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Design Intentions Report



**YARRALUMLA BRICKWORKS
DESIGN INTENTIONS REPORT**

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1.0 EXECUTIVE SUMMARY

- Doma were selected as the preferred tenderer to develop The Brickworks in April 2017 and signed land sale contracts in September 2019
- Doma's tender included a response to precinct design objectives that this report summarises

2.0 KEY DEVELOPMENT OUTCOMES

The key development outcomes that Doma promised to deliver are:

- a) **Celebration of heritage:** Establishing a viable future use for the Brickworks to ensure its physical conservation and to protect its history;
- b) **Integration with landscape:** Embedding the existing 'garden suburb' landscape character into the design of streets, parklands, public and private space;
- c) **Streets for people:** Making safe movement of pedestrians and cyclists a priority;
- d) **Diversity of housing:** Providing innovative housing types to suit the diversity and needs of a growing Canberra; and
- e) **Environmental sustainability:** Creating unique environmentally sustainable development, homes, streets and open spaces.

3.0 VISION

Doma's vision for the Brickworks Master Plan has been built on the following principles:

1. residential development will not dominate the heritage elements.
2. development planning ensures the site is not dominated by roads and cars.
3. test a range of concepts and potential uses to determine the appropriate scale of the retail and commercial development
4. target residential product to the market that is not enamoured by more urban, noisy and dense traditional residential infill.
5. Brickworks must become known for something unique and "own" its segment in the Canberra market.
6. significant visitation is required seven days a week and throughout the day for the viability of the retail and restaurant components.
7. the site components represent different elements of the industrial process of brick making allowing the story to be told in a subtle yet accessible way.

4.0 HERITAGE

4.1 Built

Doma's highly sympathetic and appropriate heritage strategy considered the endorsed Conservation Management Plan (2010) (the CMP), the Burra Charter and the TICCIH Charter for Industrial Heritage. Doma Group's scheme preserves all the Core Elements identified in the CMP through conservation, restoration, or adaptive re-use. Many Supporting Elements are also retained.

The result is that Doma Group's heritage strategy retains a greater number of Heritage Elements than in the pre-existing CMP. Some retained Heritage Elements will be adapted for reuse as commercial, retail and recreational facilities. Others will be maintained as relics in place - to pay homage to how this site has built the foundations of Canberra

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4.2 Environmental

Doma Group understands the need to integrate the Land's heritage, cultural and geological elements to maintain the connection to the industrial process that took place at the Brickworks. Doma Group's Master Plan sees the Brickworks become the public centrepiece of an open, landscaped park, plaza and pedestrian network that is highly permeable with an abundance of interesting spaces to visit.

The Railway Remnants and Quarry Park are central to this approach and will be publicly accessible parkland. Strong design direction from Doma Group focussed the design team to achieve a unique and distinctive destination that provides for a diversity of activities that the broader community will enjoy.

5.0 RESIDENTIAL DESIGN INTENTIONS

To achieve the key development outcomes of the precinct the following design principles have been recognised and included in Doma's EDP:

- a) A 'Garden Setting' for consistency with Canberra's Garden City Principles – we wanted all the buildings to feel like they were in a park.
- b) A network of communal open spaces, amenities and vegetable gardens convenient to each apartment building cluster. The building footprint and typology is designed to create more green space between buildings.
- c) 'Bricks as the dominant material' – an obvious gesture to the history of the Brickworks. Brick is a warm and enduring material with longevity and association with traditionally lower rise residential dwellings and the origins of Canberra's housing.
- d) Maximise north-facing units and cross ventilation, optimising orientation to catch the sun and breezes consistent with good practice.
- e) Aspect and relationship – encourage varying levels of density in micro pockets around the site as well as respecting the neighbouring properties on the site fringe along Denman Street and the ridge.
- f) Appeal to the target market with a product offering that is unique to Canberra. The Request for Tender restricted the number of dwellings to 380, but allowed the possibility of adding aged care, hotels and the like to increase the density. However, the development proposal exercises restraint and recognises that creating more development than the 380 dwellings may be detrimental.
- g) Minimise the visual impact of cars and service vehicles, through considered design of streets, and parking and servicing strategies.
- h) Minimise the visual impact of roads by delivering a waste collection and visitor parking strategy that reduces the area taken up by roads, coupled with nestling of minor roads in the landscape using the natural contours.
- i) "Topographic Sympathy" that disperses housing amongst the land to suit the contours.
- j) Provide financially viable uses in the heritage elements suited to support their future maintenance.
- k) Strike the optimal balance between creating too much public use with associated vacancies, parking and servicing infrastructure, or too little that the precinct does not achieve a critical mass.
- l) Financial resilience – the success of this project and ongoing management of the Brickworks needs the development and residential offering to be successful.

6.0 COMMERCIAL DESIGN INTENTIONS

There is a strong desire that demand for activities at the Brickworks do not overspill into the existing Yarralumla streets. If activities with too high a demand are created in the Precinct, such as regular markets, it will require significant parking infrastructure to support it or else visitors will spill out into the street. If a great deal of parking infrastructure is required, more expensive parking solutions will be required, giving rise to higher paid parking charges, which again will encourage cars to be parked in the existing Yarralumla streets (given that pedestrian access to the site is easy).

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Consequently, the non-residential activities on the site will be curated so that:

- there is a point of difference with the uses to make them a destination;
- the different uses attract people at different times through the day so that there is a steady stream of people on the site rather than big spikes in visitors. This is important both for the viability of the businesses on site, but also so that there is not a spike in peak parking load that requires significant and expensive infrastructure to be provided;
- non-vehicular users are attracted as much as possible;
- there is a small measure of convenience retail on site, which will also partly serve the immediately surrounding population;
- that the site “owns” a unique space in the marketplace.

Following these principles, the proposed uses and amenities will create the optimal level of activity without requiring excessive infrastructure. These uses are designed to provide all day activation with unique offerings at an optimal scale. Importantly, each of the experiences provided on site will aim to allow for interaction between residents, commercial operators, employees, existing Yarralumla residents as well as visitors from the wider Canberra area.

7.0 SUSTAINABILITY

The Yarralumla Brickworks is targeting 5 Star Greenstar Communities certification. Some specific features include:

- Stormwater management using a man-made lake and bioswale to provide a natural and low-cost mechanism to provide water for irrigation;
- Passive solar;
- Water-sensitive urban design (WSUD);
- Design providing opportunities for natural ventilation and/or mixed mode in certain buildings;
- Use of deciduous trees to provide appropriate shading through varied seasons;
- Building Management System for office component;
- User education and associated induction so that all buildings are properly harnessing their energy efficiency potential;
- Provision for future energy storage solutions;
- Provision for future innovations in downstream selling of renewable energy production;
- Strategic use of native tree and plant species requiring less irrigation and maintenance as against exotic trees and plant species; and
- Use of energy and water efficient fittings and appliances

8.0 SITE SERVICING / UTILITIES

8.1 Water Supply

The following existing water mains have been identified:

- 150mm diameter main in Lane-Pool Place;

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- 100mm diameter main with internal loop throughout the CB precinct;
- 150mm diameter main along NW side of Denman Street; and
- A 150mm diameter main along Dudley Street and Dunrossil drive that extends into the site.

The proposed development water main network will connect to:

- 225mm diameter main upgrade along Dudley Street;
- 100mm diameter service from Denman Street;
- 150mm diameter service in Bentham Street; and
- 150mm diameter service off lane Poole Place.

8.2 Sewer

The following existing sewer mains were identified:

- 150mm diameter main servicing lane Pool Place running out to Molonglo Valley Interceptor Sewer, also known as the Molonglo Outfall Sewer; and
- 100mm sewer tie to site off the 150mm service.

The capacity of the 150mm diameter main has been assessed by Icon Water who has confirmed capacity to meet the demand of the proposed development. A new 150mm service tie is to be provided from the manhole immediately east of block 20 into the site.

The heritage assets block is to be serviced with an individual 150 diameter tie from the sewer manhole off the end of Lane Poole Place in Block 21.

8.3 Gas

The following gas mains were identified:

- 63mm diameter 210kPa gas main located in Bentham Street
- 40mm diameter 210kPa gas main locate in Denham Street.

Jemena has confirmed that the proposed development can be serviced from a new gas main passing through the site, connecting the 63mm diameter main in Bentham Street to the 40mm diameter main in Denman Street.

8.4 Stormwater

The Site is serviced at the north western corner via drainage reserve through the Royal Canberra Golf Course. Within the drainage reserve is a 900mm diameter pipe that increases to 1050mm diameter before discharging into Lake Burley Griffin.

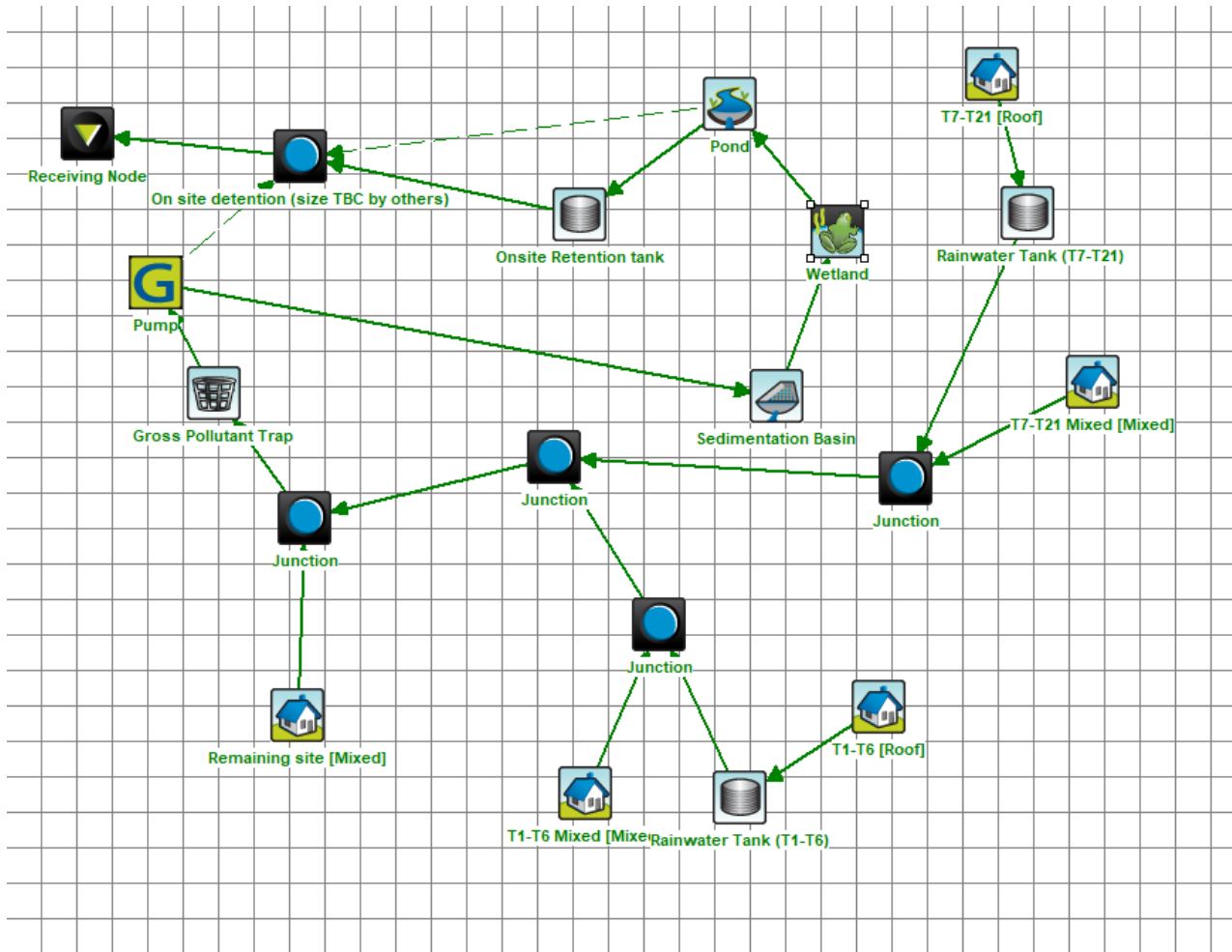
A 450mm diameter main services Lane Pool Place and feeds into this system via a 600mm diameter main

Water Sensitive Urban Design, including the proposed bioswale and pond, is being implemented throughout the development site. This design is to meet the targets referenced in The Territory Plan and Waterways: Water Sensitive Urban Design Code.

Alluvium Consulting, our specialist water resource consultant, have undertaken a detailed Model for Urban Stormwater Improvement Conceptualisation (MUSIC). The MUSIC model has confirmed that the site catchment provides adequate capacity to irrigate all required areas and that water residence times within the pond are such that stagnant water and algal blooms will not occur. This model provides the Territory with

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confidence that our pond concept is well-considered and that the precinct landscape can be maintained to a high quality in to the future. All surplus stormwater will be drained to the north-western corner, discharging to the 900 diameter main passing through the golf course discharging into the lake.



A permissible site discharge of 2500 L/s is to be applied to the site through the proposed WSUD measures to ensure capacity of the downstream main is not exceeded during the minor storm event.

The pond will be predominantly formed within the existing quarry excavation.

Surface drainage from all impermeable surfaces across the entire site will be captured and treated within this proposed stormwater system.

8.5 Electrical Services

An existing 11kV High Voltage (HV) overhead line originates from the Woolls St / Denman St intersection and connects to the existing Brickworks building for incoming power supply to the site. This overhead line inside the site property boundary to the Brickworks building will be disconnected and removed. A new 11kV HV will be placed underground to suit the new roadway within this section of the site. A service easement will be provided along the entire length of the route between Denman St and Dudley St through the site.

For the proposed new development, it is expected that the supply authority will provide a new underground HV supply originating from supply authority pole 6296 at the Woolls St / Denman St Intersection, with a new ACTEWAGL HV switching station located at the site development boundary.

A pad mounted kiosk substation will be located within each of the site residential areas, as required, with each residential unit located at a maximum of 250m from a substation. Each unit will be provided with an underground electrical service pit located at the property boundary between two units. For multi dwelling units a link pillar will be provided at the property boundary for incoming electrical services.

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A dedicated substation will be provided to service the heritage core area.

A single 125mm diameter heavy duty (HD) PVC underground conduit will be installed in the street for low voltage (LV) infrastructure services and a 1 x 50mm diameter HD PVC underground conduit for street lighting. The main HV backbone will generally require 2 x 125mm diameter HD PVC underground electrical conduits and 1 x 63mm diameter HD PVC underground communications conduit.

The supply authority HV substations will be configured in a daisy chain arrangement and connected in a ring configuration back to the HV supply network for redundancy.

8.6 Driveways / Access

The development proposal has a primary access road off Dudley Street. The access road is to be designed as a major collector in accordance with the Estate Development Code with some modification proposed to facilitate a central landscaped median, which will be subject to detailed design review with TCCS.

In response to requests from TCCS, a secondary connection is proposed to Denman Street to facilitate traffic distribution and provide alternate emergency access/ egress. Cross connection through the site will be available to emergency vehicles only and general traffic will not be able to drive between the primary and secondary access points

For individual residential blocks along the ridge overlooking the pond, a cul-de-sac is proposed off both Bentham Street and Denman Street. These cul-de-sacs terminate prior to reaching the furthest blocks at which point a Woonerf lane extends to service them. The cul-de-sacs and Woonerf lane are to be assets handed back to the Territory.

In addition to this, individual driveway access provisions for five individual dwelling lots are proposed along the frontage of Bentham Street, and individual dwelling lots along Denman Street.

8.7 Waste Management

A design objective for this development is to promote a pedestrian friendly environment with a high degree of amenity to both residents and visitors alike.

To assist with promoting this objective it is proposed to minimise the need for waste collection vehicles to traverse through the site. This will be achieved through the creation of waste transfer stations where residential waste will be transported by the estate manager for collection to a central waste point.

Commercial waste from the heritage assets will be collected via private contractors accessing the commercial service lane at the rear of the kilns.

The waste transfer stations are to be designed to meet the requirements of Development Control Code for Best Practice Waste Management in the ACT.

9.0 TRAFFIC IMPACT

The indicative development yield includes a mix of low and medium density residential uses, retail, office and business agency uses. Primary vehicle access to the site is proposed via an access point to Dudley Street to the south of the site with secondary access from Denman Street and Bentham Street. The access points will be configured to allow emergency vehicles a cross connection through the site but will be designed to prevent general traffic traversing the precinct. The proposal will maintain the heritage components of the existing brickworks site, including the brickworks itself and the remnant railway.

10.0 BUSHFIRE

Doma's Master Plan has been developed in line with the recommendations of the ABPP Bushfire Risk Assessment. Specifically;

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- We will implement a Bushfire Operations Plan for each individual construction stage in the development.
- Our internal road network will be designed & constructed to cater for ACT Fire & Rescue heavy vehicles.
- All buildings located within 100m of unmanaged bushfire prone vegetation will be constructed to the BAL 12.5 standards of AS3959.
- Hydrants will be provided in accordance with the National Construction Code and all relevant standards.
- Dudley Street and Dunrossil Drive act as the mandatory edge roads for the development.

The existing poor-quality Pinus Radiata trees and understorey of dense weeds to the west and southwest of the existing brickworks buildings will be removed in line with the tree assessment report. The area will be landscaped and managed as 'parkland' and as such there is no Inner Asset Protection Zone required to this area.

We have received preliminary advice that the current management of the land adjoining the south-western and southern boundaries of the site, in accordance with the National Capital and TCCS Bushfire Operations Plans, satisfies the requirement for an Inner Asset Protection Zone. Subject to receiving advice to the contrary, we have assumed that the management of this zone by the Territory or a third party will continue in perpetuity.

We have maintained a 10m wide Inner Asset Protection Zone to the south-eastern aspect of the development. We understand this land may be sold and developed in the future so do not believe setting this boundary up as an urban edge is the correct outcome for the site or suburb. Please note that the Bushfire Report is currently in concept stage for discussion.