
Park Avenue
Harbour Drive
Earl Street
Albany Street
Skate Park
Amenities
Open Lawn
Village Green
Civic Entrance
Brelsford Entry Statement
Section One - Village Green
Waterplay
Lawn
Section Two - Event Space
Stage
Amenities
Active Recreation
Playground
Event Space
Amphitheatre
Tennis subject to feasibility analysis as per recommendations
Expansion of Existing Native Plantings
N

PART 4 MASTERPLAN

BRELSFORD PARK MASTERPLAN

The Brelsford Park Masterplan encapsulates the essence of the 2012 plan (as shown yellow on Page 1). The 2012 plan establishes a repetitive use of a series of ovals and circular shapes with intersecting straight lines to create spaces and to define certain areas. This theme has been implemented throughout this process whilst exploring and investigating ambiguous areas.

Major Paths through the park (those over 3 metres in width) include the mid-block connection from Earl Street to Curacoa and the 2 arching paths from Earl to Albany Street. These paths are to be constructed of grey concrete with exposed aggregate and must allow for cyclists, pedestrians, ambulant and pram users to comfortably pass by each other with the ability for other uses (such as markets) to utilise the walkway at specific nodes as well. Minor paths (2 metres in width) throughout the park are to be grey concrete.

All seating in throughout Brelsford Park is to be custom designed and built guided by precedents and constructed from sustainably sourced timber, concrete and stainless steel.

For further detail regarding the road layout/ structure around Brelsford and broad levels plan please refer to Appendix 6.2.

Examples of entry statements referencing materials, shape and form, a tall structure to blend with native tree planting that will contrast and stand out texturally (refer to planting plan and palette in appendix for species).

Examples of irectional signage referencing materials, shape and form, natural simple materials (timber, stainless steel, corton steel) not over whelming and links with surrounding design.

Brelsford Entry Statement:

Is to be a tall totem sculptural piece that compliments the existing and future Eucalypt vegetation (refer to Tree Plan and Planting List in Appendix). The piece will contrast texturally and in materiality against the vegetation. Materials are restricted to timber, stainless steel, concrete and corten steel (refer to examples/precedents above). The entry statement can be illuminated or have up lighting under Eucalypt vegetation.

Signage:

As stated in the City Centre Masterplan, a specialist consultant must be engaged to develop a coordinated signage and wayfinding plan to provide an effective cohesive wayfinding program throughout the City Centre. Only very simplistic directional signage “to City Centre” and “to Coffs Creek Walk” is to be installed throughout Brelsford Park (refer to precedents above for material palette and design suggestions).



St Joan Boulevard Barcelona by Lola Domenech - example of Transition Zones mixing paving and vegetation/low turf breaking up expanse areas of hardstand and turf marking transitional areas between the two.


Sydney Park amenities by Stanic Harding + Interiors - referencing materials shape and form of the building combined with path layout and integrated gardens and informal seating.

Copalita School Chapel 128A Architecture and Urban Design referencing materials and form.



Examples Civic Entrances, mxed with waterplay elements, referencing colour palette and materials, concrete, paving textures, timber and grates.

BRELSFORD PARK MASTERPLAN PALETTE

Transition Zones:

A transition zone is located in a place where the design moves from one large expanse of paving to a large open lawn/turfed area and vice versa essentially where there is an abrupt conflict in materials (hard to soft). These zones consist of strips/lines of thin pavers that alternate with turf/ low grasses (see planting list in appendix) and are designed to soften the change in materials becoming nodes to dwell and linger.

The transition zones require further detailing and investigation through a Landscape Architect consultant as the representation on the plan is larger than how it would appear realistically. Ideally the transition zones would have a similar set out to the St Joan Boulevard in Barcelona (see precedents and palette).

Please refer to St Joan Boulevard in Barcelona for further precedental information.

Major Event Stage:

The stage must be accessible and designed by a registered architect as it will be a large dominant visual statement within the park. It must be a custom contemporary piece that is simplistic in nature and compliments the natural surroundings of the parkland (please see precedents/examples provided).

The selected architect must design the stage in conjunction with the Coffs Harbour Events Strategy 2020 and its team/Section Leader to ensure it meets the appropriate requirements and standards to hold major events.

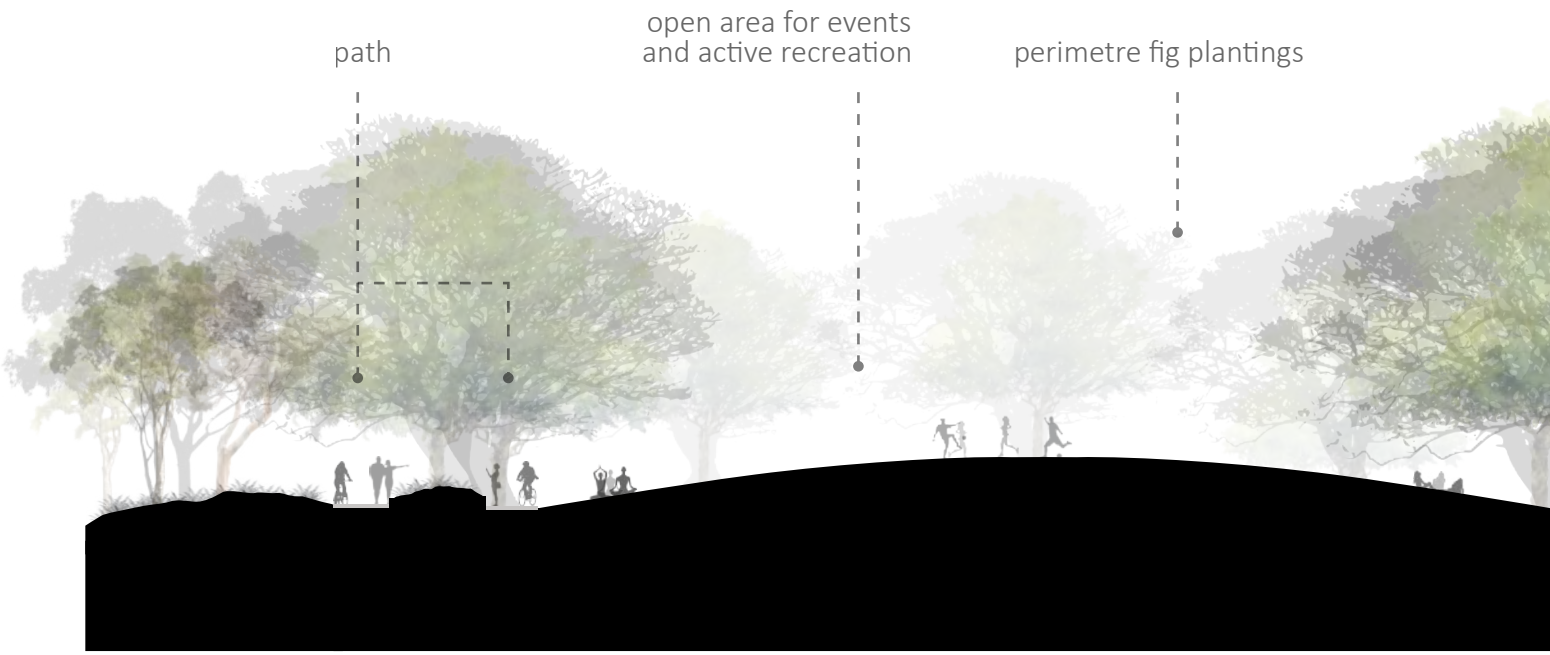
This may include but is not limited to:

- 12 x 9metre accessible stage deck minimum and to be elevated by 900 millimetres;
- Capacity to integrate event specific signage onto the 'header' and 'footer' of the stage;
- Engineered and load rated roof with rigging points to allow for lighting/audio/video equipment to be hung;
- 3 Phase power and A conduit under the ground from stage to the 'standard' front of house mixing area.

Civic Entrance and Waterplay:

The intersection of Park Avenue and Earl Street is to announce the civic entrance to Brelsford Park. The space is to be balanced by the planting of two figs on the skate park side of the entrance (see Tree Plan) accompanied by a paved area mixed with themed waterplay and garden beds (see Waterplay Section).

This space requires further investigation with consultants who specialise in civic spaces and feature waterplay (see Darling Quarter precedent in Waterplay Section). This space must incorporate concrete, paving, grates and garden beds with tree planting (with appropriate root barrier measures utilised). Consultation is required to be undertaken with Council's Coastal Works/ outdoor Staff throughout design process to ensure a holistic approach to soften the vast expanse of hard stand.



Section One- Village Green

PALETTE & PRECEDENTS

Docklands City Park by MALA Studio - open lawn turf with surrounding trees and seating with garden beds.

Cleveland Street - Large fig tree planting along pathway with native grass planting underneath.

The fig grove (Ficus obliqua –see Tree Plan) surrounding the green is integral to the space as it forms a boundary and vegetative buffer defining the space highlighting path entry ways with gaps in plantings, with a 3metre wide path becoming the barrier between fig grove and open lawn.

PART 4 MASTERPLAN

VILLAGE GREEN

The Village Green is to cater for large scale events as described in the Events Strategy 2020 and is approximately 6000m^2 in area.

When there are no large scale events the Village Green must serve as a passive recreational open area for small informal sports, school games and active recreational opportunities.

Refer previous section regarding palette and specifications for the Stage and Appendix 6.4 for Levels Plan.

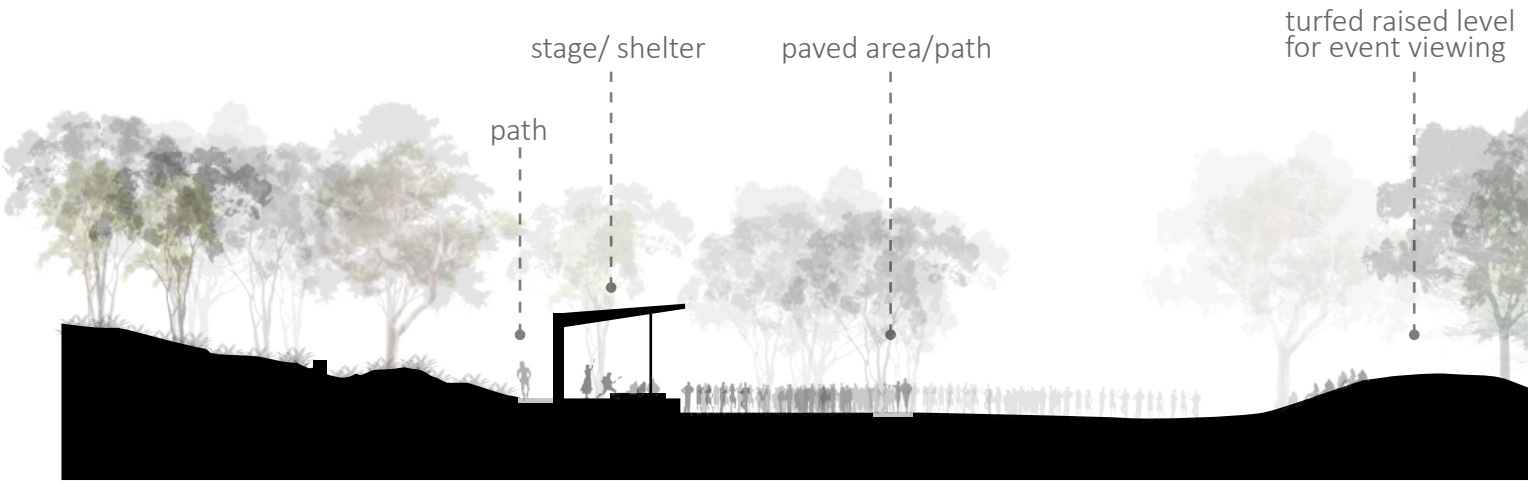
Tree planting with concrete garden edge and seating opportunity.

Docklands City Park - Trees around open lawn and concrete and timber seating along edge of path.

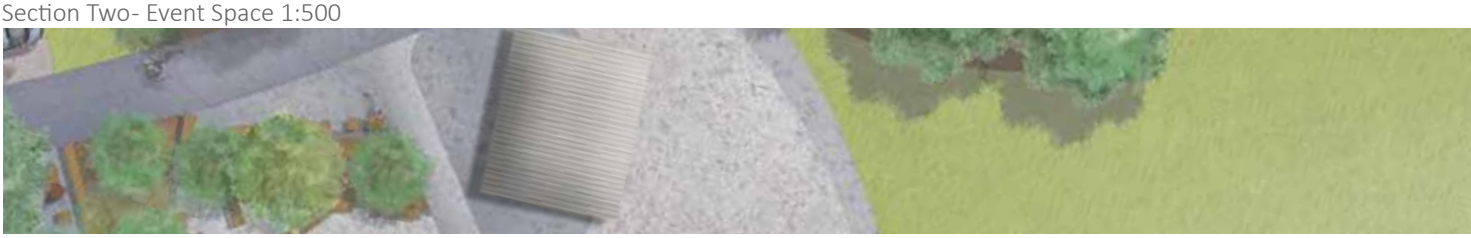
When undertaking the detail design processes a Landscape Architect/Horticulturalist and Council's Coastal Works Team (Arborist and Horticulturalist) must be engaged and consulted in order to achieve the fig grove around the Village Green.

It has been advised by the Coastal Works team that these beds may need to be raised with imported soils and root barrier under footpaths.

Refer to Tree Plan and Appendix 6.1 for the Planting List and Planting Specifications.



Section Two- Event Space 1:500



PALETTE AND PRECEDENTS

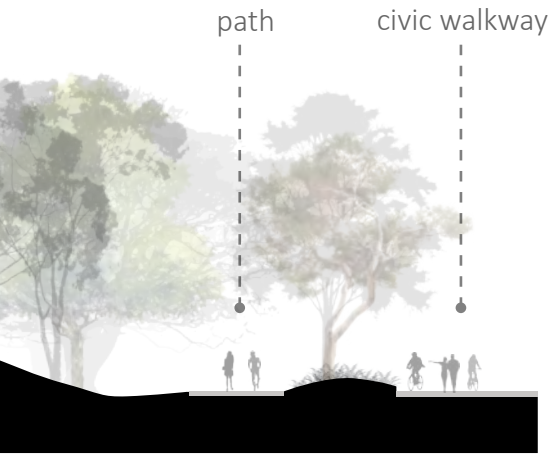
Terraforming by Michael Bates - example of low raised turf area for event viewing.

Mount Royal Salamander Playground by Cardinal Hardy Interface between turf areas and hard stand

Docklands City Park by MALA Studio - open lawn turf with surrounding trees and seating with garden beds.

PART 4 MASTERPLAN

EVENT SPACE



A smaller event space has also been designed within Brelsford Park that is 1500m^{2}. It has a small rise in topography to allow for viewing of events as the existing landscape is flat (see Levels Plan in Appendix 6.4).

Here the event stage is smaller in scale but important, hence must be designed by a registered architect as it needs to be a multifaceted structure. This stage must cater for small scale events and acts. When there are no performances booked, it can be utilised as a shelter for gatherings, parties and picnics. The shelter must have storage space, a stage area that can open up to create windows and vistas throughout the park (see Rever & Drage Architects precedent).

Materials are to be of an industrial and minimalist style such as sustainably sourced timber, steel and concrete. The shelter must have access to 3 Phase power (see Power and Lighting Plan in Appendix 6.5) and be designed in accordance with Council's Events Team.

Rever & Drage Architects - adaptable storage/shelter/stage space constructed from sustainable timbers.

Example stage/shelter structure referencing materials and form only. Timber, corrugated iron, steel and concrete


Tennis subject to feasibility analysis as per recommendations
N

PART 4 MASTERPLAN

TREE MASTERPLAN

The Tree Masterplan for Brelsford Park was prepared in collaboration with Council's Coastal Works Team (Arborist, Horticulturalists and Bush Regeneration officer). This plan is designed to rectify the missing links identified in the analysis, connecting City Hill to Coffs Creek to establish a connected green network. Street trees must be established to achieve the outcomes in the City Centre Masterplan such as street greening and encouraging people to walk and cycle.

The majority of the species selected are taken from Council's *Fine Scale Vegetation Mapping for the Coffs Harbour Local Government Area Volume 2: Vegetation Community Profiles* which defines vegetation on Brelsford Park as a Dry Open Forest.

The cluster of Significant *Eucalyptus microcorys* and *E. tereticornis* have over 50 years of life left. For future generations. To ensure longevity of the species and the park, new plantings are required to offset the existing trees when they eventually die. In this regard, trees should be planted now to ensure there are mature species for the future.

This applies for all Eucalypt species within the park including those along Harbour Drive near the existing tennis courts.

All existing trees are to be retained and incorporated into the design. All existing and future trees not in a garden bed must have mulch beds around the 'critical zone' (four times the diameter of the tree) to prevent ring barking from mowing. A supply and maintenance budget needs to be established for trees within the park to ensure their growth and success of the park. It is estimated by Council's Coastal Works Team that $250/year per tree for six years is required. Further consultation is required with Council's Coastal Works Horticulturist and Arborist Team for all future tree plantings.

If a tree is removed or damaged it must be replaced with a species from the Tree Masterplan. Existing mature trees are an asset and are not easily replaced like infrastructure as they need time and space to grow and reach their maturity.

LEGEND

- Existing Trees - All to be retained and incorporated into all design work
- Ficus obliqua - Existing species in park and street tree in parking areas
- Eucalyptus microcorys and tereticornis - Existing species to be planted for future longevity
- Syncarpia glomulifera - Species identified in Vegetation Community
- Eucalyptus haemastoma - Park Tree and Coastal Works suggestion
- Eucalyptus signata - Park Tree identified in Vegetation Community
- Eucalyptus propinqua - Park Tree identified in Vegetation Community
- Eucalyptus robusta - Existing species and Coastal Works Suggestion
- Eucalyptus maculata - Large Park Shade Tree
- Melaleuca leucadendra - Existing species park shade tree
- Corymbia ficifolia - Feature Tree
- Stenocarpus sinuatus - Feature Tree Coastal Works suggestion
- Eucalyptus curtisii - Mallee tree sparse foliage for use around built
- Elaeocarpus reticulatus - Identified in Vegetation Mapping
- Allocasurina littoralis/torulosa - Identified in Vegetation Mapping - quick growing for shade and blending of slash pines
- Melaleuca viridflora - Screening feature tree Coastal Works suggestion
- Flindersia schottiana - Nodal tree to announce gateways/intersections throughout the CBD (taken from CBD Masterplan)
- Melaleuca quinquenervia or Eucalyptus robusta - Street tree (taken from CBD Masterplan)
- Tristaniopsis laurina - Street tree (taken from CBD Masterplan)
- Xanthostemon chrysanthus - Street tree (taken from CBD Masterplan)


Park Avenue
Harbour Drive
Earl Street
Albany Street
Skate Park
1
Amenities
Open Lawn
Village Green
Civic
Entrance
Brelsford Entry
Statement
4
Waterplay
Lawn
3
Stage
Active
Recreation
Amenities
Playground
Event Space
2
Amphitheatre
Tennis subject to feasibility analysis as per recommendations
Expansion of
Existing Native
Plantings
N

PART 4 MASTERPLAN

KEY PLANS

A series of four key plans have been selected to describe the layout, concept and overall design intent for the selected areas. These are also accompanied by sections and materials palette and precedents to assist in the visioning of the spaces.

1) Amenities, Kiosk and Public Seating Area

2) Event Space Kiosk Seating and Amphitheatre

3) Active Recreation

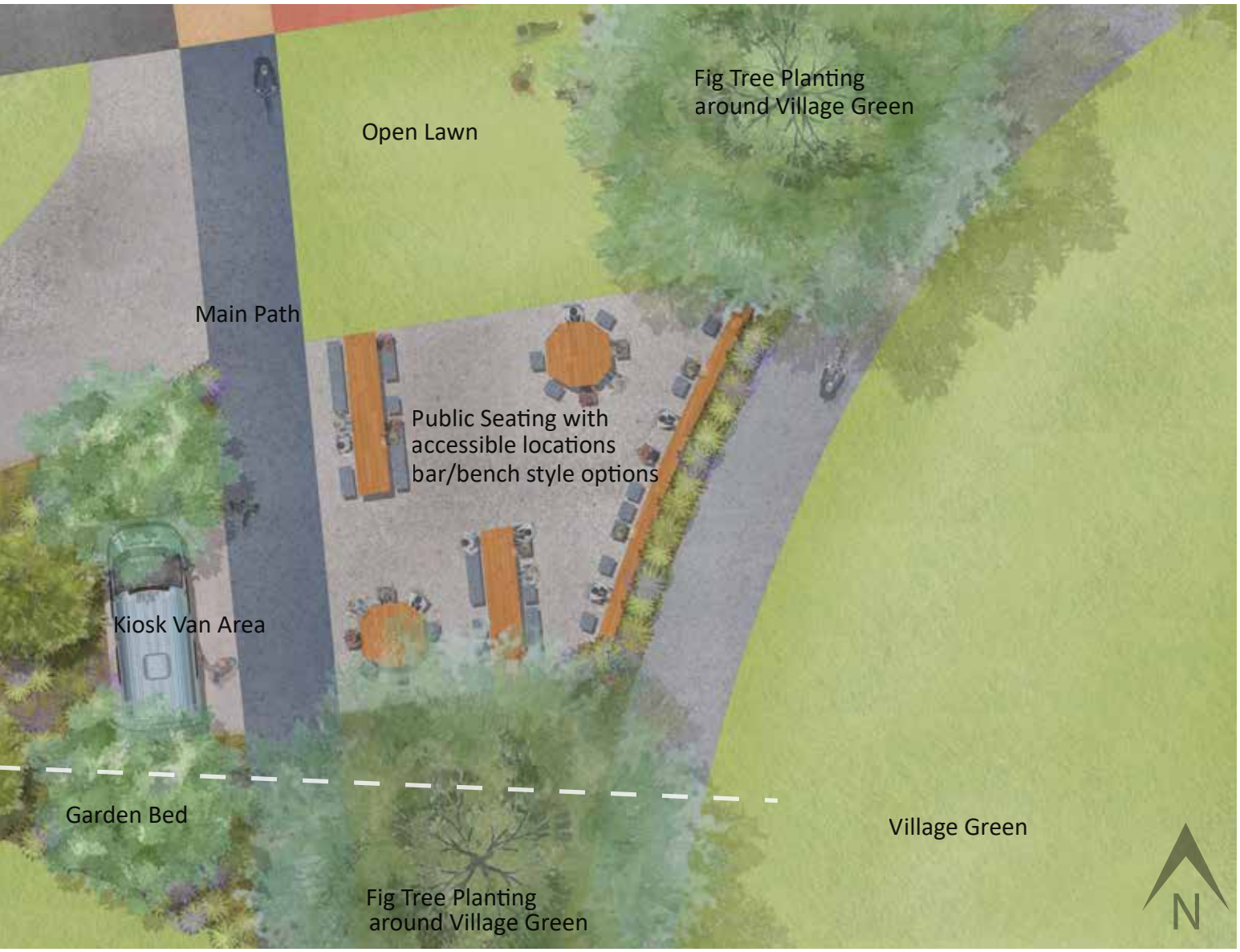
4) Waterplay

Further details such as levels, lighting and power supply, planting lists and specifications and street configuration can be found in Part 6 Appendix (Sections 6.1-6.5).


Existing
Exercise Node
Open Lawn
Grey Concrete Path
Garden Bed
Amenity Block
Section - Amenity Block Kiosk Public Seating
Open Lawn

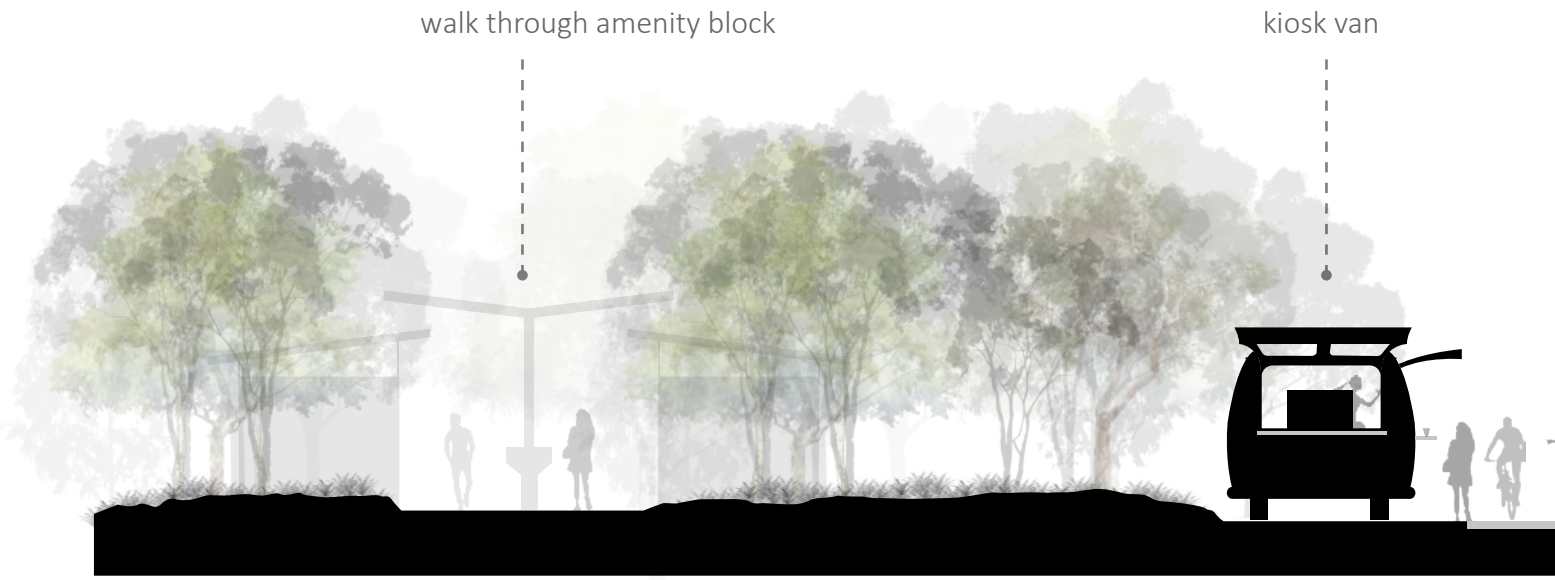
PART 4 MASTERPLAN

AMENITY KIOSK AND SEATING AREA



The second amenity block is located adjacent to the existing Skate Park. It will be constructed using the same materials and palette as the amenity block located near the existing adventure playground. However it will differ in design and arrangement having a breeze-way walk through with a trough basin in the centre and cubicles either side, ensuring the distance between cubicles and wash basin is accessible (refer to section).

The surrounding garden beds are to consist of *Melaleuca leucadendra* with *Eucalyptus curtisii* around the built form (see Tree Masterplan for details) with low growing species in the garden beds (see Planting List in Appendix 6.1).



Section- Amenity Block Kiosk and Public Seating Area

PALETTE & PRECEDENTS

The Link by Lat 27 - Kiosk setting along side major walkway with seating options.

Northern Plaza Monash University Clayton by Taylor Cullity Lethlean - Bar style seating.

PART 4 MASTERPLAN

AMENITY KIOSK AND SEATING AREA

The mobile kiosk area will be a grey concrete pad surrounded by vegetated garden beds (see Tree Plan and Planting List for species details) to soften the expanse of hardstand. By using a mobile kiosk it elevates the need to provide bins and storage facilities and service infrastructure which consumes vital public space.

Cleveland Street - fig planting and low native grasses along major walkway.

Timber and concrete seating can be used as small table setting.

Timber and concrete tables and seating areas.

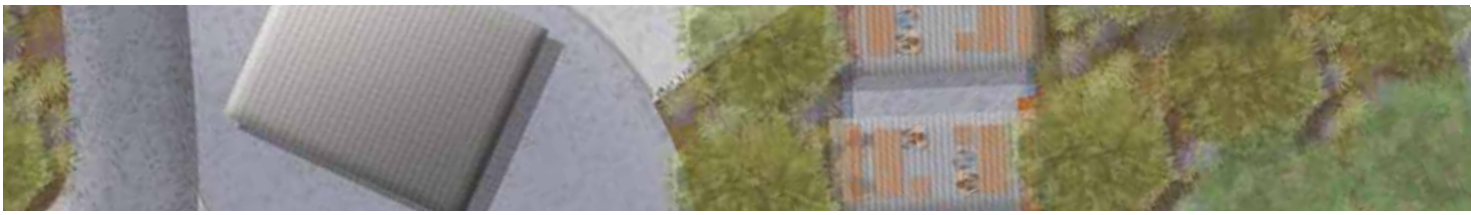
The public seating area will incorporate accessible inclusive seating and be constructed from concrete, steel and sustainably sourced timber (see palette and precedents). The raised bench area will be for perch style seating with a small garden bed with low groundcovers to establish a divide and distinguish between the Village Green and public seating area to clearly define the space.


Garden Bed
Minor Path
Event Space - grey concr
Event Stage - exposed aggregate
Section One - Event Space
Garden Bed
Garden Bed
Section Three - Feature Seating Areas
Minor Path
exposed aggregate
Garden Bed
Main Path
Kiosk Van Area
Feature Seating Area
grey co
grey concrete
Existing Row Slash Pines
granite pavers
Section Two - Kiosk Van and Seating Areas
Feature Seating
Garden Bed Incorporating
Existing Row Slash Pines
Seating Area

PART 4 MASTERPLAN

EVENT SPACE KIOSK SEATING AND AMPHITHEATRE

Section One Event Space



PALETTE & PRECEDENTS

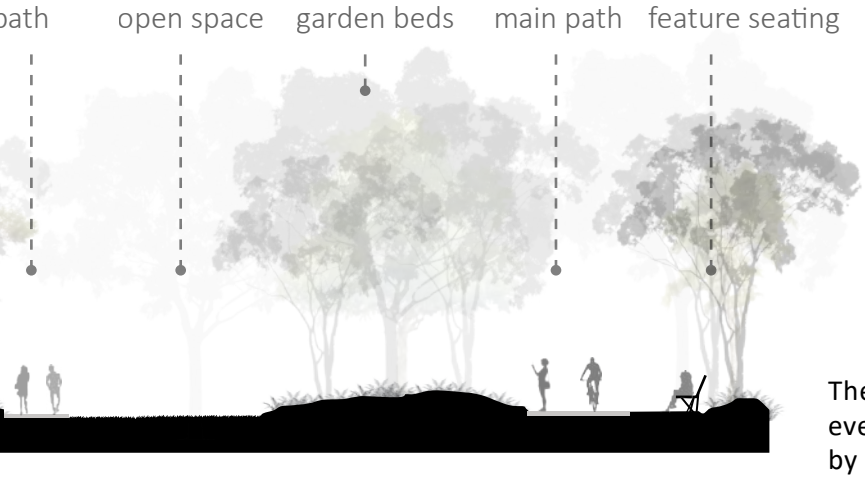
Shelter example - framed views constructed from timber, corrugated iron and steel.

Rever & Drage Architects - adaptable storage/shelter/stage space constructed from sustainable timbers.

Timber and concrete tables and seating.

PART 4 MASTERPLAN

EVENT SPACE



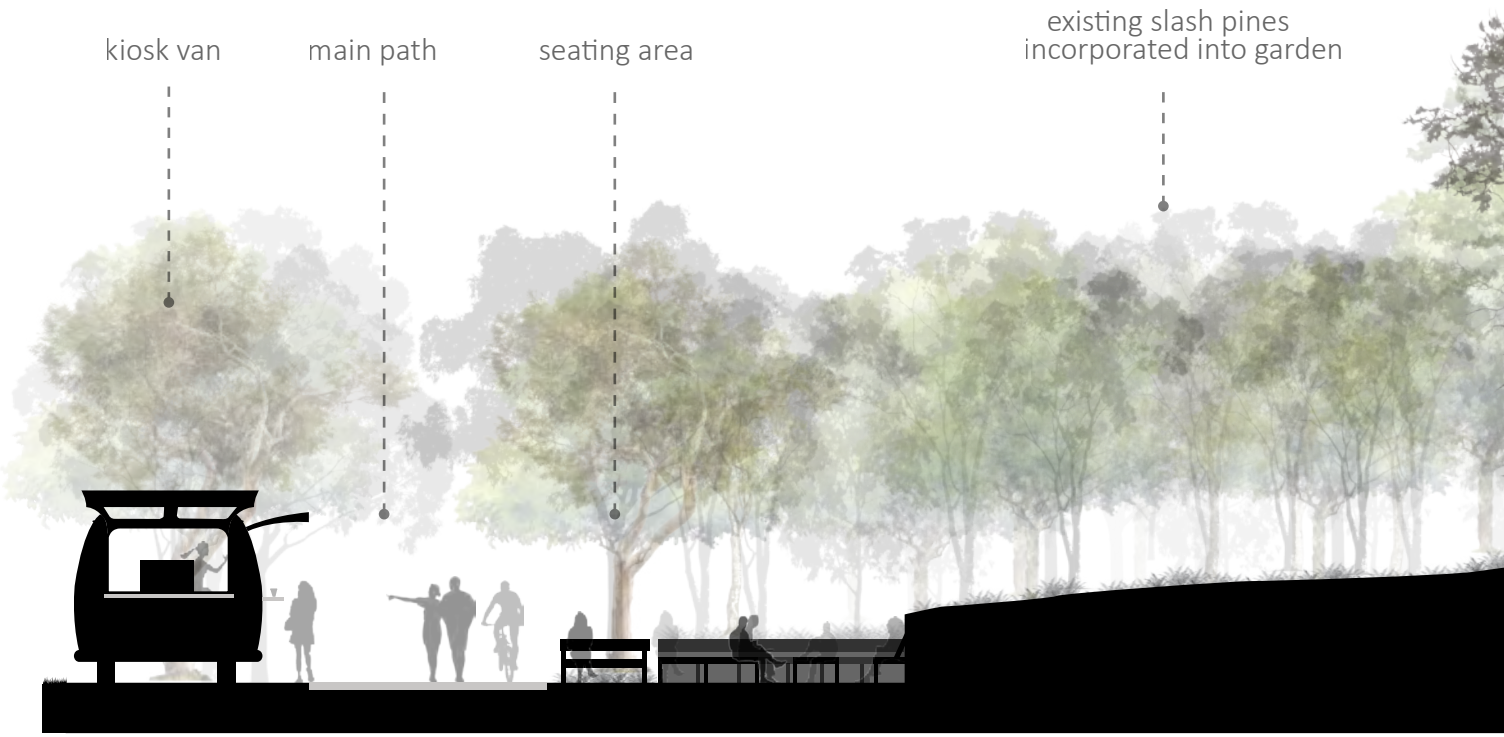
The event space is to cater for smaller scale events. The stage and shelters must be designed by a registered architect to ensure that they create a cohesive and legible design. The shelters are to be of an industrial style and palette incorporating inclusive accessible seating which is to be incorporated into the design.

Saundsa Architectd Wooden Shelter constructed of sustainably sourced timber simple and modest design

Timber and concrete feature curved seating with garden behind.

The hard stand areas are to be predominantly grey concrete with exposed aggregate interchanging in different sections with granite pavers used to distinguish and create vectors into and out of the space (refer to Event Space Plan).

The predominant trees surrounding the built form are to be *Eucalyptus curtisii* for its mallee form and low growth (approved by Council's Coastal Works Team) incorporating all existing trees into the design (see Planting List in Appendix 6.1 for garden bed plantings).



Section Two-Kiosk Van & Seating

PALETTE & PRECEDENTS

Timber and concrete seating incorporated with garden beds.

Timber and concrete feature curved seating with garden behind.

Timber and concrete seating can be used as small table setting.

PART 4 MASTERPLAN

KIOSK SEATING AREA

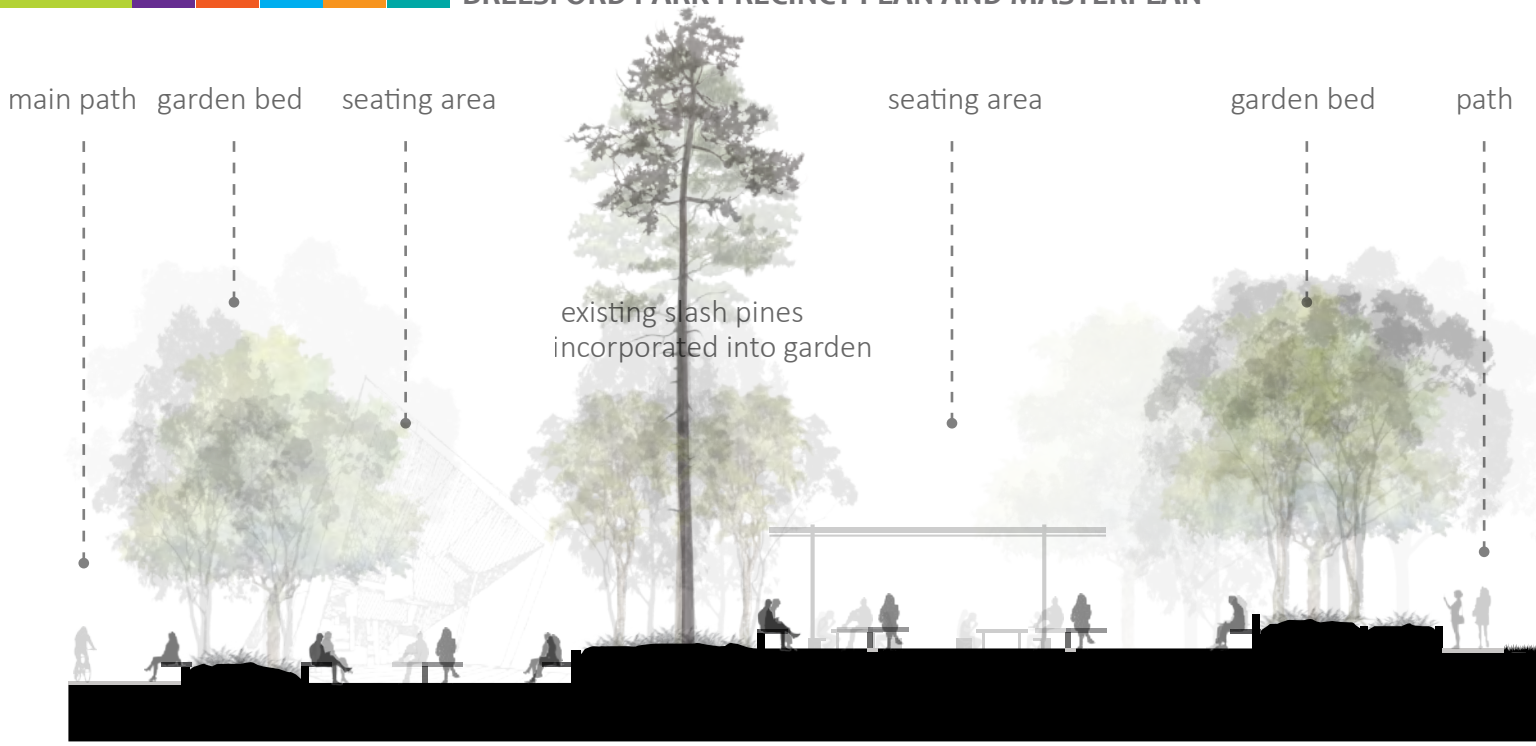
The mobile kiosk area will be of similar if not the same design as the one near the existing skate park, consisting of a grey concrete pad surrounded by trees (see Tree Plan and Planting List for species details) and turfed lawn areas to soften the expanse of hardstand.

Using a mobile kiosk elevates the need to provide bins and storage facilities and service infrastructure which consumes vital public space. The kiosk pads are located on Major pathways to allow for easy access into the park with ample manoeuvring room for the mobile kiosk, pedestrians and park users. It is implied that the mobile kiosk units will enter and exit in a forward direction only, entering on Albany Street and exiting onto Earl Street.

The Link by Lat 27 - Kiosk setting along side major walkway with seating options.

Docklands City Park by MALA Studio - timber and concrete seating.

The adjacent public seating area will incorporate accessible inclusive seating and be constructed from concrete, steel and sustainably sourced timber (see palette and precedents) and to be custom designed to suit the space by a specialist consultant such as a Landscape Architect.



Section Three- Feature Seating

PALETTE & PRECEDENTS

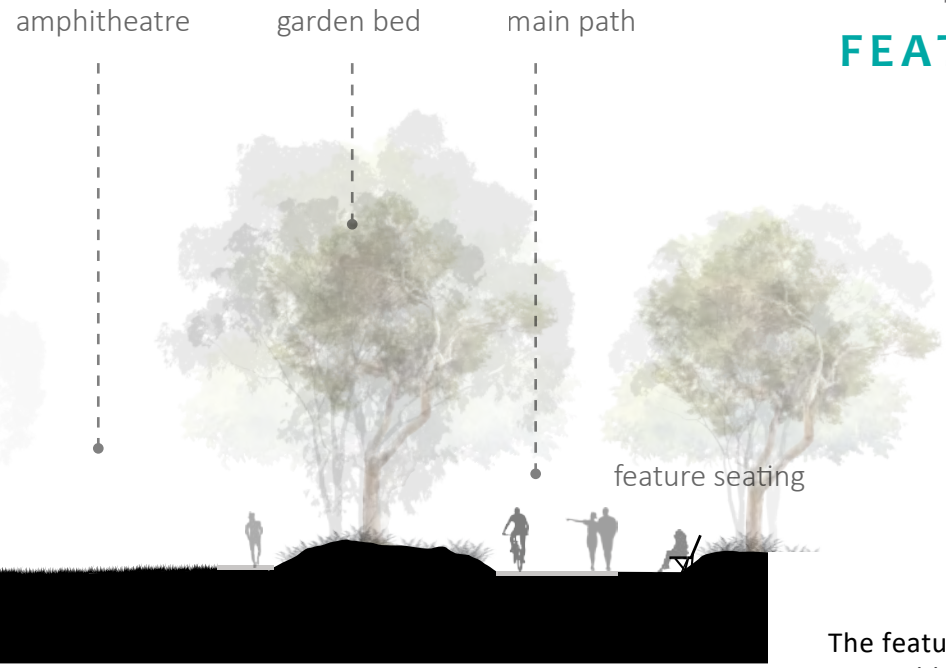
Docklands City Park by MALA Studio - seating style, concrete and timber with garden bed incorporated into seating complimenting the surrounding landscape.

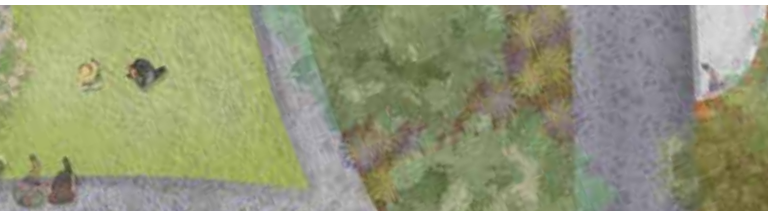
The hard stand areas are to be predominantly grey concrete with exposed aggregate interchanging in different sections with granite pavers used to distinguish and create vectors into and out of the space (refer to Event Space Plan).

Refer to Tree Plan and the Planting List in Appendix 6.1 for species.

PART 4 MASTERPLAN

FEATURE SEATING AREA





The feature public seating area will incorporate accessible inclusive seating and be constructed from concrete, steel and sustainably sourced timber (see palette and precedents). The seating area is to be custom designed to suit the space by a specialist consultant such as a Landscape Architect.

Precedent images for Amphitheatre - Oakey Creek Linear Corridor and Michael Bates Pit referencing undulating natural landform with concrete stepped seating. Please see next page for section.

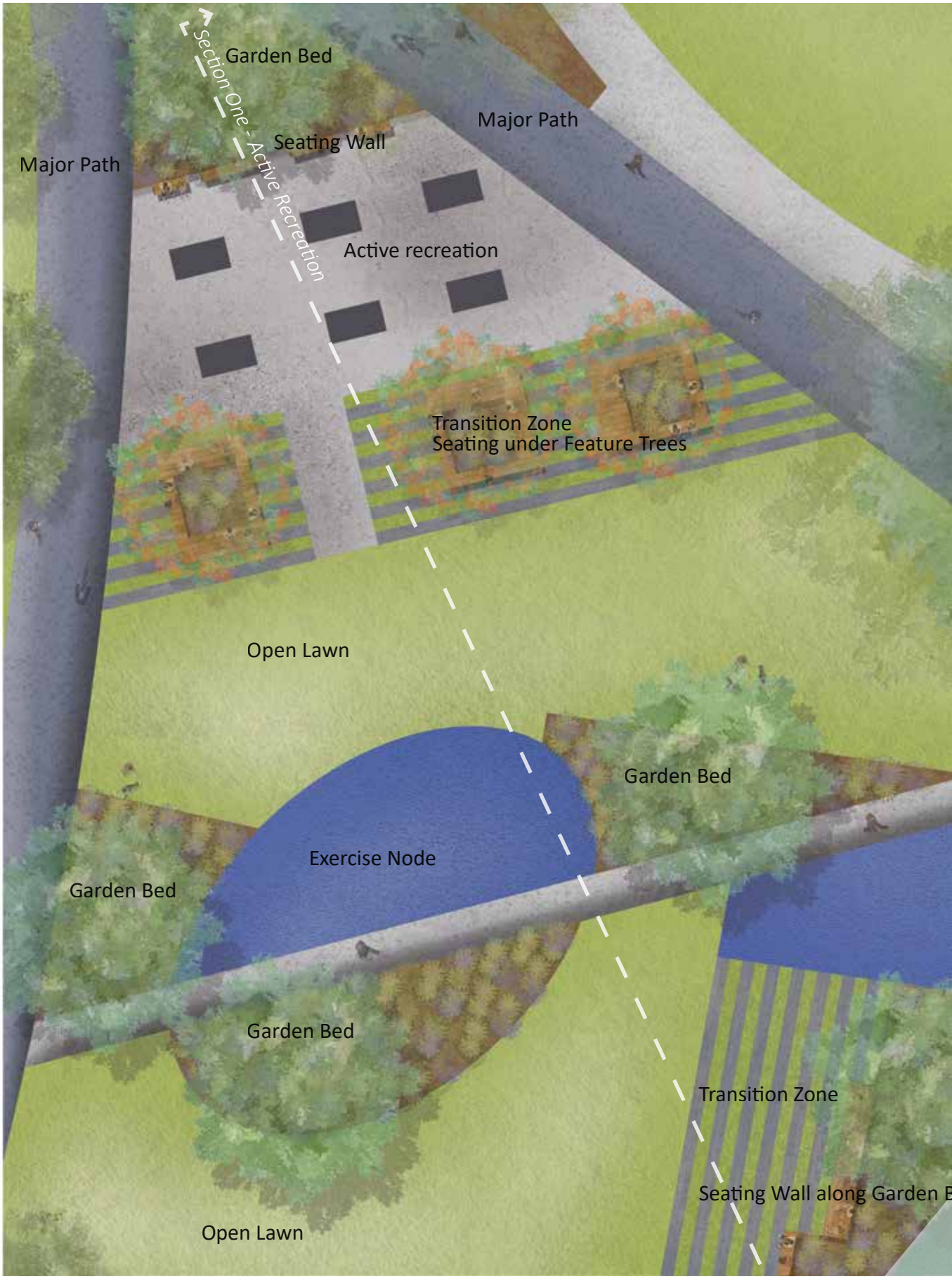
The amphitheatre is to be constructed of turf and wide concrete steps that slide seamlessly into the landform; and that are connected by concrete isles. The edges or 'corners' of the amphitheatre ascending up the slope are to be designed as extended round areas of flat concrete – this is to enable alternate informal 'stage' like areas for diversity within performances or to provide a designated area for people to stand and ask questions throughout a presentation.

The amphitheatre is a small minimalistic informal area intended for small gatherings and outdoor classes to offer variety and scope to the park (refer to precedents and Tree Plan).

Section Four- Amphitheatre

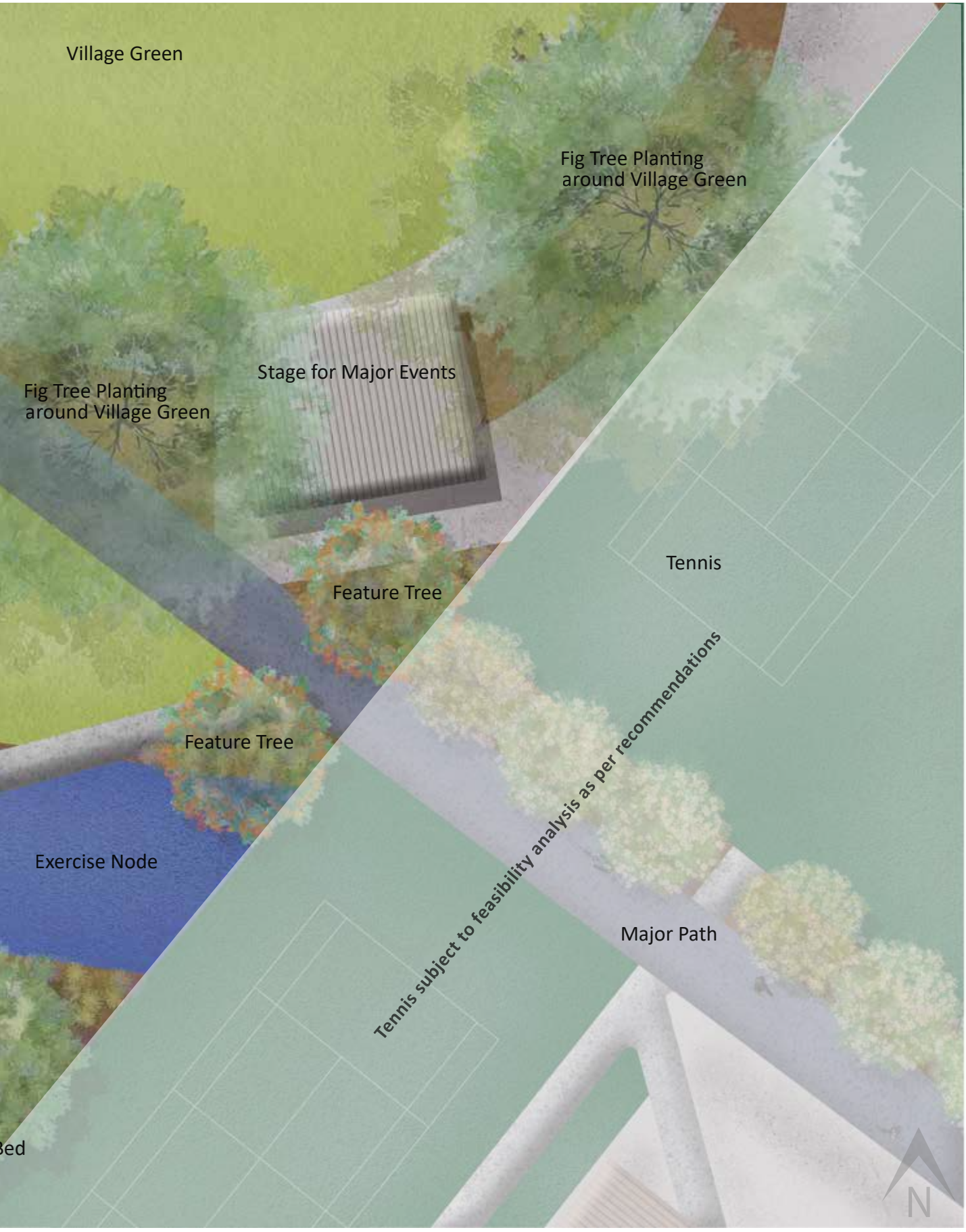
PART 4 MASTERPLAN

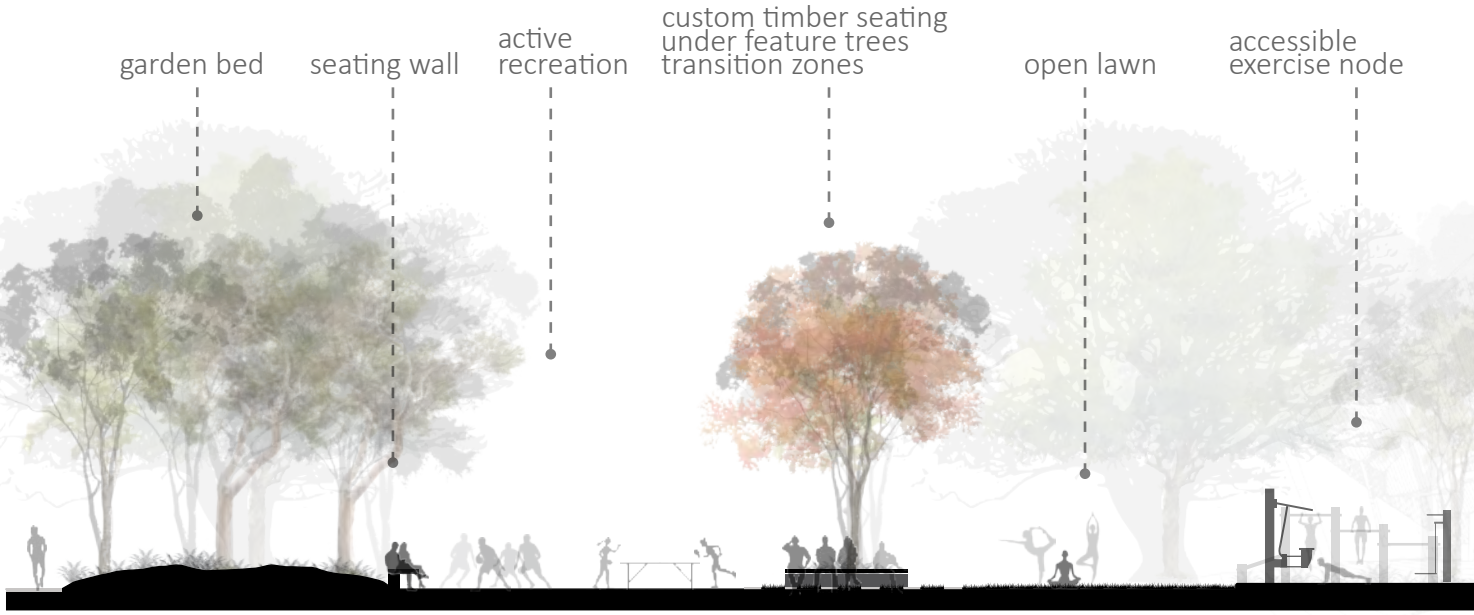
AMPHITHEATRE


Section One - Active Recreation
Garden Bed
Major Path
Seating Wall
Major Path
Active recreation
Transition Zone
Seating under Feature Trees
Open Lawn
Garden Bed
Exercise Node
Garden Bed
Garden Bed
Transition Zone
Seating Wall along Garden B
Open Lawn

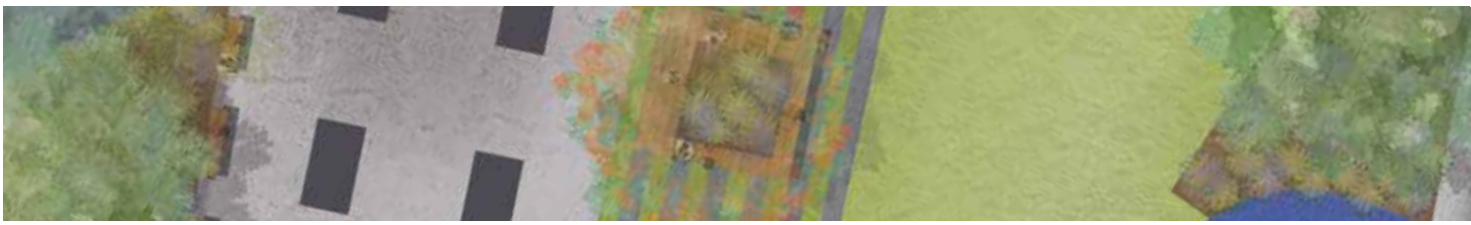
PART 4 MASTERPLAN

ACTIVE RECREATION





Section One- Active recreation 1:200

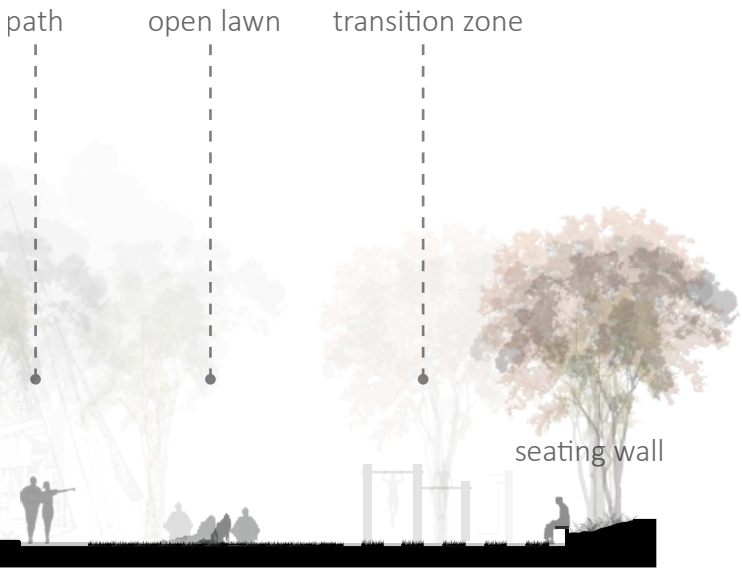


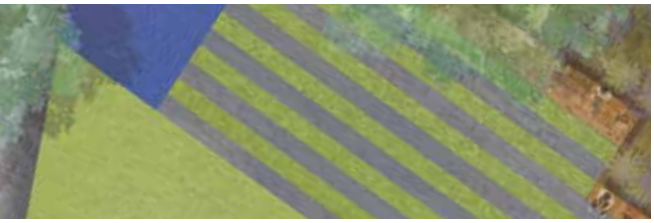
PALETTE & PRECEDENTS

Docklands City Park by MALA Studio - example seating, active recreation area with garden beds incorporated into seating linking with surrounding parkland planting.

PART 4 MASTERPLAN

ACTIVE RECREATION





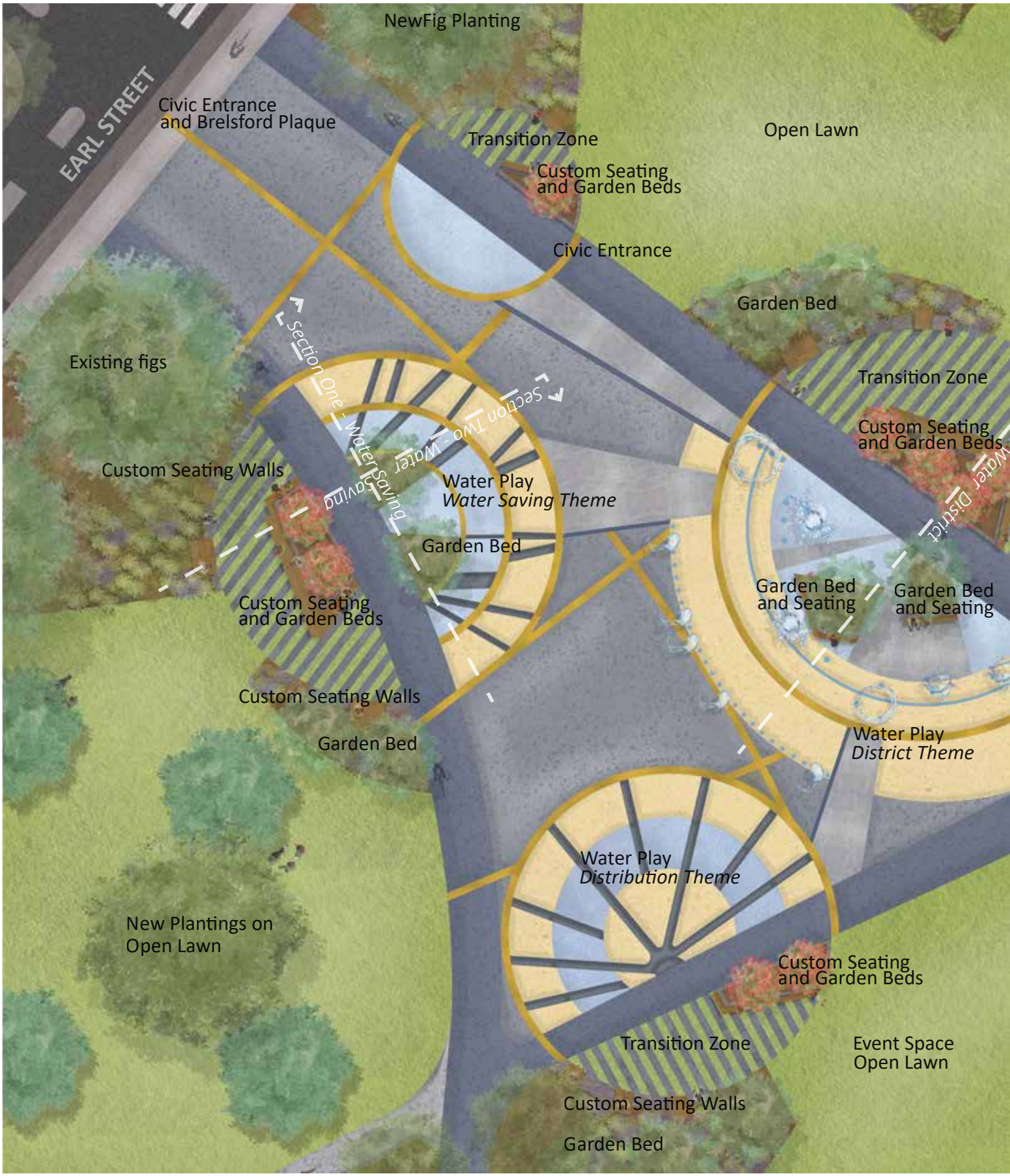
This space is to provide opportunities for varied types of accessible active recreation accompanied with rest spots. Further community consultation is required to determine what active elements are to be incorporated into the detail design of this space.

Refer to Tree Plan for tree species and Planting List in the Appendix 6.1 for garden bed species.

St Joan Boulevard Barcelona by Lola Domenech - example of transition zones paving and vegetation along side softfall areas with planting.

Seating in the Active Recreation space is to be similar style as the Docklands City Park, using timber concrete and stainless steel. The seating is to provide opportunity for the community to sit or recline and relax in this space.

The Transition Zones require further detailing and investigation through a Landscape Architect consultant as the representation on the plan is larger than how it would appear realistically. Ideally the transition zones would have a similar set out to the St Joan Boulevard in Barcelona (see precedents and palette).


NewFig Planting
EARL STREET
Civic Entrance
and Brelsford Plaque
Transition Zone
Open Lawn
Custom Seating
and Garden Beds
Civic Entrance
Garden Bed
Existing figs
Section One - Water Saving
Section Two - Water
Transition Zone
Custom Seating
and Garden Beds
Water District
Custom Seating Walls
Water Play
Water Saving Theme
Garden Bed
Garden Bed
and Seating
Garden Bed
and Seating
Custom Seating
and Garden Beds
Custom Seating Walls
Garden Bed
Water Play
District Theme
Water Play
Distribution Theme
New Plantings on
Open Lawn
Custom Seating
and Garden Beds
Transition Zone
Event Space
Open Lawn
Custom Seating Walls
Garden Bed

PART 4 MASTERPLAN

CIVIC ENTRANCE AND WATER PLAY

This area is to function as a civic entrance space combined with waterplay elements as you move into the park.

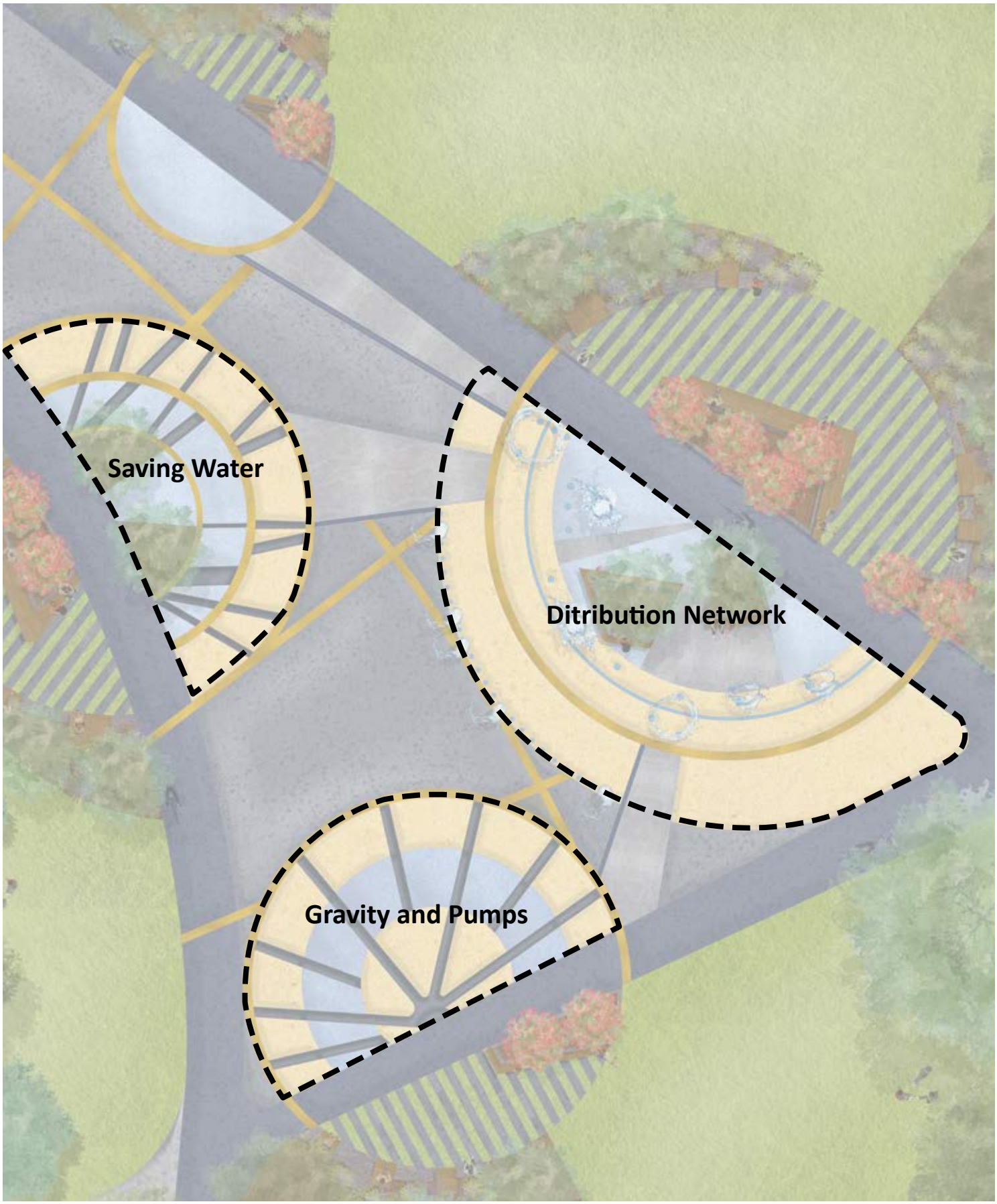
The planting of two additional figs on the northern side of the space will balance the existing two figs on the south, to announce the arrival into Brelsford from Earl Street. This will be accompanied by an iron or bronze plaque stating *"Brelsford 1886"* (the year the village of Brelsford was gazetted). This plaque is to run the width of the footpath on Earl Street and continues into the civic space converting into grate systems within the waterplay elements.

Materials to be used are reflected in the selected palette. Grey concrete with exposed aggregate (ensuring that it differs from the Major Path) with granite paver embellishments and bronze/iron grate detailing. The bronze/iron grates are to be the only embellishments on the ground plane.

Darling Quarter Waterplay by ASPECT Studios - waterplay elements concrete and stainless steel.

Example of Civic Entrance with paving, tree planting, gardens and seating opportunities.

Example of Civic Entrance plaques to denote the entrance of Brelsford and grate systems for waterplay.


Saving Water
Ditribution Network
Gravity and Pumps

WATER PLAY THEMES

The waterplay areas are designed to be an educational tool for teaching locals and visitors about Council's drinking water supply and its usage throughout the Local Government Area. This space is intended to become a stop on the tour of the Coffs Harbour Water Facilities with each play element having a different educational theme associated to it.

The waterplay areas must be designed simultaneously by specialist consultants who have extensive experience in the field, exploring and expanding on the design themes to ensure a cohesive and fucntional space.

The water play elements are to be composed of spouts, sprays and water tunnels only. These spouts are to come from the ground and are to be composed of stainless steel. This still needs to function as a public space when the waterplay is not in use, without tall structures obstructing the space.

Distribution Network - Water Supply and Where We Supply to

This waterplay space is conceptually based on Coffs Harbour City Council's Water Distribution Mains and Resevoirs Map (refer Council's website). Here the main localities identified on the plan: Woolgoolga, Coffs Harbour and Sawtell are depicted by the grey concrete rays and where they sit in the system. Each reservoir is represented by a water play element (for example a spry or squirt) and each pump station is represented by a spout (see precedents and palettes).

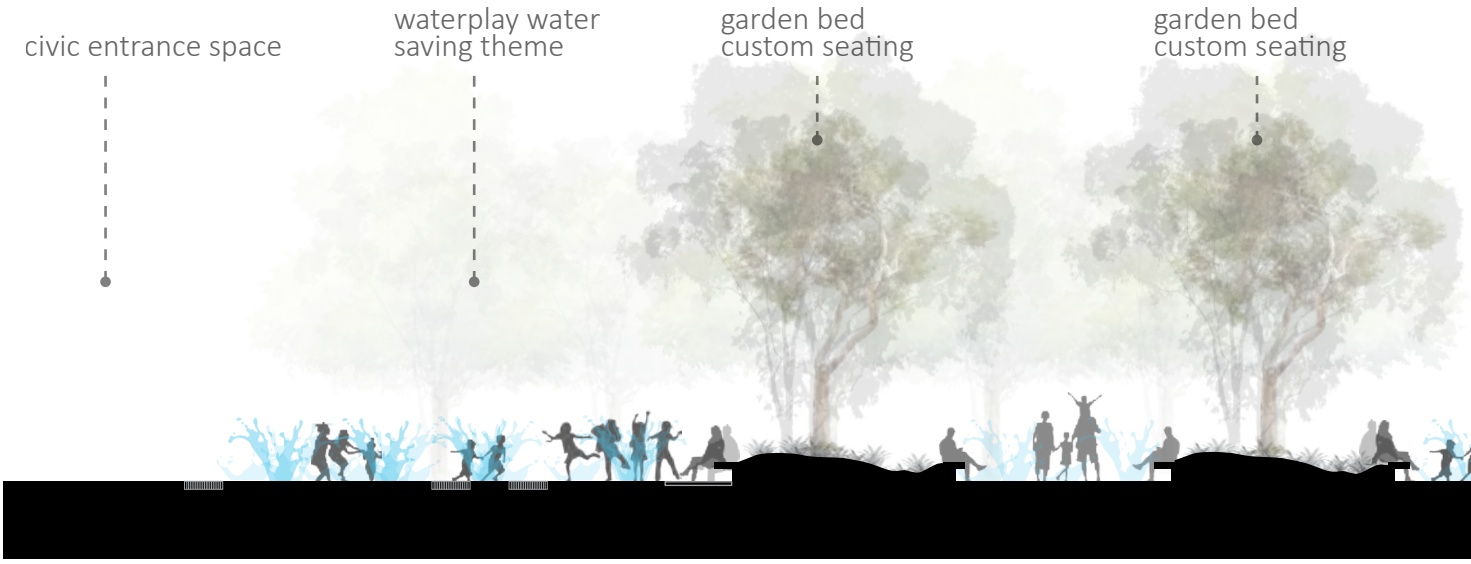
Gravity and Pumps - Delivering Water to Your Home

Water is distributed throughout the Coffs Harbour Local Government Area via a gravity-fed system. Using the surrounding topography, the reservoirs are located on the top of the hills, and rely on gravity to move the water downhill towards the urban areas.

There are some locations throughout the Local Government Area that require a booster or pump to assist the water. These principles (gravity and pumps) are to be the theme of this waterplay area (refer to precedents and palette).

Saving Water - Being Waterwise

This system will explore water leaks and reduced flows in the system and how it affects the overall play experience.



Section One- Water Saving

PALETTE & PRECEDENTS

Docklands City Park by MALA Studio - example seating, active recreation area with parkland planting

Timber and concrete seating incorporated with garden beds.

Darling Quarter Waterplay by ASPECt Studios - waterplay elements concrete and stainless steel

PART 4 MASTERPLAN

WATERPLAY WATER SAVING THEME

waterplay water saving theme

This area is subject to further detail design by specialist consultants exploring the water saving theme.

Centenary Lakes Nature Play by Landplan Landscape Architecture - waterplay elements concrete and stainless steel

Water bursts/spouts on concrete plain.

The feature garden beds with seating are to provide shade and shelter for the space, connecting into the green network linking to Coffs Creek and defining the entrance to the waterplay facility from the Major Path. The waterplay elements are to be in ground, made from stainless steel and concrete (see precedents and palette).

The trees are to be Melaleuca leucadendra (see Tree Plan) and will require root barrier to inhibit obstruction of waterplay – consult with Council's Coastal Works Team (Horticulturalists and Arborist).

Section Two- Water Saving

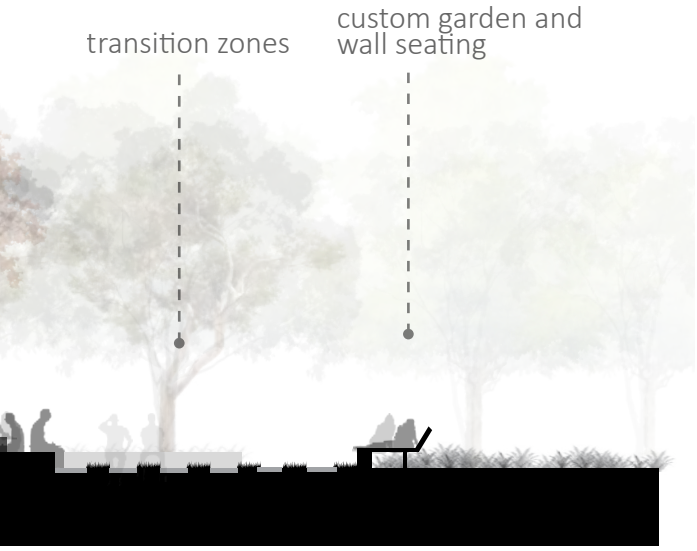
PALETTE & PRECEDENTS

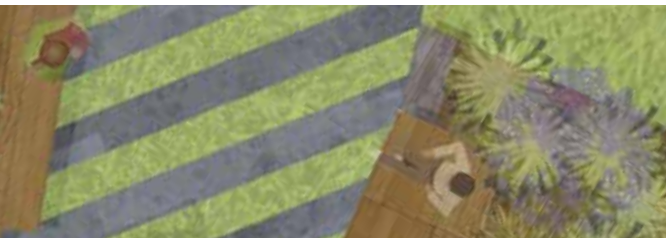
Qinglongshan Cultural Plaza Park Atelier DYJG Landscape Architects

Docklands City Park by MALA Studio - example seating, active recreation area with parkland planting

PART 4 MASTERPLAN

WATERPLAY WATER SAVING





This area is subject to further detail design by specialist consultants exploring the water saving theme.

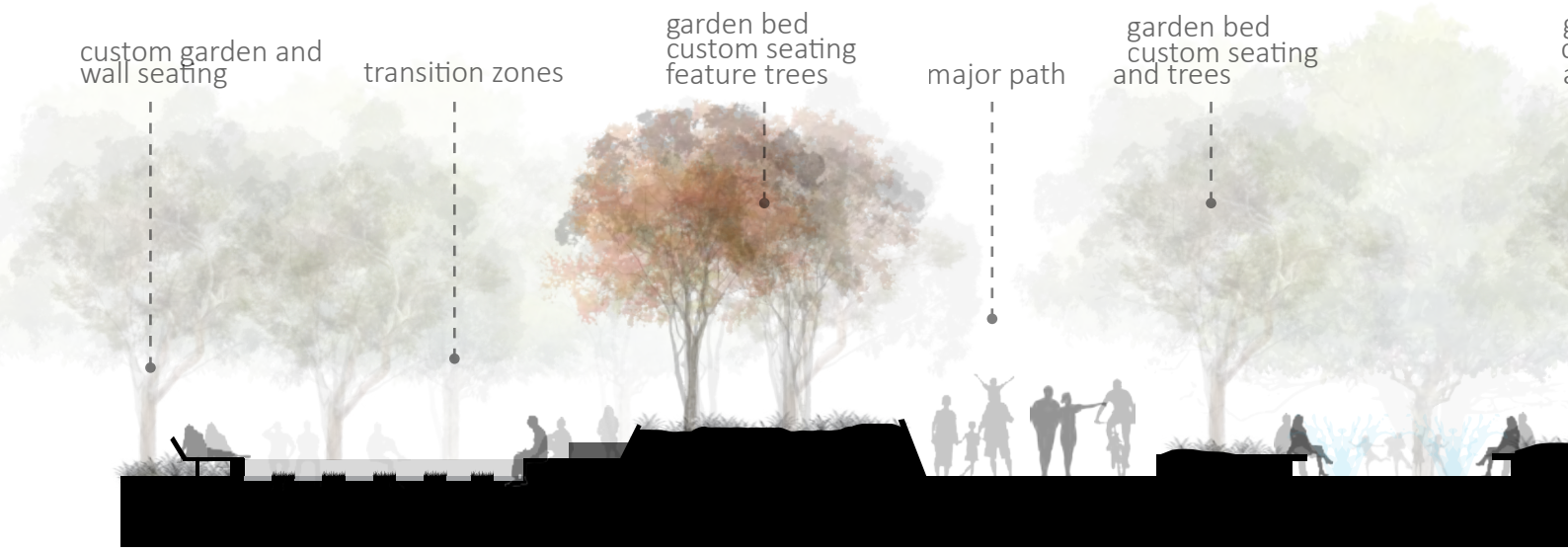
Timber and concrete feature curved seating with garden behind.

Timber and concrete seating incorporated with garden beds.

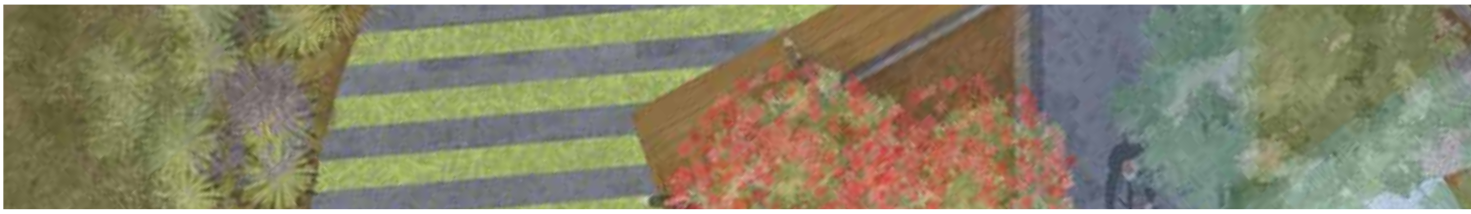
The feature garden beds with seating are to provide shade and shelter for the space, connecting into the green network linking to Coffs Creek and defining the entrance to the waterplay facility and the adjacent transition zone from the Major Path.

The waterplay elements are to be in ground, made from stainless steel and concrete (see precedents and palette).

The trees are to be *Melaleuca leucadendra* and *Corymbia ficifolia* as feature trees (see Tree Plan) and will require root barrier to inhibit obstruction of waterplay and transition zones. Consultation is required with Council's Coastal Works Team (Horticulturalists and Arborist).



Section Three- Water District



PALETTE & PRECEDENTS

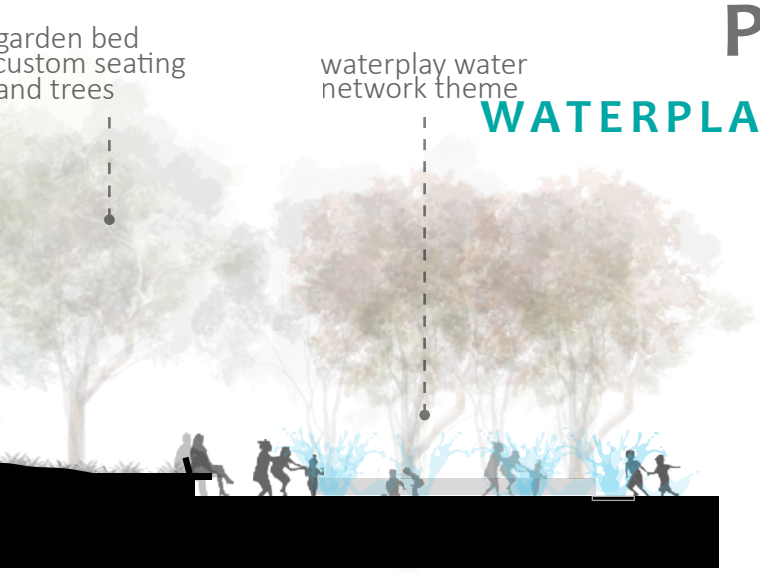
St Joan Boulevard Barcelona by Lola Domenech - example of transition zones paving and vegetation

Reclined timber seating with garden bed and concrete seating wall.

Water play spouts and cast iron drains.

PART 4 MASTERPLAN

WATERPLAY DISTRIBUTION NETWORK



This area is subject to further detail design by specialist consultants exploring the water saving theme.

Pirrama Park by ASPECT Studio - concrete pavement with water spouts - no over hanging large obtrusive structures

Cascading waterspouts creating water tunnel

The feature garden beds with seating are to provide shade and shelter for the space, connecting into the green network linking to Coffs Creek and defining the entrance to the waterplay facility and the adjacent transition zone from the Major Path. The waterplay elements are to be in ground, made from stainless steel and concrete (see precedents and palette).

The trees are to be *Melaleuca leucadendra* and *Corymbia ficifolia* as feature trees (see Tree Plan) and will require root barrier to inhibit obstruction of waterplay and transition zones. Consultation is required with Council's Coastal Works Team (Horticulturists and Arborist).

Brelsford Park Masterplan Indicating Existing Tennis Footprint

Existing Tennis Footprint

PART 4 MASTERPLAN

CONSTRAINTS OF TENNIS

Existing Tennis Arrangements

This is the existing footprint of tennis, which is not consistent with the Brelsford Park Masterplan. To reiterate the existing layout does not fit in with the current masterplan and would need to undergo significant redesign.

The incorporation of tennis into Brelsford Park must be reviewed.

As identified in the analysis existing tennis is a visual and physical barrier that impedes the overall design and connectivity to Brelsford Park. This visual and physical barrier to the eastern side of Brelsford is creating an isolated unusable area.

Brelsford Park Masterplan Indicating Impacts of Existing Tennis Footprint

Unobtainable Design Elements -
Impacts of existing tennis footprint that stops masterplan entries and connections through to the City Centre

Impacts of Existing Tennis Footprint

Not addressing the current footprint of tennis will inhibit the success of the benefits described in the Brelsford Park Project listed in the City Centre Masterplan.

The mid-block connection from Earl through to Curacoa Street is vital to the success of the parking opportunities on Curacoa Street which is a direct outcome of the project taken from the City Centre Masterplan " car park opportunities on the fringe of the city centre for shared use with Brelsford Park to encourage walking into the city centre from the edges" (page 53). With tennis' current location the mid-block connection cannot proceed, moving against the principles on the City Centre Masterplan, as visitors will not have direct connectivity to enable them to park and walk to the City Centre or to events held within the park.

The mid-block connection is also designed to allow for large trucks for events to drive through from Curacoa Street assist and or set up at the Major Events stage area and then exit forward to Earl Street, or vice versa. Without this direct link this cannot be achieved.

Another unachievable outcome would be the entry statement and pathway into Brelsford Park from Harbour Drive as tennis encompasses the entire site that it would occupy effecting flow and layout of the Village Green path, it will truncate the space emphasising the sense of enclosure with no clear site lines on how or where to exit and ultimately limiting the ability to establish a vegetated link to Coffs Creek.

PART 5 RECOMMENDATIONS

RECOMMENDATIONS

It is recommended that the following actions are taken:

- **Tennis Feasibility Study** - Given that tennis is the most significant influence within Breslford Park, an LGA wide tennis feasibility study needs to be undertaken to determine its viability within Brelsford Park. Consultation with Council's City Prosperity Group is required to source funding opportunities. It is recommended that the tennis feasability study is undertaken prior to the commencement of any other works within the park, as it will have the greatest impact on the park.
- **Skate Park Amenity Block -** A detailed design and construction estimate for a second amenity block is required, with a walkthrough breezeway (based on Pureablue materials and palettes used near Playground) and including connecting footpaths based on the Brelsford Masterplan.
- **Waterplay Zones -** An external subject matter expert(s) consultant(s) needs to be engaged to design and cost the water play zone based on Masterplan themes, palettes and precedents.
- **Active Recreation Zone** - Further consultation is required to be undertaken with the community to determine active elements e.g. table tennis, basketball and outdoor exercise equipment. Footpaths, lighting and landscaping should be based on Brelsford Masterplan palette and precedents and should be refined in consultation with subject matter experts and relevant sections of Council.
- **Major Events Stage** - A detailed design of the stage should be undertaken in consultation with Council's Stadium & Major Events Section.
- **Amphitheatre and Event Space -** Detailed design and construction costing should be undertaken for connecting footpaths, lighting and landscaping based on the Masterplan to ensure a cohesive inclusive design.
- **Lighting** - Develop a lighting plan for the park using precedents in Appendix 6.5 and revisit existing plans and specifications for lighting at the skate park at night.
- **Directional Signage -** Remove existing redundant signage and develop a new place branding guide and artwork based on the Brelsford Masterplan detail.
- **Tree Budget** - Establish funding opportunities for the planting and maintenance and replacement of trees within the park and its surrounding streetscapes.
- **Vegetative Link** - Ensure the Tree Plan for the park is developed and established to provide a green link from City Hill to Coffs Creek.

PLANTING SPECIES

Botanical Name	Common Name	Height	Form and Placement
Trees			
Open Space Planting (avoid seating areas)			
Eucalyptus robusta	Swamp Mahogany	20-30m	Potential existing species
Eucalyptus tereticornis	Forest Red gum	20-50 m	Existing species corner Curacoa and
Eucalyptus microcorys	Tallowood	35m +	Existing species corner Curacoa and
Eucalyptus haemostoma	Scribbly Gum	10m +	Park Tree - CW suggestion
Eucalyptus signata	Scribbly Gum	25m +	Identified in Veg. Map. - existing spe
Eucalyptus propinqua	Small Fruited Grey Gum	20m +	Identified in Vegetation Mapping
Corymbia maculata	Spotted Gum	35m +	Large shade tree
Syncarpia glomulifera	Turpentine	25m +	Identified in Vegetation Mapping - La
Feature Trees			
Corymbia ficifolia	Red Flowering Gum	15m	Feature tree
Stenocarpus sinuatus	Firewheel Tree	30m +	Feature Tree
Trees Seating Areas and Built Form			
Ficus obliqua	Small Leafed Fig	35m +	Match existing trees - Entry on Earl S
Melaleuca leucadendra	Weeping Paperbark	10-14m	Park shade tree - existing near playg
Eucalyptus curtisii	Plunkett Mallee	7m +	Mallee with sparse foliage - suitable
Melaleuca viridiflora	Weeping Red-flowering Paperbark	6-8m	Suitable street tree under powerline
Allocasuarina littoralis	Black She Oak	15m+	Identified in Vegetation Mapping Co
Allocasurina torulosa	Forest Oak	10m+	Identified in Vegetation Mapping Co
Elaeocarpus reticulatus	Blueberry Ash	8-15m	Identified in Vegetation Mapping Co
Ground Layer			
Prostrate			
Banksia spinulosa	Birthday Candles	50mm	Texture plant and colour pop
Banksia integrifolia	Roller coaster	20mm	Statement feature
Casuarina glauca	Cousin It	20mm+	Mass planting, textural feature
Chrysocephalum apiculatum	Yellow Buttons	15mm+	Attractive feature - colour pop
Conostylis candicans	Silver Sunrise	20mm+	Attractive feature - colour pop
Kunzea ambigua prostrate	Tick Bush	30mm+	Attractive feature - colour pop
Grasses			
Lomandra fluvialtilis	Shara	45mm+	Mass planting
Lomandra confertifolia	Little Con	40mm+	Clumping - mass planting
Dianella caerula variegata	Flax Lily	40mm+	Clumping - mass planting
Poa labillardieri	Eskdale	50mm+	Arching form and colour contrasting
Themeda australis	Mingo	20mm+	Boarder and contrast plant
Isolepsis cernua	Lucky whisps	20mm	Transition zones
Dichondra repens		20mm	Transition zones
Zoysia	tenufolia	15mm	Transition zones
Low Shrub			
Blechnum cartilagineum	Gristle Fern	50mm+	Shaded areas texture feature
Gardenia radicans	Gardenia (prostrate)	50mm+	Hardy mass planting under trees in h
Melaleuca thymifolia	Thyme Honey Myrtle	50mm+	Thin sparse foliage ideal for veritcal
Persoonia stradbrokensis	Broad Leaved Geebung	1m	Tip prune regularly from a young age

PART 6 APPENDIX

6.1 PLANTING SPECIES LIST AND SPECIFICATIONS

Albany St
Albany St

cies along Harbour Dr

arge shade tree - CW suggestion

t and around Village Green and Curacoa St Planting
ground
for use around built form
s and screening of Tennis
munities - quick growing provide shade
munities - quick growing provide shade
mmunities

- mass planting

igh active areas playground and exercise nodes - CW suggestion
break/uplift
e for a shrub

PLANTING SPECIFICATIONS

NOTES

ALL MATERIALS TO BE INSPECTED AND APPROVED BY SUPERINTENDENT PRIOR TO INSTALLATION.

1. EXISTING ESTABLISHED PLANTING:

ALL EXISTING TREES TO BE RETAINED TO BE PROTECTED DURING CONSTRUCTION **IN** ACCORDANCE WITH ENGINEERING DEMOLITION PLAN, AND CHCC ARBORISTS RECOMMENDATIONS. TREE PROTECTION ZONE WILL BE FENCED OFF AS PER TREE PROTECTION PLAN.
NO PLANT, MACHINERY OR VEHICLES, OR STORAGE OF MATERIALS, OR GENERAL ACCESS TO TREE PROTECTION ZONE WITHOUT PRIOR WRITTEN APPROVAL FROM THE SUPERINTENDENT. TREES TO BE REMOVED WITHIN TREE PROTECTION ZONE WILL BE STUMP GROUND TO 200mm BELOW EXISTING GL. TREES TO BE REMOVED OUTSIDE THIS AREA WILL INCLUDE FULL REMOVAL OF STUMPS. ANY CONCERN THAT TREE REMOVAL WILL DAMAGE EXISTING TREES TO REMAIN, CONFIRM REMOVAL METHOD WITH SUPERINTENDENT AND ARBORIST PRIOR TO COMMENCEMENT OF WORKS.

2. MULCH

PROVIDE TO ALL GARDEN AREAS AS FOLLOWS: 100mm DEEP X 20mm PINE BARK/HARDWOOD MULCH
TO AS4454. ENSURE MULCH FINISHED LEVEL FLUSH WITH CAR PARK, PATHS, AND MOWING STRIP FINISHED LEVELS

3. TOPSOIL STRIPPING AND STOCKPILING:

STRIPPING

- PREPARATION: CLEAR ALL DEBRIS INCLUDING DEMOLITION WASTE, TIMBER, RUBBISH, WIRE FENCES, ROCK, GRAVELLED DRIVEWAYS, ETC. CLEAR TREES AND SHRUB GROWTH AND SLASH IF NECESSARY CLEAR PASTURE AND WEED GROWTH IF HEAVY OR OTHERWISE A PROBLEM SPRAY WITH A BROAD SPECTRUM HERBICIDE AT MANUFACTURER'S RATE AND ALLOW 1-2 WEEKS TO OBTAIN KILL BEFORE STRIPPING
- STRIPPING: AVOID THE INCLUSION OF SUBSOIL IN TOPSOIL STRIPPING, ADJUST DEPTH ACCORDINGLY
- STRIPPED TOPSOIL TO BE STOCKPILED FOR USE AS FILL, OR DELIVERED OFF SITE FOR FUTURE USE. STRIPPED TOPSOIL TO BE APPROVED FOR USE BY COASTAL WORKS HORTICULTURE MAINTENANCE COORDINATOR BEFORE USE AS TOPSOIL WITHIN THE NEW SITE.

STOCKPILING

LOCATE STOCKPILES IN ACCORDANCE WITH ENGINEERS' EXCAVATION WORKS PLAN. STOCKPILE NOT WITHIN am OF ANY RETAINED TREES. PROTECT UPSLOPE USING DIVERSION DRAINS. PROTECT DOWNSLOPE SEDIMENT LOSS USING SEDIMENT CONTROL STRUCTURES (SILT FENCING OR OTHER APPROVED METHOD). STOCKPILES MUST BE NO HIGHER THAN 2m BUT MAY BE FLAT TOPPED. LABEL STOCKPILES WITH ORIGIN AND DATE. PROTECT STOCKPILES FROM WASTE AND RUBBISH DUMPING AND ENCROACHMENT OF WORKS IF STOCKPILES ARE TO BE IN PLACE LONGER THAN 3 MONTHS, SOW WITH A SEASONALLY APPROPRIATE ANNUAL COVER CROP.

4. SUBGRADE PREPARATION

BEFORE LAYING TOPSOIL, THE FOLLOWING SUBGRADE TREATMENT MUST BE APPLIED TO ALL FINISHED SUBGRADE AREAS: TRIM TO RELATIVE LEVEL TO ACCOMMODATE THE REQUIRED OVERALL SOIL DEPTH AS PER PLANTING DETAILS. NOTE: TREE PLANTING AND PLANTING BEDS TO BE MOUNDED 150-200mm ABOVE FINISHED TURF LEVELS, AND GRADED TO BELOW TURF LEVEL AS PER PLANTING DETAILS. REMOVE ROCKS >100mm. REMOVE RUBBISH SUCH AS CONSTRUCTION GENERATED WASTE, PLASTICS, METALS AND GLASS. CHISEL, DISC PLOUGH OR USE AN EXCAVATOR WITH A TYNE ATTACHMENT TO LOOSEN THE SUBGRADE AND MIX THE AMELIORANTS TO 150mm DEPTH TO INCORPORATE HARROW TO BREAK UP CLODS BUT DO NOT SMOOTH (LEAVE THE SURFACE 'KEYED' TO ACCEPT THE TOPSOIL)

IMPORTED SUBSOIL

GENERALLY THE SOIL MUST BE FREE OF 'UNWANTED MATERIAL' AND MUST MEET ALL REQUIREMENTS OF THE TABLES BELOW.

TABLE 1. PHYSICAL PROPERTIES

PROPERTY	UNITS	ACCEPTABLE RANGE
texture, preferred range	n/a	Sandy to sandy loam
Emerson aggregate class		>4
Large particles (method ref. AS7755 5.4) in the largest dimension		
2-10mm	%w/w	<20
10-20 mm	%w/w	<10
> 20	%w/w	<10
>50 mm	%w/w	<2
Visible contaminants> 2 mm•	%w/w	0-0.5

TABLE 2: CHEMICAL PROPERTIES

PROPERTY	UNITS	ACCEPTABLE RANGE
Wettability	min	>2
pH in water (1:5) Standard range	pH units	5.4-6.8
pH in CaCl2 (1:5) Standard range	pH units	5.2-6.5
pH in water (1:5) Alkaline range	pH unrts	6.8-8.0
pH in CaCl2 (1:5) Alkaline range	pH units	6.5-7.5
Electrical conductivity (1 :5)	dS/m	<0.5
Chloride	mg/kg	<200
Phosphorus - P-tolerant or standard plants acid soils method 18F1	mg/kg	<50
Phosphorus -P-sensitive plants alkaline soils method 981 or 9C1	mg/kg	<20
Exchangeable Sodium (Na)	% of ECEC	<7%
Exchangeable Potassium (K)	% of ECEC	3-10%
Exchangeable Calcium (Ca) method 18F1 or 15A1 in alkaline soils	% of ECEC	60-80
Exchangeable Magnesium (Mg)	% of ECEC	15-25%
Ca:Mg ratio	Ratio	1.5-8

PART 6 APPENDIX

6.1 PLANTING SPECIES LIST AND SPECIFICATIONS

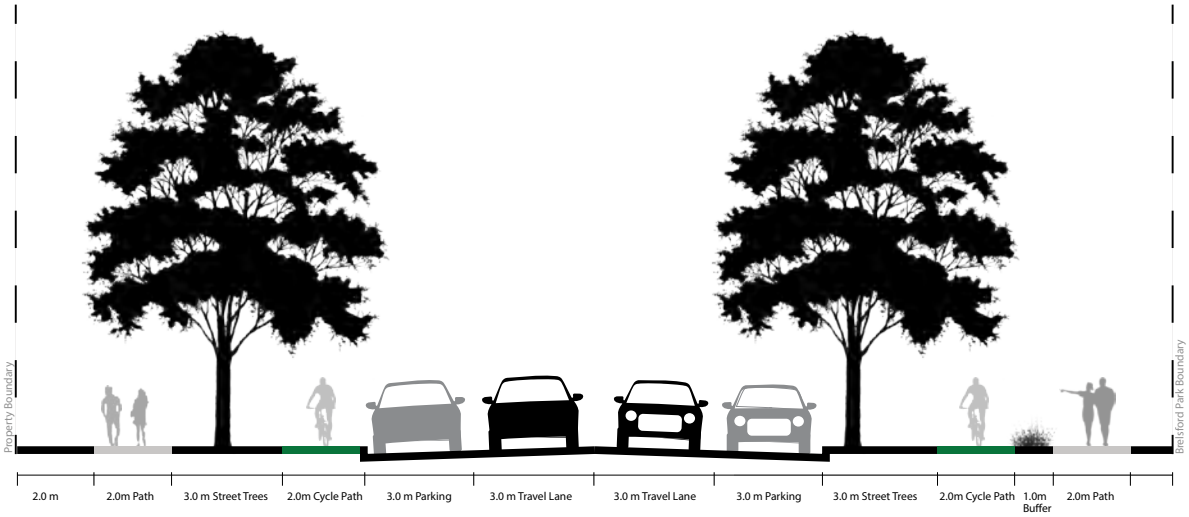
5. NEW GARDEN BED PREPARATION
POISON ALL WEEDS WITH BROAD SPECTRUM HERBICIDE AS PER MANUFACTURERS' RECOMMENDATION CULTIVATE EXISTING SUBSOIL 150mm SUPPLY AND SPREAD 300mm GARDEN SOIL - GO GROW BALLINA PREMIUM GARDEN MIX OR APPROVED EQUIVALENT TO SPECIFICATION D2: GARDEN BED PLANTING SOIL: "SOILS FOR LANDSCAPE DEVELOPMENT. (LEAKE & HAEGE CSIRO 2014) INCORPORATING TERRACOTTEM ® UNIVERSAL TO MANUFACTURERS' RECOMMENDATIONS. PROVIDE GYPSUM TO MANUFACTURERS DIRECTIONS TO ALL AREAS WHERE CLAY HAS BEEN FOUND DURING CULTIVATION. PROVIDE OSMOCOTE PLUS 12-15 MONTH OR EQUIVALENT SLOW RELEASE FERTILISER, BROADCAST TO ALL PLANTINGS AS PER MANUFACTURERS' RECOMMENDATIONS. MAINTENANCE PERIOD 12 MONTHS FROM PRACTICAL COMPLETION.
6. PLANTING
PLANTING AS PER DETAIL. PLANT STOCK SUPPLIED BY CONTRACTOR: PLANT MATERIAL IN ACCORDANCE WITH PLANTING SCHEDULE. ANY SUBSTITUTES TO ATTAIN WRITTEN APPROVAL FROM SUPERINTENDENT PRIOR TO PLANTING. MAINTENANCE PERJOD: 12 MONTHS FROM PRACTICAL COMPLETION.
8. MOWING EDGE
MOWING EDGE INSTALLED BETWEEN ALL GARDEN EDGE AND TURFED AREAS. CLEAN SPADE EDGE SEPARATING MULCH AND TURF AREAS.
7. LEVELS, DRAINAGE AND FALLS
ALL LEVELS TO BE VERIFIED ON SITE. REFER SURVEY, ARCHITECTURAL DRAWINGS, HYDRAULIC AND ENGINEERING DOCUMENTATION INCLUDING LOCATION OF EXISTING SERVICES AND SERVICE EASEMENTS, FIELD GULLIES, AND STORMWATER. NOTE: ENSURE FIELD GULLIES, STRIP DRAINS AND OVERLAND FLOW GRAVEL PATHS ARE KEPT CLEAR OF DEBRIS AND SILT, TO ENSURE UNIMPEDED FLOW OF SURFACE RUN-OFF. ALLOW MINIMUM 2% FALLS ALL TURF AREAS: AWAY FROM HARD SURFACES AND BUilT STURCTURES.
8. TURF
GRASS SEED OF TURF ANY DISTURBED AREAS OF MEDIAN. NOTE ALL TURFED AREAS ARE TO BE GRADED EVENLY. MINIMUM 2% FALL AWAY FROM HARDSTAND. FINISHED LEVELS IN ACCORDANCE WITH ENGINEERS' DRAWINGS. PONDING IS NOT ACCEPTABLE. FINISHED SOIL LEVEL PRIOR TO TURFING TO BE 50MM BELOW ADJACENT HARDSTAND MOWING EDGE/KERBS

ROOT BARRIER
ROOT BARRIER (TM), OR APPROVED EQUIVALENT TO BE INSTALLED ALONG EDGE BETWEEN SHARE PATH AND TREE PITS. ALSO BETWEEN ROAD EDGE AND TREE PITS. INSTALL FULLY IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS. ENSURE TOP OF ROOT BARRIER IS TRIMMED 100mm BELOW FINISHED MULCH LEVEL.
36. QUALITY ASSURANCE AND CONTROL
BEFORE ANY SOIL INSTALLATION, THE CONTRACTOR OR SOIL MANUFACTURER WILL SUBMIT SAMPLES OF TRIAL BLENDS LIKELY TO MEET THE PERFORMANCE SPECIFICATIONS TO A TESTING LABORATORY. THE TRIAL BLEND MUST BE BASED ON AVAILABLE TEST INFORMATION ON COMPONENTS AND, IF NECESSARY, EMPLOY AN AGRONOMIST FOR ADVICE. SUBMIT REPRESENTATIVE SAMPLES OF ~5 KG PER 500m3 OF EACH PRODUCT SPECIFICATION, PACKED AND LABELLED TO INDICATE THE SOURCE AND THE SPECIFICATION TO BE MET. THE SAMPLES MUST BE TAKEN IN A REPRESENTATIVE MANNER TO THE TESTING LABORATORY, ALLOWING SUFFICIENT TIME FOR TESTING AND RE-FORMULATION IN THE CASE OF FAILURE TO SATISFY THE PERFORMANCE CRITERIA. ONCE COMPLIANT, A TEST CERTIFICATE CLEARLY STATING COMPLIANCE WITH THE APPLICABLE CRITERIA MUST BE PRESENTED TO THE SITE SUPERVISOR OR QUALITY OFFICER. HOLD **POINT.** NO SOIL WILL BE INSTALLED UNTIL COMPLIANCE CERTIFICATION HAS BEEN DEMONSTRATED. THE CONTRACTOR MUST SUBMIT SAMPLES OF BLENDED SOILS OR IMPORTED SOIL MIXES AT REGULAR INTERVALS DURING CONSTRUCTION FOR THE PURPOSES OF DEMONSTRATING CONTINUED COMPLIANCE AS PART OF QUALITY CONTROL. GROWING MEDIA COMPLIANCE CERTIFICATION RECORDS MUST BE KEPT IN AN EASILY RETRIEVABLE MANNER THAT PROVIDES FOR TRACEABILITY OF PURCHASE AND LOCATION ON SITE. EACH COMPLIANCE CERTIFICATION FOR ALL THE PRODUCT SPECIFICATIONS USED ON SITE MUST BE IDENTIFIED BY DATE, QUANTITY TO BE SUPPLIED AND A COPY OF THE FORMULATION USED TO REACH COMPLIANCE
37. ENVIRONMENTAL MANAGEMENT
ALL EXISTING VEGETATION, OTHER THAN SHOWN FOR REMOVAL ON ENGINEERS' DRAWINGS, TO BE PROTECTED THROUGHOUT CONSTRUCTION. ENDANGERED SPECIES: SOPHORA TORMENTOSA, HAS BEEN IDENTIFIED IN THE FORE DUNES. CONTRACTOR IS TO PROVIDE A VEGETATION MANAGEMENT PLAN FOR APPROVAL AS PER REVIEW OF ENVIRONMENTAL FACTORS SECTION 6, AND IN ACCORDANCE WITH ALL PLANS PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPENCIES CONSULT SUPERINTENDENT PRIOR TO COMMENCEMENT OF WORKS.

SOIL PROFILE HORIZONS
TURF A HORIZON 200mm WASHED SAND/TERRACOTTEM MIX B
HORIZON (SUBGRADE FILL): WASHED SAND
SHRUBS/MASSPLANTING: A HORIZON: 300mm TOPSOIL AS PER NOTES
B HORIZON (SUBGRADE FILL): WASHED SAND
TREE PLANTING: A HORIZON: 800mm TOPSOIL ARE PER NOTES B
HORIZON (SUBGRADE FILL): WASHED SAND
C HORIZON (EXISTING SUBGRADE): VARIOUS DEPTHS.
ENSURE EXISTING SUBGRADE CULTIVATION AS PER SUBGRADE PREPARATION NOTES.

Earl Street Cross Section

Street Layout for Earl Street - principles taken from CBD Masterplan

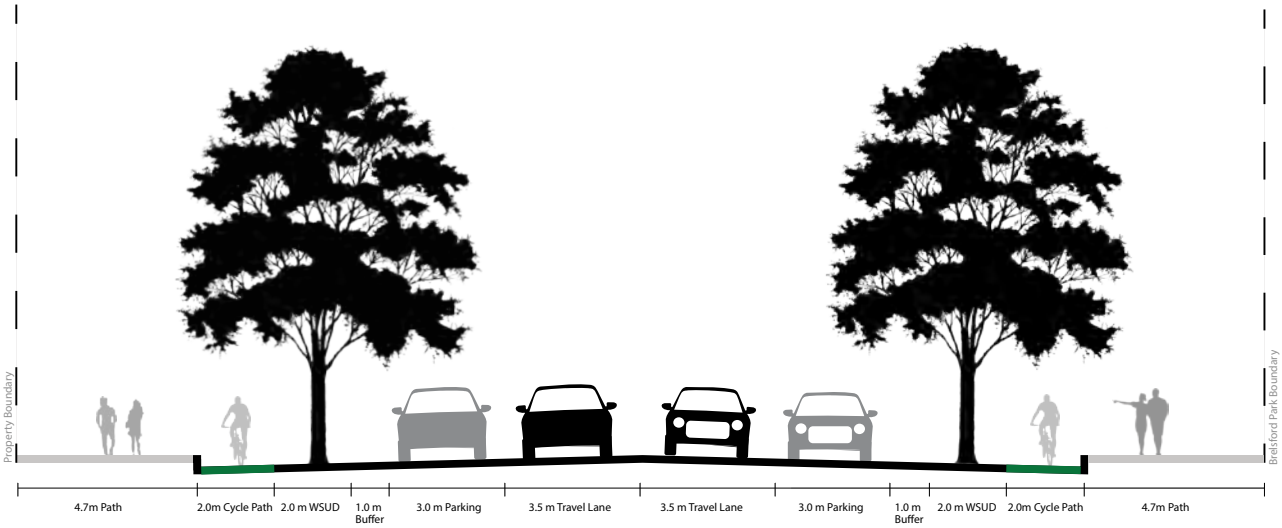


Albany Street Cross Section

Street Layout for Albany Street - principles taken from CBD Masterplan

PART 6 APPENDIX

6.2 STREET CROSS SECTIONS



Harbour Drive Cross Section

Street Layout for Harbour Drive - principles taken from CBD Masterplan

Curacoa Street Cross Section

Street Layout for Curacoa Street - principles taken from CBD Masterplan

Parking survey extent - Thursday 20 July 2017

Parking survey extent - Thursday 23 November 2017 and Saturday 25 November 2017

PART 6 APPENDIX

6.3 PARKING

PARKING SURVEYS

Two parking surveys inform this assessment:

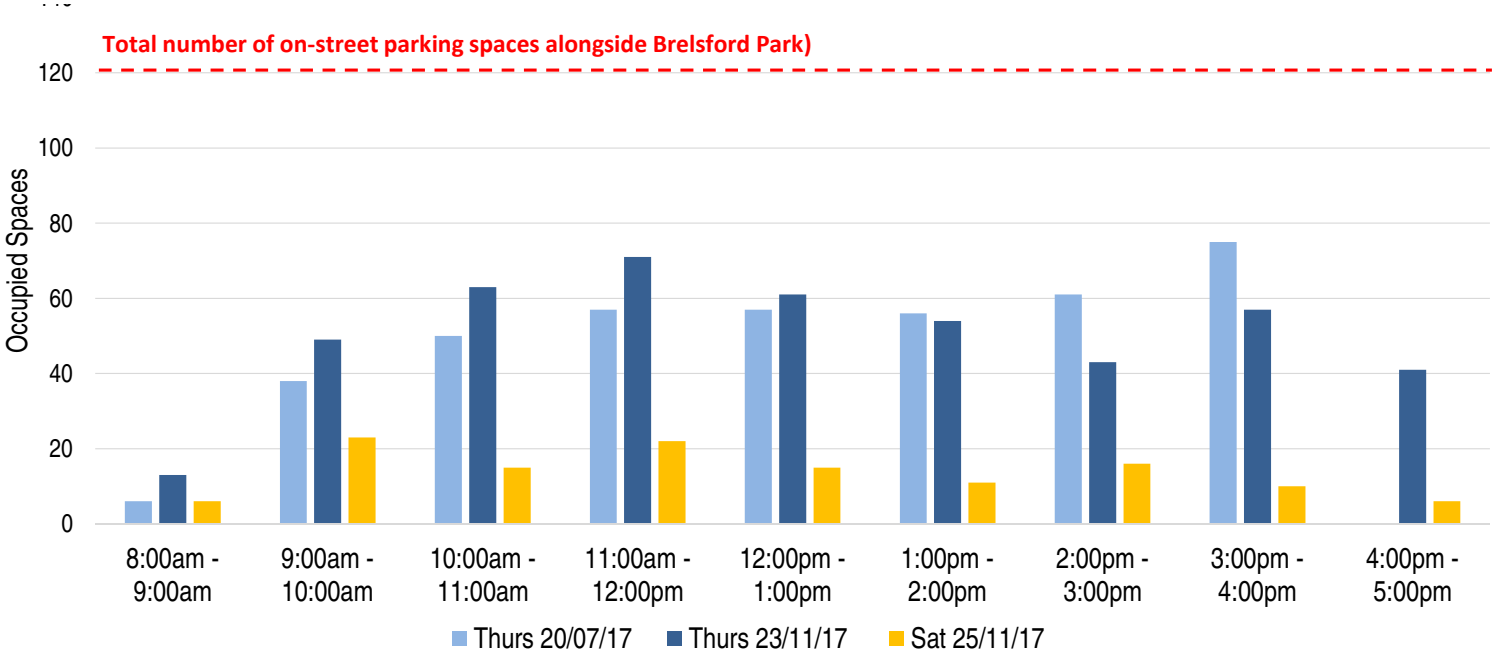
- **Thursday 20 July 2017** – hourly surveys were carried out from 8am to 3pm - undertaken by Coffs Harbour City Council.
- **Thursday 23 November 2017 and Saturday 25 November 2017** - hourly surveys from 8am to 4pm - undertaken by Bitzios.

The survey on 20 July 2017 was more specifically focussed on Brelsford Park whereas the November study covered the whole Coffs CBD.

Thursday was selected as an appropriate weekday for the surveys as it is typically the busier day in the CBD. The Coffs Coast Growers Market's were on in City Square between 8:00am and 3:30pm on both Thursday's.

Fine weather occurred on the days of the parking surveys.

The on-street and off-street parking areas covered by the two surveys is shown in the images (left).



Use of On Street Parking Alongside Brelsford Park

PART 6 APPENDIX

6.3 PARKING

PARKING OCCUPANCY

On-Street Parking alongside Brelsford Park

On-street carparking spaces on the Brelsford Park side of the surrounding streets are all-day parking ie. no time restrictions. The parking is a mix of angle and parallel parking – angle parking occurs along the adjoining length of Harbour Drive and the portion of Earl Street adjoining the skate park.

The surveys on the Thursdays in July and November indicate the total occupancy alongside Brelsford Park only reaches about 60% at peak times – around 11am and 3pm – refer to following graph. Occupancies were significantly less on the Saturday in November.

In Earl Street the 26 angle parks are generally full for most of the day. The majority of this usage is workers/shoppers using it as an all-day car park. This is based on hourly survey observations which show that 80% of the parking spaces are occupied all-day by the same cars. Usage of these angle parks on the Saturday is relatively low - less than 50%.

Harbour Drive has 41 angle parks alongside Brelsford Park. The maximum usage was 60% which occurred at school pick-up time. The average usage throughout each day was less than 40%.

In Albany Street parking is generally minimal (less than 10 cars) for most of the day however 20 cars were surveyed around 11am on the Thursday in November. The parking at the peak times was generally located along the north-western end of the street (the playground end).

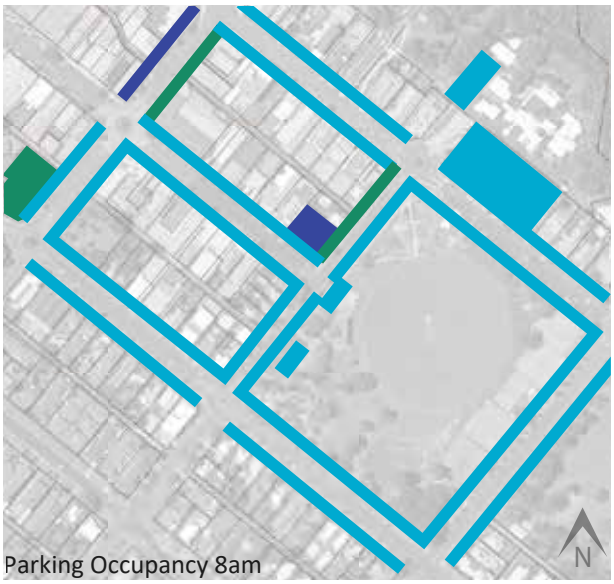
Curacoa Street is generally empty or has one or two cars for most of the day except around 3pm at school pickup time. At this time about 30 cars were recorded in the whole street (both sides of the street). This number included visitors to the tennis courts which occurred at the same time.

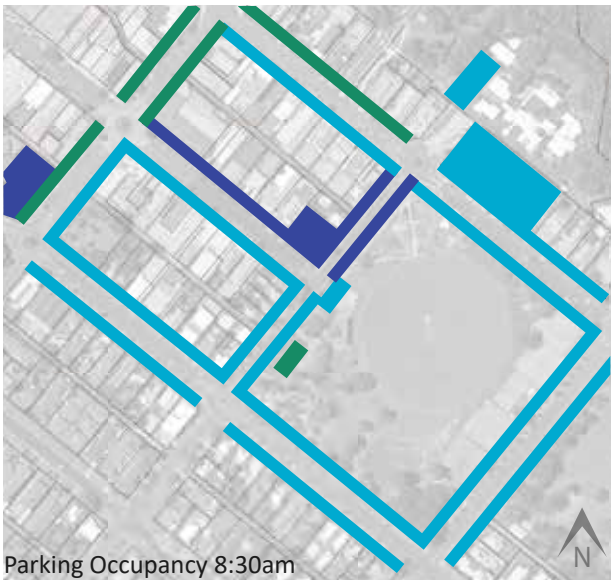
Parking occupancy in the surrounding streets during school pick-up time was surveyed on Thursday 20 July 2017:

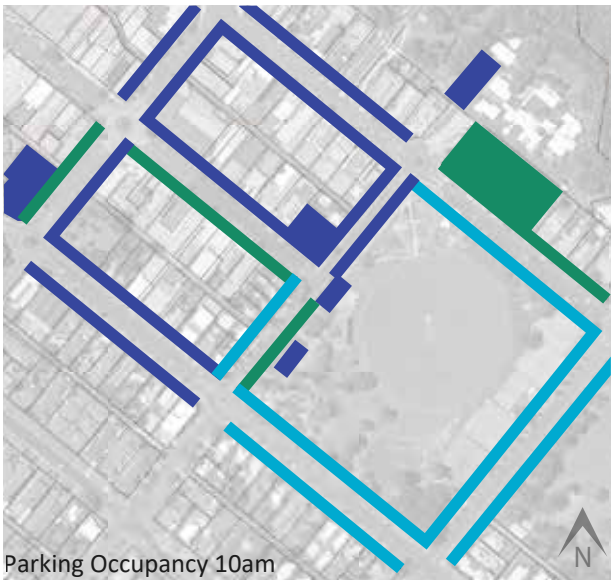
At Coffs Harbour Public School it was observed that most of the parking occurred around Salamander Street (80 parked cars around 3pm) – including parking in Victoria Street. About 30 cars were recorded around the same time in Curacoa Street on the north-west side of the school.

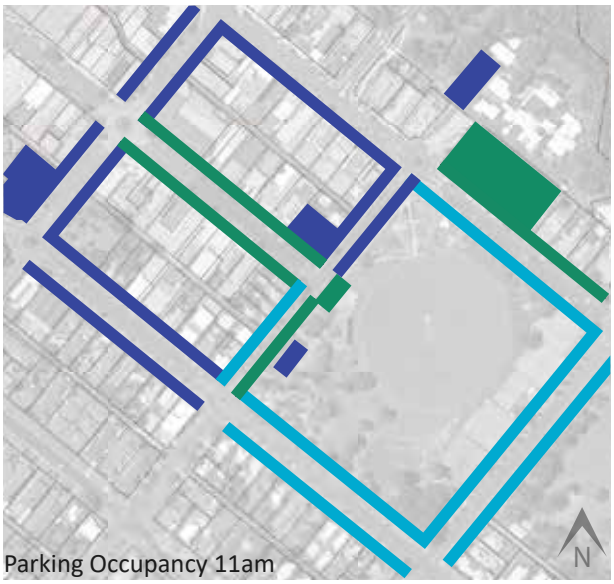
At Coffs Harbour Christian Community Primary School 84 parked cars were recorded in Curacoa Street on the north side of Harbour Drive.

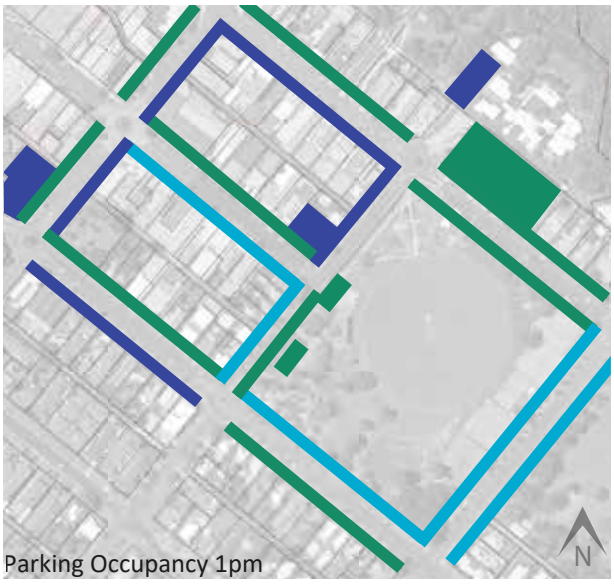
Parking occupancies throughout the day on Thursday 20 July 017 are shown overleaf.

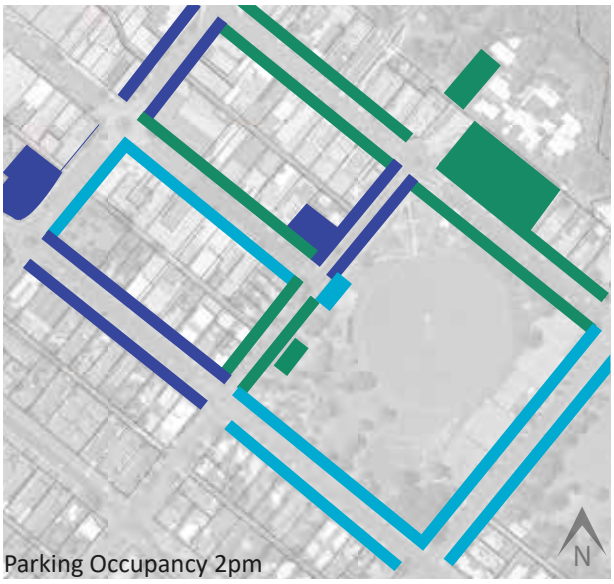












LEGEND

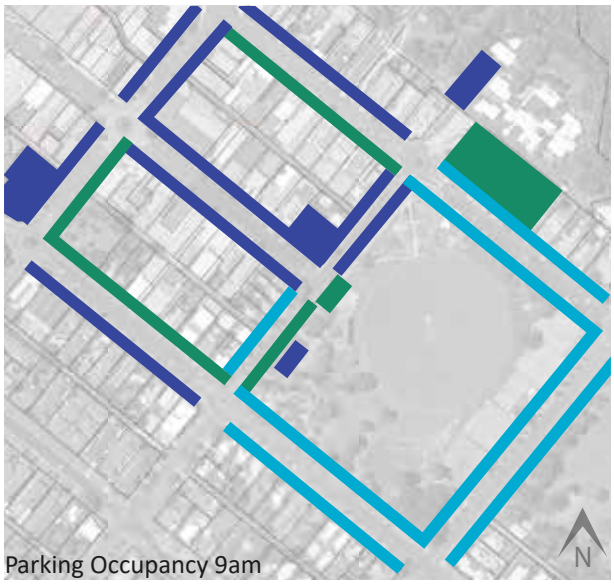
< 50% occupied

50 - 85% occupied

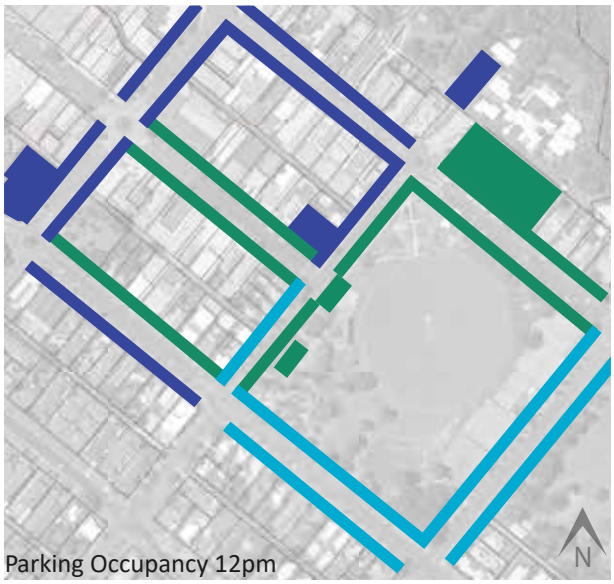
PART 6 APPENDIX

6.3 PARKING

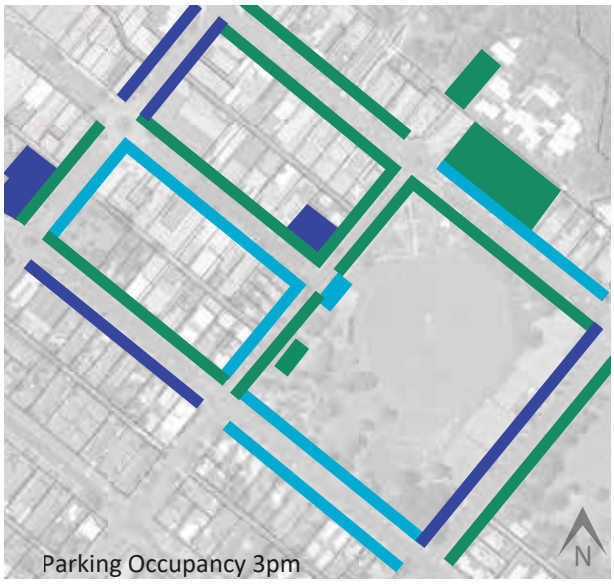
PARKING OCCUPANCY



Parking Occupancy 9am



Parking Occupancy 12pm



Parking Occupancy 3pm

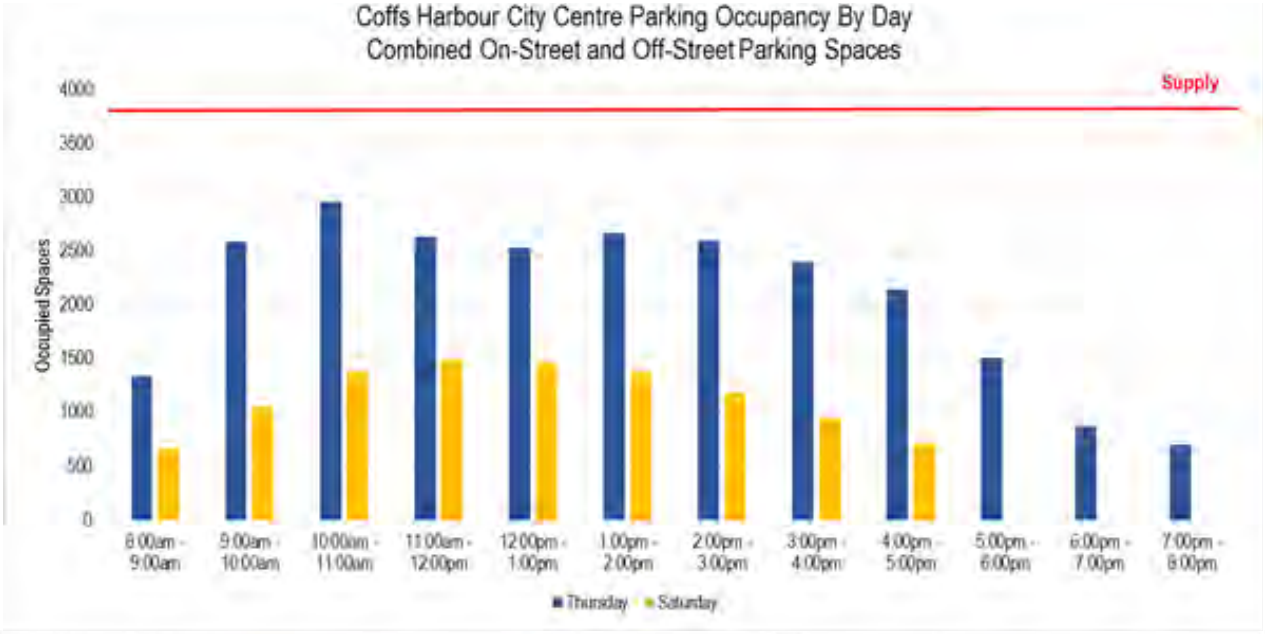
85 - 100% occupied

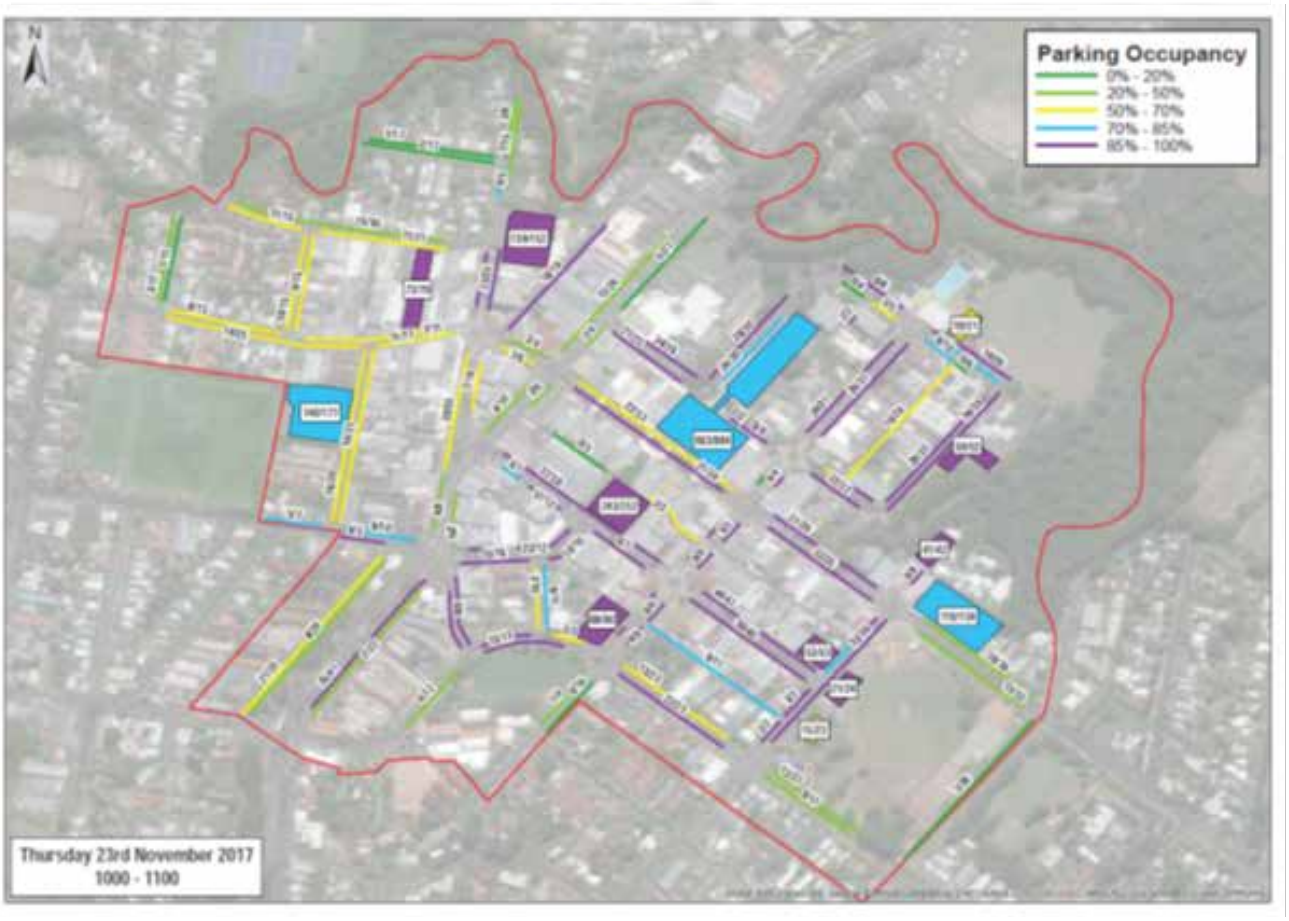
Off-Street Parking around Brelsford Park

The two parking areas within Brelsford Park were surveyed on the two Thursdays (in July and November). The total number of cars surveyed in the two areas varied from 25 to 40 throughout most of the day. Observations from the survey in July indicate the majority of this usage is associated with workers/shoppers (as opposed to park users) using them as an all-day or half-day car park.

Parking in the off-street car park on the corner of Park Avenue and Earl Street has 53 spaces. This parking area rapidly fills with workers in the morning for all-day parking and remains full for most of the day. It was observed to be 90% occupied by 8:30am and 100% by 9:00am on Thursday 20 July 2017, and similarly on Thursday 23 November 2017 (53% around 8:00am and 100% around 9:00am).

Parking use in the Coles basement car park averaged about 60% (of 140 spaces) throughout the day on the two Thursdays and peaked at 80% - 90% around 11am-12pm.





The study by Bitzios in November 2017 shows there is sufficient parking supply across the whole of the City Centre to meet parking demand. The study compared survey results from 2012 with the 2017 study which showed no significant increase in parking occupancy over the five-year period.

Key observations regarding the whole of the city centre include:

- sections of on-street car parking located within the central core activity area exceed the desirable 85% occupancy rate;
- the majority of the off-street car parks also exceed the 85% occupancy rate during peak periods; and
- available car parks are found around the fringe areas of the study area - approximately 5-minute walk from the central core.

PART 6 APPENDIX

6.3 PARKING

PARKING STRATEGY

Parking occupancy across the whole of the City Centre peaks around 10am to 12pm as shown in the graph. The distribution of this peak parking demand on Thursday 23 November 2017 is shown in the map. Parking occupancies on weekends are relatively low.

The Bitzios study recommends long-term parking located around the City Centre fringes and high turnover parking located within the central business areas to support the aim for a city centre where people park once and walk around the centre to each destination. This needs to be supported with promotion of active transport and strategies to make walking more desirable around the city centre.

Parking Strategy for Brelsford Park

The general parking strategy is to relocate parking out of the park itself and provide it in the streets next to the park. To ensure parking is available for more vulnerable park-users (eg. parents/carers with small children) time restrictions are proposed to ensure the on-street supply is not occupied all-day by workers in the city centre.

Improved walkability and connectivity provided by the Brelsford Park Masterplan initiatives will assist in better utilisation of Curacoa Street and the other surrounding streets for workers and general visitors to the city centre.

The above strategy is consistent with strategies in the Coffs Harbour City Centre Masterplan 2031 which encourage walking into city centre.

The following actions are recommended:

SHORT TERM:

- Remove the two parking lots located in Brelsford Park.
- Introduce time restrictions (eg. 3 hour parking limit between 9am and 2pm) for on-street parking spaces adjoining Brelsford Park in Earl Street, Harbour Drive and Albany Street with complimentary improvements in footpaths and street trees / street amenity.

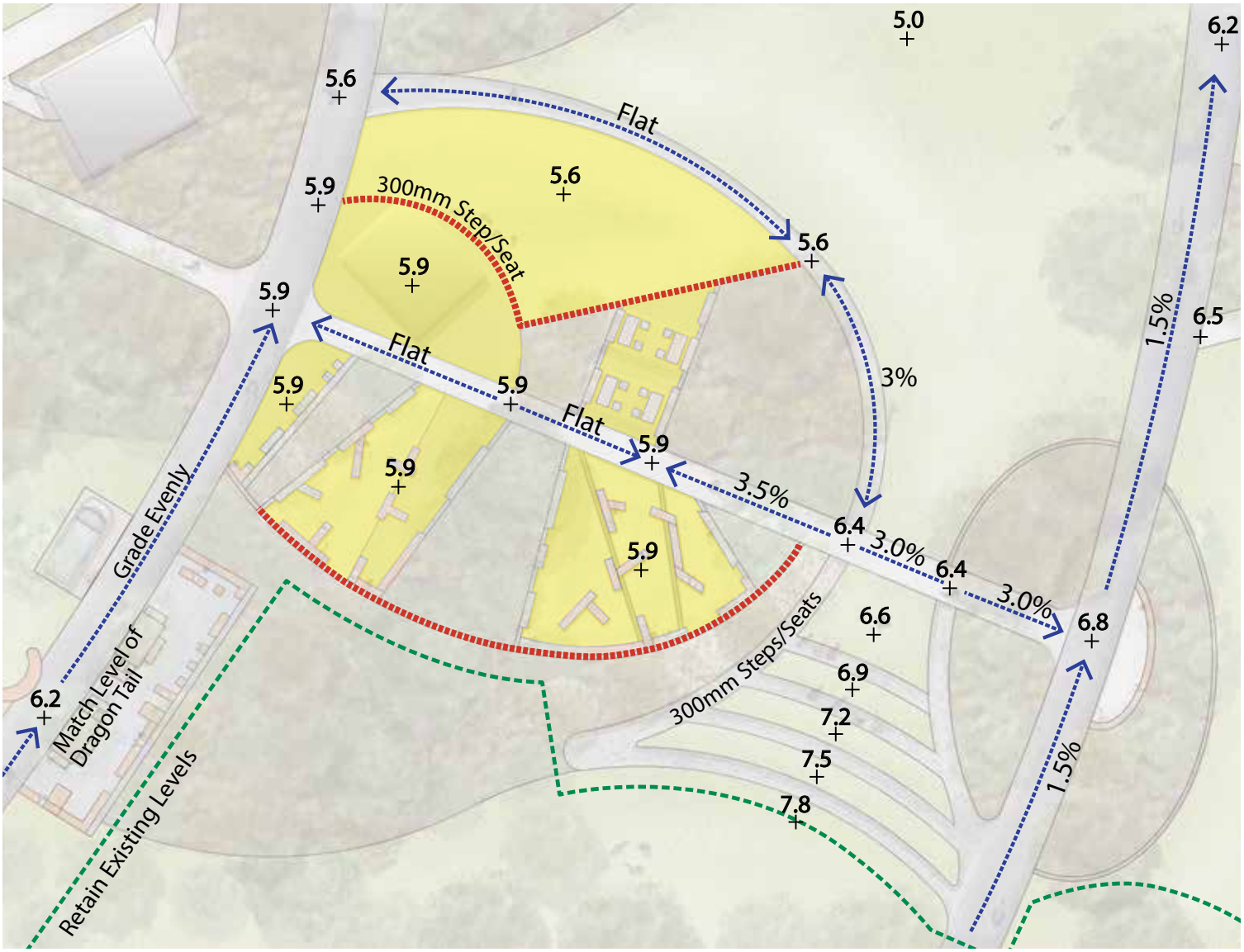
LONG TERM:

- Convert the angle parking in Earl Street to parallel parking to reduce the dominance of vehicles along this key area of the park, and to improve pedestrian connectivity across Earl Street.
- Provide formalised angle parking in Curacoa Street (between Albany St and Harbour Dr) in combination with large street trees to reduce the impact on the street amenity.
- Provide the mid-block walking connection through Brelsford Park from Curacoa Street to Park Avenue in combination with formalising angle parking in Curacoa Street.
- Improve pedestrian connectivity at the Earl Street / Harbour Drive intersection and the Earl Street / Park Avenue intersection to better connect the parking around Brelsford with the City Centre.

Indicative Levels Plan - spot levels with arrows indicating the fall sloping down

PART 6 APPENDIX

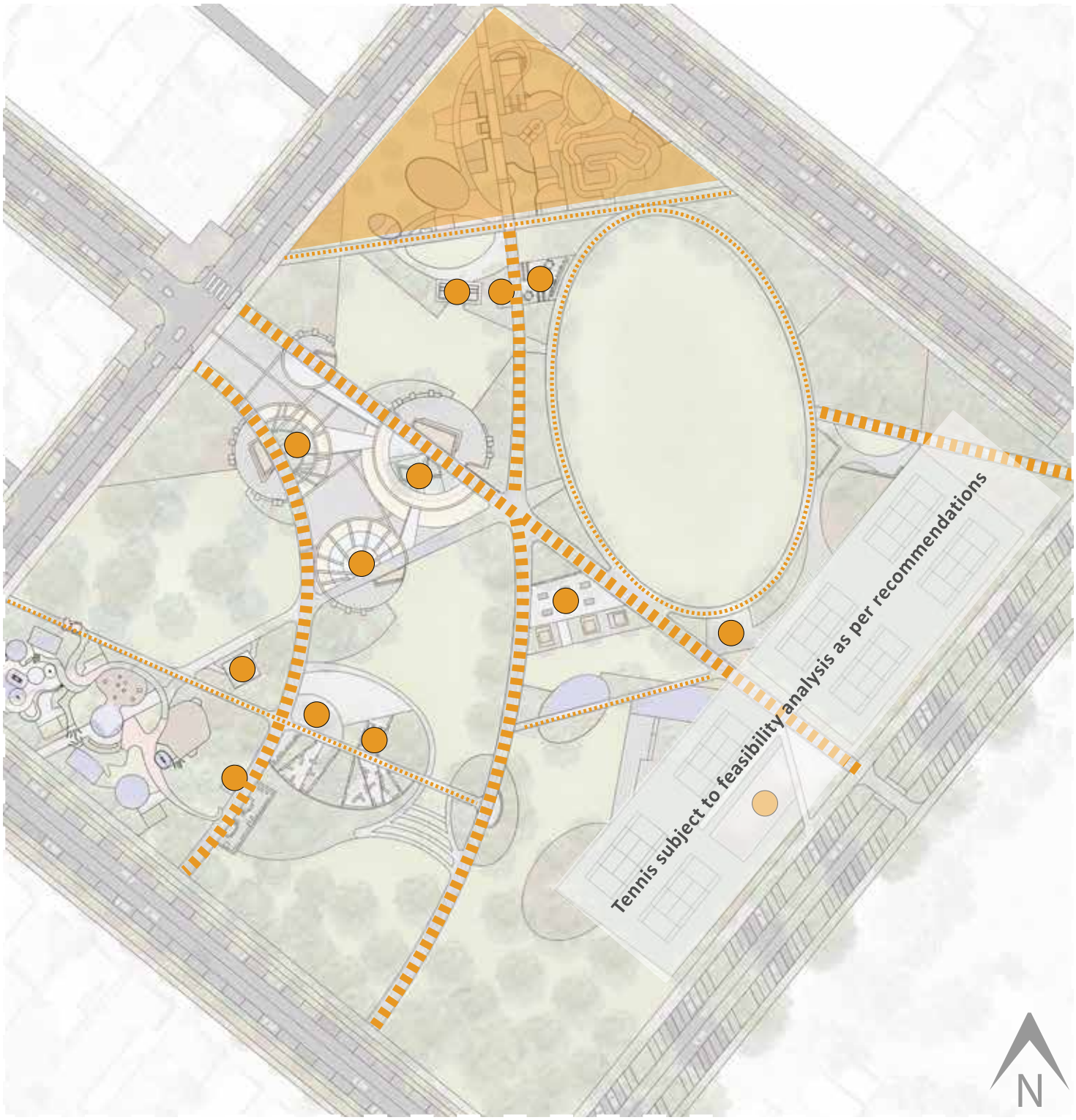
6.4 LEVELS PLAN



Indicative Events Space Levels Plan - spot levels with arrows indicating the fall sloping down

LEGEND

- Flat Hardstand
- Direction Land Slopes/Falls Proposed Works
- Retaining Wall/Step
- Retain Existing Levles
- Indicative Finished Surface l



Areas that Require Access to 3 Phase Power and Lighting

LEGEND

Areas with 3 Phase Power -
Locations that will hold events or have the need for power

Major Path -
Lighting required for safe passage through park in evenings

Minor Path -
Lighting required for safe passage through park in evenings

Investigate Lighting Strategy for Skate Park -
Lighting required for safe usage of skate park in evenings

PART 6 APPENDIX

6.5 LIGHTING AND POWER ACCESS

PALETTE & PRECEDENTS

Docklands City Park by MALA Studio - example seating and active recreation opportunities incorporating and lighting elements.

Sydney Park amentities by Stanic Harding + Interiors - referencing lighting opportunities for shelter structures.

Queen Elizabeth Olympic Park referencing lighting effects for Major Paths and feature seating opportunities.

Darling Quarter Waterlay by ASPECt Studios - waterplay lighting.

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