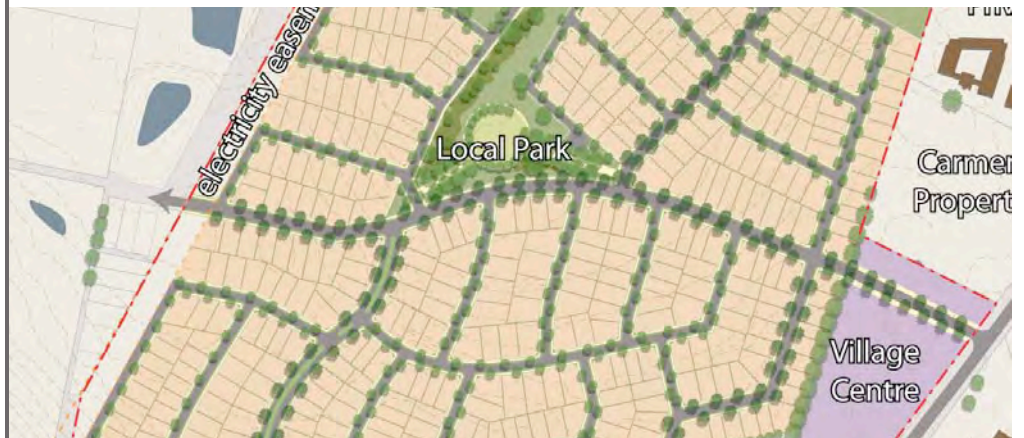




Appendix 2

Urban Design Rationale

Annand Alcock

Appendix 2 - Urban Design Rationale

The following appendix contains further explanation into the urban design rationale behind the concept plan.

Urban Design Rationale

Layout and Future Character

While the DII site is not adjacent to central Orange, the same general principles that have served to make the traditional parts of Orange such an attractive place to live have been incorporated in modified ways into the subdivision pattern.

The initial concept plan proposes a connected street layout that offers a high degree of choice for pedestrians, cyclists and motorists. This type of development is promoted and considered 'Best Practice' by the Urban Design Advisory Service (UDAS) in 'Residential Subdivision – a Handbook for the Design & Planning of New Neighbourhoods' (2000) as developed by the State Government in the most recent advice on the subject.

The DII plan carefully follows slopes & drainage with a 'deformed' street grid that creates visual interest through curves, deviations and views to open space, without losing the clarity and simplicity of the broader pattern.

Urban Structure & Connections

The Concept Plan shows a logical circulation pattern that allows for a primary movement (Interdistrict Connector) running East-West to connect with Forest Road and to any future development to the West. Along this connector a Local Park marks the drainage line in the central part of the site, which is a key legibility/wayfinding indicator and a focus for public amenity. Below this the riparian zone of water management and vegetation links to the DII's grazing lands around the dam. Local Distributor/Collector streets feed into the primary East West route forming the 'skeleton' of the new urban structure.

Carmen Property - The concept plan could provide access to the Carmen property through a north/south road that links to the primary access East/West road that runs through the length of the DII site from Forest Road to potential future development to the west. This access could alleviate the need for Carmen to provide a future access onto Forest Road should that prove difficult in light of new access points to the hospital / private hospital. This could give good access to Carmen and DII's future local centre via a safe and traffic managed intersection at Forest Road.

Regional Cycle Route - The current alignment for the OCC regional cycling route runs along the western boundary of the DII site. Using the green links and the connected street network illustrated in the Concept Plan appropriate connections to this regional network can easily be achieved across the electrical easement.

Sustainable Subdivision Design

The plan balances the creation of an accessible street system with appropriate street lengths in the context of the economics of a mid-larger sized lot subdivision pattern. Key principles adopted in the creation of the street pattern are;

- Streets generally follow topography (parallel or perpendicular to contours) to minimise impacts on the land, facilitate easy drainage, and avoid intrusive site engineering
- Connected street pattern minimises travel distances and facilitates a walkable community, avoiding overly long streets/cul-de-sac based pattern.
- Streets edge open space to oversee and manage park/ecological zones
- Streets run north-south or east-west where possible to maximise preferred lot solar orientation.
- Connection made to 'Carmen' land to North of village centre to facilitate shared access/minimise junctions to Forest Road.

Safe Subdivision Design

The Concept Plan and street layout is designed to create safe, low speed and walkable streets. Measures include;

- relatively short 'leg lengths' between intersections, avoiding unduly long streets
- footpaths intended to all streets, with dual footpaths on key connectors
- footpath/cycleway to be provided at edge of riparian zone
- 'deformed grid' streets which do not curve unnecessarily causing sight line and pedestrian safety issues.
- streets generally follow topography (parallel or perpendicular to contours) meaning avoidance of significant cut and fill and resultant visual/safety issues
- housing fronts and overlooks streets – design does not have backs of lots facing streets.
- open space and parks are fronted by 'edge' streets, which create good surveillance and management of public domain areas.
- landscape design detail to follow CPTED principles, avoiding concealment opportunities and providing safe and well lit public spaces.

Road Types/Widths

All roads shown in the initial concept plan comply with current OCC standard roads widths. The road types are:

- 22m major wide Inter-District road for the East/West route connecting Forest Road to potential future development to the West.
- 20m Local Distributor/Collector Streets
- 18m Local Streets
- 14m Edge Streets - These are the 'Local Street' type with a minimal footpath reserve on the non-residential (open space) side of the street.

Landscape and Public Domain

Central Local Park – A Local Park has been located at the intersection of the East West InterDistrict connector and the north-south drainage line, which is broadly central to the new residential community. This will provide opportunities for passive recreation including open kick-a-round area, children's play, tree planting, and will incorporate/interpret the drainage line in its Western edge.

Central Riparian Zone/Drainage Line - It was determined from on-site investigation that the significance of the drainage line in the Southern parts of the DII development site was overstated in previous mapping. In fact the corridor is not much more than a small depression in the land running halfway up the slope to the ridge marking the northern boundary of the redefined DII research station.

From on-site investigation it is also clear that the primary source of water feeding the main northern dam comes from off-site to the West, entering the site near the existing smaller westerly dam. At this point the depression becomes more of a corridor in nature and this has been reflected in the initial concept plan. Thus a riparian corridor has been created that connects the northern dam with the primary overland flow path to the west through the site. The north/south drainage line South of the Local Park has been managed within a swale in the road reserve, and forms an appropriately sized southerly extension of the landscape/drainage link.

Edges to Open Space – Edge Streets form a management interface between residential areas and open space/riparian areas/grazing land. These will allow the landscape to be easily maintained and overcome management issues such as weed invasion from rear yards, as well as providing good residential amenity and surveillance.

Street Landscaping – There will be street tree planting to define the three key street types;

- **Interdistrict Connector/Local Connector** – Avenue Planting of both indigenous trees for landscape structure and exotic trees for shade and seasonal interest
- **Local Streets** – Street Planting of Native/Endemic Species
- **Edge Streets** – Street Planting of Native/Endemic species which will tie in with planting/existing species in open space, riparian corridor and grazing land.

Screening - Screening is to be established on the Southern boundary to the existing DII site and to the Eastern interface with the 'Carmen' property. In both cases there will be rear residential property fences to 1.8m high, and a 5 metre planting zone established within the rear of the residential lot to create a visual screen to the adjoining uses.

Lot Sizes & Housing Diversity

The site has been planned to create a diversity of lot sizes and housing products within the context of the local market. While the majority of lots will cater for traditional sized lots and houses, where there is higher amenity and/or proximity to the proposed village centre there is the opportunity for a range of lot sizes, with smaller frontages/areas providing for more affordable choices.

The overall yield is approximately 550 lots. The lot mix is shown in the table below:

Lot Size	Typical Lot Frontage	Number of Lots
< 500m ²	< 15m	< 10% (55 approx.)
500m-700m ²	16 - 20m	20% (110 approx.)
above 700m ²	20m+	70% (385 approx.)
	TOTAL	550 (approx.)

Village Centre

The Southern portion of land zoned B4 (commercial/retail) has been identified as the location for a local centre, with retail uses serving both the site and Forest Road/Hospital Precinct/recreation area derived trade.

This will be the 'front door' to the evolving residential area, and as such will become its local focus and 'village centre'. A variety of supermarket based retail uses together with opportunities for local business, and supporting parking areas are intended to be located on the Southern B4 site.

