

Bulimba Barracks Master Plan



Dedicated to a better Brisbane



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Brisbane City Council is leading the development of the Bulimba Barracks Master Plan together with the Queensland Government. As part of this project Council engaged the services of the following consultants:

Buckley Vann	Town Planning and Project management
Deicke Richards	Urban Design
McGregor Coxall	Public Realm and Open Space
Cambay Consulting	Traffic and Transport
Bligh Tanner	Engineering Services

Disclaimer

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View inside the fabrication workshop



Introduction

This master plan document describes the vision and principles which will guide future development and community use within this important riverfront site.



View of the Bulimba Barracks Master Plan site from Portside, with Brisbane's City Centre in the background



Existing fabrication workshop building on site

The Bulimba Barracks represents an eastern gateway to the river's edge and symbolises the continuing evolution of Brisbane's inner city, as former defence activities relocate to other areas.

Project Drivers and Purpose

Following the announcement of the Australian Government Department of Defence (DoD) to sell the majority of the Bulimba Barracks site at Apollo Road, Bulimba, Brisbane City Council, together with the Queensland Government, initiated a master planning process to facilitate a development of the site that reflects the outcomes of the Bulimba District Neighbourhood Plan.

The master plan project was launched in mid-August 2015 with an intensive community engagement phase which included a community survey and the formation of a Community Planning Team (CPT). The master plan has been highly collaborative – feedback from community surveys, the CPT design workshop and Council's technical input have all directly contributed to its design. The community survey results used in this document incorporate all the hardcopy and electronic responses received.

The objectives of the master planning process were to:

- Provide clear guidance to prospective purchasers and developers of the site, reflecting the expectations of Queensland Government, Council and the community
- Build on the principles set out in the Bulimba District Neighbourhood Plan
- Capture and reflect community expectations and translate these ideas into a master plan for the site
- Deliver a master plan which includes more detailed development and infrastructure guidance to achieve the overall outcomes of the neighbourhood plan
- Provide a non-statutory framework in which to guide the redevelopment of the site through the development assessment process
- Inform any subsequent infrastructure requirements generated from future development of the site (e.g. including parkland, transport and traffic and community facilities).

Bulimba District Neighbourhood Plan principles

The future possible redevelopment of the site has been anticipated by Council, and the Brisbane City Plan 2014 already expresses a clear set of strategic outcomes (via the Strategic Framework) and more specific outcomes through the Bulimba District Neighbourhood Plan, including:

- Retention of the existing operational facilities of and access to the Royal Australian Navy South Queensland Headquarters and conservation of significant heritage and character buildings and features of intrinsic historic value that reflect the previous use of the site as a defence base.
- An appropriate mix of uses, housing types and densities, including affordable housing.
- Sensitive integration of built form with surrounding residential areas.
- Retention of significant vegetation.
- Improved access to essential facilities and community services.
- Provision of new infrastructure that meets the needs of the community with infrastructure contributions which are consistent with the Priority Infrastructure Plan.
- Generous public parkland and land based riverwalk along the entire Brisbane River frontage of the site, including a safe and attractive pedestrian and bikeway network that integrates with the wider district.
- A passenger set-down area and community meeting space adjacent to the Apollo Road ferry terminal with provision for off street car parking.
- A permeable street network, including footpaths that reflects the grid pattern of surrounding established residential areas and maximises access to and use of public transport.

Context and Opportunities



Bulimba Barracks Site (shown in white)

The Bulimba Barracks site occupies an extensive north-facing site overlooking the Brisbane River immediately opposite the emerging Portside development at Hamilton Northshore.

The site forms a large pocket of land on the northern edge of Bulimba, 4.6km north east of Brisbane's City Centre. The Australia Trade Coast industrial precinct sits to the east with Balmoral to the south and the balance of the Bulimba suburb to the west. To the east the DoD intends to retain part of the site for Navy Headquarters including a Naval Cadets facility. This landholding will prevent access to the balance of the site from Taylor Street.

To provide context, the key issues are described in the following paragraphs and graphically on the plan opposite.

Adjoining Uses

Almost exclusively single detached dwellings of low scale and low density directly adjoin the site. A strip of land west of the site, fronting the Brisbane River along Byron Street, is zoned low-medium density residential (up to 3 storeys) and includes an existing development approval for a 3-5 storey residential development. Land on the southern side of Apollo Road and Lytton Road is zoned low-medium density residential (2 or 3 storey mix) and includes a mix of detached housing and 2-3 storey unit complexes. Tugulawa Park is located south of the site and immediately adjacent to the main entrance of the army barracks fronting Apollo Road.

City Plan

The Brisbane City Plan 2014 identifies the suburb of Bulimba within the Suburban Living Area, which is intended to provide local housing choice (in the form of a mix of detached housing and some low rise apartments and other housing forms) that encourage and support a range of households and lifecycle needs. These areas can also accommodate a range of non-residential land uses that generally support the needs of the surrounding residential area.

Site History

The site has an extensive history dating from the 1880s when the Apollo Candle Works was established on the site. In the 1940s the site was given over to the US Military to establish a Barge Assembly Depot, which included the construction of repair sheds, warehouses, fabrication workshops and administration buildings. The largest of these buildings is one of the fabrication workshops located in the north-west corner of the site toward the Apollo Road frontage. This facility was used to construct timber barges.

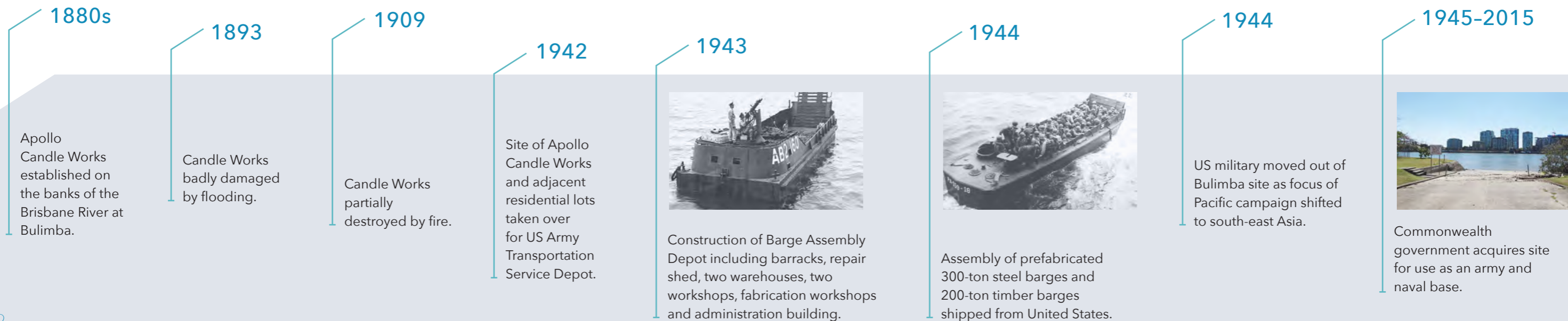
Flooding and Stormwater

The site is relatively low lying. The majority of the site varies in level between about 2m and 3m Australian Height Datum and will require some flood immunity measures. This will be determined through further detailed analysis. The site is in the floodplain of the lower reaches of the Brisbane River so neither stormwater flow mitigation works, nor compensatory earthworks, are required. Stormwater conveyance through the site will also need to be resolved through the development assessment process. Stormwater traverses the site from Tugulawa Park in the south to the river. This presents an opportunity to create a semi-natural conveyance channel through the site creating a central landscape feature.

Traffic and Access

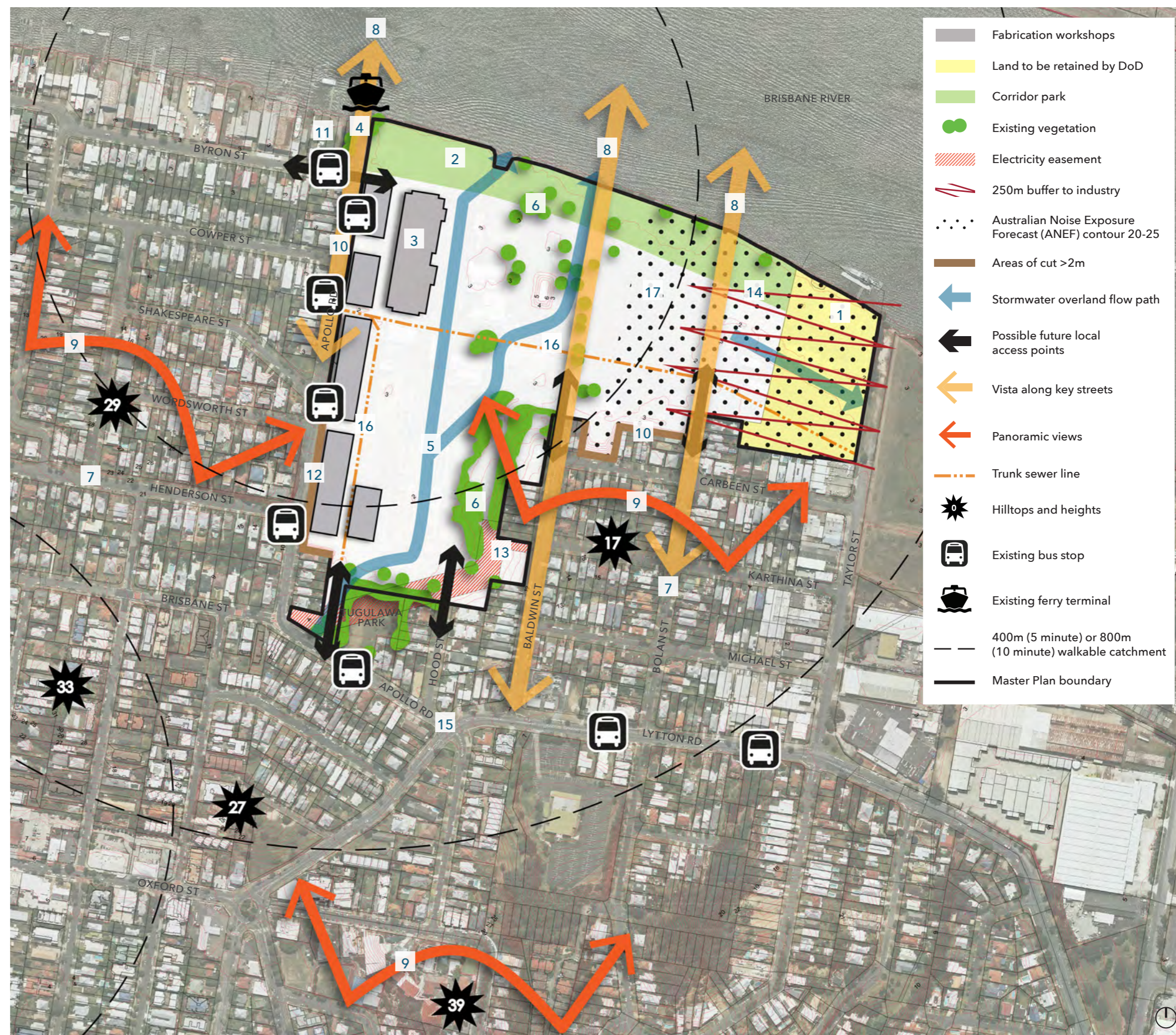
There are numerous potential road access points from Lytton Road to the redevelopment area. Apollo Road is a higher order road within Council's road hierarchy and as such the internal road network for redevelopment should promote Apollo Road as the primary point of access into the precinct. Council is progressing Stage 1 of the Wynnum Road corridor upgrade from Latrobe Street to Canning Bridge and these upgrades are not triggered or brought forward by the possible redevelopment.

Historical timeline



Key Constraints and Opportunities

1. Royal Australian Navy uses on DoD land are to remain.
2. Extensive north facing riverfront land earmarked for park reserve in the Priority Infrastructure Plan by BCC.
3. Existing Fabrication Workshop building with heritage significance could be retained as a local landmark. The roof ridge line of this building is up to 14m high.
4. Public transport access with CityCat terminal and existing bus stops on Apollo Road. Most of site is within 400m (5 minute) and all within the 800m (10 minute) walkable catchment.
5. Important overland flow paths exist to river through the site from hill slopes to the south. This presents an opportunity to create a semi-natural conveyance channel through the site creating a central landscape feature.
6. Large significant trees within site could be retained along the riverfront and within local parks.
7. The surrounding street network is an interconnected grid layout with a number of existing connections to the site.
8. There are extended views to the river and Hamilton Northshore along existing street alignments which should be preserved.
9. Panoramic views towards the north and river from lower density high value residential areas and from the hilltops behind the site at elevations of 28m-50m high.
10. The interfaces with low-density residential uses at the rear boundary and along Apollo Road will need to be considered.
11. Marine industry land uses on Byron Street are transitioning to low-medium density residential uses.
12. An historic cut on boundary (up to 6m) exists but is likely to reduce when the site is filled to create a flood free development parcel.
13. Overhead power lines traverse the site. These will need to remain in their current form and can be retained in open space areas.
14. 250m buffer from industrial land to the Australia Trade Coast industry area.
15. Intersection of Apollo Road and Lytton Road requires further investigation.
16. Two trunk sewer mains traverse the site (a large 1000mm trunk main runs parallel to Apollo Road on the western edge of the site and the Perrin Creek Trunk Main (750mm) traverses the site centrally east to west.) Both these large pieces of infrastructure will need to be contained in either park or road reserve for access, maintenance or upgrade purposes.
17. The site is in close proximity to the Brisbane Airport and is located under existing and future flight paths. Future residential development will be subject to the requirements of the Brisbane airport environs overlay in the Brisbane City Plan 2014.



Bulimba Barracks Constraints and Opportunities Plan

Community Planning Team Workshop No. 1

A collaborative workshop was undertaken with community representatives on 9 September 2015. Four groups worked with representatives from the consultant team to develop a range of concepts to inform the development of the Bulimba Barracks Master Plan area. Their ideas are set out on the following pages.



GROUP 1 Big Ideas

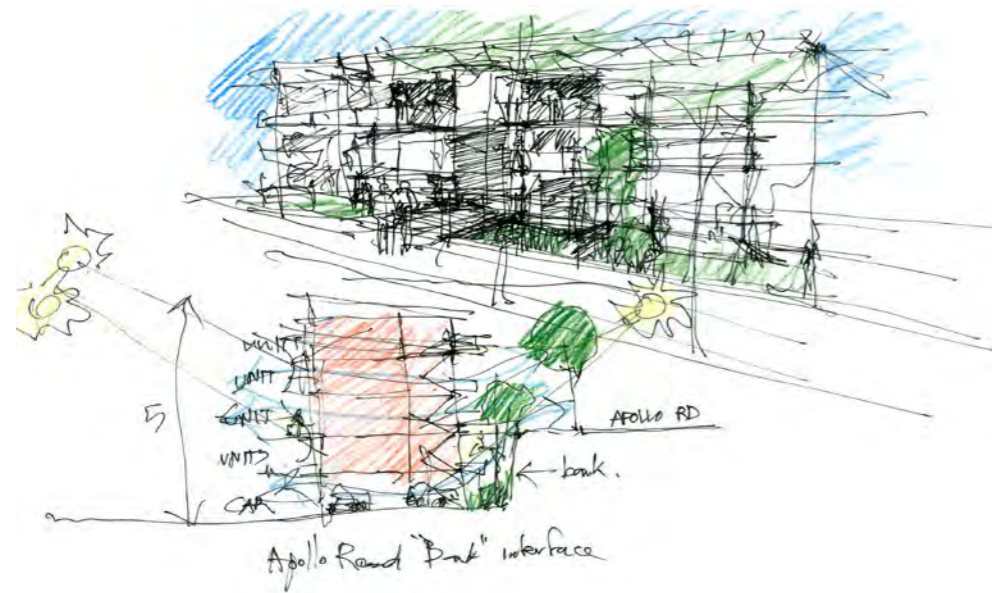
- Community node on Apollo Road near the river
- Riverfront park for community use
- Adaptive reuse of fabrication workshops for retail, employment and community uses
- Drainage corridor as a high amenity avenue connecting green spaces
- Disconnected frontage street along riverfront park
- Park extends into site adjacent to the community node
- Low-medium density throughout with medium density towards the river but stepping down at the riverfront park. Lower density transition to existing neighbours
- Tech hub of smart businesses in buffer.



GROUP 2 Big Ideas

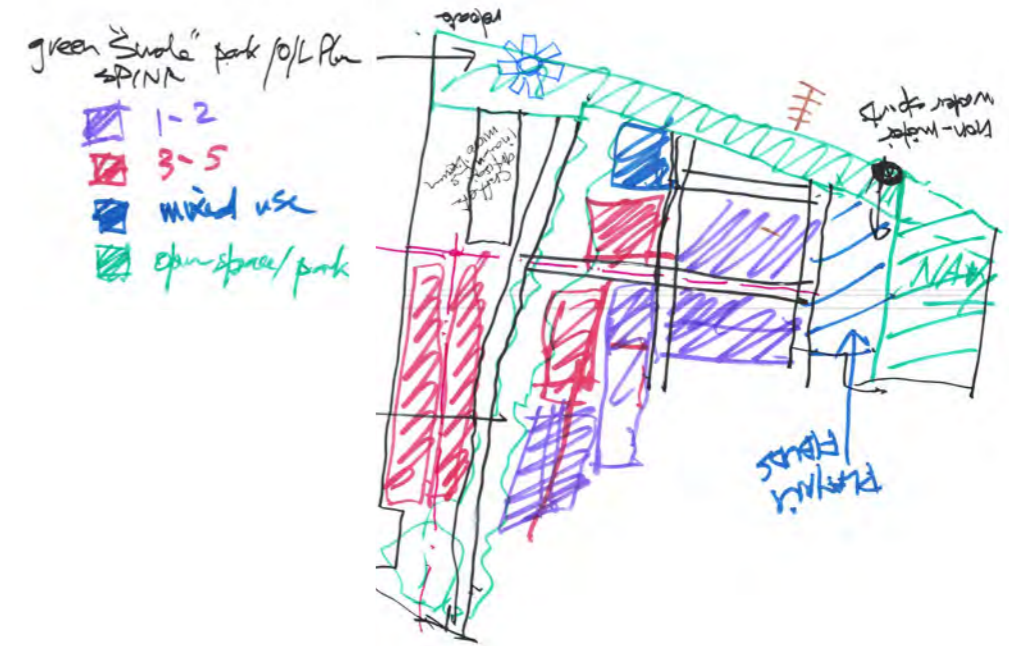
- Park along the riverfront
- Higher density residential adjacent to the park (3-5 storeys) to allow lower scale integration with surrounding residential
- Repurpose the fabrication workshop into a marketplace
- Inclusion of childcare centre, library, aged/young care
- Open space in the 250m buffer
- Development follows the existing grid pattern of streets
- Streets follow the sewer lines.





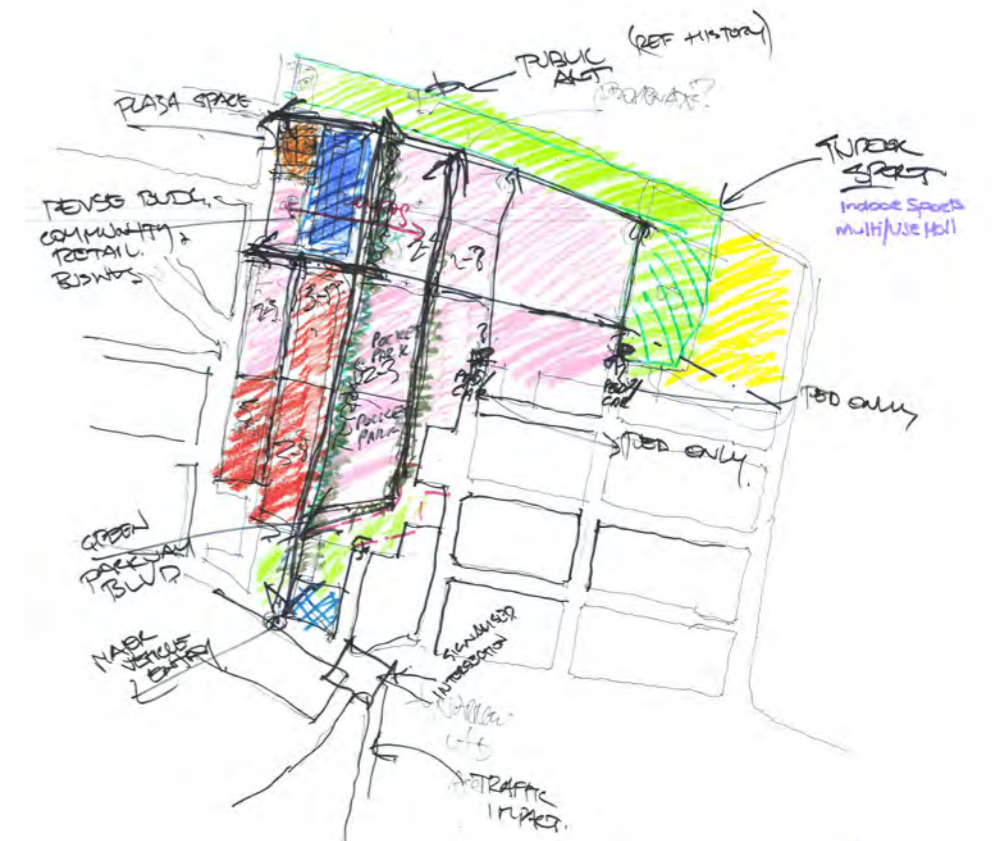
GROUP 3
Big Ideas

- Express ferry service to the city
- Fabrication workshops for market, cafes, microbrewery, serviced offices etc. with pedestrian plaza interface to river
- Lower density edges next to existing residences
- Non-motorised boating along the riverfront
- Higher density internally within the site
- Marina
- Recreation activities, including sports and playing fields, in the 250m industry buffer.



GROUP 4
Big Ideas

- Riverfront park
- Fabrication workshop used for retail, community, arts
- No road connection from Byron Street – pedestrian only promenade
- Central spine road to deal with stormwater
- Replicate grid pattern of surrounding streets
- Walkability is important to the design of the site.
- Sports activities in the industry buffer.



Vision and Principles

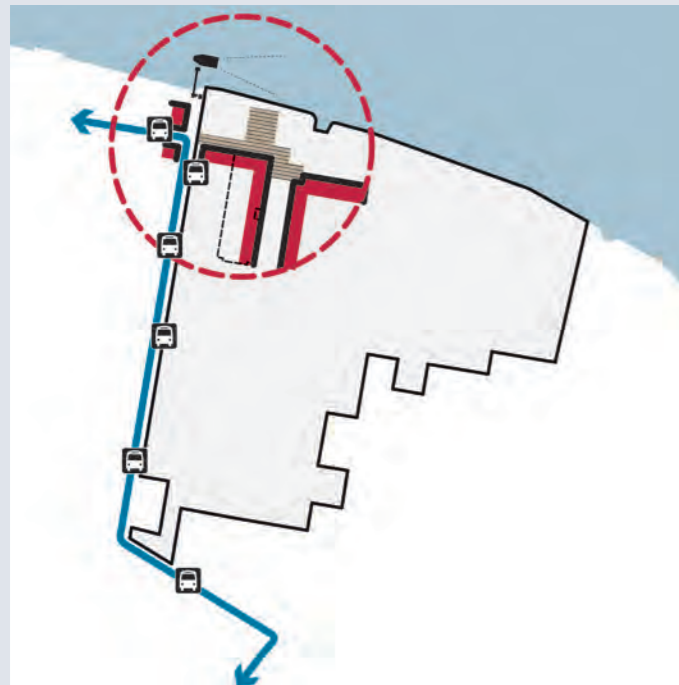
The Bulimba Barracks Master Plan will create a new subtropical neighbourhood that activates and celebrates its generous river frontage.

The master plan will create a new neighbourhood that seamlessly integrates with adjoining neighbourhoods and surrounding residential areas providing new opportunities for connectivity and access to the riverfront. The fabrication workshop is retained and adapted to create a new community heart that will provide a strong visual identity for the neighbourhood and new neighbourhood centre.

The network of streets and spaces creates opportunities for diverse housing product and a range of households types that will enjoy the recreation and outdoor lifestyle opportunities generated along the riverfront and other areas of open space.

Principles

Four overarching design principles have been developed. These highlight the key ideas which emerged from the community consultation and workshop and describe the master plan's intent.

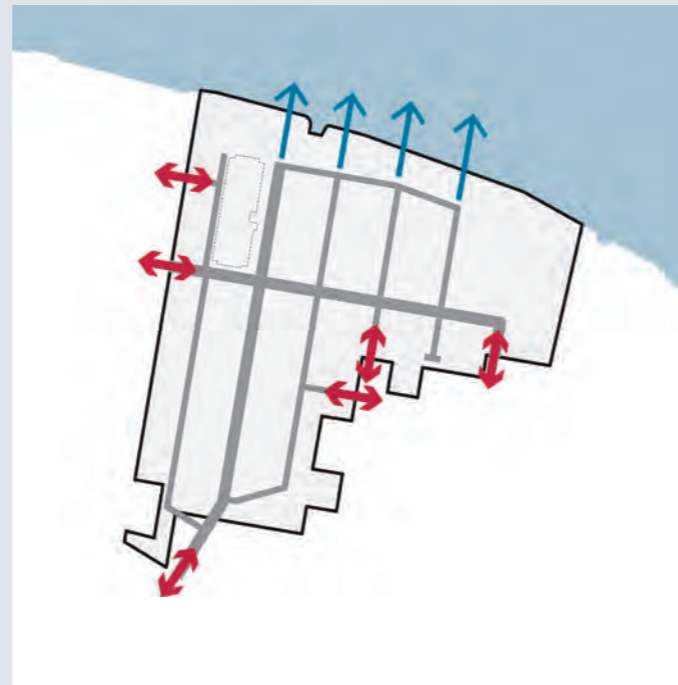


A new community heart

A community focal point is created for this new neighbourhood. This new community heart will contain a mix of uses and includes the adaptive reuse of the fabrication workshop as a key local landmark.

Public transport and a public pedestrian forecourt underpin the site creating a place for residents and visitors.

Mixed uses in the Residential Core Precinct support the new neighbourhood centre and activate the Riverfront Precinct



An integrated community

Connections are made with neighbouring streets, integrating with the grid network that is characteristic of the area. This provides a seamless connection to the external street network for vehicle, cycle and pedestrian movement. The streets align with major trunk infrastructure retaining these elements in publicly accessible corridors.

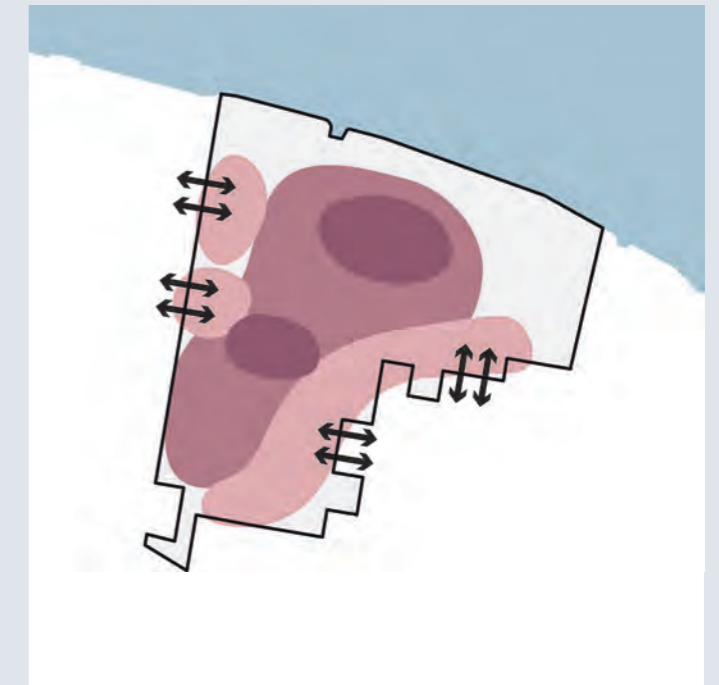
The North-South and East-West Avenues accommodate most vehicle movements into and out of the site.



A network of green

The stormwater network overlays the street network. This creates opportunities for landscape spaces to traverse the site and link to the riverfront park.

The alignment of streets facilitates the movement of stormwater and allows long views to the river. A central stormwater corridor within the main North-South Avenue, provides a strong landscape element which unifies the site linking Tugulawa Park to the riverfront. The eastern edge of the site is identified for sport and recreation facilities. The riverfront park provides public access across the entire river edge.



Housing and diversity

The site provides for a diversity of housing types across the site. The scale and form of housing provides a transition at the edges of the site ensuring its scale and character is commensurate with adjoining development.

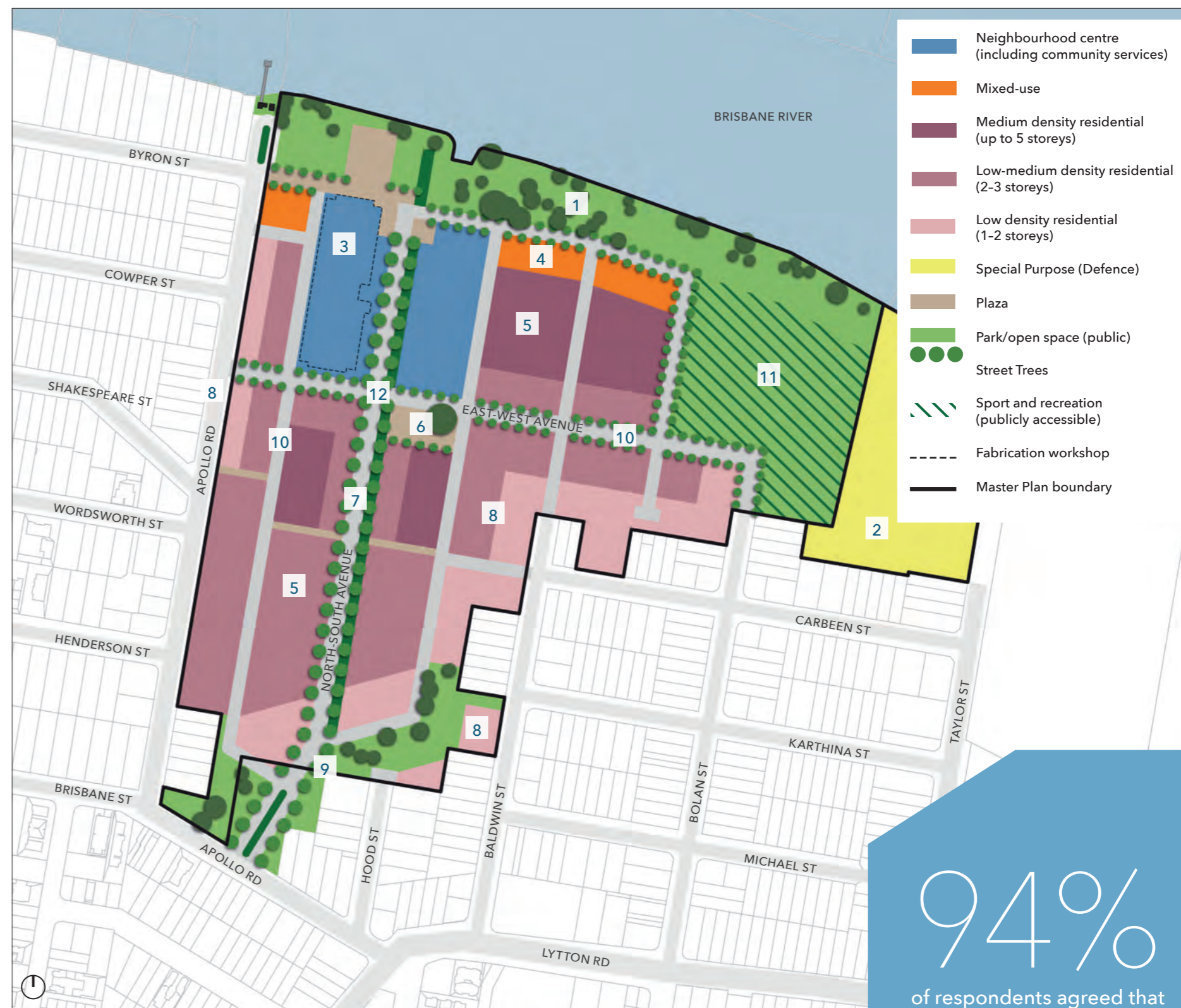
Development along the North-South and East-West Avenues steps down to provide a low rise interface. Development overlooking the Riverfront Precinct also steps down to provide a low rise interface to the riverfront parkland.

Master plan

The master plan lays the foundations for the creation of a vibrant community which capitalises on its expansive riverfront parkland. It enables innovative building responses, reflecting subtropical principles in a contemporary urban environment.

Key Master plan Elements

- Riverfront open space** A generous corridor of open space is retained along the entire riverfront for community use which will contain active and passive recreation opportunities including land based riverwalk.
- Special Purpose (Defence)** A portion of Bulimba Barracks land is to be retained by the Commonwealth for use by the Royal Australian Navy.
- Community heart** A new neighbourhood centre that provides a community focal point for the master plan's residents and those of the surrounding area. Underpinned by the retention and repurposing of the fabrication workshop, the community heart provides space for shops, offices, cafes, residential dwellings and community services such as child care centres, health care services, art galleries and residential care facilities. A pedestrian forecourt on the northern end of the fabrication workshop provides a pedestrian interface with the Riverfront precinct.
- Mixed-uses** Overlooking the river, an active frontage of mixed-use development provides small scale uses and live/work opportunities which activate the public park.
- Housing diversity** Areas of medium density offer a range of housing types including 2-3 storey attached and semi-detached dwellings, and apartments in buildings up to 5 storeys in height.
- Plaza spaces** A small plaza is provided to facilitate the retention of trees subject to earthworks and site remediation requirements.
- North-South Avenue** A main avenue running north-south incorporates water sensitive urban design elements to convey and treat stormwater.
- Residential interface** Low density (1-2 storey buildings) interface with neighbouring houses and local streets on side and rear boundaries.
- Tugulawa Park** Extending the park allows pedestrian access from areas adjoining the site. The park extension also allows high tension electricity transmission lines to remain in green space.
- Streets and infrastructure** Key north-south and east-west streets design with the trunk sewers which traverse the master plan area. These form part of the site's primary street network.
- Publicly accessible sport and recreation facilities and green space** which may be owned and operated by the private sector.
- Scale of built form** on main streets maintains a low medium rise character along the North-South and East-West Avenues and overlooking the riverfront parkland.



Bulimba Barracks Master Plan

94%

of respondents agreed that development should be set well back from the river with riverfront public parkland and land based riverwalk provided

COMMUNITY SURVEY

Precincts and Land Use

The Bulimba Barracks site will contain a mix of land uses to assist in the development of a vibrant riverfront community. The master plan describes four precincts.



Bulimba Barracks Precinct Plan

80%

of respondents want
community facilities
COMMUNITY SURVEY

81%

of respondents want local
shops, cafes and offices
COMMUNITY SURVEY



Indicative view – Interface between Precinct 2 and the riverfront park



1. Riverfront

This precinct has been identified by an overwhelming majority of the community as the site's essential ingredient. It will contain active and passive recreation opportunities along the riverfront.

The land based riverwalk is a dominant feature of this space and it begins within the master plan site.

One of the administration buildings adjacent to the ferry terminal could be reused as a waterfront café and restaurant. The boat ramp could be retained and is suitable for non-motorised watercraft.

BBQ facilities and shelters, walking paths as well as the retention of existing significant vegetation create a community space for formal and informal activities. The eastern edge of the site is identified for publicly accessible sport and recreation facilities and green space which may be owned and operated by the private sector.



2. Community heart

This precinct forms a new neighbourhood centre that is the community focal point for the master plan. The community heart provides for the range of non-residential and residential uses expected of a new neighbourhood centre. Ample site area and gross floor area (GFA) has been provided to encourage the reuse of the fabrication workshop, provide for off-street car parking and to encourage privately-delivered community services. While total GFA and individual tenancy sizes for offices, shops, restaurants and cafes is capped, small-scale convenience uses are desirable where they serve the needs of the local community. This precinct will eventually be included in the Neighbourhood centre zone of the Brisbane City Plan 2014. The Neighbourhood centre zone allows a range of land uses that have a community benefit or provide community services including child care centres, health care services, art galleries, museums, libraries and residential care facilities.

The principal feature of this precinct is the retention and re-purposing of the fabrication workshop. This impressive industrial warehouse can be adapted for uses including retail, commercial and office space, community and art spaces. Its robust form and generous proportions create an immediate landmark for the site and its community heart.

This building also provides a link between the community heart and the Riverfront Precinct. The existing hard stand area in front of the fabrication workshop is retained and used as a pedestrian forecourt providing opportunities for outdoor dining, events and entertainment taking advantage of the waterfront location.

This precinct makes allowance for other commercial, residential and community services to be located opposite the fabrication workshop on North-South Avenue. This allows for other uses, which may not be suited to a refurbished industrial building, to be sited in a new development with a low rise frontage to North-South Avenue.



3. Residential interface

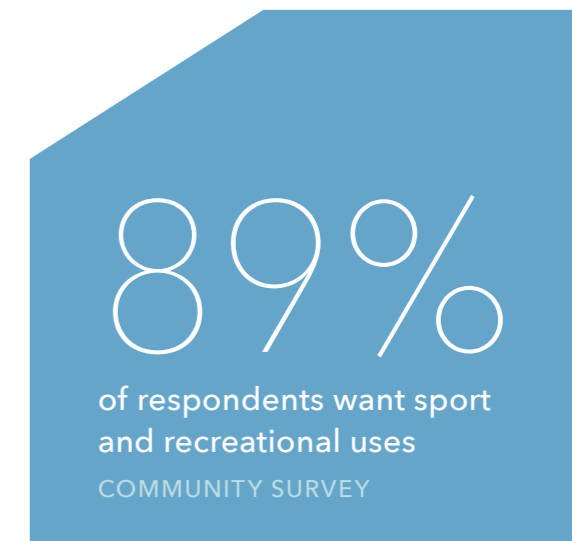
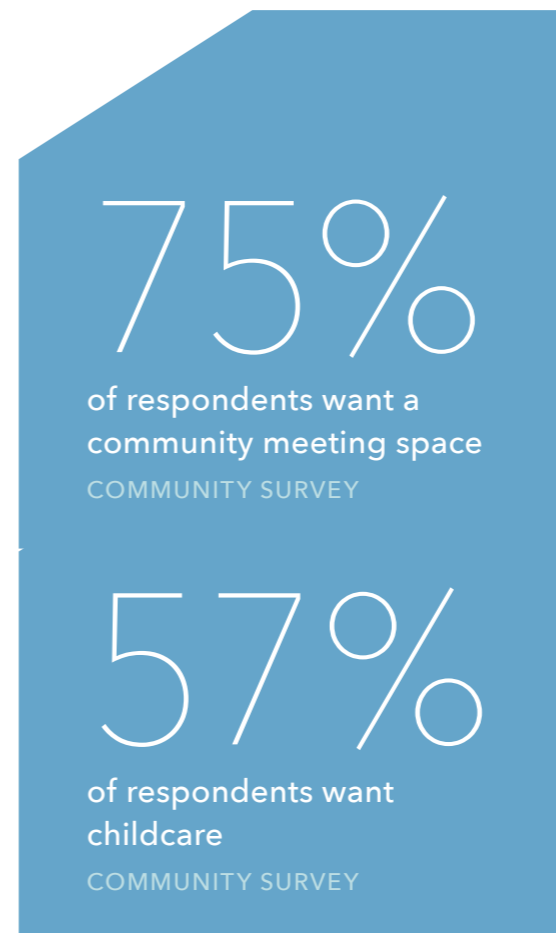
This precinct provides for a sensitive and appropriate transition of building height and scale between the residential development adjoining the master plan area and taller development and more active uses within the site.



4. Residential core

This precinct provides for a diversity of dwelling types from terraced housing to low-rise and medium-rise apartment buildings. This precinct supports the community heart and provides for a range of households. It allows people to stay in the locality and shift between housing types to suit individual lifestyle needs.

The master plan provides for small scale mixed-uses adjoining the community heart that overlook and further activate the riverfront park. This low rise mixed-use frontage on the northern edge to the Residential core precinct will provide opportunities for live/work units and other small scale business and commercial uses that are compatible with residential development.



Built Form and Character

Brisbane is a subtropical city. The buildings within the master plan area will exhibit a strong subtropical character. Building design will be climatically responsive, incorporating a building expression of light and shade with well detailed and articulated façades.

The scale and height of buildings define the street and public realm. Built form reinforces the structure of the street system by aligning building facades parallel to and overlooking streets and public spaces.

Building elements such as weather protection and sun shading (including eaves and overhangs) are incorporated into façades and roof forms to reduce direct solar heat and for rain protection appropriate to the subtropical climate.

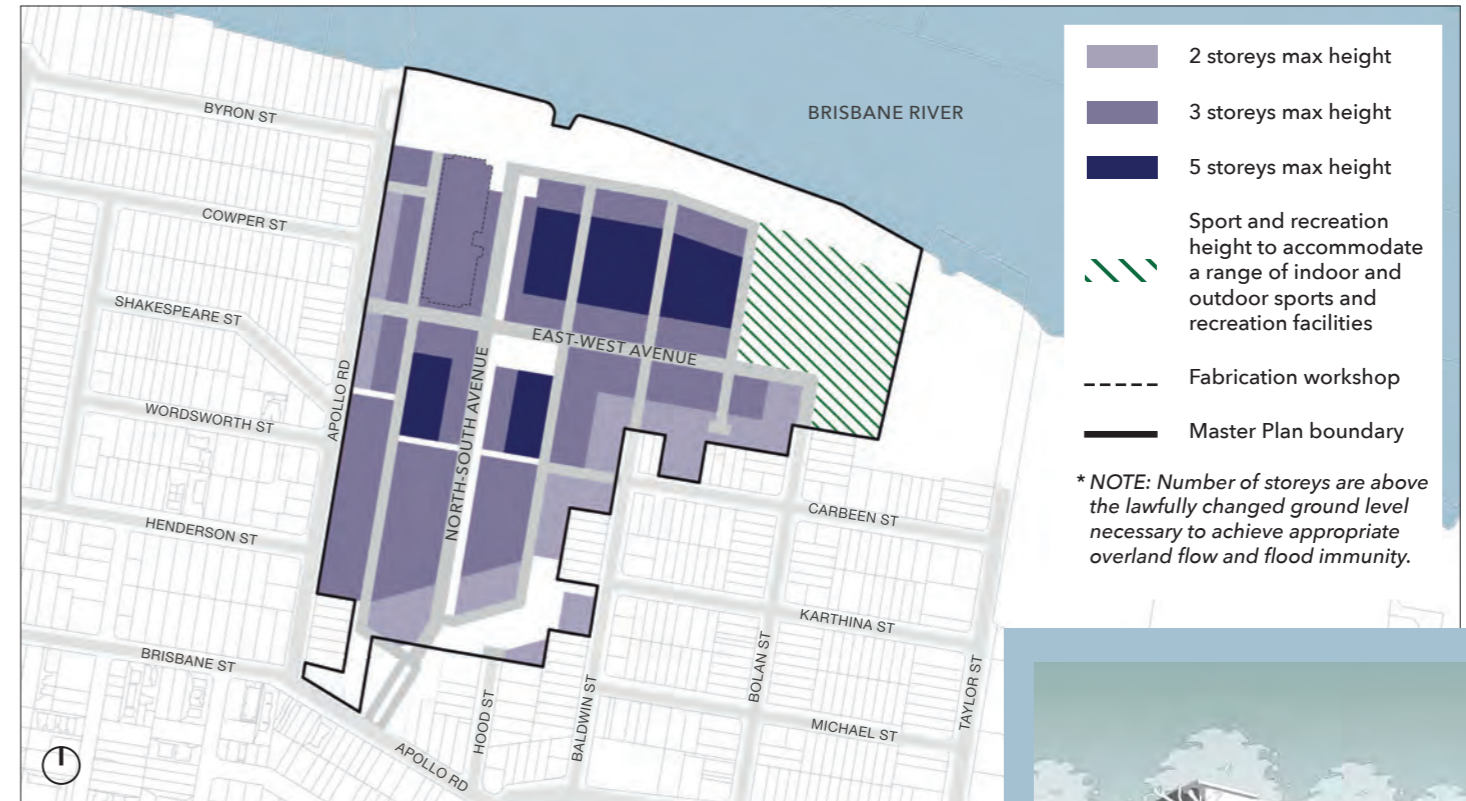
The built form has visible and expressive roof forms and includes outdoor/semi-outdoor living, indoor to outdoor integration by the use of balconies and courtyards and large windows creating open facades.

Height and Density

The master plan creates a precinct of lower scale buildings to integrate with adjoining low density residential development and local streets. Pockets of higher density built form are located to take advantage of the topography, amenity of the river and to consolidate the community heart.

Low rise apartment buildings will be the dominant built form in the residential core allowing for housing diversity and a range of households. Maximum height within the core of the master plan area will be 5 storeys. This is commensurate with the height of the fabrication workshop and allows for a transition in height to the existing residential areas. The residential interface precinct will allow up to 2 storeys.

Development located opposite the riverfront park, and on North-South Avenue and East-West Avenue will be low rise stepping up to a maximum of 5 storeys where identified on the Bulimba Barracks Building Heights Plan.



Bulimba Barracks Building Heights Plan



Key plan



Low density (1-2 storey) duplexes and small lot houses



3-5 storey apartments

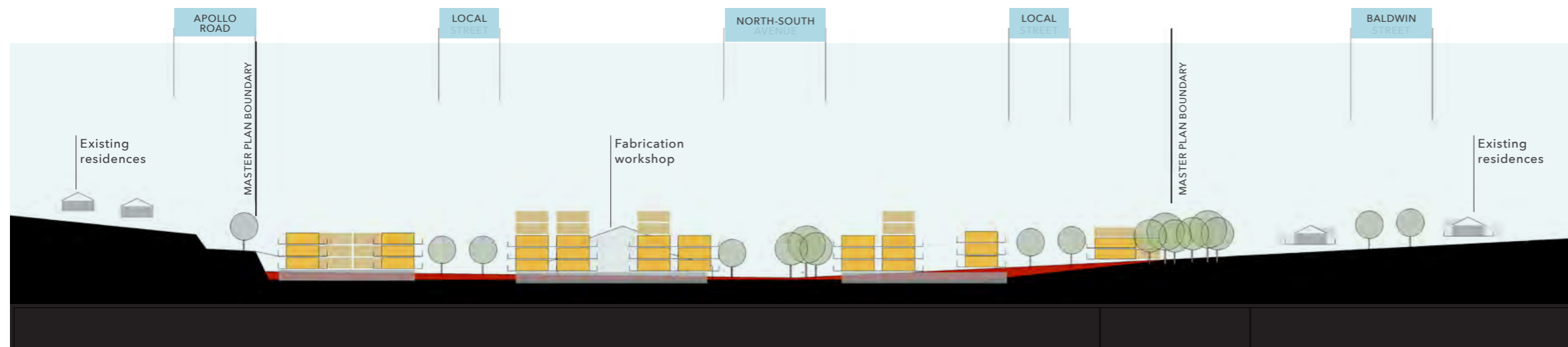


2 and 3 storey row houses and live/work dwellings

55%

of respondents agree that live/work or mixed-use buildings should be provided

COMMUNITY SURVEY



Indicative site cross section - A - A - Apollo Rd to Baldwin St (NOTE: Notional areas of fill to achieve flood immunity shown in red)

50% - 75%

A majority of respondents agreed that a mix of housing should be provided including low rise apartments, attached houses, duplexes and small and wide frontage detached houses.

COMMUNITY SURVEY



Key plan

Indicative view – 3 storey apartments and townhouses surrounding plaza retaining the existing fig tree. Development of up to 5 storeys is located behind the plaza.



Key plan

Indicative view - View down local street (Precinct 4) towards the Brisbane River, buildings step down from 5 to 3 storeys on the northern edge of the residential core allowing for views and low-medium rise interface.

Movement

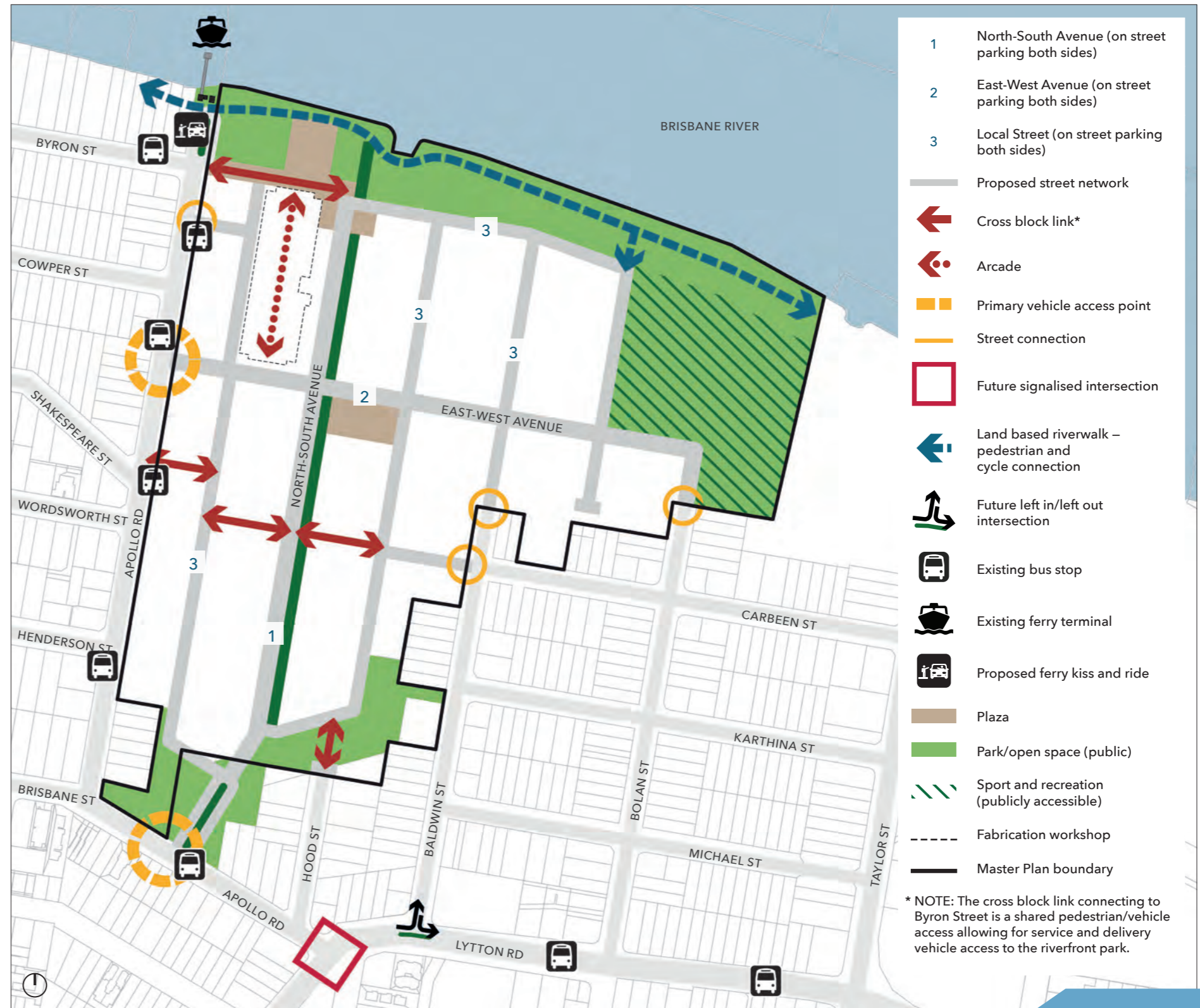
The movement strategy focuses on creating a highly walkable neighbourhood that provides generous access to the riverfront.

The master plan creates a permeable street grid with connections to the surrounding road network. The grid pattern of streets creates high levels of choice and mobility for pedestrians, cyclists and vehicles. The land based riverwalk, which will activate the edge of the Brisbane River in this location, will be a significant focus for pedestrian and cyclist movement.

With increased connectivity from the adjoining residential areas greater access is created for residents who use the Apollo Road ferry terminal.

Major external connections to Apollo Road on the southern and western edges of the site support the surrounding road hierarchy. This limits vehicle movement through smaller local streets. A signalised intersection at Apollo and Lytton Roads will facilitate safe access to the broader road network and will incorporate a pedestrian crossing to facilitate safe pedestrian crossing of Lytton Road at this point. Further intersection treatments will be required at Baldwin Street and Lytton Road, restricting access to Lytton Road and reinforcing Apollo Road as the main traffic route.

Major infrastructure elements such as the trunk sewers and overland flow paths are incorporated into the street network. The major movement path through the site the North-South Avenue, is configured to include a natural drainage channel. It conveys stormwater through the site and is designed as a wider street with significant landscape qualities. This greenway corridor connects Tugulawa Park to the riverfront park.



Bulimba Barracks Movement Plan

96%

of respondents want a land based riverwalk with pedestrian and cycle pathways

COMMUNITY SURVEY



Land based riverwalk

The master plan creates a generous riverfront park and access to the land based riverwalk. The land based riverwalk link is important because there are few opportunities east of the site for river access. The land based riverwalk will cater for recreational users, pedestrians, runners and cyclists providing a generous shared pathway network which activates the river edge.



Shared streets

The streets within the master plan area are shared spaces for pedestrian, vehicular and cyclist activity. The streets are configured with pedestrian footpaths on either side. Generous tree planting creates comfortable subtropical streets that encourage walking as the primary mode of transport to access local services and attractions. On street parking is provided on both sides of the street.



North-South Avenue

North-South Avenue is the main street linking north-south through the development. This street will contain a natural drainage channel for the conveyance of stormwater through the master plan area. This street will be well detailed with generous planting and on street parking particularly around the neighbourhood centre of the community heart precinct.



Public transport

The Apollo Road ferry terminal will be an integral part of the community. Given the high levels of walkability the terminal will be highly accessible.



Indicative street cross section – East-West Avenue



Indicative street cross section – Typical Local Street

Public realm

The public domain design aspiration is to preserve key parts of the defence heritage and riverfront character and to incorporate these into new public space. Contemporary adaptive reuse principles are proposed for the new public domain works to highlight the heritage.

The concept landscape plan sets aside public parkland along the river's edge, sports facilities and public spaces at key locations. A walkable, bicycle friendly street grid connected to the local street network is supported by green infrastructure on streets and along the trunk stormwater corridors. Utilising native vegetation endemic to the river edge, the parklands will enhance the local ecology.

The riverfront park is proposed to be incorporated into the Bulimba heritage trail. The site, used in 1942 by the US Army Transportation Service received prefabricated 300-ton steel barges, and 200-ton timber barges shipped in from the USA, and commenced their assembly. The completed barges were launched from the site. These uses and their remnant site structures such as the boat ramp are proposed to be interpreted through the public realm and public art.

Cultural heritage (pre European and European history) memorials and/or public artworks to be provided within the master plan public realm area. Final outcomes are subject to agreement from relevant stakeholders prior to their implementation.

The former fabrication workshop and its pavement curtilage provide the foundation for a new pedestrianised community/retail/commercial hub space connected to the CityCat terminal and bus hub. The public space allows markets or events to spill out onto the riverfront open space.

The following elements and ideas are identified in the Bulimba Barracks Concept Landscape Plan:

1. **Fabrication workshop** Adaptive reuse of the workshop for numerous small scale commercial, retail and community uses
2. **Public jetty** A public wharf for short term mooring of motorised vessels
3. **Shade structure** A generously scaled modern park shelter using the truss timbers from demolished sheds
4. **Land based riverwalk** A continuous cycling and pedestrian link along the foreshore
5. **CityCat terminal** Existing terminal with undercover shelter to the bus stop while still allowing views to the river
6. **Market plaza** Flexible space for markets and events using the existing concrete hardstand area with holes cut for shade trees
7. **Existing building** Adaptive reuse of existing building for a restaurant and café retaining the existing trees, gardens and pedestrian ramp structures
8. **Bus stop** Covered shelter for bus commuters
9. **Public parking** On street parking for the fabrication workshop and parklands BBQ, play areas
10. **Plaza** Retaining the existing tree where possible in a plaza space
11. **North-South Avenue** Linear parkway and natural drainage channel treatment
12. **Heritage boat ramp** Non-motorised boat launching
13. **River terraces** Located adjacent to the heritage boat ramp, the river terraces allow the public to enjoy views of the cruise ship terminal opposite, and river environs. Stepping down to the water, the terraces can be integrated with non-motorised boating use such as temporary mooring for kayaks or dragon boats
14. **Playground and BBQ** Large scale playground and BBQ area
15. **Publicly accessible** sport and recreation facilities and green space which may be owned and operated by the private sector
16. **Private moorings** Potential moorings for private recreation use designed to provide for local demand, complement existing marina facilities at Rivergate and to ensure continuous public riverfront access, maintain views to the Brisbane River from Bolan and Baldwin Streets and minimise impacts to river operations.

Note: The concept landscape plan is subject to land acquisition for park purposes. Park improvements are subject to Council funding. In addition the retention and reuse of structures or building materials in Council parkland is subject to assessment of existing conditions and requirements for Disability Discrimination Act compliance.



Bulimba Barracks Concept Landscape Plan



View of the existing site riverfront

96%
of respondents want retention of trees, shade and gardens
COMMUNITY SURVEY

67%
of respondents want access to the river for water-based activities and boating
COMMUNITY SURVEY



Indicative View – Riverfront park with BBQ shelter and retained boat ramp

A. North-South Avenue

This linear parkway is located on the storm water overland flow path. Low flow storm water flows are directed to the natural drainage channel for treatment and public seating places under shade trees.

B. River Terraces

Located adjacent to the heritage boat ramp, the river terraces allow the public to enjoy the views of the cruise ship terminal and river environs. Stepping down to the water, the terraces can be integrated with non-motorised boating use such as temporarily mooring kayaks or dragon boats after launching.



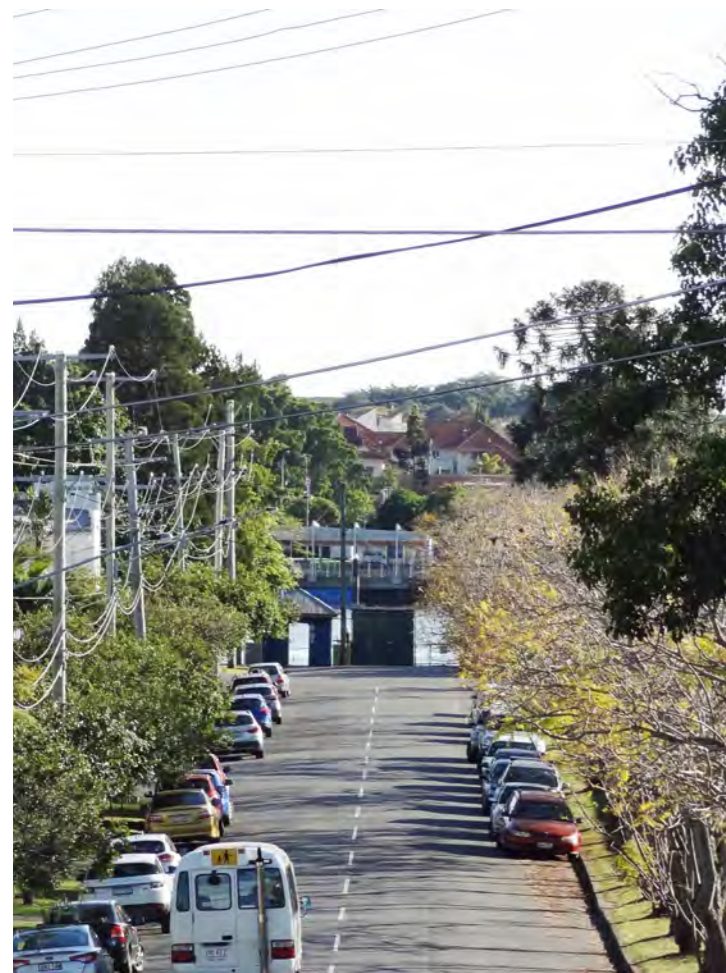
Indicative cross section – North-South Avenue (A)



Indicative cross section – River Terrace (B)

Infrastructure

All development needs infrastructure to support a liveable functioning community.



View down Apollo Road to the ferry terminal and Brisbane River

The master plan builds on the principles embodied in the Bulimba District Neighbourhood Plan and has captured and reflected community expectations about the future of the site and the infrastructure needed to support development.

Where possible the master plan distinguishes between:

- Infrastructure required as a normal consequence of development in the locality; and
- Infrastructure needs specifically generated by the development.

Who provides this infrastructure?

Only a portion of the infrastructure needs identified by the community are managed by Council. Council manages the transport, community purposes and stormwater networks and is legally empowered to levy infrastructure charges as part of the development assessment process when development generates demand on these networks. The full range of Council infrastructure needs will be reassessed and finalised as part of assessing a future development application over the site.

Other infrastructure such as public schools are planned and delivered by Education Queensland. However, Council working in partnership with the Queensland Government, has consulted with all key infrastructure providers to ensure that essential services can be delivered.

Additionally, social infrastructure such as child and aged care is mostly provided by the private sector. Council cannot lawfully make anyone provide these services. However, Council makes sure that there is enough zoned land so that the market can provide these facilities. The master plan enables these types of uses to be established should a developer wish to provide them.

When is this infrastructure needed?

Given the very large size of Bulimba Barracks, Council anticipates that it will take at least ten years to complete the development following the Australian Government's disposal process. Growth will be gradual. Development is likely to occur in stages with Council and other infrastructure delivered as part of each stage or where critical thresholds are reached. Infrastructure delivery timeframes will be determined during the development assessment process.

Proposed infrastructure

Infrastructure upgrades required at present – regardless of development of the Bulimba Barracks site

- Perrin Creek Trunk Sewer Main.

Likely infrastructure upgrades required as a result of the development of the Bulimba Barracks site consistent with this master plan

- Intersection upgrades – signalised intersection at Lytton/Apollo Road incorporating two controlled pedestrian crossings plus left-in/left-out alterations to Baldwin Street
- Streets – Bolan, Carbeen and Baldwin Streets integrated into the site and new streets wide enough for kerbside parking on both sides, on street cycling and street trees
- Parking – Approximately 600 on street car parking spaces, no loss of Apollo Road on street parking and approximately 1500 on-site car parking spaces provided in accordance with City Plan 2014
- Passenger set-down & drop-off – A passenger set-down and drop-off area at the head of Apollo Road next to the ferry terminal
- Stormwater conveyance – includes in-ground and natural drainage channel treatment through the site
- Water upgrade – including improvements for fire fighting
- Parkland- approximately 2.1 ha riverfront park acquisition
- Land based riverwalk – A 6m wide land-based riverwalk along river frontage
- Other open space improvements – Pedestrian forecourt area for community meetings and markets, play equipment, BBQ shelters, planting and landscaping
- Filling and shaping – approximately 150,000 cu/m of fill to achieve desired flood free levels.

Possible infrastructure upgrades required irrespective of further development of the site (and not time critical)

- Apollo Road Ferry terminal upgrade – Planned long term infrastructure item. Upgrades would include consideration of provision of secure bicycle storage.
- New footpaths and street lighting – Upgrades to adjoining streets such as Baldwin and Bolan Streets may be investigated further subject to staging and budgetary considerations.
- Bus turn-a-round – A bus turning circle upgrade may be investigated at the head of Apollo Road adjacent to the ferry terminal dependent on network needs.
- Land based riverwalk connection to Taylor Street – A long-term connection through the Australian Navy Headquarters site when they cease operations.

Local Traffic Improvements

Council developed a tailored traffic model for the master plan and tested the site for up to 2500 dwellings or two and half times anticipated dwelling numbers to be certain about the broader network and local traffic impacts of development.

Key intersections have also been analysed prior to and during the development of the master plan. The master plan's internal road network has been designed to promote use of Apollo Road rather than local streets. This recommendation, coupled with the results of Council's traffic modelling and intersection analyses, requires the following upgrades to be undertaken as part of the Bulimba Barracks development:

- Lytton Road / Apollo Road - signalised
- Lytton Road / Baldwin Street - altered to left-in/left-out movements only

However, any future development application will be required to include a detailed Traffic Impact Assessment using Council's model to demonstrate the specific impacts and appropriate infrastructure response. Development impacts on the following intersections will be further investigated as part of this future development application:

- Lytton Road / Taylor Street
- Lytton Road / Thynne Road

Traffic Impact Assessments will continue to be undertaken as part of ongoing development generally in the area, potentially leading to additional traffic upgrades.

No upgrade of Lytton Road / Bolan Street is required.

Wynnum Road Corridor Upgrade - Stage 1

Council has a plan in place to address the broader road network issues experienced by Bulimba and Balmoral motorists. In October 2014, Council announced an upgrade for the Wynnum Road corridor; an important route in Brisbane's road network providing the primary means of access for local motorists travelling east to the City Centre.

Council is planning to deliver the Wynnum Road corridor upgrade in stages. Stage 1 of the upgrade is from Latrobe Street to Canning Bridge and will see this section of Lytton Road widened from four to six lanes from 2018 - 2020. Improved travel times and reduction in congestion east of Canning Bridge should allow for signal time improvements at the Hawthorne Road and Riding Road intersections with Wynnum Road.

Traffic impacts to the local traffic network will be incremental and spread out over a number of streets, impacts to the broader road network will see about 30 additional cars per year make their way south along Riding and Hawthorne Roads during the morning peak between 7.45am to 8.45am. The remaining traffic will head east along Lytton Road.

Importantly, upgrades to the broader road network are not triggered or brought forward by the traffic anticipated in the master plan. The Wynnum Road corridor upgrade has already assumed up to 1000 new dwellings on the Bulimba Barracks site on the basis of the Bulimba District Neighbourhood Plan. So, while the Hawthorne Road and Riding Road intersections experience congestion, planned upgrades such as the Wynnum Road corridor upgrade ensure that there are negligible impacts on the broader network.



85

new dwellings per year

Estimated over a 10-year development horizon



150

new residents per year

Estimated over a 10-year development horizon



5

primary school-aged children at
Bulimba State School per year

Estimated over a 10-year development horizon



55

additional cars per year, equal to about
one per minute, during the critical
morning peak hour (7.45am to 8.45am)

Estimated over a 10-year development horizon

Yield Estimate

Residential

The following table provides an approximate yield based on the recommendations of the master plan. It has been generated on the basis of the land uses noted in the master plan with an assumed yield (dwellings/hectare) per land use category.

Land Use	Area (m ²)	Yield (Dwelling Units)
Mixed Use	3980 m ²	40
Medium Density Residential	18697 m ²	327
Low-Medium Density Residential	42990 m ²	430
Low Density Residential	19202 m ²	58
Total	84869 m²	855

Non Residential

The following table provides a breakdown of the approximate maximum amount of floor space (m²) of non residential uses in the master plan area.

Land Use	Estimated Floor Area (m ²)
Commercial/retail/food outlets in the Community Heart Precinct	3300
Mixed Use in the Residential Core Precinct	2040
Community and other non-residential uses in the Community Heart Precinct	3300
Total	8640

This estimate is based on the retention and reuse of the fabrication workshop with additional floor space in the adjoining neighbourhood centre designated area. This calculation does not include floor space for sport and recreation facilities.

Where to from here

Next steps:

Council anticipates that a future development application will be lodged. This application will be assessed against the Brisbane City Plan 2014. The site is currently included the Defence zone precinct of the Special purpose zone. Development is impact assessable under this zone.







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