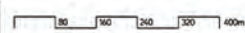


- Legend**
- Town Centre Blocks
 - Primary Green Streets
 - Secondary Green Streets

MOLONGLO VALLEY STAGE 2 - GroupCentre: Sketch Option B

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DATE 08/02/2012

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ACT
Government

Environment and
Sustainable Development

Molonglo Valley stage 2: Draft Planning and Design Framework

Important Planning Requirements
for first land release area

Environment and Sustainable Development Directorate
ACT Government

August 2011

Environment and Sustainable Development Directorate
ACT Government

Version	Version Date	Details	Authorised (Name/Position)
1	28 June 2011	Technically endorsed	Chief Planning Executive
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GLOSSARY OF ABBREVIATIONS

ACTPLA	ACT Planning and Land Authority	GFA	Gross Floor Area
AMCORD	Australian Model Code for Residential Development	ha	Hectares
APZ	Asset Protection Zone	IPRs	Important Planning Requirements
CRIP	Community Recreation Irrigated Park	PTWL	Pink-tailed Worm Lizard
EDT	Education and Training Directorate	MVIS	Molonglo Valley Interceptor Sewer
ESA	ACT Emergency Services Agency	NCA	National Capital Authority
EDD	Economic Development Directorate	NSA	North South Arterial
EDP	Estate Development Plan	PDF	Planning and Design Framework
ESDD	Environment and Sustainable Development Directorate	SRS	Sport and Recreation Services
EIS	Environmental Impact Study	TAMSD	Territory and Municipal Services Directorate
EWA	East West Arterial	WSUD	Water Sensitive Urban Design

1 Background to Important Planning Requirements

1.1 The brief

The brief for Molonglo Valley Stage 2 Draft Planning and Design Framework (ACT Government, July 2010) requires that: *The IPR plan is to outline the obligations of the developer preparing an estate development plan (EDP) for submission as a development application.*

The intention is to derive the Important Planning Requirements (IPRs) for the first land release area in Molonglo Valley stage 2 from the draft Molonglo Valley Stage 2 Planning and Design Framework (PDF). The brief also requires the elements to be described that are fixed and which ones are to remain flexible to allow the developer to demonstrate innovation within the agreed context.

This document should be read in the context of the draft PDF.

1.2 What are Important Planning Requirements?

IPRs or similar names, including Deed Annexures and Implementation Plans, were used more frequently in the past by the ACT Government to guide the land development process for land subdivision. More recently, with the introduction of concept plans/precinct codes into the Territory Plan, IPRs have not been commonly used.

IPRs are expressed in words and can include drawings. IPRs can include any matter that is important to the future development of an area. IPRs contain mandatory requirements that can be used in Deeds of Agreement and must be consistent with the Territory Plan and the National Capital Plan.

Deeds of Agreement will be expected to convey the content of the IPRs and contain the development conditions for the lease area and can include:

- *mandatory planning requirements*
- *landscape requirements*
- *infrastructure requirements*
- *definition of off-site works and interdependent works*
- *conditions relating to consequential leases*
- *other special conditions such as heritage.*

(Source: ESDD internal document: handout by Deed Management, May 2011)

For example IPR equivalents in the past have included indicative maps showing major land uses including broad location of supermarkets, indicative road connections, mandatory access points, trees to be retained and mandatory edge roads (Source: Casey 4 Estate - Special Project Conditions).

1.3 The draft PDF

1.3.1 Overview

The draft PDF provides the spatial land use structure and servicing elements required to create a community to meet a target yield of approximately 18,000 people and associated services and facilities at Molonglo Valley stage 2.

The draft PDF is a 'draft' in the sense that it provides sufficient planning and design directions to inform the IPRs for the first land release area in stage 2 of an anticipated 3,000 dwellings by 2013-14. The draft PDF also provides initial directions for the balance of the stage 2 development area, including for the group centre.

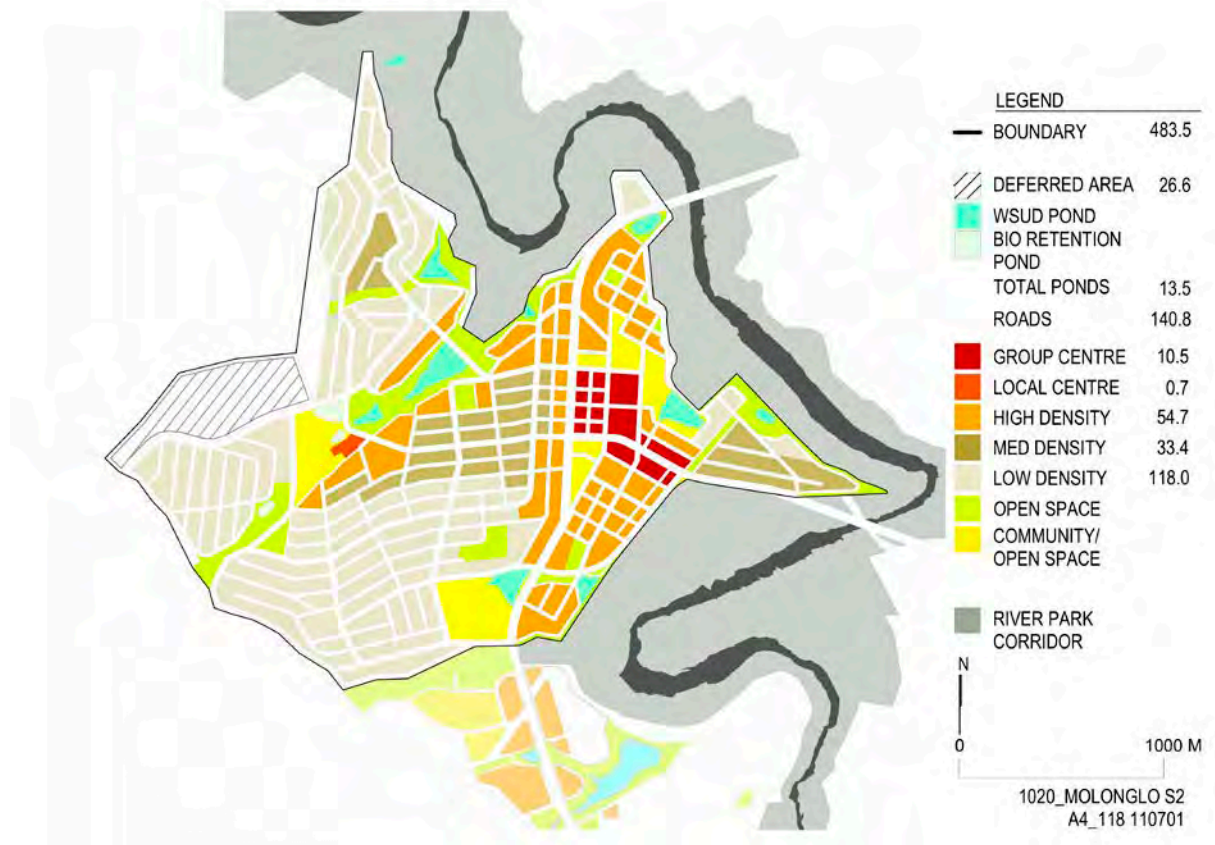
The draft PDF contains a detailed description of the following aspects of the proposed development at Molonglo Valley stage 2:

- development area and constraints
- stormwater
- arterial road alignment
- group and local centre
- housing mix and types
- open space
- community facilities
- access and movement
- public transport
- proposed servicing plans.

1.3.2 Overall layout

The major structural elements in Molonglo Valley stage 2 include a North-South Arterial (NSA), East West Arterial (EWA), the adjoining Molonglo River corridor and a group centre. Figure 1 shows the overall layout for stage 2 as proposed in the draft PDF (June 2011).

The draft PDF provides for a housing mix (detached, compact, row and apartments) to accommodate approximately 18,000 people.

Figure 1 Proposed layout for Molonglo Valley stage 2

1.3.3 First release area of 3,000+ dwelling sites

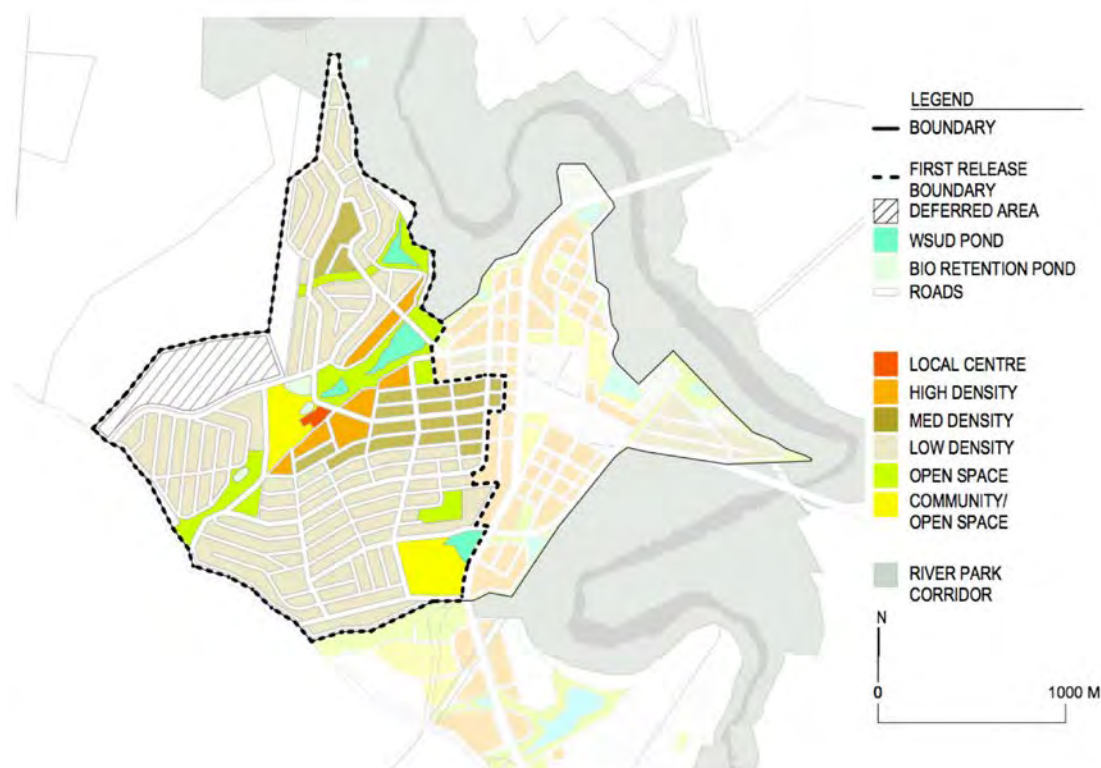
In determining the boundaries for the first land release area within stage 2, a number of criteria were considered:

- sites for a minimum 3,000 dwellings have to be achieved
- a high proportion of housing is to be low and medium density
- has to operate within the environmental constraints identified through the work of the strategic assessment
- the development area has to be to the west of the NSA and not include the group centre or a significant share of the higher density areas
- sewer servicing catchments
- the area must be able to be serviced following the early road works on the southern part of the NSA and via Uriarra Road
- areas suitable for high density housing have to be identified but may be deferred.

Figure 2 shows the boundary of the first land release area in stage 2. The first land release area includes predominantly low and medium density areas. It also includes the western local centre and the southern school/community/education cluster.

The yield within these boundaries is approximately 3,440 dwellings (including the high density areas which may be deferred). Also included is part of the central open space spine with some of the stormwater retention and treatment ponds.

Figure 2 Boundary for Molonglo Valley stage 2 first land release area – 3,000+ dwellings



1.4 Implementing the draft PDF

The draft PDF indicates the high aspirations for Molonglo Valley stage 2, and its complexities. There are significant delivery challenges including how best to:

- achieve accommodation for approximately 18,000 people and major support infrastructure on a site area that is considerably steeper than any comparable greenfield area in Canberra (with more than 50 percent of the land area being above 10 percent slopes)
- achieve much higher residential densities with a mix of housing (including more compact lots and apartments) than is common for Canberra's greenfield areas
- attend to critical natural resource issues at the site's edges and the interrelationship with the adjacent Molonglo River Park
- achieve high levels of sustainability and urban design excellence
- meet tight time frames under the government's land release program

- work under an arrangement which does not bring the usual scope for local variations to code provisions (usually available through a concept plan under the *Planning and Development Act 2007*).

The draft PDF addresses the challenges and provides a clear framework to meet the overall project objectives and broader community wellbeing goals which are sought for the long term residents of the Molonglo Valley.

The draft PDF is supported by a comprehensive and cohesive implementation strategy which links this current planning stage with land transfer, development and ongoing government infrastructure delivery.

The draft PDF recognises that an integrated delivery strategy is required. It proposes the following implementation components:

- **Overarching governance arrangements** to ensure a cross government approach is adopted and responsibilities are clearly understood (part of the risk management strategy).
- **A focus on the first 3,000+ dwellings** including:
 - Major capital works to allow the site to be developed for urban uses
 - IPRs to inform Deeds of Agreement for land developers (including a requirement to deliver complex special non-residential development areas, which will involve engagement with and agreements between government agencies)
 - Strategies (which may be further developed over time) to support development and achieve the wider objectives of the draft PDF (these include the need for cross agency agreement on modes of delivery for facilities and infrastructure).
- **Recommended further studies and investigations** to inform either or both first release and subsequent release areas (these are not material to the spatial planning elements addressed in these IPRs).

The overall approach to implementation is described in more detail in Part 3 of the draft PDF.

1.5 Scope: IPRs and Molonglo Valley stage 2

The ACT Government's accelerated land release program has and will require "fast tracking" of planning and infrastructure works to ensure the required blocks of land are delivered on time in Molonglo Valley stage 2. The traditional approach of preparing more detailed concept plans/precinct codes to guide future development has not been possible in these circumstances.

While the site and development challenges are complex, the draft PDF has provided confidence that an exemplary development outcome is achievable. The main issue is how to ensure the relevant principles and policies from the Structure Plan for Molonglo and North Weston and the spatial planning elements developed in the draft PDF are translated into the next level of planning and design through the IPR process.

It is proposed that the principles and policies from the Structure Plan for Molonglo and North Weston and the IPRs inform the Deeds of Agreement for land developers, government development sites **as well as** the planning and development of special non-residential areas, where further resolution of issues will be required.

For englobo land, the IPRs directly inform the content of Deeds of Agreement. Relevant elements of the IPRs will be included and 'worked up' in the Deeds for selected land parcels which are packaged for lease.

Typically, the use of concept plans/precinct codes provides the opportunity to vary the existing codes of the Territory Plan and tailor development standards to meet the site conditions. This option is not exercised under the IPR framework for the development of the first 3,000+ dwellings so all of the existing codes of the Territory Plan will have to apply to the IPRs which inform the Deeds of Agreement.

The following content is included in this document.

The **plans for infrastructure** are shown (section 2) covering:

- Sewer
- Water supply
- Arterial roads and connection points for adjacent development.

Government infrastructure works are not subject to or assessed by IPRs but notional trunk infrastructure alignments are shown to provide critical context for development. Work on resolving the detail on this infrastructure and on infrastructure master planning is continuing and will be finalised in time for developers to prepare Estate Development Plans (EDPs).

Note: The delivery of these and other infrastructure works is subject to further consultation with the relevant authorities in delivering the land release program. Whether the infrastructure works are delivered publicly (capital works) or privately (Deeds of Agreement) will be subject to further consultation with the relevant authorities.

IPRs for individual elements (section 3) are included with references to maps showing what will be expected to be provided by developers. These cover:

- defining the edge (including edge road conditions)
- internal natural and cultural heritage items to be excluded and/or protected from development
- stormwater management
- land for open space and community facilities
- the movement network including collector roads, some of which will be suitable for buses, pedestrian and cycle priority streets (providing supplementary pedestrian and cycling networks)
- housing yield, mix and densities including affordable housing.

Addressing each of these elements is mandatory. The words within each of these sections, combined with references to the maps, as well as the relevant principles and policies from the

Structure Plan for Molonglo and North Weston, will need to be addressed to show ultimate compliance.

'Indicative' elements need to be provided with the intent clearly satisfied. For each element the intent that has to be satisfied, or the tolerance for flexibility, is described.

In addition there are five 'special' areas with complex planning issues. For these areas **IPRs for Special Areas** (section 4) are included.

The five areas are:

- the western local centre, community facilities and P-6 school site
- the southern school/open space/community cluster
- three major areas of open space devoted primarily to stormwater management but also requiring appropriate boundary treatments and providing access corridors, amenity and passive recreation.

The Molonglo geological site may be considered as a sixth area deserving special design to ensure integration with the stage 2 area for access and landscape design, but it is outside the current modified development boundary (and will be subject to an alternative design process).

These special areas will provide fundamentally important public amenity, open space, stormwater management, retail and service assets for future residents. Due to the public importance and risks involved, especially those related to site complexities and the need for more detailed planning (including in some cases considerable agency involvement), there is a reasonable requirement for further government sign-off prior to EDP submission in respect of these special areas.

There are already examples of such provisioning in Deeds, where infrastructure or other works need to be complete and 'signed off' before applications can be lodged.

For these special areas the IPRs are still mandating required outcomes but are documenting contingent or inter-related items that will need further resolution before being finally approved. Essentially, a clause would be included in a Deed along the lines that an EDP Development Application cannot be submitted to Environment and Sustainable Development Directorate (ESDD) until certification is received from the Deed Manager that the IPRs have been satisfied. Negotiation with relevant authorities will need to be undertaken to ensure the IPRs are addressed.

More detail on the process is provided in the IPRs related to the Special Areas.

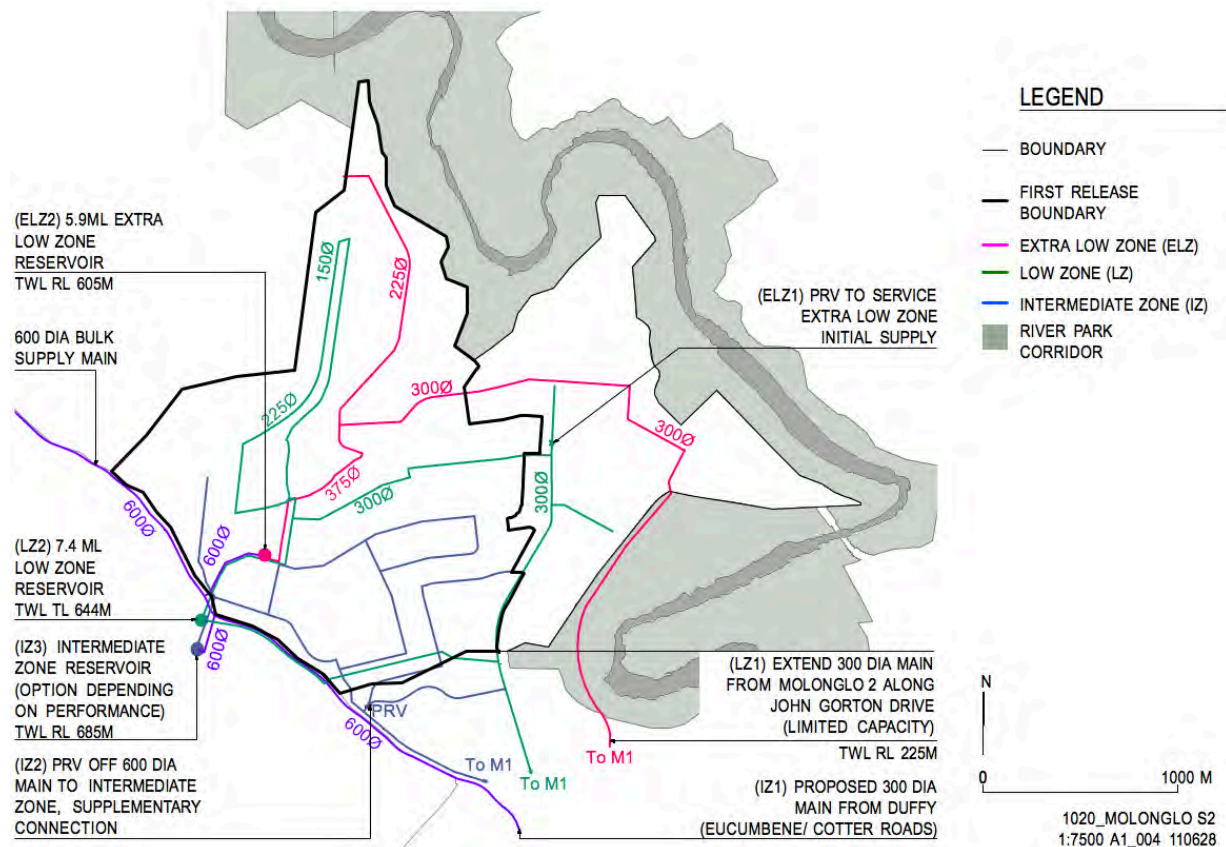
All the maps in this document are available in an A1 size format.

2 Government Infrastructure and Services

2.1 Water supply

The proposed water supply plan for the site is shown in Figure 3.

Figure 3 Water supply map (indicative)



Molonglo Valley stage 2 will require water servicing from the intermediate, low and extra low zones.

Required water infrastructure elements include a 600mm diameter bulk supply main and two (or possibly three- see intermediate zone servicing below) water reservoirs to supply the various water pressure zones within stage 2. It is anticipated that Actew Corporation (Actew) will construct the 600mm diameter bulk supply main which approximately follows the alignment of Uriarra Road. This 600mm diameter bulk supply main will link the Belconnen bulk supply main at the south of the site to the Stromlo/Higgins bulk supply main. Similarly, the low and extra low zone reservoirs will be delivered by Actew, along with the intermediate zone reservoir if required, as capital works projects. Reservoir works will include the connection to the bulk supply mains, valving and outlets to allow for future connection to developer delivered distribution mains.

It is anticipated that the smaller distribution mains will be constructed by developers and the ACT Government as part of the roadworks within the estate works, with alignments to be determined as part of detailed planning.

A summary of the proposed services for each pressure zone is outlined below.

Site Servicing –Intermediate zone

A 300mm diameter connecting main from the existing intermediate zone in Duffy will need to be constructed from the existing 225mm diameter main located at the intersection of Eucumbene Road and Cotter Road to the intermediate zone in Molonglo Valley stage 2. It is anticipated this main would be located on the northern side of Uriarra Road.

The 300mm diameter main along with a supplementary connection from a Pressure Reducing valve off the proposed 600mm diameter bulk supply main is proposed. ActewAGL then propose to monitor pressures as land is released in the stage 2 intermediate zone and, depending on performance, an intermediate zone reservoir located south of Uriarra Road (outside the stage 2 development boundary) may be constructed.

Site Servicing – Low zone

An extension of the existing 300mm diameter main from Coombs and Wright (stage 1) along the NSA could service the low and extra low zones of stage 2.

A low zone reservoir will be required to supplement water supply when the number of occupied dwellings in stage 1 and stage 2 exceeds 3,000, or a maximum of 1,000 dwellings in the low zone of stage 2. This reservoir will be located south of Uriarra Road, outside the stage 2 development. It is anticipated this reservoir will have a capacity of around 7.4ML, and will be supplied from the 600mm diameter bulk supply main.

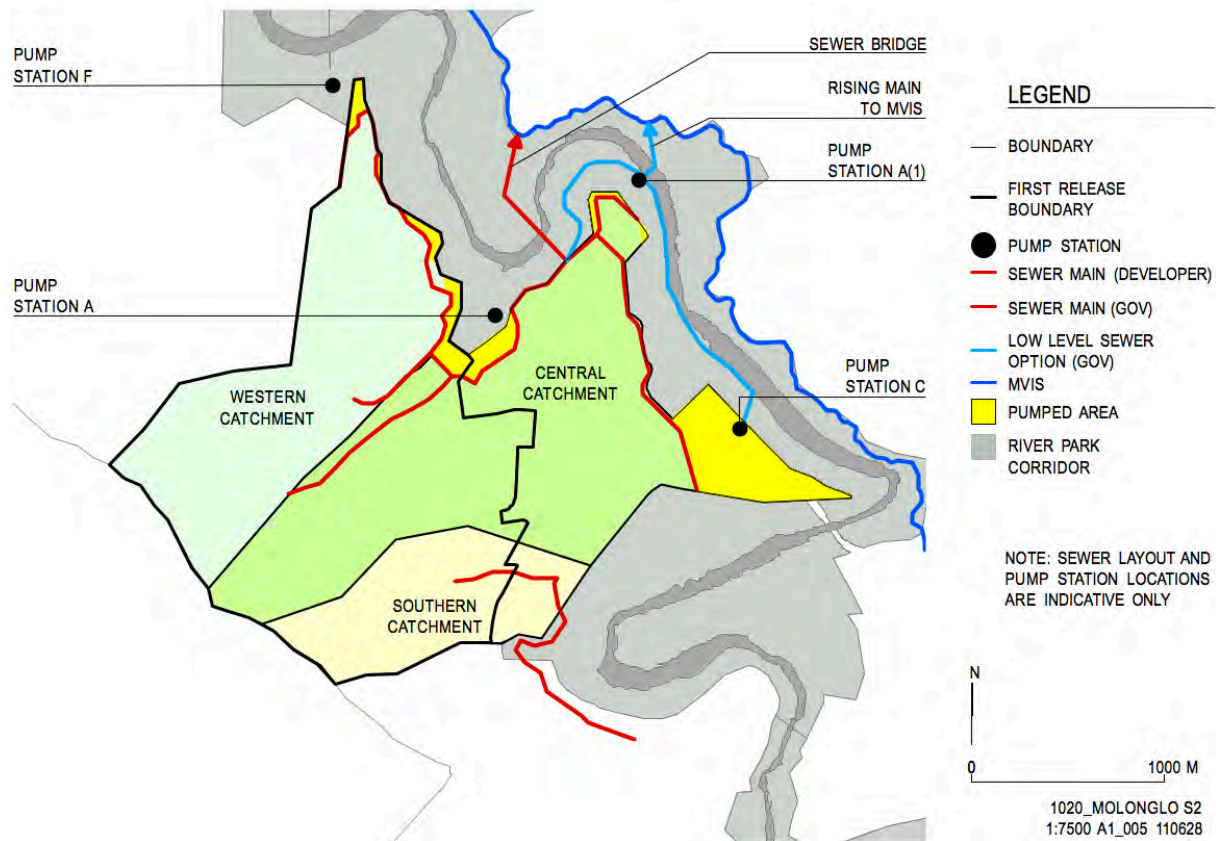
Site Servicing – Extra low zone

The extra low zone will require a new reservoir with a capacity of approximately 5.9ML to be located within the stage 2 boundary. It is proposed to locate this reservoir in the proposed open space south of a natural gully that flows to the Molonglo River.

2.2 Trunk sewers

The proposed sewer plan for the site is shown on Figure 4.

Figure 4 Trunk sewers map



Molonglo Valley stage 2 contains three sewer catchments as follows:

The *southern catchment* is approximately 74ha and extends east from the ridgeline to the south-east boundary of the site. This catchment drains to the south and will be drained by the Molonglo Trunk Sewer to be constructed by the ACT Government.

The *western catchment* is approximately 168ha and is located to the west of the main creek. This catchment generally drains north east towards the Molonglo River.

The *central catchment* is approximately 164ha and extends from east of the main creek to a ridge line running east west along the southern side of the site. This catchment generally drains north towards the Molonglo River.

The central and western catchments will be serviced by a gravity sewerage system with areas too low to drain to the MVIS being served by sewer pumping stations.

Two solutions for the sewer are as follows:

1. Construct new gravity main and connect to Molonglo Valley Interceptor Sewer (MVIS) via new sewer/pedestrian bridge

This involves the construction of a new gravity main to connect to the MVIS. It requires the construction of a sewer bridge across the Molonglo River that will also function as a pedestrian/cycle bridge, to be constructed by the ACT Government. The bridge level will be to suit connection to the MVIS (deck level at approximately RL 530m).

2. Construct new gravity main and connect to MVIS via new pump station and rising main as an interim solution

As the lead time for the construction of the sewer bridge is likely to be longer than the lead time available, an interim solution is to use the Coppins Crossing sewer pumping station (A1) as a means of providing the first sewerage services to the central and western catchments.

A number of sewer pump stations to service areas below the reach of the gravity catchment which will be required.

2.3 Major arterial roads

The roads to be provided as part of ACT Government's capital works program and connection points are shown in Figure 5. The final alignments may vary slightly from those shown.

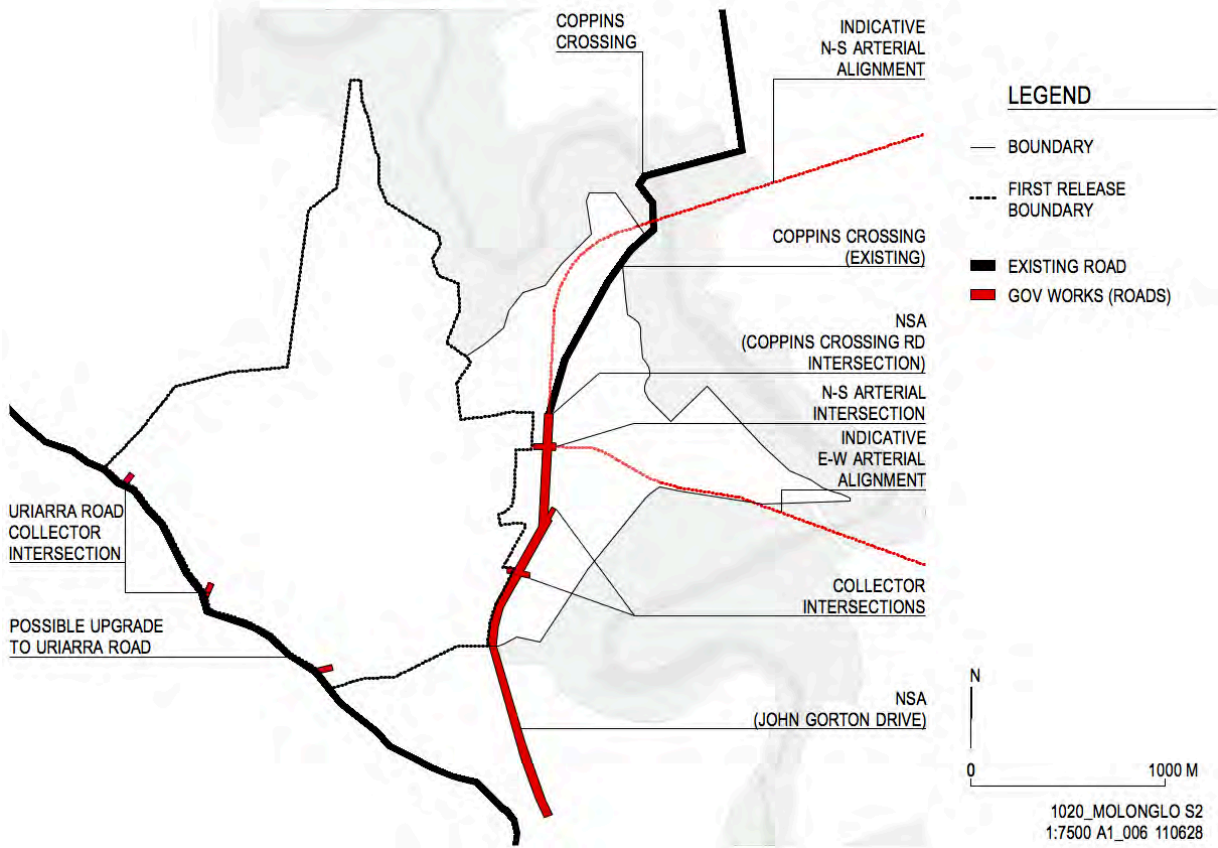
Access to dwellings in the lower density areas to the south-west of stage 2 would likely include construction of intersections on Uriarra Road and construction of approximately 500m of the NSA to the first signalised intersection with a collector road, providing a major entry point in to stage 2.

From that point it is envisaged that the NSA would continue approximately 800m to transition to Coppins Crossing Road, including provision for the EWA intersection. This could initially be constructed as a two lane road, to be later upgraded to four lanes when traffic volumes warrant duplication as stage 2 and the group centre is developed.

The next stages of construction would include the NSA bridge crossing of the Molonglo River and an arterial road connection to William Hovell Drive.

The final stages of construction would include the EWA and bridge across the Molonglo River from the NSA to the Tuggeranong Parkway.

Figure 5 Constructed roads



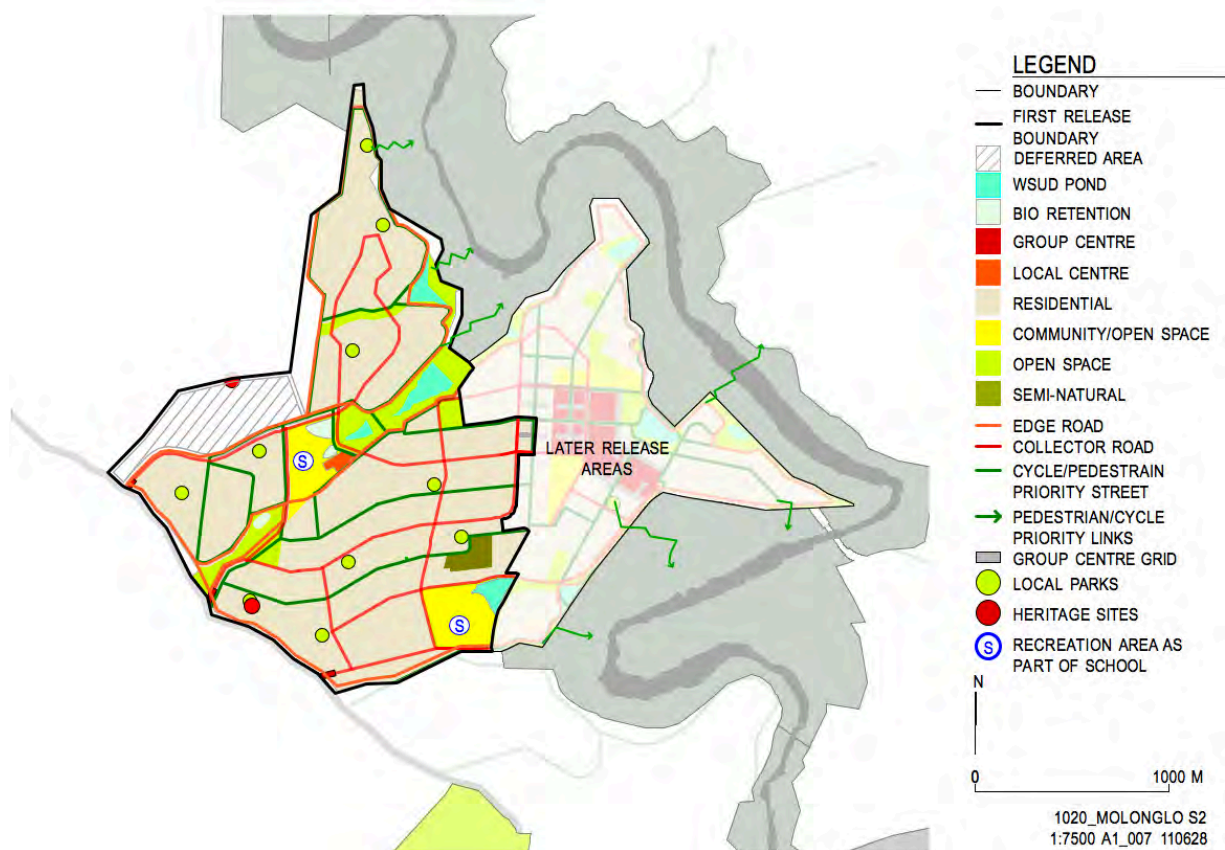
3 IPRs for inclusion into Deeds of Agreement

3.1 Consolidated IPRs map

Figure 6 is the key map showing the IPRs for the first land release area in stage 2 to be delivered via Deeds of Agreement and in agreement with the Economic Development Directorate (EDD) for implementation in ACT Government land development.

A map is included for each individual element that follows.

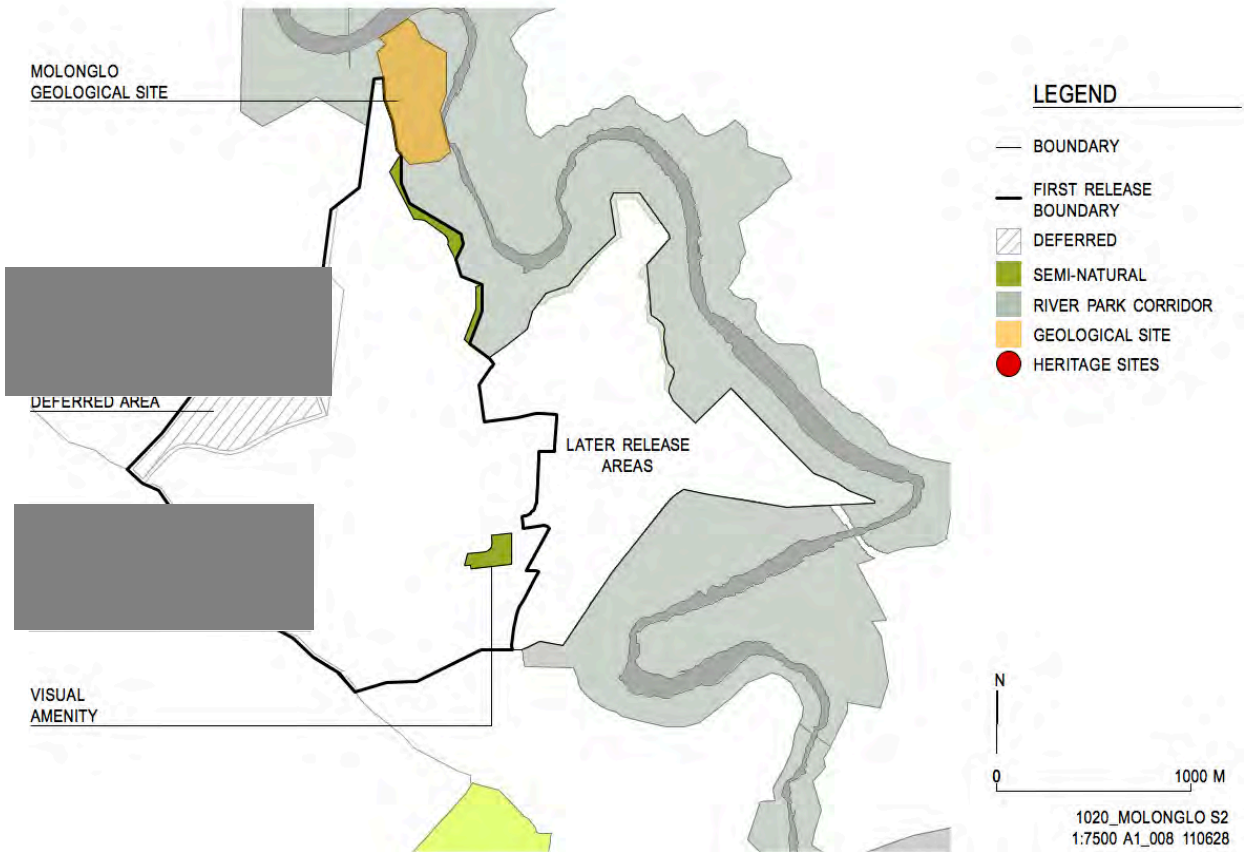
Figure 6 Consolidated IPRs for Deeds of Agreement



3.2 Natural and cultural heritage items

All natural and cultural heritage features shown in Figure 7 are to be retained or protected.

Figure 7 Natural and cultural heritage features



The stand of remnant vegetation marked as ‘semi-natural’ is to be retained in open space and excluded from development. Provided the trees are retained this area could accommodate a wide range of facilities including playgrounds, picnic and barbecue facilities and informal sports area.

The Aboriginal heritage and cultural values of the site identified [redacted] - Grinding grooves identified in the Molonglo Stage 2 Detailed Heritage Assessment (BIOSIS 2010) is to be protected by a 20m buffer during construction phase and protected, conserved and maintained subsequently as per the Conservation Management Plan (BIOSIS 2011) for this site and any subsequent ACT Heritage advice/requirements.

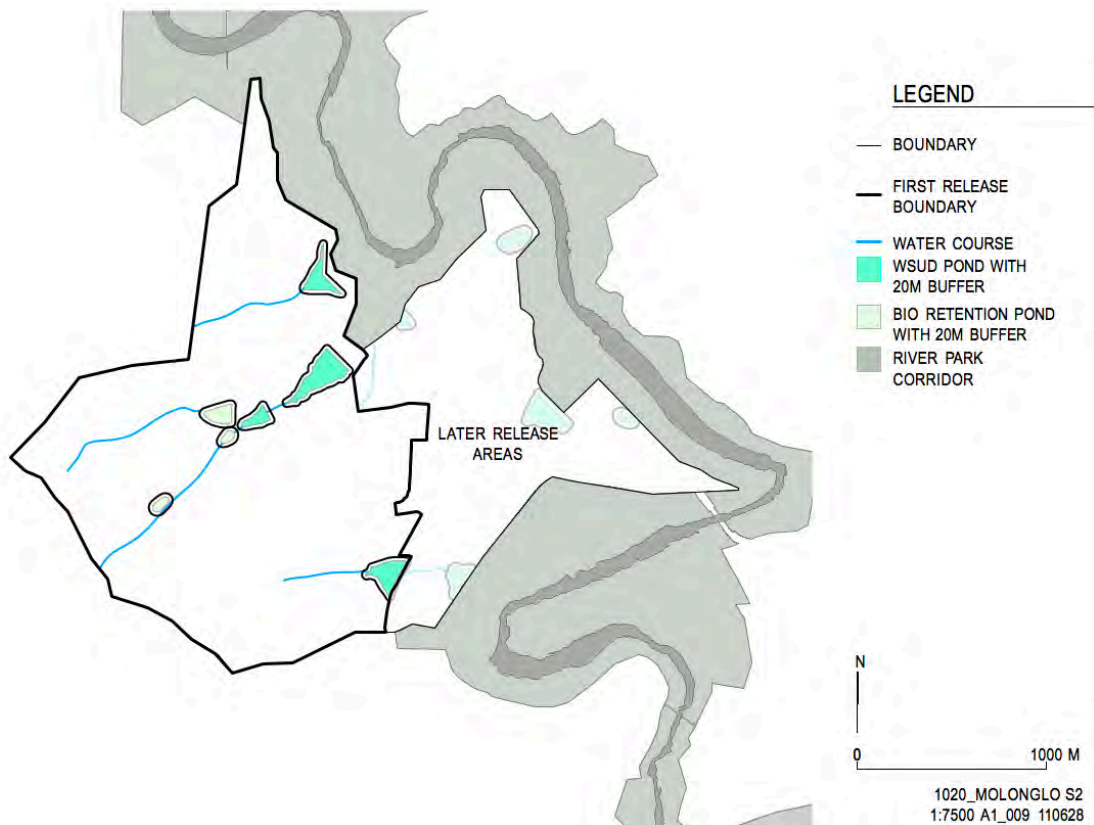
The heritage and cultural values of a surveyors blaze on a tree on the western ridge identified as [redacted] identified in the Molonglo Valley Stage 2 Detailed Heritage Assessment (BIOSIS 2010) is to be protected by a 20m buffer during construction phase and protected, conserved and maintained subsequently as per the Conservation Management Plan (BIOSIS April 2011) for this site and any subsequent ACT Heritage advice/requirements.

The Molonglo geological site to the north, containing fossil limestone outcrops, and forming a development boundary, is a heritage listed item and should be protected as per ACT Heritage advice/requirements.

3.3 Stormwater

Major stormwater management measures are to be generally located as indicated by Figure 8.

Figure 8 Stormwater plan



Explanatory note:

Stormwater quality improvement and protection of water quality in the Molonglo River and Murrumbidgee River downstream is an important overall Government objective and an important objective for the Molonglo Valley development.

The key objective for the Molonglo Valley development in this respect s to achieve the regional water quality targets as described in the Waterways WSUD Guidelines in the Territory Plan. These regional targets are above the developer targets contained in the development specific codes in the Territory Plan. These targets will be partially met by measures adopted for each individual development site - to be demonstrated in future EDP submissions and partially by measures to be implemented by Government as part of the capital works program.

Developments in the first englobo releases in stage 2 are to meet the developer targets in the Territory plan while those in later stages including developments abutting the Molonglo River corridor will need to meet targets between the developer targets and regional targets in the Territory Plan. These requirements for later stages of the development will be defined and may form part of the Deed conditions specific to each development.

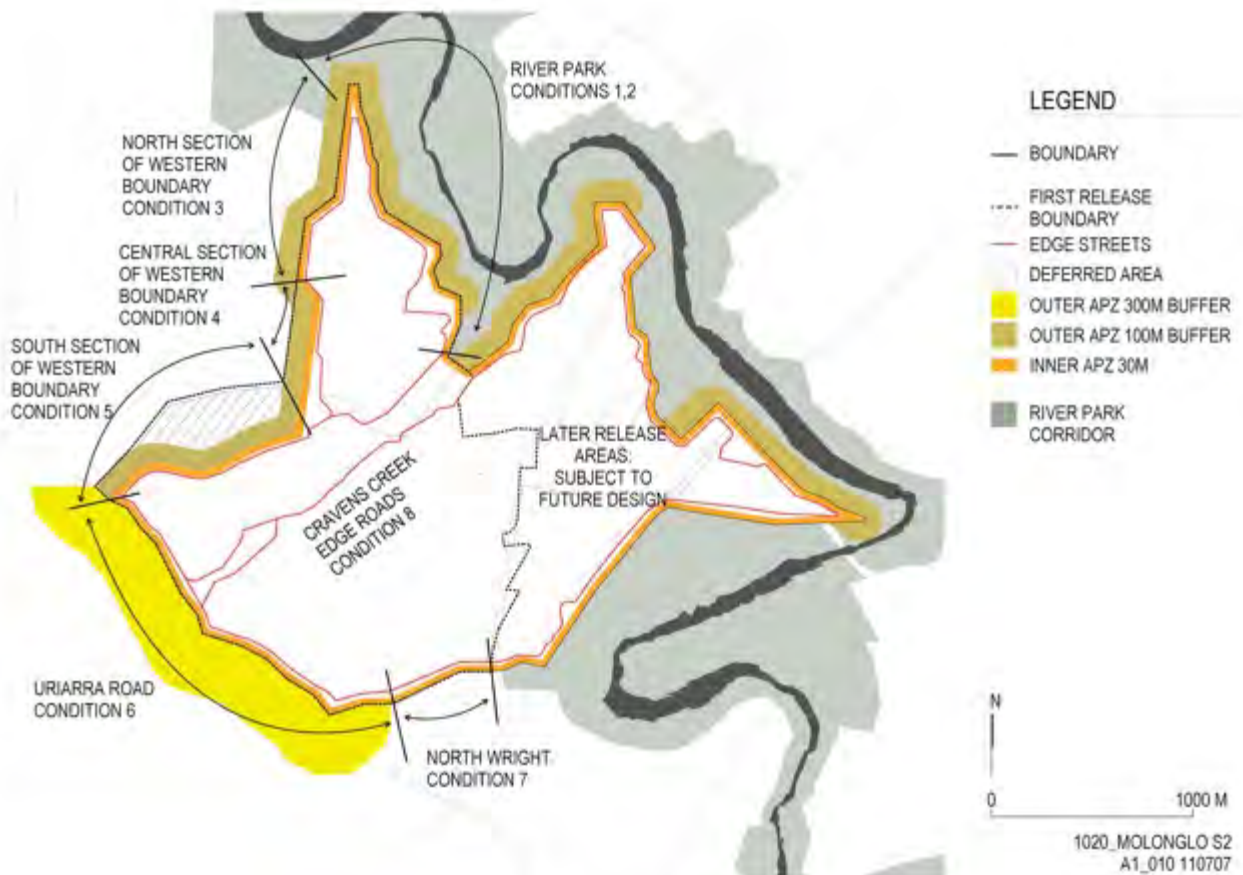
Measures being considered include:

- Water quality control ponds and wetlands at the downstream end of each catchment
- Bio swales and bio retention basins in the northern catchments
- Possible infiltration zones at major collector roads
- Rainwater tanks on blocks
- Other elements as specified in 'Water Ways: Water Sensitive Urban Design General Code'.

3.4 Development edges

The boundaries, and development edges as defined by edge roads, are shown on Figure 9.

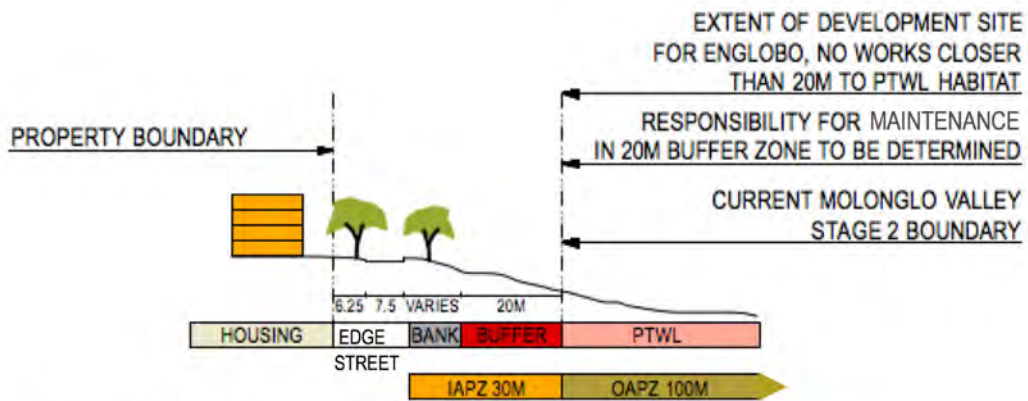
Figure 9 Development edges



Edges are to be developed as relevant to the particular development parcel as indicated by Figure 10 to Figure 17.

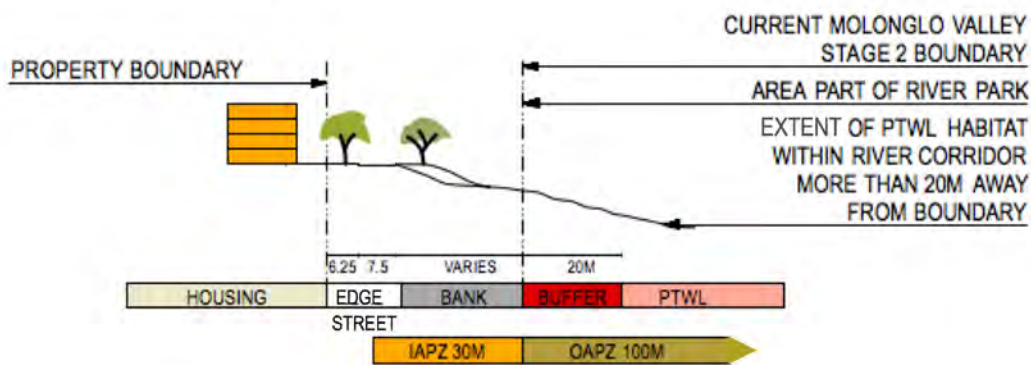
There is a requirement for a 20m buffer zone to the PTWL habitat adjacent to or outside the site boundary. An additional Inner Asset Protection Zone is required within the site boundary area (not within the river corridor or urban open space). Cycle paths, walking tracks, roads and other infrastructure are to be located in the Inner Asset Protection Zone, not within the 20m buffer zone to PTWL habitat.

Figure 10 River Park edge indicative condition 1



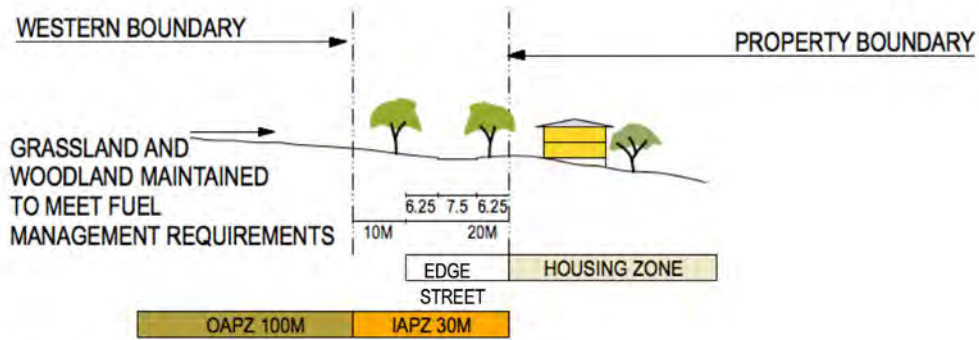
CONDITION 1

Figure 11 River Park edge indicative condition 2



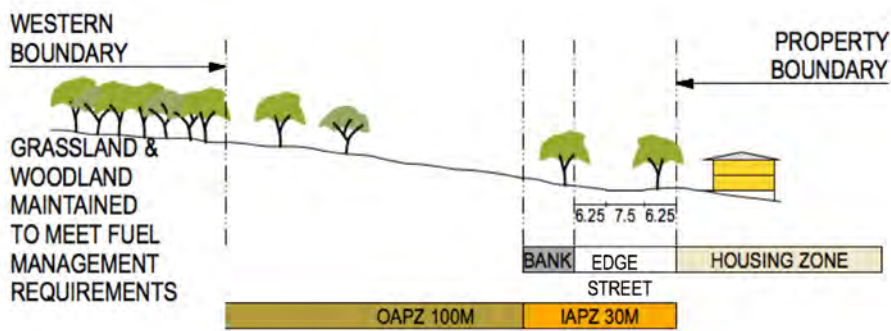
CONDITION 2

Figure 12 North section of western edge condition 3



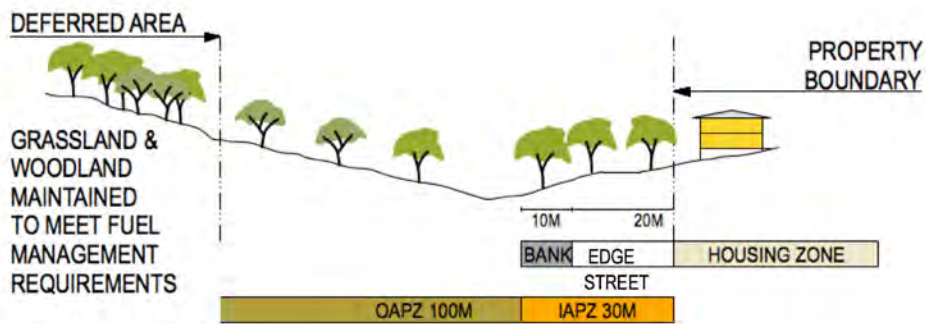
CONDITION 3

Figure 13 Central section of western edge condition 4



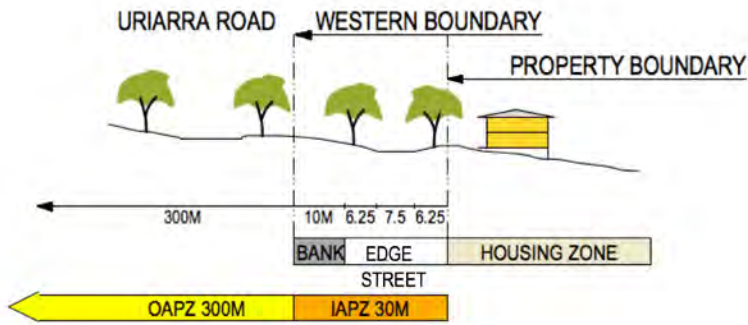
CONDITION 4

Figure 14 South section of western edge condition 5



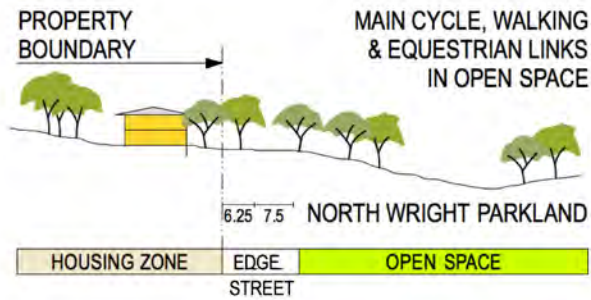
CONDITION 5

Figure 15 Uriarra Road edge condition 6



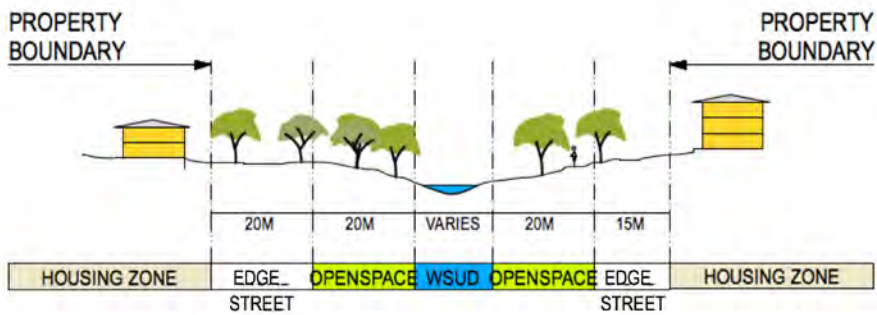
CONDITION 6

Figure 16 North Wright edge condition 7



CONDITION 7

Figure 17 Cravens Creek edge condition 8



CONDITION 8

3.5 Movement and access network

Collector roads

The principal network for vehicles is indicated by the 'collector roads' on Figure 20.

Compliance is satisfied by the provision of collector roads generally as indicated by the alignments shown on Figure 20. Alignments can be modified by 150m either side of the alignment shown but there shall be no reduction in the number and they must connect to the NSA and Uriarra Road in the locations shown.

Pedestrian and cyclist priority streets (low traffic volumes)

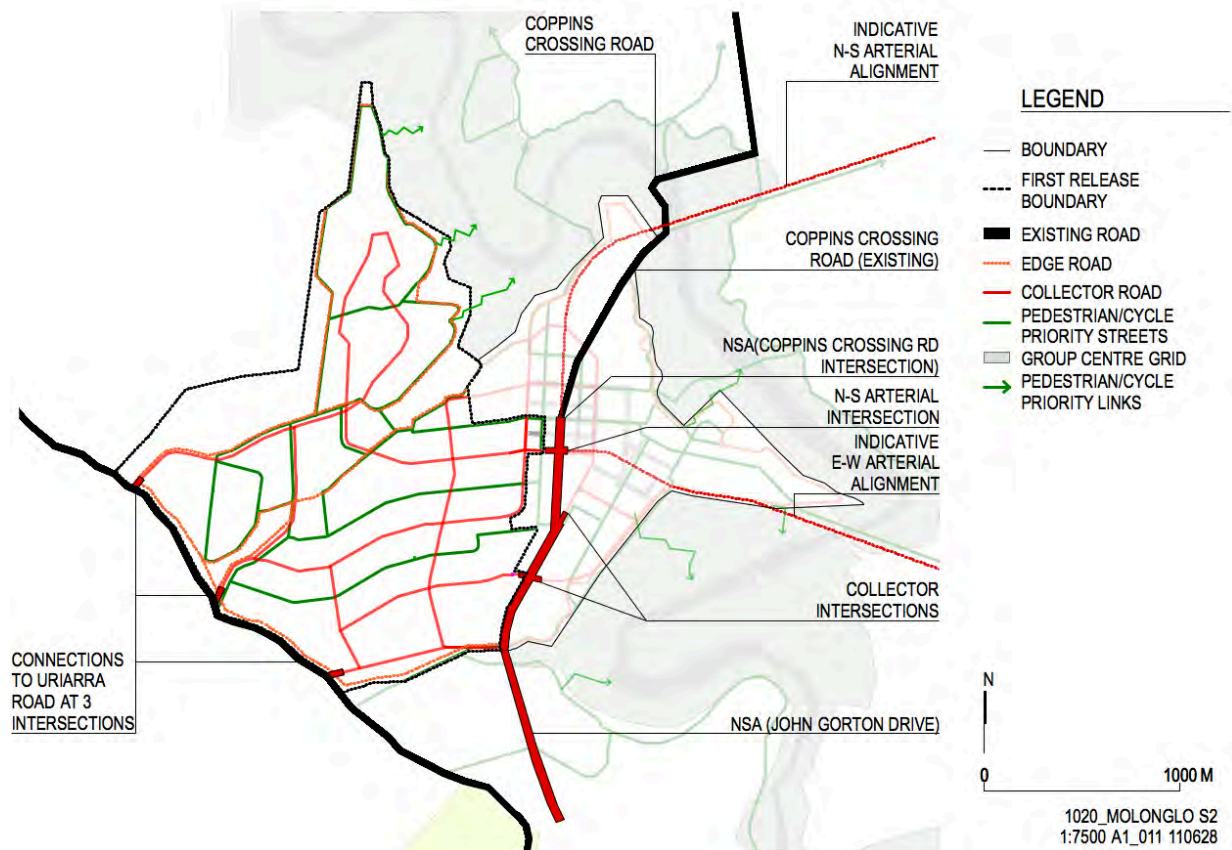
A supplementary, continuous and 'alternative' network for pedestrians and cyclists is indicated by the pedestrian and cyclist priority streets on Figure 20.

Compliance will be satisfied by the provision of streets that prioritise movement for pedestrians and cyclists (and the status of vehicles is subordinate wherever possible) generally as indicated by the alignments shown on Figure 20. Alignments can be modified by 100m either side of the alignment shown but there shall be no reduction in the number of routes.

These pedestrian and cycle priority streets will comply with the standard road designs but need to give priority to pedestrians and cyclists through a combination of T-intersections, threshold treatments, slow points and continuous cycle pavement. The gradients for these streets should be less than 5 percent unless site conditions (such as creek crossings) or other objectives (such as minimising intersection turns for buses) can be shown to make this unachievable. In this case alternative off-road connections through open space should be provided, even though this may be more circuitous.

Bus route

Generally, according to the Residential Subdivision Code, all major and minor collector roads need to be capable of carrying buses. Given the topography of the site this will be difficult to satisfy. Once the ultimate bus route is decided by Territory and Municipal Services Directorate (TAMSD), and by agreement with ACTION and Roads ACT, roads included in the route will be expected to be capable of carrying buses.

Figure 18 Movement network**Explanatory note to Figure 18**

The access and movement layout for stage 2 is predicated on meeting the current roads standards; however the topography could make compliance difficult in many situations. There are options in these cases for the roads to become privately owned and maintained through community title. However, this approach should only be used in extraordinary circumstances rather than the norm as public access and permeability through the site is essential for pedestrian, cycling and vehicular traffic.

Any deviation from the road design standards are to be agreed with TAMSD.

The collectors will provide pedestrian and cycle connections to major destinations as part of the comprehensive "trunk-route" network. In addition, a supplementary, continuous and 'alternative' network for pedestrians and cyclists is provided by 'green streets'. This network will provide convenient, safe and attractive routes to major attractors including the group and local centre, open space and schools.

It should be possible to achieve a complete network of 'green streets' with gradients less than 5 percent.

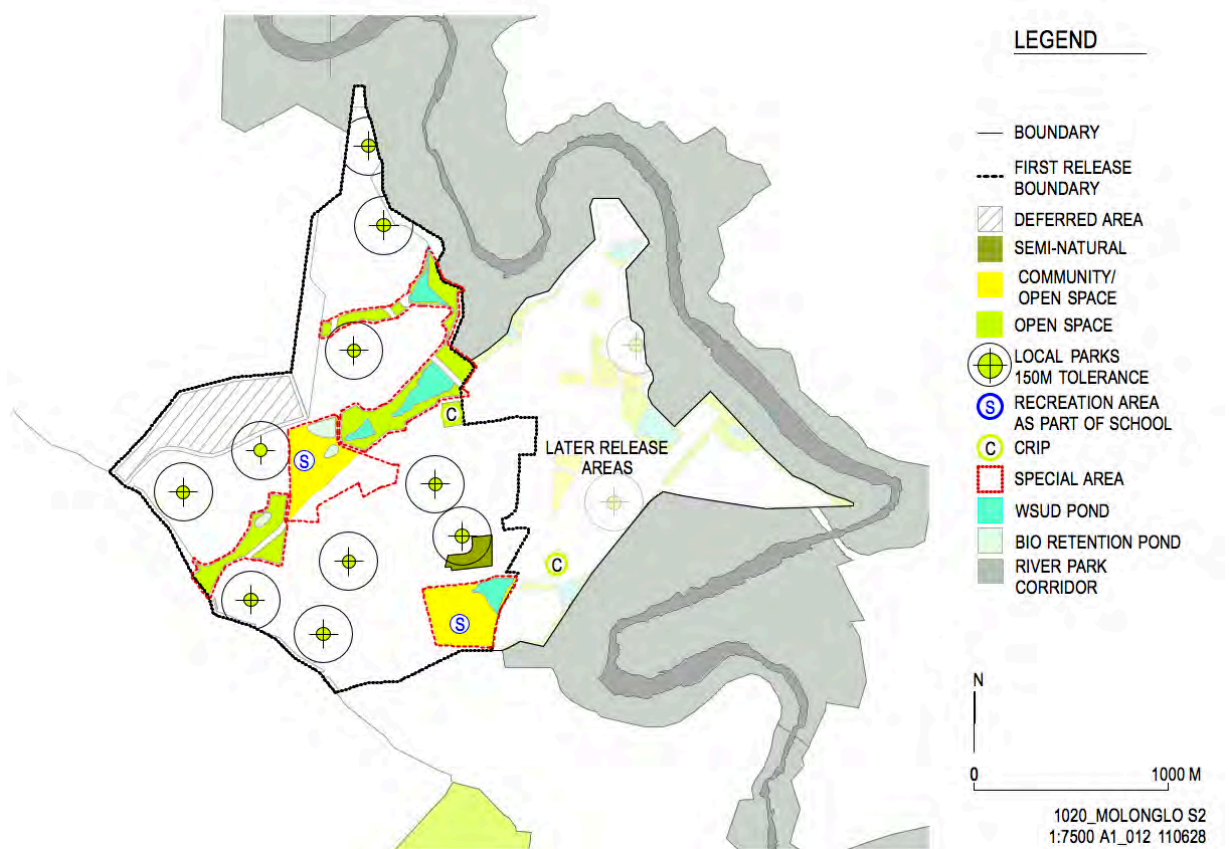
The details of the treatments in the 'green street' network and acceptable gradients given site conditions will need to be further resolved in consultation with TAMSD during the EDP preparation.

All associated bus stop infrastructure will be in accordance with TAMSD standards.

3.6 Open space and community facilities

Land for open space shall be reserved and allocated for open space and community facilities in accordance with Figure 21.

Figure 19 Distribution of open space and community facilities



A Community Irrigated Recreation Park (CRIP) of a minimum of 1.5ha is to be provided generally in the location shown on Figure 19. The design or scheme must satisfy EDD (Sport and Recreation) requirements (see explanatory note to specifications overleaf).

Small local parks (of 5000 m² minimum including bordering verges) in residential areas shall generally be provided as shown on Figure 19, with flexibility in location of 150m from the centre point indicated to the edge of the park.

The local parks are to be located to ensure residents have good access to open space and achieve:

- accessibility to the residential area they are intended to serve without the need to cross a collector road
- dwellings generally within 200m of some form of open space (consistent with clause 65 in the Structure Plan)

One community garden should be included within the first land release area in stage 2, and land should be allocated for this purpose on a suitable area (with appropriate gradient, soils, orientation etc). The use could replace or partially replace a required local park, or could be included in the design of one of the special areas adjacent to a school or childcare facility. The Deed of Agreement in relation to this should require a bond for the cost of provision and this bond be held for future community use in development of the community garden.

All other open space and community facility areas shown on Figure 19 are discussed in section 3.1 - Natural and Cultural Heritage items (including the site which has remnant vegetation with visual amenity values), and in section 4 on the Special Areas.

Explanatory note on specifications

CRIP

- *minimum of 1.5ha.*
- *irrigated low maintenance play space to support informal physical activity and recreation activities.*
- *connected to a non potable water source for irrigation purposes and utilise a drought tolerant grass species (e.g. couch), where possible and economically viable.*
- *generally include the provision of a toilet block, community barbeque and picnic shelter.*
- *other facilities that could also be considered include the provision of a children's playground, basketball half court, tennis wall and cricket nets.*
- *a variety of low maintenance, drought tolerant tree species should also be provided from an aesthetic perspective and to provide shade.*
- *the irrigated grass area does not need to be uniform in its shape or design, but it should be on flat land and be large enough (minimum of 0.8ha) to accommodate a range of informal recreation pursuits and activities.*
- *design and construction to be completed in accordance with the relevant TAMSD design standards.*

Local parks

- *minimum of 5000m² including verges connected to a non potable water source for irrigation purposes and utilise a drought tolerant grass species (e.g. couch), where possible and economically viable.*
- *generally include the provision of a toilet block, community barbeque, children's playground and picnic shelters variety of low maintenance, drought tolerant tree species should also be provided from an aesthetic perspective and to provide shade.*
- *design and construction to be completed in accordance with the relevant TAMSD design standards.*

3.7 Housing

3.7.1 Yield, mix and densities

Figure 22 shows the distribution of the different density areas. At least 3,538 dwellings need to be provided in the first land release area in stage 2, as indicated on Figure 22. Table 1 shows the desirable densities and housing mix associated with these density areas in the first land release area.

The total yield indicated in Table 1 has to be achieved. However, final designs may include a greater or lesser proportion of particular housing types (the tolerances are explained in the explanatory note on process below).

Figure 20 Distribution of housing density

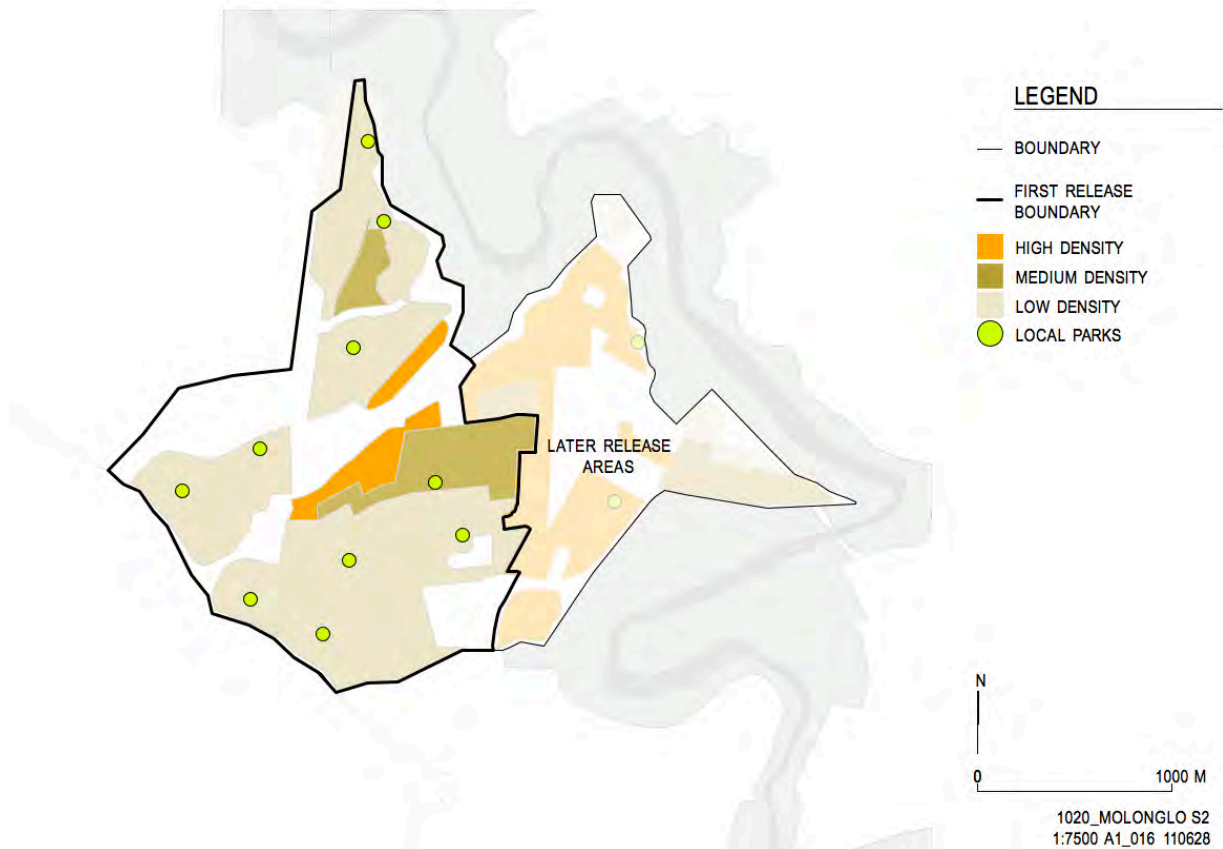


Table 1 Housing mix and yield for Molonglo Valley stage 2 first release area

First release	Net AMCORD d/ha	Pure net d/ha	ha	Dwellings	Detached	Compact	Row	Apart.
Group centre								
Low density	13	21	112.7	2,319	2,203	116	-	-
% mix					95%	5%		
Medium density	16	26	20.5	535	321	134	80	-
% mix					60%	25%	15%	
High density	35	62	11.0	684	-	308	137	239
% mix						45%	20%	35%
TOTAL				3,538	2,524	558	217	239
Share of total					71%	16%	6%	7%

Note:

1. Net AMCORD density refers to the definition of residential density as set out in the Australian Model Code for Residential development (AMCORD) and includes an allowance for the area of associated roads. Pure net density is the number of dwellings divided by the actual area of subdivided lots.
2. Figures shown in the table have been 'rounded' as appropriate.

Explanatory note on process

Any particular development parcel will contain a certain area (ha) of the different density precincts.

Each of these density precincts will be required to generate a housing yield based on the indicated "net" residential densities for each density category as follows:

- Low density approximately 13 dwellings per net hectare (AMCORD definition)
- Medium density approximately 16 dwellings per net hectare (AMCORD definition)
- High density approximately 35 dwellings per net hectare (AMCORD definition)
- (the pure net densities in Table 1 do not include the area of roads).

Each density category also has a preferred housing mix (or share) as indicated in Table 1. The number of each dwelling type to be provided in each density area is generated by applying this share (%) to the total yield in each density precinct, with the following interpretation to provide for flexibility.

- A maximum number of apartments is defined for each precinct
- A maximum number of row houses is defined for each precinct
- A minimum number of compact dwellings is defined for each precinct
- A minimum number of larger lot detached dwellings is defined for each precinct.

The ultimate distribution of the density precincts – and therefore the zones in the EDP – could be distributed to meet particular site conditions or planning outcomes provided they are generally in accordance with the density distribution shown on Figure 20.

Housing Types Definitions

The 'housing mix' includes 'traditional' detached dwellings but also includes detached and attached compact housing, row housing and apartments.

- **Conventional Detached houses** – Average of around 500m² blocks, attractive to market, able to comply with existing codes. Larger lots can deal with issues related to solar access and steeper slopes.
- **Compact Housing**– Stand alone dwellings on individual lots with a maximum area of 250 m². These may be able to be developed to meet the \$328,000 affordable housing benchmark in some locations. However, it is likely that more detailed designs for Integrated Housing Development parcels will be required to gain approval for these housing types.
- **Row/terrace Houses** – Desirably in single ownership without common walls though usually delivered with common walls by developers. Average size 200m² block. It is likely that more detailed designs for Integrated Housing Development parcels will be required to gain approval for these housing types.
- **Apartments/Multi-Units** – Current yield calculations suggest approximately the following proportions by number of bedrooms: Multi level in group title 40 percent, 1 bedroom 75m²; 55 percent 2 bedroom 90m²; 5 percent three bedroom 105m².

3.7.2 Affordable housing

Development of Molonglo Valley Stage 2 aims to provide future residents with a diversity of housing options, including the cost of housing. The ACT Government's Affordable Housing Policy requires that 20% of the housing stock be sold at up to \$328,000 per dwelling.

The requirement for 20% of housing stock to be affordable can be met for the whole of stage 2. However the higher costs of construction for houses given the topography, means that a higher percentage of affordable dwellings may possibly be apartments, the majority of which will be constructed in the later stages of land release in stage 2. Notwithstanding this, it is desirable to have a reasonable target for affordable housing in the first land release area given the availability of compact blocks and row housing dwellings.

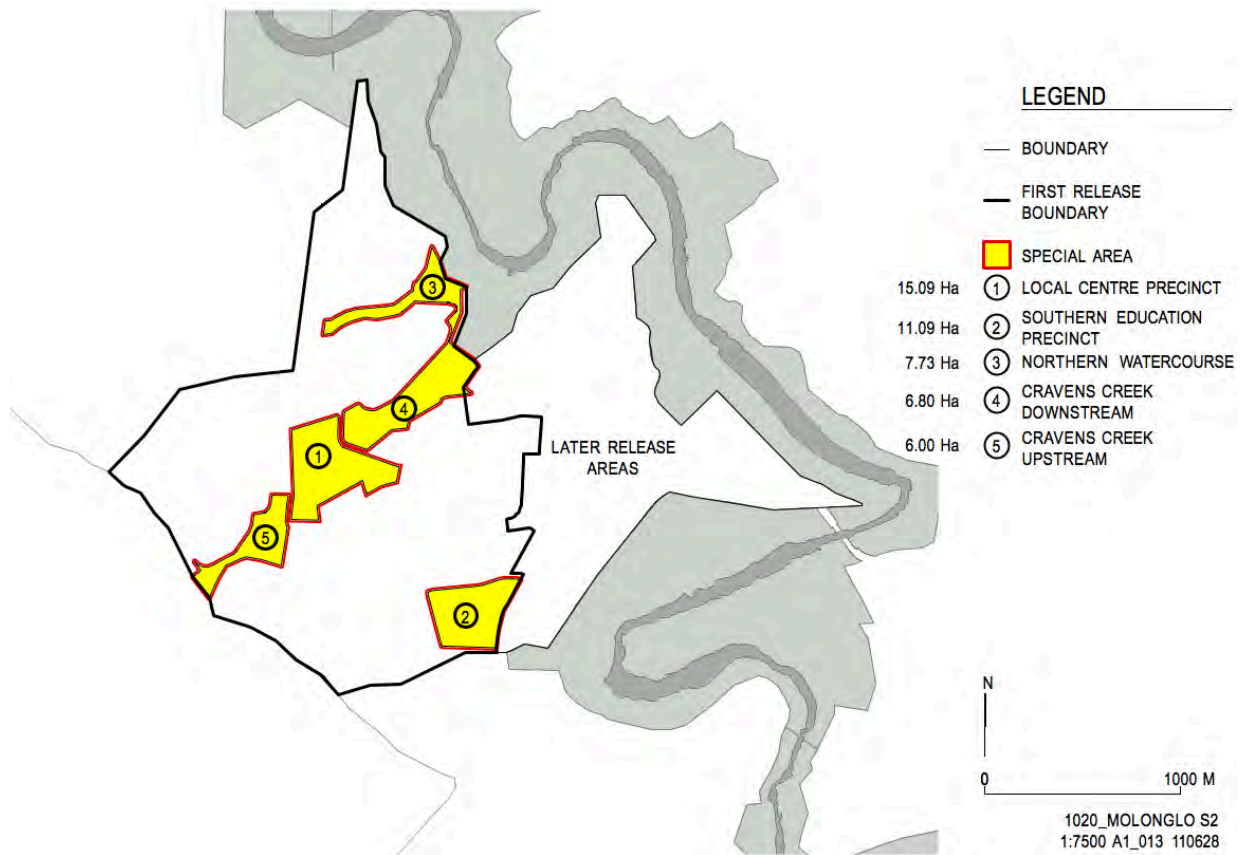
Affordable housing should be distributed throughout the development area. Therefore, a share of affordable housing of perhaps less than 20% shall be provided in the first land release area in stage 2, with the balance to achieve 20% overall delivered in the remainder of stage 2.

4 IPRs for Special Areas

4.1 Special Areas map

The Special Areas in the first land release area are indicated on Figure 21.

Figure 21 Special Areas



For these areas the parties will acknowledge that Annexure A1 of the Deed (EDP) relating to these areas is only indicative. The developer will then immediately and at its own cost prepare and submit to the Estate Manager for approval a substitute EDP in accordance with the requirements of the Deed and subject to conforming with the IPRs (for the relevant Special Area). Liaison with relevant authorities will be required in the course of preparing this 'substitute' EDP.

Upon receipt of the EDP the Estate Manager will circulate the plan to all relevant authorities for comment and prepare a consolidated response with advice from the ESDD Impact and Estates Team to the developer.

After addressing the issues raised by the relevant authorities the developer shall amend the EDP where necessary and submit the revised EDP to the Estate Manager for approval. Upon acceptance

of the plan, the Estate Manager shall certify that the plan may be submitted as a development application.

In practice there would be negotiation with ESDD (and other relevant agencies) as there is already with Directorates of ET and TAMS in regard to similar provisions.

4.2 Special Area 1: Local Centre/Education/Community Precinct

The area indicated as Special Area 1 on Figure 21 shall be provided for the Local Centre/Education/Community Precinct. The boundary alignment is flexible by plus or minus 200m and the total area of 15.09ha by plus or minus 10 percent. A major part of this area will be 'handed back' (excluding the local centre/retail area and high density residential area).

The early establishment of an attractive and functional Local Centre Precinct will be critical for the success of the first release area and the requirements for quality design outcomes are specified in clauses 31 and 32 of the Structure Plan for Molonglo and North Weston. The area has a steep topography, is at the confluence of two watercourses and will include two creek crossings. Extensive land-forming will be required to integrate and accommodate the different elements, along with more detailed dialogue with end users (both government and non-government). This makes its design and development complex and best resolved at the point of an EDP. However, design parameters can be nominated.

- The Local Centre/Education/Community Precinct will provide capacity for the following activities:
 - P-6 school core area comprising buildings and secure courtyard and other play spaces, drop-off areas and bus stop
 - Dual-use active recreation areas to be for shared community use (reference TAMS/EDD SRS provisioning standards), including single soccer field, hardstand courts, informal recreation space and access, to EDT satisfaction
 - Shared parking for recreation, local centre community facilities, church, school and retail
 - Convenience retail and specialty shops with a gross floor area of 2,500m²
 - Community hall (500m² that could be integrated with the school)
 - Child care facility (300-500m²)
 - Site for a future local church or equivalent space
 - Pathways to enable community access to school open space and community facilities buildings, and as parts of a continuous walking and cycling network
 - Landscaping and other public domain provisioning in accordance with (TAMSD standards).
 - Design guidelines and consideration of the interface with the deferred high density housing area that could provide the basis for provision in the future concept plan/precinct code.

- Stormwater treatment including wetland ponds or bio-retention areas and other infrastructure will be provided on the site in accordance with the provisions of the relevant infrastructure master plan.
- The precinct has steep grades and an integrated earthworks plan will be required for the entire site to ensure access to and between all site uses, satisfactory interfaces with adjoining roads and pathways, and stormwater infrastructure.

This precinct includes an area of around 8 ha identified for future high density development. The boundary for the local centre precinct includes this high density residential area, to realise efficiencies from the integrated planning of the centre and residential area.

The planning for the site should also:

- determine external and off-site requirements for developers (e.g. boundary conditions and responsibilities such as retaining walls, landscaping and path connections)
- establish community access arrangements and associated security aspects
- ensure that there is dual use of car parking and appropriate rates of provision taking into account the efficiencies of co-location and potential for 'park-once' and the variations in peak demand that occur over the course of the day and week.

The process would include relevant agencies in particular the EDT to ensure the school design meets all relevant requirements.

Explanatory note on specifications for recreation area as part of School (Government School Oval)

- *unencumbered flat land to support the minimum provision of one combination football/rugby field (approximately 1.0ha) and additional space to support informal play and physical activity requirements (exact size requirements for each government school oval should be confirmed with the ETD)*
- *designed to support community access outside of school hours and on weekends, therefore security fencing at schools cannot prohibit external community use of these open space areas.*
- *designed, constructed and maintained by the ETD; EDD Sport and Recreation Services recommend that any natural turf football/rugby field should be designed and constructed in accordance with the relevant TAMSD design standards.*

Indicative concepts, site and floor areas

Some early concepts have been prepared for this site as shown in Figure 22. These should be seen as a guide only. Relevant, indicative site areas and floor areas are shown in Table 2.

Figure 22 Indicative layout for Local Centre/Education/Community Precinct

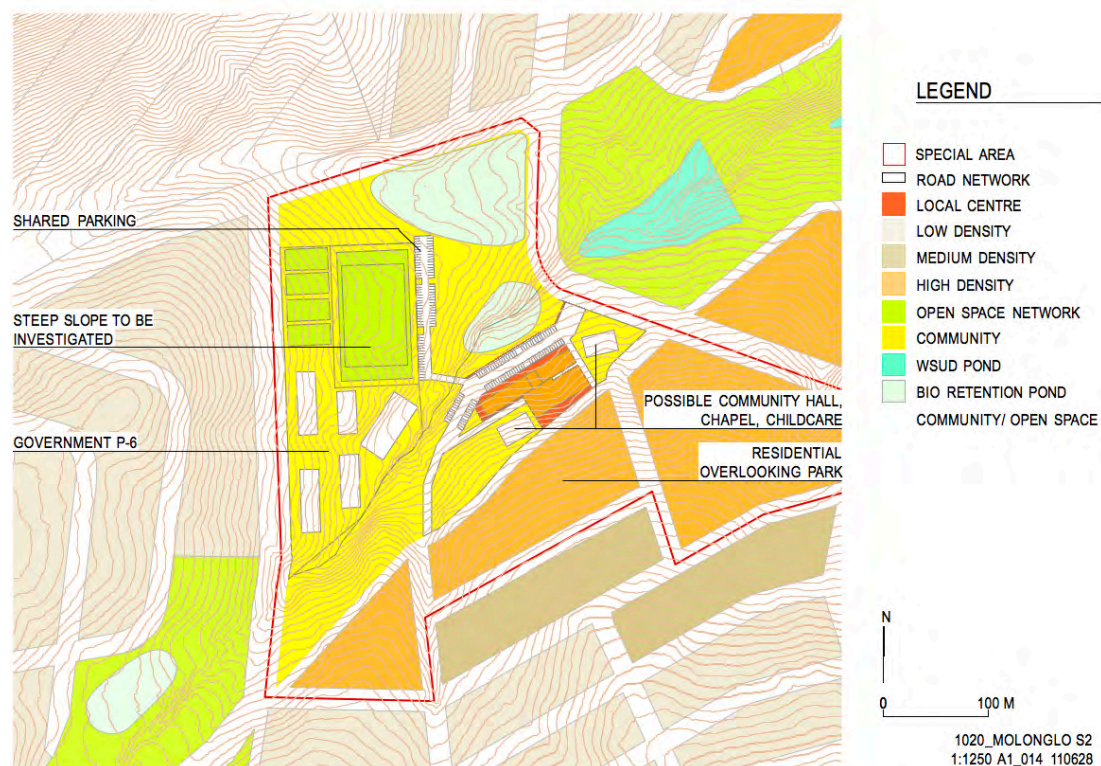


Table 2 Indicative site and floor areas for Local Centre/Education/Community Precinct

Use	Indicative gross floor area (m ²)	Site area (ha)
School	8,000	3.20
Local centre – Commercial/retail/community/childcare	3,500	0.79
Bio-retention areas		1.40
Open space		3.25
Shared parking (included in other areas)	150 spaces	incl
High density housing	Approx 267 dwellings	4.87
Roads		1.64
Total land area		15.09
Dual use recreation on school site (indicative)		
Soccer pitch	1	
Courts	4 outdoor	
Indoor recreation	2 indoor courts	

4.3 Special Area 2: Southern Education/Community Precinct

The area indicated as Special Area 2 on Figure 21 shall be provided for the Southern Education/Community Precinct. The boundary alignment is flexible by plus or minus 200m and the total area of 11.1ha is flexible by plus or minus 10 percent. Ultimately, this will all be a 'hand-back' site.

The area will need to accommodate the following elements.

- It will provide capacity for the following activities:
 - P-10 school with 1.5 ha oval (shared community use - reference TAMSD/EDD SRS provisioning standards), including single soccer field, hardstand courts, informal recreation space, access and parking to ETD satisfaction
 - Community hall
 - Child care facility
 - Future local church or equivalent space
 - Pathways to enable community access to school open space and community facilities buildings (and associated security aspects)
 - Landscaping and other public domain provisioning in accordance with (TAMSD standards).
- WSUD infrastructure will be provided on the site in accordance with the provisions of the relevant infrastructure master plan.
- Overall site earthworks prior to handover will be prepared to achieve suitable building pads for the proposed community and education facilities on this site to the satisfaction of ETD. Hand-back will need to make appropriate earthworks, erosion control and landscape provisioning to the satisfaction of ETD and TAMSD.
- Consultation will be undertaken with ETD and TAMSD in regard to proposed earthworks and infrastructure planning will seek to optimise land availability and suitability for the proposed community infrastructure.

The planning should also:

- determine external and off-site requirements for developers (e.g. boundary conditions and responsibilities such as retaining walls, landscaping and path connections, public transport access arrangements including adjoining road gradients to enable bus drop off, preferred entry and exit points)
- resolve internal site connections
- ensure that there is dual use of car parking and appropriate rates of provision taking into account the efficiencies of co-location and potential for 'park-once' and the variations in peak demand that occur over the course of the day and week.

There are also some management and funding aspects to resolve. For this reason the design process will also need to incorporate an MOU or other agreement, between Directorates of ED and

TAMS and other social agencies (as relevant), to optimise the procurement and management of education and community facilities and open space. This will address:

- allocation of responsibilities to the agency most suited to maintaining or managing the facility
- establishment of community access arrangements and associated security aspects
- ensuring that there is dual use of car parking
- capital and recurrent funding.

Explanatory note on specifications for recreation area as part of school (Government School Oval)

- *unencumbered flat land to support the minimum provision of one combination football/rugby field (approximately 1.0ha) and additional space to support informal play and physical activity requirements (exact size requirements for each government school oval should be confirmed with the EDT)*
- *designed to support community access outside of school hours and on weekends, therefore security fencing at schools cannot prohibit external community use of these open space areas.*
- *designed, constructed and maintained by the ETD; EDD Sport and Recreation Services recommend that any natural turf football/rugby field should be designed and constructed in accordance with the relevant TAMSD design standards.*

Indicative concepts, site and floor areas

An indicative concept is shown in Figure 23 with estimates of land and floor areas in Table 3.

Figure 23 Indicative layout for Southern Education/Community Precinct

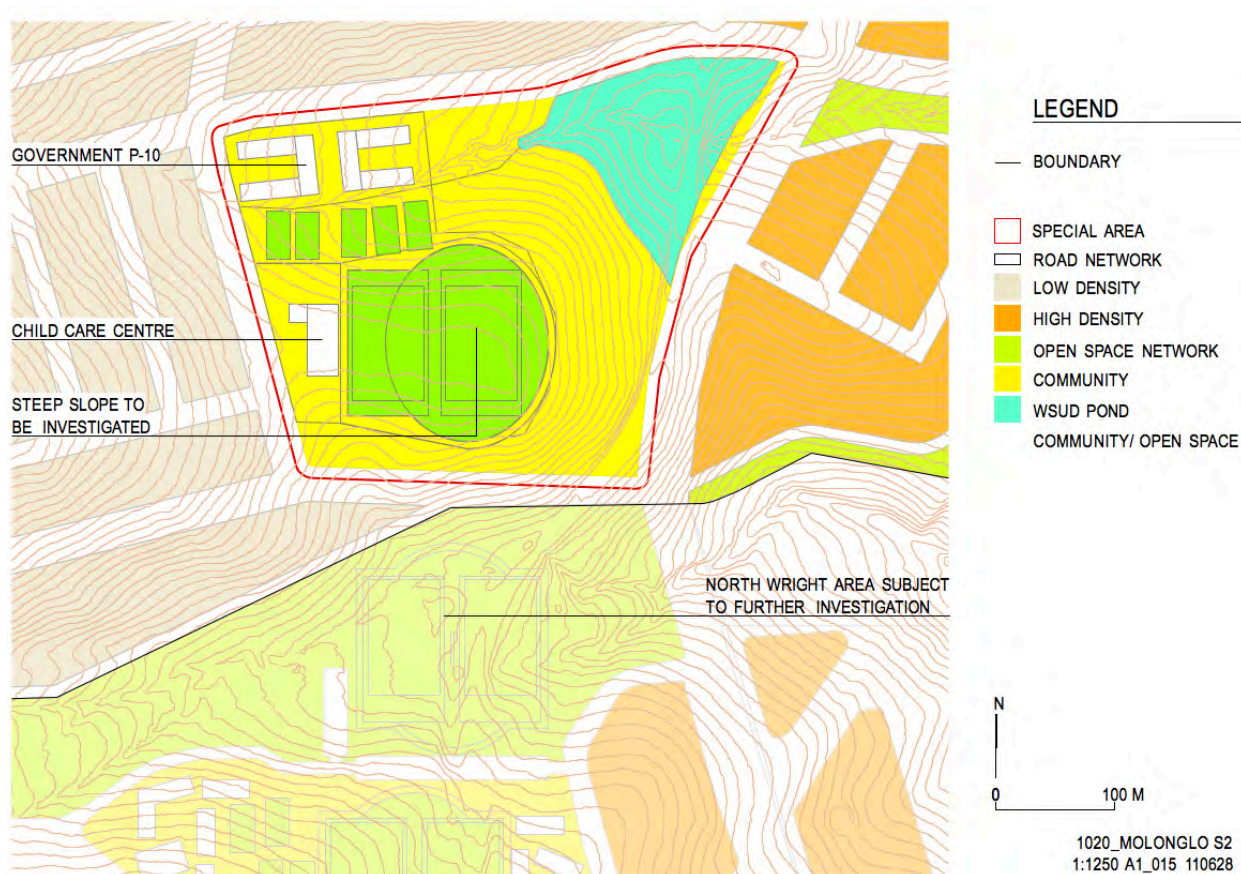


Table 3 Indicative site and floor areas for Southern Education/Community Precinct

Use	Indicative gross floor area (m ²)	Site area (ha)
School P-10	10,000	4.63
Community/childcare	1,000	0.71
WSUD pond areas		1.80
Open space		3.95
Shared parking (included in other areas)	150 spaces	
Total land area		11.09
Dual use recreation on school site (indicative)		
Soccer pitch	2	
Courts	5 outdoor	
Indoor recreation	2 indoor courts	

4.4 Special Area 3: Northern watercourse

The area indicated as Special Area 3 on Figure 21 will be provided for the northern watercourse. The boundary alignment is flexible by plus or minus 200m and the total area of 6.8ha is flexible by plus or minus 10 percent. This is a hand-back site.

While planning principles are established in the draft PDF work to date, the site's physical characteristics are such that the detailed analysis which is beyond the scope of the draft PDF will itself lead to resolution of the particular outcome on this site that meets water quality, water management, access, edge treatments, landscape design and overall development objectives. However, the design requirements can be established as follows.

The planning for this area needs to accommodate the following elements:

- stormwater infrastructure in accordance with the provisions of the relevant infrastructure master plan, undertaken by consultants commissioned by ESDD
- integrated and detailed open space and storm water design to provide certainty in relation to the development boundary
- internal access arrangements, and any connections outside the site boundary.

This area is currently the subject of a feasibility design and concept design for a preferred option. Estimates of component land areas are shown in Table 4.

Table 4 Indicative site areas for northern watercourse

Use	Site area (ha)
Open space	6.11
WSUD pond areas	0.40
Roads (crossing through corridor)	1.22
Total land area	7.73

4.5 Special Area 4: Cravens Creek downstream

The area indicated as Special Area 4 on Figure 21 will be provided for Cravens Creek downstream. The boundary alignment is flexible by plus or minus 200m and the total area of 6.8ha is flexible by plus or minus 10 percent. This is a hand-back site.

Due to the site complexities and the ambitions for high quality, it has been inappropriate to bring a detailed resolution to the desired outcome on this site in regard to water quality, water management, access and edge treatments. Such matters are more appropriately resolved at the EDP stage of planning. Core parameters can be defined and the planning for this area needs to accommodate the following elements:

- stormwater infrastructure in accordance with provisions of the relevant infrastructure master plan

- a road crossing (across pond wall)
- pedestrian and cycling linkages, particularly to Molonglo River Park
- sewer main (across pond wall)
- sewer main either side of Cravens Creek.

Planning will also need to address or define:

- edge conditions to pond and Q100 area (modelled extent of the area needed to detain the volume of water of 1 in 100 year flood event)
- the edge road and development boundary for high density residential area
- the road types bordering open space
- integration with the CRIP
- the landscaping of the pond wall
- pedestrian and cycle traversing of pond wall
- resolution of gradients along park edge.

Estimates of component land areas are shown in Table 5.

Table 5 Indicative site areas for Cravens Creek downstream

Use	Site area (ha)
Open space	5.6
WSUD pond areas	0.4
Road (collector)	0.8
Total land area	6.8

4.6 Special Area 5: Cravens Creek upstream

The area indicated as Special Area 5 on Figure 21 will be provided for Cravens Creek upstream. The boundary alignment is flexible by plus or minus 200m and the total area of 6.0 ha by plus or minus 10 percent. This is a hand-back site.

The planning for this area will need to accommodate the following elements:

- WSUD elements including major pondage
- the water reservoir for water supply (a large tank needs to be accommodated)
- the edge road and development boundary.

Estimates of component land areas are shown in Table 6.

Table 6 Indicative site areas for Cravens Creek upstream

Use	Site area (hectares)
Open space	5.6
WSUD pond areas	0.4
Water supply reservoir	To be determined
Total land area	6.0



ACT
Government

Economic Development



ACT
Government

Environment and
Sustainable Development



ACT
Government

Treasury

**URIARRA ROAD INTERSECTIONS AND JGD LINK ROAD
PSP DESIGN**

DEVELOPMENT APPLICATION (DA) REPORT

JOB NO: C11150

FEBRUARY 2012

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DOCUMENT CONTROL

Issue	Date	Issue Details	Author	Checked	Approved
1	17/12/2012	2 nd DRAFT – EDD comments added	MM		
2	14/01/2013	Opinion of Costs clarified by Section	MM	MM	
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1 INTRODUCTION

This Development Application is submitted on behalf of Economic Development Directorate (EDD) for the purpose of gaining approval to construct new intersections along Uriarra Road and a Link Road from John Gorton Drive (JGD) to the existing Stromlo Forest Park entrance on Uriarra Road.

This report is to provide clear and thorough information about the proposed development and to help make the Development Application assessment process transparent and uncomplicated. A project background has been included to help establish the history and context of the proposed development, and also to provide additional background information about the project where it has influenced our assessment of the relevance of the Development Application requirements.

A *Statement Against Relevant Criteria* is included in **Section 4** below.

2 PROJECT OVERVIEW

2.1 General

Uriarra Road is a rural road which connects Cotter Road to the Molonglo River at Uriarra Crossing and continues on to the rural area known as Coree. The road provides important access to Stromlo Forest Park in the south and rural properties further north.

The Molonglo Valley urban development area is identified in The Canberra Spatial Plan as a key implementation project for major greenfield residential development, to be undertaken over the next 30 years. The Molonglo Development is located on both sides of the Molonglo River, downstream of Scrivener Dam. The Government has expedited the land release program including land releases in Molonglo 2 which is the central section of Molonglo.

As a result of this, Uriarra Road will carry increased traffic volumes during the land development stage. Similarly John Gorton Drive, including its proposed northern extension through the centre of Molonglo 2, has also been formulated as one of the primary roads servicing the local traffic in the future development area. Decommissioning a portion of Coppins Crossing Road and the demand to link Uriarra Road and John Gorton Drive has been considered necessary to form a better transportation network to adjacent areas.

The project also involves considerable coordination between various services providers and asset owners that tailors the aspects of design to best suit their needs for the future development in this area.

The construction of the Uriarra Road intersections and Link Road will be undertaken as part of the Government's Capital Works Program.

Upon the completion of the Link Road and adjacent stages (1D and 2A) of John Gorton Drive both roads will be opened up for traffic whilst Coppins Crossing Road, as far as the tie-in with John Gorton Drive, and the section of Uriarra Road to the east of the proposed roundabout at the entrance of Stromlo Forest Park will become decommissioned.

2.2 Description of the Works

Key features of the design are as follows:

- Three intersections on Uriarra Road to provide access to Molonglo 2 development area.
- An intersection at the entrance to Stromlo Forest Park.
- A Link Road between John Gorton Drive and the existing Stromlo Forest Park entry, including a central roundabout to provide access to areas north to south of the Link Road.

Refer to drawing C11150-P003+ for the General Arrangement.

2.3 Studies and Investigations

2.3.1 North Wright Planning Study

The Draft North Wright Precinct Planning Study (26 October 2011) identifies land use details within the North Wright Precinct and importantly identifies the need for the construction of a collector road linking John Gorton Drive and Uriarra Road as a critical activity for early stage works in the Molonglo 2.

The Planning Study draws upon the findings of the Options Study of the Uriarra Link Road produced by Brown Consulting in 2011. The study analysed three general options for alignment and three options for cross-sectional profile. Brown Consulting is required to review the existing concept for the Link Road as a part of this study.

ESDD have since engaged Hassell to finalise the North Wright master planning.

2.3.2 Uriarra Road Options Study

Brown Consulting completed a review of three alignment options and cross sections for the Link Road corridor between John Gorton Drive and the Stromlo Forest Park Entrance. The report recommended that the straight alignment which provided the most direct route was suitable however identified that there would be various complications arising from the alignments proximity to the creek.

The cross section recommended was a dual carriageway with 6.0m median to allow for right turn auxiliary lanes at intersection. Each carriageway was to provide a single travelling lane in each direction.

The options study included provision for lengths of indented parking and a 2.0m wide shared path on the northern side.

2.3.3 Ecological and Environmental Studies

SMEC was engaged by ACT Procurement Solutions in 2009 to undertake the contamination assessment is to assist the ACT Planning and Land Authority (ACTPLA) in identifying and managing risks associated with the site, in support of the assessment of proposed future residential land use options.

The Molonglo Valley Plan for the Protection of Matters of National Environmental Significance was published by the ACT Planning and Land Authority in 2011. One set of the actions used to achieve the conservation of the Yellow Box-Red Gum is to develop, implement and independently monitor Construction Environmental Management Plans (CEMP).

An example CEMP template can be found in **Appendix O**. The successful tenderer shall be responsible to complete the CEMP and seek for EPA approval prior to the commencement of the physical works.

2.3.3.1 *Decommissioning of the Farm Dam*

A farm dam is located within the currently Link Road alignment which needs to be decommissioned to allow future construction to take place. The farm dam is found in the study area for Coombs and Wright covered by the report titled "Final Phase 1 Environmental Site Assessment Report for Coombs and Wright, Molonglo" (Project Number 3002156) by SMEC Australia Pty Ltd dated February 2009.

In accordance with the Environment Protection Unit (EPU) conditions of endorsement of the above phase 1 assessment a construction environmental management plan was required prior to commencement of works in the area. The EPU has endorsed the use of the document titled "Short Term Environmental Management Plan, Former Pine Plantation, Block, 1204 Weston Creek, ACT" dated November 05, 2009 by SMEC Australia Pty Ltd for the management of potential contamination and unexpected finds within the suburbs of Coombs and Wright, which includes the farm dam area. All earthworks at the site must be undertaken in accordance with the requirements of this plan.

As per email communication with the EPAs Mark Heckenberg on 18 September 2012, it is understood that no assessment of material associated with the dam would be required provided it was managed in accordance with the SMEC 2009 management plan.

If contamination is identified during site works then the material would then require assessment in accordance with the SMEC 2009 plan. Mark Heckenberg advised that the EPU has no record of asbestos impacts to material in the proximity of the farm dam. If impacts are identified then they must be managed in accordance with the above plan.

2.3.3.2 *Waterway Works License*

The inquiry in regards to the right to work adjacent to waterways was raised by Brown Consultants to Jillian Harrap and Rohan Peek from ACT Government on 19 September 2012. Jillian Harrap advised that "You [the Contractor] do not need a waterway works licence to decommission the farm dam; however you [the Contractor] will need a waterway works licence to construct the road over the waterway next to the dam." Likewise, Rohan Peek emphasised the point that the successful Contractor will need a CEMP and sediment control plans approved prior to any works commencing on site.

The requirement of the Contractor's waterway license will be specified in the project specification Request For Tender (RFT) Documentation.

A copy of all correspondence with the EPA is included in Appendix A.

2.3.4 Tree Assessment

A Tree Assessment for the project site area was completed by John Easthope and Associates in October 2012. Around nineteen trees will need to be removed to facilitate construction of the new Link Road, as well as to eliminate potential hazards within the clear zone.

Some trees will be required to be removed for the construction of the Uriarra Road intersections.

Refer to Appendix I for a copy of the tree assessment data sheets.

2.3.5 Molonglo Valley Light Impact Study

The Molonglo Valley Light Impact Study (March 2006) provides general recommendations to assist minimising the light spill, the glare and the sky glow, one of the key concerns for the people running the Mt Stromlo Observatory projects. (Refer Appendix K)

Recommendations made to the ACT Planning & Land Authority concerning lighting of the development of the area around Mt Stromlo are:

- Fully shielded lighting for public areas.
- No public facilities requiring lighting within the 2km zone.
- Full consultation with the Observatory on any new major lighting proposal.

2.4 Link Road

2.4.1 General

The Draft North Wright Precinct Planning Study (26 October 2011) importantly identifies the need for the construction of a collector road linking John Gorton Drive and Uriarra Road as a critical activity for early stage works in the Molonglo 2. The Link Road will be a significant distributor level road for Molonglo Valley Stage 2 residential area link to Uriarra Road as well as serve as the entry road to Stromlo Forest Park. Provision for internal access for the subject precinct will be delivered.

The Link Road design allows for two access into North Wright, namely the primary roundabout (at around Chainage 180) and a future secondary left-in left-out intersection (at around Chainage 370).

The primary four-leg roundabout will provide access to the north into North Wright and to the south into the proposed Molonglo Aquatic Centre. The roundabout has a single circulating lane and thus each approach has a single entry and exit lane.

The new Stromlo Forest Park entrance intersection type has not been altered from that shown in the feasibility study. It is proposed to be a three leg roundabout providing connection to John Gorton Drive via

the Link Road, Molonglo 2 via Uriarra Road and into Stromlo Forest Park. The dimensions of the roundabout match those of the primary Link Road intersection, allowing for the same type of vehicles.

2.4.2 Road Design

Road design criteria have been adopted from the latest AUSTRROADS publications (Guide to Road Design) and are generally consistent with previously constructed sections of the adjacent JGD. Where appropriate, RTA criteria have been adopted.

The key features of the Link Road are:

- 1 x 3.5m traffic lane in each direction. This is suitable based on the traffic volumes indicated in the SMEC EMME models.
- 1.5m on-road cycle lanes each direction to suit 70km/h design speed.
- On-street parking bays along the northern carriageway including intermediate blisters.
- 6m central median including provision for a 3.5m right turn bay with residual median suitable for future traffic signal hardware and pedestrian refuge.
- A future shared path which will be constructed as part of the adjacent development.

Intersection design criteria have been adopted from the latest AUSTRROADS publications (Guide to Road Design – Parts 4, 4A & 4B)

The key features of the Link Road central roundabout are:

- Achieve the desirable central island width for 60km/h driver speed of 12m.
- 1 x 8.0m circulating carriageway width checked for 19m semi-trailer and steer tag busses
- Treatment for pedestrians and cyclists in accordance with TAMS design standards, including access/egress facilities along the Link Road for on-road to off-road cycling.

2.4.3 Batter Design

1H: 4V batter is proposed for the Link Road verges in general with the exception of the verge batters between chainage 60 and 140m in the north verge and chainage 100m and 160m in southern where batter slopes of 1H : 2.5V have been adopted to minimise earthworks and maintain consistency with the adjacent John Gorton Drive construction where similar batter slopes have been adopted.

The road alignment follows the natural watercourse and between chainage 110m and 130m the toe of the batter will encroach into the natural watercourse. There is the potential for Q100 flood event flows to have reach height of around 1m in the watercourse. Scour protection measures such rock lining or similar will be

installed within the zone of influence. To minimise surface erosion, the batters must be vegetated as soon as possible after construction or by some other method of stabilising the exposed faces.

2.4.4 Services

2.4.4.1 Existing services

Watermains present in the ACTEW Water easement run Northeast and Southwest and cross beneath Uriarra Road to the east of Coppins Crossing Road. The services currently include a 900mm and 1200mm diameter bulk supply mains. The proposed Link Road and northern stub associated with the middle intersection will be built across these watermains.

Telecommunication assets exist at various locations within the proposed work area. We have identified and located the fibre optic cables to the east of Coppins Crossing Road. These assets will not be affected by the proposed works. Brown Consulting has commenced discussions with Telstra's Network Integrity group regarding the current and future requirements of the Telstra assets in the region. Provision for the future relocation of the existing Telstra cable into the Link Road verge has been recommended.

2.4.4.2 Proposed services

The provision of services in the project area has been discussed with services authorities. This will include a shared services trench, sewer, water and stormwater in the northern verge to accommodate the adjacent future development. The records of discussions are included in Appendix B.

2.4.5 Streetlighting

The street lighting design of the Link Road will be carried out in accordance with the following publications:

- TAMS Design Standard – DS12 – Public Lighting
- Molonglo Valley Light Impact Study (March 2006)

A Light Limitation Zone is supported by The Canberra Spatial Plan (where it is called a 'Low Light Zone').

All roads within the Eastern Molonglo development are to be lit as P Category roads in accordance with AS1158.3.1. This allows the use of lower lighting levels than the application of V categories from other parts of the standard.

Based upon the following extract from AS1158.3.1, it is recommended the following rules be applied:

- All fittings shall be full cut-off type.
- Uncast or tilt shall be not more than 5 degrees.

2.4.6 Landscaping

The landscape design will be sympathetic to the landscaping selected for the connecting John Gorton Drive 1D. A selection of deciduous trees, such as the *Quercus palustris* 'Yarralumla Clone' and *Prunus cerasifera*, is proposed in both the median and verges.

The median from the central roundabout to SFP entrance roundabout will be treated with the abovementioned landscaping, and the remaining will be finished with decomposed granite gravel as agreed by EDD.

Landscape drawings have been included in the DA Drawings.

2.5 Uriarra Road Intersections

2.5.1 General

The addition of three intersections along Uriarra Road will provide access to Molonglo 2. The selected location of each intersection has been based on visual inspection onsite, analysis of the existing survey and in conjunction with the Molonglo Master Planning process.

All three intersection designs are a relatively standard intersection type being channelized right turn, basic T-junction layout. The channelized right turn provides protection for vehicles waiting to turn right from the centre of the road whilst permitting through vehicles to pass through the intersection. Channelized right turn junctions are suitable where there are low to moderate through and turning volumes.

2.5.2 Road Design

The design criteria were adopted from the latest AUSTRROADS publications (Guide to Road Design).

The key features of the intersections are:

- 1 x 3.5m traffic lane in each direction and 3.5m channelised right lane. This is suitable based on the traffic volumes indicated in the SMEC EMME models.
- Widening of the existing southern shoulder to allow the inclusion of an on-road cycle lane in the southern shoulder. This involves additional earthworks with the realigning of the swale drain to the south.

2.5.3 Services

2.5.3.1 Existing services

A single Telstra line runs along the northern verge of Uriarra Road. It is likely that this asset will require relocation or protection to facilitate the construction of the three proposed intersections.

2.5.3.2 Proposed services

Provision for future services similar to the shared trench will be provided at the road crossings. The services provided for will include the following:

- ActewAGL – 6 x 125mm conduit
- Telecommunications – 2 x P100 conduits

2.5.4 Landscaping

Landscaping for the intersections is minimal and is limited to the reinstatement of disturbed verge areas with topsoil and dryland grassing.

2.6 Temporary Stockpile

The imported material used for the construction of the Link Road is proposed to be stockpiled on site immediately to the east of Coppins Crossing Road and to the north of the proposed Link Road in Block 23 Molonglo Valley. The material is in-situ virgin excavated natural material (VENM) from the adjoining John Gorton Drive – Stage 2A project. Any contaminants found as part of the abovementioned project have previously been treated and removed accordingly.

2.6.1 Stockpile dimension

The proposed stockpile area is designed to hold a capacity of 25,000m³.

2.6.2 Constraints associated with the stockpile

The stockpile will be subject to the following constraints:

- 10m clearance to JGD-1D works.
- 10m clearance to Link Road works.
- 10m clearance to Telstra services.
- Stockpile is to be outside the Bulk Supply Main easement.

The removal of some fence lines will be necessary to facilitate stockpiling of material.

2.6.3 Stockpiling period

The Link Road project is proposed to commence construction from June 2013 with completion anticipated around March 2014. The stockpiling of the imported fill is proposed to commence around March 2013. The stockpile material will be incorporated into the Link Road embankment and the stockpile will be removed before the completion of the Link Road.

2.6.4 Stockpile management

The stockpile is proposed to facilitate the best outcome for the Territory, by effectively managing the excess fill requirement of one project and the fill requirement of a neighbouring job. This will minimise the costs to the Territory and minimise the environmental impact. The location of the proposed stockpile will be fenced to prevent unauthorised access.

Refer to drawing C11150 – DA601 for details.

2.7 Development Application Drawings

A set of drawings including the proposed site plan, elevations, sections, utility services and landscaping is included with this Development Application. The register of drawings is included in Appendix C.

Each drawing has been drawn to the scale considered most fit for purpose.

3 APPLICATION REQUIREMENTS

3.1 Land Use

The proposed Link Road corridor is a greenfield site with future planned developments on either side of the proposed road. It is intended that the Link Road that connects John Gorton Drive (Stage 1D) and Uriarra Road (at the Stromlo Forest Park entrance) design will set the road reserve corridor.

Currently the Territory Plan has not defined the road corridor for the Link Road. The zonings that the proposed road alignment falls into are various, including Residential Suburban (RZ1), Urban Parks and Recreation (PRZ1), Residential High Density (RZ5) and Communities facilities (CF).

The alignment of the proposed extension is similar to the preferred alignment documented in the Preliminary Sketch Plan and does not correspond with the Territory Plan. It is understood that the area where the Link Road is to be situated will need to be acquired and the zoning codes of these areas will be amended to TSZ1 Transport and Services Zone in the Territory Plan to suit the land use purpose. The Statement Against Relevant Criteria for this project is included in **Section 4**.

The proposed road alignment runs alongside the existing water course that flows from west to east. At the western limit of the proposed Link Road the water course will cross the roads alignment. In general, the alignment of the Link Road has been selected to limit the amount of works required in the water course. In the study report "North Wright Precinct Molonglo Valley Planning Study" prepared by Walsh Consulting for ESDD in 2011 it identifies the land use constraints due to this watercourse and the surrounding topography, hence indicates that the preferred land use pattern is to rezone the Link Road and the associated riparian corridor.

Earthworks spillage to adjacent blocks is a temporary interface between the road corridor and the blocks and therefore considered to have no permanent impact to the adjacent land uses.

3.2 Impact Track

Impact track DA applies to proposals under Section 123 of the Planning and Development Act 2007 (the Act) that involves a process or activity likely to have significant adverse environmental impact on an endangered species or ecological community. An Environmental Impact Statement (EIS) is normally required for the projects which go down the route of the Impact Track Assessment.

Section 211 of the Act allows an applicant to seek exemption from the requirement to complete an EIS. The Minister responsible for the Act has discretion under Section 211 to grant exemption based on the information presented in previous studies. If an exemption is granted, as has been granted in this instance, then the EIS process is regarded as complete and allows an application to lodge a development assessment (DA) for evaluation under the impact track process.

The Land Development Agency (LDA) and EDD have prepared and submitted S211 exemption applications for parts of the Molonglo development, which identify the potential impacts of the proposed development and provides information to support the request for Ministerial exemption under S211 of the Act. Exemptions have been granted for each of the S211 exemption applications.

A copy of the Ministers' Approval Decision of the S211 exemption applications is included in Appendix D:

- Molonglo Urban Land Development – Section 211 Exemption Request. (July 2009)
- Molonglo Valley Stage 2 – Urban Development Area B1 and associated infrastructure s211 from the requirement to complete an Environmental Impact Statement. (14 May 2012)
- Molonglo Valley Stage 2 (part), Link Bridge and Sewer 3 Central s211 exemption from the requirement to complete an Environmental Impact Statement. (27 August 2012)

3.3 EIS/ESO Triggers

Schedule 4 of the Act sets the criteria for Development proposals requiring an EIS. The relevant items of Schedule 4 that this Development Proposal is assessable against is responded to in the blow paragraphs:

Part 4.2 – activities - item 1 identifies that proposals for a major road on any land **other than** land designated under the Territory Plan as a future urban area or in a transport and services zone would trigger an EIS/ESO. The proposed road construction is within a future urban area (Stromlo Block 13 / Molonglo Valley Block 18), and the footprint of road construction outside of the Special Purpose Reserve boundary and S211 boundary is of less than 100sqm. Therefore, as there are no triggers under this section of Schedule 4.2, an EIS/ESO is not required.

Part 4.3 – areas and processes - item 2 identifies that a proposal involving the clearing of more than 0.5ha of native vegetation other than on land that is designated as a future urban area will trigger an ESO. The majority of the intersection footprints is within the S211 exemption areas, however a small portion of intersection 3 is not within the S211 boundary, (Refer to drawing C11150 - 004+ BOUNDARY AND APPROVALS PLAN Inset 3, which shows the area of land outside of the S211 boundary.) As the footprint of road construction outside of the Special Purpose Reserve boundary and S211 boundary is of less than 100sqm, an ESO will not be required.

In addition to the responses provided against Schedule 4, a statement from the Conservator Liaison Officer (ESDD) regarding the proposed works outside of the Special Purpose Reserve, stating that an ESO will not be required, is included in Appendix F.

3.4 NES Plan

In September 2008 the ACT Government signed an agreement with the Commonwealth to undertake an assessment of the Molonglo Valley Structure Plan under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). This agreement was amended in March 2010 to provide for the assessment of impacts under the *Molonglo Valley Plan for the Protection of Matters of National Environmental Significance* (the NES Plan) and ESDD engaged Eco Logical Australia Pty Ltd (ELA) to prepare this strategic assessment report of the Molonglo Valley plan.

The strategic assessment of the area was undertaken to streamline the referral process, provide greater certainty in environmental protection and conservation practices, and facilitate sustainable outcomes in new urban development areas.

In the Molonglo Valley matters of NES include threatened species, migratory species and important ecological communities and have been identified as follows;

- *White Box – yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland* (Box Gum Woodland) - listed under the EPBC Act as critically endangered
- *Natural temperate Grassland of the Sothern Tablelands of NSW and the ACT* (Natural temperate Grassland) - listed under the EPBC Act as endangered
- *Aprasia parapulchella* (Pink-tailed Worm Lizard) - listed as vulnerable
- *Polytelis swainsonii* (Superb Parrot)
- *Lathamus discolor* (Swift parrot)

The presence of these endangered and vulnerable communities, require that the impacts of development in Molonglo and North Weston were required to be assessed under national environment law.

On 7 October 2011, the Federal Environment Minister endorsed the Plan. This is the third strategic assessment in Australia to reach the endorsement stage. The endorsement of this Plan allows the Federal Environment Minister to consider giving approval to actions or class of actions that are taken in accordance with the endorsed Plan.

On 20 December 2011, the Federal Environment Minister approved actions associated with urban development in East Molonglo as described in the endorsed Plan.

A copy of the Approval Decision of the NES Plan is included in Appendix E.

3.5 S211 Exemptions

3.5.1 S211 Exemption Application July 2009

S211 Exemption Application July 2009 was lodged by the Land Development Agency (LDA) to the ACT Minister for Planning on the assessment of the Molonglo Urban Land Development and associated works project proposed. The project encompasses the future suburbs of North Weston, Wright and Coombs.

The LDA identified the development of North Weston, Wright and Coombs as key components in their land release program to ensure long term residential land availability in the National Capital. The LDA has prepared an Environmental Impact Statement (EIS) scoping / S211 exemption application that identifies the potential impacts of the proposed development and provides information to support the LDA's request for Ministerial exemption under S211 of the Planning and Development Act 2007 (the Act).

The exemption of S211 has been granted by the Minister for Planning Andrew Barr upon the conditional and unconditional supports from various entities. The details of these support entries are tabulated as follows:

Entity	Support	Relevant Conditions to be address in DA	Response to the condition
Environment Protection Authority	Conditional	<p>Any subsequent DA for an estate development plan 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 environmental site assessment phase 2 report – Pine Plantation, Blocks 1204 and 1180 Weston Creek; • Short-term Contamination Environmental 	The scope of this project does not encroach into those areas which require further documentary evidence of EPU sign off.

		<p>Management Plan – Pine Plantation, Blocks 1204 and 1180 Weston Creek</p> <ul style="list-style-type: none"> • 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 • Remedial Action Plan – Block 1210 Weston Creek. 	
<p>Conservator</p>	<p>Conditional</p>	<p>Any subsequent DA for an estate development plan 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 Environmental planning principles for the 	<p>The proposed road corridor and work areas are confirmed clear of the Pink-tailed Worm-lizard habitat area and associated buffer zone. Refer to drawing C11150-850+ and 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</i></p>

		<p>protection of the Pink-tailed Worm-lizard (<i>Aprasia paraulchella</i>) in the Lower Molonglo Valley, ACT – William S Osborne February 2008. 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 Pink-tailed Worm-lizard habitat adjacent to the urban development area.</p> <ul style="list-style-type: none"> • A statement addressing how the estate development plan has considered and addressed findings and recommendations of the Molonglo Valley Strategic Environmental Assessment. • A statement addressing how the design of the ponds has considered and addressed PCL advice regarding the locations of the dam walls. 	<p>2008.</p> <p>The scope of this project involves neither estate development nor construction of a pond; therefore the conditions are not applicable to this project.</p> <p>Refer to Appendix E – NES Plan for the abovementioned report.</p>
<p>Department of Territory and Munciple Services – Asset Services Group</p>	<p>Unconditional</p>	<p>Nil</p>	<p>Nil</p>

National Capital Authority	Unconditional	Nil	Nil
ACT Heritage Council	Conditional	<p>Any subsequent DA for an estate development plan must include:</p> <ul style="list-style-type: none"> • Documentary evidence of the ACT Heritage Councils ratification and clearance of the final report regarding historic heritage places in the areas of Coombs and Wright • A statement addressing how the estate development plan has considered and addressed findings and recommendations of the final report regarding historic heritage places in the areas of Coombs and Wright • An unanticipated discovery plan be developed for each area that is subject an estate development plan DA or other DA approval. 	<p>The proposed road corridor and work areas are confirmed clear of the known heritage sites. Refer to drawing C11150-800+ and the report <i>Aboriginal Heritage Assessment - Additional Proposed Mountain Bike Trails at Mount Stromlo</i>. (Refer Appendix J)</p> <p>The contractor will be required to include an unanticipated discovery plan in the project plan and submit for engineer's/ACT Heritage Councils approval prior to the commencement of works.</p>
ACT Health	Conditional	<p>Whilst ACT Health supports the S211 exemption they have identified several matters that will need to be addressed prior to or in conjunction with development of the site:</p> <ol style="list-style-type: none"> 1. Identification and remediation of any site contamination 	<p>The following comments had been made in the S211 exemption report against the conditions:</p> <ol style="list-style-type: none"> 1. Site contamination issues are in hand as evidenced by the response to Environment Protection Authority (EPA) comments above.

		<ol style="list-style-type: none"> 2. Assessment and mitigation of the decommissioned sewage treatment facility adjacent to the site 3. Provision of appropriate recreational space to encourage healthy living activities 4. Management of odours from nearby sewage vents. <p>Conditions requiring documentary evidence of EPU approval for all site contamination reports to be provided at the estate development plan DA submission stage.</p>	<ol style="list-style-type: none"> 2. N/A to this project. 3. N/A to this project. 4. N/A to this project.
<p>ACT Emergency Services Agency (ESA) – ACT Fire Brigade, ACT State Emergency Services</p>	<p>Unconditional</p>	<p>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"> • Fire station response area (ACT FB) • Water supplies (ACT FB) • Infrastructure – roadways standards (ACT FB) • Street furniture (ACT FB) • Construction requirements (ACT FB) • Bush fire risk (ACT FB) • 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 estate development plan or the individual infrastructure project DA's.</p>	<p>Water supply systems will comply with the relevant Australian Standards / Water Authority Standards. Refer to drawings C11150-100+ and 101+.</p>

3.5.2 S211 Exemption Application May 2012

This application is to the ACT Minister for Environment and Sustainable Development on the assessment of the request for an exemption from requiring a completed Environmental Impact Statement for the Molonglo Valley Stage 2 - Urban Development Area B1 and associated infrastructure (the proposal). The application for exemption is made by the Economic Development Directorate (EDD) under Section 211 (S211) of the Planning and Development Act 2007 (the Act).

The exemption of S211 has been granted by the Minister for the Environment and Sustainable Development Simon Corbell upon the conditional and unconditional supports from various entities. The details of these support entries are tabulated as follows:

Entity	Support	Relevant Conditions to be address in DA	Response to the condition
ActewAGL networks	Conditional	ActewAGL would like to advise that all aspects in regards to electrical assets in the area of Molonglo 2 can be dealt with at the DA stage.	Liaison with the Electrical Authority to confirm their requirements as part of this project has been carried out. Refer to Appendix B for authority correspondence.
ACT Heritage Council	Conditional	Several heritage assessments have been undertaken within the area and, as a result, there are Conservation Management Plans (CMPs) in place that relate to identified heritage places and objects. The management recommendations outlined within the CMPs must be adhered to, as well as all previously approved unanticipated Discovery Protocols. The Heritage Council therefore supports the request for exemption from EIS scoping pursuant to S211 of the	The proposed road corridor and work areas are confirmed clear of the known heritage sites. Refer to drawing C11150-800+ and the report <i>Aboriginal Heritage Assessment - Additional Proposed Mountain Bike Trails at Mount Stromlo</i> . The contractor will be required to include an unanticipated discovery plan in the project

		Planning and Development Act 2007, provided that these heritage requirements are met.	plan and submit for engineer's/ACT Heritage Councils approval prior to the commencement of works. Refer to Appendix J.
City Planning, ESDD	Conditional	ESDD is responsible for planning for the Molonglo B1 area. A number of documents have been prepared by the planning and land authority/City Planning (ESDD) are relevant to Molonglo B1. These include, amongst others, the Molonglo North Weston Structure Plan, Molonglo Stage 2 Draft Planning and Design Framework (PDF), Molonglo Valley Plan for the Protection of Matters of National Environmental Significance (NES Plan), Important Planning Requirements (IPRs) for the First Release Area, the Molonglo River Park Concept Plan and Preliminary Risk Assessment (PRA). Development Applications for the Molonglo B1 area would be referred to ESDD Land Planning for comment to ensure consistency with the planning intent for the area as outlined in these documents.	Application to be referred to the relevant agency.
Conservation Planning and Research, ESDD	Unconditional	Nil	Nil
Conservator of Flora and Fauna	Unconditional	Nil	Nil
National Capital Authority	Unconditional	Nil	Nil

3.5.3 S211 Exemption Application September 2012

This application is to the ACT Minister for Environment and Sustainable Development on the assessment of the request for an exemption from requiring a completed Environmental Impact Statement for the Molonglo Valley Stage 2 - Urban Development Area B1 and associated infrastructure (the proposal). The application for exemption is made by Economic Development Directorate (EDD) under Section 211 (S211) of the Planning and Development Act 2007 (the Act).

The exemption of S211 has been granted by the Minister for the Environment and Sustainable Development Simon Corbell upon the conditional and unconditional supports from various entities. The details of these support entries are tabulated as follows:

Entity	Support	Relevant Conditions to be address in DA	Response to the condition
ACTEW Water	Unconditional	No environmental impacts. No further comments.	Nil
ActewAGL Networks	Unconditional	ActewAGL Distribution Gas, Jemena have no comments to make.	Nil
ACT Heritage Council	Conditional	Several heritage assessments have been undertaken within the Molonglo Stage 2 area, and, as a result, there are Conservation Management Plans in place that relate to identified heritage places and objects. The management recommendations outlined within these CMPs must be adhered to, as well as all previously approved Unanticipated Discovery Protocols. The Sec. 211 boundary indicated on the southern side of the Molonglo River as part of the current Application appears to deviate from the boundaries of the previous heritage	<p>The proposed road corridor and work areas are confirmed clear of the known heritage sites. Refer to drawing C11150-800+ and the report <i>Aboriginal Heritage Assessment - Additional Proposed Mountain Bike Trails at Mount Stromlo</i>.</p> <p>The contractor will be required to include an unanticipated discovery plan in the project plan and submit for engineer's/ACT Heritage</p>

	<p>surveys undertaken by BIOSIS Research. If any impacts occur within the apparently amended footprint, a cultural heritage assessment will be required, unless it is demonstrated that a recent assessment (i.e. within the last 6 years) has been undertaken.</p> <p>However, it is understood that the Molonglo River Park Concept Plan is being prepared. If the area in question is surveyed as part of a cultural heritage assessment for the River Park, this would also be acceptable.</p> <p>With regard to the area north of the Molonglo River, BIOSIS Research has prepared the document titled: Molonglo: Detailed Heritage Assessment – Aboriginal and Historical Heritage (May 2012). At this stage, the Heritage Council has not endorsed the document, therefore all future actions must be undertaken in accordance with Heritage Council advice. Additional heritage requirements may arise from this report, and the recommendations contained therein and in any subsequent documents must be adhered to.</p> <p>Provided these conditions are met, the Heritage Council has no objection to the request for exemption from EIS</p>	<p>Councils approval prior to the commencement of works.</p> <p>Refer to Appendix J.</p>
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		scoping pursuant to s211 of the Planning and Development Act 2007.	
Conservator of Flora and Fauna	Unconditional	<p>The conservation values of the land that will be impacted by the construction of the proposed sewer trunk pipeline and link bridge, and potential environmental impacts, are well known from earlier studies. The key issues are</p> <ol style="list-style-type: none"> 1. impact on Pink Tailed Worm Lizard (<i>Aprasia parapulchella</i>) habitat, the need to avoid this habitat wherever possible (which the route largely seems to have done), and the requirement to account for any habitat loss; and 2. that where works are within the River Corridor Park the need for there to be a large and ongoing program of restoration and weed control. African lovegrass is abundant in the vicinity of the works and will require a specific control focus. The impacts have already been sufficiently addressed by other planning and impact assessment documentation as detailed in the application requesting an exemption. These include: <ul style="list-style-type: none"> • Preliminary Risk Assessment- Molonglo Valley Urban Development Stage 2 and Supporting Infrastructure, NGH Environment, August 2011; • Draft Strategic Assessment Report for the Molonglo 	<ol style="list-style-type: none"> 1. The proposed works are clear of known pink tailed worm lizard sites. Refer to drawing C11150-850+. 2. The proposed works are outside of the Molonglo River Corridor (NUZ4).

		<p>Valley Plan for the Protection of Matters of National Environmental Significance, Ecological Australia, March 2010;</p> <ul style="list-style-type: none"> • Molonglo Valley Plan for the Protection of Matters of National Environmental Significance, (NES Plan), ACT Planning and Land Authority, Sept 2011; • Molonglo Valley Ecological Study, EPBC Listed Flora, Ecological Communities and Golden Sun Moth Mapping in the Molonglo Valley, Ecological Australia, March 2009; • Draft Planning and Design Framework- Molonglo Valley Stage 2, ESDD, ACT Government, July 2011; and • Molonglo Valley Stage 2: Draft Planning and Design Framework- Important Planning Requirements for first land release area, ESDD, ACT Government, June 2011. <p>It is noted that the Preliminary Risk Assessment prepared by NGH Consultants (August 2011) took into consideration 85 studies and reports prepared prior to that date which address the environmental conditions and impacts associated with development in the Molonglo Valley.</p> <p>There would be no additional benefit in requiring an EIS to be completed, therefore the exemption under section 211 can be supported.</p>	

Emergency Services Agency	Unconditional	ACTF&R has reviewed the information supplied for Molonglo Stage 2 & Link Bridge. ACTF&R has no special considerations or comment at this stage.	Nil
Department of Sustainability, Environment, Water, Population and Communities (SEWPAC)	Unconditional	No further comment at this time	Nil
Environment Protection Authority	Conditional	<p>The EPA has not issued any environment protection orders under sections 91C (1), 91D (1) or 125 (4) of the Environment Protection Act 1997 (the Act) over the site and as a result the site is not recorded on the Register of contaminated sites under section 21(A) of the Act.</p> <p>On the basis of the studies undertaken to date at the site it is unlikely that the land is potentially contaminated in a way that is causing, or is likely to cause, a significant risk of harm to people's health or the environment.</p> <p>Works at the site, to date, have been undertaken to the satisfaction of the Environment Protection Authority (EPA) in accordance with the Contaminated Sites Environment Protection Policy November 2009 and associated guidelines.</p>	Application to be referred to the relevant agency.

		<p>All future assessment and remedial works at the site must be undertaken to the satisfaction of the EPA.</p> <p>The site is currently subject to a voluntary environmental audit into its suitability for the proposed land uses from a contamination perspective. This audit must be reviewed and It is noted that the EPA do not require any further studies at this stage. Future EDPs and DAs will be referred to the EPA for comment.</p>	
<p>National Capital Authority</p>	<p>Unconditional</p>	<p>The current boundary for the urban area in the Molonglo Valley was established through National Capital Plan (the Plan) Amendment 63 and Territory Plan Variation 281 and informed by a number of studies into the suitability of the area for urban use. The NCA notes the many further studies that have been undertaken to better understand the environmental impacts of development in the area. The NCA supports this exemption as it considers environmental issues in relation to this phase of the Molonglo development were sufficiently addressed in the reports prepared to inform Amendment 63 to the Plan, Territory Plan Variation 281, the Strategic Assessment of Matters of National Environmental Significance and</p>	<p>Nil</p>

		subsequent environmental studies in the Molonglo Valley.	
Territory and Municipal Services	Unconditional	<p>This DA is supported.</p> <p>Note: AA, TAMS understands that there have been a number of studies prepared with regard to Molonglo Valley Development. TAMS has previously reviewed all those studies to determine the appropriate development options and assessed possible environmental impacts. Also the expected impacts from the proposed development have already been addressed by all those studies; as such AA, TAMS doesn't have any comments at this stage.</p>	Nil
ACT Health		<p>The Health Protection Service (HPS) acknowledges that the Phase 1 Environmental Site Assessment (ESA) identified a number of potential contaminants across the site. The HPS recommends further sampling of the site is conducted in a Phase 2 ESA consistent with the recommendations of the Phase 1 ESA.</p> <p>Other than concern relating to contaminated sites, the HPS has no additional comments on the request for an exemption.</p>	Site contamination issues are in hand as evidenced by the response to Environment Protection Authority (EPA) comments against S211 Exemption Application July 2009 above.

4 STATEMENT AGAINST RELEVANT CRITERIA

4.1 Transport and Services Zone (TSZ1)

Transport and Services Zone Development Code

This Development Code applies to all development in the Transport and Services Zones.

Zone Objectives

- a) Make provision for a transport network that can provide for the efficient, safe and convenient movement of people and goods;
- b) Ensure that major roads and transport infrastructure are developed in a comprehensive manner, including the provision of appropriate landscaping, street furniture and lighting, traffic control devices, and noise attenuation measures; and
- c) Make provision for public transport.

The development involves a significant utilization of current TSZ1 land use zone. The relevant rules and criteria are comprehensively addressed in following table.

Part A – Zone Specific Controls		
TSZ1 - Transport Zone		
Element 1: Restrictions on Use		
Intent:		
a) To provide for development that does not jeopardise the Inter-town Public Transport Route b) To allow flexibility in development that is not inconsistent with the National Capital Plan		
Rules	Criteria	Comment
1.1 Use and Form		
There is no applicable rule.	C1 A proposal for works on land identified on the map as forming part of the Inter-town Public Transport Route does not jeopardise the future provision of a separate right-of-way within the road reserve to accommodate this service.	C1 The Link Road does not form a part of the Inter-town Public Transport Route.
There is no applicable rule.	C2 Subject to the National Capital Plan, airspace may be used for a purpose which is permitted on land under an adjoining Zone, where the subject development application will not interfere with the safe operation of the road system.	C2 The subject development will not interfere with the safe operation of the road system.

Part B – General Development Controls		
<p>Element 1: Restrictions of Use</p> <p>Intent:</p> <p>a) To ensure development is consistent with the approved Plan of Management</p>		
Rules	Criteria	Comment
1.1 Plans of Management		
There is no applicable rule.	<p>C7</p> <p>Where relevant, the proposed development is consistent with the approved Plan of Management.</p>	<p>C7</p> <p>An approved Plan of Management is not applicable to the proposed development. The development is not located in an area of public land.</p> <p>This Criterion is therefore not relevant to the proposed development.</p>

<p>Element 2: Building and Site Controls</p> <p>Intent:</p> <p>a) To ensure development is compatible with, and does not adversely impact on, the environment</p>		
Rules	Criteria	Comment
2.1 Subdivision		

<p>R8</p> <p>Subdivision is only permitted where:</p> <ul style="list-style-type: none"> a) it is part of a development application for another assessable development b) it is demonstrated that any residual block can accommodate another assessable development designed in accordance with the relevant section of this Code. 	<p>R8</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R8</p> <p>No subdivision of land is required under the proposed works.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>2.2 Demolition</p>		
<p>R9</p> <p>In accordance with section 148 of the <i>Planning and Development Act 2007</i>, the application is accompanied by a Statement of Endorsement from utilities provider (including Water, Sewerage, Stormwater, Electricity, Gas and Telecommunications) stating that:</p> <ul style="list-style-type: none"> a) All network infrastructure on or immediately adjacent the site has been identified on the plan b) All potentially hazardous substances and conditions (associated with or resulting from the demolition process) that may constitute a risk to utility services have been identified c) All required network disconnections have been identified and the disconnection works comply with utility requirements 	<p>C9</p> <p>If a Statement of Endorsement is not provided the application will be referred to relevant utilities provider in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R9</p> <p>Minor Demolition of existing road to facilitate the construction of the new Link Road and Intersection adjacent to SFP entrance is required. However, demolition involving the disconnection of utilities is not required in the scope of works.</p> <p>Relocation of the existing Telstra asset at the three intersection locations is required. Telstra has been engaged to finalise the asset relocation design</p> <p>Refer to relevant utilities provider</p>

<p>d) All works associated with the demolition comply with and are in accordance with utility asset access and protection requirements.</p>		
<p>2.3 National Capital Plan</p>		
<p>There is no applicable rule.</p>	<p>C10</p> <p>Where a development is subject to Special Requirements under the National Capital Plan, or any relevant Development Control Plan prepared under the National Capital Plan, the development is not inconsistent with the Special Requirements or Development Control Plan. Where any provision of this code is inconsistent with Special Requirements under the National Capital Plan, or any relevant Development Control Plan prepared under the National Capital Plan, that provision has no effect.</p>	<p>C10</p> <p>The proposed development is subject to Special Requirements under the National Capital Plan.</p> <p>Clause 4.4. Policies For Urban Areas, item g specifies that within 5km of Mount Stromlo, development or installations which may, through night time illumination or significant vibration, adversely affect the operation of the Mount Stromlo Observatory or the associated seismological vault at Mount Stromlo, shall be referred to the Australian National University for examination and comment and reasonable steps shall be taken to mitigate adverse impacts.</p> <p>The street lighting design (Link Road) proposed is in accordance with the Molonglo Valley Light Impact Study (March 2006) by providing fully shielded/ full cut-off lighting.</p> <p>Application to be referred to the relevant agency.</p>

Element 3: Built Form

Intent:

a) To ensure that development is compatible with the surrounding landscape, especially in areas of high visibility

Note: Under the *Building Act 2004* buildings need to meet the requirements of the Building Code of Australia. For certain classes of buildings, this will include prescribed energy requirements.

The proposed development does not include buildings and is located within a future road corridor.

This Section of the Code is therefore considered not applicable to the proposed development.

Element 4: Parking and Site Access

Intent:

- a) To encourage the design of access and parking as part of the overall design of the development
- b) To provide for safe, convenient access to meet the needs of all users and visitors

Rules	Criteria	Comment
4.1 Traffic Generation		
There is no applicable rule.	<p>C15</p> <p>The existing road network can accommodate the amount of traffic that is likely to be generated by the development.</p>	<p>C15</p> <p>The proposed Link Road has been designed allowing for the traffic volumes provided in the SMEC 'Molonglo Revised' EMME model (12 June 2012).</p>
4.2 Vehicle Access and Parking		
There is no applicable rule.	<p>C16</p> <p>Vehicle access and parking complies with the requirements of the Parking and Vehicular Access General Code.</p>	<p>C16</p> <p>This development does not include any off-street parking facility or access from off-street car parking areas.</p> <p>On-street parking facilities are provided in accordance with the AS/NZS 2890.6:2000. Refer detailed drawings attached with this Development Application for details.</p>
4.3 Bicycle Parking		

<p>There is no applicable rule.</p>	<p>C17</p> <p>Bicycle Parking complies with the requirements of the Bicycle Parking General Code.</p>	<p>C17</p> <p>This development does not include Bicycle Parking.</p> <p>This Criterion is therefore not relevant to the proposed development.</p>
<p>4.4 Pedestrian Movement</p>		
<p>There is no applicable rule.</p>	<p>C18</p> <p>Safe and convenient movement of public transport passengers, pedestrians and cyclists is provided.</p>	<p>C18</p> <p>A check for Steer Tag Busses at all proposed intersections has been completed.</p> <p>Provision for on road cyclists has been incorporated into the design and allows for on road/off road connectivity at intersections.</p> <p>Provision for pedestrians via a shared path in each verge in the future has been allowed for.</p> <p>Refer detailed drawings attached with this Development Application for details.</p>

<p>Element 5: Amenity</p> <p>Intent:</p> <p>a) To ensure development is compatible with, and does not adversely impact on, the urban environment</p>		
Rules	Criteria	Comment
5.1 Lighting		
<p>R19</p> <p>External lighting is provided to building frontages, all pathways, roads, laneways and car-parking areas in accordance with Australian Standard AS1158.3.1 <i>Pedestrian Lighting</i>.</p>	<p>C19</p> <p>External lighting is provided in accordance with the Crime Prevention Through Environmental Design General Code.</p>	<p>R19</p> <p>External lighting to the road is provided in accordance with AS/NZS1158 Category V3 and P4 on pathways along the northern verge.</p> <p>Refer detailed drawings attached with this Development Application for details.</p>
<p>R20</p> <p>All external lighting provided is in accordance with AS 4282 <i>Control of the Obtrusive Effects of Outdoor Lighting</i>.</p>	<p>C20</p> <p>All outdoor lighting, including security and car park lighting, is designed and sited to minimise light spill.</p>	<p>R20</p> <p>External lighting to the road is provided in accordance with ANU lighting pollution report.</p> <p>Full cut-off type lighting is adopted for all street lights in the Molonglo area.</p> <p>Refer Appendix K for the ANU Report</p>
5.2 Signs		
	<p>C21</p>	<p>C21</p>

<p>There is no applicable rule.</p>	<p>Signs comply with the Signs General Code.</p>	<p>No signs, as per the Signs General Code, are included in this proposed development.</p> <p>This Criterion is therefore not applicable to the proposed development.</p> <p><i>Note: All proposed traffic control signs have been designed in accordance with AS1742 and are located within the road reserve.</i></p>
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Element 6: Environment		
Intent:		
a) To provide for ecologically sustainable development which does not have adverse impacts on the surrounding environment		
Rules	Criteria	Comment
6.1 Assessment of Environmental Effects		
There is no applicable rule.	<p>C22</p> <p>The development application is accompanied by an Assessment of Environmental Effects that addresses the following:</p> <ul style="list-style-type: none"> a) appropriate measures to soften the impact of development on the landscape b) impacts on the character and appearance of any building, area of architectural, historic, aesthetic or scientific interest, or other object or place of special cultural or heritage value c) impacts on public health and safety, including crime prevention d) whether public transport services are necessary and, if so, whether they are available and adequate e) impacts on the likely accessibility to facilities and services for users and consumers f) any significant short or long-term effect, that the relevant authority considers the use or 	<p>C22</p> <p>S211 exemptions for Molonglo Development have previously been granted. A copy of the exemption letters is included in the Appendix D.</p> <p>The three applicable s211 exemptions are as follows:</p> <ul style="list-style-type: none"> • Molonglo Urban Land Development and Associated Works (North Weston-Wright-Coombs) – July 2009; • Molonglo Valley Stage 2 - Urban Development Area B1 and Associated Infrastructure – May 2012; & • Molonglo Valley Stage 2 (part), Link Bridge and Sewer 3 Central – September 2012.

	<p>development may have on the environment, including social and economic effects and potential cumulative effects</p> <p>g) impacts on the watercourses and drainage characteristics of the area, including water quality</p> <p>h) impacts on the amenity of surrounding land uses, including impacts on air quality, the level of noise generated, overshadowing, privacy, and the level of wind turbulence generated.</p>	<p>The EDP stage for North Wright Precinct will deal with the traffic (and other) noise attenuation (as was the case with JGD in Molonglo 1 and 2). The flexibility of providing active frontages along the major road will result in transferring noise attenuation to developers, who will have to incorporate adequate construction methodologies to meet Australian Standards related to the internal noise.</p>
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6.2 Water Sensitive Urban Design – Mains Water Consumption
 Note: Refer to the Water Ways: Water Sensitive Urban Design General Code for more information on Water Sensitive Urban Design

<p>R23</p> <p>Evidence is provided that shows the development achieves a minimum 40% reduction in mains water consumption compared to an equivalent development constructed in 2003 using the ACTPLA on-line assessment tool or the NSW BASIX tool. The 40% target is met without any reliance on landscaping measures to reduce consumption.</p> <p>This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area.</p>	<p>C23</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R23</p> <p>Mains water consumption is not affected by this proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
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6.3 Water Sensitive Urban Design – Stormwater Quality
 Note: Refer to the Water Ways: Water Sensitive Urban Design General Code for more information on Water Sensitive Urban Design

<p>R25</p> <p>Sites of size greater than 5,000m² or roads longer</p>	<p>C25</p> <p>Sites of size greater than 5,000m² or roads longer than 1</p>	<p>R25/C25</p>
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<p>than 1 km need to provide evidence showing a reduction in average annual stormwater pollutant export load of:</p> <ul style="list-style-type: none"> a) suspended solids by 60% b) total phosphorous by 45% c) total nitrogen by 40% <p>compared to an urban catchment with no water quality management controls, using the MUSIC model to demonstrate compliance.</p> <p>This requirement can be met by associated stormwater works in the same catchment. This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area or to road modifications where the increase in pavement areas is less than 50% of the existing area.</p>	<p>km need to provide evidence showing a reduction in average annual stormwater pollutant export load of:</p> <ul style="list-style-type: none"> a) suspended solids by 60% b) total phosphorous by 45% c) total nitrogen by 40% <p>compared to an urban catchment with no water quality management controls, using any other method.</p> <p>This requirement can be met by associated stormwater works in the same catchment. This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area or to road modifications where the increase in pavement areas is less than 50% of the existing area.</p>	<p>The proposed works is less than 1km in length.</p> <p>Vegetated swales have been provided to manage run-off from the proposed road and these will provide additional water quality controls of storm water run-off.</p> <p>Future adjacent developments within the catchment will be required to provide their own stormwater quality controls to achieve additional load reduction targets.</p>
<p>6.4 Water Sensitive Urban Design – Stormwater Quantity Note: Refer to the Water Ways: Water Sensitive Urban Design General Code for more information on Water Sensitive Urban Design</p>		
<p>R26</p> <p>All sites of size greater than 2,000m² and subject to redevelopment need to ensure that the capacity of the existing pipe (minor) stormwater connection to the site is not exceeded in the 1-in-10 year storm event.</p> <p>All sites of size greater than 2,000m² and subject to redevelopment need to ensure that the capacity of the existing overland (major) stormwater system to the site is not exceeded in the 1-in-100 year storm</p>	<p>C26</p> <p>Evidence is provided by a suitably qualified person that shows that for all sites of size greater than 2,000m² and subject to redevelopment</p> <p>EITHER</p> <p>a reduction of 1-in-5 year and 1-in-100 year stormwater peak run off flow to pre-development levels. See WaterWays General Code for more detail.</p>	<p>R26</p> <p>This rule is not applicable to the proposed road component.</p> <p>However, the road pipe drainage networks are designed for 10 year ARI.</p>

<p>event.</p>	<p>OR</p> <p>That the capacity of the downstream piped stormwater system to its outlet with an open channel is not exceeded in the 1-in-10 year storm event.</p>	
<p>6.5 Heritage</p>		
<p>R27</p> <p>In accordance with section 148 of the <i>Planning and Development Act 2007</i>, applications for development on land or buildings subject to interim or full heritage registration are to be accompanied by advice from the Heritage Council stating that the development meets the requirements of the <i>Heritage Act 2004</i>.</p>	<p>C27</p> <p>If advice from the Heritage Council is required, but not provided, then the application will be referred to the Heritage Council in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R27</p> <p>A Cultural Heritage Assessment was undertaken in June 2003.</p> <p>Refer to Section 3.4 – Section 211 Exemption Application and Appendix D.</p>
<p>6.6 Contamination</p>		
<p>R28</p> <p>A statement is provided that the potential for land contamination has been assessed in accordance with the <i>ACT Government Strategic Plan – Contaminated Sites Management 1995</i> and the <i>ACT Environment Protection Authority Contaminated Sites Environmental Protection Policy 2000</i>, and it is demonstrated that the land is suitable for the proposed development.</p>	<p>C28</p> <p>If a Statement of Endorsement is not provided the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R28</p> <p>Application to be referred to the relevant agency.</p> <p>SMEC was engaged by ACT Procurement Solutions in 2009 to undertake the contamination assessment to assist the ACT Planning and Land Authority (ACTPLA) in identifying and managing risks associated with the site. The contamination assessment was to support the assessment of proposed future residential land use options.</p> <p>The scope of this project does not encroach into those areas which require further documentary</p>

		evidence of EPU sign off. Refer to Appendix G.
6.7 Trees		
<p>R29</p> <p>This rule applies to a development that has one or more of the following characteristics:</p> <ul style="list-style-type: none"> a) requires groundwork within the tree protection zone of a <i>protected tree</i> b) is likely to cause damage to or removal of any <i>protected trees</i> <p>The authority shall refer the development application to the Conservator of Flora and Fauna.</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. Under the <i>Planning and Development Regulation 2008</i> a development application for a <i>declared site</i> under the <i>Tree Protection Act 2005</i>, must be referred to the Conservator of Flora and Fauna. 2. The authority will consider any advice from the Conservator of Flora and Fauna before determining the application in accordance with the <i>Planning and Development Act 2007</i>. 3. <i>Protected tree</i> and <i>declared site</i> are defined under the <i>Tree Protection Act 2005</i>. 	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R29</p> <p>Application to be referred to the relevant agency.</p> <p>Tree Assessment and Tree Management Plan included in the DA drawings set.</p>
6.8 Erosion and Sediment Control		
R30	C30	R30

<p>For sites less than 0.3 of a hectare, a plan is provided to demonstrate that the development complies with the <i>ACT Environment Protection Authority, Environment Protection Guidelines for Construction and Land Development in the ACT, August 2007</i>.</p>	<p>If a plan is not provided, the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>The proposed site is >0.3 of a hectare. This Rule is therefore not relevant to the proposed development.</p>
<p>R31 For development on a site greater than 0.3 of a hectare, the application is accompanied by an Erosion and Sediment Control Plan endorsed by the ACT Environment Protection Authority.</p>	<p>C31 If an endorsed Sediment and Erosion Control Plan is not provided the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R31 An endorsed Sediment and Erosion Control Plan is not relevant to this stage of the project. However a concept Sediment and Erosion Control Plan, incorporating control measures included in the Environmental Protection Guidelines for Construction and Land Development in the ACT, is provided in the drawing set. This plan will be finalised by the successful Contractor who will liaise with ACT Environment Protection Authority, prior to commencing construction in accordance with their Environmental Authorisation.</p>
<p>6.9 Hazardous Materials</p>		
<p>R32 For the demolition of single dwelling housing (including garages and carports) constructed* prior to 1985, a Hazardous Materials Survey (including an asbestos survey) is carried out and signed by an appropriately licensed person. The Survey is provided and covers the disposal of hazardous materials, showing that:</p> <p>a) Hazardous material disposal (including asbestos) is to be at a licensed disposal</p>	<p>C32 If an endorsed Hazardous Materials Survey is not provided the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>C32 Demolition of residential premises is not included in the scope of the proposed development. This Rule is therefore not relevant to the proposed development.</p>

<p>facility in the ACT</p> <ul style="list-style-type: none">b) If hazardous materials are to be transported for disposal interstate, approval from the Environment Protection Authority is obtained prior to removal of material from the sitec) An appropriately licensed contractor is engaged for the removal and transport of all hazardous materials (including asbestos) present at the site <p>* Construction date means the date when the Certificate of Occupancy was issued.</p>		
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<p>Element 7: Services</p> <p>Intent:</p> <p>a) To provide for appropriately serviced developments that meet the needs of service providers and users of the proposed development</p>		
Rules	Criteria	Comment
<p>7.1 Waste Management</p>		
<p>R33</p> <p>In accordance with section 148 of the <i>Planning and Development Act 2007</i>, the application is accompanied by a Statement of Compliance from the Department of Territory and Municipal Services stating that the waste facilities and management associated with the development are in accordance with the current version of the <i>Development Control Code for Best Practice Waste Management in the ACT</i>.</p>	<p>C33</p> <p>If a Statement of Compliance is not provided the application will be referred to the Department of Territory and Municipal Services in accordance with the requirements of the <i>Planning and Development Act 2007</i></p>	<p>C33</p> <p>Application to be referred to the relevant agency.</p> <p>A Waste Management Plan is included in this Development Application.</p> <p>Refer to Appendix H.</p>
<p>7.2 Waste Water</p>		
<p>R34</p> <p>Subject to ACTEWAGL approval, all under cover areas drain to the sewer.</p>	<p>C34</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R34</p> <p>Under cover areas are not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>7.3 Utilities</p>		

<p>R34</p> <p>A Statement of Compliance from each relevant utility provider is provided, which confirms that the location and nature of earthworks, utility connections, proposed buildings, pavements and landscape features comply with utility standards, access provisions and asset clearance zones.</p> <p>Note: Where there is a conflict between planning and utility requirements, the utility requirements take precedence over other provisions of this Code.</p>	<p>C34</p> <p>If a statement of compliance is not provided, the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>C34</p> <p>Whilst liaison has been undertaken with utility providers, the application is to be referred to the relevant agency.</p> <p>Services affected by the proposed works are identified in the Development Application Drawings.</p>
<p>7.4 Storage</p>		
<p>R36</p> <p>Outdoor storage areas are located behind the building line and screened from view from any road or other public area.</p>	<p>C36</p> <p>Where the proposed use of the site requires open areas for storage of goods and materials, adequate provision is included in the design layout of the site.</p>	<p>R36</p> <p>Outdoor storage areas are not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>R37</p> <p>Outdoor storage areas do not encroach on required car-parking spaces, driveways exclusively required for vehicular circulation or landscape areas.</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R37</p> <p>Outdoor storage areas are not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>7.5 Servicing and Site Management</p>		
<p>R38</p>	<p>C38</p>	

<p>In accordance with section 148 of the <i>Planning and Development Act 2007</i>, the application is accompanied by a Statement of Endorsement from the relevant agency stating that the waste facilities and management associated with the development are in accordance with the <i>Design Standards for Urban Infrastructure</i>.</p>	<p>If a Statement of Endorsement is not provided the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>C38</p> <p>Waste facilities and management is not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
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4.2 Coombs and Wright Concept Plan

The purpose of this plan is to:

- a) Guide the design and assessment of estate development plans (subdivision proposals) in Coombs and Wright;
- b) Inform the allocation of final zones at the time when a parcel of land ceases to be part of the future urban area following subdivision;
- c) Guide the development of individual blocks in concert with other relevant codes under the Territory Plan; and
- d) Guide the development and management of the public realm.

This plan is based on the principles and policies set out in the Structure Plan - Molonglo and North Weston of the Territory Plan.

Refer to Appendix L for the Coombs and Wright Concept Plan.

Part A – Land Use

Notes:

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 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.

Element 1: Land use plan

Note: Desired planning outcomes relevant to this element are: (a), (b), (c), (e), (f), (g), (h), (j), (k), (o), (p) and (q).

Rules	Criteria	Comment
<p>R1</p> <p>The land use plan submitted with an estate development plan (EDP) is in accordance with figure 4.</p>	<p>C1</p> <p>Precinct A 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, a) RZ1, consistent with desired planning outcome (a) b) PRZ1, consistent with desired planning outcome (h).</p>	<p>C1</p> <p>No works in the project scope are proposed in Precinct A.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R2</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C2</p> <p>Precinct B 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, a) RZ5, not less than 6.5ha, consistent with desired</p>	<p>C2</p> <p>No works in the project scope are proposed in Precinct B.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>

	<ul style="list-style-type: none"> 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>R3</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C3</p> <p>Precinct C 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>C3</p> <p>No works in the project scope are proposed in Precinct C.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R4</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C4</p> <p>Precinct D 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> <ul style="list-style-type: none"> a) CZ4 on the south eastern side of road 3, not less than 1.4ha b) CZ5, not less than 0.9ha. 	<p>C4</p> <p>No works in the project scope are proposed in Precinct D.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R5</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C5</p> <p>Precinct E 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 1ha, consistent with desired planning outcome (b).</p>	<p>C5</p> <p>No works in the project scope are proposed in Precinct E.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>

<p>R6</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C6</p> <p>Precinct F 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) c) PRZ1 and NUZ4, in the balance to accommodate Coombs urban open space corridor specified in R23) and C23). 	<p>C6</p> <p>No works in the project scope are proposed in Precinct F.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R7</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C7</p> <p>Precinct G 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> <ul style="list-style-type: none"> a) RZ5, not less than 2.7ha, consistent with desired planning outcome (b) b) b) PRZ1, following the watercourse, consistent with desired planning outcome (h). 	<p>C7</p> <p>No works in the project scope are proposed in Precinct G.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R8</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C8</p> <p>Precinct H 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,</p>	<p>C8</p> <p>No works in the project scope are proposed in Precinct H.</p>

	consistent with desired planning outcome (a).	This Rule / Criteria is not relevant to the proposed development.
R9 The land use plan submitted with an EDP is in accordance with figure 4.	C9 Precinct I 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 I, RZ5, not less than 5.9ha, consistent with desired planning outcome (b).	C9 No works in the project scope are proposed in Precinct I. This Rule / Criteria is not relevant to the proposed development.
R10 The land use plan submitted with an EDP is in accordance with figure 4.	C10 Precinct J 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).	C10 No works in the project scope are proposed in Precinct J. This Rule / Criteria is not relevant to the proposed development.
R11 The land use plan submitted with an EDP is in accordance with figure 4.	C11 Precinct K 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 K, CZ5, not less than 1.7ha, consistent with desired planning outcome (b).	C10 No works in the project scope are proposed in Precinct K. This Rule / Criteria is not relevant to the proposed development.
R12 The land use plan submitted with an EDP is in accordance with figure 4.	C12 Precinct L Subject to the identification of precincts and key roads in accordance with elements 2 and 3, and to the zoning of	C13 No works in the project scope are proposed in Precinct L.

	land that is not in a future urban area, the land use plan submitted with an EDP shows in precinct L, RZ1, consistent with desired planning outcome (a).	This Rule / Criteria is not relevant to the proposed development.
R13 The land use plan submitted with an EDP is in accordance with figure 4.	C13 Precinct M 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 M, a) RZ5, not less than 4.2ha, consistent with desired planning outcome (b) b) PRZ1 and NUZ4, following the watercourse, consistent with desired planning outcome (h).	C13 No works in the project scope are proposed in Precinct M. This Rule / Criteria is not relevant to the proposed development.
R14 The land use plan submitted with an EDP is in accordance with figure 4.	C14 Precinct N 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 N, a) RZ5, not less than 5ha, consistent with desired planning outcome (b) b) PRZ1, following the watercourse, not less than 60 metres at widest point, consistent with desired planning outcome (h).	C14 No works in the project scope are proposed in Precinct N. This Rule / Criteria is not relevant to the proposed development.
R15 The land use plan submitted with an EDP is in accordance with figure 4.	C15 Precinct O 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 O, CZ5, not less than 1.7ha, consistent with desired planning outcome (b).	C15 No works in the project scope are proposed in Precinct O. This Rule / Criteria is not relevant to the proposed development.

<p>R16</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C16</p> <p>Precinct 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 P, RZ5, not less than 1.75ha, consistent with desired planning outcome (b).</p>	<p>C16</p> <p>No works in the project scope are proposed in Precinct P.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R17</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C17</p> <p>Precinct Q 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 Q, a) RZ5, not less than 2.1ha, consistent with desired planning outcome (b) b) PRZ1, following the watercourse, not less than 75 metres wide, consistent with desired planning outcome (h).</p>	<p>C17</p> <p>No works in the project scope are proposed in Precinct Q.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R18</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C18</p> <p>Precinct R 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 R, a) predominantly RZ1, consistent with desired planning outcome (a) b) CFZ, not less than 0.85ha, located adjacent to CZ5 in precinct O, with frontage to a collector road c) PRZ1, not less than 1ha, located adjacent to CFZ in precinct R, with frontage to a collector road and</p>	<p>C18</p> <p>No works in the project scope are proposed in Precinct R.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>

	<p>ccessible from the primary shared path network, incorporating not less than 0.5ha that is less than 2% (finish grade) for active recreation, consistent with desired planning outcome (c).</p>	
<p>R19</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C19</p> <p>Precinct S 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 S,</p> <ul style="list-style-type: none"> a) CFZ, to accommodate, at a minimum, an educational establishment (not less than 6ha) and other community uses (not less than 2ha), consistent with desired planning outcome (b) b) PRZ1, over the balance. 	<p>C19</p> <p>The proposed Link Road is located within the PRZ1 land use zone. However it is in accordance with the concept plan.</p>
<p>R20</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C20</p> <p>Precinct T 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 T, RZ5, not less than 1.6ha, consistent with desired planning outcome (b).</p>	<p>C20</p> <p>No works in the project scope are proposed in Precinct T.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R21</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C21</p> <p>Precinct U 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 U,</p> <ul style="list-style-type: none"> a) CZ6, not less than 5.5ha, consistent with desired planning outcome (b) b) PRZ1, with sufficient area and width to protect the associated water course, consistent with 	<p>C21</p> <p>The proposed Link Road will be within a designated transportation and services corridor TSZ1 and will have no interference with Precinct U CZ6 and PRZ1 land use areas.</p> <p>The proposed Link Road does not influence the PRZ1 land area.</p>

	desired planning outcome (h).	
<p>R22</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C22</p> <p>Precinct V 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 V, <ul style="list-style-type: none"> a) RZ1, consistent with desired planning outcome (a) b) PRZ1, consistent with desired planning outcome (h). </p>	<p>C22</p> <p>The proposed Link Road will be within a designated transportation and services corridor TSZ1 and will have no interference with Precinct V CZ6 and PRZ1 land use areas.</p>
<p>R23</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C23</p> <p>Coombs urban open space corridor 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, <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>	<p>C23</p> <p>The proposed Development is not in Coombs.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R24</p> <p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>C24</p> <p>Weston Creek urban open space corridor 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>C24</p> <p>No works in the project scope are proposed in the Weston Creek area.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R25</p>	<p>C25</p>	<p>C25</p>

<p>The land use plan submitted with an EDP is in accordance with figure 4.</p>	<p>Holdens Creek urban open space corridor 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>No works in the project scope are proposed in the Holdens Creek area.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R26</p> <p>The land use plan submitted with an EDP includes PRZ1 to incorporate a buffer not less than 20 metres wide (where measured 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>C26</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R26</p> <p>The proposed road corridor and work area is confirmed clear of the Pink-tailed Worm-lizard habitat area and associated buffer zone. Refer to drawing C11150-850+ and the report Environmental planning principles for the protection of the Pink-tailed Worm-lizard (<i>Aprasia paraulchella</i>) in the Lower Molonglo Valley, ACT – William S Osborne February 2008.</p>

Element 2: Precincts

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

Rules	Criteria	Comment
<p>R27</p> <p>The land use plan submitted with an EDP complies with precincts shown on figure 2.</p>	<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, precinct D and the north-south arterial road 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. It is transected 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 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 h) precinct H is bounded by Coombs urban open space corridor, Molonglo River corridor, the urban open space surrounding the proposed Weston 	<p>C27</p> <p>The propose work involves precinct S, U and V. Hence the remaining precincts and areas are not relevant to this DA submission.</p> <p>In regards to precinct S, U and V, The proposed Link Road will be within a designated transport and services corridor TSZ1 and will inflict no contradiction to the zoning characters.</p>

	<p>Creek pond, precinct I and road 7</p> <ul style="list-style-type: none"> i) precinct I is bounded by precinct H, Weston Creek urban open space corridor and road 7 j) precinct J is bounded by road 4, road 7, Weston Creek urban open space corridor and the north-south arterial road k) precinct K is the site of the ACT Forestry Depot. It is bounded by Weston Creek urban open space corridor and the northsouth arterial road l) precinct L is bounded by Molonglo River corridor, Holdens Creek urban open space corridor, precinct M and the existing water supply easement 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 n) precinct N is bounded by Holdens Creek urban open space corridor, the north-south arterial road, precinct O, precinct R and Uriarra Road 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) precinct P is bounded by precinct O, the north-south arterial road, Coombs urban open space overland flow corridor and road 6 q) precinct Q is bounded by Coombs urban open space overland flow corridor, the north-south arterial road, Cotter Road and road 6 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 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 	
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	<p>and Uriarra Road</p> <ul style="list-style-type: none">t) precinct T is bounded by the north-south arterial road, the existing water supply easement and precinct Su) 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 1v) precinct V is bounded by Uriarra Road, precinct S and precinct Uw) Coombs urban open space corridor,<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, shared paths and stormwater measuresx) Weston Creek urban open space corridor contains the proposed Weston Creek pond and surrounding urban open space and stormwater measuresy) 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.	
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Element 3: Identification of key roads

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

Rules	Criteria	Comment
<p>R28</p> <p>The land use plan submitted with an EDP complies with the location and configuration of the north-south arterial road, including lanes, underpasses, entry points, junctions and signals as shown on figure 3.</p>	<p>C28</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R28</p> <p>The alignment of the Link Road is fully governed by the planning concept and complies with the relevant development standards and codes, including the location and configuration of the north-south arterial road (John Gorton Drive).</p>
<p>R29</p> <p>The land use plan submitted with an EDP identifies key roads 1-8 in accordance with figure 3.</p>	<p>C29</p> <p>Road 1 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 1, that is the realignment of the eastern end of Uriarra Road to form a new junction at signalised intersection 3.</p>	<p>R29</p> <p>Road 1 is the proposed Link Road which is the purpose of this DA submission. The purpose of the proposed Link Road remains unchanged.</p>
<p>R30</p> <p>The land use plan submitted with an EDP identifies key roads 1-8 in accordance with figure 3.</p>	<p>C30</p> <p>Road 2 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 2. Its key function is to provide convenient access to the northern part of Coombs (precincts L and M) from signalised intersection 3.</p>	<p>R30</p> <p>Road 2 is not included as a part of the work scope.</p> <p>This Rule / Criteria is not relevant to the proposed development.</p>
<p>R31</p> <p>The land use plan submitted with an EDP identifies key roads 1-8 in accordance with figure 3.</p>	<p>C31</p> <p>Road 3 Subject to the zoning of land that is not in a future urban</p>	<p>R31</p> <p>Road 3 is not included as a part of the work scope.</p>

	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 area (precinct A) from signalised intersection 2.	This Rule / Criteria is not relevant to the proposed development.
R32 The land use plan submitted with an EDP identifies key roads 1-8 in accordance with figure 3.	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 bridge and embankment at the northern extremity of the proposed Weston Creek pond.	R32 Road 4 is not included as a part of the work scope. This Rule / Criteria is not relevant to the proposed development.
R33 The land use plan submitted with an EDP identifies key roads 1-8 in accordance with figure 3.	C33 Road 5 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 5, which links signalised intersection 2 to Uriarra Road.	R33 Road 5 is not included as a part of the work scope. This Rule / Criteria is not relevant to the proposed development.
R34 The land use plan submitted with an EDP identifies key roads 1-8 in accordance with figure 3.	C34 Road 6 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 6, which forms the boundary between the medium and high density residential and mixed use zones abutting the north south arterial and the lower density residential zones in Wright. Its key function is to provide a convenient link between abutting land uses and the signalised intersections on the north-south arterial road, and links road 5 and Cotter Road.	R34 Road 6 is not included as a part of the work scope. This Rule / Criteria is not relevant to the proposed development.
R35	C35	R35

<p>The land use plan submitted with an EDP identifies key roads 1-8 in accordance with figure 3.</p>	<p>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 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 road.</p>	<p>Road 7 is not included as a part of the work scope. This Rule / Criteria is not relevant to the proposed development.</p>
<p>R36 The land use plan submitted with an EDP identifies key roads 1-8 in accordance with figure 3.</p>	<p>C36 Road 8 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>R36 Road 8 is not included as a part of the work scope. This Rule / Criteria is not relevant to the proposed development.</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.

The proposed development does not include subdivisions and is located within a future road corridor.

This Section of the Code is therefore considered not applicable to the proposed development.

Part C – Buildings and structures

Note:

1. Sections referred to in this part are shown on figure 4, and they are located by cross sections lines.
2. Building heights referred to in this part exclude minor structures such as garbage enclosures, fences and the like.

The proposed development does not include buildings and is located within a future road corridor.

This Section of the Code is therefore considered not applicable to the proposed development.

Part D – Environment		
Element 17: Matters of national environmental significance		
Rules	Criteria	Comment
<p>R64</p> <p>This rule applies to the area shown in Figure 6. Development is not inconsistent with the Molonglo Valley Plan for the Protection of Matters of National Environmental Significance (NES Plan).</p>	<p>C64</p> <p>This is a mandatory rule. There is no criterion.</p>	<p>R64</p> <p>Refer to Section 3.3</p> <p>A copy of the NES report can be found in the Appendix E.</p>

4.3 Molonglo Valley 2 – Important Planning Requirements (IPR)

A review of the IPR specifically in relation to the planning requirements of the major arterial and collector roads has been carried out. The IPR identified the Uriarra Road intersections to be a part of the collector road network that will “*provide pedestrian and cycle connections to major destinations*”. These three intersections final alignment is largely in keeping with the locations shown by the IPR.

The IPR states the requirement for proposed Developments to meet the standards for pedestrian, cyclists and busses. The intersection designs have incorporated provision for on road cycling and have been designed so that they are capable of carrying busses. In general the collector roads have not been identified as a pedestrian/cycle priority street.

The location of the intersections is clear of natural and heritage features identified in the IPR (refer Figure 7).

Condition 6 of the IPR applies to intersections. Figure 15 – Uriarra Road edge condition 6 specifies the protection zone (outer and inner) widths that apply. The intersection stubs have no bearing on the protection zones.

Refer to Appendix M for the IPR.

5 OPINION OF COST

The estimated construction costs for Uriarra Road Intersection and John Gorton Drive Link works within TAMS designated land would be in the order of \$6,000,000 including GST and a 10% contingency.

Refer to Appendix N for the break down.

6 CONCLUSIONS

We expect that this document provides necessary and adequate information on this proposed development and demonstrates that the development application requirements under the Territory Plan and Form 1D are satisfied. It is intended that, by providing the above information, the intent and impacts of the proposed John Gorton Drive Link Road and Uriarra Road Intersections are made clear and it helps make the Development Application assessment process transparent and uncomplicated.

BROWN CONSULTING (ACT) PTY LTD
December 2012

Appendix A EPA Correspondence

Appendix B Service Authority Correspondence -

Appendix C Drawing Register

Appendix D S211 Exemptions

Appendix E NES Plan

Appendix F Letter from the Conservator Liaison Officer

Appendix G Final ESA Phase 1 Report

Appendix H Waste Management Plan

Appendix I Tree Assessment Sheets

Appendix J Heritage Studies

Appendix K ANU Report

Appendix L Coombs and Wright Concept Plan

Appendix M Molonglo Valley Stage 2 – IPR

Appendix N Opinion of Cost

Appendix O CEMP Template



ACT
Government
Economic Development

**MOLONGLO 2
EAST WEST ARTERIAL – STAGE 1**

DEVELOPMENT APPLICATION (DA) REPORT

JOB NO: C13025

AUGUST 2013

Brown Consulting (ACT) Pty Ltd

August 2013

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1 INTRODUCTION

This Development Application is submitted on behalf of Economic Development Directorate (EDD) for the purpose of gaining approval to construct the first stage of the East West Arterial within Molonglo 2.

This report is to provide clear and thorough information about the proposed development and to help make the Development Application assessment process transparent and uncomplicated. A project background has been included to help establish the history and context of the proposed development, and also to provide additional information about the project where it has influenced our assessment of the relevance of the Development Application requirements.

A *Statement Against Relevant Criteria* is included in **Section 4** below.

2 PROJECT OVERVIEW

2.1 General

The East West Arterial (EWA) is a major infrastructure element in Molonglo Valley Stage 2. It forms the primary east west link between Molonglo Valley Stage 2 and the Tuggeranong Parkway, thus providing connectivity between new residential development and the broader ACT.

Stage 1 includes the length of road directly west of John Gorton Drive up to and including the first intersection. The works are required to facilitate the installation of services from John Gorton Drive into the Denman Prospect Englobo site. Additionally the construction of Intersection 1 will provide a point of connection into Denman Prospect from which the future developer may construct the edge road required under the Deed.

The construction of Stage 1 of the EWA will be undertaken as part of the ACT Government's Capital Works Program.

2.2 Description of the Works

Key features of the design are as follows:

- A two-way, dual lane carriageway arterial road for approximately 320m.
- A four way signalised intersection providing access to future development to the north and south.
- An intermediate minor unsignalised intersection providing a left in / left out arrangement to the north.

Refer to drawing C13025-P005+ for the General Arrangement.

2.3 Studies and Investigations

The following studies and investigations are of particular relevance to East West Arterial Stage 1 works:

2.3.1 *Molonglo 2- East West Arterial Road Extension to Cravens Creek – Feasibility Study*

Brown Consulting (ACT) was engaged by Shared Services Procurement on behalf of the Economic Development Directorate (EDD) in December 2012 to undertake a Feasibility Study of the Molonglo 2 East West Arterial Extension from John Gorton Drive to Cravens Creek. The scope of the study included developing options for the horizontal and vertical alignments for the East West Arterial (EWA) and to identify suitable locations for intersections along the road.

2.3.2 Heritage Assessment

In August 2010, the Environmental and Sustainable Development Directorate (ESDD) engaged BIOSIS Research to undertake a cultural heritage survey and sub-surface test pitting program of the proposed Molonglo Stage 2. The investigations followed on from the initial desktop heritage review of the Molonglo Valley in 2006. The footprint of the East West Arterial Stage 1 is within the heritage study area.

The heritage survey revealed no areas of archaeological significance in close proximity to the Stage 1 works. The closest area of significance is an isolated find MVF10, 150m west of Intersection 1.

Following correspondence with the ACT Heritage Unit, any restricted information included in the original heritage assessments has been omitted from the Development Application documentation in order to comply with requirements of the Heritage ACT 2004.

2.3.3 Tree Assessment

Scenic Landscape Architecture undertook a tree assessment of the trees within Molonglo Valley Stage 2 in 2011. The East West Arterial Stage 1 is within this study area and no trees have been identified to exist within the road footprint area.

2.3.4 Molonglo 2 Phase 2 Environmental Site Assessment

Following the Phase 1 Environmental Site Assessment (ESA) undertaken by AECOM in 2012, the Land Development Agency (LDA) commissioned AECOM to undertake a Phase 2 Environmental Site Assessment. The study assessed background concentrations of Contaminants of Potential Concern (COPC) and focused on Areas of Environmental Concern that were identified in the Phase 1 ESA.

The report stated that concentrations of the organic COPC were below the adopted soil assessment criteria and that no asbestos was identified. Concentrations of metals were deemed to be of an acceptable range. Overall the report concluded that the site was suitable for the proposed residential land use. The footprint of the EWA is within the ESA study area.

2.3.5 Geotechnical Investigation

Douglas Partners Pty Ltd carried out an investigation into the geotechnical conditions for the proposed works in June 2013. The site investigation included a site inspection and the excavation of four test pits along the proposed alignment to depths of 0.7 to 2.9m.

The site investigation revealed the following:

- Average topsoil depth of 0.3m
- A variable mix of sand, silt, clay and gravel underlying the topsoil. This included large areas of silty and sandy soils.
- Bedrock: medium to high strength, moderately weathered dacite below depths of 0.2 – 0.45 m to the ripper refusal depths of 0.7 – 1.1 m.

2.3.6 Noise Assessment

UNSW at Canberra carried out an investigation into the noise impact for the proposed works. The investigation identified the predicted 58 and 63 dB(A) lines and recommended noise attenuation measures.

The ACT Noise Management Guidelines (1996) recommends a 63 dB(A) line for residential and community facilities. The noise investigation determined the 63 dB(A) contour to occur at the following approximate locations:

- 30m from the kerb along the East West Arterial
- 20m from the kerb on Road 1
- 30m from the kerb on Road 2

The ACT Noise Management Guidelines (1996) also recommend an additional limit of 58 dB(A) for private open space. This contour was determined to occur at the following approximate locations:

- 45m from the kerb along the East West Arterial
- 25m from the kerb on Road 1
- 35m from the kerb on Road 2

The location of both the 58 and 63 dB(A) contours will need to be considered during the design of proposed adjacent development. It is currently proposed that development adjacent to the Stage 1 of the East West Arterial and side roads will be multi-unit, however the specific location of these developments remains unconfirmed. The proposed developments are likely to be multistorey which means that traditional noise mitigation measures such as barriers and mounds will likely be ineffective. If development occurs within the 63 dB(A) line, then it is recommended that sound insulation be incorporated within the building façade via architectural treatments.

An additional consideration for developers is the location of the 58dB(A) contour. This will impact open space areas of multi-unit developments. External noise mitigation measures may be effective for these areas.

A copy of the Noise Assessment Report is included in Appendix F.

2.4 East West Arterial Design

2.4.1 General

The East West Arterial Stage 1 design was informed by a number of factors and constraints. Of particular importance was the Molonglo 2 – East / West Arterial Road Extension to Cravens Creek – Feasibility Study, which Brown Consulting completed in June 2013. This feasibility study formed the basis of road layouts, alignments and likely grades.

2.4.2 Road Design

Road design criteria have been adopted from the latest AUSTRROADS publications (Guide to Road Design) and are generally consistent with previously constructed sections of the adjacent JGD.

The key features of the East West Arterial Road are:

- 2 x 3.5m traffic lane in each direction. This is suitable based on the traffic volumes indicated in the SMEC EMME 3 traffic models which covers the whole of Molonglo;
- 2.0m on-road cycle lanes each direction;
- Provision for back to back 3.5m right turn bays with 3.0m residual median suitable for future traffic signal hardware and pedestrian refuge;
- One way cross fall along the East West Arterial;
- 39m wide road reserve;

Intersection design criteria has been adopted from the latest AUSTRROADS publications (Guide to Road Design – Parts 4, 4A & 4B)

The key features of the Intersection 1 are:

- Dedicated right turn lane for all intersection approaches.
- Pedestrian crossing at all left turn lanes.
- 2.5m minimum wide concrete medians for all approaches.
- Concrete islands for pedestrian refuge
- Treatment for pedestrians and cyclists in accordance with TAMS design standards, including coloured pavement treatment

2.4.3 Pavement

The pavement design has been selected based upon the Geotechnical Investigation and the existing pavement at the intersection with John Gorton Drive. The proposed surface treatment for the road pavement is stone mastic asphalt (SMA), which will assist in reducing noise by up to 5dB(A).

Refer to Drawings C13025-P200+ & C13025-P201+ for details of the pavement.

2.4.4 Earthworks

The Economic Development Directorate (EDD) wish to utilise the excess material from Molonglo 2 Group Centre, which is located adjacent to John Gorton Drive (within 500m of the East West Arterial), as imported fill for the East West Arterial Stage 1 works. It is anticipated that 3,000m² of imported material will be required.

2.4.5 Batter Design

1H: 2.5V batter is proposed for the East West Arterial verges. This batter slope is in accordance with Douglas Partners recommendations and maintains consistency with the adjacent John Gorton Drive construction where similar batter slopes have been adopted.

2.4.6 Services

2.4.6.1 Existing services

There are existing Telecommunications and Electrical assets in the vicinity of stage 1 of the East West Arterial.

An existing 11kV overhead electrical service runs along the western side of Coppins Crossing Road, crossing over the proposed East West Arterial alignment at approximately chainage 190. The existing electrical poles are spaced such that the East West Arterial alignment passes between two poles. The 11kV overhead electrical service is proposed to be relocated as part of the John Gorton Drive Stage 2A Construction.

Telstra has two assets which will be impacted by the Stage 1 of the East West Arterial, a copper line and fibre optic. These services run parallel to the existing Coppins Crossing Road and cross the proposed East West Arterial at approximately chainage 140. The Telstra assets are proposed to be relocated as part of the John Gorton Drive Stage 2A Construction.

2.4.6.2 Proposed services

The provision of services in the project area has been discussed with services authorities. This will include a shared services trench, sewer, water and stormwater to accommodate the adjacent future development. The records of discussions are included in Appendix G.

2.4.7 Streetlighting

The street lighting design of the East West Arterial will be carried out in accordance with TAMS Design Standard – DS12 – Public Lighting. In addition, consideration has been given to the lighting restrictions imposed by Stromlo Observatory.

Street Lighting drawings have been included in the DA Drawings.

2.4.8 Landscaping

There are limited opportunities for landscaping within the Stage 1 work area. This is due to the restricted road reserve area and required clearances between trees and services. Landscaping measures will be restricted to grassing within the verges and shrub bed planting in batters. It is noted that whilst native grass has been used in areas of nearby John Gorton Drive, dry land grassing has been selected due to availability and reduced maintenance.

There are significant cut and fill batters along the East West Arterial. In accordance with recommendations from the geotechnical investigation, erosion measures, such as shrub beds, have been included on exposed batters where required.

2.5 Development Application Drawings

A set of drawings including the proposed site plan, elevations, sections, utility services and landscaping is included with this Development Application. Each drawing has been drawn to the scale considered most fit for purpose.

3 APPLICATION REQUIREMENTS

3.1 Land Use

The proposed East West Arterial corridor is a greenfield site with future planned developments on either side of the proposed road. Currently the Territory Plan has not defined the corridor for the East West Arterial. It is intended that the East West Arterial alignment will set the road reserve corridor.

The current zonings that the proposed road alignment of the East West Arterial falls into are RZ4 Medium Density Residential Zone and RZ5 High Density Residential Zone. The proposed road reserve for the East West Arterial will require the zoning codes of these area to be amended to be TSZ1 Transport and Services Zone in the Territory Plan to suit the land use purpose.

As detailed in section 2.2 - 2.2 Description of the Works, this proposal is only for the construction of the first stage of the East West Arterial Road and associated infrastructure and does not involve any residential development. As such, the Residential Zones Development Code for the current RZ4 and RZ5 zoning is not relevant and has not been assessed against.

The Statement Against Relevant Criteria, has been completed for the future Transport and Services Zone Development Code. This is included in section 4.

Refer to drawing C13025 – P006 for details of the current zoning.

3.2 Impact Track

Impact track DA applies to proposals under Section 123 of the Planning and Development Act 2007 (the Act) that involves a process or activity likely to have significant adverse environmental impact on an endangered species or ecological community. An Environmental Impact Statement (EIS) is normally required for the projects which go down the route of the Impact Track Assessment.

Section 211 of the Act allows an applicant to seek exemption from the requirement to complete an EIS. The Minister responsible for the Act has discretion under Section 211 to grant exemption based on the information presented in previous studies. If an exemption is granted, as has been granted in this instance, then the EIS process is regarded as complete and allows an application to lodge a development assessment (DA) for evaluation under the impact track process.

The Land Development Agency (LDA) and EDD have prepared and submitted S211 exemption applications for parts of the Molonglo development, which identify the potential impacts of the proposed development and provides information to support the request for Ministerial exemption under S211 of the Act. Exemptions have been granted for each of the S211 exemption applications.

The two previous applications prepared by EDD had identified potential impacts of the proposed development and provided information supporting their request for Ministerial exemption under s211. In July 2013 these two exemptions were consolidated into a single exemption.

- Molonglo Valley Stage 2 – Urban Development Infrastructure and Link Bridge, Application for s211 Exemption Consideration Report, (July 2013)

A copy of the Ministers' Approval Decision of the S211 exemption application is included in Appendix D:

3.3 NES Plan

In September 2008 the ACT Government signed an agreement with the Commonwealth to undertake an assessment of the Molonglo Valley Structure Plan under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). This agreement was amended in March 2010 to provide for the assessment of impacts under the *Molonglo Valley Plan for the Protection of Matters of National Environmental Significance* (the NES Plan) and ESDD engaged Eco Logical Australia Pty Ltd (ELA) to prepare this strategic assessment report of the Molonglo Valley plan.

The strategic assessment of the area was undertaken to streamline the referral process, provide greater certainty in environmental protection and conservation practices, and facilitate sustainable outcomes in new urban development areas.

In the Molonglo Valley matters of NES include threatened species, migratory species and important ecological communities and have been identified as follows;

- *White Box – yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland* (Box Gum Woodland) - listed under the EPBC Act as critically endangered
- *Natural temperate Grassland of the Sothern Tablelands of NSW and the ACT* (Natural temperate Grassland) - listed under the EPBC Act as endangered
- *Aprasia parapulchella* (*Pink-tailed Worm Lizard*) - listed as vulnerable
- *Polytelis swainsonii* (*Superb Parrot*)
- *Lathamus discolor* (*Swift parrot*)

The presence of these endangered and vulnerable communities, require that the impacts of development in Molonglo and North Weston were required to be assessed under national environment law.

On 7 October 2011, the Federal Environment Minister endorsed the Plan. This is the third strategic assessment in Australia to reach the endorsement stage. The endorsement of this Plan allows the Federal Environment Minister to consider giving approval to actions or class of actions that are taken in accordance with the endorsed Plan.

On 20 December 2011, the Federal Environment Minister approved actions associated with urban development in East Molonglo as described in the endorsed Plan.

A copy of the Approval Decision of the NES Plan is included in Appendix E.

3.4 S211 Exemptions

S211 Exemption Application July 2013

This application is to the ACT Minister for Environment and Sustainable Development on the assessment of the request for an exemption from requiring a completed Environmental Impact Statement for the Molonglo Valley Stage 2 - Urban Development, Infrastructure and Link Bridge for an exemption. The application for exemption is made by the Economic Development Directorate (EDD) under Section 211 (S211) of the Planning and Development Act 2007 (the Act).

The exemption of S211 has been granted by the Minister for the Environment and Sustainable Development Simon Corbell upon the conditional and unconditional supports from various entities.

Within this section, responses have been provided to the Molonglo Valley Stage 2 - Urban Development, Infrastructure and Link Bridge Application for s211 Exemption Consideration Report, July 2013. This includes responses to the following components of the July 2013 Exemption Consideration Report:

- Table 15 – Development Application Considerations
- Table 6 – Mitigation Measures – Species and Ecological Communities
- Table 8 - Mitigation Measures – Species and Ecological Communities
- Table 10 - Mitigation measures - land reserved under s315 of the Act
- Table 12 - Mitigation measures – heritage significance of a place or object
- Heading 5.1.2 - Recommended mitigation measures
- Table 14 - Mitigation measures

Table 1 - Development Application Considerations (Table 15) Responses

No	Consideration requirement	Endorsement/ Approval	Development stage	Details of considerations	Response
1	Molonglo River Park Concept Plan	ACT Government	Required prior to construction within the River Corridor.	The River Park Concept Plan will contain detailed policies and guiding principles for construction and operational activities within and near the Molonglo River Corridor.	Not Applicable. The proposed works are outside of the Molonglo River Corridor (NUZ4).
2	Plan of Management for the Molonglo River	ACT Government	Required within 3 years of endorsement of the NES plan or prior to commencement of the Molonglo Group Centre Infrastructure Stage, whichever occurs first.	Related to Management of the Molonglo River Corridor and associated Special Purpose Reserve. Should provide details on (but not limited to) following the matters: <ul style="list-style-type: none"> • Restricting or managing works within the river corridor to limit the risk of erosion; • Restricting or managing works within the river corridor to limit the risk of direct impacts; • Stormwater Quality controls and targets to improve water quality in the Molonglo River particularly downstream of the proposed urban areas; • CEMP to manage the handling of potential contaminants/pollutants during construction; • Stringent sediment and erosion controls during construction implemented through CEMP; • Weed management strategies during construction and land management activities; • Asset protection and fire hazard management strategies to limit the impact on the area and reduce the risk of fire occurring in the area; • Education of local residents on values and conservation of this environment. Including importance of weed management, the illegal dumping of waste, cat containment and responsible pet ownership and on appropriate recreation within the river corridor 	Not Applicable. The proposed works are outside of the Molonglo River Corridor (NUZ4).

3	Asset Protection Zone - Management Plans	Conservation, Planning & Research (ESDD) & Land Manager (ACT Government)/ Rural Lessee	Prior to the establishment of APZs	<p>Management Plans should be developed for the establishment and maintenance of APZs. These plans will be developed in consultation with Conservation, Planning and Research (ESDD) the intended land manager of rural lessee. The plans should outline at least the following:</p> <ul style="list-style-type: none"> • Activities and mitigations associated with the establishment of APZs; • Details on method, timing and frequency of management activities to reduce impacts on grasslands ecology and species; • Details on weed management practices and enforcement of these practices; • Details of measures to reduce risks associated with erosion of soils 	<p>Not Applicable. The proposed works are outside of the Asset Protection Zone (APZ).</p>
4	Concept planning for future urban areas	ACT Government	Prior to the DA/preparation of Estate Development Plans	<p>Concept Planning of future urban areas should be undertaken to ensure that recommended mitigation measures within this report and the s211 requests are incorporated where possible into the Territory Plan. This should include:</p> <ul style="list-style-type: none"> • Designs which develop in areas of degraded or exotic vegetation and avoid areas of high quality vegetation and habitat; • Reduction in the clearing of remnant trees and maintenance of woodland connectivity; • Reduces the requirements for construction within the river corridor; • Reduces the required bushfire APZs and their impacts; • Measures to reduce the impacts of light spill on Mt Stromlo Observatory; • Appropriate links between recreation areas such as Stromlo Forest Park, the National Arboretum and the Molonglo River Park 	<p>The proposed works are clear of any areas of environmental significance. Refer to drawing C13025-850+.</p> <p>Scenic Landscape Architecture undertook a tree assessment of the trees within Molonglo Valley Stage 2 in 2011. The study identified no trees to exist within the footprint of the East West Arterial Stage 1. Refer to Appendix I for a copy of the Molonglo Stage 2 Tree Assessment.</p> <p>Since Scenic Landscape Architecture's tree assessment a number of small pine trees (<i>Pinus radiata</i>) have regrown within the East West Arterial Stage 1 work area. It has been confirmed with ESDD that these <i>Pinus Radiata</i> trees are a pest species and not protected by any legislation.</p> <p>Refer to drawing C13025 – P855+ for details of the required tree removals and to Appendix M for details of tree removal correspondence</p>

					<p>with ESDD.</p> <p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p> <p>The streetlight design for the East West Arterial Road has been designed to comply with the lighting requirements for the Stromlo Observatory.</p> <p>Stage 1 of the East West Arterial is only a 320m section of road, therefore providing links between recreation areas is not applicable.</p>
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5	Construction Environment Management Plans	Land Managers, Conservator of Flora and Fauna, Environment Protection Authority, Tree Protection Unit.	Prior to any construction	<p>Comprehensive Construction Environment Management Plans CEMPs should be developed prior to the undertaking of any construction of development activities. These plans should include as a minimum:</p> <ul style="list-style-type: none"> • Measures to avoid impacts on areas outside of development footprints; • Fencing off of areas of vegetation/trees to be retained; • Erosion and Sediment controls to be implemented during construction and remediation; • Contamination management plans for the handling of potentially contaminating materials and for the remediation of contaminated lands; • Air quality and dust controls measures to limit air quality impacts from construction activities; • Fauna management plans for breeding, injured or trapped wildlife; • Waste management plans for construction activities; • Workplace health and safety plans to protect workers and the public from harm; • Tree management plans for trees to be removed, retained and trimmed/pruned. Should include details on timing of works to reduce impacts on bird species breeding; • Unanticipated Discovery Protocols for the management of impacts unexpected heritage object finds; • Traffic management plans 	A CEMP will be prepared by the contractor prior to construction.
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6	Cultural Heritage Survey where works are to occur outside of previously surveyed areas.	ACT Heritage Council	EDP or infrastructure DA stage – Prior to construction.	Required with the development of the Molonglo River Park Concept Plan or where there is to be an impact outside the previously surveyed area	The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to drawings C13025-P800+ and C13025-P801+.
7	Conservation Management Plans	ACT Heritage Council	EDP or infrastructure DA stage – Prior to construction.	Related to Aboriginal and historical heritage sites. Should be developed to reduce the potential impacts on heritage objects which will be retained in place or salvaged. For objects to be retained in place, plans should outline how objects will be managed and interpreted by the public	The contractor will be required to include an unanticipated discovery plan in the project plan and submit for the ACT Heritage Council's approval prior to the commencement of works.

Table 2 - Mitigation Measures - Species and Ecological Communities (Table 6) - Responses

No	Impact of Development	Mitigation Measure	Response
1	Removal of endangered ecological communities	<p>Develop in areas of degraded vegetation or predominantly exotic vegetation;</p> <p>Undertake further investigation of significance of vegetation to be removed;</p> <p>Offset significant vegetation to be located in parklands and urban open spaces;</p> <p>CEMP to control erosion and sedimentation and the effects on vegetation;</p> <p>Weed control measures to reduce ingress of weeds;</p> <p>Implementation of the Molonglo River Park Concept Plan to protect and manage areas within identified public lands.</p>	<p>The proposed works are clear of any areas of environmental significance. Refer to drawing C13025-850+.</p> <p>An endorsed Sediment and Erosion Control Plan is not relevant to this stage of the project. However a Concept Pollution Control Plan, incorporating control measures included in the Environmental Protection Guidelines for Construction and Land Development in the ACT, is provided in the drawing set.</p> <p>This plan will be finalised by the successful contractor who will submit it to the ACT Environment Protection Authority for approval prior to commencing construction.</p>
2	Reduction of woodland connectivity	<p>Limit mid and over story vegetation removal especially in areas of ecological significance such as the Molonglo River Corridor;</p> <p>Reduce clearing in identified woodland connections;</p> <p>Implementation of the Molonglo River Park Concept Plan to protect and manage areas within identified public land;</p> <p>Develop parks and reserves to improve connectivity between areas of ecological significance and offset clearing of identified woodland connections.</p>	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p> <p>Scenic Landscape Architecture undertook a tree assessment of the trees within Molonglo Valley Stage 2 in 2011. The study identified no trees to exist within the footprint of the East West Arterial Stage 1. Refer to Appendix I for a copy of the Molonglo Stage 2 Tree Assessment.</p> <p>Since Scenic Landscape Architecture's tree assessment a number of small pine trees (<i>Pinus radiata</i>) have regrown within the East West Arterial Stage 1 work area. It has been confirmed with ESDD that these <i>Pinus Radiata</i> trees are a pest species and not protected by any legislation.</p> <p>Refer to drawing C13025 – P855+ for details of the required tree removals and to Appendix M for details of tree removal correspondence with ESDD.</p>

3	Tree hollows being removed	Management options are to reduce clearing of tree hollows, manage clearing to reduce injuring individuals and timing of construction/clearing to avoid breeding disruptions; Strategic preservation of Hollow bearing trees; Relocation of felled limbs/trees containing hollows into reserved areas.	<p>Scenic Landscape Architecture undertook a tree assessment of the trees within Molonglo Valley Stage 2 in 2011. The study identified no trees to exist within the footprint of the East West Arterial Stage 1. Refer to Appendix I for a copy of the Molonglo Stage 2 Tree Assessment.</p> <p>Since Scenic Landscape Architecture's tree assessment a number of small pine trees (<i>Pinus radiata</i>) have regrown within the East West Arterial Stage 1 work area. It has been confirmed with ESDD that these <i>Pinus Radiata</i> trees are a pest species and not protected by any legislation.</p> <p>Refer to drawing C13025 – P855+ for details of the required tree removals and to Appendix M for details of tree removal correspondence with ESDD.</p>
4	Damage or removal of PTWL habitat and Perunga grasshopper habitat	Protection of important habitat by fencing and signage during construction (avoiding key habitat); CEMP to protect habitat from construction activities and indirect impacts; Enhance connectivity by strategically located parks and open spaces areas; Implementation of the Molonglo River Park Concept Plans.	The proposed works are clear of known pink tailed worm lizard or perunga grass hopper habitat. Refer to drawing C13025-850+.
5	Damage or removal of habitat important to, and direct impacts on threatened birds	Mitigation measures specified for woodland connectivity, tree hollows and removal of endangered ecological communities would assist for this species if found to be present; Construction timing to limit disruption on breeding times; Field investigations and/or targeted surveys to determine the presence of species. Recommendations on the management of the species should it occur should be presented prior to any development occurring on site; Implementation of mitigation and management measures from the NES Plan.	The proposed works are clear of any areas of environmental significance. Refer to drawing C13025-850+.

6	Removal of or damage to native flora species	If specimens are found, fencing of key habitat areas (areas of environmental significance) would be appropriate to protect from construction activities	The proposed works are clear of any areas of environmental significance. Refer to drawing C13025-850+. The contractor will be required to include an unanticipated discovery plan in the project plan prior to the commencement of works.
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Table 3 - Mitigation Measures - Species and Ecological Communities (Table 8) - Responses

No	Impact of Development	Mitigation Measure	Response
1	Permanent clearing of native vegetation	Develop in areas of degraded vegetation or predominantly exotic vegetation; Undertake further investigation of significance of vegetation to be removed; offset significant vegetation to be located in parklands and urban open spaces; CEMP to control erosion and sedimentation and the effects on vegetation; Weed control measures to reduce ingress of weeds; Implementation of the Molonglo River Park Concept Plan to protect and manage areas within identified public lands.	<p>The proposed works are clear of any areas of environmental significance. Refer to drawing C13025-850+.</p> <p>An endorsed Sediment and Erosion Control Plan is not relevant to this stage of the project. However a Concept Pollution Control Plan, incorporating control measures included in the Environmental Protection Guidelines for Construction and Land Development in the ACT, is provided in the drawing set.</p> <p>This plan will be finalised by the successful contractor who will submit it to the ACT Environment Protection Authority for approval prior to commencing construction..</p>

Table 4 - Table 10 - Mitigation Measures - Land Reserved under S315 of the Act (Table 10) – Responses

No	Impact of Development	Mitigation Measure	Response
1	<p>Construction activities which generate soil (including soil with vegetative composition and potential weed introduction) or water pollution risks (sedimentation or eutrophication of waterways).</p> <p>Formalised stormwater systems may change hydrological conditions, changing vegetation composition.</p>	<p>Implementation of the Molonglo River Park Concept Plans; Restricting or managing works within the river corridor to limit the risk of erosion; Restricting or managing works within the river corridor to limit the risk of direct impacts; Stormwater infrastructure design to improve water qualities flowing through waterways (swales, ponds); CMP to manage the handling of potential contaminants/pollutants during construction; Stringent sediment and erosion controls during construction implemented through CEMP; Weed management strategies during construction; Asset protection and fire hazard management strategies to limit the impact on the area and reduce the risk of fire occurring in the area.</p>	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p> <p>An endorsed Sediment and Erosion Control Plan is not relevant to this stage of the project. However a Concept Pollution Control Plan, incorporating control measures included in the Environmental Protection Guidelines for Construction and Land Development in the ACT, is provided in the drawing set.</p> <p>This plan will be finalised by the successful contractor who will submit it to the ACT Environment Protection Authority for approval prior to commencing construction..</p>
2	<p>Operational activities which generate soil (including soil with vegetative composition and potential weed introduction) or water pollution risks (sedimentation or eutrophication of waterways).</p>	<p>Implementation of the Molonglo River Park Concept Plans; Restricting or managing works within the river corridor to limit the risk of erosion; Restricting or managing works within the river corridor to limit the risk of direct impacts; Asset protection and fire hazard management strategies to limit the impact on the area and reduce the risk of fire occurring in the area.</p>	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p>
3	<p>Presence of Urban development – operational activities, recreational use</p>	<p>Implementation of the Molonglo River Park Concept Plans; Implementation of the Plan of Management in accordance with the NES Plan.</p>	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p> <p>An approved Plan of Management is not applicable to the proposed development. The development is not located in an area of public land.</p>

Table 5 - Mitigation Measures - Heritage significance of a place or object (Table 12) – Responses

No	Impact of Development	Mitigation Measure	Response
1	Clearing vegetation, soil disturbance including excavation and removal of rock surface.	Undertake works in accordance with management recommendations outlined within the Conservation Management Plans, as well as all previously approved Unanticipated Discovery Protocols. Undertake cultural heritage assessments where development is proposed to occur outside of previously surveyed areas. Undertake actions in accordance with the advice of the ACT Heritage Council.	The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to drawings C13025-P800+ and C13025-P801+. Liaison with ACT Heritage Council has been undertaken to ensure that in accordance with the Heritage Act 2004 any restricted information has been excluded from development application documentation. The contractor will be required to include an unanticipated discovery plan in the project plan and submit for the ACT Heritage Council's approval prior to the commencement of works.
2	Clearing of significant over storey vegetation.	Develop in area of degraded vegetation or predominantly exotic vegetation. Undertaken further investigation of significance of vegetation to be removed. Undertake actions in accordance with the advice of the ACT Heritage Council.	The proposed works are clear of any areas of environmental significance. Refer to drawing C13025-850+. Scenic Landscape Architecture undertook a tree assessment of the trees within Molonglo Valley Stage 2 in 2011. The study identified no trees to exist within the footprint of the East West Arterial Stage 1. Refer to Appendix I for a copy of the Molonglo Stage 2 Tree Assessment. Since Scenic Landscape Architecture's tree assessment a number of small pine trees (<i>Pinus radiata</i>) have regrown within the East West Arterial Stage 1 work area. It has been confirmed with ESDD that these <i>Pinus Radiata</i> trees are a pest species and not protected by any legislation. Refer to drawing C13025 – P855+ for details of the required tree removals and to Appendix M for details of tree removal correspondence with ESDD.

3	Formalisation of stormwater infrastructure and ponds and associated erosion and soil loss.	<p>Undertake works in accordance with management recommendations outlined within the Conservation Management Plans, as well as all previously approved Unanticipated Discovery Protocols.</p> <p>Undertake cultural heritage assessments where development is proposed to occur outside of previously surveyed areas.</p> <p>Undertake actions in accordance with the advice of the ACT Heritage Council.</p>	<p>The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to drawings C13025-P800+ and C13025-P801+.</p> <p>Liaison with ACT Heritage Council has been undertaken to ensure that in accordance with the Heritage Act 2004 any restricted information has been excluded from development application documentation.</p> <p>The contractor will be required to include an unanticipated discovery plan in the project plan and submit for the ACT Heritage Council's approval prior to the commencement of works.</p>
4	Presence of Urban development – operational activities, recreational use	<p>Implement Conservation management Plans.</p> <p>Undertake actions in accordance with the advice of the ACT Heritage Council.</p>	<p>The contractor will be required to include a Conservation Management Plan prior to the commencement of works.</p> <p>The contractor will be required to liaise with the ACT Heritage Council prior to the commencement of works.</p>

Table 6 - Mitigation Measures (Table 14) – Responses

No	Impact of Development	Mitigation Measure	Response
1	Air Quality	<ul style="list-style-type: none"> • Construction Environment Management Plans (CEMPs) to manage use of construction machinery and allow for dust suppression • Dust suppression measures – watering, spray tack, hydro mulching, limiting work on windy days 	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
2	Climate Change	<ul style="list-style-type: none"> • Emission controls on construction and personnel vehicles • Energy efficiency ratings for dwellings • Offsetting emissions via replanting vegetation in urban areas and parklands • Household waste and energy use reduction management strategies 	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
3	Steep slopes - development of and on	<ul style="list-style-type: none"> • Implementation of appropriate erosion and sediment control measures • CEMP to manage construction on steep areas and limit clearing of vegetation and ground cover • Appropriate stormwater management during construction and in the ultimate urban environment • Formalisation of tracks in recreation areas to limit erosion 	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
4	Contaminated land	<ul style="list-style-type: none"> • Environmental site assessment be undertaken prior to construction • Appropriate site remediation of contamination where required • CEMP to manage potential contaminants used during construction 	<p>Application to be referred to the relevant agency.</p> <p>A Phase 1 Environmental Site Assessment within the area of works was undertaken by AECOM in 2012.</p> <p>A Phase 2 Environmental Site Assessment was also undertaken by AECOM which focused on areas of environmental concern identified in the Phase 1 ESA.</p> <p>Refer to Appendix H for a copy of the Phase 2 ESA</p>

5	Molonglo Riparian Corridor	<ul style="list-style-type: none"> • Implementation of the Molonglo River Park Concept Plan • Restricting or managing works within the river corridor to limit the risk of erosion • Restricting or managing works within the river corridor to limit the risk of direct impacts • Stormwater infrastructure design to improve water qualities flowing through waterways (swales, ponds) • CMP to manage the handling of potential contaminants/pollutants during construction • Stringent sediment and erosion controls during construction implemented through CEMP • Weed management strategies during construction • Asset protection and fire hazard management strategies to limit the impact on the area and reduce the risk of fire occurring in the area 	The proposed works are outside of the Molonglo River Corridor (NUZ4).
10	Important view sheds	<ul style="list-style-type: none"> • Preserve the backdrop as described in the National Capital plan • Minimise the impact on the landscape as described in the Territory Plan • Incorporate the preservation of trees into the development • Implement principles from the Structure Plan for Molonglo and North Weston • Preservation of non-urban areas (hills, ridges and buffers and the river corridor) • Implement the Molonglo River Park Concept Plan 	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p> <p>The proposed works are clear of any areas of environmental significance. Refer to drawing C13025-850+.</p> <p>Scenic Landscape Architecture undertook a tree assessment of the trees within Molonglo Valley Stage 2 in 2011. The study identified no trees to exist within the footprint of the East West Arterial Stage 1. Refer to Appendix I for a copy of the Molonglo Stage 2 Tree Assessment.</p> <p>Since Scenic Landscape Architecture's tree assessment a number of small pine trees (<i>Pinus radiata</i>) have regrown within the East West Arterial Stage 1 work area. It has been confirmed with ESDD that these <i>Pinus Radiata</i> trees are a pest species and not protected by any legislation.</p> <p>Refer to drawing C13025 – P855+ for details of the required tree removals and to Appendix M for details of tree removal correspondence with ESDD.</p>

11	Local community perception	Proponent to undertake community consultation prior to EDPs and DAs	DA will be circulated and available for public comment.
12	Molonglo River Park - Recreation	Implementation of the Molonglo River Park Concept Plan	The proposed works are outside of the Molonglo River Corridor (NUZ4).
13	Stromlo Forest park – Recreation	<ul style="list-style-type: none"> • Appropriate transport links through suburbs and into the park • Landscaping to reduce the impact on vista and views • Implementation of adaptive management strategy from NES Plan for the use of the Stromlo Forest Park 	Not Applicable as Stage 1 of the East West Arterial is not connected or in close proximity to Stromlo Forest Park.
14	Mt Stromlo Observatory	<ul style="list-style-type: none"> • Dust suppression measures during construction • Consultation with Observatory staff, especially during times of prescribed bushfire management (burning) • Implementation of the “5km Light Limitation Zone” • Design of suburbs and lighting in consultation with Observatory staff to limit light pollution 	The streetlight design for the East West Arterial Road has been designed to comply with the lighting requirements for the Stromlo Observatory.
15	Public health and safety	<ul style="list-style-type: none"> • Implement CEMP for public safety • Urban design to limit shading of residences and public spaces • Use of crime prevention through environmental design • Access to and availability of recreation facilities during construction and operation through CEMPs and adaptive management strategies outlines in the NES Plan. • Promote awareness of public safety in relation to water quality control ponds and the river 	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
16	Residential receivers	<ul style="list-style-type: none"> • Implementation of CEMP • Suburb design to limit impacts • Access to and availability of recreation facilities • Promote awareness of public safety of open water 	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.

17	Significant trees	<ul style="list-style-type: none"> • Develop in area of degraded vegetation or predominantly exotic vegetation • Undertake further investigation of significance of vegetation to be removed • Offset significant vegetation to be removed in parklands and urban open spaces • Strategic preservation of hollow bearing/significant trees • Timing of tree removal to prevent injury, death or disturbance of breeding of fauna species 	<p>The proposed works are clear of any areas of environmental significance. Refer to drawing C13025-850+.</p> <p>Scenic Landscape Architecture undertook a tree assessment of the trees within Molonglo Valley Stage 2 in 2011. The study identified no trees to exist within the footprint of the East West Arterial Stage 1. Refer to Appendix I for a copy of the Molonglo Stage 2 Tree Assessment.</p> <p>Since Scenic Landscape Architecture's tree assessment a number of small pine trees (<i>Pinus radiata</i>) have regrown within the East West Arterial Stage 1 work area. It has been confirmed with ESDD that these <i>Pinus Radiata</i> trees are a pest species and not protected by any legislation.</p> <p>Refer to drawing C13025 – P855+ for details of the required tree removals and to Appendix M for details of tree removal correspondence with ESDD.</p>
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Table 7 – Bushfire Management Considerations

No	Impact of Development	Mitigation Measure	Response
1	Bushfire	The management of the APZs and the River Park will be critical to reducing risks associated with bushfires on urban populations in MVS 2. The undertaking of management activities for APZs has the potential to cause a number of impacts on the environment. It will be critical for Environment Management Plans to be prepared for APZs and fuel management activities before any works are undertaken towards establishing the APZs	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
2	Bushfire	Environment Management Plans for APZ activities should be developed in consultation with the intended land manager or lessee, the relevant ACT Government agencies for the conservation of species and ecological communities and the developer of the urban areas. Plans of management for APZs should be economically feasible and sustainable for the environment and local residents.	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.

4 STATEMENT AGAINST RELEVANT CRITERIA

4.1 Transport and Services Zone (TSZ1)

Transport and Services Zone Development Code

This Development Code applies to all development in the Transport and Services Zones.

Zone Objectives

- a) Make provision for a transport network that can provide for the efficient, safe and convenient movement of people and goods;
- b) Ensure that major roads and transport infrastructure are developed in a comprehensive manner, including the provision of appropriate landscaping, street furniture and lighting, traffic control devices, and noise attenuation measures; and
- c) Make provision for public transport.

It is understood that the area where the East West Arterial to be situated will require the zoning codes of these area will be amended to be TSZ1 Transport and Services Zone in the Territory Plan to suit the land use purpose. The relevant rules and criteria are comprehensively addressed in following table.

Part A – Zone Specific Controls		
TSZ1 - Transport Zone		
<p>Element 1: Restrictions on Use</p> <p>Intent:</p> <ul style="list-style-type: none"> a) To provide for development that does not jeopardise the Inter-town Public Transport Route b) To allow flexibility in development that is not inconsistent with the National Capital Plan 		
Rules	Criteria	Comment
1.1 Use and Form		
There is no applicable rule.	<p>C1</p> <p>A proposal for works on land identified on the map as forming part of the Inter-town Public Transport Route does not jeopardise the future provision of a separate right-of-way within the road reserve to accommodate this service.</p>	<p>C1</p> <p>The EWA does not form a part of the Inter-town Public Transport Route.</p>
There is no applicable rule.	<p>C2</p> <p>Subject to the National Capital Plan, airspace may be used for a purpose which is permitted on land under an adjoining Zone, where the subject development application will not interfere with the safe operation of the road system.</p>	<p>C2</p> <p>The subject development will not interfere with the safe operation of the road system.</p>

Part B – General Development Controls		
<p>Element 1: Restrictions of Use</p> <p>Intent:</p> <p>a) To ensure development is consistent with the approved Plan of Management</p>		
Rules	Criteria	Comment
1.1 Plans of Management		
There is no applicable rule.	<p>C7</p> <p>Where relevant, the proposed development is consistent with the approved Plan of Management.</p>	<p>C7</p> <p>An approved Plan of Management is not applicable to the proposed development. The development is not located in an area of public land.</p> <p>This Criterion is therefore not relevant to the proposed development.</p>

<p>Element 2: Building and Site Controls</p> <p>Intent:</p> <p>a) To ensure development is compatible with, and does not adversely impact on, the environment</p>		
Rules	Criteria	Comment
<p>2.1 Subdivision</p>		
<p>R8</p> <p>Subdivision is only permitted where:</p> <p>a) it is part of a development application for another assessable development</p> <p>b) it is demonstrated that any residual block can accommodate another assessable development designed in accordance with the relevant section of this Code.</p>	<p>R8</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R8</p> <p>No subdivision of land is required under the proposed works.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>2.2 Demolition</p>		
<p>R9</p> <p>In accordance with section 148 of the <i>Planning and Development Act 2007</i>, the application is accompanied by a Statement of Endorsement from utilities provider (including Water, Sewerage, Stormwater, Electricity, Gas and Telecommunications) stating that:</p> <p>a) All network infrastructure on or immediately adjacent the site has been identified on the plan</p>	<p>C9</p> <p>If a Statement of Endorsement is not provided the application will be referred to relevant utilities provider in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R9</p> <p>Relocation of the existing Telstra and overhead electrical assets is being undertaken as part at the John Gorton Drive Stage 2A project. Telstra and ActewAGL have been engaged to finalise the asset relocation designs.</p> <p>Refer to relevant utilities provider</p>

<p>b) All potentially hazardous substances and conditions (associated with or resulting from the demolition process) that may constitute a risk to utility services have been identified</p> <p>c) All required network disconnections have been identified and the disconnection works comply with utility requirements</p> <p>d) All works associated with the demolition comply with and are in accordance with utility asset access and protection requirements.</p>		
<p>2.3 National Capital Plan</p>		
<p>There is no applicable rule.</p>	<p>C10</p> <p>Where a development is subject to Special Requirements under the National Capital Plan, or any relevant Development Control Plan prepared under the National Capital Plan, the development is not inconsistent with the Special Requirements or Development Control Plan. Where any provision of this code is inconsistent with Special Requirements under the National Capital Plan, or any relevant Development Control Plan prepared under the National Capital Plan, that provision has no effect.</p>	<p>C10</p> <p>The proposed development is not subject to Special Requirements under the National Capital Plan.</p> <p>This Criterion is therefore not relevant to the proposed development.</p>

Element 3: Built Form

Intent:

a) To ensure that development is compatible with the surrounding landscape, especially in areas of high visibility

Note: Under the *Building Act 2004* buildings need to meet the requirements of the Building Code of Australia. For certain classes of buildings, this will include prescribed energy requirements.

**The proposed development does not include buildings and is located within a future road corridor.
This Section of the Code is therefore considered not applicable to the proposed development.**

Element 4: Parking and Site Access

Intent:

- a) To encourage the design of access and parking as part of the overall design of the development
- b) To provide for safe, convenient access to meet the needs of all users and visitors

Rules	Criteria	Comment
4.1 Traffic Generation		
There is no applicable rule.	<p>C15</p> <p>The existing road network can accommodate the amount of traffic that is likely to be generated by the development.</p>	<p>C15</p> <p>The proposed EWA will, in itself, not generate traffic. Rather, it is being constructed to accommodate the traffic that will be generated from the future surrounding developments. Traffic volumes were sourced from the SMEC 'Molonglo Revised' EMME model (January 2013).</p> <p>This Criterion is therefore not relevant to the proposed development.</p>
4.2 Vehicle Access and Parking		
There is no applicable rule.	<p>C16</p> <p>Vehicle access and parking complies with the requirements of the Parking and Vehicular Access General Code.</p>	<p>C16</p> <p>This development does not include any on or off-street parking facilities or access from off-street car parking areas.</p> <p>This Criterion is therefore not relevant to the proposed development.</p>

4.3 Bicycle Parking		
There is no applicable rule.	<p>C17</p> <p>Bicycle Parking complies with the requirements of the Bicycle Parking General Code.</p>	<p>C17</p> <p>This development does not include Bicycle Parking.</p> <p>This Criterion is therefore not relevant to the proposed development.</p>
4.4 Pedestrian Movement		
There is no applicable rule.	<p>C18</p> <p>Safe and convenient movement of public transport passengers, pedestrians and cyclists is provided.</p>	<p>C18</p> <p>Intersection 1 caters for steer tag buses.</p> <p>The grading of the side roads and the EWA has been designed so as not to preclude buses from travelling along them, providing flexibility in determining the bus route through Molonglo 2</p> <p>Provision for on road cyclists has been incorporated into the design via a 2.0m wide on road cycle lane.</p> <p>Provision for pedestrians via a shared path in each verge has been allowed for.</p> <p>Refer detailed drawings attached with this Development Application for details.</p>

<p>Element 5: Amenity</p> <p>Intent:</p> <p>a) To ensure development is compatible with, and does not adversely impact on, the urban environment</p>		
Rules	Criteria	Comment
<p>5.1 Lighting</p>		
<p>R19</p> <p>External lighting is provided to building frontages, all pathways, roads, laneways and car-parking areas in accordance with Australian Standard AS1158.3.1 <i>Pedestrian Lighting</i>.</p>	<p>C19</p> <p>External lighting is provided in accordance with the Crime Prevention Through Environmental Design General Code.</p>	<p>R19</p> <p>External lighting to the road is provided in accordance with AS/NZS1158 Category V3 and P3 on pathways within the verge.</p> <p>Refer detailed drawings attached with this Development Application for details.</p>
<p>R20</p> <p>All external lighting provided is in accordance with AS 4282 <i>Control of the Obtrusive Effects of Outdoor Lighting</i>.</p>	<p>C20</p> <p>All outdoor lighting, including security and car park lighting, is designed and sited to minimise light spill.</p>	<p>R20</p> <p>External lighting to the road is provided in accordance with AS/NZS1158 Category V3 and P3 within the verge and complies with AS 4282 <i>Control of the Obtrusive Effects of Outdoor Lighting</i>.</p> <p>Refer detailed drawings attached with this Development Application for details.</p>
<p>5.2 Signs</p>		
<p>There is no applicable rule.</p>	<p>C21</p> <p>Signs comply with the Signs General Code.</p>	<p>C21</p> <p>No signs, as per the Signs General Code, are included in this proposed development.</p>

		<p>This Criterion is therefore not applicable to the proposed development.</p> <p><i>Note: All proposed traffic control signs have been designed in accordance with AS1742 and are located within the road reserve.</i></p>
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Element 6: Environment		
Intent:		
a) To provide for ecologically sustainable development which does not have adverse impacts on the surrounding environment		
Rules	Criteria	Comment
6.1 Assessment of Environmental Effects		
There is no applicable rule.	<p>C22</p> <p>The development application is accompanied by an Assessment of Environmental Effects that addresses the following:</p> <ul style="list-style-type: none"> a) appropriate measures to soften the impact of development on the landscape b) impacts on the character and appearance of any building, area of architectural, historic, aesthetic or scientific interest, or other object or place of special cultural or heritage value c) impacts on public health and safety, including crime prevention d) whether public transport services are necessary and, if so, whether they are available and adequate e) impacts on the likely accessibility to facilities and services for users and consumers f) any significant short or long-term effect, that the relevant authority considers the use or development may have on the environment, including social and economic effects and potential cumulative effects 	<p>C22</p> <p>S211 exemptions for Molonglo Development have previously been granted. A copy of the exemption letter is included in the Appendix D.</p> <p>The applicable s211 exemption is:</p> <ul style="list-style-type: none"> • Molonglo Valley Stage 2 – Urban Development Infrastructure and Link Bridge, Application for s211 Exemption Consideration Report, (July 2013) <p>The EDP stage for Denman Prospect will deal with the traffic (and other) noise attenuation (as was the case with JGD in Molonglo 1 and 2). The flexibility of providing active frontages along the major road will result in transferring noise attenuation to developers, who will have to incorporate adequate construction methodologies to meet Australian Standards related to the internal noise.</p>

	<p>g) impacts on the watercourses and drainage characteristics of the area, including water quality</p> <p>h) impacts on the amenity of surrounding land uses, including impacts on air quality, the level of noise generated, overshadowing, privacy, and the level of wind turbulence generated.</p>	
<p>6.2 Water Sensitive Urban Design – Mains Water Consumption Note: Refer to the Water Ways: Water Sensitive Urban Design General Code for more information on Water Sensitive Urban Design</p>		
<p>R23</p> <p>Evidence is provided that shows the development achieves a minimum 40% reduction in mains water consumption compared to an equivalent development constructed in 2003 using the ACTPLA on-line assessment tool or the NSW BASIX tool. The 40% target is met without any reliance on landscaping measures to reduce consumption.</p> <p>This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area.</p>	<p>C23</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R23</p> <p>Mains water consumption is not affected by this proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>6.3 Water Sensitive Urban Design – Stormwater Quality Note: Refer to the Water Ways: Water Sensitive Urban Design General Code for more information on Water Sensitive Urban Design</p>		
<p>R25</p> <p>Sites of size greater than 5,000m² or roads longer than 1 km need to provide evidence showing a reduction in average annual stormwater pollutant export load of:</p> <p>a) suspended solids by 60%</p>	<p>C25</p> <p>Sites of size greater than 5,000m² or roads longer than 1 km need to provide evidence showing a reduction in average annual stormwater pollutant export load of:</p> <p>a) suspended solids by 60%</p>	<p>R25/C25</p> <p>The proposed works is less than 1km in length.</p>

<p>b) total phosphorous by 45%</p> <p>c) total nitrogen by 40%</p> <p>compared to an urban catchment with no water quality management controls, using the MUSIC model to demonstrate compliance.</p> <p>This requirement can be met by associated stormwater works in the same catchment. This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area or to road modifications where the increase in pavement areas is less than 50% of the existing area.</p>	<p>b) total phosphorous by 45%</p> <p>c) total nitrogen by 40%</p> <p>compared to an urban catchment with no water quality management controls, using any other method.</p> <p>This requirement can be met by associated stormwater works in the same catchment. his requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area or to road modifications where the increase in pavement areas is less than 50% of the existing area.</p>	<p>Future adjacent developments within the catchment will be required to provide their own stormwater quality controls to achieve additional load reduction targets.</p>
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6.4 Water Sensitive Urban Design – Stormwater Quantity

Note: Refer to the Water Ways: Water Sensitive Urban Design General Code for more information on Water Sensitive Urban Design

<p>R26</p> <p>All sites of size greater than 2,000m² and subject to redevelopment need to ensure that the capacity of the existing pipe (minor) stormwater connection to the site is not exceeded in the 1-in-10 year storm event.</p> <p>All sites of size greater than 2,000m² and subject to redevelopment need to ensure that the capacity of the existing overland (major) stormwater system to the site is not exceeded in the 1-in-100 year storm event.</p>	<p>C26</p> <p>Evidence is provided by a suitably qualified person that shows that for all sites of size greater than 2,000m² and subject to redevelopment</p> <p>EITHER</p> <p>a reduction of 1-in-5 year and 1-in-100 year stormwater peak run off flow to pre-development levels. See WaterWays General Code for more detail.</p> <p>OR</p> <p>That the capacity of the downstream piped stormwater system to its outlet with an open channel is not exceeded in the 1-in-10 year storm event.</p>	<p>R26</p> <p>This rule is not applicable to the proposed road component.</p> <p>However, the road pipe drainage networks are designed for 10 year ARI and cross drainage pipes cater for the 100 year ARI.</p>
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6.5 Heritage		
<p>R27</p> <p>In accordance with section 148 of the <i>Planning and Development Act 2007</i>, applications for development on land or buildings subject to interim or full heritage registration are to be accompanied by advice from the Heritage Council stating that the development meets the requirements of the <i>Heritage Act 2004</i>.</p>	<p>C27</p> <p>If advice from the Heritage Council is required, but not provided, then the application will be referred to the Heritage Council in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R27</p> <p>Biosis Research completed the Molonglo 2: Detailed Heritage Assessment in August 2010</p> <p>Refer to Section 3.4 – Section 211 Exemption Application and Appendix D.</p>
6.6 Contamination		
<p>R28</p> <p>A statement is provided that the potential for land contamination has been assessed in accordance with the <i>ACT Government Strategic Plan – Contaminated Sites Management 1995</i> and the <i>ACT Environment Protection Authority Contaminated Sites Environmental Protection Policy 2000</i>, and it is demonstrated that the land is suitable for the proposed development.</p>	<p>C28</p> <p>If a Statement of Endorsement is not provided the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R28</p> <p>Application to be referred to the relevant agency.</p> <p>A Phase 1 Environmental Site Assessment within the area of works was undertaken by AECOM in 2012.</p> <p>A Phase 2 Environmental Site Assessment was also undertaken by AECOM which focused on areas of environmental concern identified in the Phase 1 ESA.</p> <p>Refer to Appendix H for a copy of the Phase 2 ESA</p>
6.7 Trees		
<p>R29</p> <p>This rule applies to a development that has one or more of the following characteristics:</p> <p>a) requires groundwork within the tree protection zone of a <i>protected tree</i></p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R29</p> <p>Application to be referred to the relevant agency.</p> <p>Scenic Landscape Architecture undertook a tree assessment of the trees within Molonglo Valley Stage 2 in 2011. The study identified no trees to</p>

<p>b) is likely to cause damage to or removal of any <i>protected trees</i></p> <p>The authority shall refer the development application to the Conservator of Flora and Fauna.</p> <p>Notes:</p> <ol style="list-style-type: none"> Under the <i>Planning and Development Regulation 2008</i> a development application for a <i>declared site</i> under the <i>Tree Protection Act 2005</i>, must be referred to the Conservator of Flora and Fauna. The authority will consider any advice from the Conservator of Flora and Fauna before determining the application in accordance with the <i>Planning and Development Act 2007</i>. <i>Protected tree</i> and <i>declared site</i> are defined under the <i>Tree Protection Act 2005</i>. 		<p>exist within the footprint of the East West Arterial Stage 1. Refer to Appendix I for a copy of the Molonglo Stage 2 Tree Assessment.</p> <p>Since Scenic Landscape Architecture’s tree assessment a number of small pine trees (<i>Pinus radiata</i>) have regrown within the East West Arterial Stage 1 work area. It has been confirmed with ESDD that these <i>Pinus Radiata</i> trees are a pest species and not protected by any legislation.</p> <p>Refer to drawing C13025 – P855+ for details of the required tree removals and to Appendix M for details of tree removal correspondence with ESDD.</p>
<p>6.8 Erosion and Sediment Control</p>		
<p>R30</p> <p>For sites less than 0.3 of a hectare, a plan is provided to demonstrate that the development complies with the <i>ACT Environment Protection Authority, Environment Protection Guidelines for Construction and Land Development in the ACT, August 2007</i>.</p>	<p>C30</p> <p>If a plan is not provided, the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R30</p> <p>The proposed site is >0.3 of a hectare.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>R31</p> <p>For development on a site greater than 0.3 of a hectare, the application is accompanied by an Erosion and Sediment Control Plan endorsed by the ACT Environment Protection Authority.</p>	<p>C31</p> <p>If an endorsed Sediment and Erosion Control Plan is not provided the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R31</p> <p>An endorsed Sediment and Erosion Control Plan is not relevant to this stage of the project. However a Concept Pollution Control Plan, incorporating control measures included in the Environmental Protection Guidelines for Construction and Land Development in the ACT, is provided in the drawing set.</p>

		This plan will be finalised by the successful Contractor who will liaise with ACT Environment Protection Authority, prior to commencing construction in accordance with their Environmental Authorisation.
6.9 Hazardous Materials		
<p>R32</p> <p>For the demolition of single dwelling housing (including garages and carports) constructed* prior to 1985, a Hazardous Materials Survey (including an asbestos survey) is carried out and signed by an appropriately licensed person. The Survey is provided and covers the disposal of hazardous materials, showing that:</p> <ul style="list-style-type: none"> a) Hazardous material disposal (including asbestos) is to be at a licensed disposal facility in the ACT b) If hazardous materials are to be transported for disposal interstate, approval from the Environment Protection Authority is obtained prior to removal of material from the site c) An appropriately licensed contractor is engaged for the removal and transport of all hazardous materials (including asbestos) present at the site <p>* Construction date means the date when the Certificate of Occupancy was issued.</p>	<p>C32</p> <p>If an endorsed Hazardous Materials Survey is not provided the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>C32</p> <p>Demolition of residential premises is not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>

Element 7: Services		
Intent:		
a) To provide for appropriately serviced developments that meet the needs of service providers and users of the proposed development		
Rules	Criteria	Comment
7.1 Waste Management		
R33 In accordance with section 148 of the <i>Planning and Development Act 2007</i> , the application is accompanied by a Statement of Compliance from the Department of Territory and Municipal Services stating that the waste facilities and management associated with the development are in accordance with the current version of the <i>Development Control Code for Best Practice Waste Management in the ACT</i> .	C33 If a Statement of Compliance is not provided the application will be referred to the Department of Territory and Municipal Services in accordance with the requirements of the <i>Planning and Development Act 2007</i>	C33 Application to be referred to the relevant agency. A Waste Management Plan is included in this Development Application. Refer to Appendix J.
7.2 Waste Water		
R34 Subject to ACTEWAGL approval, all under cover areas drain to the sewer.	C34 This is a mandatory requirement. There is no applicable criterion.	R34 Under cover areas are not included in the scope of the proposed development. This Rule is therefore not relevant to the proposed development.
7.3 Utilities		
R34	C34	C34

<p>A Statement of Compliance from each relevant utility provider is provided, which confirms that the location and nature of earthworks, utility connections, proposed buildings, pavements and landscape features comply with utility standards, access provisions and asset clearance zones.</p> <p>Note: Where there is a conflict between planning and utility requirements, the utility requirements take precedence over other provisions of this Code.</p>	<p>If a statement of compliance is not provided, the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>Whilst liaison has been undertaken with utility providers, the application is to be referred to the relevant agency.</p> <p>Services affected by the proposed works are identified in the Development Application Drawings.</p>
<p>7.4 Storage</p>		
<p>R36</p> <p>Outdoor storage areas are located behind the building line and screened from view from any road or other public area.</p>	<p>C36</p> <p>Where the proposed use of the site requires open areas for storage of goods and materials, adequate provision is included in the design layout of the site.</p>	<p>R36</p> <p>Outdoor storage areas are not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>R37</p> <p>Outdoor storage areas do not encroach on required car-parking spaces, driveways exclusively required for vehicular circulation or landscape areas.</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R37</p> <p>Outdoor storage areas are not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>7.5 Servicing and Site Management</p>		
<p>R38</p> <p>In accordance with section 148 of the <i>Planning and Development Act 2007</i>, the application is accompanied by a Statement of Endorsement from the relevant agency stating that the waste facilities and management associated with the</p>	<p>C38</p> <p>If a Statement of Endorsement is not provided the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>C38</p> <p>Waste facilities and management is not included in the scope of the proposed development.</p>

development are in accordance with the <i>Design Standards for Urban Infrastructure</i> .		This Rule is therefore not relevant to the proposed development.
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4.2 Molonglo Valley 2 – Important Planning Requirements (IPR)

A review of the IPR specifically in relation to the planning requirements of the major arterial and collector roads has been carried out. The IPR identified the Roads 1 and 2 to be a part of the collector road network that will “*provide pedestrian and cycle connections to major destinations*”. The final alignment of the side roads is largely in keeping with the locations shown by the IPR.

The IPR states the requirement for proposed Developments to meet the standards for pedestrian, cyclists and buses. The intersection designs have incorporated provision for on road cycling and have been designed so that they are capable of carrying buses.

The locations of the intersections are clear of natural and heritage features identified in the IPR.

5 OPINION OF COST

The estimated construction costs for Stage 1 EWA works within TaMS designated land would be in the order of \$3,000,000 base estimate excluding GST.

Refer to Appendix C for the break down.

6 CONCLUSIONS

We expect that this document provides necessary and adequate information on this proposed development and demonstrates that the development application requirements under the Territory Plan and Form 1D are satisfied. It is intended that, by providing the above information, the intent and impacts of the proposed Stage 1 of the East West Arterial are made clear and it helps make the Development Application assessment process transparent and uncomplicated.

**BROWN CONSULTING (ACT) PTY LTD
August 2013**

Appendix A Letter of Appointment

Appendix B Roads ACT Design Acceptance

Appendix C Opinion of Cost

Appendix D S211 Exemption Acceptance Letter

Appendix E Approval of NES Plan

Appendix F Noise Report

Appendix G Service Authority Correspondence

Appendix H Phase 2 ESA

Appendix I Molonglo 2 Tree Assessment

Appendix J Waste Management Plan

Appendix K Heritage Studies

Appendix L Survey Master plan

Appendix M Tree Removal Correspondance



East West Arterial Stage 2 and Molonglo 2 Group Centre Bulk Earthworks Stage 1

Development Application

21 May 2014

C13107

Economic Development Directorate

Roads and Traffic

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2014

DOCUMENT CONTROL

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Issue	Date	Issue Details	Author	Checked	Approved
0	17/02/14	Draft DA Report For Client Review	SC	JKM	JKM
1	5/03/14	Rev1 address Client Comments	SC	JKM	JKM
2	9/04/14	Rev2 address completeness check comments	SC	JKM	JKM
3	19/05/14	Rev3 address further comments	SC	JKM	JKM

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APPENDICES

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Appendix C	Approval of NES Plan
Appendix D	Roads ACT Correspondence
Appendix E	Value Management Workshop Report
Appendix F	Opinion of Cost
Appendix G	Service Authority Correspondence
Appendix H	PRV Correspondence
Appendix I	Environmental Site Assessments and Correspondence
Appendix J	BRU01 Stockpile Information
Appendix K	Molonglo 2 Tree Assessments and Correspondence
Appendix L	Heritage Studies
Appendix M	Noise Report
Appendix N	Survey Master Plan
Appendix O	Waste Management Plan
Appendix P	DA Completeness Check Responses
Appendix Q	DA Request for Further Information Responses

1. Introduction

This Development Application is submitted on behalf of Economic Development Directorate (EDD) for the purpose of gaining approval to construct the second stage of the East West Arterial within Molonglo 2. This application includes two components, the East West Arterial Road Stage 2 and the Molonglo 2 Group Centre Bulk Earthworks Stage 1.

This report is to provide clear and thorough information about the proposed development and to help make the Development Application assessment process transparent and uncomplicated. A project background has been included to help establish the history and context of the proposed development, and also to provide additional information about the project where it has influenced our assessment of the relevance of the Development Application requirements.

2. Project Overview

2.1 General

Shared Services Procurement, on behalf of the Economic Development Directorate, engaged Brown Consulting (ACT) in August 2013 to develop the design and documentation for Stage 2 of the proposed East West Arterial in Molonglo 2. This followed on from Brown Consulting's work on the East West Arterial Feasibility Study and forward design of Stage 1 of the East West Arterial.

The Molonglo 2 East West Arterial (EWA) is a major infrastructure element in Molonglo. It forms the primary east west link between Molonglo Valley Stage 2 and Tuggeranong Parkway, thus providing connectivity between development in Molonglo and the broader ACT. Stage 2 includes the length of the East West Arterial Road from Chainage 320 through to the western side of Cravens Creek, a distance of approximately 780m

The Stage 2 works are required to provide access from John Gorton Drive to Molonglo 2 and Denman Prospect. The bridge over Cravens Creek will also enable future access to developments on the western side of Cravens Creek.

2.2 Description of the Works

The construction of major infrastructure is required to support the development of Molonglo. This application includes two components, the East West Arterial Road Stage 2 and the Molonglo 2 Group Centre Bulk Earthworks Stage 1, details of which are provided below:

East West Arterial Stage 2- This includes the length of the East West Arterial Road from Chainage 320 through to the western side of Cravens Creek. The key features of the works are as follows:

- » The design of this arterial road from directly west of the first major intersection through to the north-western side of Cravens Creek, approximately 780m in length.
- » The design of two major signalised tee intersections, one to the north and one to the south.
- » The design of a precast arch bridge crossing of Cravens Creek.

Molonglo 2 Group Centre Bulk Earthworks Stage 1 – The Group Centre site is located to the north east of the East West Arterial Stage 2, next to the East West Arterial and John Gorton Drive Intersection and has the following key features:

- » Approximate area of 3.8Ha
- » Approximately 120,000m³ of fill material available
- » Maximum cut of 6m

2.3 Studies and Investigations

The following studies and investigations are of particularly relevance to East West Arterial Stage 2 design:

2.3.1 Molonglo 2 East/West Arterial Road Extension to Cravens Creek – Feasibility Study

Brown Consulting (ACT) was engaged by Shared Services Procurement on behalf of the Economic Development Directorate (EDD) in December 2012 to undertake a Feasibility Study of the Molonglo 2 East West Arterial Extension from John Gorton Drive to Cravens Creek. The scope of the study included developing options for the horizontal and vertical alignments for the East West Arterial (EWA) and to identify suitable locations for intersections along the road.

2.3.2 East West Arterial Stage 1 - Forward Design

Shared Services Procurement, on behalf of the Economic Development Directorate, engaged Brown Consulting (ACT) in March 2013 to develop the design and documentation for Stage 1 of the proposed East West Arterial in Molonglo 2.

The design for Stage 1 includes the length of the East West Arterial Road from John Gorton Drive to Chainage 320. This includes the design of two intersections, a major signalised intersection with Roads 1 and 2, and a left in / left out arrangement at Lane 1.

2.3.3 East West Arterial Stage 2 – Value Management Workshop

Value Network facilitated a Value Management Study (VMS) of the East West Arterial Stage 2 on 13 December 2013. The workshop included representatives from the following organisations:

- » Economic Development Directorate
- » Shared Services Procurement
- » Environment and Sustainable Development Directorate
- » Roads ACT
- » Land Development Authority
- » Jemena
- » Territory and Municipal Services
- » ACTEW Water
- » Brown Consulting

2.3.4 Denman Prospect Stage 1A Master planning

Brown Consulting (ACT) was engaged by Shared Services Procurement on behalf of the Economic Development Directorate (EDD) in December 2013 to undertake the Master planning for Denman Prospect.

The purpose of this project is to progress the previous Planning Design Framework (PDF) master planning to enable the LDA to deliver the suburb of Denman Prospect. The East West Arterial will provide access from John Gorton Drive to Molonglo 2 and Denman Prospect.

2.3.5 Topographical survey

LANDdata Survey Pty Ltd was commissioned by Environment and Sustainable Development Directorate (ESDD), to undertake detailed survey for the entire Molonglo Stage 2 development. The detailed ground survey model is incorporated in this project.

2.3.6 Heritage Assessment

In August 2010, ESDD engaged BIOSIS Research to undertake a cultural heritage survey and sub-surface test pitting program of the proposed Molonglo Stage 2. The investigations followed on from the initial desktop heritage review of the Molonglo Valley in 2006. The footprint of the East West Arterial Stage 2 is within the heritage study area.

The heritage survey revealed a selection of archaeological items of low significance in close proximity to the western extent of the Stage 2 works.

Refer to Drawing C13107- 800+ and C13107-801+ for details.

2.3.7 Molonglo 2 Phase 2 Environmental Site Assessment

Following the Phase 1 Environmental Site Assessment (ESA) undertaken by AECOM in 2012, the Land Development Agency commissioned AECOM to undertake a series of Phase 2 Environmental Site Assessments over the Molonglo Stage 2 area. Four studies cover the project area. MV2-C3 and MV2-C4 cover the Group Centre Bulk Earthworks (GCBE) area , MV2-C1-A2 and MV2-C2 cover the EWA Stage 2 area. The study studies assessed background concentrations of Contaminants of Potential Concern (COPC) and focused on Areas of Environmental Concern that were identified in the Phase 1 ESA.

The MV2-C1-A2, MV2-C2 and MV2-C4 reports have been endorsed by the Environmental Site Auditor and the EPA, refer to **Appendix I** for details. The Phase 2 ESA for area MV2-C3 (ie part of the GCBE site) has been completed and submitted to the Environmental Site Auditor for endorsement.

The reports stated that concentrations of the organic COPC were below the adopted soil assessment criteria and that no asbestos was identified. Concentrations of metals were deemed to be of an acceptable range. Overall the report concluded that the site was suitable for the proposed residential land use. The footprint of the EWA is within the ESA study area.

Approximately 240m³ of fill material will also be sourced from the existing stockpile BRU01, which is located to the north east of the John Gorton Drive and East West Arterial Intersection, and used as fill in the EWA. EPA endorsement of this material re-use has been received, refer to **Appendix J** for details.

2.3.8 Molonglo 2 Earthworks Management Strategy

Indesco is responsible for continual development of an earthworks management strategy for the Molonglo 2 area which identifies the cut and fill volumes required for projects in the region and how these can be managed to achieve efficiencies and reduce costs.

As discussed within Section 2.5.7, the Earthworks Management Strategy identified the John Gorton Drive 2A Stockpile and Molonglo 2 Group Centre Bulk Earthworks Stage 1 as sources of fill material for the East West Arterial Road.

2.3.9 Molonglo Group Centre and Environs Master plan

Master planning for the Molonglo 2 Group Centre and Environs was undertaken by Indesco in June 2013. The master plan included developing a layout for the Group Centre as well as undertaking hydraulic master planning.

The sewer, water and stormwater layouts were considered in the development of the East West Arterial Stage 2 hydraulics and also the location of the GCBE site and associated sediment pond.

2.3.10 Molonglo EMME Modelling

The EMME traffic modelling of the Molonglo Valley Stage 2 development undertaken by SMEC identified the predicted traffic volumes and turning movements for the 2021 and 2031 design years. The modelling undertaken established a primary road network through Molonglo Valley Stage 2 including major intersections and connections with the East West Arterial. These road alignments and intersection locations, as well as the Molonglo 2 Group Centre concept plan, have largely informed the general location and the number of intersections and the number of traffic lanes adopted for the East West Arterial.

2.3.11 Tree Assessment – Scenic Landscape Architecture 2011

Scenic Landscape Architecture undertook a tree assessment of the trees within Molonglo Valley Stage 2 in 2011. Additionally, the Economic Development Directorate provided a plan mapping the environmentally sensitive areas within Molonglo Valley Stage 2. The studies revealed no significant trees within East West Arterial Stage 2 area.

Since Scenic Landscape Architecture's tree assessment a number of small pine trees (*Pinus radiata*) have regrown within the East West Arterial Stage 2 work area. It has been confirmed with ESDD that these *Pinus Radiata* trees are a pest species and not protected by any legislation.

2.3.12 Tree Assessment – Enviro Links Design 2013

An assessment of the trees impacted by Stage 2 of the East West Arterial and Cravens Creek Water Main as well a number of trees North West of the Stage 2 extent was completed in October 2013 by Enviro Links Design.

The tree assessment involved a reassessment of the impacted trees as assessed by Scenic Landscape Architecture in late 2011. The results confirmed that the previous designated tree quality rating is still accurate and that no new significant trees have established themselves within the proposed work area. Refer to Drawing C13107-840 and **Appendix K** for further details.

2.3.13 Tree Assessment – Indesco 2013

Indesco undertook a tree assessment of the trees impacted by the Molonglo 2 Group Centre Bulk Earthworks Stage 1 in December 2013. A summary of the tree assessment is presented below, additionally the completed tree assessment has been included as **Appendix K**.

The site has inherently poor soil and low moisture levels. It has been highly modified by the large cut for the road. This work (John Gorton Drive 2A) has removed many of the trees which were in the area of interest. Within the Molonglo 2 Group Centre Bulk Earthworks Stage 1 site the following trees no longer exist 13161, 13162, 13164, 13188, 13189, 13190, 13191, 13192, 13199 and 13202.

The remaining trees are mainly *Eucalyptus blakelyi* with a small number of *E. dives* and one *E. melliodora*. In the recent past fire has severely affected some of the trees and the resultant decline is clearly evident in most trees.

Tree 13210 is poor from a silvicultural perspective but has been given an (H) for urban amenity due to its active hollows. Trees 13209, 13198, 13201, 13203, 13214, 13217 are (M) trees at this time but given the conditions outlined above it can be expected that they too will decline in a year or two. Notwithstanding these conditions the Indesco Tree Assessment Report concludes that "overall there is little merit to be found in these trees either from a silvicultural point of view or an aesthetic paradigm".

Refer to Section 2.6 for further details of the tree removals required for the East West Arterial Stage 2 and Molonglo 2 Group Centre Bulk Earthworks Stage 1.

2.3.14 Geotechnical Investigations

East West Arterial Road

Douglas Partners Pty Ltd carried out an investigation into the geotechnical conditions for the proposed works in November 2013. The site investigation included a site inspection and the excavation of 20 test pits top depths along the East West Arterial and watermain alignment.

Key notes from the site investigation and report include:

- » The field work comprised the excavation of 20 test pits (Pits 101 – 120) using a Kubota KX057.4 miniexcavator fitted with a 450 mm bucket to depths of 0.15 – 3.1 m.
- » No free groundwater was observed during the excavation of test pits, however moist to wet conditions were observed within silty sandy layers in Pits 117 and 118 below depths of 2.4 m and 1.6 m, respectively.
- » All constructed fill batters should be constructed no steeper than 2.5:1 (horizontal:vertical), protected against erosion by vegetating the exposed surface or other stabilisation method and construction of toe and spoon drains as a means of controlling surface water flows on the batters.
- » Given the relatively shallow depth to rock, it is recommended that footings for the proposed Bebo arch bridge found within the dacite bedrock. Foundation design could be based on the following design pressures:
 - Allowable base bearing pressure (medium to high strength rock) – 1500kPa
 - Ultimate passive pressure (medium to high strength rock) – 6000kPa
 - Friction angle (medium to high strength rock) – 40 degrees

Molonglo 2 Group Centre Bulk Earthworks Stage 1

A number of geotechnical studies were completed within the Group Centre Site during various planning stages in Molonglo 2.

An additional geotechnical investigation will be carried out for the Molonglo 2 Group Centre Bulk Earthworks Stage 1. The geotechnical investigation report will be completed prior to construction and made available to the successful contractor.

2.3.15 Noise Assessment

As part of the East West Arterial Stage 2 Design, UNSW at Canberra carried out an investigation into the noise impact for the proposed works. The investigation was completed using the predicted traffic volumes from the SMEC EMME model, received 14 May 2013, and the feasibility design road alignment. The analysis identified the location of the 58 and 63 dB(A) lines.

Within the noise assessment reference is made to the ACT Noise Management Guidelines (1996), which recommends a 58 dB(A) limit for residential private open space and a 63 dB(A) limit for residential and community facilities. The noise investigation determined the 58 and 63 dB(A) contours to occur at the following locations:

Location	58 dBA	63 dBA
EWA Ch 400 to 700	58 dBA contour located 40m from the north and south kerbs	63dBA contour located 30m from the north and south kerbs
EWA Ch 700 to 1050	58 dBA contour located 45m from the north and south kerbs	63dBA contour located 35m from the north and south kerbs
Road 3	The small traffic volume is below the range for the prediction programs.	The small traffic volume is below the range for the prediction programs.
Road 4	23 m from the east and west side of the kerb.	15 m from the east and west side of the kerb.

Table 1 - Noise Investigation, summary of analysis

The location of both the 58 dB(A) and 63 dB(A) contours will need to be considered during the design of adjacent developments. It is currently proposed that development adjacent to Stage 2 of the East West Arterial and side roads will be multi-unit development, however the specific location of these developments remains unconfirmed.

The proposed developments are likely to be multistorey which means that traditional noise mitigation measures such as barriers and mounds will likely be ineffective. If development occurs within the 63 dB(A) line, then it is recommended that sound insulation be incorporated within the building façade via architectural treatments.

An additional consideration for developers is the location of the 58 dB(A) contour. This noise contour will impact design and location of open space areas of multi-unit developments.

Refer to **Appendix M** for a copy of the Noise Assessment Report and Drawings C13107-860+, C13107-861+ and C13107-862+ for details of the noise contour locations.

2.4 Key Design Features and Agency Agreement

Aspect	Description	Criteria	Agreement
Requirement for 4 lanes	The East West Arterial includes 2 Lanes in each direction. This is due to the	<p>A traffic lane is considered saturated when the number of vehicles per hour exceeds 700. The EMME model indicates traffic volumes along the extent of the Stage 2 area to be in excess of 1000 vph for the 2031 AM Peak, confirming the requirement for two lanes.</p> <p>The results of SIDRA analysis confirmed the requirement for two lanes of traffic in each direction in order to provide adequate holding capacity at each intersection.</p>	The requirement for 4 lanes (2 in each direction) was determined during the Feasibility Design and agreed upon at the Value Management Workshop. Refer to Appendix E .
Maximum desirable longitudinal grade – Side Roads	As a result of the steep topography, Roads 3 and 4 have been designed with a longitudinal grade of 10%.	AustROADS Guide to Road Design Part 3, specifies a maximum grade of 9-10% within mountainous terrain and a grade of 7-9% within rolling terrain. Refer to Table 8.3, AustROADS Guide to Road Design Part 3.	Roads 3 and 4 have been graded at a maximum of 10%, which was agreed to by TaMSD (Roads ACT) due to the constraints imposed by the existing topography. Refer to the correspondence in Appendix D for TaMSD’s agreement to these side roads being graded at 10%.
Bus Stop Locations	4 bus stops have been located within the East West Arterial Stage 2. These bus stops have been located within vertical curves where a longitudinal grading of less than 2.5% has been achieved. Refer to C13107-820 for details.	Criteria for bus stop locations and routes is not clearly defined by TaMS or AustRoads design standards.	It was agreed with Roads ACT that there should be sufficient length of longitudinal grades to accommodate bus stops to ensure compliance with grades of less than 2.5%. Refer to Roads ACT Correspondence within Appendix D for details.

Aspect	Description	Criteria	Agreement
Road Corridor width	The road corridor has been set to accommodate 11.25m wide verges on either side. Total road corridor width of 47.0m	Not applicable.	Originally, a 39.0m wide corridor as per 'Arterial' standard was detailed. However the corridor was widened to 47.0m at request of ESDD to accommodate trees. The typical cross section was presented to stakeholders from ESDD, EDD, TaMS and Roads ACT following the Value Management Workshop. Acceptance was received from all stakeholders.
Paths	Paths have not been documented on side roads as DDA requirements are not yet defined.	The Disability Discrimination Act 1992.	Refer to the correspondence in Appendix D for confirmation from Roads ACT that paths are not to be documented on side roads.
PRV Location	As part of ACTEW Waters supply system for Molonglo 2, a PRV will be required for both the Cravens Creek Low and Extra Low Zone Mains. It is proposed that the PRV be located within a bunker style arrangement building which will be incorporated into the northern road batter at approximately CH920.	Not applicable.	ACTEW and Roads ACT have both reviewed the location proposed and advised that it is acceptable refer to Appendix H for details.

Table 2 - Key Design Aspects

2.5 East West Arterial Stage 2 Design

2.5.1 General

The East West Arterial Stage 2 design was informed by a number of factors and constraints. Of particular importance was the Molonglo 2 East / West Arterial Road Extension to Cravens Creek – Feasibility Study, which Brown Consulting completed in June 2013 and the East West Arterial Stage 1 Design. This feasibility study formed the basis of road layouts, alignments and likely grades based on limited planning information available at the time.

2.5.2 Road Users

Pedestrians

The provisions for pedestrians have been designed in accordance with the criteria detailed in the TaMS standard DS13, Pedestrian and Cycle Facilities. The following issues were considered in the design development and have had a significant influence on the design:

- » Addressing the requirements of people with disabilities, including compliance with the Disability Discrimination Act 1992.
- » The steep topography of the Molonglo Area and longitudinal grades of side roads.

The proposed provisions for pedestrians include a 2.0m wide footpath on both sides of the East West Arterial, extending along the length of the Stage 2 works.

Due to the steep topography, the longitudinal grades of Side Roads 3 and 4 are 10%. Footpaths have not currently been documented on these side roads as it is envisaged that pedestrian access to the southern side of Denman Prospect will be provided via a series of intermediate pedestrian path networks through the development which achieve DDA compliant grading.

Cyclists

The provisions for cyclists have been designed in accordance with the criteria detailed in the TaMS standard DS13, Pedestrian and Cycle Facilities and are consistent with on road and off-road provisions within Stage 1. Consideration has been given to likely cycle routes and connectivity with proposed off road path networks.

Additionally, a 2.5m wide off road cycle path will be provided along the eastern side Cravens Creek alignment, passing under the eastern arch of the Cravens Creek Bridge. The design of the off road cycle path will extend approximately 60m either side of the arch bridge. Connectivity to the East West Arterial will be provided via two 2.0m wide paths. Refer to Drawing C13107 – P101+ for details of the path arrangement.

2.5.3 Public Transport

The location of bus routes and stops has been considered throughout the design development of the East West Arterial, including consideration to the following constraints:

- » The steep topography of the Molonglo 2 area and corresponding longitudinal grading of the East West Arterial Stage 2
- » DDA compliance, which requires bus stops to be located where the longitudinal grade is 2.5% or less.
- » Stage 1 eastbound bus stop, located between Intersection 1 and Lane 1.
- » The proposed 60km/h speed limit means that indented bus stops are not preferred by Action Buses.
- » Bus stop spacing requirements

Stage 2 of the East West Arterial is proposed to include 3 bus stops, the locations of which are detailed on Drawing C13107-820. The proposed bus stops were discussed in detail at the December 19 Value Management Workshop, with the location of three out of four agreed with ACTION Buses. It is noted that the three agreed bus stops are in accordance with DDA requirement and located where the longitudinal grade is 2.5% or less.

Note that the bus stops are to include Rationalised Classic Type bus shelters, which is consistent with what was adopted on John Gorton Drive Stage 2A.

As discussed below, Brown Consulting investigated two options for the location of the fourth bus stop, which is the west bound bus stop near Intersection 3.

The first option located the bus stop on the departure side of the Intersection 3 at approximately CH 800. This location was not selected due to the longitudinal grading of the East West Arterial and issues with achieving DDA compliance.

The second option locates the bus stop on the approach side to Intersection 3 at approximately CH 680. This location was selected as the bus stop is located within a vertical curve which exists between CH554.163 and CH729.163 and as such the longitudinal grading of less than 2.5% required for DDA compliance is able to be achieved. To accommodate the bus stop at this location, the intersection had to be designed to remove the approach taper. A re-run of the traffic model verified this did not significantly affect the Level of Service of the intersection. As discussed at the Value Management Workshop, Roads ACT is committed to DDA compliance for public transport facilities and supports the intersection arrangement.

Due to the importance of achieving DDA compliance, Option 2 has been adopted.

2.5.4 Road Design

The road design criteria adopted was developed in consultation with the Economic Development Directorate (EDD), TAMS Roads ACT input and using the latest AUSTRROADS publications (Guide to Road Design). Where applicable and for the purpose of consistency, criterion was adopted to match the adjoining East West Arterial Stage 1 and nearby John Gorton Drive. Confirmation was obtained from TaMS (Roads ACT) during the Feasibility Study that the criteria was acceptable for the East West Arterial.

Stage 2 of the East West Arterial is a 780m section of road, extending from Intersection 1 through to the western side of Cravens Creek. The horizontal alignment of this section has been largely set by the by the connection with Intersection 1 and the broader alignment of the East West Arterial which extends across Cravens Creek, as determined during the Feasibility Study.

The topography of the area is relatively steep. In general, the design criteria and intent to minimise earthworks have informed the vertical alignment of the East West Arterial. The vertical geometry has been largely determined by the minimum and maximum longitudinal gradients and minimum K values stated in the design criteria as well as the Precast Arch Bridge and clearance requirements.

Typical Cross Section

Two lanes in each direction are proposed for the East West Arterial. This is due to the predicted traffic volumes and the East West Arterials classification as an Urban Arterial road.

A traffic lane is considered saturated when the number of vehicles per hour exceeds 700. The EMM model indicates traffic volumes along the extent of the Stage 2 area to be in excess of 1000 vph for the 2031 AM Peak, confirming the requirement for two lanes. Furthermore Sidra analysis of the intersections indicate that two through lanes will be required for storage / queuing at approaches and to suit midblock capacity.

Intersections

The East West Arterial Stage 2 includes the design of three intersections, as described below.

- » The design of two major signalised tee intersections, one to the north and one to the south.
- » The design also includes the provision for Intersection 5, between Road 5 and the East West Arterial which is not proposed to be constructed in the first instance. If it is to proceed the intersection is to be a minor unsignalised T intersection between the East West Arterial and Road 5.

Intersection 2 is the major signalised T intersection with the East West Arterial and Road 3. Intersection 2 has been positioned 280 m west of Intersection 1, this location is consistent with the feasibility study. A signalised T intersection design has been adopted for Intersection 2.

Intersection 3 is the major signalised T intersection with the East West Arterial and Road 3. Intersection 3 has been located at chainage 530, approximately 220 m west of Intersection 2.

Intersection 5. The design includes the provision for a minor unsignalised T intersection between the East West Arterial and Road 5 at chainage 945. The intersection will adopt a left in / left out arrangement with a protected right turn lane from East West Arterial into Road 5.

Signage

This application includes the design traffic control devices and signage for the East West Arterial Stage 2. Refer to Drawings C13107-P500, C13107-P501, C13107-P502, C13107-P510 and C13107-P513 for details.

All signage will comply with the requirements of AS1742.10 (1991) Manual of Uniform Traffic Control Devices – Pedestrian Control and Protection.

2.5.5 Precast Arch Bridge Cravens Creek

The project involves the design of a Precast Arch bridge crossing over Cravens Creek at the western end of the Stage 2 works. The bridge design comprises two parallel rows of 18m wide Precast Arches, with services and a cycle path running through one and Cravens Creek through the other. This arrangement achieves the required clearance for Sewer 3 Central and the extra low pressure water main, whilst ensuring the alignment of these services remains outside the 100-year ARI flood level of Cravens Creek.

The Cravens Creek Bridge is proposed to maintain the same road carriageway as per other sections of the East West Arterial with minor changes to the verge width to suit arch spacing below. The East West Arterial will serve as the only entry / egress point (initially at least) to certain pockets of residential development. A dual carriageway crossing of Cravens Creek is therefore recommended in the event of a bushfire to facilitate timely and safe movement of emergency vehicles and general traffic.

Key Features include:

- » Two parallel rows of 18m wide Precast Arches.
- » Reinforced Earth Walls positioned parallel with the roadway.
- » Two traffic lanes in each direction.
- » The reinforced earth wall panels, incorporated into the arch bridges, are precast concrete in material with a pigmented textured finish
- » For graffiti treatment, all concrete surface (precast arches and RE Wall panels) within 5m of the underpass are to be coated with an anti-graffiti treatment, nanocoat or equivalent with a non sacrificial coating.

For details on the arch bridge including the General Arrangement refer to Drawings C13107-P880+, C13107-P881, C13107-P882 and C13107-P883.

2.5.6 Pavement Design

The design for the pavement has been developed considering the geotechnical investigation and integration with the existing pavement design from Stage 1 of the East West Arterial. The proposed surface treatment for the road pavement is stone mastic asphalt (SMA), which will assist in reducing noise by up to 5dB(A).

Design ESA's have been adopted in accordance with Part 6.4 of the TaMS Design Standards for Urban Infrastructure and are as follows:

- » Design Traffic Loading for through carriageway - 1×10^7 ESA (Arterial Road)
- » Design Traffic Loading for intersections - 4×10^7 ESA
- » The adopted design life of the pavement is 25 years.

Pavement Whole of Life Comparison (WOLC)

A Whole of Life Comparison has been completed for two pavement profiles:

- » Option 1 - Deep lift asphalt pavement for the entirety of Stage 2 as documented in the PSP drawing set. This option is consistent with the pavement profile of the East West Arterial Stage 1 and John Gorton Drive.
- » Option 2 - Deep lift asphalt at intersections and a full depth unbound granular midblock.

The analysis compared the present value of the cost streams for discount rates of 4%, 7% and 10% for the same 25 years analysis period. The construction cost is the initial cost of pavement construction and includes all relevant capital cost items associated with the construction.

The discounted net present cost (PVC) of the capital and recurrent costs are shown in the table below.

Option	Undiscounted Capital Cost (\$'000)	NPC at 7% (\$'000)	NPC at 4% (\$'000)	NPC at 10% (\$'000)
Option 1 – Deep Lift AC Full Length	3,217	2,319	2,550	2,194
Option 2 - Deep Lift AC Intersections, Full Depth Granular Midblock	3,360	2,271	2,583	2,081

Table 3 - Summary of WOLC for pavement option 1 and option 2

The WOLC confirmed the selection of the Option 1, Deep lift asphalt pavement for the entirety of Stage 2.

Whilst the Initial capital cost is higher than Option 2, the difference in cost between the two options over a 25 year period is minor and therefore Option 1 was selected due to the reduced likely hood of defects and maintenance requirements.

2.5.7 Earthworks

The development of the vertical alignment of the road has been undertaken with a view to minimising the extent of cut and fill batters, staying as close as possible to the existing surface and improve grades on the side roads. Key features of the earthworks include:

- » Stage 2 of the East West Arterial is predominately in fill, with substantial batters required along the northern side, notably opposite the Road 4 Intersection.
- » At the approach to the arch bridge the East West Arterial is in a significant amount of fill, up to 6m. This substantial fill in this area is due to the required levels of the arch bridge, notably to achieve clearance over Sewer 3 Central and the Bulk Supply Watermain.
- » The East West Arterial passes over an existing gully at chainage 780. For this section the East West Arterial approximately 8 to 9m of fill is required.

The Stage 2 works requires the importation of 145,000m³ of fill material, this material is anticipated to be sourced from the following locations

Molonglo 2 Group Centre Bulk Earthworks Stage 1

The future Group Centre east of John Gorton Drive has also been identified a source of material for the project. It is anticipated that the majority of the fill material required for the East West Arterial Stage 2 will be sourced from this site. Refer to Section 2.5.8 for further details.

As discussed further within Section 2.6.2, the sourcing of fill material from the Molonglo 2 Group Centre Bulk Earthworks Stage 1 will have the following associated benefits:

- » Facilitate Economical Construction of the East West Arterial Stage 2
- » Facilitate an Active Frontage to John Gorton Drive
- » Make the Molonglo 2 Group Centre Land More Saleable

John Gorton Drive 2A Stockpile

It is anticipated that approximately 25,000m³ of the required fill for the East West Arterial Stage 2 will come from the John Gorton Drive 2A stockpile which is located to the south east of the East West Arterial.

Stockpile BRU01

Approximately 240m³ of fill material will also be sourced from the existing stockpile BRU01, which is located to the north east of the John Gorton Drive and East West Arterial Intersection. The stockpiled material will be utilised within the fill embankment at approximately CH 380. Aecom completed a report on the stockpiled material, which advised that the material is suitable for beneficial re-use within commercial/industrial, road alignments or other development of lesser sensitivity within the ACT. This recommendation is supported by the Environment Protection Unit (EPU), refer to **Appendix I** for details.

2.5.8 Molonglo 2 Group Centre Bulk Earthworks Stage 1

The Molonglo 2 Group Centre Bulk Earthworks Stage 1 is expected to be a source of up to 120,000m³ of fill material for the East West Arterial Road Stage 2. The Molonglo 2 Group Centre Bulk Earthworks Stage 1 is located to the north east of the East West Arterial Road and John Gorton Drive Intersection and has the following attributes:

- » Approximate area of 3.8Ha
- » 120,000m³ of fill material available
- » Maximum cut of 6m

It is intended that the fill material from the Molonglo 2 Group Centre Bulk Earthworks Stage 1 will be hauled via the John Gorton Drive and East West Arterial Stage 1 and through the operational East West Arterial / John Gorton Drive Intersection.

2.5.9 Landscaping

East West Arterial Road

The landscape design for the East West Arterial Road Stage 2 has been developed with consideration to the preliminary site investigation and analysis of the existing and proposed adjacent landscape treatment of the site. This information has informed the landscape and urban design principles detailed below.

The design is primarily street tree planting to the East West Road and temporary planting to the road embankments which will be developed at future stage.

The central median planting will predominantly dry land grassing with informal groupings of *Eucalyptus mannifera*. Tree plantings spaced in between service lines (min. 2.5m off service lines) and minimum 10m spacing between tree plantings. As the informal groupings of *Eucalyptus mannifera* will be within the median clear zone, provision has been made to allow for future incorporation of a wire rope safety barrier, refer on Drawing C13107-010 for details.

At key areas along the road, mainly at intersections, proposed to plant *Pyrus calleryana* 'Capital' planted within *Grevillea* 'Bronze Rambler' as visual guide to drivers, also added interest and contrast along the road, between the native plantings of the *Eucalyptus* and the exotic plantings of the *Pyrus*.

The use of the *Grevillea* rather than native grasses in the central median;

- » *Grevillea* less attracting for Kangaroos
- » *Grevillea* low growing, so drivers sight lines are still maintained

The road verges will be planted with street trees in dry land grassing at a spacing of 12m. The main tree species is *Eucalyptus mannifera* with *Pyrus calleryana* 'Chanticleer' planted at intersections.

The exotic tree plantings at intersections will be visual guide for drivers and also provide contrast interest between the native and exotic plantings for drivers as they drive down the road.

The proposed informal grouping of the *Casuarina cunninghamiana* flanking the bridge is symbolic to tree plantings found along the creek channel.

For erosion control temporary mass planting of *Poa labillardieri* will be planted to the embankments of the road. This treatment is only temporary as the embankments will be redeveloped in the future

For details of the proposed landscaping including areas to be landscaped refer to Drawing LC01 – LC06.

Molonglo 2 Group Centre Bulk Earthworks Stage 1 Site

As detailed on Drawing 5091-05, all earthworks and batters of the Molonglo 2 Group Centre Bulk Earthworks Stage 1 Site are to be reinstated with topsoil and dryland grass at the completion of works.

Note that this treatment is only temporary and final landscaping of the site will be developed during the design of the Molonglo 2 Group Centre.

2.5.10 Existing Services

An overhead electrical service near the Cravens Creek Precast Arch Bridge which will be impacted by the East West Arterial alignment. The East West Arterial is in significant fill at the location of the existing service and as such required clearance between the carriage way and overhead electrical wires cannot be achieved. Additionally an existing power pole is within the proposed eastbound carriageway.

It is proposed that the existing overhead electrical service is relocated to underground and realigned further to the east to avoid the bridge and wing walls. The proposed alignment for the electrical relocation is detailed on Drawing C13107-120+.

The overhead electrical service is located in a rural area and the risk of interruption to electricity supply to the Molonglo and wider Southern Canberra areas during power line reconnections will be minimal. Consultation with ActewAGL has occurred and they have provided network advice and quotation for the electrical relocation, refer to Appendix G for details.

In the preparation of the network advice, ActewAGL have considered the impact on the electricity network and methodology for minimise disruption to electricity supplies.

2.5.11 Proposed Services

The provision of services in the project area has been discussed with services authorities. This will include a shared services trench, sewer, water and stormwater to accommodate the adjacent future development. The records of discussions are included in **Appendix G**. The proposed shared trench along the East West Arterial will connect into the existing shared trench stub, ST1, at western extent of the Stage 1 area.

Telecommunication service providers have provided advice on their requirements for servicing the proposed developments. Telecommunication conduits are to be included within a shared trench proposed in the northern verge of the East West Arterial.

ZNX has provided advice on service requirements within Stage 2 of the East West Arterial. Specifically provisions for gas services include a 110mm diameter gas main runs along the northern verge of the East West Arterial, within ST1.

2.5.12 Street Lighting

The street lighting design for the East West Arterial has been designed in accordance with TaMS Design Standards for Urban Infrastructure Part 12 Public Lighting and AS/NZS 1157.1.1.2005. In addition, consideration has been given to the lighting restrictions imposed by Stromlo Observatory. Due to the topography of the area blocking light to Stromlo Observatory, standard street light poles will be adopted for Stage 2 of the East West Arterial. This is consistent with what was adopted within Stage 1.

Refer to Drawing CR130454-E01 to CR130334-E05 for Street Lighting details.

2.5.13 Pressure Reduction Valve station (PRV)

As part of ACTEW Waters supply system for Molonglo 2, a PRV will be required for both the Cravens Creek Low and Extra Low Zone Mains. It is proposed that the PRV be located within a bunker style arrangement building which will be incorporated into the northern road batter at approximately CH920.

The location of the PRV building has been confirmed with Roads ACT, ACTEW Water and the Land Development Authority. Refer to **Appendix H** for details.

The East West Arterial Stage 2 design includes the recommendation of the PRV building location, car park and interim access, however it does not include the design of the building or PRV.

Key features include:

- » Building is a bunker style arrangement incorporated in the road batter.
- » Interim access to building is via an existing fire trail. Long term access is from the estate roads in Denman Prospect 3, not from the EWA.
- » Maintenance and installation of the PRV equipment is via the lower level.
- » The car park at the lower level accommodates 3 light vehicles.

The proposed location was chosen due to the following reasons:

- » Access does not conflict with proposed shared paths to and from Cravens Creek.
- » The extra low zone watermain connection to the PRV is readily accommodated.
- » The building is away from the reinforced earth walls which avoids issues with backfilling.
- » The building is outside of the clear zone for the East West Arterial.
- » Pedestrians are protected by a fence at the edge of the verge.

Refer to Drawing C13107-101 for further details of the PRV building location.

*Note that the Development Application for the PRV Building and car park does not form part of this application and it will be documented separately by ACTEW Water.

PRV Building Access

Interim access to the PRV building will be via an existing fire trail which will require modification as part of the East West Arterial Stage 2. The interim modification to the existing fire trail forms part of this application, long term access to the PRV building from Denman Prospect 3 does not.

2.5.14 Stormwater

The stormwater road drainage network has been designed in accordance with the Molonglo 2 Stormwater Master Plan prepared by Indesco and the criteria detailed in the TaMS standard DS01. A minor system design average recurrence interval (ARI) of 10 years has been adopted. This is in accordance with the requirement for “Group and Neighbourhood Shopping Centres” detailed in the TaMS standard and is the same as adopted on Stage 1 of the East West Arterial and the nearby John Gorton Drive. A major system (cross drainage) has been designed for 1 in 100 year flows, as has the on-road flow depths for pedestrian and vehicular safety.

The Stage 2 road drainage consists of seven distinct drainage networks all which outlet to a series of temporary sediment ponds to the north of the East West Arterial. The road drainage network has been largely influenced by the one way cross fall of the East West Arterial and overall site topography. Stormwater sumps are typically positioned in the median for the westbound carriageway and northern kerb for the drainage of the eastbound carriageway, with longitudinal stormwater pipes located within the northern verge.

The location and size of the cross drainage has been developed considering the locations of gullies and water courses as well as the future land use requirements and proposed Denman Prospect 1A and 1B layout. The overland flow drainage network consists of 4 major cross drainage culverts which convey flows from the south to a number of temporary sediment ponds. At Roads 4 and 5, the cross drainage system has been combined with the road drainage network.

Water Sensitive Urban Design (WSUD)

Whilst no specific WSUD treatments have been incorporated into the Stage 2 design, in accordance with the Molonglo master plan, stormwater flows are proposed to be conveyed to the proposed Craven’s Creek Pond to the north-west of the East West Arterial where they will be treated as required by the WaterWays General Code.

Pollution Control

A concept pollution control plan has been prepared. Key pollution control measures include:

- » Five sediment ponds located on the northern side of the East West Arterial
- » Silt fencing typically located at the base of the northern batters for the length of Stage 2 works
- » Hay bales

Refer to Drawings C13107–600 to C13107–603+ for details.

Sediment Control Ponds

Prior to the development of future downstream networks, the flows from the East West Arterial and southern catchment are proposed to outlet to five temporary sedimentation ponds located on the northern side of the East West Arterial. The sediment ponds form part of this application and will be constructed prior to the East West Arterial earthworks.

2.5.15 Cravens Creek Realignment

The precast arch bridge as discussed with Section 2.5.5 will require the realignment of a section of approximately 200m of Cravens Creek. This will include mortared stone pitching for the majority of the realignment. Refer to Drawings C13107-450+ and C13107-451+ for details.

2.6 Tree Removals

As detailed in Section 2.3.11, 2.3.12 and 2.3.13 a number of tree assessments have been completed for this project. This section presents a summary of the tree removals required for the project and reasoning for their removal. Additionally, a tree management plan has been prepared which details the required tree removals, refer to Drawing C13107 – 840+ for details.

An overview of the tree planting and removals associated with the project is presented in the table below:

Description	Tree Planting	Tree Removals
East West Arterial Stage 2	Native Trees (95) <ul style="list-style-type: none"> » <i>Eucalyptus Mannifera</i> » <i>Casuarina cunninghamiana</i> Deciduous Trees (56) <ul style="list-style-type: none"> » <i>Pyrus Calleryana Chanticleer</i> » <i>Pyrus Calleryana Capital</i> 	Approximately 500 trees of small size and not significant including: <ul style="list-style-type: none"> » <i>Pinus Radiata</i> » <i>Regrowth Eucalyptus</i>
Molonglo 2 Group Centre Bulk Earthworks Stage 1	The Group Centre Site will be temporarily reinstated with dry-land grassing. Landscaping of the Molonglo 2 Group Centre Site will be determined during the design of the Group Centre.	<ul style="list-style-type: none"> » 6 x Medium Value Trees (13209, 13198, 13201, 13203, 13214 and 13217) » 10 x Poor Value Trees (13208, 13210, 13160, 13163, 13176, 13176, 13177, 13200, 13204, 13215, 13216)

Table 4 - Overview of project tree planting and removals.

2.6.1 East West Arterial Stage 2 – Tree Removals

As confirmed by the tree assessments, the East West Arterial Road Stage 2 will not impact upon any significant trees, Scenic Landscape Architecture undertook a tree assessment of the trees within Molonglo Valley Stage 2 in 2011. The study identified no significant trees exist within the footprint of the East West Arterial Stage 2.

In October 2013, Enviro Links Design completed a reassessment of the impacted trees as assessed by Scenic Landscape Architecture in late 2011. The results confirmed that the previous designated tree quality rating is still accurate and that no new significant trees have established themselves within the proposed work area. Refer to **Appendix K** for details.

Since Scenic Landscape Architecture's tree assessment a number of small pine trees (*Pinus radiata*) and *Eucalyptus* Species have regrown within the East West Arterial Stage 2 work area. Enviro Links Design has confirmed that the *Eucalyptus* Species are regrowth and of small size and not significant. Refer to **Appendix K** for details of tree removal correspondence with Enviro Links Design

Furthermore, it has been confirmed with ESDD during the Value Management Workshop and Stage 1 Design that the *Pinus Radiata* trees are a pest species and not protected by any legislation. Refer to **Appendix K** for details of correspondence with ESDD regarding *Pinus radiata*.

2.6.2 Molonglo 2 Group Centre Bulk Earthworks Stage 1 – Tree Removals

Based upon Indesco’s December 2013 Tree Assessment, the Molonglo 2 Group Centre Bulk Earthworks Stage 1 project site will require the removal of the following trees:

- » 6 x Medium Value Trees (13209, 13198, 13201, 13203, 13214 and 13217)
- » 10 x Poor Value Trees (13208, 13210, 13160, 13163, 13176, 13177, 13200, 13204, 13215, 13216)
- » Refer to Drawing 5091-05-020 for details of the tree removals and **Appendix K** for Indesco’s tree assessment.

This section details why the listed trees are required to be removed, including discussion of the background studies, investigations and requirements for earthworks.

The Molonglo 2 Group Centre Bulk Earthworks Stage 1 project builds upon previous studies and investigations. A discussion of these studies and relevance to trees in the vicinity follows.

Description	Relevance
<p>1. Planning and Design Framework (PDF) – Molonglo Valley Stage 2 (2010 – 2011)</p> <p>In 2010, The Environment and Sustainable Development Directorate (ESDD) of the ACT Government engaged SGS Economics and Planning to prepare the Planning and Design Framework Study for Molonglo Valley Stage 2. This study identified the land use structure and servicing elements for Molonglo 2. In effect it informed the positioning of key elements such as the Group Centre and Arterial roads.</p>	<p>The requirement to remove trees in the Group Centre was identified during the study. The PDF was approved by the ACT Government.</p> <p>As the design options were explored at this stage of planning the alternatives were assessed as not feasible and the preferred design option emerged as the PDF. The current development is consistent with the PDF therefore consistent with the requirements of the Planning and Development Act 2007 that all design options have been considered around the retention of trees. There is no feasible alternative to that which is presented in this development.</p>
<p>2. Molonglo Group Centre and Environs PDF Study (2011 – 2012)</p> <p>Hames Sharley and Indesco were engaged in 2011 by ESDD to undertake the planning and design of the Group Centre Precinct, located adjacent to John Gorton Drive in the vicinity of the East West Arterial intersection.</p> <p>The project prepared preliminary layouts and site regrading for the proposed development in addition to hydraulic masterplans.</p>	<p>The requirement for extensive regrading of the Group Centre Precinct was identified during the project. Various stakeholders were informed that almost all of the trees in the area would need to be removed to facilitate development due to the location and placement that was explored and determined in the PDF for Molonglo Valley Stage 2.</p>
<p>3. Molonglo NES Plan</p> <p>ESDD engaged Eco Logical Australia Pty Ltd (ELA) to prepare a strategic assessment report of the Molonglo Valley plan for the Protection of Matters of National Environmental Significance (the NES plan).</p>	<p>In accordance with the Molonglo NES Plan, the impacts to Box-Gum Woodland will be limited to a maximum of 110Ha and a range of measures will be implemented to minimise this area of impact.</p> <p>As such it is acknowledged that a number of significant trees will require removal as part the Molonglo development.</p> <p>The development is consistent with the requirements of the NES Plan and is consistent with the PDF for Molonglo Valley Stage 2. No additional trees are being impacted beyond what was considered in the PDF or the Molonglo NES Plan.</p> <p>Notwithstanding the above, no high, medium, low or very low quality Box Gum Woodland is impacted by the proposed Group Centre Bulk Earthworks (Stage 1).</p>

Table 5 - Molonglo 2 Group Centre Bulk Earthworks Stage 1 - Previous Studies and Investigations

Requirement for Earthworks from the Molonglo 2 Group Centre Bulk Earthworks Site

The earthworks is required for the following reasons:

1. To Facilitate Economical Construction of the East West Arterial Stage 2

With other projects currently under construction (including Majura Parkway), fill material is relatively difficult to source and expensive to import. The Group Centre Bulk Earthworks Stage 1 will net sufficient material (120,000 cubic metres) to construct East West Arterial Stage 2 with a potential overall saving of \$1.2M dollar compared to importing from elsewhere. This potential saving has been calculated based upon an extra \$10/m³ cost to import the material from elsewhere. This has an added benefit of reducing the number of trucks on the road hauling fill from other parts of Canberra and / or surrounds.

2. To Facilitate an Active Frontage to John Gorton Drive

Currently, the blocks adjacent to John Gorton Drive are approximately six metres above the roadway verge. To enable commercial activities at this interface, the blocks will need to be trimmed down to the road level. A level interface between the Group Centre blocks and John Gorton Drive is an integral part of the planning strategy and critical to the architectural viability of the entire Group Centre development.

Removing this material will open up views (to the east) towards Canberra City, providing a much improved urban design outcome.

3 To Make the Land More Saleable

The blocks where earthworks are proposed are within the prime Commercial Zone Area. However, the slope of the existing land will require major reshaping prior to any building construction.

Removing the excess surface material prior to sale will save a potential developer a considerable amount of money in the order of \$1.80M (based upon a rate of 15/m³ for general earthworks) and make purchasing blocks much more attractive.

Summary

A limited number of trees require removal in order to construct the first stage of earthworks within the Molonglo Group Centre. The requirement for tree removals was identified in numerous previous studies and is consistent with the PDF for Molonglo Valley Stage 2 which determined the location and scale of the Molonglo Group centre.

Further, including the earthworks for the Group Centre Site in this development encourages development in the Group Centre as well as allowing economical construction of the East West Arterial Stage 2. It also removes the impediment for future proponents to demonstrate that all design options have been explored as this has been undertaken through a planning process by the ACT Planning Authority in the PDF for Molonglo Valley Stage 2. A copy of the PDF has been attached to demonstrate the ACT Government considerations around the placement of the Molonglo Town Centre and the required removal of trees in this location.

3. Application Requirements

3.1 Land Use

3.1.1 East West Arterial - Stage 2

The proposed East West Arterial corridor is a greenfield site with future planned developments on either side of the proposed road. Currently the Territory Plan has not defined the corridor for the East West Arterial. It is intended that the East West Arterial alignment will set the road reserve corridor.

The current zonings that the proposed road alignment of the second stage of the East West Arterial falls into are as follows:

- » RZ4 Medium Density Residential Zone
- » RZ5 High Density Residential Zone
- » PRZ1 Urban Open Spaces
- » CZ4 Commercial Local Centre
- » Refer to Drawing C13107 – 006+ for further details.

The proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not involve any residential development. As such, the Residential Zones for the current RZ4, RZ5 zoning is not relevant and will not be assessed against. The proposed road reserve for the East West Arterial will require the zoning codes of the residential areas to be amended to be TSZ1 Transport and Services Zone in the Territory Plan to suit the land use purpose.

The PRZ1 zoning at the western extent of the road is expected to remain and has been assessed against.

At the time of this application, the development in Denman Prospect 1B is unknown, hence the need for Road 5 remains unconfirmed and has been shown as indicative only within the Drawing Set. Furthermore, the Commercial Local Centre CZ4 only covers a minor section of the Road 5 Stub (less than 500m²) and as such has not been assessed against.

The Statement against Relevant Criteria, has been completed for the future Transport and Services Zone Development Code, Commercial Zone Development Code and Urban Open Spaces Zone Development Code. Refer to Section 4 for details.

3.1.2 Molonglo 2 Group Centre Bulk Earthworks Stage 1

The Molonglo 2 Group Centre Bulk Earthworks Stage 1 site is located to the north east of the East West Arterial and John Gorton Drive Intersection and is currently zoned as CZ1 Commercial Core and TSZ1 Transport and Services Zone. The Statement against Relevant Criteria, has been completed for the Commercial Zone and Transport and Services Zone Development Codes, refer to Section 4 for details.

3.2 Impact Track

Impact track DA applies to proposals under Section 123 of the Planning and Development Act 2007 (the Act) that involves a process or activity likely to have significant adverse environmental impact on an endangered species or ecological community. An Environmental Impact Statement (EIS) is normally required for the projects which go down the route of the Impact Track Assessment.

Section 211 of the Act allows an applicant to seek exemption from the requirement to complete an EIS. The Minister responsible for the Act has discretion under Section 211 to grant exemption based on the information presented in previous studies. If an exemption is granted, as has been granted in this instance, then the EIS process is regarded as complete and allows an application to lodge a development assessment (DA) for evaluation under the impact track process.

The Land Development Agency (LDA) and EDD have prepared and submitted S211 exemption applications for parts of the Molonglo development, which identify the potential impacts of the proposed development and provides information to support the request for Ministerial exemption under S211 of the Act. Exemptions have been granted for each of the S211 exemption applications.

The two previous applications prepared by EDD had identified potential impacts of the proposed development and provided information supporting their request for Ministerial exemption under s211. In July 2013 these two exemptions were consolidated into a single exemption.

» Molonglo Valley Stage 2 – Urban Development Infrastructure and Link Bridge, Application for s211 Exemption Consideration Report, (July 2013)

A copy of the Ministers' Approval Decision of the S211 exemption application is included in **Appendix B**:

3.3 NES Plan

In September 2008 the ACT Government signed an agreement with the Commonwealth to undertake an assessment of the Molonglo Valley Structure Plan under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). This agreement was amended in March 2010 to provide for the assessment of impacts under the Molonglo Valley Plan for the Protection of Matters of National Environmental Significance (the NES Plan) and ESDD engaged Eco Logical Australia Pty Ltd (ELA) to prepare this strategic assessment report of the Molonglo Valley plan.

The strategic assessment of the area was undertaken to streamline the referral process, provide greater certainty in environmental protection and conservation practices, and facilitate sustainable outcomes in new urban development areas.

In the Molonglo Valley matters of NES include threatened species, migratory species and important ecological communities and have been identified as follows;

- » White Box – yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland (Box Gum Woodland) - listed under the EPBC Act as critically endangered
- » Natural temperate Grassland of the Sothern Tablelands of NSW and the ACT (Natural temperate Grassland) - listed under the EPBC Act as endangered
- » Aprasia parapulchella (Pink-tailed Worm Lizard) - listed as vulnerable
- » Polytelis swainsonii (Superb Parrot)
- » Lathamus discolour (Swift parrot)

The presence of these endangered and vulnerable communities, require that the impacts of development in Molonglo and North Weston were required to be assessed under national environment law.

On 7 October 2011, the Federal Environment Minister endorsed the Plan. This is the third strategic assessment in Australia to reach the endorsement stage. The endorsement of this Plan allows the Federal Environment Minister to consider giving approval to actions or class of actions that are taken in accordance with the endorsed Plan.

On 20 December 2011, the Federal Environment Minister approved actions associated with urban development in East Molonglo as described in the endorsed Plan.

A copy of the Approval Decision of the NES Plan is included in **Appendix C**.

3.4 Structure Plan – Molonglo and North Weston

The East West Arterial and Molonglo 2 Group Centre Bulk Earth works is within the area covered by the Molonglo and North Weston Structure Plan. The structure plan sets out the principles and policies that apply to the Molonglo and North Weston future urban area in accordance with section 91 of the Planning and Development Act 2007.

Responses to the Structure Plan have been provided within Section 4.5.

3.5 S211 Exemption

S211 Exemption Application July 2013

This application is to the ACT Minister for Environment and Sustainable Development on the assessment of the request for an exemption from requiring a completed Environmental Impact Statement. The application for exemption is made by the Economic Development Directorate (EDD) under Section 211 (S211) of the Planning and Development Act 2007 (the Act).

The exemption of S211 has been granted by the Minister for the Environment and Sustainable Development Simon Corbell upon the conditional and unconditional supports from various entities.

Within this section, responses have been provided to the Molonglo Valley Stage 2 - Urban Development, Infrastructure and Link Bridge Application for s211 Exemption Consideration Report, July 2013, this includes responses to the following components:

- » Table 15 – Development Application Considerations
- » Table 6 – Mitigation Measures – Species and Ecological Communities
- » Table 8 - Mitigation Measures – Species and Ecological Communities
- » Table 10 - Mitigation measures - land reserved under s315 of the Act
- » Table 12 - Mitigation measures – heritage significance of a place or object
- » Table 14 – Mitigation measures – summary of mitigation measures
- » Heading 5.1.2 - Recommended mitigation measures

Table 6 – Development Application Considerations (Table 15)

	Consideration requirement	Endorsement/ Approval	Development stage	Details of considerations	Response
1	Molonglo River Park Concept Plan	ACT Government	Required prior to construction within the River Corridor.	The River Park Concept Plan will contain detailed policies and guiding principles for construction and operational activities within and near the Molonglo River Corridor.	Not Applicable. The proposed works are outside of the Molonglo River Corridor (NUZ4).

	Consideration requirement	Endorsement/ Approval	Development stage	Details of considerations	Response
2	Plan of Management for the Molonglo River	ACT Government	Required within 3 years of endorsement of the NES plan or prior to commencement of the Molonglo Group Centre Infrastructure Stage, whichever occurs first.	<p>Related to Management of the Molonglo River Corridor and associated Special Purpose Reserve. Should provide details on (but not limited to) following the matters:</p> <ul style="list-style-type: none"> • Restricting or managing works within the river corridor to limit the risk of erosion; • Restricting or managing works within the river corridor to limit the risk of direct impacts; • Stormwater Quality controls and targets to improve water quality in the Molonglo River particularly downstream of the proposed urban areas; • CEMP to manage the handling of potential contaminants/pollutants during construction; • Stringent sediment and erosion controls during construction implemented through CEMP; • Weed management strategies during construction and land management activities; • Asset protection and fire hazard management strategies to limit the impact on the area and reduce the risk of fire occurring in the area; • Education of local residents on values and conservation of this environment. Including importance of weed management, the illegal dumping of waste, cat containment and responsible pet ownership and on appropriate recreation within the river corridor 	<p>Not Applicable.</p> <p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p>

	Consideration requirement	Endorsement/ Approval	Development stage	Details of considerations	Response
3	Asset Protection Zone - Management Plans	Conservation, Planning & Research (ESDD) & Land Manager (ACT Government)/ Rural Lessee	Prior to the establishment of APZs	<p>Management Plans should be developed for the establishment and maintenance of APZs. These plans will be developed in consultation with Conservation, Planning and Research (ESDD) the intended land manager of rural lessee. The plans should outline at least the following:</p> <ul style="list-style-type: none"> • Activities and mitigations associated with the establishment of APZs; • Details on method, timing and frequency of management activities to reduce impacts on grasslands ecology and species; • Details on weed management practices and enforcement of these practices; • Details of measures to reduce risks associated with erosion of soils 	<p>Not Applicable.</p> <p>The proposed works are outside of the Asset Protection Zone (APZ).</p>

	Consideration requirement	Endorsement/ Approval	Development stage	Details of considerations	Response
4	Concept planning for future urban areas	ACT Government	Prior to the DA/preparation of Estate Development Plans	<p>Concept Planning of future urban areas should be undertaken to ensure that recommended mitigation measures within this report and the s211 requests are incorporated where possible into the Territory Plan. This should include:</p> <ul style="list-style-type: none"> • Designs which develop in areas of degraded or exotic vegetation and avoid areas of high quality vegetation and habitat; • Reduction in the clearing of remnant trees and maintenance of woodland connectivity; • Reduces the requirements for construction within the river corridor; • Reduces the required bushfire APZs and their impacts; • Measures to reduce the impacts of light spill on Mt Stromlo Observatory; • Appropriate links between recreation areas such as Stromlo Forest Park, the National Arboretum and the Molonglo River Park 	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p> <p>The streetlight design for the East West Arterial Road has been designed to comply with the lighting requirements for the Stromlo Observatory.</p> <p>Stage 2 of the East West Arterial is only a 780m section of road, therefore providing links between recreation areas is not applicable.</p>

	Consideration requirement	Endorsement/ Approval	Development stage	Details of considerations	Response
5	Construction Environment Management Plans	Land Managers, Conservator of Flora and Fauna, Environment Protection Authority, Tree Protection Unit.	Prior to any construction	<p>Comprehensive Construction Environment Management Plans CEMPs should be developed prior to the undertaking of any construction of development activities. These plans should include as a minimum:</p> <ul style="list-style-type: none"> • Measures to avoid impacts on areas outside of development footprints; • Fencing off of areas of vegetation/trees to be retained; • Erosion and Sediment controls to be implemented during construction and remediation; • Contamination management plans for the handling of potentially contaminating materials and for the remediation of contaminated lands; • Air quality and dust controls measures to limit air quality impacts from construction activities; • Fauna management plans for breeding, injured or trapped wildlife; • Waste management plans for construction activities; • Workplace health and safety plans to protect workers and the public from harm; • Tree management plans for trees to be removed, retained and trimmed/pruned. Should include details on timing of works to reduce impacts on bird species breeding; • Unanticipated Discovery Protocols for the management of impacts unexpected heritage object finds; • Traffic management plans 	A CEMP will be prepared by the contractor prior to construction.

	Consideration requirement	Endorsement/ Approval	Development stage	Details of considerations	Response
6	Cultural Heritage Survey where works are to occur outside of previously surveyed areas.	ACT Heritage Council	EDP or infrastructure DA stage – Prior to construction.	Required with the development of the Molonglo River Park Concept Plan or where there is to be an impact outside the previously surveyed area	The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to Drawings C13107-800+ and C13107-801+.
7	Conservation Management Plans	ACT Heritage Council	EDP or infrastructure DA stage – Prior to construction.	Related to Aboriginal and historical heritage sites. Should be developed to reduce the potential impacts on heritage objects which will be retained in place or salvaged. For objects to be retained in place, plans should outline how objects will be managed and interpreted by the public	The contractor will be required to include an unanticipated discovery plan in the project plan and submit for the ACT Heritage Council’s approval prior to the commencement of works.

Table 7 – Mitigation Measures – Species and Ecological Communities (Table 6)

	Impact of Development	Mitigation Measure	Response
1	Removal of endangered ecological communities	<p>Develop in areas of degraded vegetation or predominantly exotic vegetation;</p> <p>Undertake further investigation of significance of vegetation to be removed;</p> <p>Offset significant vegetation to be located in parklands and urban open spaces;</p> <p>CEMP to control erosion and sedimentation and the effects on vegetation;</p> <p>Weed control measures to reduce ingress of weeds;</p> <p>Implementation of the Molonglo River Park Concept Plan to protect and manage areas within identified public lands.</p>	<p>The proposed works are clear of any areas of environmental significance. Refer to Drawing C13107-850+.</p> <p>An endorsed Sediment and Erosion Control Plan is not relevant to this stage of the project. However a Concept Pollution Control Plan, incorporating control measures included in the Environmental Protection Guidelines for Construction and Land Development in the ACT, is provided in the drawing set.</p> <p>This plan will be finalised by the successful contractor who will submit it to the ACT Environment Protection Authority for approval prior to commencing construction.</p>
2	Reduction of woodland connectivity	<p>Limit mid and over story vegetation removal especially in areas of ecological significance such as the Molonglo River Corridor;</p> <p>Reduce clearing in identified woodland connections;</p> <p>Implementation of the Molonglo River Park Concept Plan to protect and manage areas within identified public land;</p> <p>Develop parks and reserves to improve connectivity between areas of ecological significance and offset clearing of identified woodland connections.</p>	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4). The design of the East West Arterial and Molonglo 2 Group Centre Bulk Earthworks Stage 1 has been developed with the intent to minimise impact on existing trees and vegetation. Refer to Section 2.6 for a detailed discussion of the tree removals associated with the project.</p> <p>Refer to Drawing C13107 – 840+ for details of the required tree removals and to Appendix K for details of tree removal correspondence with ESDD.</p>
3	Tree hollows being removed	<p>Management options are to reduce clearing of tree hollows, manage clearing to reduce injuring individuals and timing of construction/clearing to avoid breeding disruptions;</p> <p>Strategic preservation of Hollow bearing trees;</p> <p>Relocation of felled limbs/trees containing hollows into reserved areas.</p>	<p>The design of the East West Arterial and Molonglo 2 Group Centre Bulk Earthworks Stage 1 has been developed with the intent to minimise impact on existing trees and vegetation. Refer to Section 2.6 for a detailed discussion of the tree removals associated with the project.</p> <p>Refer to Drawing C13107 – P840+ for details of the required tree removals and to Appendix K for details of tree removal correspondence with ESDD.</p>

	Impact of Development	Mitigation Measure	Response
4	Damage or removal of PTWL habitat and Perunga grasshopper habitat	Protection of important habitat by fencing and signage during construction (avoiding key habitat); CEMP to protect habitat from construction activities and indirect impacts; Enhance connectivity by strategically located parks and open spaces areas; Implementation of the Molonglo River Park Concept Plans.	The proposed works are clear of known pink tailed worm lizard or perunga grass hopper habitat. Refer to Drawing C13107-850+.
5	Damage or removal of habitat important to, and direct impacts on threatened birds	Mitigation measures specified for woodland connectivity, tree hollows and removal of endangered ecological communities would assist for this species if found to be present; Construction timing to limit disruption on breeding times; Field investigations and/or targeted surveys to determine the presence of species. Recommendations on the management of the species should it occur should be presented prior to any development occurring on site; Implementation of mitigation and management measures from the NES Plan.	The proposed works are clear of any areas of environmental significance. Refer to Drawing C13107-850+.
6	Removal of or damage to native flora species	If specimens are found, fencing of key habitat areas (areas of environmental significance) would be appropriate to protect from construction activities	The proposed works are clear of any areas of environmental significance. Refer to Drawing C13107-850+. The contractor will be required to include an unanticipated discovery plan in the project plan prior to the commencement of works.

Table 8 – Mitigation Measures – Species and Ecological Communities (Table 8)

	Impact of Development	Mitigation Measure	Response
1	Permanent clearing of native vegetation	Develop in areas of degraded vegetation or predominantly exotic vegetation; Undertake further investigation of significance of vegetation to be removed; offset significant vegetation to be located in parklands and urban open spaces; CEMP to control erosion and sedimentation and the effects on vegetation; Weed control measures to reduce ingress of weeds; Implementation of the Molonglo River Park Concept Plan to protect and manage areas within identified public lands.	The proposed works are clear of any areas of environmental significance. Refer to Drawing C13107-850+. An endorsed Sediment and Erosion Control Plan is not relevant to this stage of the project. However a Concept Pollution Control Plan, incorporating control measures included in the Environmental Protection Guidelines for Construction and Land Development in the ACT, is provided in the Drawing set. This plan will be finalised by the successful contractor who will submit it to the ACT Environment Protection Authority for approval prior to commencing construction.

Table 9 – Mitigation Measures – Land Reserved under S315 of the ACT (Table 10)

	Impact of Development	Mitigation Measure	Response
1	<p>Construction activities which generate soil (including soil with vegetative composition and potential weed introduction) or water pollution risks (sedimentation or eutrophication of waterways).</p> <p>Formalised stormwater systems may change hydrological conditions, changing vegetation composition.</p>	<p>Implementation of the Molonglo River Park Concept Plans;</p> <p>Restricting or managing works within the river corridor to limit the risk of erosion;</p> <p>Restricting or managing works within the river corridor to limit the risk of direct impacts;</p> <p>Stormwater infrastructure design to improve water qualities flowing through waterways (swales, ponds); CMP to manage the handling of potential contaminants/pollutants during construction;</p> <p>Stringent sediment and erosion controls during construction implemented through CEMP;</p> <p>Weed management strategies during construction;</p> <p>Asset protection and fire hazard management strategies to limit the impact on the area and reduce the risk of fire occurring in the area.</p>	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p> <p>An endorsed Sediment and Erosion Control Plan is not relevant to this stage of the project. However a Concept Pollution Control Plan, incorporating control measures included in the Environmental Protection Guidelines for Construction and Land Development in the ACT, is provided in the drawing set.</p> <p>This plan will be finalised by the successful contractor who will submit it to the ACT Environment Protection Authority for approval prior to commencing construction.</p>
2	<p>Operational activities which generate soil (including soil with vegetative composition and potential weed introduction) or water pollution risks (sedimentation or eutrophication of waterways).</p>	<p>Implementation of the Molonglo River Park Concept Plans;</p> <p>Restricting or managing works within the river corridor to limit the risk of erosion;</p> <p>Restricting or managing works within the river corridor to limit the risk of direct impacts;</p> <p>Asset protection and fire hazard management strategies to limit the impact on the area and reduce the risk of fire occurring in the area.</p>	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p>
3	<p>Presence of Urban development – operational activities, recreational use</p>	<p>Implementation of the Molonglo River Park Concept Plans;</p> <p>Implementation of the Plan of Management in accordance with the NES Plan.</p>	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p> <p>An approved Plan of Management is not applicable to the proposed development. The development is not located in an area of public land.</p>

Table 10 – Mitigation Measures – Heritage significance of a place or object (Table 12)

	Impact of Development	Mitigation Measure	Response
1	Clearing vegetation, soil disturbance including excavation and removal of rock surface.	<p>Undertake works in accordance with management recommendations outlined within the Conservation Management Plans, as well as all previously approved Unanticipated Discovery Protocols.</p> <p>Undertake cultural heritage assessments where development is proposed to occur outside of previously surveyed areas.</p> <p>Undertake actions in accordance with the advice of the ACT Heritage Council.</p>	<p>The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to Drawings C13107-800+ and C13107-801+.</p> <p>As part of the East West Arterial Stage 1 Development Application, liaison with ACT Heritage Council was undertaken to ensure that in accordance with the Heritage Act 2004 any restricted information has been excluded from development application documentation. This has been considered for this application.</p> <p>The contractor will be required to include an unanticipated discovery plan in the project plan and submit for the ACT Heritage Council’s approval prior to the commencement of works.</p>
2	Clearing of significant over storey vegetation.	<p>Develop in area of degraded vegetation or predominantly exotic vegetation.</p> <p>Undertaken further investigation of significance of vegetation to be removed.</p> <p>Undertake actions in accordance with the advice of the ACT Heritage Council.</p>	<p>The proposed works are clear of any areas of environmental significance. Refer to Drawing C13107-850+.</p> <p>The design of the East West Arterial and Molonglo 2 Group Centre Bulk Earthworks Stage 1 has been developed with the intent to minimise impact on existing trees and vegetation. Refer to Section 2.6 for a detailed discussion of the tree removals associated with the project.</p> <p>Refer to Drawing C13107 – 840+ for details of the required tree removals and to Appendix K for details of tree removal correspondence with ESDD</p>

	Impact of Development	Mitigation Measure	Response
	<p>Formalisation of stormwater infrastructure and ponds and associated erosion and soil loss.</p>	<p>Undertake works in accordance with management recommendations outlined within the Conservation Management Plans, as well as all previously approved Unanticipated Discovery Protocols.</p> <p>Undertake cultural heritage assessments where development is proposed to occur outside of previously surveyed areas.</p> <p>Undertake actions in accordance with the advice of the ACT Heritage Council.</p>	<p>The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to Drawings C13107-800+ and C13107-801+.</p> <p>As part of the East West Arterial Stage 1 Development Application, liaison with ACT Heritage Council was undertaken to ensure that in accordance with the Heritage Act 2004 any restricted information has been excluded from development application documentation. This has been considered for this application.</p> <p>The contractor will be required to include an unanticipated discovery plan in the project plan and submit for the ACT Heritage Council’s approval prior to the commencement of works.</p>
4	<p>Presence of Urban development – operational activities, recreational use</p>	<p>Implement Conservation management Plans.</p> <p>Undertake actions in accordance with the advice of the ACT Heritage Council.</p>	<p>The contractor will be required to include a Conservation Management Plan prior to the commencement of works.</p> <p>The contractor will be required to liaise with the ACT Heritage Council prior to the commencement of works.</p>

Table 11 – Mitigation Measures – Summary (Table 14)

	Impact of Development	Mitigation Measure	Response
1	Air Quality	<ul style="list-style-type: none"> • Construction Environment Management Plans (CEMPs) to manage use of construction machinery and allow for dust suppression • Dust suppression measures – watering, spray tack, hydro mulching, limiting work on windy days 	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
2	Climate Change	<ul style="list-style-type: none"> • Emission controls on construction and personnel vehicles • Energy efficiency ratings for dwellings • Offsetting emissions via replanting vegetation in urban areas and parklands • Household waste and energy use reduction management strategies 	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
3	Steep slopes - development of and on	<ul style="list-style-type: none"> • Implementation of appropriate erosion and sediment control measures • CEMP to manage construction on steep areas and limit clearing of vegetation and ground cover • Appropriate stormwater management during construction and in the ultimate urban environment • Formalisation of tracks in recreation areas to limit erosion 	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.

	Impact of Development	Mitigation Measure	Response
4	Contaminated land	<ul style="list-style-type: none"> • Environmental site assessment be undertaken prior to construction • Appropriate site remediation of contamination where required • CEMP to manage potential contaminants used during construction 	<p>Application to be referred to the relevant agency.</p> <p>A Phase 1 Environmental Site Assessment within the area of works was undertaken by AECOM in 2012.</p> <p>A Phase 2 Environmental Site Assessment was also undertaken by AECOM for the area covered by EWA Stage 2 (ie MV2-C2 and MV2-C1-A2) which focused on areas of environmental concern identified in the Phase 1 ESA. The Reports have been endorsed by the Environmental Site Auditor and the EPA.</p> <p>A Phase 2 ESA for Area MV2-C3 (ie part of the GCBE site) has been completed and submitted and is currently with the Environmental Site Auditor for endorsement.</p> <p>Refer to Appendix I for a copy of the Phase 2 ESA</p>
5	Molonglo Riparian Corridor	<ul style="list-style-type: none"> • Implementation of the Molonglo River Park Concept Plan • Restricting or managing works within the river corridor to limit the risk of erosion • Restricting or managing works within the river corridor to limit the risk of direct impacts • Stormwater infrastructure design to improve water qualities flowing through waterways (swales, ponds) • CMP to manage the handling of potential contaminants/pollutants during construction • Stringent sediment and erosion controls during construction implemented through CEMP • Weed management strategies during construction • Asset protection and fire hazard management strategies to limit the impact on the area and reduce the risk of fire occurring in the area 	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p>

	Impact of Development	Mitigation Measure	Response
10	Important view sheds	<ul style="list-style-type: none"> • Preserve the backdrop as described in the National Capital plan • Minimise the impact on the landscape as described in the Territory Plan • Incorporate the preservation of trees into the development • Implement principles from the Structure Plan for Molonglo and North Weston • Preservation of non-urban areas (hills, ridges and buffers and the river corridor) • Implement the Molonglo River Park Concept Plan 	<p>The proposed works are outside of the Molonglo River Corridor (NUZ4).</p> <p>The proposed works are clear of any areas of environmental significance. Refer to Drawing C13107-850+.</p> <p>The design of the East West Arterial and Molonglo 2 Group Centre Bulk Earthworks Stage 1 has been developed with the intent to minimise impact on existing trees and vegetation. Refer to Section 2.6 for a detailed discussion of the tree removals associated with the project.</p> <p>Refer to Drawing C13107 – P840+ for details of the required tree removals and to Appendix K for details of tree removal correspondence with ESDD.</p>
11	Local community perception	Proponent to undertake community consultation prior to EDPs and DAs	DA will be circulated and available for public comment.
12	Molonglo River Park - Recreation	Implementation of the Molonglo River Park Concept Plan	The proposed works are outside of the Molonglo River Corridor (NUZ4).
13	Stromlo Forest park – Recreation	<ul style="list-style-type: none"> • Appropriate transport links through suburbs and into the park • Landscaping to reduce the impact on vista and views • Implementation of adaptive management strategy from NES Plan for the use of the Stromlo Forest Park 	Not Applicable as Stage 2 of the East West Arterial is not connected or in close proximity to Stromlo Forest Park.
14	Mt Stromlo Observatory	<ul style="list-style-type: none"> • Dust suppression measures during construction • Consultation with Observatory staff, especially during times of prescribed bushfire management (burning) • Implementation of the “5km Light Limitation Zone” • Design of suburbs and lighting in consultation with Observatory staff to limit light pollution 	The streetlight design for the East West Arterial Road has been designed to comply with the lighting requirements for the Stromlo Observatory.

	Impact of Development	Mitigation Measure	Response
15	Public health and safety	<ul style="list-style-type: none"> • Implement CEMP for public safety • Urban design to limit shading of residences and public spaces • Use of crime prevention through environmental design • Access to and availability of recreation facilities during construction and operation through CEMPs and adaptive management strategies outlines in the NES Plan. • Promote awareness of public safety in relation to water quality control ponds and the river 	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
16	Residential receivers	<ul style="list-style-type: none"> • Implementation of CEMP • Suburb design to limit impacts • Access to and availability of recreation facilities • Promote awareness of public safety of open water 	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
17	Significant trees	<ul style="list-style-type: none"> • Develop in area of degraded vegetation or predominantly exotic vegetation • Undertake further investigation of significance of vegetation to be removed • Offset significant vegetation to be removed in parklands and urban open spaces • Strategic preservation of hollow bearing/significant trees • Timing of tree removal to prevent injury, death or disturbance of breeding of fauna species 	<p>The proposed works are clear of any areas of environmental significance. Refer to Drawing C13107-850+.</p> <p>The design of the East West Arterial and Molonglo 2 Group Centre Bulk Earthworks Stage 1 has been developed with the intent to minimise impact on existing trees and vegetation. Refer to Section 2.6 for a detailed discussion of the tree removals associated with the project.</p> <p>Refer to Drawing C13107 – P840+ for details of the required tree removals and to Appendix K for details of tree removal correspondence with ESDD</p>

Table 12 – Bushfire Management Considerations

No	Impact of Development	Mitigation Measure	Response
1	Bushfire	The management of the APZs and the River Park will be critical to reducing risks associated with bushfires on urban populations in MVS 2. The undertaking of management activities for APZs has the potential to cause a number of impacts on the environment. It will be critical for Environment Management Plans to be prepared for APZs and fuel management activities before any works are undertaken towards establishing the APZs	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
2	Bushfire	Environment Management Plans for APZ activities should be developed in consultation with the intended land manager or lessee, the relevant ACT Government agencies for the conservation of species and ecological communities and the developer of the urban areas. Plans of management for APZs should be economically feasible and sustainable for the environment and local residents.	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.

4. Statement Against Relevant Criteria

4.1 Transport and Services Zone Development Code

Transport and Services Zone Development Code

The proposed road reserve for the East West Arterial will require the zoning codes to be amended to be TSZ1 Transport and Services Zone in the Territory Plan to suit the land use purpose. This Development Code applies to all development which will be within the future Transport and Services Zones, including:

- » East West Arterial Road
- » Roads 3 and Road 4
- » Southern section of the Molonglo 2 Group Centre Bulk Earthworks Stage 1 site where it crosses of the future East West Arterial Road
- » Refer to Drawing C13107-006 for details of the project zoning

Zone Objectives

- a) Make provision for a transport network that can provide for the efficient, safe and convenient movement of people and goods;
- b) Ensure that major roads and transport infrastructure are developed in a comprehensive manner, including the provision of appropriate landscaping, street furniture and lighting, traffic control devices, and noise attenuation measures; and
- c) Make provision for public transport.

Part A – Zone Specific Controls

TSZ1 - Transport Zone

Element 1: Restrictions on Use

Intent:

- a) To provide for development that does not jeopardise the Inter-town Public Transport Route
- b) To allow flexibility in development that is not inconsistent with the National Capital Plan

Rules	Criteria	Comment
1.1 Use and Form		
There is no applicable rule.	<p>C1</p> <p>A proposal for works on land identified on the map as forming part of the Inter-town Public Transport Route does not jeopardise the future provision of a separate right-of-way within the road reserve to accommodate this service.</p>	<p>C1</p> <p>The EWA does not form a part of the Inter-town Public Transport Route.</p>
There is no applicable rule.	<p>C2</p> <p>Subject to the National Capital Plan, airspace may be used for a purpose which is permitted on land under an adjoining Zone, where the subject development application will not interfere with the safe operation of the road system.</p>	<p>C2</p> <p>The subject development will not interfere with the safe operation of the road system.</p>

Part B – General Development Controls

Element 1: Restrictions of Use

Intent:

- a) To ensure development is consistent with the approved Plan of Management

Rules	Criteria	Comment
1.1 Plans of Management		
There is no applicable rule.	<p>C7</p> <p>Where relevant, the proposed development is consistent with the approved Plan of Management.</p>	<p>C7</p> <p>An approved Plan of Management is not applicable to the proposed development. The development is not located in an area of public land.</p> <p>This Criterion is therefore not relevant to the proposed development.</p>

Element 2: Building and Site Controls

Intent:

- a) To ensure development is compatible with, and does not adversely impact on, the environment

Rules	Criteria	Comment
2.1 Subdivision		
<p>R8</p> <p>Subdivision is only permitted where:</p> <ul style="list-style-type: none"> a) it is part of a development application for another assessable development b) it is demonstrated that any residual block can accommodate another assessable development designed in accordance with the relevant section of this Code. 	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R8</p> <p>No subdivision of land is required under the proposed works.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
2.2 Demolition		
<p>R9</p> <p>In accordance with section 148 of the <i>Planning and Development Act 2007</i>, the application is accompanied by a Statement of Endorsement from utilities provider (including Water, Sewerage, Stormwater, Electricity, Gas and Telecommunications) stating that:</p> <ul style="list-style-type: none"> a) All network infrastructure on or immediately adjacent the site has been identified on the plan b) All potentially hazardous substances and conditions (associated with or resulting from the demolition process) that may constitute a risk to utility services have been identified c) All required network disconnections have been identified and the disconnection works comply with utility requirements 	<p>C9</p> <p>If a Statement of Endorsement is not provided the application will be referred to relevant utilities provider in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R9</p> <p>Relocation of the existing overhead electrical assets will be undertaken as part of the East West Arterial Stage 2 construction. ActewAGL have been engaged to finalise the asset relocation designs.</p> <p>Refer to relevant utilities provider correspondence.</p>

<p>d) All works associated with the demolition comply with and are in accordance with utility asset access and protection requirements.</p>		
<p>2.3 National Capital Plan</p>		
<p>There is no applicable rule.</p>	<p>C10 Where a development is subject to Special Requirements under the National Capital Plan, or any relevant Development Control Plan prepared under the National Capital Plan, the development is not inconsistent with the Special Requirements or Development Control Plan. Where any provision of this code is inconsistent with Special Requirements under the National Capital Plan, or any relevant Development Control Plan prepared under the National Capital Plan, that provision has no effect.</p>	<p>C10 The proposed development is not subject to Special Requirements under the National Capital Plan. This Criterion is therefore not relevant to the proposed development.</p>

Element 3: Built Form

Intent:

- a) To ensure that development is compatible with the surrounding landscape, especially in areas of high visibility

Note: Under the *Building Act 2004* buildings need to meet the requirements of the Building Code of Australia. For certain classes of buildings, this will include prescribed energy requirements.

Rules	Criteria	Comment
3.1 Materials and Finish		
There is no applicable rule.	C11 Where development exposes a blank façade of an adjoining building, a visually interesting architectural treatment is applied to that wall such as through the use of colour, articulation, materials and shadows.	Not applicable
There is no applicable rule.	C12 The development uses high quality materials that are not incompatible with the character of existing adjacent development and the desired architectural character of the area.	Not applicable
3.2 Crime Prevention Through Environmental Design		
There is no applicable rule.	C13 The development meets the requirements of the Crime Prevention Through Environmental Design General Code.	Refer to section 4.1.1
3.3 Access and Mobility		
There is no applicable rule.	C14 The development meets the requirements of the Access and Mobility General Code.	Refer to section 4.1.2

Element 4: Parking and Site Access

Intent:

- a) To encourage the design of access and parking as part of the overall design of the development
- b) To provide for safe, convenient access to meet the needs of all users and visitors

Rules	Criteria	Comment
4.1 Traffic Generation		
There is no applicable rule.	<p>C15</p> <p>The existing road network can accommodate the amount of traffic that is likely to be generated by the development.</p>	<p>C15</p> <p>The proposed EWA will, in itself, not generate traffic. Rather, it is being constructed to accommodate the traffic that will be generated from the future surrounding developments. Traffic volumes were sourced from the SMEC 'Molonglo Revised' EMME model (January 2013).</p> <p>This Criterion is therefore not relevant to the proposed development.</p>
4.2 Vehicle Access and Parking		
There is no applicable rule.	<p>C16</p> <p>Vehicle access and parking complies with the requirements of the Parking and Vehicular Access General Code.</p>	<p>C16</p> <p>This development does not include any on or off-street parking facilities or access from off-street car parking areas.</p> <p>This Criterion is therefore not relevant to the proposed development.</p>
4.3 Bicycle Parking		

<p>There is no applicable rule.</p>	<p>C17 Bicycle Parking complies with the requirements of the Bicycle Parking General Code.</p>	<p>C17 This development does not include Bicycle Parking. This Criterion is therefore not relevant to the proposed development.</p>
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4.4 Pedestrian Movement

<p>There is no applicable rule.</p>	<p>C18 Safe and convenient movement of public transport passengers, pedestrians and cyclists is provided.</p>	<p>C18 The grading of the EWA has been designed so as not to preclude buses, providing flexibility in determining the bus route through Molonglo 2 Provision for on road cyclists has been incorporated into the design via a 2.0m wide on road cycle lane. Provision for pedestrians via a shared path in each verge has been allowed for. Refer detailed drawings attached with this Development Application for details.</p>
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Element 5: Amenity

Intent:

- a) To ensure development is compatible with, and does not adversely impact on, the urban environment

Rules	Criteria	Comment
5.1 Lighting		
<p>R19</p> <p>External lighting is provided to building frontages, all pathways, roads, laneways and car-parking areas in accordance with Australian Standard AS1158.3.1 <i>Pedestrian Lighting</i>.</p>	<p>C19</p> <p>External lighting is provided in accordance with the Crime Prevention Through Environmental Design General Code.</p>	<p>R19</p> <p>External lighting to the road is provided in accordance with AS/NZS1158 Category V3 and P3 on pathways within the verge.</p> <p>Refer detailed drawings attached with this Development Application for details.</p>
<p>R20</p> <p>All external lighting provided is in accordance with AS 4282 <i>Control of the Obtrusive Effects of Outdoor Lighting</i>.</p>	<p>C20</p> <p>All outdoor lighting, including security and car park lighting, is designed and sited to minimise light spill.</p>	<p>R20</p> <p>External lighting to the road is provided in accordance with AS/NZS1158 Category V3 and P3 within the verge and complies with AS 4282 Control of the Obtrusive Effects of Outdoor Lighting.</p> <p>Refer detailed drawings attached with this Development Application for details.</p>
5.2 Signs		
<p>There is no applicable rule.</p>	<p>C21</p> <p>Signs comply with the Signs General Code.</p>	<p>C21</p> <p>No signs, as per the Signs General Code, are included in this proposed development.</p> <p>This Criterion is therefore not applicable to the proposed development.</p> <p>Note: All proposed traffic control signs have been designed in accordance with AS1742 and are located within the road reserve.</p>

Element 6: Environment

Intent:

- a) To provide for ecologically sustainable development which does not have adverse impacts on the surrounding environment

Rules	Criteria	Comment
6.1 Assessment of Environmental Effects		
<p>There is no applicable rule.</p>	<p>C22</p> <p>The development application is accompanied by an Assessment of Environmental Effects that addresses the following:</p> <ul style="list-style-type: none"> a) appropriate measures to soften the impact of development on the landscape b) impacts on the character and appearance of any building, area of architectural, historic, aesthetic or scientific interest, or other object or place of special cultural or heritage value c) impacts on public health and safety, including crime prevention d) whether public transport services are necessary and, if so, whether they are available and adequate e) impacts on the likely accessibility to facilities and services for users and consumers f) any significant short or long-term effect, that the relevant authority considers the use or development may have on the environment, including social and economic effects and potential cumulative effects g) impacts on the watercourses and drainage characteristics of the area, including water quality h) impacts on the amenity of surrounding land uses, including impacts on air quality, the level of noise generated, overshadowing, privacy, and the level of wind turbulence generated. 	<p>C22</p> <p>S211 exemptions for Molonglo Development have previously been granted. A copy of the exemption letter is included in the Appendix B.</p> <p>The applicable s211 exemption is:</p> <ul style="list-style-type: none"> • Molonglo Valley Stage 2 – Urban Development Infrastructure and Link Bridge, Application for s211 Exemption Consideration Report, (July 2013) <p>a) The EDP stage for Denman Prospect will deal with the traffic (and other) noise attenuation (as was the case with JGD in Molonglo 1 and 2). The flexibility of providing active frontages along the major road will result in transferring noise attenuation to developers, who will have to incorporate adequate construction methodologies to meet Australian Standards related to the internal noise.</p> <p>b) The location of the East West Arterial Stage 2 is a greenfield site and there are no existing buildings in proximity.</p> <p>The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to drawings C13107-P800+ and C13107-P801+.</p> <p>As part of the East West Arterial Stage 1 Development Application, liaison with ACT Heritage Council was undertaken to ensure that in</p>

		<p>accordance with the Heritage Act 2004 any restricted information has been excluded from development application documentation. This has been considered for this application.</p> <p>The contractor will be required to include an unanticipated discovery plan in the project plan and submit for the ACT Heritage Council’s approval prior to the commencement of works.</p> <p>c) The location of the East West Arterial Stage 2 is a greenfield site and will not have a negative impact on public health and safety.</p> <p>The East West Arterial Stage 2 design is in accordance with the Crime Prevention through Environmental Design General Code. Refer to Section 4.1.1 for details.</p> <p>d) The location of bus routes and stops has been considered throughout the design development of Stage 2 of the East West Arterial. The Stage 2 design incorporates 4 bus stops, Refer to Section 2.5.3 and Drawing C13107 – 820+ for further details.</p> <p>e) Stage 2 of the East West Arterial is required to facilitate the installation of services from John Gorton Drive into Denman Prospect.</p> <p>f) The East West Arterial is a major infrastructure element in Molonglo and will form the primary east west link between Molonglo Valley Stage 2 and Tuggeranong Parkway, thus providing connectivity between development in Molonglo and the broader ACT.</p> <p>g) The stormwater network for Stage 2 of the East West Arterial has been designed in accordance with the Molonglo 2 Stormwater Master Plan prepared by Indesco.</p>
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		<p>Whilst no specific WSUD treatments have been incorporated into the Stage 2 design, in accordance with the master plan, stormwater flows are proposed to be conveyed to the proposed Craven’s Creek Pond to the north-west of the East West Arterial where they will be treated as required by the WaterWays General Code.</p> <p>h) The proposed East West Arterial corridor is a greenfield site with future planned developments on either side of the proposed road. As part of the Stage 2 design, a noise assessment has been completed, refer to Appendix M for details.</p>
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6.2 Water Sensitive Urban Design – Mains Water Consumption
 Note: Refer to the Water Ways: Water Sensitive Urban Design General Code for more information on Water Sensitive Urban Design

<p>R23</p> <p>Evidence is provided that shows the development achieves a minimum 40% reduction in mains water consumption compared to an equivalent development constructed in 2003 using the ACTPLA on-line assessment tool or the NSW BASIX tool. The 40% target is met without any reliance on landscaping measures to reduce consumption.</p> <p>This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area.</p>	<p>C23</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R23</p> <p>Mains water consumption is not affected by this proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
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6.3 Water Sensitive Urban Design – Stormwater Quality

Note: Refer to the Water Ways: Water Sensitive Urban Design General Code for more information on Water Sensitive Urban Design

<p>R25</p> <p>Sites of size greater than 5,000m² or roads longer than 1 km need to provide evidence showing a reduction in average annual stormwater pollutant export load of:</p> <ul style="list-style-type: none"> a) suspended solids by 60% b) total phosphorous by 45% c) total nitrogen by 40% <p>compared to an urban catchment with no water quality management controls, using the MUSIC model to demonstrate compliance.</p> <p>This requirement can be met by associated stormwater works in the same catchment. This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area or to road modifications where the increase in pavement areas is less than 50% of the existing area.</p>	<p>C25</p> <p>Sites of size greater than 5,000m² or roads longer than 1 km need to provide evidence showing a reduction in average annual stormwater pollutant export load of:</p> <ul style="list-style-type: none"> a) suspended solids by 60% b) total phosphorous by 45% c) total nitrogen by 40% <p>compared to an urban catchment with no water quality management controls, using any other method. This requirement can be met by associated stormwater works in the same catchment. This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area or to road modifications where the increase in pavement areas is less than 50% of the existing area.</p>	<p>R25/C25</p> <p>Whilst Stage 2 of the EWA is less than 1km in length, the overall length of road will be in excess of 1km, as such a comment has been provided against this element.</p> <p>The stormwater network for Stage 2 of the East West Arterial has been designed in accordance with the Molonglo 2 Stormwater Master Plan prepared by Indesco.</p> <p>Whilst no specific WSUD treatments have been incorporated into the Stage 2 design, in accordance with the master plan, stormwater flows are proposed to be conveyed to the proposed Craven’s Creek Pond to the north-west of the East West Arterial where they will be treated as required by the WaterWays General Code.</p>
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6.4 Water Sensitive Urban Design – Stormwater Quantity

Note: Refer to the Water Ways: Water Sensitive Urban Design General Code for more information on Water Sensitive Urban Design

<p>R26</p> <p>All sites of size greater than 2,000m² and subject to redevelopment need to ensure that the capacity of the existing pipe (minor) stormwater connection to the site is not exceeded in the 1-in-10 year storm event.</p> <p>All sites of size greater than 2,000m² and subject to redevelopment need to ensure that the capacity of the existing overland (major) stormwater system to the site is not exceeded in the 1-in-100 year storm event.</p>	<p>C26</p> <p>Evidence is provided by a suitably qualified person that shows that for all sites of size greater than 2,000m² and subject to redevelopment</p> <p>EITHER</p> <p>a reduction of 1-in-5 year and 1-in-100 year stormwater peak run off flow to pre-development levels. See WaterWays General Code for more detail.</p> <p>OR</p>	<p>R26</p> <p>This rule is not applicable to the proposed road component.</p> <p>However, the road pipe drainage networks are designed for 10 year ARI and cross drainage pipes cater for the 100 year ARI.</p>
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	That the capacity of the downstream piped stormwater system to its outlet with an open channel is not exceeded in the 1-in-10 year storm event.	
6.5 Heritage		
R27 In accordance with section 148 of the <i>Planning and Development Act 2007</i> , applications for development on land or buildings subject to interim or full heritage registration are to be accompanied by advice from the Heritage Council stating that the development meets the requirements of the <i>Heritage Act 2004</i> .	C27 If advice from the Heritage Council is required, but not provided, then the application will be referred to the Heritage Council in accordance with the requirements of the <i>Planning and Development Act 2007</i> .	R27 Biosis Research completed the Molonglo 2: Detailed Heritage Assessment in August 2010 Refer to Section 3.4 – Section 211 Exemption Application and Appendix B .
6.6 Contamination		
R28 A statement is provided that the potential for land contamination has been assessed in accordance with the <i>ACT Government Strategic Plan – Contaminated Sites Management 1995</i> and the <i>ACT Environment Protection Authority Contaminated Sites Environmental Protection Policy 2000</i> , and it is demonstrated that the land is suitable for the proposed development.	C28 If a Statement of Endorsement is not provided the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i> .	R28 Application to be referred to the relevant agency. A Phase 1 Environmental Site Assessment within the area of works was undertaken by AECOM in 2012. A Phase 2 Environmental Site Assessment was also undertaken by AECOM which focused on areas of environmental concern identified in the Phase 1 ESA. Refer to Appendix I for a copy of the Phase 2 ESA and endorsement that the East West Arterial is within areas endorsed by the EPA.
6.7 Trees		
R29 This rule applies to a development that has one or more of the following characteristics: a) requires groundwork within the tree protection zone of a <i>protected tree</i> b) is likely to cause damage to or removal of any <i>protected trees</i>	This is a mandatory requirement. There is no applicable criterion.	R29 Application to be referred to the relevant agency. The design of the East West Arterial and Molonglo 2 Group Centre Bulk Earthworks Stage 1 has been developed with the intent to minimise impact on existing trees and vegetation. Refer to Section 2.6 for a detailed discussion of the tree removals associated with the project.

<p>The authority shall refer the development application to the Conservator of Flora and Fauna.</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. Under the <i>Planning and Development Regulation 2008</i> a development application for a <i>declared site</i> under the <i>Tree Protection Act 2005</i>, must be referred to the Conservator of Flora and Fauna. 2. The authority will consider any advice from the Conservator of Flora and Fauna before determining the application in accordance with the <i>Planning and Development Act 2007</i>. 3. <i>Protected tree</i> and <i>declared site</i> are defined under the <i>Tree Protection Act 2005</i>. 		<p>Refer to Drawing C13107 – P840+ for details of the required tree removals and to Appendix K for details of tree removal correspondence with ESDD.</p>
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6.8 Erosion and Sediment Control

<p>R30</p> <p>For sites less than 0.3 of a hectare, a plan is provided to demonstrate that the development complies with the <i>ACT Environment Protection Authority, Environment Protection Guidelines for Construction and Land Development in the ACT, August 2007</i>.</p>	<p>C30</p> <p>If a plan is not provided, the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R30</p> <p>The proposed site is >0.3 of a hectare. This Rule is therefore not relevant to the proposed development.</p>
<p>R31</p> <p>For development on a site greater than 0.3 of a hectare, the application is accompanied by an Erosion and Sediment Control Plan endorsed by the ACT Environment Protection Authority.</p>	<p>C31</p> <p>If an endorsed Sediment and Erosion Control Plan is not provided the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>R31</p> <p>An endorsed Sediment and Erosion Control Plan is not relevant to this stage of the project. However a Concept Pollution Control Plan, incorporating control measures included in the Environmental Protection Guidelines for Construction and Land Development in the ACT, is provided in the drawing set.</p> <p>This plan will be finalised by the successful Contractor who will liaise with ACT Environment Protection Authority, prior to commencing construction in accordance with their Environmental Authorisation.</p>

6.9 Hazardous Materials

R32

For the demolition of single dwelling housing (including garages and carports) constructed* prior to 1985, a Hazardous Materials Survey (including an asbestos survey) is carried out and signed by an appropriately licensed person. The Survey is provided and covers the disposal of hazardous materials, showing that:

- a) Hazardous material disposal (including asbestos) is to be at a licensed disposal facility in the ACT
- b) If hazardous materials are to be transported for disposal interstate, approval from the Environment Protection Authority is obtained prior to removal of material from the site
- c) An appropriately licensed contractor is engaged for the removal and transport of all hazardous materials (including asbestos) present at the site

* Construction date means the date when the Certificate of Occupancy was issued.

C32

If an endorsed Hazardous Materials Survey is not provided the application will be referred to the relevant agency in accordance with the requirements of the *Planning and Development Act 2007*.

C32

As discussed in section 2.3.7, the East West Arterial will utilise 240m³ of stockpiled material from a previous house site within the Molonglo 2 Group Centre Bulk Earthworks Stage 1 area.

Endorsement has been received from the EPA has been received that the material is suitable for use within the East West Arterial, refer to **Appendix J** for details.

Element 7: Services

Intent:

- a) To provide for appropriately serviced developments that meet the needs of service providers and users of the proposed development

Rules	Criteria	Comment
7.1 Waste Management		
<p>R33</p> <p>In accordance with section 148 of the <i>Planning and Development Act 2007</i>, the application is accompanied by a Statement of Compliance from the Department of Territory and Municipal Services stating that the waste facilities and management associated with the development are in accordance with the current version of the <i>Development Control Code for Best Practice Waste Management in the ACT</i>.</p>	<p>C33</p> <p>If a Statement of Compliance is not provided the application will be referred to the Department of Territory and Municipal Services in accordance with the requirements of the <i>Planning and Development Act 2007</i></p>	<p>C33</p> <p>Application to be referred to the relevant agency. A Waste Management Plan has been completed for both the East West Arterial and the Molonglo 2 Group Centre Bulk Earthworks Stage 1. Refer to Appendix O for details.</p>
7.2 Waste Water		
<p>R34</p> <p>Subject to ACTEWAGL approval, all under cover areas drain to the sewer.</p>	<p>C34</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R34</p> <p>Under cover areas are not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
7.3 Utilities		
<p>R34</p> <p>A Statement of Compliance from each relevant utility provider is provided, which confirms that the location and nature of earthworks, utility connections, proposed buildings, pavements and landscape features comply with utility standards, access provisions and asset clearance zones.</p>	<p>C34</p> <p>If a statement of compliance is not provided, the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>C34</p> <p>Whilst liaison has been undertaken with utility providers, the application is to be referred to the relevant agency.</p> <p>Services affected by the proposed works are identified in the Development Application Drawings.</p>

<p>Note: Where there is a conflict between planning and utility requirements, the utility requirements take precedence over other provisions of this Code.</p>		
<p>7.4 Storage</p>		
<p>R36 Outdoor storage areas are located behind the building line and screened from view from any road or other public area.</p>	<p>C36 Where the proposed use of the site requires open areas for storage of goods and materials, adequate provision is included in the design layout of the site.</p>	<p>R36 Outdoor storage areas are not included in the scope of the proposed development. This Rule is therefore not relevant to the proposed development.</p>
<p>R37 Outdoor storage areas do not encroach on required car-parking spaces, driveways exclusively required for vehicular circulation or landscape areas.</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>R37 Outdoor storage areas are not included in the scope of the proposed development. This Rule is therefore not relevant to the proposed development.</p>
<p>7.5 Servicing and Site Management</p>		
<p>R38 In accordance with section 148 of the <i>Planning and Development Act 2007</i>, the application is accompanied by a Statement of Endorsement from the relevant agency stating that the waste facilities and management associated with the development are in accordance with the <i>Design Standards for Urban Infrastructure</i>.</p>	<p>C38 If a Statement of Endorsement is not provided the application will be referred to the relevant agency in accordance with the requirements of the <i>Planning and Development Act 2007</i>.</p>	<p>C38 Waste facilities and management is not included in the scope of the proposed development. This Rule is therefore not relevant to the proposed development.</p>

4.1.1 Crime Prevention through Environmental Design General Code

Part A – General Requirements

Element 1: Neighbourhood Design

Intent:

Achieving key principles of natural surveillance, natural access control and territorial reinforcement through the establishment of:

- a) easily navigable and legible network of streets
- b) clearly delineated and hierarchy of public open space, community open space (shared areas)and private open space
- c) convenient access for all users across to activity centres

Rules	Criteria	Comment
1.1 Neighbourhood Design		
There is no rule applicable.	C1 Design is in accordance with the recommendations of a crime risk assessment as outlined in the ACT Crime Prevention and Urban Design Resource Manual.	The design of the East West Arterial Stage 2 is in accordance with the ACT Crime Prevention and Urban Design Resource Manual.

Element 2: Use

Intent:

- a) To provide developments with an increased level of safety for its users and the wider community

Rules	Criteria	Comment
2.1 General Code		
There is no applicable rule.	C2 The development described in Table 1 meet the Crime Prevention Through Environmental Design General Code.	The design of the East West Arterial Stage 2 meets the requirements of the Crime Prevention Through Environmental Design General Code as expanded upon within this section (4.1.1).

Element 3: Public Realm

The Development Code for Subdivision, as well as the relevant Precinct Code for an area, address the design of the public realm. The following rules and criteria are to be generally applied to the design of the public realm and shared community spaces in addition to the relevant Development Code.

Intent:

- a) To establish natural surveillance, territorial reinforcement and natural access

Rules	Criteria	Comment
3.1 Open Space and Community (Shared) Areas		
There is no rule applicable.	<p>C3</p> <p>Natural surveillance of open space and community areas is provided by:</p> <ul style="list-style-type: none"> a) locating to adjacent activity centres; b) encouraging pedestrian (or cyclist) movement through the space; c) ensuring clear site lines from, and between, buildings and open space areas: community areas; and d) designing out any entrapment spaces. 	<p>a) Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. However the proposed location of the Molongo Group Centre nearby in accordance with Molonglo Master Planning.</p> <p>b) Provision for on road cyclists has been incorporated into the design via a 2.0m wide on road cycle lane and provision for pedestrians via a shared path in each verge of the East West Arterial. Refer to Drawings C13107 – P101+, C13107 – P102+ and C13107 – P103+ for details.</p> <p>c) Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any buildings/community areas.</p> <p>d) Not Applicable. There are no entrapment spaces within the EWA Stage 2.</p>
There is no rule applicable.	<p>C4</p> <p>Natural access is considered, providing clear entry and exit points and a legible, accessible route through the space.</p>	<p>Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any open space / community areas.</p>

There is no rule applicable.	C5 Planting in public spaces do not obscure views along paths and streets, or to entrances and should not create secluded, hiding areas.	Plants and shrubs are of small sizes and do not obscure views. Refer to Section 2.4.8, Drawing 1321 LC01 to 1321 – LC06 for details.
There is no rule applicable.	C6 Selection of plant material are sturdy and in areas of high crime, to make it difficult to snap main growing stems, heavy standard (140-160mm girth) or semi-mature trees (200-270mm girth) should be used to increase their chance of survival.	Refer to Section 2.5.9 and Drawing 1321 LC01 to 1321 – LC06 for details of the plants adopted along the East West Arterial Stage 2.
There is no rule applicable.	C7 Plant material, such as creepers or low hedges may be used to deter to access and limit the opportunity for graffiti on fences and walls.	Not Applicable. There are no walls or solid fences proposed within the EWA Stage 2.
There is no rule applicable.	C8 Hard landscape features such as low walls, bollards are used to delineate movement areas from semi-private areas.	Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any semi private areas.

3.2 Children’s Play Areas

There is no rule applicable.	C9 Children’s play areas are located and designed to to comply with each of the following: a) there is natural surveillance from adjoining areas b) adjacent areas are used by compatible groups c) there are multiple entry/exits	Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not involve any Children’s Play Areas.
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3.3 Lighting

There is no rule applicable.	C10 Provide a schedule of lighting showing that lighting complies with each of the following:	a) Complies. The street lighting design meets the requirements of TaMS Design Standards 12 and 14 and Categories V3(Roads), and P1X(Pedestrian Crossings) in accordance with AS/NZS 1158 – Lighting for roads and public spaces. Refer to Section
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	<p>a) Australian Standard AS1158 Lighting for Roads and Public Spaces Part 3.1: Pedestrian Area (Category P) Lighting – Performance and Design Requirements</p> <p>b) Australian Standard AS1158: Lighting for Roads and Public Spaces Part 2: Computer Procedures for the Calculations of Light Technical Parameters for Category V and Category P Lighting</p> <p>c) Australian Standard AS4282: The Control of Obtrusive Effects of Outdoor Lighting, in the case of security lighting</p>	<p>2.5.12 and Drawings CR131454-E01 to CR131454-E05.</p> <p>b) Complies. The street lighting design meets the requirements of TaMS Design Standards 12 and 14 and Categories V3(Roads), and P1X(Pedestrian Crossings) in accordance with AS/NZS 1158 – Lighting for roads and public spaces. Refer to Section 2.5.12 and Drawings CR131454-E01 to CR131454-E05.</p> <p>c) Not Applicable. AS4282 does not apply to road lighting.</p>
<p>There is no rule applicable.</p>	<p>C11</p> <p>Legitimate users and activities at night are encouraged by lighting:</p> <p>a) spaces evenly and consistently (except where accent/feature lighting is necessary)</p> <p>b) inset spaces, entries/exits and paths</p> <p>c) to reduce the casting of shadows that could hide intruders</p> <p>d) directional signage</p> <p>e) building entries</p> <p>f) exterior to interior spaces evenly to allow for surveillance</p>	<p>a/b/c/d) The East West Arterial Road and pedestrian paths will be lit by street lighting as detailed on Drawings CR131454-E01 to CR131454-E05. The street lighting design meets the requirements of TaMS Design Standards 12 and 14 and Categories V3(Roads), and P1X(Pedestrian Crossings) in accordance with AS/NZS 1158 – Lighting for roads and public spaces.</p> <p>e/f) Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not involve any buildings.</p>
<p>There is no rule applicable.</p>	<p>C12</p> <p>Areas that are not intended for night time are not lit and are closed off to pedestrians.</p>	<p>Not Applicable. The East West Arterial Stage 2 does not include any areas that are not intended for night time use.</p>
<p>There is no rule applicable.</p>	<p>C13</p> <p>Damage to light fixtures are minimised by selecting vandal-resistant, high mounted light fixtures. All light bulbs are protected with a suitable lantern bowl.</p>	<p>Complies. Street Lighting provisions include 12m impact absorbing direct buried galvanised columns and aeroscreen high pressure sodium street lighting luminaire.</p>

		<p>Lighting under the bridge utilises steel body with wire guard and lamps are contained within shatterproof sleeves.</p> <p>Refer to section 2.5.12 and Drawings CR131454-E01, to CR131454-E05.</p>
<p>3.4 Signs</p>		
<p>R14</p> <p>A statement is provided that all directional signage will comply with the requirements of AS1742.10 (1991) Manual of Uniform Traffic Control Devices – Pedestrian Control and Protection</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>All signage will comply with the requirements of AS1742.10 (1991) Manual of Uniform Traffic Control Devices – Pedestrian Control and Protection.</p> <p>Refer to Drawings C13107-P500, C13107-P501, C13107-P502, C13107-P510 and C13107-P513.</p>
<p>There is no rule applicable</p>	<p>C15</p> <p>Locate signs so that they comply with each of the following:</p> <ul style="list-style-type: none"> a) they are clearly visible from a distance at all times b) they are not likely to be obscured by growing vegetation c) they are strategically placed at entrances and near activity centres including bus stops, taxi rank and public facilities 	<ul style="list-style-type: none"> a) All signage will be clearly visible and comply with the requirements of AS1742.10 (1991) Manual of Uniform Traffic Control Devices – Pedestrian Control and Protection. Refer to Drawings C13107-P500, C13107-P501, C13107-P502, C13107-P510 and C13107-P513. b) Signs will not be obscured by growing vegetation. Plants and shrubs are of small sizes and do not obscure views. Refer to Section 2.4.8, Drawing 1321 LC01 to 1321 – LC06 for details. c) Consideration has been given to location of bus stops and public facilities in the design and locating of signage. All signage will comply with the requirements of AS1742.10 (1991) Manual of Uniform Traffic Control Devices – Pedestrian Control and Protection. Refer to Drawings C13107-P500, C13107-P501, C13107-P502, C13107-P510 and C13107-P513.

<p>There is no rule applicable.</p>	<p>C16 Provide legible signs for all users: a) specify signs of high contrast, with light lettering on dark backgrounds with nonreflective surfaces; b) signs should be developed as a system with a consistent pattern, based on a hierarchy of most important messages.</p>	<p>a/b) Signage has been designed to be legible for all users. All signage will comply with the requirements of AS1742.10 (1991) Manual of Uniform Traffic Control Devices – Pedestrian Control and Protection. Refer to Drawings C13107-P500, C13107-P501, C13107-P502, C13107-P510 and C13107-P513.</p>
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Element 4: Built Form

Intent:

- a) To ensure the building design, especially in regard to its elevation and façade treatments, contributes to establishing safer environments through the use of appropriate quality material and detailing in the building, maximizing visibility and clearly delineating access and functional areas

Rules	Criteria	Comment
4.1 Interface between buildings and public realm		
There is no rule applicable.	C17 Building entrances are easily identified, providing easy access to all users, affording visibility to and from the street and minimising the potential for hiding spots.	Not Applicable This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any buildings.
There is no rule applicable.	C18 Provide clear sightlines from the building foyer so that occupants can see the nearest pedestrian area/car park before leaving the building.	Not Applicable This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any buildings.
There is no rule applicable.	C19 Recessed sections in the building elevation/façade are detailed and located so as that there is opportunity for natural surveillance, for spill lighting and the potential for hiding is minimised.	Not Applicable This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any buildings.
There is no rule applicable.	C20 Buildings are detailed in a manner that deters scaling (climbing) the building to access balconies from the ground and/or access between individual balconies.	Not Applicable This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any buildings.
There is no rule applicable.	C21 Where buildings are set back from the street and/or pedestrian path, the area is developed to minimise hiding and entrapment spots.	Not Applicable This proposal is only for the construction of the second stage of the East West Arterial Road and

		associated infrastructure and does not include any buildings.
4.2 Materials and Finish		
There is no rule applicable.	C22 Building materials and finishes are of an appropriate quality and detailed in a manner to: a) reduce opportunities for graffiti and vandalism b) facilitate cleaning and replacement c) avoid facilitating illegal access to the building and to services	Not Applicable This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any buildings.

Element 6: Travel and Access

Intent:

The Development Code for Subdivision, as well as the relevant Precinct Code for an area, address travel and access. The following rules and criteria are to be generally applied to Travel and Access in conjunction with the relevant Development Code.

- a) To encourage walking and cycling and thereby increase the number of people in the public realm
- b) To optimise the safe use of public transport by providing direct access routes as well as maximizing natural surveillance

Rules	Criteria	Comment
6.1 Pedestrian Routes, Bicycle Paths and Lanes		
	<p>C23</p> <p>Pedestrian Routes, Bicycle Paths and Lanes are designed to maximise opportunities for natural surveillance by:</p> <ul style="list-style-type: none"> a) maintaining sightlines along paths between destination points b) allowing overlooking from adjacent areas 	<p>Pedestrian paths and provisions for cyclists maintain clear sightlines and allow for overlooking from adjacent areas.</p> <p>Refer to Drawing C13107 – P101, C13107 – P102 and C13107 – P103 for details.</p>
	<p>C24</p> <p>Provide direct access routes to buildings streets, car parks and public transport. Signs should be used to assist pedestrians where it is not possible to establish clear sightlines between destinations.</p>	<p>Bus stop on the eastbound lane is centrally located and there is clear signage advising of its location.</p> <p>Refer to Drawings C13107 – P101, C13107 – P102 and C13107 – P103 for details.</p>
	<p>C25</p> <p>Security of pedestrian routes, bicycle paths and lanes are provided by:</p> <ul style="list-style-type: none"> a) selecting and lighting ‘safe routes’ to the standard required for pedestrian areas so that these become the focus of legitimate movement after dark; b) ensuring that laneways have more than one entrance to avoid “dead-ends” and entrapment spots, where possible. 	<ul style="list-style-type: none"> a) Lighting has been provided for the East West Arterial Road and Pedestrian Paths. The street lighting design meets the requirements of TaMS Design Standards 12 and 14 and Categories V3(Roads), and P1X(Pedestrian Crossings) in accordance with AS/NZS 1158 – Lighting for roads and public spaces. Refer to Section 2.4.7 and Drawings CR131454-E01 to CR131454-E05. b) All roads will be through roads connecting other roads within Denman Prospect. There will be no ‘dead ends’ or entrapment spots.

	<p>C26</p> <p>When planting adjacent to pedestrian /bicycle routes:</p> <p>a) ensuring there are open sightlines. Low planting (maximum height 600mm) and high-branching trees (two metres) should be used;</p> <p>b) avoiding tall bushes, dense shrubbery and dense clusters of trees, especially immediately adjacent to routes and at predictable stopping points such as road crossings.</p>	<p>a) Plants and shrubs are of small sizes and do not obscure views.</p> <p>b) Plants and shrubs are of small sizes and do not obscure views.</p> <p>Refer to Section 2.4.8 and Drawing 1321 LC01 to 1321 – LC06 for details.</p>
<p>R27</p> <p>A Statement is provided that pedestrian paths are designed in accordance with AUSTROADS Guide to Traffic Engineering Practice Part 13. – Pedestrians</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>Pedestrian paths are designed in accordance with AUSTROADS Guide to Traffic Engineering Practice Part 13. – Pedestrians</p>
<p>R28</p> <p>A Statement is provided that Bicycle Paths are designed in accordance with AUSTROADS Guide to Traffic Engineering Practice Part 14. – Bicycles.</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>Bicycle Paths are designed in accordance with AUSTROADS Guide to Traffic Engineering Practice Part 14. – Bicycles.</p>
<p>6.2 Pedestrian Underpasses and Overpasses</p>		
<p>There is no rule applicable.</p>	<p>C29</p> <p>The use of pedestrian underpasses is to be avoided. Where there is no practical or feasible alternative underpasses are designed:</p> <p>a) wide enough to accommodate both pedestrian and cycle traffic</p> <p>b) straight and without recesses</p> <p>c) with mirrors so pedestrians can see around corners if there is a turn of 60 degrees or more</p>	<p>This proposal includes the design of an underpass at Cravens Creek. Refer to Drawings C13107-880+ to C13107-883 for details.</p> <p>a)The underpass includes a 2.5m wide shared path which is adequate for both pedestrian and cycle traffic. Refer to Drawings C13107-881 for details</p> <p>b) The underpass is straight without recesses. Refer to Drawings C13107-880+ for details.</p> <p>c) N/A. The underpass does not include corners of 60 degrees or more.</p>

	<p>d) with entrances and exits that are visible from shops, homes or other areas of frequent pedestrian traffic</p> <p>e) to ensure there is no screening of entries/exits</p> <p>f) with signs at each end indicating where it leads and an alternative route to use at night</p>	<p>d) Entry and exits are in visible locations which will be of frequent pedestrian traffic once the development of Denman Prospect is completed.</p> <p>e) There is no screening of the entries/exits. This has been considered in the selection of landscaping treatment.</p> <p>f) Signage will be provided at the entries/exits indicating where the underpass leads. An alternate route is available via crossing the East West Arterial which is easily accessed via the shared path network.</p>
<p>There is no rule applicable.</p>	<p>C30</p> <p>Overpasses are designed to reduce opportunities to throw missiles at cars or pedestrians.</p>	<p>This proposal includes the design of a Bebo Arch Bridge over Cravens Creek. A 2.5m wide shared path passes under the eastern arch. The bridge includes a 1.3m high pedestrian fence for the safety of pedestrians and to reduce opportunities to throw objects. Refer to Drawings C13107-880+ to C13107-883 for details.</p>

6.3 Bus Interchange, Bus Stops and Taxi Ranks

<p>There is no rule applicable.</p>	<p>C31</p> <p>Locate bus stops and taxi ranks so that:</p> <p>a) natural surveillance is possible</p> <p>b) there are no walls, landscaping, fences or other structures which block sightlines to bus stops and taxi ranks</p> <p>c) they are not located adjacent to vacant land, alleys, car parks or near possible entrapment spots</p> <p>d) there are short, safe routes to bus stops and taxi ranks from night-time venues such as cinemas, theatres etc</p>	<p>The East West Arterial Stage includes four bus stops and does not include any taxi ranks. Refer to Section 2.5.3 and Drawing C13107-820+ for details.</p> <p>a) The East West Arterial Stage 2 design incorporates 4 on road bus stop. The bus stops are located in an area with clear view where natural surveillance is possible.</p> <p>b) There are no walls, landscaping, fences or other structures which will block sightlines of the bus stop. Refer to Drawing C13107-P101, C13107 – P102 and C13107 – P103.</p> <p>c) The bus stops are located on a major arterial road. The surrounding area is proposed to be residential.</p> <p>d) Pedestrian access to the bus stop is provided via pedestrian path within the road verge. Street</p>
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		lighting is provided along the East West Arterial Stage 2.
There is no rule applicable.	<p>C32</p> <p>Major bus stops and taxi ranks are well lit and protected from the weather, or adjacent to areas which are well lit or that provide protection from the weather.</p>	<p>The bus stop will be lit by streetlighting as detailed in Section 2.4.7 and Drawings CR131454-E01, to CR131454-E05.</p> <p>A shelter is provided at the bus stops to protect passengers from the weather. Refer to Drawing C13107-P101, C13107 – P102 and C13107 – P103 for details.</p>
There is no rule applicable.	<p>C33</p> <p>Directional signage makes it easy to find bus stops or taxi ranks, and provides up-to-date passenger information.</p>	<p>Bus stop signage is provided. Refer to Drawings C13107-P500, C13107-P501, C13107 – P502, C13107 – P502, C13107 – P510 and C13107-P513</p>
There is no rule applicable.	<p>C34</p> <p>Interchanges are located on the same level as significant activity generators to avoid entrapment, increase natural surveillance and provide direct routes of access.</p>	<p>Not Applicable.</p> <p>This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any interchanges.</p>

Element 7: Services

Intent:

a) To provide services that are highly visible and in accessible locations.

Rules	Criteria	Comment
7.1 Automatic Teller Machines (ATMs)		
There is no rule applicable.	C35 Approaches and entrances to ATMs are highly visible and adequately lit so that people cannot loiter, or enter, without being seen.	Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any ATMs.
There is no rule applicable.	C36 Locations near licensed premises, and bus stops should be avoided to discourage loitering by potential offenders.	Not Applicable.
There is no rule applicable.	C37 Where ATMs are enclosed in a vestibule or similar, the vestibule should be securely glazed, adequately and secure from non-legitimate users	Not Applicable.
There is no rule applicable.	C38 Use bollards, or other landscaping, to restrict the potential for vehicle incursions.	Not Applicable.
7.2 Local Waste Storage Facilities		
There is no rule applicable.	C39 Screening does not provide entrapment or hiding spots and safe access and adequate lighting is provided near the waste storage areas.	Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any waste storage facilities.
7.3 Local Utility Facilities		
There is no rule applicable.	C40	Not Applicable.

	Air conditioning plants, meter boxes and other service points are mounted within a secure building / enclosure for protection.	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any local utility facilities.
7.4 Delivery and Storage Facilities		
There is no rule applicable.	C41 Ensure that: a) Delivery and storage areas are not isolated from the main building b) Secure storage areas are provided for shop owners	a/b) Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any delivery and storage facilities.
7.5 Public Toilets		
There is no rule applicable.	C42 Ensure that: a) Public toilets are located in obvious locations, but not in isolated areas of activity centres b) Entrances are highly visible so that people cannot loiter or enter without being seen, particularly for toilets close to Children's' playgrounds c) Public seating and telephones are located away from public toilets to avoid opportunities for loitering.	a/b/c) Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any public toilets.
7.6 Public Telephones		
There is no rule applicable.	C43 Public telephones are located in obvious locations, are well lit and well signposted, eg near bus stops or taxi ranks.	Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any public telephones.

4.1.2 Access and Mobility General Code

Elements 2.1 and 2.3 of the Access and Mobility General Code are applicable to the East West Arterial Stage 2 Development Application. Responses to the rules and criteria of these elements are presented in the table below.

Element 2: External Access to Entrances

Intent:

- a) To ensure safe and convenient access is provided to entrances of buildings and public spaces for people with a disability, or with impaired mobility

Rules	Criteria	Comment
2.1 Continuous Accessible Path of Travel and Walkways		
<p>R3</p> <p>A continuous accessible path of travel is provided that complies with:</p> <ul style="list-style-type: none"> i) AS 1428.1 - Design For Access and Mobility; ii) AS 1428.4 – Tactile ground surface indicators for the orientation of people with vision impairment to highlight hazards or provide direction; iii) AS 4586 – Slip Resistant Classification of New Pedestrian Surface Materials for external paving and ground surfaces; and iv) designed so that the placement of facilities does not intrude into the continuous accessible path of travel. v) Walkways and glass adjacent to walkways to comply with AS1428.1 and AS1428.2 	<p>C3</p> <p>Continuous accessible path of travel is provided for owners, occupants, employees and visitors:</p> <ul style="list-style-type: none"> a) to all areas and all required facilities of the building; b) from property boundary, designated accessible parking spaces, passenger drop off points and public spaces to entrances of buildings; c) to connect buildings, facilities and spaces that are on the same block or part of the same complex unless topographically impossible; and d) to minimise distances travelled between elements of buildings and facilities. e) Walkways are of an appropriate scale and if clear glass is used adjacent to walkways, are identified by appropriate luminance contrast. 	<p>a/b/c/d/e)</p> <p>This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any external access to entrances.</p>
2.3 Way finding		
<p>R6</p> <p>Where installed directional signage or other wayfinding methods, e.g. tactile indicators, to be in accordance with AS1428.1 and AS1428.4 and must identify the continuous</p>	<p>C6</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>The requirement for directional signage or other wayfinding methods has been assessed as part of the Traffic Control Devices design.</p>

accessible path of travel, accessible parts of buildings and all accessible facilities. Details to meet AS1428.1 and AS1428.4.		Refer to Drawings C13107-P500, C13107-P501, C13107 – P502, C13107 – P502, C13107 – P510 and C13107-P513.
R7 There is no applicable rule.	C7 For illuminated signs, the luminance of the symbols to be at least 30% in contrast to the background.	Not Applicable. There are no illuminated signs within the EWA Stage 2.

4.2 Parks and Recreation Zones Development Code

Parks and Recreation Zones Development Code

This Development Code applies to all development in the Parks and Recreation Zones identified in the zones' Development Tables as being within the code, merit and impact assessment tracks. Urban Open Spaces PRZ1 areas within this project include:

- » Cravens Creek Watermain
- » Shared paths along Cravens Creek and connecting paths to the East West Arterial
- » Cravens Creek realignment
- » Refer to Drawing C13107-006 for details of the project zoning

Part A – Zone Specific Controls

Part A(1) - PRZ1 – Urban Open Space Zone

Element 1: Restrictions on Use

Intent:

- a) To provide for small-scale community and ancillary uses, which do not significantly detract from the open space character or impact on surrounding development

Rules	Criteria	Comment
1.1 Municipal Depot		
R1 Municipal depot may be used only for the purpose of park maintenance depots.	This is a mandatory rule. There is no criterion.	Not Applicable. The project does not include a Municipal Depot.
There is no applicable rule.	C1A Development of a municipal depot for the purpose of park maintenance depot provides landscaping and screen fences around any outside storage area.	Not Applicable. The project does not include a Municipal Depot.
1.2 Community Activity Centre, Outdoor Recreation Facility and Municipal Depot		
R2 Maximum proportion of gross area of any single open space parcel to be used for Community activity centre, Outdoor recreation facility, and Municipal depot purposes – 15%.	C2 Development for these purposes in the PRZ1 urban open space zone meets all of the following: a) Does not unreasonably restrict access to recreation space b) Is of an appropriate scale and compatible with its open space setting.	Not Applicable. The project does not include a Community Activity Centre.
1.3 Community Activity Centre and Outdoor Recreation Facilities		

<p>There is no applicable rule.</p>	<p>C3</p> <p>A Community Activity Centre or Outdoor Recreation Facilities are permitted as follows:</p> <ul style="list-style-type: none"> a) The proposed location is suitable in terms of the catchment to be served and access routes for users b) There is a community requirement for such a facility c) There will be adequate opportunities for the public or community to use the facilities d) The nature of landscape works to be carried out is consistent with the surrounding open space or identified landscape theme e) Public access to adjoining open space is adequate and sufficient open space is retained for other future purposes f) The proposal will not have an adverse impact on the open space environment in terms of design and aesthetics g) The proposal will not adversely affect naturally occurring plant communities and patterns of wildlife movement h) Important natural and cultural features including existing mature trees are conserved i) There are no adverse noise and safety impacts on adjoining residential areas. 	<p>Not Applicable. The project does not include any Community Activity Centre or Outdoor Recreation Facilities.</p>
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Element 2: Building and Site Controls

Intent:

a) To ensure development in the PRZ1 - Urban Open Space Zone is compatible with, and does not adversely impact on, the urban environment

Rules	Criteria	Comment
2.1 Height		
R4 Maximum height of buildings adjacent to Residential Zones: one storey	C4 The scale of the development is consistent with adjacent developments and the neighbouring uses are protected from overlooking, noise and other intrusions.	Not Applicable. The project does not include any the design of any buildings within PRZ1 Zone.
R5 Minimum setback of building from boundary of blocks adjacent to Residential Zones: 6 m	C5 The scale of the development is consistent with adjacent developments and the neighbouring uses are protected from overlooking, noise and other intrusions.	Not Applicable. The project does not include any the design of any buildings within PRZ1 Zone.
R6 Maximum gross floor area of enclosed structures: 200 m2	C6 The scale of the development is consistent with adjacent developments and the neighbouring uses are protected from overlooking, noise and other intrusions.	Not Applicable. The project does not include any the design of any buildings within PRZ1 Zone.

Element 2: Building and Site Controls

Intent:

- a) To ensure development in the PRZ2 – Restricted Access Recreation Zone is compatible with, and does not adversely impact on, the urban environment

Rules	Criteria	Comment
2.1 Height		
R8 Maximum height of buildings in blocks adjacent to Residential Zones: two storeys or 10 m	C8 The building height minimises the impact of developments on adjoining residential zones.	Not Applicable. This application does not involve any PRZ2 zoning.
2.2 Setbacks		
R9 Minimum setback of building from boundaries to Residential Zones: 6m	C9 The building setback minimises the impact of developments on adjoining residential zones.	Not Applicable. This application does not involve any PRZ2 zoning.
2.3 Scale of Development		
There is no applicable rule.	C10 The development is of an appropriate scale and form, and is compatible with surrounding development and the anticipated use.	Not Applicable. This application does not involve any PRZ2 zoning.

Part A (2) - PRZ2 - Restricted Access Recreation Zone

Element 1: Restrictions on Use

Intent:

- a) To provide for high quality recreation facilities without adverse effects on the amenity of the locality

Rules	Criteria	Comment
1.1 Club, Educational Establishment, Guest House, Hotel, Motel		
<p>R7</p> <p>Development for these purposes meets one of the following:</p> <ul style="list-style-type: none"> a) Is ancillary to the use of the land for recreation purposes b) The proportion of the land area of any discrete PRZ2 restricted access recreation zone (i.e. not separated by another zone) used for these purposes and associated car parking and other site facilities is a maximum of 15%. 	<p>C7</p> <p>Development for these purposes in the PRZ2 restricted access recreation zone meets all of the following:</p> <ul style="list-style-type: none"> a) Does not unreasonably restrict the availability of land in the zone for recreation purposes b) Is of an appropriate scale and compatible with the recreational purposes of the zone. 	<p>Not Applicable. This application does not include any Club, Educational Establishment, Guest House, Hotel or Motel.</p>

Part B – General Development Controls

Element 1: Restrictions on Use

Intent:

- a) To provide for high quality recreation facilities without adverse effects on the amenity of the locality
- b) To ensure development is consistent with the approved Plan of Management

Rules	Criteria	Comment
1.1 Location Requirements		
There is no applicable rule.	<p>C11</p> <p>The development meets the requirements of the Community and Recreation Facilities Location General Code.</p>	<p>The Community and Recreation Facilities Location General Code is not applicable.</p> <p>This application only includes a small area of PRZ1 zoning at the western extent. Within the PRZ1 zoning, the application only includes a short section of 2.5m wide shared path along Cravens Creek.</p>
1.2 Plans of Management		
There is no applicable rule.	<p>C12</p> <p>Where relevant, the proposed development is consistent with the approved Plan of Management.</p>	<p>Not relevant.</p> <p>This application only includes a small area of PRZ1 zoning at the western extent. Within the PRZ1 zoning, the application only includes a short section of 2.5m wide shared path along Cravens Creek.</p>
1.3 Major Utility Installation		
There is no applicable rule.	<p>C12A</p> <p>The development of land for a MAJOR UTILITY INSTALLATION can be integrated with the recreational use of the land and does not result in the exclusion of</p>	<p>This application includes the relocation of a section of overhead power line to underground within the PRZ1 zone, refer to Drawing C13107-P103+ for details.</p>

	<p>the land from its use for recreational enjoyment purposes.</p>	<p>The relocation underground will result in increased land for recreational enjoyment purposes.</p> <p>This application also includes a shared trench, ST1 and extra low and low zone water mains. All of these services are underground and will not result in the exclusion of land from its use for recreational enjoyment purposes.</p>
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Element 2: Building and Site Controls

Intent:

- a) To ensure development is compatible with, and does not adversely impact on, the urban environment

Rules	Criteria	Comment
2.1 Subdivision		
<p>R13</p> <p>Subdivision is only permitted where:</p> <ul style="list-style-type: none"> a) it is part of a development application for another assessable development b) It is demonstrated that any residual block can accommodate another assessable development designed in accordance with the relevant section of this Code. 	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>Not Applicable. This application is does not involve any subdivision.</p>
2.2 Demolition		
<p>R14</p> <p>In accordance with section 148 of the Planning and Development Act 2007, the application is accompanied by a Statement of Endorsement from utility providers (including Water, Sewerage, Stormwater, Electricity and Gas) stating that:</p> <ul style="list-style-type: none"> a) All network infrastructure on or immediately adjacent the site has been identified on the plan b) All potentially hazardous substances and conditions (associated with or resulting from the demolition process) that may constitute a risk to utility services have been identified 	<p>C14</p> <p>If a Statement of Endorsement is not provided the application will be referred to relevant utility provider in accordance with the requirements of the Planning and Development Act 2007.</p>	<p>Relocation of the existing overhead electrical assets will be undertaken as part of the East West Arterial Stage 2 construction. ActewAGL have been engaged to finalise the asset relocation designs.</p> <p>The location of the existing overhead power line is detailed on Drawing C13107-P103+.</p> <p>Refer to relevant utilities provider correspondence.</p>

<p>c) All required network disconnections have been identified and the disconnection works comply with utility requirements</p> <p>d) All works associated with the demolition comply with and are in accordance with utility asset access and protection requirements.</p>		
<p>2.3 National Capital Plan</p>		
<p>There is no applicable rule.</p>	<p>C15</p> <p>Where a development is subject to Special Requirements under the National Capital Plan, or any relevant Development Control Plan prepared under the National Capital Plan, the development is not inconsistent with the Special Requirements or Development Control Plan. Where any provision of this code is inconsistent with Special Requirements under the National Capital Plan, or any relevant Development Control Plan prepared under the National Capital Plan, that provision has no effect.</p>	<p>Not applicable. The development is not subject to Special Requirements under the National Capital Plan.</p>

Element 3: Built Form

Intent:

- a) To provide for buildings that promote a safe and attractive urban environment

Rules	Criteria	Comment
3.1 Materials and Finish		
There is no applicable rule.	<p>C16</p> <p>Where the development exposes a blank façade of an adjoining building, a visually interesting architectural treatment is applied to that wall such as through the use of colour, articulation, materials and shadows.</p>	Not Applicable. The project does not include any the design of any buildings within PRZ1 Zone.
There is no applicable rule.	<p>C17</p> <p>The development uses high quality materials that are not incompatible with the character of existing adjacent development and the desired architectural character of the area.</p>	Not Applicable. The project does not include any the design of any buildings within PRZ1 Zone.
3.2 Interface		
There is no applicable rule.	<p>C18</p> <p>Where appropriate, compatible uses of any existing buildings are integrated with new development and provide physical connections and linkages between buildings, and between buildings and public spaces.</p>	Not Applicable. The project does not include any the design of any buildings within PRZ1 Zone.
There is no applicable rule.	<p>C19</p> <p>Elements of the development that present to, or are visible from, the street, promote an attractive and appropriate streetscape.</p>	Not Applicable. The project does not include any the design of any buildings within PRZ1 Zone.
3.3 Crime Prevention Through Environmental Design		

<p>There is no applicable rule.</p>	<p>C20 The development meets the requirements of the Crime Prevention Through Environmental Design General Code.</p>	<p>Not Applicable. The project does not include any the design of any buildings within PRZ1 Zone.</p>
<p>3.4 Access and Mobility</p>		
<p>There is no applicable rule.</p>	<p>C21 The development meets the requirements of the Access and Mobility General Code.</p>	<p>The application does not include any buildings, however responses to the Access and Mobility General Code within Section 4.1.2.</p>
<p>3.5 Location Requirements for Community and Recreation Facilities</p>		
<p>There is no applicable rule.</p>	<p>C21A The development meets the requirements of the Community and Recreation Facilities Location Guidelines General Code.</p>	<p>The Community and Recreation Facilities Location General Code is not applicable. This application only includes a small area of PRZ1 zoning at the western extent. Within the PRZ1 zone, the application only includes a short section of 2.5m wide shared path along Cravens Creek.</p>

Element 4: Parking and Site Access

Intent:

- a) To encourage design of access and parking as part of the overall design of the development
- b) To provide for safe, convenient access to meet the needs of all users and visitors

Rules	Criteria	Comment
4.1 Traffic Generation		
There is no applicable rule.	<p>C22</p> <p>The existing road network can accommodate the amount of traffic likely to be generated by the development.</p>	<p>This application only includes a small area of PRZ1 zoning at the western extent. Within the PRZ1 zone, the application only includes a short section of 2.5m wide shared path along Cravens Creek and as such is not expected to generate any traffic.</p> <p>This Criterion is therefore not relevant to the proposed development.</p>
4.2 Vehicle Access and Parking		
There is no applicable rule.	<p>C23</p> <p>Vehicle Access and parking complies with the requirements of the Parking and Vehicular Access General Code.</p>	<p>C16</p> <p>This development does not include any on or off-street parking facilities or access from off-street car parking areas.</p> <p>This Criterion is therefore not relevant to the proposed development.</p>
4.3 Bicycle Parking		
There is no applicable rule.	<p>C24</p> <p>Bicycle Parking complies with the requirements of the Bicycle Parking General Code.</p>	<p>C17</p> <p>This development does not include Bicycle Parking.</p> <p>This Criterion is therefore not relevant to the proposed development.</p>
4.4 Pedestrian Movement		

<p>There is no applicable rule.</p>	<p>C25</p> <p>Safe and convenient movement of public transport passengers, pedestrians and cyclists is provided.</p>	<p>Provision for cyclists and pedestrians has been incorporated into the design via a 2.5m wide shared path. This includes an underpass along Cravens Creek and shared paths connecting the shared paths to paths within the East West Arterial verge.</p> <p>Refer to Drawings C13107-101 and C13107 -881 for details.</p>
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Element 5: Amenity

Intent:

- a) To ensure visual and acoustic privacy of users, within and adjacent to the proposed development
- b) To ensure a safe and attractive urban environment is maintained

Rules	Criteria	Comment
5.2 Lighting		
<p>R27</p> <p>External lighting is provided to building frontages, all pathways, roads, laneways and car parking areas in accordance with Australian Standard AS1158.3.1 Pedestrian Lighting.</p>	<p>C27</p> <p>External lighting is provided in accordance with the Crime Prevention Through Environmental Design General Code</p>	<p>R27</p> <p>External lighting to the road is provided in accordance with AS/NZS1158 Category V3 and P3 on pathways within the verge.</p> <p>Refer Drawings CR130454-E01 to CR130454-E05 for details.</p>
<p>R28</p> <p>All external lighting provided is in accordance with AS 4282 Control of the Obtrusive Effects of Outdoor Lighting.</p>	<p>C28</p> <p>All outdoor lighting, including security and car park lighting, is designed and sited to minimise light spill.</p>	<p>R28</p> <p>External lighting to the road is provided in accordance with AS/NZS1158 Category V3 and P3 within the verge and complies with AS 4282 Control of the Obtrusive Effects of Outdoor Lighting.</p> <p>Refer Drawings CR130454-E01 to CR130454-E05 for details.</p>
5.3 Signs		
<p>There is no applicable rule.</p>	<p>C29</p> <p>Signs comply with the Signs General Code.</p>	<p>No signs, as per the Signs General Code, are included in this proposed development.</p> <p>This Criterion is therefore not applicable to the proposed development.</p>

		Note: All proposed traffic control signs have been designed in accordance with AS1742 and are located within the road reserve.
5.4 Neighbourhood Plan		
There is no applicable rule.	C30 Where a Neighbourhood Plan exists, development demonstrates a response to the key strategies of the relevant Neighbourhood Plan.	Not applicable. The application is for the East West Arterial Road and therefore Neighbourhood Plan does not exist and is not applicable.

Element 6: Environment

Intent:

- a) To provide for ecologically sustainable development that does not have adverse impacts on the surrounding environment

Rules	Criteria	Comment
6.1 Assessment of Environmental Effects		
<p>There is no applicable rule.</p>	<p>C31</p> <p>The development application is accompanied by an Assessment of Environmental Effects that addresses the following:</p> <ul style="list-style-type: none"> a) provision for tree planting and appropriate landscape treatment b) impacts on the character and appearance of any building, area of architectural, historic, aesthetic or scientific interest, or otherwise of special cultural or heritage value c) impacts on public health and safety, including crime prevention d) the amount of traffic likely to be generated and its impact on the movement of traffic on the road system e) whether public transport services are necessary and, if so, whether they are available and adequate f) impacts on the likely accessibility to facilities and services for users and consumers g) any significant short or long-term effect that the relevant authority considers the use or development may have on the environment, including social and economic effects and potential cumulative effects 	<p>C22</p> <p>S211 exemptions for Molonglo Development have previously been granted. A copy of the exemption letter is included in the Appendix B.</p> <p>The applicable s211 exemption is:</p> <ul style="list-style-type: none"> • Molonglo Valley Stage 2 – Urban Development Infrastructure and Link Bridge, Application for s211 Exemption Consideration Report, (July 2013) <p>a) As discussed within Section 2.4.8, the East West Arterial includes the planting of trees within the verge and medians. Additionally, dryland grassing and planting has been included within the road batters.</p> <p>b) The location of the East West Arterial Stage 2 is a greenfield site and there are no existing buildings in proximity.</p> <p>The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to drawings C13107-P800+ and C13107-P801+.</p> <p>As part of the East West Arterial Stage 1 Development Application, liaison with ACT Heritage Council was undertaken to ensure that in accordance with the Heritage Act 2004 any restricted information has been excluded from</p>

<p>h) impacts on the watercourses and drainage characteristics of the area, including water quality</p> <p>i) impacts on the amenity of surrounding land uses, including impacts on air quality, noise, overshadowing, privacy, and the level of wind turbulence generated.</p>	<p>development application documentation. This has been considered for this application.</p> <p>The contractor will be required to include an unanticipated discovery plan in the project plan and submit for the ACT Heritage Council’s approval prior to the commencement of works.</p> <p>c) The location of the East West Arterial Stage 2 is a greenfield site and will not have a negative impact on public health and safety.</p> <p>The East West Arterial Stage 2 design is in accordance with the Crime Prevention through Environmental Design General Code. Refer to Section 4.1.1 for details.</p> <p>d) This application only includes a small area of PRZ1 zoning at the western extent. Within the PRZ1 zone, the application only includes a short section of 2.5m wide shared path along Cravens Creek and as such is not expected to generate any traffic.</p> <p>e) This application only includes a small area of PRZ1 zoning at the western extent. Within the PRZ1 zone, the application only includes a short section of 2.5m wide shared path along Cravens Creek and as such public transport services for this area are deemed unnecessary. Nevertheless, as detailed in Section 2.5.3 bus stops have been provided along the East West Arterial.</p> <p>f) The location of the East West Arterial Stage 2 is a greenfield site and its construction will not have a negative impact on accessibility to facilities for users or consumers.</p>
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g) The East West Arterial is a major infrastructure element in Molonglo and will form the primary east west link between Molonglo Valley Stage 2 and Tuggeranong Parkway, thus providing connectivity between development in Molonglo and the broader ACT.

h) The stormwater network for Stage 2 of the East West Arterial has been designed in accordance with the Molonglo 2 Stormwater Master Plan prepared by Indesco.

Whilst no specific WSUD treatments have been incorporated into the Stage 2 design, in accordance with the master plan, stormwater flows are proposed to be conveyed to the proposed Craven’s Creek Pond to the north-west of the East West Arterial where they will be treated as required by the WaterWays General Code.

i) The EDP stage for Denman Prospect will deal with the traffic (and other) noise attenuation (as was the case with JGD in Molonglo 1 and 2). The flexibility of providing active frontages along the major road will result in transferring noise attenuation to developers, who will have to incorporate adequate construction methodologies to meet Australian Standards related to the internal noise.

The proposed East West Arterial corridor is a greenfield site with future planned developments on either side of the proposed road. As part of the Stage 2 design, a noise assessment has been completed, refer to **Appendix M** for details.

6.2 Water Sensitive Urban Design – Mains Water Consumption

<p>R32</p> <p>Evidence is provided that shows the development achieves a minimum 40% reduction in mains water consumption compared to an equivalent development constructed in 2003 using the ACTPLA on-line assessment tool or another tool as included in the Water Ways: Water Sensitive Urban Design General Code. The 40% target is met without any reliance on landscaping measures to reduce consumption.</p> <p>This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area.</p>	<p>C32</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>Mains water consumption is not affected by this proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>6.3 Water Sensitive Urban Design – Stormwater Quality</p>		
<p>R33</p> <p>All sites of size greater than 2,000m² need to provide evidence of stormwater storage greater than or equal to the volume of 1.4kL per 100m² of impervious area and release over a period of 1 to 3 days. 50% of the volume of rainwater tanks with a toilet connection may be regarded as contributing towards this requirement.</p> <p>This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area.</p>	<p>C33</p> <p>Evidence is provided that demonstrates that for all sites of size greater than 2,000m², a reduction of 1-in-3 month stormwater peak run off flow to pre-development levels with release of captured flow over a period of 1 to 3 days can be achieved.</p> <p>This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area.</p>	<p>This rule is not applicable to the proposed road component.</p> <p>However, the road pipe drainage networks are designed for 10 year ARI and cross drainage pipes cater for the 100 year ARI.</p>
<p>R34</p>	<p>C34</p>	<p>R34</p>

<p>Sites of size greater than 5,000m2 need to provide evidence showing a reduction in average annual stormwater pollutant export load of:</p> <ul style="list-style-type: none"> a) suspended solids by 60% b) total phosphorous by 45% c) total nitrogen by 40% <p>compared to an urban catchment with no water quality management controls, using the MUSIC model to demonstrate compliance. This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area.</p>	<p>Sites of size greater than 5,000m2 need to provide evidence showing a reduction in average annual stormwater pollutant export load of:</p> <ul style="list-style-type: none"> a) suspended solids by 60% b) total phosphorous by 45% c) total nitrogen by 40% <p>compared to an urban catchment with no water quality management controls, using any other method.</p> <p>This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area.</p>	<p>The stormwater network for Stage 2 of the East West Arterial has been designed in accordance with the Molonglo 2 Stormwater Master Plan prepared by Indesco.</p> <p>Whilst no specific WSUD treatments have been incorporated into the Stage 2 design, in accordance with the master plan, stormwater flows are proposed to be conveyed to the proposed Craven’s Creek Pond to the north-west of the East West Arterial where they will be treated as required by the WaterWays General Code.</p>
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6.4 Water Sensitive Urban Design – Stormwater Quantity

<p>R35</p> <p>All sites of size greater than 2,000m2 and subject to redevelopment need to ensure that the capacity of the existing pipe (minor) stormwater connection to the site is not exceeded in the 1-in- 10 year storm event.</p> <p>All sites of size greater than 2,000m2 and subject to redevelopment need to ensure that the capacity of the existing overland (major) stormwater system to the site is not exceeded in the 1-in-100 year storm event.</p> <p>For estate and multiple block developments larger than 5000 m2, retardation of stormwater to meet the above requirements are to be met at the estate scale rather than by measures on individual blocks.</p>	<p>C35</p> <p>Evidence is provided by a suitably qualified person that shows that for all sites of size greater than 2,000m2 and subject to redevelopment</p> <p>EITHER</p> <p>a reduction of 1-in-5 year and 1-in-100 year stormwater peak run off flow to pre-development levels. See WaterWays General Code for more detail.</p> <p>OR</p> <p>That the capacity of the downstream piped stormwater system to its outlet with an open channel is not exceeded in the 1-in-10 year storm event.</p> <p>For estate and multiple block developments larger than 5000 m2, retardation of stormwater to meet the above requirements are to be met at the estate scale unless it</p>	<p>This rule is not applicable to the proposed road component.</p> <p>However, the road pipe drainage networks are designed for 10 year ARI and cross drainage pipes cater for the 100 year ARI.</p>
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	can be demonstrated that this is less feasible than measures on individual blocks.	
6.5 Heritage		
R36 In accordance with section 148 of the Planning and Development Act 2007, applications for development on land or buildings subject to interim or full heritage registration are to be accompanied by advice from the Heritage Council stating that the development meets the requirements of the Heritage Act 2004.	C36 If advice from the Heritage Council is required, but not provided, then the application will be referred to the Heritage Council in accordance with the requirements of the Planning and Development Act 2007.	Biosis Research completed the Molonglo 2: Detailed Heritage Assessment in August 2010 Refer to Section 3.4 – Section 211 Exemption Application and Appendix L .
6.6 Contamination		
R37 A statement is provided that the potential for land contamination has been assessed in accordance with the ACT Government Strategic Plan – Contaminated Sites Management 1995 and the ACT Environment Protection Authority Contaminated Sites Environmental Protection Policy 2000, and it is demonstrated that the land is suitable for the proposed development.	C37 If a statement that the site has been assessed is not provided, the application will be referred to the relevant agency in accordance with the requirements of the Planning and Development Act 2007.	Application to be referred to the relevant agency. A Phase 1 Environmental Site Assessment within the area of works was undertaken by AECOM in 2012. A Phase 2 Environmental Site Assessment was also undertaken by AECOM which focused on areas of environmental concern identified in the Phase 1 ESA. Refer to Appendix H for a copy of the Phase 2 ESA Additionally, refer to Section 2.4.7 for discussion on the incorporation of stockpile BRU01 into the fill material.
6.7 Trees		
R38 This rule applies to a development that has one or more of the following characteristics:	This is a mandatory requirement. There is no applicable criterion.	Application to be referred to the relevant agency. The design of the East West Arterial and Molonglo 2 Group Centre Bulk Earthworks Stage 1 has been developed with the intent to minimise impact on existing trees and vegetation. Refer to Section 2.6

<p>a) requires groundwork within the tree protection zone of a protected tree</p> <p>b) is likely to cause damage to or removal of any protected trees</p> <p>The authority shall refer the development application to the Conservator of Flora and Fauna.</p>		<p>for a detailed discussion of the tree removals associated with the project.</p> <p>Refer to Drawing C13107 – P840+ for details of the required tree removals and to Appendix K for details of tree removal correspondence with ESDD.</p>
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6.8 Erosion and Sediment Control

<p>R39</p> <p>For sites less than 0.3 of a hectare, a plan is provided to demonstrate that the development complies with the ACT Environment Protection Authority, Environment Protection Guidelines for Construction and Land Development in the ACT, August 2007.</p>	<p>C39</p> <p>If a plan is not provided, the application will be referred to the relevant agency in accordance with the requirements of the Planning and Development Act 2007.</p>	<p>The proposed site is >0.3 of a hectare.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
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<p>R40</p> <p>For development on a site greater than 0.3 of a hectare, the application is accompanied by an Erosion and Sediment Control Plan endorsed by the ACT Environment Protection Authority.</p>	<p>C40</p> <p>If an endorsed Sediment and Erosion Control Plan is not provided the application will be referred to the relevant agency in accordance with the requirements of the Planning and Development Act 2007.</p>	<p>An endorsed Sediment and Erosion Control Plan is not relevant to this stage of the project. However a Concept Pollution Control Plan, incorporating control measures included in the Environmental Protection Guidelines for Construction and Land Development in the ACT, is provided in the drawing set.</p> <p>This plan will be finalised by the successful Contractor who will liaise with ACT Environment Protection Authority, prior to commencing construction in accordance with their Environmental Authorisation.</p>
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6.9 Hazardous Material

<p>R41</p> <p>For the demolition of multi-unit housing (including garages and carports) constructed* prior to 1985, and</p>	<p>C41</p> <p>If an endorsed Hazardous Materials Survey is not provided the application will be referred to the relevant</p>	<p>C41</p> <p>The Demolition of residential premises is not included within the Urban Open Space zoning.</p>
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<p>Commercial / Industrial premises constructed prior to 2005, a Hazardous Materials Survey (including an asbestos survey) is carried out and signed by an appropriately licensed person and is endorsed by Environment Protection.</p> <p>The Survey is provided and covers the disposal of hazardous materials, showing that:</p> <p>a) Hazardous material disposal (including asbestos) is to be at a licensed disposal facility in the ACT</p> <p>b) If hazardous materials are to be transported for disposal interstate, approval from the Environment Protection Authority is obtained prior to removal of material from the site</p> <p>c) An appropriately licensed contractor is engaged for the removal and transport of all hazardous materials including asbestos) present at the site.</p>	<p>agency in accordance with the requirements of the Planning and Development Act 2007.</p>	<p>This Rule is therefore not relevant to the proposed development.</p>
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6.10 Water Use

<p>There is no applicable rule.</p>	<p>C42</p> <p>Where relevant, development complies with the requirements of the Water Use and Catchment General Code.</p>	<p>The application complies with all relevant requirements of the Water Use and Catchment General Code.</p> <p>Refer to Section 2.4.13 for further details.</p>
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Element 7: Services

Intent:

- a) To provide for appropriately serviced developments that meet the needs of service providers and users of the proposed development

Rules	Criteria	Comment
7.1 Waste Management		
<p>R43</p> <p>In accordance with section 148 of the Planning and Development Act 2007, the application is accompanied by a Statement of Compliance from the Department of Territory and Municipal Services stating that the waste facilities and management associated with the development are in accordance with the current version of the Development Control Code for Best Practice Waste Management in the ACT.</p>	<p>C43</p> <p>If a Statement of Compliance is not provided the application will be referred to the Department of Territory and Municipal Services in accordance with the requirements of the Planning and Development Act 2007.</p>	<p>Application to be referred to the relevant agency. A Waste Management Plan has been completed for both the East West Arterial and the Molonglo 2 Group Centre Bulk Earthworks Stage 1. Refer to Appendix O for details.</p>
7.2 Waste Water		
<p>R44</p> <p>Subject to ACTEWAGL approval, all under cover areas drain to the sewer.</p>	<p>C44</p> <p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>Under cover areas are not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
7.3 Utilities		
<p>R45</p> <p>A Statement of Compliance from each relevant utility provider (for water, sewerage, stormwater, electricity and gas) is provided, which confirms that the location and nature of earthworks, utility connections, proposed buildings, pavements and landscape features comply with utility standards, access provisions and asset clearance zones.</p>	<p>C45</p> <p>If a Statement of Compliance is not provided the application will be referred to the relevant agency in accordance with the requirements of the Planning and Development Act 2007.</p>	<p>Whilst liaison has been undertaken with utility providers, the application is to be referred to the relevant agency.</p> <p>Services affected by the proposed works are identified in the Development Application Drawings.</p>

7.4 Storage		
<p>R46</p> <p>Outdoor storage areas must be screened from view from any road or other public area.</p>	<p>C46</p> <p>Where the proposed use of the site requires open areas for storage of goods and materials, adequate provision is included in the design and layout of the site.</p>	<p>Outdoor storage areas are not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>R47</p> <p>Outdoor storage areas do not encroach on required car-parking spaces, driveways exclusively required for vehicular circulation or landscape areas.</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>Outdoor storage areas are not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
7.5 Servicing and Site Management		
<p>R48</p> <p>In accordance with section 148 of the Planning and Development Act 2007, the application is accompanied by a Statement of Endorsement from the relevant agency stating that the waste facilities and management associated with the development are in accordance with the Design Standards for Urban Infrastructure.</p>	<p>C48</p> <p>If a Statement of Endorsement is not provided the application will be referred to the relevant agency in accordance with the requirements of the Planning and Development Act 2007.</p>	<p>Waste facilities and management is not included in the scope of the proposed development.</p> <p>This Rule is therefore not relevant to the proposed development.</p>

4.3 Commercial Zones Development Code

This Development Code applies to all development in the Commercial Zones. For this project this includes the Molonglo 2 Group Centre Bulk Earthworks Stage 1 Site which is within CZ1, refer to Drawing C13107-006+ for details.

Part A – General Controls

Element 1: Lease and development conditions

Rules	Criteria	Comment
1.1 Municipal Depot		
<p>R1</p> <p>This rule applies to blocks affected by approved lease and development conditions that provide for one or more of the following matters:</p> <ul style="list-style-type: none"> a) plot ratio b) building envelope c) building height d) front street setback e) side setback f) rear setback g) building design h) materials and finish i) interface j) vehicle access k) parking l) solar access m) private open space 	<p>C1</p> <p>The development meets the intent of any current, relevant lease and development conditions.</p> <p>C3A,CZ5 DC</p>	<p>The proposed Molonglo 2 Group Centre Bulk Earthworks Stage 1 will not impact upon any approved and current lease and development conditions applying to the site.</p> <p>This Rule/Criteria is therefore not relevant to the proposed development.</p>

Element 2: Use

Intent:

- a) To ensure that community and recreation facilities remain available to the community

Rules	Criteria	Comment
2.1 Existing community and recreation sites		
<p>R2</p> <p>A development proposal does not reduce the range of community or recreation facilities available.</p>	<p>C2</p> <p>A proposal that reduces the range of community or recreation facilities available demonstrates through a social impact assessment that there is enough land or sufficient other facilities in the locality to meet anticipated demand.</p>	<p>The proposed Molonglo 2 Group Centre Bulk Earthworks Stage 1 will not impact upon any existing community and recreation sites.</p> <p>This Rule/Criteria is therefore not relevant to the proposed development.</p>

Element 3: Buildings

Rules	Criteria	Comment
The proposed development does not include buildings		This Section of the Code is therefore considered not applicable to the proposed development.

Element 4: Site

Rules	Criteria	Comment
4.1 Landscaping		
<p>There is no applicable rule.</p>	<p>C14</p> <p>Landscaping associated with the development achieves all of the following:</p> <ul style="list-style-type: none"> a) response to site attributes, including streetscapes and landscapes of documented heritage significance b) appropriate scale relative to the road reserve width and building bulk c) vegetation types and landscaping styles which complement the streetscape d) integration with parks, reserves and public transport corridors e) minimal adverse effect on the structure of the proposed buildings or adjoining buildings f) contribution to energy efficiency and amenity by providing substantial shade in summer, especially to west-facing windows and open car park areas, and admitting winter sunlight to outdoor and indoor living areas g) minimal overlooking between buildings h) satisfies utility maintenance requirements i) minimises the risk of damage to aboveground and underground utilities j) screens aboveground utilities 	<p>Dryland grass will be used to revegetate the Molonglo 2 Group Centre Bulk Earthworks Stage 1 surface in accordance with the Standard Specification for Urban Infrastructure Works Edition 1, Revision 0, September 2002 – Section 9 Landscape.</p>

	<p>k) provides adequate sight lines for vehicles and pedestrians, especially near street corners and intersections</p> <p>l) does not obscure or obstruct building entries, paths and driveways to reduce the actual or perceived personal safety and security.</p>	
There is no applicable rule.	<p>C15</p> <p>Tree planting in and around car parks provides shade and softens the visual impact of parking areas.</p>	<p>The proposed development does not include any car parks.</p> <p>This Criteria is therefore not relevant to the proposed development.</p>
4.2 Lighting		
<p>R16</p> <p>External lighting is provided to building frontages, to all pathways, roads, laneways and car-parking areas in accordance with Australian Standard AS1158.3.1 Pedestrian Lighting.</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>The proposed development does not include any external lighting.</p> <p>This Rule is therefore not relevant to the proposed development.</p>
<p>R17</p> <p>All external lighting provided is in accordance with Australian Standard AS4282 - Control of the Obtrusive Effects of Outdoor Lighting.</p>	<p>C17</p> <p>Light spill is minimised.</p>	<p>The proposed development does not include any external lighting.</p> <p>This Rule / Criteria is therefore not relevant to the proposed development.</p>
4.3 Easements		
<p>R18</p> <p>Buildings do not encroach over easements or rights of way.</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>The proposed development will not encroach into a registered easement.</p> <p>This Rule is therefore not relevant to the proposed development.</p>

Element 5: Access

Rules	Criteria	Comment
5.1 Access		
There is no applicable rule.	<p>C19</p> <p>Driveways and pedestrian entrances to the site are clearly visible from the front boundary.</p>	<p>The proposed Molonglo 2 Group Centre Bulk Earthworks Stage 1 does not include any driveways or pedestrian access</p> <p>This Criteria is therefore not relevant to the proposed development.</p>
<p>R20</p> <p>Loading docks or vehicular entries to buildings are not located on frontages to the street.</p>	<p>C20</p> <p>Loading docks and vehicular entries do not dominate the street frontage or conflict with parking and pedestrian movements in front of the building.</p>	<p>The proposed Molonglo 2 Group Centre Bulk Earthworks Stage 1 does not include any loading docks.</p> <p>This Criteria is therefore not relevant to the proposed development.</p>
5.2 Traffic generation		
There is no applicable rule.	<p>C21</p> <p>The existing road network can accommodate the amount of traffic that is likely to be generated by the development.</p>	<p>The proposed Molonglo 2 Group Centre Bulk Earthworks Stage 1 will in itself, not generate traffic. Rather, it is being constructed to accommodate the traffic that will be generated from the future surrounding developments. Traffic volumes were sourced from the SMEC 'Molonglo Revised' EMME model (January 2013).</p> <p>This Criterion is therefore not relevant to the proposed development.</p>
5.3 Service access and delivery		
<p>R22</p> <p>Goods loading and unloading facilities comply with all of the following:</p>	<p>C22</p> <p>Facilities for the loading and unloading of goods achieve all of the following:</p>	<p>The proposed Molonglo 2 Group Centre Bulk Earthworks Stage 1 does not include any service access or delivery.</p>

<p>a) are located within the site</p> <p>b) allow for service vehicles to enter and leave the site in a forward direction.</p>	<p>a) safe and efficient manoeuvring of service vehicles</p> <p>b) does not unreasonably compromise the safety of pedestrians</p> <p>c) does not unreasonably compromise traffic movement or the operation of any adjoining road, cycleway or pedestrian pathway</p> <p>d) does not unreasonably affect on-street or off-street car parking</p> <p>e) adequate provision for the manoeuvring of vehicles.</p>	<p>This Criteria is therefore not relevant to the proposed development.</p>
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Element 6: Noise

Rules	Criteria	Comment
6.1 Potentially noisy uses		
<p>R23</p> <p>This rule applies to any of the following:</p> <ul style="list-style-type: none"> a) club b) drink establishment c) emergency services facility d) hotel e) indoor recreation facility f) industry (except light industry) g) indoor entertainment facility h) outdoor recreation facility i) restaurant. <p>Development complies with a noise management plan prepared by a suitably qualified person and endorsed by the Environment Protection Authority (EPA).</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>The proposed Molonglo 2 Group Centre Bulk Earthworks Stage 1 does not include any potentially noisy uses as detailed under R23.</p> <p>This rule is therefore not relevant to the proposed development.</p>

Element 7: Environment

Rules	Criteria	Comment
7.1 Water sensitive urban design		
<p>R24</p> <p>This rule applies to sites 5000m² or larger.</p> <p>The average annual stormwater pollutant export is reduced for all of the following:</p> <ul style="list-style-type: none"> a) suspended solids by at least 60 per cent b) total phosphorous by at least 45 per cent c) total nitrogen by at least 40 per cent compared with an urban catchment with no water quality management controls. 	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>The stormwater network for Stage 2 of the East West Arterial has been designed in accordance with the Molonglo 2 Stormwater Master Plan prepared by Indesco.</p> <p>Whilst no specific WSUD treatments have been incorporated into the Stage 2 design, in accordance with the master plan, stormwater flows are proposed to be conveyed to the proposed Craven’s Creek Pond to the north-west of the East West Arterial where they will be treated as required by the WaterWays General Code.</p>
<p>R25</p> <p>This rule applies to sites 2000m² or larger. Stormwater management complies with one of the following:</p> <ul style="list-style-type: none"> a) the capacity of the existing pipe (minor) stormwater connection is not exceeded in 1-in-10 year storm event and the capacity of the existing major overland stormwater system is not exceeded in the 1-in-100 year storm event b) the 1-in-5 year and 1-in-100 year stormwater peak run off does not exceed pre-development levels. 	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>The stormwater network for Stage 2 of the East West Arterial has been designed in accordance with the Molonglo 2 Stormwater Master Plan prepared by Indesco.</p> <p>As discussed in Section 2.4.13, the stormwater networks has been designed for a Q10 minor stormwater event and Q100 for major stormwater events.</p>

<p>R26</p> <p>This rule applies to sites 2,000m² or larger. Provision is made for one or more of the following:</p> <ul style="list-style-type: none"> a) the storage of stormwater equivalent to at least 1.4kl per 100m² of impervious area, and its release over a period of 1 to 3 days b) runoff peak flow for the 3 month ARI storm to be no more than pre-development levels and release of captured flow over a period of 1 to 3 days. 	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>As detailed within Section 2.5.14, the stormwater network for Stage 2 of the East West Arterial includes 5 Sediment Ponds and has been designed in accordance with the Molonglo 2 Stormwater Master Plan prepared by Indesco.</p>
<p>R27</p> <p>Evidence is provided that shows the development achieves a minimum 40% reduction in mains water consumption compared to an equivalent development constructed in 2003 using the ACTPLA on-line assessment tool or another tool as included in the Water Ways: Water Sensitive Urban Design General Code. The 40% target is met without any reliance on landscaping measures to reduce consumption.</p> <p>This requirement does not apply for extensions with an increase in the combined roof area, driveway, car manoeuvring areas and car parking areas of less than 25% of the original area.</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>The proposed Molonglo 2 Group Centre Bulk Earthworks Stage 1 will not be connected to mains water. Therefore this rule is not relevant to the proposed development.</p>
<p>There is no applicable rule.</p>	<p>C28</p> <p>Underground piping of natural stormwater overland flow paths is minimised.</p>	<p>The Molonglo 2 Group Centre Bulk Earthworks Stage 1 does not involve the piping of any natural stormwater overland flow paths.</p>

7.2 Earthworks

<p>There is no applicable rule.</p>	<p>C29</p> <p>The extent of earthworks is minimised.</p>	<p>The earthworks quantities required from the Molonglo 2 Group Centre Bulk Earthworks Stage 1 have been determined holistically with consideration to all sources of fill material for the East West Arterial Stage 2. Refer to Section 2.4.7 and Section 2.5 for further details.</p> <p>As such, the earthworks required for the Molonglo 2 Group Centre Bulk Earthworks Stage 1 have been minimised.</p> <p>Additionally, the Molonglo 2 Group Centre Bulk Earthworks Stage 1 has been designed with consideration to minimising the earthworks required for the future Molonglo 2 Group centre.</p>
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7.3 Tree protection

<p>R30</p> <p>This rule applies to a development that has one or more of the following characteristics:</p> <ul style="list-style-type: none"> a) requires groundwork within the tree protection zone of a protected tree b) is likely to cause damage to or removal of any protected trees c) is a declared site. <p>The authority shall refer the development application to the Conservator of Flora and Fauna.</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>The project will require the removal of a number of trees. Tree removal correspondence and reasoning behind the tree removals is detailed within Section 2.6.</p>
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<p>R31</p> <p>Trees on development sites may be removed only with the prior agreement in writing of the Territory.</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>The project will require the removal of a number of trees. Tree removal correspondence and reasoning behind the tree removals is detailed within Section 2.6.</p> <p>Application for the removal of trees to be referred to the relevant agency.</p>
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7.4 Heritage

<p>R32</p> <p>This rule applies to land containing places or objects registered or provisionally registered under section 41 of the Heritage Act 2004. The authority shall refer a development application to the Heritage Council.</p>	<p>This is a mandatory requirement. There is no applicable criterion.</p>	<p>The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to drawings C13107-P800+ and C13107-P801+.</p> <p>Liaison with ACT Heritage Council has been undertaken to ensure that in accordance with the Heritage Act 2004 any restricted information has been excluded from development application documentation.</p> <p>The contractor will be required to include an unanticipated discovery plan in the project plan and submit for the ACT Heritage Council’s approval prior to the commencement of works.</p>
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Element 8: Subdivision

Rules	Criteria	Comment
<p>The proposed development does not contain any subdivision works. This Section of the Code is therefore considered not applicable to the proposed development.</p>		

Element 9: Demolition

Rules	Criteria	Comment
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The proposed development does not contain any existing services for demolition. This Section of the Code is therefore considered not applicable to the proposed development.

Element 10: Neighbourhood Plans

Rules	Criteria	Comment
10.1 Consideration		
There is no applicable rule.	<p>C36</p> <p>Where a Neighbourhood Plan exists, development demonstrates a response to the key strategies of the relevant Neighbourhood Plan.</p>	<p>There is no existing Neighbourhood Plan within the project area.</p> <p>This criteria is therefore not relevant to the proposed Molonglo 2 Group Centre Bulk Earthworks Stage 1.</p>

Part B – Additional controls for town centres

Rules	Criteria	Comment
This Section of the Code is not applicable as the proposed development does not include town centres.		

Part C – Additional controls for group centres

Rules	Criteria	Comment
This Section of the Code is not applicable as the proposed development does not include group centres.		

Part D – Additional controls for local centres

Rules	Criteria	Comment
This Section of the Code is not applicable as the proposed development does not include local centres.		

4.4 Residential Zones Development Code

As detailed on Drawing C13107-006+, the East West Arterial Stage 2 falls within residential zones RZ4 and RZ5, however as expanded upon below the residential zone development code has not been assessed against.

The proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not involve any residential development. As such, the Residential Zones for the current RZ4, RZ5 zoning is not relevant and will not be assessed against. The proposed road reserve for the East West Arterial will require the zoning codes of the residential areas to be amended to be TSZ1 Transport and Services Zone in the Territory Plan to suit the land use purpose.

4.5 Molonglo North and Weston Structure Plan

Stage 2 of the East West Arterial is within the Molonglo North Weston Structure Plan area. Responses to the relevant provisions are provided in the table below.

No	Principle	
4.1 Sustainable development principles		
1	The development will accord with the principles for sustainable development contained in the Statement of Strategic Directions.	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. The design is in accordance with the Statement of Strategic Directions.
4.2 Social Principles		
2	Provision will be made for a range of housing types, densities and affordability, to meet changes in household and community needs and encourage the formation of a diverse community.	Not Applicable
3	Higher density development will be encouraged within and near major centres, and in other suitable locations well served by public transport, maximising accessibility to services, facilities and employment.	Not Applicable
4	Opportunities will be provided for aged persons housing and adaptable and special needs housing within or adjacent to centres and close to public transport.	Not Applicable
5	Community facility sites will be located close to public transport and generally in places where, for reasons of safety, people already have a cause to congregate, particularly at shopping centres and schools.	Not Applicable
6	Neighbourhoods will be planned to encourage walking and reduce vehicle dependence, with a legible and permeable hierarchy of roads, conveniently located commercial and community facilities, a network of open spaces, an on and off-road system for pedestrians and cyclists where appropriate, and provision for accessible public transport.	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. Provision for on road cyclists has been incorporated into the design via a 2.0m wide on road cycle lane and provision for pedestrians via a shared path in each verge of the East West Arterial.
7	The location, design and siting of development will promote community vitality and safety, and equality of access (access for people with a disability).	Not Applicable

8	Landscape features and community facilities are to be incorporated in the urban design layout at neighbourhoods to create a sense of place and community identity.	Not Applicable
9	Development is to meet the requirements of relevant Government affordable housing policies or strategies.	Not Applicable
4.3 Economic Principles		
10	Infrastructure and services will be provided and managed in a cost effective manner taking into account whole-of-life and whole-of-systems costs.	The East West Arterial Stage 2 has been designed considering the whole of life cost.
11	Higher density development will be generally located near areas of higher amenity and public transport routes.	Not Applicable
12	Commercial and retail activities will be concentrated in centres and other planned nodes well served by public transport to ensure an efficient pattern of development and high levels of accessibility. Opportunities for home business will be provided.	Not Applicable
13	The group and local centres will be located on major roads and will have good pedestrian and vehicular access.	Not Applicable
14	Centres are to be designed as mixed-use places and supported by residential development, with flexibility to evolve to meet changing community needs over time, within or surrounding the centre.	Not Applicable
4.4 Environmental Principles		
15	The landscape setting and values of Molonglo and North Weston will be recognised and incorporated into the urban design of the area. Boundary hills and significant internal ridges within the urban fabric will be excluded from inappropriate development.	The location of the East West Arterial Stage 2 does not impact any Boundary hills or significant internal ridges.
16	Exceptional trees, significant trees and tree stands will be retained and integrated into the urban fabric through the design of parks, streets and other areas, wherever possible.	The design of the East West Arterial and Molonglo 2 Group Centre Bulk Earthworks Stage 1 has been developed with the intent to minimise impact on existing trees and vegetation. Refer to Section 2.6 for a detailed discussion of the tree removals associated with the project.
17	Water sensitive urban design principles will be adopted at all levels of the development (block, neighbourhood, catchment) to minimise potable water	The stormwater network for Stage 2 of the East West Arterial has been designed in accordance with the Molonglo 2 Stormwater Master Plan prepared by Indesco.

	consumption and manage water quality in the Molonglo River and its receiving waters.	Whilst no specific WSUD treatments have been incorporated into the Stage 2 design, in accordance with the master plan, stormwater flows are proposed to be conveyed to the proposed Craven’s Creek Pond to the north-west of the East West Arterial where they will be treated as required by the WaterWays General Code.
18	Subdivision design will facilitate energy efficient housing consistent with current best practice and evolving approaches.	Not Applicable
19	Aboriginal and European heritage places will be recognised and significant sites conserved in public open space.	<p>The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to drawings C13107-P800+ and C13107-P801+.</p> <p>As part of the East West Arterial Stage 1 Development Application, liaison with ACT Heritage Council was undertaken to ensure that in accordance with the Heritage Act 2004 any restricted information has been excluded from development application documentation. This has been considered for this application.</p> <p>The contractor will be required to include an unanticipated discovery plan in the project plan and submit for the ACT Heritage Council’s approval prior to the commencement of works.</p>
20	Bushfire risk assessments and management plans will be prepared consistent with relevant Government guidelines for bushfire mitigation.	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
21	Critical natural habitats and connectivity will be protected [REDACTED]	The proposed works are clear of any areas of environmental significance. Refer to drawing C13107-850+.
22	Upward light spill will be minimised in East Molonglo in recognition of its proximity to the Mount Stromlo Observatory.	Streetlighting provisions have been designed considering Mount Stromlo Observatory. Refer to Section 2.4.7 and Drawings CR131454-E01 to CR131454-E05 for street lighting details.
4.5 Landscape and open space principles		
23	Development will be planned to respond to the topography of the area by minimising cut and fill, responding to key features (eg: views, vistas, ridges and drainage lines) and minimising the visual impacts of development.	The location and vertical alignment of the East West Arterial has been designed to minimise cut and fill requirements. Refer to Section 2.5.7 for further details.
24	Appropriate buffer areas will be provided in areas situated adjacent to existing development and existing major roads.	Not Applicable. The location of the East West Arterial Stage 2 is a greenfield site with no existing development.
25	The river corridor is recognised as an important natural asset to the ACT and region. It will be planned as an integral part of the National Capital Open	Not Applicable. The proposed works are outside of the Molonglo River Corridor (NUZ4).

	Space System by providing for continuity of recreation use with surrounding open space and the Murrumbidgee River corridor.	
26	The environmental quality, landscape setting, natural and cultural values of the river corridor will be reinforced by the provision of an open space corridor on each side of the Molonglo River.	Not Applicable. The proposed works are outside of the Molonglo River Corridor (NUZ4).
27	Provision will be made along the river corridor for a balanced range of recreational activities appropriate to the characteristics of the river and adjacent land, and in a manner that reinforces and protects the natural and cultural values of the river corridor.	Not Applicable. The proposed works are outside of the Molonglo River Corridor (NUZ4).
28	Open space will be provided as an integrated hierarchical system which provides for a diversity of sport and recreation activities, contributes to the legibility and character of urban development and assists in the effective management of stormwater.	Not Applicable
29	Playing fields will be provided in central locations, typically co-located with schools to optimise access and usage.	Not Applicable
30	Provision will be made for open space links between Stromlo Forest Park, Molonglo River corridor and the Canberra International Arboretum and Gardens suitable for equestrian, cycling and pedestrian use.	Not Applicable

4.6 Urban Design Principles

31	Subdivision design and road layout will maximise access to ‘special places’ to enhance the character of Molonglo and North Weston and contribute to a ‘sense of place’. Special places include Stromlo Forest Park, the Canberra International Arboretum and Gardens, the group and local centre, neighbourhood activity nodes, active and passive open spaces, riparian (creek and drainage) corridors, riverside parks and other open space corridors.	Not Applicable This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning.
32	Subdivision and detailed planning will provide for quality design outcomes within residential areas, centres and activity nodes, along principal approach routes and in the interface between public and private spaces (including shared spaces and spaces around buildings).	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning.

33	Subdivision and detailed planning will maximise solar access, while responding to topographic and planning constraints.	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning.
34	Road and other transport links will provide for high levels of accessibility to areas within Molonglo and North Weston and to surrounding areas. This will be achieved partly through links to the existing arterial road network through, and surrounding, the development.	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning.
4.7 Transport Principles		
35	Current and projected traffic flows in adjacent arterial roads will be considered in the design of the road network for Molonglo and North Weston.	A traffic impact assessment has been completed as part of the design. Traffic volumes were sourced from the SMEC 'Molonglo Revised' EMME model (January 2013).
5.1 General		
36	Urban development will be generally in accordance with the zones applying to the future urban area shown on the Territory Plan map.	Not Applicable
37	The local neighbourhood is to be generally based on a walkable radius of around 400 metres from an activity node such as a park, bus stop, shops, community facility or school.	Not Applicable
5.2 Concept Plans		
38	Concept plans (which are deemed to be precinct codes under the <i>Planning and Development Act 2007</i>) may be prepared where alternative provisions to the relevant development codes are proposed. Such matters as higher development densities, increased building heights, and contemporary best practice for energy efficiency, water efficiency and solar access, could be included.	Not Applicable
5.3 Environmental Protection		
39	Development is to be generally contained to the west of the ridge that separates Molonglo and North Weston from the Tuggeranong Parkway and Lake Burley Griffin to ensure that it does not visually adversely impact Central National Area (i.e. central Canberra as identified by the National Capital Plan)	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning.

40	Important hills and ridgelines which form the skyline of the Central National Area are to be generally excluded from development. These include the east side of the main ridgeline to the west of Tuggeranong Parkway (generally from Dairy Farmers Hill to the Molonglo River).	The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning and does not impact any important hills or ridgelines.
41	Major roads will be located on less steep land. Where appropriate, the width of the road reservation is to allow for the retention or establishment of large trees to visually reinforce the major route as seen from distant vantage points.	<p>The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning and has been largely fixed by the location of the intersection with Stage 1 of the East West Arterial.</p> <p>The design of the East West Arterial and Molonglo 2 Group Centre Bulk Earthworks Stage 1 has been developed with the intent to minimise impact on existing trees and vegetation. Refer to Section 2.6 for a detailed discussion of the tree removals associated with the project.</p> <p>The East West Arterial includes trees within both verges and the median. Refer to Section 2.5.9 for further details.</p>
42	Leading practice bushfire risk management is to be implemented in all stages of planning (including concept plans and/or estate development plans) in accordance with the Territory’s Strategic Bushfire Management Plan.	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
43	The staging of development is to be undertaken in a manner that minimises bushfire risk to residents and accords with bushfire mitigation measures.	The contractor will be required to include a Construction Environmental Management Plan (CEMP) prior to the commencement of works.
44	Areas with high conservation value will be protected from development where possible, and the impact of adjacent urban development minimised through suitable mechanisms including the provision of appropriate buffers.	<p>The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to Drawings C13107-P800+ and C13107-P801+.</p> <p>The proposed works are clear of any areas of environmental significance. Refer to Drawing C13107-P850+.</p>
45	A wildlife corridor with associated high value woodlands and grasslands will be provided from the Belconnen Hills to the slopes of Mount Stromlo generally through [REDACTED]	Not Applicable
46	Buffers for bushfire protection, and to manage urban edge-effects, are to be provided between the identified ‘Kama Nature Reserve’ and urban development to the east, pending further assessment. The extent of any buffer is to be clearly identified in the relevant future concept plans. Any	Not Applicable

	buffer implemented is to be located outside the boundaries of 'Kama' (Block 1419 District of Belconnen).	
47	The lower Molonglo River gorge and Murrumbidgee River corridor are to be managed to protect bird habitats, and high value woodlands and grasslands.	Not Applicable. The proposed works are outside of the Molonglo River Corridor (NUZ4).
48	In subdivision design, larger lots will generally be situated on steeper/constrained land to appropriately respond to the topography and minimise cut and fill and maximise tree retention.	Not Applicable This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning.
49	Upward light spill from East Molonglo will be minimised by: (a) planting dense evergreen trees between the Mount Stromlo Observatory and urban areas (b) minimising reflective ground surfaces (c) applying the relevant Australian Standards such as AS/NZS 1158 (Road Lighting), AS 4282 (Obtrusive Effects of Outdoor Lighting), and AS 2560 (Sports Lighting) (d) applying light-sensitive practices to sportsgrounds including the use of cutoff lighting and limiting hours of operation (e) minimising light spill from outdoor lighting systems, including advertising structures	a) This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any dense evergreen trees. b) This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. c) Lighting has been provided for the East West Arterial Road and Pedestrian Paths. The street lighting design meets the requirements of TaMS Design Standards 12 and 14 and Categories V3(Roads), and P1X(Pedestrian Crossings) in accordance with AS/NZS 1158 – Lighting for roads and public spaces. Refer to Section 2.4.7 and Drawings CR131454-E01, to CR131454-E05 for details. d/e) This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any sportsgrounds or outdoor lighting systems.
50	Contamination and heritage assessments must be undertaken for new suburbs prior to, or during, the concept planning stage. If the concept plans have already been prepared (such as in the case of Coombs, Wright and North Weston), such studies will be undertaken concurrently with the estate development plan stage.	The proposed road corridor and work areas are within a previously surveyed area and confirmed clear of the known heritage sites. Refer to Drawings C13107-P800+ and C13107-P801+. A Phase 1 Environmental Site Assessment within the area of works was undertaken by AECOM in 2012. A Phase 2 Environmental Site Assessment was also undertaken by AECOM which focused on areas of environmental concern identified in the Phase 1 ESA. Refer to Appendix I for a copy of the Phase 2 ESA
51	A Heritage Management Plan must be undertaken for the Weetangera Cemetery prior to the development front reaching this area.	Not Applicable

5.4 Residential

52	<p>52. Zones will be allocated in a variation to the Territory Plan under s96 of the <i>Planning and Development Act 2007</i> in accordance with the following principles:</p> <p>(a) Suburban scale housing is to be the dominant housing type. page 8 14.10 Structure Plan Molonglo and North Weston Effective: 7 May 2010 I2008-27 Authorised by the ACT Parliamentary Counsel—also accessible at www.legislation.act.gov.au</p> <p>(b) Small-scale community and commercial uses may be allowed within residential areas, outside of local centres, in order to meet local needs (eg. child care centres, health facility, community activity centre).</p> <p>(c) Medium density housing, which may include a higher built form is to be located on land near major transport routes, commercial centres, at activity nodes, and in locations with higher amenity such as near the proposed pond on Weston Creek, adjacent to the Molonglo River Corridor, and other substantial public open spaces.</p> <p>(d) Residential mixed use (ie. residential and commercial or residential and community facilities) to be located near the major and minor group centres, and in areas with high amenity.</p>	<p>a/b/c/d)</p> <p>Not Applicable. This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any residential area. The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning.</p>
53	<p>Precinct codes will be assessed by the Authority against any relevant Government affordable housing policies or strategies.</p>	<p>Not Applicable</p>
54	<p>Noise abatement measures will be incorporated into the design of residential buildings along major roads and adjacent to other substantial noise sources, where appropriate.</p>	<p>A noise assessment was completed by UNSW @ ADFA as part of the East West Arterial Stage 2 Design. Refer to Section 2.3.15 and Appendix M for details.</p>
55	<p>Opportunities for special dwellings and supportive housing are to be provided.</p>	<p>Not Applicable</p>
56	<p>Appropriate landscape buffers will be provided to screen urban development adjacent to the Tuggeranong Parkway and sections of Cotter Road, Uriarra Road, and William Hovell Drive.</p>	<p>Not Applicable</p>
<p>5.5 Broadacre</p>		
57	<p>Broadacre land use zone applies to West Molonglo.</p>	<p>Not Applicable</p>

5.6 Commercial		
58	Residential development up to 6 storeys is permitted at commercial centres.	Not Applicable
5.7 Open space and recreation		
59	The provision of open space for active recreation will generally accord with the relevant Territory guidelines.	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any open space or recreation areas.
60	Strong recreational links are to be facilitated in Molonglo and North Weston from Lake Burley Griffin to the Molonglo River, and between Stromlo Forest Park and the Canberra International Arboretum and Gardens.	Not Applicable
61	Playing fields, ovals and district parks will, where possible, be located on flatter land, accessible to movement systems, and possibly co-located with schools. They will be edged by a local street and provide parking where practicable on edge streets to avoid large surface car parks.	Not Applicable
62	Land with suitable topographic characteristics is to be reserved for 2 district level playing fields in East Molonglo: one on the southern side of the river preferably adjacent to land set aside for a government high school, and another on the northern side.	Not Applicable
63	Land with suitable topographic characteristics adjacent to nominated school sites is to be reserved for neighbourhood playing fields, except where district playing fields are already identified adjacent to the school sites.	Not Applicable
64	Opportunities are to be explored at the concept plan stage for restricted access recreation sites eg. enclosed ovals and special use sporting clubs.	Not Applicable
65	Local parks will be located generally within 200m of all residents. Local parks will incorporate remnant tree stands where possible, and will generally be edged by streets, not back or side fences.	Not Applicable
66	Major passive open space areas are to be provided in conjunction with significant drainage lines, lake side reserves, together with prominent hills including Misery Hill and the smaller hill to its south east, and will generally be edged by streets, not back or side fences.	Not Applicable
67	That part of the National Bicentennial Trail between Uriarra Road in the west to the concrete causeway over the Molonglo River in the east will be relaxed	Not Applicable

	by a suitably located mixed use off-road trail, linking Stromlo Forest Park and the Canberra International Arboretum and Gardens.	
68	Bridle trails are to be incorporated into the development where required. Where provided, mixed use trails will link to existing equestrian facilities including the National Bicentennial Trail, the Pegasus Disabled Riding School, Forest Park Riding School, the public Equestrian Park in Yarralumla, pony clubs and agistment facilities. The trails will also connect to recreation trails in Canberra International Arboretum and Gardens and Stromlo Forest Park.	Not Applicable
5.8 Community Facilities		
69	Where appropriate, group and local centres and activity nodes are to provide sites for community facilities.	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure and does not include any community facilities.
70	Sites will be allocated for at least five government schools. They will be sited on land with suitable topography, in locations that minimise the length of trips to and from school.	Not Applicable
71	Other community facilities sites, including sites for non-government schools, community centres and the like may be allocated within or adjacent to residential land.	Not Applicable
5.9 Stormwater management		
72	A stormwater management strategy will be adopted to control stormwater runoff from the Molonglo and North Weston urban development. This strategy will also seek to improve the water quality of Woden and Weston Creek where possible.	The stormwater network for Stage 2 of the East West Arterial has been designed in accordance with the Molonglo 2 Stormwater Master Plan prepared by Indesco. Whilst no specific WSUD treatments have been incorporated into the Stage 2 design, in accordance with the master plan, stormwater flows are proposed to be conveyed to the proposed Craven’s Creek Pond to the north-west of the East West Arterial where they will be treated as required by the WaterWays General Code.
73	A pond on Weston Creek (located between the Cotter Road and the Molonglo River) is to be provided within the urban open space zone. The pond will treat stormwater run-off from the existing Weston Creek district (including North Weston) and a small part of the Molonglo urban development.	Not Applicable
74	The Weston Creek pond will be suitably landscaped to provide a high amenity and passive recreation feature.	Not Applicable

5.10 Traffic management		
75	The north-south Molonglo arterial is to connect Coulter Drive and/or Bindubi Street in the north and to Cotter Road in the south. The road will also form part of a major public transport route for the city.	Not Applicable
76	An east-west arterial road is to connect the Molonglo arterial road at the proposed group centre to the Tuggeranong Parkway.	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning.
77	An interconnected (generally grid-based) street system is to be provided which facilitates a choice of routes and legible way-finding.	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning.
78	The road network is to be appropriately landscaped, consistent with its function and character.	Landscaping measures will be restricted to grassing within the verges and shrub bed planting in batters Refer to Section 2.5.9 and Drawing 1321 LC01 to 1321 – LC06 details.
79	The north-south and east-west arterials are to be generally designed as urban boulevards, with service streets and address frontages. Regular cross-streets are to be provided, consistent with traffic safety and efficiency, to minimise the effect of the arterials as a barriers between neighbourhoods.	This proposal is only for the construction of the second stage of the East West Arterial Road and associated infrastructure. The location and alignment of the East West Arterial Stage 2 is in accordance with the Molonglo Master planning.
5.11 Transport		
80	Shared paths (bicycle/pedestrian) will provide access to key features within Molonglo and North Weston including the river corridor, group centre and small group centre, local centres, Stromlo Forest Park and the Canberra International Arboretum and Gardens, generally in accordance with Figure 2 . The paths will also connect to existing shared paths that link Molonglo with the City and the districts of Belconnen, Weston Creek and Woden Valley.	Provision for on road cyclists has been incorporated into the design via a 2.0m wide on road cycle lane and provision for pedestrians via a shared path in each verge of the East West Arterial. Refer to Drawing C13107 – P101, C13107 – P102 and C13107 – P103 for details.

4.6 Molonglo Valley 2 – Important Planning Requirements (IPR)

A review of the IPR specifically in relation to the planning requirements of the major arterial and collector roads has been carried out. Roads 3 and 4 will be a part of the collector road network that will “provide pedestrian and cycle connections to major destinations”. The final alignment of the side roads is largely in keeping with the locations shown by the IPR.

The IPR states the requirement for proposed Developments to meet the standards for pedestrian, cyclists and buses. The intersection designs have incorporated provision for on road cycling and have been designed so that they are capable of carrying buses.

The locations of the intersections are clear of natural and heritage features identified in the IPR.

4.7 Estate Development Code

The alignments of Roads 3, 4 and 5 have been designed in accordance with the Molonglo 2 Group Centre and Environ Master Plan. The road profiles have been designed generally in accordance with the Estate Development Code and Subdivision Code to consider road, lane and verge widths.

5. Opinion of Cost

The estimated construction costs for the East West Arterial Stage 2 and Molonglo 2 Group Centre Bulk Earthworks Stage 1 within TaMS designated land would be in the order of \$19,900,000 P90 estimate excluding GST.

Refer to **Appendix F** for the break down.

6. Conclusion

We expect that this document provides necessary and adequate information on this proposed development and demonstrates that the development application requirements under the Territory Plan and Form 1D are satisfied. It is intended that, by providing the above information, the intent and impacts of the proposed Stage 2 of the East West Arterial are made clear and it helps make the Development Application assessment process transparent and uncomplicated.

BROWN



Appendices

Appendix A Letter of Appointment

Appendix B S211 Exemption Acceptance Letter

Appendix C Approval of NES Plan

Appendix D Roads ACT Correspondence

Appendix E Value Management Workshop Report

Appendix F Opinion of Cost

Appendix G Service Authority Correspondence

Appendix H PRV Correspondence

Appendix I Environmental Site Assessments and Correspondence

Appendix J BRU01 Stockpile Information

Appendix K Molonglo 2 Tree Assessments and Correspondence

Appendix L Heritage Studies

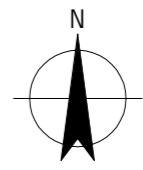
Appendix M Noise Report

Appendix N Survey Master Plan

Appendix O Waste Management Plan

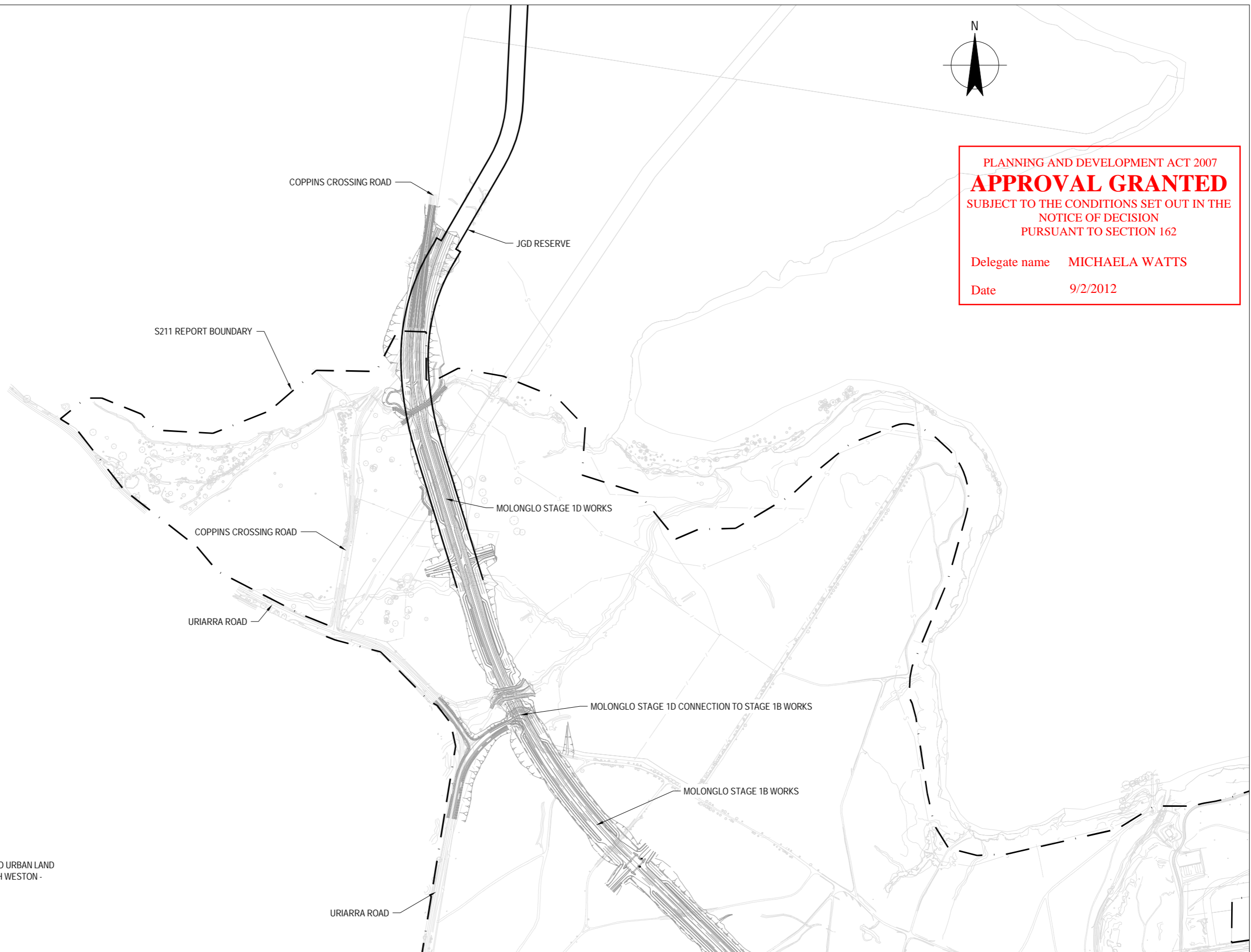
Appendix P DA Completeness Check Responses

Appendix P DA Request for Further information responses

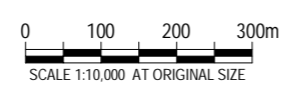


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 PURSUANT TO SECTION 162

Delegate name MICHAELA WATTS
 Date 9/2/2012



NOTE:
 EIS SCOPING & S211 CONSIDERATION, MOLONGLO URBAN LAND
 DEVELOPMENT AND ASSOICATED WORKS (NORTH WESTON -
 WRIGHT - COOMBS DATED JULY 2009)



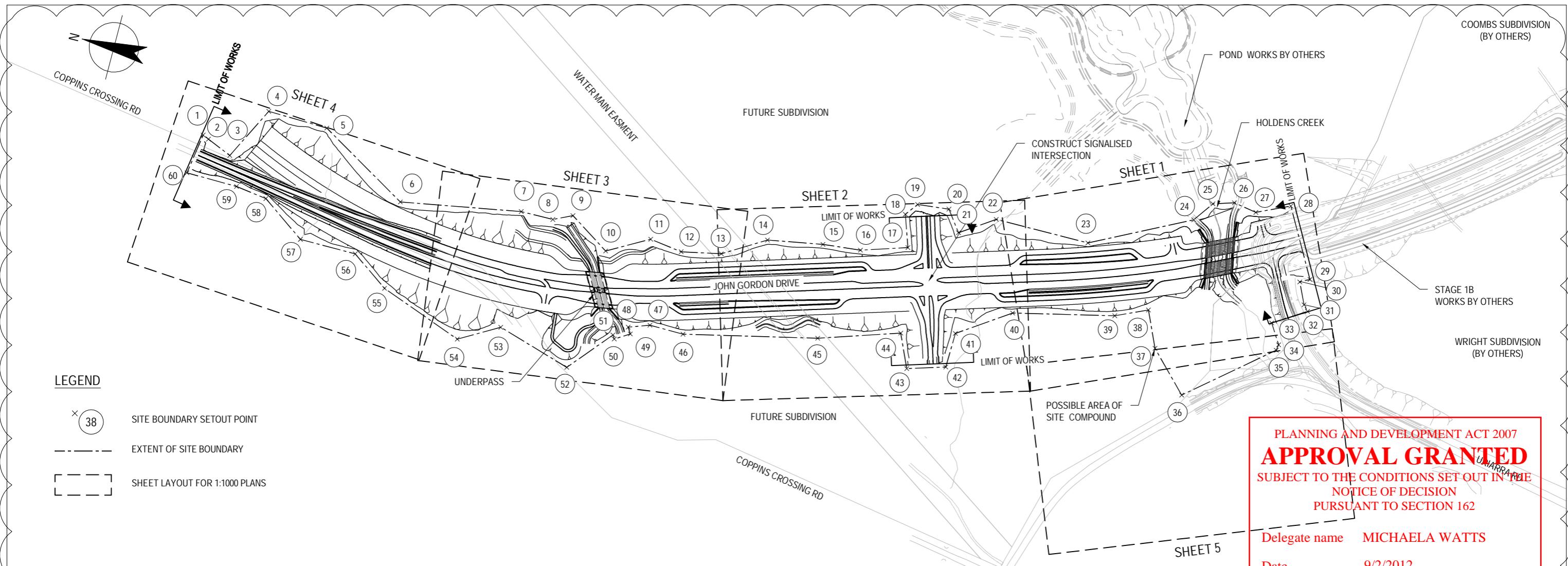
GHD CLIENTS | PEOPLE | PERFORMANCE

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		Approved (Project Director) C.KAZAROFF*	Date 24.01.12
		Scale 1:10000	This Drawing must not be used for Construction unless signed as Approved

Client	PROCUREMENT SOLUTIONS
Project	MOLONGLO INFRASTRUCTURE - STAGE 1D
Title	S211 REPORT BOUNDARY PLAN
Original Size	A3
Drawing No:	23-12739-C7500
Rev:	A

A FOR INFORMATION					GD	ML*	CK*	24.01.12
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date		



SITE BOUNDARY SETOUT POINTS

POINT	EASTING	NORTHING
1	201924.258	601362.283
2	201920.932	601354.390
3	201907.540	601322.618
4	201975.242	601288.485
5	201973.395	601210.906
6	201905.578	601095.342
7	201933.179	600941.844
8	201933.710	600899.954
9	201945.115	600876.196
10	201911.764	600823.970
11	201941.189	600771.829
12	201935.529	600729.837
13	201946.159	600679.304
14	201978.366	600626.377
15	201991.104	600556.000

POINT	EASTING	NORTHING
16	201996.184	600507.506
17	202014.901	600449.322
18	202055.456	600463.369
19	202071.661	600451.372
20	202076.159	600410.854
21	202049.958	600391.278
22	202078.868	600348.753
23	202079.648	600227.051
24	202143.051	600102.949
25	202169.161	600084.430
26	202177.541	600057.945
27	202172.578	600028.259
28	202191.925	599986.761
29	202106.866	599939.035
30	202100.480	599950.840

POINT	EASTING	NORTHING
31	202073.399	599938.066
32	202066.350	599931.585
33	202040.272	599972.390
34	202015.289	599956.552
35	202007.845	599957.700
36	201921.109	600060.679
37	201970.475	600109.113
38	202015.999	600129.790
39	201997.827	600169.801
40	201967.824	600297.664
41	201923.662	600362.162
42	201878.742	600363.141
43	201864.066	600411.129
44	201906.196	600430.267
45	201872.642	600531.774

POINT	EASTING	NORTHING
46	201833.639	600700.616
47	201833.964	600744.702
48	201824.442	600771.060
49	201816.673	600766.136
50	201805.070	600784.442
51	201809.763	600787.416
52	201754.322	600834.241
53	201782.612	600929.403
54	201753.563	600979.595
55	201792.957	601086.630
56	201826.236	601134.359
57	201826.328	601207.189
58	201865.772	601263.558
59	201871.242	601304.011
60	201871.945	601370.137

SUPPLEMENTARY DRAWINGS

A. ACT GOVERNMENT DESIGN STANDARDS FOR URBAN INFRASTRUCTURE

DS1 STORMWATER
 SUMP INLETS ON KERBS AND GUTTERS
 TYPE R AND QS SUMPS
 PLANTATION AND GRATED SUMPS
 1050 ND MANHOLES
 SPECIAL CHAMBERED MANHOLES
 STRUCTURES - MISCELLANEOUS DETAILS
 PIPE CONNECTIONS TO STRUCTURES
 PIPE CULVERTS 300 - 675 DIA - ENDWALLS
 PIPE CULVERTS 750 - 1200 DIA - HEADWALLS

ST-001
 ST-002
 ST-003
 ST-004
 ST-005
 ST-007
 ST-008
 ST-0021
 ST-0022

DS3 ROAD DESIGN
 KERB AND GUTTER STANDARD DETAILS SHEET 1
 KERB AND GUTTER STANDARD DETAILS SHEET 1

DS3-01
 DS3-02

DS4 ROAD VERGES
 SERVICE MODULES SHEET 1 OF 2
 SERVICE MODULES SHEET 2 OF 2

DS4 - 01
 DS4 - 02

DS6 PAVEMENT DESIGN
 SUBSOIL DRAINAGE STANDARD DETAILS SHEET 1
 SUBSOIL DRAINAGE STANDARD DETAILS SHEET 2

DS6 - 01
 DS6 - 02

DS7 BRIDGES AND ASSOCIATED STRUCTURES
 GRAVITY RETAINING WALLS - STONE AND CLAY BRICK
 RETAINING WALLS GENERAL NOTES
 BRIDGE IDENTIFICATION PLATE

DS7 - 01
 DS7 - 04
 DS7 - 05

DS11 FENCES, GUARDRAILS AND BARRIERS
 PATH STANDARD DETAILS

DS13 - 01

B. N.S.W. ROADS TRAFFIC AUTHORITY
 RTA MODEL DRAWING

CONCRETE HEADWALLS SINGLE CELL 300MM TO 900MM DIA.
 WITH ROCK MATTRESS PROTECTION (2 OF 1 BATTER OR STEEPER) MD.R11.A03.A.2
 CONCRETE HEADWALLS DOUBLE CELL 1050MM TO 1800MM DIA. MD.R11.A07.A
 WITH ROCK MATTRESS PROTECTION (2 OF 1 BATTER OR STEEPER)
 DEPRESSED MEDIAN GULLY PITS MD.R11.B30.A1
 ED4 - TYPE A (RIPRAP) ENERGY DISSIPATOR SHEET 1 MD.R11.D03.A
 ED4 - TYPE A (RIPRAP) ENERGY DISSIPATOR SHEET 2 MD.R11.D03.A
 MODIFIED ECCENTRIC LOADER TERMINAL (MELT) GENERAL ARRANGEMENT MD.R132.G01.B
 W BEAM CONNECTION TO TYPE F BARRIER OR PARAPET ON CONCRETE BRIDGES MD.R132.H01.B
 TYPE 'F' CONCRETE SAFETY BARRIER TRANSITION TO TYPE 'SF' AND TYPE 'SA' MD.R132.H03.A.1
 KERB AND GUTTER

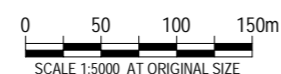
GENERAL NOTES

- LEVEL DATUM : AHD
- SURVEY GRID : ACT GRID
- SURVEY SUPPLIED BY LANDATA SURVEYS
- REFER LANDSCAPING DRAWINGS FOR TOPSOIL AND VEGETATION REQUIREMENTS
- PUBLIC UTILITY SERVICES MAY EXIST ON OR ADJACENT TO THE SITE OF WORKS. THESE SERVICES MAY NOT BE SITUATED WITHIN REGISTERED EASEMENTS OR WITHIN STANDARD FOOTPATH ALLOCATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO IDENTIFY THE LOCATION OF ALL SERVICES PRIOR TO CONSTRUCTION WORKS AND TO AVOID DISTURBANCE OF THESE SERVICES

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 Date 9/2/2012

PRELIMINARY

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
C	SCOPE OF WORKS UPDATED (DA)		DP	ML*	CK*	26.08.11
B	REVISED DRAWINGS		MPQ	CK*	PT*	18.08.11
A	FSP ISSUE		TM	ML*	GV*	04.05.11

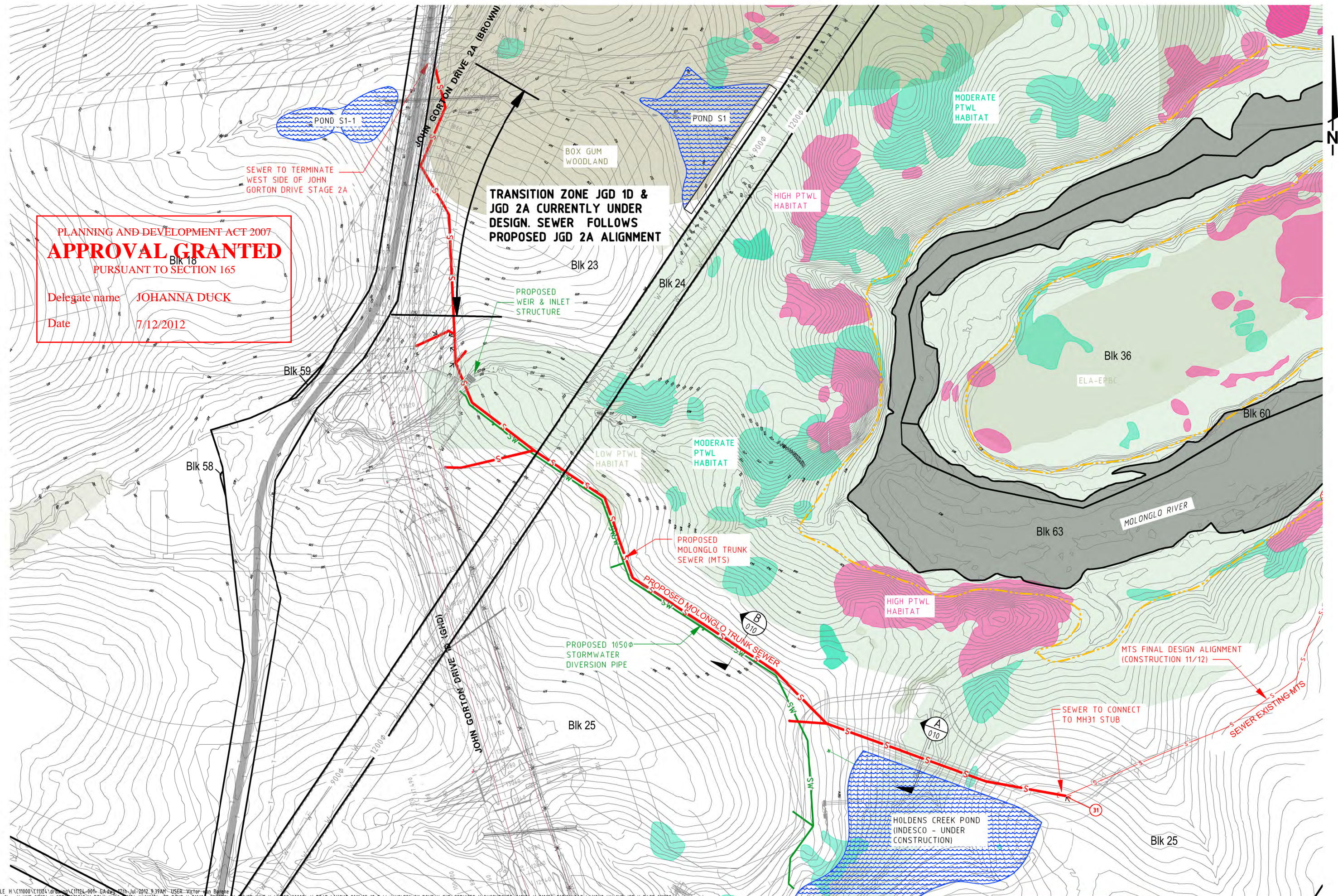


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SCOPE OF WORKS		Title
Drawing No: 23-12739-C7003		Original Size
Rev: C		A3

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 Delegate name JOHANNA DUCK
 Date 7/12/2012

TRANSITION ZONE JGD 1D & JGD 2A CURRENTLY UNDER DESIGN. SEWER FOLLOWS PROPOSED JGD 2A ALIGNMENT



FILE: H:\C11000\C11024\Drawings\C11024-001-GA.dwg 11-Jul-2012 9:39AM USER: Victor van Borene
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REV	DATE	BY	CHKD	APP'D	DESCRIPTION
A	05/03/12	KRC	JL		REALIGNMENT
B	19/06/12	JB	JL		ADD BLOCK NUMBER
C	17/07/12	VVB	JL		
D					
E					
F					

AMENDMENT	DATE	BY	CHKD	APP'D	DESCRIPTION

NAE No.	
PROJECT No.	

SCALE (METRES)
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 CONSULT AUSTRALIA

ACT Government Treasury
 PROJECT: MOLONGLO TRUNK SEWER & STORMWATER DIVERSION
 BLOCKS 23, 24 & 25 MOLONGLO VALLEY

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DRAWING TITLE: GENERAL ARRANGEMENT
 DRAWING NUMBER: C11024-001+
 AMEND: B