

Rules / Criteria	Compliance
<p>R67</p> <p>a) Blocks front streets or public open space.</p> <p>b) Where blocks abut public open space the principles described in Figure 4 are applied.</p>	<p><i>Complies: All single and multi unit blocks have their primary address fronting roads, however 2 multi unit blocks that also abut parks.</i></p> <p><i>While Figure 4 generally relates to single dwelling blocks the principles of having edge streets around the rest of the park has been applied.</i></p> <p><i>In addition the Concept Plan has detail built from requirements to ensure the multi unit dwellings address the parks and open spaces (C60).</i></p>
<p>R68</p> <p>Battle-axe blocks are used only where they:</p> <p>a) front parks, natural areas or recreation areas such as golf courses</p> <p>b) provide frontage to major roads.</p> <p>c) are necessary to provide vehicle access to sloping sites.</p>	<p><i>Complies: Battle-axe blocks are necessary to provide vehicular access from sloping sites and to eliminate dangerous access points near the roundabouts on major roads.</i></p>
<p>6.5 Compact blocks (defined as blocks having a site area less than 250m²)</p>	
<p>R69</p> <p>Compact blocks are located:</p> <p>a) Opposite parkland open space; or</p> <p>b) Within 100m of parkland open space; or</p> <p>c) Adjacent to a minimum 10m wide verge.</p>	<p><i>Complies: All compact blocks are within 100m of open space or parkland or alternatively are adjacent to verges of a minimum 10m width.</i></p>
<p>R70</p> <p>a) Where vehicle access is provided to the front of the block the block frontage is to a local road, and not a major collector.</p> <p>b) Where a block has rear laneway access it may front a collector road.</p>	<p><i>Complies. All compact blocks are serviced by a rear lane / shared private driveway.</i></p>

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<p>R71</p> <p>Compact blocks provide opportunities for north facing living areas that can be achieved through such measures as:</p> <p>a) East - west running ends of sections</p> <p>b) East – west running culs de sac or minor access roads.</p>	<p><i>Complies: Compact blocks are located with east/west running sections and achieve acceptable solar orientation in accordance with the Territory Plan solar access requirements.</i></p>
<p>R72</p> <p>Road and services infrastructure achieves all operational requirements for waste collection, utilities service access and overland flow protection applicable to standard residential blocks.</p>	<p><i>Complies. The compact blocks have been sited close to parklands and on topographic that minimise grade issues that may impact on services, etc. Waste collections will be via the street and gravity services will be provided in the private lane or in the street.</i></p>

Element 7: Utilities, Waste Management and Sediment and Erosion Control

Intent:

- a) To ensure that residential areas are adequately serviced with sewerage, water, stormwater, fire-fighting, electricity, gas, street lighting and communication services in a timely, cost-effective, coordinated and efficient manner that supports sustainable development practices and asset maintenance needs and to promote the use of road verges or other public land for the provision of reticulated services where topography and other site constraints allow.

Rules / Criteria	Compliance
7.1 Viability of Services	
<p>R73</p> <p>Land development occurs only where adequate stormwater, sewerage and water supplies for domestic and fire-fighting purposes can be provided and maintained in accordance with utility codes and standards made under or in accordance with ACT law.</p>	<p><i>Complies: Service availability for the development is dependent on ACTPLA's capital works projects and the Actew sewer main project. The timing of these projects is currently consistent with the completion of the development.</i></p>
7.2 Utility Services on Leased and Unleased Land	
<p>R74</p> <p>a) Utility services comply with utility standards.</p> <p>b) Subject to agreement between the land manager and utility provider, water, electricity, gas and communication services are located within road reservations or other Territory Land that is, and is to remain, unleased.</p> <p>c) Subject to agreement between the proponent and the utility provider, and for the purpose of maximising land utilisation, preference is given to locating sewage and stormwater services within road reservations, or other Territory Land that is, and is to remain, unleased.</p>	<p><i>Complies: Proposed utility services comply with design standards.</i></p> <p><i>Complies. Water, electrical, gas and technical services are located in the public street verges.</i></p> <p><i>Complies: Sewer and stormwater are located within road reserves wherever topography allows. Where this cannot be achieved due to topography. The services have been located at the rear of a block where the setbacks allow for the required side access easement. In principle support from the utility provider has been received.</i></p>
<p>R75</p> <p>a) Where utility standards require sewerage and stormwater services to be located within leased blocks, those services:</p> <p>i) are contained within service reservations and accessed by means of utility, emergency or maintenance access routes complying with Figures 5 and 6 and Table 7</p> <p>ii) are on a block of sufficient size to accommodate service reservations and utility access routes, whilst providing comparable building footprint area to similar but unencumbered blocks</p> <p>iii) where possible, are located in service reservations directly accessible from unleased Territory Land</p> <p>iv) where possible, are co-located with private open space to maximise land utilisation</p>	<p><i>Complies: Sewer and stormwater are located within road reserves wherever topography allows. Where this cannot be achieved due to the topography the services have been located at the rear of a block where the setbacks allow for the required side access easement. This is generally on blocks greater than 500m2, however functional size houses can still be achieved on blocks approx 450m2.</i></p>
7.3 Shared Trenching	
<p>R76</p> <p>Compatible minor service reticulation in the road verge may be located in shared trenching where permitted by utility standards.</p>	<p><i>Complies: Shared trenching has been designed in accordance with agency standards.</i></p>

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<p>R77</p> <p>Written acceptance of service reservation alignments has been provided by Territory and Municipal Services (TaMS) and other relevant utility providers.</p>	<p><i>N/A: Written support cannot be obtained until the detailed design submission is received by the agencies, however in principle support has been received from TAMS, ActewAGL and Jemena for shared trench arrangement and proposed verge configuration.</i></p>
<p>7.4 Width of Service Reservations and Service Access Elements</p>	
<p>R78</p> <p>All sewerage and stormwater reticulation on land that is to be leased is located in a service reservation. The widths of service reservations are agreed by the utility provider and comply with the relevant section of Table 6. More than one easement may be required, as is shown in Figure 6.</p>	<p><i>Complies: the proposed easement and access requirements are in accordance with agency standards. (refer to rule 75 above)</i></p>
<p>7.5 Width of Service Reservation and Emergency Access to Minor Service Reticulation</p>	
<p>R79</p> <p>Where service reservations for sewerage reticulation cannot be adequately accessed directly from public land, maintenance and emergency access routes are provided on each affected leased block to provide obstruction-free access from public land to the service reservation.</p>	<p><i>Complies - Sewer services are located within road reserves or open space as far as possible. Where services lie within blocks the design of easements has been carried out in accordance with agency guidelines. (refer to rule 75 above)</i></p>
<p>R80</p> <p>The widths of maintenance and access routes are approved by the utility provider and comply with the relevant section of Table 6.</p>	<p><i>Complies. Refer to 3.7 of Report</i></p>

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<p>R81</p> <p>Where corner blocks require service reservations in the rear corner, the service reservation is extended along a side boundary to link with the road verge as shown in Figure 5 and 6.</p>	<p><i>Complies. Easements to be extended for stormwater access to link with road verge</i></p>
<p>7.6 Separation of Private and Utility Services</p>	
<p>R82</p> <p>Where the permissible footprints of buildings are located adjacent to a service reservation, the relevant service provider determines and provides written approval of the extent and width of a private service zone required for private stormwater and sanitary drains, electricity and communication cables, gas, water and irrigation pipes associated with the development of the lease. This zone is documented in the EDP to provide adequate separation of private services from utility assets, and to prevent damage to private services when the utility is repairing or replacing its assets (see Figure 5). More than one private service zone may be required.</p>	<p><i>Complies: See diagram showing access to utility sewerage and stormwater services in rear of blocks in 3.7. The detailed design of the estate will fully incorporate these requirements.</i></p>
<p>7.7 Recording Utility Access Requirements in Leases</p>	
<p>R83</p> <p>Where services are proposed to be included in leased land the proponent:</p> <ul style="list-style-type: none"> a) consults with each utility service provider during the preparation of the EDP and obtains written confirmation that the provider's service reservations and maintenance and emergency access route requirements are included b) provides a written undertaking that all designated service reservations, maintenance and emergency access routes, and utility pipe protection envelopes are recorded on the Deposited Plans that will be referred to in the subsequent leases in the manner shown in Appendix B c) includes in the EDP the standard lease clauses applying to service reservations, maintenance and emergency access routes and utility pipe protection envelopes. 	<p>Consultation undertaken with all service providers. Providers' service reservations, emergency, and maintenance access and private service zones are detailed in 3.7 and these will be fully incorporated into the hydraulic masterplans and the detailed design.</p> <p>Written Support to be obtained as part of agency circulation process of EDP prior to Development approval. Consultation to date has indicated in principal support for the service and maintenance reservations.</p>

Rules / Criteria	Compliance
7.8 Design and Construction Qualifications	
R84 Sewerage facilities, water supply mains, stormwater, electricity, communications services, gas and street lighting are designed by persons who are qualified by reference to codes and standards made under or in accordance with ACT law.	<i>Complies: The detailed design will be undertaken and/or verified by a Chartered Professional Engineer or agencies with appropriate experience.</i>
7.9 Overland Flow Paths for Sewage and Stormwater Spillage	
R85 Overland flow paths must be provided to ensure that surcharge of sewage or stormwater from utility network overflow points (such as manholes) or future residential sanitary drain overflow relief gullies, will not be obstructed by proposed building footprints and will comply with utility and residential plumbing standards.	<i>Complies: Stormwater overland flowpaths are located to prevent discharge through leased land. The locations of sewer manholes are in accordance with the appropriate standards. The detail design process will refine the block grading and stormwater and sewer designs. All buildings are subject to a separate development application.</i>
7.10 Location of Sewage and Stormwater Connections	
R86 Unless specifically approved by the utility provider, the sewer and stormwater ties are at the low point of the block in accordance with utility standards.	<i>Complies: The majority of sewer and stormwater ties are located at the low point of the block. Where this cannot be met adequate depth will be provided to ensure the lowest point of the block can drain into the service (this will be approved by Agencies)</i>
R87 a) Subject to agreement between the proponent and the utility provider, the sewer and stormwater ties may be located away from the low point. b) Written approval is provided by TaMS and other utility service providers, and any special requirements imposed by the service authorities are incorporated in the design.	<i>Complies - See above. Noted.</i>
7.11 Clearance Between Utility Equipment and Landscape Elements	
R88 The location of and accessibility to meters, control valves, manholes and utility connections are acceptable to service providers and determined in accordance with utility standards to minimise conflict with proposed driveways, fencing, courtyard walls or other permanent paving, vegetation or structures mandated by the development.	<i>Complies: Service locations are designed in accordance with TAMS Design Standards for Urban Infrastructure and service authority requirements.</i>

Rules / Criteria	Compliance
7.12 Noise and odour buffer zones	
<p>R89</p> <p>Buffer zones complying with utility requirements are provided between dwellings and utility service equipment such as sewer vents or pump stations to protect residential amenity from odour and noise nuisance. This buffer zone is agreed with the utility provider and documented in the EDP.</p>	<p><i>N/A.</i></p> <p><i>No sewer or water pump stations are to be provided as part of this development. Sewer vents are not part of this EDP but part of the trunk sewer main which has been design to allow residential development in accordance with the Territory Plan land use zones.</i></p>
7.13 Waste management	
<p>R90</p> <p>Waste management is in accordance with the latest version of the <i>Development Control Code for Best Practice Waste Management in the ACT</i>, TaMS 2006.</p>	<p><i>Complies: See waste management plan (WCP 01-04).</i></p>
<p>R91</p> <p>In accordance with the <i>Development Control Code for Best Practice Waste Management in the ACT</i> (TaMS 2006), garbage collection vehicle access is provided as follows:</p> <ul style="list-style-type: none"> a) to mobile garbage bins for all single unit dwellings and multi unit and cluster developments up to and including 10 units. b) to garbage hoppers in an approved structure for multi-unit sites in excess of 10 dwellings. 	<p><i>Complies. All single dwelling blocks have street garbage collection within 60m of the dwelling.</i></p> <p><i>Complies. The multi unit blocks are an adequate size to allow the future development to have internal garbage collection.</i></p>
<p>R92</p> <p>Demolition waste leaving the site is diverted to a recycling or reprocessing operator for the particular type of waste material. Evidence of proper recycling, reprocessing or disposal is obtained and kept for 12 months after practical completion of the project.</p>	<p><i>Complies. The majority of the waste on this site will come from the removal of the existing pine trees, which will be chipped and used as mulch in the Arboretum or on site.</i></p> <p><i>Generally no other demolition waste will be generated from this development.</i></p> <p><i>All waste generated as part of the construction will be subject to a separate waste management plan developed by the civil and landscape contractors.</i></p>
7.14 Sediment and Erosion Control Plan	
<p>R93</p> <p>A Sediment and Erosion Control Concept Plan satisfies the requirements of the Environment Protection Authority.</p>	<p><i>Complies. The EDP submission contains a Sediment and Erosion Control Concept Plan. See drawing (EMCP-01 and 02).</i></p>

7 COMPLIANCE WITH THE COOMBS AND WRIGHT CONCEPT PLAN

The Coombs and Wright Concept Plan became effective on January, 2010 and has been amended serial times with the latest amendment dated 8 July 2011.

The following section demonstrates compliance with the provisions of Parts A and B of the Plan including with the purpose of the Plan and with the “desired planning outcomes” contained in the Plan.

Part C has been excluded as it relates to development undertaken following EDP approval.

Only Rules/Criteria relevant to Coombs have been assessed in this report. Compliance with the provisions as they relate to Wright were covered in the Wright EDP report.

Part A – Land use	
Notes:	
<ol style="list-style-type: none"> 1. Precincts referred to in this part are shown on figure 2, subject to element 2. 2. Roads referred to in this part are shown on figure 3, subject to element 3. 3. Signalised intersections on the north-south arterial road (<i>referred to in this EDP report as John Gorton Drive</i>) are shown on figure 3, subject to element 3. 4. Sections referred to in this part are shown on figure 4, and they are located by cross sections lines. 	
1.1 Land use plan	
Rules / Criteria	Compliance
Note: Desired planning outcomes relevant to this element are: (a), (b), (c), (e), (f), (g), (h), (j), (k), (o), (p) and (q).	
<p>C1</p> <p>Precinct A</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows in precinct A,</p> <ol style="list-style-type: none"> a) RZ1, consistent with desired planning outcome (a) b) PRZ1, consistent with desired planning outcome (h). <p>Desired planning outcomes:</p> <ol style="list-style-type: none"> (a) Provide diverse housing types, block sizes, densities and affordability to meet the changing needs of households and to encourage the formation of a diverse community; 	<p><i>Complies as follows:</i></p> <ol style="list-style-type: none"> a) <i>The location of precinct A in the EDP is consistent with figure 2 in the concept plan and all residential development in the precinct is permitted by the Territory Plan RZ1 Land Use policies.</i> <p><i>In accordance with planning outcome (a), R37 & R51 of the concept plan (density controls), a variety of low density (less 20 dwellings / ha) block sizes have been provided. Overall the desired planning outcome (a) is achieved by providing a range of housing products and block sizes across the estate in a number of different precincts of which precinct A contribute the low density suburban product, and</i></p>

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<p>(h) retain the landscape setting and significant natural elements of the site as part of an urban open space network that responds to the topography of the area, contributes to 'place-making' character, and where possible connects to adjacent suburbs with high levels of public access, amenity and safety.</p>	<p><i>The public open space (PRZ1) and enlarged road reserves provided in Precinct A retain the significant features of the site including, views to the Molonglo River, surrounding hills, Black Mountain and the existing Eucalyptus trees on the ridge. These trees, together with the proposed plantings will be the highest element in Precinct A and will provided a landscape back drop so the housing does not break the skyline.</i></p> <p><i>The location of the open space in the Concept Plan (northwest of the ridge) was originally proposed to retain moderate quality Pink-tailed Worm Lizard (PTWL) potential habitat. This potential habitat has since been reassessed by a PTWL expert for ACTPLA and the Commonwealth has downgraded it to low quality (EPBC determination 16 April 2010). As the site does not contain significant site features and R26 (concept plan) and the EPBC determination do not require the area to be retained and the area has been proposed for development.</i></p> <p><i>The EDP has provided an alternative open space centrally located (adjacent to section BR) on the eastern side of the ridge in accordance with Table 7 (Description and prime management purpose of urban parks and sportsgrounds) of the Residential Subdivision Development Code. Together with the Holdens Creek Pond open space the provision of this park will guarantee residents of both the east and west sides of the ridge will have centrally located open space for recreational purposes.</i></p> <p><i>At this time the Strategic EPBC Assessment for the Molonglo Valley (including the River Corridor) has not been completed, and there is no guarantee that the Commonwealth will permit recreational facilities (playgrounds, etc) within the River Corridor.EDP.</i></p>

Rules / Criteria	Compliance
<p>C2</p> <p>Precinct B</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows in precinct B,</p> <ul style="list-style-type: none"> a) RZ5, not less than 6.5ha, consistent with desired planning outcome (b) b) RZ4, not less than 2ha, consistent with desired planning outcome (b) c) PRZ1, following the watercourse, consistent with desired planning outcome (h) d) RZ1, consistent with desired planning outcome (a) over the balance <p>Desired planning outcomes:</p> <ul style="list-style-type: none"> (a) Provide diverse housing types, block sizes, densities and affordability to meet the changing needs of households and to encourage the formation of a diverse community; (b) Allow for zoning to accommodate higher residential densities and building heights, community facilities and mixed use retail/commercial activity centres supported by residential development close to areas of higher amenity and the north-south arterial road which includes a major public transport route; (h) retain the landscape setting and significant natural elements of the site as part of an urban open space network that responds to the topography of the area, contributes to 'place-making' character, and where possible connects to adjacent suburbs with high levels of public access, amenity and safety. 	<p><i>Complies as follows:</i></p> <ul style="list-style-type: none"> a) <i>A total of 17.5ha of RZ5 is provided, thus exceeding the minimum 6.5ha required in the Concept Plan; The EDP complies with Desire planning outcome (b) for the following reasons:</i> <ul style="list-style-type: none"> - <i>RZ5 is a high density area with the minimum density for each block in accordance with R49 of the Concept Plan (1 dwelling for each 200m²);</i> - <i>the height of buildings will be controlled by the Territory Plan provisions (minimum 2 storeys, maximum 6 storeys); and</i> - <i>The location of RZ5 in the EDP is consistent with figure 2 in the Concept Plan, which places high density housing along the arterial road and around the mixed use area of Coombs.</i> b) <i>A total of 3.2ha of RZ4 is provided thus exceeding the minimum 2ha required in the EDP; The EDP complies with Desire planning outcome (b) for the following reasons:</i> <ul style="list-style-type: none"> - <i>RZ4 is a high density area with the minimum density for each block in accordance with R49 of the Concept Plan (1 dwelling for each 200m²);</i> - <i>the height of buildings will be controlled by the Territory Plan provisions (maximum 3 storeys); and</i> - <i>The location of RZ4 in the EDP is consistent with figure 2 in the concept plan, which places it adjacent to the high amenity area of Holdens Creek Pond.</i> c) <i>The PRZ1 area provided is consistent figure 2 of the Concept Plan with desired planning outcome (h) in that it:</i> <ul style="list-style-type: none"> • <i>is part of an open space network which is proposed to continue south of John Gorton Drive into the adjoining suburb of Wright</i> • <i>will retain the existing watercourse and natural elements of the site where possible, in a landscaped parkland setting, noting however, that the water course alignment, topography and configuration will be impacted on by the</i>

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	<p>construction and proximity of John Gorton Drive – however, landscape elements can be utilised to reinstate and enhance the original landscape (particularly water) features</p> <ul style="list-style-type: none"> • will directly adjoin John Gorton Drive allowing opportunities for a highly visible and accessible public space which, through landscaping and urban design elements (such as public art), can contribute to ‘place making’ by helping to establish the desired character for Coombs • will directly adjoin a multi unit site which can be developed to effectively extend the public realm features of the park into the site and which will provide passive surveillance to assist with public safety for park users. Furthermore, the park will provide a high level of amenity for residents of the surrounding higher density developments which adjoin on 1 side ensuring that the park is likely to be well utilised. It is also likely the adjacent developments will be themed and marketed to capitalise on the amenity and attributes offered by the park; and <p>d) The balance of the precinct comprises RZ1 housing products permitted by the Territory Plan RZ1 Land Use policies and provides a variety of block sizes and housing, while complying with the RZ1 density rules (R37 & R51) of the Concept Plan. Overall the desired planning outcome (a) is achieved by providing a range of housing products and block sizes across the estate in a number of different precincts of which precinct A contribute the low density suburban product.</p>
<p>C3</p> <p>Precinct C</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows in precinct C, CZ5, not less than 0.4ha, consistent with desired planning outcome (b).</p> <p>Desired planning outcomes:</p> <p>(b) Allow for zoning to accommodate higher residential densities and building heights, community facilities and mixed use retail/commercial activity centres supported by residential development close to areas of higher amenity and the north-south arterial road which includes a major public transport route;</p>	<p>Complies: Precinct C comprises a total of 0.67ha of CZ5 adjacent to the edge road and Holden’s Creek, thus exceeding the minimum 0.4ha required area of CZ5. The CZ5 zoning has been located in accordance with bushfire requirements for edge streets and C27 of the Concept Plan. The sight is consistent with Figure 2 in the Concept Plan and locates the mixed used area adjacent to the high amenity open space of Holdens Creek Pond.</p>

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<p>C4</p> <p>Precinct D</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows in precinct D, consistent with desired planning outcome (b),</p> <p>a) CZ4 on the south eastern side of road 3, not less than 1.4ha</p> <p>b) CZ5, not less than 0.9ha.</p> <p>Desired planning outcomes:</p> <p>(b) Allow for zoning to accommodate higher residential densities and building heights, community facilities and mixed use retail/commercial activity centres supported by residential development close to areas of higher amenity and the north-south arterial road which includes a major public transport route;</p>	<p><i>Complies as follows:</i></p> <p>a) <i>A total of 1.4ha of CZ4 is provided on the south eastern side of road 3 thus meeting the minimum 1.4ha required to be provided in the Concept Plan; The EDP complies with Desire planning outcome (b) for the following reasons:</i></p> <ul style="list-style-type: none"> - <i>CZ4 is a high density area with the minimum density for each block in accordance with R50 of the Concept Plan (1 dwelling for each 150m2);</i> - <i>the height of buildings will be controlled by R56 of the Concept Plan (minimum 3 storeys, no maximum restriction); and</i> - <i>The location of CZ4 in the EDP is consistent with figure 2 in the concept plan, which places the local centre at the main entrance to Coombs adjoining the arterial road (south east of road 3); and</i> <p>b) <i>A total of 1.64ha of CZ5 is provided, thus exceeding the minimum 0,9ha required to be provided in the Concept Plan.</i></p> <p><i>The EDP complies with Desire planning outcome (b) for the following reasons:</i></p> <ul style="list-style-type: none"> - <i>CZ5 is a high density area with the minimum density for each block in accordance with R50 of the Concept Plan (1 dwelling for each 150m2);</i> - <i>the height of buildings will be controlled by R53 in the Concept Plan (minimum 3 storeys, no maximum restriction); and</i> - <i>The location of CZ5 in the EDP is consistent with figure 2 in the concept plan, which places the mixed use along the arterial road and adjoining the local centre.</i>
<p>C5</p> <p>Precinct E</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land</p>	<p><i>Complies: Precinct E comprises a total of 2.43ha of RZ5, thus exceeding the minimum 1ha of RZ5 required. The</i></p>

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<p>that is not in a future urban area, the land use plan submitted with an EDP shows in precinct E, RZ5, not less than 1ha, consistent with desired planning outcome (b).</p> <p>Desired planning outcomes:</p> <p>(b) Allow for zoning to accommodate higher residential densities and building heights, community facilities and mixed use retail/commercial activity centres supported by residential development close to areas of higher amenity and the north-south arterial road which includes a major public transport route;</p>	<p><i>dwelling yield is consistent with R49 and it provides higher density housing close to the arterial road and the local centre / mixed use precinct, consistent with planning outcome b and figure 2 of the Concept Plan.</i></p>
<p>C6</p> <p>Precinct F</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows in precinct F a minimum overall area of 17ha, comprising,</p> <ul style="list-style-type: none"> a) CFZ, not less than 6ha, to accommodate at a minimum, an educational establishment (primary school), community activity centre and child care centre, consistent with desired planning outcome (b) b) PRZ1, not less than 0.3ha at the junction of roads 3, 7 and 8 consistent with desired planning outcome (h) c) PRZ1 and NUZ4, in the balance to accommodate Coombs urban open space corridor specified in R23) and C23). <p>Desired planning outcomes:</p> <p>(b) Allow for zoning to accommodate higher residential densities and building heights, community facilities and mixed use retail/commercial activity centres supported by residential development close to areas of higher amenity and the north-south arterial road which includes a major public transport route;</p> <p>(h) retain the landscape setting and significant natural elements of the site as part of an urban open space network that responds to the topography of the area, contributes to 'place-making' character, and where possible connects to adjacent suburbs with high levels of public access, amenity and safety.</p>	<p><i>Complies: Precinct F is 17ha inclusive of roads (in accordance with ACTPLA pre-application meeting advice 6/12/2010);</i></p> <ul style="list-style-type: none"> a) <i>The area of CFZ is 6ha which meets the minimum area required for the various community facilities – ie primary school, community activity centre, and child care centre; The location of the CFZ land use is consistent with Figure 2 of the Concept Plan which locates community facilities adjacent to high amenity areas and close to the arterial road and mixed use areas in accordance with planning outcome b;</i> b) <i>The area of PRZ1 provided at the junction of roads 3, 7 and 8 is 0.5ha which exceeds the minimum 0.3ha required. The location of the park is consistent with Figure 2 of the Concept Plan. This park will form an external plaza abutting the local centre and is part of the open space system that connects east and west Coombs. The park will also retain a number of existing pine trees, to reflection of the former use of the site. Pine trees are a significant natural element that currently dominates the site, but will only be retained in 2 parks within Coombs. The retention of the pine trees is consistent with the desired planning outcome (h).</i> c) <i>The balance of the precinct comprises PRZ1 and NUZ4 and accommodates the Coombs urban space corridor – refer C23.</i>

Rules / Criteria	Compliance
<p>C7</p> <p>Precinct G</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows in precinct G,</p> <p>a) RZ5, not less than 2.7ha, consistent with desired planning outcome (b)</p> <p>b) PRZ1, following the watercourse, consistent with desired planning outcome (h).</p> <p>Desired planning outcomes:</p> <p>(b) Allow for zoning to accommodate higher residential densities and building heights, community facilities and mixed use retail/commercial activity centres supported by residential development close to areas of higher amenity and the north-south arterial road which includes a major public transport route;</p> <p>(h) retain the landscape setting and significant natural elements of the site as part of an urban open space network that responds to the topography of the area, contributes to 'place-making' character, and where possible connects to adjacent suburbs with high levels of public access, amenity and safety.</p>	<p>Complies as follows:</p> <p>a) <i>The area of RZ5 provided in precinct G is 3.9ha which exceeds the minimum 2.7ha required.</i></p> <p><i>The dwelling yield is consistent with R49 and it provides higher density housing close to the arterial road and the local centre / mixed use precinct, consistent with planning outcome b and figure 2 of the Concept Plan; and</i></p> <p>b) <i>The PRZ1 area provided is consistent figure 2 of the Concept Plan and with desired planning outcome (h) in that it:</i></p> <ul style="list-style-type: none"> • <i>is part of an open space network which is proposed to continue south of John Gorton Drive into the adjoining suburb of Wright</i> • <i>will retain the existing watercourse and natural elements of the site where possible, in a landscaped parkland setting, noting however, that the water course alignment, topography and configuration will be impacted on by the construction and proximity of John Gorton Drive – however, landscape elements can be utilised to reinstate and enhance the original landscape (particularly water) features</i> • <i>will directly adjoin John Gorton Drive allowing opportunities for a highly visible and accessible public space which, through landscaping and urban design elements (such as public art), can contribute to 'place making' by helping to establish the desired character for Coombs</i> • <i>will directly adjoin a multi unit site which can be developed to effectively extend the public realm features of the park into the site and which will provide passive surveillance to assist with public safety for park users. Furthermore, the park will provide a high level of amenity for residents of the surrounding higher density developments which adjoin on 1 side ensuring that the park is likely to be well utilised. It is also likely the adjacent developments will be themed and marketed to capitalise on the amenity and attributes offered by the park.</i>
<p>C8</p> <p>Precinct H</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows in precinct H, RZ1, consistent</p>	<p><i>Complies: Precinct H comprises RZ1. The location of precinct H in the EDP is consistent with figure 2 in the concept plan and all residential development in the precinct is permitted by the Territory Plan RZ1 Land Use policies (including the park).</i></p>

Rules / Criteria	Compliance
<p>with desired planning outcome (a).</p> <p>Desired planning outcomes:</p> <p>(a) Provide diverse housing types, block sizes, densities and affordability to meet the changing needs of households and to encourage the formation of a diverse community;</p>	<p><i>In accordance with planning outcome (a), R37 & R51 of the concept plan (density controls), a variety of low density (less 20 dwellings / ha) block sizes have been provided. Overall the desired planning outcome (a) is achieved by providing a range of housing products and block sizes across the estate in a number of different precincts of which precinct A contribute the low density suburban product.</i></p>
<p>C9</p> <p>Precinct I</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows in precinct E, RZ5, not less than 5.9ha, consistent with desired planning outcome (b).</p> <p>Desired planning outcomes:</p> <p>(b) Allow for zoning to accommodate higher residential densities and building heights, community facilities and mixed use retail/commercial activity centres supported by residential development close to areas of higher amenity and the north-south arterial road which includes a major public transport route;</p>	<p><i>Complies: Precinct I comprises a total of 6.65ha of RZ5, thus exceeding the minimum area of RZ5 required to be provided in the EDP.</i></p> <p><i>The dwelling yield is consistent with R49 and it provides higher density housing close to areas of higher amenity, consistent with planning outcome b and figure 2 of the Concept Plan.</i></p>
<p>C10</p> <p>Precinct J</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows in precinct J, CZ5, not less than 2ha, consistent with desired planning outcome (b).</p> <p>Desired planning outcomes:</p> <p>(b) Allow for zoning to accommodate higher residential densities and building heights, community facilities and mixed use retail/commercial activity centres supported by residential development close to areas of higher amenity and the north-south arterial road which includes a major public transport route;</p>	<p><i>Complies: Precinct J contains 3ha of CZ5, thus exceeding the minimum 2ha area of CZ5 required to be provided in the precinct.</i></p> <p><i>The EDP complies with Desire planning outcome (b) for the following reasons:</i></p> <ul style="list-style-type: none"> - <i>CZ5 is a high density area with the minimum density for each block in accordance with R50 of the Concept Plan (1 dwelling for each 150m²);</i> - <i>the height of buildings will be controlled by R53 in the Concept Plan (minimum 3 storeys, no maximum restriction); and</i> <p><i>The location of CZ5 in the EDP is consistent with figure 2 in the concept plan, which places the mixed use at the entrance to the estate on the southeast side of road 4 at the intersection with the arterial road and consistent with R27 of the concept plan.</i></p>
<p>C11 to C22</p>	<p><i>Not relevant to Coombs EDP</i></p>
<p>C23</p>	

Rules / Criteria	Compliance
<p>Coombs urban open space corridor</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows Coombs urban open space corridor, PRZ1 and NUZ4, consistent with desired planning outcome (h) that,</p> <ul style="list-style-type: none"> a) follows the unnamed water course from Wright to its confluence with Molonglo River b) includes a neighbourhood park, oval, cycleway and stormwater measures. 	<p><i>Complies: The EDP accommodates the Coombs urban open space corridor (PRZ1 and NUZ4 zones), consistent with desired planning outcome (h) in that,</i></p> <ul style="list-style-type: none"> a) <i>it follows the unnamed water course from Wright to its confluence with Molonglo River;</i> b) <i>the corridor will include a neighbourhood park, oval, cycleway and stormwater measures.</i> <p><i>In addition the location of the PRZ1 and NUZ4 are consistent with figures 2 & 4 in the concept plan and the EDP has been coordinated with the ACTPLA Capital Works Project that is constructing these facilities.</i></p>
<p>C24</p> <p>Weston Creek urban open space corridor</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows Weston Creek urban open space corridor, PRZ1, consistent with desired planning outcome (h).</p> <p>Desired planning outcomes:</p> <p>(h) retain the landscape setting and significant natural elements of the site as part of an urban open space network that responds to the topography of the area, contributes to 'place-making' character, and where possible connects to adjacent suburbs with high levels of public access, amenity and safety.</p>	<p><i>Complies: This park is principally a Capital Works Project separate to the Coombs EDP, however LDA will provide a local play ground within the park to comply with desired planning outcome (h).</i></p> <p><i>The Weston Creek urban open space will provide a high level of public access, amenity and safety and responds to the natural topography of the area.</i></p>
<p>C25</p> <p>Holdens Creek urban open space corridor</p> <p>Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP shows Holdens Creek urban open space corridor, PRZ1 and NUZ4, consistent with desired planning outcome (h).</p> <p>Desired planning outcomes:</p> <p>(h) retain the landscape setting and significant natural elements of the site as part of an urban open space network that responds to the topography of the area, contributes to 'place-making' character, and where possible connects to adjacent suburbs with high levels of public access, amenity and safety.</p>	<p><i>Complies: This park is principally a Capital Works Project separate to the Coombs EDP, however LDA will provide a local play ground within the park to comply with desired planning outcome (h).</i></p> <p><i>The Holdens Creek urban open space will provide a high level of public access, amenity and safety and responds to the natural topography of the area.</i></p>
<p>R26</p> <p>The land use plan submitted with an EDP includes PRZ1 to</p>	<p><i>Complies: The EDP does not propose any development within 20 metres of any area of moderate or high quality</i></p>

Rules / Criteria	Compliance
<p>incorporate a buffer not less than 20 metres wide (where measure wholly outside the habitat areas) around areas of moderate and high quality Pink-tailed worm lizard (<i>Aprasia parapulchella</i>) habitat, as shown on Figure 5 and section viii.</p>	<p><i>Pink-tailed worm lizard (Aprasia parapulchella) habitat as shown in Figure 5 and more recent PTWL habitat surveys.</i></p> <p><i>The river corridor (including PTWL potential habitats) will be separated from the construction site by stock proof fencing, (see landscape master plan) This fencing will be handed over to TaMS at the end of the project and is likely to be retained until the River Park Concept Plan develops an alternative.</i></p> <p><i>The EDP complies with Section viii for the following reasons:</i></p> <ul style="list-style-type: none"> - <i>The Capital Works Trunk Sewer is in accordance with the typical section minimum 20m distance to PTWL habitats; and</i> <p><i>House blocks in the EDP are located almost twice the distance from PTWL habitats compared to that shown in section viii (50m instead of 30m). This is due to the detailed bushfire mitigation plan, inner asset protection zones recommendations and compliance with the Coombs EPBC management requirements for PTWL.</i></p>

1.2 Precincts	
Note: Desired planning outcomes relevant to this element are: (b) and (c).	
Rules / Criteria	Compliance
<p>C27</p> <p>Subject to the zoning of land that is not in a future urban area, the land use plan submitted with an EDP identifies precincts with the following characteristics:</p> <ul style="list-style-type: none"> a) precinct A is bounded by Holdens Creek urban open space corridor, Molonglo River corridor, road 8 and precinct B b) precinct B is bounded by precinct C, Holdens Creek urban open space corridor, precinct A, road 3 and precinct D and the north-south arterial road (<i>John Gorton Drive</i>) c) precinct C is bounded by Holdens Creek urban open space corridor and precinct B, and may adjoin precinct A d) precinct D is part of the Coombs/Wright local centre. It is bounded by precinct B, road 7, precinct E and the north-south arterial road (<i>John Gorton Drive</i>). It is transacted by road 3 e) precinct E is bounded by precinct D, road 7, the urban open space corridor draining to Coombs pond and the north-south arterial road (<i>John Gorton Drive</i>) f) precinct F is the Coombs community facilities precinct. It is bounded by road 3, road 8, Molonglo River corridor, Coombs urban open space corridor and road 7 g) precinct G is bounded by the urban open space corridor draining to Coombs pond, road 7, road 4, and the north-south arterial road (<i>John Gorton Drive</i>) h) precinct H is bounded by Coombs urban open space corridor, Molonglo River corridor, the urban open space surrounding the proposed Weston Creek pond, precinct I and road 7 i) precinct I is bounded by precinct H, Weston Creek urban open space corridor road and road 7 j) precinct J is bounded road 4, road 7, Weston 	<p><i>Complies: All precincts generally comply with the following characteristics listed below.</i></p> <p><i>A copy of the EDP precinct boundaries is contained in Appendix B.</i></p> <ul style="list-style-type: none"> a) <i>Complies: Precinct A is bounded by Holdens Creek urban open space corridor, Molonglo River corridor, road 8 (C08E) and precinct B</i> b) <i>Complies: precinct B is bounded by precinct C, Holdens Creek urban open space corridor, precinct A, road 3 (Road C03A and C03B) and precinct D and the north-south arterial road (John Gorton Drive)</i> c) <i>Complies: precinct C is bounded by Holdens Creek urban open space corridor and precinct B.</i> d) <i>Complies: precinct D is part of the Coombs/Wright local centre. It is bounded by precinct B, road 7 (C07), precinct E and the north-south arterial road (John Gorton Drive). It is transacted by road 3 (Road C03/C0D)</i> e) <i>Complies: precinct E is bounded by precinct D, road 7 (C07), the urban open space corridor draining to Coombs pond and the north-south arterial road (John Gorton Drive)</i> f) <i>Complies: precinct F is the Coombs community facilities precinct. It is bounded by road 3 (C03), road 8 (C08E), Molonglo River corridor, Coombs urban open space corridor and road 7 (C07)</i> g) <i>Complies: precinct G is bounded by the urban open space corridor draining to Coombs pond, road 7 (C07), road 4, and the north-south arterial road (John Gorton Drive)</i> h) <i>Complies: precinct H is bounded by Coombs urban open space corridor, Molonglo River corridor, the urban open space surrounding the proposed Weston Creek pond, precinct I and road 7 (C07)</i> i) <i>precinct I is bounded by precinct H, Weston Creek urban open space corridor road and road 7 (C07)</i> j) <i>precinct J is bounded road 4 (C04), road 7</i>

<p>Creek urban open space corridor road and the north-south arterial road (<i>John Gorton Drive</i>).</p>	<p><i>(C07), Weston Creek urban open space corridor road and the north-south arterial road (John Gorton Drive).</i></p>
<p>k) precinct K is the site of the ACT Forestry Depot. It is bounded by Weston Creek urban open space corridor and the north-south arterial road</p>	<p>k) precinct K is to be developed on the site of the ACT Forestry Depot. It is bounded by Weston Creek urban open space corridor and the north-south arterial road</p>
<p>l) precinct L is bounded by Molonglo River corridor, Holdens Creek urban open space corridor, precinct M and the existing water supply easement</p>	<p>l) <i>N/A Not part of this EDP</i></p>
<p>m) precinct M is bounded by the north western boundary of Coombs, precinct L, Holdens Creek urban open space corridor and the north-south arterial road. It is transected by the existing water supply easement</p>	<p>m) <i>N/A Not part of this EDP</i></p>
<p>n) precinct N is bounded by Holdens Creek urban open space corridor, the north-south arterial road, precinct O, precinct R and Uriarra Road</p>	<p>n) <i>N/A Not part of this EDP</i></p>
<p>o) precinct O is part of the Coombs/Wright local centre. It is bounded by precinct N, the north-south arterial road, precinct P and road 6. It is transected by road 5</p>	<p>o) <i>N/A Not part of this EDP</i></p>
<p>p) precinct P is bounded by precinct O, the north-south arterial road, Coombs urban open space overland flow corridor and road 6</p>	<p>p) <i>N/A Not part of this EDP</i></p>
<p>q) precinct Q is bounded by Coombs urban open space overland flow corridor, the north-south arterial road, Cotter Road and road 6</p>	<p>q) <i>N/A Not part of this EDP</i></p>
<p>r) precinct R is the balance of Wright south of Holdens Creek. It is bounded by precinct N, road 6, the north-south arterial road, Cotter Road and Uriarra Road</p>	<p>r) <i>N/A Not part of this EDP</i></p>
<p>s) precinct S is bounded by the northern boundary of Wright, the north-south arterial road, precinct T, the existing water supply easement, precinct V and Uriarra Road</p>	<p>s) <i>N/A Not part of this EDP</i></p>
<p>t) precinct T is bounded by the north-south arterial road, the existing water supply easement and precinct S</p>	<p>t) <i>N/A Not part of this EDP</i></p>
<p>u) precinct U is bounded by the existing water supply easement, the north-south arterial road, Holdens Creek urban open space corridor and Uriarra Road. It is transected by road 1</p>	<p>u) <i>N/A Not part of this EDP</i></p>
<p>v) precinct V is bounded by Uriarra Road,</p>	<p>v) <i>N/A Not part of this EDP</i></p>

<p>precinct S and precinct U</p> <p>w) Coombs urban open space corridor, i. follows the unnamed water course from Wright to its confluence with Molonglo River ii. includes a neighbourhood park, oval, shared paths and stormwater measures</p> <p>x) Weston Creek urban open space corridor contains the proposed Weston Creek pond and surrounding urban open space and stormwater measures</p> <p>y) Holdens Creek urban open space corridor follows Holdens Creek from Uriarra Road to its confluence with Molonglo River and includes a pond, shared path and a section of the Bicentennial National Trail</p> <p>Desired planning outcomes:</p> <p>(b) Allow for zoning to accommodate higher residential densities and building heights, community facilities and mixed use retail/commercial activity centres supported by residential development close to areas of higher amenity and the north-south arterial road which includes a major public transport route;</p> <p>(c) provide safe, compact, walkable residential precincts with convenient vehicular, pedestrian, cycle and public transport access to recreational, retail/commercial and community facilities</p>	<p>w) <i>Complies: Coombs urban open space corridor, i. follows the unnamed water course from Wright to its confluence with Molonglo River ii. includes a neighbourhood park, oval, shared paths and stormwater measures</i></p> <p>w) <i>Complies: Weston Creek urban open space corridor contains the proposed Weston Creek pond and surrounding urban open space and stormwater measures</i></p> <p>x) <i>Complies: Holdens Creek urban open space corridor follows Holdens Creek from Uriarra Road to its confluence with Molonglo River and includes a pond, shared path and a section of the Bicentennial National Trail</i></p> <p><i>DPO (b) The provision of the different precincts which will deliver a range of dwelling densities and building heights complies with desired planning outcome (h)</i></p> <p><i>DPO (c) The school, community facilities sites and the local centre are located in the heart of the estate. Together with the street grid network, the estate provides extensive permeability for vehicles and pedestrians.</i></p>
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1.3 Identification of key roads

Note: Desired planning outcomes relevant to this element are: (d), (f) and (n).

Rules / Criteria	Compliance
<p>R28</p> <p>The land use plan submitted with an EDP complies with the location and configuration of the north-south arterial road (<i>John Gorton Drive</i>), including lanes, underpasses, entry points, junctions and signals as shown on figure 3.</p>	<p><i>Complies: The Coombs EDP provides entry points with John Gorton Drive as dictated by the adjacent capital works project and consistent with figure 3 in the concept plan.</i></p> <p><i>The intersections proposed with John Gorton Drive are configured to permit vehicular movements consistent with the Concept Plan.</i></p>
<p>C29 and C30</p>	<p><i>Not relevant to Coombs EDP</i></p>
<p>C31</p> <p>Road 3</p> <p>Subject to the zoning of land that is not in a future urban area, and to previously approved EDPs, the land use plan submitted with an EDP shows and identifies road 3, the principal collector road to the Coombs low density residential</p>	<p><i>Complies: Road 3 (nominated C03A, C03B, C03C and C03D in the EDP) is the principal collector road to the</i></p>

<p>area (precinct A) from signalised intersection 2.</p>	<p><i>Coombs low density residential area and is also referred to as the 'ridge' road. It joins John Gorton Drive at signalised intersection 2.</i></p>
<p>C32 Road 4 Subject to the zoning of land that is not in a future urban area, and to previously approved EDPs, the land use plan submitted with an EDP shows and identifies road 4, which links signalised intersection 1 with north Weston via a proposed road bridge and embankment at the northern extremity of the proposed Weston Creek pond.</p>	<p><i>Complies: Road 4 meets the required function specified in the Concept Plan (ie linking John Gorton Drive and the Weston Creek pond). The alignment of the road also retains the significant views to the surrounding hills, Molonglo River Corridor and Black Mountain.</i></p>
<p>C33 and C34</p>	<p><i>Not relevant to Coombs EDP</i></p>
<p>C35 Road 7 Subject to the zoning of land that is not in a future urban area, and to previously approved EDPs, the land use plan submitted with an EDP shows and identifies road 7, which links roads 3 and 4, and forms the boundary between the medium and high density residential and mixed use zones abutting the north south arterial (<i>John Gorton Drive</i>) and the balance of Coombs. Its key function is to provide a convenient link between abutting land uses and the signalised intersections on the north-south arterial (<i>John Gorton Drive</i>).</p> <p>Desired planning outcomes:</p> <p>(d) provide a legible and permeable road network that integrates safe and adequate pedestrian and cycle access to the precinct and connectivity to surrounding suburbs, facilities and features such as Stromlo Forest Park, Molonglo River corridor and Duffy Primary School and the urban open space network</p> <p>(f) encourage walking, cycling and the use of public transport</p> <p>(n) provide for a street and pedestrian movement network with a legible hierarchy and function that integrates safe and adequate pedestrian and cycle access and connectivity</p>	<p><i>Complies:</i></p> <p><i>Road 7 essentially runs parallel with John Gorton Drive and is proposed to provide east west access through the southern portion of Coombs whilst servicing the development fronting John Gorton Drive. The EDP complies in terms of meeting this objective. However, at its western extremity the continuation of Road 7 dissects the proposed local centre and the adjacent neighbourhood park which collectively are proposed to be developed to create a "Village Centre" precinct. To give vehicular priority to this section of road is not considered a desirable planning outcome as the urban design objective for this part of the estate is to create an integrated pedestrian friendly "Village Centre" where traffic will be slowed, on street parking provided, a safe environment created for pedestrians moving between the local centre and the park, and convenient through access by vehicles is permitted but discouraged unless it is associated with a trip to the shops.</i></p> <p><i>In addition, due to high traffic volumes on Road C03 in the vicinity of the town centre, an unrestricted right turn onto Road C28 does not perform to an appropriate level of service. As such Road C28 is proposed with a prioritised left in left out only.</i></p> <p><i>To facilitate efficient through movement of traffic roundabouts are proposed at the intersection of Road 03 / Road 08 and also Road 07 / Road 08. These intersections have been assessed and all perform with an appropriate level of service. Therefore the proposed road network is considered to operate efficiently and in keeping with the intent of the Concept Plan.</i></p>

	<p><i>Differentiated landscaping, road design and paving and signage in this portion of Road 7 is proposed to promote the Village Centre character and convey the intent that vehicles entering this area are in a low speed environment where pedestrians will be given priority. The "convenience" factor for the traffic using Road 7 in its western extremity will therefore be for those seeking access to the uses within the Village Centre. Accordingly this section of Road 7 is considered a "Pedestrian Priority Route".</i></p> <p><i>It is proposed to encourage the rest of the through traffic on Road 7 to travel immediately east of the Village Centre precinct around the park to join Road 8 and then Road 3. This route is therefore considered the "Vehicle Priority Route" and will have wider carriageways to accommodate the bus route (ie Tag-Steer buses) and high traffic volumes that would otherwise dissect the Village Centre and isolate the park from the shops. The wider carriageways on this road will generally be seen as giving priority to vehicles and not pedestrians.</i></p> <p><i>In summary, the only vehicles which will be encouraged to continue west past the local centre and park on Road 7 will be those seeking to access the Village Centre precinct, where a low speed environment is expected. Vehicles not seeking access to the Village Centre but only access to/from Road 3 will be generally deviated around the Centre to link with Road 8 (unless they choose to turn into the Village Centre).</i></p> <p><i>This minor departure as detailed above complies with desired planning outcome (d), (f) and (n) in that it provides a legible and permeable road network as well as a safe pedestrian environment linking the local centre to the park.</i></p>
	<p><i>Full access to and from Road 3 will still be provided from Road 7 but provided in a manner suitable for the creation of a Village Centre. Whilst there will therefore be different design environments for the two distinct portions of Road 7 (for the reasons outlined above), it nevertheless still complies with this criterion in that it:</i></p> <ul style="list-style-type: none"> <i>• links Roads 3 and 4 forms the boundary between mixed uses and higher densities fronting John Gorton Drive and the balance lower density areas of Coombs; and</i> <p><i>provides a convenient link between abutting landuses</i></p>

	and the signalised intersections on John Gorton Drive
<p>C36 Road 8</p> <p>Subject to the zoning of land that is not in a future urban area, and to previously approved EDPs, the land use plan submitted with an EDP shows and identifies road 8, which links road 3 with the edge road to Molonglo River corridor, and forms the boundary between Coombs CFZ (precinct F) and Coombs RZ1 (precinct A).</p>	<p><i>Complies: Road 8 links the Coombs ridge road (road 3) with the Coombs edge road adjoining the Molonglo River corridor and forms a boundary to the CFZ and RZ1 zones in precincts F and A respectively.</i></p>

Part B – Subdivision

Notes:

1. This part is applicable to the preparation and assessment of estate development plans (EDP). It should be read in conjunction with other relevant codes.
2. Precincts referred to in this part are as defined in Part A and shown on the relevant land use plan submitted for a development application where an EDP is required.
3. Sections referred to in this part are shown on figure 4, and they are located by cross sections lines.

1.4 Block sizes

Note: Desired planning outcomes relevant to this element are: (a) and (b).

Rules / Criteria	Compliance
<p>R37</p> <p>RZ1 in each precinct,</p> <p>a) has a maximum of 50% of blocks less than 500m², and</p> <p>b) a maximum of 20% of blocks are less than 250m².</p> <p>Note: The 20% in b) is a subset of the 50% in a). This rule applies to each precinct, independently, i.e. without reference to proposed subdivision of RZ1 in other precincts.</p>	<p><i>Complies: Precinct A (RZ1 zone) within the EDP has:</i></p> <p>a) <i>maximum of 30% of blocks less than 500m² and</i></p> <p>b) <i>0% of blocks less than 250m².</i></p> <p><i>Complies: Precinct B (RZ1 zone) within the EDP has:</i></p> <p>a) <i>maximum of 21% of blocks less than 500m² and</i></p> <p>b) <i>0% of blocks less than 250m².</i></p> <p><i>Complies: Precinct H (RZ1 zone) within the EDP has:</i></p> <p>a) <i>Maximum of 32% of blocks less than 500m², and</i></p> <p>b) <i>18.2% of blocks less than 250m².</i></p> <p><i>No other precinct contains RZ1 blocks</i></p>

1.5 Multi-unit housing

Note: Desired planning outcomes relevant to this element are: (a) and (b).

Rules / Criteria	Compliance
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<p>R38</p> <p>In addition to the maximum number of dwellings on multi-unit blocks, an EDP identifies the minimum number of dwellings on multi-unit blocks, in accordance with Part C.</p>	<p><i>Complies: For multi unit blocks, the EDP identifies the minimum and maximum number of dwellings proposed by way of a range for each block. Generally the maximum is limited to 100 dwellings/ha. and the minimum complies with R49 and R50 (see block detail plans).</i></p>
<p>1.6 Open space</p>	
<p>Note: Desired planning outcomes relevant to this element are: (a), (b), (c), (d), (e), (f), (g) and (p).</p>	
<p>Rules / Criteria</p>	<p>Compliance</p>
<p>C39</p> <p>Edge Streets are provided to the common boundary between blocks in urban zones (other than single residential blocks and precinct C), and PRZ1 and NUZ4 to achieve the following:</p> <ul style="list-style-type: none"> a) Ease of access to urban open space corridors b) Surveillance of urban open space corridors c) Avoidance of rear boundary fencing at the common boundary to PRZ1 and NUZ4 d) Ground floor dwelling address to urban open space where there is no edge street. 	<p><i>Complies.</i></p> <ul style="list-style-type: none"> a. <i>Parks generally have a minimum 75% edge streets including 100% edge street to the Molonglo River Corridor (NUZ4). The exception to this is Section CA. The adjoining open space provides the oval for the school. It is undesirable, for reasons of amenity and public safety, to divide the school and the oval with a public road. However the urban open space corridor is easily accessible;</i> b. <i>The master plan has been developed considerate to surveillance of the urban open space corridors. North Weston Pond, Coombs Pond and the Molonglo River Corridor benefit from view corridors largely unrestricted from adjacent street and urban development;</i> c. <i>No rear boundary fencing at the common boundary to PRZ1 and NUZ4 is proposed under this EDP;</i> d. <i>Single unit residences have street frontage as required by the Territory Plan. Where MU sites abut open space, future development will be subject to compliance with the relevant sections of the Territory Plan and including aspects relating to the built form.</i>
<p>R40</p> <p>There is no common boundary between a single residential block and PRZ1 or NUZ4. Edge streets are provided to the common boundary between single residential blocks and PRZ1 or NUZ4.</p>	<p><i>Complies: there are no common boundaries proposed between PRZ1/NUZ4 zones and single residential blocks. They are all separated by road reservations (streets).</i></p>
<p>R41 and R42</p>	<p><i>Not relevant to Coombs EDP</i></p>
<p>R43</p> <p>Continuous edge roads are provided along the boundary between urban development and Molonglo River corridor and associated urban open space.</p>	<p><i>Complies: there are edge roads between all urban boundaries and the river corridor (and its associated urban spaces) in Coombs in accordance with figure 4 of the Concept Plan.</i></p>

<p>C44</p> <p>Coombs urban open space overland flow corridor:</p> <ul style="list-style-type: none">a) follows the unnamed water course from Wright to its confluence with Molonglo Riverb) includes a neighbourhood park, oval, cycleway and stormwater measures.	<p><i>Complies: the open space corridor follows the unnamed water course from Wright to the river and will include a variety of community facilities including parks, the oval, cycleways and appropriate stormwater measures.</i></p>

1.7 Shared paths	
<p>Note: Desired planning outcomes relevant to this element are: (c), (d), (e), (f), (h), (l), (n), (o) and (q).</p>	
Rules / Criteria	Compliance
<p>C45</p> <p>An off-road network of cycleways and pedestrian paths to link key community and urban open space destinations in the neighbourhood subject to element 1 is provided including:</p> <p>a) a trunk cycleway following Molonglo River corridor</p> <p>b) a trunk cycleway following road 8 from Molonglo River corridor trunk cycleway to the local centre adjoining precinct F</p> <p>c) links to parks and neighbourhood facilities including shops and schools</p> <p>d) an underpass under the John Gorton Drive to provide access to Molonglo River corridor from:</p> <p>i. (relates to North Wright)</p> <p>ii. (relates to Wright)</p> <p>iii. Coombs urban open space corridor, to road 6 cycle path system network</p> <p>iv. (relates to Weston Creek)</p> <p>e) a continuous primary pedestrian path along both sides of the length of the north-south arterial road (<i>John Gorton Drive</i>) of:</p> <p>i. a minimum 2 metres wide on the Coombs side of the road</p> <p>ii. (Wright).</p>	<p><i>Complies: The EDP complies with the major pedestrian path and cycleway network shown in figure 4 of the concept plan.</i></p> <p><i>However the design and construction of the majority of these paths are not part of the EDP but included in various capital works projects. The following is a list of paths being provided by the EDP and Capital works projects:</i></p> <ul style="list-style-type: none"> - Coombs EDP will construct the main 1.5m wide pedestrian paths along the arterial road and the link between the arterial road and the community facility land. Otherwise the rest of the paths will be designed and constructed as part of the following are Capital Works Projects:: - The river park concept plan will provided the cycleways within the river corridor, - the North Western Creek Pond will provide the cycleways that link the arterial road with the river corridor to the east of Coombs - The Holdens Creek Pond open space will provided the cycleway within Holdens Creek; <p><i>Coombs pond will provided the design for the link between the river corridor and the community facility site.</i></p> <p><i>Complies: An off-road network of cycleways and pedestrian paths has been provided as shown in Drawings PTP 01 to 04 to link key community and urban open space destinations in Wright and Coombs (ie parks, neighbourhood facilities and shops) noting however, that Capital Works will provide:</i></p> <ul style="list-style-type: none"> ✓ the John Gorton Drive underpasses and associated linkages; ✓ the Coombs urban open space underpass under John Gorton Drive; and ✓ a continuous primary pedestrian path of a minimum 1.5 metres wide along the Coombs side of John Gorton Drive.

1.8 Road Network	
Rules / Criteria	Compliance
<p>R46</p> <p>Junctions with the north south arterial road are limited to the following:</p> <ul style="list-style-type: none"> a) locations shown in Figure 3 b) an uncontrolled T-intersection adjacent to the Stromlo Forestry Depot (temporary only) c) a left-in/left out arrangement near the Holdens Creek bridge accessing to the east d) protected right turn arrangements at the following locations: <ul style="list-style-type: none"> i. adjacent to Stromlo Forest Depot [in place of temporary arrangements referred to in item b)] ii. approximately 100m to the west of the junction referred to in item d)i) iii. approximately midway between intersections 1 and 2 shown in Figure 3 accessing both sides iv. at Holdens Creek accessing Uriarra Road e) a left-in/left-out arrangement at the location referred to in item d) ii) 	<p><i>Complies: Junctions with the north south arterial proposed under this EDP are located consistent with the requirements of the Concept Plan specifically:</i></p> <ul style="list-style-type: none"> a) <i>as per Figure 3</i> b) <i>NA to this EDP</i> c) <i>Provided by Road C21 at the western most extent of this EDP adjacent to Holdens Creek;</i> d) <i>i. NA to this EDP</i> <i>ii. provided by Road C11 at the eastern most extent of this EDP adjacent to North Weston Pond open space</i> <i>iii. provided by Road C53 on the eastern side of the John Gorton Drive underpass</i> <i>iv. NA to this EDP</i> e) <i>A left-in/left-out configuration for Road C11 is proposed under this EDP. Specifically no right turn movement from Road C11 will be permitted onto John Gorton Drive.</i>
R46A	<i>NA to this EDP</i>
<p>R46B</p> <p>Vehicular access from the north south arterial to adjoining blocks is permitted only from service streets.</p>	<i>Complies: Vehicular access from the north south arterial is only proposed from service streets or from adjoining streets (i.e. not direct from north south arterial).</i>
1.9 Stormwater	
Note: Desired planning outcomes relevant to this element are: (g), (h), (k), (l), (m) and (p).	
Rules / Criteria	Compliance
<p>R47</p> <p>Stormwater treatment ponds and overland flow paths are provided as indicated on figure 4 and sections i, ii, iii, iv, v, vii, ix, x, xi and xii for the purpose of stormwater management.</p>	<p><i>Complies – The stormwater treatment ponds and over land flow paths have been provided consistent with figure 4.</i></p> <p><i>As stated in the rule the stormwater treatment and flow paths (minimum open space widths) have been provided in accordance with the sections x and xi. The locations of the rest of the sections in figure 4 are not applicable to the Coombs EDP.</i></p>

Rules / Criteria	Compliance
<p>R48</p> <p>Molonglo surge protection line is provided in Coombs as indicated on figure 4. No leases (other than holding leases) are to be issued down-slope of this line until it is demonstrated that Scrivener Dam meets flood safety and operational requirements, based on the applicable Australian National Committee on Large Dams (ANCOLD) guidelines.</p>	<p><i>Complies:</i></p> <p><i>Bulk filling of the edge road and adjacent blocks is proposed as an appropriate mitigation measure against the Molonglo surge protection line. The "Molonglo Catchment and Scrivener Dam Flood Hydrology" commissioned by ACTPLA demonstrates this to be the case. Refer also Section 1.4 of this report.</i></p> <p><i>All blocks proposed under this EDP are above the impact of the Molonglo surge protection line.</i></p>

Part C – Building and structures

Notes: Sections referred to in this part are cross sections at the end of this plan. They are located by cross sections lines on figure 4

<p>R49</p> <p>In RZ4 and RZ5 in precincts B, E, G, I, M, N, P, Q and T, the minimum average residential density on each block is one dwelling for each 200m² of site area (rounded to the nearest whole number).</p>	<p><i>Complies:</i></p> <p><i>RZ4 and RZ5 in Precincts B, E, G, I, M, P, Q and T have minimum residential density on each block of one dwelling for each 200m² of site area.</i></p>
<p>R50</p> <p>In CZ4 and CZ5 in precincts D, J, K and O, the minimum residential density on each block is one dwelling for each 150m² of site area (rounded to the nearest whole number).</p>	<p><i>Complies:</i></p> <p><i>CZ4 and CZ5 in Precincts D, J, K and O have minimum residential density on each block of one dwelling for each 150m² of site area.</i></p>
<p>R51</p> <p>In RZ1, the maximum <i>net residential density</i> is 20 dwellings/hectare</p>	<p><i>Complies:</i></p> <p><i>The average net residential density in the RZ1 zone is 12 dwellings/hectare.</i></p>

8 ENVIRONMENTAL IMPACT STATEMENT (EIS) EXEMPTION – MOLONGLO URBAN LAND DEVELOPMENT

As part of the strategic planning process completed for the initial stages of land development proposed in the Molonglo Valley an EIS scoping/s211 exemption request was submitted to ACTPLA by the LDA 28 May 2009. The exemption was granted by the Minister for Planning on 22 July 2009.

Though the s211 exemption was free from conditions the initial scoping report contained various recommendations and comments made by Government Entities. We note that a number of comments are located outside of the area of the Coombs EDP and are therefore not applicable to the assessment of the EDP. The following section clarifies the intent, where relevant, of the Coombs EDP in fulfilling the intent of the EIS exemption:

The following numbering system is consistent with the EIS Scoping & Section 211 consideration prepared by ACTPLA, July 2009.

Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009	LDA response with regard to Coombs EDP
4.1 Item 1 Part 4.2 Schedule 4 - Arterial Road	<p>Item 4.1 – Arterial Road</p> <p><i>The arterial road is outside of the area of the EDP. The potential environmental impacts were noted as air quality, ambient noise, vibration, visual intrusion and impact on residential areas.</i></p> <p><i>Only ambient noise can be addressed by the adjacent residential development. Sections 2.3 & 4 of the EDP report address noise from the arterial road.</i></p> <p><i>Section 4 includes the outcomes of the GHD desktop assessment of the potential traffic noise impacts of the proposed North-South Arterial Road on proposed adjacent residential areas.</i></p> <p><i>LDA has provided Planning Control Plans which identify which multi unit sites need to mitigate noise. LDA request these plans form a Technical Amendments to the Concept Plan to ensure the multi-unit sites adjacent to the North/South Arterial Road provide noise mitigation measures in accordance with the requirements of the Territory Plan.</i></p>
4.2 Item 3 Part 4.2 Schedule 4 – Weston Pond	<p>Item 4.2 – North Weston Pond</p> <p><i>Proposed stormwater in East Coombs interfaces with North Weston Pond however these are minor construction elements. Construction of North Weston Pond is a separate Capital Works item outside of the EDP area. This item is therefore not applicable to the proposed EDP.</i></p>

<p>Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009</p>	<p>LDA response with regard to Coombs EDP</p>
<p>4.3 Item 5 Part 4.2 Schedule 4 – Trunk Sewer</p>	<p>Item 4.3 – Trunk Sewer The proposed sewer reticulation network from Coombs connects to the trunk sewer at various locations. However, construction of the trunk sewer forms a separate Capital Works item outside of the EDP area. This item is therefore not applicable to the proposed EDP.</p>
<p>4.4 Item 1 Part 4.3 Schedule 4 – PTWL Habitat</p> <p>Impacts This area of East Molonglo is known PTWL habitat. The potential for the disturbance and loss of PTWL habitat as a result of this project was identified early in the Territory Plan Variation and design process.</p> <p>Previous studies Two studies are key to understanding the PTWL habitat of this area of the Molonglo Valley.</p> <ul style="list-style-type: none"> • Habitat mapping and conservation considerations for the Pink-tailed Worm Lizard with respect to the alignment of the proposed Molonglo Trunk Sewer, W Osborne 2007; and • Environmental planning principles for the protection of the Pink-tailed Worm Lizard in the Lower Molonglo Valley, ACT, W Osborne 2008. These documents were supplied in support of the s211 exemption consideration. These studies achieved two things: <ul style="list-style-type: none"> • identifying the quality/extent of PTWL habitat; and • provide recommendations for land use planning in the vicinity of the PTWL habitat to mitigate or avoid impacts from urban development. <p>Conclusion The concept plans for Wright and Coombs have been developed with reference to the above mentioned studies. The concept plans have identified a land use pattern that is sympathetic to the PTWL habitat areas. These will be carried forward to the individual EDP DAs. PCL has agreed that the recommendation of the reports have been addressed through the design and subsequent adoption of the concept plans for Wright and Coombs. PCL have provided wording of a possible condition that should be attached to any subsequent EDP DA approval. It is concluded that further environmental assessment of this issue is not required for this project.</p>	<p>Item 4.4 – PTWL Habitat On 16 April 2010 The Australian Government, Department of Environment, Water, Heritage and the Arts conditionally determined that urban development of the Coombs Estate was not a controlled action (EPBC approval). The EPBC determination is contained at Appendix H. Section 1.1 and Section 9 of this report also outline the consultation process completed in consideration of this decision and verifies the LDA's commitments, with regard to compliance with the requirements of the EPBC determination.</p> <p>Further TaMS, ACTPLA and LDA have completed a Molonglo Riparian Strategy adjacent to Coombs and North Weston (see Appendix K). This strategy represents a first stage in an ongoing strategy for the river corridor which ultimately will extend from Scrivener Dam to the lower end of the future urban area downstream of Coppins Crossing. This Strategy address urban interface issues, conservation objectives, recreational uses and land management requirements. The second stage of planning for the Molonglo River is the development of a River Corridor Concept Plan. We understand the River Corridor Concept Plan is currently being prepared by ACTPLA though at the time of writing this report the outcomes are unknown.</p>

<p><i>Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009</i></p>	<p><i>LDA response with regard to Coombs EDP</i></p>
<p>4.5 Item 3 Part 4.3 Schedule 4 – Clearing greater than .5ha</p> <p>Conclusion Environmental studies supplied in support of this s211 application, including the review by NGHenvironmental, have identified the impacts of urban development of the areas of North Weston, Wright and Coombs.</p> <p>Recommendations given in those reports have been reinforced in the adopted concept plans and the indicative land use pattern of the Territory Plan. It is concluded that further environmental assessment of this issue is not required for this project. Detailed design issues can be addressed at the individual EDP DA stage.</p>	<p>Item 4.5 – Clearing Greater than ½ ha of native vegetation</p> <p><i>From vegetation assessments the site does not contain ½ ha of native vegetation. The majority of the site is covered by a pine forest which is considered to be a weed in the ACT and the rest of the site is degraded pasture, which has been extensively grazed and predominately consists of exotic species.</i></p> <p><i>As for the clearing of the land the Environmental Protection Guidelines for Construction and Land Development 2007 govern this issue and requires the construction contractor to enter into agreement with EPA prior to start of construction.</i></p>
<p>4.6 Item 7 Part 4.3 Schedule 4 – Heritage</p> <p>Conclusion It is concluded that further assessment of this issue is not required for this project. However, the requirement for an unanticipated discovery plan must still be attached to any EDP DA or other DA approval, as a standard condition.</p>	<p>Item 4.6 – Heritage</p> <p><i>Heritage approval for Coombs was granted 5 October 2010. Development in Coombs is subject to the unanticipated discovery plan included in Coombs, Wright and Environs Detailed Heritage Assessment Report No. 0901 (10/1/09).</i></p>
<p>4.7 Item 8 Part 4.3 Schedule 4 – Contaminated land</p> <p>Impacts This trigger is activated as the area for development contains known contaminated sites. These sites include the former Weston Sewage Treatment Facility, night soil depot, builders land fill and former pine plantation.</p> <p>Previous studies This issue has been identified early and addressed accordingly. Phase 1 ESA's studies have been completed for all contaminated sites, with Phase 2 and remediation action plans already lodged with an independent land contamination auditor for endorsement and subsequent submission to the Environment Protection Authority's Environment Protection Unit for sign off, which is expected by 31 July 2009.</p> <p>Conclusion The EPA has confirmed that contamination issues have been adequately identified and the process for remediation is well in hand. It is recommended that should a an EDP DA be lodged prior to EPU signing off on the remediation action plans that approval be conditional upon obtaining the required EPU clearance of the final remediation plans. It is concluded that further assessment of this issue is not required for this project.</p>	<p>Item 4.7 – Contaminated Land</p> <p><i>The SMEC Phase 1 Environmental Assessment approved by EPA (12/2/2009), identified 2 sites north of Holdens Creek that will require remediation (TP2151 & TP2152). These sites are not in the Coombs EDP area, refer Appendix L.</i></p> <p><i>The rest of the sites identified in this report as being contaminated are located in and around the former sewer treatment plant which is outside of the Coombs EDP area. These areas are being remediated as part of the capital works for the North Weston Pond.</i></p>

Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009	LDA response with regard to Coombs EDP
4.8 Entity comments	Item 4.8 – Entity comments Addressed in the preceding sections and clarified below:
<p>EPA</p> <p>Recommendation</p> <p>That any subsequent DA for an EDP in the area of land that is the subject of this EIS scope/s211 request must provide documentary evidence of EPU sign off on all documents associated with the land contamination investigations and remediation, including;</p> <ul style="list-style-type: none"> • Final ESA Phase 2 Report – Pine Plantation, Blocks 1204 and 1180 Weston Creek; • Short Term Contamination Environmental Management Plan – Pine Plantation, Blocks 1204 and 1180 Weston Creek; • Final Phase 2 Report – Former Weston Creek Sewerage Treatment Plant, • Builders Landfill and Night Soil Depot, Blocks 1196, 1179 and 1203 Weston Creek; • Short Term Contamination Environmental Management Plan – Builders Landfill and Night Soil Depot, Blocks 1196, 1179 and 1203 Weston Creek; • Short Term Contamination Environmental Management Plan – Grease Trench and Sludge Bed, Part Block 1210 Weston Creek; • Remedial Action Plan - Builders Landfill and Night Soil Depot, Blocks 1196, 1179 and 1203 Weston Creek; and • Remedial Action Plan – Block 1210 Weston Creek 	<p><i>EPA's 2009 list of potentially contaminated sites are all outside of the Coombs EDP area. As discussed above The SMEC Phase 1 Environmental Assessment for Coombs was approved by EPA on 12/2/2009 which did not identify any contamination within the Coombs EDP area, refer Appendix L.</i></p>

Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009	<i>LDA response with regard to Coombs EDP</i>
<p>Conservator Conditional support of s211 exemption. The comments submitted by the Conservator are concerned with:</p> <p>i) Increased recreational use of the Molonglo River Corridor; and</p> <p>ii) Indirect impacts to PTWL habitat. The proponent is aware that impacts on the Molonglo River Corridor and the PTWL habitat are potential significant issues that must be addressed before development of the area can proceed. As such numerous studies have been commissioned and completed over many years to obtain an understanding of the areas ecology and potential impacts of the proposed urbanisation of the Molonglo Valley. Statements and documents provided by the proponent in support of the EIS scope/s211 request demonstrate that the issues have been thoroughly investigated with the results informing the Territory Plan Variation, concept plans/strategic land use pattern indicated by the Territory Plan. Clarification was sought and provided (3 July 2009) by the proponent as follows:</p> <p>iii) It is conceded by the proponent that increased recreational use of the Molonglo River corridor will occur as a result of urban development within the Molonglo Valley. However, studies commissioned to investigate the valley as the next major development front for the ACT have mapped areas of significant conservation value and proposed strategies for minimising impacts. This is reflected in the Territory Plan by identification of the river corridor as NUZ4-River Corridor and restricting the limits (size and shape) of the FUA to be sympathetic to the receiving environment. The limits of the development area will be further refined at the EDP DA evaluation assessment stage by referencing the recommendations of the previous studies and by ensuring that the indicative land use pattern of the Territory Plan is adhered to.</p> <p>iv) Indirect impacts on PTWL habitat will occur as a result of the development of the valley. As with the issues associated with the river corridor, the studies commissioned to investigate this issue were used to inform the strategic land use pattern in the Territory Plan which avoids those areas of high PTWL habitat value. It has also been confirmed by the proponent that a sewer pump station is no longer required for the trunk sewer line. This further reduces the impact upon PTWL habitat. In relation to the location of the dam wall for the proposed Coombs Pond, it was chosen to ensure minimal impact by locating in an area of former pine plantation of very low ecological value. However, the Conservator will have an opportunity to comment on the DA for the pond during the referral process which will include TaMS.</p>	<p><i>The Conservator raised a number of issues which have been addressed in this report, EDP or EPBC determination as explained below:</i></p> <p><i>i) Recreation use of the river corridor: The Molonglo Riparian Strategy adjacent to Coombs and North Weston has identified areas of potential recreational use and areas of conservation. In addition ACTPLA is preparing a River Park Concept Plan for the whole of the Molonglo River. Together, these documents define areas for conservation and recreation and fulfil the Conservators recommendation for the development of the Molonglo River Corridor Master Plan.</i></p>

Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009	LDA response with regard to Coombs EDP
<p>Conclusion</p> <p>The comments submitted by the Conservator contain a level of detail that the EIS process is not intended to address. Whilst the comments have proven valuable in identifying issues early in the development process there are more appropriate tools to ensure they are implemented. By way of the comments being noted in this report they will be carried forth into the EDP DA assessment for the various other DA's associated with the development of this area of the Molonglo Valley. The comments may also be given effect through any relevant Deed of Agreement. The issues raised by the Conservator have been thoroughly investigated by the proponent as is evidenced by the numerous studies referenced in the s211 request. ACTPLA is satisfied that the level of investigation and documentation has demonstrated that further environmental assessment is not required. At a 6 July 2009 meeting with the Conservator and key staff, it was agreed that the issues raised by the Conservator could be addressed by this report making a recommendation to the Minister that that the Conservators comments be addressed at the EDP DA assessment stage</p>	<p>i) <i>Indirect impacts on PTWL</i></p> <p><i>The Coombs EPBC determination places a number of conditions on development to ensure the PTWL habitats are protected. The Coombs EDP complies with these conditions (see Section 9 of this report). As the report included statement of compliance with the Coombs EPBC, this fulfils the Conservator's recommendation for a statement against the Molonglo Valley Strategic Environmental Assessment which is yet to be determined by the Commonwealth.</i></p> <p><i>As Coombs ponds are being designed and constructed by Capital works (separate to the Coombs EDP) the Conservator's recommendation regarding the location of the dam walls is not relevant to the Coombs EDP.</i></p>
<p>Recommendation</p> <p>That any subsequent DA for an EDP must include:</p> <ul style="list-style-type: none"> • A Molonglo River Corridor Master Plan. The plan is to be prepared in consultation with Parks Conservation and Lands, and include the implementation of the principles for the protection of Pink-tailed Worm Lizard habitat as contained in the report <i>Environmental planning principles for the protection of the Pink-tailed Worm Lizard (Aprasia paraulchella) in the Lower Molonglo Valley, ACT – William S Osborne February 2008</i>. The plan will include the requirement for a 20m buffer zone and an additional Inner Asset Fire Protection Zone that is to be within the development area, not within the river corridor or urban open space. Locations of cycle paths, walking tracks, roads and other infrastructure are to be located in the inner asset protection zone n, not within the 20m buffer zone. The plan must contain provision for the appropriate fencing of PTWL habitat adjacent to the urban development area; • A statement addressing how the EDP has considered and addressed findings and recommendations of the Molonglo Valley Strategic Environmental Assessment; <p>A statement addressing how the design of the ponds has considered and addressed PCL advice regarding the locations of the dam walls.</p>	<p><i>See i) above together with Section 9 of this report and the Molonglo Riparian Strategy at Appendix K.</i></p>

<p>Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009</p>	<p><i>LDA response with regard to Coombs EDP</i></p>
<p>ACT Heritage Council</p> <p>Recommendation That no further assessment is required in relation to these matters. That any subsequent DA for an EDP must include:</p> <ul style="list-style-type: none"> • Documentary evidence of the ACT Heritage Councils ratification and clearance of the final report re: historic heritage places in the areas of Coombs and Wright; and • A statement addressing how the EDP has considered and addressed findings and recommendations of the final report re: historic heritage places in the areas of Coombs and Wright. • An unanticipated discovery plan be developed for each are that is subject an EDP DA or other DA approval. 	<p><i>As stated above Heritage approval for Coombs study and the unanticipated discovery plan was granted 5 October 2010. Development in Coombs is subject to the unanticipated discovery plan included in Coombs, Wright and Environs Detailed Heritage Assessment Report No. 0901 (10/1/09).</i></p>
<p>ACT Health</p> <p>Recommendation That conditions requiring documentary evidence of EPU approval for all site contamination reports be provided at the EDP DA submission stage.</p>	<p><i>The Coombs EDP report includes the EPA approval letter dated 12/2/2009 of the SMEC Phase 1 Environmental Assessment for Coombs (Appendix L). The study did not identify any contamination within the Coombs EDP area.</i></p>
<p>ACT Emergency Services Agency – ACT Fire Brigade, ACT State Emergency Services</p> <p>Conditional support of s211 exemption. Whilst ACT ESA supports the s211 exemption they have identified several matters that they believe will need to be addressed prior to or in conjunction with development of the site:</p> <ul style="list-style-type: none"> i) Fire station response area; ACT FB ii) Water supplies; ACT FB iii) Infrastructure – roadways standards; ACT FB iv) Street furniture; ACT FB v) Construction requirements; ACT FB vi) Bush fire risk; ACT FB vii) Drowning risk; ACT SES <p>ACTPLA considers that the matters listed above are concerned with a level of detail that is beyond the scope of the EIS process. They are more appropriately addressed during the DA assessment stage of the EDP and or the individual infrastructure project DA's.</p> <p>Recommendation That no further assessment is required in relation to these matters.</p>	<p><i>ACT Emergency Services Agency comments relate to bushfire protection measure (addressed by this EDP) detail design issues (locations of street furniture, etc), structure plan issues and the public safety associated with the ponds being constructed by capital works in Coombs and North Weston (outside of the EDP area).</i></p>

Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009	LDA response with regard to Coombs EDP
<p>Section 5 - DA Considerations</p> <p>Any development application related to the MVUD will include the consideration of appropriate conditions of approval such as those outlined below. Issues which are identified during the assessment of the subsequent impact track development application may be addressed through further conditions not included in this section or as a variation of these conditions. Many of the conditions of approval involve the implementation or management of mitigation measures. The following possible conditions of approval have been identified during the consideration of the s211 request for the proposal:</p>	<p>Item 5 – DA Considerations of approval</p> <p><i>The majority of the recommended conditions of approval have already been complied with as part of the information submitted with the EDP, clarified as follows:</i></p>
<p>Construction Environmental Management Plan That a <i>Construction Environmental Management Plan</i> (CEMP) be submitted to ACTPLA for approval prior to the commencement of works on site. The CEMP shall include as a minimum, the following sub-plans and mitigation measures:</p> <p>(a) Vegetation Management Plan and Mitigation Strategy A plan that details management and/or removal of native and exotic vegetation before, during and after construction and endorsed by PCL, TAMS.</p> <p>(b) Map of areas of Environmental Significance A map that identifies areas of environmental significance, including areas identified for rehabilitation, offsets and for special consideration.</p> <p>(c) Work Method Statements Work method statements endorsed by PCL, TAMS.</p> <p>(d) Conservation Management Plan and Unanticipated Discovery Plan – Heritage A <i>Conservation Management Plan</i> and an <i>Unanticipated Discovery Plan</i>, that include the discovery of human remains, developed and endorsed by the ACT Heritage Council.</p> <p>(e) Noise Management Plan A <i>Noise Management Plan</i> including mitigation measures to be endorsed by EPA.</p> <p>(f) Molonglo River Corridor Master Plan A <i>Molonglo River Corridor Master Plan</i> endorsed by PCL</p> <p>(g) Sediment and Erosion Control Plan A <i>Sediment and Erosion Control Plan</i> to be endorsed by the EPA.</p>	<p>Construction Environmental Management Plan</p> <p>a) <i>A vegetation management plan and mitigation strategy.</i> <i>The majority of the site and adjacent River Corridor is a former pine plantation which has not been managed since the 2003 bushfires and is generally over grown with weeds (blackberry, pines, and willows). The EDP includes a tree survey and tree management plan for areas within the Coombs EDP and the Molonglo Riparian Strategy outlines the general method for clearing weeds from the River Corridor. In addition ACTPLA's River Corridor Concept Plan will undertake this work for the rest of the River Corridor. As such there is no need to include this as a condition of approval;</i></p> <p>b) <i>A map of environmental significance</i> <i>The only areas of environmental significance is the moderate and high quality PTWL habitats which have been shown in the Coombs EDP Plans. As such there is no need to include this as a condition of approval;</i></p> <p>c) <i>Construction work methods are part of the EPA agreement which the construction contractor enters into with EPA in accordance with the Environmental Protection Guidelines for Construction and Land Development 2007. As such there is no need to include this as a condition of approval;</i></p> <p>d) <i>Heritage Conservation Management Plan and Unanticipated Discovery Plan, as stated above these plans have already been approved (5 October 2010) as stated above. As such there is no need to include this as a condition of approval;</i></p>

<p>Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009</p>	<p><i>LDA response with regard to Coombs EDP</i></p>
<p>NOTE: the CEMP may contain plans and management strategies listed elsewhere within the conditions of approval. Where these plans can be integrated into the CEMP, it must be clearly identified to which condition of approval the plan or management strategy applies.</p>	<p>e) Noise, as stated above (4.1) this issue has already been addressed by the provision of Planning Control Plans which identify which multi unit sites need to mitigate noise and in sections 2.4 in the EDP report. As such there is no need to include this as a condition of approval ;</p> <p>f) Molonglo River Corridor Master Plan, as stated above LDA, TaMS and ACTPLA have developed the Molonglo Riparian Strategy for Coombs and North Weston to allow the Coombs EDP to comply with the intent of this condition. In the future ACTPLA will complete the Molonglo River Concept Plan, separate to the EDP for Coombs. As such there is no need to include this as a condition of approval:</p> <p>g) A Concept Sediment and Erosion Control Plan has been submitted as part of the EDP. A detailed Sediment and Erosion Control Plan will form part of the construction contractor agreement with the EPA. As such there is no need to include this as a condition of approval.</p>
<p>Environmental Authorisation/Agreement That prior to the commencement of works, the following requirements be sought, submitted to and approved by the EPA:</p> <p>(h) Environment Authorisation under the provisions of the <i>Environment Protection Act 1997</i> for any activity on the site which is listed under Schedule 1 as a Class A activity;</p> <p>(i) A Waterways Works licence under the provision of the <i>Water Resources Act 2007</i> for any diversion of or any works within a natural waterway; and</p> <p>(j) Environment Protection Agreement with the EPA for any activity on the site which is listed under Schedule 1 as a Class B activity of the <i>Environment Protection Act 1997</i>.</p>	<p>Environmental Authorisation / Agreement <i>There is no need to include this as a condition of approval as it is already required prior to construction by the Environment Protection Act 1997.</i></p>
<p>Works on Territory Land That in accordance with the <i>Roads and Public Places Act 1937</i> no work should be undertaken on road verges and other unleased Territory Land without the approval of the Manager, Asset Acceptance, Community & Infrastructure Services (AA, C&I), TAMS. The approval is to be obtained prior to the commencement of any work on site.</p>	<p>Works on Territory Land. <i>As LDA will be constructing Coombs, LDA will be the managers of the unleased Territory Land not Asset Acceptance. As such this recommended condition does not apply.</i></p>
<p>Traffic Management Plan That a <i>Traffic Management Plan</i> be submitted to and approved by the Manager, AA, C&I, TAMS, and evidence of this approval be submitted to ACTPLA prior to the commencement of works.</p>	<p>Traffic Management Plan <i>To be included as part of detailed design submissions, approved and administered by Asset Acceptance in Tams. Without this plan detail design approval will not be granted per TaMS Requirements for Design Acceptance Submissions. As such there is no need to include this as a condition of approval under the Land and Planning Act.</i></p>

Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009	LDA response with regard to Coombs EDP
Construction (Temporary) Parking Management Plan That a detailed construction parking plan for the construction phase be submitted to and approved by the Manager, AA, C&I, TAMS, prior to the commencement of any works on site. This plan shall take into account all construction/demolition vehicles and equipment, and construction workers vehicles, and how and where they will be accommodated within the site to the satisfaction of the Manager, AA, C&I, TAMS.	Construction (Temporary) Parking Management Plan <i>To be included in the detailed design submissions, approved and administered by Asset Acceptance in TaMS. Without this plan detail design approval is not granted. As such there is no need to include this in a condition of approval.</i>
Traffic Control Device Drawings That Traffic Control Device drawings for all new and amended works be submitted to the Manager, AA, C&I, TAMS for approval prior to the installation of such devices.	Traffic Control Device Drawings <i>To be included in the detailed design submissions, approved and administered by Asset Acceptance in TaMS. Without this plan detail design approval is not granted. As such there is no need to include this in a condition of approval.</i>
Landscape Management Protection Plan (LMP) That during construction, all existing vegetation (trees, shrubs and grass) located on the verge and unleased Territory land immediately adjacent to the development be managed, protected and maintained in accordance with the LMP submitted to and approved by the Manager, AA, C&I, TAMS prior to the commencement of works. This plan is to be implemented before the commencement of works, including the demolition/earthworks on the site and is to be in accordance with <i>City Management Guidelines for the Protection of Public Landscape Assets Adjacent to Development Works-REF-04</i> .	The tree assessment commissioned by ACTPLA concluded no significant trees were present within the Coombs EDP area. However LDA propose to retain some existing trees due to their cultural value. A tree retention plan is included with the EDP and will form the basis for any contractual requirement for the protection of existing vegetation. This aside, and considering the status of all existing vegetation on site and not significant, a formal LMP is not considered appropriate and is not proposed.
Notice of Commencement of Construction That a Notice of Commencement of Construction be submitted to the Manager, AA, C&I, TAMS, one week prior to the commencement of works. The Notice shall also include the confirmation of any protective measures installed in accordance with the approved <i>Landscape Management Protection Plan</i> and programmed implementation of the <i>Temporary Traffic Management Plan</i> .	Notice of Commencement of Construction <i>Shall be provided 2 weeks before commencement on site in accordance with any EPA Agreement, therefore there is no need to include this as a condition of approval</i>
Waste Management Plan That a <i>Waste Management Plan</i> be prepared in accordance with the Development Control Code for Best Practice Waste Management in the ACT which includes demolition, construction and ongoing operational phases.	LDA has an ongoing agreement with the International Arboretum site for the use of pine mulch from cleared vegetation areas within Wright and Coombs. Otherwise this is a greenfield site and a formal WMP is not considered necessary.
Bushfire Risk Management and Mitigation Plan That a bushfire risk assessment and recommendations be endorsed by the Commissioner, Emergency Services Authority and be submitted to ACTPLA prior to commencement of works on site, in accordance with the Planning for Bushfire Risk Mitigation General Code, the Territory Plan.	Bushfire management Plan <i>A Bushfire Management Plan and report have been submitted with the EDP for endorsement by ESA as part of the entity comments on the EDP. ESA endorsement must be forthcoming prior to EDP approval being granted. As such there is no need to include this in a condition of approval.</i>

<p>Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009</p>	<p>LDA response with regard to Coombs EDP</p>
<p>Table of Associated works and details of associated works Details of associated works including off site works be submitted to ACTPLA including the location of alternative recreation areas, parking areas and public viewing areas. Details shall include requirements for approval (DA/BA) and proposed intended timeframes for implementation</p>	<p>Table of associated works and details of associated works to be provide to ACTPLA. All associated works are included in the EDP drawings. The staging plan identifies the general timing of the works. As such there is no need to include this requirement as a condition of approval;</p>
<p>Audit of requirements of conditions of approval That prior to the commencement of works, the applicant/Lessee shall nominate an independent person, who will be approved by ACTPLA, to audit and ensure that all conditions of approval set out in the decision by ACTPLA, or under the EPBC Act are fully completed in accordance with the next condition of this decision. That prior to the completion of work, the applicant/Lessee shall submit a report prepared and endorsed by the person identified under the previous condition of this decision to provide demonstrated evidence that the mitigation measures set out in the approval have been fully completed to the satisfaction of ACTPLA.</p>	<p>Audit of requirements of conditions of approval by an independent person approved by ACTPLA. The Coombs EDP has addressed all of the significant issues identified in the recommendations associated with the Section 211 exemption. Therefore the EDP is likely to be approved with a limited number of standard conditions. It would be unusual for an independent Auditor to administer the standard EDP conditions of approval. As such there is no need to include this requirement as a condition of approval.</p>
<p>Compliance Monitoring and Tracking That a Compliance Tracking Program be developed and implemented to track and audit the requirements and compliance of conditions of the approval. The Program shall be submitted to and approved by ACTPLA prior to the commencement of construction or operation as appropriate. The program shall relate to both the construction and operational stages of the project and shall include, but not necessarily be limited to:</p> <p>(k) Provisions for periodic review of the compliance status of the development against the requirements and conditions of approval;</p> <p>(l) Provisions for periodic reporting of compliance status to ACTPLA; and</p> <p>(m) Mechanisms for rectifying any non-compliance identified during auditing or review of compliance.</p>	<p>Compliance Monitoring and Tracking program to be approved by ACTPLA before construction. As stated above in the Audit requirements the Coombs EDP has addressed all of the significant issues identified in the recommendations associated with the Section 211 exemption. Therefore the EDP is likely to be approved with a few typical conditions. It would be unusual for a monitoring and tracking program to be required by ACTPLA for the standard EDP conditions of approval. As such there is no need to include this requirement as a condition of approval.</p>
<p>Implementation of revisions for approval That prior to the commencement of works, revised drawings, based on the relevant drawings submitted as part of the application, showing any changes required as a result of the implementation of the conditions of approval set out in this decision, shall be submitted to ACTPLA for assessment and decision;</p>	<p>Implementation of Revisions for Approval prior to commencement of works. This is a typical condition of approval, however the Land Act already governs this requirement. As such there is no need to include this requirement as a condition of approval.</p>
<p>Hazardous Materials That a <i>Hazardous Materials Management Plan</i> be submitted to the Manager, EPA, DECCEW, in accordance with the <i>Hazardous Materials Environment Protection Policy</i>.</p>	<p>Hazardous Material Management Plan The EPA agreement between the construction contractor and the EPA includes an unexpected hazardous material discovery plan. As the EPA agreement is required by the Environment Protection Act there is no requirement for a condition of approval for this item.</p>

Report to Minister for Planning EIS scoping & Section 211 considerations Prepared by ACTPLA July 2009	LDA response with regard to Coombs EDP
<p>Emergency and Incident Response Management Plan That an <i>Emergency and Incident Response Management Plan</i> endorsed by the ESA shall be submitted to ACTPLA for approval prior to the commencement of works on site.</p>	<p><i>Emergency and Incident Response Management Plan.</i> <i>This plan is not required under ACTPLA's Guidelines for the preparation of Estate Development Plans. From the comments within the Section 211 recommendations it would appear this plan is not specifically related to the development of Coombs, but the overall structure plan for East Molonglo and response times for emergency services. The development of a single estate cannot address this issue, it needs to be addressed at the structure plan level. As such there is no need to include this requirement as a condition of approval;</i></p>

In summary the significant issues raised in 2009 in the Section 211 exemption recommendations have been addressed, supersede or do not apply to the Coombs EDP area.

9 RESPONSE TO EPBC DETERMINATION CONDITIONS

While the EPBC determination found the proposed development not to be a controlled action, the determination is conditioned. Compliance with these conditions was discussed at an Agency workshop on 8 November 2010 and each condition was allocated to either a capital works project or the Coombs EDP or both.

The following section discusses these requirements and their relationship to the Coombs EDP in greater detail. Crucially the following section outlines the LDA's response:

Commonwealth EPBC Determination	LDA response with regard to Coombs EDP
<p>1. Maintain a buffer zone of at least 20m from moderate and high quality <i>Aprasia parapulchella</i> habitat except when inconsistent with other measures in this notice.</p>	<p><i>No works are proposed within 20m of moderate and high quality habitats. It is not anticipated that any construction activities will require access within 20m of moderate and high quality habitats.</i></p> <p><i>Erosion and sediment control measures installed on site shall be considerate to the location of medium and high quality habitats. Sediment fencing shall be installed on the upstream side of all habitats and will be employed in conjunction with catch drains to divert 'dirty water' away from habitats of interest.</i></p> <p><i>During construction appropriate barrier fencing will be provided around the works perimeter.</i></p> <p><i>Following completion of the works a stock proof fence will be installed around the Coombs edge road until such times as the Molonglo River Corridor Concept Plan is established and works commence under that plan.</i></p>
<p>2. Ensure vehicles do not drive over and keep all forms of disturbance, such as heavy earthmoving equipment and other construction activity away from moderate and high quality <i>Aprasia parapulchella</i> habitat except when inconsistent with other measures in this notice.</p>	<p><i>No works are proposed within 20m of moderate and high quality habitats. It is not anticipated that any construction activities will require access within 20m of moderate and high quality habitats.</i></p> <p><i>Erosion and sediment control measures installed on site shall be considerate to the location of medium and high quality habitats. Sediment fencing shall be installed on the upstream side of all habitats and will be employed in conjunction with catch drains to divert 'dirty water' away from habitats of interest.</i></p>
<p>3. Prevent construction spoil and any material used in soil stabilisation and revegetation from running down slope over mapped <i>Aprasia parapulchella</i> habitat area.</p>	<p><i>Preparation of a Contractor's Environmental Management Plan will be a contractual requirement of any construction activity completed under the Coombs EDP. Protection of EPBC habitats will be a mandatory Contract requirement.</i></p> <p><i>The EPA will approve the Contractor's Environmental Management Plan prior to commencement of works on site and will be made aware of the EPBC sensitivities.</i></p> <p><i>Erosion and sediment control measures installed on site shall be considerate to the location of medium and high quality habitats. Sediment fencing shall be installed on the upstream side of all habitats and will be employed in conjunction with catch drains to divert 'dirty water' away from habitats of interest.</i></p>

Commonwealth EPBC Determination	LDA response with regard to Coombs EDP
<p>4. Prevent the spread or planting of trees, shrubs or weeds (eg <i>blackberry rubus fruitcosus</i>) within 20m of high and moderate quality <i>Aprasia parapulchella</i>. Trees and shrubs will not be planted in areas that could potentially shade moderate and high quality habitat and buffers.</p> <p>4.1 All construction machinery will be washed to prevent the spread of weeds prior to entering the site. All machinery operating below the proposed edge road will be washed; if machines have been (a) offsite or (b) entered or operated in the area of former pine plantation.</p>	<p><i>No landscaping or civil works are proposed within 20m of high or moderate quality habitats, landscaping of the river corridor is subject to the River Corridor Concept Plan.</i></p> <p><i>Preparation of a Contractor's Environmental Management Plan will be a contractual requirement of any construction activity completed under the Coombs EDP. Adherence to this Clause will become a Contract requirement.</i></p>
<p>5. Prevent stormwater, occurring as a result of this action, from flowing over moderate and high quality <i>Aprasia parapulchella</i> habitat patches below the sewer line.</p>	<p><i>A clarification was sought as to the intent of Condition 5 as it relates to stormwater runoff. A meeting was held between ACTPLA, DECCEW (The Conservator's Representative), LDA and Cardno on 23 February 2011 with the following agreement reached:</i></p> <ul style="list-style-type: none"> <i>• Low-flow discharge / 3-month (Annual Recurrence Interval (ARI)) flows should be directed towards existing gully lines (and away from PTWL habitats) where practical. Where not practical low-flow discharge / 3-month flows may be directed towards PTWL habitats if equal or less than pre-development conditions;</i> <i>• Minor design (1 in 5yr ARI) flows should be directed towards existing gully lines and away from PTWL habitats;</i> <i>• Major design (1 in 100yr ARI) flows should be direct towards existing gully lines and away from PTWL habitats;</i> <p><i>Hydraulic and hydrological modelling should demonstrate capacity of gully lines to convey post-development flows without inundation of medium and high quality PTWL habitats.</i></p>
<p>6. Erect permanent fencing to enclose moderate and high quality <i>Aprasia parapulchella</i> habitat. Fencing will be designed to minimise unregulated public access, rock collection, access by domestic animals and unregulated stock grazing.</p>	<p><i>During construction appropriate barrier fencing will be provided around the works perimeter.</i></p> <p><i>Following completion of the works a stock proof fence will be installed around the Coombs edge road until such times as the Molonglo River Corridor Concept Plan is established and works commence under that plan.</i></p> <p><i>Permanent fencing of the medium and high quality habitats is to be completed under the Molonglo River Park Concept Plan works.</i></p>
<p>7. An edge road as indicated on Page 27 of the Coombs and Wright Concept Plan will separate residential development from the river corridor</p>	<p><i>An edge road consistent with the Coombs and Wright Concept Plan is proposed under this EDP.</i></p>

Commonwealth EPBC Determination	LDA response with regard to Coombs EDP
<p>8. A management strategy will be implemented, and ensure that:</p> <p>8.1 Habitat values for high and moderate quality <i>Aprasia parapulchella</i> habitat patches below the edge road are maintained and improved, including removal and ongoing management of weeds;</p> <p>8.2 Any fire, biomass management, or fuel reduction required as a result of the action within 20m of moderate and high quality habitat will be conducted in an ecologically sympathetic manner with the conservation of <i>Aprasia parapulchella</i> . Grazing will only be used as a management technique when it is undertaken in accordance with expert advice;</p> <p>8.3 Signs containing educational / public information concerning the conservation of <i>Aprasia parapulchella</i> in the Molonglo Valley will be erected in consultation with expert advice.</p>	<p><i>The Coombs bushfire mitigation plan has determined that PTWL habitats and other OAPZ's are ecologically compatible, see 3.10 of the EDP report and Appendix C. All other matters associated with a management strategy for high and moderate quality Aprasia parapulchella habitat patches will be a requirement of the Molonglo River Park Concept Plan and is outside the scope of this EDP.</i></p>
<p>9. Measures 1. and 2. will not apply with respect to construction of public access to the river corridor through moderate quality <i>Aprasia parapulchella</i> habitat or buffer areas. Access ways will be planned and designed in accordance with expert advice to minimise impact and conserve habitat values;</p> <p>9.1 Access ways will not pass through high quality <i>Aprasia parapulchella</i> habitat</p>	<p><i>N/A – Public access through the river corridor will be addressed as part of the Molonglo River Park Concept Plan and is outside the scope of this EDP.</i></p>
<p>10. Surface rocks suitable for <i>Aprasia parapulchella</i> from within the Coombs pond inundation area and access way alignments will be used to rehabilitate areas of potential habitat below the sewer line in accordance with expert advice. Rehabilitation will not take place within mapped high quality habitat. Rocks and any machinery will be washed of all soil and organic matter prior to use for rehabilitation.</p> <p>10.1 A monitoring program developed in accordance with expert advice will survey rehabilitated habitat areas annually for 5 years, following completion of the trunk sewer.</p>	<p><i>N/A – Clause relates to the River Park Concept Plan and Capital Works project in construction of the trunk sewer and Coombs Ponds and is outside the scope of this EDP.</i></p>
<p>11. For Patch 2 all measures expect measure 1 apply. In addition;</p> <p>11.1 Within 20m of Patch 2 machinery will only operate from within or above the sewer alignment; excavated material will not be stockpiled below the alignment.</p> <p>11.2 All land disturbed within 20m of Patch 2 will be rehabilitated to improve current <i>Aprasia parapulchella</i> habitat value in accordance with expert advice. Specifically surface rocks will be retained and replaced and disturbed areas will be revegetated with local native grasses, sterile Rye and specifically Kangaroo grass.</p>	<p><i>11.1 N/A - All works are proposed above the sewer alignment within the vicinity of Patch 2. The Works area of any construction will therefore not extend beyond the sewer alignment and therefore no material will be stockpiled below the alignment.</i></p> <p><i>11.2 It is anticipated that this area will be heavily disturbed by construction of the Trunk Sewer Capital Works. Construction of the trunk sewer will occur prior to Coombs EDP works in this area. LDA will retain expert advice for any area of Patch 2 left undisturbed when Coombs works commence. Any work proposed within 20m of Patch 2 will be completed in accordance with his advice.</i></p>
<p>12. Patch 4 will be rehabilitated to improve current <i>Aprasia parapulchella</i> habitat value below the sewer alignment as per the measure outlined in 11.2</p> <p>12.1 All development other than the trunk sewer will avoid the rehabilitated portion of Patch 4 by a minimum of 20m</p>	<p><i>All works are proposed above the sewer alignment within the vicinity of Patch 4. LDA will work with the adjacent capital works project to ensure the provision of stormwater is 20m from any rehabilitated PTWL habitat area.</i></p>

Commonwealth EPBC Determination	LDA response with regard to Coombs EDP
13. A wildlife expert experienced with <i>Aprasia parapulchella</i> will check all potential habitat that is disturbed prior to construction. Any <i>Aprasia parapulchella</i> specimens found will be relocated to the nearest suitable habitat.	<i>N/A – Clause relates to Capital Works project in construction of the trunk sewer and Coombs Ponds and is outside the scope of this EDP.</i>
14. The above measures do not apply to the area identified as Patch 1 except measures 10 and 13.	<i>N/A – Patch 1 will be disturbed by the Coombs Pond capital works and is outside the scope of this EDP.</i>

The Coombs EDP has been developed consistent with the requirements of the EPBC determination as clarified above.

No additional referrals are required to the Department of the Environment, Water, Heritage and the Arts.

Appendix A

Traffic Impact Assessment

PROPOSED COOMBS ESTATE DEVELOPMENT PLAN

Traffic Analysis and Road Hierarchy
Final Report

Prepared for
ACT Land Development Agency

transportation | traffic | engineering | planning

June 2011

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1 INTRODUCTION

Cardno was commissioned by the Land Development Agency (LDA) to undertake a Road Hierarchy and Traffic Analysis Report to assist in the formulation of the Coombs Estate Development Plan for residential development within Stage 1 of the Molonglo Valley Development.

The proposed Coombs Estate Development Plan consists of a predominantly residential development with the following mix of land uses:

- Single dwellings.
- High and medium density residential.
- Commercial mixed use.
- Primary school.
- Child care facility.
- Public open spaces.
- Community facilities.

A number of previous traffic studies of relevance have been undertaken to identify the infrastructure requirements for the development within the Molonglo Valley. Key outputs from these studies have been included within these technical assessments where relevant. Previous traffic studies include:

- Molonglo Infrastructure Stage 1 Traffic Report December (GHD 2008).
- Molonglo Transport Model Review Final Report (AECOM 2010).
- Proposed Wright Estate Development Plan Traffic Study (Cardno 2010).

This report builds upon the work undertaken previously. It should be noted that we have used the most recent information for the intersection layout configurations for JGD from the GHD report. Our report has also used distribution splits and midblock traffic volumes on JGD from the AECOM report. The focus of this study is an examination of the precinct internal road layout and appropriate definition of a road hierarchy. The operation of key internal intersections is also assessed to understand their likely operational performance in both the interim (2021) and ultimate (2031) stages of development. These future time periods have been selected as they correspond with the AECOM report assessment. The interim case assumes one midblock lane in each direction in JGD whilst the ultimate scenario assumes 3 midblock lanes in each direction in JGD.

1.1 SCOPE OF WORKS

The scope of this study comprises the following tasks:

- Determine an appropriate set of future year design traffic flows for the Coombs Estate Development Plan.
- Undertake intersection analysis for 2 intersections on John Gorton Drive (JGD). These key intersections are considered to represent the connections of the higher order road network (arterial through to major collector).

- Review traffic generation internal to the site and assess intersection performance where appropriate based on anticipated traffic volumes. These locations are detailed below and assessed using SIDRA to determine appropriate priority and intersection type.
 - Road 03/Road 28
 - Road 03/Road 08
 - Road 07/Road 08
 - Road 20/Road 09
 - Road 07/Road 04
- Identify an appropriate road hierarchy plan based upon traffic volumes, traffic composition, bus services and active transport (walk/cycle) considerations.
- Assess the environmental traffic capacity of the internal road network under the road hierarchy plan.
- Summarise the above into a Road Hierarchy and Traffic Analysis Report.

This study should appropriately assess the operational performance of internal intersections within Coombs and the site access connections to the external road network system.

It is proposed that new intersection connections are constructed as part of the proposed JGD which is a planned major arterial road which will provide the major vehicular access connections to both Coombs and Wright. Intersection layouts have been developed by other consultants in the reports referenced above. Operational performance needs to be considered for both Wright and Coombs based on final land use estimates.

1.2 REFERENCE DOCUMENTS

- Report on Molonglo Infrastructure Stage 1 Traffic Report (GHD 2008).
- Molonglo Transport Model Review Final Report (AECOM 2010).
- Proposed Wright Estate Development Plan Traffic Study (Cardno 2010).
- Updated traffic forecast produced by SMEC provided by TAMS via email to Cardno dated 11 January 2010.
- Guidelines for the preparation of Estate Development Plans (ACT Planning & Land Authority 2009).
- Territory Plan Wright Concept Plan (ACT Parliamentary Counsel 2008).
- Guide to Traffic Generating Developments (NSW RTA 2002).
- Road Hierarchy Plan for Coombs and Wright Estate Development Plan Drawing No. 292347-RHP-01, 02, 03 (Cardno 2010).
- TAMS Design Standards for Urban Infrastructure (Edition 1 issue 0).
- Parking and Vehicular Access General Code (ACTPLA 2008).

1.3 REPORT STRUCTURE

The remainder of the report is structured as follows:

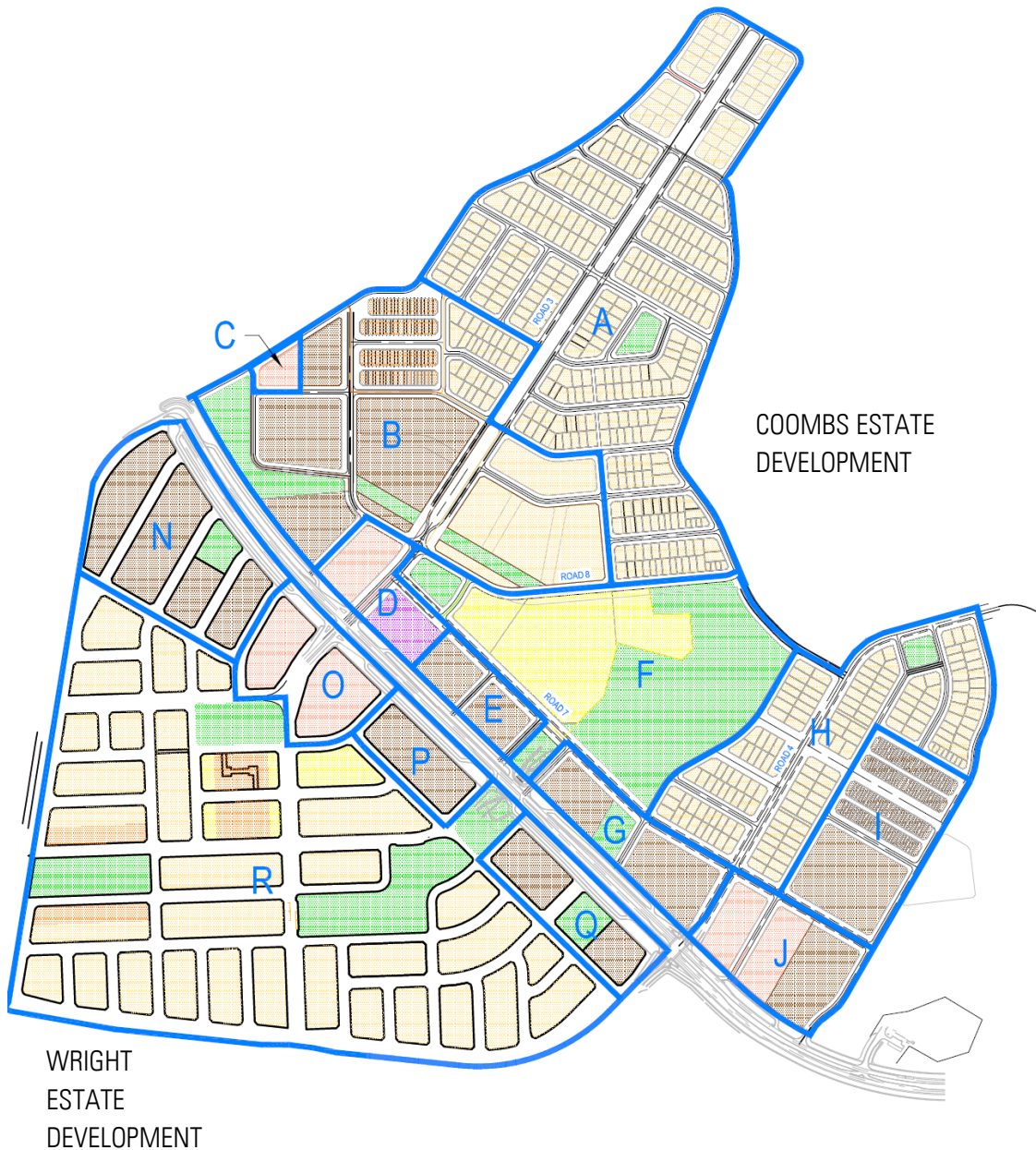
- Chapter 2 describes the Concept Plan and proposed Coombs Estate Development Plan.
- Chapter 3 describes the derivation of the forecast traffic volumes associated with the Masterplan.
- Chapter 4 outlines the proposed road hierarchy including its principles and identifies and assesses the road hierarchy and key intersection performances both within Coombs and its external intersections along JGD.
- Chapter 5 provides a summary and concludes the study.

2 PROPOSED COOMBS DEVELOPMENT

The Coombs Estate Development Plan is to be provided one of the first stages of the proposed large scale land use changes within the Molonglo Valley.

The Coombs and Wright Masterplan is indicated in **Figure 2.1**. The layout for Road 3, 4, 7 and 8 is consistent with the Concept Plan.

Figure 2.1 Site Location



2.1 Proposed Arterial Road Construction to Access Coombs

Roads ACT are constructing a new arterial road link providing principal vehicular access to all proposed land release areas within the Molonglo Valley, namely John Gorton Drive (JGD). JGD will connect Cotter Road in the south to Coulter Drive and Bindubi Street in the north. The road will cater for road vehicles and accommodate on road cycling and future Inter-town Public Transport (IPT).

It is proposed to construct JGD in stages as the Molonglo Valley is being progressively developed with Stages 1A and 1B, those providing direct frontage and access to Coombs from Road C11 in the east to Road C21 in the west, currently under construction.

JGD Stage 1D is currently being designed by GHD and will extend from the western boundary of Coombs. Construction is expected to commence sometime in 2012 and therefore a permanent connection to JGD from Coombs Road C21 is anticipated. Should the timeline for JGD Stage 1D extend a temporary connection can be facilitated.

These future stages of JGD construction will provide improved accessibility between the site and the existing urban areas to the north (Belconnen / Macquarie). Accordingly the potential traffic distributions between the Wright and Coombs Estate Development Plan area and the external road network will change as the road is progressively constructed.

3 TRAFFIC VOLUMES

This section of the report details the methodology used to determine the traffic generation of the site and its distribution and assignment within the Coombs Estate based on the development mix of each block and potential access points onto JGD. This information has been used in developing the internal road hierarchy including elements such as bus routes.

3.1 DETERMINATION OF TRAFFIC GENERATION

A maximum forecast of the traffic generation potential of the Coombs Estate Development Plan was undertaken based upon the potential lot yields identified within the Masterplan. The same approach was utilised for the Wright Estate Development Plan. Traffic generation on the yields has been assessed by adoption of the following traffic generation rates:

- Single dwellings 8 vehicle movements per day per dwelling.
- Multi-unit dwellings 6 vehicles per day per dwelling.
- Mixed use floorspace 10 trips per 100 sqm (based on expected development mix).
- Child care facility 1.6 trips per day per child (based upon RTA Guide to Traffic Generating Development long-day child care uses).
- Primary school 60% of students are driven to school (based upon previous school studies undertaken by Cardno).
- Community facility 10 trips per 100 m² per day.

For the traffic assessment of this study, the following yields were assessed:

- 706 single dwellings.
- 2530 multi-unit dwellings.
- 19,850 m² GFA mixed use floorspace.
- 8,860 m² site area for child care facility with 200 children.
- 38,300 m² site area for primary school with 900 students.
- 12,550 m² site area for community facility.

A conservative approach has been taken with respect to the assumed dwelling numbers at the multi-unit sites. The upper limit of the ranges provided illustrated on the Road Hierarchy and Traffic Analysis Plan (RHP) have been adopted at all locations and is reflected in the trips generated, as recorded in **Table 3.1**.

It has been assumed, as per the Wright study, that LDA anticipate that the mixed use floorspace would comprise of doctors surgeries, a small supermarket, hairdressers, laundries and small businesses etc. These land uses will provide a local focus with the potential for a significant number of walk/cycle trips to be made from the surrounding areas.

Based on the potential for shared trips (trips generated by local attractors such as schools and retail, but not resulting in a trip end) and the anticipated sustainable mode share (as discussed in AECOM's 2010 study), given the high quality walking and cycling infrastructure proposed and excellent public transport facilities (high frequency route on JGD, local services beginning from day 1) the likely volume of traffic generated is judged to be approximately 15% less than would be generated by the stated code rates total traffic generated by the Coombs

Estate and this discount is reflected as the lower end of the daily vehicle movements forecasted in the RHP. The RTA Guide to Traffic Generating Developments states that such an allowance (up to 25%) provides a realistic representation of trips occurring internal to a subdivision. An upper range has been included however which reflects conservative dwelling densities and code traffic generation rates, and are published as the upper limit of the range anticipated on the RHP. The road hierarchy proposed has been informed by these upper limit rates.

3.1.1 Zoning System

Zones are defined as locations where trips originate and terminate, i.e. trip ends. Based on the Coombs Estate Development Plan, a zoning system is set up for the study area as shown in **Figure 3.1**. A total of 40 zones have been set up for this study. Based on the rates assumed above, the development could generate some 19,850 two way daily trips or 2,500 two-way peak hour trips. It should be noted that the daily trip rate does not calculate to 10 times the hourly rate as some land uses within the site such as the school and child care have proportionally higher number of trips in the peak hour compared to the daily rate than do the residential land uses. **Table 3.1** details the number of trips generated by each zone.

Figure 3.1 Zoning System

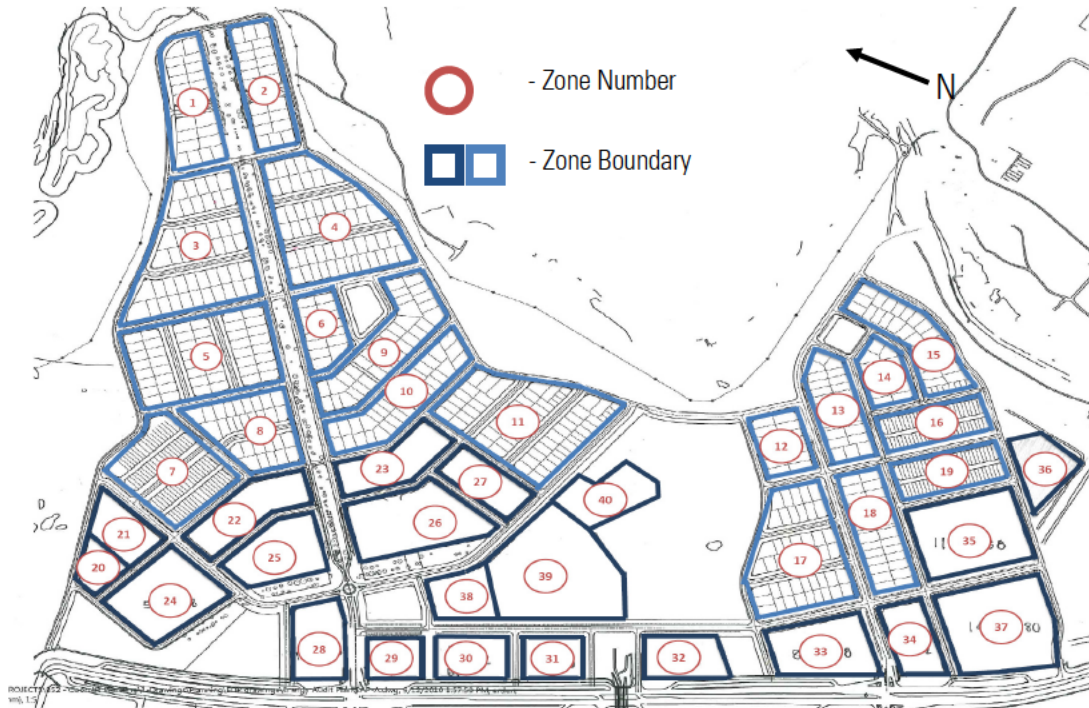


Table 3.1 Generated Zone Trips

Zone No.	Development Type	Daily Trips		Zone No.	Development Type	Daily Trips		Zone No.	Development Type	Daily Trips	
		Lower	Upper			Lower	Upper			Lower	Upper
1	Suburban Residential	150	176	15	Suburban Residential	232	273	29	Commercial Mixed	789	928
2	Suburban Residential	150	176	16	Medium Density Residential	347	408	30	High Density	470	553
3	Suburban Residential	320	376	17	Suburban Residential	313	368	31	High Density	408	480
4	Suburban Residential	368	433	18	Suburban Residential	177	208	32	High Density	510	600
5	Suburban Residential	327	385	19	Medium Density Residential	354	416	33	High Density	832	979
6	Suburban Residential	102	120	20	Commercial Mixed	204	240	34	Commercial Mixed	995	1171
7	Medium Density Residential	524	616	21	High Density Residential	388	456	35	High Density	1250	1471
8	Suburban Residential	198	233	22	High Density Residential	735	865	36	High Density	510	600
9	Suburban Residential	232	273	23	High Density Residential	592	696	37	Part Commercial Mixed	1428	1680
10	Suburban Residential	218	256	24	High Density Residential	944	1111	38	Child Care	272	320
11	Suburban Residential	449	528	25	High Density Residential	679	799	39	Primary School	918	1080
13	Suburban Residential	164	193	27	High Density Residential	765	900				
14	Suburban Residential	89	105	28	Commercial Local	986	1160				

3.2 TRAFFIC DISTRIBUTION

Trips were assigned in proportion to the major attractors and generators for Molonglo traffic. For a robust assessment a distribution of 70% to/from the east and 30% to/from the west was assumed, with the ultimate assumption that there will be approximately a 50/50 split north/south. This is consistent with the AECOM forecasts (51% north / 49% south, refer to Table 12).

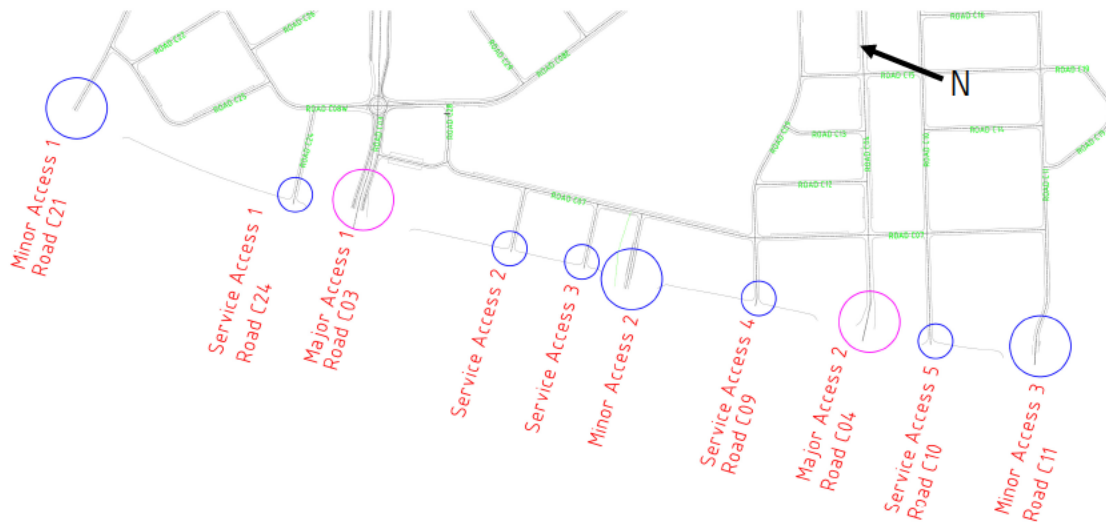
Based on our review of the work undertaken by AECOM in 2010, the nature of the study was such that the level of detail provided at an individual intersection level was not sufficient for the modelling required in this study. At an intersection level, the traffic distribution breakdown was based on the traffic distribution identified in Table 6-8 of Section 6.13 in the Molonglo Transport Model Review (SMEC). However the AECOM forecast traffic movements, which reflect current planning intentions were adopted, including the midblock forecast traffic volumes on JGD.

3.2.1 Development Access

Development accesses into the development from John Gorton Drive are as follows:

- Major accesses located at Road C03 in the north and at Road C04 in the south with all movements permitted at these intersections.
- Minor accesses located at Road C21 in the north, Road C11 in the south with some restricted movements.
- Service access roads at various locations along John Gorton Drive with only left in left out movements permitted.

Figure 3.2 Development Access Points



It is assumed in this assessment that the outbound trips from Coombs to the south will be distributed to the various major, minor and service accesses. Inbound trips from the south will only be distributed to the Major Accesses (Road C03 and Road C04) and Minor Access 2 due to the right turn movement restriction on the service accesses and Minor Access 1 (Road C21) and Minor Access 3 (Road C11).

Outbound trips to the north will access via the major accesses while it is assumed that inbound trips from the north will utilise most accesses along John Gorton Drive.

It has been assumed, given duplicate development types in the assessment that a small proportion of traffic from Wright will enter Coombs to utilise the Town Centre facilities.

The distribution percentages used at each access are detailed in **Table 3.2**.

Table 3.2 Access Distribution

Zones	Trips	Trips Distributed To									
		Major Access 1	Major Access 2	Minor Access 1	Minor Access 2	Minor Access 3	Service Access 1	Service Access 2	Service Access 3	Service Access 4	Service Access 5
1,3,5,7,8,20-22,24,25,28	To South	30%		20%			20%				
	To North	30%									
	From South	70%									
	From North	10%		10%			10%				
2,4,6,9-11,23,26,27	To South	30%	10%							30%	
	To North	10%	20%								
	From South	35%	35%								
	From North	20%	5%							5%	
12-19,33-37	To South		35%			15%				10%	10%
	To North		30%								
	From South		50%							20%	
	From North		15%			5%				5%	5%
29,30,31,32	To South	15%			35%			10%	10%		
	To North	30%									
	From South	35%			35%						
	From North	10%			10%			5%	5%		
38,39,40	To South	30%	30%							10%	
	To North	20%	10%								
	From South	35%	35%								
	From North	20%	10%								

3.3 TRAFFIC ASSIGNMENT

Traffic was assigned onto the internal precinct local road network on the basis of likely driver routes through the Masterplan area using routes seeking to minimise travel distances and time.

3.4 INTERACTION BETWEEN NORTH WESTON AND COOMBS ESTATES

Road C04 provides a connection between North Weston and Coombs at its north-eastern extent. The primary reason for providing this connection is to facilitate local bus services in an efficient manner. During consultation,

some concerns were raised that this link, in association with the east-west connection provided by Road C20, may facilitate 'rat-running', and has the potential to provide a more efficient east-west connection than John Gorton Drive (JGD) between the primary access points to North Weston and Coombs.

Analysis has been undertaken to determine the likely level number of trips travelling between the estates as a result of this connection being provided. With the exception of traffic movements attracted to retail core, childcare facilities and the school which originate from North Weston, there were no externally generated trips judged to travel via this connection. This is primarily due to the fact that the anticipated travel time associated with external traffic movements arriving from the northern end of JGD, travelling via North Weston and then traversing east-west through Coombs, destined for the western portion of the estate or re-connecting with JGD is judged to exceed the time it would take to continue along JGD and if bound for the western portion of the estate, entering via Road C3. This assumption can be mainly attributed to the more circuitous internal route and speed limit which is significantly less on the internal road network than on JGD.

In addition to the local bus movements, approximately 200 vpd are anticipated to travel between the two estates (Coombs and North Weston) via this link; of which approximately 50 vpd are anticipated to travel via Road C20. An inset has been provided on sheet 2 of the RHP, which isolates the number of trips originating from North Weston which utilise Coombs' internal road network.

4 PROPOSED COOMBS ESTATE DEVELOPMENT PLAN LAYOUT

4.1 ROAD CLASSIFICATIONS

The identification of a road hierarchy serves not only to identify the roads role to carry vehicles but should attempt to match the class of road to its use and the environmental needs of the community. The desire to separate through and local traffic should improve the general amenity of all areas within the development.

If roads are viewed as either purely for local access or purely for traffic movement then inconsistencies will arise. An example of this would be the situation where a main road passes through a shopping centre, here both local access and through traffic movement must be accommodated. Where road network design alone is unable to remedy this situation traffic management can be applied to minimise impacts and prioritise conflicting functions.

Traffic management objectives at a local level need to be consistent with government objectives for community planning and development. The levers which traffic management most closely affects are:

- Need to ensure cohesive precincts.
- Need to ensure accessibility of neighbourhood areas for all road users.
- Need to ensure the environmental integrity is respected.

The classification of roads in the ACT is based on a formal road hierarchy. The classification fundamentally relates to the predominant function of a road and to the extent it serves the two basic purposes of the road network, i.e. the movement of traffic and access to property. A road's physical characteristics and traffic volume will reflect its function and role in the network.

The road classifications used are:

- Arterial roads.
- Major collector roads.
- Minor collector roads.
- Access streets.

The definitions of each road classification are discussed in the following sections.

4.1.1 Arterial Roads

Arterial roads predominantly serve longer distance travel within a district and through traffic from one district to another, and form the principal avenues of communication for metropolitan scale traffic movements. They include limited access roads and parkways (or freeways) having full access control and grade separated inter-sections. A small number have higher levels of property access for urban design reasons, for example Northbourne Avenue, or reflect the planning and design parameters of the time of their construction, for example, Limestone Avenue. Traffic capacity is a function of the design of the road rather than being constrained by environmental objectives.

4.1.2 Major Collector Roads

Major collector roads collect and distribute traffic within residential, industrial and commercial areas. They form the link between the primary network and the roads within local areas and should carry only traffic originating or terminating within an area. The volume of traffic carried is constrained by environmental objectives - safety and traffic noise - rather than road geometry and reflects the limited area that they serve. Direct property access is still permissible but the level of traffic may dictate that access and egress arrangements should be such that vehicles can exit properties in a forward direction.

4.1.3 Minor Collector Roads

Minor collector roads collect and distribute traffic from access streets, linking to the major collector roads within the neighbourhood. They can also provide secondary connections direct to the external arterial road network. Traffic volumes are compatible with direct property access.

4.1.4 Access Streets

Access streets are generally streets where the residential environment is dominant. Traffic volumes and speed environment are low. They would generally connect only to a collector road.

4.1.5 Speed Environments

The ATPLA Residential Subdivision Development Code provides details on the desirable speed environment based on the residential street level, type and function which requires the following speed limits, consistent with our proposed speed environment as part of the EDP:

- Access streets - 40km/h.
- Minor collector roads - 50 km/h.
- Major collector roads - 50 km/h.
- Arterial roads - 60 km/h or above.

4.1.6 TAMS Classifications

In addition to the above coarse level definitions TAMS Design Standard for Urban Infrastructure identifies a road classification based upon the National Association of Australian State Road Authorities (now known as Austroads) and describes urban roads as follows:

- Class 6 - Those roads whose main function is to perform the principal avenue of communication for massive traffic movements.
- Class 7 - Those roads, not being Class 6, whose main function is to supplement the Class 6 roads in providing for traffic movements or which distribute traffic to local street systems.
- Class 8 - Those roads not being Class 6 or 7, whose main function is to provide access to abutting property.
- Class 9 - Those roads which provide almost exclusively for one activity or function and which cannot be assigned to Class 6, 7 or 8.

4.2 ROAD HIERARCHY PRINCIPLES

TAMS Design Standard for Urban Infrastructure also identifies a road hierarchy network to maximise road safety, amenity and legibility and to provide for all road users. Sections from this document are reproduced below.

A hierarchical road network is essential to maximise road safety, amenity and legibility and to provide for all road users. Each class of road in the network serves a distinct set of functions and is designed accordingly. The design should convey to motorists the predominant function of the road. Essentially there is a broad division between arterial and non arterial (or local) roads.

Arterial Roads

Servicing the individual residential areas are the major roads that are Class 6 and in some cases Class 7 roads. These are important transport routes that provide for the major traffic streams in terms of both volume and speed.

In the ACT, there are three distinct types of major road:

- Sub-Arterial.
- Arterial.
- Parkway.

Non-Arterial Roads

There are four distinct street types in residential areas:

- Access Places – Class 8.
- Access Streets – Class 8.
- Collector Street (Minor) – Class 7.
- Collector Street (Major) – Class 7.

The lowest order of road (Access Place) having as its primary function, residential space / amenity features which facilitate pedestrian and cycling movements and where vehicular traffic is subservient in terms of speed and volume to those elements of space, amenity, pedestrians and cyclists.

The next level of road (Access Street) should provide a balance between the status of that street in terms of its access and residential amenity function. Residential amenity and safety are dominant but to a lesser degree than Access Places.

All Collector Streets have a residential function but also carry higher volumes of traffic than the lower order streets. A reasonable level of residential amenity and safety is maintained by restricting traffic volumes and speeds; however amenity and safety do not have the same priority as Access Streets and Access Places.

Major Collector Streets provide the principal link between the residential street network and the arterial road system. These streets often require frontage access restrictions due to traffic volume

4.2.1 Proposed Road Hierarchy

In accordance with the principles identified above a potential road layout was formulated.

Principal direct connections to the external road network include:

- JGD via a large traffic signal controlled intersection (Major Access 1).
- JGD via traffic signal controlled intersection with Cotter Road (Major Access 2).
- Left in/left out service roads.

A highly permeable connective style grid iron layout is proposed in accordance with the latest planning directions. Key features of the road hierarchy plan include:

- A short sub arterial road providing primary access to JGD surrounded to the east and west by mixed use development.
- An interconnected permeable network of lower order residential streets.
- Small section of shared driveways providing access to a limited number of plots (4 or less) which will not require truck access.

4.2.2 Proposed Road Cross Sections

It is proposed to provide the internal road network with varying cross sectional width requirements dependent upon the road category. The proposed road hierarchy cross sections are shown on the figures included within **Appendix A**. The road cross sections are described below:

- 55m reserve – Major Collector that provides access between JGD and the internal road network. A variable width median of up to 23.9m and 10m wide verges provide a boulevard entry feature. In either direction the carriageway is made up of a 3.75m wide trafficable lane, 1.5m wide marked on road bicycle lane with a 2.8m parking bay (3.5m for proposed bus stops) proposed at appropriate locations.
- 31.1m reserve – Major / Minor Collector that provides access between JGD and the internal road network. There is no central median however the 10m wide verges are maintained on either side. In either direction the carriageway is made up of a 3.75 metre wide trafficable lane and 1.5m wide marked on road bicycle lane. Again a 2.8m parking bay and 3.5m bus bay are proposed at appropriate locations.
- 40m reserve – Minor Collector that serves as the main spine road for west Coombs. A wide 8.9m median and 10m verges again provide a boulevard statement. The carriageway is made up of 3.75m wide trafficable lane, 1.5m wide marked on road bicycle lane in either direction.
- 26m to 30m reserves – Local Access C with variable verge widths (between 7.2m and 10.75m) to suit urban form and infrastructure requirements. The carriageway is typically 3.75m trafficable lanes with 2.8m indented parking bays as required. No on road marked cycling is provided.
- 22m reserves – Local Access B generally with 7.25m wide verges and 3.75m wide trafficable lanes. Adjacent to open space the reserve drops down due to a 2m narrowed verge on the open space side.
- 56.7m reserve – Local Access A. Road reserve accommodates a 37.4m median in 'dress circle' area in the northern tip of Coombs. A single direction 3.5m wide trafficable lane is accommodated together with a 6.15m wide verge.

4.2.3 Pedestrian / Cycle Facilities

Cycling and walking are supported by the ACT Government and are recognised as healthy, low cost and environmentally friendly forms of transport. The ACT Government has adopted the National Strategy for

Ecologically Sustainable Development and the National Greenhouse Strategy. Both of these strategies support an increase in commuter cycling and walking in favour of private car use. Recreation policies also strongly support walking and cycling as a means of improving community health and fitness, and of helping to reduce greenhouse gas emissions and vehicle-produced noise and air pollution.

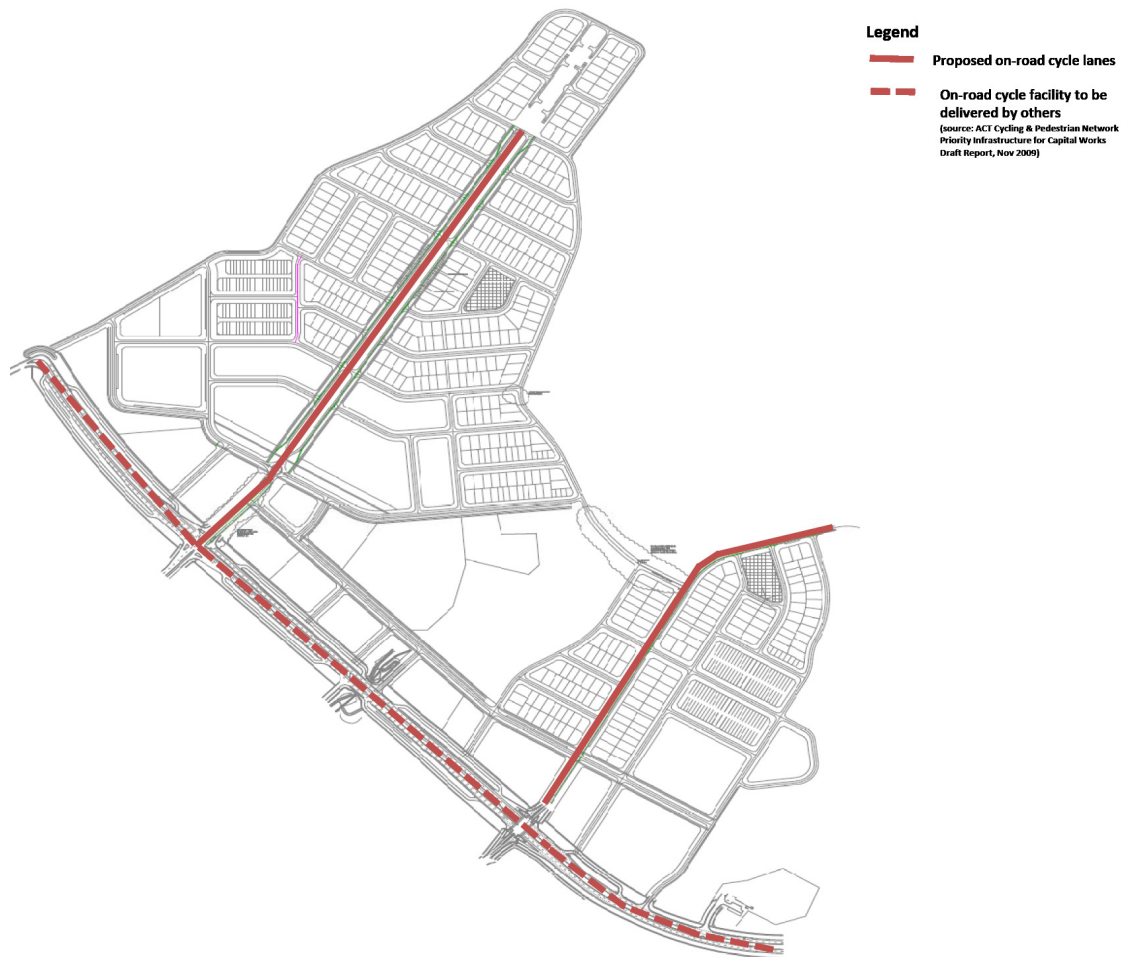
The ACT Sustainable Transport Plan (2004) aims to increase the mode share of walking and cycling from 4.1% and 2.3% respectively in 2001 to 7% each by 2021. Ensuring that greenfield developments are provided with high quality walking and cycling facilities is an integral part of achieving this target. It is recognised that encouraging walking and cycling as recreational pursuits can lead to increases in walking and cycling for commuting and other trip purposes.

Key features for Coombs which encourage walking and cycling include:

- The provision of mixed use developments along the public transport spine (JGD), facilitating multi-purpose trips involving public transport and walking.
- The provision of footpaths along both sides of all streets, facilitating safe walking environments for all walkers and less confident cyclists.
- The provision of on-road cycling facilities along key road links through the site, linking to the proposed Main Routes Network.
- Provision of an off-road link through the open space corridor in the south-east of the suburb, linking with the proposed Roads Main Routes Network at Cotter Road and with Wright.

Design Standard 13, Drawing No. 11 (DS13-11) illustrates the ACT Government Main Routes Network and was last updated in June 2007 following preparation of the *Commuter Cycling Network: Priorities for Capital Works* report by CBRE. DS13-11 does not include the Molonglo area, however the infrastructure required in Molonglo was considered as part of the report. A review of the 2007 report is presently underway and it is anticipated that the Main Routes Network and DS13-11 will be updated accordingly. The provision of pedestrian and cycling facilities in Coombs has been developed consistent with the links recommended in the *Pedestrian and Cycling Network: Priority Infrastructure for Capital Works Draft Report* (Cardno, November 2009).

Figure 4.1 shows the proposed and cyclist facilities within Coombs. Locations where at-grade crossings, such as refuge islands, will be required have been identified. Specific crossing treatments will be determined during detailed design.

Figure 4.1 Proposed Cyclist Facilities in Coombs

4.2.4 Public Transport Provision

In 2009, the ACT Government commissioned McCormack Rankin Cagney to prepare a strategic network plan for public transport in Canberra (*ACT Strategic Public Transport Network Plan & Service Design*, McCormack Rankin Cagney, June 2009) over the next 20 years. The strategy has produced a strategic network plan with appropriate service levels which will be used to guide land use planning in the future. As a part of this strategy, servicing the Molonglo urban release area was considered thoroughly and a strategy developed for five interim development phases and full development as shown in **Figure 4.2**.

Coombs, along with North Weston and Wright, forms part of Phase 1 of the Molonglo release area. The recommended public transport services for Phase 1 include:

- An all-day service running from Coombs/Wright to City via JGD, Cotter Road, Adelaide Avenue, and Commonwealth Avenue, generally at 30 minute headways. It is intended that this service grow into a 'Rapid' service running much more frequently throughout the day.
- A 'Peak Express' service from Coombs/Wright to Barton and Russell, running in the peak direction during peak periods only with a frequency to be determined by demand (initial service would probably be every 30 minutes across the two-hour peak).
- A 'Coverage' service from Coombs/Wright to Woden via Coleman Court.

The recommended services for Phase 1 are shown **Figure 4.3**. It is likely that all the of the proposed plan area will be within a convenient 400 metre walk distance of a bus service pending finalisation of bus stop locations by Action Buses.