

## COUNCIL RESOLUTION EXTRACT FROM MINUTES 13 OCTOBER 2014

### DISCLOSURES OF INTERESTS

Councillor Martin declared a non-significant conflict of interest in Items 6, 7 and 12 as they all relate to Planning Proposals which will go, or have already been to the Department of Planning and Environment and she is employed by that Department.

### ITEM 6 - DRAFT PLANNING PROPOSAL: STAGE 3 WEST DAPTO URBAN RELEASE AREA

**183** **COUNCIL'S RESOLUTION** - RESOLVED UNANIMOUSLY on the motion of Councillor Curran seconded Councillor Crasnich that –

- 1 A draft Planning Proposal be prepared to:
  - a Rezone the Stockland Residential Development lands being Lots 1, 2 and 3 DP 810104, located between Brooks Reach and Cleveland Road, from RU2 Rural Landscape to a mix of R2 Low Density Residential, E4 Environmental Living, E3 Environmental Management and E2 Environmental Conservation with associated changes to the Floor Space Ratios and Minimum Lot Size (Heights remain unchanged).
  - b Include updated flood information from the Mullet Creek Flood Extension Study (2010) in the Flood Planning maps for Stages 1 to 4 of the West Dapto Urban Release Area.
  - c Update the Land Reservation Acquisition Map – to show Cleveland Road widening to reflect the future Type 3, two lane Collector Road – Minor (Bus Route) totalling a width of 20.4m.
  - d Include model Clause 4.1C to assist in the efficient delivery of integrated housing.
- 2 The draft Stage 3 Planning Proposal be referred to the NSW Department of Planning and Environment for a Gateway determination and if endorsed exhibited for a minimum period of 28 days. The Gateway be requested to issue an 18 month timeframe and require the proponent to prepare the following information for the Stockland lands

Minute No.

prior to formal exhibition:

- a Draft Neighbourhood Plan to enable the community to consider the proposal;
  - b Aboriginal Heritage Assessment;
  - c Non-indigenous Heritage Assessment;
  - d Flora and Fauna Assessment;
  - e A water and sewerage servicing strategy that addresses Sydney Water's concerns about the capacity and ability to service; and,
  - f Stormwater Assessment Management and Infrastructure Plan that addresses concerns identified in Wollongong City Council's Lake Illawarra Catchment Stormwater Management Plan and other relevant Studies, including stormwater harvesting and reuse to minimise the impact on Lake Illawarra.
- 3 Stockland be advised that the development is to access via Bong Bong Road, and access to Cleveland Road is denied unless Stockland design and upgrade Cleveland Road to Council's standards, and not expect reimbursement until at least 2030, as indicated in the West Dapto Section 94 Development Contribution Plan.
  - 4 The other land owners affected by the original Planning Proposal request be advised that Council does not have sufficient information to pursue the rezoning of their properties at this time.
  - 5 A separate draft Planning Proposal be prepared to rezone the land located north of proposed Lot 1528 (currently known as Lot 1 DP 549692) and proposed Road No 05 in the Hayes Lane West precinct from E3 Environmental Management to R2 Low Density Residential with a Minimum Lot Size of 300m<sup>2</sup>, Floor Space Ratio of 0.5:1, maximum building height of 9m (no change) and adjusting the flood risk restriction to the northern side of proposed Road No 05.
  - 6 The draft Housekeeping Planning Proposal be referred to the NSW Department of Planning and Environment for a Gateway determination and if endorsed exhibited for a minimum period of 14 days.
  - 7 Council requests authority for the General Manager to exercise plan making delegations in accordance with Council's resolution of 26 November 2012, for both Planning Proposals.

ITEM 6

**DRAFT PLANNING PROPOSAL: STAGE 3 WEST DAPTO URBAN RELEASE AREA**

A draft Planning Proposal request has been submitted on behalf of Stockland Residential Development Pty Ltd (Stockland) to rezone land between Bong Bong Road and Cleveland Road, West Dapto for residential development. The land forms part of Stage 3 West Dapto Urban Release Area. The draft Planning Proposal request seeks to rezone approximately 270 hectares of land from RU2 Rural Landscape and E3 Environmental Management zones to a mix of residential, business and environmental zones, generally in accordance with the West Dapto Vision to provide residential development and support to the future Bong Bong Town Centre.

This report presents the preliminary assessment of the draft Planning Proposal and recommends that Council resolve to prepare a draft Planning Proposal for only the part of the precinct owned by Stockland (approximately 111ha) as sufficiently detailed information is available for this area. It is recommended that the rezoning of the balance of the precinct not be progressed at this time. It is also recommended that a minor boundary adjustment occur between the E3 Environmental Management and R2 Low Density Residential zone on the northern side of Bong Bong Road within the Hayes Lane West precinct to allow one additional residential lot (currently Lot 1 DP 549652). It is recommended that the draft Planning Proposals be referred to the NSW Department of Planning and Environment for a Gateway determination, submission of additional information and then exhibition.

## RECOMMENDATION

- 1 A draft Planning Proposal be prepared to:
  - a Rezone the Stockland Residential Development lands being Lots 1, 2 and 3 DP 810104, located between Brooks Reach and Cleveland Road, from RU2 Rural Landscape to a mix of R2 Low Density Residential, E4 Environmental Living, E3 Environmental Management and E2 Environmental Conservation with associated changes to the Floor Space Ratios and Minimum Lot Size (Heights remain unchanged).
  - b Include updated flood information from the Mullet Creek Flood Extension Study (2010) in the Flood Planning maps for Stages 1 to 4 of the West Dapto Urban Release Area.
  - c Update the Land Reservation Acquisition Map – to show Cleveland Road widening to reflect the future Type 3, two lane Collector Road – Minor (Bus Route) totalling a width of 20.4m.
  - d Include model Clause 4.1C to assist in the efficient delivery of integrated housing.

- 2 The draft Stage 3 Planning Proposal be referred to the NSW Department of Planning and Environment for a Gateway determination and if endorsed exhibited for a minimum period of 28 days. The Gateway be requested to issue an 18 month timeframe and require the proponent to prepare the following information for the Stockland lands prior to formal exhibition:
  - a Draft Neighbourhood Plan to enable the community to consider the proposal;
  - b Aboriginal Heritage Assessment;
  - c Non-indigenous Heritage Assessment;
  - d Flora and Fauna Assessment; and
  - e A water and sewerage servicing strategy that addresses Sydney Water's concerns about the capacity and ability to service.
- 3 Stockland be advised that the development is to access via Bong Bong Road, and access to Cleveland Road is denied unless Stockland design and upgrade Cleveland Road to Council's standards, and not expect reimbursement until at least 2030, as indicated in the West Dapto Section 94 Development Contribution Plan.
- 4 The other land owners affected by the original Planning Proposal request be advised that Council does not have sufficient information to pursue the rezoning of their properties at this time.
- 5 A separate draft Planning Proposal be prepared to rezone the land located north of proposed Lot 1528 (currently known as Lot 1 DP 549692) and proposed Road No 05 in the Hayes Lane West precinct from E3 Environmental Management to R2 Low Density Residential with a Minimum Lot Size of 300m<sup>2</sup>, Floor Space Ratio of 0.5:1, maximum building height of 9m (no change) and adjusting the flood risk restriction to the northern side of proposed Road No 05.
- 6 The draft Housekeeping Planning Proposal be referred to the NSW Department of Planning and Environment for a Gateway determination and if endorsed exhibited for a minimum period of 14 days.
- 7 Council requests authority for the General Manager to exercise plan making delegations in accordance with Council's resolution of 26 November 2012, for both Planning Proposals.

## ATTACHMENTS

- 1 Location Map
- 2 Current Zoning Map
- 3 Submitted Zoning Plan (Proponent)
- 4 Town Centres Review Urbacity
- 5 Visual Impact Assessment
- 6 Escarpment area (50m RL)
- 7 Proposed Zones, Minimum Lot Size and Floor Space Ratio Maps

- 8 Proposed Flood Map
- 9 Proposed Land Acquisition Reservation Map

## REPORT AUTHORISATIONS

Report of: Renee Campbell, Manager Environmental Strategy and Planning  
Authorised by: Andrew Carfield, Director Planning and Environment – Future City and Neighbourhoods

## BACKGROUND

### WEST DAPTO RELEASE AREA

In 2006, Council endorsed the West Dapto Vision, Local Environmental Study, draft Local Environmental Plan and draft Development Control Plan for exhibition. The documents were exhibited from December 2007 to April 2008. After the exhibition period, Council requested that the Minister for Planning make available the (then) NSW Growth Centres Commission (GCC) to review key aspects of the release area.

On 16 December 2008, Council considered a report on submissions and the Growth Centres Commission report which highlighted concerns relating to the viability and affordability of the release area, cost and timing of infrastructure development, access, flooding, riparian corridors and staging. Council endorsed the GCC's recommendations and resolved to refer the draft Local Environmental Plan for Stages 1 and 2, Dapto Town Centre and Horsley to the NSW Department of Planning for approval. The instrument was renamed to Wollongong Local Environmental Plan (West Dapto) 2010 and was approved by the Minister for Planning on 5 May 2010.

The remaining lands (including the subject site) were deferred to coincide with the recommendation of the GCC to promote effective development through the use of staging. This land is currently zoned under the Wollongong Local Environmental Plan 2009.

The West Dapto Urban Release Area covers an area of approximately 4,700 hectares and is currently proposed to provide an additional 17,000 dwellings and 183 hectares of employment land when fully developed. The number of dwellings may increase when the Planning Proposal for Yallah-Marshall Mount is finalised.

West Dapto is the last remaining area for large scale urban development in the Wollongong Local Government Area. The area has been identified by the NSW Department of Planning and Environment as a priority urban release area which will contribute housing supply for the expected population growth. The development of West Dapto draws upon principles of economic, social and environmental sustainability.

## Planning Proposal Request

A draft planning proposal request was submitted by consultants on behalf of Stockland Residential Development (Stockland) for the rezoning of the northern part Stage 3 (between Brooks Reach and Cleveland Road) in December 2011. The south side of Cleveland Road is not included in the current proposal.

The proponent was requested to provide the following additional information:

- Preliminary Flora and Fauna assessment;
- Current flooding constraints on future residential land;
- Phase 1 Contamination Study;
- Aboriginal Archaeological and Cultural Heritage Assessment;
- Draft Zoning Plan;
- Draft Neighbourhood Plan; and
- An interim Access Strategy (noting that at that stage Council had not resolved to progress the Fowlers Road – Fairwater Drive link).

The draft planning proposal request was re-submitted again in January 2014. The request was almost identical to the 2012 request, but was accompanied by the following studies:

- Preliminary Flora and Fauna Assessment prepared by Hayes Environmental;
- Flood and Riparian Corridor Study prepared by Cardno; and
- Stage 1 Environmental Site Assessment prepared by JBS Environmental.

The proponent advised that the proposal should be assessed based on previous work undertaken in the Council's West Dapto Local Environmental Study (2006), and further the site specific aboriginal archaeological and cultural heritage assessment can be deferred until a Gateway determination is sought.

The proponent has not provided a concept plan or a draft neighbourhood plan, advising that these will be developed later in the planning process. This has meant that they have not provided an anticipated development yield or future population estimate.

In terms of the Interim Access Strategy, the proponent advised that now that Council had resolved to pursue the Fowlers Road – Fairwater Drive link no further details on flood free access were necessary.

The requested rezoning precinct comprises 11 properties covering approximately 264 hectares of land lying between Bong Bong Road and Cleveland Road, West Dapto (Attachment 1). The precinct comprises 11 different land holdings, as follows:

Land Holding	Property Details	Area (ha)	Owner	Current Zone(s)
1	Lot 1 DP 810104	45.9	Stockland	RU2 Rural Landscape E3 Environmental Management
2	Lot 2 DP 810104	6.3	Stockland	RU2 Rural Landscape
3	Lot 3 DP 810104	58.6	Stockland	RU2 Rural Landscape E3 Environmental Management
4	Lot 1 DP 730326	20.9	Private	RU2 Rural Landscape
5	Lot 2 DP 730326	20.1	Private	RU2 Rural Landscape
6	Lot 59 DP 1125379	16.2	Private	RU2 Rural Landscape
7	Lot 1 DP 156208	18.2	Private	RU2 Rural Landscape
8	Lot 1 DP 532391	38.8	Private	RU2 Rural Landscape
9	Lot 200 DP 803810	19.6	Private	RU2 Rural Landscape E2 Environmental Conservation
10	Lot 3 DP 532391	18.7	Private	RU2 Rural Landscape
11	Lot 10 DP 235743	0.4	Private	RU2 Rural Landscape
<b>Total</b>		263.7		

In addition, Council officers considered the following additional properties located south of Reed Park:

Land Holding	Property Details	Area (ha)	Owner	Current zone(s)
12	Lot 200 DP 1175709	11.5	Council	RU2 Rural Landscape
13	Lot 201 DP 1175709	5.3	Council	RU2 Rural Landscape E2 Environmental Conservation
14	Lot 202 DP 1175709	24.9	Trustees of The Roman Catholic Diocese	RU2 Rural Landscape E2 Environmental Conservation
15	Lot 203 DP 1175709	9.9	Trustees of The Roman Catholic Diocese	RU2 Rural Landscape E2 Environmental Conservation
16	Lot 1 DP 220843 (former tramway)	3.0	Council	RU2 Rural Landscape E2 Environmental Conservation

The topography of the precinct varies from flat in the eastern parts through to undulating areas in the centre, with the western parts of the site being steep and extending into the foothills of the Illawarra Escarpment.

The precinct is currently zoned under Wollongong Local Environmental Plan 2009 as a combination of RU2 Rural Landscape and E3 Environmental Management (Attachment 2 and table above). The land is being used for grazing and rural-residential development. The majority of landholders are anticipating future urban development. The suburb of Horsley is located to the north east of the site which has already been subject to urban development and is in advanced stages of construction. Brooks Reach is a recently approved subdivision that adjoins the site, with the construction of housing well progressed, with some 360 lots released. The site also adjoins the location of the proposed Bong Bong Town Centre, zoned for commercial purposes.

The precinct is bisected by a number of watercourses flowing in easterly and southern directions from the escarpment. Cleveland Road in part follows a ridge line which creates northern and southern catchment and servicing areas, although the western part of the site does drain to the southern Mullet Creek catchment.

Much of the site has been cleared of vegetation for agricultural practices, with the exception of a small pocket of Illawarra Lowlands Grassy Woodland on Lot 200 DP 803810 towards the eastern part of the site and a section of dense vegetation to the western end of the site which adjoins to the Illawarra Escarpment Conservation Area.

There are a number of dwellings scattered throughout the precinct along with various farm related infrastructure such as sheds, fences and access roads. Four high voltage overhead power lines run through the site in a north/south direction. The Jemena Eastern Gas Pipeline also traverses the eastern part of the site in a north south direction. A large volume of coal washery reject is located in close proximity of the proposed Bong Bong Town Centre. Existing infrastructure can be extended and augmented to serve the subject site, including Bong Bong Road and Cleveland Road upgrades, water supply, sewerage, electricity, telephone and gas utilities available for extension.

The draft planning proposal request was placed on preliminary notification between 10 February and 21 February 2014. Council received three submissions; one from Sydney Water and two from local residents. The comments received are addressed later in the report.

A Council briefing on the Planning Proposal request occurred on 16 June 2014.

The Department of Planning and Environment have advised that a Pre-Gateway Appeal has been lodged on behalf of Stocklands, as Council has not determined the Planning Proposal request within 90 days. The Department has sought Council's input into the Pre-Gateway Appeal process. Following the meeting, Council officers will advise the Department of Council's resolution.



## PROPOSAL

The draft planning proposal request seeks to rezone approximately 264 hectares of land between Bong Bong Road and Cleveland Road, West Dapto for residential purposes. An additional five properties (54.6ha) south of Reed Park was also considered. The proponent has proposed that the draft zoning generally follow the original West Dapto Master Plan for Stage 3 acknowledging that some minor adjustments would be required (Attachment 3). The proponent notes the objectives of the draft planning proposal are:

- Assist in meeting dwelling targets of the Illawarra Urban Development Program;
- Provide critical mass population to support the development of the Bong Bong Town Centre;
- Water Management – manage flood water and drainage to catchment basins;
- Access – extension of Bong Bong Road, upgrade of Cleveland Road and establish north-south connections between the roads;
- Development of infrastructure and services (electricity, water, sewer, NBN, gas); and
- Support greater housing choice and affordable housing.

The draft zoning plan submitted by the proponent is based on the original Council master plan from 2007 and indicates:

- The extent of proposed low density residential land shown by the R2 area.
- The riparian corridors and environmental areas shown as zones E3 Environmental Management and RU2 Rural Landscape.
- Three neighbourhood centres zoned B1 Local Centre, including a medium density zone to support the Fowlers Road Village Centre.
- An E2 Environmental Conservation zone over remaining area in the far western end of the subject area at the foothills of the escarpment.

The key aim of the draft planning proposal request was to support the West Dapto Master Plan, particularly in regard to housing supply and the viability of Town and Village Centres.

From a Council officer view, the 2007 plans are now out-of-date, as a consequence of:

- The GCC review, recommendations and changes to strategies;
- Updated flood risk information;
- Updated Biodiversity information, including the progression of the Biodiversity Certification strategy;

- Review of town centre locations;
- Changes to the Access Strategy; and
- Review of lot sizes in West Dapto to provide housing diversity.

It is somewhat disappointing that the proponent just submitted historic information without considering more recent data. Accordingly, Council officers have been required to assess the submitted information and update it to reflect current information. This included a re-assessment of the land capability for development and the overall review of the proposed master plan zoning scheme to ensure that land zoned for development was capable of supporting development at development application stage. A visual assessment was also undertaken. This has lengthened the time taken to assess the Planning Proposal request.

### **Assessment of Key Issues:**

#### **Town Centres**

The draft planning proposal nominates three town centres as per the exhibited 2007 West Dapto Vision, namely the Fowlers, Cleveland and Purrungully neighbourhood centres. However, the West Dapto Vision/Master Plan particularly the town centres have undergone several studies and evolutions since 2007. Council has established that there was need to refine the town centre locations and engaged Urbacity in 2012 and 2014 to review of the town centres in West Dapto Stage 3 and 4 (Attachment 4). The 2012 review recommended the removal of the Purrungully neighbourhood centre because the centre was no longer considered viable. The 2014 review recommends the retention of the Fowlers Neighbourhood Centre, but in a slightly different position, and the removal of Cleveland Road Neighbourhood Centre because the centre is compromised by its close proximity to Bong Bong Town Centre.

Accordingly, the 2007 zoning plan submitted by the proponent needs to be amended to reflect the more recent town centre reviews. The town centre review has implications for local employment opportunities, although it is questionable as to whether the centres were going to be viable and produce employment opportunities. In addition, the town centre review may result in the location of some collector roads being shifted and the traffic implications of both the realignment and changing employment opportunities need to be assessed.

It is recommended that the town centre locations be deferred from the planning proposal to allow a more detailed review to occur.

#### **Visual Impact Assessment**

The western precinct is both within the West Dapto Release Area and the area covered by the Illawarra Escarpment Strategic Management Plan. This overlap can create conflict between the competing objectives of providing housing opportunities and conservation outcomes, although both objectives can be met.

The draft planning proposal request did not address the Illawarra Escarpment Strategic Management Plan and was not accompanied by a Visual Impact Assessment that would help determine the appropriate locations of development footprint. In addition there were no clear environmental improvements identified as part of the draft planning proposal.

A Visual Impact Assessment was prepared by Council officers to determine the level of impact (Attachment 5).

The Illawarra Escarpment is a prominent feature in the West Dapto Urban Release Area and should be conserved to provide benefits for all residents, including protecting biodiversity, offering expansive views and providing a unique character to this urban release area. It is noted that pressure for urban development will certainly change aspects of the landscape at West Dapto as the area transitions from a predominantly rural landscape to a suburban landscape.

For the purpose of the report the Escarpment was taken to be the 50m (above sea level contour as defined in the Illawarra Escarpment Strategic Management Plan and with reference to the Illawarra Escarpment Land Use Review Study.

Caution needs to be exercised where this definition is used as a mechanism to assess visual impacts, as development impacts vary according to topography, vegetation and street and development design. Considerable amounts of development in many suburbs of Wollongong have been built above the 50m RL, with varying levels of visual impact. In this context, it is considered that this definition is quite conservative; however as a new release area West Dapto is required to be developed consistent with contemporary principles that protect the visual and environmental values of the Illawarra Escarpment. The varied topography of the alluvial plains also needs to be considered – some areas of the floodplain quite disconnected from the Escarpment formations also sit at or above 50m RL. Therefore, blanket assumptions about impacts based upon whether development is situated above or below the 50m RL may not be sufficient to assess actual visual impacts and deeper investigation, such as that described within this study, is required to assess impacts from important viewpoints.

The Stage 3 Planning Proposal includes land within the Illawarra Escarpment as defined by the Illawarra Escarpment Strategic Management Plan (ie land above the 50m RL, shown in purple on the map) and Wollongong Local Environmental Plan 2009 (the legally adopted boundary line as shown in yellow on the map) refer to Attachment 6.

As a result of the Stage 3 Planning Proposal and development associated with the West Dapto Urban Release, the landscape will change significantly from rural outlook to low density residential suburbia. This will see the development of residential and commercial infrastructure on currently vacant land with the exception of flood prone land and riparian corridors which will not be developed. The extent of this development includes an area within the escarpment as defined by the IESMP. This area is defined by locations of 50m above sea level and was not intended to be used as a planning guideline. Planning constraints within the Escarpment are largely based around vegetation and topography which can often influence the visual impact of development.

The effects of the visual impact are assessed against the criteria outlined in the Illawarra Escarpment, Visual Quality Analysis of the Escarpment Scenic Values, March 2007, HLA Sciences report.

As identified in the report prepared by Council officers, accepting that residential development in West Dapto is inevitable the planning proposal will have limited impacts on the visual quality of the Escarpment, which are not considered unreasonable.

However, due to the planning proposal's location within and bordering the Illawarra Escarpment, a number of additional planning measures should be considered to ensure this low visual impact can be achieved. Much of the development is proposed to take place on the alluvial plains and restricted to the cleared sections of the lower foothills. To maintain low visual impacts, E2 Environmental Conservation zones should be established over existing high ecological and aesthetic valued environments. E3 Environmental Management zones should be established within riparian corridors as these non-developed areas will soften the visual impacts of the proposed development by breaking up the built form. Also suggested for areas of high visual integrity (partially cleared foothills whose remaining vegetation is continuous with the Escarpment) is an increase lot size as proposed development climbs into the lower foothills and becomes more visible from key viewpoints in the surrounding area due to topography. Development should remain within the existing cleared lands of the lower foothills at areas which have a low gradient and not extend into ecologically significant vegetation. E4 Environmental Living zones should also be considered in the higher cleared slopes of the planning proposal which adjoin the E2 Environmental Conservation and E3 Environmental Management zones to retain an overall low impact.

Another important consideration is the quality of the built form and the appreciation it has for the surrounding area. This will require street trees, quality landscaping, parklands, consistent building heights and materials to soften the visual impact and provide a smooth transition from the developed area and the high quality scenic value areas of the escarpment.

It is recommended that the submitted Planning Proposal be amended by increasing the E2 Environmental Conservation and E4 Environmental Living land on the western boundary to reflect the topography and visual sensitivity of the landscape.

### **Biodiversity**

The proponent submitted a preliminary Flora and Fauna Study prepared by Hayes Environmental. The report stated that the proposed zoning plan was sensitive to the biodiversity constraints and opportunities on the site. It highlighted that:

- A broad riparian corridor would be retained along the main east-west creek line within the site as E3 Environmental Management and RU2 Rural Landscape zones.
- The riparian corridor would connect to the south eastern corner of the Purrungully Woodland reserve.

- The primary constraint area of vegetation in the far west and north-eastern part of the site would be retained and protected within the E2 Environmental Conservation zone.
- The far eastern part of the site which consists of low lying land between two creek lines would be zoned E3 Environmental Management.
- The majority of the site would be zoned R2 Low Density Residential with several B1 Local Centre zones which would result in the loss of small isolated patches of secondary constraints within the site. It is anticipated that these could be offset.

Council officers have reviewed the report and recommended the following:

- E3 Environmental Management zone should be applied to the riparian corridors not RU2 Rural Landscape.
- As a minimum the 1 in 100 year flood line should be zoned E3 Environmental Management however where there is vegetation Council is seeking to include this into the E3 Environmental Management zone to allow for conservation outcome through Bio-certification.
- Service easements should be zoned with a special use zone rather than the residential zones.
- Flora and Fauna work should be used to determine the development zones.
- The report submitted is insufficient as it does not look at mitigation or offsetting for vegetation loss.

Council on 23 June 2014 endorsed the progression of the bio-certification for the West Dapto Urban Release Area. Generally the modified zoning map prepared by Council officers provided in Attachment 7 has regard for the preliminary boundaries between conservation and development areas determined as part of the bio-certification process. The riparian corridors have been modified to E3 Environmental Management zones this includes the flood affected lands. Service easements are unlikely to have special zones applied.

However, it is recommended that the proponent undertake a Flora and Fauna Assessment that considers offsetting as part of the Gateway determination process to inform the final zoning plan for Lot 1, 2 and 3 DP 810104.

It is recommended that the submitted Planning Proposal be amended by rezoning riparian corridors to the E3 Environmental Management zone as per the remainder of West Dapto Stages 1 and 2 reflecting both vegetative and 1 in 100 constraints as well as consideration for Biocertification outcomes.

### **Flooding**

The proponent submitted a Flood and Riparian Corridor Study prepared by Cardno that shows the current flood behaviour on Lot 1, 2 and 3 DP 810104 owned by Stockland.

These areas represent the 1 in 100 year flood event and are generally consistent with Council's findings for the Mullet Creek Flood Study and Mullet Creek Flood Extension Study. Land within the 1 in 100 year flood level is considered unsuitable for residential development and have therefore been captured as part of the riparian corridor and zoned E3 Environmental Management.

The Mullet Creek Flood Study and Mullet Creek Flood Extension Study show land to the east of Brooks Reach as being within the 1 in 100 year flood level. The West Dapto vision envisaged a cut and fill strategy to manage flooding and increase the development area, similar to what has occurred in Brooks Reach. An updated flood study has not been submitted for the non-Stockland properties. Until a strategy has been developed and modelled, it would not be appropriate for the rezoning of lands within the 1 in 100 year flood level to be rezoned to permit residential development. Accordingly, it is recommended that the Planning Proposal be amended to only cover the Stockland lands, which is subject to a detailed flood study.

The Wollongong LEP 2009 Flood Map only applies to Stages 1 and 2 of the West Dapto Release Area, which reflects the Flood Map in the previous Wollongong LEP (West Dapto) 2010. This can cause confusion as it could be interpreted as some properties are not flood liable. Additionally, the flood map reflects the original 2009 Mullet Creek Flood Study and not the more recent Mullet Creek Flood Extension Study (2011). The Mullet Creek Flood Extension study was exhibited in 2012 with the West Dapto Merger LEP Planning Proposal. No comments were received. As the rezoning of part of Stage 3 is being considered, it would be appropriate to update the Flood Map in the LEP to reflect the more recent information in the entire catchment. The update should also reflect the subdivision works within the Brooks Reach development which have modified the flood behaviour.

Accordingly, it is recommended that the Wollongong LEP 2009 Flood Map be updated to reflect the Mullet Creek Flood Extension Study (2011) for the whole of the Mullet Creek catchment in the West Dapto Release Area (ie Stages 1 to 4) (Attachment 8).

## **Traffic**

The proposed rezoning will allow for a north-south connection between Bong Bong Road and Cleveland Road which will have a number of access benefits.

As noted, the proponents did not submit a traffic report. An initial assessment by Council officers indicates that the Council proposed future road network provides adequate capacity for Stage 3 West Dapto provided that the Fowlers Road – Fairwater Drive link proceeds.

Cleveland Road is currently a narrow two lane wide country road, and is not designed for large traffic volumes. Cleveland Road is proposed to be a two lane Collector Road – Minor Bus Route, with shared paths; however it is not scheduled to be upgraded until at least 2030. The widening will require land acquisition to widen the road reserve and the relocation of services (there is power lines on both sides). There is concern that the development will increase traffic volumes on Cleveland Road, especially trying to

access the High School, and the Fowlers Road – Fairwater Drive link, which will lead to demands for the upgrading to be brought forward, and affect the West Dapto Section 94 Plan and cash flow.

There are two options to minimise the risk:

- Not allow the development to access Cleveland Road until it has been upgraded;
- Require Stockland to design and upgrade Cleveland Road now, and not reimburse them from Section 94 until at least 2030, as per the current schedule in the Section 94 Plan, it is estimated that funding for the road would be collected at a rate of approximately \$2 million per year from 2030 to 2047.

The bringing forward of the upgrading of Cleveland Road by Council through Section 94 now, is not considered a viable option, as Council is committed to funding the Initial Access Strategy and the Fowlers Road – Fairwater Drive link over the next 10 years.

It is therefore recommended that access be denied from Cleveland Road unless Stockland is willing to design and deliver the Cleveland Road corridor, and not be reimbursed until 2030, as indicated in the Section 94 Plan.

### **Social Planning**

Council's Social Planner indicated support in principle for the small lots housing around Bong Bong Town Centre. It is considered that no further information is required at this stage.

### **Heritage**

Aboriginal and non-indigenous heritage studies were not submitted with the proposal. The proponent has indicated that they will prepare additional reports to consider the potential heritage impacts (both Aboriginal and non-indigenous) further following the Gateway determination process should the proposal proceed.

It is noted that the proposed development area has potential to impact on areas of Aboriginal Heritage significance, and non-indigenous Heritage significance. There are areas within the development site that have been identified as requiring additional Aboriginal Heritage investigation. These will require further work to explore their potential to contain Aboriginal sites.

The former Tramway Alignment which runs through part of the development area will need to be considered as part of this documentation.

It is recommended that these additional reports be required to be submitted as soon as possible for additional consideration. It is considered that the proponent should undertake the additional reporting concurrent to Gateway determination process should the proposal be supported. This could then be considered as part of a post exhibition report where changes may be made if necessary to protect key heritage sites.

## Geotechnical

The proponent has not submitted a geotechnical assessment. There are potential geotechnical issues in the western portions of Lots 1 and 3 DP 810104 and these are likely to have significant constraints due to susceptibility to slope instability.

It is considered that these constraints can be effectively managed through the normal application of DCP Chapter E12. These same lots are also subject to uncontrolled filling with coal washery reject material. In this regard the proponent will be proposing some variation to Chapter E19 Clause 4.4 for locations which will not be for residential development which is in line with the original intent of the use of coal washery reject material. This can be considered further once the development concepts for the affected areas are more detailed.

## Contamination

The proponent has submitted a Stage 1 Environmental Assessment prepared by JBS Environmental which found that there is the potential for some contamination to be present in limited areas of the site. However, the potential contamination is unlikely to be of such a scale or occurrence that common remediation and/or management techniques could not render the site suitable for the proposed uses. As such, the potential for contamination to occur at the site is considered not to represent a significant barrier to the future development of the site.

The report points out that the 'The Planning Guidelines' (DUAP/EPA, 1998) state:

*'Rezoning that cover a large area, for example, more than one property, usually describe proposed land uses very generally both in type and location. This makes it difficult for a planning authority to be satisfied that every part of the land is suitable for the proposed use(s) in terms of contamination at the rezoning stage. In these cases, the rezoning should be allowed to proceed, provided measures are in place to ensure that the potential for contamination and the suitability of the land for any proposed use are assessed once detailed proposals are made. However, if the rezoning includes the identification of locations for sensitive uses, such as childcare centres, then it may be appropriate to determine the suitability of the land in those locations at the rezoning stage.'*

Given that the Cleveland district comprises an area of approximately 270ha, development of the proposed rezoning plan is anticipated to make general provisions, rather than designate specific lots for future sensitive land uses. It is therefore recommended that, where a risk of contamination exists, more detailed investigations are undertaken as part of specific development proposals, and that provisions are included in the planning instruments to require these investigations to be carried out.

The report recommends five actions for future development applications including:

- 1 Intrusive sampling, targeting areas of concern highlighted by the Preliminary ESA, is required to assess potential contamination at high potential contamination risk properties to provide an appropriate assessment of stockpiled material, soil and



- background soil concentrations and draw specific conclusions in relation to suitability with respect to final land use;
- 2 Targeted assessment of potential contamination conditions is necessary in areas of highest potential for impact on medium risk level properties. This is anticipated to comprise former and current building locations and infrastructure with a broad scale assessment in open areas or areas used for market gardening and pasture for livestock;
  - 3 Future sampling strategies for property assessments within the site should take into consideration the size of future subdivisions and their respective lots. This is of utmost importance where individual lots may be located wholly within areas considered to be of potential high risk;
  - 4 Hazardous materials audits should be completed on existing buildings proposed for demolition to ensure appropriate management of materials during demolition associated with future redevelopment activities; and
  - 5 Subsequent to completion of future targeted investigations in areas of medium to high potential for contamination impact, an evaluation of contamination risks is required to be completed as per the requirements of EPA endorsed guidelines. Where appropriate, implementation of a Remedial Action Plan and/or Environmental Management Plan may also be required for the site to be considered suitable for the proposed future use.

No additional information is required at this stage.

### **Water and Sewerage**

Sydney Water has received Concept Application approval for the construction of water and sewerage infrastructure throughout West Dapto and Project Approval to service Stages 1 and 2 and the Brooks Reach development. The Stage 3 Stockland proposal can be partially serviced by the Project Approval, but is also partially beyond the approval.

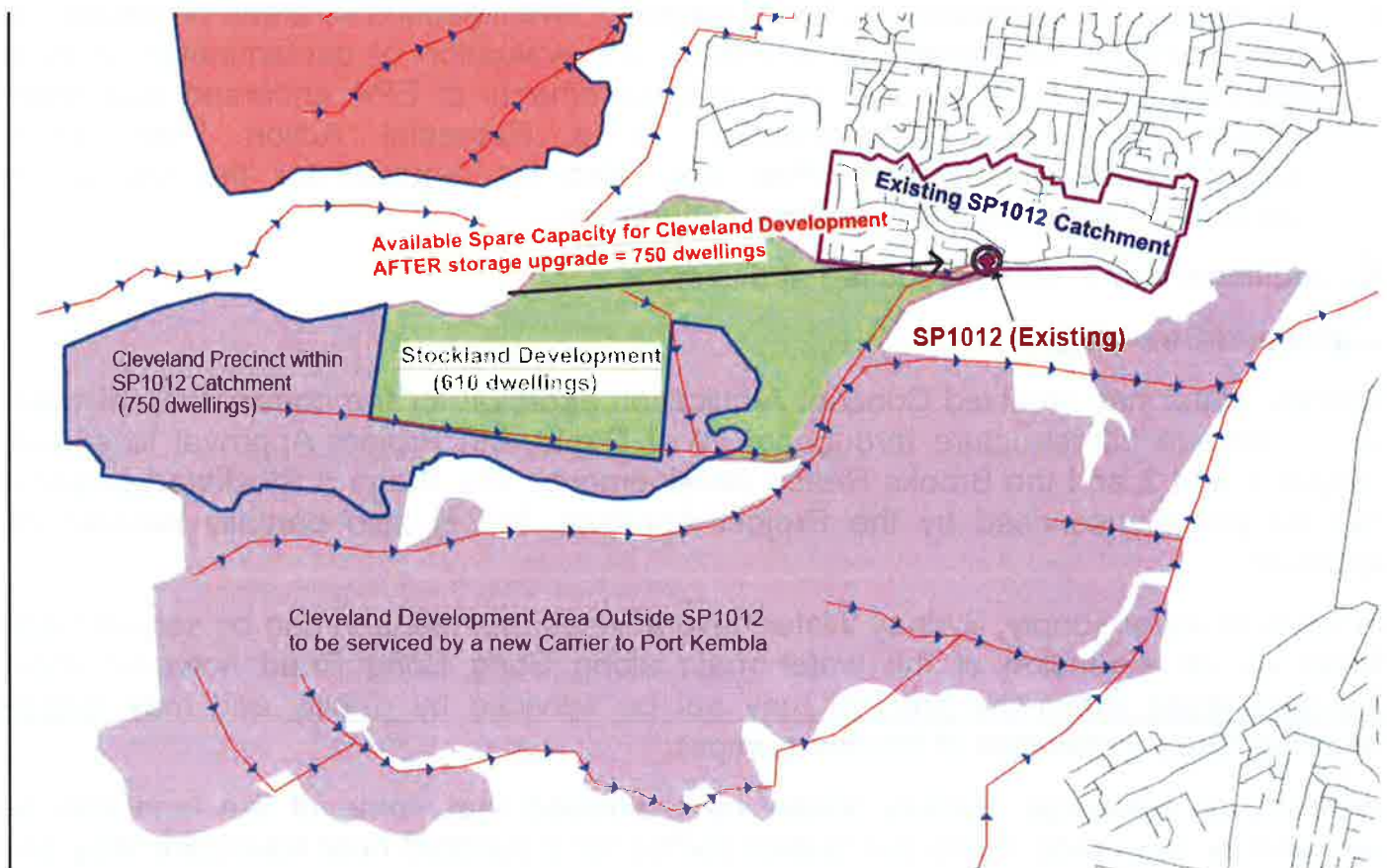
In terms of water supply, Sydney Water have advised that the land can be serviced with water via an extension of the water main along Bong Bong Road however some elevated areas within the precinct may not be serviced by gravity and may require boosting (likely installation of booster pumps).

In terms of sewerage, Sydney Water have advised that some of the land can be serviced by Sewerage Pump-out Station (SPS) 1012 (located near Riverpark Way and Fairwater Drive), however the proponent's report makes misleading and incorrect statements about the capacity of SPS 1012. It is likely that there may be some limited spare capacity at SPS 1012 but this will require either a pump upgrade and/or storage upgrade. However spare capacity can only be determined and confirmed after detailed planning investigation/assessment.

The majority of Cleveland Precinct that cannot be serviced by SPS 1012 will drain to a new sewer carrier which will be connected to the existing Port Kembla sewer carrier. At this stage Sydney Water does not have any planning funds allocation or approval for Stage 3 detailed planning works and servicing. Although the draft Illawarra Urban Development Program Update Report 2014 forecasted certain dwellings (Stage 3 and 4 Cleveland and Huntley) to be developed. Subject to rezoning of Cleveland Precinct, Sydney Water intends to seek approval for planning funds for 2015/16. This would mean the delivery of required trunk works in 2017/18 subject to funding approval. This is assuming that initial works are just a water main extension and an upgrade to existing SPS1012, the land is rezoned and there is adequate demand (DA approvals).

The options for Stockland are to either wait for the gravity main to be constructed along Mullet Creek or install a rising main or tunnel to connect to the gravity system draining to the Reed Creek pumping station.

The proponent should have further discussions with Sydney Water to clarify how the precinct can be serviced.



### Draft Planning Proposal

The above evaluation indicates that there is insufficient information to progress the rezoning of land outside of Stockland's ownership. The main shortcomings were outdated flood risk information for the eastern part of the precinct and lack of design work and funding to deliver access from Cleveland Road to the wider Stage 3 area.

Accordingly, it is proposed that only the following lots owned by Stockland be progressed in the Planning Proposal to permit urban development at this time:

- Lot 1 DP 810104;
- Lot 2 DP 810104; and
- Lot 3 DP 810104.

It is also recommended that the Flood Map be updated for the entire West Dapto Release Areas (stages 1 to 4).

To progress the planning proposal, an updated draft zoning plan has been prepared for the Stockland land only in Stage 3 of West Dapto (Attachment 7).

The modifications to the submitted rezoning proposal include:

- R2 Low Density Residential zone around the Bong Bong Town Centre will have a minimum lot size of 300m.
- RU2 Rural Landscape zone applied to the riparian corridors is now an E3 Environmental Management zone this includes land subject to the 1 in 100 year event.
- E4 Environmental Living zone has been applied to provide a buffer to the escarpment land and to reflect the development potential of the land which is steeply sloping and not suitable for small lots.

**Lot Size:** The draft planning proposal requests smaller lots of 300m<sup>2</sup> be considered for residentially zoned land within a radius of 800m for town centres and 300m for villages including Bong Bong Town Centre, Cleveland village and Fowlers Road village for this site. The distance is consistent with the Growth Centre Commissions report and as the town centre is not yet established, greater population density will assist in encouraging its development. The approach of smaller lot housing can, if delivered with appropriate controls, provide greater housing supply; promote affordable housing options and diversity in the area as well as assisting in providing adequate density to support the viability of the town centre. Given that the village centres area are not within Stockland land holdings nor will Cleveland Village be retained as part of the overall master plan it is only suitable to provide small lots around the Bong Bong Town Centre as part of this planning proposal. The remaining land is proposed to be a consistent with Stages 1 and 2 being:

- R2 Low Density Residential – 450 m<sup>2</sup>;
- E4 Environmental Living – 1500m<sup>2</sup>;
- E3 Environmental Management – 40ha minimum lot size consistent with majority of E3 Environmental Management zones in the LGA; and

- E2 Environmental Conservation – 40ha minimum lot size consistent with the E2 Environmental Conservation zones across West Dapto and the wider Wollongong area (refer to Attachment 7).

**Floor Space Ratio:** The proposed floor space ratios for each zone are as follows:

- R2 Low Density Residential – 0.5:1;
- E4 Environmental Living – 0.3:1;
- E3 Environmental Management – NA; and
- E2 Environmental Conservation – NA (refer to Attachment 7).

**Heights:** The proposed heights for the draft planning proposal remain unchanged at 9m.

**Flood Planning:** As noted it is proposed that the Flood Map be updated to reflect the 1 in 100 year flood level contained in the Mullet Creek Flood Extension Study, for Stages 1 to 4 of West Dapto (refer to Attachment 8).

**Land Reservation Acquisition Map:** Cleveland Road will be shown as a two lane Collector Road Minor as per the road types in the Section 94 Plan and DCP with a width of 20.4m. This will enable Council to begin acquiring land for the construction of future road up grades (refer to Attachment 9).

### **Integrated housing**

The Wollongong LEP 2009 currently does not encourage integrated housing (multi-dwelling housing with subdivision). Proponents currently have to seek development approval for the multi-dwelling housing, then once constructed a separate approval for the subdivision of the development. This is inefficient and does not encourage integrated housing.

It is proposed that Clause 4.1 of the LEP be amended to assist in the delivery of integrated housing. Proposed Clause 4.1c is included to enable both the development and subdivision of land to be achieved under one application making development more feasible to deliver.

### **Draft Planning Proposal for Hayes Lane West precinct**

Separate to the Stage 3 rezoning request, Stockland have developed and released some 360 lots in the Brooks Reach development, have development approval for 66 lots in the Hayes Lane East precinct (located on the northern side of Bong Bong Road) and are lodging a Development Application for a further 163 lots in the Hayes Lane West precinct.

As part of the pre-lodgement discussions for Hayes Lane West, it has been identified that a 600m<sup>2</sup> parcel of land located between proposed Lot 1528 and proposed Road 05 could be rezoned to permit residential development. The land is currently zoned E3 Environmental Management due to the possible 1:100 Annual Recurrence Interval

flood extent. If the development application is approved, Road 05 would be raised and will form the boundary of the flood extent, meaning that the land will not be flood affected and could be developed for a dwelling house (refer to Attachment 7).

The rezoning of the land to the north of proposed Lot 1528 to R2 Low Density Residential will have a number of minor benefits:

- Provide for the efficient use and development of land, and finish off the subdivision;
- Removing the possibility of future complaints over the non-maintenance of the land;
- An 80m setback to the creek from Road 05 will be retained;
- Allowing one extra lot to be developed, which will have a minor reduction in Stockland development costs and increase the Section 94 contribution to Council;
- Allowing for the re-orientation of Lot 1528, from east-west, to north-south and removing the access from Hayes Lane (a proposed four lane collector road);
- Demonstrating that Council is being pro-active in encouraging the efficient development of West Dapto.

Accordingly, it is recommended that a separate housekeeping draft planning proposal be prepared for the rezoning of the land north of proposed Lot 1528 and the proposed Road 05 in the Hayes Lane West precinct from E3 Environmental Management to R2 Low Density Residential, with a Minimum Lot Size of 300m<sup>2</sup>, floor space ratio of 0.5:1 and Maximum Building Height of 9m (no change), consistent with the adjoining land, and adjusting the flood map affectation to the northern side of Road 05.

## CONSULTATION AND COMMUNICATION

The draft planning proposal request was placed on preliminary notification between 10 February and 21 February 2014. Surrounding landholders were notified by mail with copies of the proposal being available at local libraries and Council's webpage. Council received three submissions; one from Sydney Water and two from local residents that wanted to be included in the draft planning proposal.

It is noted that Sydney Water was contacted specifically to understand the capacity to service the Stage 3 area prior to a report to Council being considered. NSW Department of Education provided advice in 2012 on the provision of schools which is also included in the table. All other State agencies will be consulted formally as part of the Gateway determination process should the proposal proceed. A summary of submissions received during the exhibition has been provided in the table below.

Submitter	Issues	Comment
Resident West Dapto	Want the planning proposal to cover both sides of Cleveland Road.	Due to the significant amount of information required to progress the planning proposal for all of Stage 3 Council will not be considering land for rezoning outside of that owned by Stockland.
Resident West Dapto	<p>Added value in including their properties in the proposed rezoning area.</p> <p>As much land as possible identified within Council's Stage 3 West Dapto Release Area should be included within this proposal, including at least all lots from Cleveland Road to Mullet Creek, which form a part of the Stage 3 Release area.</p> <p>This will benefit the area because:</p> <ol style="list-style-type: none"> <li>1 It will help limit the amount of development fragmentation in the area, providing for a smoother development pathway for the region.</li> <li>2 It is likely to assist with the development of a suitable water management system for the region.</li> </ol>	While Council notes that there are benefits to rezoning more land there are too many gaps in information and infrastructure that would need to be addressed to progress Stage 3 further and Council is not in a position to be able to support this.
Sydney Water	<ul style="list-style-type: none"> <li>• June 2013 Sydney Water obtained concept approval under Part 3A for the whole West Dapto Urban Release Area and the adjacent growth areas Huntley, Calderwood, Tullimbar and Tallawarra.</li> <li>• Also have approval for staged delivery of trunk infrastructure to Stage 1 and 2.</li> <li>• The planning proposal report makes misleading and incorrect statements about the capacity of Sewerage Pump-out Station 1012.</li> <li>• It is likely that there may be some limited spare capacity at SPS 1012 but this will require either a pump upgrade and/or storage upgrade. However spare capacity can only be determined and confirmed after detailed planning investigation/ assessment.</li> </ul>	Noted – discussed in the report.

Submitter	Issues	Comment
	<ul style="list-style-type: none"> <li>• The majority of Cleveland Precinct that cannot be serviced by SPS 1012 will drain to a new sewer carrier which will be connected to the existing Dapto sewer carrier.</li> <li>• The Cleveland Precinct can be serviced with water via an extension of the water main along Bong Bong Road however some elevated areas within the precinct may not be serviced by gravity and may require boosting (likely installation of booster pumps).</li> <li>• At this stage Sydney Water does not have any planning funds allocation or approval for Stage 3 detailed planning works and servicing. Although draft IUDP Update Report 2014 forecasted certain dwellings (Stage 3 and 4 Cleveland and Huntley) to be developed.</li> <li>• Subject to rezoning of Cleveland Precinct, Sydney Water intends to seek approval for planning funds for 2015/16. This would mean the deliver or required trunk works in 2017/18 subject to delivery funding approval. This is assuming that initial works are just a water main extension and an upgrade to existing SPS1012, the land is rezoned and there is adequate demand (DA approvals).</li> </ul>	
<p>Department of Education</p>	<p>Does not oppose, in principal, the fast tracking of land in Stage 3 for urban development.</p> <p>Our concerns are as follows:</p> <ul style="list-style-type: none"> <li>• that in any neighbourhood plans and/or Development Control Plan for Stage 3, provision for two public schools (2 x 3.0ha) and a high school (1 x 6.0ha) is made on suitable land that is flat, flood free, not within a fire hazard zone and away from high voltage electrical.</li> <li>• that any upgrading or alteration to Cleveland Road around Dapto High School result in a safe and practical environment for staff and students and that it has minimal impact on the operation of the school.</li> </ul>	<p>Stockland would be required to prepare a concept plan as part of the Neighbourhood Plan which would need to consider the requirements of schools in the West Dapto Release Area. This is being requested as part of the Gateway determination.</p>

The proposal would require further formal consultation with State agencies such as Office of Environment and Heritage, Department of Education, Services NSW, Rural Fire Service and State Emergency Services. The draft planning proposal would be exhibited for 28 days as part of the formal Gateway determination process. It is necessary that Council request that the Gateway determination have an 18 month timeframe for completion to allow the proponent to prepare necessary reports as outlined in the recommendation and for those reports to be referred to State agencies.

## PLANNING AND POLICY IMPACT

### **Illawarra Regional Strategy (2007)**

The West Dapto Stage 3 Planning Proposal is consistent with the Illawarra Regional Strategy (IRS). The IRS outlines and reinforces how housing, employment and conservation can be achieved through careful planning by Wollongong City Council and the NSW State Government.

The IRS anticipates the Illawarra region will increase by 47,600 people by 2031. The IRS calculates 328,600 people will then reside in the Illawarra region and that an extra 38,000 dwellings will be required to house the increase in population. West Dapto is expected to support 19,350 of these dwellings.

The West Dapto Stage 3 development will play a key role in supplying an affordable housing mix and catering for the expected increase in population. The planning proposal identifies the town centre areas as key locations for smaller lot house (300m<sup>2</sup>) this accommodates diversity in land size which contributes to diversity in housing types.

The IRS expects 30,000 new jobs will be required in the Illawarra region. West Dapto Stage 3 supports the IRS employment aims by providing additional residential catchment around the town centres. The increase in population will encourage greater uptake of commercial land, and create employment in these centres. Residents will also be able to take advantage of proposed and existing employment lands opportunities located at Kembla Grange. Closer employment opportunities and upgrades of existing infrastructure will create shorter commuting distances.

The conservation of riparian lands, high valued environments, habitat corridors, the Illawarra Escarpment, and cultural significant sites are also key factors to be considered. The information provided by the proponent as well as work undertaken by Council will be used to ensure that sensitive environments are protected and balance against the direction of West Dapto as an Urban Release Area.

### **Illawarra Escarpment Strategic Management Plan (2006)**

The Illawarra Escarpment Strategic Management Plan (IESMP) defines the Escarpment boundary as land higher than the 50 metre (above sea level) contour and all riparian corridors connected to the Escarpment (irrespective of their height above sea level). The use of the 50m RL was adopted by a project coordination group which looked for a stronger biophysical justification for establishing a study area boundary for the



Escarpment. This boundary was thought to provide a distinction between 'escarpment influenced' and 'coastal influenced' vegetation communities and not necessarily a conservation zone which prevents development in the area.

The vision of the IESMP is to protect, conserve and manage the environmental values and assets of the Illawarra Escarpment within the principles of Environmental Sustainable Development. It's noted that the primary objective of the plan was to consolidate the information and recommendations of various studies to inform policy writing and planning decisions.

The plan also classifies land into categories of conservation value which is used to provide a framework for consistency in applying WCC land use planning policies.

The IESMP is used to assess the adequacy of land use zoning, permissible uses, subdivision entitlements and dwelling entitlements. Attributes were collected and arranged into four areas in order of significance which include: Core conservation, Biophysical support, Landscape support for core and Escarpment interface. The following two areas relate to the subject site:

- **Landscape Support for Core** - *Areas which form a link between core and support areas of the escarpment and foothills. Have some significance but are fragmented and do not always form contiguous links to core and support land.*
- **Escarpment Interface** - *provides a gradation between the naturally vegetated areas and the foothills with the existing or proposed urban areas. The interface areas reflect the history of the rural areas and the need for a transition from natural areas to more urban areas.*

The three lots in the Stockland land holding contributes to approximately 26ha of escarpment land as mapped in the Wollongong LEP 2009. This area comprises of vegetation on the steep slopes down to cleared agricultural land on the foothills of the escarpment. A total of approximately 44ha are proposed to remain in E2 Environmental Conservation and E3 Environmental Management precluding development. The remaining land is proposed to be zoned E4 Environmental Living with a minimum lot size of 1500m<sup>2</sup> over an area of approximately 16ha and the remainder being for standard residential development for an area approximately 52ha.

The plan recommends that areas identified as escarpment interface and landscape support should be classified as an Environmental Protection Zone – Management. Zoning controls should generally:

- a Provide a rural boundary on the outskirts of residential areas and to act as a reservoir from urban development and environmental protection;
- b Allow agricultural and peri-urban pursuits which are not likely to inhibit or prejudice the present environmental quality.

The IESMP recommends only environmental zones within the Escarpment area as can be seen in the zoning map. The land contained within the Escarpment boundary is

proposed to be E3 Environmental Management and E2 Environmental Conservation and is therefore consistent with the policy. It is important to the note that while in this instance the Escarpment land is protected by the conservation zones, the West Dapto Urban Release Area is an equally important consideration and is included in the Illawarra Regional Strategy as playing a key role in the supply of housing for the Illawarra Region noting that West Dapto is expected to support 19,350 of these dwellings according the Illawarra Regional Strategy.

Where land is steeply sloping an E4 Environmental Living zone has been applied (approximately 16ha) and serves to provide a buffer between the residential land and the escarpment land.

### **Illawarra Escarpment Land Use Review Strategy (2007)**

The strategy is used to assess the values of different areas within the Escarpment to provide recommendations in regard to zoning and development controls for policy making. This was achieved by dividing the escarpment area into precincts to provide specific reference and information. The subject site in this proposal is located in the West Dapto Bowl precinct. Within this precinct, the subject site is located in the Bong Bong Pass to Wongawilli sub precinct. The strategy identifies the visual quality of this area as having highly visible clearings within the lower foothills which highlights the need for a site specific visual impact report. The steep slope angle and visible grass surface limits identification of the development opportunity envelope. The land use review strategy identifies this land as Landscape Support for Core. This area is defined as areas which form a link between core and support areas of the Escarpment and foothills which have some significance but are fragmented and do not always form continuous links to core and support land. Further work was recommended as part of the strategy such as a visual impact assessment to identify which areas are suitable for development. A visual impact assessment was conducted by Council staff with consideration to the Strategy and the mapping of the West Dapto Urban Release Area in the Illawarra Regional Strategy. The Visual Impact Assessment is discussed below.

### **Wollongong 2022 – Community Strategic Plan**

This report contributes to the Wollongong 2022 objective - *Residents are able to have their say through increased engagement opportunities* and take an active role in decisions that affect our city under the Community Goal – *we are a connected and engaged community*.

It specifically delivers on core business activities as detailed in the Land Use Planning Service Plan 2014-15.

### **S117 Ministerial Directions**

The relevant Section 117 directions that apply include 1.2 Rural Zones, 1.3 Mining, Petroleum Productions and Extractive Industries, 2.1 Environmental Protection Zones, 2.3 Heritage Conservation, 3.1 Residential Zones, 3.3 Home Occupation, 3.4 Integrated Land Use and Transport, 4.3 Flood Prone Land, and 4.4 Planning for Bushfire Protection.

## 1.2 Rural Zones

The objective of the direction is to protect the agricultural production value of rural land.

Under this direction Council must:

- a not rezone land from a rural zone to a residential, business, industrial, village or tourist zone;*
- b not contain provisions which will increase the permissible density of land within a rural zone (other than land within an existing town or village); and*
- c include provisions that control access from traffic generating developments to classified roads in rural zones.*

Council may be inconsistent with the direction where it is justified by a strategy or in accordance with a Regional Strategy. This area is identified in the Illawarra Regional Strategy as an Urban Release Area and as such inconsistency with this direction is warranted.

## 2.1 Environmental Protection Zones

The objective of the direction is to protect and conserve environmentally sensitive areas.

Under this direction Council must

- a include provisions that facilitate the protection and conservation of environmentally sensitive areas; and*
- b not reduce the environmental protection standards that apply to the land (including by modifying any development standards or subdivision controls that apply to the land).*

It is considered that this planning proposal is consistent with this direction applying E2 Environmental Conservation, E3 Environmental Management and E4 Environmental Living zones where necessary and appropriate.

## 3.1 Residential Zones

The objectives of this direction are:

- a to encourage a variety and choice of housing types to provide for existing and future housing needs;*
- b to make efficient use of existing infrastructure and services and ensure that new housing has appropriate access to infrastructure and services; and*
- c to minimise the impact of residential development on the environment and resource lands.*

Under this direction Council must

- a *broaden the choice of building types and locations available in the housing market; and*
- b *make more efficient use of existing infrastructure and services; and*
- c *reduce the consumption of land for housing and associated urban development on the urban fringe; and*
- d *be of good design.*

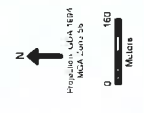
It is considered that this proposal will provide a variety of lot sizes to suit different housing types ranging from 300m<sup>2</sup> to 1,500m<sup>2</sup>.

### Options




- 1 Proceed with the draft planning proposal as lodged for the northern part of Stage 3 West Dapto Urban Release Area – between Horsley and Cleveland Road (refer to Attachment 3).
- 2 Proceed with an amended draft planning proposal for only the Stockland owned part of Stage 3 West Dapto Urban Release Area – *RECOMMENDED* (refer to Attachment 4)
- 3 Not proceed with a draft planning proposal for part of Stage 3 West Dapto Urban Release Area.

### CONCLUSION

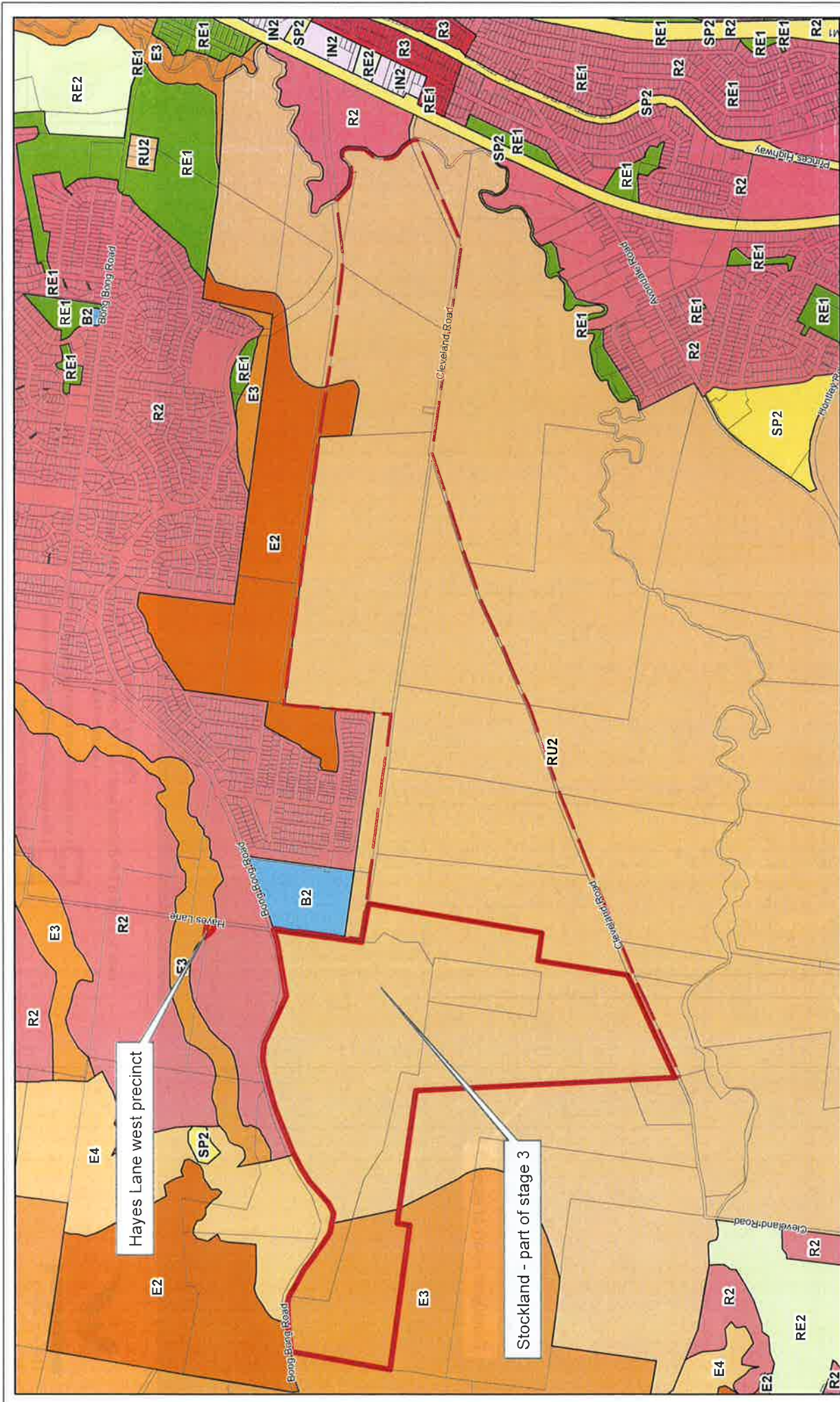
It is considered appropriate that the draft planning proposal for only the Stockland land holding within Stage 3 West Dapto Urban Release Area be progressed at this time. There is insufficient information to progress the remainder of the northern part of Stage 3 as originally submitted. It is recommended that a draft Planning Proposal also be prepared for a minor rezoning in the Hayes Lane West precinct and be referred to the NSW Department of Planning and Environment for a Gateway determination. It is proposed that the Gateway determination be requested to require the proponent to prepare for part of Stage 3 an Aboriginal Heritage Assessment, Non-indigenous Heritage Assessment, Flora and Fauna Assessment, and a draft Neighbourhood Plan that incorporate the findings of the previously mentioned assessments prior to formal exhibition of the draft Planning Proposal to enable State agencies to provide comment on the proposal. If supported it is proposed that the draft planning proposal be placed on exhibition for a minimum of 28 days.



Planning Proposal  
 Lots 1, 2 and 3 DP 810104 and Lot 1 DP 549692 Bong Bong Road West Dapto  
 Location Map

-  Land proposed to be progressed as part of Planning Proposal
-  Land subject to Planning Proposal request
-  Additional land considered





Planning Proposal  
 Lots 1, 2 and 3 DP 810104 and Lot 1 DP 549692 Bong Bong Road West Dapto  
 Current Zoning Map - LEP 2009

- Zones**
- Subject Site
  - Stage 3 Boundary
  - Local Centre
  - National Parks & Nature Reserves
  - Environmental Conservation
  - Environmental Management
  - Environmental Living
  - General Industrial
  - Light Industrial
  - General Residential
  - Low Density Residential
  - Medium Density Residential
  - Primary Production Small Lots
  - Special Activities
  - Primary Production
  - Infrastructure
  - Rural Landscape
  - Tourist
  - Public Recreation
  - Private Recreation
  - Primary Production
  - Rural Landscape
  - Tourist



Map last updated on: 12/01/2010  
 Map Date: 12/01/2010



# Constraints and Potential Zoning

## WEST DAPTO STAGE 3

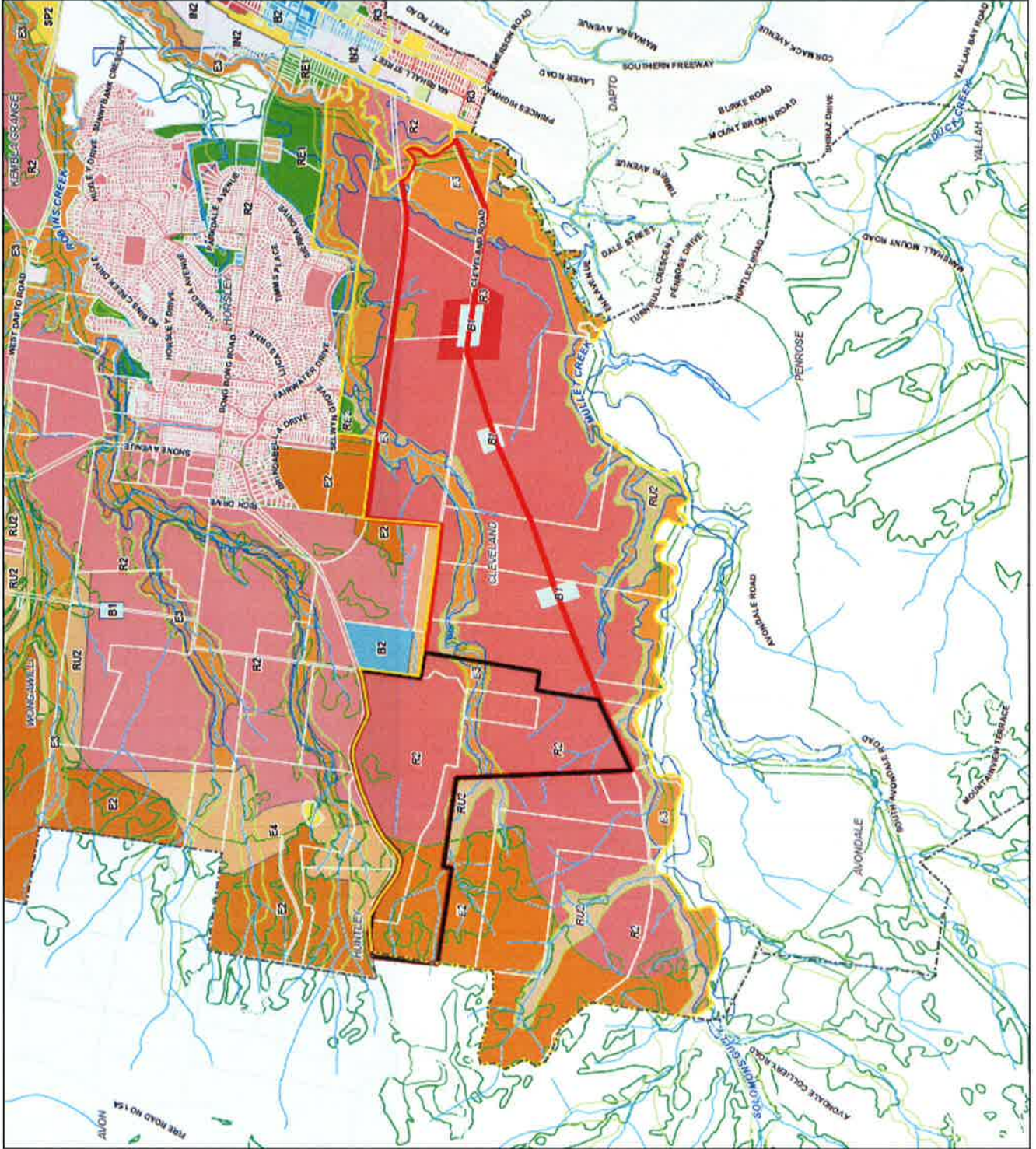
- Legend**
- Stockland Land Holdings
  - Proposed Reasoning Boundary
  - West Dapto Stage 3 (to Murrumbidgee) - 685.4 ha
  - West Dapto Future Urban Release Area
  - Watercourse (LPI)
  - Catchment (LPI)
  - 1% AEP Flood Development (Soarwater, 2010)
  - Roadway Corridor (RC/MAS)
  - Conservation Significance (NPWS)
  - West Dapto Stage 3 Proposed Zoning
  - B1 (6.7 ha)
  - E2 (92.3 ha)
  - E3 (123.1 ha)
  - R2 (398.0 ha)
  - R3 (3.8 ha)
  - RE2 (2.5 ha)
  - RU2 (54.4 ha)



Scale 1:20,000 (at A3)



Map Prepared by Cardno Planning  
 Coordinate System GDA 1984 MGA Zone 88  
 Project 11028-01  
 Map 1818\_180606stage3\_180606stage3\_05  
 Zoning Area West Dapto LPT 2010 (Stage 1 and 2)  
 Potential Zoning for Stage 3 by Cardno



West Dapto

**further review of release area centres & controls**

PREPARED FOR WOLLONGONG CITY COUNCIL - JUNE 2014



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### DISCLAIMER

Urbanicity has taken every care to ensure the correctness of all the information contained in this report. All information has been obtained by what are considered to be reliable sources, and the consultants have no reason to doubt its accuracy. It is however the responsibility of all parties acting on information contained in this report to make their own enquiries to verify correctness.

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## 1. INTRODUCTION

This study is a review of centre capacity for West Dapto and the retail types and locations for the town and village centres that sit within the West Dapto Urban Release Area (WDURA) in the context of the Dapto Town Centre and the proposed Caldenwood and Tallawarra Town Centres. This review is a refinement of previous work that proposed the consolidation of a number of West Dapto centres undertaken for Wollongong Council by Urbanity in March 2012.

The purpose of this review is to enable Council to deliver an updated master plan for the West Dapto Release Area. The review also takes into account recent decisions on road and access infrastructure and also provides feedback for infrastructure provision as a consequence of any proposed changes to the centres pattern. Council also wishes to develop design controls for these smaller centres so to facilitate an improved form of centre that is focused on the street and of a quality that is able to inspire housing density within and/or around the centre.

This review was undertaken using three processes:

1. Field analysis and desktop review of location options and centre catchments and role.
2. Discussions with Metcash on their feasibility triggers and preferences for centre location and catchment size. With the exception of Darkes Rd, all centres are too small for a major supermarket.
3. Workshop with Council staff

The staff workshop was held on Wednesday 4th June in Dapto and included testing design options for Darkes Rd Town Centre. The consultants also interviewed Metcash (who are the suppliers of secondary supermarkets such as IGA) on feasibility triggers for their supermarket franchisees so as to get a sense as to what catchment thresholds exist for their stores.

## 2. CONTEXT

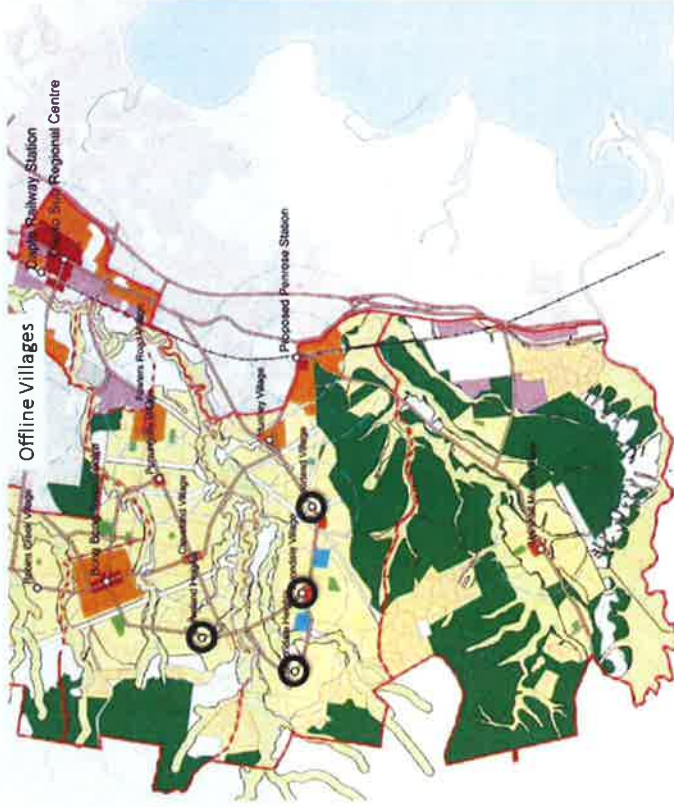
The 2007 Vision and draft LEP for the West Dapto Release Area identified:

- Dapto Town Centre as the sub-regional centre,
- Darkes Road and Bong Bong Road as town centres
- Some 15 smaller town and village centres
- The existing Horsley Village Centre.

The 2007 Draft Vision was based on the principle of walkable catchments, that was to provide local employment and some retail service facilities and bus stops. However the urban or settlement pattern of West Dapto is heavily constrained by landscape features and water management areas. As a consequence the pattern tends to be linear in an east-west orientation and not circular. This affects the level to which walkable catchments can be defined even assuming such catchments delivered viable centres.

The Draft Vision provided a geographically wide sequence of centres throughout the WDURA. The Draft Vision also established the road network for the area, based on the conjoined principles of walkable catchments and connected movement network. However some of the proposed centres had weak catchments and were offline in terms of the likely major direction of movement in the area. Consequently the truncated movement network that was supposed to support these centres did not have the effect of adding energy from outside the catchment to all of these centres. This had the effect of reducing the important influence of the movement economy. The Draft Vision plan is shown in Figure 1.

Figure 1 - 2007 Draft Vision Plan - Villages with Limited Movement Network Benefits



The four highlighted centres benefit from local movement, which is predominantly the movement of each village's potential catchment. The benefits of a movement network that delivers customers from other places would not be a factor in the performance of these four centres.

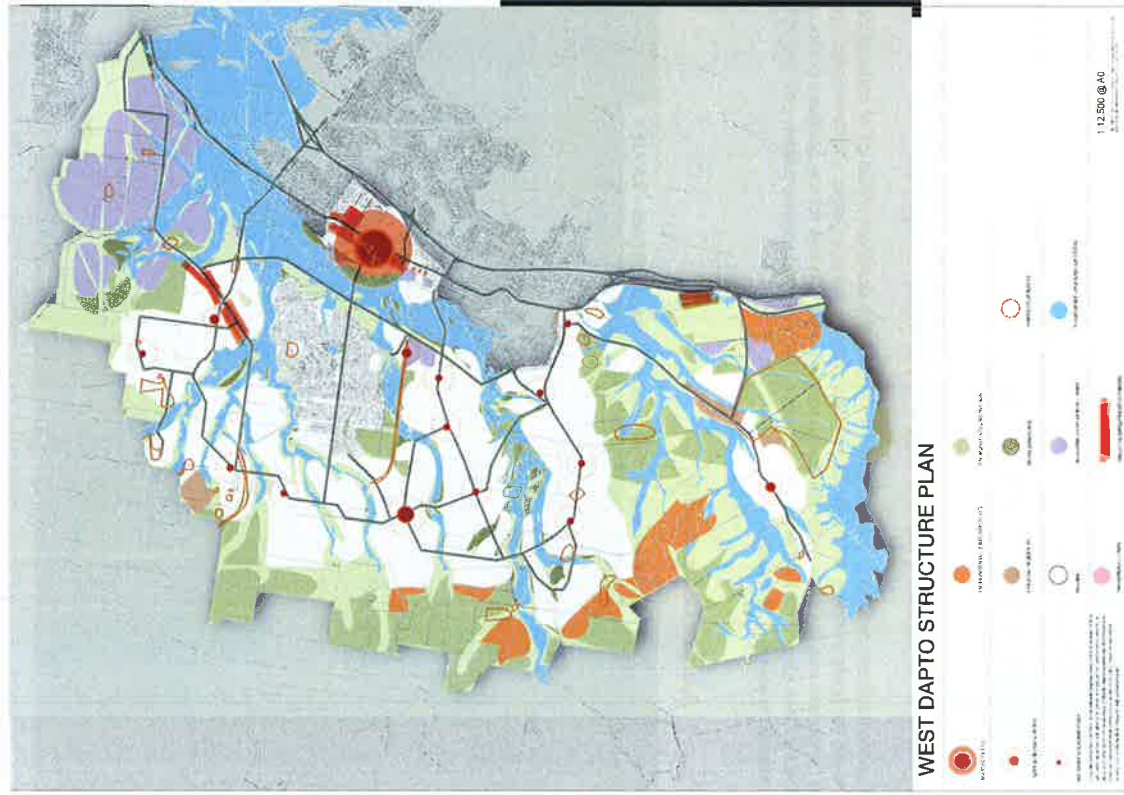
Following exhibition of the 2007 draft Plan a further review was undertaken by the NSW Growth Centres Commission (2008) which supported fewer centres. The review proposed:

- Support of the Dapto Town Centre as a sub-regional centre;
- Development of the Bong Bong Road District town centre containing some 15,000m<sup>2</sup> of retail floor space.
- Development of the Darkes Road large village centre containing 7,500m<sup>2</sup> of retail floor space.
- 3 smaller village centres containing 2,500m<sup>2</sup> of retail floor space each.
- 6 villages to the south and a small town centre at Marshall Mount.

This strategy was incorporated into the revised Wollongong LEP (West Dapto) 2010 which was gazetted in May 2010 and enabled the rezoning of stages 1 and 2 of the Release Area. The rezoning of stages 3-5 was deferred and did not proceed. However the 2008 Plan left the road structure largely the same as the 2007 Vision Plan.

Figure 2 shows the pattern of centres and their location as proposed by the NSW Growth Centres Commission.

Figure 2 - Growth Centres Commission Plan



In 2012 a further review of the West Dapto centres structure was undertaken by Urbacity. This study proposed two centres be moved (Wongawilli and Jersey Farm) and three others (Paynes Village, Purrungully and Moorland) be deleted. The review was used to update the location of Wongawilli and Jersey Farm and remove the Paynes Village from the LEP and

Purrungully and Moorland centres from Stages 3 & 4 of the structure and master plans.

With these actions taken, Council wishes a further review of the proposed amended 2012 centres structure in the southern part of the release area (Stages 3-5) to determine whether the amended town and village centres are still necessary, with set size, in the appropriate locations, with appropriate retail types and suitable catchments. The information from this review is proposed to be used to update the Wollongong Local Environmental Plan 2009.

### 2.1 New Zonings in the Area

In 2011-2013 a review of the Yallah – Marshall Mount (Stage 5) precinct was undertaken and this area is planned for an additional 4,000 dwellings.

The draft Planning Proposal for Stage 5 of the Marshall Mount precinct, which includes a B2 Local Centre (34000m<sup>2</sup>) and B4 Mixed Use zone (48000m<sup>2</sup>), has recently been exhibited. This proposed centre sits south of the centres under review in this study but Council also wishes to check whether this centre will have any effect on the performance of these centres.

In the Wollongong LEP 2009, land was zoned B1 Local Centre at Tallawarra and a Major Project Concept Application was approved for the development of the area. Tallawarra is some distance from West Dapto across a freeway and a railway line. Tallawarra has no influence on the centres pattern in West Dapto.

In addition a Major Project Concept Application has been approved for the Caldenwood Release Area (predominately in the Shellharbour City Council area and to the south of the Marshall Mount precinct), which may have some influence on the trading performance for centres in West Dapto and depending on the ultimate street network, may generate traffic through this area to destinations to the north.

Given that the dominant direction of flow in this area is northward towards Wollongong, the proposed Marshall Mount centre is unlikely to have an influence on the smaller centres to the north and will have no influence on the preferred pattern of these centres. The smaller centres to the north that are the subject of this review will not contain full size supermarkets but they will have small and dedicated catchments. Their role is to provide a convenient alternative to the supermarket-based town centres for daily goods and services as well as an amenity focus for housing density and improved public transport use. They are likely to comprise grocery stores of between 500-1,000 square metres and limited specialty shops in the convenience and personal services categories.

### WEST DAPTO STRUCTURE PLAN

### 2.2 New Information & Changes to WDURA

In the sequence of analysis since to 2007 Vision some seven out of fifteen proposed centres have been removed. However the road network has remained largely unchanged, despite the centres pattern being a primary driver of road network.

Council has also undertaken subsequent analysis of the density zones and has changed its minimum lot size around the town and village centres. This has implications for housing yield and the pattern of movement in and around the centres. In addition Council has updated its constraints map for the area based on new information about flooding and vegetation/ biodiversity. Whilst these changes are incremental, when considered together they have resulted in fundamental modifications to the development pattern of the WDURA. The cumulative result questions the integrity of the masterplan, structure plan and public transport strategy.

### 3. CURRENT & PROPOSED CENTRES STRUCTURE

#### 3.1 Approved Centres

The current approved and zoned town and village centres within Stages 1 and 2 of the West Dapto Release area are:

1. Bong Bong Town Centre
2. Darkes Road Town Centre
3. Wongawilli Village Centre
4. Jersey Farm Village Centre (this centres is within land controlled by a coal company and unlikely to be developed for some 20-30 years)
5. Horsley Village Centre (existing village centre)

These centres are now locked into the City's LEP. The proposed Yallah Marshall Mount centre (draft Planning Proposal) is also at a stage where its location is largely set.

For the southern centres of Stages 3 and 4 WDURA the dominant influence of convenience based shopping patterns will be the Bong Bong town centre and Dapto. Dapto will also have an important role in higher order shopping and business services for the southern portion of the WDURA as well as for the northern portion. The approved centres pattern post the 2012 Urbacity review is shown below.

Figure 3 - Approved Centres WDURA



1. Fowlers Rd
2. Cleveland
3. Avondale
4. Huntley

These four proposed village centres to the south are the dominant focus of this review.

Council wishes the review to:

- Address the capacity/size of the catchment required to achieve a sustainable village centre;
- Recommend a size range or maximum size for each centre;
- Identify the type of retail to be accommodated within the centre that supports the revised hierarchy;
- Provide suggestions for any site specific controls that may be needed to support the town centres hierarchy.

With these four proposed southern village centres added, the pattern is as shown in Figure 4.

Figure 4 - Approved & Proposed Centres WDURA



### 4. CATCHMENT ANALYSIS

#### 4.1 Catchment Definition

Catchments for centres operate on the basis of the dynamics and relationships between centres of similar types and the relative priority of the road network between catchment households and these centres. Centres higher up in the hierarchy are an influence of shopping patterns

#### 3.2 Proposed Centres

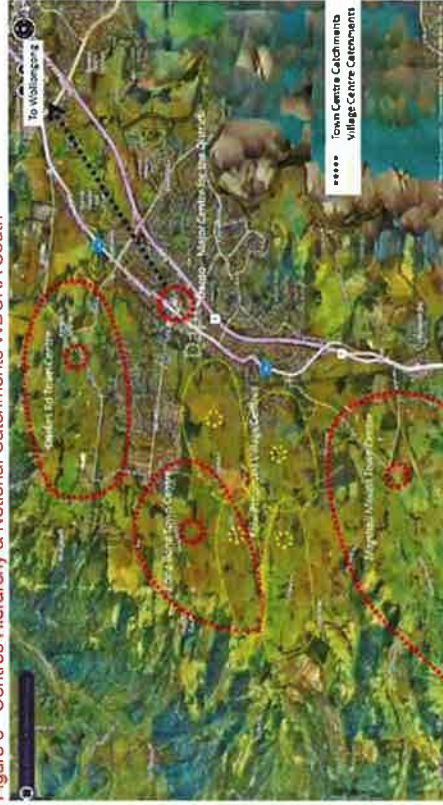
In addition to the centres shown above that are fixed in terms of location, there are 4 proposed and unzoned centres in Stages 3, 4 and 5 being:

as well as directional patterns of travel. In West Dapto the major flows to centres are initially eastward, then northward towards Wollongong. This means that centres positioned further to the east will have larger catchments due to natural patterns of movement than centres to the west.

The location and nature of the major regional and district networks is also an influence of centre performance. However the contribution of these higher order networks to centre performance is a function of the level to which movement is managed within the boundaries of the centre and the ability of this movement to contribute to the positive energy of the centre.

The growth pattern to the south runs along east-west corridors defined by the flood pattern. The dominant direction of movement in this area is also west to east and then northward. This means that village centres in the eastern edges of the growth cells could serve the entire growth cell based in usual and normal patterns of movement. However this would give each centre a relatively large catchment and reduce convenience and choice for residents in each growth cell. The existing and proposed centres hierarchy and notional catchments is shown in Figure 5.

Figure 5 - Centres Hierarchy & Notional Catchments WDJURA South



What is obvious from the diagram is the level to which the potential of the Cleveland Village catchment is compromised by its proximity to Bong Bong Town Centre and the level of duplication of its catchment with the Bong Bong Town Centre. Of all the proposed village centres, the Cleveland centre would appear to be the most compromised. This issue is made more obvious when considering the role of the movement network.

The 2012 study assessed the Cleveland catchment as containing around 1,400 households. However the centre sits close to the Bong Bong town centre and all of its catchment has direct connections to the larger town centre. Also in the sequence of analysis since

The previous analysis assumed limited encroachment by the Bong Bong town centre on the Cleveland centre and did not define a catchment for the Bong Bong town centre. The discipline of defining a catchment of around 10,000 people for the town centre suggests that its catchment will be long to the west and south. The 2012 study merely defined a catchment for Cleveland on the assumption that Bong Bong would trade more to the north. However

the residential development pattern shows that there is not enough catchment to the north to satisfy the performance requirements of town centre. This means that the centre needs most of the Cleveland catchment. Given that the town centre will have a full service supermarket and is much larger than the proposed Cleveland centre, it will dominate retail trade within the notional Cleveland catchment. The previous analysis defined the Cleveland catchment as shown in the following diagram. With the Bong Bong catchment defined, it is likely that the Cleveland centre would struggle for viability

Figure 6 - 2012 Study, Cleveland Catchment & 2014 Overlaid Bong Bong Catchment



#### 4.2 The Role of the Movement Network

There is a point at which movement depletes the social and economic potential of a centre. This effect varies between centre types. Larger centres can operate well with heavier movement but smaller centres are more sensitive to vehicular movement characteristics and volumes. Cities can perform well with heavy volumes and multiple travel lanes providing that levels of friction are high as this decreases average speed. Congestion and parking within the street are also de facto amenity devices that improve the pedestrian experience by slowing traffic. Centres or cities with high levels of visual diversity and detail (as opposed to simple and monotonous building rhythms) can also have the effect of reducing the desire to speed.

In terms of a general rule, a street through a centre with four travel lanes is a detriment to a centre. This is certainly the case in West Dapto. No centres in the West Dapto Urban Release Area should experience a four travel lane street through the centre as it will diminish its social and economic potential and desired pedestrian priority. Thresholds for 4 lanes start at 20,000 vehicles per day (although there are 2 lane streets with trams in Melbourne that have higher volumes). Anything less than 20,000 vehicles per day should be a two lane street.

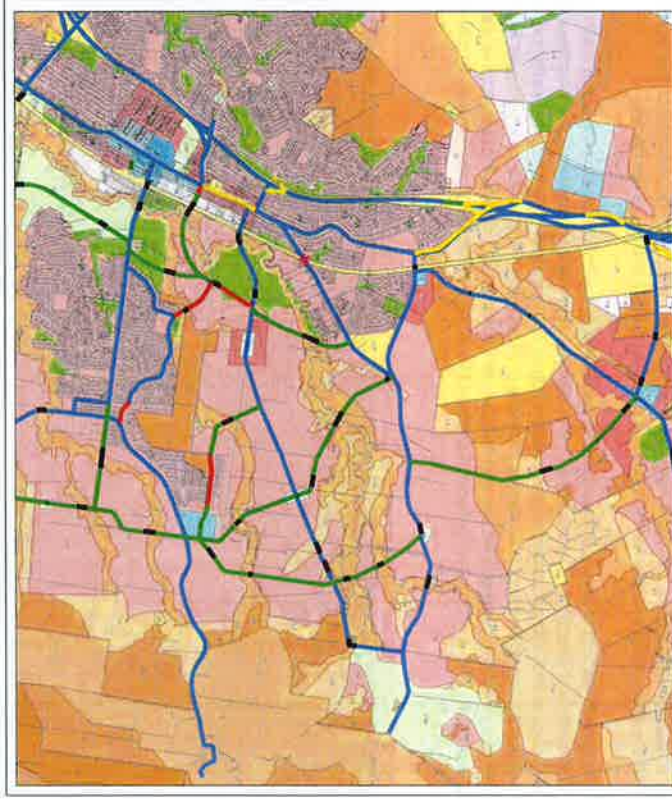
In the staff workshop it was noted that a four travel lane street was proposed for West Dapto

Road through the proposed Darkes Road Centre. However traffic volumes were assessed at well below this level. West Dapto Road should be narrowed to single travel lanes in each direction as this would change the land use capacity of the street edge condition within the proposed town centre. A part of this Brief is to consider whether the proposed town centre zone should be confined to the western edge of the street, with a different zone on the east side. The ultimate street section will be a major influence of the advice given. A four lane road will increase vehicle speeds and affect the potential response on the east side. It also affects the desire of the centre to orient to West Dapto Road or away from it. The issue relating to Darkes Road Town Centre are dealt with in more detail in the next section.

The location of the primary movement networks influences the performance of each centre and its relationship to competition.

The current proposed structure in the release area is shown in the following diagram.

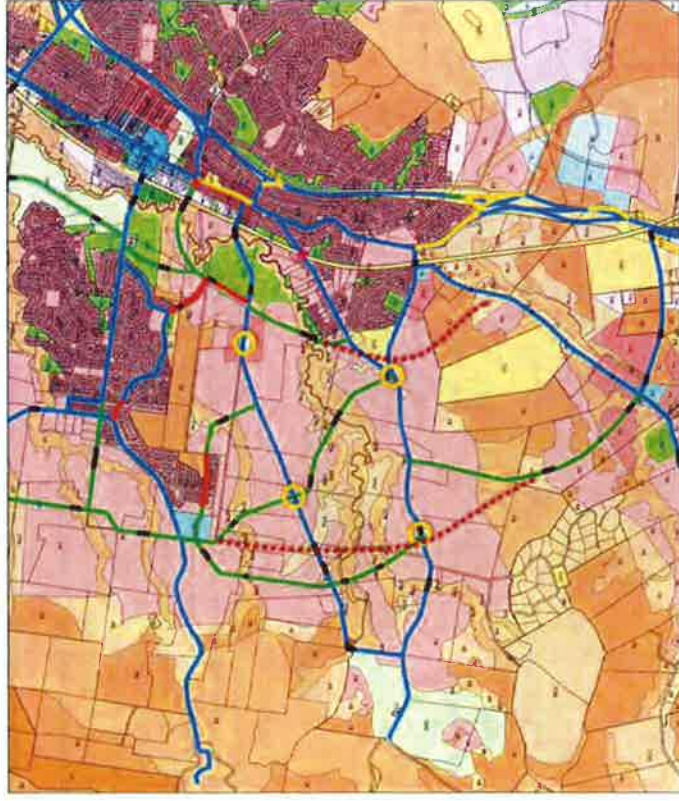
Figure 7 - Current Primary Road Structure - WDURA South



In the structure above the movement network connects the centres within a local or district network. The wider sub-regional network only exists at the eastern edge of the WDURA in the form of the Princes Highway and the motoway. The structure does not provide an alternate sub-regional route network through the WDURA, and this reduces the potential of the villages, and the extent to which alternate route choices are available for north-south movement. So the proposed network is a series of disconnected north-south links that prioritise west-east movement onto the Princes Highway and motoway. This approach favours Dapto town centre but not Marshall Mount, Bong Bong or Darkes Road town centres. The staff workshop

suggested a modified structure in part due to an objective of a more regionally significant and connected network reinforcing the three new town centres at Darkes Rd, Bong Bong and Marshall Mount. That structure in red dotted lines is added to the existing structure below.

Figure 8 - Adjusted and Combination Primary Road Structure - WDURA South



The added structure duplicates much of the existing network and is inefficient as shown. The structure also shows that the Cleveland centre sits in the catchment shadow of the stronger Bong Bong town centre to its north. This means that the connection from the north via Bong Bong town centre is not needed for centre vitality or justification purposes as the centre is likely not viable. The red dotted mid line road connection shown above between Bong Bong town centre and Cleveland Rd would replace the two green lines/streets to Cleveland Rd (at the proposed Huntley Village centre) shown in the diagram. The removal of the link also removes the need to continue it further south to Avondale Road.

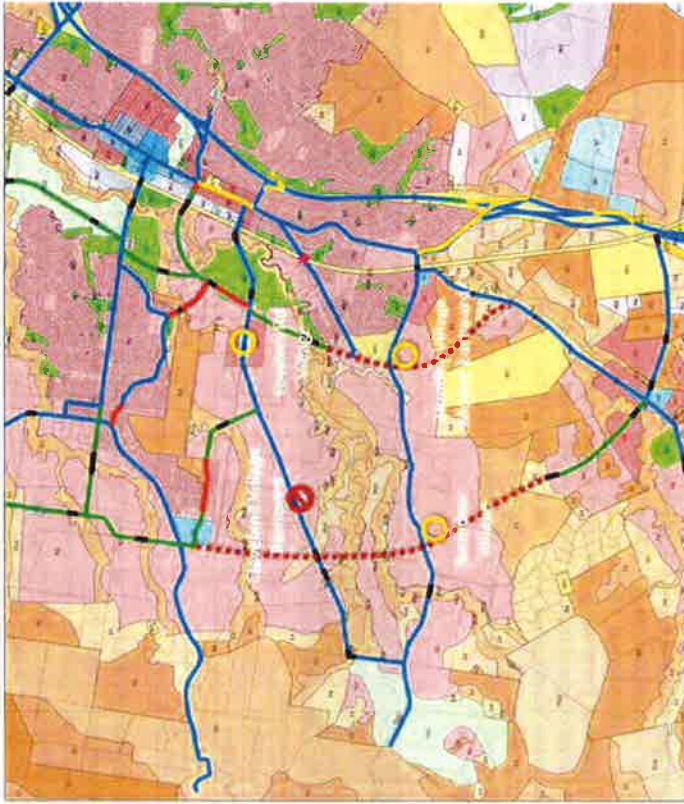
Dropping the Cleveland village also presents the opportunity for the structure to have a sub regional role by adding north south capacity that is not available under the existing (proposed) structure.

The change in structure requires the slight movement of the Huntley village to the east side of the proposed added link and on the south side of Avondale Road opposite the proposed hospital. The hospital (when built) can be a strong source of custom for this centre and also provide the opportunity for consulting rooms outside of the hospital site.

The structure should facilitate the placement of the villages for an optimum level of movement

activity (sometimes referred to as the "movement economy") and where the centre is the most accessible centre from its catchment. The following diagram removes the duplicate and unnecessary links in the network and replaces them with an adjusted network that strengthens the three town centres. Cleveland Village is removed and Huntley village is moved slightly further east. Fowlers Rd village and Avondale village stay in their original positions.

Figure 9 - Proposed Adjusted Primary Road Structure - WDURA South



The proposed structure above removes the need for 3 to 4 bridge/culverts and may be cheaper to build than the current proposed pattern. The southern leg of the proposed extension of northern arterial that runs past Huntley Village and parallel to the Princes Highway to the west of the rail line needs to be positioned to reduce the amount of running through the Environmental Protection zone to the south (it may need to be pulled to the east of Huntley Village - but that would require agreement or negotiations with the proposed hospital developer).

Placing Huntley opposite the proposed hospital and further east suggests the possibility of a larger residential density zone along Huntley Rd from the intersection of Marshall Mount Rd to beyond the village centre (as shown in Figures 9 & 10).

#### 4.3 Catchment Yields

The preceding analysis suggests that the mid growth cell Cleveland village centre may struggle for viability. This concern was confirmed in the staff workshop on 4 July when catchment yields were calculated for each centre. Cleveland could not generate enough dedicated catchment for a centre that would be much greater than a corner store (which is allowed anyway). It was also

decided that the combination of the Fowlers Rd centre and Bong Bong Town Centre allowed for the eastern portion of the Cleveland growth cell to be well connected to the resources of two different centres.

The analysis represented in Figure 5 was applied in the context of the proposed adjusted structure shown in Figure 9 and the influence of the Bong Bong catchment (Figure 10). The general outline of the flood affected areas is now added to show the orientation and integrity of the east west growth cells.

Figure 10 - Overlapping Catchment Cleveland Centre



With Cleveland removed, the remaining centres of Fowlers Rd, Avondale Village and Huntley Village have relatively secure catchments for their secondary roles. Fowlers Road is shown as sitting a little off the eastern proposed sub-regional north - south connector. Huntley sits on the connector opposite the proposed hospital and Avondale sits on the western sub-regional connector, likely on the south side of Avondale Road and on the east side of the connector.

Council has prepared detailed household yield tables for the entire WDURA. These tables have a range of dwelling densities depending on location and land type ranging from 3 dwellings per ha to 25 dwellings per ha. The dwelling density average was calculated at 12.08.

Table 1 - Estimates of Dwelling Yield by Centre Catchment

Centre	Total Dwelling Yield of Growth Cell	Est Centre Catchment Dwelling Yield	Population Yield
Fowlers Rd	4,041	3,000	8,700
Avondale	3,525	1,500	4,350
Huntley	3,525	2,025	5,850
<b>Total</b>	<b>7,566</b>	<b>6,525</b>	<b>18,900</b>

#### 4.4 Secondary Supermarket Capacity

In order to test the capacity of each centre to provide a reasonable size secondary supermarket, we have modelled the potential retail spend in the grocery category (excluding alcohol) and applied a feasibility rate of \$8,000 sales per square metre of floorspace. This figure is generally accepted by the industry as a feasible trading level for a supermarket and therefore gives a rough idea as to the level of demand for floorspace. We have then assumed that 75% of this demand will be met by full service supermarkets in the area. The result is one measure of the possible amount of supermarket-type floorspace in each centre. In practice the level of spend retained by each supermarket will vary widely. It could be argued that the Avondale supermarket (which has the smallest catchment) is also the most remote and not as susceptible to competition and therefore its percentage of the market might be higher. Discussions with Metcash on the basis for such stores indicated market shares from 5% to 90%.

Table 2 - Estimates of Secondary Supermarket Capacity

Centre	Catchment Dwelling Yield	Est Grocery Spend \$m	Notional Grocery Floorspace Demand sqm	Assumed 25% to Secondary Supermarket
Fowlers Rd	3,000	\$34.6	4,325	1,000 sqm
Avondale	1,500	\$17.3	2,160	500 sqm
Huntley	2,025	\$23.4	2,900	700 sqm
<b>Total</b>	<b>6,525</b>	<b>\$75.3</b>	<b>9,385</b>	<b>2,200 sqm</b>

In addition to the theoretical model that attempts to establish a performance threshold for such stores and centres, there is also the issue of a developer's ability to make such a centre a feasible and fundable development. In this respect we are not aware of the arrangements that potential operators might make with the likes of IGA/Metcash and how that might play through to deliver these three centres. This is not the case with the major supermarkets where rental rates and specific typologies are available to the developer for these centres.

At a dwelling catchment yield of 3,000 households, the Fowlers Rd centre is at the threshold of a full service supermarket. Therefore the planning controls that establish the basis for the secondary centre (and which does not allow a full service supermarket) might need to be a component of an LEP amendment for these centres. We believe that such amendments if accompanied by a well written DCP can demonstrate a higher relative community benefit as well as comply with any potential Australian Competition & Consumer Commission issues.

#### 4.5 Pro Forma Merchandise Mix

The secondary supermarket anchor provides the opportunity for a small range of specialty stores and other business and personal service tenancies alongside it. Whilst the range of these stores will vary it is reasonable to expect around 8-12 other tenancies of between 60-150 square metres. In development terms the definition of these tenancies will be important for the feasible development of a centre. Consequently it is appropriate to define the likely composition of the merchandise mix of each centre. In planning terms though the more important consideration for these centres is a building typology. Given that Council should not expect these centres to deliver multi-storey buildings with retail on the ground floor, it is more likely that the retail component will be provided in single storey buildings. These buildings, their location, proportions and site position should be the subject of a DCP, otherwise Council will not be able to deliver on many of the desired outcomes as expressed in the LEP for these centres.

A basic pro forma merchandise mix, as a basis for informing a general or order of magnitude allocation of space for the commercial component of each of these centres is as follows:

Small Supermarket	500-1,000 sqm
Newsagent	100 sqm
Delii/Cafe	100 sqm
Bakery	100 sqm
Takeaway	100 sqm
Liquor	150 sqm
Restaurant	150 sqm
Prof Services x 2	200 sqm
Hairdresser	100 sqm
Dentist/Health	80 sqm
Misc Other	200 sqm
<b>Total Provision</b>	<b>1,800 - 2,300 sqm</b>

Including car parking a centre of this type and size would require around 5,000 square metres of land area. However the centre should ideally be the subject of a zone plan that includes medium density housing and that reaches wider than the commercial component. The village centre and its development characteristics should be the subject of a DCP that requires the shops to address the street with doors to the street and not to any rear car parking. This specific requirement will meet with initial operator resistance as the basic premise of a second order supermarket is high levels of convenience. However the supermarket is only one part of the village. The village must work as a whole and the supermarket is required to contribute to its vitality.

The overall effect of a well designed centre (will happen only as a consequence of a well written DCP, as the market has shown no appetite to deliver it - with the possible exception of the proposed Marshall Mount centre) should be to improve the performance of all tenants in the centre including the supermarket. There are clear precedents for improved retail performance from such an approach, but the intent of the DCP is to create the settings for elevated social engagement and not to prioritise the perceived convenience or utilitarian requirements of an individual retailer. As social engagement is an inspirer of improved economic performance (higher retail trading levels, increased demand for public transport and increased demand for higher density housing or living in the village core), the major retailers are required to deliver better buildings and improved amenity in order to break the perceived reliance on convenience. In the past supermarket retailers have put an accepted case that their business



model requires ease of access, which is mostly interpreted as supermarket check outs directly facing a hardstand area of car parking. This means that the need for the supermarket to build a building that adds to the quality of a village is lost, as the building's reference is to cars and not to pedestrians.

Town and village centres are important contributors to the health and wellbeing of communities and to sustainability. They provide places of social support and, if well designed and encourage lingering, and allow the formation of social networks<sup>1</sup> that have been shown to generate economic and health spin off benefits<sup>2</sup>. They are the places where we buy our food, work, meet people and occasionally play. They are so fundamental to community and intellectual<sup>3</sup> life yet Councils have regulated them with a light touch, managing activity but not requiring development to be socially or culturally relevant. Councils have controlled land use; a control that gives no ability to underwrite, create or manage social or cultural values despite the proven economic benefit that these values bring to town centres. These values are not found in car friendly design, but in pedestrian friendly design. Spatial intimacy and continuity along with visual complexity are essential elements in creating the environment for walking and it is these aspects that deliver social and cultural relevance. To say this in another way; if people will not come to town BECAUSE they cannot park immediately next to where they want to go, then the town's amenity is low (poor built form and public realm interfaces).

Providing the ability for people to park directly outside where they want to go means a low level of pedestrians in the street. A low level of pedestrians in the street results in a weak social and economic environment. This means that for the economic and social health of towns and village Councils MUST set up the street and parking regime in a manner that increases levels of walking. In other words it is a more effective economic and social strategy for a town if parking is inconvenient. The circular element of this is that people will happily walk around town if the spaces and buildings are attractive. In other words you can easily make inconvenient parking work if the town or village's buildings and streets are attractive. If it is not an attractive town to walk around then proximity of parking becomes very important to the motivation to visit.

Councils therefore need to break the functional nexus related to purpose. A relatively mundane purpose (such as shopping for groceries) is a primary motivator of visits to local centres. However local centres that work best are those where the visit is pleasurable OUTSIDE of the mundane purpose. It can only be pleasurable if the physical and spatial qualities of the village are high. Retailers have instructed councils for years about the ease of accessing their stores and councils have been complicit in allowing these operators to deliver poor quality, box-like buildings to address car parking where they have also enforced a minimum car parking standard. Not only by following this path but also by regulating to get the development outcomes that this path delivers, has meant that we have legislated for poor quality village centres in Australia, where the primary focus of design has been to parking - not to pedestrians.

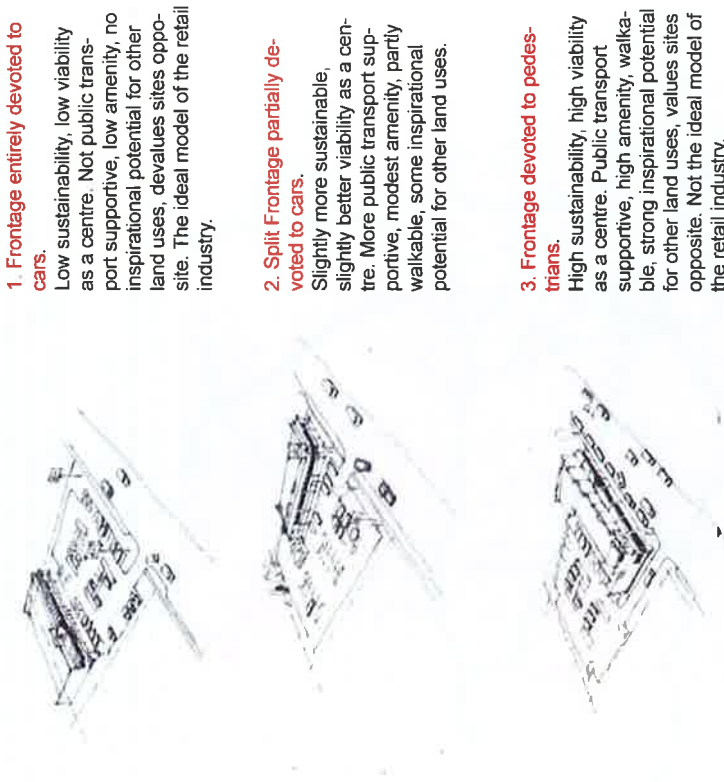
## 5. CENTRE-SUPPORTING DEVELOPMENT & LAND USES

### 5.1 Urban Centre Layout

It is assumed that some mixed density housing will be a component of the zone of influence of each centre if not within the centre zone itself. The relationship between the built form of the retail and commercial activities and their ability to activate the public realm will establish the basis for housing density. A poor built form retail and commercial response to the public

realm will not encourage a density response within the centre or nearby. In this respect there are three general layout options for each centre. The preferred model of the major retail stores cannot be the model adopted if Council wishes to use the qualities of each centre as an inspiration for mixed density housing. The three models are shown following:

Figure 10 - Village Centre Layout Option Analysis



Drawings by Steve Thorne - Design Urban

#### 1. Frontage entirely devoted to cars.

Low sustainability, low viability as a centre. Not public transport supportive, low amenity, no inspirational potential for other land uses, devalues sites opposite. The ideal model of the retail industry.

#### 2. Split Frontage partially devoted to cars.

Slightly more sustainable, slightly better viability as a centre. More public transport supportive, modest amenity, partly walkable, some inspirational potential for other land uses.

#### 3. Frontage devoted to pedestrians.

High sustainability, high viability as a centre. Public transport supportive, high amenity, walkable, strong inspirational potential for other land uses, values sites opposite. Not the ideal model of the retail industry.

The DCP should establish the basis or reference points for retail design as an urban-centre-supportive, public realm dependent, inspiration for housing density within a mixed use village centre and these controls should be supported directly through amendments to the LEP to give them sufficient weight.

Public realm amenity within each village centre is also an inspirer of improved public transport performance. It is noted that Council has set high mode shares for non private vehicle use in the WDURA. The level to which the villages are attractive and safe places to walk to and around will be a factor in shifting mode shares in favour of public transport

1 Putnam & Feldstein 2003, "Better Together", Simon & Schuster

2 Edward Glaeser 2011, "Triumph of the City", Macmillan

3 Nahapiet, J. and Ghoshal, S. (1998), "Social Capital, Intellectual Capital and the Organizational Advantage", Academy of Management Review, 23.2,

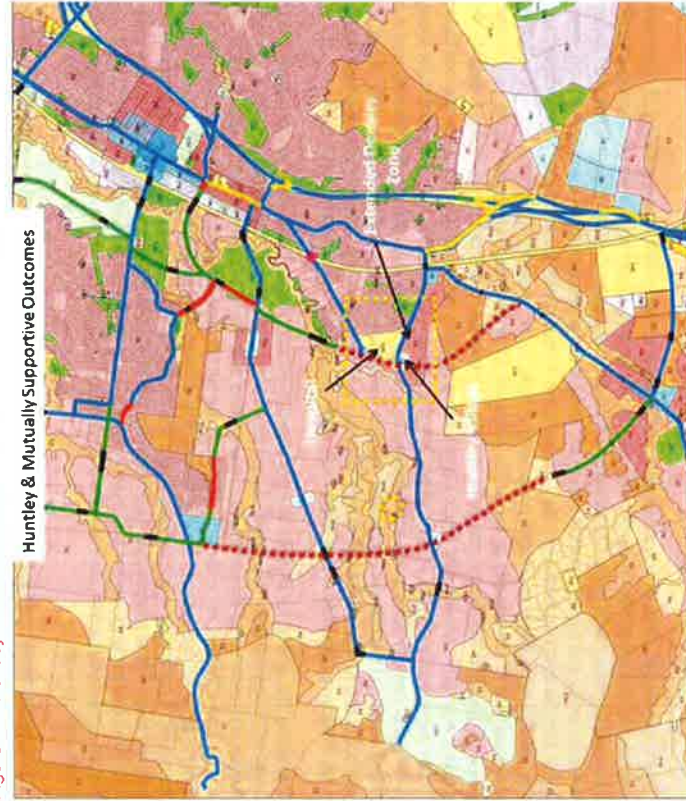
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### 5.2 Centre Supportive Land Uses

The quality of the retail and commercial component of the centres as discussed is a factor in the feasible delivery of density in and around the village centres. This will be the primary mechanism for density. However having substantial employment zones or areas within easy driving or walking distance of these centres will add substantially to their performance. Schools also fit within this category, given the propensity of mothers and fathers to pick up and drop off their children at school. Schools are also a source of employment and teachers are also high users of cafes and other food service locations in centres.

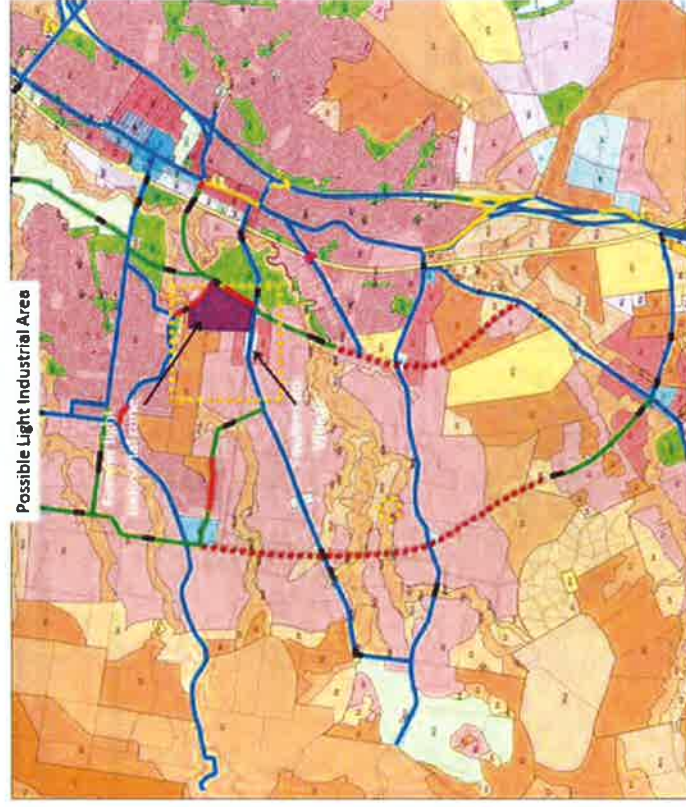
Near to the Huntley Centre is proposed a hospital. On the basis that this will be developed as proposed, the Huntley Centre will substantially benefit from the relationship with the hospital by providing a range of food service and other facilities. Depending on the status of the hospital the centre could also provide an opportunity for off campus medical facilities such as consulting rooms etc. On that basis the proposed Huntley Centre has been moved to a point generally opposite the proposed hospital on the south (going home) side of Huntley Road. In addition, the placement of the village in this location encourages an extended R3 zone from the rail line to beyond the centre - as shown in the diagram below.

Figure 11 - Huntley Location Benefits



For the Fowlers Road Centre a former plan for the area proposed a light industrial zone to the immediate north. This zone was removed in subsequent plans. The benefit of an adjoining employment zone to a centre is that it delivers a day time economy that is not supplied to that extent by housing (where the occupants work elsewhere). The zone would deliver a strong morning market as well as lunchtimes. Such a zone next to the centre would meaningfully increase the demand for food services and also expand the merchandising categories of the supermarket into general merchandise. The location of the former zone is shown in Figure 11.

Figure 12 - Possible Employment Zone Adjoining Fowlers Rd Centre



If this land was to be zoned for light industry (it is not suited or an appropriate interface or location for heavy industry) the major issue is the type of development suited to the site and a site of this size. The area in question is around 20 ha.

Hill PDA undertook a "Wollongong Employment Lands Study" for Council in 2006. Whilst this study is now dated, it described the characteristics suited to various types and locations of industrial land. On the basis of the performance assessment in the study this land is most suited to service industry and clean manufacturing. It is some distance from rail and rail stations and so would either be serviced by bus or public transport and is unsuited to higher order business park use (the study identified no demand for this type of use at that time in the southern areas of Wollongong). We also agree that the site is not appropriate for a business park. The issue therefore is whether there is demand for service industry and light industry/manufacturing at this location and of this scale. Nevertheless, subject to suitable design controls that moderated the site's interface with the village centre, this site and activity would give a major economic

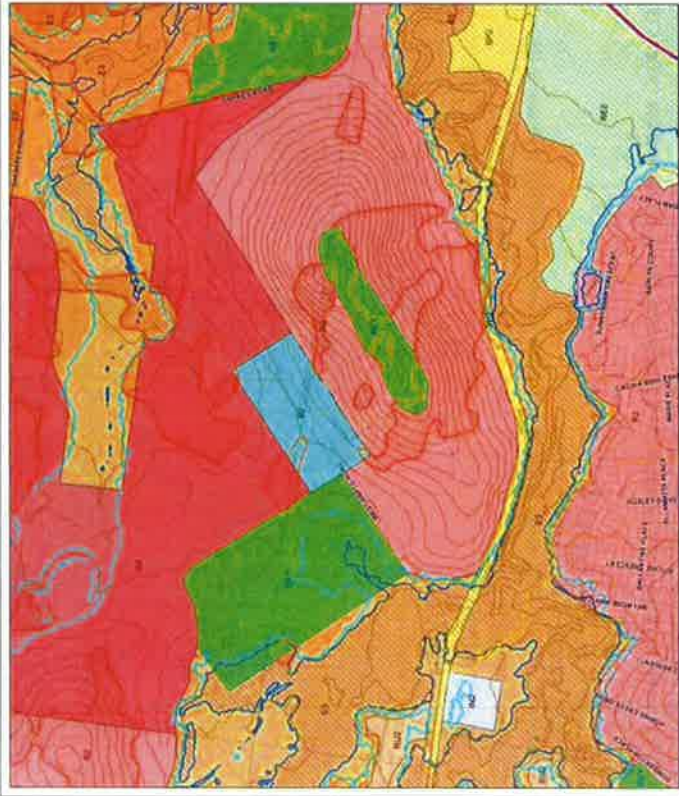
In summary, the location of the centre encourages a wider spread of housing density, improves the viability of the hospital (in terms of making it a more attractive setting for workers), and is enhanced as a village by both of these factors.

boost to the Fowlers Rd centre. However our re-statement of the proposed use is purely from a centre viability perspective. Such a use, if demand existed, would be ideal next to the village. For the past 5 years or so there has been a proposal for Outlet retail and some large format retail at Kembla Grange. We have advised Council on this issue in the past and regard such a use as a poor outcome in terms of economic benefit and opportunity cost at Kembla Grange. The Fowlers Road site may be suitable for the Outlet component if it was integrated as an urban (street-based) extension of the village centre. The resultant development would be a strong street-based centre with a local and regional role. The regional role of the Outlet component would be a minor factor in the integrity of the Wollongong centres hierarchy as such centres take a little from everywhere. The centre could become a vibrant focus of the community if in the event that Council found little or no demand for light industry on the site.

## 6. DARKES ROAD TOWN CENTRE

Part two of this review relates to the Darkest Road Town Centre. Previous work on the centre proposed a two sided centre across West Dapto Road. The topography of the east side and west side of West Dapto Rd are markedly different. On the east side the land rises sharply, whereas the west side is relatively flat as shown in Figure 13.

Figure 13 - Darkest Road Town Centre Zone & Topography

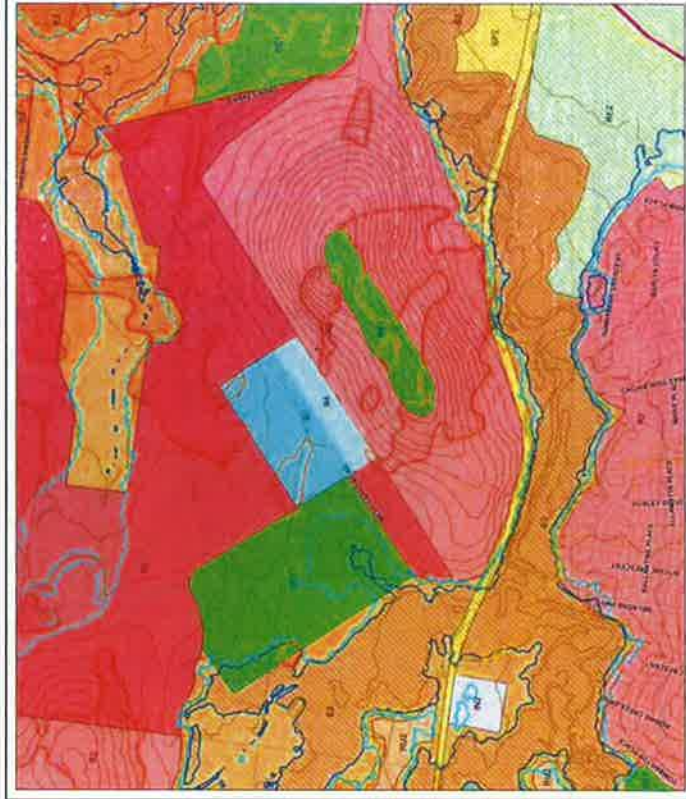


The proposed centre is likely to have a single full service supermarket but no other major big box stores. The most appropriate location for the supermarket and accompanying shops is on the west side. This leaves the east side "anchor free" and so the east side would need

to rely on other mechanisms to perform well. Given the proposed size of the centre and catchment, the most likely activities are a mix of secondary retail and businesses that face the street. These types of activities could be accommodated in a residentially appropriate typology (assuming the new zone allowed it) or indeed they could simply be an appropriate medium density typology again facing the street. The centre would lose very little under either scenario and the town centre zone (B2 in this case) would simply be fattened on the west side.

Council has been requested to consider the relocation of the entire town centre to the north western side of West Dapto Road to accommodate a potential investor/supermarket and allow the land to the south east to be utilised as residential land. We would support that request subject to the eastern edge of West Dapto Road providing an appropriate town centre supportive typology that adaptable as commercial capable and/or housing. A typology that fits such a brief would be terraces that could also be used for business. These assumed outcomes are shown in the following diagram. The former town centre zone on the east side is replaced with a B4 zone on the assumption that it facilitates the appropriate interface with the town centre.

Figure 14 - Darkest Road Town Centre Proposed Zone Adjustments



The proposed design for West Dapto Road is for four travel lanes (2 in each direction). If this is the outcome then the focus of the town centre is likely to require a street that runs perpendicular to West Dapto Rd as the "main street". However the modelled traffic volumes on West Dapto Rd (presented at the staff workshop) were below 15,000 vehicles per day. At that rate West Dapto Rd only needs a single travel lane in each direction, not two and the town centre "main street" can be West Dapto Rd.

## 7. STAFF WORKSHOP CONCLUSIONS & IMPLICATIONS FOR REGULATION

A workshop was held with key Council staff in the areas of planning, urban design and transport. The workshop was jointly facilitated by Edith Barnes (Council) and Michael Cullen (Urbacity).

The purpose of the workshop was to:

- Test the integrity of the southern centres,
- Design in principle the Darikes Road Town Centre reflecting identified constraints (mainly

Figure 15 - Current (Proposed) Network - T Junctions Closing Down the Network

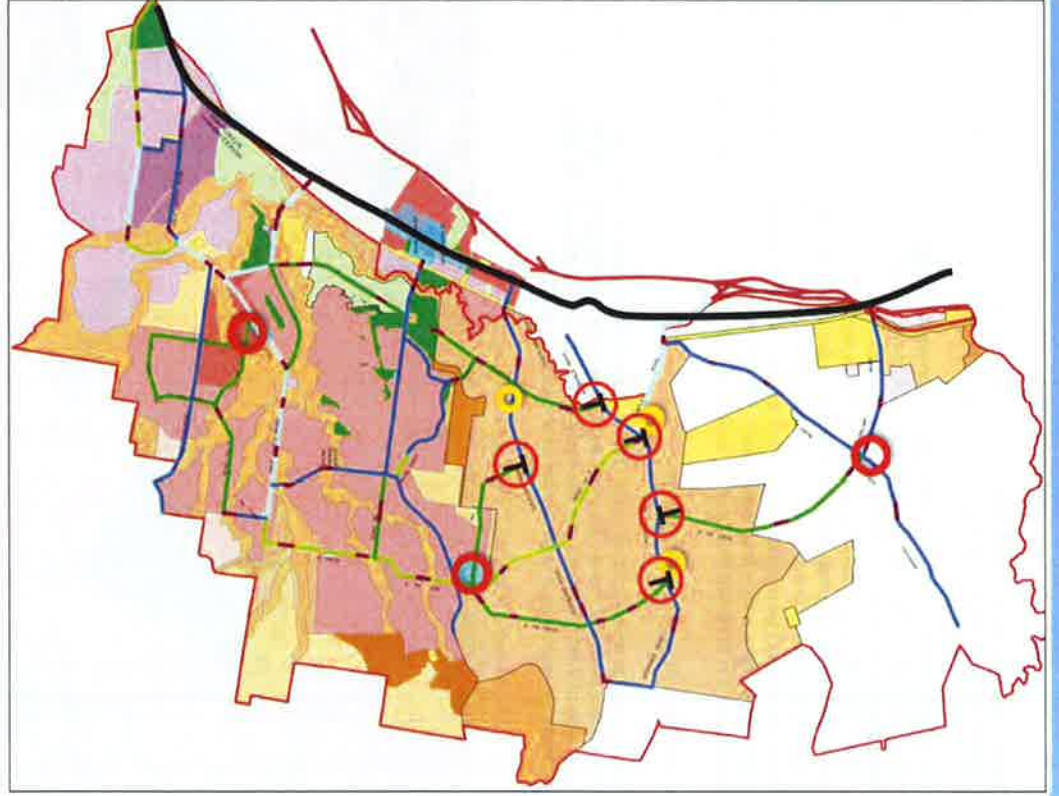
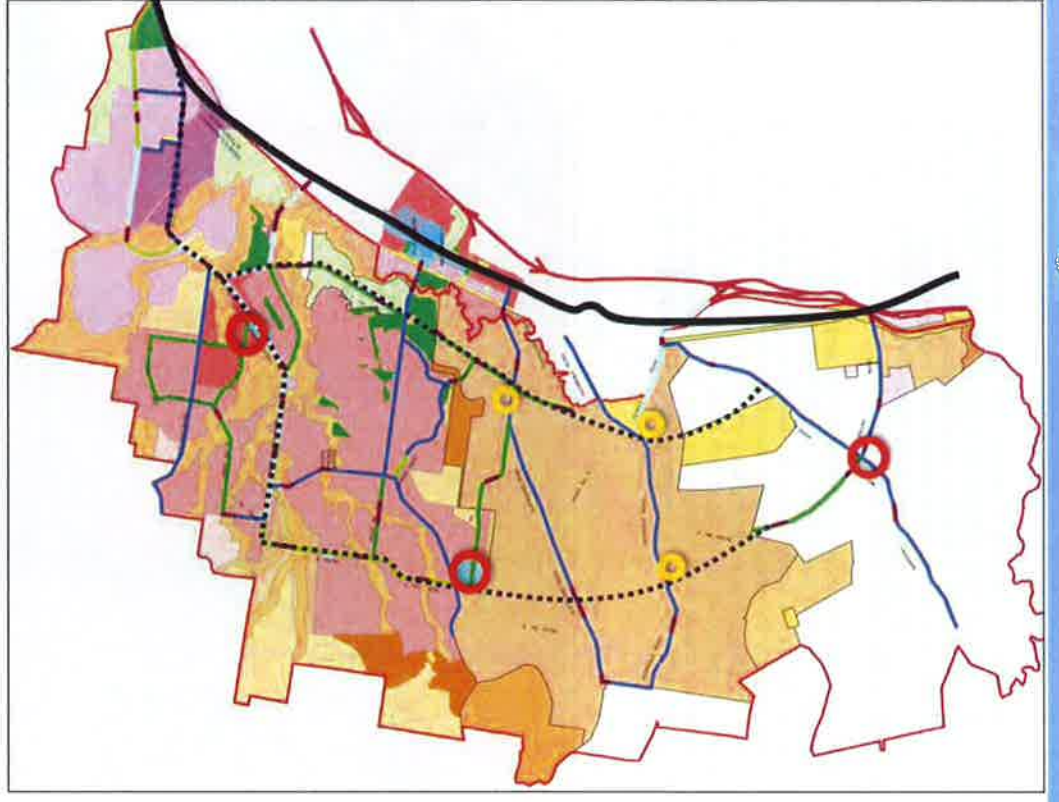


Figure 16 - Workshop (Proposed) Network - Integrating & Connecting the Centres



the topography of the eastern side of West Dapto Rd and the status of the road),

- Review the proposed road network and
- Discuss design principles behind an effective DCP for the village centres. The DCP to be a part of the citywide DCP for centres.

### 7.1 Road Network

A strategic assessment of the road network was undertaken in the workshop that reflected new knowledge about the centres and development zones.

The current planned network in part reflects previous assumptions about the pattern of centres and density. Loss of one or more centres in the southern area would influence the structure and an alternative (Figure 16) was proposed in the workshop. The current planned network reflects a dominant east-west movement pattern and reduces north-south connections between the centres. As regional or district wide movement is north-south the modified network provides district or sub-regional movement capacity as an alternate to the Princes Highway and motorway. In the view of the consultants this not only better connects the towns and villages to each other but is a more robust network, which not as susceptible to congestion.

The basis of a sub-regionally connected network for the centres is that it adds energy and activity from a wider area to each of the towns and the villages in the south. In particular it provides a direct connection between Bong Bong and Marshall Mount town centres and an uplift to the proposed Huntley Village centre. Towns and villages tend to work better when the movement network widens the catchment and establishes the basis for a centres 'network' when centres are directly connected to each other. The current planned network relatively isolates centres within their growth cells, which are defined by landscape and floodways.

That said, the alternate network is a proposition generated by the workshop and has not been tested. Council is currently investigating a range of factors that will influence the network including input from a public transport study for West Depto by AECOM. The network proposed in the workshop is therefore the most "centre-supportive" network but the workshop recognised that a range of other factors and priorities are also at play.

## 7.2 DCP Issues

Council officers and the consultants brought images of ideal centres. These images provided a view of the types of ideal buildings, spaces, streets and streetscapes and activities

### Placement of Buildings

All images presented showed shops trading to streets and public space. For the DCP, this should be the most important focus of regulation. All shops must trade to the street (or public space if facing a small plaza or square) and be entered from the street. There may be a special case for full line supermarkets (generally over 3,000 square metres) in terms of orientation, but an over-arching objective for them is that they must be located in a manner that allows easy access to smaller shops and placed so as to add pedestrian activity to the streets of the centre.

Figure 17 - Quality Domestic Scale Village Centre- Type Building Examples



Most of the images provided were of domestic scale buildings as appropriate for a village centre (as shown above).

### Building Design

The basis for a walkable centre is found in the partnership between buildings and space. Villages tend to be intimate and spaces tight and narrow. Larger centres with bigger and taller buildings tend to generate larger spaces and wider footpaths. Buildings themselves are required to be fine grained in order to capture intimacy and spatial continuity. Fine grain is otherwise known as dominant vertical proportions, which should be a requirement of the DCP.

The buildings below demonstrate the clear differences in terms of pedestrian appeal of buildings with vertical and horizontal proportions.

Figure 18 - Buildings with Vertical Proportions (Fine Grain & High Visual Complexity)



Figure 19 - Buildings with Horizontal Proportions & Low Visual Complexity



Buildings "floating on glass" as shown immediately above on the left, without the building being brought to ground via its vertical elements (columns, doors and windows) are poor at inspiring walking as they are visually dull to the pedestrian.

Figure 20 - Over-Glazing and Poor Solid to Void Ratios



Figure 21 - LH Image, Poor Solid to Void - Compensating Window



Over glazing the shop front in the absence of other visual interest factors and poor solid to void ratios is also dull to the pedestrian. The lack of visual interest is extended when looking along the glass facade when walking next to the building on the footpath. Ideally the building itself should create the visual complexity and interest. Shop fronts with recessed doors, heavily framed doors and windows and bay windows along with generous use of natural materials and dominant vertical elements usually result in a solid to void ratio of a maximum of 70% (void) as in the right hand image in Figure 21.

If the building itself is not good enough to create visual interest (as in the Left Hand image of Figure 21) then the shop window becomes the only possible device to appeal to the pedestrian. If, as in Figure 20, the building is represented as a single and horizontally-dominant development and the shop windows are also poor then not only is the inspiration for pedestrian movement along the street reduced but the joy of walking the street is removed. See the contrast represented in the Bangalow (NSW) shops in the Right Hand image of Figure 21.

Building design is therefore important in inspiring higher levels of walking. The DCP must require buildings with strong and dominant vertical proportions. This is also the case for larger box type buildings such as a small supermarket, if it addresses the street.

The principle of designing buildings that secure public space AND are visually rich with strong vertical proportions will reduce the reliance on proximate car parking and encourage higher levels of walking within and to centres.

#### Activities

Generally the buildings of a centre will have an active, street orientated ground floor use. However requiring a retail use should not be the objective of planning. If the building is designed in a manner that is retail and commercial-capable, then it can transition to and from retail uses at any time. The focus of the DCP should therefore be on the grain, quality and adaptability of the

building in West Dapto centres and not on the land use. That said, the standard LEP requires a particular set of activities in B1, B2 and B4 zones. The DCP though should be about built form and public realm quality - not land use.

## 8. RECOMMENDATIONS & CONCLUSIONS OF THIS REVIEW

### Proposed Centres Pattern

The workshop and this study recommends the removal of the Cleveland centre. This leaves three remaining centres at Huntley, Avondale and Fowlers Rd.

### Road Network

The wider road network should directly link to all centres to each other. The current (proposed) network is relatively disjointed in this respect and should be reconsidered. The network proposed in the workshop gives greater accessibility to all centres but also has some "dead running" issues to the south. Wider assessment of the costs and benefits we understand is being undertaken by Council's transport planners. This re-assessment is needed as the centres pattern has been modified (and proposed to be further modified by this study) and densities have changed.

### DCP

The only way to deliver active, urban centres is via a prescriptive DCP that controls the form, placement and frontage detail of buildings in the centres. Work should begin as soon as possible on this document. Furthermore, as the qualities of these centres will be a major factor in their economic, social, environmental and cultural performance, the outcomes required by the DCP should be reflected back into the LEP (where appropriate) to ensure that the higher order provisions of the LEP do not undermine the intent of the DCP.

### Darokes Road Centre

Council owns the majority of land that will comprise the Darokes Road centre. This means that it has the ability to use its ownership as leverage for an urban development outcome. However, Councils have in the past been spectacularly unsuccessful at using land ownership to generate good centres (this is also a failure of state governments). In order to deliver on Council's assumed desire for an urban centre at Darokes Road there will need to be a process and mechanisms established within Council that guarantee an urban outcome. This process must be completed before sale or development of the Darokes Road town centre site and will need to cover off on the following issues:

- political risk & political motivations
- planning and design
- property value (aligned with treasury risk)
- community benefit
- release strategy

Generally the comprehensive failure of government to deliver urban centres can be attributed to weak political will (encouraged by political lobbying by centre developers and the two major supermarket operators), weak motivation for such centres outside of internal (Council) planners, and poor processes.

No tender or expression of interest process by local government has ever delivered an urban centre in Australia (with the possible exception of Gungahlin in Canberra). This does not mean that such a process should not be contemplated by Council, rather Council should cover off on the risks of these processes so as to design a release strategy that delivers on the desired outcome. Presently, Council has no processes or political characteristics that would lock in its ability to deliver an urban centre.



The advantages of setting up a release strategy early and getting political support for it early are numerous. In addition, the successful development of an urban centre at Darikes Road would establish Wollongong Council as an exemplar not only in terms of a centre on the ground but also in terms of process.

# Visual Impact Assessment Report



## Stage 3 West Dapto – Planning Proposal

April 2014

Wollongong City Council Land Use Planning Division



## Introduction

The Illawarra Escarpment covers an area of approximately 9570ha in the Wollongong Local Government Area and forms a natural boundary and scenic backdrop to the Wollongong coastal plain. It is one of the most important landscape and cultural features of the Illawarra and has high aesthetic value to the local community. Since 1788, the escarpment has been alternately viewed as a constraint to overcome, a resource to be exploited and in modern times recognised as an asset to be preserved.

West Dapto is the last remaining area for large scale urban development in the Wollongong Local Government Area. The area has been identified by the NSW Planning and Infrastructure agency as a priority urban release area which will contribute housing supply for the expected population growth. The development of West Dapto draws upon principles of economic, social and environmental sustainability.

A key factor relating to these principles is retaining the visual integrity of the Illawarra Escarpment. The Escarpment is a prominent feature in the West Dapto Urban Release Area and should be conserved to provide benefits for all residents, including protecting biodiversity, offering expansive views and providing a unique character to this urban release area. It should be noted that this pressure for urban development will certainly change aspects of the landscape at West Dapto as the area will transition from a predominantly rural landscape to a suburban landscape. However, various measures outlined in this report should be followed to ensure a seamless transition from the developed area to the conservation area of the Escarpment.

The Illawarra Escarpment boundary is a difficult entity to define, despite the omnipresence of the Escarpment across Wollongong. Different people have different ideas about what is and isn't Escarpment lands and various strategies and policies have also adopted different definitions. In West Dapto, views to the Illawarra Escarpment are a unique feature of this land release and consideration of how future development will address the Escarpment interface and how development will present in views to the Escarpment is an important planning and design consideration.

The Illawarra Escarpment Strategic Management Plan 2007 defines the Escarpment boundary as land higher than the 50 metre (above sea level) contour and all riparian corridors connected to the Escarpment (irrespective of their height above sea level). The use of the 50m RL was adopted by a project coordination group which looked for a stronger biophysical justification for establishing a study area boundary for the Escarpment. This boundary was thought to provide a distinction between 'escarpment influenced' and 'coastal influenced' vegetation communities and not necessarily a conservation zone which prevents development in the area. This is important to note because a significant portion of the West Dapto Urban Release Area is located above the 50m RL and therefore can be considered using the IESMP definition as within the Illawarra Escarpment.

Caution needs to be exercised where this definition is used as a mechanism to assess visual impacts, as development impacts will vary according to topography, vegetation and street and development design. Considerable amounts of development in many suburbs of Wollongong have been built above the 50m RL, with varying levels of visual impact. In this context, it is considered that this definition is quite conservative; however as a new release area West Dapto is required to be developed consistent with contemporary principles that protect the visual and environmental values of the Illawarra Escarpment. The varied topography of the alluvial plains also needs to be considered – some areas of the floodplain quite disconnected from the Escarpment formations also sit at or above 50m RL. Therefore, blanket assumptions about impacts based upon whether development is situated above or

below the 50m RL may not be sufficient to assess actual visual impacts and deeper investigation, such as that described within this study, is required to assess impacts from important viewpoints. Development needs to be considered in its wider context and for its wider impacts including environmental, social and economic impacts, which should be duly considered as part of the Planning Proposal assessment process.

### **Location**

Stage 3 of the West Dapto release area is situated between Bong Bong Road and Mullet Creek. The extent of this visual impact report includes land between Bong Bong Road and Cleveland Road as highlighted red on the map on the following page. This area is the subject of a draft Planning Proposal lodged by Stockland currently under consideration. This Planning Proposal does not currently include the entire Stage 3 area (shown as the draft zoned areas outside the red border) but could be expanded to include surrounding Stage 3 areas if Council chooses.

The Stage 3 Planning Proposal includes land within the Illawarra Escarpment as defined by the Illawarra Escarpment Strategic Management Plan (i.e. land above the 50m RL, shown in purple on the map) and Wollongong Local Environmental Plan 2009 (the legally adopted boundary line as shown in yellow on the map).

This proposal seeks to rezone land to permit urban development. This includes zones such as R2 Low Density Residential and B1 Business zone, as well as E2 Environmental Protection and E3 Management zones. These have been appropriately designated with consideration given to constraints in the area and may continue to change as new information is provided. For example, the Purrungully Village Centre shown on the map has recently been deleted from the West Dapto Master Plan to better support the viability of other town centres in the area.



# Indicative Zoning Stage 3 Dec 2013

## Legend

- Sixi City
- Administrative Boundary
- Urban Campuses Boundary
- Neighbourhood Centre
- Suburban Campuses
- Greenfield Development
- Green Field (No. 1)
- Water Facility Boundary
- Water Facility Boundary
- Water Facility



Scale: 1:50,000  
Date: 12/2013  
Author: [Name]  
Project: [Name]



## **Objective of Visual Impact Assessment**

The Illawarra Escarpment has major conservation significance and is regarded as a natural icon of the region. The Illawarra Escarpment Strategic Management Plan has been prepared by Wollongong City Council which defines, in a broad scale, the strategic planning and management actions required to manage the escarpment in its entirety. A key aspect of this document outlines the value of the visual integrity of the escarpment and how to handle the expected pressures involved with potential urban development. This provides the basis for assessing the visual impacts to ensure the integrity of the escarpment is not lost to urban development.

Therefore the objective of this study is to comprehensively assess the visual impacts of future development (as a result of the planning proposal currently under consideration) to inform planning in the area and ensure the visual quality and integrity of the Escarpment is retained.

## **Summary**

As a result of the Stage 3 planning proposal and development associated with the West Dapto Urban Release, the landscape will change significantly from rural outlook to low density residential suburbia. This will see the development of residential and commercial infrastructure on currently vacant land with the exception of flood prone land and riparian corridors which will not be developed. The extent of this development includes an area within the escarpment as defined by the IESMP. This area is defined by locations of 50 m above sea level and was not intended to be used as a planning guideline. Planning constraints within the escarpment are largely based around vegetation and topography which can often influence the visual impact of development. The effects of the visual impact are assessed against the criteria outlined in the Illawarra Escarpment, Visual Quality Analysis of the Escarpment Scenic Values, March 2007, HLA Sciences report.

As identified in this report, accepting that residential development in West Dapto is inevitable the planning proposal will have limited impacts on the visual quality of the Escarpment, which are not considered unreasonable.

However, due to the planning proposal's location within and bordering the Illawarra Escarpment, a number of additional planning measures will need to be considered to ensure this low visual impact can be achieved. Much of the development is proposed to take place on the alluvial plains and restricted to the cleared sections of the lower foothills. To maintain low visual impacts, it is supported to establish E2 Environmental Conservation zones over existing high ecological and aesthetic valued environments. It is also supported to establish E3 Environmental Management zones within riparian corridors as these non-developed areas will soften the visual impacts of the proposed development by breaking up the built form. Also suggested for areas of high visual integrity (partially cleared foothills whose remaining vegetation is continuous with the Escarpment) is an increase lot sizes as proposed development climbs into the lower foothills and becomes more visible from key viewpoints in the surrounding area due to topography. Development should remain within the existing cleared lands of the lower foothills at areas which have a low gradient and not extend into ecologically significant vegetation. E4 Environmental Living zones should also be considered in the higher cleared slopes of the planning proposal which adjoin the E2 and E3 zones to retain an overall low impact.

Another important consideration is the quality of the built form and the appreciation it has for the surrounding area. This will require street trees, quality landscaping, parklands, consistent building

heights and materials to soften the visual impact and provide a smooth transition from the developed area and the high quality scenic value areas of the escarpment.

### **Methodology**

The Visual Impact Assessment Report drew from the already proven methods outlined in the Illawarra Escarpment, Visual Quality Analysis of the Escarpment Scenic Values.

A visit to the proposed site of West Dapto Stage 3 occurred on the 9 April 2014, beginning at approximately 10:00 am. The conditions were suitable to photograph the site in focus, its interactions with the surrounding foot hills, rural lands and the escarpment. The photos were taken to give a visual depiction of the site in its current form, then to illustrate the interaction with the escarpment after development of the site. It was therefore important to capture land fall, vegetation types, and views from surrounding residential and commercial hubs.

The visual impact assessment was carried out in the following manner:

- A variety of documentation was researched to locate and identify significant terrain and vegetation. Documents evaluated were;
  - Illawarra Escarpment, Visual Quality Analysis of the Escarpment Scenic Values, March 2007, HLA Sciences
  - Illawarra Escarpment Strategic Management Plan 2007, Wollongong Council
  - West Dapto Release Area Visual and Landscape Study, January 2006, O'Hanlon Design
  - Former Huntley Colliery Site and adjacent lands, Visual Assessment, September 2011, TCG Planning
- Mapping was used to gather data of terrain and possible points of interest. The map data and documentation research was then used to pin point locations that had significance relevant to assessing the visual impacts.
- The critical views of the escarpment were determined to come from the lower slopes of the escarpment, from the foothills and finishing on the alluvial plain.
- Capturing land forms required efficient natural light. Weather condition played a key role in relation to the timing of when images were captured.
- Relevant instrumentation was required to locate the position of where each image would be taken from. This included the use of a GPS unit and a compass.
- Important features to capture were types of vegetation, whether they are native or introduced species. This would determine the impact of the planning proposal on that community of vegetation.

### **Location of Survey Points**

The survey locations represent key views when investigating the level of impact that West Dapto Stage 3 Planning Proposal would have on the escarpment. The locations varied from future village and town centres to views from West Dapto Stage 2, from proposed planning of West Dapto Stage 3 along Cleveland Road to environmentally sensitive lands. A view looking back towards the ocean from the foothills of the escarpment was also included.

Photographs were taken at the locations shown on the map on the following page.

MAP TO BE INSERTED SHOWING SURVEY POINTS

### **Location 1**

Location Description: Corner of Bong Bong Road and Hayes Lane

GPS Coordinates: 56 H 0293765 UTM 6180540

Elevation: 54m

Direction: Looking West



This photograph was taken on the corner of Hayes Lane and Bong Bong Road. This location is the boundary between Stages 2 and 3 of the West Dapto Urban Release. Stage 3 of West Dapto will occupy the land to the left of the frame. The land to the right of the frame is also proposed to be developed, but this area is already zoned and forms part of Stage 2.

Various features of the Illawarra Escarpment can be viewed from this location, including the exposed sandstone cliffs, continuous densely vegetated slopes, prominent ridgelines and some grassy, cleared areas in the background. The end of Bong Bong Road and a power pole are also visible far in the distance in middle of the frame. The escarpment and wooded slopes have a high scenic quality rating according to the 2006 “West Dapto Release Area Visual and Landscape Study” prepared by O’Hanlon Design.

The view presents many changes in gradients from a high peak in the top right of the frame to gently sloping land in the foreground to the right of the frame. Although obscured by vegetation, the land to the left falls quite significantly away from the road, revealing extensive views of the floodplain. The “West Dapto Release Area Visual and Landscape Study” states the alluvial plains have a low to moderate scenic quality rating.

Human modifications include the road, fencing, power lines and cleared areas as well as weed species such as lantana.

Overall, this view presents a rural landscape on the foothills of the Illawarra Escarpment. This view is considered significant and attractive because it is located along a main road (close to a future town centre) and contains a variety of escarpment features; however, the presence of the power lines, road and weeds do compromise the integrity and 'naturalness' of this view somewhat.



The blue shape shows development areas that form part of Stage 3 of West Dapto. The area to the left of the frame forms part of Stage 2 of West Dapto. This area is not the subject of this visual assessment as it is already zoned for low density residential development.

The highlighted area is proposed to become a low density residential area, and neighbours the Bong Bong Town Centre. This residential area will form an important part of the catchment for the future town centre. This area will change significantly as part of the West Dapto development. The road infrastructure will be upgraded, power lines could be transferred underground and housing will replace rural land holdings as the dominant land use in the area.

For this view, the existing vegetation and the fall of the land away from the road obscures the views down and across the plains. Whilst this vegetation is not to be retained, street trees will also frame the roadway and continue to obscure views to the south and west. Housing in this area will change the appearance of the view, but these impacts are not considered unreasonable given that Stage 2 of West Dapto has been zoned and housing has been approved to the right of the frame. It is accepted that the rural setting will change to a suburban setting. The height limit of development is proposed to be 9 metres; and future housing development will be low scale (single or double storey). As such the



sandstone cliffs, ridge and escarpment vegetation will still be prominent features of the landscape, even in the presence of low density housing along the road.

Vegetation in the developed area will be an important feature of the landscape linking the escarpment to the foreground and establishing native, endemic vegetation and landscaping along the road and in front and backyards could provide a visual link with this area to the escarpment, softening built forms whilst, in time, providing a leafy character to the suburb. The winding nature of Bong Bong Road leads users up towards the Escarpment and various design measures could be employed to soften the visual appearance of the road, including but not limited to landscaping. Bong Bong Road from this location heading west is unlikely to be excessively wide given it will not serve a large number of residents. This location is close to the Escarpment and future residents of this area will be able to enjoy the views from this location. With appropriate landscaping along the road, this view is not considered to be unduly impacted by proposed low-rise, low density development.

## Location 2

Location Description: Hayes Lane

GPS Coordinates: 56 H 0293836 UTM 6181046

Elevation: 49m

Direction: Looking South West



This photograph was taken at the northern end of Hayes Lane. This location is within West Dapto Stage 2 Urban Release, which is zoned for low density residential development. The land from which this shot was taken is the site of a future link road between Bong Bong town centre and Wongawilli village. Beyond the house behind the trees, to the right of centre of the frame, lies West Dapto Stage 3. The western boundary of Stage 3 lies just below the green field located in the centre of the frame and is obscured by existing vegetation.

This vantage point illustrates the variations in the escarpment landform. Large sandstone cliffs dominate the top left hand of frame, a vegetated ridge continues down to the lower foothills. The lower foot hills show human disturbances with rural green fields breaking up the natural landscape. Below this are the alluvial plains, which are mostly cleared rural land with small isolated areas of native vegetation. Residential development associated with Stage 3 lies mostly within the alluvial plains. The planning proposal takes advantage of existing cleared land, proposing residential development in cleared areas on the lower reaches of the escarpment's foothills. The continuously vegetated foothills of Stage 3 seen in this photo, but mostly obscured by existing trees, as well as the cleared section on the upper ridge, are not proposed to be developed for residential purposes. These

areas are described by the “Illawarra Escarpment, Visual Quality Analysis of Escarpment Scenic Values”, to be of high scenic quality rating. These areas will not be developed upon, and are proposed to be zoned E2 Environmental Conservation according to the current draft Planning Proposal under consideration.

The proposed development of West Dapto Stage 3 lies below the rural land in front of frame. The farmland in the foreground will be developed as low density housing as part of Stage 2 and this area will change substantially from rural to suburban. The future housing associated with Stage 2 will obscure views of Stage 3 development in this location. As such development associated with Stage 3 will not be visible and have no visual impact from this location.

### **Location 3**

Location Description: Bong Bong Road

GPS Coordinates: 56 H 0293014 UTM 6180488

Elevation: 101m

Direction: Looking South East



The location of this visual impact point is on Bong Bong road approximately 1km towards the escarpment from the approved Bong Bong Town Centre. This image is taken from the boundary of the Stage 3 planning proposal which is part of the West Dapto Urban Release Area. Features of the escarpment which can be viewed from this location include the densely vegetated slopes and the foothills which are currently used for small scale agriculture. Human modifications of the site include the existing clearing for agriculture, farm related infrastructure such as fences and construction of the coal wash dam as well as the introduction of extensive exotic plant species such as Lantana.

A coal wash dam can be seen at the bottom of the slope to the left of the frame in the lower photograph (panoramic view). The top photograph shows the foothills area, which has a steeper topography.



This view shows the Stage 3 developable area highlighted in blue and the clearing in the middle ground in the left of the frame does not currently form part of this planning proposal. The area within the blue boundary shown in the image is proposed to be rezoned from RU Rural Landscape to R2 Low Density Residential with the vegetated area proposed to remain as E2 Environmental Conservation.

The “West Dapto Release Area Visual and Landscape Study” prepared by O’Hanlon Design states the alluvial plains have a low to moderate scenic quality rating. It should be noted that the majority of proposed residential development is located within this area and is therefore impacting on a low to moderate area of visual appearance. However, the area highlighted in blue above is in close proximity to the wooded foothills and slopes of the Escarpment which has a high scenic value according to the “West Dapto Release Area Visual and Landscape Study”. The vegetated slopes are proposed to be zoned E2 Environmental Conservation to protect the significant visual qualities of the Escarpment.

The proposed residential development will extend into the foothills of the escarpment which will impact on this viewpoint. From the road, these foothills will be partially obscured by low-rise low density houses, although the fall of the land away from the road may enable distant views of the Escarpment to remain visible from the road (as seen in the middle ground left of the frame). Over time, landscaping in the developed area will mature and soften the visual impact as viewed from afar. Appropriate landscaping will allow for a smoother transition from the escarpment to residential areas. This area was not visible from other points surveyed along lower Bong Bong Road, however this area may be visible from other points within the Stage 3 area that were not accessible on the survey day.

**Location 4**

Location Description: Top of Bong Bong Road

GPS Coordinates: 56 H 0291898 UTM 6180396

Elevation: 236m

Direction: Looking East



These photographs were taken at the top of Bong Bong Road. This area is not part of Stage 3 of West Dapto. These photographs are taken from the Illawarra Escarpment looking down over West Dapto. A residence is located to the right out of frame and the public road terminates not far from this point (the road continues onto private property and is gated). A walking track into the Escarpment also starts at this point. The vegetation along the road forms part of the vegetated foothills and lower slopes of the Escarpment and this vegetation will remain, with protection from a proposed E2 Environmental Conservation zoning.

The top photograph is taken from atop a ridge and only very distant views to Lake Illawarra and the ocean can be seen. The Stage 3 West Dapto area is obscured by the ridge. Therefore, development associated with the Stage 3 Planning Proposal will have no visual impacts from this area. The bottom panoramic view reveals the view down Bong Bong Road. The location of this photograph is at a high elevation of 236 metres and over 900 metres away from the proposed developable area in Stage 3. The vegetation on either side of Bong Bong Road will not be impacted by Stage 3 and will continue to shield any views of development from this point. Therefore the proposal will have no visual impact from this location.



### Location 5

Location Description: Brooks Reach Playground

GPS Coordinates: 56 H 0294160 UTM 6180583

Elevation: 54m

Direction: Looking West



The following location is within the new Brooks Reach development area which is part of Stage 2 of West Dapto. This area adjoins the existing suburb of Horsley and is located close to the future Bong Bong Town Centre. The red brick of the former Gun Club can be seen behind the row of new homes. This area will form part of the new Bong Bong Town Centre. This is an important view as it provides an indication of how West Dapto will look like in years to come and how the Escarpment will be seen from street level. The street trees which can be seen from this location are also worth mentioning as they will provide benefits by blending the residential development in with the Escarpment once matured.

This location provides a view of the upper slopes of the escarpment in the background with the view of the foothills being blocked by new residential development. It is important to note the extent of land which is visible within the foothills is proposed to be retained as E2 Environmental Conservation. The 'Visual Quality Analysis of Escarpment Scenic Values Report' (2006) identifies this area as having a high scenic value because of its high gradient, dense vegetation and exposed Hawkesbury Sandstone. For this reason, its conservation and visibility is important for the visual integrity of the escarpment.

The extent of land which is proposed as R2 Low Density Residential as part of Stage 3 is not visible from this location because this development will be located behind the future town centre and will be obscured from this view. The Planning Proposal will therefore have no visual impact from this viewpoint.



### **Location 6**

Location Description: Cleveland Road

GPS Coordinates: 56 H 0292987 UTM 6178994

Elevation: 46m

Direction: Looking North West



The following location is within Stage 3 but sits outside of the Stage 3 Planning Proposal. The photo was taken on Cleveland Road close to the south western border of the Planning Proposal area. Previous draft plans and zonings for this area show R2 low density residential zoning that is not included in the Planning Proposal. This view shows significant amount of the vegetated slopes of the escarpment, as well as areas of the cleared foothills which are currently used for small scale agriculture. Human modification to this area is largely related to agricultural practices. The house located in the centre of frame is Glen Avon and is heritage listed. The zoned property was once a working dairy. The Glen Avon property also contains rural outbuildings and fences.



The development associated with the Planning Proposal would change the rural landscape setting quite significantly from this location. However this area has been designated as part of the West Dapto Urban Release area. The visual impacts of development are lessened in the lower cleared rural land of the foothills, but there may be concern where the topography rises significantly if vegetation needs to be cleared. The lower foothills rise relatively steeply into the Escarpment and from this location give the appearance of being larger and dominant visual features. Should the area be rezoned R2 low density residential, development in the west could run highly up the hillside than run across the ridge and involve vegetation removal on the hill (as shown by the yellow line). Should this area be developed for traditional low density residential development adequate views of the upper foothills and sandstone cliffs would still exist; however the development could compromise the view of the lower foothills, although over time vegetation in backyards could soften the built form appearance. The next foothill to the right was proposed to be zoned E2 Environmental Conservation and should this zoning be adopted, it is assumed that natural processes of revegetation would allow the partially cleared hill to regenerate.

This proposed R2 zoned land area to the west and extending into the closest foothill, is in close proximity to the Huntley golf course and zoned residential lands lying to the south. If the development was to occur in this area, it would share a close relationship with Huntley. After the trees located at the bottom of the frame, Cleveland road takes a southern route. This intersects with Avondale Road which leads directly into the Huntley area.

If the lower Escarpment slopes that currently contain vegetation in their upper reaches were zoned R2 low density residential, as shown in the proposed indicative zoning map on page 3, there would be moderate visual impacts to the Escarpment and its scenic values from this position. Residential development if it were to build to the upper limits would not interfere with the upper foothills and cliffs. However it would dominate the closest foothill. It is noted there has not been any transitional zoning suggested either by this Planning Proposal or shown in previous draft zonings for the area. Such a transitional zone could be an E4 Environmental Zone or larger lot sizes within the Low Density Zone on the hilly slopes to offer a visual and physical buffer to the lower foothills of the Escarpment. Such transitional zoning is evident within the Huntley area, where small vegetated areas in the lower foothills of the Escarpment are zoned E4 transitioning to R2.

### Location 7

Location Description: Cleveland Road

GPS Coordinates: 56 H 0293263 UTM 6179074

Elevation: 48m

Direction: Looking North West



The following location is on Cleveland Road, West Dapto at the foothills of the Escarpment and along the alluvial plains. This view shows areas affected by Stage 3 of the West Dapto Release Area, however the current Planning Proposal does not include development of the entire area. The boundary of the Planning Proposal area follows the property boundary (and fence line) of the rural landholding in this photo, which also contains a heritage listing of the landscaping within this property. The trees within this property, including the fig in the middle ground and the trees adjacent to the road (to the left outside the frame) form part of the listing and the landscaping associated with the former “Benares” estate. The Planning Proposal area also excludes the majority of the cleared area on the hill visible in the foreground, which also forms part of Stage 3.

The view from this location shows a significant amount of the vegetated slopes and peaks of the Escarpment as well as a large area of the cleared foothills which are currently used for small scale agriculture. Human modification to this area is largely related to agricultural practices with sheds and fences noticeable in the landscape. The hill in the middle ground is a significant visual feature due to its topography and is cleared with patchy vegetation on its eastern elevation. Stands of vegetation extend either side of the eastern elevation and follow the hill down slope to the north and south. The top of the hill is defined by a row of trees which then join the continuous vegetation of the Escarpment. A large fig in the middle ground is a feature tree and adds visual interest to the pasture of

the floodplain. This fig is not located in the Planning Proposal area, but does sit within the Stage 3 area, and will be rezoned at a later date or included within the current proposal.



This photo is taken from the same location looking north-north west (towards Bong Bong Road). It shows the expansive floodplain and proposed developable area is highlighted. These lower pastures appear relatively free of vegetation constraints to development. Development in this blue area would be located approximately 650m from the proposed Cleveland Village Centre. The blue highlighting shows the current Planning Proposal area (as defined by Stockland in their submission and rezoning request) and shown in red on the map on page 3. This line follows the boundary of the former Benares property.

From this viewpoint, residential development will impact significantly on the visual appearance of this view, changing it from rural pastures and an Escarpment backdrop to low density residential development which will obscure the view of the escarpment as a backdrop from Cleveland Road. Considering this area is within close proximity to a village centre and relatively free of topographical or vegetation constraints and is some distance from the Escarpment vegetation (approximately 500m from the continuously vegetated foothills) it is considered a logical development area. The visual impacts of development within the cleared floodplains are, on balance, considered reasonable from this point on Cleveland Road looking to the north and north-north west.

The orange highlighting shows the area of Stage 3 not currently part of the Planning Proposal but still designated for future development. Previous draft zonings for the area showed low density residential zoning extending into the foothills, including the vegetated areas just visible in the left of the frame from this view. Whilst this lower vegetation will be obscured by residential development in the foreground, it is important to retain as it may be visible from other viewpoints and belongs to a fairly continuous stand of Escarpment vegetation at a higher elevation than the floodplain.



From the same location looking west, different topographical features are evident; in particular the mostly flat pastures are interrupted by a prominent hill which is partially cleared.

Stage 3 of West Dapto will change the rural landscape setting significantly from this location with the extent of low density residential zoning extending across the plains in the foreground as proposed by Stockland. This development will obscure most of the views of the Escarpment to the west. This is not considered unreasonable as development in this area will be low-rise, similar to Brooks Reach and from further away will not affect the visual prominence of the Escarpment.

The area highlighted in orange shows the area of Stage 3 not currently covered by the Stockland Planning Proposal. Previous draft zonings (as shown on the map on page 3) show significant areas of R2 low density residential zoned land encroaching onto the prominent slope and vegetated areas seen in the middle ground. Development on exposed hillsides is more prominent than development in the floodplain and exposed hillsides and ridges are especially visually important in the context of the Escarpment. The visual impact of residences in the higher reaches of the foothills, and in particular the clearing of vegetation in these areas would have significant visual impacts across the West Dapto area, albeit obscured from this particular viewpoint by future residential development along Cleveland Road. Allowing low density residential development into the continuously vegetated foothills of the Escarpment would not only compromise the visual integrity of these areas, it could also set a precedent for clearing of vegetation and the “pushing up” of residences further up the escarpment slopes. Environmental living (E4) zones with large allotments may be more appropriate for areas within the foothills that have some development potential/cleared areas. It is also recommended that development be confined to existing cleared areas within the foothills, and that clearing

The fig tree is an important visual feature in the landscape and forms part of a heritage listing. The tree will be obscured from this view by residential development. The future of this tree is unknown, as it does not sit within the boundaries of the current Planning Proposal. Future consideration of zonings

in the remainder of Stage 3 should look at retention of this tree, if practical, to add character to the future residential neighbourhood.



**Location 8**

Location Description: Cleveland Road

GPS Coordinates: 56 H 0294631 UTM 6179630

Elevation: 41m

Direction: Looking West



The two photos above are taken on the southern edge of the West Dapto Stage 3 Planning Proposal, on Cleveland Road. The location is approximately half way between Cleveland village centre and the former proposed Purrungully village centre(since removed from the West Dapto Masterplan but still visible on the map on page 3). The northern edge of the future Cleveland Village is located south of the group of buildings, right of frame. The Cleveland village continues down the slope and is hidden by the crest in the foreground.



To the right of frame you can see the current development of Brooks Reach. The cleared open land bordering the West Dapto Stage 3 Planning Proposal is the future Bong Bong town centre (out lined in red). The Stage 3 Planning Proposal area lies south of Bong Bong town centre and will have minimal impact on the scenic views of the escarpment as viewed from this location. Around the Bong Bong town centre will be smaller lot residential development, which should visually transition easily into the town centre. Traditional density residential (similar to Brooks Reach) will then radiate out across the rest of the Planning Proposal area.

Land west of Bong Bong town centre and along the ridge to the centre of frame have the greatest impacts on scenic views of the Escarpment. The ridge is deceptive as the rural land drops away behind it then rises back up to the lower foot hills vegetation. From this location it will appear that residential areas will be built to the vegetation line of the lower foothills. The northern side of the Planning Proposal, near the town centre extends higher into the lower foot hills of the escarpment. High in this section there is thin remnant vegetation. Residential areas below this section would have less of an impact on scenic values. This is due to a riparian corridor traversing north to south which would shield development.

The 50m contour line cuts through planning proposal, it also encroaches into the Cleveland Village and the Bong Bong Town centre. From this position there will be an impact on the scenic values of the escarpment, but no more intense than Brook Reach currently displays.

### **Location 9**

Location Description: Cleveland Road

GPS Coordinates: 56 H 0295493 UTM 6179955

Elevation: 39m

Direction: Looking West



This photo shows the escarpment from the western edge of the proposed Fowlers Road Village. This view of the escarpment will be obscured due to the development of the future village. Medium density residential is proposed to surround the village and may include townhouse or terrace development and potentially shop top housing or low rise flats. This may further obscure the view of the escarpment completely.

Whilst the view may be obscured from this location, the village centre will serve an important function for the nearby residential areas. The West Dapto Stage 3 villages have been strategically placed to provide for the day to day requirements of the surrounding residential areas. Consideration has been given to the village's accessibility via various transport modes. As can be seen via this photo, the topography of the land is relatively level and shares a good relationship with the surrounding land. These attributes make this a suitable site for the future village centre.

From Cleveland Road there will be less of a visual impact from the Fowlers Road Village Centre, further east from this location. There will be a clear view along the street west up to the escarpment.

Overall, the proposed development will not have an unreasonable impact on the scenic value of the escarpment.

### **Location 10**

Location Description: Cleveland Road near Dapto High School

GPS Coordinates: 56 H 0296430 UTM 6179917

Elevation: 24m

Direction: Looking West



This photo is taken from within the eastern area of the West Dapto Stage 3 planning proposal, proposed to be zoned E3 Environmental Management. The view is looking back towards the escarpment and over the residential lands of the planning proposal. From this position, development will start behind the small crest in the foreground. This portion of the proposal is zoned for environmental management due to it being low-lying land that is flood prone. From here the visual impact of future development on the escarpment would be minimal.

Beyond the small crest the proposed development will run adjacent to Cleveland Road left of frame, and over the crest where currently housing can be seen. The loss of view of the escarpment would be minimal from the alluvial plains. Looking back to the escarpment, on the Cleveland road side there are manmade disturbances within the Escarpment. Cleared rural land can be seen on the lower foothills. This will aid the Planning Proposal by providing transitional views from residential to cleared land to vegetated Escarpment area. From this distance the cleared rural lands in the elevated foothill areas will give appearance that West Dapto Stage 3 transitions more softly into the foothills.

The development along the northern boundary of the planning proposal will have minimal impact from this position as well. The slow rise in topography allows a gradual build-up of residential dwellings towards the escarpment. To the right of frame, the south west portion of Horsley can be seen. There are also environmentally managed areas called the Purrungully wetlands in between the two development areas. This visual vegetation barriers “breaks up” the suburban developments allows a clear definition between the Planning Proposal area and the Escarpment.

From this position the impacts on the scenic views of the Escarpment would be minimal. The cleared rural foothills on the ridges in the distance give the appearance of a transition into the vegetated foothills. The upper foothills and cliff portions of the escarpment will not be affected from this location and the Escarpment will retain its visual prominence.

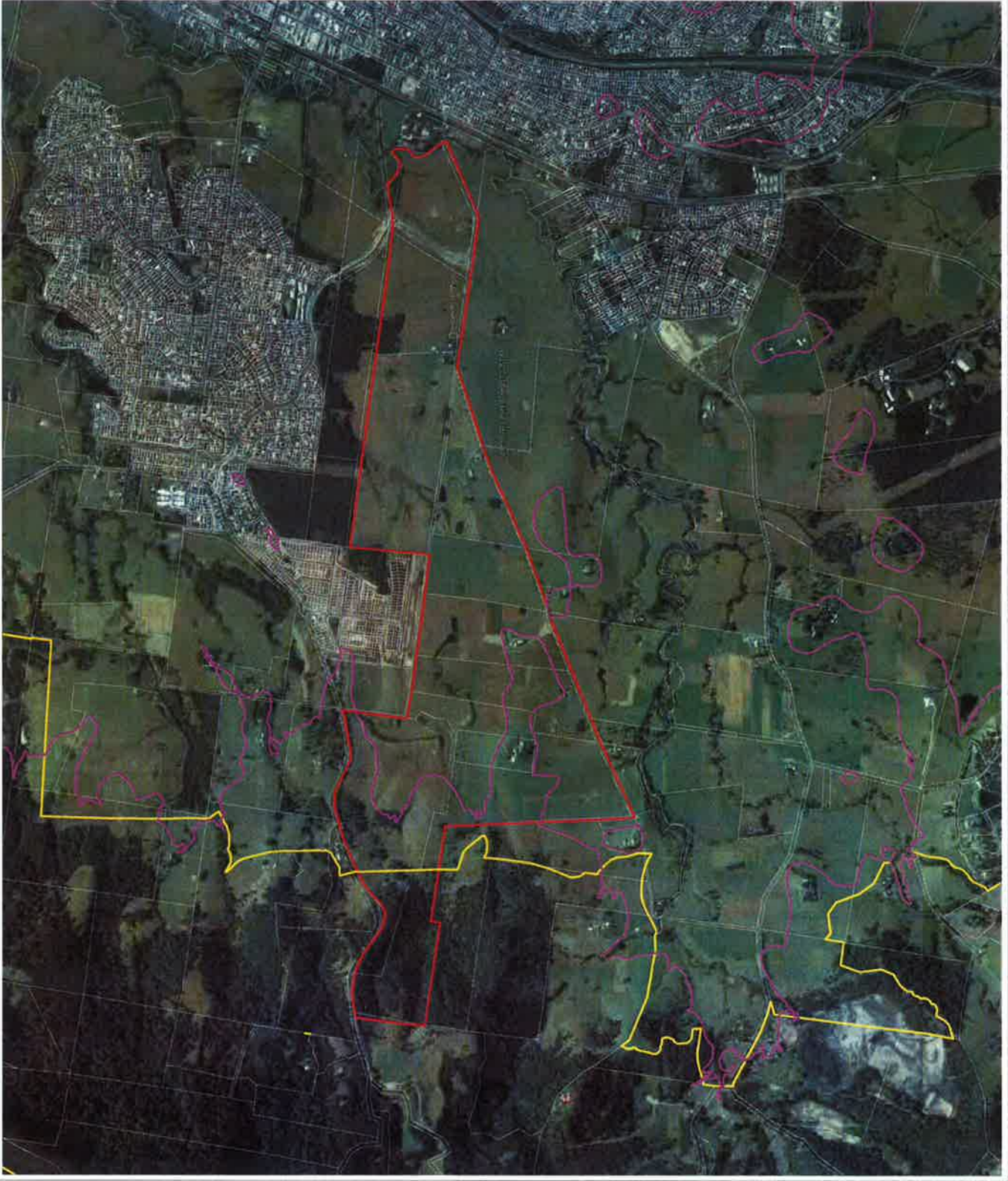
## Escarpment & 50m Contour Line

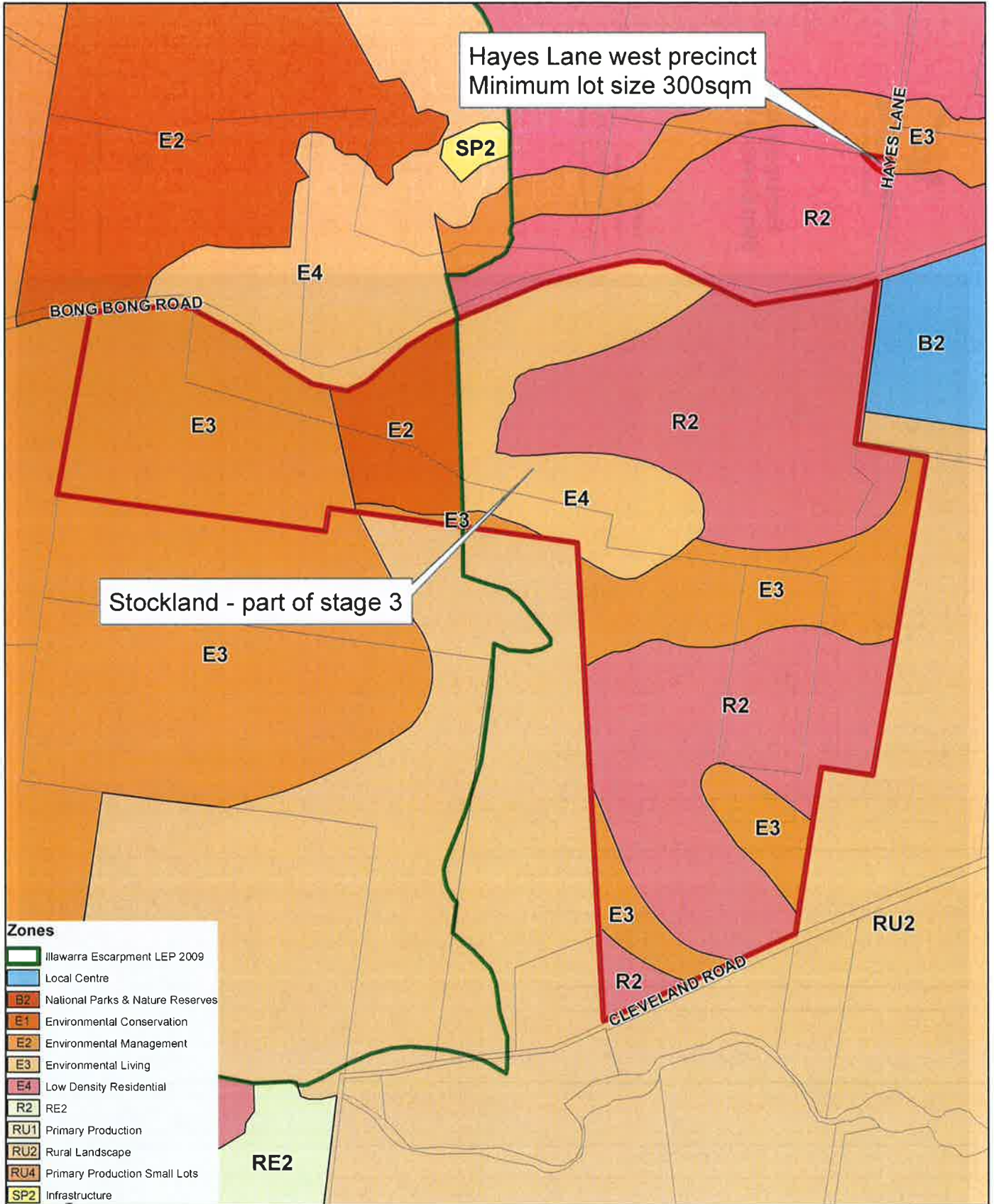
- Legend**
- 50m Contour
  - LEP2008 Mawarra Escarpment
  - Proposed Rezoning Boundary




0 1,000  
Metres

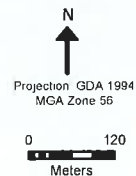
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Drawn By: H. Jones  
Date: 26/02/2014  
Dir ref: WD Stage 3\_Indicative 04-01-14.mxd

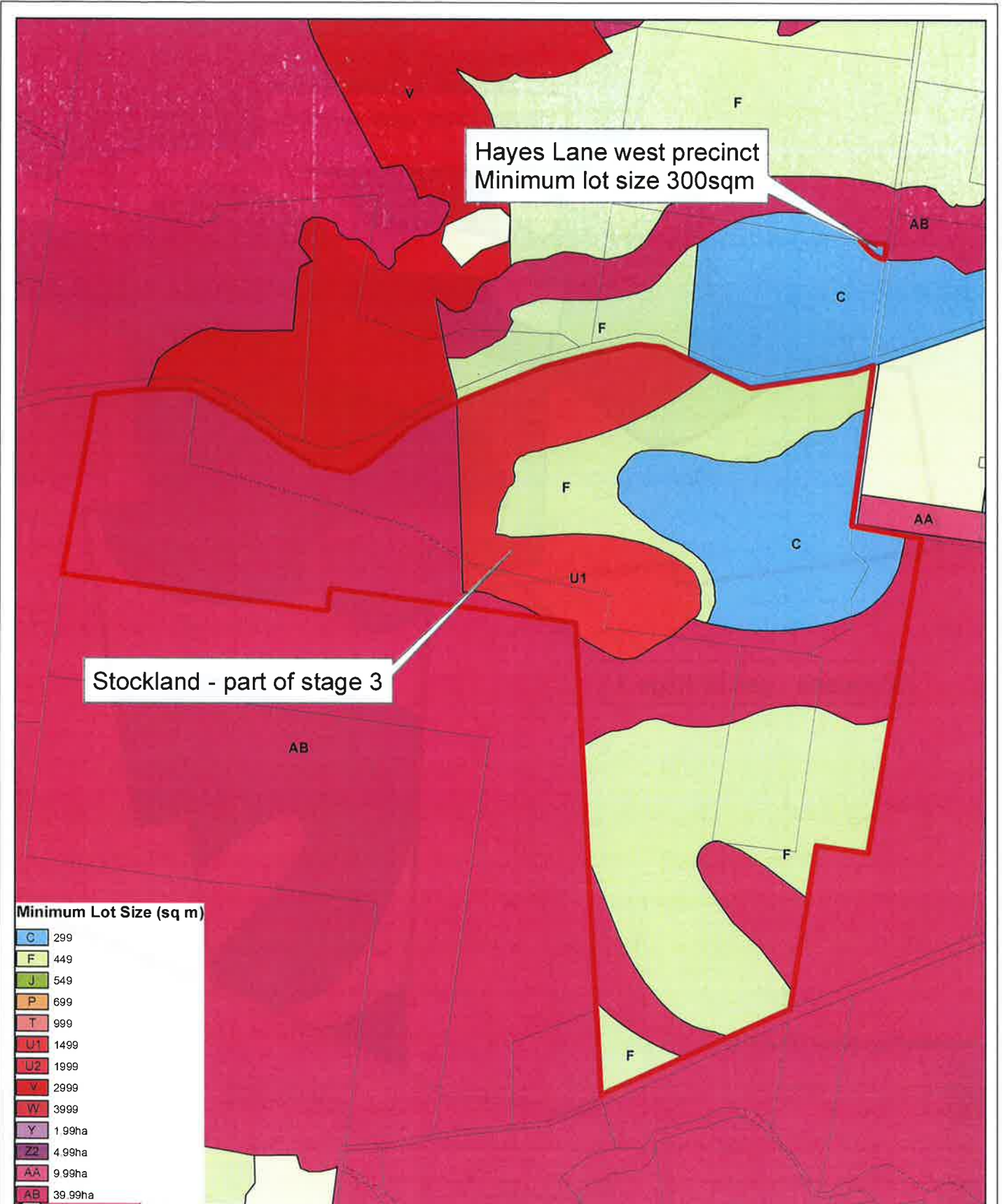




Planning Proposal  
 Lots 1, 2 and 3 DP 810104  
 and Lot 1 DP 549692  
 Bong Bong Rd West Dapto  
 Zoning

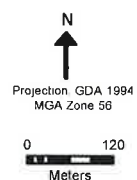
 Subject site



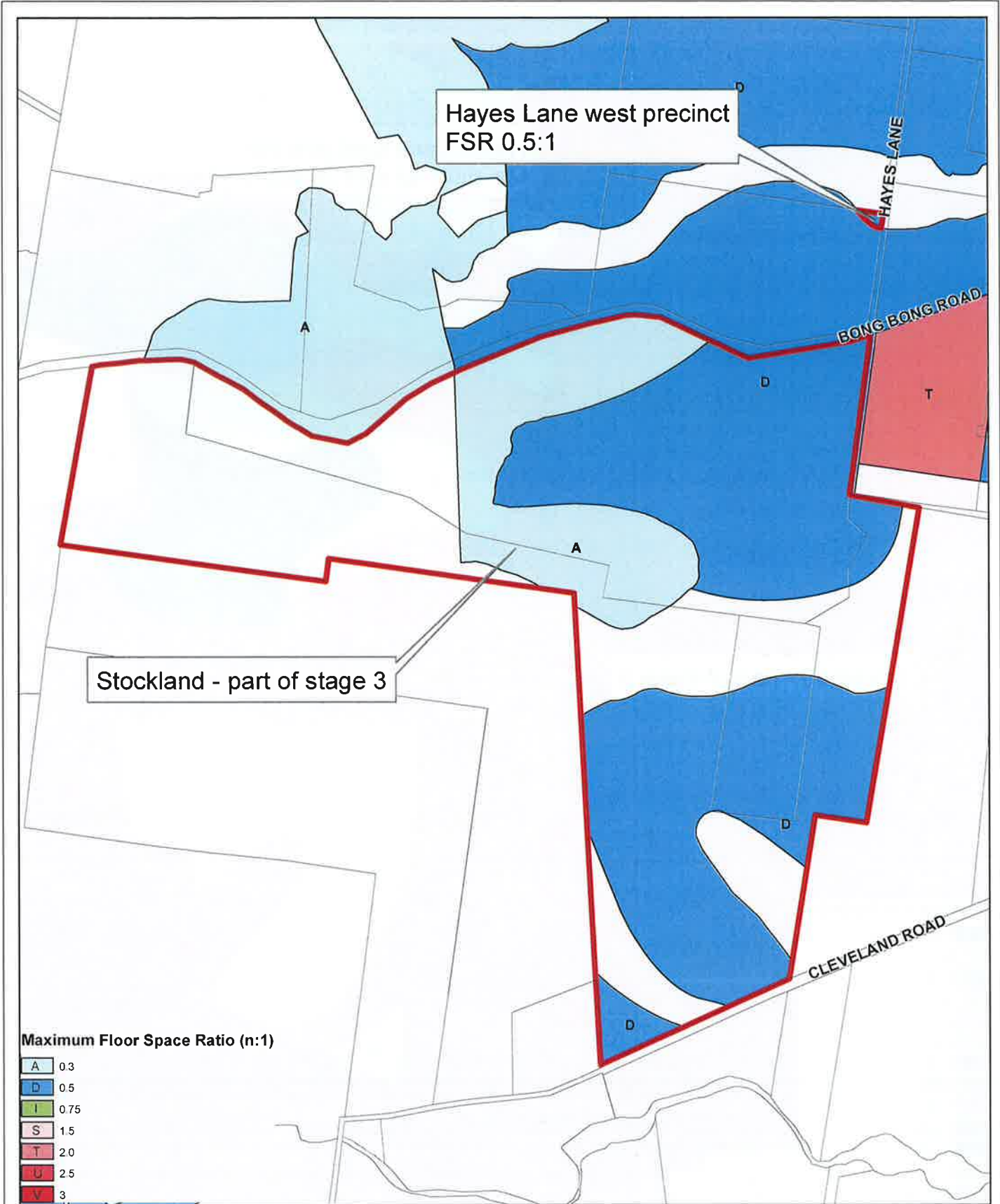


Planning Proposal  
Lots 1, 2 and 3 DP 810104  
and Lot 1 DP 549692  
Bong Bong Rd West Dapto  
Minimum Lot Size

Subject site



Map identification number:  
WL\_Stage3\_PlanningProposal\_MinimumLotSize.mxd



Maximum Floor Space Ratio (n:1)

A	0.3
D	0.5
I	0.75
S	1.5
T	2.0
U	2.5
V	3



Planning Proposal  
 Lots 1, 2 and 3 DP 810104  
 and Lot 1 DP 549692  
 Bong Bong Rd West Dapto  
 Maximum Floor Space Ratio

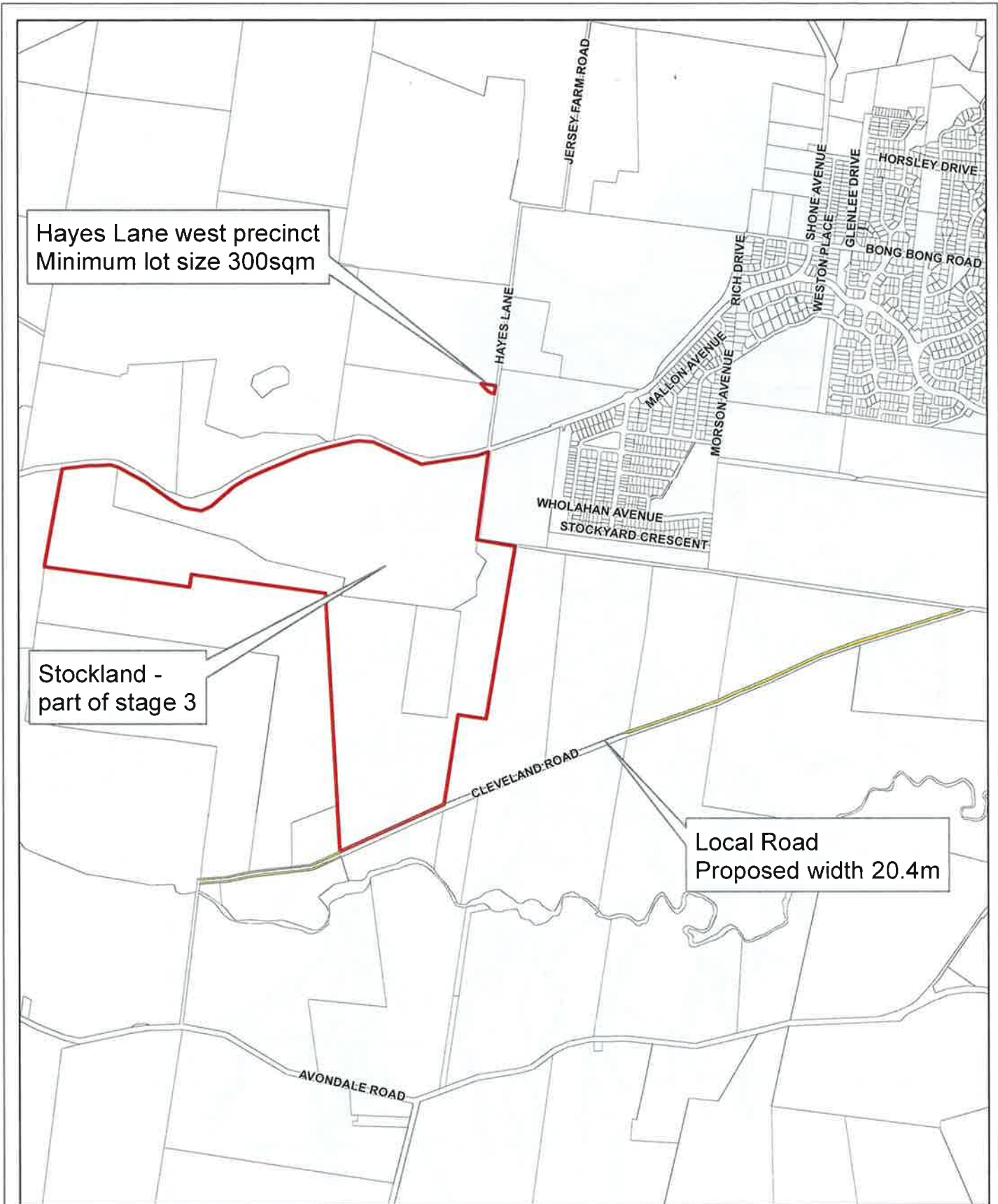
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Map identification number:  
Wd\_Stage3\_PlanningProposal\_FSR.mxd







Hayes Lane west precinct  
Minimum lot size 300sqm

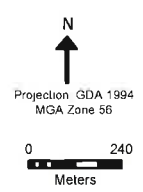
Stockland -  
part of stage 3

Local Road  
Proposed width 20.4m



Planning Proposal  
Lots 1, 2 and 3 DP 810104  
and Lot 1 DP 549692  
Bong Bong Rd West Dapto  
Land Reservation Acquisition Map

 Subject site



Map Identification number  
Wd\_Stages3\_PlanningProposal\_ResAcq1.mxd