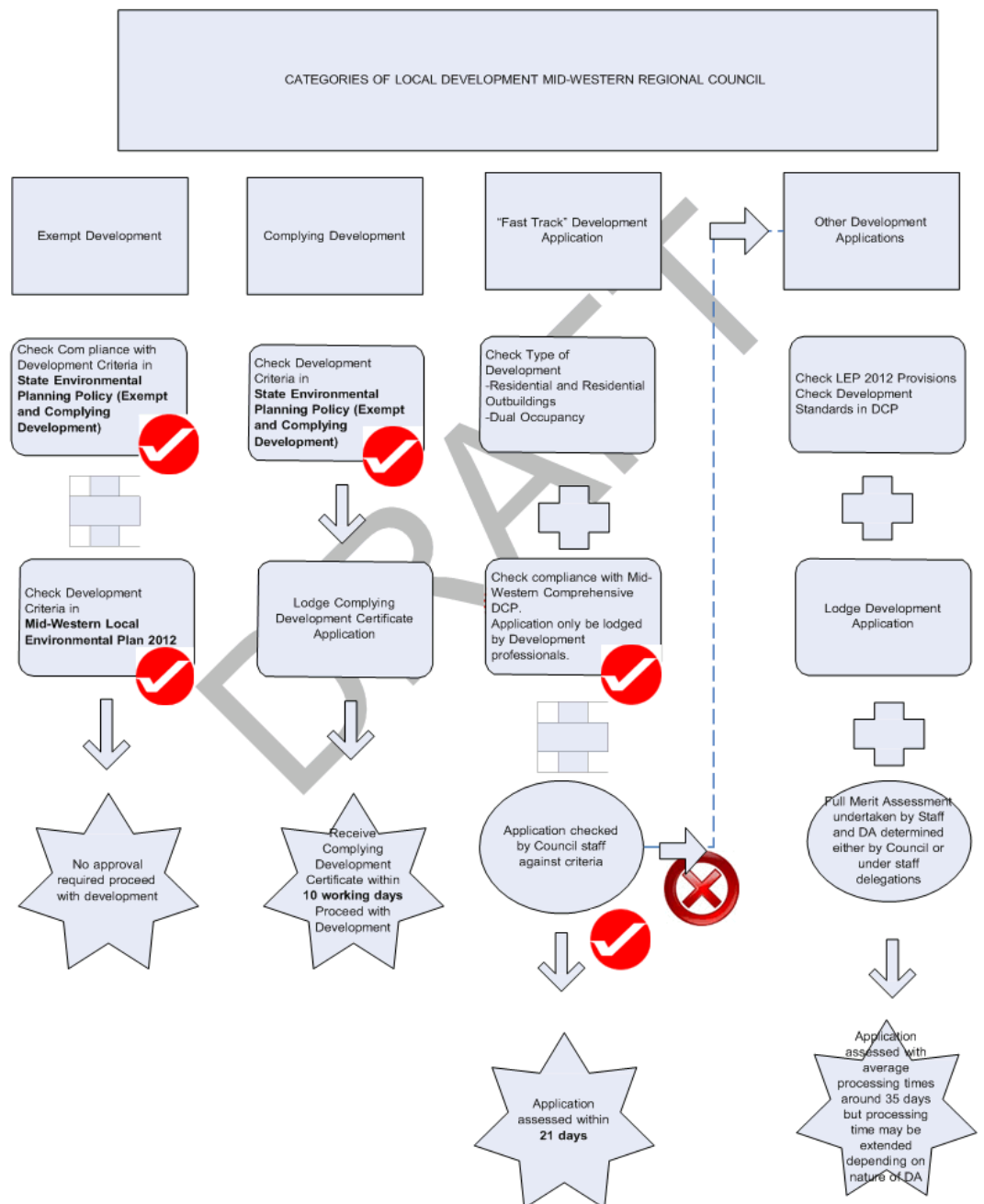
1.4 TRANSITION PROVISION

Where a development application is lodged prior to the commencement of this Development Control Plan the applicant must nominate if the application is to be assessed under this Development Control Plan or the Development Control Plans in place prior to the adoption of this Development Control Plan.

Where no development control plan is nominated an application will be assessed in accordance with the Development Control Plans in place prior to the adoption of this Development Control Plan.

1.5 FAST TRACK DETERMINATIONS

The *fast-track* process allows specific types of development to be determined more quickly than a standard DA where the proposal meets the “deem-to satisfy” provisions of this DCP. Where a proponent certifies that the minimum standards are met, determination should be issued within 21 days.



The new “deem-to satisfy” process is a simpler, faster approval pathway. Still merit-based, the process streamlines the assessment of common forms of development that can be clearly quantified as achieving outcomes sought by the community, the development industry and Council.

The following types of development may be fast-tracked where the proponent certifies that the development complies with the minimum DCP controls:

- Residential (General Housing including ancillary structures such as pools and carports.
- Dual Occupancy
- Fast-tracking does not apply to residential and dual-occupancy development on flood prone land or bushfire prone land.

Fast-tracking does not apply to any other development.

Development Applications lodged under the fast track process will need to be accompanied by signed certification.

Council will only accept applications certified by suitably qualified persons (such as planners, architects, engineers, draftsman and surveyors).

Where plans are subsequently found to not meet a standard, the application will be removed from the *fast-track* system and the development professional who provided the certification will not be eligible to claim fast track determinations for a period of at least 6 months.

1.6 DOCUMENTATION REQUIRED TO ACCOMPANY A *FAST TRACK* DA

The documentation required to be prepared for a *fast track* DA is the same as for a regular DA. Schedule 1 of the Environmental Planning and Assessment Regulations 2000, specify this information,

A *Fast Track Certification Checklist* must also be completed to confirm that the proposal complies with all the “deemed –to satisfy” controls applicable to that form of development.

Separate checklists are provided for each development type in Council’s website – Midwestern@nsw.gov.au.

1.7 DON’T MEET THE “DEEMED TO SATISFY” STANDARDS?

If your proposal does not meet the “deemed to satisfy” standards, your application must provide justification as the variation of the deemed to satisfy provisions and address the relevant performance standards in this DCP.

Applications that do not meet the “deemed-to-satisfy” criteria WILL NOT be processed under the *fast track* stream.

1.8 RELATIONSHIP TO OTHER PLANS

The DCP is only one of the matters that must be considered by Council in determining a DA.

The proposal must also be considered with regard to the other matters contained in Section 79c of the Environmental Planning and Assessment Act 1979, including relevant environmental planning instruments, the likely environmental effects, suitability of the site, any submissions received and the public interest.

Where inconsistency arises between this DCP and any environmental planning instrument applying to the same land, the provisions of the environmental planning instrument prevail.

1.9 DEVELOPER CONTRIBUTIONS

As a consequence of development it is likely that an increase in the demand for public amenities and services (such as community facilities, local open space etc) will occur. In this regard, a contribution under Section 94 of the Environmental Planning and Assessment Act 1979 may be required as a condition of the development consent in accordance with Mid-Western's Contributions Plan.

Council required developers to contribute towards the augmentation of water and sewerage works to meet the additional demands of the new development. In this regard, approval must be sought from Council under the Water Management Act 2000 to determine the required contributions.

1.10 PRIVATE COVENANTS

Where inconsistency arises between this DCP and any private covenant, the provision of the DCP will prevail. Council is not required to have regard to private covenants in the assessment of development applications. Clause 1.9A of the Mid-Western Regional LEP 2012 outlines the full legal context associated with this provision.

1.11 SEWER INFRASTRUCTURE

Council does not permit the following types of development over an existing sewer main or easement for sewer;

- erection of permanent structures,
- cut or fill of land,
- the planting of trees, or
- Concrete structures.

1.12 COMMUNITY CONSULTATION

Advertised Local Development

The following kinds of development will be advertised:

- Demolition of a building identified as a heritage item in Schedule 5 of the Mid-Western Regional LEP 2012.
- Major Council projects (not including utility service infrastructure) with a value exceeding \$1,000,000 or likely to be of significant community interest;
- Non-residential uses in or adjacent to the R1 General Residential, R2 Low Density Residential, or RU5 Village Land Use zones.
- Subdivision creating 20 or more allotments.
- Sex services premises
- Within the R1 General Residential, R2 Low Density Residential, or RU5 village land use zones, development applications for the purposes of:

Multi dwelling housing; residential flat buildings; senior housing; hostels; boarding house; group homes; tourist and visitor accommodation (excluding B&Bs); boarding houses; caravan parks; exhibition villages; child care centre

NOTE: Application for residential forms of development lodged as *fast track* DAs will not be advertised.

- Any development identified by Senior Council staff that should be advertised in the public interest.

Process for Advertised Development

- Notice of the development in a local Newspaper, containing the same information as required to be given in the written notice;
- Written notice of the proposal to be given to all adjoining landowners;
- Period of exhibition to comprise a minimum of 14 days from the date notice is published (plus an additional 7 days where the period coincides with public holidays.)

Notified Development Applications

Apart from the exceptions listed below or where a development is advertised development, all other development applications, that involves a use that requires development consent, alteration to the external configuration of a building, the erection of a new building, variation to an adopted building line will be notified to adjoining owners in accordance with this DCP. The kinds of development that will **not** require notification are:

- Single storey dwelling;
- Single storey additions to a house
- Minor dwelling additions such as carports, pergola and verandahs;
- Private swimming pools;
- Detached garage or shed associated with a dwelling to be used in conjunction with the dwelling (ie not for commercial/industrial use)
- Any building on land within RU1 Primary Production, RU4 Primary Production Small Lots, which has an area greater than 2 hectares (land);
- Subdivision creating less than 5 lots
- Commercial or industrial development within a business or industrial zone that does not adjoin a dwelling.
- Attached dual occupancy within the R5 Large Lot Residential zone.

Despite the above exclusion, following site inspection of the site and consideration of such factors as the character of the existing development, slope of the site and local amenity, Council may determine that notification should occur and the appropriate fee will be applied.

Process for Notified Development

- Written notice of the proposal to be given to all adjoining landowners;
- Period of exhibition to comprise a minimum of 7 days from the date of the notice (plus an additional 3 days where the period coincides with public holidays.)

PART 2 FAST TRACK DEVELOPMENT APPLICATIONS

2.1 GENERAL HOUSING AND ANCILLARY STRUCTURES “DEEMED TO SATISFY” PROVISIONS

The following criteria must be met to qualify for the “fast track” application process.

Building Setbacks

| Zone | Street | Side/Rear | Secondary Frontage for Corner Lots * |
|--|--|-----------|--|
| R1, R2 and R3 where Lot size is less than 900m ² | 4.5m to building line or average of adjoining properties 5.5m to the garage | 900mm | 0m for garages in laneways 2m to side boundary |
| R1, R2 and R3 where Lot size is greater than 901m ² less than 1,999m ² | 6.5m to building line or average of adjoining properties 7.5 to the garage | 900mm | 2m |
| R2 where 2000 m ² to 1 ha | 15m | 5m | 7.5m |
| R5 Less than or equal to 5 ha. in area | 30m | 20m | 15m |
| RU1, RU4 and R5 Greater than 5 ha. in area | 60m | 20m | 15m |
| RU5 | 7.5m | BCA | 3m |

*Applicant to nominate front and secondary setback.

- Where the lot is located on a Classified Road such as Ulan or Cope Road the front setback is 100m and side and rear setback is 20 metres.
- Where the lot is located on the State Highway (Castlereagh Highway) the front setback is 200 m and the side setback is 20 metres.
- Garages – the aggregate width of the garage door or carport shall not exceed 45% of the front elevation of the dwelling.

Building height

- Single storey (Single storey dwelling is one that has only one storey (as defined by the BCA) and the Finished Floor Level (FFL) is less than 1 metre above natural ground level.

Privacy

- Single storey development achieving setbacks do not require specific privacy controls.

Design

- 75% of the Private open space and internal living areas should have access to sunlight for 3 hours a day between 9 am and 3 pm with direct access to the

-
- main living areas.
 - 80m² of private open space is provided with a minimum dimension of 5 metres.
 - No windowless facades at the street frontage(s).
 - Street elevations are to include at least 5% of openings including windows, doors.
 - Garages – the aggregate width of the garage door or carport shall not exceed 45% of the front elevation of the dwelling.
 - For corner allotments no fences, structures or landscaping exceeding 1 metre in height are to be located within the triangle formed by a sight line 12 metres x 6 metres from the intersection of the two street boundary lines.
 - Cannot be a transportable or relocated building.
- Parking**
- Provision for parking of two vehicles behind the building line including at least one space undercover.
- Utilities**
- Buildings and structures are to be located clear of utility infrastructure.
 - No building can be located within an easement for the purposes of utility infrastructure.
 - Structures are to be located 1,500 mm from the centre line of the water or sewer main.
 - Details of water supply and sewer reticulation are to be provided.
 - ❖ If available within 500 m connected to reticulated network.
 - ❖ Where no water supply is available, a minimum tank storage of 60,000 litres is required, of which a minimum of 20,000 litres is retained for fire fighting purposes.
 - Where there is no reticulated sewer system than approval is required for onsite disposal in accordance with Section 68 of the Local Government Act 1919
 - Stormwater shall be designed to flow to a gravity system. Alternatives are not acceptable.
 - No building on overland flow paths
- Fencing**
- Front fences to be open panels not to include “Colorbond” and are restricted to a maximum height of 1.2 metres.
 - Where a street fence is proposed, the section of side fence located in front of the building setback shall be open or a combination of open panels and masonry columns to match the front fence.
 - Dividing fences is not to adversely affect the flow of surface of surface water or create flooding problems to adjoining properties.
 - Maximum height of side and rear fences behind the building line to be 1.8 metres.
- Access**
- All weather two wheel drive access
 - Driveways to be located a minimum of 6m from an intersection.
 - For rural area the minimum sight distances-is 250m in the 100km/hr speed zone and 180km/hr for the 80km zone
 - Where the driveway exceeds a slope of 6 % appropriate erosion and sediment control is to be incorporated into the design of the access.

**Garages
 Outbuildings
 and Carports**

Maximum size of garages and outbuildings in urban areas shall be as follows:

| Lot size m2 | Shed Size m2 |
|-------------|--------------|
| <750 | 50 |
| 750-1000 | 80 |
| 1000-2000 | 100 |
| >2000 | 120 |

Ridgelines

- Development roofline must not project above the ridgeline where visible from any public road or place.

**Slope & Cut
 and Fill**

- The slope of the development site cannot exceed 15degrees.
-
- Cut is to be limited to 1,000 mm.
- Fill is restricted to 600 mm. It must be clean fill and a geotechnical assessment issued for the fill to demonstrate compaction to the Australian Standard.
- Any cut and/or fill must be provided with retaining walls, drainage and must be setback a minimum of 300 mm from any boundary.
- Fill must not direct stormwater onto adjoining properties and drainage pits for overland flow paths are to be provided.
- Cut and fill is not permitted within water or sewer easements

Pools

- Pools and fencing to be located behind the building line.
- Where visible from a public place or road, details of screening to be provided with DA
- Any associated retaining walls tor decks not to exceed 1.0 m above the natural ground surface.
- Pool pump enclosure to be placed greater than 15 m from a habitable room in any dwelling adjoining the property or within a sound proof enclosure.
- Compliance with the relevant Australian Standards – please check with Council to ascertain the correct standard.
- Pools over 40,000 Litres require a BASIX Certificate to be provided with application

**Energy
 Efficiency**

- New Dwelling – Has a BASIX Certificate
- Alteration and Additions that do not exceed \$50,000 in value shall provide R3 Ceiling insulation and R1.5 wall insulation (to be shown on the plans)

Permissibility

- The lot is to comply with the minimum area as designated on the LEP 2012 Lot Size Map.
- Dwellings in rural zone must have a staged dwelling approval or comply with the minimum lot size.

Heritage

- Heritage items are excluded from the fast track provisions.

2.2 DUAL OCCUPANCY DEVELOPMENT “DEEMED TO SATISFY” PROVISIONS

The following criteria must be met to qualify for the “fast track” application process.

- Minimum** Attached Dual Occupancy –minimum area 600m²
Lot Size Detached Dual Occupancy – minimum area 800m²
 Detached dual occupancy is PROHIBITED in the R2 Low Density Residential Zone.

Building Setbacks

| Zone | Street | Side/Rear | Secondary Frontage for Corner Lots * |
|--|--|-----------|--|
| R1, R2 and R3 where Lot size is less than 900m ² | 4.5m to building line or average of adjoining properties 5.5m to the garage | 900mm | 0m for garages in laneways 2m to side boundary |
| R1, R2 and R3 where Lot size is greater than 901m ² less than 1,999m ² | 6.5m to building line or average of adjoining properties 7.5 to the garage | 900mm | 2m |
| R2 where 2000 m ² to 1 ha | 15m | 5m | 7.5m |
| R5 Less than or equal to 5 ha. in area | 30m | 20m | 15m |
| Ru1, RU4 and R5 Greater than 5 ha. in area | 60m | 20m | 15m |
| RU5 | 7.5m | BCA | 3m |

*Applicant to nominate front and secondary setback.

- Where the lot is located a Classified Road such as Ulan or Cope Road the front setback is 100m and side and rear setback is 20 metres.
- Where the lot is located on the State Highway or Goolma Road the front setback is 200 m and the side setback is 20 metres.

- Building Height**
- Single storey (Single storey dwelling is one that has only one storey (as defined by the BCA) and the Finished Floor Level (FFL) is less than 1 metre above natural ground level.

- Design**
- Council will not consider mirror reversed or duplication of design for the two dwellings when fronting streets.
 - 75% of Internal living areas shall receive at least three hours effective sunlight between the hours of 9.00 am and 3.00 pm on 21 June (Winter solstice).
 - For attached and detached dual occupancies, any separation between the two dwellings is to be a minimum of 3 metres apart;
 - Compliment the appearance of the streetscape through the replication of the

scale, spacing, fenestration, articulation, roof forms, setbacks and landscaping of dwellings on adjoining and surrounding lots. All dual occupancies must have direct street frontage; that is no dual occupancy can be developed in a battleaxe arrangement.

- No windowless facades at the street frontage(s).
- Street elevations are to include at least 5% of openings including windows, doors.
- The dwellings shall not be relocated or manufactured homes.
- Garages – the aggregate width of the garage door or carport shall not exceed 45% of the front elevation of each dwelling.
- Cannot be a transportable or relocated building

Slope & Cut and Fill

- The slope of the development site cannot exceed 15 degrees
- Cut is to be limited to 1,000 mm.
- Fill is restricted to 600 mm. It must be clean fill and a geotechnical assessment issued for the fill to demonstrate compaction to the Australian Standard.
- Any cut and/or fill must be provided with retaining walls, drainage and must be setback a minimum of 300 mm from any boundary.
- Fill must not direct stormwater onto adjoining properties and drainage pits for overland flow paths are to be provided.
- Cut and fill is not permitted within water or sewer easements

Open Space

- Private open space should be on the northern or eastern side of the dwelling with direct access to the main living areas. Cannot be forward of the building line.
- Each dwelling shall have one principal private open space with a minimum area of 80 square metres and a minimum dimension of 5 metres (depth and width).
- For the purposes of this clause, living area means any room or rooms within the dwelling which are generally available for day-to-day use by residents and visitors and include such rooms as lounge, dining and kitchen.
- Decks, balconies and alfresco areas at or near ground level may only be counted as principal private open space area where they have direct northerly aspect and are no more than 25% of the private open space requirement.
- Council may consider private open space within the front setback.
- Where courtyards in the front setback are permitted, these shall be located behind a suitably landscaped area with a minimum width of 1.5 metres to the front boundary.

Such landscaping shall be maintained at all times to Council's satisfaction. Fencing of such areas will be incorporated into the landscaped area. The use of 'Colorbond' or similar fencing of such areas is prohibited in favour of timber or masonry materials.

- At least 75% of each required private open space area, courtyard, balcony, terrace or the like shall receive at least three hours effective sunlight between the hours of 9.00 am and 3.00 pm on 21 June (Winter solstice).
- Council may require submission of shadow diagrams to demonstrate

compliance with the requirement above

- Site Coverage**
- Maximum site coverage of 35%.
- Parking**
- Each dwelling to have two car parking spaces, at least one being a garage. The second space may be provided in a stacked arrangement in front of the garage providing the space is contained wholly within the subject site.
 - All parking and manoeuvring areas to be hardstand.
 - Driveways to be located 6m from an intersection.
- Utilities**
- Buildings and structures are to be located clear of utility infrastructure (Minimum 1m from light/power poles)
 - No building can be located within an easement for the purposes of utility infrastructure.
 - Structures are to be located 1500mm from the centre line of the water/sewer main.
 - Details of water supply and sewer reticulation are to be provided. If the development is within 500 m of the reticulated water and sewer network it must connect to that reticulated network.
 - Dual Occupancy will not be permitted on allotments less than 5 ha where reticulated water and sewer is not connected.
 - Where no water supply is available, a minimum tank storage of 60,000L is required, of which a minimum of 10,000L is retained for fire fighting purposes for each dwelling.
 - Where there is no reticulate sewer system than approval is required for onsite disposal in accordance with Section 68 of the Local Government Act 1919
 - Stormwater shall be designed to flow to a gravity system. Alternatives are not acceptable.
 - No building over flow paths, no increase in flows.
- Fencing**
- All dual occupancy developments are required to provide a 1.8m high fence on the boundary of the development site and between private open space areas of individual units (all residential zones excluding R5 zone). All fencing is to be provided at full cost to the developer. All fencing which is in front of the building line shall be constructed of timber and/or masonry materials.
 - Dividing fences is not to adversely affect the flow of surface of surface water or create flooding problems to adjoining properties.
 - For corner allotments no fences, structures or landscaping exceeding 1 metre in height are to be located within the triangle formed by a sight line 12 metres x 6 metres from the intersection of the two street boundary lines.
 - Maximum height of side and rear fences behind the building line to be 1.8 m.
- Heritage**
- Heritage items are excluded from the fast track provisions.

PART 3 DISCRETIONARY DEVELOPMENT STANDARDS

Where a development does not comply with the “Fast-track” criteria a normal development application may be lodged. In lodging the development application justification must be given to the variation from the fast track criteria by addressing the objectives outlined in the discretionary standards relevant to the particular type of development.

The discretionary standards represent the standard that Council wishes to apply to development. Variation to these standards will only be considered in extraordinary circumstances and will need to be fully justified due to the unique circumstances of a particular case.

3.1 RESIDENTIAL DEVELOPMENT IN URBAN AREAS (SINGLE DWELLINGS AND DUAL-OCCUPANCIES)

Buildings Setbacks

- a) Setbacks must be compatible with the existing and/or future desired streetscape.
- b) Side or rear building setbacks are to demonstrate no unreasonable adverse impact on the privacy or solar access of adjoining properties.
- c) Garages are to be setback a minimum of 5.5 metres from the front boundary.
- d) Side and rear walls within 900mm and eaves within 450mm of boundaries are to comply with the BCA requirements for fire rating

Deem to satisfy

| Zone | Street | Side/Rear | Secondary Frontage for Corner Lots * |
|--|---|-----------|--|
| R1, R2 and R3 where Lot size is less than 900m ² | 4.5m to building line 5.5m to the garage | 900mm | 0m for garages in laneways 2m to side boundary |
| R1, R2 and R3 where Lot size is greater than 901m ² less than 1,999m ² | 6.5m to building line 7.5 to the garage | 900mm | 2m |
| R2 where 2000 m ² to 1 ha | 15m | 5m | 7.5m |

Building Height

- a) Elevated housing developments must minimise the impact on areas of predominantly single storey housing.
- b) Building height must ensure that adjacent properties are not overlooked or overshadowed.

Deem to satisfy is a single storey building with a FFL of less than 1 metre above Natural Ground Level.

Site Coverage

- a) Stormwater runoff must not exceed infrastructure capacity.
- b) Development must be an appropriate bulk and scale for the existing residential surrounds.
- c) Dual occupancy development is not to exceed 50% site coverage.

Note: Site Coverage means:

The proportion of a site area covered by buildings. However, the following are not included for the purpose of calculating site coverage:

- Any basement,
- Any part of an awning that is outside the outer walls of a building and that adjoins the street frontage or other site boundary,
- Any eaves
- Unenclosed balconies, decks, pergolas and the like.

Deem to satisfy is 35% site coverage

Solar Access

- a) Development must have reasonable access to sunlight and must not unduly impede solar access of neighbouring dwellings.
- b) Dwellings are to be positioned to maximise solar access to living areas.
- c) Shadow diagram must include:
 - Location, size, height and windows openings of buildings on adjoining properties;
 - Existing shadow-casting structures such as fences, carports, hedges, trees etc.; and
 - Topographical details, including sectional elevations where land has any significant slope.
- d) Living areas and gardens should be orientated to the north to maximise solar access to these areas.
- e) North-facing pitched roofs should be incorporated where possible to provide opportunity for solar energy collectors.
- f) Solar access should be controlled within buildings to allow warm winter sun to penetrate rooms while excluding hot summer sun by:
 - Using horizontal projecting screens such as balconies, awnings, verandah roofs, pergolas and wide eaves; and
 - Use of ceiling insulation.

Deem to satisfy
Living areas and private open space areas are to be located with a northerly aspect (ie on the north or eastern side of the building).

- Privacy**
- a) Development must ensure that reasonable privacy is achieved for new dwellings and existing adjoining residences and private open space.

Deem to satisfy
Dwellings must be single storey and have a finished floor level less than 1,000 mm above the natural ground level.

- Parking**
- a) Development must provide adequate off-street parking to maintain the existing levels of service and safety on the road network.
 - b) Parking areas and access driveways must be functional in design.
 - c) Parking areas should be visually attractive and constructed, designed and situated so as to encourage their safe use.
 - d) The number of spaces is determined based on the occupation potential. Note: rooms capable for use as a bedroom, e.g. 'study' are counted as a bedroom.
 - e) Any vehicle entering or leaving the driveway must be visible to approaching vehicles and pedestrians.
 - f) Driveway access to a major road should be avoided where possible.

Deem to Satisfy
Two (2) spaces per dwelling

- Land scaping**
- a) Landscaping must enhance the quality of the built environment.
 - b) Species selection and location should improve energy efficiency through reducing heat gain through windows and deflecting winter winds.
 - c) Plants with low maintenance and water requirements should be selected.

- Open Space**
- a) Sufficient open space must be provided for the use and enjoyment of the residents.
 - b) A plan shall be submitted which demonstrates that the dimensions of the open space provides for functional space, including placement of outdoor furniture.
 - c) Open space areas provided must be suitably located and landscaped to obtain adequate sunlight and protection from prevailing winds.
 - d) Private open space for dual occupancy development is to be a minimum area of 80m² and have a minimum dimension of 5 metres (depth and width).
 - e) Private open space for dual occupancy development is to be located behind the front building line and on the northern, eastern or western side of the dwelling.

Deem to satisfy
Private open space to be on the northern or eastern side of dwelling with direct access to living areas. Area to be 80m² with a minimum dimension of 5 metres.

- Corner lots**
- a) Development must address both street frontages.
 - b) Utility windows are not permitted on either elevation with frontage to the street unless they are integrated into architectural features of the development.

- Fencing**
- Fencing facing the street or forward of the building line must avoid extensive lengths of 'Colorbond' as it presents a barrier to the street.
-) Solid fencing of a length greater than 30% may be permitted where landscaping is provided to soften the visual impact on the streetscape.

Deem to Satisfy
1.8 metre high fence to all boundaries including private open space areas.
All fencing forward of building line cannot be 'Colorbond' (All Residential zones excluding R5 zone).

- Infra structure**
- a) Surface infrastructure (e.g. tanks, clotheslines) must not be located within front setback.
 - b) Surface infrastructure must not be visible from the street.
 - c) Garbage storage locations must be included in landscape plan and show how they will be screened.

- Out buildings**
- a) Outbuildings must not negatively affect the amenity of the streetscape or adjoining properties. The following standards apply for urban areas.

| Lot size m2 | Shed Size m2 |
|-------------|--------------|
| <750 | 50 |
| 750-1000 | 80 |
| 1000-2000 | 100 |
| >2000 | 120 |

Development near Ridgelines

- a) A ridgeline is considered an elevated section of land, visible from beyond the individual property boundary.
- b) Development shall protect key landscape features, being the dominant ridgelines and slopes and the intermediate ridges forming a visual backdrop to existing and future urban localities and places of special landscape amenity.
- c) Development should not be visually intrusive or degrade the environmental value, landscape integrity or visual amenity of land.
- d) The dwelling-house and associated buildings must not be visible above the existing skyline or any prominent ridgeline or local hill top.
- e) The dwelling-house and associated buildings will be constructed from low reflectivity building materials and incorporate colours which are visually unobtrusive in relation to the surrounding environment.

Slopes

- a) Development maximises retention of natural ground levels and contours. b) Drainage is to avoid erosion of gullies, slopes and drainage lines in the locality.
- c) Cut and fill, earthworks, retaining walls, unprotected embankments and terraces etc are setback from boundaries such that there is no impact on the privacy or visual amenity of adjoining dwellings and their private open space. d) Cut and fill, earthworks, retaining walls, unprotected embankments and terraces etc are setback from boundaries such that they do not redirect the flow of surface water onto adjoining properties.

Deem to Satisfy

- Cut is to be limited to 1,000 mm.
- Fill is restricted to 600 mm. It must be clean fill and a geotechnical assessment issued for the fill to demonstrate compaction to the Australian Standard.
- Any cut and/or fill must be provided with retaining walls, drainage and must be setback a minimum of 300 mm from any boundary.
- Fill must not direct stormwater onto adjoining properties and drainage pits for overland flow paths are to be provided.
- Cut and fill is not permitted within water or sewer easements
-

Access

- a) All weather vehicle access is required to ensure that emergency services (fire, ambulance, police) are able to access the dwelling at all times.

Relocated Dwellings

- a) Dwellings proposed to be re-sited must be of a suitable standard both aesthetically and structurally.

Adaptability

- a) Adaptable housing design must incorporate practical and flexible features to meet the changing needs of residents of different ages and abilities over time. For example,

hobless shower area, space for wheelchair access, height of light switches, arrangement and size of rooms,

Design Principles

- a) Design should maximise surveillance with clear sightlines between public and private places, effective lighting of public places and landscaping that makes places.
- b) Physical and symbolic barriers should be used to attract, channel or restrict the movement of people to minimise opportunities for crime and increase the effort required to commit crime.
- d) Must be sympathetic with existing adjoining and surrounding developments in relation to bulk and height.
- e) Well-proportioned building form that contributes to the streetscape and amenity.
- f) Density appropriate to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.
- g) Design must demonstrate efficient use of natural resources, energy and water throughout its full life cycle, including construction.
- h) Landscape design should optimise useability, privacy and social opportunity, equitable access and respect for neighbours' amenity, and provide for practical establishment and long term management.
- i) Optimise amenity (e.g. appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, outlook and ease of access for all age groups and degrees of mobility).
- j) Optimise safety and security, both internal to the development and for the public domain.
- k) Design must demonstrate response to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities.
- l) Council will not support dual occupancy development where both dwellings are pre-manufactured or relocatable homes in urban zones.

PART 4 SPECIFIC TYPES OF DEVELOPMENT

4.1 MULTI DWELLING HOUSING

The provisions of this section apply to multi dwelling housing, residential flat buildings, villa and town house forms of development.

The location of multi-dwelling housing is only permissible on lots with an area of at least 1,200 m² and should comply with the following:

- Be located within the Heritage Conservation Areas of Mudgee or Gulgong and or within a Village Zone; or
- Be on a lot with two street frontages; or
- Be on any residential lot with a frontage width greater than 25m; or
- Must not be located on a lot which adjoins a lot which is approved for or contains multiple dwellings outside the Heritage Conservation Areas of Mudgee or Gulgong and or within a Village zone.

It is Council's intent to strictly apply this criteria to manage expectations of residents and developers.

Built Form

Design

- (a) Where existing buildings are to be retained as part of an overall proposal, those structures are to be upgraded to integrate with the new development.
- (b) Verandahs, steps in the roof line or other architectural features should be incorporated in the design to provide visual relief and to minimise the bulk and scale of development.
- (c) The design of the proposal must:
 - Optimise solar access and lot orientation; and
 - Be consistent with the appearance of the streetscape - the scale, spacing, setbacks and landscaping of buildings; and
 - Positively enhance the streetscape.

Building Scale Height and Bulk

- (a) Development, particularly when viewed from the street should be compatible with the scale of buildings in the immediate locality, consistent with the objectives of the zone and should not be visually obtrusive as a consequence of their height.
- (b) In determining appropriate building heights Council shall have regard for the scale of future development for which provision is made in the locality.
- (c) The maximum height of the building at any point shall be measured as the vertical distance between the ground level (existing) and the highest point of the building, including plant and lift overruns, but excluding communications devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.
- (d) Buildings shall not exceed two storeys and generally should not exceed 8.5 metres in height.

- (e) Each development or building will be assessed on its merits in terms of its visual impact on the streetscape and impact on the amenity, privacy, views and solar access of the surrounding properties.
- (f) Council may require an applicant to prepare and submit to Council shadow diagrams in order to determine the impact of a proposal on buildings and landscaped areas.
Such diagrams should be based on a survey of the relevant site and adjoining development. It is essential that shadow diagrams be based on such detailed information in view of the fact that the shadows are the result of the relative height of structures and not just the height of a structure above ground level. In this regard the resultant shadow cast by a structure can vary greatly depending whether the structure is uphill or downhill of the area in question.

Setbacks

- (a) 4.5 metres to street frontage
- (b) 3 metres to side and rear boundaries
- (c) 3 metres to secondary frontages

Development Density

- (a) The number of units accommodated on a specific site shall be as follows;
 - (i) These density standards apply to the towns of Kandos and Rylstone and to the areas of Mudgee and Gulgong outside the conservation areas, on lots with a single frontage of at least 25m or lots with two street frontages.

| Unit Type | Site Area |
|----------------|---|
| 1 Bedroom unit | 1 dwelling unit per 300m ² of site |
| 2 bedroom unit | 1 dwelling unit per 380m ² of site |
| 3 bedroom unit | 1 dwelling unit per 450m ² of site |

- (ii) These density standards apply to the Gulgong and Mudgee Conservation areas:

| Unit Type | Site Area |
|----------------|---|
| 1 Bedroom unit | 1 dwelling unit per 250m ² of site |
| 2 bedroom unit | 1 dwelling unit per 280m ² of site |
| 3 bedroom unit | 1 dwelling unit per 310m ² of site |

- (b) the minimum floor area (excluding balconies and garages) for multi-dwelling housing are as follows;

| Unit Type | Floor Area m ² |
|----------------|---------------------------|
| 1 Bedroom unit | 55 |
| 2 bedroom unit | 70 |
| 3 bedroom unit | 85 |

A residential flat building may contain any combination of one, two and three bedroom units.

-
- Landscaping**
- (a) Site landscaping must not be less than 40% of the site area.
 - (b) Landscaping shall consist of well advanced trees and shrubs, preferably with a predominance of native species.
 - (c) The area of the site between the front building line and the street frontage must be landscaped as common property to a depth of at least 5m.
 - (d) landscaping is to be completed prior to the release of the Construction Certificate.
- Site Coverage and Private Open Space**
- (a) The maximum site coverage (excluding driveways) for residential development on land identified for medium density development, as a percentage of the total site area, shall not exceed 40%.
 - (b) Each dwelling shall have a principal private open space with a minimum area of 40 square metres and a minimum dimension of 5 metres (width and depth). These areas must be directly accessed from the living areas. For the purposes of this clause, living area means any room or rooms within the dwelling which are generally available for day-to-day use by residents and visitors and include such rooms as lounge, dining and rumpus rooms.
 - (c) Rainwater tanks are not to be located within the principal private open space.
 - (d) Patios, decks, balconies at or near ground level may only be counted as principal private open space, under the same roof, when they have a direct northerly aspect and are less than 25% of the overall private open space requirement.
 - (e) Wherever a dimension is less than 5 metres, it will not be counted as part of the calculation for a principal private open space.
 - (f) Where principal private open space in the front setback is permitted, these shall be located behind a suitably landscaped area with a minimum width of 1.5 metres to the front boundary. Such landscaping shall be maintained at all times to Council's satisfaction. Fencing of such areas will be incorporated into the landscaped area. The use of 'Colorbond' or similar fencing of these is prohibited in favour of timber or masonry materials.
 - (g) For all forms of development, at least 75% of each required principal private open space area and internal living areas shall receive at least three hours effective sunlight between the hours of 9.00 am and 3.00 pm on 21 June (Winter solstice). Council may require submission of shadow diagrams to demonstrate compliance with the requirement above.

Vehicular Access and Parking

- (a) The table for calculating the total number of car parking spaces required is shown below. One space only is to be allocated as resident parking for each dwelling with the remainder of the total requirement to be provided as visitor car parking, which is to remain available for use at all times. The second space required for a unit must be provided as general visitor parking or as an open space associated with the unit.

| Type of Parking | Spaces provided |
|---------------------|--|
| Residential Parking | 1 space per 1 bedroom flat 2 spaces per 2 bedroom flat (other than in the Conservation Areas of Mudgee and Gulgong and Village Zones in Rylstone and Kandos where the provision is 1 space per 2 bedroom flat) 2 spaces per 3 bedroom flat or cluster dwelling |
| Overflow Parking | 1 space per 5 units – not required for developments of 3 or less units |

Note: Car parking calculations shall be rounded up to the nearest whole number.

- (b) For dwellings above commercial premises, car parking shall be provided at the above mentioned rates, except in the case of a single dwelling, which requires one car parking space only.
- (c) Car parking must be designed so that either ingress to or egress from each space can be achieved in one movement.
- (d) Parking shall be located so that vehicles can enter and leave in a forward direction.
- (e) All geometric standards applicable to site access and car parking layout are to be in accordance with Council's Development Control Plan - Car Parking.

Vehicular Access Design.

- (f) Driveways are not to be continuous straight lines and are to be offset by landscaped sections and/or unit layout.
- (g) Driveways are to be designed as follows:
- A pavement width of 3 metres is required for developments of 3 to 4 dwellings.
 - A pavement width of 6 metres is required for developments of 5 or more dwellings.
 - Where the length of driveway exceeds 30m, the width of pavement must be 6m

at intervals. This width may be varied along its length subject to provision being made for passing along the driveway.

- (h) Where access is to a major road a pavement width of not less than 6 metres for the first 5 metres of the driveway adjoining the road boundary is to be provided.
- (i) Driveways are to be offset a minimum of 2 metres from any side boundary for the full length of the required front setback (ie. 6 metres or 7.5 metres). The setback area should be suitably landscaped to screen the hardstand driveway surfaces and to provide visual appeal to the streetscape.

Privacy and Amenity

Where windows or balconies of dwellings are within 6 metres and facing windows or balconies of adjacent dwellings, windows must be offset by a minimum of 1 metre from the edge of the opposite window and balconies be screened or oriented to ensure visual privacy.

Window openings at first floor level and above should be orientated or designed to minimise the potential for overlooking of adjacent properties and the consequent loss of privacy.

Windows which are orientated towards adjoining properties and do not adequately restrict overlooking will be required to be opaque finish or located at appropriate heights above floor level to minimise overlooking of adjoining properties.

All developments are required to provide a 1.8m high fence on the boundary of the development site and between private open space areas of individual units.

All fencing is to be provided at full cost to the developer. All fencing which is in front of the building line shall be constructed of timber and/or masonry materials.

Acoustic Privacy

- (a) Site layout should separate active recreational areas, parking areas, vehicle accessways and service equipment areas from bedroom areas of dwellings.
- (b) Development adjacent to high levels of uncontrollable external noise shall incorporate a building design and external wall treatments to minimise the entry of that noise.

Waste Disposal

Development applications should provide details of an appropriate means of waste disposal via the provision of individual 240 litre mobile garbage, recycling bins to each dwelling.

All dwellings should provide an external access to the rear of the development (private open space area) to enable garbage bins to be taken to the street without the need for moving the bins through the dwelling. A garage can be used for this purpose if it provides direct access to the rear courtyard. All garbage bins should be stored within the private open space or garage of the dwelling.

Waste disposal collection points should not compromise the amenity of future residents in terms of noise, odour or aesthetic impact.

4.2 AFFORDABLE MULTI DWELLING HOUSING

State Environmental Planning Policy (Affordable Rental Housing) 2009 [SEPP]

This SEPP provides incentives for the development of affordable housing in its various forms and should be used as the guideline for development for the purpose of affordable in-fill development, secondary dwellings, multi dwelling housing and residential flat buildings. The policy applies to the Mid-Western Region, however, the SEPP *only* applies where development is within **400m of a B2 Local Centre or B4 Mixed Use Zone**.

The purpose of this part of the DCP is to provide guidelines for the development of affordable multi dwelling housing on land that is further than the 400m prescribed by the SEPP.

Definition

“affordable housing”

In these provisions the definitions in the SEPP Affordable Rental Housing apply

Affordable Housing Principles

- (a) Affordable housing is to be created and managed so that a socially diverse residential population representative of all income groups is developed and maintained in a locality.
- (b) Affordable housing is to be made available to a mix of very low, low and moderate income households.
- (c) Affordable housing is to be rented to appropriately qualified tenants and at an appropriate rate of gross household income.
- (d) Land provided for affordable housing is to be used for the purpose of the provision of affordable housing.
- (e) Buildings provided for affordable housing are to be managed so as to maintain their continued use for affordable housing.
- (f) Rental from affordable housing, after deduction of normal landlord's expenses (including management and maintenance costs and all rates and taxes payable in connection with the dwellings), is generally to be used for the purpose of improving or replacing affordable housing or for providing additional affordable housing.
- (g) Affordable housing is to consist of dwellings constructed to a standard that, in the opinion of the consent authority, is consistent with other dwellings in the vicinity.

Application

The following provisions apply to development for the purposes of dual occupancies, multi dwelling housing or residential flat buildings if:

- (a) the development concerned is permitted with consent under another environmental planning instrument, and
- (b) the development is on land that does not contain a heritage item that is identified in an environmental planning instrument, or an interim heritage order or on the State Heritage Register under the *Heritage Act 1977*.

Location

The following provisions apply to land with two street frontages or a single frontage of 25m and:

- Land Zoned R3 Medium Density Residential in Mudgee,
- Within the Conservation Area of Gulgong , and
- Within the Village Zones in Kandos and Rylstone
- Land within 400m of a Business Zone

Landscaping (a) in the case of a development application made by a social housing provider—at least 35 square metres of landscaped area per dwelling shall be provided, or
 (b) in any other case—at least 30 per cent of the site area is to be landscaped,

Solar Access living rooms and private open spaces for a minimum of 70 per cent of the dwellings of the development shall receive a minimum of 3 hours direct sunlight between 9am and 3pm in mid-winter.

Parking Parking is to be provided at the following rates:

| Type of Parking | Spaces provided |
|---------------------|---|
| Residential Parking | 1 space 1 bedroom flat 1 space per 2 bedroom flat 1.5 spaces per 3 bedroom flat or cluster dwelling |
| Overflow Parking | 1 space per 3 units |

Dwelling size Floor areas are to be as follows:

| Unit Type | Floor Area m ² |
|-----------------|---------------------------|
| 1 Bedroom Units | 45 |
| 2 bedroom units | 70 |
| 3 bedroom units | 85 |

A residential flat building may contain any combination of one, two and three bedroom units.

Development Density The following development density applies

| Unit Type | Site Area |
|----------------|---|
| 1 Bedroom unit | 1 dwelling unit per 250m ² of site |
| 2 bedroom unit | 1 dwelling unit per 280m ² of site |
| 3 bedroom unit | 1 dwelling unit per 310m ² of site |

Design A consent authority must not consent to development to which this section applies

| | |
|---|---|
| Requirements | unless it has taken into consideration the provisions of the <i>Seniors Living Policy: Urban Design Guidelines for Infill Development</i> published by the Department of Infrastructure, Planning and Natural Resources in March 2004, to the extent that those provisions are consistent with this Policy. |
| Character of Local Area | A consent authority must not consent to development to which this section applies unless it has taken into consideration whether the design of the development is compatible with the character of the local area. |
| Must be used for affordable housing for 10 years | <p>A consent authority must not consent to development to which this section applies unless conditions are imposed by the consent authority to the effect that:</p> <ul style="list-style-type: none"> (a) for 10 years from the date of the issue of the occupation certificate: <ul style="list-style-type: none"> (i) the dwellings proposed to be used for the purposes of affordable housing will be used for the purposes of affordable housing, and (ii) all accommodation that is used for affordable housing will be managed by a registered community housing provider, and (b) a restriction will be registered, before the date of the issue of the occupation certificate, against the title of the property on which development is to be carried out, in accordance with section 88E of the <i>Conveyancing Act 1919</i>, that will ensure that the requirements of paragraph (a) are met. <p>(2) Subclause (1) does not apply to development on land owned by the Land and Housing Corporation or to a development application made by, or on behalf of, a public authority.</p> |
| Subdivision | Land on which development has been carried out under this Division may be subdivided with the consent of the consent authority. |

4.3 SEX SERVICES PREMISES (BROTHELS)

- Location**
- a) Council will not consider an application for a brothel within view or within a 100 metre radius of a church, hospital, school, community facility, residential zone, or any other place regularly frequented by children for recreational activities or cultural activities.
 - b) An entrance to or exit from a brothel is not to be within 300 metres of the entry to any other approved brothel.
 - c) The interior of the premises is not to be visible from a public place.
 - d) Brothels shall not be located in a building that contains a dwelling(s).
- Size Layout and Design**
- a) An adequate reception/waiting room with a minimum area of 20m² is to be provided per premises.
 - b) The premises is to be located on an allotment with a minimum size of 900m².
 - c) A brothel shall be restricted to a maximum of five (5) rooms where sexual services are provided at any one time.
 - d) The brothels appearance shall be discrete and sympathetic with adjoining premises.
- Car Parking**
- a) Provision for 2 car parking spaces per room used for prostitution
 - b) Disabled parking to be provided close to the building entrance in accordance with the AS 2890.1 1993
 - c) Car parking areas to be well lit.
- Signs**
- a) Signs do not display words or images which are sexually explicit or otherwise sexually suggestive.
 - b) The sign identifies only the name of the person who conducts the business or the registered name of the business and be limited to 0.3m x 0.6 m lit by a single globe.
 - c) A clearly visible street number must be displayed.
 - d) There is only one sign per premises.
 - e) The content, illumination, size and shape of the sign is well integrated and compatible with the building it is attached to.
- Security and Public Safety**
- a) Development Applications are to provide details on measures to be undertaken to safeguard workers, clients and the general public. Such details are to address the number of hours of security personnel and the lighting of access ways and car parking areas
 - b) A private security company is to be engaged to monitor and regularly check entrances and exits.
- General Requirements**
- a) The hours of operation nominated with the development application form part of any approval and businesses will be bound by those hours unless a

specific condition of consent is imposed by Council to the contrary.

- b) Should the specified operator change, Council must be notified prior to the business operating.
- c) If the number of sex workers, hours of operation or signage are proposed to be changed, it will be necessary to modify the consent or lodge a new application depending on the scale of the changes.
- d) Persons under the age of 18 years are not to be engaged in the business or permitted on the premises.
- e) No alcohol to be provided or offered for sale.

**Limit on
Development
Consent**

- a) All development consents granted to a brothel application shall be initially limited to a period of 12 months. At the completion of this period, Council will re-evaluate the proposal in terms of any complaints received regarding the operation of the business, and in terms of compliance with conditions of consent.

If Council is satisfied that the brothel has operated in an orderly manner with minimal impact upon nearby uses, and in compliance with conditions of consent, it may approve a modification to the consent under the Section 96 of the Environmental Planning and Assessment Act, 1979, to extend the consent.

Council may also impose conditions of consent relating to the hours of operation. This will also be subject of review after the 12 month trial. If, after the 12 month trial, any hours of operation are shown to be causing a nuisance or disturbance in the neighbourhood, the approved hours of operation may be further restricted.

4.4 SIGNS

GENERAL REQUIREMENTS

Full details of sign type, size, lettering, location, colours etc. must be provided with a development application.

All advertising must relate to the lawful uses or activities carried out on the same land on which the advertising sign is to be erected.

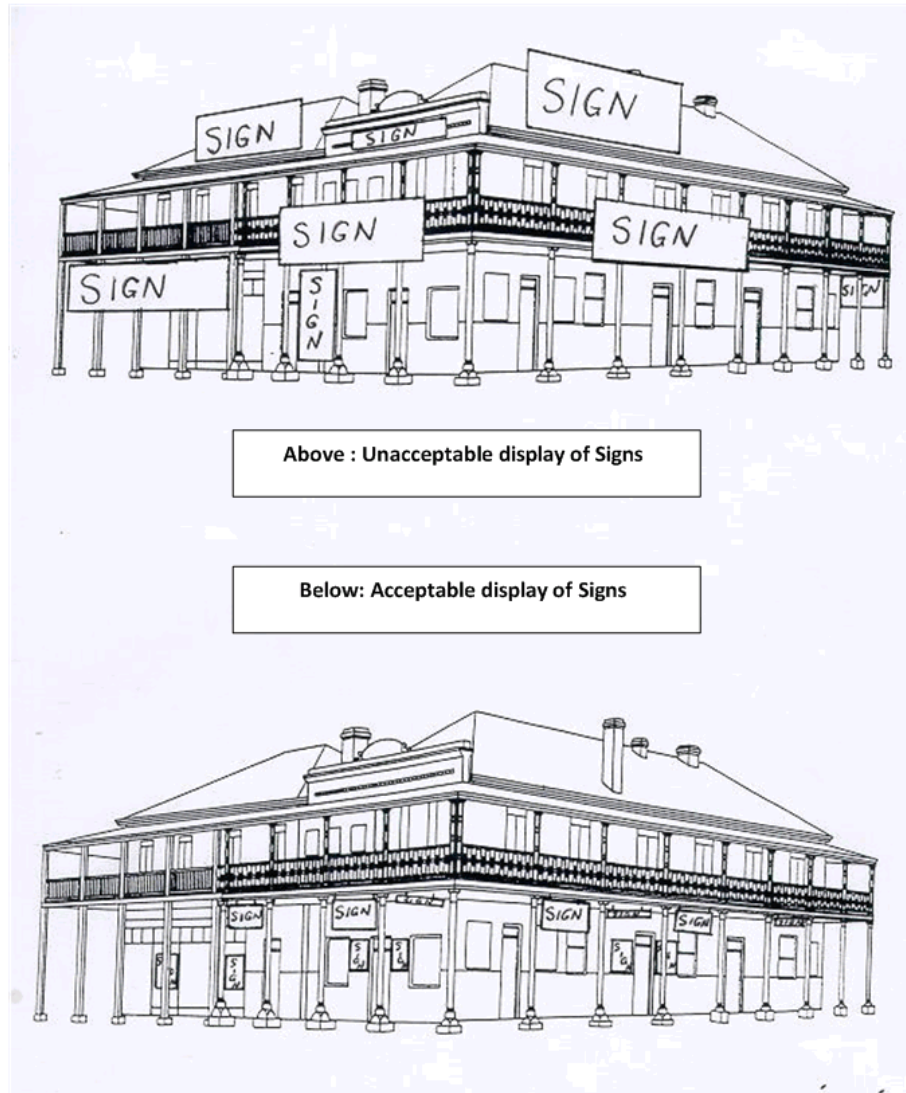
Types

| | |
|---------------------------------------|--|
| Fascia Sign | Attached to the fascia or return end of an awning. |
| Pole or Pylon Signs | A sign mounted on a single pole independent of any building or other structure. |
| Projecting Wall Sign | Attached to the wall of a building and projecting horizontally from the wall. |
| Roof Sign | A sign mounted on the roof of a building but do not project above the ridge cap. Roof signs will generally not be approved in business or residential zones. |
| Under Awning/Verandah Sign | A sign attached underneath the awning or verandah at right angles from the façade of the building. |
| Wall Sign | A sign attached directly to the wall of the building or painted directly onto the wall excluding signs including the parapet of the building. |
| Window Sign | A sign applied on or inside the glass of windows and doors, or etched, painted or attached to the glass or displayed directly behind the surface. |
| Flags | supported by a freestanding flag pole and not necessarily displaying any words or logos. |
| Vertical Projecting Wall Signs | Attached to the wall of a building. |
| Wine Barrel Signs | Signs which use a wine barrel as the template or mounting. |
| Floodlit Sign | Illuminated by an external source of artificial light. |
| Post Supported Signs | A sign supported by a post on either side pole independent of any building or other structure. |
| Sandwich Board or A-Frame Sign | A free standing sign within the property boundary. |

Prohibited Signs

The following types of signs do not contribute to the character of the towns or rural areas and are prohibited.

| | |
|-----------------------------------|--|
| Advertising Fixed to Trees | Any sign that uses a tree as a pole for mounting. |
| Above Awning Signs | Signs mounted above the awning or verandah of a building. |
| Billboards | Additional billboards where the structure is erected for the express purpose of displaying advertising not associated with the use of the land are prohibited. |



**Signs in
Towns and
Villages**

HERITAGE CONSERVATION AREAS

- (a) The streetscapes in the business areas of Mudgee, Gulgong, Rylstone and Hargraves are within a heritage conservation and particular attention is paid to the preservation and enhancement of the character and appearance of these areas.
- (b) Corporate identification should be carefully selected and amended where necessary to

retain the character of individual buildings and the surrounding locality.

- (c) Generally signs on individual buildings or within areas of special significance should be discreet and should complement the building or area. An important element of Council's planning policies involves the careful control of all advertisements, and external building colours in the main business areas.

GULGONG HERITAGE CONSERVATION AREA

- (a) **No new signs or changes to the outside of buildings in this area are permitted without development approval.** This provision also applies to repainting, replastering and/or other external redecoration of buildings.
- (b) Council is required to assess the colour, size, style and architectural/aesthetic impact of proposed works in the Conservation Area.
- (c) Internally illuminated advertisements are not permitted in the Gulgong Conservation Area. External illumination such as spot lighting is encouraged, provided the intensity of illumination is not obstructive in the surrounding area.
- (d) In Gulgong lettering should conform, where possible, with the style used in the 1850 - 1900 period (the most common types were Egyptian (antique), Ionic (Fat Clarendon) and Grosteque (Sans Serif).

Business Areas

- (a) Generally a maximum signage area per commercial building (regardless on number of tenancies) of 25% of the frontage is permitted per building.
- (b) **Under-awning/verandah signs** must have a minimum height of 2.6 metres distance from the pavement to the bottom of the sign and protrude no further than a maximum length of 3.5 metres as measured from the front wall of the commercial building and will not protrude beyond the line of the awning/verandah.
- (c) **Additional pylon signs, projecting wall signs, above awning signs, illuminated wall signs located above the verandah or awning and roof signs** are not permitted in both Mudgee and Gulgong business areas.
- (d) **Wall signs** should be either painted directly onto the building or constructed of painted wood, or coated at point of manufacture or powdercoated flat metal sheets. Wall signs utilising plastic or modern metal materials are not favoured. Specific consideration should be given to buildings that are Heritage Items or within a Heritage Conservation Area. In those instances it is recommended that you discuss your proposal with the Town Planning Section or Heritage Advisor prior to finalising the design.

Industrial Areas

- (a) **Non-Illuminated Pole/pylon** signs and directory boards shall be limited to a maximum of 6m² advertising area and a maximum overall height of 5 metres. In general the bottom of a pole or pylon signs should be at least 3 metres above ground level.
- (b) **Illuminated Pole or pylon** signs must have a maximum area of 4m².
- (c) A maximum of one pole or pylon sign can be erected without Council approval if the above requirements are met.
- (d) A maximum of two (1) pole or pylon signs shall be permitted per site frontage.
- (e) In the case of an **industrial multi unit complex**, one (1) directory sign board of up to 8m² in any area may be permitted with approval. Each industrial unit may have a sign at the entrance of each unit having the maximum dimensions of 2000mm by 600mm without approval.

- (f) One **sandwich board** sign per site is permitted without approval however must be located inside the property boundaries and weighted and securely fixed so that it will not blow over. A maximum area of 2m² per side applies.
- (g) Council will not approve the use of flashing lights, bunting and other devices to attract attention to a business.
- (h) Individual directional signage will not be permitted

**Business
Activity
Centres**

Business Activity Centres are areas where a number of businesses exist which are not on the main traffic routes and can demonstrate a need to provide direction for customers to the site.

These areas include:

- Gulgong Industrial Estate
- George Street Mudgee Industrial Area
- Depot Road Mudgee Industrial Area
- South Mudgee Shops
- Industrial Avenue, Mudgee
- Cooper Drive, Rylstone

Council will allow the erection of one major directory sign for each business activity centre, on land not necessarily utilised by the businesses.
Development Approval is required for these signs.

**Residential
Areas**

There are a number of businesses outside traditional shopping centres and industrial estates as well as many home industries.

Businesses in residential areas must have special controls to maintain the residential amenity of the neighbourhood.

The following criteria must be met for businesses in residential areas:

- (a) The sign shall only display the name and nature of the business, including address, hours of business, telephone number and the like;
- (b) The sign shall not be larger than one metre long and 300mm high;
- (c) The sign shall not be erected higher than one metre above ground level;
- (d) The above provisions apply to signage on the building or site of the business. Advertising signage on other land will not be permitted.
- (e) Council will not approve the use of flashing lights, bunting and other devices to attract attention to a business.
- (f) Any other signs to be erected on a property shall be considered in accordance with the type of business and whether there are any "existing-use" rights for signage.
- (g) Generally, only one sign will be allowed for home industries and home occupations.

Rural Areas

The following criteria must be met for businesses in rural areas and includes signs relating to Landcare and Community Projects:

- (a) Advertising signs must describe premises and be located on private land, not in the road reserve.
- (b) Maximum of one sign only per site.
- (c) Maximum height of 2.5m

- (d) Maximum area 2m²
- (e) Made of Non-reflective material.
- (f) Must be free standing post sign
- (g) Must be set back 3m if located on a corner or intersection of a road
- (h) Not illuminated

Tourist Signage

Tourist related development includes winery and cellar door facilities, restaurants, accommodation and other businesses catering for tourists.
Signs on private land must relate to the business contained on the land itself.

IDENTIFICATION SIGNS

These are post supported or wall structures located at the front of the site with the express purpose of identifying the business or facility to the travelling public.

- (a) Post supported structures max. height of 3m above ground level or an advertising area of more than 3m² with typical dimensions being 1.2m x 2.5m.
- (b) Identification signs must relate to a lawful or approved use of the land and be located on private land, not in the road reserve.
- (c) The size, colour and shape of the signs will generally be left to the discretion of the business but should not include the use of bright or fluorescent colours or highly reflective or illuminated materials.
- (d) Each property shall be allowed **two identification signs** (which may be double sided). In circumstances when the property has two road frontages Council will consider a third sign on the secondary frontage where that frontage has a minimum of 250m.
- (e) In circumstances where there are two or more businesses operating from a site, Council will consider increasing the maximum sign face area from 3m² to 4m².

ENTRANCE SIGNS

Signs incorporated into the primary entrance of the site and may include fencing or walls. Advertising incorporated into the entrance structure is restricted to the name of the premises. In circumstances where the business operates after sunset, Council will consider low intensity external illumination of entrance signage.

VINEYARD IDENTIFICATION SIGNS

These signs can be erected when the vineyard name has been used on a wine bottle label. The maximum dimension of such signs shall be 3.0m². They shall contain only the company and vineyard name and the design of the sign face should reflect the design on the bottle label.

INTERNAL SIGNAGE

This includes signs that direct visitors within the site and include entry/exit signs, toilet and parking facilities, picnic areas and the like. These signs only require approval if they can be viewed from a public road.

LARGE SCALE TOURIST DEVELOPMENT

Council will consider an integrated approach to signage for large scale tourist developments outside the dimensional requirements identified above. Large scale developments must lodge a development application that details a signage theme for the property as part of the overall landscape design. In assessing such an application consideration will include;

- (a) Surrounding landscape
- (b) Impact on the rural character of the locality
- (c) Integration of the signage with buildings and other landscape characteristics.

**Maintenance
and Illegal
Signs**

- (a) Signage is a reflection on the community as a whole. Council will not tolerate amateurish and poor quality signage.
- (b) A person intending to erect a sign should refer to a qualified sign writer for advice in relation to size, colour, location and design.
- (c) Unprofessional signs will be resisted. In circumstances where, in the opinion of Council, signs become unsightly or unsafe, Council will require the removal, repair or replacement as appropriate under the particular circumstances.
- (d) In circumstances where signs have been erected without prior approval of Council, a notice will be issued requesting the landowner to remove the subject sign. After a reasonable period, Council may pursue legal action where such a request has been ignored.
- (e) Signs that have been erected or placed on public land or within a road reserve without the approval of Council will be impounded without notice and administrative fees levied for their release. After 3 months signs may be sold to offset Council's costs.

**Temporary
Signage**

- a) Temporary signage for the purpose of advertising a major or charitable event is permitted to be erected on any land (with the owner's consent) for a period of one (1) week prior to the event,
- b) This type of signage may include Variable Message Boards,
- c) This does not permit local businesses advertising particular sales or the like,
- d) Only one sign is permitted per event (multiple signs around a town are not permitted).

4.5 COMMERCIAL DEVELOPMENT

| | |
|--|--|
| Building Setbacks | <ul style="list-style-type: none"> (a) No minimum front setbacks apply. (b) Side and rear must comply with Building Code of Australia (BCA) |
| Signage | Refer section 4.4 Signs |
| Design | <ul style="list-style-type: none"> (a) The LEP includes provisions relating to active street frontages. All premises on the ground level of a building facing the street are used for the purposes of business premises or retail premises. (b) All premises on the ground level of a building facing the street shall be comprised of windows and doors to encourage the interaction between pedestrians and the retail space (c) Building facades shall be articulated by use of colour, arrangement of elements or by varying materials (d) Consider elements within established heritage buildings and how its application may be applied to new development (e) Consider the pattern of built form, scale, use of verandahs, fenestration, colour and materials. (f) Design of new development should seek to be sympathetic to heritage items not reproduce them. (g) Plans must include details of all external infrastructure (air conditioning ducts, plant rooms) and how it will be screen from view from a public road. (h) Development on a corner must include architectural features to address both frontages. (i) Where the development will adjoin the residential, village and mixed use zones, sufficient setbacks in the form of landscape buffers and access ways should be incorporated. |
| Scale form and height | <ul style="list-style-type: none"> (a) The LEP controls the height of buildings to a maximum of 8.5m (b) Consistent with the existing heritage character of the town centres of Gulgong, Mudgee and Rylstone. (c) Gulgong has a building height limit to a maximum of 5m |
| Mortimer & Church Street Mudgee | <ul style="list-style-type: none"> (a) Development fronting Mortimer and Church Streets in Mudgee should enhance and maintain the streetscape established in Church street between Market and Mortimer Streets by encouraging a coherent double storey pattern of development adopting zero front and side property setbacks. (b) Where possible the use elements that emphasis the horizontal form of development established in the Town Centre, for example through the use of verandas. (c) Any new development should provide for a visual treatment to minimise visual bulk and maintain established pattern of building frontage widths, by providing variance particularly on upper floor levels , every 20-25m. Variance may be provided through change in building materials, fenestration, or changes in parapet height etc. |

**Articulation
and Facade
Composition**

- (a) To break visual bulk and create interest, use secondary vertical elements such as fenestration or detail such as changes in materials and colour.
- (b) Excessive length of blank walls are not supported in the front facade.
- (c) Where blank walls are unavoidable (alongside or rear boundaries), break the visual impact through the provisions of landscaping, or by creating visual interest through patterning of the facade, signage or public art.

**Post
supported
verandahs
and
balconies**

- (a) Setback a minimum 600mm from edge of kerb
- (b) Compliment the elements of the building to which it is attached
- (c) Public liability insurance and approval for works on public land will be required
- (d) Not interfere with the operations of or access to public utilities or infrastructure
- (e) The use of bollards at the base of posts to protect from rear parking vehicles will be required.

**Residential-
Commercial
Interface**

- (a) Provision of landscaping buffers to provide visual screening along residential boundaries that adjoin development sites in the Mortimer Street precinct (in particular .
- (b) Ground and first floor development should not overlook residential properties
- (c) Maintain acoustic privacy through the use of acoustic fencing, where vehicular movement adjoins property boundaries to reduce visual bulk of the proposed development.
- (d) Reduce visual bulk by locating buildings and structures away from residential boundaries, or where buildings must be located along property boundaries ensure that sufficient landscaping is provided
- (e) A development should not reduce the sunlight received by the north-facing windows of living area, private open space areas, or clothes drying areas of adjoining properties to less than 3 hours between 9 am and 3pm at the winter solstice.

**Utilities and
services**

- (a) Documentation to demonstrate that the development is able to be services with water, sewer and drainage and adequate provision has been made for handling and disposal of solid waste
- (b) Trade Waste Application is required where liquid waste (other than water from wash basins, toilet or bathrooms) will be discharged into Council's sewerage system.
- (c) Building and structures are to be located clear of infrastructure
- (d) For new sewer mains structures are to be located 1m plus the equivalent inverted depth, whichever is greater) of the centreline of the main.

**Traffic and
Access**

- (a) All vehicles must be able to enter and exit the site in a forward direction
- (b) All vehicle movement paths are to be sealed
- (c) Driveways must comply with Australian Standard AS 2890.1 Parking Facilities
- (d) For new commercial development all loading facilities are to be located within the

site with no loading to occur from the public road system.

- (e) All loading facilities shall be designed to complying with Australian Standards.
- (f) Where the truck delivery paths extend through car parking areas due consideration should be given to the separation of truck, pedestrian and car traffic. Where separation cannot be achieved then the application it to address traffic flow and safety issues.

**Pedestrian
Access**

- (a) Maintain existing covered pedestrian access within the town centres
- (b) Convenient and safe access through parking areas
- (c) Convenient and safe disabled access through parking areas and where relevant focus on improving links with the existing retail areas.

Parking

Refer Specific Provisions relating to parking section 1.3.

Landscaping

- (a) Landscaped areas within the car parks should be provided incorporating the use of canopy trees and buffer planting to residential boundaries.
- (b) Landscaping to comprise low maintenance, drought and frost tolerant species

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4.6 INDUSTRIAL DEVELOPMENT

The following standards are applicable to all development within industrial zones and industrial development generally.

Setbacks

| Site Area | Street | Side/Rear* | Secondary Frontage for Corner Lots * | Site Coverage |
|-------------------------------|--------|------------|--------------------------------------|---------------|
| Less than 2000m ² | 6m | nil | 4m | 60% |
| 2,001 to 5,000 m ² | 12m | nil | 10m | 55% |
| Over 5,001m ² | 15m | nil | 12m | 50% |

*Subject to compliance with fire rating requirements of BCA

Landscaping

- (a) In the front 5 metre where the site adjoins Sydney Road and in the front 3 metres on other sites.
- (b) Landscaping should be provided in front of the building line to increase the visual presentation of the development to the street
- (c) In the side and rear setbacks where it provides visual relief from a public street or area.
- (d) Landscaping to consist of mature trees and lawn which are low maintenance, drought and frost tolerant in nature.
- (e) Landscaping shall be provided in outdoor car parking areas where >10 spaces are required to provide shading and soften the visual impact of large hard stand area.

Design

- (a) Low scale building elements such as display area, offices, staff amenities are to be located at the front of the premises and constructed in brick or finished concrete.
- (b) Roof materials are to be non-reflective.

Fencing

- (a) All security fencing is to be pre-coloured or power coated.
- (b) Open work areas or storage areas visible from a public place or street must be fenced by masonry material or pre-coloured metal cladding of minimum 2m height. This fencing is to be only located behind the front setback.
- (c) Where perimeter fencing is proposed, any access gates are to be setback from the boundary by the length of the largest vehicle accessing the site.

Utilities

- (a) Statement of servicing to be provided to demonstrate the availability and feasibility of providing water, sewer, and stormwater appropriate for the scale of the development.
- (b) Applications must demonstrate adequate provision for storage and handling of solid waste.
- (c) Liquid Trade Waste Application and facilities are required where liquid

- wastes (excluding domestic waste form a hand basin, shower, bath or toilet) are to be discharged to Council's sewer system
- (d) No building can be located within an easement for the purposes of utility infrastructure.
- (e) For water and sewer mains structures are to be located 1500mm for the centre line of the main.
- Traffic and Access**
- (a) A traffic assessment report to be submitted that demonstrates:
- i. Site Access
 - ii. Loading and unloading facilities (to be contained within the site and to be able to cater for largest design vehicle.
 - iii. Safe on-site manoeuvring area for the largest design vehicle
- (b) Unsealed vehicle movement areas are not acceptable due to environmental impacts
- (c) All vehicles must be able to enter and leave in a forwarded direction.
- (d) The number of access points from a site to any one street frontage is limited to 1 ingress and 1 egress .
- (e) No vehicular access will be permitted to a Main Road where there is an alternate access point.
- (f) Driveways must be provided in accordance with AS2890.1 Parking Facilities
- (g) A separate sealed hardstand loading area which is capable of accommodating trucks that service the site.
- (h) The loading area is to be provided behind the building line at the side or rear of the building.
- Car parking** Refer section 5.1 Car Parking
Customer parking should be provided convenient to the public entrance
- Signage**
- (a) Refer section 4.4 Signage
- (b) Single occupant industrial site:
- i. one free standing advertisement within the 5m landscaped setback; and
 - ii. one advertisement integrated within the facade of the building, but no higher than the building roof line.
- (c) Multiple unit industrial site:
- i. one index board near site entrance or within the 5m landscaped setback; and
 - ii. one advertisement integrated within the facade of each unit, but no higher than the building roof line.
- Outdoor lighting and noise**
- (a) Must comply with *AS4282 Control of Obtrusive Effects of Outdoor Lighting*.
- (b) Windows, doors and other wall openings shall be arranged to minimise noise impacts on residences where proposed within 400m of a residential zone.
- (c) External plant (generators, air conditioning plant etc.) shall be enclosed to minimise noise nuisance where adjoining residential area.

- Subdivision**
- (a) Minimum 30 metre frontage for lots.
 - (b) Roads to be designed to AusRoads standards for B-Doubles.
 - (c) Lots are to be provided with reticulated water and sewer.
 - (d) Stormwater drainage and water quality standards are to be implemented – see Section 5.3 – Stormwater Management
 - (e) All lots are to be provided with services for telecommunications and underground electricity
 - (f) Lots are to be designed to be B-double accessible.
 - (g) All roads with new subdivisions are to be constructed with bitumen.

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4.7 TREE PRESERVATION ORDER

A Tree Preservation Order exists in two forms, one being a significant tree register applying to the LGA and the second being specific approval for certain trees in the Village zone in Rylstone, Kandos, Charbon, Clandulla and Ilford.

Mudgee and Gulgong

Mudgee and Gulgong Town and Environs – Specific trees have been identified as significant with in accordance with the table below:

| LOCATION | SPECIES | SINGLE / GROUP |
|--|--|----------------|
| Tramp Café, Market Street, Mudgee | Betula pendula - Silver Birch | Single |
| Lot 671 Rifle Range Road, Mudgee | Angophora floribunda - Apple Gum | Group |
| Kelletts Carpark, Mudgee | Eucalyptus camaldulensis - River Red Gum | Single |
| 158 Robertson Street, Mudgee | Eucalyptus cladocalyx - Sugar Gums | Group 16 |
| Lot 2 Barigan Road, Wollar | Eucalyptus melliodora - Yellow Box | Single |
| 472 Ridge Road, Cooks Gap | Ficus macrophylla - Morton Bay Fig | Single |
| Roadside Vegetation along Whitehorse Road between Spring Creek Rd & Henry Lawson Drive (including Snelsons Ln from Whitehouse) to form "T" shaped area of bush | Various Eucalyptus species - roadside vegetation | Various |
| Flirtation Hill, Mudgee | Eucalyptus calophylla - Marri, Port Gregory Gum | |
| 49 Church Street Mudgee | Sebal plametto - Cabbage Palm | Two |
| Hospital Grounds Mudgee | Eucalyptus maculata - Spotted Gum | Group 84 |
| Police Station Mudgee | Eucalyptus camaldulensis - River Red Gum | Single |
| Wilbetree Road | Eucalyptus camaldulensis - River Red Gum | Single |

The consent of Council is not required For any tree not identified on the register.

Rylstone, Kandos, Charbon, Clandulla and Ilford

- (1) This provision applies to all land within Zone RU5 Village in Rylstone and Kandos.
- (2) A person shall not, ringbark, cut down, top, lop, remove, injure or wilfully destroy any tree without the consent of Council.
- (3) The consent of Council is not required:
 - i. for any tree having a height not exceeding 4m and a trunk diameter not exceeding 150mm (measured 1m above ground), or

- ii. for the pruning of any tree for the purpose of its regeneration or shaping, or
- iii. where the action proposed with respect to the tree is necessary to prevent imminent personal injury or imminent damage to property, or
- iv. where the tree has otherwise become dangerous, or
- v. for the removal of noxious plants.

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PART 5 DEVELOPMENT STANDARDS

5.1 CAR PARKING

Spaces shall be provided to the next highest whole number. Floor space areas refer to gross internal spaces, excluding stairs, amenities and corridors, except as noted in the schedule. Car parking requirements are based on the net increase in demand for parking created by a development. A reference to staff parking includes staff and management. Parking requirement rates are to be pro-rated in accordance with the proposed gross floor area (GFA) and rounded-up.

Where it is proposed to change the use of an existing retail premises/ floorspace to a restaurant, dining, and/or take food bar, additional car parking shall not be required where car parking cannot be provided on site.

| Land Use | Car Parking Requirement |
|---|---|
| Dwellings (including dual occupancy) | 2 spaces per dwelling – 1 space to be a garage, 1 space may be provided in a stacked arrangement in front of the garage provided that the space is contained wholly within the site. |
| Multi Unit Housing <ul style="list-style-type: none"> Resident Parking | 1 space per 1 bedroom flat 2 spaces per 2 bedroom flat (other than in the Conservation Areas of Mudgee and Gulgong and Village Zones ion Rylstone and Kandos where the provision is 1 space per 2 bedroom flat) 2 spaces per 3 bedroom flat or cluster dwelling |
| Over flow parking Parking | 1 space per 5 units – not required for developments of 3 or less units |
| Offices and Business Premises | 1 space per 30 m ² gross floor area (gfa) |
| Bulky Goods | 1 space per 50m ² GFA |
| Manufacturing | 1 space per 75m ² GFA |
| Warehouse | 1 space per 100m ² GFA |
| Restaurants or cafes or Take away food and drink premises | 1 space per 7 m ² gfa or 1 space per 3 seats whichever is the greater (Restaurant). 1 space per 4m ² for licensed floor including outdoor seating or dining |
| Drive thru food service | 10 spaces, either in queue or as normal parking |
| vehicle body repair workshops, and vehicle repair stations | 5 spaces per vehicle workbay |
| Recreation facilities indoor | 3 spaces per court or lane |

| | |
|---|--|
| including Squash Courts, Tennis Courts and Bowling Alleys | |
| Other Recreation Facilities | As determined by Council, but generally a minimum of 20 spaces plus spectator parking. |
| Vehicle sales or hire premises | 1 space per 50 m ² of display area |
| Hospitals | 1 space per 3 beds, plus 1 space per 2 staff (day shift) |
| Pub | Within the Commercial Core B3 zone, car parking study required. All other areas, 1 space per 5m ² of public/licensed area plus 2 spaces per 3 guest rooms plus 2 spaces per 3 employees. |
| Tourist and Visitor Accommodation | 1 space per unit, plus 2 spaces per 3 employees plus if restaurant included: 1 space per 7 m ² gfa or 1 space per 3 seats whichever is the greater (Restaurant). 1 space per 4m ² for licensed floor including outdoor seating or dining |
| Service Stations and Highway service centres | 6 spaces per service bay (including automatic car wash bay), plus 2 driveway spaces per fuel bowser |
| Educational Establishments | 1 space per staff member, plus adequate pickup space, plus 1 space per 10 senior students (Year 11 and up), plus Provision for at least three (3) parking spaces for buses. |
| Shops | 1 space per 30 m ² gfa |
| Places of Public Worship, Entertainment Facilities, Community facilities, | 1 space per 4 seats or 1 space per 10m ² of gfa whichever is the greater. |
| Amusement Centres | 1 space per 4 machines |
| Bulky Goods Retailing, rural supplies, hardware and building supplies | 1 spaces per 50m ² gfa |
| Garden Centres, landscape material supplies and plant nurseries | 1 space per 500m ² of site area (minimum of 5 spaces) plus 0.5 spaces per staff member. |
| Child Care centre | 1 space per 4 children. |
| Surgeries and Medical Centres | 3 spaces per consulting room, plus staff parking. |
| Other Uses | Other uses not listed in this Development Control Plan shall be assessed individually heaving regard to the expected traffic generation. |
| Varying of Standards | Where site conditions warrant, Council may vary the above standards by up to 10% provided the applicant lodges a formal objection, including reasons, against the subject standard. This is likely to require a car parking and/or traffic impact assessment as means of justification for the variation. |

| | |
|----------------------------|--|
| Hours of Operation | <ul style="list-style-type: none"> a) Off-Peak development is development which operates or carries out its business outside the peak demand periods for parking which is generally between 9.00 am and 5.00 pm weekdays. b) Development of this type will be assessed in accordance with DCP and have regard to the characteristics of the proposed development, its hours of operation and the availability of publicly accessible parking in walking distance of the development site. |
| Change of Use | <p>Where existing premises are proposed to be redeveloped or their uses changed, the following method of calculating car parking requirements shall apply.</p> <ul style="list-style-type: none"> a) determine the parking requirement of the previous or existing premises in accordance with the parking rates contained in this plan; b) determine the parking requirement of the proposed development in accordance with the parking rates contained in this plan; c) subtract the number of spaces determined in (a) above from the number of spaces calculated in (b) above; and d) the difference calculated in (c) above represents the total parking spaces to be provided. <p>For a re-development or new development or any additional floorspace in excess of 100m² car parking shall be calculated and provided in accordance with the Development Control Plan.</p> |
| Car Parking Credits | <p>Historic parking credits for lawfully established uses are recognised under this clause and evaluated in accordance with the DCP.</p> <p>Frontage credits related to parking availability on-street. The parking frontage credit calculation is the subject lot width reduced by the extent of driveways and no-parking zones.</p> <p>The parking credit available is the historic credit and the frontage credit.</p> |
| Heritage Incentive | <p>The Mid-Western Regional Council may exempt development involving the restoration and/or conservation of a heritage item from part or all of the subject developments parking demand. The applicant shall make a claim for the exemption and the justification thereof in the development application.</p> <p>The Heritage Incentive will only be applied where the applicant can demonstrate that the conservation of the building depends upon the use of this clause.</p> |
| Landscaping | <ul style="list-style-type: none"> a) Parking facility design shall consider the likely visual impact of the parking facility in the locality and provide an integrated landscape design addressing amenity impacts. |

-
- b) A landscaping plan including details of species selection of mature shade trees, species condition, size of beds, under storey and ground cover planting, irrigation provision shall be submitted to Council for approval.
 - c) Landscaping shall be provided to separate pedestrian and vehicle conflict points where possible.
 - d) Landscaping provision for sun control (shading) shall be provided at the rate of 1 shade tree for every 6 car parking spaces.
 - e) Existing trees on site are to be retained where possible.

Note: Design and layout including manoeuvring, provisions of accessible spaces and access reference should be made to AS 2890.1 Parking Facilities

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5.2 FLOODING

| | |
|-----------------------------|--|
| Definitions | <p><i>Flood compatible materials</i> include those materials used in building which are resistant to damage when inundated. A list of flood compatible materials is attached in Appendix A.</p> <p><i>Flood evacuation strategy</i> means the proposed strategy for the evacuation of areas during periods of flood as specified within any policy of Council, the Floodplain Management Plan, the relevant (SES) Flood Plan, by advices received from the SES or as determined in the assessment of individual proposals.</p> <p><i>Flood prone land</i> means land indicated on the map marked “Flood Prone land” deposited in the office of Council and amended from time to time.</p> <p><i>Freeboard</i> is a height above the design floor level or ground level which compensates for factors such as wave action, localised hydraulic effects and construction variations.</p> <p><i>Note: Reference to freeboard in this Plan refers to an increased height of 0.5 metres except adjacent to Redbank Creek (within the Mudgee Township and Environs Floodplain) where it refers to an increased height of 1.0 metres.</i></p> <p><i>Probable Maximum Flood (PMF)</i> means the flood calculated to be the maximum likely to occur.</p> |
| Flood Risk Precincts | <p>Each of the floodplains within the local government area which have been subject to flood investigations have been divided based on different levels of potential flood hazard. The relevant Flood Risk Precincts (FRP’s) are outlined below.</p> <ul style="list-style-type: none"> • High Flood Risk <p>Land that is below the 100 year ARI flood that is subject to high hydraulic hazard (ie provisional high hazard in accordance with the Floodplain Management Manual) or areas that are isolated in a 100 year ARI flood due to evacuation difficulties.</p> <ul style="list-style-type: none"> • Medium Flood Risk <p>Land below the 100 year ARI flood level that is not subject to high hydraulic hazard and where there are no significant evacuation difficulties.</p> <ul style="list-style-type: none"> • Low Flood Risk <p>All other land within the floodplain (ie. within the PMF extent) but not identified as either in a high flood risk or medium flood risk precinct.</p> |
| Development controls | <p>The development controls apply to all known potentially flooded areas (that is up to the largest estimated flood including the PMF when known). The type and stringency of controls have been graded relative to the severity and frequency of potential floods, having regard to categories determined by the relevant Floodplain Management Study and Plan. The categories applicable to each floodplain are depicted on the planning matrices in Appendix A as follows:</p> |

- **Matrix 1** – Urban Floodplains
- **Matrix 2** – All other floodplains.

Performance Criteria

- (a) The proposed development should not result in any increased risk to human life.
- (b) The additional economic and social costs which may arise from damage to property from flooding should not be greater than that which can reasonably be managed by the property owner and general community.
- (c) The proposal should only be permitted where effective warning time and reliable access is available for the evacuation of an area potentially affected by floods, where likely to be required.
- (d) Development should not detrimentally increase the potential flood affectation on other development or properties.

Fill Earthworks that change the nature of a watercourse and have the potential to affect upstream or downstream properties is not permitted.

This standard applies to watercourses in the high hazard flood risk precinct.

Development Application Applications must include information which addresses all relevant controls listed above, and the following matters as applicable.

Minor Additions Applications for minor additions (refer to the Land Use Categories in Appendix A) to an existing dwelling on Flood Prone Land shall be accompanied by documentation from a registered surveyor confirming existing floor levels.

Survey plan required Development applications for Flood Prone Land shall be accompanied by a survey plan showing:-

- (a) The position of the existing building/s or proposed building/s;
- (b) The existing ground levels to Australian height datum around the perimeter of the building and contours of the site;
- (b) The existing or proposed floor levels to Australian height datum; and
- (c) A reliable access route, with regular levels to Australian Height Datum along the centreline of this route, wherever development is within a high or medium flood risk precinct.

Applications for earthworks, filling of land and subdivision shall be accompanied by a survey plan (with a contour interval of 0.25m) showing relative levels to Australian height datum.

Flood Study

For large scale developments, or developments in critical situations, particularly where an existing catchment based flood study is not available, a flood study using a fully dynamic one or two dimensional computer model may be required. For

smaller developments the existing flood study may be used if available and suitable (eg it contains sufficient local detail), or otherwise a one dimensional steady state flood model would normally suffice.

A flood study must demonstrate that the cumulative impact of a development on flood levels for up and downstream properties is negligible.

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5.3 STORMWATER MANAGEMENT

All development will need to address the issues associated with managing water on the site. Specific design and specification is attached as Appendix B.

PERFORMANCE TARGETS

Table 1 Development Categories, Performance Targets & Relevant references

| Development Categories | Performance Target(s) | Requirements (refer below) | Section in the Technical Guidelines – Appendix B1 |
|---|--|----------------------------|---|
| Single dwelling and Dual occupancy development | I. BASIX II. Quantity Management During Operation III. Quality Management During construction | A | 0 |
| Multi Dwelling housing | I. BASIX II. Quantity Management During Operation III. Quality Management During construction | A B C | 0 3 4 |
| Residential development in areas of high ground salinity | I. BASIX II. Quality Management During Construction III. Quality Management During Operation IV. Salinity prevention | A C D F | 0 4 5 7 |
| Roads in urban areas and Car Parks (> 5 cars) including new roads on subdivisions and road widening | I. Quality Management During Construction II. Quality Management During Operation III. Salinity Prevention (where applicable) | C D F | 4 5 7 |
| Commercial, Industrial Developments & Mixed Use | I. Quality Management During Construction II. Quality Management During Operation III. Water conservation IV. Salinity Prevention (where applicable) | C D E F | 4 5 6 7 |
| All other types of development including Council development that requires approval under the EP&A Act. | I. Quality Management During Construction II. Quality Management During Operation III. Water conservation IV. Salinity prevention only where applicable | C D E F | 4 5 6 7 |

A BASIX

The Development proponent shall meet all obligations included on their BASIX certificate.

B QUANTITY MANAGEMENT DURING OPERATION

EXEMPTIONS TO THIS PART

Rural development and development which is located in areas of high ground salinity.

HOW TO COMPLY?

Step 1: Determine the minimum runoff storage volume required

The minimum runoff storage volume (m^3) required is shown in equation 1 and is:

$$(1) \quad \text{Rainfall threshold depth, } 0.022\text{m} \times \text{proposed impervious area (m}^2\text{)}$$

Note that all paved areas which are constructed from permeable paving shall be considered to be permeable for the purposes of applying this policy.

Step 2: Work out how much a rainwater tank can reduce the infiltration volume?

The next step is to work out if a rainwater tank is to be included in the configuration of your solution. If it is, then credit will be given and the retention volume can be reduced in accordance with the following table (2) below.

If there is a rainwater tank obligation arising from BASIX, then credit will be given for the tank and the runoff storage volume will be reduced. If the applicant opts to install a larger tank than that required under BASIX, then even more credit may be given.

Table 2 Credits (reductions in the runoff storage volume) given for various rain tank sizes and proposed end uses of the rainwater.

| Reduction in runoff storage volume (m^3) for using a rainwater tank | | |
|---|------------------------------------|--|
| Proposed Rainwater Tank size (kL) | Where outdoor use only is proposed | Where both outdoor and internal use including toilets, hot water and laundry is proposed |
| <2.5 | 0 | 0 |
| ≥2.5 | 1 | 2.0 |
| ≥5.0 | 1.25 | 2.5 |
| ≥7.5 | 1.5 | 3.0 |
| ≥10.0 | 1.75 | 3.5 |
| ≥12.5 | 2 | 4.0 |
| ≥15.0 | 2.25 | 4.5 |

Step 3 Configure the proposed trench, rain garden or rainwater tank according to the supporting S2S - Supporting Technical Guidelines (Appendix B2)

Alternate solutions

Alternatively, a unique solution supported with scientific evidence which demonstrates that the proposal complies with the performance targets may be submitted. The supporting technical guidelines document the minimum evidence requirements.

C QUALITY MANAGEMENT DURING CONSTRUCTION

PERFORMANCE TARGETS

Table 3 identifies soil and erosion control requirements during construction for all Applicants.

Commercial and industrial internal alterations, refits and refurbishments which do not disturb any earth are exempt from complying with this part.

Table 3. Water quality management requirements during construction

| Development Scale | Performance Target |
|--|--|
| Small Scale < 800m ² of disturbed area | As a minimum, Council requires a hand marked-up plan of proposed works showing sediment and erosion control measures. This plan must be prepared in accordance with the supporting Technical Guidelines |
| Medium 800 m ² to 2,500 m ² of disturbed area | An Erosion and Sediment Control Plan (ESCP) must be prepared in accordance with Landcom’s Managing Urban Stormwater (2006) otherwise known as ‘The Blue Book’ (refer to the supporting S ₂ S - Technical Guidelines). |
| Large More than 2,500 m ² of disturbed area | A Soil and Water Management Plan (SWMP) must be prepared in accordance with Landcom’s Managing Urban Stormwater (2006) otherwise known as ‘The Blue Book’ (refer to the S ₂ S - Supporting Technical Guidelines). |

D QUALITY MANAGEMENT DURING OPERATION

PERFORMANCE TARGETS

This performance target is applicable to:

- Residential development in areas of high ground salinity
- Subdivisions that comprise the whole or major part of a catchment
- Car parks which have a capacity for more than 5 cars
- Commercial development (excluding internal refurbishment and refits)
- Industrial development (excluding internal refurbishment and refits)
- Any new Council or Special Uses development such as schools, hospitals, etc.

Water Quality Requirements for Urban Subdivision

| Development Scale (average lot size of 800m ² or equivalent land size) | Performance Target |
|--|---|
| Small Scale Up to 30 Lots | <ul style="list-style-type: none"> • Bio-retention • Post development flows do not exceed pre-development flows up to and including 1.5 year ARI rainfall event • Bio filtration for overland flow paths |
| Medium 30 – 100 lots | <ul style="list-style-type: none"> • On Site Detention (OSD) up to 100 year ARI • All water quality requirements except Gross Pollutant Traps (GPTs) |
| Large Beyond 100 lots | <ul style="list-style-type: none"> • On Site Detention (OSD) up to 100 year ARI • All water quality requirements including Gross Pollutant Traps (GPTs) and biofiltration |

Water quality performance targets are stipulated in Table 4.

Table 4. Post development pollution reduction targets

| Pollution Reduction Target |
|---|
| <ul style="list-style-type: none"> • Total Suspended Solids (TSS) – 85% reduction of the typical annual load • Total Phosphorus (TP) - 65% reduction of the typical annual load • Total Nitrogen (TN) - 45% reduction of the typical annual load • 90% of gross pollutant loads (litter and heavy sediments), oil and grease are retained on site |

HOW TO COMPLY?

DEEMED TO COMPLY SOLUTIONS

There are two deemed to comply solutions which are:

- 1) The use of a bioretention basin or raingarden (which can also be used to increase public amenity) configured to also promote infiltration where permitted.
 The minimum area of the bioretention basin is to be based on the proposed impervious area. Table 6 defines the minimum requisite areas. The bioretention basin or rain garden is to be designed in accordance with the supporting S₂S - Supporting Technical Guidelines (Appendix B2)
- 2) The use of a buried infiltration trench. The deemed to comply infiltration trench solution will need to have a minimum volume calculated in accordance with Table 5. The infiltration trench usually receives stormwater flows from the surface in the same manner as raingardens. However, if the trench is receiving sub-surface flows from the stormwater network then the flows will need to be pre-treated with a sediment trap to ensure that sediment is removed from the runoff before it enters the trench. This, in combination with routine maintenance to remove accumulated sediment will ensure the trench has a long life.
- 3) The provision of a rainwater tank as defined in Appendix B2.

Worked examples are included in the S₂S - Supporting Technical Guidelines Appendix B2.

Table 5. Area of bioretention and volume of infiltration as a proportion of the upstream impervious area.

| Average annual rainfall (mm/yr) | <800 | >800 |
|--|--------------------------------------|---------------------------------------|
| Area of bioretention for roads/carparks expressed as % of the upstream <u>impervious</u> catchment area (based on 100mm depth of surface ponding, 500mm filter media depth and 120mm/hour saturated hydraulic conductivity). | 1.0% | 1.2% |
| Minimum volume of storage required inside buried infiltration trench per 100m ² of upstream <u>impervious</u> catchment. | 0.5m ³ /100m ² | 0.75m ³ /100m ² |

Both the bioretention/raingarden and infiltration trench shall be constructed in accordance with the supporting S₂S - Supporting Technical Guidelines Appendix B2.

Alternate solutions

Alternatively, a unique solution supported with scientific evidence which demonstrates that the proposal complies with the performance targets may be submitted. The supporting technical guidelines document the minimum evidence requirements.

E WATER CONSERVATION FOR NON RESIDENTIAL DEVELOPMENT

EXEMPTIONS

This clause does not apply to residential development.

PERFORMANCE TARGETS

New development applicants (other than residential and commercial and industrial refurbishments and refits) shall reduce consumption of potable water by 40% benchmarked against a development which uses only potable water and which has no water conserving fixtures or fittings.

Commercial and Industrial refurbishments and refit applicants shall reduce consumption of potable water by 30% benchmarked against a development which only uses potable water and which does not use water conserving fixtures and fittings.

HOW TO COMPLY?

A Water Conservation Report is to be prepared and submitted with the DA which demonstrates how the water consumption on the proposed development will be reduced by 40% when benchmarked against a development which only uses potable water and does not have any water conservation measures. The measures proposed in the Water Conservation Report shall form a statement of commitment and be included on the conditions of consent.

Compliance with the target can be achieved by firstly reducing the demand for water (known as demand management), and secondly by substituting rainwater, stormwater or wastewater sources for town potable water.

With respect to refurbishments and refits and; where consumption is relatively minor, compliance might be achieved simply by implementing demand management measures alone. In all cases evidence must be provided to Council by way of the Water Conservation Report which defines current demand and demonstrates how future demand will be reduced by the relevant performance target.

Demand Management Measures include the following examples noting the list is not exhaustive:

- Use of minimum AAA rated fixtures and appliances
- Use of aerators on existing and proposed taps
- Flush arresters on existing toilets.
- Selection of plants and landscaping that require little or no watering.

If source substitution such as the use of rainwater tanks, grey water recycling systems or other measures are proposed then the applicant shall ensure that all water shall be fit for its intended purpose, including:

- Recycled water (treated wastewater or stormwater) may be used for non-potable purposes such as toilet flushing or irrigation and washdown.
- Rainwater may be used for both potable and non potable uses.
- Applicants are encouraged to maintain a town water supply (where available) to top up a rainwater tank when needed.

- Where town water supply is available but not to be installed, agreement on adequate provisions for fire-fighting shall be made with the NSW Fire Brigade who may permit the use of rainwater for fire-fighting purposes provided it is stored in such a manner that it cannot be drawn down for any other purpose.

F SALINITY PREVENTION

AIMS

To prevent a decline in the health of receiving waters from development located in areas with high ground salinity.

PERFORMANCE TARGET

In areas with high ground salinity or in areas where an elevated saline groundwater table exists, infiltration of runoff shall not be permitted.

Where a Quality Management During Operation performance target exists (such as for residential development in saline affected areas) and for reasons of high ground salinity infiltration is not permitted then:

- 1) Applicants shall be limited to one deemed to comply solution, which is either a rainwater tank, bioretention basin or raingarden.
- 2) If a bioretention basin or raingarden is adopted, it shall be lined to prevent infiltration and otherwise sized in accordance with Appendix B1 and constructed in accordance with the S₂S - Supporting Technical Guidelines Appendix B2.
- 3) Wherever possible, explore the adoption of rainwater tanks or stormwater harvesting to reduce the volume of stormwater runoff as much as possible. This is possible for residential developments where tanks up to 15 kL in volume will help to reduce water bills and runoff greatly.

In areas which are affected by high ground salinity and which have an elevated saline groundwater table, permeable paving may be used provided that no additional areas drain onto the pavement, i.e. only the paved area drains through the pavement.

5.4 ENVIRONMENTAL CONTROLS

- Protection of Aboriginal Archaeological Items**
- (a) Aboriginal archaeological relics are protected by the provisions of the National Parks and Wildlife Act 1974, which makes the disturbance or destruction of these relics, without permission of the Director, an offence.
 - (b) Proponents should determine whether their site has potential archaeological significance and if so, should submit an archaeological survey with their development application. Generally, where a site is located near a water course or on an elevated area, an archaeological study will be required.
 - (c) Proponents should determine if the development application is classified as integrated development under Section 91 of the EP&A Act 1979 and if an Aboriginal Heritage Impact Permit is required.
- Bushfire Management**
- (a) Where the development site is affected by a bushfire hazard as identified on the Bushfire Prone Land Map produced by the NSW Rural Fire Service, the design and management of the development shall comply with the guideline "Planning for Bushfire Protection" and where required; the Australian Standard AS 3959 - Construction of Buildings in Bush Fire Prone Areas.
 - (b) Buildings shall be located to ensure that requirements for fuel free or fuel reduced zones do not impact on existing native vegetation on the site.
 - (c) Proponents should determine if the development application is classified as integrated development under Section 91 of the EP & A Act 1979 and if a Bushfire Safety Authority is required.
- Riparian and drainage line Environments**
- (a) Proponents must identify all drainage lines, streams, creeks and rivers on development plans and identify how the development has been designed to respect and be setback from such waterways and their vegetation.
 - (b) Proponents should determine if the development application is classified as integrated development under Section 91 of the EP & A Act 1979 and if a water use approval, water management work approval or activity approval is required.
- Pollution and Waste Management**
- (a) Proponents should indicate all waste streams i.e. trade, liquid, chemical, solid, medical, and clarify how they will be managed and contained safely on-site and disposed of such that there are no environmental impacts or effects on adjoining properties, stormwater or sewerage systems or waterways.
 - (b) Proponents should determine if the development application is classified as integrated development under Section 91 of the EP&A Act 1979 and if an environmental protection license is required.

| | |
|---|--|
| | <p>(c) Proponents will refer to Groundwater Vulnerability Mapping associated with Mid-Western Regional Council Local Environmental Plan 2012.</p> |
| Threatened Species and Vegetation Management | <p>(a) An assessment of any potential impact on native flora and fauna is to accompany a development application. If considered necessary by Council a Flora and Fauna Impact Assessment will be required from a suitably qualified professional. This Assessment will determine whether a Species Impact Statement will be required.</p> <p>(b) Development applications should indicate all existing vegetation.</p> <p>(c) Buildings and access areas should be sited to avoid removal of trees.</p> |
| Building in Saline Environments | <p><i>Information provided by the NSW Government indicates that salinity may occur in parts of the Mid-Western Regional Local Government Area (LGA). This salinity potential is due to inherent characteristics of the Mid-Western Regional LGA landscape. As a result, residential buildings in the Mid-Western Regional LGA may be susceptible to salt damage.</i></p> <p><i>The inclusion of this information in the DCP will assist the Council in the reasonable undertaking of its roles and responsibilities under the Local Government Act 1993 and the Environmental Planning and Assessment Act 1979.</i></p> |
| Definitions | <p><i>Salt damage</i> - the deterioration of material such as concrete, metal or brick caused by the chemical and physical impact of salts. Salts can be carried in surface water, soil, groundwater, rain or air.</p> <p><i>Residential Building</i> - Structures classified as either class 1, 2, 3, 9c or 10 in the Building Code of Australia (BCA)</p> |
| Variation | <p>Council will consider on merit, arguments relating to the application of this policy based on diminished salinity risk*. In all such instances the onus of proof rests with the applicant.</p> <p>*Diminished salinity risk may be argued through a risk assessment based on a site analysis consistent with the Department of Land and Water Conservation (2002) Guide: <i>Site Investigations for Urban Salinity</i> (ISBN: 0 7347 5305 5), and the incorporation into structure design, appropriate measures to manage the risk of salt damage.</p> |
| House slabs and Footings | <p>(A) The following measures must be used for house slabs and footings:</p> <ol style="list-style-type: none">1. For slab on ground construction, a layer of sand at least 50 mm deep under the slab must be provided;2. A high impact damp proof membrane (rather than a vapour proof membrane) must be laid under the slab (NSW BCA 3.2.2.6);3. The damp proof membrane must be extended to the outside face of the external edge beam up to the finished ground level. <i>(As per clause 3.2.2.6 and figure 3.2.2.3 of the BCA);</i>4. Class 25 MPa (N25) concrete must be used OR a sulphate resisting Type SR cement with a water cement ratio of 0.5 must be used. Water, which will reduce the concrete strength below 25 MPa must not be added to the concrete at the |

construction site;

5. Slabs must be vibrated and cured for a minimum of three days. Care must be taken not to over vibrate the concrete during placement, as segregation of the concrete aggregates will occur;
6. The minimum cover to reinforcement must be 50 mm from unprotected ground. Chairs including lateral supports should be in position prior to inspection and subsequent pouring of the concrete;
7. The minimum cover to reinforcement must be 30 mm from a membrane in contact with the ground;
8. The minimum cover to reinforcement must be 50 mm for strip footings and beams irrespective of whether a damp proof membrane is used;
9. Admixtures for waterproofing and/or corrosion prevention may be used.

Brickwork

(B) The following measures must be used for brickwork:

1. The damp proof course must consist of polyethylene or polyethylene coated metal and be correctly placed; (NSW BCA 3.3.4.4);
2. Exposure class masonry units must be used below the damp proof course level. (*Clause 3.3.1.5 (b) and Table 3.3.1.1 of the BCA*);
3. Appropriate mortar (M4 grade) and mixing ratio must be used with exposure class masonry units; (*clause 3.3.1.6 of the BCA*);
4. Admixtures for waterproofing and/or corrosion prevention may be used.

All buildings

(C) The following measures must be used for all buildings:

1. Once installed the damp proof course or the vapour barrier must not be breached by any later works or additions such as; steps, verandas, walls, rendering, bagging, pointing, paving or landscaping.
2. Appropriate sub-soil drainage must be installed for all slabs, footings, retaining walls and driveways;
3. The dwelling must be designed to suit the sites existing topography and any cut and fill required must not exceed 1000 mm in total.

Additional controls recommended for all buildings:

Landscaping and garden designs should not be placed against walls and be designed to minimise the use of water on the site.

Low water requiring plants and water-wise garden designs are required in accordance with the requirements of the Building Sustainability Index.

Buildings shall be maintained in accordance with the requirements of AS2870 Australian Standard Residential Slabs and Footings – Construction. Drainage is to be designed and constructed to avoid the ponding of water against or near footings.

**Alterations
and Additions**

(D) Alterations and Additions.

Applications for alterations or additions to existing buildings shall comply with the requirements for new structures. Existing buildings affected by the impact of salinity shall be repaired in accordance with the requirements for new buildings and any necessary remediation carried out to the site to ensure the impacts of salinity are eliminated.

Property owners are to obtain advice from suitably qualified building professionals with experience in this field before commencing any repairs or remedial action.

Situations requiring demolition of parts of the building, repairs to drainage systems or structural alterations should not be commenced before the appropriate Construction Certificate or Combined Development Certificate is obtained for the work proposed.

Notes:

- 1. In the event that the requirements of this section of the DCP contradicts the Building Code of Australia, the requirements of the Building Code of Australian prevail.*
- 2. Design and construction requirements in this section of the DCP are based on AS3600 Australian Standard Concrete Structures, for moderately aggressive to aggressive environments.*

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PART 6 DEVELOPMENT IN RURAL AREAS

6.1 DWELLINGS

There are provisions within the LEP that prescribe circumstances for the erection of dwellings on rural land. These controls relate to Rural zoned (RU1, RU3, RU4, RU5) land and Large lot residential (R5) zoned land.

The subdivision controls in section 7.2 address dwellings associated with new lots. Additional guidelines are as follows.

Primary Production Small Lots Dwellings on land within the Primary Production Small lots zone will only be approved where it can be demonstrated that the dwelling is required to support the agricultural use of the land.

The agricultural use of the land for the purposes of the RU4 zone means intensive plant agriculture (defined in LEP) or the irrigation of pasture and fodder crops.

Applications for a dwelling will need to include:

- ❖ Details of the proposed/existing intensive plant agricultural activity
- ❖ Business plan prepared by a suitably qualified professional detailing production costs, harvesting potential and conservative market prices
- ❖ Evidence of water licenses satisfactory for the use
- ❖ Evidence of commencement or intention to commence the activity

Land adjacent to the Mudgee Airport – Dwellings on land zoned RU4 Primary Production Small Lots and having a minimum lots size of 2ha on the Lot Size Map shall only be considered where the dwelling is designed to incorporate a hanger. Such an application will need to address:

- ❖ The relationship between the airport and the development site in respect to the interface with the airport; and
- ❖ Access to the airport for private aircraft.

Dwellings on rural lots within the former Rylstone LGA The LEP provides for the erection of a dwelling on a lot (including a lot which forms part of larger holding) on which the erection of a dwelling was permissible immediately before the commencement of the (LEP) plan.

This clause ensures that despite the Lot Size Map, a dwelling house may be erected on a lot with a minimum are of at least 40ha within the former Rylstone LGA.

Reference should be made to the provisions of the LEP 2012 which provide for dwellings on lots below the minimum lot size in particular circumstances, for example existing holdings.

Services Where the dwelling will be erected on a lot that is within 500m of an R1 General Residential or R2 Low Density Residential zone, it must:

- ❖ Be on a lot with have sealed road frontage and be connected to the sealed road network; and
- ❖ connect to the reticulated water and sewer infrastructure.

Dwellings adjacent to Village Zones

Consideration will be given to applications for the erection of dwellings on existing lots within 500m of an RU5 Village zone where the lot has sealed road frontage and is connected to the sealed road network – in many cases this is likely to mean that the proponent will be responsible for the upgrade of the road as part of any development approval.

In circumstances where the site is within 500m of reticulated water or sewer infrastructure, the dwelling will need to be connected as part of any development approval.

Setbacks

| Zone | Street | Side/Rear | Secondary Frontage for Corner Lots * |
|---|--------|-----------|--------------------------------------|
| R5 Less than or equal to 5 ha. in area | 30m | 20m | 15m |
| Ru1, RU4 and R5 Greater than 5 ha. in area | 60m | 20m | 15m |
| RU5 | 7.5m | BCA | 3m |
| <ul style="list-style-type: none"> • Where the lot is located a Classified Road such as Ulan or Cope Road the front setback is 100m and side and rear setback is 20 metres. • Where the lot is located on the State Highway the front setback is 200 m and the side setback is 20 metres. | | | |

6.2 TEMPORARY WORKERS ACCOMMODATION

Definition

temporary workers' accommodation means any habitable buildings and associated amenities erected on a temporary basis for the purpose of providing a place of temporary accommodation for persons employed to carry out large-scale infrastructure, including development for the purposes of an extractive industry, mining, renewable energy or an electricity transmission or distribution network.

Location

The development is to be located:

- (i) if the development relates to a mine—within 5 kilometres of the relevant mining lease under the Mining Act 1992, or
- (ii) in any other case—within 5 kilometres of the large-scale infrastructure in which persons are to be employed.
 - Provision of suitable arrangements for the disposal of waste water and the provision of a water supply. It should be noted that proposals relying on the provision of water transported by tankers will not be supported.
 - Design of the facility to ensure that there is no adverse visual impact discernable from outside the project site.
 - Submission of a plan of management to address the social concerns having regard to the particular location of the accommodation.
 - The application should address health and residential amenity issues that arise due to the location near the major infrastructure project site.
 - Provision of additional access and parking infrastructure commensurate with the additional demand.
 - Provision of a Social Impact Assessment.
 - The application should identify and address potential positive and negative economic impacts of the proposal.

Need

The proponent shall demonstrate the need for the facility by providing an analysis of the number of major infrastructure project (including mining) jobs currently approved and the total number of temporary workers accommodation beds approved. The expected life of the Temporary Workers Accommodation facility shall be included in the Statement of Environmental Effects indicating the expected timing of decommissioning to relate to the life of the major infrastructure project.

Social Impact Assessment

There are many definitions of *social impact*. A contemporary definition (Armour, 1992) defines social impacts as changes that occur in:

- People's way of *life* (how they live, work, play and interact with one another on a day-to-day basis);
- Their *culture* (shared beliefs, customs and values); and
- Their *Community* (its cohesion, stability, character, services and facilities).

Key principles of assessing social impacts.

To achieve a useful and appropriate framework for assessing social impacts, a number of key principles are important.

- The purpose of assessing social impacts is to provide focused relevant details on the significant or problematic impacts.
- It is essential to consider the positive and negative social aspects of the development.
- Persons and groups that may be affected by the proposal should be consulted. Community consultation should identify the possible impacts and mitigating measures that may be introduced. Community consultation should occur early in the process and should lead to the formulation of the terms of reference of the Social Impact Statement. It is a requirement that the proponent consult the NSW Police Local Area Command and local health providers (including General Practitioners and Dentists operating in the local area) during the preparation of the Social Impact Statement. It is recommended that the proponent consult Council after the terms of reference are formulated.
- The proponent should incorporate practical measures that will enhance the positive aspects, may improve the development and limit any possible negative social impacts.

The Social Impact Statement should include but is not limited to the following:

- Identification and an in-depth analysis of social impacts of the proposal.
- Outline the process of community consultation and address issues raised by the community.
- consideration of cumulative impacts, intergenerational equity, impacts on the provision of all services and identify ways to address these impacts.
- The results of consultation with relevant service providers including police and health providers.
- Identification of a strategy to mitigate impacts, encourage integration with the community, and permanent relocation to the area, timeframe for implementation of the strategy and a monitoring program.
- Identify and implement provisions that will address the needs identified by the SIS and the demands generated by the development in a way that will not adversely impact upon the existing community.

Transportable Buildings

The application must illustrate that all transportable buildings can be permanently affixed to the site by footings in accordance with the requirements of the National Construction Code and associated Engineer's Certification.

Detail that all buildings and structures will have adequate form and appearance, including material and colours in soft earth browns, creams and greens, which do not detract from the visual amenity of the area. The use of reflective cladding material on walls will not be permitted. Where the use of second hand buildings is proposed the application must be accompanied by the following information:

- Photographs clearly showing the condition from all four elevations of the

| | |
|----------------------------|--|
| | <p>building</p> <p>An inspection report from a certified structural engineer or accredited building surveyor that the buildings are suitable for the proposed use and relocation.</p> |
| Accessibility | <p>Accessibility requirements established by Access to Premises Standard, the National Construction Code and the associated Australian Standards are to be addressed in the application.</p> |
| Density | <p>Development shall be limited to a maximum of 100 beds per hectare.</p> |
| Facilities | <p>The accommodation facility is to provide the following facilities as a minimum:</p> <ul style="list-style-type: none"> • Ablution facilities to be provided in each accommodation room including shower, toilet and wash basin connected to an approved effluent disposal system. ; • Communal laundry and associated facilities connected to an approved effluent disposal system • A covered/ sheltered entry for each building; • An outdoor activity area of which part shall be shaded; • Adequate and secure storage space for workers, equipment and other material associated with the management and maintenance of the accommodation facility; • Adequate Lighting for pedestrian and vehicular safety and security throughout the complex. • Paved internal pedestrian access to and between all buildings and facilities is to be provided. |
| Traffic and Parking | <ul style="list-style-type: none"> • Internal road and vehicular access provided in accordance with Australian Standard No. AS2890 Council standard. • Provision of one car parking space per room and one space per staff member in accordance with the car parking section of this DCP. • Designated bus parking and collection/drop off area located within the development area with sufficient manoeuvring area to allow the bus to enter and leave the site in a forward direction. • Designated delivery areas. |
| Services | <ul style="list-style-type: none"> • Provision of a potable water supply capable of providing a minimum of 140 litres per person per day. A lower daily minimum may be acceptable where the proposed development includes water saving measures such as recycling systems or non-potable water supply sources. • A water balance is to be submitted demonstrating that the proposed provisions for water and sewer services can be met by the development. • Demonstration of adequate water supply to maintain the accommodation facility including landscaping. • Where the facility is to connect to a reticulated system proved by the local authority, the applicant must demonstrate that the reticulated system can support the additional demand generated by the Temporary Workers Accommodation whilst allowing adequate capacity to service existing demand, demand to meet land already zoned within the |

catchment, uses already approved to connect to the reticulated service and land identified in the Comprehensive Land Use Strategy.

- Provision of waste collection and where necessary entering into a waste disposal agreement with Council or an approved waste collection operator.
- First aid facilities.

Landscaping

A landscape plan should be provided with the application. Where possible, remnant vegetation should be retained. Landscaping should focus on:

- Providing a buffer to surrounding land, in this case vegetation should consist a combination of mature trees and shrubs to achieve a visual buffer;
- Providing privacy within the development;
- Improving the residential amenity through the provisions of shade.
- Consist mainly of native species or species that thrive in this locality.
- At least 25% of the site should be open space.

It will be a requirement of any development consent that the landscaping is to be maintained for the life of the development in accordance with the approved landscaping plan.

Plan of Management

The applicant shall provide a Plan of Management that shall form part of any approval granted by Council. The Plan shall address, but is not limited to, the following issues:

- Identification of measures introduced to mitigate social impacts
- Management of security and safety of tenants, community and surrounding residents.
- Noise, dust, odour, light spill and litter.
- Potential conflict with adjoining owners/occupiers that may be affected by the operation of the accommodation facility.
- The method of transport of the workers to the project site.
- The consumption of alcohol at the accommodation facility (if applicable).
- Where adjacent to a town or village, access to facilities.
- Access to medical services.
- Method for the collection of waste within the site.
- Emergency response procedures.
- Soil, groundwater and surface water protection methods.
- Details of signage at the entrance to the accommodation which is to include the following:
 - Site Manager / Operator
 - Specific Rules of the Accommodation site
 - Emergency Contact Details
- Complaints Handling Procedure that will be publicly available and include a compliant contact phone number.

Decommissioning

The application shall be accompanied by a Decommissioning Plan that shall form part of any approval granted by Council. The Plan shall address the following issues:

-
- When the facility shall be decommissioned;
 - Works or facilities that shall remain in place following decommissioning;
 - Details of the clean –up and rehabilitation of the site;
 - The proposed use of the site after decommissioning; and
 - The transfer to public ownership of any legacy infrastructure.

**Developer
Contributions**

Council will seek to negotiate planning agreements for major developments in accordance with s93F of the Environmental Planning and Assessment Act 1979. Proposal involving less than 50 beds will be assessed in accordance with Council Section 94 Contributions Plan as commercial development.

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6.3 WIND FARMS

Scope

For the purpose of the development control plan, commercial wind power generation turbine(s) or towers with a peak capacity power rated output greater than 10kW require development consent and must comply with the provisions of this plan.

For the purposes of this Plan, commercial wind power generation includes wind power generation

Turbine(s) or towers with a peak capacity of power rated output greater than 10kW. The erection of a wind monitoring tower also requires Council's consent.

Objectives

- To minimise potential land use conflicts,
 - To ensure that there is no unreasonable interference with the comfort or response of adjoining land users,
- To ensure road access and other issues are identified and sufficient information is included with each development application to enable proper assessment, and
- To ensure that adequate provisions are made to restore developed land at the end of the life of the development.

State Significant Development

Due to the high capital investment value of large wind farms they often are categorised as State Significant Development. In these circumstances the assessment of the application is undertaken by the Department of Infrastructure and Planning. To determine if your proposal falls within this category reference should be made to State Planning Policy (State and Regional Development 2011).

In the event that your proposal falls within the category of State Significant Development such that Council is not the approving authority, consistency with this Development Control Plan is nevertheless sought.

Statement of Environmental Effects (SEE)

The development application must be accompanied by a Statement of Environmental Effects

The SEE as a minimum shall contain the following information:

- The location of the property, land contours, boundary dimensions and site area. This should include a topographic map of 1:25,000 scale showing the location of the proposed development, the route of transmission lines to the electricity grid (and include access road, pylon, gradient and erosion control assessments), the service roads on and to the site, and the proximity to significant features such as dwellings, environmentally sensitive land, prime crop and pasture land, forests, national parks, heritage items and aircraft facilities.
- The site plan or plans showing positions of the proposed wind turbines, site boundaries, land contours, native vegetation, the proposed vehicular access points, the location of existing and proposed vegetation and trees on the land, the location and uses of all existing and proposed buildings, power lines, sub-station and fences on the land.
- A description of the proposed wind turbine/s, including all relevant details such as number, make, model, dimensions, generation capacity, tower

height, blade length, materials and colour.

- A land use description of the adjoining land and/or affected lands and landscape including assessment of the likely future impact.
- A noise impact assessment demonstrating compliance with the Department of Environment, Climate Change and Water licensing requirements (whether a licence is required or not) the NSW Wind farm Guidelines (2012) and any other NSW Acts, Rules or Regulations applicable to wind farm noise. The application shall also detail proposed monitoring program(s) for full spectrum noise testing (including low frequency sound and infrasound) to validate predicted noise impacts on neighbouring properties. The impact of The Van Den Berg effect (ie the effects of the wind profile at night on wind turbine sound) is also to be specified.
- A description and assessment of the visual effects including photomontages, plate or panoramic photomontages, computer assisted photo simulations or other graphic representations of the appearance of the wind turbines and transmission lines. Viewshed modelling via the use of a suitable GIS (e.g. "MapInfo") is encouraged. Shadow prediction and shadow flicker assessments shall be included in the visual assessment(s).
- An evaluation of the electromagnetic radiation and/or interference from the wind turbines and/or transmission lines. This should include impacts on human and animal health, emergency services, RFS, Police, Ambulance etc and local television and radio reception and other local communications.
- A construction program and environmental management plan incorporating the proposed staging of the project, erosion and sedimentation controls, heavy vehicle movements, site access including all service roads, transmission towers, substation, underground wiring, construction phase impacts including facilities, waste disposal, staff/contractor numbers etc, weed control, farm impacts and all other works.
- A report detailing investigations into the impact of construction vehicles on the proposed route having regard to public safety especially school bus hours and citizens' peak hour travel to work shall accompany the development application. Detailed road condition reports will be required as part of any consent. Council will require a full traffic assessment as part of the development application;
- An evaluation of flora and fauna impacts with specific mention of migratory species potentially impacted by the development. Where the development is in close proximity to known habitats of threatened species (Flora or Fauna), early consultation with the Department of Environment, Climate Change and Water is highly recommended.
- A decommissioning and site restoration plan and program.
- Demonstration that all issues raised by relevant Agencies have been addressed (e.g. CASA for aviation safety, SCA for water quality issues - AAA for aerial agriculture implications etc)
- The heritage significance of the site and surrounds.
- An assessment of any risks involved in soil disturbance or arising from vibration or microclimate impact including contamination impacts on hydrology and archaeological issues.
- Assessment of the development regarding all relevant legislation and applicable policies.
- Applicants are required to keep the local community fully informed

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throughout their design process.

- Additional information may be required depending upon the circumstances of the development proposal and level of detail, and accuracy provided within the development application.

Controls

The following must be included as part of the design criteria and assessment of any related development application:

- The development should be sited and carried out to minimise impacts on, or restrictions to grazing, farming and forestry practices;
- The development should be carried out in a way that minimises any physical adverse effects on adjoining land and the development site, including, but not limited to:
 - (i) land degradation
 - (ii) alteration to drainage patterns
 - (iii) pollution of ground water
 - (iv) spread of noxious plants and animals, and
 - (v) bushfire hazard
- The developer must assess the visual impact of the project including an assessment of scenic value. The developer must consult with the Council and the community on appropriate visual impact measures;
- The developer must assess the cumulative impact of the development having regard to wind farms in existence, those approved but yet to be constructed, those for which a Development Application has been lodged with a planning authority and those for which written licenses have been granted to a developer for wind farm assessment purposes Council does not favour large expanses of ridgelines being covered with wind farms and turbines;
- Proposed wind turbines shall comply with the NSW Wind farm Guidelines and any other NSW Acts, Rules or Regulations applicable to wind farm noise. Note that where noise levels are found to exceed those guidelines, Council shall require remediation work and may require the cessation or decommissioning of the turbines to reduce the noise impacts on sensitive receptors such as non-related dwellings. The developer shall, upon request of council or an adjoining landowner, furnish the following information: a) noise attributable to the wind farm; b) associated wind speed and direction at the wind farm, weather conditions at the wind farm and power output of individual turbines at the wind farm; and (c) data collected on low frequency noise and Infrasound levels occurring at a representative sample of neighbouring non-host residences;
- Turbines shall not be located within 5.0 kilometres of any dwelling not associated with the development or from any lot upon which a dwelling may be constructed. The 5.0 kilometre setback proposes utilising a precautionary principle in addressing perceived visual, noise and health concerns;
- Turbines shall not be located within a distance two times the height of the turbine (including the tip of the blade) from a formed public road. A greater distance may be required by the road authority;
- Turbines shall not be located within a distance 2.0km from a non-related property boundary;

- Existing and proposed screenings may be used to minimise visual impacts to non-related properties. However, due to the height of turbines, screening is not the preferred method of minimising visual impact. Turbines shall be located in positions so as to have minimal visual impact on nearby properties, especially existing dwellings and lots on which dwellings may be constructed;
- Turbine locations are to be sensitive to existing related dwellings on the subject site. Noise and shadow flicker should be minimised and turbines should not be located in close proximity to existing dwellings;
- Turbine locations shall not surround a non-related property. Turbines shall be located with the specified setbacks from property boundaries to minimise the visual impact of the development on adjacent and nearby non-related property. Cumulative impacts, having regard to existing turbines, turbines approved but yet to be constructed, those for which a Development Application has been lodged with a planning authority and those for which written licenses have been granted to a developer for wind farm assessment purposes should be assessed;
- A Communications Study should identify the existing status of communications and detail the proposed method of dealing with potential communication interference. The development should not detract from the reception of radio, TV, internet or other communication methods. Where necessary, it may be required to install additional services (boosters/communication towers/ re-transmission towers etc) to maintain such services in the vicinity of the development. Where this is determined to be necessary, the work and equipment shall be at the developers cost;
- Construction vehicles, including concrete trucks, carriers of turbine components, and related heavy vehicles (including relevant contractors) shall only travel on an approved route. This route shall be identified in a report having regard to public safety especially school bus hours and citizens peak hour travel to work and approved in accordance with this Plan;
- A report detailing investigations into the impact of construction vehicles on the proposed route shall accompany the development application. Detailed road condition reports will be required as part of any consent. Council will require a full traffic assessment as part of the development application;
- Council will require road works to cope with the over size and overweight traffic movements related to the construction of a wind farm. Bonds will also be required for any potential damage to roads during the construction phase. The road works and bond amounts will be determined by Council professional staff, but will be determined generally by the length of road and condition of road surface/base bridge, drainage etc relevant to the selected route. Where road works are determined necessary for the development, costs associated with the road works shall be the developer's responsibility;
- The construction and maintenance of internal roads (roads within the property subject to the development) shall be the responsibility of the developer. Council will require proof that they have been adequately designed and constructed for their purpose. Council and relevant State Government Agencies shall be provided with adequate information about the environmental aspects of the internal road construction;
- All infrastructure related to the wind farm should be included in the development application. Management of temporary facilities, waste, numbers of contractors/employees, etc, should be part of the Development

Application information. All infrastructure should be located in low visual impact locations and interconnection cables/wiring and the like should be underground;

- Within six months of the wind turbine generators ceasing to operate, any rights of carriageways that were created to enable maintenance to be conducted on the wind turbine generators are to be extinguished by the developer and the land made good, unless otherwise agreed with the landowner;
- Within twelve months of the wind turbine generators ceasing to operate, they are to be fully dismantled and removed from the site. A security guarantee/bond is to be lodged with the consent authority (prior to any work commencing on-site) in an amount determined by the consent authority to cover the cost of dismantling and removal of the turbines; and
- Details of the proposed connection to the electricity reticulation network shall be included as part of the Development Application Environmental Assessment.

Other Aspects

Notification

On lodgement of the DA, Council will notify property owners within a 5 kilometre radius of the development in addition to the notification requirements outlined in the DCP. All submissions received will be presented to the Council for their consideration in the assessment and determination process. Where Council is the consent authority, Council will hold a notification and submission period of not less than 60 days and will require the developer to hold a minimum of one public information night during the exhibition and submission period. The developer shall undertake additional consultation with the community and affected property owners.

Much of Council's road network is generally not capable of sustaining the overweight loads involved with wind farms and will require substantial upgrading to accommodate the wind farm construction vehicles. Appropriate bonds will be required to ensure any road damage is repaired to Council's satisfaction. Such bonds are payable prior to commencement of any works on the site. Road sealing shall be required where appropriate on unsealed public roads utilised by the proponent.

Consultation with State Government Authorities

Proponents are advised to consult with public authorities that may have a role in assessing their development application. Council may consult relevant public authorities.

6.4 TOURIST AND VISITOR ACCOMMODATION

Definition

tourist and visitor accommodation means a building or place that provides temporary or short-term accommodation on a commercial basis, and includes any of the following:

- (a) backpackers' accommodation,
- (b) bed and breakfast accommodation,
- (c) farm stay accommodation,
- (d) hotel or motel accommodation,
- (e) serviced apartments,

but does not include:

- (f) camping grounds, or
- (g) caravan parks, or
- (h) eco-tourist facilities.

Note: Refer to the LEP 2012 for individual definition of the above terms.

serviced apartment means a building (or part of a building) providing self-contained accommodation to tourists or visitors on a commercial basis and that is regularly serviced or cleaned by the owner or manager of the building or part of the building or the owner's or manager's agents.

Development for the purposes of cabins or self contained holiday accommodation, the definition of serviced apartment is applied.

Location

- (a) Must comply with the MLS map or demonstrate compliance with Clause 4.2A of the LEP 2012.
- (b) All tourist and visitor accommodation has a residential component and therefore Council will not consider the establishment of any tourist and visitor accommodation on land on which a single dwelling is not permissible in the LEP 2012.

Design & Layout

- (a) The development should address the constraints of the site including topography, existing vegetation
- (b) Development for the purpose of services apartments (cabins or the like) shall be limited to a maximum of 6 individual accommodation units and one permanent dwelling (or manager's residence).
- (c) The use of manufactured or relocated homes will not be permitted in the urban areas.

Water Cycle Management

Council will require a Water Cycle Management Report for each lot in the subdivision which identifies that there is a suitable area capable of the disposal of on-site wastewater. The report must include a plan showing a nominal effluent management area for each proposed dwelling or cabin site (as the case may be), in relation to slope, aspect and other site constraints. The plan must indicate all nearby waterways with a buffer of a least 100 metres between effluent management areas and perennial or intermittent creeks or watercourses and 40 metres to drainage depressions.

Electricity The proponent shall demonstrate that the development can be serviced by electricity either via connection to the grid or solar power. Generators will generally not be accepted as a source of electricity.

Parking Refer to car parking requirements section 5.1 in the DCP

Signage Refer to requirement for signs section 4.4 in the DCP

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PART 7 SUBDIVISION

7.1 URBAN SUBDIVISION

This section of the Plan provides guidelines for the subdivision of land zoned residential (R1 General Residential, R2 Low Density Residential and R3 Medium Density Residential),.

- Lot Size** The minimum lot size is determined by the Mid-Western Regional LEP 2012
- (a) All lots must have street frontage.
 - (b) As slope increases the minimum size of the lots will be required to increase according to the following:-

| | |
|--------|-------------------|
| 0-10° | 600m ² |
| 10-15° | 700m ² |
| 15-20° | 800m ² |
 - (c) Development will not be permitted on slopes in excess of 20°. All lots must have a minimum width of 16m at the building line (4.5 metres from the front property boundary) in the case of lots within residential and village zones.

Battleaxe handles in R1General Residential and R3 Medium Density Residential and RU5 Village zones must have a minimum width of 4m and R2 Low Density residential and R5 large lot residential zones must have a minimum width of 6m
- Lot Design**
- (a) For infill developments in established areas, lot orientation should optimise solar access while taking account of the existing pattern and solar orientation of development.
 - (b) For subdivisions in new release areas and at the edge of established residential areas, orientation should maximise solar access by providing a north-south orientation within the range of 30° east of north or 20° west of north as the preferred option. Lots orientated east-west should have increased width and the midpoint of each lot with access to a minimum of 3 hours sunlight between 9.00 am and 3.00 pm on 21 June (Winter solstice)
 - (c) Lots should be generally rectangular in shape. Lots on the southern side of the road should provide a greater frontage to allow better solar orientation of the future dwelling.
 - (d) Corner lots should be created of a sufficient area to allow development for the purposes of dual occupancies with the supply of appropriately located independent utility connection points.
- Street Design and Layout**
- (a) A Traffic Impact Statement is to be submitted for any subdivision involving 5 or more allotments and in all cases where the creation of a new road is proposed.
 - (b) A subdivision layout will need to detail the road hierarchy and how the development integrates with the existing residential area. New roads associated with subdivisions must provide 'through road' connections between surrounding roads and road heads where they exist in the

locality.

- (c) Where a cul de sac treatment is unavoidable, the applicant will need to incorporate pedestrian linkages between streets throughout the subdivision. Multiple use of cul de sacs and “no through roads” is discouraged.
- (d) The maximum number of lots serviced by a cul de sac in a residential zone is 12, or otherwise a cul-de-sac is restricted to less than 150 metres in length.
- (e) A subdivision involving more than 80 residential lots should be able to accommodate travel without excessive backtracking.

Road Standards for New Development

A road hierarchy has been established in Mudgee and distinguishes between, Minor Roads, Collector Roads, Sub Arterial Roads and Arterial Roads. This hierarchy is to be maintained. The following table sets out the required standards for the construction of new roads.

Urban Road Standards

Access to and within a residential subdivision (the road network and internal roads) are to be upgraded or constructed to the following standards. All roads are to be constructed with asphalt or bitumen in accordance with AusRoads standards.

| Road Type | Road Reserve | Carriage-way | Nature Strip | Footpath | Kerbing |
|---|--------------|--------------|--------------|----------|-----------------------|
| Minor Road- Cul-de-sac serves ≤10 dwellings | 16m | 8m | 2x4m | No | Roll-over |
| Residential Road – serves 31-120 dwellings | 18m | 9m | 2x4.5m | 1x1.2m | Roll-over |
| Major Residential Road (collector road) - serves >120 dwellings | 20m | 11m | 2x4.5m | 1x1.2m | Roll-over |
| Sub-arterial Road –Bus Route and/or cycle lane (on one side only) | 22m | 13m | 2x4.5m | 2.5m | Barrier |
| Commercial & Industrial subdivision roads | 24m | 13m | 2x5.5m | 1x1.2m | Barrier/ roll over |

Note: The minimum radius of Cul-de-sac kerb return is 8.5m with road reserve of 12.5m

Cul-de-sacs will only be considered in commercial/industrial subdivisions where there is no alternative option and should be designed having regard to the size of the lots proposed.

Cycle ways and Footpaths

- (a) Cycle ways and alternative pedestrian networks are encouraged within new subdivisions. Where the site is included in a cycleway plan or pedestrian strategy, the design of the development will need to address this. In other cases, all new residential subdivisions are required to plan and provide combined pedestrian/cycle ways, which will provide direct, convenient and safe access to major facilities eg schools, playing fields, playgrounds, shops,

bus stops, etc.

- (b) Ends of cul-de-sacs may be required to include pedestrian pathways (or share ways) preferably in conjunction with stormwater drainage to provide access to adjacent streets or parks. The minimum width of pathway and/or drainage overland flow outlets is 10 metres.
- (c) The developer will be required to pay council a contribution for the installation of cycle ways and footpaths prior to the release of a subdivision certificate.

Open Space

(a) Subdivision of Greenfield sites where more than 20 lots are proposed shall ensure that all lots are within 400m of a local park, playground or passive open space

(b) Where on-site detention basins are proposed to double as open space the basin must include a sizeable raised level area which incorporates playground or fitness equipment or the like and shading landscaping to ensure that it can be activated for active and passive recreation.

Landscaping

A Landscape plan detailing the proposed treatment of the public domain is required to be submitted with the development application. This plan is to include treatment of the nature strip, street furniture, paving materials etc.

Land to be dedicated as a public reserve is to be top soiled, levelled and turfed prior to the release of the Subdivision Certificate. The developer will need to maintain this land for a period of two years and therefore the construction of the public reserves at the start of a green field subdivision is encouraged.

Street Trees

All new lots require the establishment of 2 street trees per lot. The developer is required to pay a levy Council to carry out these works in the future. This is the preferred method for street tree planting as Council can plant these trees after much of the construction work (80% of the lots have been built upon) has taken place. The fee associated with this type of arrangement will be provided in Council's Management Plan.

Utility Services

A servicing plan shall be submitted with the development application and include the provisions of underground electricity, reticulated sewer and water services, drainage and telecommunications to the development.

Evidence of consultation with the relevant authorities is to be submitted with the development application.

In the R1 General Residential Zone and the R3 Medium Density Residential Zone an initial assessment will be undertaken at the development application to nominate those lots considered suitable for dual occupancy development. This assessment will have regard to the requirements of this DCP (see Section 2.2 and 3.1) and the suitability of the site. Where a site has been nominated Council will require dual utility services to be provided for those lots. Dual services are to include water,

sewer, stormwater, electrical and telecommunication services. Identification of the site does not pre-empt that development consent will be given for dual occupancy development. Any subsequent Development Application for a dual occupancy will be subject to a full assessment pursuant to Section 79C of the Environmental Planning and Assessment Act 1979.

Drainage Refer to section 5.3 Stormwater & Drainage

7.2 RURAL SUBDIVISION

This section of the Plan provides guidelines for the subdivision of land zoned rural and R5 Large Lot Residential.

Site Plan Applicants are required to submit a site plan which identifies existing vegetation, farm improvements including dwellings, sheds, dams, fences and access roads.

The application should:

- ❖ Detail the existing use of the land.
- ❖ Address access points and location of proposed lot configuration to public roads.
- ❖ Identify unformed roads and other crown land within and adjoining the subject site.
- ❖ Show any easements for electricity or other services.
- ❖ Clearly mark designated streams or watercourses within the site.

Lot Size

- (a) Lots must be of sufficient area to enable the construction of a dwelling house, associated outbuildings, services, vehicle parking and access, private open space without excessive terracing and allow for maximum retention of existing vegetation.
- (b) The minimum area for subdivision will apply to that area that is considered productive for the agricultural pursuit for which the lot is being created.

Primary Production Small Lots Subdivision applications on land in the RU4 zone for the purpose of intensive agriculture and a dwelling will need to include:

- ❖ Details of the proposed/existing intensive agricultural activity
- ❖ Business plan prepared by a suitably qualified professional detailing production costs, harvesting potential and conservative market prices.
- ❖ Evidence of water licenses satisfactory for the use
- ❖ Evidence of commencement or intention to commence the activity

Land adjacent to the Mudgee Airport – Subdivision of land zoned RU4 Primary Production Small Lots and having a minimum lots size of 2ha on the Lot Size Map shall only be considered where the subdivision will facilitate the development of hangers in conjunction with a dwelling. Such an application will need to address:

- ❖ The relationship between the airport and the development site in respect to the interface with the airport; and
- ❖ Access to the airport for private aircraft.

Any dwelling component will be ancillary to the use of the lot for a hanger.

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| Services | <p>Where the proposed lot(s) is within 500m of an R1 General Residential or R2 Low Density Residential zone, the new lots must:</p> <ul style="list-style-type: none">❖ have sealed road frontage and be connected by sealed road to the sealed road network;❖ connect to the reticulated water and sewer infrastructure. |
| Roads | <p>All roads within a rural subdivision are to be sealed or connected to the sealed road network if the proposed lots are less than 500 metres to the sealed road network.</p> <p>Notwithstanding the previous clause, where land is located within the R5 Large Lot Residential Zone and the subdivision results in lots less than 2 hectares in area then the new lots must have sealed road frontage and be connected by sealed road to the sealed road network.</p> |
| Lot design | <p>New lots to be created to minimise environmental impacts including:</p> <ul style="list-style-type: none">• soil disturbance/erosion• creek/waterway crossings• tree removal, and• adequate separation distances for new and existing development and environmental features |
| Bushfire prone areas | <p>Safe siting of lots within Bushfire Prone Areas is essential. Such sites should avoid the need for extensive clearing of native vegetation and must provide for safe access for Bushfire and Emergency Service vehicles where the land is Bush Fire Prone Land. A bushfire risk assessment must be submitted in accordance with Planning for Bushfire Protection 2006, a NSW Rural Fire Service Publication. Council is able to identify if the subject land is Bushfire Prone prior to the lodging of a development application. Please note a referral fee (payable to the NSW Rural Fire Service) is required with all mandatory referrals to the NSW Rural Fire Service.</p> |
| Heritage | <p>A cultural heritage assessment will be required to be submitted along with an application for subdivision where the subdivision will result the creation of a dwelling entitlement and there are overland drainage lines and/or elevated parts of the property (ridgelines and plateaus).</p> |

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| Vegetation/flora | <p>The Native Vegetation Act 2003 prohibits the removal of native vegetation without prior permission from the relevant Local Catchment Management Authority. Applicants are advised to discuss any proposed clearing of vegetation with their respective Catchment Management Authorities (CMAs) prior to lodging a development application with Council. The relevant CMAs are:</p> <ul style="list-style-type: none"> • Central West CMA • Upper Hunter CMA <p>It is also advised to check with OEH for any endangered communities or species that may be on your land. If there is a possibility of any Endangered Communities or species on your land a flora study is to be completed and submitted with the application.</p> |
| Fauna | <p>The OEH should also be consulted to identify any threatened fauna that might be on the development site. If there is a possibility of any threatened fauna species or their habitat on your land then a fauna study is to be completed and submitted with the application.</p> |
| Crown Roads | <p>If the development is proposed to open or use a Crown Road, the written consent of the NSW Land and Property Management Authority to the making of the application is required prior to the submission of the development application to Council.</p> <p>Any crown road relied upon for the subdivision will be required by Council to be acquired from the Crown and upgraded by the applicant to Councils required standards. Thereafter the road will be designated to Council.</p> <p>Council will only be responsible for the maintenance of roads in accordance with Council's Unmaintained and Unformed Roads Policy.</p> |
| Watercourses | <p>Works on or near waterways under the Water Management Act (formerly Part 3A of the Rivers and Foreshores Improvements Act 1948) and any crossing of protected waters will require an activity approval from the NSW Office of Water prior to the construction of the crossing.</p> |
| Rights of Carriageway | <p>Subdivision of land for the purpose of a dwelling house where access is proposed by way of a right of carriageway which serves or is capable of serving any other portion or allotment of land other than that on which the dwelling house is to be erected, is generally not supported by Council. A detailed submission supporting this type of access must be submitted with the development application along with the written approval of all of the owners of the land over which a right of carriage way is proposed or currently exists to be submitted with the development application.</p> |
| Battle axe handle access | <p>Subdivision of land where access is proposed by a battleaxe handle is generally not supported by Council. A detailed submission supporting this type of access must be submitted with the development application.</p> |

No more than two battle axe handles will be permitted. Where more than one battle axe handle is required the access will be redesigned, upgraded and designated as a public road such that all lots created have direct frontage to a road.

Water cycle management report

Council will require a Water Cycle Management Report for each lot in the subdivision which identifies that there is a suitable area capable of the disposal of on-site wastewater. The report must include a plan showing a nominal effluent management area for each proposed lot, in relation to slope, aspect and other site constraints. The plan must indicate all nearby waterways with a buffer of a least 100 metres between effluent management areas and perennial or intermittent creeks or watercourses and 40 metres to drainage depressions.

Telecommunications Infrastructure advice

Telstra Corporation is the Primary Universal Service Provider for telecommunications infrastructure in Australia. Extensions to the Telstra network are planned in light of the size and pace of each stage of proposed development and the proximity of existing Telstra network. Early notification of any proposed development will enable Telstra to deliver services with minimal disruption and enable coordination of trenching with other infrastructure. To provide early notification, planned property developments can be registered on the Telstra website. Council requires the extension of the Telstra cable network to all new allotments within any subdivision for residential purposes.

Electricity

Council requires that electricity services be provided to each allotment created with a dwelling entitlement. Proposed alternative methods of power supply will be considered by Council for subdivision in RU1 Primary Production Zone, RU4 Primary Production Small Lots Zone and R5 Large Lot Residential Zone where the development is more than 1km from the grid system or the cost to provide electricity exceeds \$30,000 per lot subject to a covenant being imposed on the land title stating that the provision of electricity to the allotment is to be provided by the landowner. The approval of alternative methods of power supply is at the discretion of Council.

Land Use History

Any application on rural land would need to demonstrate the previous use of the land and potential for contaminating land uses.

Community title Subdivision

Any application on Large Lot Residential (R5) zoned land cannot create an overall lot density greater than the Minimum lot size prescribed by the LEP.

Additional provision for the creation of lots with a minimum lots size of 2ha**Water Supply**

For the purpose of this Clause a water reticulation system is a reticulated community bore scheme.

Required water volumes are detailed in the Department of Primary Industries Water publication 'How Much Water Do I need for my Rural Property'. The average combined dwelling and outbuilding rainwater catchment area for the region equates to a required potable water supply of 0.256 mega litres per year.

For lots with a minimum area of 2 hectares, a minimum non-potable water supply of 0.200 mega litres per year must be provided.

To demonstrate this, a copy of the licence issued in accordance with the Water Industry Competition Act (WICA) 2006 issued by the Independent Pricing and Regulatory Tribunal NSW is to be provided to Council with the development application for subdivision.

If it is demonstrated that a licence issued in accordance with the WICA 2006 is not required, a draft Community Management Statement and Community Title Subdivision Plan is to be submitted with the development application for subdivision. The statement and plan must detail all the required infrastructure (both private and common) for the reticulated community bore scheme.

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PART 8 SITE SPECIFIC CONTROLS

8.1 GULGONG

A person shall not subdivide land to which this plan applies (other than by strata subdivision) for the purpose of a dwelling house unless the site area of the lot to be created has an area of not less than 600m² and frontage at the front of the building alignment of not less than 18 metres.

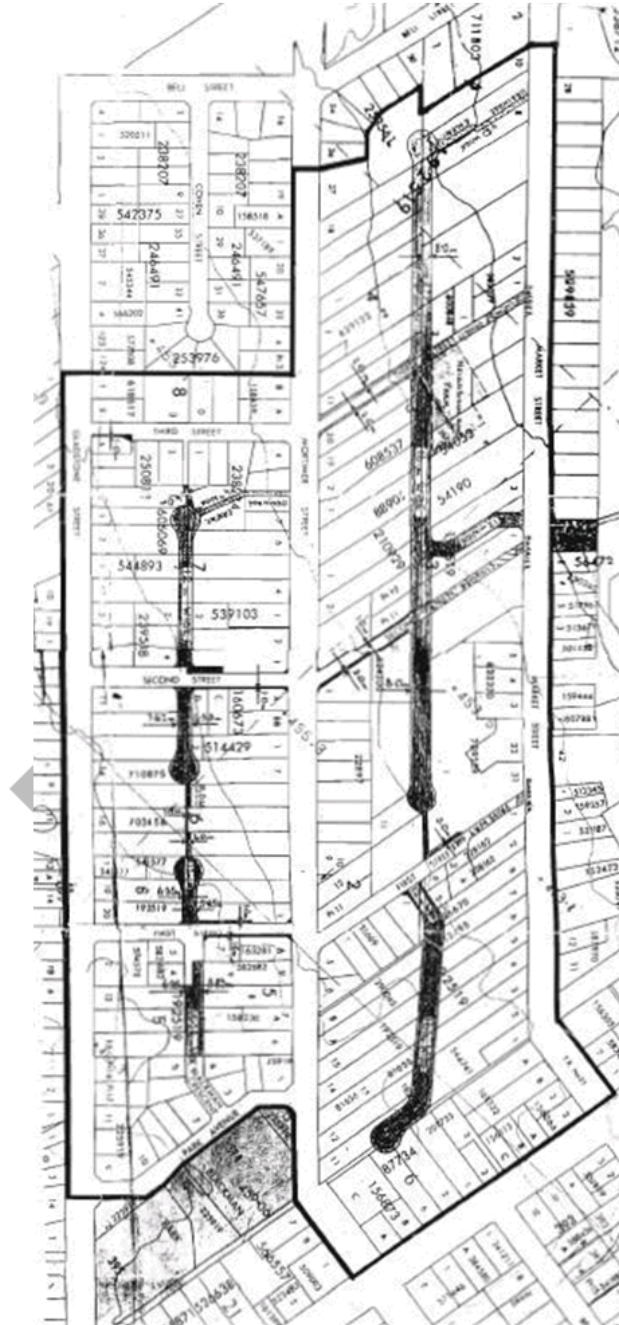
Any subdivision shall occur generally in accordance with the layout in the plan below.



8.2 WEST MUDGEE

A person shall not subdivide land to which this plan applies (other than by strata subdivision) for the purpose of a dwelling house unless the site area of the lot to be created has an area of not less than 600m² and frontage at the front of the building alignment of not less than 15 metres.

Any subdivision shall occur generally in accordance with the layout in the plan below.



8.3 CAERLEON RESIDENTIAL AREA

Site specific controls have been developed for the Caerleon precinct north west of Mudgee. The full detail of these controls is outlined in Appendix C Draft Caerleon Development Control Plan.

The Caerleon Precinct is to be assessed in accordance with the whole DCP except where specific provision is made for a standard in Appendix C.

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APPENDIX A FLOOD SCHEDULES

FLOOD COMPATIBLE MATERIALS

| BUILDING COMPONENT | FLOOD COMPATIBLE MATERIAL |
|---|--|
| Flooring and Sub-floor Structure | <ul style="list-style-type: none"> concrete slab-on-ground monolith construction suspension reinforced concrete slab. |
| Doors | <ul style="list-style-type: none"> solid panel with water proof adhesives flush door with marine ply filled with closed cell foam painting metal construction aluminium or galvanized steel frame |
| Floor Covering | <ul style="list-style-type: none"> clay tiles concrete, precast or in situ concrete tiles epoxy, formed-in-place mastic flooring, formed-in-place rubber sheets or tiles with chemical-set adhesives silicone floors formed-in-place vinyl sheets or tiles with chemical-set adhesive ceramic tiles, fixed with mortar or chemical-set adhesive asphalt tiles, fixed with water resistant adhesive |
| Wall and Ceiling Linings | <ul style="list-style-type: none"> fibro-cement board brick, face or glazed clay tile glazed in waterproof mortar concrete concrete block steel with waterproof applications stone, natural solid or veneer, waterproof grout glass blocks glass plastic sheeting or wall with waterproof adhesive |
| Insulation Windows | <ul style="list-style-type: none"> foam (closed cell types) aluminium frame with stainless steel rollers or similar corrosion and water resistant material. |
| Wall Structure | solid brickwork, blockwork, reinforced, concrete or mass concrete |
| Roofing Structure (for Situations Where the Relevant Flood Level is Above the Ceiling) | <ul style="list-style-type: none"> reinforced concrete construction galvanised metal construction |

| | |
|--|---|
| <p>Nails, Bolts, Hinges and Fittings</p> | <ul style="list-style-type: none"> • brass, nylon or stainless steel • removable pin hinges • hot dipped galvanised steel wire nails or similar |
| <p>Electrical and Mechanical Equipment</p> | <p>For dwellings constructed on land to which this Policy applies, the electrical and mechanical materials, equipment and installation should conform to the following requirements.</p> <p>Main power supply - Subject to the approval of the relevant authority the incoming main commercial power service equipment, including all metering equipment, shall be located above the relevant flood level. Means shall be available to easily disconnect the dwelling from the main power supply.</p> <p>Wiring - All wiring, power outlets, switches, etc., should, to the maximum extent possible, be located above the relevant flood level. All electrical wiring installed below the relevant flood level should be suitable for continuous submergence in water and should contain no fibrous components. Earth core linkage systems (or safety switches) are to be installed. Only submersible-type splices should be used below the relevant flood level. All conduits located below the relevant designated flood level should be so installed that they will be self-draining if subjected to flooding.</p> <p>Equipment - All equipment installed below or partially below the relevant flood level should be capable of disconnection by a single plug and socket assembly.</p> <p>Reconnection - Should any electrical device and/or part of the wiring be flooded it should be thoroughly cleaned or replaced and checked by an approved electrical contractor before reconnection.</p> |
| <p>Heating and Air Conditioning Systems</p> | <p>Heating and air conditioning systems should, to the maximum extent possible, be installed in areas and spaces of the house above the relevant flood level. When this is not feasible every precaution should be taken to minimise the damage caused by submersion according to the following guidelines.</p> <p>Fuel - Heating systems using gas or oil as a fuel should have a manually operated valve located in the fuel supply line to enable fuel cut-off.</p> <p>Installation - The heating equipment and fuel storage tanks should be mounted on and securely anchored to a foundation pad of sufficient mass to overcome buoyancy and prevent movement that could damage the fuel supply line. All storage tanks should be vented to an elevation of 600 millimetres above the relevant flood level.</p> <p>Ducting - All ductwork located below the relevant flood level should be provided with openings for drainage and cleaning. Self draining may be achieved by constructing the ductwork on a suitable grade. Where ductwork must pass through a water-tight wall or floor below the relevant flood level, the ductwork should be protected by a closure assembly operated from above relevant flood level.</p> |

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LAND USE CATEGORIES

| Essential Community Facilities | Critical Utilities | Subdivision | Residential |
|--|---|---|--|
| <p>Place of assembly, public building or community centre which may provide an important contribution to the notification and evacuation of the community during flood events;</p> <p>Generating works;</p> <p>Hospitals;</p> <p>Institutions; and Educational establishments.</p> | <p>Telecommunication facilities;</p> <p>Public utility undertaking which may cause pollution of waterways during flooding, are essential to evacuation during periods of flood or if affected during flood events would unreasonably affect the ability of the community to return to normal activities after flood events.</p> | <p>Subdivision of land which involves the creation of new allotments.</p> | <p>Bed and breakfast establishment;</p> <p>Boarding houses;</p> <p>Caravan park– long-term sites only;</p> <p>Child care centre;</p> <p>Craftsman’s studio;</p> <p>Dwelling;</p> <p>Dwelling house;</p> <p>General store;</p> <p>Home industry;</p> <p>Home occupation;</p> <p>Housing for aged or disabled persons;</p> <p>Group homes;</p> <p>Professional consulting rooms;</p> <p>Residential flat building;</p> <p>Tourist facilities; and</p> <p>Utility installations (other than critical utilities)</p> |
| <p>Recreational Uses</p> <p>Golf courses</p> <p>Playing Fields</p> <p>Amenity Buildings</p> | <p>Agricultural Uses</p> <p>Cultivation</p> <p>Pastures</p> <p>Hay sheds</p> <p>Machinery sheds</p> | | |

MATRIX 1 URBAN FLOODPLAINS

Urban Floodplains
Planning & Development Controls

| Planning Consideration | Flood Risk Precincts (FRP's) | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|--------------------------------|---------------------|-------------|-------------|-------------------------|-----------------------------|--------------------------|-------------------|--------------------------------|---------------------|-------------|-------------|-------------------------|-----------------------------|--------------------------|-------------------|--------------------------------|---------------------|-------------|-------------|-------------------------|-----------------------------|--------------------------|-------------------|-------|-------|
| | Low Flood Risk | | | | | | Medium Flood Risk | | | | | | High Flood Risk | | | | | | | | | | | | | |
| | Essential Community Facilities | Critical Facilities | Subdivision | Residential | Commercial & Industrial | Tourist Related Development | Recreation & Agriculture | Minor Development | Essential Community Facilities | Critical Facilities | Subdivision | Residential | Commercial & Industrial | Tourist Related Development | Recreation & Agriculture | Minor Development | Essential Community Facilities | Critical Facilities | Subdivision | Residential | Commercial & Industrial | Tourist Related Development | Recreation & Agriculture | Minor Development | | |
| Floor Level | 3 | 2 | 2 | 2 | 2 | | | | | | 2 | 2 | 2 | 1 | 2,4 | | | | | | | | | | 1 | 2,4 |
| Building Components | 2 | | 1 | 1 | 1 | | | | | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | 1 | 1 |
| Structural Soundness | 2 | | | | | | | | | | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | 1 | 1 |
| Flood Affection | 2 | 2 | | 2 | 2 | | | | | 1 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | 1 | 1 |
| Evacuation | 2 | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | 1 | 1 |
| Management & Design | 4,5 | | | | | | | | | 1 | | 2,3,5 | 2,3,5 | 2,3,5 | 2,3,5 | | | | | | | | | | 2,3,5 | 2,3,5 |

Not Relevant Unsuitable Land Use

Note: reference to freeboard refers to an increased height of 0.5 metres

Floor Level

- 1 All floor levels to be equal to or greater than the 20 year ARI flood (plus freeboard) unless justified by site specific assessment
- 2 Habitable floor levels to be equal to or greater than the 100 year ARI flood (plus freeboard)
- 3 All floor levels to be equal to or greater than the PMF flood (plus freeboard)
- 4 Floor levels to be as close to the design floor level as practical & no lower than the existing floor level when undertaking alterations or additions

Building Components & Method

- 1 All structures to have flood compatible building components below or at the 100 Year ARI flood level (plus freeboard)
- 2 All structures to have flood compatible building components below or at the PMF level (plus freeboard)

Structural Soundness

- 1 Engineers report to certify that any structure can withstand the forces of floodwater, debris & buoyancy up to and including the 100 year AR flood (plus freeboard)
- 2 Applicant to demonstrate that any structure can withstand the forces of floodwater, debris & buoyancy up to and including the 100 year AR flood (plus freeboard)
- 3 Applicant to demonstrate that any structure can withstand the forces of floodwater, debris & buoyancy up to and including a PMF flood (plus freeboard)

Flood Affection

- 1 Engineers report to certify that the development (or potential development in the case of subdivision) will not increase flood affection elsewhere
- 2 The impact of the development on flooding elsewhere to be considered

Evacuation

- 1 Reliable access for pedestrians or vehicles required during a 100 year ARI flood
- 2 Reliable access for vehicles required during a 100 year ARI flood
- 3 Reliable access for pedestrians and vehicles required during a PMF flood

Management and Design

- 1 Applicant to demonstrate that potential development as a consequence of subdivision proposal can be undertaken in accordance with this Plan
- 2 Flood plan required where floor levels are below the design floor level
- 3 Applicant to demonstrate that area is available to store goods above the 100 year ARI flood (plus freeboard)
- 4 Applicant to demonstrate that area is available to store goods above the PMF flood (plus freeboard)
- 5 No external storage of materials below the design floor level which may cause pollution or be potentially hazardous during any flood

MATRIX 2 NON URBAN FLOODPLAINS

Non-Urban Floodplains

Planning & Development Controls

| Planning Consideration | Flood Risk Precincts (FRP's) | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|--------------------------------|---------------------|-------------|-------------|-------------------------|-----------------------------|--------------------------|-------------------|--------------------------------|---------------------|-------------|-------------|-------------------------|-----------------------------|--------------------------|-------------------|--------------------------------|---------------------|-------------|-------------|-------------------------|-----------------------------|--------------------------|-------------------|-------|
| | Low Flood Risk | | | | | | Medium Flood Risk | | | | | | High Flood Risk | | | | | | | | | | | | |
| | Essential Community Facilities | Critical Facilities | Subdivision | Residential | Commercial & Industrial | Tourist Related Development | Recreation & Agriculture | Minor Development | Essential Community Facilities | Critical Facilities | Subdivision | Residential | Commercial & Industrial | Tourist Related Development | Recreation & Agriculture | Minor Development | Essential Community Facilities | Critical Facilities | Subdivision | Residential | Commercial & Industrial | Tourist Related Development | Recreation & Agriculture | Minor Development | |
| Floor Level | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1,2,4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1,2,4 |
| Building Components | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Structural Soundness | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Flood Affection | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Evacuation | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Management & Design | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 | 4,5 |

Not Relevant
 Unsuitable Land Use
 Note: reference to freeboard refers to an increased height of 0.5 metres

Floor Level

- 1 All floor levels to be equal to or greater than the 20 year ARI flood (plus freeboard) unless justified by site specific assessment
- 2 Habitable floor levels to be equal to or greater than the 100 year ARI flood (plus freeboard)
- 3 All floor levels to be equal to or greater than the PMF flood (plus freeboard)
- 4 Floor levels to be as close to the design floor level as practical & no lower than the existing floor level when undertaking alterations or additions

Building Components & Method

- 1 All structures to have flood compatible building components below or at the 100 Year ARI flood level (plus freeboard)
- 2 All structures to have flood compatible building components below or at the PMF level (plus freeboard)

Structural Soundness

- 1 Engineers report to certify that any structure can withstand the forces of floodwater, debris & buoyancy up to and including the 100 year AR flood (plus freeboard)
- 2 Applicant to demonstrate that any structure can withstand the forces of floodwater, debris & buoyancy up to and including the 100 year AR flood (plus freeboard)
- 3 Applicant to demonstrate that any structure can withstand the forces of floodwater, debris & buoyancy up to and including a PMF flood (plus freeboard)

Flood Affection

- 1 Engineers report to certify that the development (or potential development in the case of subdivision) will not increase flood affection elsewhere
- 2 The impact of the development on flooding elsewhere to be considered

Evacuation

- 1 Reliable access for pedestrians or vehicles required during a 100 year ARI flood
- 2 Reliable access for vehicles required during a 100 year ARI flood
- 3 Reliable access for pedestrians and vehicles required during a PMF flood.

Management and Design

- 1 Applicant to demonstrate that potential development as a consequence of subdivision proposal can be undertaken in accordance with this Plan
- 2 Flood plan required where floor levels are below the design floor level
- 3 Applicant to demonstrate that area is available to store goods above the 100 year ARI flood (plus freeboard)
- 4 Applicant to demonstrate that area is available to store goods above the PMF flood (plus freeboard)
- 5 No external storage of materials below the design floor level which may cause pollution or be potentially hazardous during any flood

APPENDIX B1 MWRC AUSPEC STORMWATER DRAINAGE DESIGN

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APPENDIX B2 STORMWATER TO SMARTWATER

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APPENDIX C CAERLEON DEVELOPMENT CONTROL
PLAN

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APPENDIX D IMPLEMENTING A SUBDIVISION CONSENT

DRAFT

13th September 2018

General Manager,
Midwestern Regional Council
86 Market Street,
Mudgee 2850

Tony & Elizabeth Roberts
254 Castlereagh Hwy
Menah 2850

Dear General Manager,

Re: Draft Development Control Plan 2013 Amendment No. 3

In relation to:

Planning Proposal
Lot 3 DP587806 and part of Lot 2 DP136904
Wilbetree Road and Castlereagh Highway

When we purchased our property, 254 Castlereagh Highway, in November 2015, one of the major attractions was the beautiful, private, peaceful rural outlook! We were told by the Council Duty Planner the proposed land only had zoning to be divided into 2 blocks **if** subdivided in the future. There are documents in the planning proposal that are dated prior to our purchase, Council would have been aware of the proposal at the time of our enquiry. If we were aware of this upcoming proposal at that time, we would not have purchased our property.

We have concerns and apprehensions about the above mentioned subdivision & require further consultation in regards to the following;

- x Water - to reassure concerns with communal bore having effect on our bore/well water supply and quality. Be connected & included in the communal bore water system.
- x Setbacks – increase to 100m from our boundaries, so as not to encroach on our privacy & rural outlook. Including buildings, outbuildings, sheds, animal shelters, shipping containers etc.
- x Building height / restrictions.
- x Planting of trees, shrubs, vegetation to retain privacy & limit noise.
- x Renewal of boundary fences.

Yours Faithfully

T Roberts *E Roberts*

Tony and Elizabeth Roberts
254 Castlereagh Hwy,
Menah, 2850
robbos@hwy.com.au



Edward Knox DeLong II & Susan Bray DeLong
"Ardrossan"
PO Box 1192, Mudgee, NSW 2850 Australia
286 Castlereagh Highway, Menah NSW 2850 Australia

Mayor Des Kennedy
c/-Mid-Western Regional Council

Dear Des:

The enclosed document deals with three issues that seriously concern me regarding the accuracy, full disclosure and scope of Draft DCP Amendment 3:

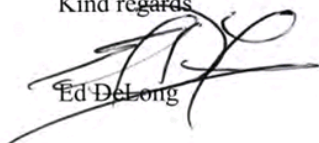
- accurate calculation of water requirements for rural residential properties
- an up-to-date explanation of the definition of Bushfire Prone Land
- the need for buffer zones between existing agricultural land and new residential development.

The first 17 pages describe each of these issues and suggest a way to deal with them. The balance of the document consists of 5 attachments dealing with the third issue and showing how two nearby councils have dealt with it.

This was supposed to be a submission during the public exhibition period of Draft DCP Amendment 3. I was unable to do the necessary research and writing in time for that deadline due to the impairment caused by my still-unidentified and therefore still-untreated auto-immune disease coupled with the side effects of the collection of medicines I am taking to minimise symptoms of the disease. I was finally able to complete the work on Monday 8 October.

I am now distributing it to you and the other councillors in hope that you will seriously consider each of these issues and that you will support my call that adoption of Draft DCP Amendment 3 will be deferred until all three can be dealt with properly.

Kind regards


Ed DeLong



Proposed addition to Draft Development Control Plan Amendment 3

Submission to Councillors by Edward K DeLong
8 October 2018

Recommendation

That Councillors

- **Receive this proposal**
- **Consider the matters addressed herein**
- **Defer action on Draft DCP Amendment 3 pending inclusion of these matters in the Amendment.**

Executive Summary

Council adopted the Mid-Western Regional Development Control Plan (DCP) in February 2013 and has made two subsequent amendments. A third amendment is now under consideration.

The DCP provides residents and developers with detailed planning and design requirements that apply to the Mid-Western Region as a whole, rather than just to individual parcels of land. In the interest of transparency, good governance and usability the description of requirements in the DCP should be as accurate, comprehensive and as easy to apply as possible.

This submission to Councillors calls for consideration of Draft DCP Amendment 3 to be deferred pending consideration of changes in three areas – accurate calculation of water requirements for rural residential properties, an up-to-date explanation of the definition of Bushfire Prone Land, and the addition of a section requiring buffer zones between existing agricultural land and new residential development. Making the requested changes will add important information, provide greater transparency and help users of the DCP make better development decisions.

Detailed Proposal

Introduction

My proposal requests modification of Draft DCP Amendment 3 to address three areas of concern:

1. Ensuring an accurate calculation of the water requirement for rural residential development, including specifically the 2ha property referenced in Draft DCP Amendment 3. The importance of getting this right is underscored by the fact that existing rural properties in the Mid-Western Region have run out of water or are getting by on very low supplies. Draft DCP Amendment 3 presently requires just 10 percent of the water requirement obtained by correct application of formulas supplied by WaterNSW. The resulting gap amounts to a shortfall of 3,500 m³ litres. If for no other reason, action on Draft DCP Amendment 3 should be deferred until this serious discrepancy can be resolved by WaterNSW itself.

2. Revising Draft DCP Amendment 3 to make users aware that grasslands across the state are being reclassified as Bushfire Prone Land, requiring new residential development or subdivision located in grasslands to provide a water reserve for firefighting and other fire protection measures. It appears likely this change will be mapped in the Mid-Western Region in the not too distant future. I believe Council must include a reference to this in Draft DCP Amendment 3 in the interest of full transparency for developers and prospective purchasers of rural property.
3. Adding a new section to Draft DCP Amendment 3 requiring new rural residential development to include appropriate buffers separating this development from potentially dangerous spray drift and other intrusive elements of normal agricultural activity on adjacent land. This is a duty of care issue with implications for public health and safety that has been addressed by other councils in New South Wales but not by the Mid-Western Regional Council. I believe that Council has a moral obligation to address this issue now.

I respectfully urge each Councillor to accept this document in lieu of a formal submission, to carefully consider the areas it addresses and to defer adoption of Draft DCP Amendment 3 until appropriate modifications can be made.

I would like to thank Manager Strategic Planning Sarah Armstrong for her meetings with me and my next-door neighbour, Tony Roberts, and for answering some of my questions in writing.

While a DCP applies to the entire Council area, the need for each of the additions I am requesting is illustrated by a single proposed subdivision of the property "Menah" that would create an eyebrow-shaped, dead-end road bordered by up to 25 lots with a minimum size of five acres each. The Roberts and DeLong families own the only properties outside of Menah that are adjacent to this proposed subdivision.

Here is how each proposed addition is relevant to this subdivision proposal:

- Issue 1, correct calculation of water requirements, applies because this proposed subdivision is not served by town reticulated water, leaving all of its properties required to rely solely on rain and bore water.
- Issue 2, Bushfire Prone Land, applies because it appears likely that grasslands in the Mid-Western Region could be remapped as Bushfire Prone before too long and this proposed subdivision is located in grasslands.
- Issue 3, spray drift buffers, applies because properties on both sides of the road in this proposed subdivision could be subject to drift from weed spraying in the paddocks where Menah grazes cattle to the north and from weed spraying by Mr Roberts and myself to the south.

During our meetings the Manager Strategic Planning said the sooner these issues are addressed the better it will be. The most timely way to do this by adding language such as I am requesting to Draft DCP Amendment 3.

This proposal was intended as a formal submission during the public exhibition of Draft DCP Amendment 3. I was unable to comply with the deadline for a formal submission due to limitations imposed on me by a serious illness and by the side effects of its treatment, both of which dramatically reduced my ability to gather necessary information and compose it into this document. I have presented this submission to you as rapidly as I could manage.

Requested additions

Issue 1: Rural Residential Water Requirements

With record drought conditions existing across Australia, the question of ensuring new rural residential properties have an adequate water supply is of paramount importance.

When my wife and I purchased our property “Ardrossan” just outside of Mudgee in 2001, rain provided more than enough water for household requirements and our bore provided more than enough water for an extensive irrigation system as well as stock needs and toilet flushing. Our rainwater tanks were always healthily full and there was no need to scrimp on water use in the house or outside. All of that has now changed. Our tanks have hovered dangerously near empty despite extreme conservation measures. Our once-plentiful bore can now barely support a day of watering essential areas of our garden with sprinklers on three hoses.

We are not alone. I know people, and so do you, whose rainwater tanks have run dry, forcing them to cart in town water, and whose dams stand dry as well.

Rainfall across the Mid-Western Regional Council can be patchy, with some areas getting good rain and other areas getting little or none. Despite the rains of September and early October, Mudgee has recorded little more than half the normal average rainfall to this time of year. The extent to which our countryside is feeling the drought is a key reason why this region’s 2017-18 Bushfire Danger Period started one month early. State-wide July was the fifth-driest on record and the seventh consecutive month of below-average rainfall, with many areas recording the lowest July rainfall ever recorded or the lowest amount for at least 20 years. Nationally this drought has been called the worst in 400 years.

For anyone contemplating creating a rural residential subdivision or purchasing a rural residential property, the question adequate water must loom large.

The inclusion of this issue in my recommendations grows out of an amendment to Draft Development Control Plan Amendment 3 passed by Council on 15 August 2015 which I believe seriously understates the amount of water required annually for a 2ha property and which potentially sets the stage for a major miscalculation of water needs on other size properties.

The report by Manager, Strategic Planning on August 15 requesting that the water requirement figures be added to Draft DCP Amendment 3 said in part:

Council has supported planning proposals for the development of rural lifestyle lots with a minimum area of 2ha. Section 7.2 Rural Subdivision of the DCP does not provide provisions relating to water supply. Accordingly, the DCP is proposed to be amended to include provisions that stipulate the requirements for subdivision creating lots with a minimum area of 2 ha.

Required water volumes are detailed in the Department of Primary Industries Water publication ‘How Much Water Do I need for my Rural Property’. The average combined dwelling and outbuilding rainwater

catchment area for the region equates to a required potable water supply of 0.256 mega litres per year.
 For lots with a minimum area of 2 hectares, a minimum non-potable water supply of 0.200 mega litres per year must be provided.

During my August 15 Open Day presentation on this subject I said I believed the amendment failed to require a large enough water supply, although I was unsure what the correct amount might be. I was asked by Cr Holden to elaborate on this in my submission on Draft DCP Amendment 3. Here is the elaboration he sought:

In her written response to my questions the Manager, Strategic Planning marked up a form from a January 2016 publication by the NSW Department of Primary Industries titled "How Much Water Do I Need for My Rural Property" to show me how to calculate the water requirements of a 2ha residential property with four residents. This is what she sent me:

How much water do I need for my rural property

| STOCK WATER | Description | 1. Consumption rate (m ³ / head) | 2. Your stock numbers | 1. x 2. = Sub total m ³ |
|------------------------------------|---|---|-----------------------|------------------------------------|
| Cattle | Lactating, Dairy | 22 | | |
| | Dry dairy, Beef | 15 | | |
| | Feedlot | 28 | | |
| | Calves | 8 | | |
| | | | | |
| Sheep | Type of pasture being grazed | Quality of drinking water (Total dissolved salts) | | |
| | Irrigated | Soft water | 0.8 | |
| | Low salt | 0 to 2000 parts per million | 1.3 | |
| | Low salt | 2000 to 5000 ppm | 1.9 | |
| | Low salt | 5000 to 10000 ppm | 3.6 | |
| | High salt | 0 to 6000 ppm | 3.6 | |
| Lambs | (adopt half the sheep rate) | 3.6 | | |
| Goats | | 17 | | |
| Horses | Working | 17 | | |
| | Grazing | 13 | | |
| Pigs | Sow | 8 | | |
| | Pig (allow 10 per sow) | 3 | | |
| Poultry | Table bird to 10 weeks | 0.08 | | |
| | Layers | 0.13 | | |
| | Turkey | 0.24 | | |
| Other | eg Wildlife | 3.6 – 4.8 | | |
| DOMESTIC WATER | Description | m ³ /person or area | Persons/ Area | Sub total m ³ |
| Household | House – without septic | 51 | | |
| | House – with septic | 64 | 4 | 256 m ³ |
| | Septic only | 13 | | |
| House Garden | For each 1000 m ² or 0.1 ha | | | |
| | - Coastal / Tablelands | 200 | 200 | 200 m ³ |
| | - Slopes | 400 | | |
| | - Plains | 600 | | |
| | - Western | 800 | | |
| FARMING | Description | m ³ / unit | Number of units | Sub total m ³ |
| Dairy | For each m ² of wash down area | 5 | | |
| Piggery | For each sow – includes sow & progeny, drinking & wash | 50 | | |
| Dip | Based on 2 events per year: - Plunge per 100 head | 0.6 – 1.4 | | |
| | - Spray per 100 head | 0.6 – 2.0 | | |
| Crop spraying | Based on 2 events per year: - Herbicide/ insecticide per ha | 0.4 | | |
| Firefighting | Based on a single event: - Buildings per m ² | 0.125 | | |
| | - Grass per m ² | 0.075 | | |
| Total Net Annual Water Requirement | | | | m ³ 456 m ³ |

Note: This table provides an estimate of your net annual water requirement and is not recommended for designing farm reticulation schemes which are based on peak daily requirements.

What is this as a volume? To convert net annual water requirement into a volume (ie megalitres) use the following equation:

$$456 \text{ m}^3 + 1000 = 0.456 \text{ Megalitres (ML)}$$

2. DPI Water, January 2016

Her calculation showed an estimated annual requirement of 256 cubic metres (m³) of potable water and 200 m³ of non-potable water – a total 456 m³ or 0.456 Megalitres (ML). Council added a requirement for this amount of water to Draft DCP Amendment 3 during its August 15 meeting.

I used the same form in preparing for my August 15 Open Day presentation. My calculations showed an annual water requirement of 256 m³ of potable water and 4,000 m³ of non-potable water for a total of 4,256 m³ or 4.256 ML – nearly 10 times the amount that Council added to the amendment.

I was uncertain of this figure at the time because I it was hard for me to tell from the form exactly what information it was seeking and I had received inconclusive advice about this during several calls to the help phone number listed in the DPI publication. Two people I spoke to during those calls explained how they thought the form should be filled out, but came up with conflicting results. People I spoke to in three other calls declined to help, saying correctly that this aspect of water was no longer the DPI's responsibility and that the DPI had archived its form. It was this mixed response that caused my cautious response the Cr Holden.

After my meetings with the Manager, Strategic Planning I tried several times to telephone Tim Baker at DPI Water in Dubbo, the person she said she had talked to about water requirements. Each time I reached his voicemail and left a message asking for a return call, but I received no response. I also made more unfruitful calls to DPI Sydney.

Eventually a DPI operator suggested that I call WaterNSW, a state-owned corporation monitored by the Independent Pricing and Regulatory Tribunal (IPART). WaterNSW is now responsible for a variety of water supply matters including this one. This organisation has produced its own October 2017 version of the DPI water requirements publication, but I found it was also confusing because of the way its guidance was provided and because minor formatting errors made it hard to follow. In a pair of phone calls seeking help from WaterNSW – the second call made as a check on the first – I was directed to people who walked me through the calculations and confirmed that my original results had been correct.

Attachment 1 shows the document as it is on the WaterNSW web site. Attachment 2 shows a modified version of that same document in which I have fixed the formatting errors and slightly modified the way it is presented in an effort to provide greater clarity.

I have also designed what I believe is an easier-to-use version of the WaterNSW form. This version, shown in Table 1 on the next page, uses simply worded questions and applies the answers step-by-step to calculate the water requirements that result from the WaterNSW formulas. (Examples of calculations and their result are shown in blue; cells containing final results are shaded yellow.)

Table 1

| Domestic Water Consumption | | Answer Here |
|--|--|--|
| Single Household Requirements | | |
| a) | How many people live in a house on your property? | 4 |
| b) | If the house does not have septic, multiply the number of residents shown in a) times a water consumption rate of 51m ³ per person. | m ³ |
| c) | If the house has septic, multiply the number of residents shown in a) times a water consumption rate of 64m ³ per person. | $4 \times 64 =$ 256 m ³ |
| d) | If you have septic but no house, multiply the number of persons served by that septic times a consumption rate of 13m ³ per person. | m ³ |
| Surrounding Garden/Property Requirements | | |
| e) | How large is your property in hectares? | 2 |
| f) | Multiply the answer shown in e) by 10 to get the number of 0.1ha sections [1,000 m ² sections] in your property. | $2 \times 10 =$ 20 |
| g) | If your property is in a Coastal or Tablelands location, multiply the number of 0.1ha sections shown in f) times a water consumption rate of 200m ³ per 0.1ha. | $20 \times 200 =$ 4,000 m ³ |
| h) | If your property is in a Slopes location, multiply the number of 0.1ha sections shown in f) times a water consumption rate of 400m ³ per 0.1ha. | m ³ |
| i) | If your property is in a Plains location, multiply the number of 0.1ha sections shown in f) times a water consumption rate of 600m ³ per 0.1ha. | m ³ |
| j) | If your property is in a Western location, multiply the number of 0.1ha sections shown in f) times a water consumption rate of 800m ³ per 0.1ha. | m ³ |
| k) | Add the answers in the shaded squares (b-d and g-j) to obtain your net annual water consumption requirement in cubic metres. | $256 + 4,000 =$ 4,256 m ³ |
| Firefighting Reserve Requirements | | |
| l) | To show your property size in m ² , multiply the answer shown in e) times 10,000 | $2 \times 10,000 =$ 20,000 m ² |
| m) | How many m ² of your property is covered by buildings? | 450 m ² |
| n) | To find how many m ² of your property is not covered by buildings, subtract the answer shown in m) from the answer shown in l). | $20,000 - 450 =$ 19,550 m ² |
| o) | If your property is located on Bushfire Prone Land, multiply the answer in m) times a storage reserve volume of 0.125m ³ . | $450 \times 0.125 =$ 56.25 m ³ |
| p) | If your property is located in Bushfire Prone Land, multiply the answer shown in n) times a storage reserve volume of 0.075m ³ . | $19,550 \times 0.075 =$ 146.63 m ³ |
| q) | Add the answers in o) and p) to get the total water reserve needed for firefighting. This is the average amount of water used to fight a single fire on a property of this size. | $56.25 + 146.63 =$ 202.88 m ³ |
| r) | Add the answer shown in q) to the answer shown in k) and round off to the nearest whole number to obtain the total net annual water requirement for your property. | $4,256 + 202.88 =$ 4,459 m ³ |
| | To convert total net annual water requirements into a volume in Megalitres (ML), divide the answer shown in r) by 1,000. | $4,459 \div 1,000 =$ 4.459 ML |

Based on the WaterNSW form calculations and excluding the firefighting reserve, a gap of 3,800 m³ or 3.8 ML exists between the volume now required by Draft DCP Amendment 3 and the correctly calculated volume. By way of illustration, a gap of 3,800 m³ equals the approximate average normal flow of water thundering over Niagara Falls every 1.6 seconds. A shortfall of this nature translates into a total understatement of 95,000 m³ or 95 ML of water required when applied to a subdivision containing 25 2ha properties. At a time when our region is experiencing serious drought, this level of shortfall appears unsustainable.

I urge you to defer approval of Draft DCP Amendment 3 until this discrepancy can be resolved and this document can show complete details of (1) how the appropriate state agency, presumably WaterNSW, calculates the amount of water required for a 2ha property or any other size of property for that matter and (2) how it determines whether that amount of water is sustainably available for both that property and neighbouring properties.

For anyone contemplating developing or purchasing any size of rural property, the ability to determine water requirements in advance using a form that is easy to understand and use would be a valuable aid in decision-making. I suggest the DCP be amended to include such a tool. While Table 1 shows an example for domestic consumption only, it would be easy to extend its design to the stock water sections of the WaterNSW form.

Issue 2: Bushfire Prone Land

Land that can support a bush fire or is likely to be subject to bush fire attack is classified Bushfire Prone. In the past this has largely meant scrub and timber country mapped by local councils as Bushfire Prone using New South Wales Rural Fire Service criteria and certified by the RFS Commissioner.

A new definition of Bushfire Prone Land, expanded to include grasslands, is now being implemented across New South Wales by the RFS. This reclassification reflects the fact that grass fires are dangerously unpredictable, spread quickly and can move three times faster than a bush fire.

Grasslands cover some 80 percent of New South Wales, including a very substantial portion of the Mid-Western Regional Council. Once grasslands in our Council are mapped with the new definition, Bushfire Prone Land will cover almost all of this Council outside of towns.

In her written reply to questions from me the Manager, Strategic Planning said the water requirements used in Draft DCP Amendment 3 for a 2ha development included no firefighting water reserve because a proposed subdivision Council is considering the create 25 2ha lots on the property "Menah" is not on Bushfire Prone Land.

The annual water needs for a rural property will vary depending on where the property is located, the type and number of livestock held and the **number of people dependent on the supply**. Other factors such as **firefighting** and crop spraying and general farming applications will also affect the volume needed.

subject site is not bushfire prone.
What size storage do I need?

This is presently true, but the proposed subdivision is located in grasslands. It is my understanding that the mapping of grasslands has already been completed for most councils in eastern New South Wales, and that the process is well under way among councils in the west. While I am not sure where Mid-Western Regional Council stands in this process, I would be surprised if it was not already under way here with completion appearing likely in the not-too-distant future.

Once it is completed here the water requirements for any new 2ha residential property located in Bushfire Prone grasslands will be increased to include a stored firefighting water reserve of 0.125 m³ for each m² of buildings plus 0.075 m³ for each m² of land not covered by buildings, or a total storage of 172.5 m³ of water held in reserve for firefighting purposes. For larger new properties the reserve storage quantities would be even greater.

In addition, development of land likely to be affected by bushfire and subdivision of Bushfire Prone Land for residential purposes would have to incorporate fire prevention measures such as suitable defensible space, access considerations, vegetation management, on-site emergency management arrangements and site assessment for building construction requirements.

Given that the mapping of grasslands to Bush Fire Prone Land can be expected to occur here in the not-too-distant future and is will place virtually all the Council in this category, I believe that language incorporating this fact should be added at this time to Section 7.2 Rural Subdivision in Draft DCP Amendment 3. This would provide transparency that is now lacking for present and prospective development regarding a change that is already under way.

I request Council to adopt wording along the lines of this modified version of the existing language under the subhead Bushfire prone areas (Page 82):

Safe siting of lots within Bushfire Prone Areas is essential. In addition to historic Bushfire Prone Land such as scrub and timbered areas, this includes any grasslands in the Council that have been remapped as Bushfire Prone. Such sites should avoid ... *(the underscoring is mine).*

Issue 3: Spray Drift

Protecting new residential development from the negative impact of existing normal farming activity such as chemical spraying is a duty of care issue with potential public health and safety significance for councils.

This issue has been addressed at the state level by Queensland and Western Australia, both of which have prepared guidelines for their councils to follow, and at the local government level in the DCPs of a number of councils in New South Wales, Victoria, South Australia, Queensland and Western Australia.

The risks associated with agricultural spray drifting outside of the target area – particularly where residential properties share a boundary with agricultural activities – have been identified by CSIRO and other scientific organisations. These risks include potential harm to human health as well as injury or damage to plants, animals, the environment and property. Spray drift is the most common cause of off-target movement of agricultural chemicals and can exist despite the application by spray operators of best practice measures to minimise it.

Mid-Western Regional Council presently addresses spraying primarily as part of its roadside management program. There are no provisions in the DCP designed to protect new residential development from the potentially dangerous or unwelcome impacts of normal activities on adjoining agricultural land and to ensure those normal agricultural activities can continue. The absence of such provisions needs to be addressed expeditiously so the DCP can more completely provide certainty to residents and developers in locations where

development may conflict with or be constrained by adjoining land uses. My requested addition to Draft DCP Amendment 3 offers the ideal opportunity to rectify this situation.

Land use across most of this Council is agricultural in nature. There is little or no conflict between adjoining properties where both spray for weeds. Unless Council adopts proactive control measures such as buffer zones, however, conflict can result from increased expansion of residential developments into what had formerly been exclusively agricultural areas.

State and local governments have most often chosen buffer zones as the best way to protect new residential development that encroaches on land previously used exclusively for agriculture while allowing existing agricultural practices to continue unhindered on adjoining or nearby properties, reducing conflict between incompatible land uses.

Here how the Lismore City Council describes the use of these zones:

Conflicts in land use may occur where residential development encroaches into non-residential areas, and established land use practices associated with a particular land use or activity are likely to lead to a real or perceived loss of amenity for residents. Typical external effects which may be generated by certain land uses and which could be considered to be incompatible with residential development include noise, odours, chemical sprays dust etc. If these effects are not taken into account at the development control stage, pressures can be exerted on land owners to modify existing land use practices. This could affect the economic viability of an established land use or industry and in some cases could result in the sterilisation of a resource.

The most appropriate means for reducing potential land use conflicts is to provide for a physical separation between incompatible land uses in the form of a buffer area. ... Where an application is received for a development which is likely to result in a conflict with existing or likely future adjoining land uses, it will be the responsibility of the "encroaching development" to provide the required buffer areas.

– Lismore City Council DCP for LEP 2000 Lands (underscoring mine)

Most councils adopt buffers of varying widths depending on why the buffer is needed and the type of buffer used. Councils have generally modelled buffer provisions in their DCPs on Queensland's *Planning Guidelines: Separating Agricultural and Residential Land Uses – August 1997*.

The Wellington Council Development Control Plan 2013 is one such plan in the Central West. It incorporates the following buffer requirements:

Buffer design for various situations

| | Duration threshold | Min default distance (m) without vegetative buffer | Min design distance (m) with suitable vegetative buffer |
|--|-----------------------|--|---|
| Chemical spray drift | None | 300 | 40 |
| Intermittent odour | >88 hrs/yr | 500 | 500* |
| Intermittent noise such as a tractor | >10 hrs/yr <50 hrs/yr | 60 (day) 1000 (night) | 15 (day) 250 (night) |
| Long term noise such as a continuously running motor | >50 hrs/yr | 500 (day) 1000 (night) | 120 (day) 1000 (night) |
| Dust, smoke and ash | None | 150 | 40 |

* Minimum design distance for an odour buffer may reduced based on site factors and nature of the odour

** Day = noise occurring 6am-10pm
 Night = noise occurring 10pm-6am

Suitable Vegetative Screen:

Research into the behaviour of pesticide spray drift has shown that Buffer Elements in the form of vegetation screens can prove effective barriers to spray drift where they meet the following criteria:

- Are a minimum total width of 40m;
- Contain random plantings of a variety of tree and shrub species of differing growth habits, at spacings of 5m for a minimum width of 40m;
- Include species with long, thin and rough foliage which facilitates the more efficient capture of spray droplets;
- Provide a permeable barrier which allows air to pass through the buffer.
- Foliage is from the base to the crown;
- Include species which are fast growing and hardy;
- Have a mature tree height 1.5 times the spray release height or target vegetation height, whichever is higher;
- Have mature height and width dimensions which do not detrimentally impact upon adjacent cropped land;
- Include an area of at least 10m clear of vegetation or other flammable material to either side of the vegetated area.

The complete Queensland Department of Natural Resources Document *Planning Guidelines: Separating Agricultural and Residential Land Uses – August 1997* is provided as Attachment 2.

I urge this Council to add a section to DCP Amendment 3 reflecting the following concepts. The language and structure I have used is derived from the Queensland Department of Natural Resources *Planning Guidelines: Separating Agricultural and Residential Land Uses – August 1997* supported by CSIRO (2002) and from the West Australia Department of Health *Guidelines for Separation of Agricultural and Residential Land Uses*. Other jurisdictions have used a similar process.

Introduction

Conflict between residential development and agricultural land uses is likely to occur where residential land use directly abuts, or is sufficiently close to, farmland such that the residential land use is likely to be affected by agricultural activities.

The need for a formal policy arises as an increasing number of residential developments encroach on land previously occupied for agricultural use. Conflict between these distinctly different uses can arise from the use of agricultural chemicals, and noise, dust and odour generating activities. Adverse impacts of residential development on farmland include sediment and stormwater run-off.

These planning guidelines outline planning measures to reduce such land use conflict.

Definitions

Agricultural land – Land to produce food, fibre and timber including grazing, breeding, cropping, horticulture and forestry.

Buffer area/zone – An area of separation between differing land uses.

Buffer element – A natural or artificial feature that mitigates an adverse impact, including open ground, vegetation or constructed/acoustic barrier.

Rural residential development – Rural allotments created primarily for residential purposes and other places of human accommodation, excluding dwellings associated with bona fide agricultural holdings.

Sensitive land use – Land uses considered to be potentially sensitive to emissions from industry and infrastructure including residential developments, hospitals, hotels, motels, hostels, caravan parks, schools, hospitals, nursing homes, child care facilities, shopping centres, playgrounds, and some public buildings.

Separation distances – The total linear distance between a source and a sensitive receptor.

Principles

The following principles should govern the application of these planning guidelines:

- Provided agricultural activities conform to existing codes of practice, it is unreasonable for new adjacent uses to demand a modification of these activities to an extent which threatens efficient agricultural operations.
- Local governments should avoid, as far as practicable, locating residential development in close proximity to agricultural land. Where this is not possible, mechanisms such as buffer areas should be used to minimise conflicts.
- Buffer areas are to be located within the encroaching residential development and are to be provided/funded by the proponent of that development. This principle protects the prior rights of agricultural producers to practice agriculture on rural land.
- Where conflicts already exist between agricultural and residential land uses, mechanisms including mediation, source controls and public education should be encouraged.

Limitations

It has been found impractical for buffer distances to be based on the chemical being applied. It is therefore important for various buffer distances to be conservatively based on the nature specific agricultural activities.

Vegetative buffers may not be suitable where the chemicals in use may result in vapour drift (for example soil fumigants) or where herbicide spray drift would impact on the vegetative buffer. In these circumstances a 300m buffer distance would apply.

Safe application of chemicals, design and use of spray technology/equipment and requirements under existing legislation are not specifically covered by this document. The establishment of buffers does not relieve agricultural producers from the requirement to apply good spray management practices.

Establishment and maintenance of buffer areas

New residential developments should protect the rights of the existing agricultural producers to continue to perform farming activities on their land.

The following measures should be implemented at the earliest possible planning stage to minimise impacts on public health:

- Where land is approved for subdivision or residential development the prospective proponent must be advised by the local government of the requirement for buffer areas to be included.
- Applications for development are to consider and describe the existence and location of surrounding land uses, including viticultural and agricultural activities, and site the development in a position which will not result in the potential for land use conflict between neighbouring land uses.
- Applications for a site being developed for residential purposes are to include buffer areas that are planned and funded by the proponent of that development, unless otherwise determined by mutual agreement with existing land owners (including land owned by State and local authorities).

- Persons intending to live in or adjacent to an agricultural land use area need to be fully informed of the existing agricultural practices and their potential impact on health or amenity before they settle into the area.
- Where a vegetative buffer is planned, the proposals must state who is responsible for planting and maintaining the buffer area vegetation. The vegetative buffer needs to be planted and established before building approval is granted. A legal agreement must be established that specifies the legal and ongoing obligations on the developers, local government and landowners.

Separation Distances

Agricultural Spray Drift

The off-target movement of agricultural chemicals can be a cause for concern to residents in proximity to farming areas. These concerns are largely based on fears of exposure to agricultural chemicals which have the potential to harm human health, damage plants and injure animals on adjoining residential property. These concerns can be triggered by the detection of odours associated with the chemical.

Based on the available research on chemical spray drift, a minimum buffer width of 300m is required where open ground conditions apply between the agricultural activity and the residential property. Buffer width can be reduced to a minimum 40m where a suitable vegetative buffer can be satisfactorily implemented and maintained between the two conflicting uses.

Research shows a suitable vegetative barrier should be 20 metres wide with a 10 metre gap on either side. It should include a variety of pesticide-resistant species with a visual porosity (light vs dark areas) of around 50 percent, consisting of a single row or two offset rows of moderate size trees at least twice as tall as the release height of the spray (a height of 3-4 metres has been identified as sufficient)

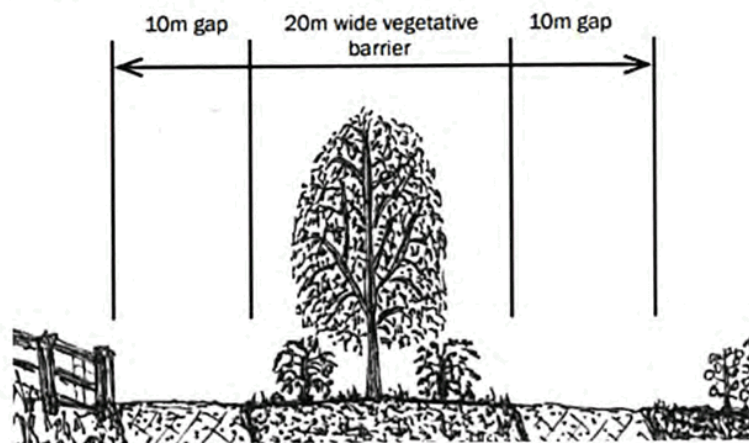
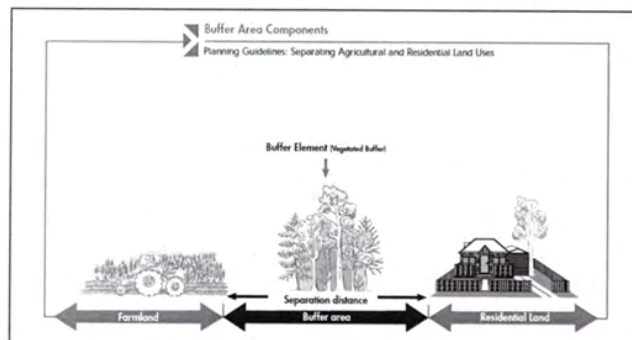


Illustration from CottonInfo – Using Vegetative Barriers

combined with an understory of shorter shrubs planted on either side. A mixture of plant species with differing leaf types is recommended, with the taller plants having long, thin cylindrical leaves such as Casuarina species because they are generally most efficient at catching small droplets.

Summary of spray drift buffer requirements:

| | |
|---|---|
| <p>Element: Agricultural Chemical Spray Drift</p> <p>Objective: To locate new residential areas so that the impact of agricultural chemical spray drift on amenity and health is avoided and complaints from residents regarding the use of agricultural chemicals is unlikely.</p> | |
| <p>Performance Criteria</p> <p>Residential development to be located or incorporate measures such that chemical spray drift does not adversely affect community public health and safety.</p> | <p>Acceptable Solutions</p> <p>(i) The separation distance between a sensitive receptor and agricultural land is a minimum of 300 m.</p> <p>or:</p> <p>(ii) A vegetated buffer designed by a consultant acceptable to council and incorporating the criteria shown in Appendix 2 is located between the sensitive receptor and adjacent agricultural land. The vegetated buffer should:</p> <ul style="list-style-type: none"> • be provided with a suitable watering system; • include access strips on either side which are kept clear of vegetation and other flammable materials; • be of a height, density and width (40 m min) acceptable to council prior to the development of residential areas within 300 m of the agricultural land. <p>or</p> <p>(iii) Other measures which meet the performance criteria and which are acceptable to council.</p> |



Odour

Odour in rural areas can arise from use of agricultural chemical sprays, fertilisers, effluent disposal and intensive livestock (e.g. feedlots, piggeries and poultry farms) and composting plants. Such detrimental odours can impact on residential amenity and have the potential to affect public health. Odour is can also be a major factor in complaints about off-site chemical spray drift where there may be no objective evidence of toxic exposure. This can result from the placement of strong “marker” odours as in a chemical to allow easy identification.

To minimise the impact of odour generated by agricultural activities a separation distance between residential land and agricultural land producing the odour is a minimum of 500m

unless a buffer area is designed based on a report from a qualified consultant acceptable to council detailing relevant factors and verifying that odour design goals will be met at within the development or other measures are adopted which meet the performance criteria and which are acceptable to council.

Summary of odour control solutions:

| | |
|--|--|
| Element: Odour from agricultural activities | |
| Objective: To locate new residential areas so that the impact of odour generated by agricultural activities on residential areas is minimised. | |
| Performance Criteria | Acceptable Solutions |
| Residential development to be located or incorporate measures to minimise the impact of odour in excess of the duration threshold generated by intermittent agricultural activities at dwellings within the development. | (i) The separation distance between a sensitive receptor and agricultural land is a minimum of 500 m. or: (ii) A buffer area design based on a report consistent with the draft EPP (Air) from a qualified consultant acceptable to council detailing relevant factors and verifying that odour design goals in the EPP (Air) will be met at sensitive receptors within the development. or: (iii) Other measures which meet the performance criteria and which are acceptable to council. |

Noise

Four types of noise associated with agricultural activity may lead to land use conflict. These are the noises associated with intensive livestock facilities, aircraft activities, constant or long-term noise (e.g. pumps or refrigeration plants), and intermittent noise from tractors and other machinery.

The following noise levels and cumulative time thresholds have been adopted to determine whether noise is likely to be excessive and require a buffer. The noise source is classed as intermittent if the noise level specified in the following table is exceeded for a cumulative total of more than 10 hours per year. If this cumulative time is not exceeded, there is no requirement for a buffer area. The noise is considered long term if it exceeds the level given in the table for a cumulative total of more than 50 hours per year. Stricter standards are applied to noise from night time operations between 10pm and 6am.

Noise level classifications

| | Intermittent Noise >10 hrs/yr | Long Term Noise >50 hrs/yr |
|------------------------|---|--|
| Day-time 6am-10pm | 75 dB(A) (L _{Amax,T}) | 60 dB(A) (L _{Amax,T}) |
| Night-time 10pm-6am | 55 dB(A) (L _{Amax,T}) | 45 dB(A) (L _{Amax,T}) |

Minimum separation distances between an agricultural noise source and residential property are based on a noise attenuation rate of 5 dB(A) for each doubling of distance from the noise source across open ground. The existence of natural barriers, broken topography or other features would increase attenuation and affect the separation distance required.

A standard noise source of 90 dB(A)(L_{Amax,T}), measured at 7.5m from the source has been used. For example a daytime noise level is attenuated to 75 dB(A) (L_{Amax,T}) at a distance of 60m from the source. A night-time noise level is attenuated to 55 dB(A) (L_{Amax,T}) at a distance of 1000m from the source. These distances have been adopted in the planning guidelines as the minimum buffer width for intermittent day and night-time activities that occur more than 10 hrs/yr but less than 50 hrs/yr.

Factors affecting noise from agricultural activities which should be considered in designing buffer areas include:

- type of engine (diesel or petrol; 2- or 4-stroke);
- number of cylinders;
- cooling system (air or liquid);
- load;
- timing, frequency and duration of operations;
- geographical conditions and barriers e.g.
- topography and inversions;
- weather conditions e.g. wind speed and
- direction;
- typical industry machinery and practices.

In circumstances where there are existing long term noise sources close to a proposed residential development, the proponent may consider funding measures such as machinery enclosures, mufflers, noise barriers and /or house design elements such as double glazing to complement subdivision layout and design measures to meet the performance criteria.

Applicants who wish to propose alternative noise reduction measures should determine noise levels at specific representative sites and demonstrate that the noise design goals for residential areas are not excessive.

Summary of noise control solutions:

| | |
|---|--|
| Element: Noise from agricultural activities | |
| Objective: To locate new residential areas so that noise from agricultural activities is attenuated to safeguard amenity in noise sensitive places. | |
| Performance Criteria | Acceptable Solutions |
| a) Residential development to be located or incorporate designs to minimise the impact of noise in excess of the duration threshold from day-time agricultural activities at dwelling within the development. | a) (i) The separation distance between the sensitive receptor and agricultural land is a minimum of 60 m for intermittent noise and 500 m for long-term noise. or: (ii) A buffer width and design based on a report from a qualified acoustic consultant acceptable to council detailing relevant factors and verifying that noise design goals consistent with the draft EPP (Noise) will be met at sensitive receptors within the development. or: (iii) Other measures which meet the performance criteria and which are acceptable to council. |
| b) Residential development to be located or incorporate designs to minimise the impact of noise in excess of the duration threshold from night-time agricultural activities at dwellings within the development. | b) (i) The separation distance between the sensitive receptor and agricultural land is a minimum of 1000 m. or: (ii) A buffer width and design based on a report from a qualified acoustic consultant acceptable to council detailing relevant factors and verifying that noise design goals consistent with the draft EPP (Noise) will be met at sensitive receptors within the development. or: (iii) Other measures which meet the performance criteria and which are acceptable to council. |
| c) In areas of aerial agricultural activity, development should be located to minimise noise from aircraft. | c) The separation distance between the sensitive receptor and agricultural land to be a minimum of 100 m to comply with Air Navigation Order 20.21 which prohibits air craft flying closer than 100 m to a private dwelling. |

Aircraft noise is governed by factors outside the scope of a council's DCP. In areas of aerial spraying, the separation distance between residential development and agricultural land must be a minimum of 100m to comply with Australia's Civil Aviation Safety Regulations 1998. This distance is based on operational safety as well as noise considerations and applies to both fixed wing and rotary wing aircraft.

Dust, Smoke and Ash

Some agricultural activities including soil cultivation, tractor movements, controlled burning and harvesting can generate dust, smoke and ash. Local conditions, including wind strength and direction, rainfall, humidity and ambient temperatures, soil type, vegetative cover and type of on-site activity determine the extent of the problem.

In the absence of quantitative research data, a separation distance of 150m is recommended where dust, smoke or ash from agricultural activities have been identified as a potential source of conflict between farming activities and residential development. In most cases, a vegetated buffer designed to capture chemical spray drift will also be effective in reducing conflict resulting from dust, smoke and ash.

Summary of solutions to problems of dust, smoke and ash

| | |
|---|---|
| Element: Dust, smoke and ash from agricultural activities | |
| Objective: To locate new residential areas so that the impact of dust, smoke and ash generated by agricultural activities on residential areas is minimised. | |
| Performance Criteria | Acceptable Solutions |
| Residential development to be located or incorporate measures to minimise the impact of dust, smoke and ash generated by agricultural activities. | <ul style="list-style-type: none"> (i) The separation distance between the sensitive receptor and agricultural land is a minimum of 150 m. or: (ii) A vegetated buffer designed by a consultant acceptable to council is located between the sensitive receptor and adjacent agricultural land. The vegetated buffer should: <ul style="list-style-type: none"> • be provided with a suitable watering system; • include access strips on either side which are kept clear of vegetation and other flammable materials; • be of a height, density and width (40 metres min) acceptable to council prior to the development of residential areas within 150 m of the agricultural land. or: (iii) • Other measures which meet the performance criteria and which are acceptable to council. |

Attachments 1-5 follow. As previously noted, Attachment 1 is the version of *How much water do I need* from the WaterNSW web site: (https://www.watarnsw.com.au/_data/assets/pdf_file/0005/128354/1.-How-much-water-do-I-need.pdf). Attachment 2 is the same document on which I have fixed formatting problems and made a few text revisions for greater clarity. Attachment 3 is the Queensland Planning Guidelines Separating Agricultural and Residential Land Uses. Attachments 4 and 5 are the Dungog and Wellington Council DCP sections on buffer zones to provide examples of how other councils deal with separating existing farming and new residential development.

Attachment 1

Original WaterNSW Version of *How much water do I need*



Customer Helpdesk
 1300 662 077 | Customer.Helpdesk@waterNSW.com.au

How much water do I need?

The annual water needs for a property will vary depending on where it is located, the type and number of livestock held and the number of people dependent on the supply. Other factors such as firefighting and crop spraying and general farming applications will also affect the volume needed.

The following table can help you estimate the volume of water required for your annual stock, domestic and general farming water needs for use on your property.

Estimates of annual water needs

| STOCK TYPE | Description | (1) Consumption rate m3/head/yr | (2) Your stock numbers | (1)x(2) = Sub total m3 |
|------------|--------------------|------------------------------------|------------------------|------------------------|
| Sheep | Weaners | 0.7 – 1.5 | | |
| | Adult dry sheep: | | | |
| | – grassland | 0.7 – 2.2 | | |
| | – saltbush | 1.5 – 4.4 | | |
| | Ewes with lambs | 1.5 – 3.7 | | |
| Cattle | Lactating cows: | | | |
| | – grassland | 14.6 – 36.5 | | |
| | – saltbush | 25.6 – 51.1 | | |
| | Young stock | 9.1 – 18.3 | | |
| | Dry stock (400 kg) | 12.8 – 29.2 | | |
| Horses | | 14.6 – 18.3 | | |

| DOMESTIC WATER | Description | m3/person/yr or area | Persons/Area | Sub total m3 |
|----------------|------------------------|----------------------|--------------|--------------|
| Household | House – without septic | 51 | | |
| | House – with septic | 64 | | |
| | Septic only | 13 | | |



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| | | | | |
|----------------------------|---|-----------|------------|--------------|
| House Garden | | | | |
| For each 1000 m2 or 0.1 ha | - coastal / tablelands | 200 | | |
| | - slopes | 400 | | |
| | - plains | 600 | | |
| | - western | 800 | | |
| | Description | m3 / unit | # of units | Sub total m3 |
| | For each m2 of wash down area | 5 | | |
| | For each sow – includes sow & progeny, drinking & wash down | 90 | | |
| | - plunge per 100 head | 0.6 – 1.4 | | |
| | - spray per 100 head | 0.6 – 2.0 | | |
| | Herbicide/ insecticide per ha of crop | 0.4 | | |

| STOCK TYPE | Description | (1) Consumption rate m3/head/yr | (2) Your stock numbers | (1)x(2) = Sub total m3 |
|---|--------------------|---------------------------------|------------------------|------------------------|
| Firefighting (based on a single event) | - buildings per m2 | 0.125 | 0.8mm | 82.8% |
| | - grass per m2 | 0.075 | | |
| Total Net Annual Water Requirement | | | | m3 |

Note: This table provides an estimate of your net annual water requirement and is not recommended for designing farm reticulation schemes which are based on peak daily requirements.

To convert net annual water requirement into megalitres (one megalitre is a million litres or 1,000 kilolitres of water) use the following equation:

_____ m3 ÷ 1,000 = _____ Megalitres (ML)



Customer Helpdesk
1300 662 077 | Customer.Helpdesk@watnsw.com.au

Find out more

For information on assessing irrigation requirements and on water requirements for stock, go to the Primefacts on the NSW DPI Agriculture website:

- [Water requirements for sheep and cattle](#)
- [Stock water – a limited resource](#)

For more information

www.watnsw.com.au


Phone: 1300 662 077

Email: water.enquiries@watnsw.com.au

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing. However users are reminded of the need to ensure that the information upon which they rely on is up to date and to check currency with WaterNSW or with the user's independent adviser.
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Attachment 2

My reformatted version of WaterNSW's *How much water do I need*



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How much water do I need?

The annual water needs for a property will vary depending on where it is located, the type and number of livestock held and the number of people dependent on the supply. Other factors such as firefighting and crop spraying and general farming applications will also affect the volume needed.

The following table can help you estimate the volume of water required for your annual stock, domestic and general farming water needs for use on your property.

Estimates of annual water needs

| (A) STOCK TYPE | Description | (1) Consumption rate m3 per head/yr | (2) Your stock numbers | (1)x(2) = Sub total m3 |
|----------------------|--------------------|---|---------------------------|---------------------------|
| Sheep | Weaners | 0.7 – 1.5 | | |
| | Adult dry sheep: | | | |
| | – grassland | 0.7 – 2.2 | | |
| | – saltbush | 1.5 – 4.4 | | |
| | Ewes with | 1.5 – 3.7 | | |
| Cattle | Lactating | | | |
| | – grassland | 14.6 – 36.5 | | |
| | – saltbush | 25.6 – 51.1 | | |
| | Young stock | 9.1 – 18.3 | | |
| | Dry stock (400 kg) | 12.8 – 29.2 | | |
| Horses | | 14.6 – 18.3 | | |

| (B) DOMESTIC WATER | Description | (1) m3/person or area | (2) Persons or/ Area | (1)x(2) = Sub total m3 |
|--------------------------|------------------------|-----------------------|----------------------------|---------------------------|
| Household | House – without septic | 51 | | |
| | House – with septic | 64 | | |
| | Septic only | 13 | | |

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| DOMESTIC WATER (cont'd) | Location | (1) m3/person or area | (2) Persons or Area | (1)x(2) = Sub total m3 |
|-------------------------|------------------------|-----------------------|---------------------|------------------------|
| House Garden | - coastal / tablelands | 200 | | |
| For each | - slopes | 400 | | |
| | - plains | 600 | | |
| | - western | 800 | | |

| (C) WATER USES | Description | (1) Consumption rate in m3/head/yr | (2) Your stock numbers | (1)x(2) = Sub total m3 |
|----------------|---|------------------------------------|------------------------|------------------------|
| | For each m2 of wash down | 5 | | |
| | For each sow – includes sow & progeny, drinking & wash down | 90 | | |
| | - plunge per 100 head | 0.6 – 1.4 | | |
| | - spray per 100 head | 0.6 – 2.0 | | |
| | Herbicide/ insecticide per ha of crop | 0.4 | | |

| | | | | |
|---|--|--|--|-----------------------|
| (D) Net Annual Water Requirements excluding Firefighting Reserve | | | | = A + B + C m3 |
| | | | | |

| (E) FIRE FIGHTING | Description | (1) Per m2 of building size | (2) Building size | (1)x(2) = Sub total m3 |
|-------------------|------------------|-----------------------------|-------------------|------------------------|
| | Buildings | 0.125 | | |
| | Grass | 0.075 | | |

| | | | | |
|---|--|--|--|-------------------|
| (E) Total Net Annual Water Requirements including Firefighting Reserve | | | | = D + E m3 |
| | | | | |



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Note: This table provides an estimate of your net annual water requirement and is not recommended for designing farm reticulation schemes which are based on peak daily requirements.

To convert net annual water requirement into megalitres (one megalitre is a million litres or 1,000 kilolitres of water) use the following equation:

$$\text{_____m3} + 1,000 = \text{_____Megalitres (ML)}$$

Find out more

For information on assessing irrigation requirements and on water requirements for stock, go to the Primefacts on the NSW DPI Agriculture website:

- [Waterrequirementsforsheepandcattle](#)
- [Stock water—a limited resource](#)

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing. However users are reminded of the need to ensure that the information upon which they rely on is up to date and to check currency with WaterNSW or with the user's independent adviser.

Published by WaterNSW

Attachment 3

Planning Guidelines

Separating Agricultural and Residential
Land Uses

Department of Natural Resources, Queensland
Department of Local Government and Planning,
Queensland
DNRQ 97088

These planning guidelines are to be read in association with State Planning Policy 1/92: Development and the Conservation of Agricultural Land

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Department of Natural Resources
GPO Box 2454
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Department of Natural Resources
Resource Sciences Centre
Land Resources Publications
Block C, 80 Meiers Rd
Indooroopilly Q 4068

Telephone (07) 3896 9426

(07) 3896 9502

Facsimile (07) 3896 9782



Preface

State Planning Policy 1/92: Development and the Conservation of Agricultural Land was approved by the Queensland Government in December 1992, under the *Local Government (Planning and Environment) Act 1990-1992*.

State Planning Policy 1/92 addresses key principles for the protection of agricultural land. The policy is supported by planning guidelines which provide detailed advice on implementing the policy.

Planning Guidelines: The Identification of Good Quality Agricultural Land was released in 1993 and addressed the definition and identification of good quality agricultural land and appropriate planning approaches to achieve the protection of such land.

Planning Guidelines: Separating Agricultural and Residential Land Uses provides technical advice and guidance to local government, developers, consultants and landholders on minimising conflicts between farming activities and residential uses (Policy Principle No. 8 of State Planning Policy 1/92). The planning guidelines are a product of extensive public consultation: two drafts were published (1993 and 1995), and the document has been substantially amended in response to comments received. In particular, the document advocates a flexible approach that is responsive to specific circumstances.

Planning Guidelines: Separating Agricultural and Residential Land Uses has been prepared by the Department of Natural Resources and the Department of Local Government and Planning in consultation with a reference group formed from representatives of the following bodies:

Local Government Association of Queensland
Farmers' Federation CANEGROWERS
Australian Cotton Foundation
Queensland Pork Producers' Organisation
Queensland Dairy Farmers' Organisation
Queensland Fruit and Vegetable Growers
Queensland Grain Growers' Council
Queensland Conservation Council
Australian Sugar Milling Council
Urban Development Institute of Australia
Royal Australian Planning Institute
Land Resource Consultants
Department of Environment
Department of Primary Industries

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1. Introduction

1.1 *The Queensland Government considers that good quality agricultural land is a finite national and state resource that must be conserved and managed for the longer term.*

State Planning Policy 1/92: Development and the Conservation of Agricultural Land (SPP1/92) was introduced in December 1992 as an instrument to protect good quality agricultural land through local government planning. SPP1/92 Principle No 8 states:

Local Authority planning provisions should aim to minimise instances of incompatible uses locating adjacent to agricultural operations in a manner that inhibits normal farming practice. Where such instances do arise, measures to ameliorate potential conflicts should be devised wherever possible.

Purpose

1.2 The purpose of the planning guidelines is to provide technical advice and guidance on reducing the potential for conflict between farming activities and residential development in accordance with Principle No. 8 of State Planning Policy 1/92. The planning guidelines are intended to assist local governments, developers, landholders and consultants. In particular, the planning guidelines contain provisions which local governments should consider including in their planning schemes or adopting as local planning policies.

1.3 Although intended to support the protection of good quality agricultural land in accordance with State Planning Policy 1/92, the principles in the planning guidelines could be used to assist decision-making on other land where agricultural/residential conflicts could arise. Also, the principles can be applied to situations where conflicts are likely to arise between industrial, tourist, commercial or other urban uses and nearby agricultural uses.

1.4 It should be noted that conflict due to intensive animal industries is not specifically covered in these planning guidelines. Detailed guidance on dealing with the impact from these activities is provided in industry-specific codes of practice and guidelines which are listed in the reference section of this document.

Background

1.5 Conflict between residential development and agricultural land uses is likely to occur where residential land uses directly abut, or are sufficiently close to, farmland such that they are likely to be affected by agricultural activities.

1.6 Such conflict can arise from the use of agricultural chemicals, and noise, dust and odour generating activities. Adverse impacts of residential development on farmland include sediment and stormwater run-off. These planning guidelines outline planning measures to reduce such land use conflict.

The Environmental Protection Act

1.7 The *Environmental Protection Act 1994* (EP Act) was introduced by the Queensland Government primarily to protect the environmental values of air, noise and water. Under the EP Act and associated Environmental Protection Policies (EPPs), everyone has a general environmental duty of care to the environment and their neighbours.

1.8 Advice in the planning guidelines is based on certain assumptions:

(a) All agricultural activities incorporate reasonable and practicable measures to protect the environment in accord with the Environmental Code of Practice for Agriculture (prepared under the provisions of the EP Act) and associated industry specific guidelines.

(b) All agricultural activities are legally conducted as required by other legislation covering workplace health and safety, and the use and handling of agricultural chemicals.

(c) Nevertheless, certain activities practised by even the most careful and responsible farmer may result in a nuisance to adjacent residential areas through, for example, unavoidable odour drift and noise impacts.

1.9 The separation distances recommended in this document are drawn from relevant State and Commonwealth legislation and guidelines, notably the EP Act, relevant research and the sources cited.

The Use of Buffer Areas

1.10 Buffer areas are legitimate planning tools. They are used to separate land uses to ensure long-term protection of both areas impacted upon and areas used for the conflict generating activity. Examples of such activities include sewage treatment works, abattoirs, tanneries, composting plants and rendering works; and intensive animal and plant production facilities (such as feedlots, piggeries and poultry sheds). The principle of separating conflicting uses is also applied to the protection of natural resource areas (such as nature conservation reserves, streams, water supply storage areas and forest reserves).

1.11 By separating agricultural uses from residential and other urban uses, buffer areas can reduce conflict and the resulting complaints. Complaints about agricultural practices are often based as much on perception as reality, particularly in relation to chemical spray drift. Seeing or smelling the source of nuisance may heighten the perception of that nuisance. Buffer

areas can contribute to the screening of agricultural activities from the view of residential areas. Thus a suitable visual barrier between the development and agricultural land in the form of a vegetation screen can significantly reduce the level of complaint by minimising both the cause and the perception of a nuisance.

1.12 Nevertheless, buffer areas designed in accordance with these planning guidelines will not totally eliminate all impacts of activities. Also, the planning guidelines do not limit the rights of individuals to take action under the common law or such legislation as the *Health Act 1937*, *EP Act 1994*, *Work Place Health and Safety Act 1995* or the *Agricultural Chemicals Distribution Control Act 1966*, if they believe their rights to enjoy a safe environment and the use of their land are restricted. Appendix 1 outlines existing controls and administering agencies for a range of issues.

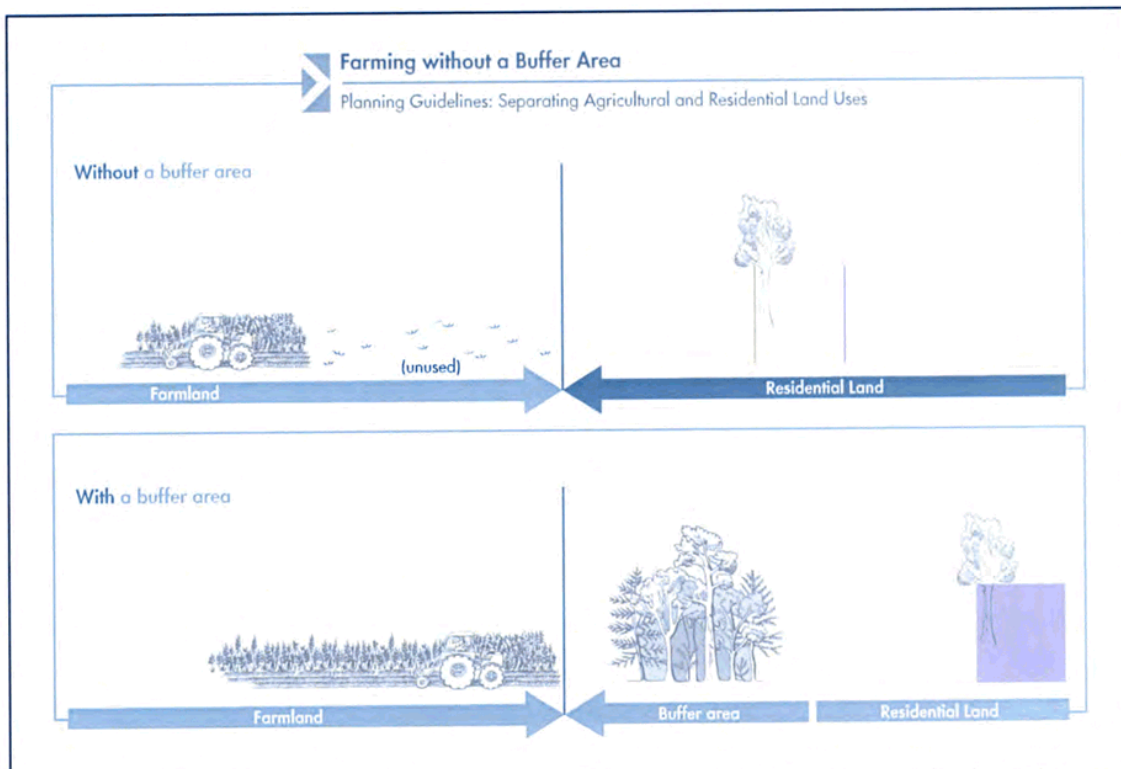


Figure 1. Farming without a buffer area

Principles

1.13 The planning guidelines should be applied with consideration to the following principles:

1. Provided agricultural practices are legally practised according to existing codes of practice, it is unreasonable for new adjacent uses to demand a modification of these practices to an extent which threatens efficient agricultural operations.
2. When preparing planning schemes, local governments should avoid, as far as practicable, locating residential development in close proximity to agricultural land. Where this is not possible, mechanisms such as buffer areas should be used to minimise conflicts.
3. Buffer areas should be determined on the basis of the sustainable agricultural land use with the potential to have the most impact on adjacent land uses and which is reasonably likely to be practised, regardless of current use.
4. Buffer areas should be located within the site being developed for residential purposes, and be provided/funded by the proponent of that development. This principle protects the prior rights of agricultural producers to practice agriculture on rural land.
5. Where conflicts already exist between agricultural and residential land uses, mechanisms including mediation, source controls and public education should be encouraged.

Objectives

1.14 The planning guidelines seek to achieve the following objectives:

1. To protect the use of reasonable and practicable farming measures that are practised in accordance with the Environmental Code of Practice for Agriculture and associated industry-specific guidelines.
2. To minimise scope for conflict by developing, where possible, a well-defined boundary between agricultural and residential areas and not interspersing agricultural and residential areas.
3. To minimise the impacts of residential development on agricultural production activities and land resources.
4. To minimise the potential for complaints about agricultural activities from residential areas.

5. To provide residents with acceptable environmental conditions in residential areas that are located adjacent to agricultural production areas.

Structure of the Planning Guidelines

1.15 The contents of these planning guidelines are as follows:

- **Section 2** provides advice on forward planning to prevent and/or minimise conflicts.
- **Section 3** details how to assess the need for buffer areas as part of development assessment and provides a performance based approach to planning scheme provisions.¹
- **Section 4** deals with issues of use, ownership and maintenance of buffer areas.
- **Section 5** provides advice on situations where conflict may already exist.
- **Section 6** identifies roles and responsibilities.
- **Appendixes** provide information on existing controls and technical data to assist in the design of effective buffer areas.

Definitions and Abbreviations

1.16 For the purpose of these planning guidelines, the following abbreviations are used:

| | |
|--------------|---|
| DLGP | - Department of Local Government and Planning |
| DNR | - Department of Natural Resources |
| DPI | - Department of Primary Industries |
| ESD | - Ecologically Sustainable Development |
| EP Act | - <i>Environmental Protection Act 1994</i> |
| EPP | - Environmental Protection Policy |
| $L_{Amax,T}$ | - The average maximum A-weighted sound pressure level in a specified time interval (I) or event |
| LG(P&E) Act | - <i>Local Government (Planning and Environment) Act 1990</i> |
| SPP1/92 | - State Planning Policy 1/92: Development and the Conservation of Agricultural Land |

¹ The performance based approach is explained in paragraph 2.27

1.17 The following definitions have been adopted in the planning guidelines:

Agricultural land use—the use of land for the production of food, fibre and timber; including grazing, cropping, horticulture and forestry². Agricultural land use is subject to constraints imposed by:

- climate
- slope, soil and water limitations
- processing requirements
- economic conditions.

Buffer area—an area of land separating adjacent land uses that is managed for the purpose of mitigating impacts of one use on another. A buffer area consists of a separation distance and one or more buffer elements.

Buffer element—a natural or artificial feature within a buffer area that mitigates an adverse impact. A buffer element may include open ground, a vegetation buffer and/or an acoustic barrier.

Building envelope—A diagram drawn on a subdivision plan, or other plan that forms part of a development application, defining the limits for the siting of buildings (and associated services and facilities e.g swimming pools).

Drift—airborne movement of agricultural chemicals onto a non-target area with the potential for risk of injury or damage to humans, plants, animals, environment or property³.

Residential development—urban subdivision, low density residential subdivision (including rural residential) and rural allotments created primarily for residential purposes (residential excisions, concessional allotments, retirement blocks etc.), and other places used as human accommodation excluding dwellings associated with bonafide agricultural holdings.

Sensitive receptor

- a dwelling, mobile home or caravan park, residential marina or other residential place in a residential development;
- a motel, hotel, or hostel;
- a childcare centre, kindergarten, school, university or other educational institution; or
- a medical centre or hospital.

Separation distance—the total linear distance between a source and a sensitive receptor.

³ The detection of odour does not necessarily correspond to the presence of an active chemical ingredient.

² Guidelines for the separation of residential uses from intensive agricultural production establishments including cattle feedlots, piggeries and poultry farms are available in separate publications listed in the references.

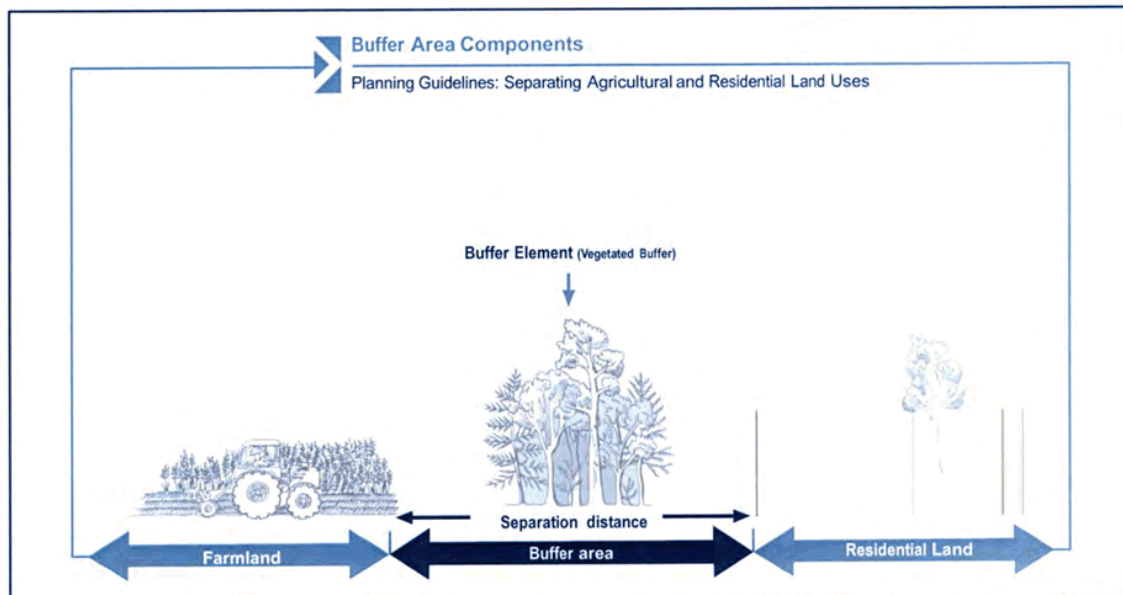


Figure 2. Buffer area components

2. PLANNING SCHEMES

2.1 Planning schemes provide local governments with the opportunity to minimise the potential for conflict between agricultural and residential land uses by separating those uses, thereby providing more certainty for land holders.

Methods of Achieving Separation

2.2 The main ways of achieving separation through planning decisions and the use of planning controls are as follows:

- As far as possible, isolate good quality agricultural land from uses likely to conflict with nearby farming activities.
- On the edges of urban areas, retain natural features (e.g. watercourses and ridge lines) free from development to act as buffer areas between newly developing areas and farmland.
- Ensure that, as far as practicable, newly developing areas are designed so that features such as public open spaces, road reserves or purpose-designed buffer areas provide the required separation.
- Require individual developments to be designed in ways that incorporate buffer areas.

2.3 Some or all of these methods will be appropriate, depending on the local circumstances. The rest of Section 2 describes how these various methods can be used when preparing planning schemes and assessing development applications.

Overview

2.4 Planning schemes comprise a forward-looking land use/development strategy complemented by development assessment provisions. These have been known respectively as the Strategic Plan and the Planning Scheme Provisions in the *Local Government (Planning & Environment) Act 1990*.

2.5 Preventing and/or minimising conflict between agricultural land uses and residential development will involve:

- determining the potential for conflict through investigations conducted as part of the preparation or review of planning schemes;
- reducing the opportunity for land use conflict by adopting appropriate planning strategies in the Planning Scheme;

- adopting provisions that are consistent with these planning guidelines and appropriate to local circumstances.

Strategic Planning

2.6 Strategic planning, supplemented as necessary by local area planning, establishes the broad framework to guide future land use and development. Therefore, when preparing or reviewing strategic plans, areas of good quality agricultural land should be identified and protected through appropriate land use designations⁴.

2.7 These designations should include additional areas considered essential for the protection of good quality agricultural land and its productive potential. Additional areas may need to include buffer areas or areas containing essential agricultural infrastructure (e.g. sugar mill tramways, irrigation pump stations, farm packing sheds and cool rooms).

2.8 Any analysis of future development options and settlement patterns should include an assessment of the potential for conflict between agricultural and other land uses. Areas designated for residential and other urban uses should be clearly delineated thereby providing some certainty about the intended boundaries between urban and rural areas. Designations should be based upon an assessment of future development needs for a reasonable time scale (approximately 15 years). This approach avoids blighting agricultural land long before it may be required for development.

Isolating Good Quality Agricultural Land from Incompatible Uses

2.9 Land use strategies in strategic plans and any supporting local area plans should, as far as practicable, aim to isolate good quality agricultural land from uses likely to conflict with certain farming activities.

2.10 Areas of poorer quality agricultural land, when used for purposes that will not cause land use conflicts, may serve to isolate more intensively farmed land from encroaching incompatible uses. Farm forestry and grazing are examples of rural land uses that are compatible with either adjoining areas of intensive agriculture or adjacent residential uses.

2.11 Where achieving isolation is not possible through forward planning, separation should be achieved in other ways.

⁴ Advice on this is contained in *Planning Guidelines: The Identification of Good Quality Agricultural Land*.

Using Retained Natural Features as Buffer Areas

2.12 Boundaries of urban designations should, where practicable, take opportunities to follow natural features that will be retained undeveloped, such as watercourses, ridge lines, steeply sloping ground and areas for nature conservation (see 4.9). All these features can act as natural buffer areas between farmland and urban areas.

Designing Urban Areas to Provide Buffer Areas

2.13 Certain facilities and uses, such as public open spaces, road reserves and golf courses, can also be located and designed to act as buffer areas.

2.14 Public open spaces and recreational uses should only be located at the edge of development and used as buffer areas if:

- the location is appropriate for satisfying the open space needs of the community;
- the use of the buffer area as public open space is compatible with adjoining uses,
- the impacts from the adjoining agricultural use do not preclude recreational use of the open space.

2.15 In many of the smaller towns in Queensland, a strip or a tract of Crown land is set aside as a town reserve or common that can act as a buffer area between agricultural and residential land. As well as a buffer area, such town reserves provide a 'land store' dedicated for various public purposes, including parks.

Designing Developments to Provide Buffer Areas

2.16 Despite designing land use strategies to minimise potential for conflict, there will be areas where residential and other urban uses have to locate adjacent to good quality agricultural land. Policies and measures to reduce the potential for conflict should therefore be set out in strategic plans or elsewhere in planning schemes.

2.17 Broad criteria should be included for determining the need for buffer areas and for the design of features such as vegetated buffers. In areas where potential for conflict is identified, each development application should be required to include an assessment of the need for buffer areas and design measures to ensure their effectiveness. Appropriate design requirements are described in Section 3.

2.18 Strategic plan maps can depict an 'area of investigation' where proposed residential uses adjoin existing agricultural areas (see Figure 3). The size of the area of investigation should be determined by:

- the potential agricultural activities in the area concerned (see paragraph 1.13, Principle 3);
- the minimum separation distances appropriate to the likely sources of conflict (see Table 2).

2.19 Planning schemes should provide scope for required separation to be achieved in different ways. A purpose-designed buffer area is one method. Alternatively, the buffer area could be incorporated into the design of the particular development.

2.20 For example, with residential development, large residential allotments incorporating the required buffer area could be located on the boundary between the residential subdivision and agricultural land. Planning schemes should allow for this approach by specifying minimum lot sizes sufficiently large to incorporate the desired buffer area into the allotment while allowing an adequate balance of the lot to be available for the house and normal residential use. To minimise any loss of development potential, a higher allotment yield could be offered over the balance of the development site to offset the use of the larger lots incorporating the buffer area.

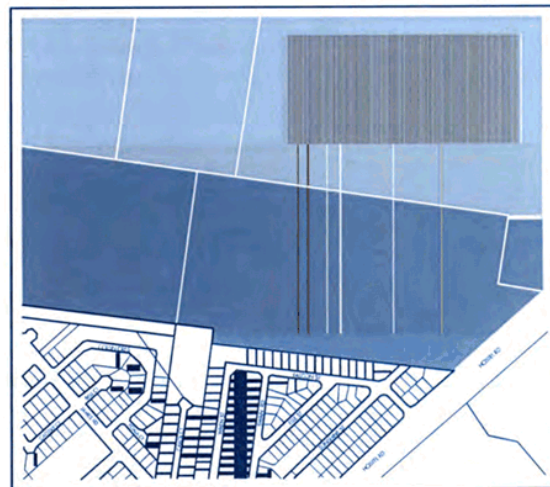


Figure 3. Strategic plan map

2.21 Designing and providing an adequate buffer as part of each residential allotment should enhance the prospect of the buffer areas being effective and well managed.

Temporary Buffers

2.22 In areas experiencing high levels of urban growth, relatively large areas of land might need to be designated for urban development. Situations will arise where good quality agricultural land is necessarily designated for development, but that development may be some years away. In such cases, consideration should be given to the need for temporary buffers at particular development stages to protect continuing farm operations until that farmland is developed.

2.23 Strategic plans or another part of the planning scheme should identify where the need for such buffer areas should be considered. Normally, the temporary buffer area should be incorporated in the future subdivision design, and planning schemes should include such a requirement. However, as the need for a buffer area is only short term, it need not be designed as a permanent feature, unless that feature has a desired role in the urban area (e.g. public open space or large residential allotments as described in 2.20).

2.24 Alternatively, land in the next development stage could still be farmed until required for development, but a buffer area incorporated into the farm management. This approach can only be required when the development approval includes the farmland concerned.

2.25 Depending on the degree of conflict and the lifespan of the buffer area, such temporary buffer areas may be considered unnecessary by council. Temporary buffer areas should be subject to the same design criteria as permanent buffer areas to ensure effectiveness at reducing conflict.

Development Assessment Provisions

2.26 Planning schemes should contain development assessment provisions to support the land use strategy and policies. Such provisions should be designed to achieve the appropriate protection of good quality agricultural land and reduce the potential for conflict between agricultural and residential land uses.

2.27 Development assessment provisions should preferably be performance based⁵. Such provisions focus on achieving specific outcomes, but allow flexibility in the means of achieving these outcomes rather than relying only on prescriptive requirements. Performance-based provisions can therefore ensure that agricultural

impacts on adjoining residential and other urban uses are minimised, but allow for differing approaches and responsiveness to local circumstances. Examples of such provisions are provided in Section 3.

2.28 For local governments without a planning scheme, a policy⁶ should be prepared to detail the mechanisms required when land use and subdivision approvals are being assessed in close proximity to agricultural land.

Appropriate Development

2.29 Minimising the potential for land use conflict can be achieved by limiting those uses regarded as inappropriate in areas of good quality agricultural land and immediately adjoining areas. The planning scheme should therefore aim to limit development in such areas to agricultural uses and other uses required to support agricultural activities. Such uses may include saleyards, grain drying facilities, animal husbandry services, storage for fresh produce, custom machinery operators.

2.30 In buffer areas between farmland and urban development, the planning scheme should aim to limit development to uses that do not detract from the effective operation of the buffer area. Such uses should therefore be compatible with the adjoining agricultural areas and adjacent residential development.

2.31 Examples of compatible uses (depending on the agricultural uses) include farm forestry, plant nurseries, horse trails, walking/cycling tracks, sport fields or other recreational activities. However, if the buffer area is created primarily to reduce conflict from agricultural chemical spray drift, some of these uses may not be compatible. In certain cases of land use conflict, it may be appropriate that minor loss of amenity is tolerated if the intrusion occurs on an infrequent basis without associated health risks.

2.32 In urban areas, the close proximity of any agricultural land should be a major consideration when deciding upon the type and design of development, including the need for buffer areas.

⁵ Such an approach involves clearly stated objectives and offers a choice of following prescribed development standards ('acceptable solutions'), or varying those standards in accordance with the objectives and performance criteria:
Objectives: describe the preferred outcomes for development and provide the opportunity for a variety of innovative solutions
Performance Criteria: the means of achieving the objectives—what is to be achieved rather than how this should be done
Acceptable solutions: set out some ways that guarantee the objectives can be met to the desired standards.

⁶ Local planning policies under the *Local Government (Planning & Environment) Act 1990* or planning scheme policies under the Integrated Planning Act.

Subdivision of Land

2.33 SPP 1/92 requires local government to give due consideration to the protection of good quality agricultural land when assessing applications for subdivision.

Residential or Rural Residential Areas

2.34 Where residential areas have to abut farmland, adequate separation can be achieved through subdivision design (see 2.20 and 2.21).

2.35 If the required buffer area is incorporated in large residential allotments, the buffer portion of the lot should be suitably designed and protected through conditions of development approval. These include requiring the provision and maintenance of planted areas in the buffer area, defining building envelopes for the location of houses outside the buffer area, or applying vegetation protection controls. The larger residential lots could be designed in such a manner as to allow redevelopment should the buffer area become redundant.

2.36 If buffer areas are proposed as one component of the public open space contribution, the issues set out in 2.14 above should be considered.

2.37 The ownership and maintenance of buffer areas are discussed in Section 4.

Single Residential Allotments

2.38 The creation of residential allotments in productive rural areas often fragments farmland and may lead to land use conflict, particularly when the occupants of the new dwelling have no direct connection with the surrounding agricultural activities. Where possible therefore, single residential allotments (such as 'concessional lots' or 'family excisions') should not be located on or adjacent to good quality agricultural land.

2.39 Local governments are encouraged to review and amend any subdivision provisions that permit residential allotments in rural areas to ensure that appropriate buffer areas are required adjacent to good quality agricultural land.

Conditions of Approval

2.40 Conditions should be set by local governments according to the relevant requirements of the planning legislation to ensure that on going maintenance and effectiveness of the buffer areas are binding upon successors in title.

3. Conflict assessment and buffer area design

3.1 Adequate consideration of possible conflict is necessary during development assessment. Development proponents should be required to assess the potential for land use conflict in areas of investigation (see 2.13), or in proximity to good quality agricultural land. This should be done regardless of whether or not the good quality agricultural land is being utilised for agriculture at the time of an application.

3.2 Councils may require reports from suitably qualified consultants to address each element of conflict and accompany an application where:

- the proposed development is within the area of investigation; or
- the planning scheme has not resolved or is silent on the issue of land use conflict; or
- the proposed development is contrary to the planning scheme.

3.3 In investigating the need for appropriate buffer areas, the following steps should be taken:

- Determine the sustainable agricultural land use with the potential of causing most problems for adjacent residential uses and which is reasonably likely to occur on the subject land.
- Identify the elements that may cause conflict and the extent of the conflict. The elements should be quantified, where possible, in terms of frequency and duration of activities to determine the element's impacts.
- Explain how the proponent intends to address each element to achieve acceptable outcomes in terms of residential area design, size of lots, separation widths, tree planting, acoustic barriers etc.
- Propose the means by which the proposed measures will be monitored and maintained. This should include responsibility for implementing and maintaining specific features of the buffer areas to ensure continued effectiveness.

3.4 When assessing development applications, local governments will need to consider the information submitted, and ensure that the mechanisms proposed to ameliorate land use conflict address all elements. The mechanisms must be flexible enough to accommodate possible changes in agricultural practices on the adjacent

land and be able to be implemented through the planning approval process. DNR is available to assist local governments in determining likely agricultural land uses.

3.5 The following provisions are provided for guidance in development assessment and for adoption by local government. Solutions other than those described may be acceptable to councils to meet the performance criteria.

Element: Agricultural chemical spray drift

Overview

3.6 The off-target movement of agricultural chemicals can be a cause for concern to residents in proximity to farming areas. These concerns are largely based on fears of exposure to agricultural chemicals but also due to detection of odours associated with the chemical (see Appendix 5). It should be noted that the guidelines treat chemical spray drift and odour as separate elements for the design of buffer areas (see section 3.15–3.20).

3.7 A Federal Government working group has conducted a review of agricultural chemical spray drift (CSIRO 1993). It concluded that 'there is insufficient knowledge to settle on a single distance for a buffer zone and that evidence indicates that buffer zones need to be chemical/formulation specific, based on supporting data.'

Available information

3.8 Studies at Emerald in 1990–91 concluded that the estimated average seasonal exposure for an adult or child of the five aerially applied insecticides detected did not exceed 0.2% of the World Health Organisation Acceptable Daily Intake. These studies did not measure the distance of measurement points from agricultural areas, but generally were in excess of 300 m from areas of chemical applications. However the perception of risk in the community associated with chemical spray drift persists.

3.9 Research and subsequent modelling has indicated negligible chemical drift at a range 300 m downwind from the release point of a chemical spray application (Spillman 1988). This research suggests a 300 m separation distance downwind of agricultural spraying is an acceptable minimum distance for adoption. It should be noted that the perception of 'negligible drift' may be influenced by the toxicity of the chemicals involved and may pose an unacceptable risk to some members of the community.

Other research and field trials have shown vegetated buffers are effective in capturing up to 80% of pesticide spray drift from an application upwind of a single row of trees (Harden 1992). Several Queensland councils now require vegetated buffers as a condition of development approval at the interface between agricultural and residential land use. Specific design criteria for vegetated buffer elements are presented in Appendix 2. Revegetation or thinning of existing stands of vegetation to the specifications in Appendix 2 may also be appropriate.

Buffer Area Width

3.10 From a planning perspective, it is not considered practical to base buffer area dimensions on individual chemicals or formulations. Based on the available research on chemical spray drift, the planning guidelines have adopted a minimum width of 300 m where open ground conditions apply; and a minimum width of 40 m where a vegetated buffer element can be satisfactorily implemented and maintained. These dimensions may vary according to local topographical or climatic conditions or as further knowledge is obtained.

3.11 Farm management can influence the effectiveness of buffer areas. The advice provided in the planning guidelines in relation to agricultural chemical use assumes farmers and their employees and contractors carry out their activities in accordance with reasonable and practicable measures as set out in the Environmental Code of Practice for Agriculture, and the *Agricultural Chemicals Distribution and Control Act 1966*. The Advisory Standard For the Storage and Use of Chemicals at Rural Workplaces provides additional guidance to persons with obligations under the *Workplace Health and Safety Act 1995*. It should be noted that currently there is no acceptable ambient air standard for agricultural chemical spray drift.

3.12 It should be noted that the recommended vegetated buffer (which includes multiple rows of trees) will not capture 100% of the chemical spray drift, but may reduce spray drift to less than 1% at a sensitive receptor when managed in terms of porosity, litter build up and noxious weed control to ensure effectiveness.

3.13 Factors affecting buffer area requirements for reducing agricultural chemical spray drift include:

- chemical composition/formulation e.g. toxicity, evaporation rates;
- method of application/release height e.g. aerial application, airblast mister etc.;
- spray technology e.g. nozzle type, droplet size;
- frequency of application;
- ability of the vegetation to capture spray droplets;
- target structure;
- weather conditions e.g. wind speed and direction, air turbulence, inversions;
- microclimate;
- geographical conditions and barriers e.g. topography.

3.14 Further information and advice on the use and effects of agricultural chemicals is available from:

Department of Primary Industries Agricultural Standards
Ph: 07 3239 3936

Department of Training and Industrial Relations
Division of Workplace Health and Safety
(Rural Officers) Ph: 1800 177 717

Queensland Farmers Federation (Workplace Health and Safety Officers) Ph: 1800 818 006

Department of Environment district or regional offices

| | |
|--|---|
| <p>Element: <i>Agricultural Chemical Spray Drift</i></p> <p>Objective: To locate new residential areas so that the impact of agricultural chemical spray drift on amenity and health is avoided and complaints from residents regarding the use of agricultural chemicals is unlikely.</p> | |
| <p>Performance Criteria</p> <p>Residential development to be located or incorporate measures such that chemical spray drift does not adversely affect community public health and safety.</p> | <p>Acceptable Solutions</p> <p>(i) The separation distance between a sensitive receptor and agricultural land is a minimum of 300 m.</p> <p>or:</p> <p>(ii) A vegetated buffer designed by a consultant acceptable to council and incorporating the criteria shown in Appendix 2 is located between the sensitive receptor and adjacent agricultural land. The vegetated buffer should:</p> <ul style="list-style-type: none"> • be provided with a suitable watering system; • include access strips on either side which are kept clear of vegetation and other flammable materials; • be of a height, density and width (40 m min) acceptable to council prior to the development of residential areas within 300 m of the agricultural land. <p>or</p> <p>(iii) Other measures which meet the performance criteria and which are acceptable to council.</p> |

Element: Odour

Overview

3.15 Odour in rural areas can arise from use of agricultural chemical sprays, fertilisers (inorganic and organic), effluent disposal and intensive livestock (e.g. feedlots, piggeries and poultry farms) and composting plants. Such detrimental odours can impact on residential amenity and have the potential to affect public health.

3.16 Odour is often a major factor in many complaints about off-site chemical spray drift where there is sometimes no objective evidence of toxic exposure. Some agricultural chemicals contain ‘markers’ (strong odours) to allow easy identification and these markers or mixing agents are sometimes detected at a distance from the target area and cause concern even though in some circumstances extremely low levels of the active ingredients may be present. Residents’ association of the odour with the chemical is sufficient to raise fears of exposure (see Appendix 5).

3.17 Factors affecting complaints from odour are influenced by the frequency, intensity, duration and offensiveness of the odour. An objectionable odour may be tolerated if it occurs infrequently at a high intensity, however a similar odour may not be tolerated at lower levels if it persists for a longer duration.

Available information

3.18 Odour can be emitted from a variety of sources and dispersed by the atmosphere. Ground level concentrations of odour have been reported as being inversely related to wind speed and atmospheric conditions, i.e. the lower the wind speed and the more stable the conditions, the higher the concentration. The subjective nature of conflict resulting from exposure to odour makes the determination of design goals difficult (Holmes et al. 1996).

3.19 Industry-specific guidelines have been developed to determine suitable separation distances to deal with odour for feedlots, piggeries and poultry farms. Factors influencing the separation distance required include the number of livestock, site factors and levels of management. The siting of such industry and other development should be carefully considered in areas with poor dispersion conditions e.g. valleys. The buffer area between a proposed residential development and existing or approved intensive livestock facilities or composting facilities should

conform with standards specified in the relevant industry specific guidelines. The separation distance will be determined by consideration of the licence conditions applying to individual facilities set by DPI, DoE and/or local government.

3.20 While detection of odours may be instantaneous, often several hours are needed to confirm the presence and source of such odours. Odours from intermittent sources, such as chemical applications in rural areas, may only reach nuisance levels when exposure at a sensitive receptor exceeds a duration threshold. This is supported by research conducted by Holmes et al. (1996) who nominate 1% of time as an appropriate threshold.

Odour Duration Threshold

3.21 For the purpose of the planning guidelines and the design of effective buffer areas, the following odour duration threshold has been adopted:

- Odour from intermittent agricultural activities (e.g. fertiliser spreading, effluent disposal or chemical spraying) should not exceed nuisance levels outside any affected sensitive receptor for greater than 1% of the time (or 88 hrs/yr).

3.22 The duration threshold allows for some detectable odour levels provided they occur for less than 88 hrs/year. For the purposes of the planning guidelines, the following formula can be used to determine the potential time of odour impact upon a sensitive receptor:

$$t = n \times o$$

where:

- t = potential hours of nuisance level odour per year
- n = number of cropped hectares within 500 m of the receptor (40 ha max)
- o = hours of operation per hectare per year of odour producing activity (a...z) (see tables in Appendix 4)

If the time ‘t’ is greater than 88 hrs/year then the design goal has been exceeded and a buffer area may be required.

Buffer Area Width

3.23 Information on odours from poultry farms (DoE, 1994) indicate that 500 m would be an acceptable separation distance for odour mitigation should the duration threshold be exceeded.

3.24 Applicants who wish to propose alternative odour reduction measures should consider the following factors that influence odour dispersion:

- atmospheric stability wind speed and direction;
- terrain/topography and drainage flows;
- vegetation density;
- impact location;
- odour source, e.g. composting, chemical formulation, effluent disposal etc.

3.25 Information on odours associated with some agricultural chemicals is provided in Appendix 5. Additional advice should be sought from agricultural chemical suppliers, AVCARE and other sources to determine the nature and odours likely to be encountered in particular instances.

Element: Odour from agricultural activities

Objective: To locate new residential areas so that the impact of odour generated by agricultural activities on residential areas is minimised.

Performance Criteria

Residential development to be located or incorporate measures to minimise the impact of odour in excess of the duration threshold generated by intermittent agricultural activities at dwellings within the development.

Acceptable Solutions

- (i) The separation distance between a sensitive receptor and agricultural land is a minimum of 500 m.
or:
- (ii) A buffer area design based on a report consistent with the draft EPP (Air) from a qualified consultant acceptable to council detailing relevant factors and verifying that odour design goals in the EPP (Air) will be met at sensitive receptors within the development.
or:
- (iii) Other measures which meet the performance criteria and which are acceptable to council.

Element: Noise

Overview

3.26 There are four types of noise associated with agricultural activity which may lead to land use conflict. These are the noises associated with intensive livestock facilities, aircraft activities, constant or long-term noise, (e.g. pumps or refrigeration plants), and intermittent noise from tractors and other machinery.

3.27 The draft EPP (Noise) and associated guidelines allows agricultural practices to generate noise provided the activity is in accordance with reasonable and practicable industry measures as described in the Environmental Code of Practice for Agriculture and other industry specific guidelines. Under the code, it is not a breach of the general environmental duty of care if noise is generated in circumstances where it can be shown that the activity is not frequent or that there are no practicable alternatives.

3.28 The Code of Practice and other industry specific guidelines, further advises that rural industry practices should seek to avoid causing excessive noise at night-time (10 p.m.–6 a.m.) which may affect residential areas. Modification of farm machinery and management practices may reduce noise levels, but there will be instances when the generation of noise due to agricultural practices is unavoidable and may result in conflicts between land uses. Planning may also reduce conflict arising from noise by requiring appropriate buffer areas.

3.29 Many noisy activities associated with agriculture are intermittent and may only affect a particular adjacent residence for a few hours several times a year. For example, small cropping on a two crop per year basis for potatoes generally requires approximately 25 hours of machinery activity per hectare per year; sugar cane production requires less than 5 hours machinery activity per hectare per year.

Noise Level and Duration Thresholds

3.30 For the purpose of the planning guidelines the following noise levels and cumulative time thresholds have been adopted to determine whether noise is likely to be excessive outside a noise-sensitive receptor. The noise source is classed as intermittent if the specified noise level in the following table is exceeded for a cumulative total of 10 hours per year. If this cumulative time threshold is not exceeded, the noise source is considered not sufficient to require a buffer area. The noise source is classed as long term if the specified

noise level in the following table is exceeded for a cumulative total of 50 hours per year. Furthermore, stricter design goals are applied to night time operations between 10 p.m. and 6 a.m.

Table 1. Noise design goals

| | Intermittent >10 hrs/yr | Long term >50 hrs/yr |
|------------------------------|------------------------------------|------------------------------------|
| Day-time 6 a.m.–10 p.m. | 75 dB(A) (L _{Amax,T}) | 60 dB(A) (L _{Amax,T}) |
| Night-time 10 p.m.–6 a.m. | 55 dB(A) (L _{Amax,T}) | 45 dB(A) (L _{Amax,T}) |

3.31 The following formulae outline the steps for calculating cumulative hours of noise which exceed the design goals per year from agricultural activities.

The formula for deriving hours per year of excessive noise from intermittent day-time activities is as follows:

$$x = \sum\{(c \times f \times X \times h) \times (\pi \times d^2/2)\}$$

where:

$$x = \text{hours/year when noise exceeds 75 dB(A)} (L_{Amax,T})^7 c$$

c = crops per year

f = frequency of activity (a...z) per crop

h = hours of noise per hectare for activity (a...z)

$$d = 10((N-60.47)/16.6) \text{ where}$$

N = noise measured as L_{Amax,T} at 7.5 m for activity (a...z)

NB: For long-term day-time activity, use

$$d = 10((N-45.47)/16.6)$$

The formula for deriving hours per year of excessive noise from intermittent night-time activities is as follows:

$$y = \sum\{(c \times f \times X \times n)\}$$

where:

$$y = \text{hours/yr when noise exceeds 55 dB (A)} (L_{Amax,T})^7$$

c = crops per year

f = frequency of night-time activity (a...z) per crop

n = hours of activity per night (prior to 6am) when noise levels exceed 55dB(A)
(L_{Amax,T})

⁷ L_{Amax,T} is the average maximum A-weighted sound pressure level in a specified time interval or event.

Buffer Area Width

3.32 In cases where the duration thresholds are likely to be exceeded, the planning guidelines use the noise design goals in Table 1 for determining effective separation distances. Minimum separation distances have been determined on the basis of noise attenuation rates of 5 dB(A) for each doubling of distance from the noise source. This attenuation rate assumes open ground conditions. The existence of natural barriers, broken topography or other features would increase attenuation and affect the separation distance required. A standard noise source of 90 dB(A) ($L_{Amax,T}$), measured at 7.5 m from the source has been used. For example a day-time noise level attenuates to 75 dB(A) ($L_{Amax,T}$) by a distance of 60 m from the source. A night-time noise level attenuates to 55 dB(A) ($L_{Amax,T}$) by a distance of 1000 m from the source. These distances have been adopted in the planning guidelines as the minimum buffer width for intermittent day and night-time activities that occur more than 10 hrs/yr but less than 50 hrs/yr.

3.33 If a noise source operating at 90 dB(A) ($L_{Amax,T}$) were to exceed the noise design goals for >50 hrs/yr, a distance of 500 m to attenuate the noise level to 60 dB(A) ($L_{Amax,T}$) for day-time noise, would be required. Night-time noise at this level may exceed 45 dB(A) ($L_{Amax,T}$) up to 4 km away. Such noise occurrence between 10 p.m.–6 a.m. is likely to be considered intrusive and therefore unreasonable. In circumstances where there are existing long term noise sources close to a proposed residential development, the proponent may consider funding measures such as machinery enclosures, mufflers, noise barriers and /or house design elements such as double glazing to complement subdivision layout and design measures to meet the performance criteria.

3.34 Appendixes 3 and 4 provide technical data on noise issues and worked examples of using these formulae to determine whether noise duration thresholds have been exceeded.

3.35 Applicants who wish to propose alternative noise reduction measures should determine noise levels at specific representative sites and demonstrate that the noise design goals for residential areas as set out in the draft EPP (Noise) and associated guidelines are not exceeded.

3.36 Factors affecting noise from agricultural activities which should be considered in designing buffer areas include:

- type of engine (diesel or petrol; 2- or 4-stroke);
- number of cylinders;
- cooling system (air or liquid);
- load;
- timing, frequency and duration of operations;
- geographical conditions and barriers e.g. topography and inversions;
- weather conditions e.g. wind speed and direction;
- typical industry machinery and practices.

3.37 It should be noted that while noise barriers can reduce noise by 10–16 dB(A) they may prove costly and have long term maintenance implications. Earth mounds to control noise must be carefully engineered to ensure minimum impacts on natural drainage patterns or the effectiveness of vegetated buffers. Noise attenuation devices may reduce the minimum separation distance for 90 dB(A) ($L_{Amax,T}$) intermittent day-time activities from 60 m to 15 m and for intermittent night-time activities from 1000 m to 250 m using a 10 dB(A) reduction as a guide.

Aircraft Noise

3.38 In areas of aerial spraying, the separation distance between the development and agricultural land must be a minimum of 100 m to comply with Air Navigation Order 20.21. This distance is based on operational safety and noise considerations.

Element: Noise from agricultural activities

Objective: To locate new residential areas so that noise from agricultural activities is attenuated to safeguard amenity in noise sensitive places.

Performance Criteria

- a) Residential development to be located or incorporate designs to minimise the impact of noise in excess of the duration threshold from **day-time** agricultural activities at dwelling within the development.

- b) Residential development to be located or incorporate designs to minimise the impact of noise in excess of the duration threshold from **night-time** agricultural activities at dwellings within the development.

- c) In areas of **aerial** agricultural activity, development should be located to minimise noise from aircraft.

Acceptable Solutions

- a) (i) The separation distance between the sensitive receptor and agricultural land is a minimum of 60 m for intermittent noise and 500 m for long-term noise.

- or:
- (ii) A buffer width and design based on a report from a qualified acoustic consultant acceptable to council detailing relevant factors and verifying that noise design goals consistent with the draft EPP (Noise) will be met at sensitive receptors within the development.

- or:
- (iii) Other measures which meet the performance criteria and which are acceptable to council.

- b) (i) The separation distance between the sensitive receptor and agricultural land is a minimum of 1000 m.

- or:
- (ii) A buffer width and design based on a report from a qualified acoustic consultant acceptable to council detailing relevant factors and verifying that noise design goals consistent with the draft EPP (Noise) will be met at sensitive receptors within the development.

- or:
- (iii) Other measures which meet the performance criteria and which are acceptable to council.

- c) The separation distance between the sensitive receptor and agricultural land to be a minimum of 100 m to comply with Air Navigation Order 20.21 which prohibits air craft flying closer than 100 m to a private dwelling.

Element: Dust, Smoke and Ash

Overview

3.39 Some agricultural activities including cultivation prior to planting, tractor and transport movements, cane fires and harvesting can generate dust, smoke and ash.

3.40 Contemporary farming practices incorporate measures to minimise loss of soil, but at times it is necessary to leave land unplanted for extended periods, which can lead to the movement of dust. Local conditions, including wind strength and direction, rainfall, humidity and ambient temperatures, soil type, vegetative cover and type of on site activity determine the extent of the nuisance.

3.41 The Environmental Audit of the Queensland Cane Growing Industry identifies cane fires as a source of smoke and ash nuisance for residents adjacent to farms but the continuing adoption of green cane harvesting will help to reduce the impacts from cane fires.

Buffer Area Design

3.42 In the absence of quantitative research data, the planning guidelines recommend a separation distance of 150 m where dust, smoke or ash from agricultural activities have been identified as a potential nuisance. In most cases, a vegetated buffer designed to capture chemical spray drift (*see Appendix 2*) will also be effective in reducing conflict resulting from dust, smoke and ash.

Element: Dust, smoke and ash from agricultural activities

Objective: To locate new residential areas so that the impact of dust, smoke and ash generated by agricultural activities on residential areas is minimised.

Performance Criteria

Residential development to be located or incorporate measures to minimise the impact of dust, smoke and ash generated by agricultural activities.

Acceptable Solutions

- (i) The separation distance between the sensitive receptor and agricultural land is a minimum of 150 m.

or:

- (ii) A vegetated buffer designed by a consultant acceptable to council is located between the sensitive receptor and adjacent agricultural land. The vegetated buffer should:
 - be provided with a suitable watering system;
 - include access strips on either side which are kept clear of vegetation and other flammable materials;
 - be of a height, density and width (40 metres min) acceptable to council prior to the development of residential areas within 150 m of the agricultural land.

or:

- (iii) • Other measures which meet the performance criteria and which are acceptable to council.

Element: Sediment and stormwater run-off

Overview

3.43 Residential development affects land surface characteristics and the hydrological balance, with the impacts often occurring on farmland located lower in the landscape. The increase of impermeable surfaces and changes to drainage patterns can accelerate soil erosion, siltation and sedimentation; and increase the risk of flooding. Techniques to alleviate conflict due to downstream effects of residential development include suitable erosion, sediment and stormwater control during the construction and operational stages of a development.

3.44 Soil erosion can be a major problem due to the highly dispersive and unstable nature of many soils in

Queensland. Proper subdivision and infrastructure design to minimise soil movement and silt loads entering drainage lines should be implemented. Temporary sediment control works should be constructed on sloping ground or near drainage lines during construction.

Buffer Area Design

3.45 Options available for council can include provisions for an erosion control plan for the construction and operation phases of the development, and management of stormwater run-off. Buffer areas can also be designed to utilise techniques such as water spreading and water diversion to reduce conflicts from stormwater run-off between residential development and adjacent farmland. Ongoing maintenance and enforcement must be identified and incorporated into conditions of approval.

Element: Sediment and stormwater run-off from residential development

Objective: To design new residential areas so that the impact of run-off and sediment from residential development areas on agricultural land is minimised.

Performance Criteria

Residential development to be located or incorporate measures to minimise the impact of sediment and storm water run-off on agricultural enterprises.

Acceptable Solutions

- (i) Residential development proposals to include the following:
 - an erosion control plan for the construction and operation phases of the development which meets the standards set out in the Guidelines for Soils Erosion and Sediment Control for Construction Sites (1996);
 - stormwater run-off from all hard surfaces (including roads, roofs, driveways etc.) to be carried to stable waterways;
 - measures such as water spreading and water diversion implemented within the buffer area.

or:

- (ii) Other measures which meet the performance criteria and which are acceptable to council.

Summary of Buffer Area Design Criteria

3.47 The design and adoption of a buffer area for a particular development proposal will reflect an analysis of all the elements likely to cause conflict and the final buffer area and component elements should reflect the

most intrusive element. Table 2 gives an overall summary of each element’s duration threshold and design criteria for acceptable solutions. See also Appendix 6 for examples of effective buffer areas.

Table 2. Summary of buffer area design criteria

| | Duration threshold | Min. default distance (m) | Min. design distance with buffer element(m) |
|----------------------|----------------------|---------------------------|---|
| Chemical spray drift | None | 300 | 40 |
| Intermittent odour | >88 hrs/yr | 500 | 500* |
| Intermittent noise** | >10 hrs/yr<50 hrs/yr | 60 (d) | 15 (d) |
| | | 1000 (n) | 250 (n) |
| Long term noise ** | >50 hrs/yr | 500 (d) | 120 (d) |
| | | 1000# (n) | 1000# (n) |
| Dust, smoke and ash | None | 150 | 40 |

* Minimum design distance for an odour buffer area may be reduced on consideration of site factors and nature of odour

** Based on source noise level of 90 dB(A) (L_{Amax,T}) at 7.5 m

d = Noise occurring in day-time (6 a.m.–10 p.m.)

n = Noise occurring in night-time (10 p.m.–6 a.m.)

= Long-term noise occurring between 10 p.m.–6 a.m. is likely to be considered intrusive and therefore unreasonable. Such noise sources may be ameliorated by a combination of enclosing or muffling the source of the noise, by provision of a buffer area and attention to residential design.

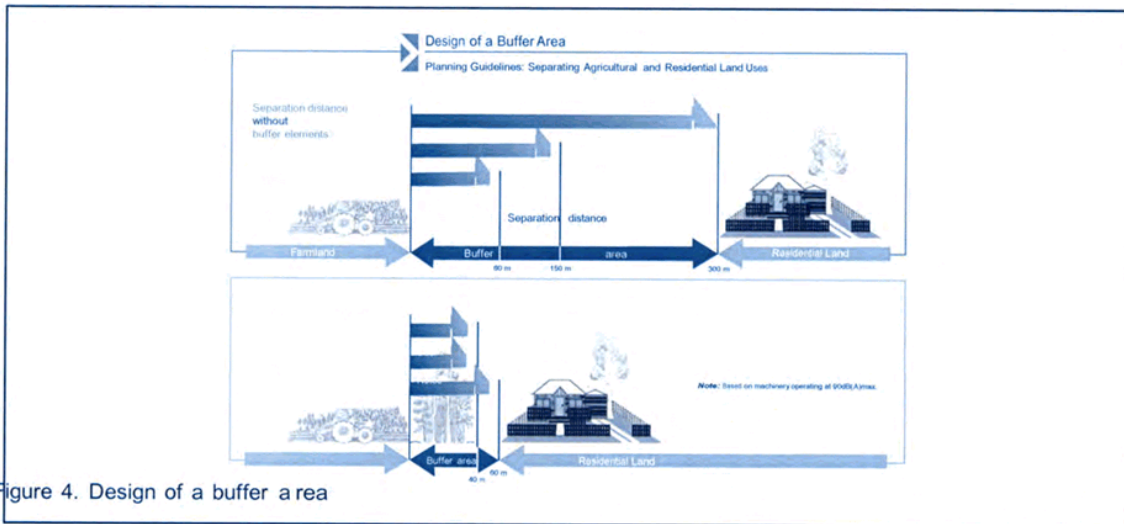


Figure 4. Design of a buffer area

4. Ownership and Maintenance of Buffer Areas

Ownership

4.1 Ownership and tenure may vary depending on the circumstances, and can be mixed over the area. For example, council parks, State land (e.g. roads), leasehold land, freehold land and easements may combine to form a continuous buffer area. An area designated as a 'buffer area' does not need to change tenure. However it should be managed in ways that reduce conflict between land uses.

Private land—single tenure

4.2 Private land refers to freehold and leasehold land. A buffer area on privately-owned land can be created through:

- planning controls such as building envelopes and other reasonable and relevant conditions attached to a development approval;
- Vegetation Protection Orders or other tree clearing controls to protect vegetation where existing vegetation is contributing to an effective buffer area;
- voluntary provision of a buffer area by the rural landholder when initiating an intensification of rural land use.

4.3 The owner will retain the rights to use the land forming the buffer area, subject to the controls and agreements put in place at the time of creation of the buffer area. Vegetation protection orders may need to be revoked if the separation area becomes redundant.

4.4 Where the buffer area is provided voluntarily by the rural land holder on rural land, it should remain in private ownership and may support productive rural uses which will not affect residential amenity, for example grazed pasture or farm forestry. Where the buffer area consists of natural vegetation with conservation values, the landholder may enter a voluntary agreement under the *Nature Conservation Act 1992* to create a nature refuge.

Private land—joint tenure

4.5 Common property areas of land which are often included as part of a community title form of development, may be used as a buffer area where the location is suitable. The land use and management must be consistent with the reduction of land use conflict.

4.6 The common property to be incorporated as the buffer area would be owned by the members of the joint tenure arrangement, usually the body corporate.

Public land

4.7 Buffer areas in public ownership will usually be under the control of local governments but may also include land under the control of State instrumentalities such as the Main Roads Department, Transport Department or Department of Natural Resources. Depending on the circumstances, parks, public open space, road and drainage reserves may be used as buffer areas. The permitted uses of the area may need to be varied if it is to function as a buffer area.

Maintenance

4.8 As a general rule, buffer areas should be properly designed to avoid special maintenance requirements whilst achieving their maximum desired effect of separating conflicting land uses. However, it will be necessary to ensure ongoing maintenance of buffer areas, including replanting, thinning, management for fire protection, herbicide damage, noxious weeds, feral animals, litter build-up etc. so that the buffer areas continue to be effective in reducing conflict. Vegetated buffers may require ongoing attention to maintain a porosity of 0.5 with suitable lower and upper storey vegetation to ensure their effectiveness in capturing spray drift.

4.9 Vegetated buffers may serve as components of wildlife corridors and improve opportunities for conserving wildlife habitat. Expert advice on effective wildlife corridors should be obtained from the Department of Environment. Where natural vegetation is used as a buffer element, management should meet objectives of both nature conservation and buffer performance. Where nature conservation objectives preclude thinning to achieve porosity specifications, an increased buffer width may be necessary.

4.10 To achieve effective management, clear responsibilities for maintenance should be determined before the buffer areas are implemented.

Responsibilities for maintenance will be largely determined by ownership. If in public ownership, local government and other agencies would be responsible for overseeing maintenance in conjunction with their usual town planning/health inspection and parks/gardens operations. In general, maintenance of buffer areas in private ownership will be the responsibility of the proprietor, as controlled by development conditions, local laws, or environmental protection agreements. The recommended mechanism is through planning conditions imposed on a development approval. These conditions attach to the land and are binding on successors in title. The necessary controls to ensure this maintenance is carried out must be in place at the time the buffer area is created.

4.11 Under joint tenure arrangements, the body corporate is responsible for the maintenance of the common area which would include the roads and any dams or buildings which exist on the common area. Control of fire, noxious weeds and feral animals should be the responsibility of the body corporate, as outlined in the body corporate management plan. This would need to be presented to the local government for approval at the time of the development application.

5. Dealing with Existing Conflicts

5.1 It should be noted that while this section does not deal with planning issues, it has been included for the benefit of councils and their local communities.

5.2 Where the opportunity to implement buffer areas is limited due to existing patterns of development, other options to reduce conflict can be explored. Mechanisms should aim to minimise conflict while not restricting existing legitimate farming operations.

Mediation and Negotiation

5.3 Many disputes arise as a result of a lack of information and understanding of why certain practices are carried out, or their effects on nearby residents. Councils should bring the conflicting parties together to discuss their concerns and focus on finding solutions. Often parties in dispute can reach agreement amongst themselves when given the opportunity.

5.4 The Department of Justice provides an alternative dispute resolution mechanism for the resolution of community disputes. It is a free, confidential mediation service that can be accessed from anywhere within the State via a toll free number. The department handles a wide range of disputes and issues. Disputes handled to date have involved neighbours on issues such as trees, boundaries, children and noise, and public issues disputes involving government departments, residents groups, conservation groups, industry representatives etc. The use of this mediation service does not limit an individual's right to use other legal avenues. This service can be reached by telephoning 1800 017 288.

5.5 The National Disputes Centre also offers a mediation service for conflict resolution, and can be reached by telephoning 029 223 1044.

Source Controls and Agricultural Practices

5.6 With the implementation of the EP Act, all persons now have a general duty of care to protect the environment. Rural producers are required to adopt reasonable and practicable measures to avoid environmental harm. These measures are set out in the Environmental Code of Practice for Agriculture. This may mean that some primary producers may need to modify some current practices to comply with the code.

5.7 Local governments will be responsible for administering sections of the EP Act. In some situations, councils may have no alternative other than to impose appropriate source controls on offending activities. An example of this may be that a farmer needs to operate a stationary pump adjacent to residences, for extended periods. In this case a cover, mounding or muffler that reduces the noise emitted by the pump to EPP Noise Design Goals would be required. Farmers can modify their practices or voluntarily forego agricultural production adjacent to residential areas to reduce conflict. Residential land holders may also choose to voluntarily forego the use of land adjacent to agricultural land for a buffer area to reduce conflict.

Education

5.8 Persons intending to live in or adjacent to an agricultural production area need to be fully informed of the likely agricultural practices that may impact on their residential amenity before they settle in such an area.

5.9 Local governments and primary industry bodies can play a role in the education process. Councils can include a 'Notice to Intending Purchasers' (see Figure 5) when providing information to persons conducting conveyancing searches. Figure 5 provides an example of such a notice. This could be combined with media releases and other methods of disseminating information to inform people from non-agricultural backgrounds. Government departments can also assist. The Department of Primary Industries produces farmer publications (Farmnotes, Guidelines for producers etc.) that can aid in educating the public; and the Department of Natural Resources provides advice on sustainable land management practices.

(EXAMPLE ONLY)

NOTICE

TO PURCHASERS OF LAND IN RURAL AREAS IN (...) SHIRE

(...) Shire Council supports the right of persons in rural areas to carry out agricultural production using reasonable and practicable measures to avoid environmental harm. An Environmental Code of Practice for Agriculture has been prepared under the *Environmental Protection Act 1995* and provides guidance on reasonable and practicable measures.

Intending purchasers are advised that agricultural production practised in accordance with the Code of Practice may include some of the following activities and some activities may have implications for occupiers of adjacent land :

- Logging and milling of timber
- Dairies
- Intensive livestock production (feedlots, piggeries and poultry farms)
- Vegetation clearing
- Cultivation and harvesting
- Bushfire hazard reduction burning
- Construction of firebreaks
- Construction of dams, drains and contour banks
- Fencing
- Use of agricultural machinery (tractors, chainsaws, motor bikes etc.)
- Pumping and irrigation
- Pesticide spraying
- Aerial spraying
- Animal husbandry practices
- Droving livestock on roads
- Silage production
- Construction of access roads and tracks
- Slashing and mowing vegetation
- Planting of wood lots

Intending purchasers of land in rural areas may have difficulty with some of these activities or the impact of these activities when they are being carried out on land near their proposed purchase. If so, they should seek independent advice and consider their position.

This notice is not intended to affect the rights of individuals to take action under the common law or legislation (including the *Health Act 1937*, *Environmental Protection Act 1994*, *Agricultural Chemical Distribution Control Act 1966* or the *Work Place Health and Safety Act 1995*).

This notice is provided for information purposes only.

Figure 5. Sample notice to intending purchasers

6. Roles

Proponents/Consultants

- Submit planning applications to local government.
- Provide accurate information which addresses each element of conflict and submit a residential design which minimises land use conflict.
- Determine the sustainable agricultural land use with the potential for causing most problems for adjacent residential uses and which is reasonably likely to occur adjacent to the subject land.
- Identify the elements that may cause conflict and the extent of the conflict. The elements should be quantified where possible in terms of frequency and duration of activities to determine the element's impacts.
- Explain how the proponent intends to address each element to achieve acceptable outcomes in terms of residential area design, size of lots, separation distances, tree planting acoustic barriers etc.
- Propose the means by which the proposed measures will be implemented, monitored and maintained to ensure continued effectiveness.

Local Government

- Prepare strategic plans indicating areas of good quality agricultural land, investigation areas (areas of potential conflict), policies for the protection of such areas; and the avoidance of land use conflict.
- Provide applicants with detailed information as set out in *Planning Guidelines: Separating Agricultural and Residential Land Uses*.
- Determine applications, based on independent advice if necessary, and set appropriate conditions.
- Supply site data from planning applications to DNR and/or DoE (if advice from these agencies is required).

Department of Natural Resources

- Provide advice to local government and comment on available broad-scale land resource information for strategic planning.
- Define what constitutes good quality agricultural land within a local government area.

- Assist consultants and local government staff in the interpretation of the elements of land use conflict in rural areas.
- Assist local governments in checking submitted information, if required, and ensure appropriate standards are met.
- Provide advice to DLGP relevant to the implementation of State Planning Policy 1/92.

Department of Local Government and Planning

- Review planning schemes and amendments (rezonings) submitted by local governments.
- Provide policy guidance to local governments.

Department of Environment

- Set standards and provide advice on noise and air quality under the *Environmental Protection Act 1994*.
- Assist local governments in checking submitted information, if required, and ensure appropriate standards are met.
- Provide advice to DLGP and/or DNR relevant to the implementation of State Planning Policy 1/92.

Department of Primary Industries

- Assist local governments in checking submitted information, if required, and ensure appropriate standards are met.
- Provide relevant information on licence conditions for approved intensive animal production facilities to local government.
- Provide advice to DLGP and/or DNR relevant to the implementation of State Planning Policy 1/92.
- Provide advice on the most suitable agricultural land use for an area.

Agricultural Producers

- Carry out agricultural practices in accordance with the Environmental Code of Practice for Agriculture and relevant industry guidelines.

Residents

- Understand agricultural workplace practices.
- Maintain buffer areas and buffer elements located on private land.

References

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Department of Primary Industries

Michael Artlett, John Walthall, Nick Delaney, Garth Grainger, Jim Fletcher

For technical Enquiries concerning this publication contact the Principal Policy Officer (LandUse), Department of Natural Resources

Telephone (07) 3224 8392

APPENDIX 1: Existing controls

| <i>Issue</i> | <i>legislation/regulations</i> | <i>Guidelines/</i> | <i>Contact Codes of Practice</i> |
|------------------------|---|--|---|
| Agricultural Chemicals | <ul style="list-style-type: none"> • Agricultural Chemicals Distribution and Control Act, 1966 • Chemical Use (Agricultural and Veterinary) Act, 1988 | Environmental Code of Practice for Agriculture | Department of Primary Industries* |
| Aircraft | Civil Aviation Order 20.21 | Civil Aviation Authority | |
| Air Quality | <ul style="list-style-type: none"> • Environmental Protection Act, 1994 • EPP (Air) | Environmental Code of Practice for Agriculture | Department of Environment** |
| Environmental Health | Health Act | | Department of Health |
| Feedlots | Stock Act, 1989 | Guidelines for the Establishment and Operation of Cattle Feedlots | Department of Primary Industries* |
| Fire | Qld Fire Services Act, 1990 | Qld Fire Service | |
| Noise | <ul style="list-style-type: none"> • Environmental Protection Act, 1994 • EPP (Noise) | Environmental Code of Practice for Agriculture | <ul style="list-style-type: none"> • Department of Environment** • Local governments |
| Piggeries | | Draft Environmental Code of Practice for Piggeries in Qld | <ul style="list-style-type: none"> • QPPO, Department of Primary Industries* |
| Poultry Farms | | Guidelines for Poultry Farming in Queensland | Department of Primary Industries* |
| Water Quality | <ul style="list-style-type: none"> • Environmental Protection Act, 1994 • EPP (Water) | Environmental Code of Practice for Agriculture | <ul style="list-style-type: none"> • Department of Environment** • Local governments |
| Waterways | Water Resources Act, 1989 | Water Quality Council of Queensland Guidelines | <ul style="list-style-type: none"> • Department of Natural Resources*** • Local governments |
| Work Practices | Workplace Health and Safety Act, 1995 | Advisory standards for: <ul style="list-style-type: none"> • Storage and Use of Chemicals at Rural • Use of Rural Plant at a Rural Workplace | Department of Training and Industrial Relations |

* Contact local offices of the Department of Primary Industries listed in local telephone directories.

** Contact district or regional offices of the Department of Environment listed in local telephone directories.

*** Contact district offices of the Department of Natural Resources listed in local telephone directories.

APPENDIX 2: Vegetated buffer element design

While buffer areas of 300 m width are recommended for forward planning between residential and agricultural areas, ‘vegetated buffers’ can offer an alternative to this separation requirement. Research into the behaviour of pesticide spray drift has shown that vegetation screens can prove effective barriers to spray drift where they meet the following criteria:

- are of a minimum total width of 40 m;
- contain random plantings of a variety of tree and shrub species of differing growth habits, at spacings of 4–5 m for a minimum width of 20 m;
- include species with long, thin and rough foliage which facilitates the more efficient capture of spray droplets;
- provide a permeable barrier which allows air to pass through the buffer. A porosity of 0.5 is acceptable (approximately 50% of the screen should be air space);
- foliage is from the base to the crown;
- include species which are fast growing and hardy;
- have a mature tree height 1.5 times the spray release height or target vegetation height, whichever is higher;

- have mature height and width dimensions which do not detrimentally impact upon adjacent cropped land;
- include an area of at least 10 m clear of vegetation or other flammable material to either side of the vegetated area;

Vegetated buffers have other advantages in that they:

- create habitat and corridors for wildlife;
- increase the biological diversity of an area, thus assisting in pest control;
- favourably influence the microclimate;
- are aesthetically pleasing;
- provide opportunities for recreational uses;
- contribute to the reduction of noise and dust impacts.

Applications for development, where vegetated buffers are proposed, should include a landscape plan indicating the extent of the buffer, the location and spacing of proposed and existing trees and shrubs and a list of tree and shrub species to be planted. The application should also contain details concerning proposed ownership of the vegetated buffer and the means by which the buffer is to be maintained. Information on appropriate vegetation species is available in the publication *Trees and Shrubs* or from DNR forestry extension officers.

Based on research by Centre of Pesticide Application and Safety, University of Queensland, Gatton College.

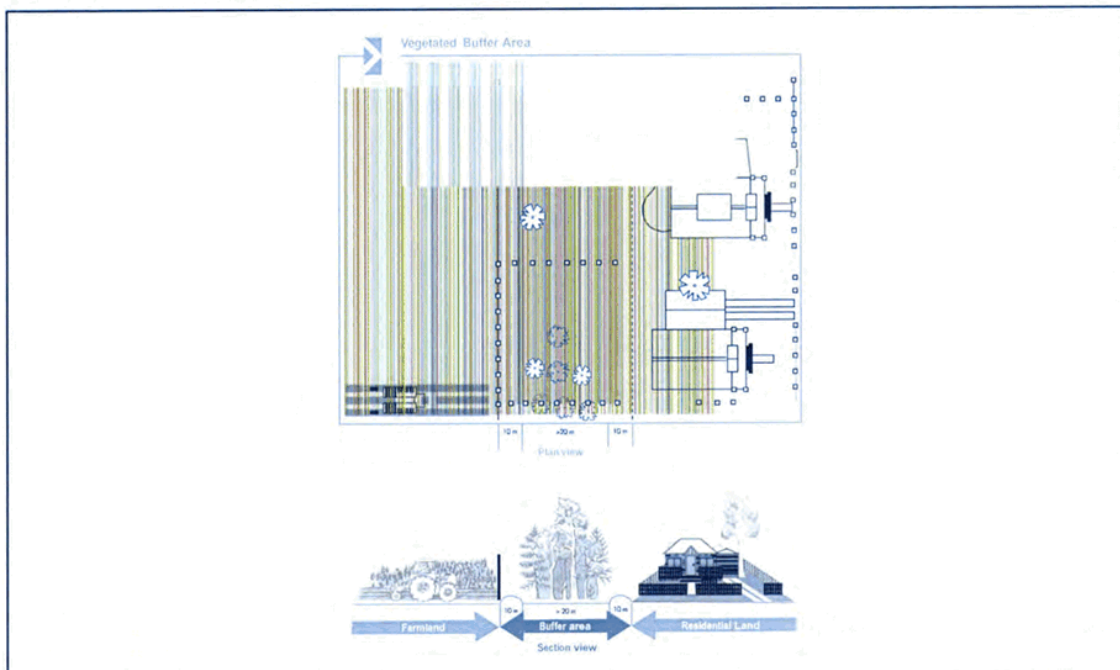
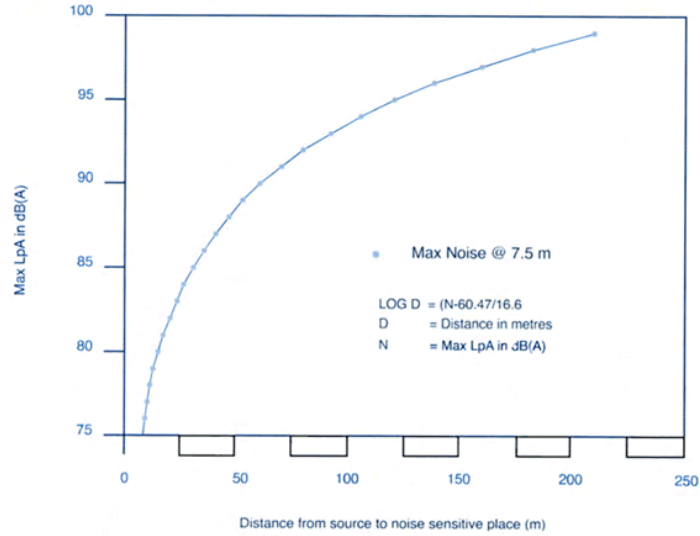


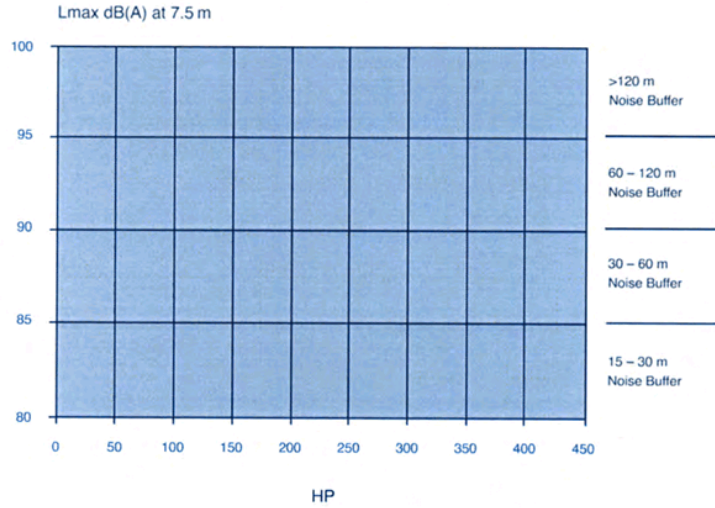
Figure 6. Vegetated buffer element

APPENDIX 3: Noise levels and separation distances

Noise levels and separation distance required to reduce noise levels to 75 dB(A)(L_{Amax,T})



Tractor HP and Noise Levels



Source: Leviticus and Morgan (1993)

APPENDIX 4: Examples and formulae for duration thresholds

The following formula and examples demonstrate the duration thresholds of intermittent noise generating activities by crop type. For day-time activities the formula for determining the number of hours of noise from agricultural activities per year is:

$$x = \sum\{(c \times f \times h) \times (\pi \times d^2 / 2)\}$$

where:

x = hours/year when noise exceeds 75 dB(A) (L_{Amax,T})

c = crops per year

f = frequency of activity (a...z) per crop

h = hours of noise per hectare for activity (a...z)

d = 10[(N-60.47)/16.6]

N = noise measured as (L_{Amax,T}) at 7.5 m for activity (a...z)

The results indicate that of all crops tested, tomatoes (25 hrs) and beetroot (15 hrs) have more than 10 hours of day-time activity per year when noise will exceed 75 dB(A) (L_{Amax,T}). The other crops conform with the duration threshold for noise which allows for up to 10 hours of day time activity per hectare per year. The separation distance required would be 69 m.

For night-time activities the formula is:

$$y = \sum(c \times f \times n)$$

where:

y = hours/yr when noise exceeds 55 dB(A) (L_{Amax,T})

c = crops per year

f = frequency of night-time activity (a...z) per crop

n = hours of activity per night (prior to 6 a.m.) when noise levels exceed 55dB(A) (L_{Amax,T})

The results indicate that while some crops do not require any night-time activities, beetroot (12 hrs), avocado (28 hrs), potatoes (32 hrs), tomatoes (96 hrs) and lucerne (48 hrs) require nighttime activities which exceed 10 hr/year when noise will exceed 55 dB(A) (L_{Amax,T}). The other crops conform with the duration threshold for noise which allow for up to 10 hours of night-time activity per year without the need for a buffer area.

The separation distance required without other amelioration measures would be 500 m for beetroot and lucerne and 1000 m for avocado, potatoes and tomato.

| Crop | Crops/yr {c} | Activity | Day /Night | Freq/ crop {f} | Freq/ yr | Hrs/ ha {h} | Hrs/ ha/yr {o} | dB(A) @ 7.5 m {N} | Impact dist.(m) {d} | Impact area (ha) {π*d ² /2} | Hrs/yr> 75 dB(A) {x} | Hrs/yr> 55 dB(A) |
|--------------|--------------|-----------|------------|----------------|-----------|-------------|-------------------|-------------------|---------------------|--|----------------------|------------------|
| Beetroot | 2 | plough | D | 3 | 6 | 1.67 | 10.00 | 91.00 | 69 | 0.75 | 7.49 | |
| | 2 | cultivate | N | 3 | 6 | 0.50 | 3.00 | 87.00 | 40 | 0.25 | 0.74 | |
| | 2 | plant | D | 1 | 2 | 1.00 | 2.00 | 87.00 | 40 | 0.25 | 0.49 | |
| | 2 | fertilise | | 2 | 4 | 1.00 | 4.00 | 87.00 | 40 | 0.25 | 0.99 | |
| | 2 | spray | | 3 | 6 | 0.40 | 2.40 ^o | 87.00 | 40/500 | 0.25 | 0.59 | 12.00 |
| | 2 | harvest | | 1 | 2 | 3.33 | 6.67 | 91.00 | 69 | 0.75 | 4.99 | |
| Total | | | | 13 | 26 | 7.90 | 28.07 | | | | 15.29 | 12.00 |

^o = hours of operation per hectare per year of odour producing activity

| Crop | Crops/yr {c} | Activity | Day /Night | Freq/ crop {f} | Freq/ yr | Hrs/ ha {h} | Hrs/ ha/yr {o} | dB(A) @ 7.5 m {N} | Impact dist.(m) {d} | Impact area (ha) {□*d2/2} | Hrs/yr> 75 dB(A) {x} | Hrs/yr> 55 dB(A) |
|------------|--------------|---------------|---------------------|----------------|-----------|-------------|-------------------|-------------------|---------------------|---------------------------|----------------------|------------------|
| Sugar cane | 0.25 | plough | D | 1 | 0.25 | 1.00 | 0.25 | 95.00 | 120 | 2.27 | 0.57 | |
| | 0.25 | plant | | 1 | 0.25 | 1.00 | 0.25 | 91.00 | 69 | 0.75 | 0.19 | |
| | 1 | cultivate | | 4 | 4 | 0.25 | 1.00 | 91.00 | 69 | 0.75 | 0.75 | |
| | 1 | fertilise (N) | | 1 | 1 | 0.33 | 0.33 | 91.00 | 69 | 0.75 | 0.25 | |
| | 1 | fertilise (P) | | 1 | 1 | 1.00 | 1.00 | 91.00 | 69 | 0.75 | 0.75 | |
| | 1 | spray | | 2 | 2 | 0.17 | 0.33 ^o | 91.00 | 69 | 0.75 | 0.25 | |
| | 1 | harvest | | 1 | 1 | 1.00 | 1.00 | 96.00 | 138 | 3.00 | 3.00 | |
| | Total | | aerial spray | | 11 | 9.5 | 4.75 | 4.16 | | | | 5.76 |

| Crop | Crops/yr {c} | Activity | Day /Night | Freq/ crop {f} | Freq/ yr | Hrs/ ha {h} | Hrs/ ha/yr {o} | dB(A) @ 7.5 m {N} | Impact dist.(m) {d} | Impact area (ha) {□*d2/2} | Hrs/yr> 75 dB(A) {x} | Hrs/yr> 55 dB(A) |
|--------------|--------------|---------------|------------|----------------|-----------|-------------|-------------------|-------------------|---------------------|---------------------------|----------------------|------------------|
| Avocado | 1 | slashing | D | 10 | 10 | 0.33 | 3.33 | 90.00 | 60 | 0.57 | 1.89 | |
| | 1 | weed spraying | N | 4 | 4 | 0.40 | 1.60 | 90.00 | 60 | 0.57 | 0.91 | |
| | 1 | pesticides | D | 14 | 14 | 0.40 | 5.60 ^o | 90.00 | 60/1000 | 0.57 | 3.18 | 28.00 |
| | 1 | harvesting | | 3 | 3 | 1.00 | 3.00 | 85.00 | 30 | 0.14 | 0.43 | |
| Total | | | | 31 | 31 | 2.13 | 13.53 | | | | 6.41 | 28.00 |

| Crop | Crops/yr {c} | Activity | Day /Night | Freq/ crop {f} | Freq/ yr | Hrs/ ha {h} | Hrs/ ha/yr {o} | dB(A) @ 7.5 m {N} | Impact dist.(m) {d} | Impact area (ha) {□*d2/2} | Hrs/yr> 75 dB (A) {x} | Hrs/yr> 55 dB(A) |
|--------------|--------------|-----------------|------------|----------------|-----------|-------------|-------------------|-------------------|---------------------|---------------------------|-----------------------|------------------|
| Irrigated | 1 | chisel plough | D | 1 | 1 | 1.67 | 1.67 | 91.00 | 69 | 0.75 | 1.25 | |
| Cotton | 1 | rip | D | 1 | 1 | 1.67 | 1.67 | 91.00 | 69 | 0.75 | 1.25 | |
| | 1 | bed preparation | D | 3 | 3 | 1.00 | 3.00 | 91.00 | 69 | 0.75 | 2.25 | |
| | 1 | fertiliser | | 1 | 1 | 0.42 | 0.42 | 87.00 | 40 | 0.25 | 0.10 | |
| | 1 | plant | D | 1 | 1 | 1.00 | 1.00 | 87.00 | 40 | 0.25 | 0.25 | |
| | 1 | boom spray | | 7 | 7 | 0.40 | 2.80 ^o | 87.00 | 40 | 0.25 | 0.69 | |
| | 1 | aerial spray | D | 8 | 8 | 0.10 | 0.80 ^o | 100 | 1.57 | 1.26 | | |
| | 1 | picking | | 2 | 2 | 1.00 | 2.00 | 91.00 | 69 | 0.75 | 1.50 | |
| | 1 | stick pulling | | 1 | 1 | 1.00 | 1.00 | 91.00 | 69 | 0.75 | 0.75 | |
| Total | | | | 25 | 25 | 8.26 | 14.36 | | | | 9.30 | 0.00 |

| Crop | Crops/yr {c} | Activity | Day /Night | Freq/ crop {f} | Freq/ yr | Hrs/ ha {h} | Hrs/ ha/yr {o} | dB(A) @ 7.5 m {N} | Impact dist.(m) {d} | Impact area (ha) {□*d2/2} | Hrs/yr> 75 dB(A) {x} | Hrs/yr> 55 dB(A) |
|--------------|-----------------|--------------------|---------------|----------------------|-------------|-------------------|----------------------|----------------------------|---------------------------|---------------------------------|----------------------------|---------------------|
| Dryland | 1 | chisel plough | D | 1 | 1 | 1.67 | 1.67 | 91.00 | 69 | 0.75 | 1.25 | |
| Cotton | 1 | cultivation | D | 2 | 2 | 1.67 | 3.33 | 91.00 | 69 | 0.75 | 2.50 | |
| | 1 | bed preparation | D | 2 | 2 | 1.00 | 2.00 | 91.00 | 69 | 0.75 | 1.50 | |
| | 1 | fertiliser | | 1 | 1 | 0.42 | 0.42 | 87.00 | 40 | 0.25 | 0.10 | |
| | 1 | plant | | 1 | 1 | 1.00 | 1.00 | 87.00 | 40 | 0.25 | 0.25 | |
| | 1 | boom spray | | 3 | 3 | 0.40 | 1.20 ^o | 87.00 | 40 | 0.25 | 0.30 | |
| | 1 | aerial spray | | 4 | 4 | 0.10 | 0.40 ^o | 100 | 1.57 | 0.63 | | |
| | 1 | picking | | 1 | 1 | 1.00 | 1.00 | 91.00 | 69 | 0.75 | 0.75 | |
| | 1 | stick pulling | | 1 | 1 | 1.00 | 1.00 | 91.00 | 69 | 0.75 | 0.75 | |
| Total | | | | 16 | 16 | 8.26 | 12.02 | | | | 8.03 | 0.00 |

| Crop | Crops/yr {c} | Activity | Day /Night | Freq/ crop {f} | Freq/ yr | Hrs/ ha {h} | Hrs/ ha/yr {o} | dB(A) @ 7.5 m {N} | Impact dist.(m) {d} | Impact area (ha) {□*d2/2} | Hrs/yr> 75 dB(A) {x} | Hrs/yr> 55 dB(A) |
|--------------|-----------------|------------------|---------------|----------------------|-------------|-------------------|----------------------|----------------------------|---------------------------|---------------------------------|----------------------------|---------------------|
| Wheat | 1 | chisel plough | D D | 1 | 1 | 1.67 | 1.67 | 91.00 | 69 | 0.75 | 1.25 | |
| Sorghum | 1 | cultivate | | 2 | 2 | 0.33 | 0.67 | 87.00 | 40 | 0.25 | 0.16 | |
| Maize | 1 | plant | | 1 | 1 | 1.00 | 1.00 | 87.00 | 40 | 0.25 | 0.25 | |
| | 1 | spray | | 1 | 1 | 0.40 | 0.40 ^o | 87.00 | 40 | 0.25 | 0.10 | |
| | 1 | harvest | | 1 | 1 | 1.00 | 1.00 | 91 | 69 | 0.75 | 0.75 | |
| Total | | | | 6 | 6 | 4.4 | 4.74 | | | | 2.51 | 0.00 |

| Crop | Crops/yr {c} | Activity | Day /Night | Freq/ crop {f} | Freq/ yr | Hrs/ ha {h} | Hrs/ ha/yr {o} | dB(A) @ 7.5 m {N} | Impact dist.(m) {d} | Impact area (ha) {□*d2/2} | Hrs/yr> 75 dB(A) {x} | Hrs/yr> 55 dB(A) |
|--------------|-----------------|-----------|---------------|----------------------|-------------|-------------------|----------------------|----------------------------|---------------------------|---------------------------------|----------------------------|---------------------|
| Potatoes | 2 | plough | D/N | 1 | 2 | 1.67 | 3.33 | 91.00 | 69/1000 | 0.75 | 2.50 | 4.00 |
| | 2 | cultivate | D/N | 2 | 4 | 0.50 | 2.00 | 87.00 | 40/500 | 0.25 | 0.49 | 8.00 |
| | 2 | plant | D | 1 | 2 | 2.50 | 5.00 | 87.00 | 40 | 0.25 | 1.23 | |
| | 2 | fertilise | D | 2 | 4 | 0.50 | 2.00 | 87.00 | 40 | 0.25 | 0.49 | |
| | 2 | spray | D/N | 5 | 10 | 1.00 | 10.00 ^o | 87.00 | 40/500 | 0.25 | 2.47 | 20.00 |
| | 2 | harvest | D | 1 | 2 | 1.67 | 3.33 | 91.00 | 69 | 0.75 | 1.50 | |
| Total | | | | 12 | 24 | 7.84 | 25.66 | | | | 8.68 | 32.00 |

| Crop | Crops/yr {c} | Activity | Day /Night | Freq/ crop {f} | Freq/ yr | Hrs/ ha {h} | Hrs/ ha/yr {o} | dB(A) @ 7.5 m {N} | Impact dist.(m) {d} | Impact area (ha) {□*d2/2} | Hrs/yr> 75 dB(A) {x} | Hrs/yr> 55 dB(A) |
|--------------|--------------|-------------|------------|----------------|-----------|--------------|--------------------|-------------------|---------------------|---------------------------|----------------------|------------------|
| Tomatoes | 2 | plough | D/N | 1 | 2 | 1.67 | 3.33 | 91.00 | 69/1000 | 0.75 | 2.50 | 4.00 |
| | 2 | disc/tyne | D | 3 | 6 | 1.67 | 10.00 | 91.00 | 69 | 0.75 | 7.49 | |
| | 2 | bed forming | D | 1 | 2 | 2.50 | 5.00 | 91.00 | 69 | 0.75 | 3.74 | |
| | 2 | lay plastic | D | 1 | 2 | 2.50 | 5.00 | 91.00 | 69 | 0.75 | 3.74 | |
| | 2 | plant | D/N | 1 | 2 | 2.50 | 5.00 | 91.00 | 69 | 0.75 | | |
| | 2 | rip | D/N | 1 | 2 | 1.67 | 3.33 | 91.00 | 69/1000 | 0.75 | 2.50 | |
| | 2 | rotary hoe | D | 1 | 2 | 0.33 | 0.67 | 87.00 | 40/500 | 0.25 | 0.16 | |
| | 2 | fertilise | N | 1 | 2 | 0.42 | 0.83 | 87.00 | 40 | 0.25 | 0.21 | |
| | 2 | spray | D | 21 | 42 | 0.40 | 16.80 ^o | 87.00 | 40/500 | 0.25 | 4.15 | |
| | 2 | harvest | | | 2 | 4 | 1.00 | 4.00 | 87.00 | 40 | 0.25 | |
| Total | | | | 33 | 66 | 14.66 | 53.96 | | | | 25.48 | 96.00 |

| Crop | Crops/yr {c} | Activity | Day /Night | Freq/ crop {f} | Freq/ yr | Hrs/ ha {h} | Hrs/ ha/yr {o} | dB(A) @ 7.5 m {N} | Impact dist.(m) {d} | Impact area (ha) {□*d2/2} | Hrs/yr> 75 dB(A) {x} | Hrs/yr> 55 dB(A) | |
|--------------|--------------|---------------|------------|----------------|-------------|-------------|----------------|-------------------|---------------------|---------------------------|----------------------|------------------|-------|
| Lucerne | 0.6 | chisel plough | D | 1 | 0.6 | 1.67 | 1.00 | 91.00 | 69 | 0.75 | 0.75 | | |
| | 0.6 | cultivation | N | 3 | 1.8 | 0.33 | 0.60 | 87.00 | 40 | 0.25 | 0.15 | | |
| | 0.6 | plant | D/N | 1 | 0.6 | 1.00 | 0.60 | 87.00 | 40 | 0.25 | 0.15 | | |
| | 0.6 | fertilise | D | 1 | 0.6 | 0.42 | 0.25 | 87.00 | 40 | 0.25 | 0.06 | | |
| | 1 | spray | | | 10 | 10 | 0.40 | 4.00 ^o | 87.00 | 40 | 0.25 | 0.99 | |
| | 1 | cut | | | 8 | 8 | 1.00 | 8.00 | 87.00 | 40/500 | 0.25 | 1.97 | 16.00 |
| | 1 | raking | | | 16 | 16 | 1.00 | 16.00 | 85.00 | 30/500 | 0.14 | 2.27 | 32.00 |
| | 1 | bailing | | | 8 | 8 | 1.00 | 8.00 | 85.00 | 30 | 0.14 | 1.13 | |
| Total | | | | 48 | 45.6 | 6.82 | 38.45 | | | | 7.47 | 48.00 | |

| Crop | Crops/yr {c} | Activity | Day /Night | Freq/ crop {f} | Freq/ yr | Hrs/ ha {h} | Hrs/ ha/yr {o} | dB(A) @ 7.5 m {N} | Impact dist.(m) {d} | Impact area (ha) {□*d2/2} | Hrs/yr> 75 dB(A) {x} | Hrs/yr> 55 dB(A) |
|--------------|--------------|----------------|------------|----------------|-----------|-------------|-------------------|-------------------|---------------------|---------------------------|----------------------|------------------|
| Peanuts | 1 | chisel plough | D | | 2 | 1.67 | 3.33 | 91.00 | 69 | 0.75 | 2.50 | |
| | 1 | cultivation | D | 2 | 2 | 0.33 | 0.67 | 87.00 | 40 | 0.25 | 0.16 | |
| | 1 | plant | | 1 | 1 | 1.00 | 1.00 | 87.00 | 40 | 0.25 | 0.25 | |
| | 1 | fertilise | | 1 | 1 | 0.42 | 0.42 | 87.00 | 40 | 0.25 | 0.10 | |
| | 1 | spray | | 2 | 2 | 0.40 | 0.80 ^o | 87.00 | 40 | 0.25 | 0.20 | |
| | 1 | IR cultivation | | 2 | 2 | 0.33 | 0.67 | 87.00 | 40 | 0.25 | 0.16 | |
| | 1 | digging | | 1 | 1 | 1.00 | 1.00 | 85.00 | 0 | 0.14 | 0.14 | |
| | 1 | threshing | | 1 | 1 | 1.00 | 1.00 | 85.00 | 30 | 0.14 | 0.14 | |
| Total | | | | 12 | 12 | 6.15 | 8.89 | | | | 3.65 | 0.00 |

APPENDIX 5: Examples of agricultural pesticides and odours

| | Chemical | Trade Names | Odour |
|--|---|--|---|
| Organophosphates | azinphos-methyl dichlorvos chlorpyrifos | Gusathion, Azithion, Benthion, Cotnion Mafu, Vapona, Insectigas-D, Chlorban Dursban, Argenstem, Lorsban, Grubkil Deter, Antkil, Chlorfos, Predator, Pynrex Suscon Blue | sulphurous or garlic-like odour due to 'mercaptans' impurities |
| | chlorpyrifos-methyl diazinon | Nucidol, Reldan, diazinon, Gesapon Diacap, Pennside, Diazamin, Knox-out Neocid | |
| | dimethoate | Rogor, Gomite, Roxion, Saboteur Perfekthion, Danadim | |
| | fenitrothion | Folithion, Sumithion, Synergen F, Tugon Fenitrogard | |
| | methamidophos | Nitofol, Monitor | |
| | methidathion | Supracide | |
| | mevinphos | Phosdrin | |
| | maldison* | Malathion, Hy-Mal, Ulvomal | * low odour formulations marketed at various times |
| | monocrotophos | Azodrin, Cronofos, Nuvacron | |
| | parathion (parathion-ethyl) | Novafos, E-605 | |
| | parathion-methyl | Folidol M, Penncap M | |
| | profenofos** | Curacron, Sabre | ** deodoriser added to prepared spray |
| phorate | Thimet, Umet | | |
| temephos | Abate, Lypor, Assassin, Tempor | | |
| terbufos | Counter, Hunter | | |
| Phenoxy type (‘hormone’) herbicides | 2,4-D (dimethylamine salt) | Amicide 500, Aminoz, D-500, 500, Shirweed | ammoniacal/phenolic ‘fishy’ |
| | dichlorprop | AF-302, Lantana DP-600 | |
| | MCPA, | Agritox, Thistle, MCPA 500, KilleM | |
| 2,4-D (diethanolamine salt) | Amicide Lo-500A , Baton, Zephyr, | ‘low odour’ formulations | |
| Miscellaneous | phosphine | various (e.g. Phostoxin) | rotting fish |
| | paraquat | Gramoxone, Shirquat | stench agent added to formulation |
| | endothal | Accelerate, Endothal | ammoniacal odour |
| | dithianon | Delan | musty |
| | dithiocarbamates (e.g. mancozeb) | Dithane, Manzate, Dek, Penncozeb | moderately sulfurous/musty |
| | methomyl | Lannate, Methomex, Marlin, Nudrin | sulfurous |
| | metribuzin | Lexone, Sencor | sulfurous mercaptan-like odour |
| | EDB | EDB | chloroform-like odour |
| chloropicrin | Larvacide | pungent odour | |

Source: DPI

Note: This table is not a complete list of available agricultural pesticides

APPENDIX 6: Examples of minimum effective separation distances

This table provides examples of effective minimum separation distance for each of the elements described in Section 3. Design of individual buffer areas must take account of specific conditions and sources of conflict. In these examples it is assumed that a noise buffer will result in a reduction of noise level of 10 dB(A).

| Sources of conflict | Minimum effective distance of open ground (metres) | Minimum effective distance with vegetated and noise buffer elements (metres) |
|---|---|---|
| 1. Agricultural chemical spray Night-time tractor use with mister (90 dB(A) $L_{Amax,T}$) (>10 hrs) Odour (>88hrs/yr) Effective width | 300 1000 * 500 1000 | 40 250 500 *# 500 |
| 2. Agricultural chemical spray Night-time tractor use (80 dB (A) $L_{Amax,T}$) (>10hrs) Odour (>88 hrs/yr) Effective width | 300 250 500 * 500 | 40 60 500 *# 500 |
| 3. Aerial spray application Agricultural chemical spray Tractors (95 dB(A) $L_{Amax,T}$) (>10hrs) Dust generation Odour (<88 hrs/yr) Effective width | 100 300 * 120 150 0 300 | 100 * 40 30 40 0 100 |
| 4. Agricultural chemical spray Tractors (85 dB(A) $L_{Amax,T}$) (>10 hrs) Day time irrigation pump (85 dB(A) $L_{Amax,T}$) (>50 hrs) Dust generation Odour (<88 hrs/yr) Effective width | 300 * 30 250 150 0 300 | 40 10 60 * 40 0 60 |
| 5. Agricultural chemical spray Tractors (90 dB(A) $L_{Amax,T}$) (>10 hrs) Dust generation Odour (<88 hrs/yr) Effective width | 300 * 60 150 0 300 | 40 * 50 40 * 0 40 |
| 6. Tractors (90 dB(A) $L_{Amax,T}$) (>10 hrs) Dust generation Odour (<88 hrs/yr) Effective width | 60 150 * 0 150 | 15 40 * 0 40 |

Note: * Most limiting factor to determine minimum separation distance
Minimum design distance for odour buffer area may be reduced on consideration of site factors and nature of odour.

This table should be read in conjunction with the text of Section 3.

- The separation distances in this table are not definitive distances for individual agricultural activities.
- Long-term noise sources operating >50 hrs/yr particularly between 10 p.m. and 6 a.m., such as pumps and cooling units, may require acoustic muffling to reduce noise to acceptable levels.

APPENDIX 7: Sample report

NEED FOR AND DESIGN OF A BUFFER AREA BETWEEN RESIDENTIAL AND AGRICULTURAL LAND USES AT SMITHVILLE

INTRODUCTION

Property Description: Lot 111 on RP 23702, Parish of Tropicana
Smith Street, Smithville

Site Description: The site consists of 40 ha, and is an undulating area with gentle northerly slopes ranging from 5–10%. The subject land comprises 24 ha of good quality agricultural land which are not to be developed, and 16 ha of rocky poor quality soils in the southern portion of the lot. The farming areas to the north and east of the site are used for mixed tree cropping enterprises of avocados, lychees and pineapples. There is a grazing property to the west of the site, and the Smithville township to the south.

Local Government: Black Stump Shire Council

Proposed development: The proposal involves a part urban expansion on 16 ha of unproductive rural land, with the remaining 24 ha of good quality agricultural land to remain in production.

SUSTAINABLE CROPPING USE OF THE LAND

The subject land has been mapped at a scale of 1:100 000 in the report Black Stump Horticultural Land Suitability Study (by Jones, M.A), published by the Department of Primary Industries in 1987. The report classifies part of the land as being suitable for most tree and vine crops with minor limitations (Class 2), and part as unsuitable for agriculture (Class 5). Class 2 land has been identified by Planning Guidelines: The Identification of Good Quality Agricultural Land (DPI/DHLGP 1993) as Class A, Crop land. This classification is not disputed.

The property has been mapped into two land types. Land type 1 consisting of 24 ha has been classified as a red ferrosol (ASC) or krasnozem (GSG). Land type 2 consists of red and yellow kurosols and tenosols (ASC) or gravelly red and yellow podzolics and lithosols (GSG) (See attached map).

The most intrusive cropping use that the subject land is capable of sustaining consists of tree crops. In Black Stump Shire, the most common crops for this land type are avocados and lychees (the current land use). Table 1 outlines a range of farming activities associated with avocado and lychee production in Black Stump Shire.

The subject land utilises a piped irrigation system, allowing fertiliser application with the irrigation water. Therefore, foliar spraying of fertilisers is unlikely.

The majority of the activities on the subject farm are carried out during the period from October to April. The main activities throughout this period are inter row weed control and grass slashing, and insecticide and fungicide spraying. Machinery will be used in the orchard for approximately 31 events per year.

Stationary pumps on the property will operate for more than 50 hr/year (day and night).

Table 1. Typical farming activities for tree crops

| Activity | Expected frequency | Machinery |
|-----------------------------------|--|------------------------------------|
| Inter-row weed and grass slashing | 2–10 times per annum depending on canopy size | 60 hp tractor and slasher |
| Weed spraying around tree bases | up to 4 times per annum | 60 hp tractor and spray pack |
| Insect and disease control | up to 14 times per annum depending on the season | 60 hp tractor and air blast mister |
| Picking | 1–3 times per annum | utility and/or cherry picker |

POTENTIAL FOR CONFLICT

Land use conflict can occur in situations where agricultural activities impact on residential amenity. There is potential for conflict along the interface of the proposed northern and eastern residential boundaries, as the proposed residential land will abut agricultural land where the farming activities listed in Table 1 can be expected.

ELEMENTS LIKELY TO CAUSE CONFLICT**Agricultural chemical spray drift**

- Avocado and lychee production entails regular spraying of pesticides (herbicides, insecticides and fungicides) which are recognised to release a moderate to strong odour. This is particularly an issue during summer when the majority of the activities on the subject farm are carried out.
- The off target movement of chemical sprays is unlikely to remain airborne greater than 300 m from the release area. However associated odour may be detectable at greater distances from the source.

Noise

- Noise from airblast misters and tractors utilised in pesticide spraying and general weed and grass control is anticipated to be in the vicinity of 85 dB(A) ($L_{Amax,T}$) when measured 7.5 m from the noise source.
- Day-time activity ie between 6 a.m. and 10 p.m. the same day is likely to occur up to 31 occasions per year. Using the formula as per Planning Guidelines: Separating Agricultural and Residential Land Uses (DNR/DLGP 1997), results in less than 7 hours of day-time activity per year for which noise will exceed 75 dB(A). This conforms with the design goals for noise which allows for up to 10 hours of day-time activity per year.
- Night-time activity i.e. between 10 p.m. and 6 a.m. the next day (as defined by the EP Act) is likely to occur on this farm up to 14 occasions per year for up to 2 hours at a time (given that spraying is likely to commence at 4 a.m., and that noise from such an activity is likely to exceed 55 dB(A) up to 500 m from the source). This will result in up to 28 hours of night-time activity per farm per year which will exceed 55 dB(A). This fails to conform with the Design Goals for Noise which allow up to 10 hours of night time activity per farm per year.

Dust

- It is considered that due to tree crop production, and the limited amount of bare earth exposed, dust generation will occur only on rare occasions, and should not be considered as a factor contributing to conflict in this situation.

Odour

- It is considered that due to the nature of tree crop production and the regular spraying of agricultural chemicals, that the generation of odour will occur up to 5.6hr/ha/yr. Using the formula as per *Planning Guidelines: Separating Agricultural and Residential Land Uses* (DNR/DLGP), the time of potential odour impact is 134 hrs/yr. This level exceeds the duration threshold for odour and therefore odour is likely to impact upon the proposed residential area.
- Prevailing wind direction will carry odour away from the residential area for approximately 50% of time. This will reduce the time of odour impact to 67 hrs/yr and below the duration threshold.

Sediment and stormwater run-off

- The proposed residential area is of higher elevation than the agricultural land.
- There is also potential for the residential area to impact on the agricultural land through increased runoff and sedimentation, particularly during the construction phase of the development.

RECOMMENDED MEASURES TO ADDRESS EACH ELEMENT

Chemical spray drift

- The south easterly prevailing winds on the subject land will assist in directing residual chemical spray away from the residential areas.
- The minimum vegetated buffer (40m width) designed to the criteria set out in Appendix 2 of *Planning Guidelines: Separating Agricultural and Residential Land Uses* (DNR/DLGP 1997) to reduce conflict in this situation is recommended (See attached plan).
- DNR Forestry Extension Officers have recommended the following species as being suitable to capture spray droplets for this particular site:

Casuarina cunninghamiana, river she-oak (outer rows)

Syzygium luehmannii, small-leaved lillipilly (inner rows)

Acmena smithii, lillipilly satinash (inner rows)

Melaleuca bracteata, river tea-tree (inner/outer rows) Melaleuca

leucadendra, white paperbark (inner/outer rows) Melaleuca

quinquenervia, broad-leaved tea-tree (inner/outer rows)

Waterhousia floribunda, weeping satinash (inner rows)

Grevillea baileyana, Findlay's silky oak (inner/outer rows)

Callitris columellaris, coastal cyprus pine (outer rows)

Araucaria cunninghamii, hoop pine (inner/outer rows)

Noise

- The south easterly prevailing winds on the subject land will not be a factor affecting noise levels.
- A maximum distance of 500 m of open ground will reduce the night time noise level from tractors and farm machinery to 55 dB(A) which is recognised in *Planning Guidelines: Separating Agricultural and Residential Land Uses* (DNR/DLGP 1997) as an acceptable design goal for intermittent night-time agricultural activities. An appropriately designed noise mound put in place at 50 m from the resource boundary will reduce the overall separation distance required to meet the noise design goals to 120 m. It is recommended that the developer provide a pump enclosure to eliminate night-time noise from stationary pumps.

Odour

While odour impacts are within the duration threshold, the following will further assist in the reduction of odour impacts:

- The south-easterly prevailing winds on the subject land will assist in directing odour from chemical spray away from the residential areas.
- Not all the chemicals used or likely to be used on activities possible on this farm contain a strong odour.
- The presence of a vegetated buffer element may also assist in reducing the impacts from odour associated with chemical spray.

Sediment and Stormwater run-off

- Erosion control measures will be necessary during the construction phase of the residential development, and, should meet the standards set out in Guidelines for Soil Erosion and Sediment Control for Construction Sites (IEA/AIAS, 1996).
- Stormwater runoff from all hard surfaces should be designed to ensure that all runoff is drained or piped to Black Stump Township's existing storm water drainage system.
- Water spreading devices should be utilised within the buffer area to minimise impacts on the adjacent farmland.

IMPLEMENTATION

W. Anonymous Consultants recommend the establishment of a 120 m wide buffer area incorporating the buffer elements of a 40 m vegetated buffer and noise mound along the northern and eastern boundaries of the subdivision. In this situation, the buffer area will be provided on private land of single tenure, utilising a series of larger lots along the agricultural land boundary. See attached map.

The proponent has agreed to provide an acoustic enclosure for stationary pumps on the adjacent agricultural property to reduce noise from these sources to acceptable levels. Additionally, it is recommended that council set the following conditions if the proposed development is approved, to take account of the agricultural conflict issues. These conditions must be continuous with all subsequent owners of the affected lots until such time as the buffer area is no longer required.

Conditions on development

1. Building envelopes to be specified on the affected lots to ensure that residences do not encroach into the required buffer area.
2. The buffer area will consist of a 120 m area along the northern and eastern boundaries of the development.
3. A vegetative buffer element of 40 m width within the buffer area, designed according to Appendix 2 of the Planning Guidelines: Separating Agricultural and Residential Land Uses (DPI/DHLGP, 1997) is to be established by the applicant to the satisfaction of council prior to any building approval within 300 m of the good quality agricultural land, i.e. land type 1.
4. The land owner is to be responsible for on-going maintenance of the vegetative buffer element to ensure that the buffer area complies with the criteria of Appendix 2 of Planning Guidelines: Separating Agricultural and Residential Land Uses (DNR/DLGP, 1997). This includes:
 - replacement of dead or dying vegetation;
 - management for fire protection, including reduction in litter build-up;
 - ensuring access to the 10m maintenance strips either side of vegetation;
 - ensuring that the buffer element does not shade adjacent cropping land for a significant period in the afternoon;
 - control of noxious weeds.

5. The vegetated buffer is to be protected by the tree clearing controls applicable to a 'Vegetation Protection Area' which are identified in the Planning Scheme of Black Stump Shire Council.
6. Prior to the sealing of the plan, a noise barrier acceptable to the engineering department of Black Stump Shire Council to be constructed by the applicant within 120 m of the good quality agricultural land ie Land Type 1. The noise mound must be of a height which is at least equal to the direct line of site of the noise source.
7. The land owner is to be responsible for on going maintenance of the noise barrier.
8. An erosion control plan which meets the standards of the Guidelines for Erosion and Sediment Control for Construction Sites is to be submitted by the applicant and complied with throughout the construction phase of the development.
9. Stormwater run-off from all hard surfaces is to be designed to ensure that all runoff is drained or piped to Black Stump township's existing stormwater drainage system.
10. Water spreading devices to be installed within the buffer areas by the applicant. Maintenance of these devices will be the land owner's responsibility.

W. Smith

ANONYMOUS CONSULTANTS LIMITED

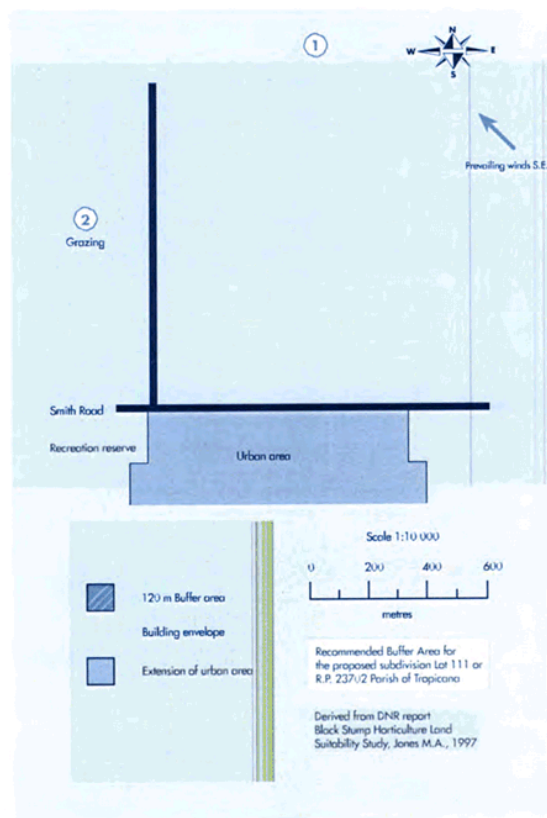


Figure1. Site Plan

Attachment 4

Dungog Shire Council DCP provisions for buffer zones

(See next page)

Dungog Development Control Plan

PART C

7. BUFFER ZONES

This plan, which may be cited as "Dungog Development Control Plan No. 1" - Buffer Zones, constitutes a Development Control Plan as provided for by Section 72 of the Environmental Planning and Assessment Act, 1979.

7.1 AIM OF THE PLAN

The aim of the Development control Plan is to provide certainty to residents and developers in locations where development may be constrained by adjoining land uses.

7.2 OBJECTIVES

This Development Control Plan seeks to:-

- Minimise conflicts between land uses that are potentially incompatible by developing well-defined boundaries and protecting the prior rights of lawful development.
- Minimise potential land use conflict by limiting uses regarded as inappropriate in areas of prime agricultural land.
- Ensure that, where development is likely to cause conflict with either existing or future adjoining land uses that the Buffer Zone will be provided on land upon which the encroaching development is located.
- In cases where the provisions of this DCP conflict with standards in other Planning Controls adopted by Council the provisions of this DCP will apply.

7.3 DEFINITIONS

Agriculture

Means the primary production of food, fibre and ornamentals not for personal consumption purposes and includes the cultivation of crops, and the keeping and breeding of livestock, bees or poultry and other birds for commercial purposes, but does not include an intensive agricultural pursuit or aquaculture;

Animal boarding, breeding or training establishment

Means a building or place used for the purposes of the boarding, nurturing, breeding or training of animals for gain or reward (other than purposes relating to agriculture), and includes riding schools, kennels and the like;

Intensive Agriculture

Means the use of land for agricultural purposes, which include market gardening, mushroom growing, fruit growing, flower growing, viticulture, milking in a shed designed for that purpose, aquaculture or intensive animal industry, but does not include an animal boarding or training establishment or the keeping of livestock or poultry for the personal enjoyment or consumption of its produce by the owner or occupier of the land;

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|---|
| <p>Dungog Development Control Plan</p> |
| <p><i>Intensive animal industry</i></p> <p>Means agricultural animal production where cattle, horses, goats, poultry or other livestock are held in buildings or in a confined area wholly or substantially for feeding and without limiting the generality of the above, may consist of or include agricultural industries such as – a feedlot containing more than five (5) cattle, dairy farm, horse training and boarding establishment containing more than five (5) horses, piggery (including free range) containing more than five (5) pigs, poultry farm (including free range) containing more than twenty (20) birds, rabbit farm or a building or place used for fish farming [which may consist of or include farming crustaceans], - but is not a building or place used for keeping of livestock intended solely for personal consumption or enjoyment by the owner or occupier of the building or place or a building or place used only for drought or similar relief;</p> |
| <p><i>Buffer Area</i></p> <p>Area of land separating adjacent land uses that is used for mitigating the impacts of one land use upon another;</p> |
| <p><i>Buffer Element</i></p> <p>A natural or artificial feature within a buffer area that mitigates an adverse impact;</p> |
| <p><i>Development - means:-</i></p> <ul style="list-style-type: none">(a) The use of land;(b) The subdivision of land; and(c) The erection of a building; and(d) The carrying out of a work; and(e) The demolition of a building or work; and |
| <p><i>Drift</i></p> <p>Airborne movement of agricultural chemicals onto a non-target area.</p> |
| <p><i>Encroaching Development</i></p> <p>Any development including the carrying out of any activity on land to which this Plan applies, any building or work or any subdivision proposed on land adjacent to an existing development or land use that has been lawfully commenced.</p> |
| <p><i>Residential Development</i></p> <p>For the purposes of this Development Control Plan "Residential Development" shall include any place of permanent or temporary occupation (including tourist uses).</p> |
| <p>7.4 VACANT LAND</p> <p>Lawfully created vacant land parcels within a buffer zone of an existing lawfully commenced development will not be sterilised and single residential dwellings will be permitted on these parcels. The location of single resident dwellings will be subject to consideration of the effect of residing within the buffer area. A buffer element that takes the form of immature landscape planting cannot be relied on in all cases.</p> |
| <p>Buffer Zones 30/10/07</p> |
| <p>7 - 2</p> |

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7.5 LAND USE CONFLICT

Conflict occurs where established land use practices associated with a particular land use or activity leads to a real or perceived loss of amenity for residents.

These conflicts may occur in instances where individual tolerances differ in relation to noise, dust, odour, chemical sprays or where legislative requirements in relation to emissions are not satisfied. These conflicts typically occur when "Residential Development" encroaches into non-residential areas.

The most appropriate method of minimising potential conflict between Non-Residential land uses and Residential land uses is to provide for separation of those uses by implementation of buffer zones. The purpose of a buffer zone is to provide sufficient separation so that conflicts do not arise.

Dungog Shire Council supports the rights of persons in rural areas to carry out agricultural activities within the boundaries of existing legislative and advisory requirements. In an effort to address these commitments, a notice to intending purchasers (see 7.13) as attached will be appended to all S149 Certificates.

7.6 BUFFER AREA DESIGN

In investigating the need for appropriate buffer areas, the following investigation should be made by an applicant for encroaching development:-

- Identify the elements that are a potential cause of conflict. These elements should be quantified, where possible in terms of the frequency and duration of the offending activity.
- Identify the means by which the applicant will address each issue to achieve an acceptable outcome in terms of separation widths, landscaped areas, acoustic barriers,
- Propose means by which proposed ameliorative measures will be monitored and maintained. This should include responsibility for implementing and maintaining the specific features of the buffer area to ensure continued effectiveness.

7.7 BUFFER ELEMENT

Minimum distances for Buffer Areas are recommended as a lineal means of separation between "Residential" and agricultural areas. The addition of Buffer Elements may vary the requirement relating to minimum separation distances. Buffer Elements are features which assist in the amelioration of potential adverse impact on one landuse upon another. One type of Buffer Element is the Vegetation Buffer and these may, in some cases offer an alternative to the lineal separation requirement.

Buffer elements are to be located within the property boundaries of the lot or lots on which the development is proposed. Topographical buffer elements will be assessed by Council on individual merit. (* Amendment No. 3)

(*Amendment No. 3 Minute No. 32719 Adopted 16/8/2005)

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Vegetated buffers have other advantages in that they:-

- Create habitat and corridors for wildlife;
- Increase the biological diversity of an area, thus assisting in pest control;
- Favourably influence the microclimate;
- Are aesthetically pleasing;
- Provide opportunities for recreation uses;
- Contribute to the reduction of noise and dust impacts

Applications for development, where Vegetated Buffer Elements are proposed, are to include a landscape plan indicating the extent of the buffer element, the location and spacing of proposed and existing trees and shrubs and a list of tree and shrub species to be planted.

As a general rule, Buffer Elements are to be properly designed to avoid special maintenance requirements whilst achieving their maximum desired effect of separation conflicting land uses. However, it will be necessary to ensure ongoing maintenance of buffer elements, including replanting, thinning, management for fire protection, herbicide damage, noxious weeds, feral animals, litter build-up etc so that the buffer elements may continue to be effective in reducing conflict.

A buffer element may also be an existing topographical feature. In this instance there is a need to specify type/height/location/density/etc.

7.8 INFORMATION TO ACCOMPANY DEVELOPMENT APPLICATIONS

The minimum level of information required in support of an encroaching development is to follow:-

- (1) Plan to scale of the land indicating distances for surrounding landuses;
- (2) Location of proposed development on the allotment.

Application for impacting development must:-

- (1) State exact type and site of development indicating numbers of acres under production or number of animals.
- (2) Identify potential adverse impact or residential development in the locality including, noise, odour, hours of operation, number of employees, number of traffic movements per day.
- (3) Nominate proposed methods of mitigating adverse impact.
- (4) Applications for residential development within the buffer zone of an existing impacting development must also address the level of perceived impact likely to be experienced and locate so as to minimise conflict.

PART 2 - BUFFER AREA SEPARATION DISTANCES

7.9 SPRAY DRIFT

Based on the available research on chemical spray drift, buffer areas must be a minimum of 300m where open ground conditions apply and a minimum of 40m where a vegetated buffer element designed by a suitably qualified consultant can be satisfactorily implemented and maintained including a suitable watering system. These dimensions may vary according to local topographical or climatic conditions.

Where chemical sprays are applied aerially, the Pesticides and Allied Chemical Act requires that the person authorising the use of the sprays obtain the prior written consent of all owners of dwellings or public premises whose boundaries are located within 150m of the spray area.

Research into the behaviour of pesticide spray drift has shown that Buffer Elements in the form of vegetation screens can prove effective barriers to spray drift where they meet the following criteria:-

- Are a minimum total width of 40m;
- Contain random plantings of a variety of tree and shrub species of differing growth habits, at spacings of 5m for a minimum width of 40m;
- Include species with long, thin and rough foliage which facilitates the more efficient capture of spray droplets;
- Provide a permeable barrier which allows air to pass through the buffer.
- Foliage is from the base to the crown;
- Include species which are fast growing and hardy;
- Have a mature tree height 1.5 times the spray release height or target vegetation height, whichever is higher;
- Have mature height and width dimensions which do not detrimentally impact upon adjacent cropped land;
- Include an area of at least 10m clear of vegetation or other flammable material to either side of the vegetated area.

7.10 ENVIRONMENTAL PROTECTION ZONE BUFFERS

Dungog Shire has many recognised natural attributes and this has been reflected in many cases by specific zonings in the Dungog Local Environmental Plan. In some cases however, where Threatened Species are known to exist and the zoning of land has not been changed, specific management practices are required and Buffer Zones will be applied as if the land were zoned Environmental Protection.

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- 7(a) - Environment;
8(a) - National Parks.

Residential development has the potential to impact on these areas by predation of wildlife by domestic animals, exotic weed invasion, and nutrient enrichment from storm water runoff. In order to protect the integrity of areas recognised as Environmentally Significant, a setback of zone between new residential development and the boundary of an environmentally sensitive area is required. The distance is to be determined upon assessment of an Environmental Impact Report prepared by the applicant.

7.11 RIVERS & WATERCOURSES

Buffers between rivers & watercourses and Residential Development are required to ensure that water quality is maintained. Setbacks will also ensure that the aesthetic, recreational and habitat values of the riparian zone are protected as a result of separation of impacting landuses.

Development requiring effluent disposal will need a minimum 100m setback to permanent surface waters (eg river, streams, lakes etc) or 40m to other waters (eg farm dams, intermittent waterways and drainage channels etc) and 250m from any domestic groundwater well.

All Development within 40m of a watercourse is Integrate Development and subject to separate assessment and subsequent consent from the Department of Infrastructure, Planning and Natural Resources under the provisions of the Rivers & Foreshore Improvement Act.

Any variation to the 40m setback must be supported by information addressing the merits of the variation and measures taken to mitigate potential adverse impact.

7.12 INTENSIVE LIVESTOCK INDUSTRIES

Residential Development must be located a minimum distance specified below or incorporate measures to minimise the impact of noise and odour generated as a result of activities associated with intensive livestock listed as follows:-

- Dairies
- Poultry
- Piggeries
- Feedlots

Intensive Livestock Industries have the potential to have a significant environmental impact on adjoining properties through the generation of odours, dust and noise. These impacts may also be generated as a result of truck movements and feed mill operation.

All Intensive Livestock Industries must achieve a 140m setback from any building to a public road.

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7.12.1 DAIRY FARMS

Dairy farms must provide a vegetated buffer between dairy complex (including solids and effluent areas) and streams, rivers and watercourses. A minimum buffer between neighbouring residential development and a pond or manure heap is 200m.

7.12.2 POULTRY FARMS

Poultry sheds shall have a minimum buffer to adjacent residential development of 500m. Litter shall not be stockpiled within 400m of any public road or any neighbouring residential development.

A buffer of 400m to any public road or residential development be applied to the bulk storage of Poultry Litter, sawdust and other products that may cause nuisance by way of odour, vapour dust, noise, vibration, waste water, waste products or otherwise. [Amendment No 1]

7.12.3 PIGGERIES

Piggeries shall have a minimum buffer to adjacent residential development of 500m and a buffer of 750m from any school, shop, church public hall or premises used for the manufacture or preparation of food.

7.12.4 CATTLE FEEDLOTS

Cattle confined to a yard area with watering and feeding facilities where they are fed and watered are considered to be in a feedlot.

Large feedlots greater than 500 head will require a buffer zone of 1500m.
Smaller operations 50 - 500 head will require a buffer of 1000m.

7.12.5 OTHER INTENSIVE LIVESTOCK OPERATIONS

Buffers will also be required to other intensive livestock operations, which are likely to impact on residential development in the locality. These operations will be assessed individually on the basis of the size, nature and characteristics of the operation. Generally the minimum separation distance of 500m is to apply between the livestock operation and any neighbouring residential development.

7.12.6 INTENSIVE AGRICULTURE

Potential conflict with adjacent development is dependent on the nature of the intensive agricultural activity and also on the management practices adopted by the producer. The greatest potential for conflict arises in cases where commercial operations involve the regular or intermittent use of chemical sprays or where noise from equipment or machinery is generated.

This conflict is likely to increase in Dungog as the agricultural sector undergoes restructuring and alternatives to traditional agricultural practice are put into place.

A minimum buffer between intensive agricultural and neighbouring residential development is to be 150m.

Buffer Zones 30/10/07

Dungog Development Control Plan

PART C**7.12.7 ANIMAL BOARDING & BREEDING ESTABLISHMENTS:**

Potential conflict with residential development generally arises as a result of noise from animals, smell from kennels/ exercise yards, waste disposal and contamination of surface water. Dust and noise from client's vehicles may also be an issue. A minimum separation distance of 500m is required from neighbouring residential development.

This distance may however be increased where the potential for noise is likely to cause disturbance to residents in the locality.

7.12.8 EXTRACTIVE INDUSTRY

Extractive Industries usually involve an extensive range of both plant & equipment that may create noise and dust during the normal extraction, processing and loading of material. The degree of impact generated is largely based on the type of material being won and the level of processing of the material prior to sale. Quarrying activities are incompatible with many land uses, particularly residential land uses and it is therefore desirable to mitigate potential conflict and prevent the sterilisation of extractive resources as a result of encroaching residential development.

A minimum buffer zone to extractive resources shall be 500 metres although this may increase if blasting is a part of the operational regime.

7.12.9. RAILWAY

Buffers between rail lines and residential development are required to minimise impacts on residential amenity caused by railway operations. All residential and other noise sensitive proposals within 60 metres of an operational railway require a detailed acoustic assessment. However, Council may use discretion to extend the acoustic assessment requirement to areas that are:

- Located outside, but within reasonable proximity to the 60m distance;
- In the vicinity of steel bridges;
- Near sections of high speed tracks; or
- In locations where there is no acoustic shielding by topography or buildings, between the track and the potential noise receivers.

A detailed Acoustic and Vibration Study is to be carried out by a suitably qualified professional and must accompany an application to Council. (Recommendations from Rail and Infrastructure Corporation, State Rail Authority, *Interim Guidelines for Councils – Consideration of rail noise and vibration in the planning process*. November 2003).

7.13 WIND ENERGY GENERATION FACILITIES

Refer to Part C Section 19 – Wind Energy Generation Facilities for information on buffer areas for this type of development.

7.14 NOTICE TO PURCHASERS OF LAND IN RURAL AREAS IN DUNGOG SHIRE

Dungog Shire Council supports the right of persons in rural areas to carry out agricultural production using reasonable and practicable measures to avoid environmental harm.

PART C

Dungog Development Control Plan

Intending purchasers are advised that agricultural production practises may include some of the following activities and some activities may have implications for occupiers of adjacent land:-

- Logging and milling of timber
- Dairies
- Intensive livestock production (feedlots, piggeries and poultry farms)
- Intensive Agriculture
- Vegetation clearing
- Cultivation and harvesting
- Bush fire hazard reduction burning
- Construction of firebreaks
- Construction of dams, drains and contour banks
- Fencing
- Use of agricultural machinery (tractors, chainsaws, motor bikes etc)
- Pumping and irrigation
- Pesticide spraying
- Aerial spraying
- Animal husbandry practices
- Droving livestock on roads
- Silage production
- Construction of access roads and tracks
- Slashing and mowing vegetation
- Planting of wood lots.

Please refer to Part C Section 19 for Wind Turbine buffer zones.

Intending purchasers of land in rural areas may have difficulty with some of these activities or the impact of these activities when they are being carried out on land near their proposed purchase. If so, they should seek independent advice and consider their position.

This notice is not intended to affect the rights of individuals to take action under the common law or legislation.

This notice is provided for information purposes only

Attachment 5

Wellington Council DCP (incorporated by Dubbo Regional Council) provisions for buffer zones

need to be provided to Council as to the satisfaction of the electricity authority with arrangements made by the subdivider to reticulate the lots.
 Generally, the electricity authority will want to see that a contract has been entered into with an approved electricity contractor to reticulate the estate to their satisfaction.

D2.4.2 Stormwater and erosion
 Refer to Section B1 for detailed requirements.

D2.4.3 Onsite Waste management
 Refer to Section B4 for detailed requirements.

D2.4.4 Road standards
 In all rural areas, a road hierarchy must be established to ensure that a safe and efficient environment is provided for motorists, cyclists and pedestrians.
 New roads shall be designed for the maximum likely traffic volumes at the end of a 20-year design life.
 Full details of Council's road standards and requirements are found in section 2.3 of "Guidelines for Engineering Works".
 Council has defined 2 standards of local rural public road:

- Rural Local Access—generally for servicing less than 10 lots
- Rural Collector—for developments servicing more than 10 Lots

D2.4.5 Agricultural buffers
 Where dwelling houses or tourist accommodation are proposed to be located in rural areas within proximity of primary production, Council will need to be satisfied that 'normal' farming practices on adjacent land are not inhibited. Development conditions may be required to ameliorate potential conflicts between rural residents and primary producers.
 The main conflicts that can occur between residential development and primary producers may involve:

- Spray drift from chemicals used in primary production
- Noise from machinery, animals (e.g. night paddocks)
- Dust from stock and/or machinery
- Odours from farm related waste, silage, etc.
- Visual impact of normal farming activity.

(A) Buffer distances
 The negative impacts on rural dwellings from agriculture and rural industry by way of dust, fumes, odour, spray drift, light and noise is to be minimised and the reasonable expectations of existing farmers protected.
 This should be achieved by separating the proposed dwelling from professional agriculture using envelopes in accordance with Table 1 below.

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TABLE 1: Summary of buffer area design criteria

| | Duration Threshold | Min default distance (m) | Min. design distance with buffer element (m) |
|----------------------|-----------------------|--------------------------|--|
| Chemical spray drift | None | 300 | 40 |
| Intermittent odour | >88 hrs/yr | 500 | 500* |
| Intermittent noise** | >10 hrs/yr <50 hrs/yr | 60 (d) | 15 (d) |
| | | 1000 (n) | 250 (n) |
| Long term noise ** | >50 hrs/yr | 500 (d) | 120 (d) |
| | | 1000# (n) | 1000# (n) |
| Dust, smoke and ash | None | 150 | 40 |

(Source: Department of Natural Resources, Queensland 1997 "Planning Guidelines - Separating Agricultural and Residential Land Uses")

Notations

* Minimum design distance for an odour buffer area may be reduced on consideration of site factors and nature of odour

** Based on source noise level of 90 dB(A) (LAmax,T) at 7.5 m

d = Noise occurring in day-time (6 a.m.–10 p.m.)

n = Noise occurring in night-time (10 p.m.–6 a.m.)

= Long-term noise occurring between 10 p.m.–6 a.m. is likely to be considered intrusive and therefore unreasonable. Such noise sources may be ameliorated by a combination of enclosing or muffling the source of the noise, by provision of a buffer area and attention to residential design.

In addition to the above prescribed separation distances, Table 2 lists those separation distances that are considered appropriate:

Table 2: Separation between rural land use and residential development

| Land Use | Separation Distance |
|--|---------------------|
| Cattle feedlot (less than 500 head) | 300 metres |
| Intensive dairies (less than 500 head) | 300 metres |
| Piggeries or poultry farms (less than 500 head) | 300 metres |
| Intensive dairies (more than 500 head) | 500 metres |
| Piggeries and poultry farms (500 head or more) | 500 metres |
| Other intensive livestock keeping (500 head or more) | 500 metres |
| Extractive industry or mine | 500 metres |
| Abattoirs | 1000 metres |

(Source: Department of Natural Resources, Queensland 1997 "Planning Guidelines - Separating Agricultural and Residential Land Uses")

(B) Buffer variations

The required buffers may be reduced if, in the opinion of Council, the development will not be adversely affected by the use of adjoining land. In assessing whether reduced buffers are acceptable in a particular case, Council will consider the following variation criteria:

- the extent, nature and intensity of the adjoining land use;
- the operational characteristics of the adjoining land use;
- Nominate proposed methods of mitigating adverse impact;
- the external effects likely to be generated by the adjoining land use (i.e. dust, fumes, odour, spray drift, light and noise) and their potential to cause conflict;
- the potential of adjoining land to be used for various commercial activities including agriculture, quarries, rural industries etc.;
- any topographical features or vegetation which may act to reduce the likely impacts of an adjoining land use;
- prevailing wind conditions and any other climatic characteristics; and
- any other mitigating circumstances.

Vegetation buffers may be used to reduce the total buffer distance required between dwellings and adjoining land uses. However, caution must be exercised when considering the appropriateness of a vegetation buffer. Vegetation buffers have little effect on noise reduction, take time to establish, require on-going maintenance and are subject to storm and insect damage. Trees only have a limited life span. Therefore, vegetation buffers will not be appropriate in all circumstances.

(C) Buffer design

Research into the behaviour of pesticide spray drift has shown that Buffer Elements in the form of vegetation screens can prove effective barriers to spray drift where they meet the following criteria:

- are a minimum total width of 40m;
- contain random plantings of a variety of tree and shrub species of differing growth habits, at spacings of 5m for a minimum width of 40m;
- include species with long, thin and rough foliage which facilitates the more efficient capture of spray droplets;
- provide a permeable barrier which allows air to pass through the buffer;
- foliage is from the base to the crown;
- include species which are fast growing and hardy;
- have a mature tree height 1.5 times the spray release height or target vegetation height, whichever is higher;
- have mature height and width dimensions which do not detrimentally impact upon adjacent cropped land; and
- include an area of at least 10m clear of vegetation or other flammable material to either side of the vegetated area.

Particular care must be made to ensure that vegetation buffers do not compromise the bushfire safety of existing and future dwellings on either the

subject or adjoining land. Vegetation buffers are therefore to be located such that they will not comprise Asset Protection Zones.

D2.4.6 Weed control

Development consent must not be granted for development on land in which a noxious weed infestation has been identified, unless a clear noxious weeds certificate is received by Council.

Council will not accept the dedication of land in subdivisions unless recognised weed infestations have been controlled in the area to be dedicated, to Council's satisfaction prior to release of the subdivision certificate.

D2.4.6.1 Weed management in the Development Application process

Application for a Development Approval to subdivide land in zones RU1, E2, E3, or R5 into lots which can be used for residential purposes must be accompanied by:

- A property weeds assessment
- A plan of management (where a significant infestation of noxious weeds are identified by Council weeds officers) comprising an agreed program of weed control over a specified time period.

The following must be shown in the plan:

- a staged plan for the management of identified noxious weeds;
- proposed method(s) of weed management;
- monitoring; and
- reporting.

The weeds management plan is to be approved by Council before issue the of a development consent for subdivision.