Tonsley

Innovation District

Site Strategies

RenewalSA

Government of South Australia

URBAN DESIGN GUIDELINES

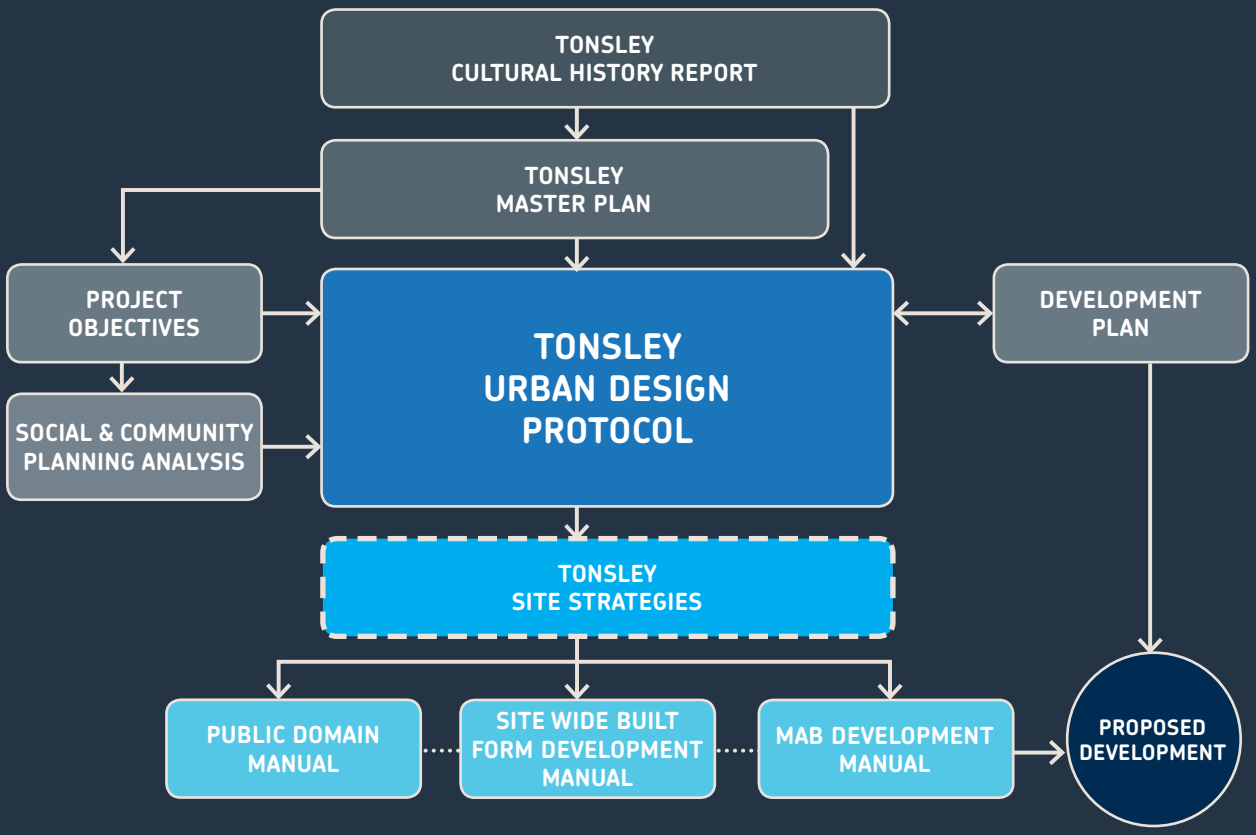
The Tonsley Urban Design Guidelines should be used by those developing public and private buildings, streetscapes and landscape, as part of the redevelopment of Tonsley. Encumbrances are established that enforce the guidelines and development applications will be reviewed against them by Renewal SA. Applications will be assessed on merit, understanding that not all developments are 'one size fits all' in nature. Developments will also be assessed against the City of Marion's Development Plan and planning approval required.

Conformance with the Tonsley Urban Design Guidelines and any approval provided by Renewal SA for developments at Tonsley do not constitute or take place of other statutory body approvals that may be required (e.g. City of Marion planning approvals). It is the responsibility of the developer to ensure all applicable approvals are obtained.

It is intended that the guidelines will be reviewed periodically and updated as necessary as the project evolves to ensure they are relevant and current to service the needs of future development at Tonsley.

The guidelines have been purposely designed as flexible and adaptable. Individual data sheets can be updated easily if required.

A sustainability rating is provided for the suite of urban elements. This has been derived using a Life Cycle Assessment tool that evaluates environmental impacts of processes, products and activities.



Maps, illustrations and images depicted throughout this document are indicative and may or may not reflect actual development of the site.

MOVEMENT

PUBLIC DOMAIN

SITE WIDE - BUILT FORM

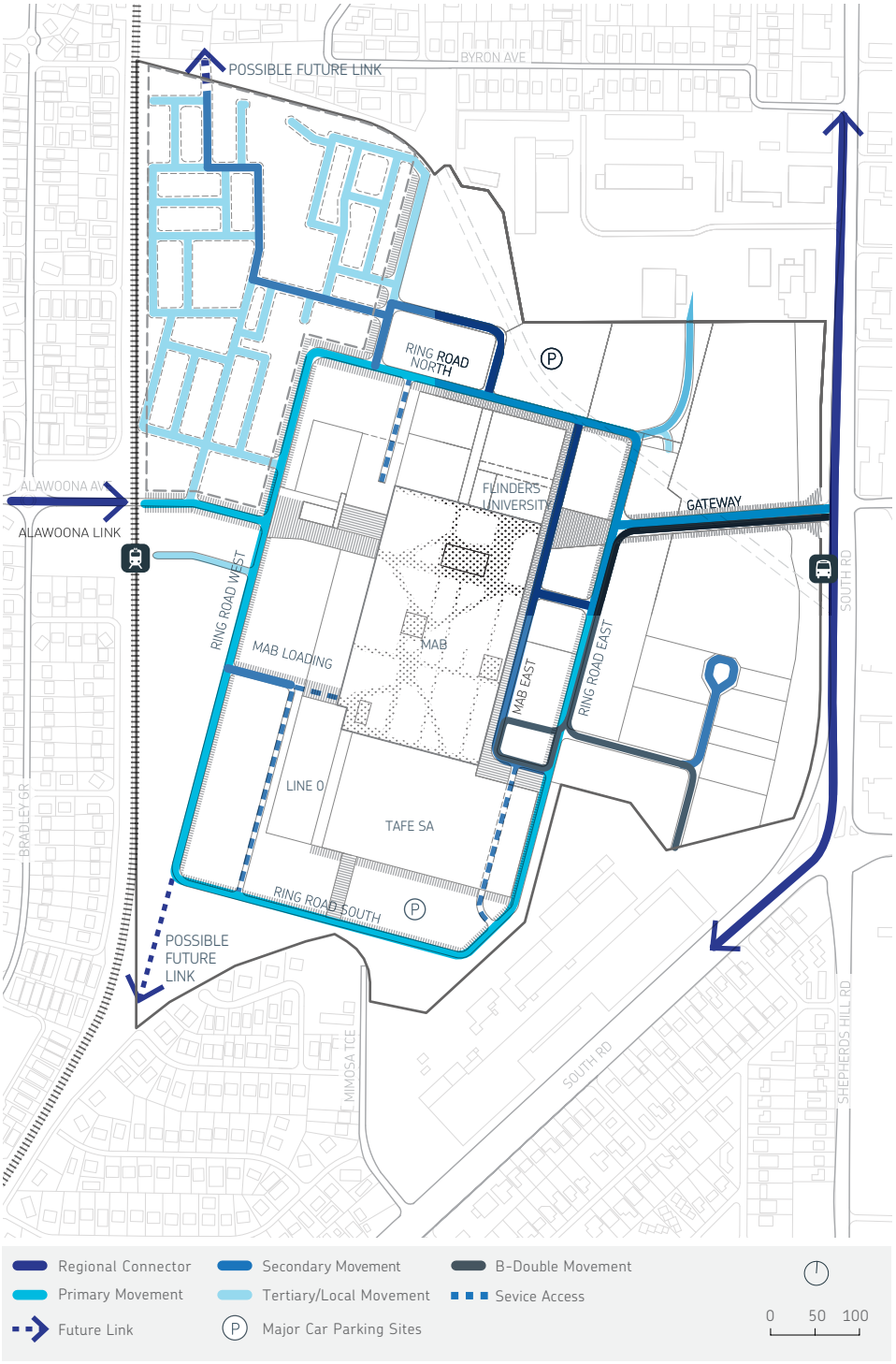
MAB - BUILT FORM

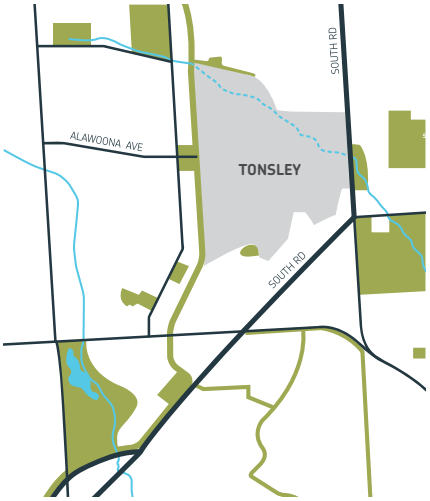
MOVEMENT

The movement strategies for Tonsley play a critical role in structuring the site and the qualities of the Public Domain.

Movement is concerned with the way vehicles, pedestrians and bicycles access and move through the site, how public transport is accessed and car parking managed.

VEHICLE MOVEMENT





LEGIBLE VEHICLE MOVEMENT HIERARCHY

- Provide the main site circulation via the Ring Road connecting externally via the two major site entry roads.
- Confine B-Double movements to the south-east of the site close to Main South Road.
- Clearly define the site entry / exit routes.

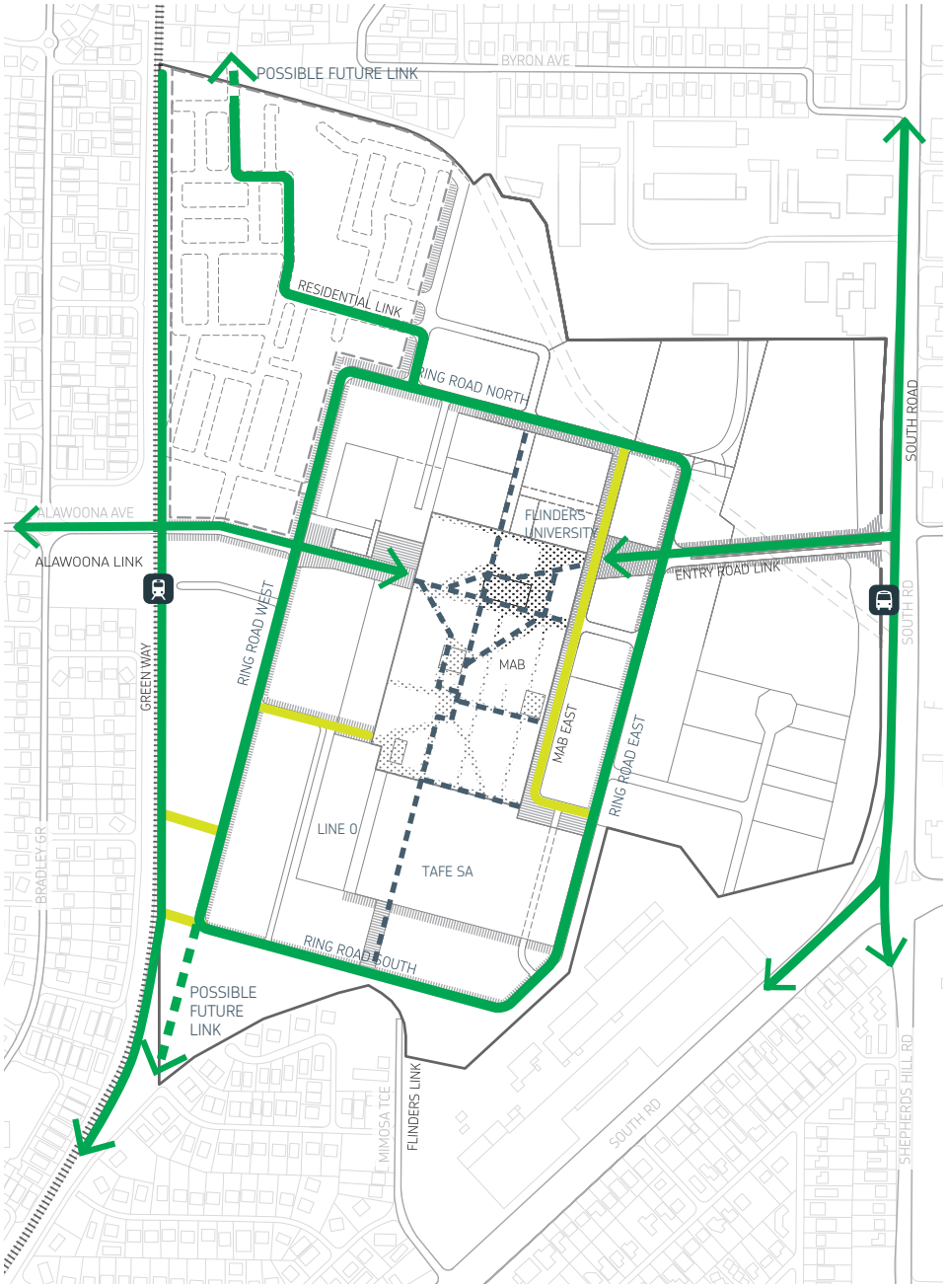
BUILT IN FLEXIBILITY

- Provide for future vehicle movement within the site, including buses, shuttles + electric vehicles.

ROAD DESIGN CONTRIBUTING TO THE PUBLIC REALM

- Coordinate the road design with the pedestrian movement hierarchy.
- Minimise the turning radii for large vehicles.
- Prioritise pedestrian focus at intersections.

CYCLE MOVEMENT



PROVIDING THE ROUTES: CONNECTION TO THE REGIONAL CYCLE NETWORK

- Link to the City of Marion Walking and Cycling Strategy.
- Connect to the City of Mitcham with a future overpass over South Road, or improved bicycle crossing facilities at the existing traffic lights.
- Consider future connections to Flinders University and Flinders Medical Centre.

CATER FOR RECREATIONAL AND COMMUTER CYCLISTS

- Provide dedicated off-road cycle lanes along major routes.
- Provide shared paths within the ring road surrounding and leading into the MAB.
- Provide broader connections via the Green Way adjacent to the rail corridor.

A SAFE CYCLING ENVIRONMENT: WORKING WITH VEHICLES

- Provide off-road cycle paths to separate cycles from vehicles on primary routes.
- Provide safe cycle crossings at intersections to reduce conflicts with cars, trucks and heavy vehicles.

CYCLE SPECIFIC AMENITIES + INFRASTRUCTURE

- Provide secure + undercover bike parking facilities, change stations + lockers in the Main Assembly Building.
- Offer bike repair + service facilities in the MAB.
- Provide cycle friendly rail crossings.

1/ Bike storage facilities
2/ Bike Hub
3/ Bourke St Cycleway, Melbourne

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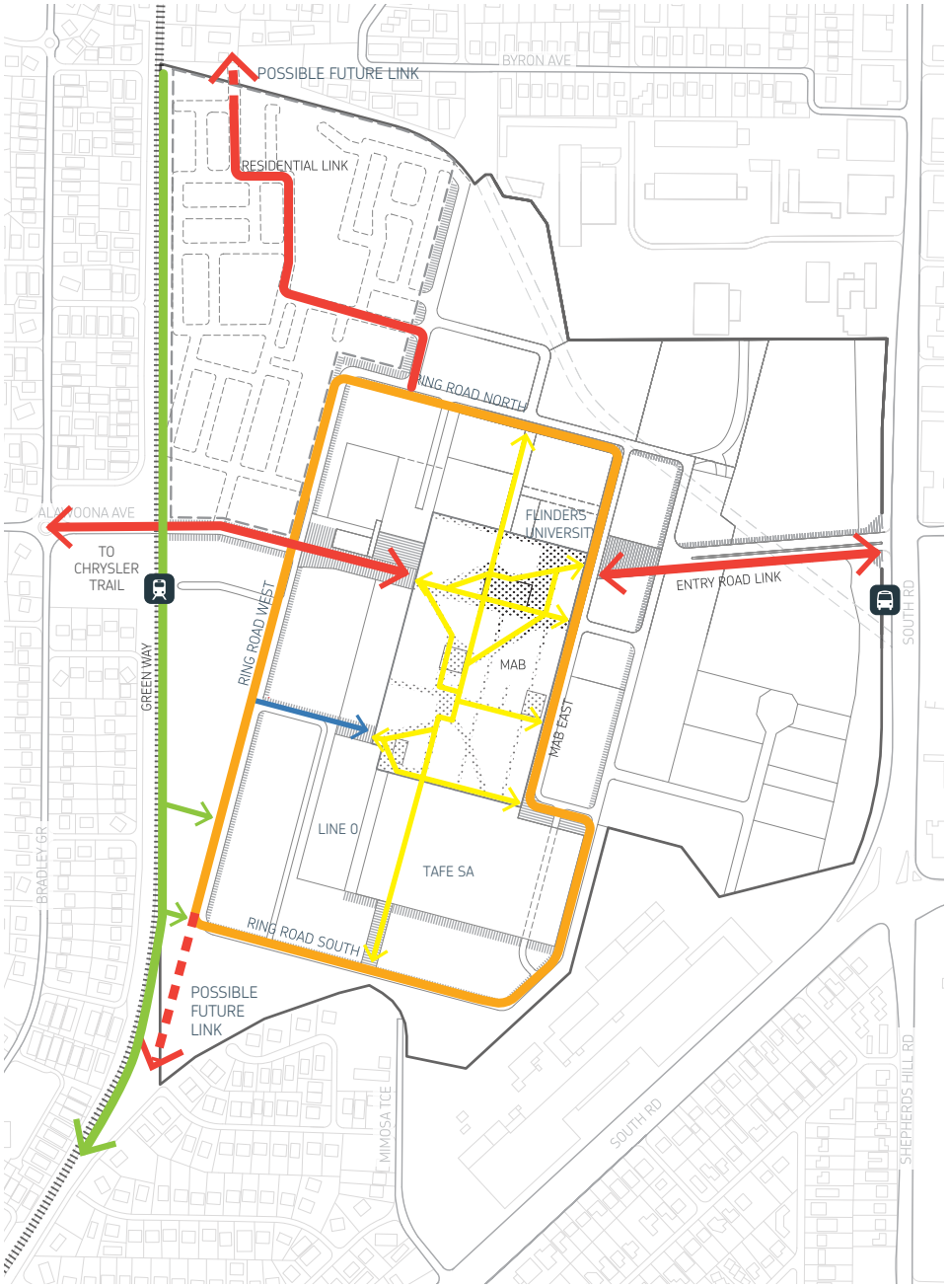
PEDESTRIAN MOVEMENT



CONNECTION TO THE BROADER NETWORK

- Link to the City of Marion Walking and Cycling Strategy.
- Connect to the City of Mitcham with a future overpass over South Road, or improved pedestrian crossing facilities at the existing traffic lights.
- Link to the train station and South Road bus stops.
- Consider future connections to Flinders University and Flinders Medical Centre.

LEGIBLE, LOGICAL + PERMEABLE PEDESTRIAN MOVEMENT

- Arrange block sizes to achieve a walkable scale or mid-block links where blocks are large.

A PEDESTRIAN SAFE ENVIRONMENT: WORKING WITH VEHICLES + CYCLES

- Provide safe pedestrian crossings at intersections to reduce conflicts with cars, trucks and heavy vehicles.
- Provide appropriate barriers, kerbs and bollards to protect pedestrians.

AN EASILY AND EQUALLY ACCESSIBLE PLACE

- Achieve a DDA compliant pedestrian realm site-wide.

PROVIDING AMENITY 'ALONG THE WAY'

- Support walking by providing amenity: safe passageways and active interfaces with built form, seating, smooth paths, lighting, shade, shelter and public art.
- Cater for crowds adjacent to the MAB and link high use areas within the MAB to the train station.

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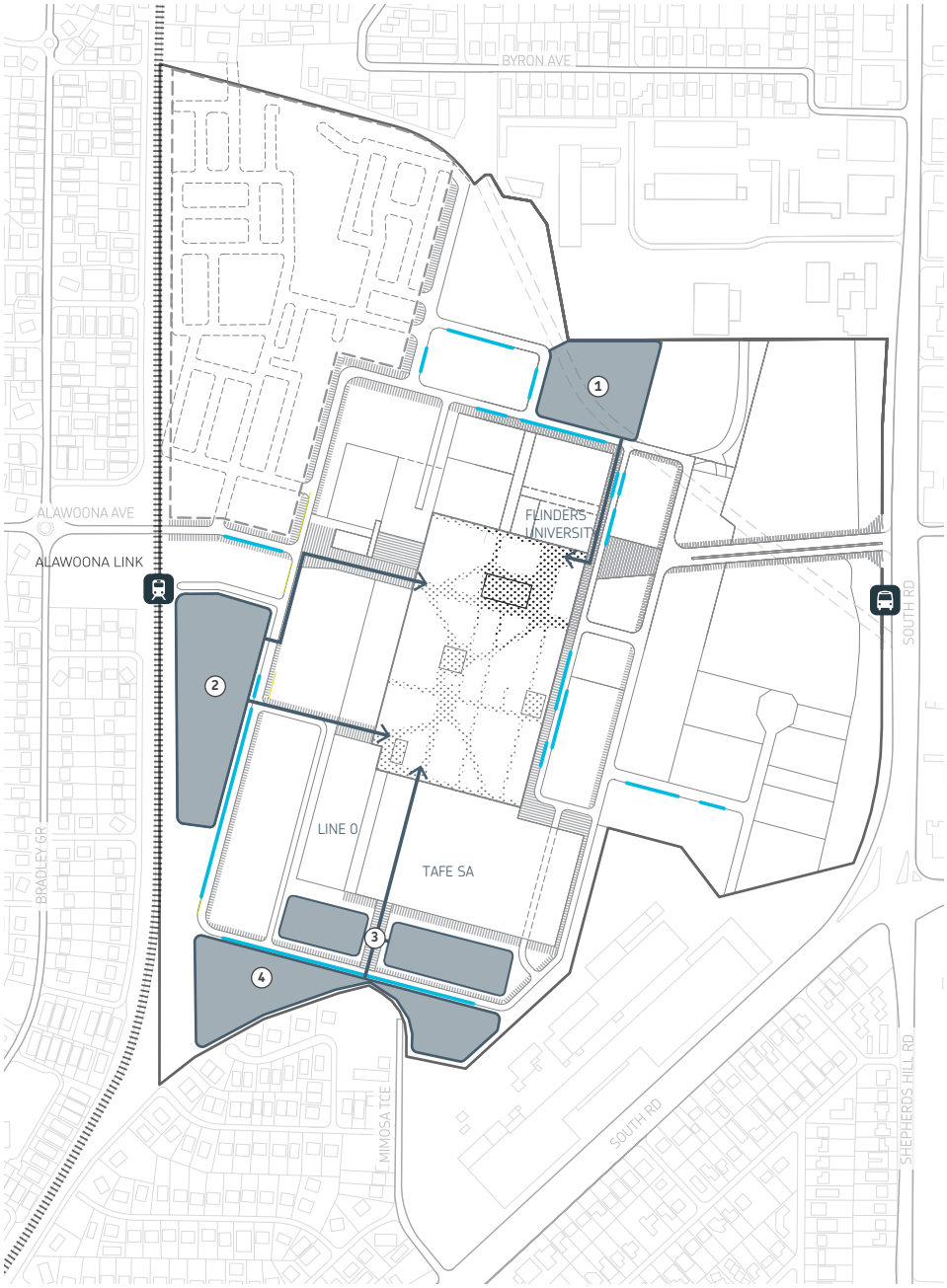
PARKING



Primary Car Parking Areas
Secondary Car Parking Areas
On Street Car Parking
1 Multi-Deck Car Park (Future)
3 TAFE SA Car Park (Future)
Pedestrian Links
2 Western Car Park (Temporary)
4 Southern Car Park (Dependant on future car parking demand)
0 50 100

OFF-STREET PARKING

- Ensure the routes between car parking and destinations become an active public realm.
- Align primary car parking areas with primary pedestrian routes to link destinations.
- Provide amenity to car parking areas; tree planting for shade, connecting footpaths and lighting.
- Employ Water Sensitive Urban Design techniques to manage stormwater.

ON-STREET PARKING

- Locate to minimise conflict with cyclists, including opening doors.
- Provide in locations to service retail uses and activate streets.
- Integrate into the streetscape design.

1/ NSE Kitakyushu Technology Center, Japan

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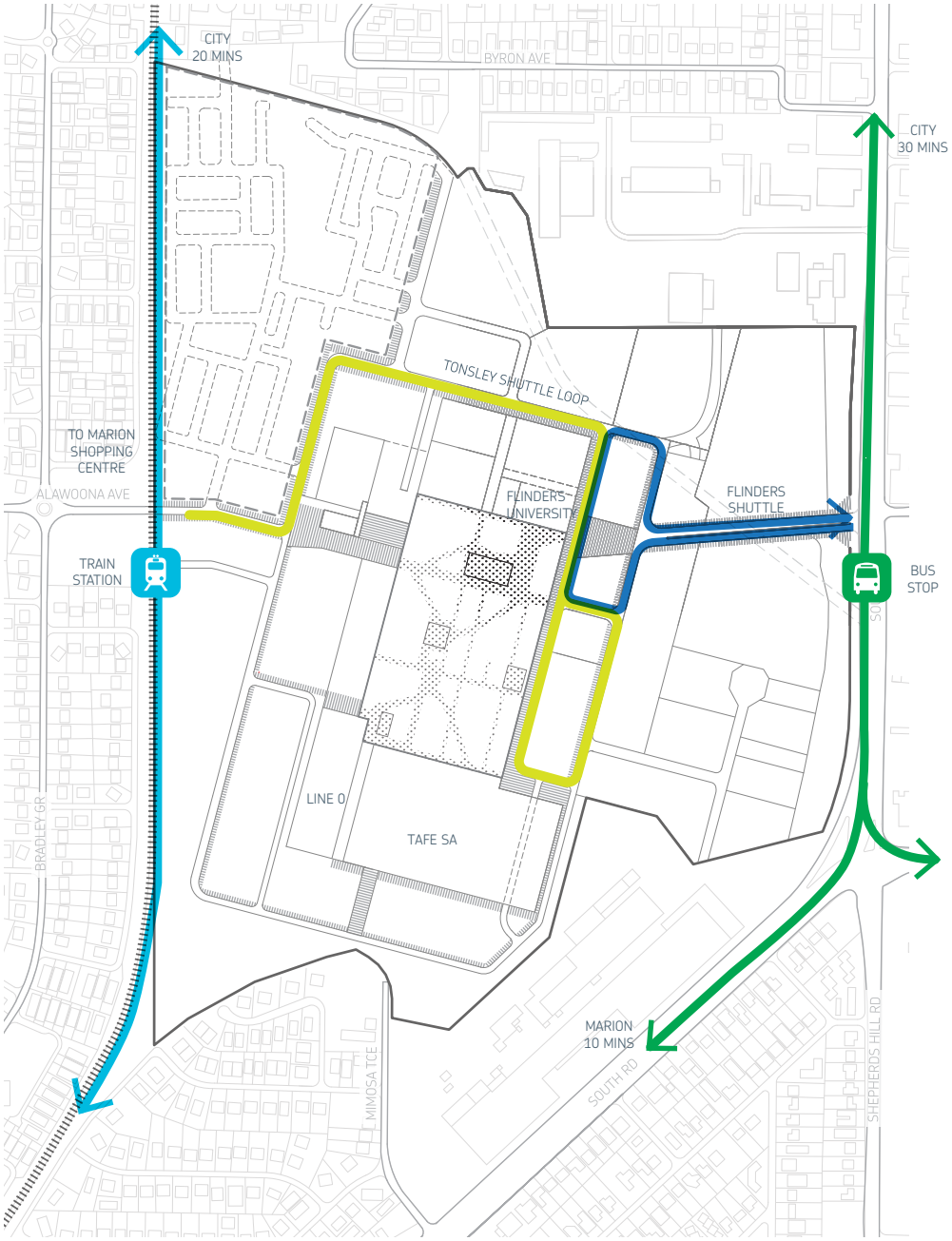
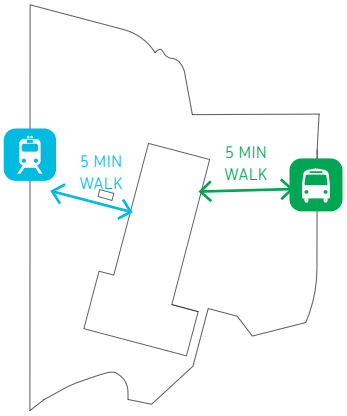
PUBLIC TRANSPORT





RAIL + BUS CONNECTION

› Link site network to rail and bus connections to the Adelaide CBD.

FLEXIBILITY FOR FUTURE CONNECTIONS

› Allow for a future bus route through the site.

DIRECT ROUTES

› Provide direct, safe, accessible and legible connections to, and from, public transport facilities.

PUBLIC AMENITY + SAFETY

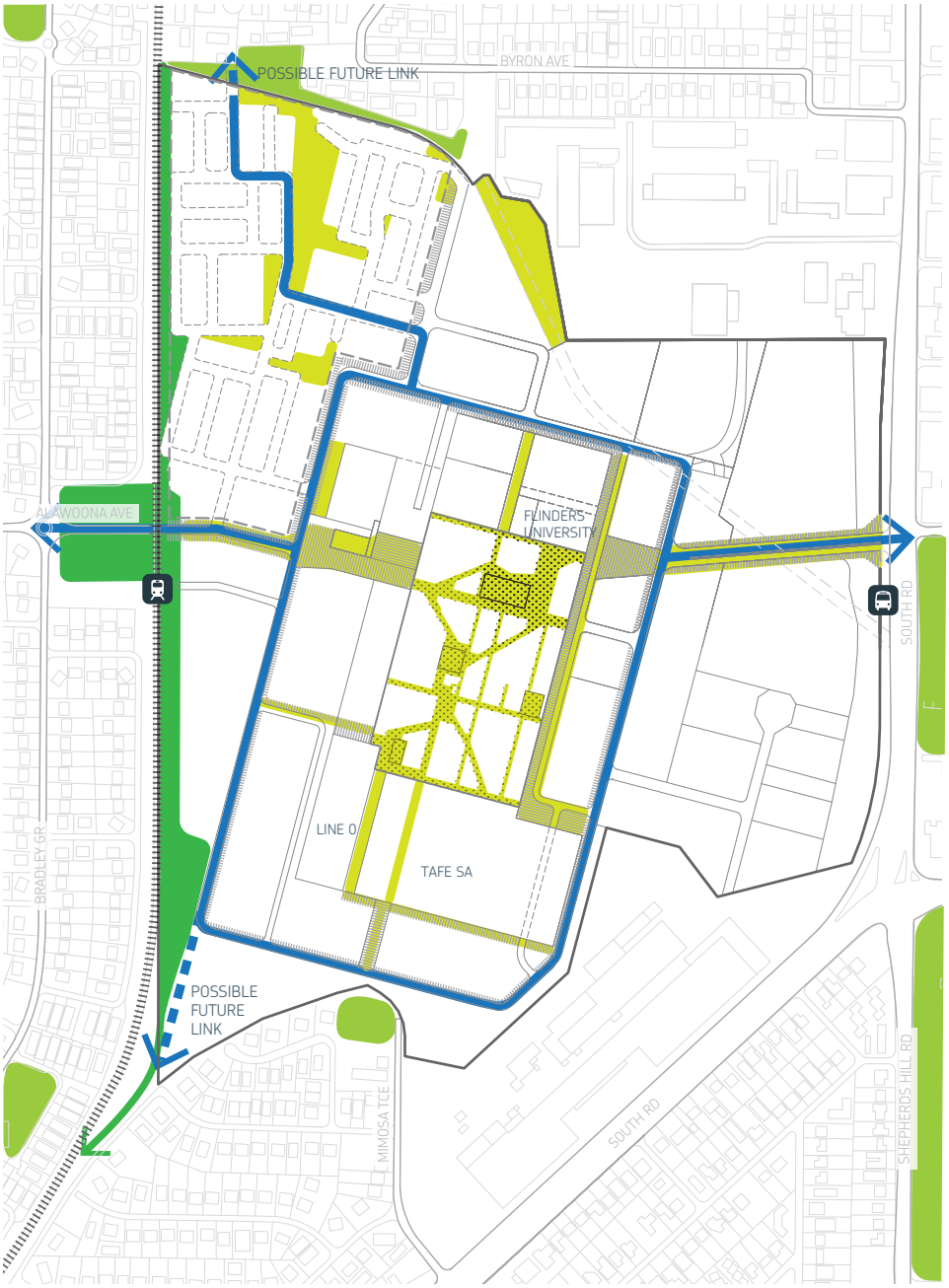
› Provide safe and comfortable areas at public transport stops and along the access routes.

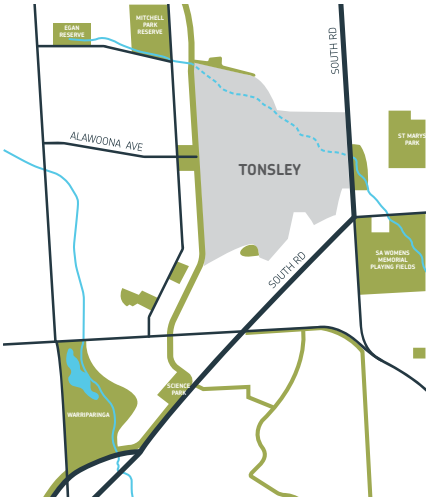
PUBLIC DOMAIN

Strategies for the Public Domain provide the framework for the progressive development of the site.

Strategies focus on the key elements that form the basis for site organisation and an attractive, safe and legible public realm.

PUBLIC DOMAIN





OPPORTUNITIES FOR ACTIVITY AND RECREATION

- Provide well connected areas of open space that also encourage active recreation.
- Encourage walking, cycling and street use to achieve a lively public realm.
- Support active use of the Public Domain and opportunity for cultural/community programming.
- Provide access to power in plazas for events

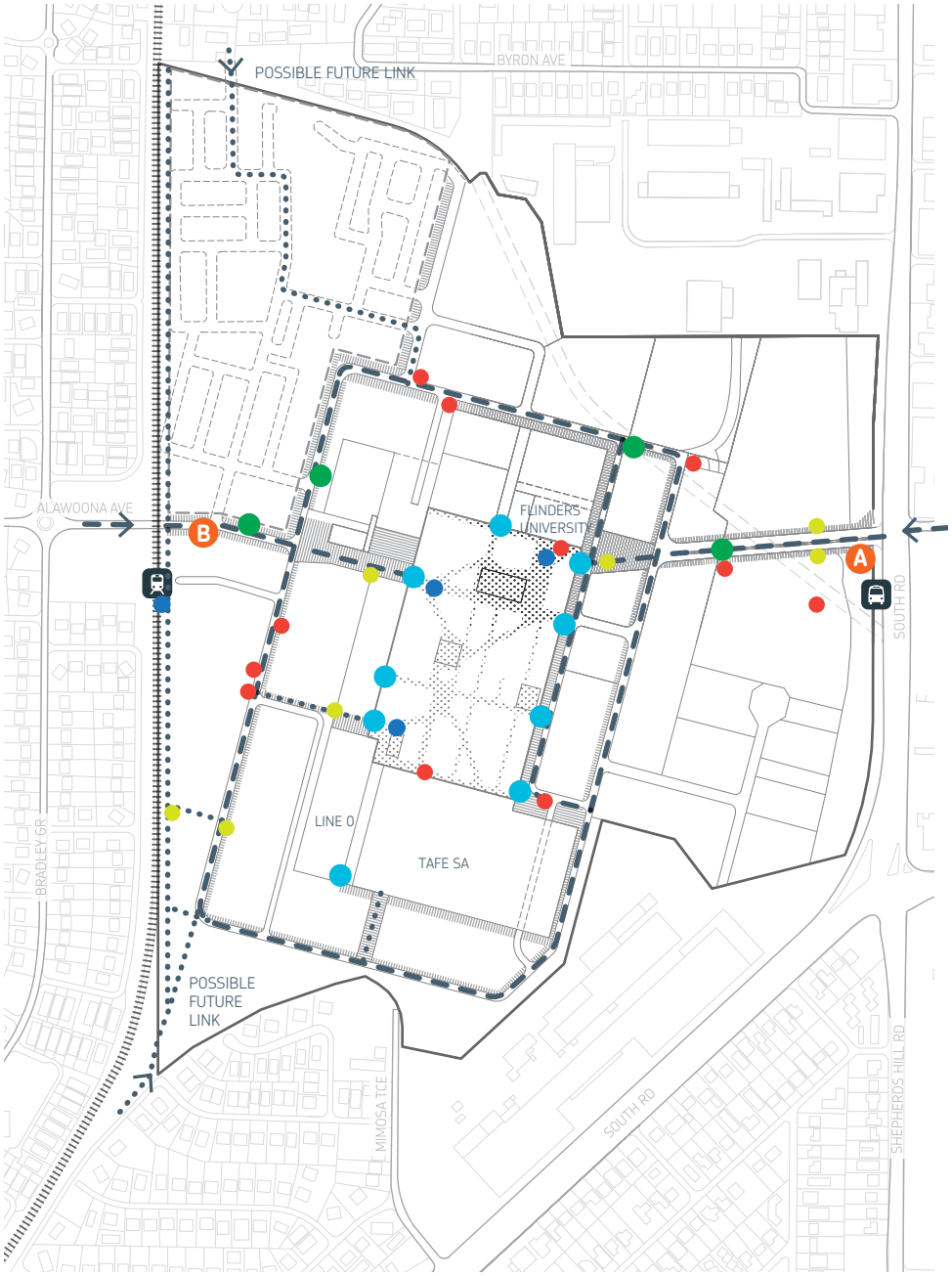
FLEXIBILITY OF USE

- Allow for flexibility and adaptable use of the Public Domain as the site develops and land uses are known.

COMFORT AND SAFETY

- Provide amenities to encourage site use and facilitate a safe, comfortable and lively environment.
- Consider Crime Prevention Through Environmental Design principles.

WAYFINDING



Primary Site Entrances
A Tonsley Blvd Entry
B Alawoona Ave Entry

Destination/Parking Entrance

Vehicle Directional Signage

Pedestrian Site Maps

MAB Entrances

Interactive Digital Signage

Primary Circulation

Secondary Circulation

0 50 100

1/ LED digital signage
2/ Race st Pier railings, Philadelphia USA

A BROAD, SIMPLE AND CONSISTENT WAYFINDING STRATEGY

- Provide a hierarchy of wayfinding to lead people through the site.
- Utilise primary entries as gateways leading to the Ring Road.
- Develop the Ring Road as a primary site orientation device.
- Provide easily identifiable entry points into the Main Assembly Building.
- Reinforce the internal forests as key structural organisers of the internal MAB Public Domain and utilise as 'landmarks'.
- Utilise the existing grid layout of the Main Assembly Building as a wayfinding device.
- Avoid signage clutter in the public realm.
- Do not allow individual business signage on South Road.

SIGNAGE WITH BUILT IN FLEXIBILITY

- Encourage innovative signage design allowing for easily changeable information that can evolve as the site develops.

INTEGRATION WITH PUBLIC ART

- Coordinate signage with other public realm elements.
- Integrate with public art elements.
- Provide signage that is obvious and functional.

INTEGRATED WITH TONSLEY BRAND STRATEGY

- Incorporate branding and marketing objectives.

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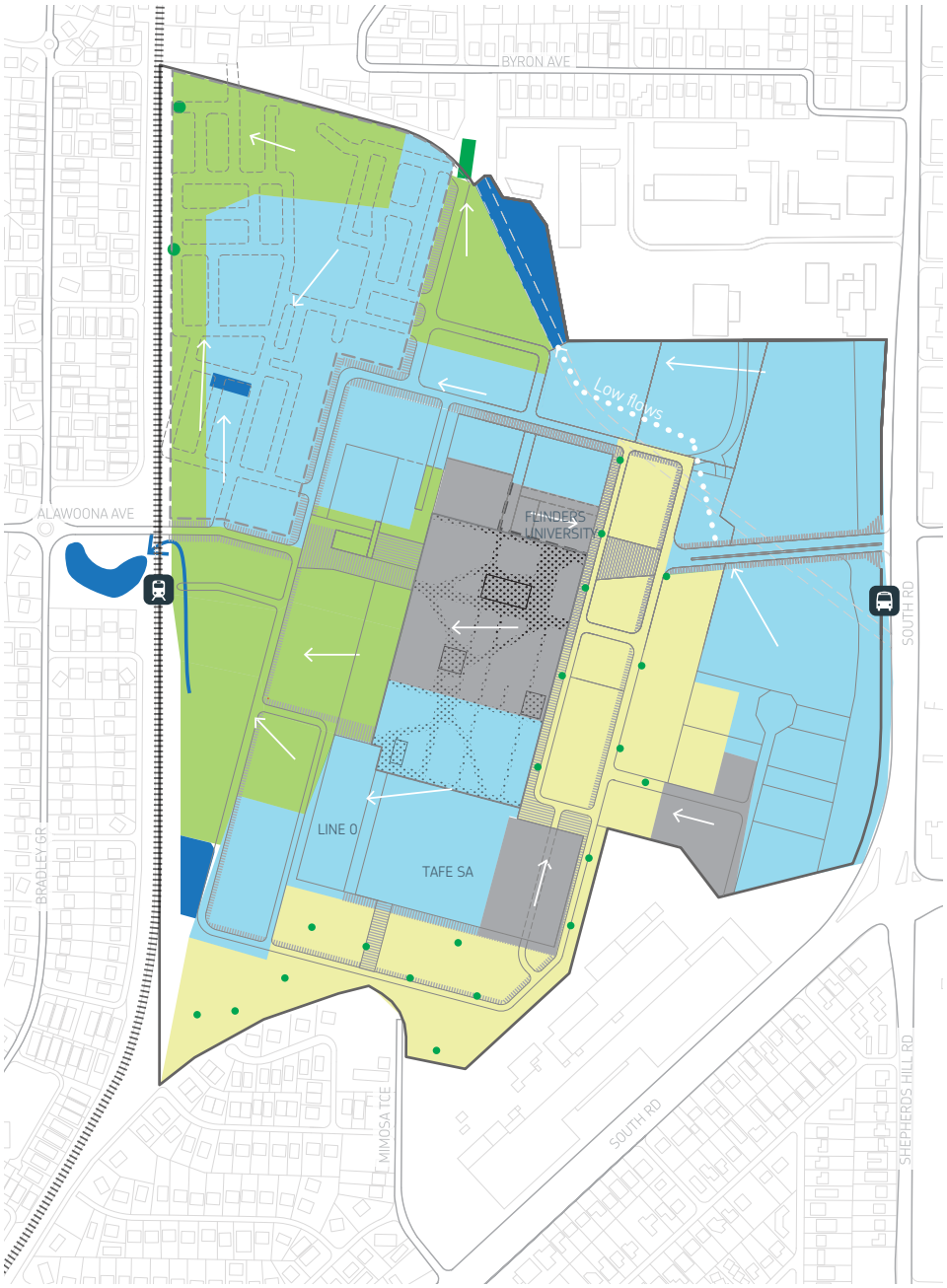
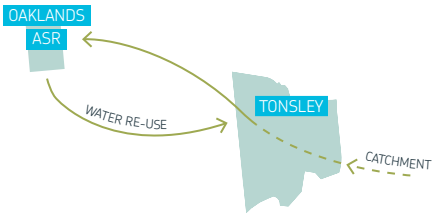
WATER SENSITIVE URBAN DESIGN





PART OF THE BROADER WATER NETWORK

- Consider the broader catchment and what happens up and downstream.
- Connect to the recycled water network from the Oaklands Park ASR scheme for the irrigation of public open space.

SITE WATER MANAGEMENT

- Collect site stormwater in response to the site topography.
- Incorporate collection and cleansing of overland stormwater flows within constructed urban wetlands and large raingardens on the northern and western sides of the site, and some of the east.
- Incorporate rain gardens to filter stormwater from the eastern side of the site.
- Following onsite cleansing, direct stormwater back into the catchment which is directed to the Oaklands Park Wetland and ASR.
- Collect roof run-off from the Main Assembly Building for re-use.
- Intergrate WSUD initiatives with recreation opportunities and open space in the public realm.

IRRIGATION

- Utilise smart irrigation technology such as moisture sensors and networked system controls for efficient water use and effective delivery.

PLANTING

- Select plants appropriate to the Tonsley microclimate that require minimal water beyond establishment.

EDUCATION + INTERPRETATION

- Demonstrate where recycled water is being used, and where site storm water is being improved prior to entering the broader catchment.
- Provide interpretive information for key initiatives and link with public art opportunities.

1/ NYC Water Tanks Project
2/ Planting

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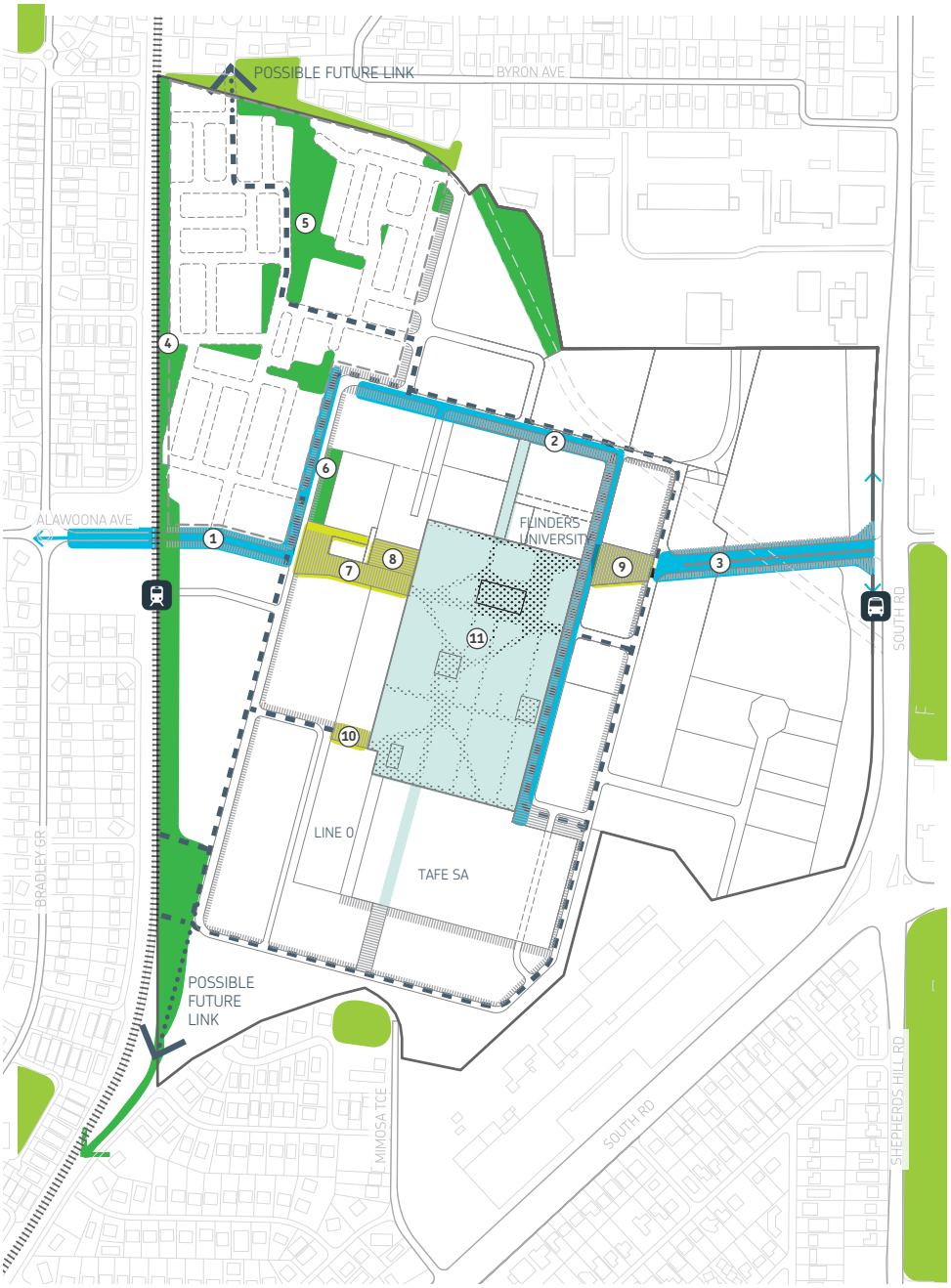
RECREATION & ACTIVITIES



Primary- Active Focus Streets
Primary- Green Recreation
Primary- Activity Plazas
MAB Internal Activities

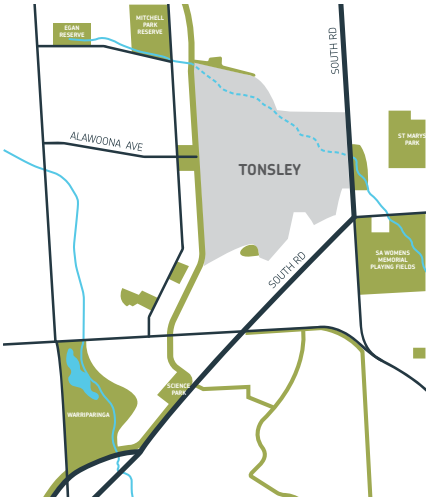
1 Alawoona Ave Link
4 Greenway
7 Boiler House (Potential future re-use)
11 MAB Recreation

2 MAB Circuit Link
5 Tonsley Village Reserve
8 Western Plaza
Recreation Links + Loops

3 Tonsley Blvd Link
6 SAPN Pocket Park
9 Eastern Plaza

External Open Space
10 South Western Plaza

0 50 100



RECREATION AND ACTIVITY AS SITE STRUCTURAL ORGANISER

› Distribute opportunities for recreation and activity across the site to engage with circulation and compatible land uses.

MULTIPLE RECREATIONAL OPPORTUNITIES

› Provide the setting for a wide variety of everyday structured and unstructured recreational opportunities.

› Achieve consistency with Council's Open Space & Recreation Strategy, including walking, jogging, picnics, formal and informal play, casual sports, games, dog walking and youth recreation.

› Provide activities for all abilities and age groups.

PROVIDING THE FRAMEWORK FOR A BROAD SPECTRUM OF ACTIVITIES

› Cater for a diverse range of activities and programs that meet the needs of the local community and visitors.

› Allow for flexibility to accommodate an evolving site and increased employment and residential population.

CATER FOR COMMUNITY, CITY + VISITORS

› Provide opportunities for events and major activities both inside the MAB and externally.

› Allow for development sites to be available for other temporary uses pre-development.

› Achieve a changing programme of events and activities that activate Tonsley both day and night, all year round.

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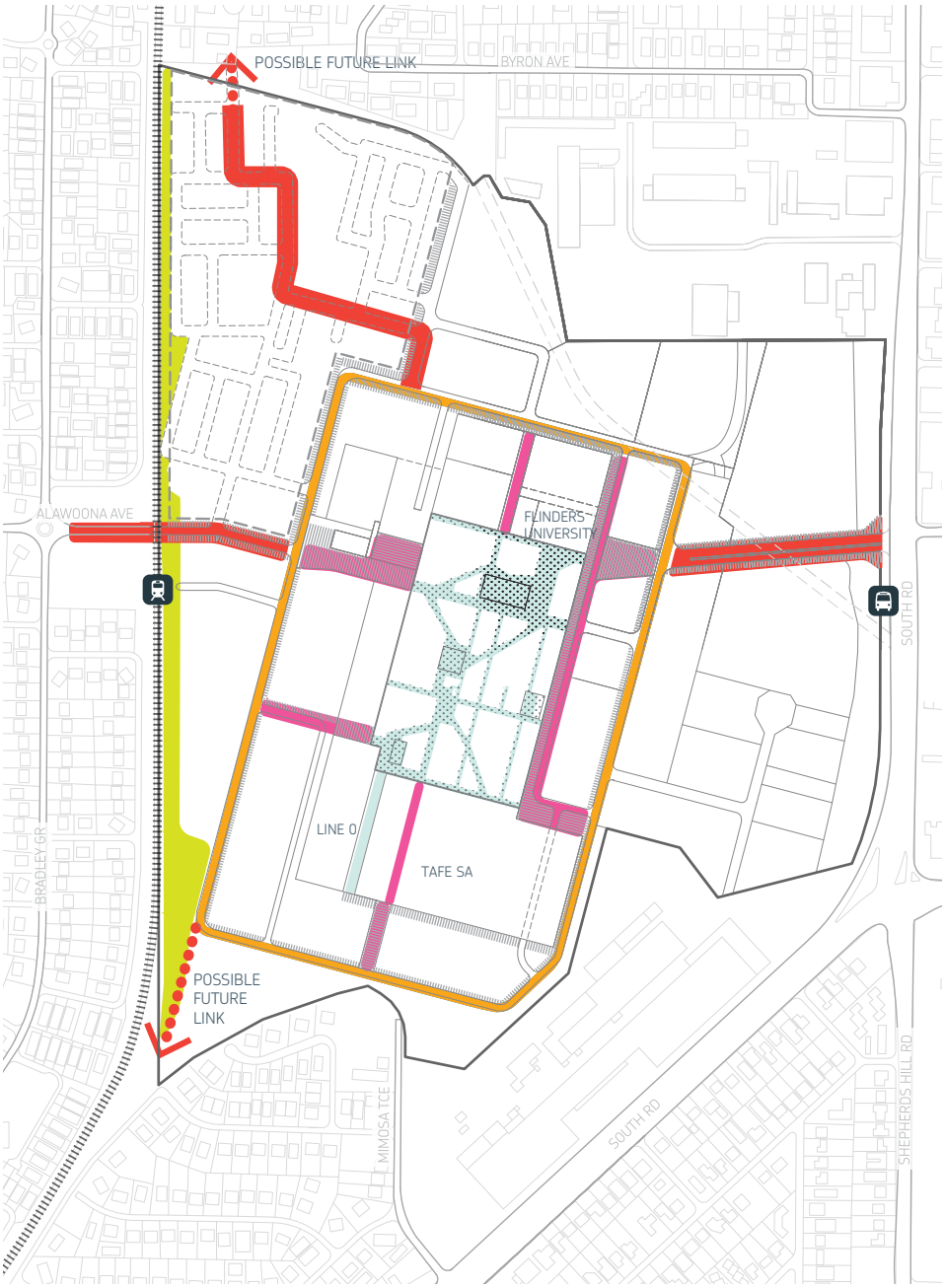
PUBLIC LIGHTING



Green Way
Links
Ring Route
MAB Surroundings
MAB Public Realm

0 50 100

SAFE USE AND NAVIGATION THROUGHOUT THE SITE

- Ensure key routes and public spaces are adequately lit.
- Assist with wayfinding through the site at night.

CONTRIBUTION TO SITE CHARACTER

- Use lighting to enliven and transform the site at night.
- Consider the design of poles and luminaires as a key visual contributor towards the appearance and function of the Public Domain.

PRACTICAL LIGHTING TO SUIT THE USES OF THE SITE

- Select lighting appropriate to function.
- Select locally assembled and, where possible, manufactured poles and luminaires.
- Achieve consistency in respect to colours and finishes with other Public Domain elements.
- Limit light spill through use of appropriate fittings that direct light to where it is needed.

ENERGY EFFICIENCY

- Utilise LED technology and alternative power sources where possible.
- Promote innovative lighting solutions.

1/ RCD Lonsdale street lighting
2/ Corvin Gate, Budapest

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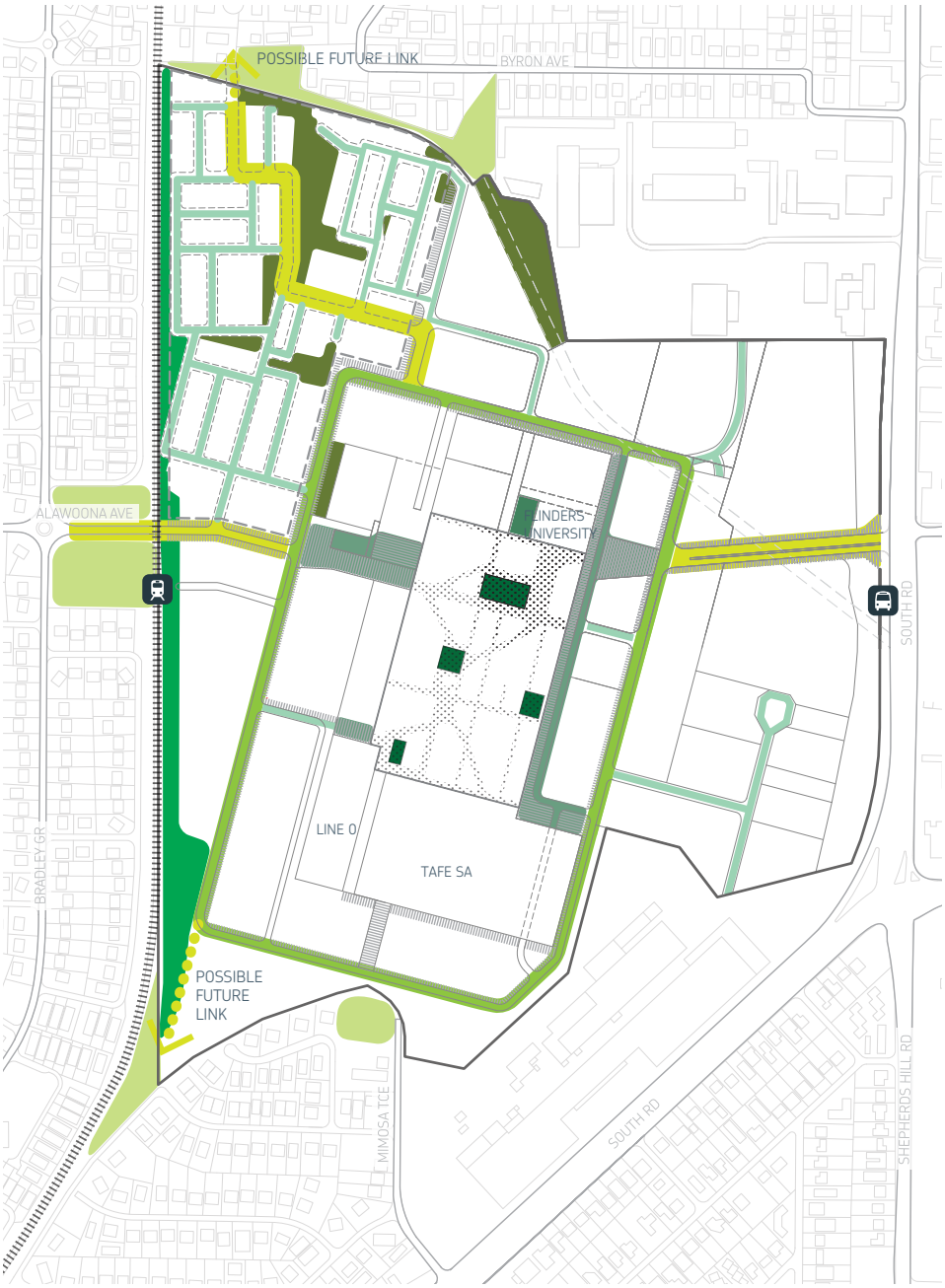
TREES



1/ Street tree planting

NOTE: Tree planting in Tonsley should consider the City of Marion Tree Management Framework and Tree Management Policy.

REINFORCING THE SITE STRUCTURE

- Reinforce the overall structure and legibility of the site by defining primary connections and routes.
- Build on existing trees of value and incorporate into the new spatial organisation of the site.
- Use larger trees to define major streets and routes.

CONNECTING THE SITE

- Connect with adjacent significant open space areas and establish tree corridors to planted road verges and open space woodlands.
- Provide biodiversity corridors on east, south and west edges of the site.
- Visually connect the site with existing surrounding tree canopies.

AMENITY

- Utilise tree planting to provide comfort to the public realm and built form - environmental protection from sun and wind and contribute to establishing microclimates.
- Consider deciduous trees for seasonal environmental control.

A NEW LAYER

- Introduce a new tree layer consisting of Australian native tree species mixed with exotic species to contribute towards species diversification and horticultural intent.

THEMES

- Native – predominately greenway, parks, perimeter planting, minor streets.
- Exotic – reinforce primary streets, pedestrian links, plazas.
- Productive - key open space nodes referencing the prior agricultural use.
- MAB Forests – providing microclimates internally within the MAB.

MAINTENANCE

- Select species that are low maintenance, have little or no impact on infrastructure, are long-lived and proven in Adelaide's climate and soils.

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MATERIALS

REFERENCE THE SITE'S RICH AND LAYERED HISTORY

› Demonstrate relevance or continuity with the site's land use legacy, including manufacturing, agriculture and pre-European use.

USE OF MATERIALS TO ARTICULATE SPACE AND FUNCTION

› Utilise a consistent palette of materials and construction techniques that characterise the Public Domain.

› In a controlled way, vary materials to highlight a unique public realm with distinct character.

A PLACE FOR EXPRESSION OF INNOVATIVE MATERIALS

› Express enterprise and innovation.

› Commit to excellence.

› Use distinctive, appropriate materials and detailing to contribute to Tonsley's new identity.

SUSTAINABILITY

› Utilise materials that are cost efficient, low in maintenance and durable (low whole-of-life costs).

› Reuse existing onsite materials where possible.

› Justify materials and construction techniques by Life Cycle Assessment modelling.

› Favour locally sourced material where possible.

APPROPRIATE

› Materials should be fit-for-purpose.

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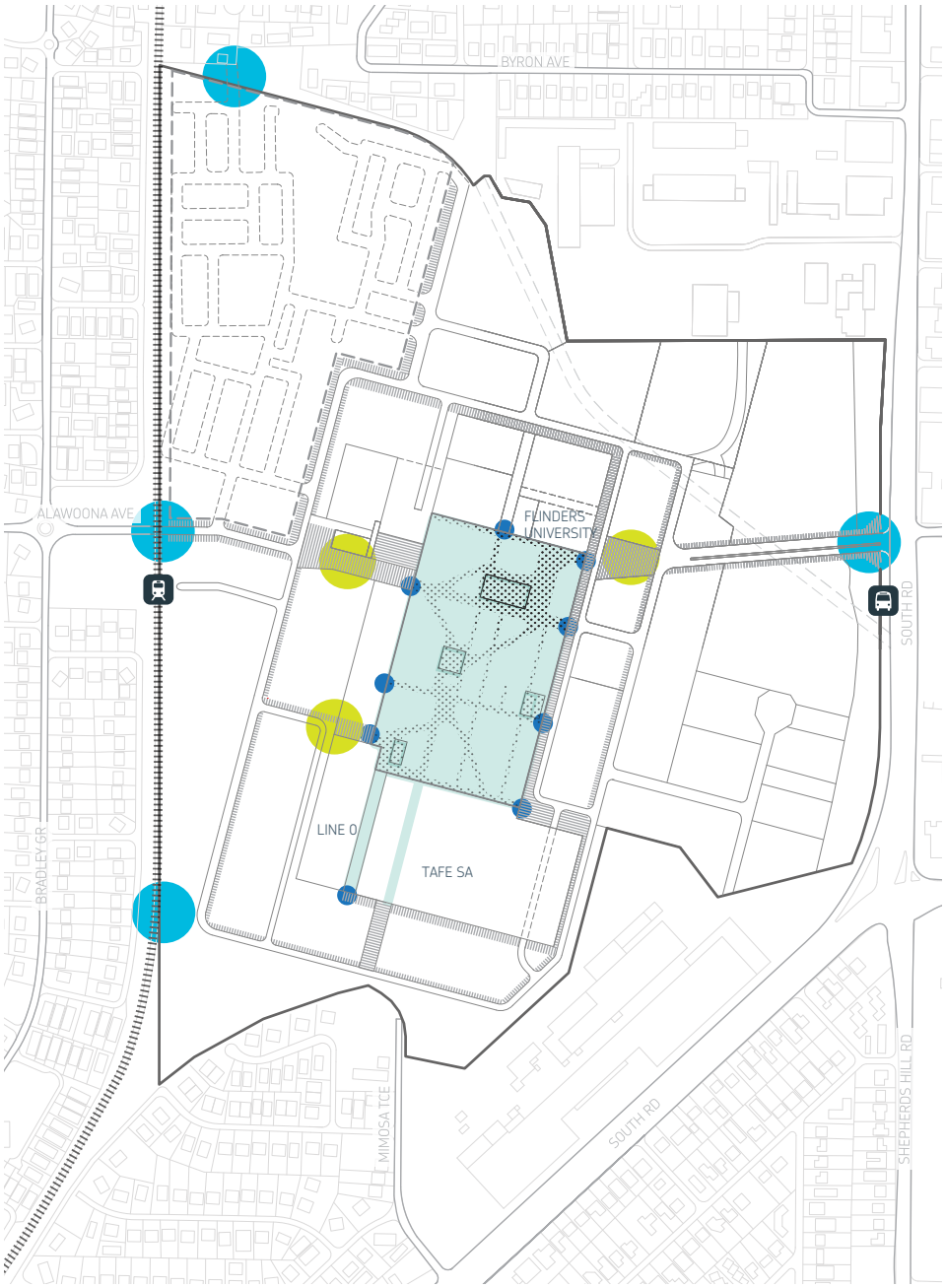
PUBLIC ART



1/ Chain mail fence art
2/ Street art

A SITE WIDE APPROACH TO PUBLIC ART

- Interpret the site's rich history and look to future technology and innovations.
- Public art to evolve as development of the site unfolds.
- Public art to explore and portray the site's history + future opportunities.

PUBLIC ART AS PART OF THE PUBLIC REALM

- Integrate with signage + wayfinding.
- Integrate with furniture/lighting.
- Be site and location specific.
- Integrate with the built form.

ADAPTIVE RE-USE

- Make use of salvaged site material for the creation of public art.

FOCUS AREAS

- Gateways
- Streets
- Plazas
- MAB

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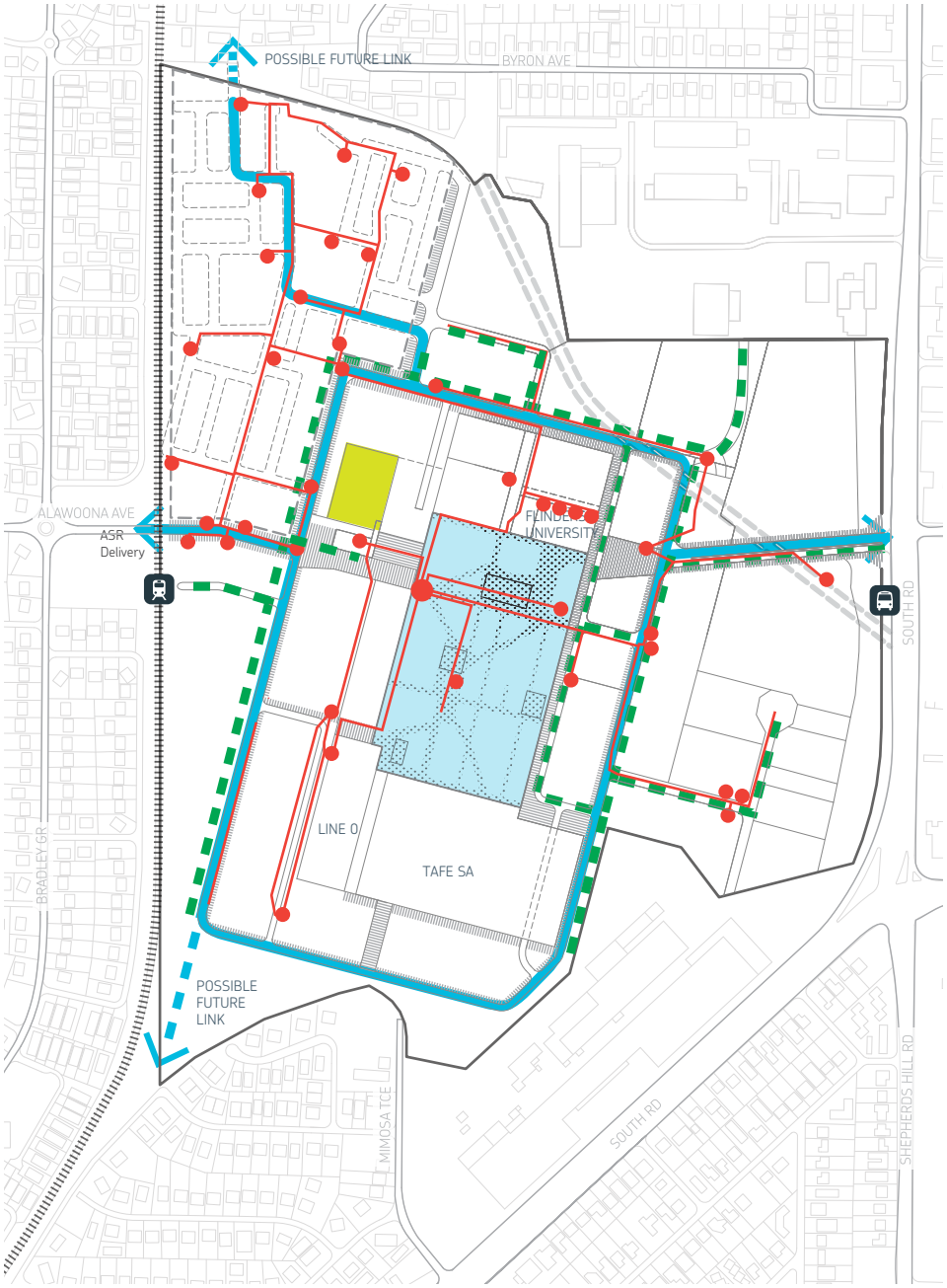
SITE SERVICES



DISTRICT ENERGY AND WATER SCHEME

› CleanPeak Energy has been established as the owner and operator of the Tonsley District Energy and Recycled Water Scheme and will provide high quality services to every occupier in the development.

OBJECTIVES

› Provide competitive supply of energy and recycled water.

› Contribute to Tonsley's high level of environmental sustainability.

› Optimise energy and water assets across the whole site.

› Reduce required upfront captial cost by developers related to energy and water infrastructure.

› Attain high levels of renewable energy generation through installation of rooftop solar photovoltaic panels across the whole site.

› Create a resilient and reliable energy and water scheme.

› Create a community scheme to provide Tonsley occupants with greater commercial, environmental and operational efficicencies.

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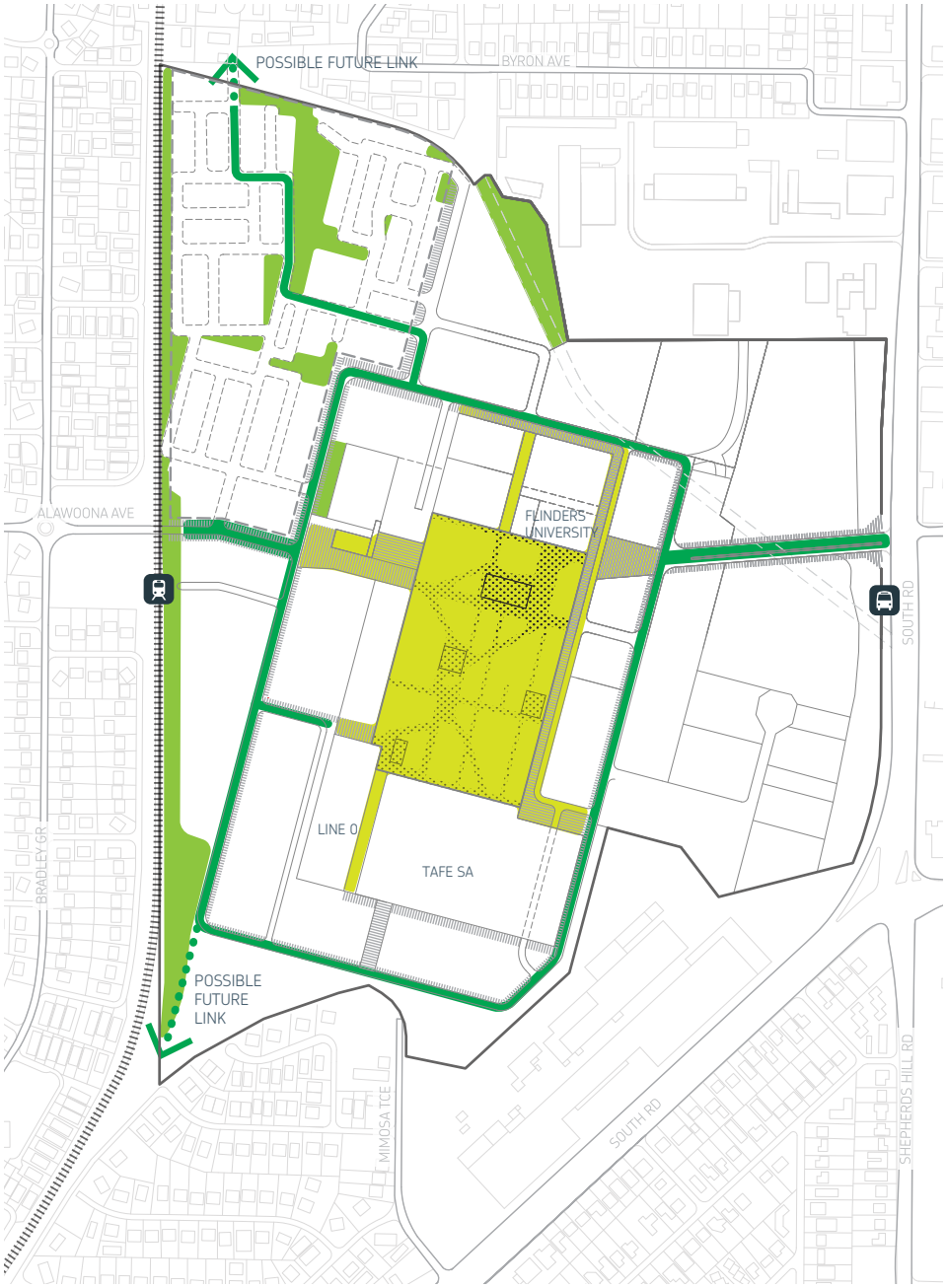
MAINTENANCE



Proposed Maintenance Levels

- MAB + Surrounds (Highest)
- Open Space (Normal)
- Primary Streets (High)

0 50 100

GOOD MAINTENANCE AND MANAGEMENT OF THE SITE WILL ENSURE TONSLEY IS AN INVITING PLACE TO BE AND VISIT

Provide a maintenance and management plan that caters for the evolution of the site and allows for a variety of activities to evolve over time.

MAB

- Manage the internal public realm to ensure presentation and safety is achieved at all times.
- Determine a level of management appropriate to development (build out) within the MAB as it evolves.

LOW MAINTENANCE TECHNIQUES ADOPTED SITE WIDE

- Consider ongoing maintenance requirements in the design of the public realm.
- Refine responsibility for maintenance of the Public Domain (MAB and external) considering council and agency obligations.

STREETS

- Adopt a design and maintenance approach that utilises robust and durable materials and construction techniques.
- Include council, agency and private development responsibilities.

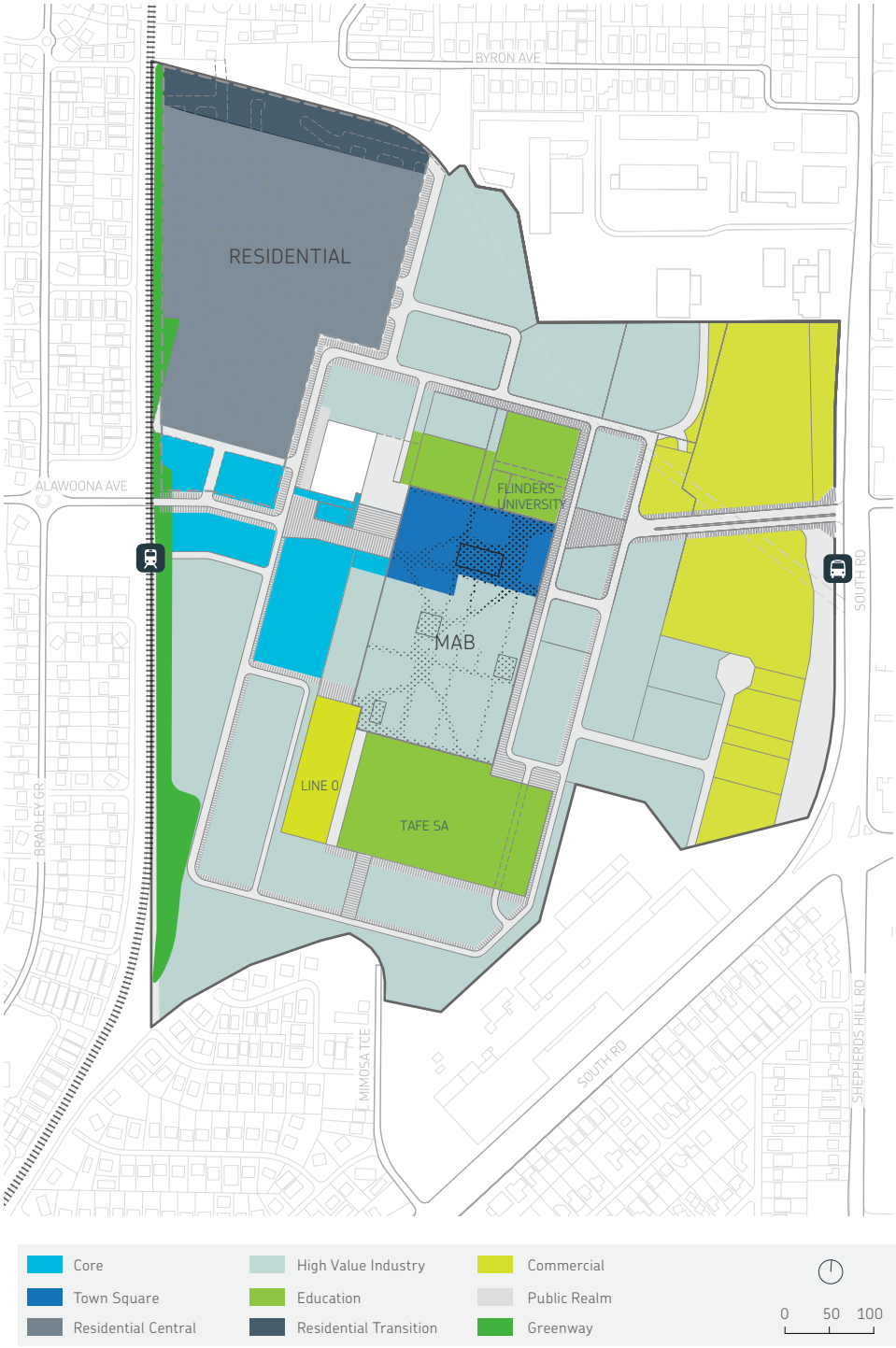
Tonsley Innovation District

SITE WIDE - BUILT FORM

Built form is one of the most dominant elements on the site and affects its overall character and the experience of the public realm.

Built form in Tonsley reflects the site's history and the vision for an innovative future, cognisant of the functional needs of a mixed use development. Design excellence that will provide Tonsley with a distinctive built form unlike any other, is at the forefront of these strategies.

LAND USE MIX AND DENSITY



A VARIETY OF LAND USES

- Distribute a variety of land uses throughout Tonsley in an intensive, compact and efficient manner.
- Capitalise on the position of the site (with respect to access to transport and services), and its unique offering of employment, education, services and housing all within walking distance.

DISTRIBUTION, LOCATION AND SYNERGY

- Distribute land uses "horizontally" as well as "vertically" through appropriately designed and sited mixed use developments.
- Locate land use and density with a sensitivity to the interface between uses.
- Create synergies between activies where possible, providing an active and vibrant environment that is safe and enjoyable for all.

CORE PRECINCT

- Provide a mix of uses including residential and smaller scale non-residential land uses.
- Create a 'retail mainstreet' along Alawoona Avenue between the railway station and the MAB (Main Assembly Building) that may include shops, offices and commercial activities with residential located on upper floors.
- Achieve a minimum residential net density of 100 dwellings per hectare.

TOWN SQUARE PRECINCT

- Develop as the main recreational and community meeting space within Tonsley, providing a sheltered, pedestrian environment within a multi-functional public space and thriving activity hub.
- Include a wide range of uses including community services, offices, consulting rooms, cafes, restaurants and other eateries that provide for day-to-day needs.
- Provide spaces for events, markets, art displays and general recreation.

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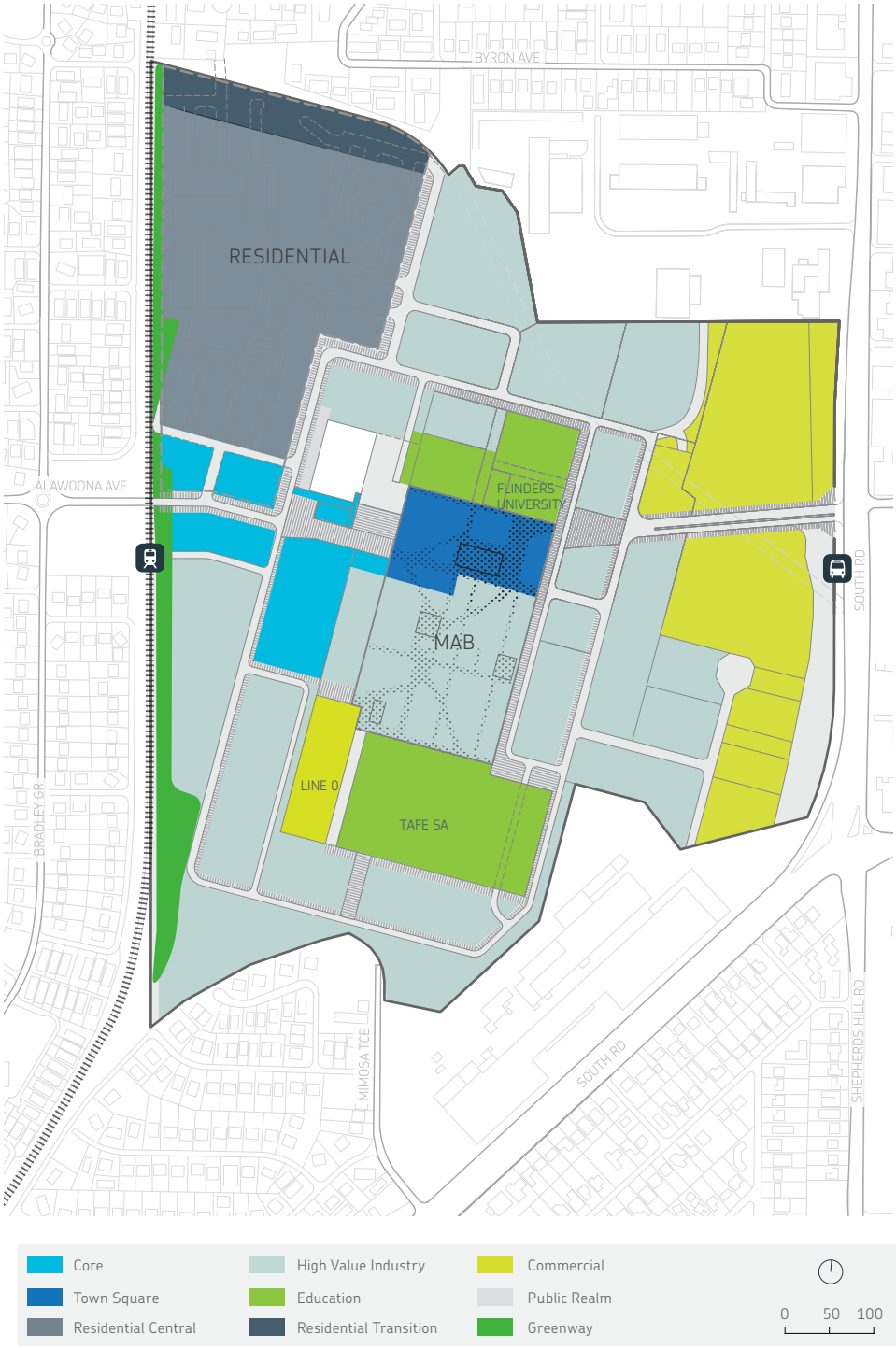
LAND USE MIX AND DENSITY (CONT_)



HIGH VALUE INDUSTRY PRECINCT

- Form the productive core of Tonsley, providing a range of light industrial uses of varying intensities.
- Allow for large floor plate enterprises (such as high value manufacturing, advanced technology and research) as well as providing a place for new innovation and "start-up" enterprises.

MAB PRECINCT

- Provide a precinct under the converted main assembly building structure that allows for a variety of complementary uses including education and training within the southern and northern ends of the facility, the Town Square Precinct at the northern end, and a variety of supporting commercial uses in between encapsulated in 'pods' under the MAB main roof.
- All development within the MAB should be in accordance with the MAB Development Manual.

COMMERCIAL PRECINCT

- Provide a commercial precinct for the development of office accommodation adjacent South Road and flanking the entry road allowing high visibility to tenancies.

EDUCATION PRECINCT

- Develop education and training facilities located at either end of the MAB and adjacent to the Town Square Precinct.

RESIDENTIAL CENTRAL PRECINCT

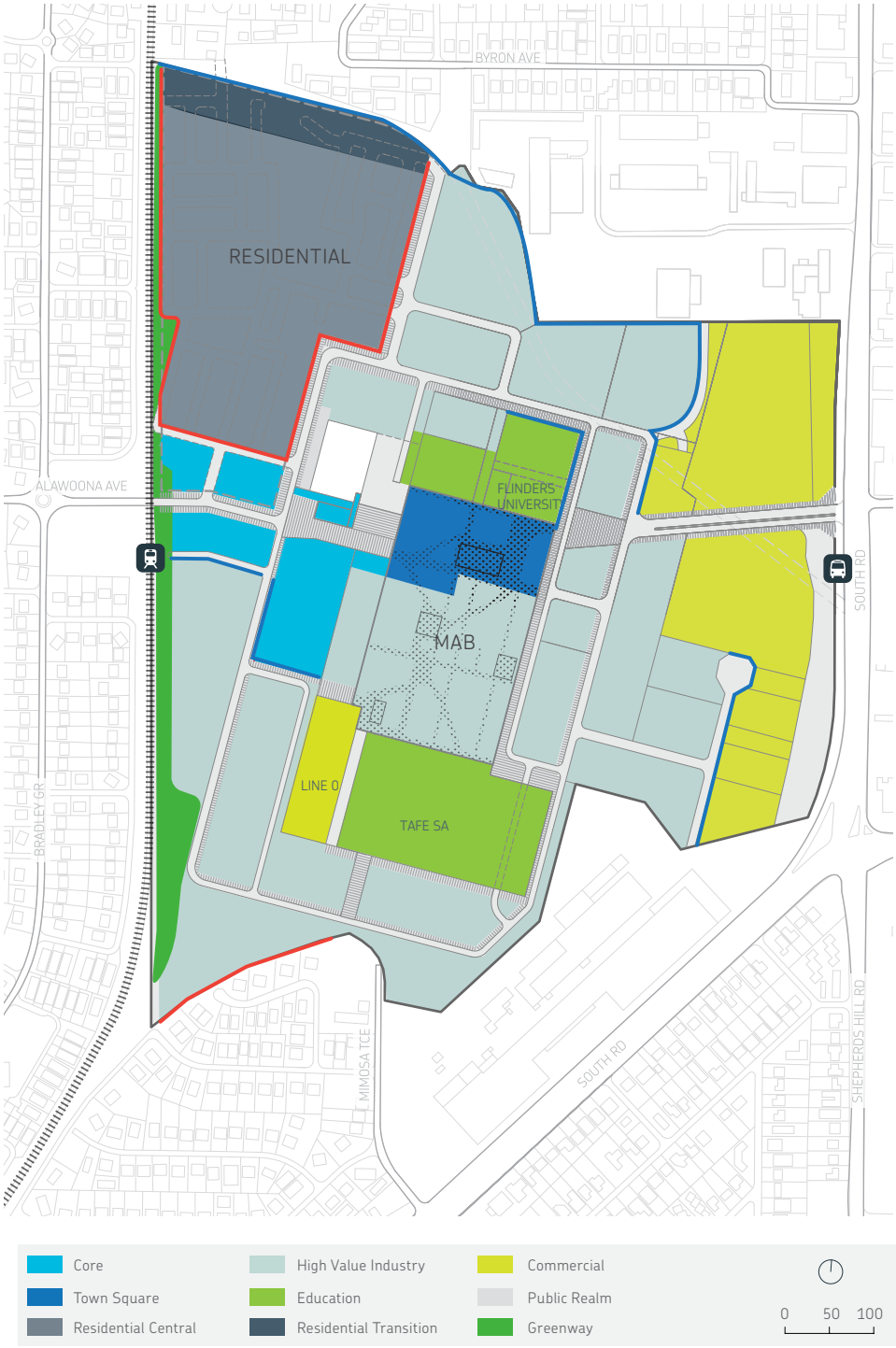
- Provide predominantly medium-to-high density residential development (at a minimum net density of 70 dwellings per hectare).

RESIDENTIAL TRANSITION PRECINCT

- Develop at a lower scale to provide a suitable transition between the Residential Central Precinct and the adjoining existing neighbourhood to the north (at a minimum net density of 50 dwellings per hectare).

Tonsley Innovation District

INTERFACE BETWEEN LAND USES



A MIX OF LAND USES

- Provide for a mix of land uses including residential, high value industry, education, commercial, retail, office and recreational activities.
- Give special attention to the interface between uses to ensure that each has a positive interaction with its neighbour, not only with respect to design and form but also activity and function.
- Create positive interaction between uses through design.
- Limit overshadowing, provide attractive outlooks, minimise noise, emissions and odour, and locate service areas and other potentially impacting activities away from residential land uses.
- Consider opportunities for providing complementary land uses at the interface between the Residential and Core Precincts and the High Value Industry Precinct, such as commercial offices (up to 250m²) and small-scale retail (up to 50m²).

INTERFACE BETWEEN LAND USES

- Given the diversity of land uses within Tonsley, it is expected that development will share the responsibility for managing the interface between different uses, such as between residential and non-residential land uses and/or between commercial, retail and public realm (plazas and key pedestrian links).
- Additional interface consideration needs to be given to any development adjacent the Greenway.

DIAGRAM

Design solutions should be applied to ensure an attractive and seamless transition between the various land uses and between Tonsley and its broader site context.

Appropriate noise and odour reduction techniques should be applied to limit conflict at the interface between residential development and both high-value industrial land uses and the railway line (assisted in part by the public realm buffer provided).

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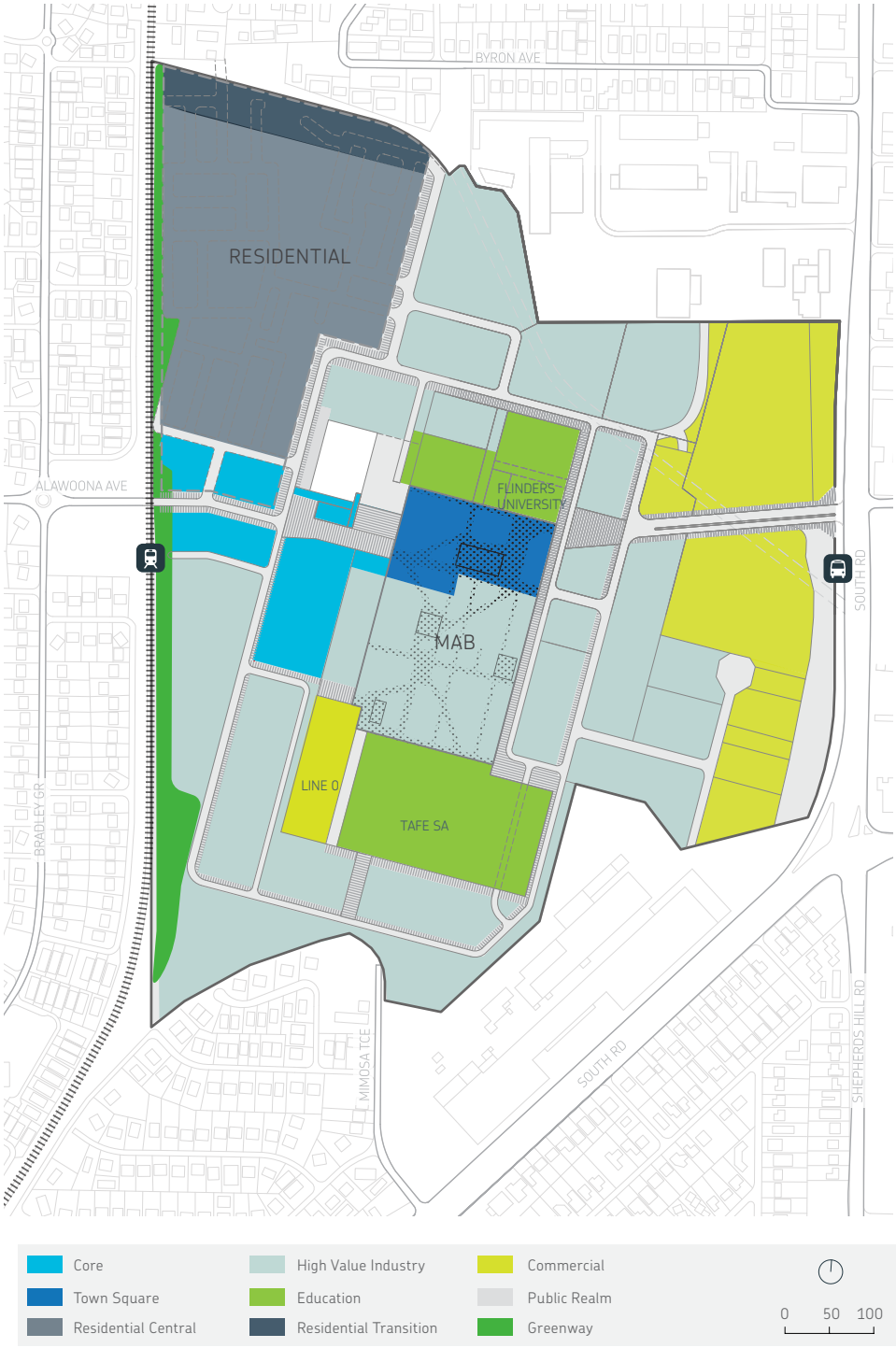
BUILDING HEIGHT



SUPPORT THE VISION

- Adopt building heights that support the vision of a vibrant, mixed-use development.
- Capitalise on the site's attributes, location and topography.
- Provide an efficient and intensive use of space.

VARIETY OF HEIGHTS

- Utilise a variety of building heights to emphasis the structure of the site and provide appropriate scale across the development in relation to neighbouring sites and the public realm.
- Provide the tallest building heights along the extension of Alawoona Avenue, along South Road and the South Road entry road, and within the Education Precinct to the north of the MAB.
- Use commercial buildings to provide an active and strong "edge" to Tonsley and its main entrance (and provide substantial floor area opportunities).
- Establish a consistent and coherent rhythm of built form throughout the High Value Industry Precinct that is cognisant of the scale of the MAB.
- Respect the scale of the existing residential neighbourhood at the northern interface of the residential release.

SUITABLE HEIGHTS

- **Core** 2-7 storeys*
- **Commercial** low-to-medium-rise
- **Education** medium-rise
- **High Value Industry** low-rise
- **Residential Central** 2-6 storeys
- **Residential Transition** 2-3 storeys
- **Town Square / MAB** (refer to MAB Development Manual)

* Development adjoining Alawoona Avenue (between the railway station and the MAB) should capitalise on the maximum height allowances.

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MAB - BUILT FORM

The built form strategy for the Main Assembly Building plays a crucial role in the design of the pods within the tenancies, the interface of the pods with the public realm and the design of the public realm. The guidelines should be used by those developing the tenancies.

INHERENT CHARACTER

1/ Refurbished external form

2/ Refurbished internal form

MAINTAINING THE INDUSTRIAL HERITAGE

- Retain the industrial character and original form and finishes of the existing building.
- Ensure any new interventions and insertions maintain and reinforce the industrial quality of the space.

EXISTING STRUCTURE

- Utilise the existing building structure for the proposed building use.

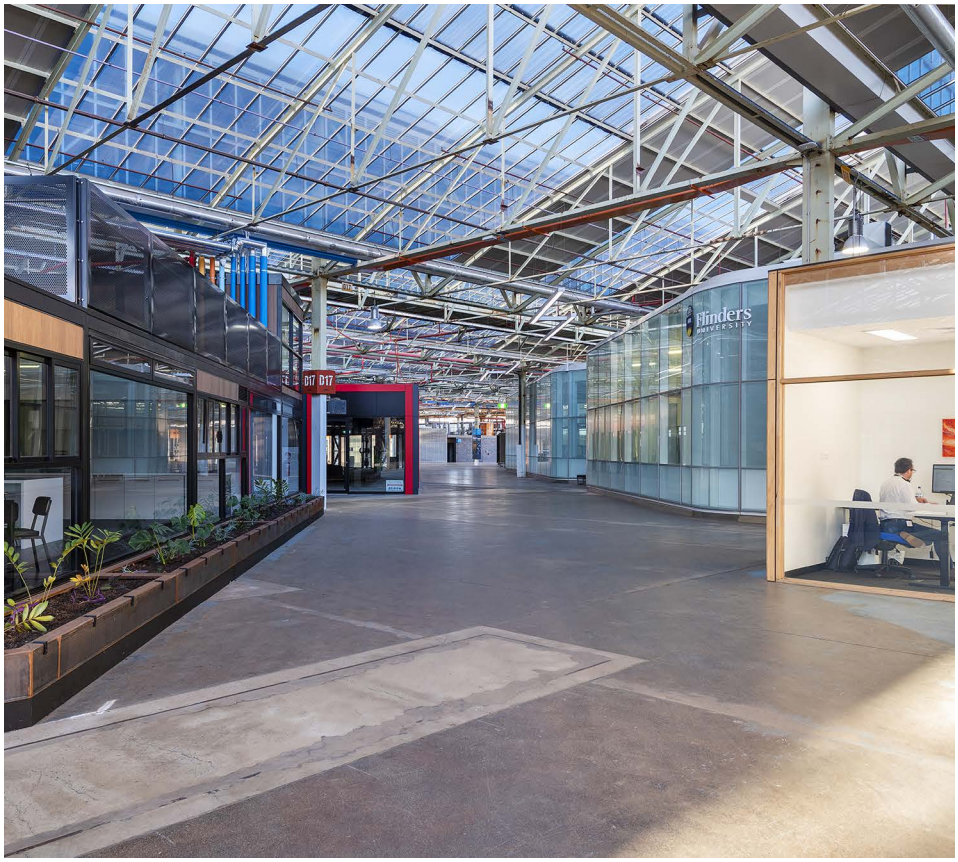
ROOF

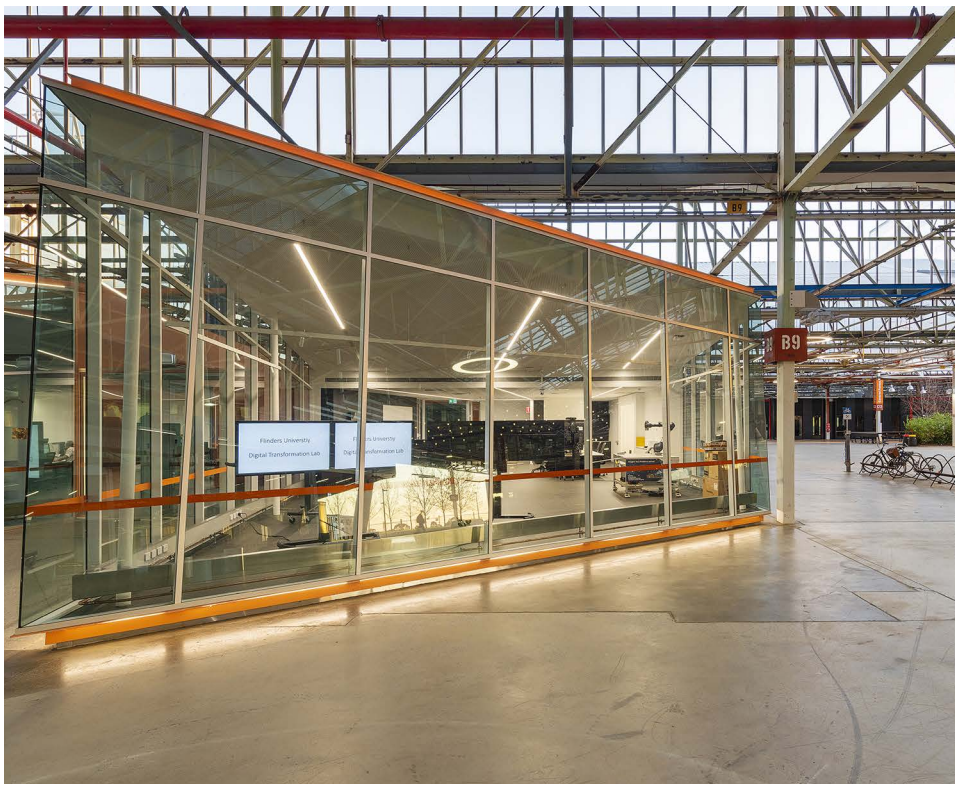
- Re-clad the existing roof structure to provide optimum environmental characteristics for various uses within MAB.

EXISTING BUILT FORM WITHIN MAB

- Reconfigure existing internal structures for public use.

STRUCTURE





INTEGRITY

› Maintain the quality of the existing Main Assembly Building structure. All new structures will relate to the existing built form, and not interfere or connect to the existing building.

EXISTING STRUCTURE

› Maintain existing columns, trusses and purlins. Do not modify or interfere with any existing structural elements.

TENANCY STRUCTURE

› Provide new structures that are freestanding, and do not attach to the existing columns, trusses or purlins in any way.

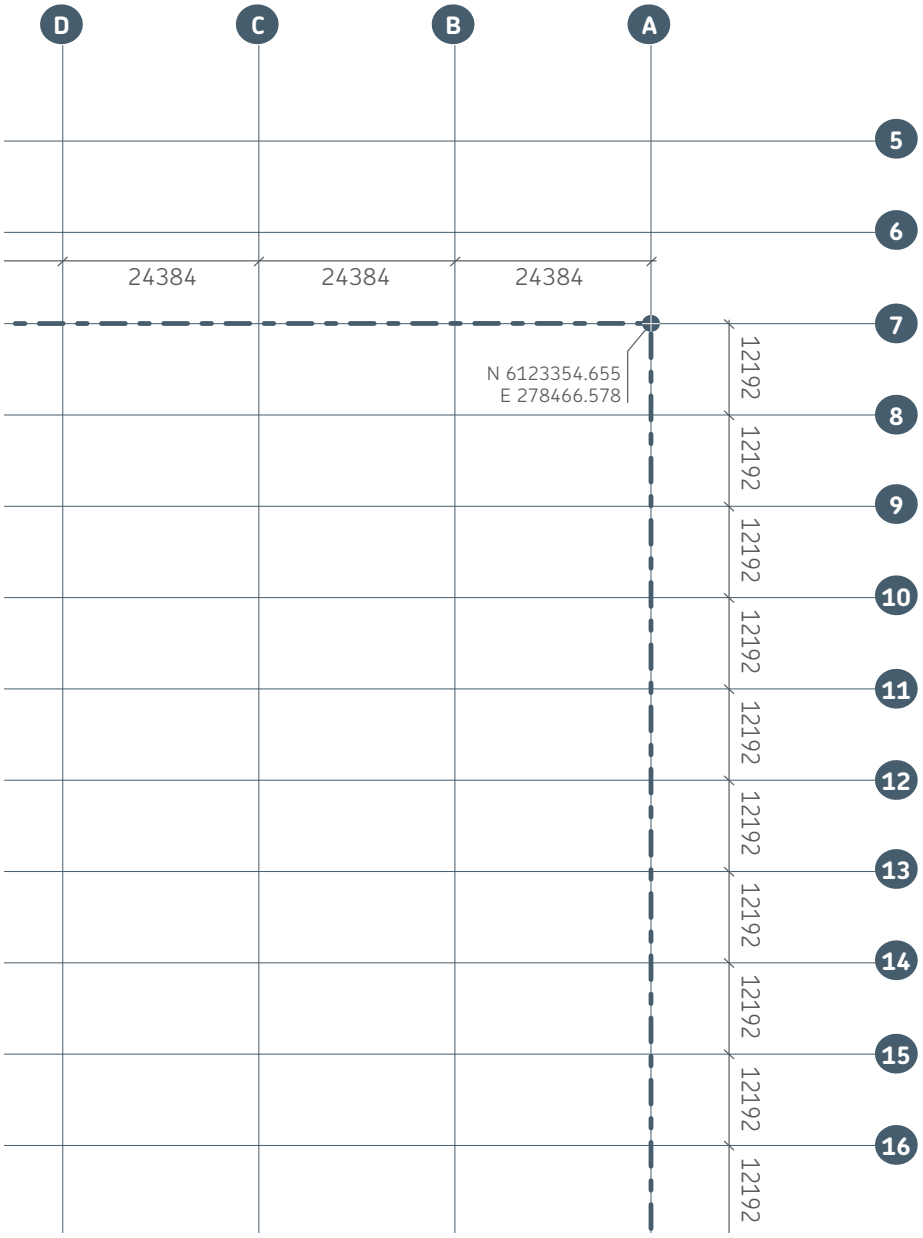
› Maintain the existing slab within tenancy zones wherever possible.

› Consideration needs to be given to services connections (refer Tonsley MAB Building Services Design Guidelines for Tenancy Developments) and slab load limits.

› No structural connections to columns and penetration through the MAB roof is permitted.

› All new structures must adhere to the Tonsley MAB Building Services Design Guidelines for Tenancy Developments and the Tonsley Park Development MAB Existing Slab Condition Report.

GRID LAYOUT



A REFERENCE SYSTEM

› Maintain the existing grid layout as a reference system for identifying elements and tenancies throughout the MAB.

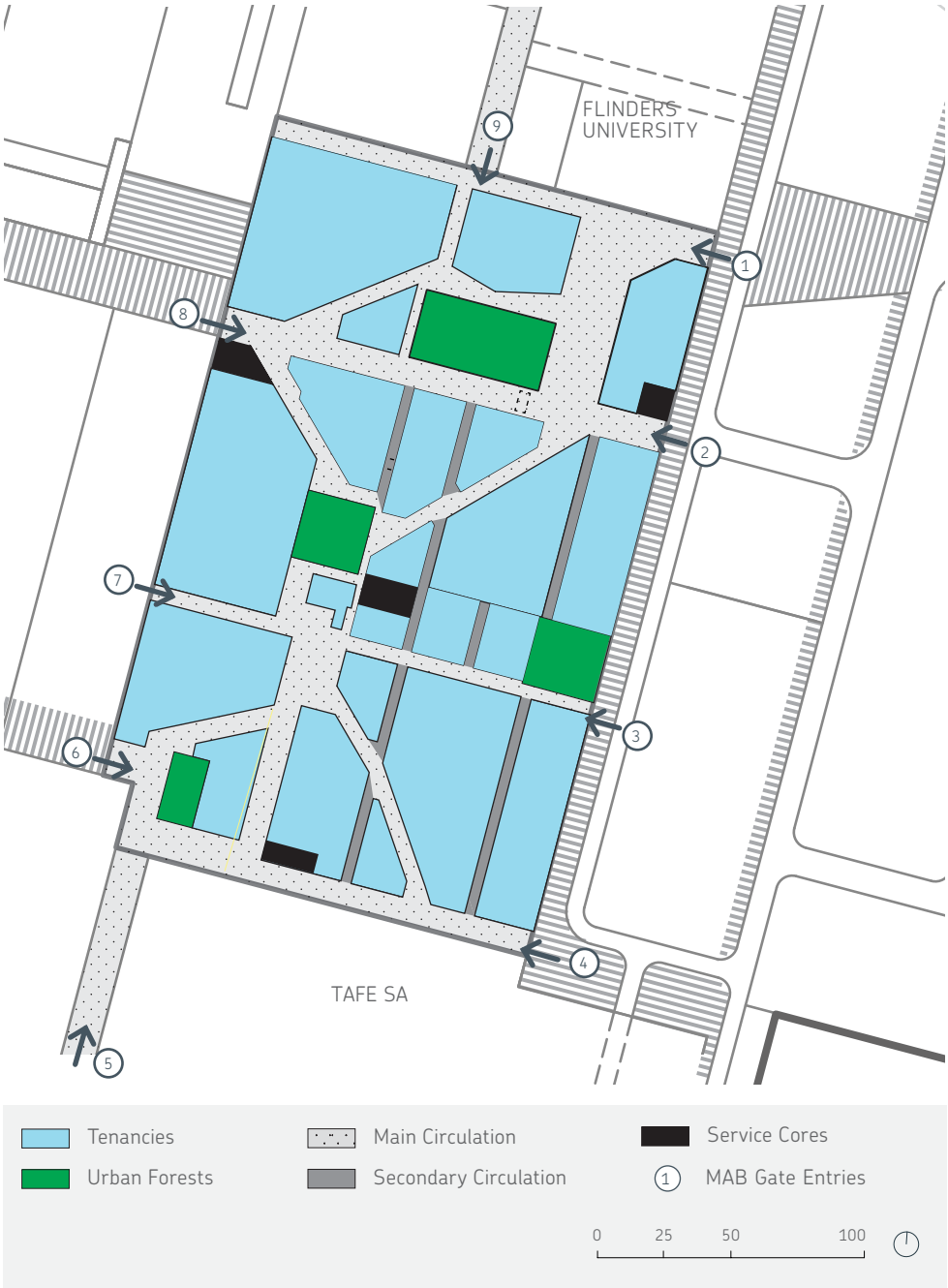
NUMERICAL

› North-South orientation at 40ft. (12,192mm) centres.

ALPHABETICAL

› East-West orientation at 80ft. (24,384mm) centres.

ROUTES & ENTRANCES



ADDRESSING THE CONTEXT
- Locate entrances to relate to the structure of the site and its movement network.

UTILISE THE GRID
- Align the entrances with the existing grid layout.

DEFINE THE EDGES
- Provide built form to both sides of an entry.
- Incorporate service cores which consolidate services and utilities at entry points as a distinguishing feature and wayfinding element.

PRIMARY CIRCULATION
- Provide minimum 6m wide thoroughfares for primary pedestrian usage.
- Allow for the provision of controlled and managed out of hours vehicle access.
- Allow for bicycle access.

SECONDARY CIRCULATION
- Provide minimum 4m wide thoroughfares for primary pedestrian usage.
- Allow the provision of controlled and managed out of hours vehicular access.

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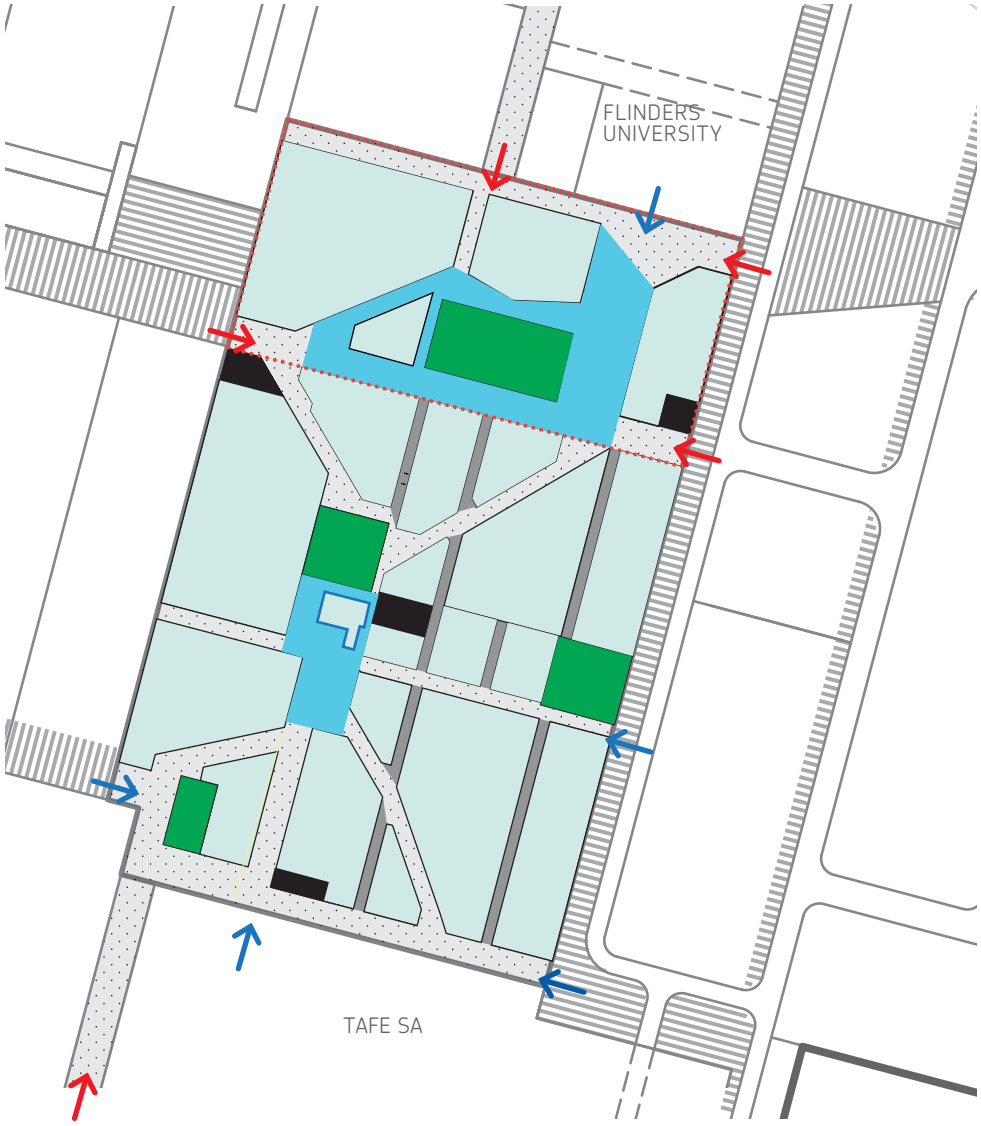
PUBLIC REALM



VARIETY OF SPACES
- Provide a variety of spaces offering different experiences within the MAB.
- Incorporate a town square that is accessible at all times and the focus of public life.
- Develop four internal forests, each offering a different charater and uses, and respite from the other public spaces.
- Provide an internal plaza offering a second large gathering space.

ACTIVITY AND RECREATION
- Support active use of the public realm and provide opportunities for cultural/ community programming.
- Allow for large groups to gather to facilitate events.
- Allow for bicycle access.
- Include temporary recreation facilities in vacant tenancy zones to provide activation prior to purchase and occupation.

FLEXIBILITY OF USE
- Allow for flexibility and adaptable use of the public domain as the MAB develops and tenancies become known.

CIRCULATION
- Provide a heirarchy of clearly defined routes.

PUBLIC VS. PRIVATE
- Provide clear delineation between the public realm and tenancies through different floor finishes and the lighting strategy.

COMFORT AND SAFETY
- Provide amenities to encourage use and facilitate a safe, comfortable and lively environment.
- Consider Crime Prevention Through Environmental Design principles.

CHARACTER
- Maintain an un-cluttered 'raw' space that embraces its industrial heritage.

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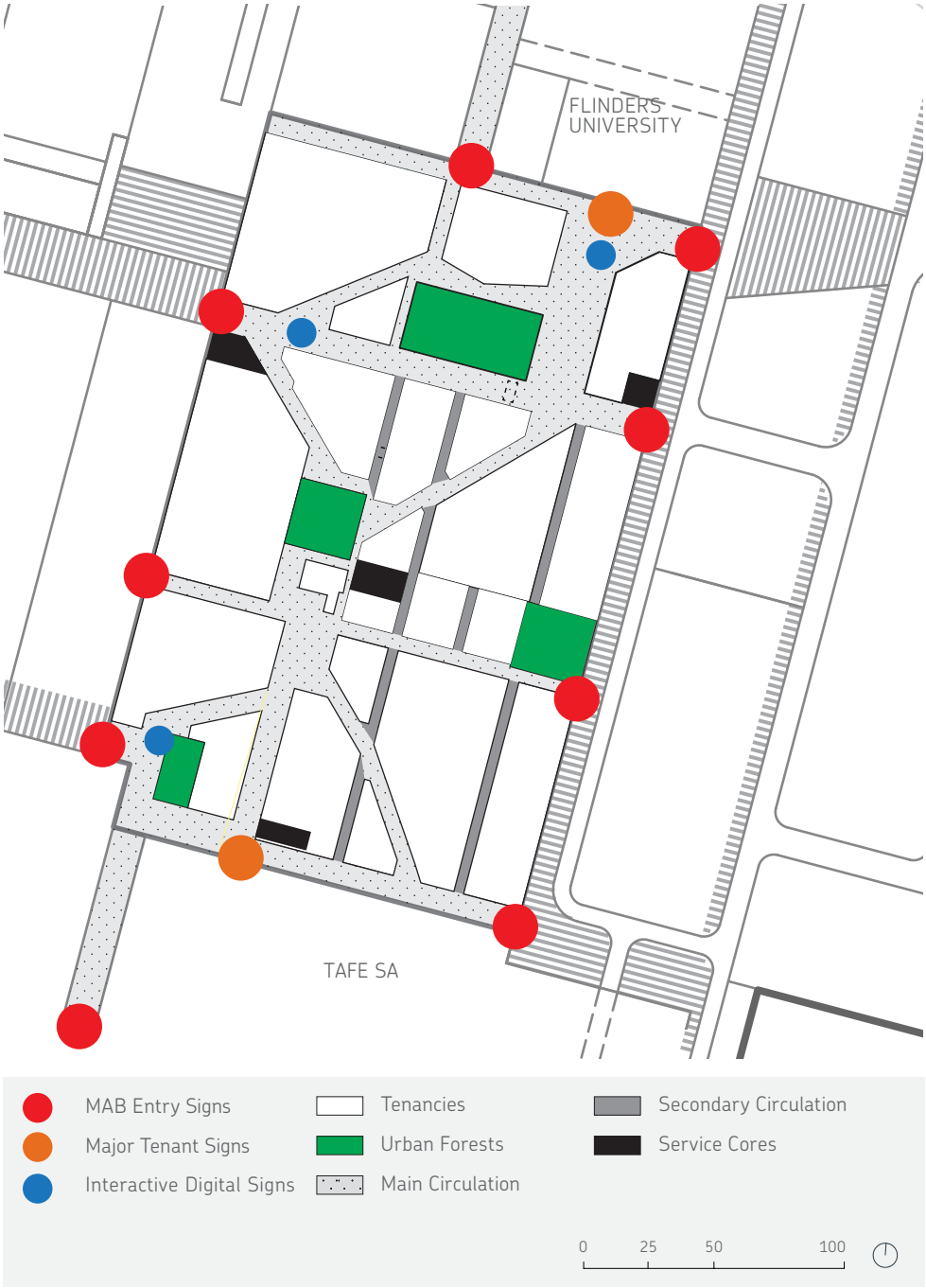
WAYFINDING



A SIMPLE AND CONSISTENT STRATEGY

- Provide a simple and clear navigational tool consistent with the overall site wayfinding strategy.
- Avoide signage clutter in the public realm.

IDENTIFY THE ENTRIES

- Clearly define the entries and provide orientation markers upon entering the MAB.

A LOGICAL STRUCTURE

- Utilise the existing grid layout as a wayfinding device.
- Maintain clear sight lines to nodes, entrances and other points of orientation.
- Provide secondary orientation markers at key nodes.
- Reinforce the internal forests as key structural organisers and utilise as 'landmarks'.
- Clearly define the public realm through floor treatments and lighting.

INTEGRATION WITH PUBLIC ART

- Coordinate signage with other public realm elements.
- Integrate with public art elements.
- Provide signage that is obvious and functional.

SIGNAGE WITH BUILT IN FLEXIBILITY

- Encourage innovative signage design allowing for easily changeable information that can evolve as the MAB develops.

INTEGRATED WITH TONSLEY BRAND STRATEGY

- Incorporate branding and marketing objectives.

TENANCY SIGNAGE

- Allow for individual tenancies to provide their own signage.
- Provide tenancy signage along the primary frontage.
- Maintain tenanacy signage within tenancy zones - not in the public realm.
- Incorporate signage to all tenancies on the Eastern facade.

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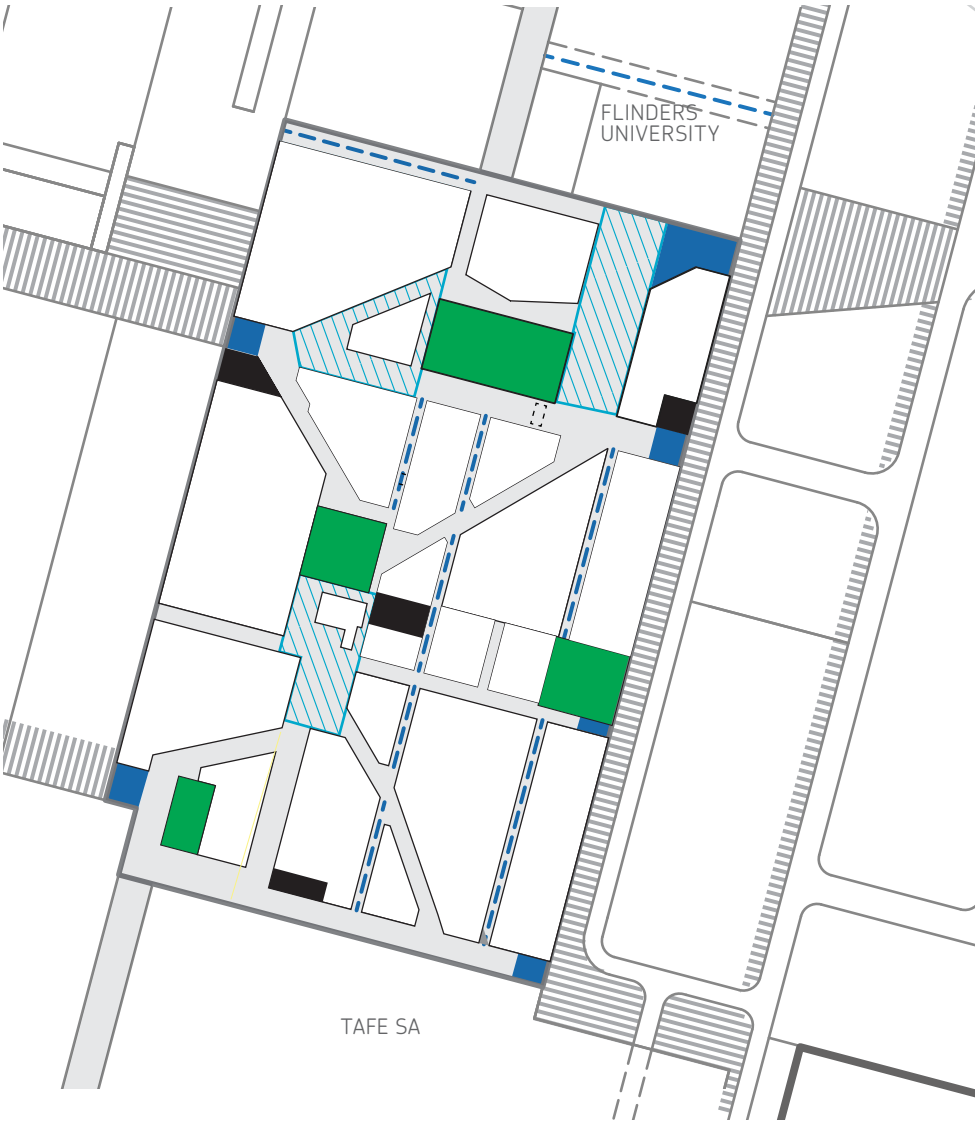
LIGHTING



Entrances
Laneways
Major Activity Areas
Tenancies
Urban Forests
Links
Service Cores
0 25 50 100

PLACE CREATION
› Utilise lighting to provide spaces with different characters to reinforce the heirarchy of the publilc realm.

WAYFINDING
› Reinforce wayfinding by differentiating primary and secondary routes, and the town square and central plaza.
› Highlight key intersections and entries through lighting treatments.

INNOVATION
› Use materials and light creatively.
› Integrate lighting into the existing built form to create unique design elements.

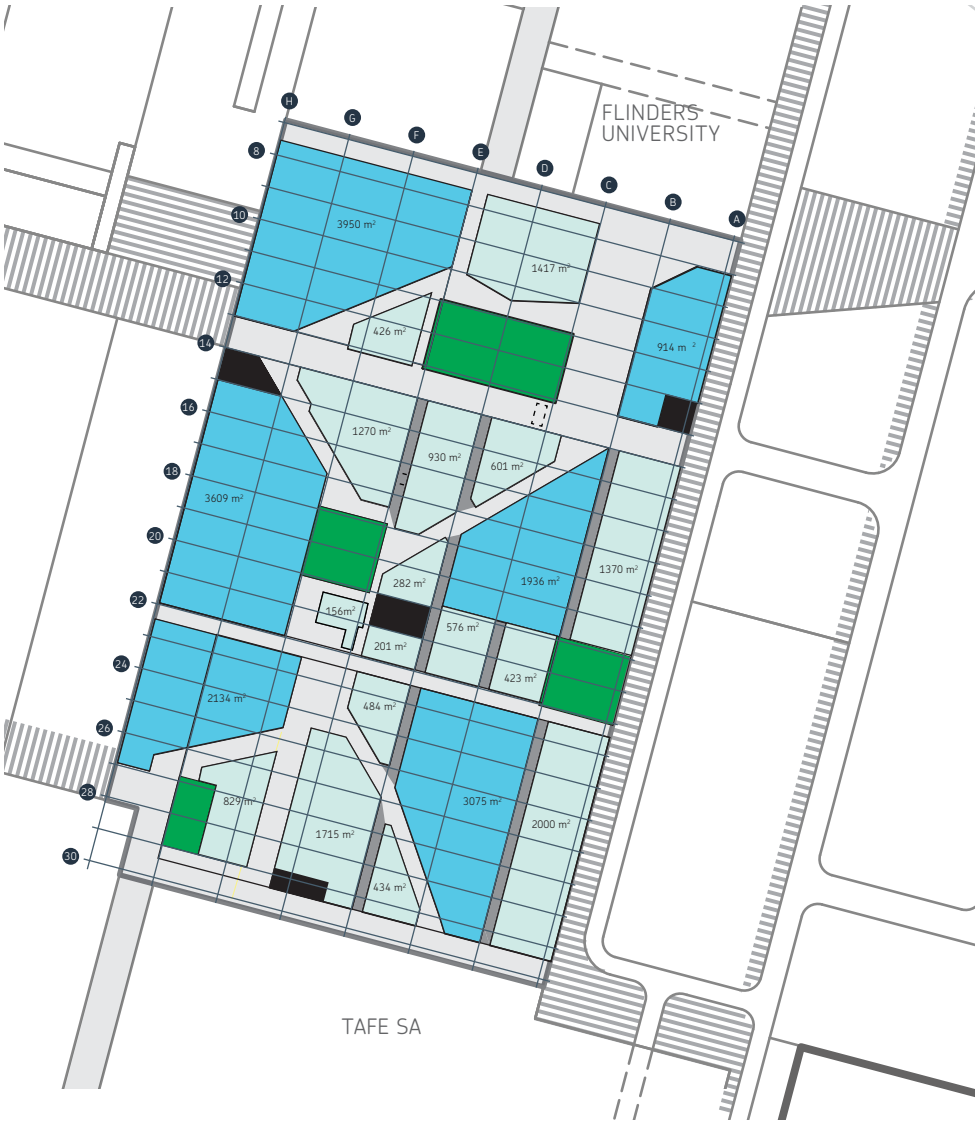
SUSTAINABILITY
› Select energy efficient luminaires.
› Concentrate lighting for its specific purpose and in movement and activity areas through considered placement.

APPROPRIATENESS
› Provide adequate lighting levels for function.
› Create a safe and inviting atmosphere.

EXISTING FABRIC
› Celebrate and enhance the existing structure.
› Interpret the industrial heritage.

TENANCY LIGHTING
› Allow for individual tenancies to provide their own lighting.

TENANCY SIZE



CONTEXT

- Develop zoning within the Main Assembly Building based on consideration of heirarchy of scale.
- Locate smaller tenancies at the eastern perimeter, and towards the centre to promote permeability through the building.
- Locate larger tenancies to the west to allow access to loading facilities, with some larger tenancies towards the centre.

HIGH VALUE INDUSTRY

- Allow for a majority of tenancies to be designated for High Value Industry.
- Locate predominantly between grid 14 and 29.

RETAIL

AN ACTIVE PUBLIC REALM

- Provide a variety of retail offerings predominantly around the town square.
- Allow for smaller food and beverage options and pop-up retail in both the town square and the central plaza.

ROOF

ENVIRONMENTAL PERFORMANCE
- Utilise environmental analysis to determine the most appropriate roofing solution to achieve a balanced performance comfort.
- Consider daylight levels, thermal and acoustic performance.
- Provide a mixture of solid panels, transparent panels and openings.

SOLID ROOF
- Provide an insulated sandwich panel system with perforated acoustic lining.

TRANSPARENT ROOF
- Utilise solid polycarbonate skylight panels.

VERTICAL SOUTH LIGHTS
- Incorporate a fixed glazing system.

AIR FLOW
- Provide air relief at the peak of the south lights and through forest areas.

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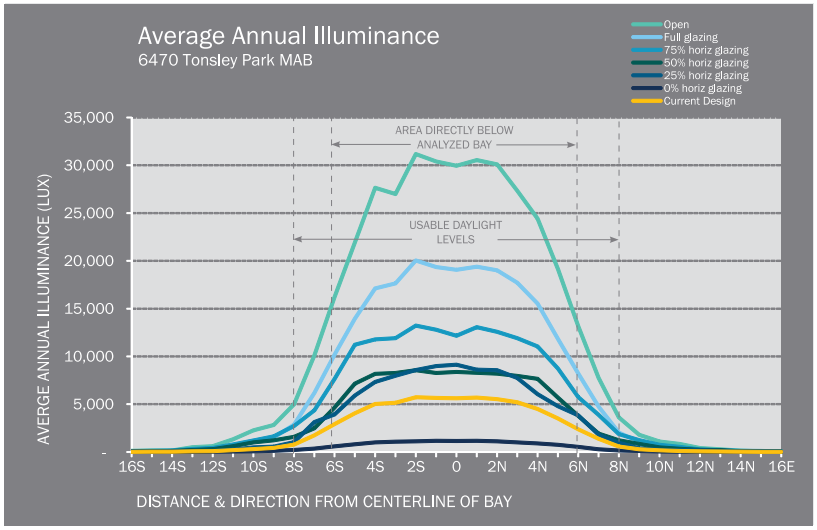
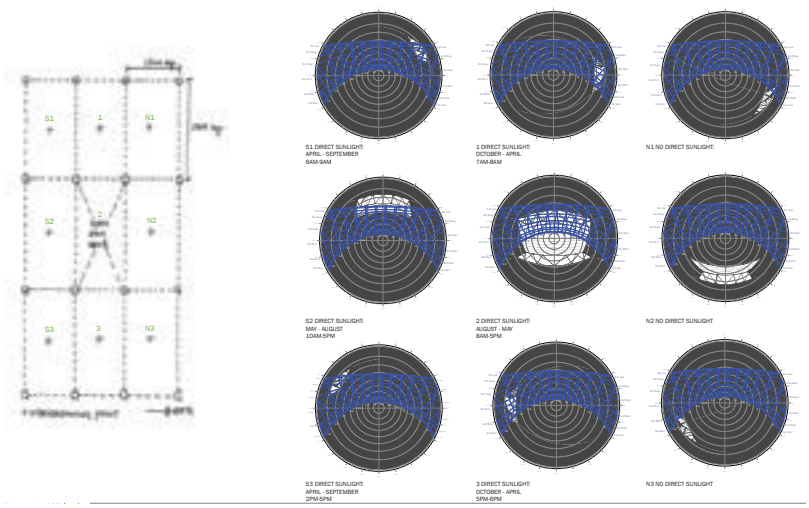
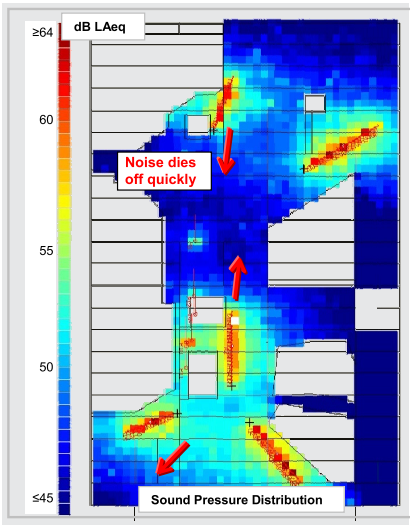
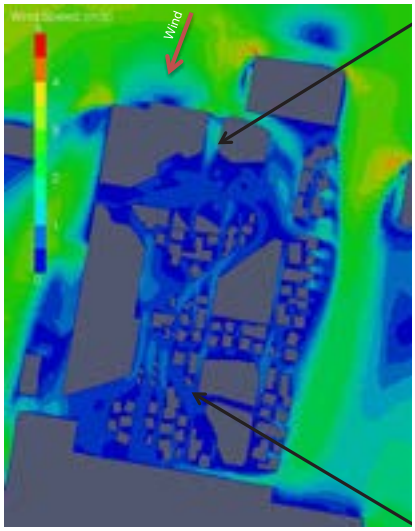
ENVIRONMENTAL









SCIENTIFIC APPROACH

› Determine the internal planning of the MAB and changes to the existing built form through scientific environmental analysis.

DAY LIGHT ANALYSIS

› Consider specific requirements for the various public (gathering, rest and circulation) and tenancy areas.

ACOUSTICS LIMITATIONS

› Utilise the ceiling material throughout the building to assist in absorbing noise levels from the public spaces.
› Require tenants to acoustically treat their tenancy should internal ambient noise levels exceed 45dB LAeq.

THERMAL ASSUMPTIONS

› Carry out wind flow CFD modelling to determine the most appropriate strategies for maximising natural thermal comfort throughout the building.
› Adopt natural ventilation systems.

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FIRE COMPARTMENT

COMPARTMENTS

› Provide a number of large compartments within the MAB derived from the requirements for fire separation.

FLEXIBILITY

› Provide fire compartments of less than 10,000m² to provide maximum flexibility to tenants in terms of construction and material selections (Fire rated construction is not required within a compartment of less than 10,000m²).

CLEARANCE BETWEEN COMPARTMENTS

› Provide a 6m minimum clearance between each compartment.

REVIEW

› At the time of publishing Issue 03 of this document, fire compartment guidelines are under review and subject to amendments to be in accordance with the Site Wide Fire Strategy as per the Tonsley MAB Building Services Design Guidelines for Tenancy Developments.

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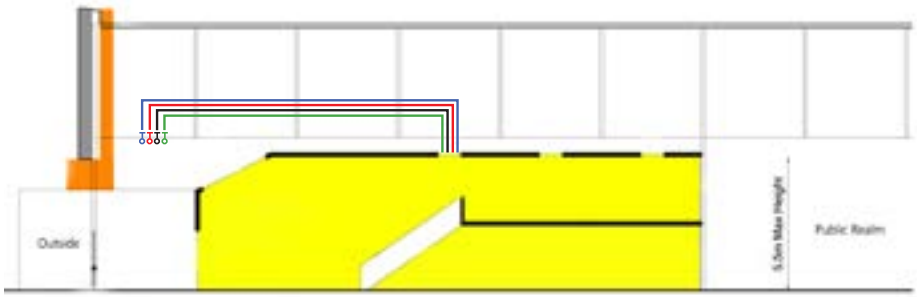
MAB SERVICES



Building services reticulation to the perimeter within the truss zone

BASE BUILDING SERVICES

- Provide the MAB with base building services, generally reticulated along the east and west boundaries exposed under the bottom truss chord with the exception of sewer.
- Allow for tenancy services to run to the perimeter to connect with the services supply points.

SERVICE IDENTIFICATION

- Paint to colour code all tenancy and base building services including paintwork and cable trays.
- Service paint colour scheme is:
  - Mechanical: Dulux 'Blaze Blue' 98419941
  - Fire Protection: Signal Red No. R13
  - Fire Water: Green to architect's selection
  - Electrical: Dulux 'Orange X15' 98451439
  - Communications: Dulux 'Safety Yellow' 9842015G
  - Spare: Light blue to architect's selection

SEWER

- Provide sewer points at the perimeter of the tenancy zones. Trenching to sewer if required shall not cross internal roadways.

WATER / ELECTRICAL / COMMUNICATIONS

- Allow for tenant supplies to run at high level within the truss zone to the East or West perimeter for connection to the base building reticulation.

SMOKE VENTING STRATEGY

- Utilise south light bays to relieve smoke at the highest point.
- From March 2021, do not allow the built area of the tenancies to be higher than 5.0m above floor level (this includes tenancy structure, cladding, fixtures, fittings, plant and equipment), so as to not restrict smoke venting.

FIRE SERVICES

- Retain the existing fire sprinkler system within the MAB to be re-commissioned
- Ensure each tenancy provides fire services in-line with the statutory requirements.
- Ensure all internal pods align with established MAB Fire Engineering Strategy and Building Certification requirements.

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RenewalSA

Government of South Australia