4.0 Zones and Overlays

The following section details the existing zones and overlays within the Mooroopna West Growth Corridor.

Due to the overall size (260 ha) and geographical location of the Mooroopna West growth corridor, a range of zones and overlays apply to the Mooroopna West OPD area. Refer to Figures 6, 7 and 8.

The existing planning zone and overlay controls are summarised within Table 4.

Table 4: Mooroopna West Growth Corridor Zones and Overlays

Zones	Overlays
Residential 1	Land Subject to Inundation
Farming	Development Plan – Schedule 1
Business 4	Rural Floodway
Urban Floodway	VicRoads PAO

Figure 6: Zoning Plan

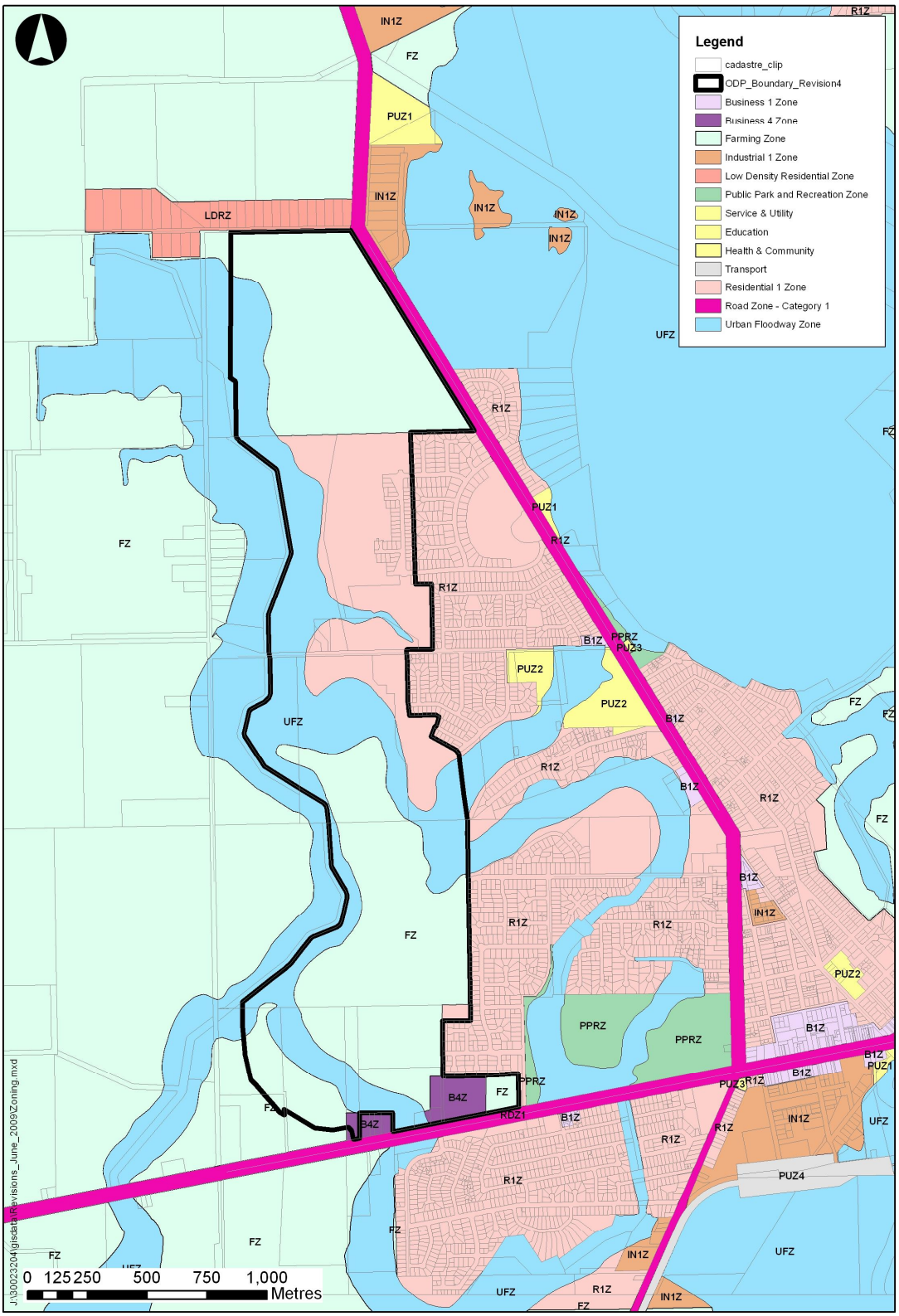


Figure 7: Flood Overlay Plan

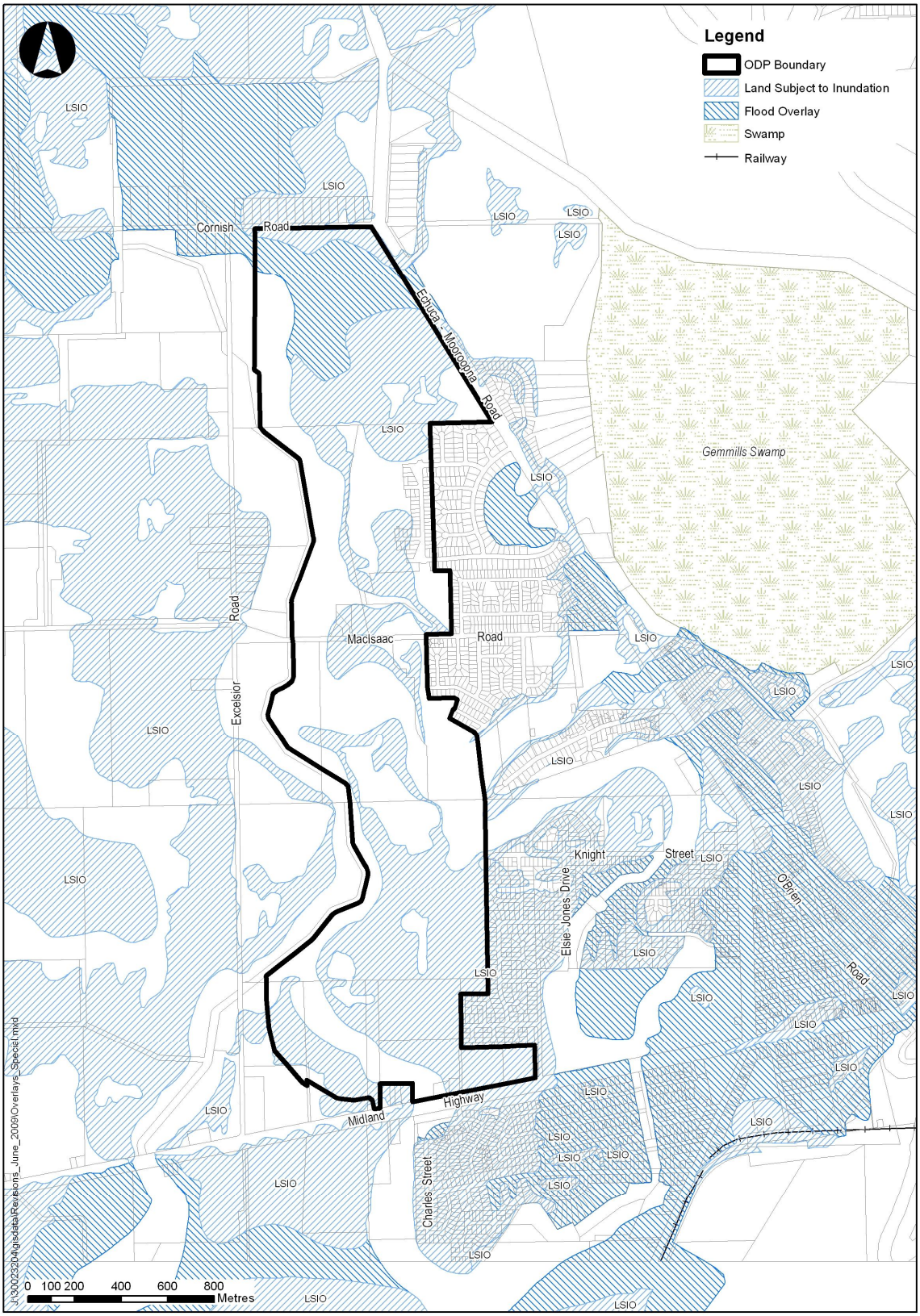
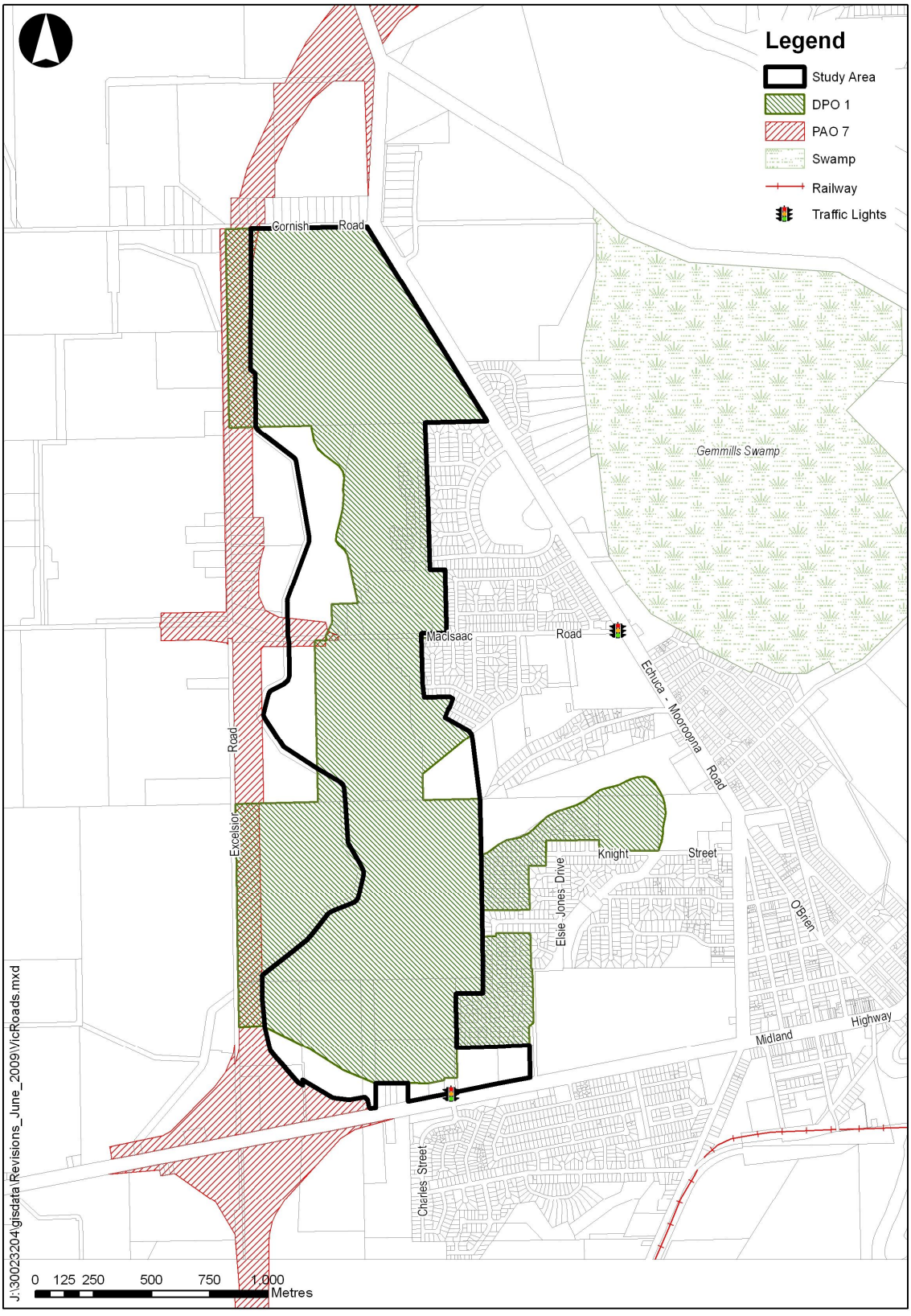


Figure 8: PAO & DPO1 Overlay Plan



5.0 Identifying Developable Land

This section provides a starting point in the overall strategic planning for the Mooroopna West Growth Corridor by way of the identification of "developable land". It is noted within this section that a significant portion of the land can be classified as "non developable" due to major flooding constraints. In setting the future urban landscape for Mooroopna West, developable land has been identified within the following section via a set of precincts.

The precincts denoted within Figure 8, are land units that reflect localised topographical and flooding conditions. The precincts are not based on land ownership arrangements.

A significant portion of the Mooroopna West Growth Corridor can be classified as “non developable” as it comprises land contained within an Urban Floodway Zone. The Urban Floodway Zone essentially traverses the corridor in a north-south alignment. A significant portion of the balance of the Mooroopna West Growth Corridor is affected by the Land Subject to Inundation Overlay and the Floodway Overlay but it remains developable subject to adequately addressing flood mitigation matters.

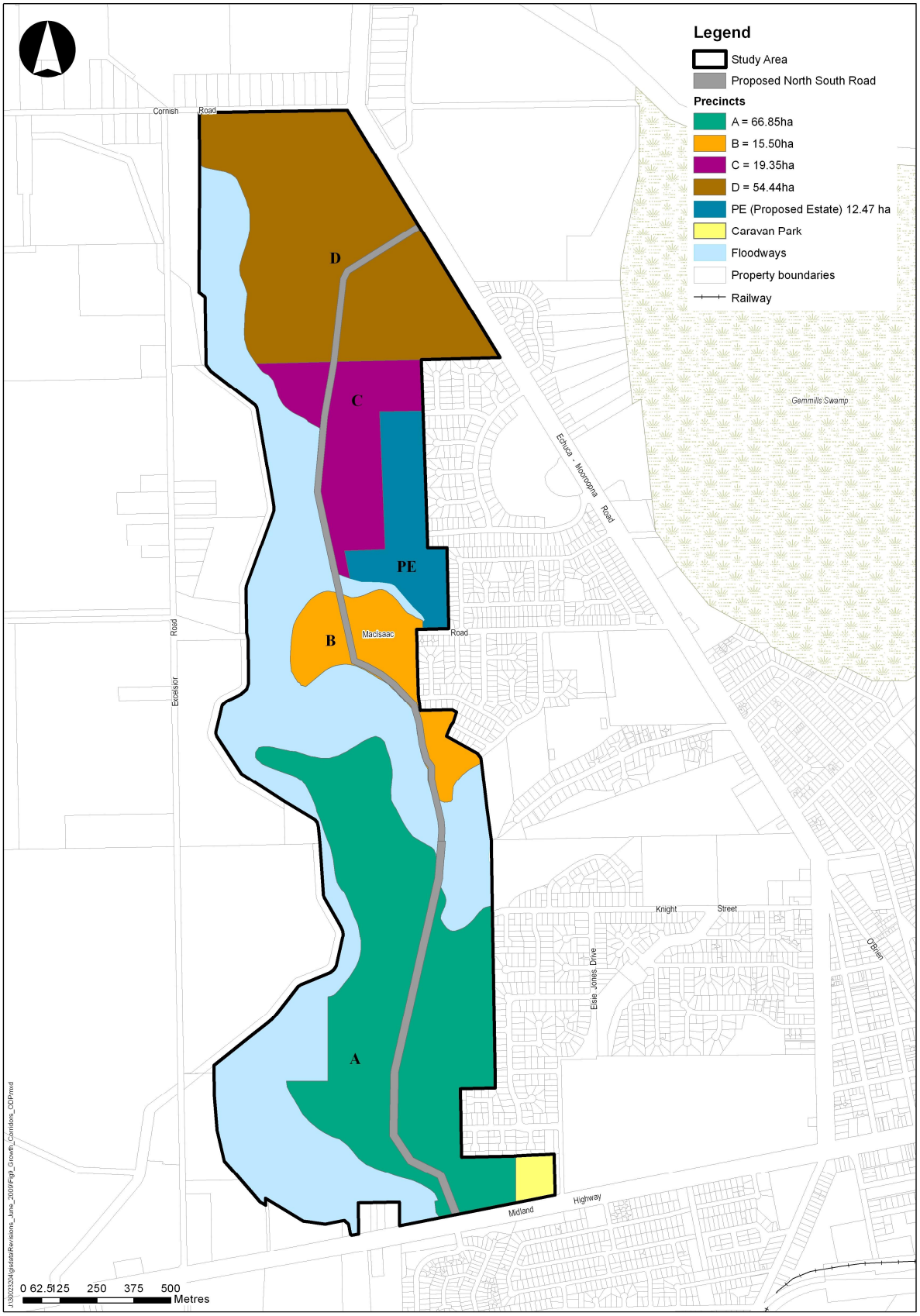
Land situated in the south-western corner of the Mooroopna West Growth Corridor is identified by way of the Public Acquisition Overlay for future road purposes in association with the Goulburn Valley Highway – Shepparton Bypass and on this basis, has not been included in future land development within the corridor..

The precinct areas are summarised within Table 5.

Table 5: Mooroopna West Growth Corridor Development Precincts

Precinct	Gross Area (Hectares)
A	66.85
B	15.50
C	19.35
D	54.44

Figure 9: Mooroopna West Growth Corridor Structure Plan Precincts



6.0 Development Opportunities and Constraints

The prevailing development opportunities and constraints within the Mooroopna West Growth Corridor have been identified within the following section to provide an existing conditions snapshot or a base line context for future land use and development. The form, extent and locations of land use and development within the Mooroopna West Growth Corridor will be inextricably linked to the pre-existing opportunities and constraints. At a micro level, these issues will need upfront consideration by proponents in preparing and lodging permit planning applications.

6.1 Development Opportunities

The Mooroopna West Growth Corridor is characterised by the following land use and development opportunities. These opportunities will influence, to varying degrees, the form and extent of future development through the growth corridor. Where appropriate, a subdivision or development plan within the Mooroopna West Structure Plan should address these considerations.

6.1.1 Existing Subdivisions

A key opportunity for new residential development within the Mooroopna West Growth Corridor is the capacity to integrate in a permeable manner with existing residential areas at the periphery Mooroopna. The existing residential areas are located to the north of the Midland Highway and to the west of the Echuca – Mooroopna Road. Existing roads such as Knight Street and Mac Isaac Road, as the main collector roads, can be used to service the Mooroopna West Growth Corridor. The alignment and design of these roads ensure that they have the capacity to link in with the proposed North-South Road within the Mooroopna West Growth Corridor.

Existing public open space areas have generally been configured along the floodway and Ardmona Drain alignments. This presents an opportunity to provide active and passive open space linkages with new subdivisions within the Mooroopna West Growth Corridor.

6.1.2 Land Supply Limitations

Land available for development within Mooroopna is limited, predominantly by natural constraints such as flood prone areas but also by man-made physical boundaries such as the future Goulburn Valley Highway - Shepparton Bypass alignment. When combined, these create a limitation on the supply of residential allotments. Additional residential lots and housing must be brought on line to address the demand side of the equation. Individual land owner tenure expectations need to be managed in a co-ordinated manner to avoid out of sequence development.

6.1.3 Proximity to the Commercial Centres

The proximity of the Mooroopna West Growth Corridor to the main commercial centres of Shepparton and Mooroopna represents an opportunity for future residential development. Shepparton is the key commercial and business centre for the local region. The Central Business District of Shepparton provides a range of higher and lower order goods and services for not only the urban area but also the surrounding rural and township areas.

The main shopping centre for Mooroopna is conveniently located along McLennan Street. It provides the township and immediately surrounding area with a range of goods and services. A number of non-residential uses such as a petrol station, a supermarket and a performing arts community centre are located along Echuca – Mooroopna Road. New commercial development to service the Mooroopna West Growth Corridor should be established. An objective of the Council is to ensure that local, small scale convenience shopping centres are available for new residential areas.

Retail facilities should be made accessible through walking and cycling networks, served by public transport, located on the North-South Road. Retail opportunities should be an appropriate size to accommodate uses that meet local community needs and oriented to support active street frontages, street -based community interaction and pedestrian safety.

Investigation by ADR indicates that there is an opportunity to establish retail clusters within “Precinct A and C” to service the growth corridor and provide a mix of uses to meet the growth corridors needs. The cluster in Precinct A should be secondary to the cluster in Precinct C. The ADR Report is **Appendix D** to this report.

6.1.4 Flora and Fauna

The Mooroopna West Growth Corridor has a highly disturbed natural environment and as a consequence possesses minimal flora and fauna attributes. Extensive tree clearing and cattle grazing throughout the growth corridor has impacted on native vegetation coverage. A cluster of Grey Box situated along Excelsior Road comprises the only native vegetation of note. The cluster of Grey Box have been excluded from the developable area in order to protect its environmental values. Any development in the vicinity of the vegetation will need to be in accordance with DSE requirements.

Opportunities exist to link open space areas within the Mooroopna West Growth Corridor with Gemmill Wildlife Reserve on the eastern side of Echuca – Mooroopna Road. Given the overall degree of "non developable" land due to flooding; there is significant scope to introduce plants, shrubs and trees in these particular areas.

6.1.5 Public Open Space Provision

The Mooroopna West Growth Corridor provides significant scope to accommodate a high quality, integrated public open space network. The public open space opportunity is primarily derived from the Ardmona (Community Drain) 7P running south – north through the Mooroopna West Growth Corridor which although it is a key land development constraint, it provides scope to satisfy various open space planning objectives. The floodway area extending throughout the growth corridor has been designated for the provision of a linear open space network. The size and distribution of public open space relative to future urban development will support and encourage a variety and diversity of uses, particularly through the provision of a shared pathway network. Public open space provision within the Mooroopna West Growth Corridor will also accommodate drainage mitigation measures, water sensitive urban design and enhancement of the local landscape values through native vegetation planting. The linear network also provides opportunity to link to other active and passive open space areas including Gemmills Wildlife Reserve, Craigmuir Lake and John Gray Reserve as well as new dedicated open space areas (i.e. local parks and playgrounds) within the Mooroopna West Growth Corridor.

Landscaping of POS is a requirement of the Development Plan.

6.1.6 Community Infrastructure

Existing facilities that currently make up the community infrastructure servicing the Mooroopna population are either at capacity or very close to being fully utilized by the existing population base. The development of the Mooroopna Hub, which was a $2.5 million dollar redevelopment to co-locate and upgrade the community house, preschool, occasional childcare, maternal and child health, senior citizens facilities and an expanded community library, is an example of a response to the need to upgrade and extend existing facilities to meet current needs and expectations.

The future population and household growth expected within the Mooroopna West Growth Corridor will bring with it a need to extend existing and create new community infrastructure to satisfy local needs and expectations for community services. Future subdivisions will need to ensure that accessibility and connectivity is provided to the new Mooroopna West community hub and local public transport services.

The Demographic and Community Centre Analysis by Maunsell indicates that it is appropriate for there to be an additional hub within the Mooroopna West Growth Corridor. The Structure Plan sets aside an area of land for this future hub. In accordance with the Ministers Direction on Development Contribution Plans under Section 46M (1) of the Planning and Environment Act 1987, the DCP will only fund the part of the hub that relates to children's services. A copy of this report is given in **Appendix E**.

6.1.7 New Mooroopna West Primary School

The Department of Education and Training (DET) has indicated that the expected level of population growth within the Mooroopna West Growth Corridor will necessitate the provision of a new primary school given the limited number of places currently available at Mooroopna's two existing State primary schools. As a general rule, a primary school is required for every 3,000 dwellings and a high school for every 10,000 dwellings. To accommodate the establishment of a new primary school, a site should incorporate the following:

- A minimum site area of 3.5 hectares;
- Preferably 3 road frontages;
- Be integrated with the local neighbourhood centres and community facilities;
- Be located on walking and cycling networks;
- Adjoin public open space network and community sporting and other recreation facilities;
- Include the provision of indented, parallel parking, drop off zones, bus stops;
- Have a bus stop located along the school site boundary;
- Be located on land that is not affected by physical, environmental or other constraints; and
- For primary schools, be located on connector streets.

The preferred location for the establishment of a new primary school within the Mooroopna West Growth Corridor is within Precinct A. This precinct, given its location and physical area, provides the best all-round scope to accommodate a new primary school in conjunction with a new local commercial hub (or local centre).

6.2 Development Constraints

The Mooroopna West Growth Corridor is characterised by the following constraints and these issues all serve to impact on the future development and land supply at Mooroopna West. Identified constraints within the growth corridor such as drainage channels may also provide opportunities such as the provision of high quality public open space.

6.2.1 Flooding and Drainage Infrastructure

The convergence of a number of river systems in the region of Mooroopna and Shepparton means that the Mooroopna West Growth Corridor is highly susceptible to flooding. Gemmill Swamp, Craigmuir Lake and the Goulburn River are the main waterways within and in close proximity to Mooroopna. The physical extent of flooding with the Mooroopna West Growth Corridor has implications for the type, form and location of drainage infrastructure that needs to be provided. In addition to riverine flooding, the flat topographical nature of the area generally makes it a difficult to dispose of local stormwater. Existing flood channels and storage areas need to be maintained with new urban development. Development must avoid areas of flooding depth in excess of 300mm above natural ground level.

Figure 10: Gemmill Swamp Facing South East from Little Road

Allied with the problem of riverine flooding and local stormwater is the need to protect and enhance Mooroopna's waterways. Stormwater development within the existing residential areas abutting the Mooroopna West Growth Corridor is directed to Gemmill Swamp via a series of pipe outlets. Nutrient levels need to be managed otherwise floral species in receiving areas such as Gemmill Swamp can be affected.

Due to the flood prone nature of the land, riverine flood mitigation works, drainage infrastructure and stormwater management will present a significant cost impost on subdivision and development.

6.2.2 Other Existing Physical Infrastructure Services

To accommodate the anticipated residential growth within the Mooroopna West Growth Corridor, augmentation of infrastructure may be necessary. The existing capacity of physical infrastructure servicing Mooroopna West and future growth issues for each servicing authority is summarised overleaf.

Gas
Origin Energy has indicated that a good supply gas is available to the Mooroopna West area. Existing reticulated gas infrastructure has sufficient capacity to be able to supply the 2500 new homes without any reinforcement to the reticulation system.

Power
The Mooroopna West Growth Corridor is in the area supplied by Mooroopna zone substation (MNA). The substation is located on the Echuca-Mooroopna Road, opposite Gange Street. The substation is supplied by two 66 kV lines, one directly from the terminal, and one via Shepparton zone substation (STN).

Based on present load forecasts and planning policy, Powercor expects in 2013 there will be a need to carry out works to avoid unacceptable overloads and load at risk for supply to customers ex MNA. The station rating and both 66 kV line ratings will be an issue. The exact timing and scope of augmentation depends, in part, on load growth - where, when and how much. Load forecasts are reviewed biannually.

Powercor has a number of existing assets in the Corridor. These assets include:

- At the northern end there is a 22 kV power line off Cornish Road, extending about 530 m into the property; and
- Along MacIsaac Road there is a 22 kV line on the south side, and a single pole line on the north side carrying both a 66 kV and 22 kV circuit. Lines along MacIsaac Road are in the road easement.

Sewerage
Goulburn Valley Water has advised that a recent assessment of the sewerage system has indicated that there is limited capacity available in the existing sewerage network. Therefore, extensive development to the West of Mooroopna is likely to require an independent sewerage network that will connect into the existing outfall rising main on Echuca Road which delivers waste to the Waste Management Facility situated to the north of Mooroopna. However, it is also likely that development of the scale being considered will also require augmentation of this outfall rising main as well.

Water
Goulburn Valley Water has prepared a Water Supply Master Plan. The 2002 Master Plan prepared for the Shepparton and Mooroopna water supply system had a 20-year outlook and assumed compounding growth of 1.0% per annum for Mooroopna. At this growth rate and from a base of approximately 3200 connected properties, an additional 720 properties could be connected to the Mooroopna water supply system by 2022. The Master Plan determined that development of this order could be accommodated with little modification to the existing water supply system.

6.2.3 Goulburn Valley Highway - Shepparton Bypass

The proposed Shepparton Bypass will involve approximately 30 kilometres of dual carriageway road. The Shepparton Bypass is to link the Goulburn Valley Highway at Arcadia in the south with the Congupna area to the north. It is anticipated that the Shepparton Bypass will reduce overall traffic volumes, particularly heavy vehicle traffic within the township areas of Mooroopna and Shepparton. The Goulburn Valley Highway runs from Seymour through to Tocumwal and forms part of the National Highway network.

In relation to the Mooroopna West Growth Corridor, the alignment of the proposed Shepparton Bypass forms the westernmost boundary. The Shepparton Bypass alignment runs along the eastern side of Excelsior Avenue. In effect, it will provide a "hard edge" to residential development and the outward expansion of Mooroopna. The location of the proposed east bound off ramp onto the Midland Highway will significantly encroach upon developable land within the south-western section of the Mooroopna West Growth Corridor. The use of an overpass over the Midland Highway however effectively dictates the positioning of the off ramp.

The Shepparton Bypass alignment not only represents a physical constraint on the western and south-western edge of the Mooroopna West Growth Corridor, it also forms a major consideration in determining the layout and alignment of future internal road networks and intersectional arrangements.

6.2.4 Interface with Agricultural Land

The interface between residential areas and surrounding agricultural landholdings at the township fringe has the potential for land use conflict. Physical buffers are generally used to mitigate negative externalities for new residential development. Issues such as dust, spray drift, noise and odour emissions have the potential to impact on sensitive receptors such as dwellings. Whilst the Mooroopna West Growth Corridor generally has hard edged boundaries such as the Midland Highway to the south and existing residential development, there is scope in the northern and western sections of the growth corridor for agricultural interface issues to arise.