

Location NewQuay

NewQuay Docklands represents Melbourne's life on the waterfront. Stretching for one kilometre along the northern shore of Victoria Harbour, it offers plenty of choice for active and healthy lifestyles. With water views and a city skyline backdrop, NewQuay enjoys fresh sea air, lush parklands and a beautiful waterfront promenade.

NewQuay is within short walking and cycling distance of the Melbourne CBD and public transport options include the free City Circle tram at your door. Less than one kilometre away is CityLink, connecting residents to greater Melbourne by car.

Within a three-kilometre radius, are some of Melbourne's most celebrated cultural and sporting facilities, as well as primary and secondary schools, prestigious universities and training institutes.

396 Docklands Drive is the last undeveloped site south of Little Docklands Drive. It is a substantial one hectare land parcel currently occupied by a commercial car park.

Legend

- T Tram Stop
- 🚶 Pedestrian zone
- B Bike path
- D Dining



Precinct Concept Site Plan



Key Features

- ▶ 750m² north facing community park with cafe on the western edge
- ▶ Little Docklands Drive planting enhanced with no vehicle cross overs to provide pedestrian friendly link to The District
- ▶ Pedestrian only diagonal laneway with active frontages connecting to park
- ▶ Building lobbies on key building corners creating high quality streetscapes with fewer retail tenancies
- ▶ Vehicle and loading entry to west block on Waterfront way opposite loading facilities at the Marriott Hotel (ie collocated)
- ▶ Safe vehicle and loading entry to east block on St Mangos Lane away from pedestrian crossing and school.

Legend

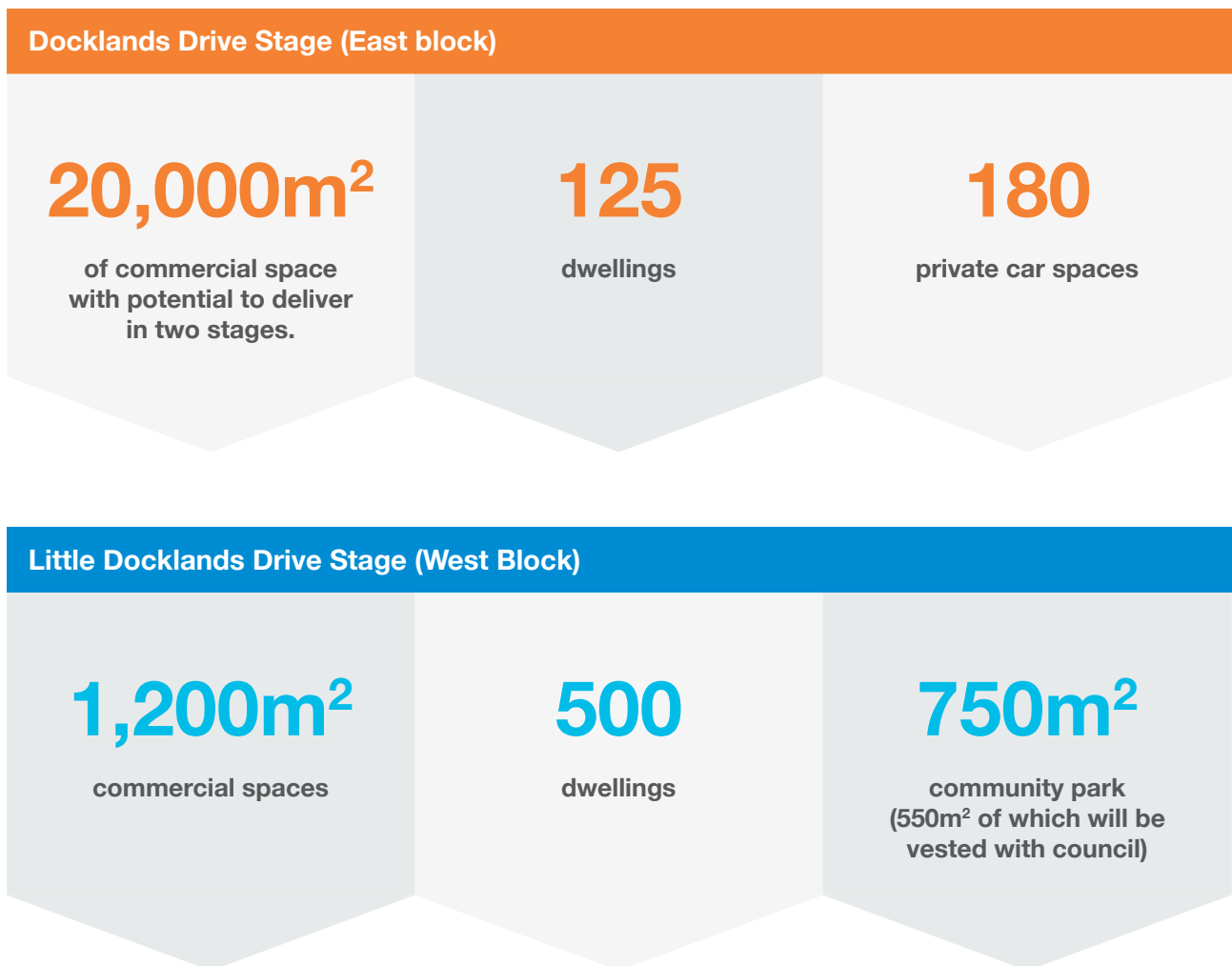
- **E** Residential Lobby + Entry
- **E** Commercial Lobby + Entry
- Colonnade
 - ▶ Permeable boundary
 - ▶ Weather protection
 - ▶ Maximised unencumbered footpath width for Tree Canopy
- Maximised Tree Canopy

Land Use and Staging

396 Docklands Drive will deliver a diverse village of buildings and public spaces housing a mixture of residential dwellings and commercial spaces. The precinct is designed to be delivered over four stages with the community park completing in line with the first stage.

The development plan will support an increase in activity in NewQuay, with over 1,300 new residents and 1,500 white collar workers. The project is expected to generate \$500 million of value and will employ 1,000 Victorians during the construction phase.

The Development Plan will accommodate buildings of the following approximate scale:



Wind

The proposed development plan has been modeled in the wind tunnel by Mel Consulting, with buildings oriented and shaped for pedestrian safety and comfort.

The criteria applied for the assessment has regard for public use, whether that be walking, waiting or seated recreation.

The modeling ensures that the wind conditions affecting the surrounding buildings will remain within acceptable limits.

Legend

- Sitting
- Standing
- Walking
- Above Walking
- Safety
- # Test Location

Summary of ground level wind conditions for the proposed configuration for 360° of wind direction



Precinct Concept Docklands Drive View



Artist Impression



Artist Impression

Docklands Drive

// View From South
(showing future development to North)

Little Docklands Drive

// View from North



Artist Impression

Development Scale

// Design and development overlay proposed

A village of buildings with heights in line with those of surrounding buildings and delivering a mix of housing typologies and commercial spaces.

Key features

- ▶ A sunny north facing park
- ▶ A collection of six buildings of varied heights between 51m and 70m that are typical of the local context.
- ▶ No overshadowing of the neighbouring Docklands Primary School



* Proposed Development Heights in Waterfront City Development Plan

Park and Lane Link to School

// Public Realm + Landscape – Site Plan

The new Park will be a welcoming place for residents, local workers, school parents and children. It will belong to Council and the chosen landscape design will be guided by the needs of these groups.

The Park will include landscape features that provide opportunity for seating, play and prioritise pedestrian permeability.

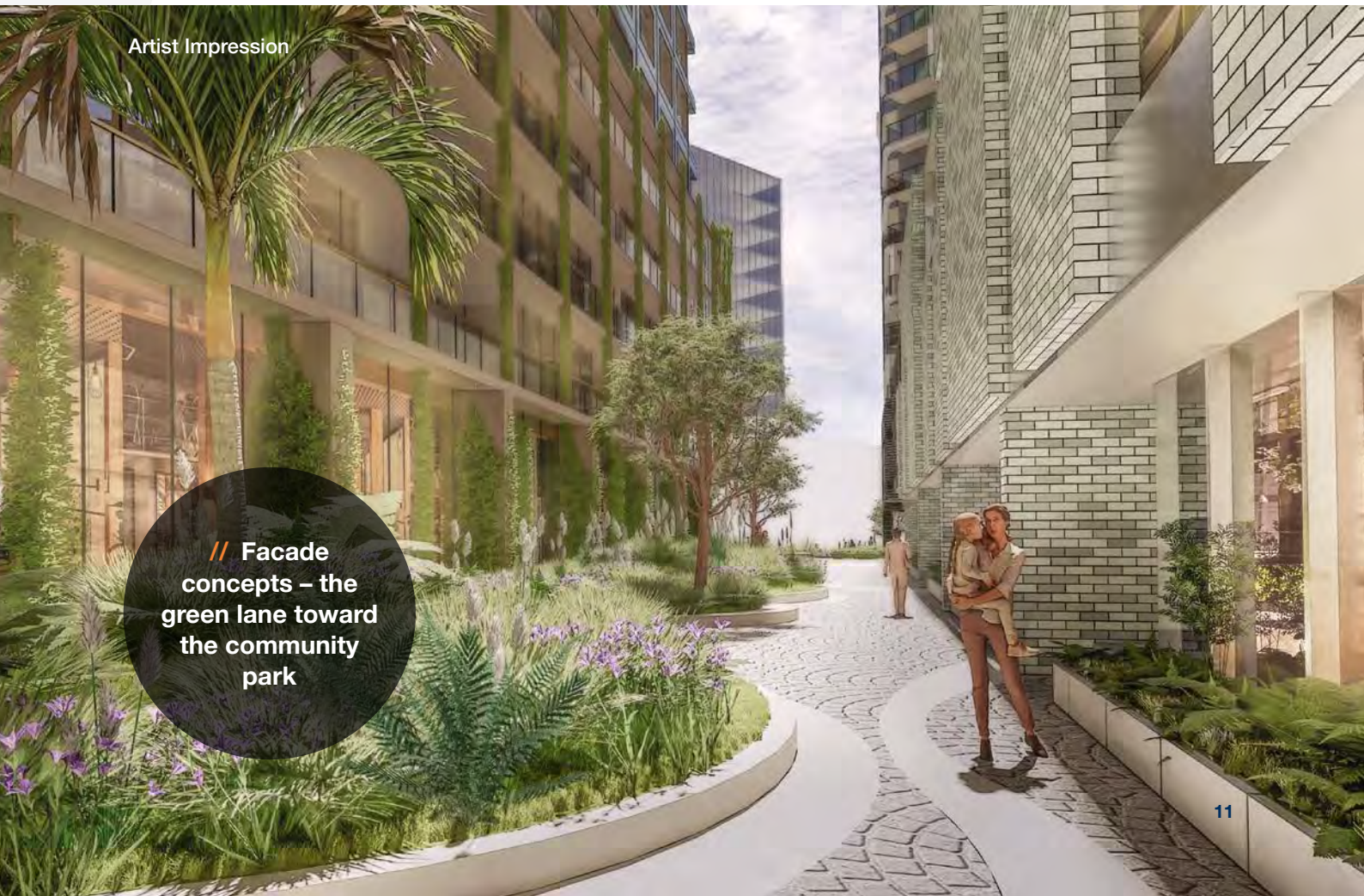
The footpaths surrounding the site will be reconstructed with bluestone kerb. Existing trees will be augmented with new street tree plantings, and the landscape response will support best practice storm water design.

Docklands Drive footpaths and key entries will have rain protection for pedestrians.

Legend

--- Development Boundary

3m Facade Access Zone



Artist Impression

// Facade concepts – the green lane toward the community park

Sustainability and Wellness

MAB is committed to delivering a precinct that incorporates exemplar design principles from concept through to completion to ensure material selection, construction process and operational cycles all contribute to achieving the precincts sustainability objectives.



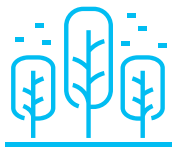
// Sustainability

396 Docklands Drive will be a vibrant, liveable and sustainable community – providing permeable spaces that encourage walking connections through the site, open space and targeting 100% clean power sources.



// Health and wellbeing

396 Docklands Drive will contribute to the health and wellbeing of residents, the longevity of the building stock, eliminate fossil fuel consumption in operations and reduce living costs for the residents and businesses.



// 15% open space

A new park and through connection for people to relax, meet and play – providing clarity and purpose to the master plan.



// High-quality buildings

High standards of environmental sustainability. All buildings will achieve a minimum 5 Star Green Star Rating in accordance with the Green Building Council of Australia's Green Star Buildings Tool.

Transport Connections

Transport Plan

396 Docklands Drive is exceptionally well connected achieving a walk score of 93 and a transport score of 100.

The Docklands Drive tram network supports three tram routes that link through the city, a cross city bus route is located on Footscray Road, bike paths connect through the promenade and the precinct is an easy walk to Southern Cross Station.

Legend

-  Tram stop
-  Pedestrian zone
-  Bike path
-  Dining



Programme



Benefits and Next Steps



A new high quality park fronting the primary school on the corner of Little Docklands Drive and St Mangos Lane will be delivered in the first stage of the delivery process.



A pedestrian connection linking the Docklands Drive and Waterfront Way corner through to the Primary School



An injection of life and activity through a variety of new uses including new residents and retail tenancies



Iconic building designs that create a visual landmark for Docklands



Transformation of a degraded car park into a high quality precinct with exciting mix of uses.

MAB's team is committed to delivering high quality private and public development at NewQuay.

We welcome your feedback and request all submissions be made by Thursday 24 March via the website: www.396engage.com.au

Thank you for participating.

Disclaimer: The information, images and illustrations contained in this brochure has been prepared by MAB Corporation Pty Ltd ('MAB') in good faith and with due care and is for promotional purposes. Any details of the project, artistic impressions and drawings used herein have been developed prior to completion of the project and the project plans, specifications and configurations are subject to change. MAB does not warrant or represent that the project will be developed in accordance with the details or the accuracy of any information contained herein and does not accept any liability for any error, discrepancy, negligence or otherwise. The information contained herein does not constitute all, or any part of, an offer for any property referred to in this brochure.

*Views shown are indicative only and are based on the site at the time the image is produced. Landscapes may change and a view which is unrestricted may be restricted in the future. MAB does not warrant the accuracy of the view contained herein and does not accept any liability for any discrepancy or otherwise in the depiction of the view. Purchasers must not rely on these being the final views upon completion. March 2022.

Appendix D – Consultation Website

396 - 416 Docklands Drive NewQuay
Development Plan

About
MAB Corporation is proud to introduce its vision for the remaining parcel (396 Docklands Drive) within the original NewQuay East Development Plan. This engagement via '396 Engage' has been prepared to inform the community and invite feedback which will be considered within the final design and submitted for the planning authorities to assist them in their assessment of the Development Plan Amendment.

Location
396 Docklands Drive is located in central NewQuay with immediate adjacency to Docklands Primary School. The District Docklands and the West End Hotel.

Precinct Plan
The Development Plan Amendment will support a diverse village of buildings housing a vibrant mix of residential and commercial spaces. At ground level a new pedestrian lane will link the corner of Docklands Drive and Waterford Way with a new community park positioned opposite Docklands Primary School.

Open Space
A new high quality community focused park adjacent to Docklands Primary School.

Activation
An injection of life and activity through a variety of new uses including residential, commercial and public spaces.

Connections
A new pedestrian oriented path linking the Docklands Drive and Waterford Way corner with Docklands Primary School.

Transformation
The existing public use park is to be transformed into a high quality precinct with an exciting mix of uses and building arrangements creating a new landmark for Docklands.

Programme

- Stage 1: Concept proposal, Department of our Melbourne City Council
- Stage 2: Community Consult
- Stage 3: Concept of Design
- Stage 4: Development Plan
- Stage 5: Planning Permit
- Stage 6: Precinct Delivery

Delivery Team

- ARCM ARCHITECTURE**: ARCM Architecture are an award winning architectural, urban design, interior design and master planning practice. (notable projects include The Westgate, Pacific Centre, MTC, Caulfield, Traralgon and Botanic Museum of Geelong, Victoria).
- FWA**: Floor Plans Architects is an award winning design practice offering consultancy services in landscape architecture, urban design and conceptual master planning. Their experience includes working with the private and public sectors across Australia, as well as Federal, State and Local Government bodies in the design, execution and delivery of landscape and urban design projects.
- Stantec**: Stantec provides a range of professional consulting services including planning, engineering, architecture, interior design, landscape architecture and sustainable environmental sciences.
- M.E.L.**: MEL Consulting are a multi-disciplinary engineering consultancy based in Melbourne specialising in determining the end effects on buildings, structures and the environment.
- ADP**: ADP Consulting is a multi-discipline engineering consultancy focused and operating in Australia providing building services and engineering, sustainability, electrical, audio visual, security, ventilation, fire and specialist lighting design.

Contact Us
Have questions or want contact us below:
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ambr@396mab.com

Contact Us
Have questions or want to know more about this project?
 396MAB is online:
www.396mab.com
www.facebook.com/396mab
www.instagram.com/396mab

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The HIVE

Appendix E – Consultation Photo



Appendix F – Docklands News Advertisement



MAB Corporation
is proud to introduce
its vision for
396 Docklands Drive

We welcome all local residents, business owners, retailers and stakeholders to view the proposed plans and provide feedback

Community drop-in sessions will be held on:

- // **Thursday 17 March**
5:30pm – 7:30pm
- // **Friday 18 March**
11am – 1pm
- // **NewQuay Display Suite**
2 Genti Place, Docklands


To register for the session, obtain further information or engage online, go to www.396engage.com.au

MAB

Appendix G – Social Media Post

NewQuay Melbourne
Published by Sprout Social · March 23 · 🌐

There is still time to have your say. We invite local residents, business owners, retailers and stakeholders to provide feedback on our vision for the remaining parcel (396 Docklands Drive) within the NewQuay East Development plan. Visit 396engage.com.au by Friday 1st April




396ENGAGE.COM.AU
Engage 396 Docklands
Engage 396

146 People reached 8 Engagements – Distribution score **Boost a post**

👍 Like 💬 Comment ➦ Share

NewQuay Melbourne
Published by Sprout Social · March 16 · 🌐

We are pleased to introduce our vision for the remaining parcel (396 Docklands Drive) within the original NewQuay East Development Plan. We welcome all local residents, business owners, retailers and stakeholders to view the proposed plans and provide feedback to the project team via the dedicated online engagement platform. There will also be two drop-in sessions, this Thursday and Friday. For more details and to register for the drop-in sessions go to <https://www.396engage.com.au/>



362 People reached 50 Engagements – Distribution score **Boost post**

👍 4 9 Comments

Appendix H – Collated responses

Report Date Range:

5 Mar 2022 - 4 Apr 2022

Date Exported:

5 Apr 2022 10:46 am

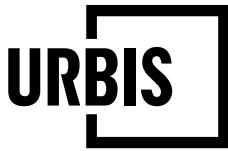
Exported By:

tbradleyow

Which elements of the proposed Development Plan appeal to you most?	What key design elements or features would you like to see incorporated into the new community park?	Do you have any other suggestions for incorporating in this Development Plan?
The green pedestrian link through the site and the park are appealing characteristics.	We would like to see the learnings from the proposed "New Quay Neighbourhood Square" incorporated into the new community park. This might include passive recreation pursuits such as bocce and outdoor chess, BBQ facilities, shade and the opportunity to gather around community interests.	Given that the Docklands infrastructure plan commissioned by City of Melbourne and Development Victoria has identified the need for several more community facilities in Docklands, we believe that 396 has the potential to house one of these, to the benefit of new residents and others living in the New Quay facility. It would be a great improvement and a vital selling point through the next stages of approval and development to include a permanent facility for the Docklands Neighbourhood House within the proposal. Ideally this would be a ground floor facility adjacent to the park. Very happy to talk more about this, but as we understand this engagement process may be finishing soon, we wanted to make sure this opportunity wasn't lost. Ariel Valent; arielv@centre.org.au; 0414 367 300
The park, greenlane, cafes, indented parking, trees	Benches, kids climbing frames/slides	Some undercover areas to protect from rain/sun
The green space and the inclusion of a community garden. There are benefits for health, mental well being, community and opportunities for the school. If anything as much space as possible should be given to this.	Ask the children who attend the primary school and incorporate their ideas.	It's important to be clear about who will run the community garden so that the same problem doesn't happen again. The local Neighbourhood house and the school could be a starting point.
It is a shame that this land becomes a residential purpose for the high-rise building, which increases the shading to the main street, Docklands Drive.	The community park should be bigger and larger, able for public access which is similar to the lawn area in front of Banksia and the carpark underneath.	To bring more vibe to Docklands, more art, leisure, educational, design market facilities should be introduced and contributed to the local community and attraction for tourists or people from other suburbs. No more apartments or hotel is needed for the local community, especially that piece of land could be a community center to the northern part of Docklands, it should be treated as a town hall/ community center instead of another apartment building.
No elements appeal to me. Why did I not get a letter telling me about the meeting on the 18th march? Very sneaky of you. You will be hearing from my lawyer. You obviously Don really want to engage with the community because you know your plans are not going to be well liked. They are not in keeping with the current aesthetic. They are too dense. They overshadow the school. You have put no thought into this at all other than trying to put my money in your own pocket. If you lived here would you like it?	Why aren't you asking about the entire development? Why just the park? What park? The tiny piece of grass? Trying to spin it and pretend it is a park is ridiculous. Do you even have a conscience? Or are you just happy to lie?	Get a better planner and designer at your business? Think of it as if you lived there. Have some empathy. If you are incapable of empathy, fire yourself and hire someone with a conscience.
Wow what an ugly proposal. Nothing appeals to me. I'd rather have the ugly carpark.	Why isn't the whole site a community park?	Massive reduction of the height of buildings. Massive reduction in the number of the buildings (preferably to 0)
The park	make it bigger. The park could take up the entire development and be an amazing space. A carpark could be developed underneath for revenue earning. Cafes surrounding it. See https://www.prahansquare.com.au/Home for an excellent example. Do you even care about this community? We don't need another 6 high rises in that tiny space. Where did you people get your degrees in town planning? A cereal box?	It's gross. Build a park.
None	With half the buildings here already un-occupied why would you build 50-70m tall building in that spot? It makes no sense. Docklands is already gaining a reputation of being sole-less. Why not make this area a nice park like they did in Prahans when they redeveloped that car park? Carpark on the bottom, nice park on the top.	Don't do it.
green lane	trees.	quiet
Height	Children activities, parks, nature.	Height and density not suitable for area
Renovation of the existing car park is critical given the noise.	Larger green spaces for sports	As a resident, the proposed building sites will remove the views from a number of new and existing developments which will impact their value, aspect and vista. There will be a significant proportion of residents that object to buildings of such significant height

<p>The community park (more green space is welcomed however the bulk of this development master plan looks an over development of the lot. The buildings fronting Docklands Drive do not have any set back / podiums as do other buildings in the area. The corner of Docklands Dr and Waterfront Way is of particular concern as the building proposed is hard up on the boundary. The high of the buildings are of concern as the highest level 70 meter building is at the front of the development and the lowest at the rear. This should have a step up / set back to the building adjacent (Marriot building) as this has the highest level at the rear. There will be significant over shadowing in the morning of the Marriot building.</p>	<p>Greenery and canopy planting with seating areas. Page 97 of 249</p>	<p>The overall development seems over developed and bulky looking on main road (Docklands Drive) Refer above comments also. The laneway should be directed / started at the corner of Docklands Dr and Waterfront Way with an area opened with greenery also to "feed" through to the laneway directing walking traffic into the complex to the rear community park.</p>
<p>At ground level a good ratio of green space to buildings</p>	<p>Seating, shade trees, interesting plants</p>	<p>No</p>
<p>Street frontages in the images looks New York style - this is attractive. Brick work and high windows is great.</p>	<p>It's too small, what a joke. Is this a token gesture to appease the locals or an actual commitment to public realm for our great city?</p>	<p>Make Waterfront Way a high street and put the commercial lobbies and cafes along it to align with all the other retail and commercial of District Docklands and Market Lane.</p>
<p>Making better use of that space. A car park is unsightly and not great for locals to enjoy. The activation and transformation will create an asset for the area.</p>	<p>Large open spaces. Let's be honest, the park is 1/12 of the entire block, it's tiny. It's more like a large garden bed than a community park. Include greenery and decent seating to enjoy the greenery.</p>	<p>No above ground level parking - put parking underground as walking past a building full of cars and devoid of life in levels 1 and above is unsettling. The Community Park feels like it's in the wrong corner of the site - it's opposite the Woolworths carpark entrance ramp where it's located on the Draft Masterplan. It would be better in the opposite corner facing the Marriot main entrance and Docklands Drive. The park and cafe would connect well with the Marriot entrance and tram line on Docklands Drive, than be hidden facing towards the Woolworths carpark.</p>
<p>The green spaces and pedestrian walk through will be amazing. This area currently a car park, attracts rubbish and fast driving hoons. I'm sure the five star Marriott will be excited too. I would like to see local traffic only and there's a potential to waterfront way extended a mall only allowing Marriott guests pick up and drop off and the Marriott residents.</p>	<p>Seating and lighting along with beautiful trees.</p>	<p>Palm trees to give a holiday feel.</p>
<p>more parks</p>	<p>ANYTHING. Just put in more green space!</p>	<p>MORE GREEN SPACE</p>
<p>Provide ample car park not less but should be more than existing number of car park spaces for public. If lack of space for visitor and public car park lots on ground level, then build the residents' car parking lots at upper levels via a car park lift. May cost more to provide such lifts, it will attract instead of distract more visitors to the area. Docklands has long been well known for lack of car park esp at street level. Also plenty of winds tunnels make it a cold place to be in, worst than in Port Melb's cold! At least Port Melb has the sandy beach to offer during fine weather. Apart from Costco and the Cable Wheels, nothing much to attract people to visit Docklands. Maybe a world class University or Hospital will upgrade the place. instead of building more residential apartment in the already crowded area!</p>	<p>A good size multi purpose community building at the community park with ample parking. City is already too congested to have a purpose built building for table tennis, badminton, basket ball and ball room hall. Docklands still has the required land space for that purpose. Not just built and built and built high rise apartment for more residents without facilities for activities!</p>	<p>As mentioned above, Docklands has little activities to offer residents. Docklands cannot compare with Melb. City for having multiple high rise buildings simply because Melb. has many existing specialty and icon buildings, theaters, colleges and universities to offer the residents. Let's not just follow Melb. city in building more residential apartments. Time to plan facilities of various activities that can offer the residents.</p>
<p>Very hard to say because your draft master plan does not show any elevations, so it is not possible to determine how the precinct will look.</p>	<p>Sunshine. As opposed to the overshadowing of the promenade/boardwalk in front of the entire length of New Quay, it would be good if MAB actually planned the new precinct in such a way that at least some sunshine enters the community park - especially during the cooler months.</p> <p>For years, the main criticism from our friends, neighbours and visitors is the lack of sun on the south side of New Quay. People just prefer to visit Yarra's Edge and Bourke/Collins Street because they can see and feel some sunshine. And the retailers too suffer and miss out on trade during the cooler months.</p> <p>Monument Park is in the shade for the majority of the year.</p> <p>Shame on you MAB. We hope you build this precinct in a more "user friendly" and less greedy way.</p>	<p>Sunshine. More sunshine.</p>
<p>Community Park, there are a lot of kids and dogs owner in Docklands, I think it would be great to have a bigger community park.</p>	<p>Lots of trees and please make the park bigger.</p>	<p>I really hope we can have a medical centre on this side of Docklands, it's bizzare there are so many residents and not a single medical centre here unless we go to Victoria Harbour, MC Medical Dr Wee, the closest one to us recently stop trading in person, he only does Telehealth now. So hopefully with this new development plan, we can get a medical centre.</p>
<p>Green space</p>	<p>Key design element is that the park is large and takes up the majority of the free space. Docklands is currently overrun with highrise apartments, and building even more will be a missed opportunity</p>	<p>The residential and commercial buildings if built should be low rise - only a few stories high</p>
<p>Terrible use of land in the city if I'm honest, we need open spaces not a small park, it can still be commercially viable if you go up higher and make a large park across from the school.</p>	<p>This isn't a park, just like monument/ central park are not either. they are basically small patches of grass a developer like to call a parks, These patches of grass serve one purpose, dogs pooing and peeing everywhere. ask anyone would you sit at those parks no.</p>	<p>It doesn't feel like its best use of the land IMO. I would scrap the townhouses completely. Place a much larger park that isn't like a concrete dog poop park like monument and central parks. Twin towers developed and go higher to make the large park commercially viable. Design the tower separation in a way that offers maximum sunlight within the park. Towers on waterfront way, Park on the other 1/2 on little docklands drive. Low rise housing is an absolute waste of space, shop or cafe are not required. there is a entire mall full of empty shops.</p>

Where are the Development Plans? All I can see if a very basic draft 'master' plan.	Close St Mangos Lane between Anchor Lane and Little Docklands - Primary and extend the park out across this street space in front of the school.	Protect the school community from more dangerous traffic by moving the car/truck entryway and footpath crossover off Mangos Lane - move this entryway to Docklands Drive.
The green space	Off leash area and play equipment or gym equipment	Keep it green and welcoming with adequate lighting
Community park	No cement features. Docklands has enough of it.	A basketball court to bring a sense of community.
SUBMISSIONS Via Email		
Email From G Davies		
Email From Marriott Residents		
Email From Pavel Lesev		
Email From Ashe Morgan		
Email From Docklands Primary School		
Email From Marriott Hotel		



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URBIS.COM.AU
Urbis Pty Ltd
ABN 50 105 256 228

01 April 2022

David Allt-Graham
MAB Corporation
dalltgraham@mab.com.au

Dear David,

SUBMISSION TO DEVELOPMENT PLAN - NEW QUAY EAST 396-416 DOCKLANDS DRIVE

1. Introduction

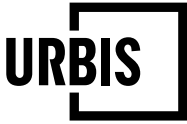
Thank you for the opportunity to review and provide comment on the proposed amendments to the New Quay East Development Plan at 396-416 Docklands Drive.

Urbis act for Ashe Morgan, the owners of the land within the Waterfront City East Development Plan (WFCEDP). This land is located to the site's immediate north and 'The District' forms part of the Docklands primary retail activity centre. Ashe Morgan is invested in the delivery of a high-quality built environment and provides overarching support for the development and intensification of Docklands, including MAB's site which will have a direct relationship with WFCEDP. As you're aware, the amended WFCEDP is currently awaiting approval.

Ashe Morgan recognises the Docklands' key role in facilitating the delivery of a liveable and functional extension of Melbourne's expanding CBD, but also creating an individual sense of identity. The considered development of the area is integral to this future success.

Design principles developed through strategic studies and translated into Clause 22.18 Urban Design within the Docklands Zone, provide guidance for good planning and development outcomes within the Docklands. Relevant principles informing our review and comments on the amended New Quay East Development Plan include:

- *For Docklands to become a new and vital urban redevelopment and activity hub*
- *Encourage diversity and complementary design between buildings and public spaces*
- *Creating a destination with a unique character and sense of place*
- *Ground level uses which create active streets*
- *That development is site responsive and complements adjoining development*
- *That proposed open spaces form a linked sequence of enlivening experiences*



- *Provide quality space that is attractive and usable, promotes public life and encourages visitors to stay in the area*

2. Considerations of the amended New Quay East Development Plan

Support is provided by Ashe Morgan for the general principles employed in the amended development plan, including:

- The density and height being appropriate in the area and rightly reflecting the strategic intent and importance of the location.
- Delivering a mixed-use precinct incorporating residential and commercial uses which will activate the streets.
- The inclusion of a new public open space and through site pedestrian-only link to enhance amenity and maximise connectivity.
- Providing sufficient opportunity for landscaping to enhance the amenity of the public realm.
- Built form which contributes to a positive public realm experience and the overall character of the precinct.

On review of the amended plan, Ashe Morgan considers there is opportunity to further optimise the layout and design solutions for the site and broader precinct, particularly relating to:

- Location of the Community Park
- Orientation of the Green Lane

These two elements are discussed below.

3. Position of Community Park

The community park is proposed at the north-east corner of the site. We consider positioning this on the north-west corner would deliver an improved outcome with greater benefits for the following reasons:

- The Docklands retail and activity centre is located to the north of the site on Waterfront Way and improved synergies would assist generate a higher level of activation centred in this location.
- A new office development is being built on the north-west corner of Waterfront Way and Studio Lane, adding to the activation and population of this precinct.
- Opportunities exist to improve connectivity and permeability through the area to integrate with the shopping centre, where existing and future activity is focused.
- The open space can be viewed as an extension of the retail centre and be easily utilised by customers.
- It would provide a visual connection to the activity centre and form a key element of the pedestrian route between the waterfront and retail centre.
- The proposed activated frontage of the site and landscaped green spine along Little Docklands Drive would remain and provide good connections to the Docklands school, the public plaza proposed within WFCED, and Footscray Road.



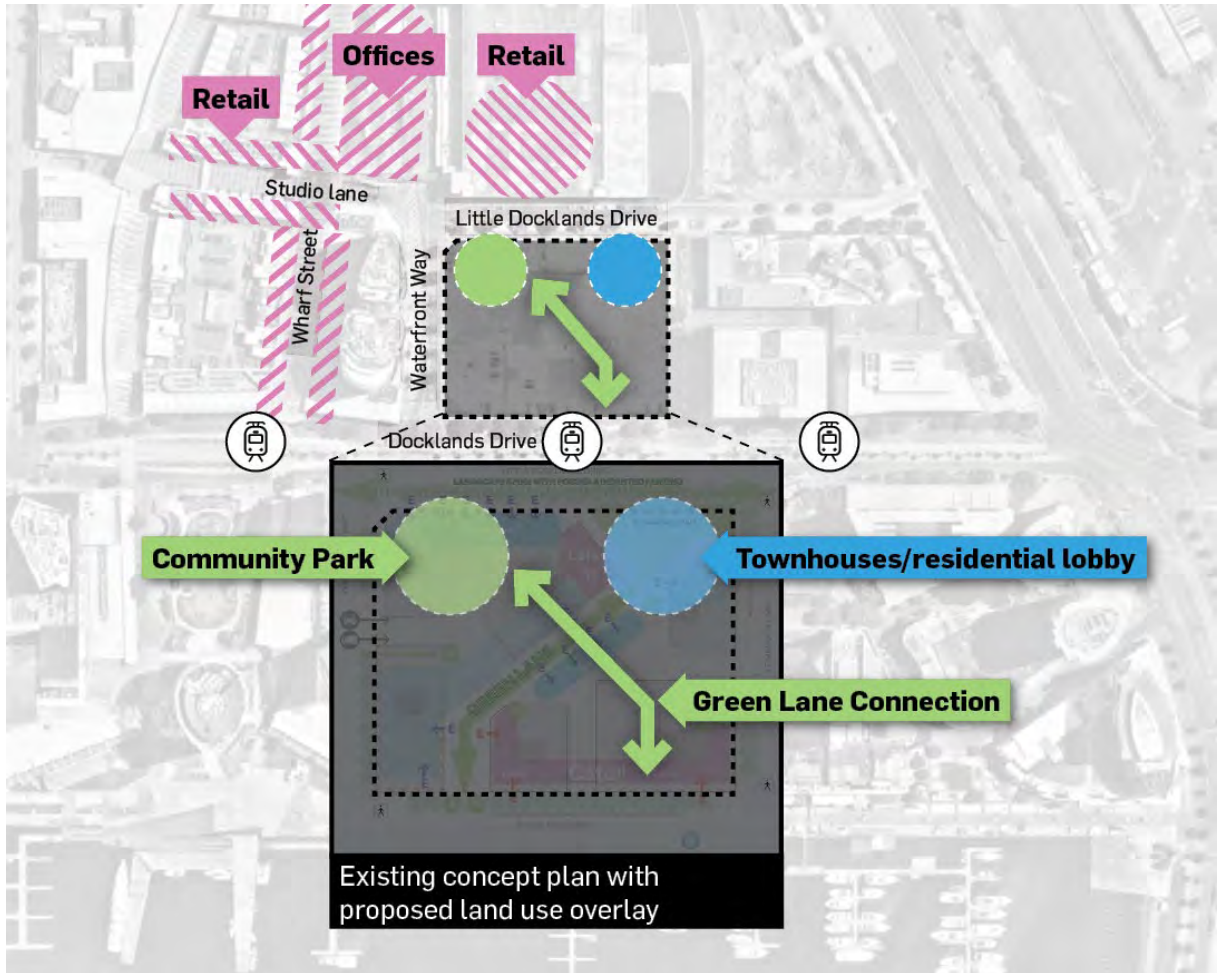
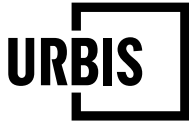
- The Community Park will remain in a north facing orientation and would be relocated predominantly opposite a lower scale building (Building 3 within the WFCEDP proposed at 40m).
- The Community Park will be subject to reduced overshadowing when compared with the proposed location on the spring equinox at 22nd September, the test criteria for the Docklands Zone.
- We also note that the resolution of certain building forms within the amended WFCEDP have been derived though winter solstice shadow criteria imposed during the assessment process. The Development Plan has been required to meet this test when assessing shadow to the open space of the primary school despite the controls within the precinct and the built form permit triggers for height within DDO54-A4. It is our view that the placement of the park should not lead to unreasonable future constraints based on shadow requirements for the WFCEDP.

4. Orientation of Green Lane

The diagonally oriented Green Lane encourages pedestrian permeability and public access through the large site, and this is endorsed. With the suggested re-positioning of the Community Park, we also recommend the reorientation of the Green Lane run to the north-west corner of the site from a point on Docklands Drive. The benefits of this being:

- The culmination of the lane at the Community Park, proximate to the northern commercial centre and activity focus on Waterfront Way.
- Improved integration of the site to the north, providing better permeability, and affording pedestrians a more direct path to the retail centre.
- Active frontages and quality pedestrian pathways are maintained along Little Docklands Drive, providing connections with the Docklands School and the proposed plaza to the north-east within the WFCEDP.
- Provision of greater opportunity for activation at ground level on Waterfront Way.
- Efficient pedestrian connections through to Docklands Drive can still be provided, delivering pedestrians from development to the south.
- Maintaining the opportunity to be internally activated with the proposed uses.

The below map prepared demonstrates the suggested alterations discussed above.



5. Conclusion

We considered the above suggested design alterations would deliver an overall improved outcome for Docklands, and particularly for the integration of the site with The District and wider retail centre to its north. We would be pleased to discuss any of the above content further and look forward to ongoing discussions around the progression of the amended New Quay East Development Plan.

Kind regards,

Adelaide Smith
Associate Director
+61 3 8663 4825
asmith@urbis.com.au

Appendix 2

Wind Report



**22 CLEELAND ROAD
SOUTH OAKLEIGH VIC 3167
AUSTRALIA**

(ACN 004 230 013)

Ref: 09-21-DE-EWC-02

28th June 2023

MAB Corporation Pty Ltd
Level 5, 441 St Kilda Road
Melbourne VIC 3004
Attn: Stefan Miles

Dear Stefan,

**396-400 Docklands Drive, Docklands
Environmental Wind Considerations**

The masterplan design of the proposed development at 396-400 Docklands Drive, Docklands, was wind tunnel studied to assess the pedestrian level wind impacts and reported in MEL Consultants Report 09-21-WT-ENV-01 dated 3rd May, 2021. The wind tunnel model did not include the future developments on The District East site, except for the buildings under construction along Waterfront Way.

The masterplan design has been revised in the ARM drawing package dated 21st June, 2023. The principal changes to the design are as follows:

- Northeast tower (E3) has been deleted
- Revision to increase the park size and improve the shape
- Tower separation is increased
- Tower street wall extend is reduced.

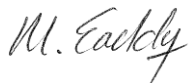
The 3D models of the masterplan tested in May, 2021, and the revised design have been overlaid in Figures 1 to 3 to highlight the differences. The May 2021 design is shown in grey and the revised design shown in red.

Our comments are as follows:

- The massing of W1 and W2 do not appear to be significantly altered and there would be a wind effects trade-off between the tower form and the increased separation.
- Tower W3 has not significantly altered.
- The built form of Towers E1 and E2 has been trade-off and E2 has been rotated 90 degrees. The rotation would be expected to be a positive change from a wind impacts perspective as it will now present a smaller face to the northerly wind directions.
- The deletion of the northeast tower (E3) and the set back of the E2 from the park would be expected to improve the wind conditions in the park compared to the information presented in Report 09-21-WT-ENV-01.
- The wind conditions along Little Docklands Drive, St Mangos Lane, Docklands Drive, and Waterfront Way would be expected to be the similar to those presented in Report 09-21-WT-ENV-01.

In conclusion, based on our review of the revised masterplan detailed in ARM drawings dated 21st June, 2023, the wind conditions would be expected to be similar or better than the wind conditions presented in MEL Consultants Report 09-21-WT-ENV-01. In particular, the revised built form around the northeast park would be expected to have a beneficial effect on the wind conditions in this area.

Yours sincerely,



M. Eaddy

MEL Consultants Pty Ltd

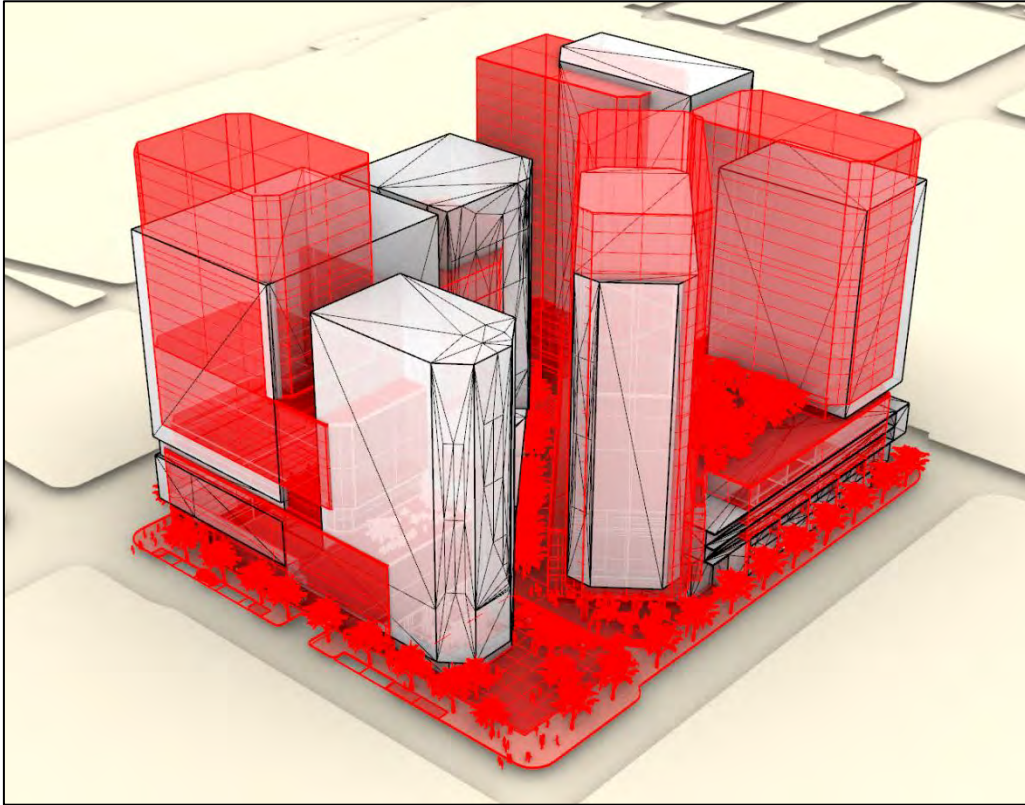


Figure 1: Masterplan Comparison – view from northeast



Figure 2: Masterplan Comparison – overhead view

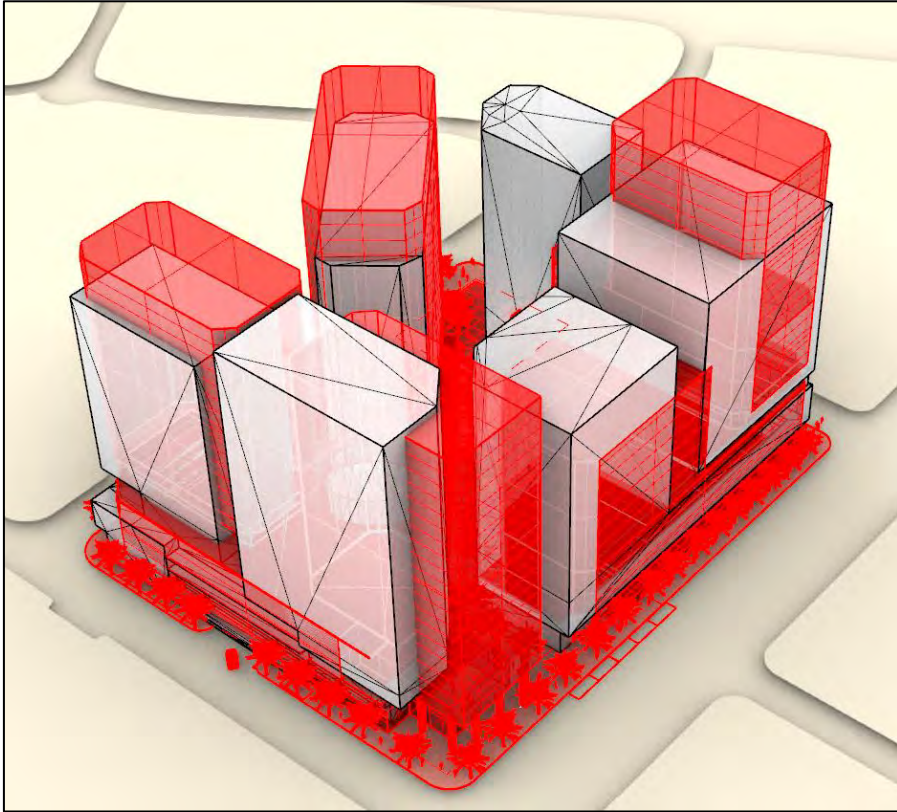


Figure 3: Masterplan Comparison – view from southwest

ENVIRONMENTAL WIND SPEED MEASUREMENTS ON A WIND TUNNEL MODEL OF THE 396-400 DOCKLANDS DRIVE, DOCKLANDS

By
E. Chong & M. Eaddy

SUMMARY

Wind tunnel tests have been conducted on a 1/400 scale model of the proposed masterplan massing of 396-400 Docklands Drive, Docklands. The model of the Development within surrounding buildings was tested in a simulated upstream boundary layer of the natural wind to determine likely environmental wind conditions. These wind conditions have been related to the freestream mean wind speed at a reference height of 300m and compared with criteria developed for the Melbourne region as a function of wind direction.

For the Proposed Configuration, wind conditions for all Test Locations surrounding the development have been shown to pass the walking criterion, with many Test Locations passing the sitting and standing criteria, or equivalent to the Existing Configuration wind conditions.

The wind conditions for the Existing Configuration have been presented for all Test Locations for comparison.

No wind mitigation strategies or modifications to the 396-400 Docklands Drive Development design have been recommended. The wind conditions at all Test Locations for the Proposed Configuration in the surrounding streetscapes of the 396-400 Docklands Drive Development have been shown to satisfy the pedestrian safety criterion.



Report 09-21-WT-ENV-01

May 2021



Report 09-21-WT-ENV-01

**396-400 DOCKLANDS DRIVE, DOCKLANDS
ENVIRONMENTAL WIND TUNNEL MODELLING**

MEL CONSULTANTS REPORT NO: 09-21-WT-ENV-00

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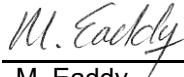

E. Chong
Engineer

Date: 22 March 2021

REVIEWED BY:


M. Eaddy
Managing Director

Date: 3 May 2021

RELEASED BY:


M. Eaddy
Managing Director

Date: 3 May 2021

REVISION HISTORY

Revision No:	Date Issued	Reason/Comment
0	3 May 2021	Masterplan Ver 1
1	3 May 2021	Masterplan Ver 2

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1. INTRODUCTION

The proposed masterplan of the 396-400 Docklands Drive Development will consist of two podiums with two towers each at approximately height from 56m to 76m and create a new laneway (Diagonal Lane in northeast to southwest direction) between the two podiums. The site is bounded by Docklands Drive, Waterfront Way, Little Docklands Drive, and St Mangos Lane.

A wind tunnel model study was commissioned by MAB Corporation Pty Ltd, to undertake measurements of environmental wind conditions in and around the Development, and if necessary, to develop wind amelioration features to achieve conditions satisfying the recommended environmental wind criteria.

These tests were carried out in the MEL Consultants 400kW Boundary Layer Wind Tunnel during April, 2021.

2. ENVIRONMENTAL WIND CRITERIA

The advancement of wind tunnel testing techniques, using large boundary layer flows to simulate the natural wind, has facilitated the prediction of wind speeds likely to be induced around a development. To assess whether the predicted wind conditions are likely to be acceptable or not, some form of criteria are required. The Melbourne Planning Scheme and the Better Apartments Design Standards (BADs) has defined wind comfort criteria for the assessment of the wind conditions in Melbourne. The definition of the criteria is as follows:

Unsafe wind conditions means the hourly maximum 3 second gust which exceeds 20 metres/second from any wind direction considering at least 16 wind directions with the corresponding probability of exceedance percentage.

Comfortable wind conditions means a mean wind speed from all wind directions combined with probability of exceedance less than 20% of the time, equal to or less than:

- 3 metres/second for sitting areas
- 4 metres/second for standing areas
- 5 metres/second for walking areas

Mean wind speed means the maximum of:

- Hourly mean wind speed, or
- Gust equivalent mean wind speed (3 second gust wind speed divided by 1.85)

The above criteria are pass/fail criteria as they only assess the summation of probabilities of exceedance across all wind directions to determine whether a location passes or fails the threshold criterion. There may be cases that the Test Locations pass the all directions combined criterion but still fail the same criterion when applied correctly for a particular wind direction. For completeness, this report will provide data for each Test Location as a function of wind direction in Appendix A.

The Melbourne Planning scheme does not provide any methodology or worked example as how to obtain the 'from all wind directions combined'. Therefore, to obtain the probability

for all wind directions combined we will apply the methodology described in Melbourne (1978) to determine the probability for all wind directions.

The Melbourne Planning Scheme uses the definition of mean wind speed as based on the hourly wind speed so the probabilities will be determined from the hourly wind data for an applicable automatic weather station for the Melbourne City. The probability data used have been corrected for the approach terrain at the location of the automatic weather station and referenced to 10m in Terrain Category 2. This is the standard reference height of AS/NZS1270.2:2011.

2.1 Suggested Pedestrian Comfort Criteria.

For the masterplan of the 396-400 Docklands Drive Development the following wind criteria are suggested for the surrounding streetscapes:

- | | |
|------------------------------|--------------------|
| - Pedestrian transit areas | Walking Criterion |
| - Building/Tenancy entrances | Standing Criterion |

The masterplan design provided envelopes of the proposed towers and podiums and did not provide detailed design information for the locations of entrances and other streetscape activity areas. Therefore, the criteria of interest in this study will be for walking comfort and pedestrian safety.

The activation of the public realm external to the site would depend on the existing wind conditions in the streetscapes that are often beyond the control of the proposed development. For cases where the existing wind conditions in the public realm external to the site are on or above the walking criterion, then the proposed development should not have any adverse wind effects in these areas.

3. MODEL AND EXPERIMENTAL TECHNIQUES

A 1/400 scale model of the masterplan for the 396-400 Docklands Drive Development was constructed from digital 3D model provided by ARM Architecture dated up to the 30 March 2021 and the surrounding buildings included future buildings within the District Docklands Precinct along Waterfront Way. The proposed masterplan models are massing envelopes that have no specific design detail for the individual buildings. Therefore, terraces and balconies measurements were not undertaken during the study.

The scale model of the development and surrounding buildings was tested in a model of the natural wind generated by flow over roughness elements augmented by vorticity generators at the beginning of the wind tunnel working section. The surrounding buildings include all built and under construction buildings in the immediate vicinity. The basic natural wind model was for flow over suburban terrain, the characteristics of which are given in Figure 2. The surrounding wind tunnel model of all significant buildings, out to a minimum radius of 300m, modified the approach wind model for the presence of the surrounding buildings.

The techniques used to investigate the environmental wind conditions and the method of determining the local criteria are given in detail in Reference 2. In these tests measurements in the Development areas are inside separated regions and peak velocity squared ratios were required to make conclusions about likely wind conditions. In summary, measurements were made of the peak gust wind velocity with a hot wire anemometer at various stations and expressed as a squared ratio with the mean wind velocity at a scaled reference height of 300m. This gives the peak velocity squared ratio

$$\left(\hat{V}_{\text{local}} / \bar{V}_{300\text{m}}\right)^2$$

Wind tunnel velocity measurements were made for an equivalent 1 hour period in full scale and filtered to provide an equivalent full scale 3 second gust wind speed. Photographs of the model as tested in the wind tunnel are shown in Figures 3 and 4. The Test Locations around the masterplan is shown in Figure 5.

4. DISCUSSION OF RESULTS

The wind tunnel model study of the environmental wind conditions around the masterplan for the 396-400 Docklands Drive Development has been undertaken for two configurations as follows:

- Existing Configuration
- Proposed Configuration

The Proposed Configuration of the masterplan for the 396-400 Docklands Drive Development, Docklands was defined by ARM Architecture dated up to the 30 March 2021 and the future surrounding buildings in the District Docklands Precinct.

The Existing Configuration is defined as the on-grade car park at 396-400 Docklands Drive and the future surrounding buildings noted above.

Velocity measurements were made at various locations around the development for different wind directions at 22.5° intervals. As discussed in Section 2, the Melbourne Planning Scheme wind comfort criteria are pass/fail criteria based on an assessment of the summation of probabilities for all wind directions combined. Therefore, to assess the wind conditions the exceedances will be presented in tabular form in Tables 1 – 9. For completeness these data are also provided in Appendix A as a function of wind direction and compared with the pedestrian criteria based on gust wind speeds.

The following sections detail the results for the various areas tested for the various areas tested.

4.1 Summary of discussion

To assist with the assessment of the wind conditions, summaries of the wind criteria satisfied at each test location at ground level in the public realm for the Existing and Proposed Configurations have been provided in Figures 6a and 6b, respectively. Different colours have been used to represent the wind criteria satisfied at each test location.

4.2 Docklands Drive

The wind conditions for the Proposed Configuration along Docklands Drive (Test Locations A1 to A19 and A49) have been shown to pass the walking criterion. These criteria achieved for both Existing and Proposed Configurations have been presented in Table 1.

The wind conditions are a function of wind direction based on the gust criteria for Melbourne as presented in Appendix A. It is noted that at each Test Location the directional specific wind conditions may be lower or higher than those of the tabulated results for all wind directions.

Table 1: Pedestrian Wind Comfort and Safety – Docklands Drive

Test Location	Configuration	Wind Comfort Criteria			Safety
		Sitting	Standing	Walking	
A1	Existing	19%	9%	3%	Pass
	Proposed	9%	2%	1%	Pass
A2	Existing	18%	7%	3%	Pass
	Proposed	12%	4%	1%	Pass
A3	Existing	45%	30%	18%	Pass
	Proposed	35%	21%	12%	Pass
A4	Existing	46%	30%	19%	Pass
	Proposed	30%	15%	7%	Pass
A5	Existing				
	Proposed	25%	11%	4%	Pass
A6	Existing	28%	15%	8%	Pass
	Proposed	9%	3%	1%	Pass
A7	Existing	26%	15%	8%	Pass
	Proposed	21%	9%	4%	Pass
A8	Existing	37%	23%	14%	Pass
	Proposed	21%	10%	4%	Pass
A9	Existing	24%	11%	4%	Pass
	Proposed	30%	17%	9%	Pass
A10	Existing	43%	28%	17%	Pass
	Proposed	26%	12%	5%	Pass

Table 1-continued: Pedestrian Wind Comfort and Safety – Docklands Drive

Test Location	Configuration	Wind Comfort Criteria			Safety
		Sitting	Standing	Walking	
A11	Existing	34%	19%	11%	Pass
	Proposed	30%	15%	7%	Pass
A12	Existing	41%	28%	19%	Pass
	Proposed	33%	18%	9%	Pass
A13	Existing	20%	12%	6%	Pass
	Proposed	22%	13%	7%	Pass
A14	Existing	28%	15%	8%	Pass
	Proposed	26%	16%	10%	Pass
A15	Existing	24%	12%	6%	Pass
	Proposed	32%	19%	12%	Pass
A16	Existing	31%	17%	9%	Pass
	Proposed	25%	17%	11%	Pass
A17	Existing	35%	20%	12%	Pass
	Proposed	22%	11%	6%	Pass
A18	Existing	33%	18%	9%	Pass
	Proposed	37%	23%	13%	Pass
A19	Existing	28%	16%	7%	Pass
	Proposed	30%	20%	13%	Pass
A49	Existing	35%	21%	13%	Pass
	Proposed	32%	19%	11%	Pass

4.3 Waterfront Way

The wind conditions for the Proposed Configuration along Waterfront Way (Test Locations A20 to A28) have been shown to pass the walking criterion with many Test Locations passing the standing criterion. These criteria achieved for both Existing and Proposed Configurations have been presented in Table 2.

The wind conditions are a function of wind direction based on the gust criteria for Melbourne as presented in Appendix A. It is noted that at each Test Location the directional specific wind conditions may be lower or higher than those of the tabulated results for all wind directions.

Table 2: Pedestrian Wind Comfort and Safety – Waterfront Way

Test Location	Configuration	Wind Comfort Criteria			Safety
		Sitting	Standing	Walking	
A20	Existing	29%	17%	9%	Pass
	Proposed	32%	21%	13%	Pass
A21	Existing	29%	15%	9%	Pass
	Proposed	38%	24%	15%	Pass
A22	Existing	21%	10%	5%	Pass
	Proposed	21%	11%	5%	Pass
A23	Existing	25%	13%	6%	Pass
	Proposed	29%	18%	11%	Pass
A24	Existing	15%	5%	2%	Pass
	Proposed	26%	12%	5%	Pass
A25	Existing	21%	9%	3%	Pass
	Proposed	17%	6%	2%	Pass
A26	Existing	35%	21%	13%	Pass
	Proposed	31%	19%	11%	Pass
A27	Existing	34%	20%	11%	Pass
	Proposed	30%	17%	9%	Pass
A28	Existing	32%	18%	10%	Pass
	Proposed	27%	13%	6%	Pass

4.4 Diagonal Lane

The wind conditions for the Proposed Configuration along Diagonal Lane (Test Locations A29 to A36) have been shown to pass the walking criterion. These criteria achieved for the Proposed Configurations have been presented in Table 3.

The wind conditions are a function of wind direction based on the gust criteria for Melbourne as presented in Appendix A. It is noted that at each Test Location the directional specific wind conditions may be lower or higher than those of the tabulated results for all wind directions.

Table 3: Pedestrian Wind Comfort and Safety – Diagonal Lane

Test Location	Configuration	Wind Comfort Criteria			Safety
		Sitting	Standing	Walking	
A29	Proposed	36%	20%	10%	Pass
A30	Proposed	40%	25%	15%	Pass
A31	Proposed	40%	26%	16%	Pass
A32	Proposed	21%	12%	7%	Pass
A33	Proposed	18%	12%	7%	Pass
A34	Proposed	21%	13%	8%	Pass
A35	Proposed	20%	13%	9%	Pass
A36	Proposed	19%	11%	7%	Pass

4.5 Little Docklands Drive

The wind conditions for the Proposed Configuration along Little Docklands Drive (Test Locations A37 to A44) have been shown to pass the walking criterion. These criteria achieved for both Existing and Proposed Configurations have been presented in Table 4.

The wind conditions are a function of wind direction based on the gust criteria for Melbourne as presented in Appendix A. It is noted that at each Test Location the directional specific wind conditions may be lower or higher than those of the tabulated results for all wind directions.

Table 4: Pedestrian Wind Comfort and Safety – Little Docklands Drive

Test Location	Configuration	Wind Comfort Criteria			Safety
		Sitting	Standing	Walking	
A37	Existing	10%	3%	1%	Pass
	Proposed	21%	10%	4%	Pass
A38	Existing	40%	25%	14%	Pass
	Proposed	20%	11%	5%	Pass
A39	Existing	40%	25%	14%	Pass
	Proposed	26%	14%	7%	Pass
A40	Existing	19%	9%	4%	Pass
	Proposed	26%	13%	7%	Pass
A41	Existing	30%	16%	8%	Pass
	Proposed	26%	13%	6%	Pass
A42	Existing				
	Proposed	28%	15%	8%	Pass
A43	Existing				
	Proposed	19%	11%	6%	Pass
A44	Existing	25%	11%	5%	Pass
	Proposed	20%	8%	3%	Pass

4.6 Docklands Primary School

The wind conditions for the Proposed Configuration around the Docklands Primary School (Test Locations A45, A46 and AP1) have been shown to pass the sitting criterion. These criteria achieved for both Existing and Proposed Configurations have been presented in Table 5.

The wind conditions are a function of wind direction based on the gust criteria for Melbourne as presented in Appendix A. It is noted that at each Test Location the directional specific wind conditions may be lower or higher than those of the tabulated results for all wind directions.

Table 5: Pedestrian Wind Comfort and Safety – Primary School

Test Location	Configuration	Wind Comfort Criteria			Safety
		Sitting	Standing	Walking	
A45	Existing	6%	1%	0%	Pass
	Proposed	17%	8%	3%	Pass
A46	Existing	5%	1%	0%	Pass
	Proposed	6%	2%	0%	Pass
AP1	Existing	13%	5%	2%	Pass
	Proposed	9%	4%	1%	Pass

4.7 The District Development Site

The wind conditions for the Proposed Configuration around the The District Development site (Test Location A47) have been shown to pass the sitting criterion. These criteria achieved for both Existing and Proposed Configurations have been presented in Table 6.

The wind conditions are a function of wind direction based on the gust criteria for Melbourne as presented in Appendix A. It is noted that at each Test Location the directional specific wind conditions may be lower or higher than those of the tabulated results for all wind directions.

Table 6: Pedestrian Wind Comfort and Safety – Empty Site

Test Location	Configuration	Wind Comfort Criteria			Safety
		Sitting	Standing	Walking	
A47	Existing	21%	10%	4%	Pass
	Proposed	16%	9%	5%	Pass

4.8 St Mangos Lane

The wind conditions for the Proposed Configuration along St Mangos Lane (Test Locations A48 and A50 to A52) have been shown to pass the walking criterion. These criteria achieved for both Existing and Proposed Configurations have been presented in Table 7.

The wind conditions are a function of wind direction based on the gust criteria for Melbourne as presented in Appendix A. It is noted that at each Test Location the directional

specific wind conditions may be lower or higher than those of the tabulated results for all wind directions.

Table 7: Pedestrian Wind Comfort and Safety – St Mangos Lane

Test Location	Configuration	Wind Comfort Criteria			Safety
		Sitting	Standing	Walking	
A48	Existing	31%	20%	12%	Pass
	Proposed	26%	17%	11%	Pass
A50	Existing	28%	16%	9%	Pass
	Proposed	23%	12%	6%	Pass
A51	Existing	32%	21%	13%	Pass
	Proposed	23%	12%	6%	Pass
A52	Existing	21%	11%	6%	Pass
	Proposed	27%	15%	9%	Pass

4.9 Anchor Lane

The wind conditions for the Proposed Configuration along Anchor Lane (Test Location A53) have been shown to pass the sitting criterion. These criteria achieved for both Existing and Proposed Configurations have been presented in Table 8.

The wind conditions are a function of wind direction based on the gust criteria for Melbourne as presented in Appendix A. It is noted that at each Test Location the directional specific wind conditions may be lower or higher than those of the tabulated results for all wind directions.

Table 8: Pedestrian Wind Comfort and Safety – Anchor Lane

Test Location	Configuration	Wind Comfort Criteria			Safety
		Sitting	Standing	Walking	
A53	Existing	25%	14%	7%	Pass
	Proposed	15%	8%	4%	Pass

4.10 Doepel Way and Rakaia Way

The wind conditions for the Proposed Configuration along Doepel Way (Test Location A54) have been shown to pass the walking criterion and along Rakaia Way (Test Location A55) have been shown to pass the sitting criterion. These criteria achieved for both Existing and Proposed Configurations have been presented in Table 9.

The wind conditions are a function of wind direction based on the gust criteria for Melbourne as presented in Appendix A. It is noted that at each Test Location the directional specific wind conditions may be lower or higher than those of the tabulated results for all wind directions.

Table 9: Pedestrian Wind Comfort and Safety – Doepel Way and Rakaia Way

Test Location	Configuration	Wind Comfort Criteria			Safety
		Sitting	Standing	Walking	
A54	Existing	42%	27%	15%	Pass
	Proposed	38%	23%	12%	Pass
A55	Existing	24%	15%	9%	Pass
	Proposed	18%	10%	5%	Pass

5. CONCLUSIONS

Wind tunnel tests have been conducted on a 1/400 scale model of the masterplan for the 396-400 Docklands Drive Development, Docklands. The model of the Development within surrounding buildings was tested in a simulated upstream boundary layer of the natural wind to determine likely environmental wind conditions. These wind conditions have been related to the freestream mean wind speed at a reference height of 300m and compared with criteria developed for the Melbourne region as a function of wind direction.

For the Proposed Configuration, wind conditions for all Test Locations surrounding the development have been shown to pass the walking criterion, with many Test Locations passing the sitting and standing criteria, or equivalent to the Existing Configuration wind conditions. The wind conditions at all Test Locations for the Proposed Configuration in the surrounding streetscapes of the masterplan for the 396-400 Docklands Drive Development have been shown to satisfy the pedestrian safety criterion.

The wind conditions for the Existing Configuration have been presented for all Test Locations for comparison.

No wind mitigation strategies or modifications to the 396-400 Docklands Drive Development design have been recommended.

M. Eaddy



M. Eaddy

REFERENCES

1. W. H. Melbourne, Criteria for environmental wind conditions, Journal of Industrial Aerodynamics, Volume 3, 1978, pp. 241-249
2. W. H. Melbourne, Wind environment studies in Australia, Journal of Industrial Aerodynamics, Volume 3, 1978, pp. 201-214

FIGURES

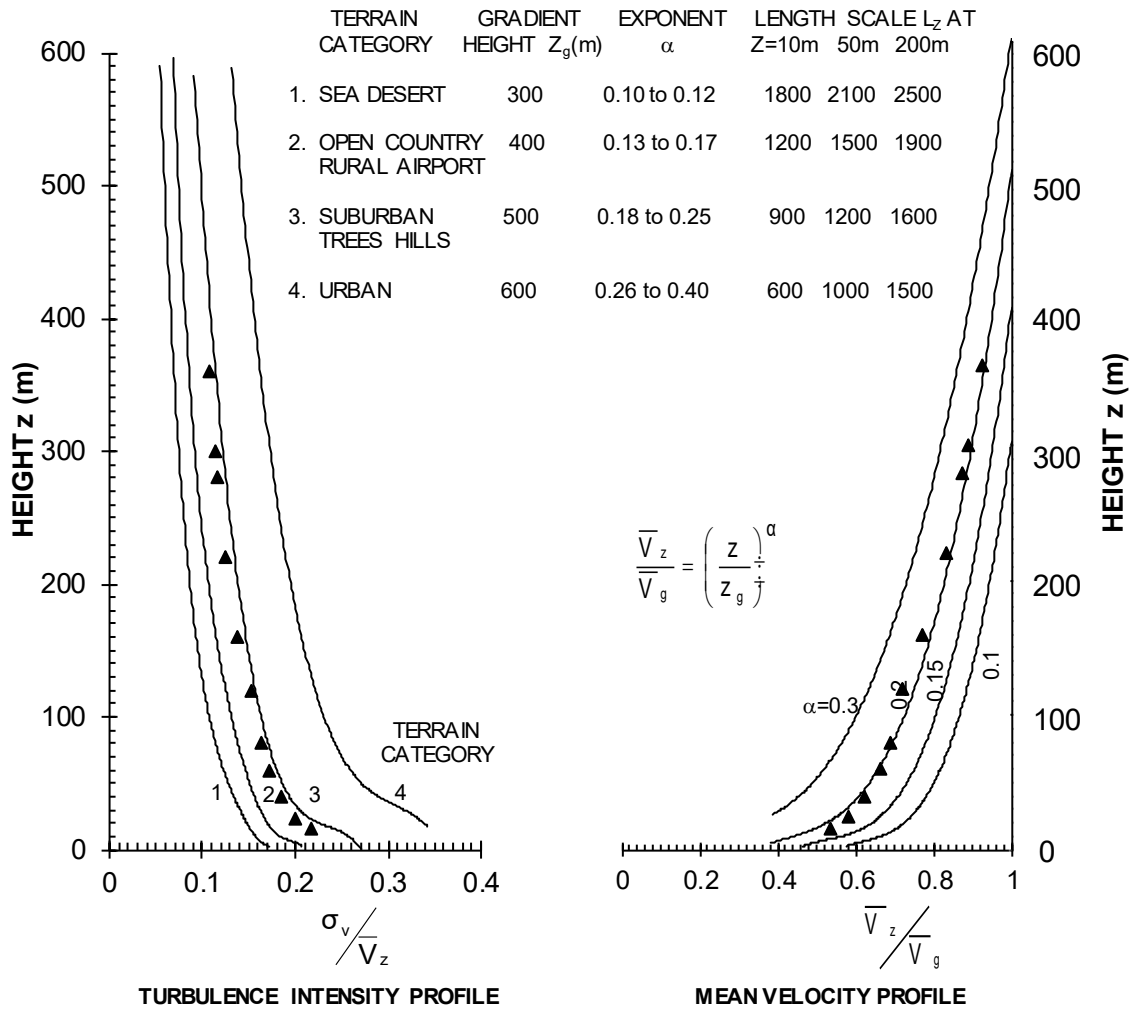


Figure 2 – 1/400 scale TC3 boundary layer turbulence intensity and mean velocity profiles in the MEL Consultants Boundary Layer Wind Tunnel 4.8m x 2.2m working section, scaled to full scale dimensions.



Figure 3 – View from the north of the 1/400 scale model of the 396-400 Docklands Drive, Docklands in the wind tunnel.



Figure 4 – View from the northwest of the 1/400 scale model of the 396-400 Docklands Drive, Docklands in the wind tunnel.

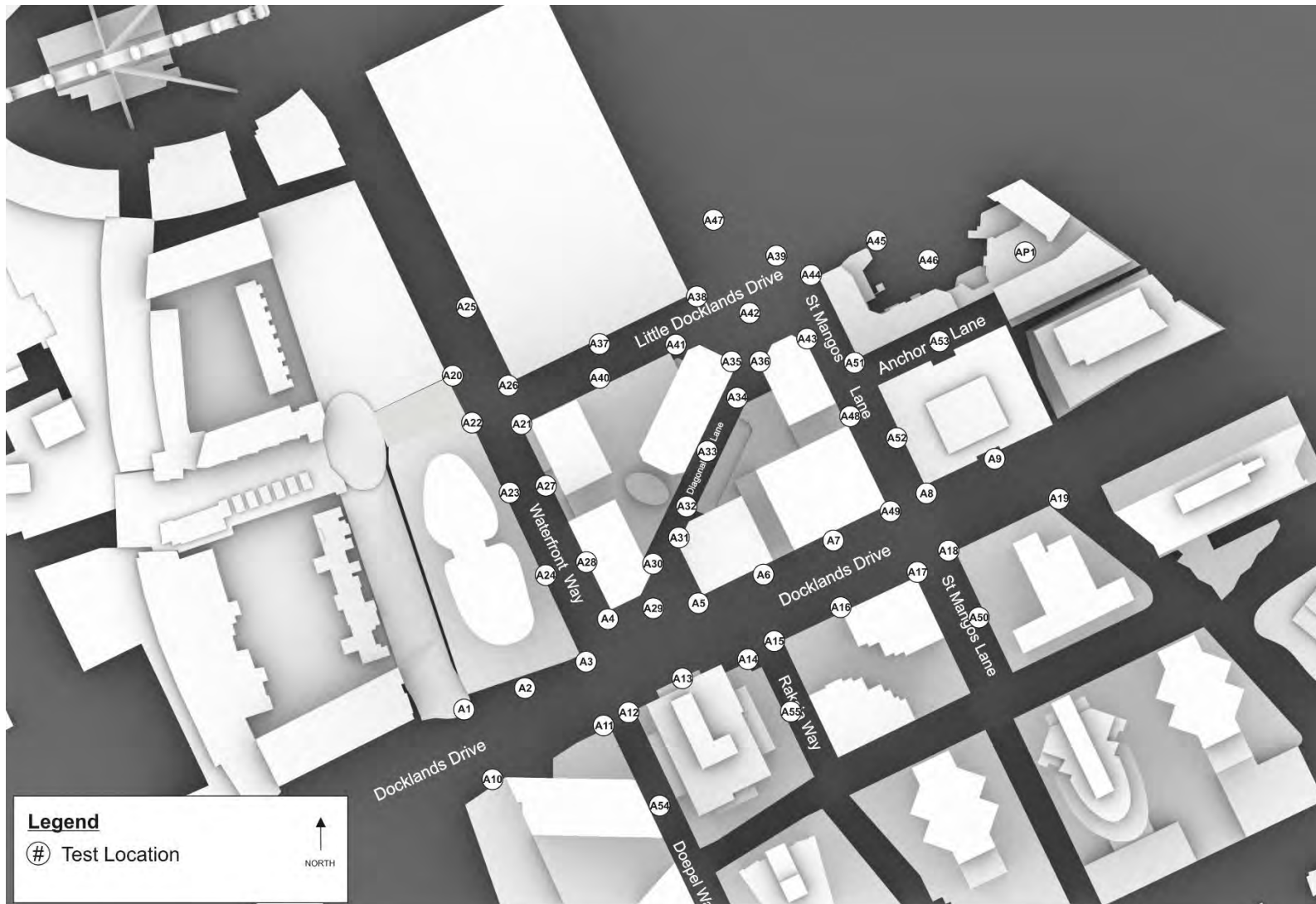


Figure 5 - Test Locations around the 396-400 Docklands Drive, Docklands.



Figure 6a – Summary of wind conditions for the Existing Configuration for 360° of wind direction



Figure 6b – Summary of ground level wind conditions for the Proposed Configuration for 360° of wind direction

Appendix A

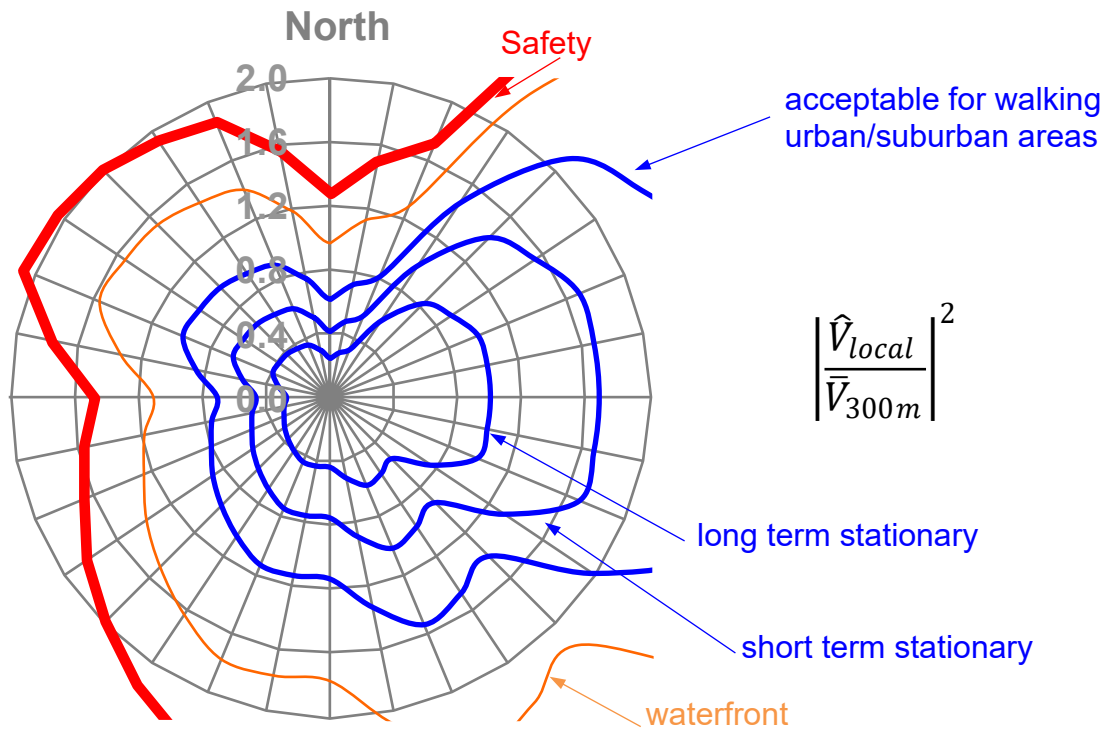


Figure A1 - Environmental wind criteria for Melbourne as a function of wind direction based on a 3 second gust (0.1% probability of exceedance)

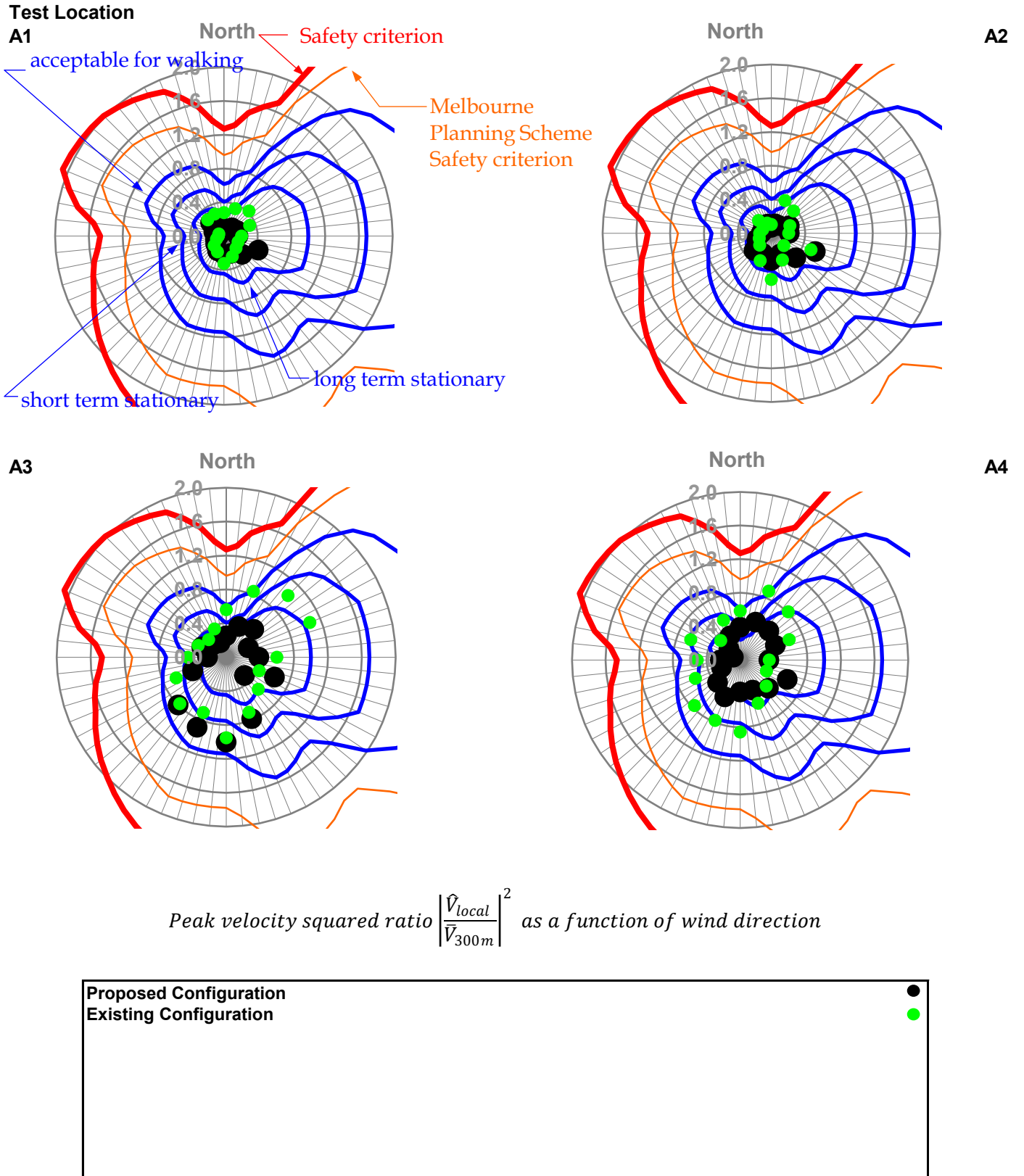
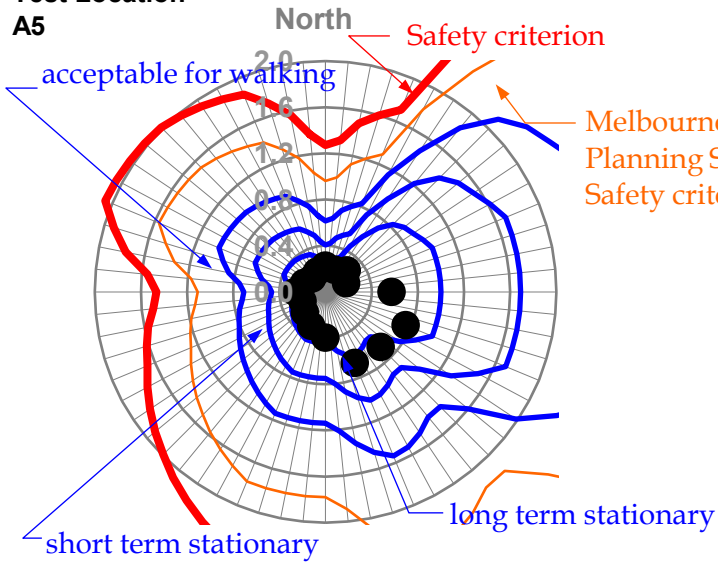
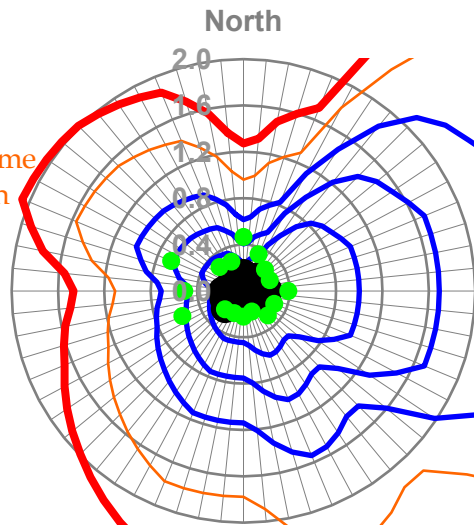


Figure A2 - Docklands Drive

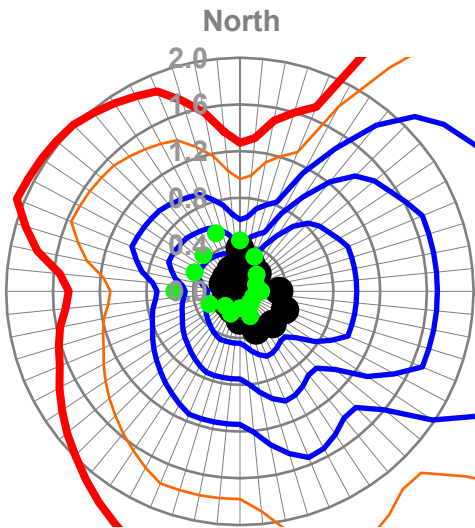
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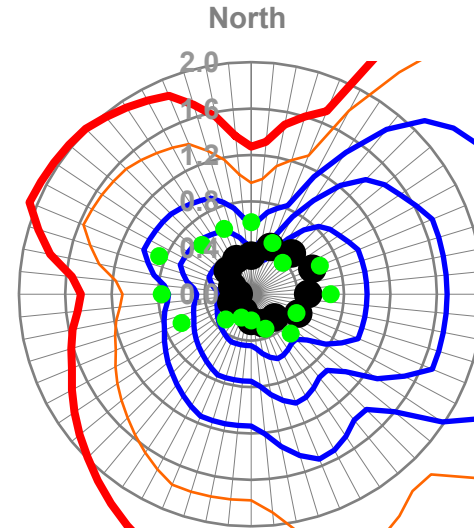
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A8



Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\bar{V}_{300m}} \right|^2$ as a function of wind direction

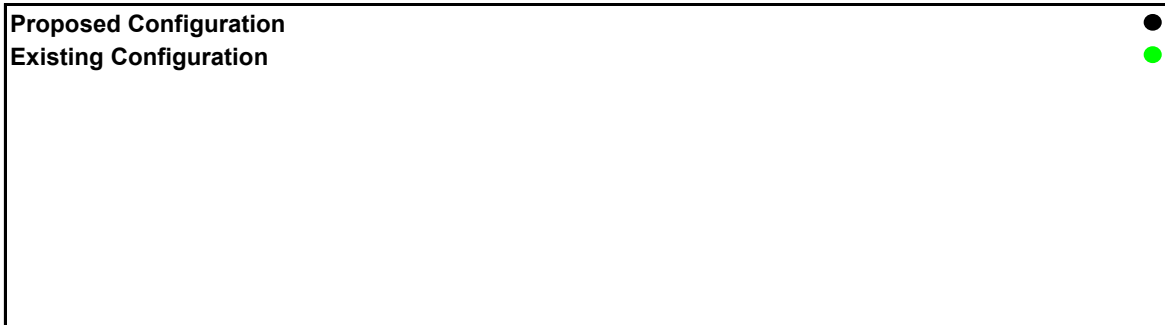
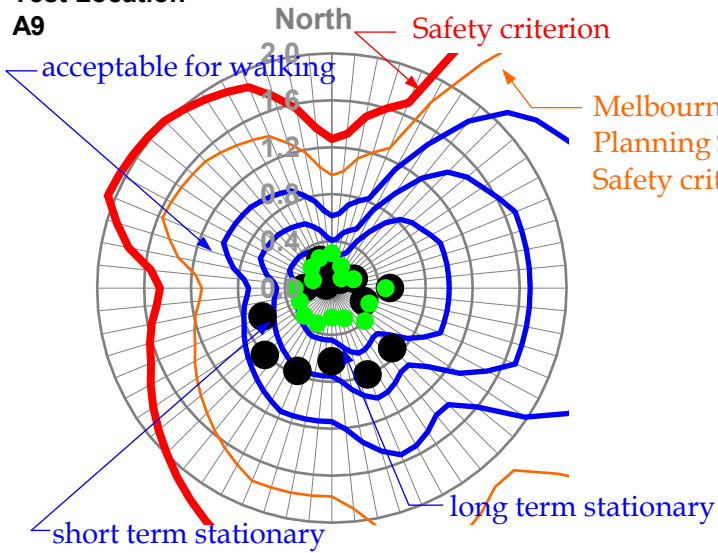
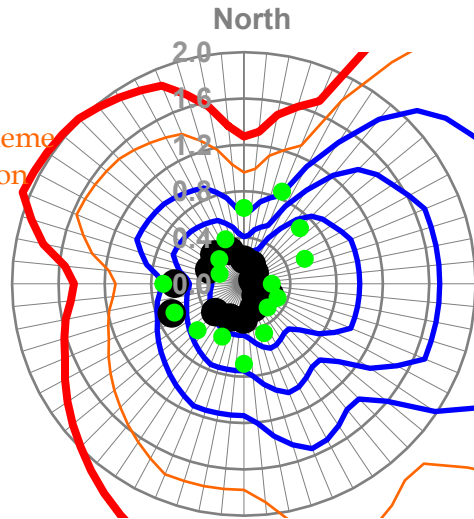


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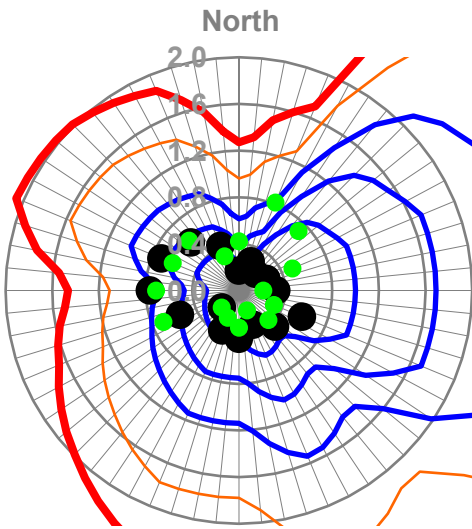
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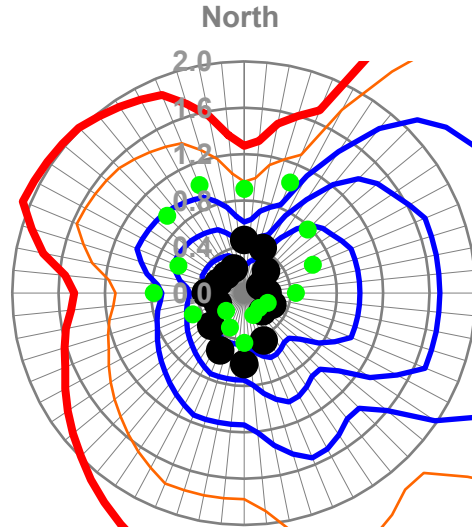
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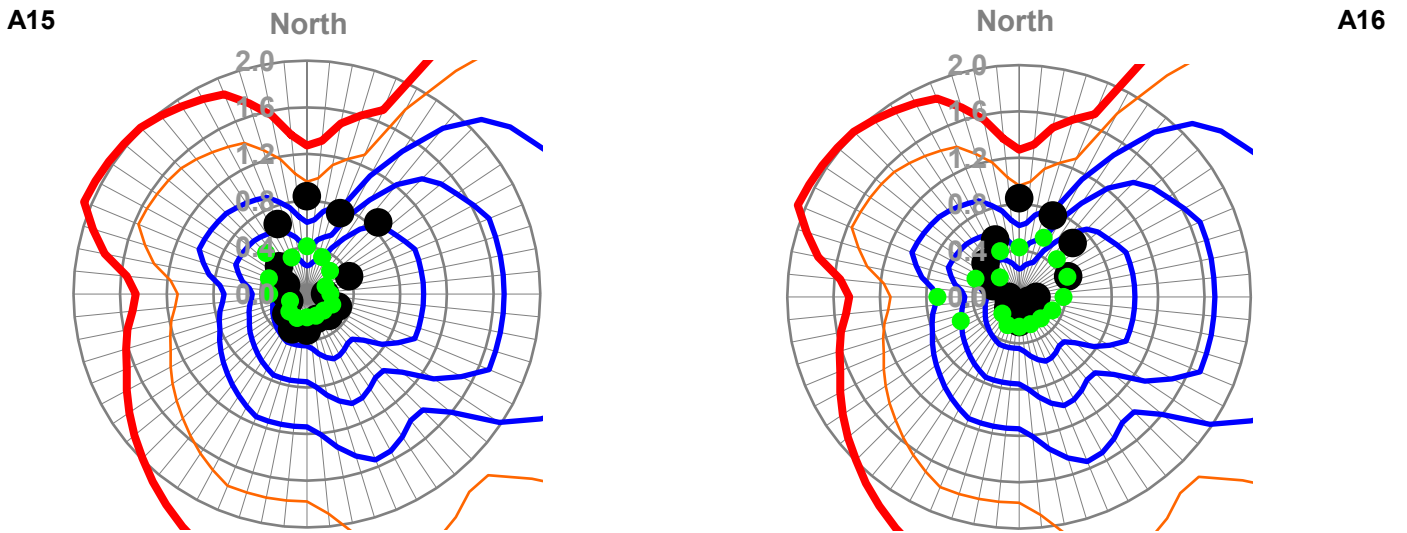
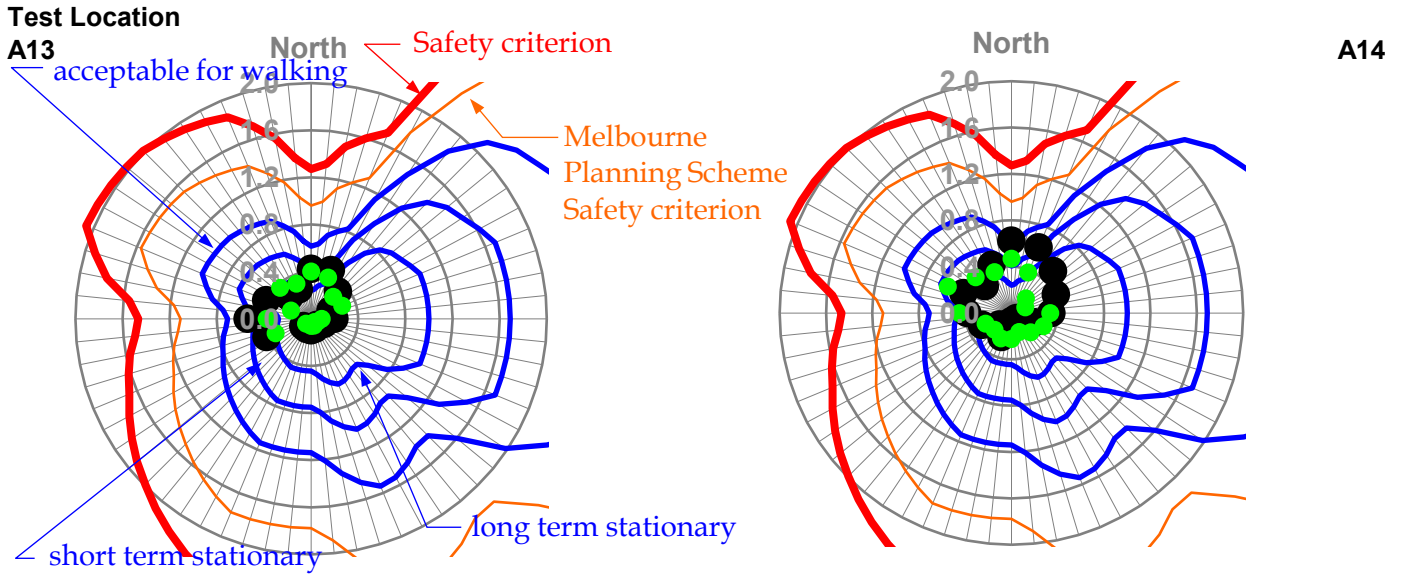
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Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\hat{V}_{300m}} \right|^2$ as a function of wind direction



Figure A4 - Docklands Drive - continued

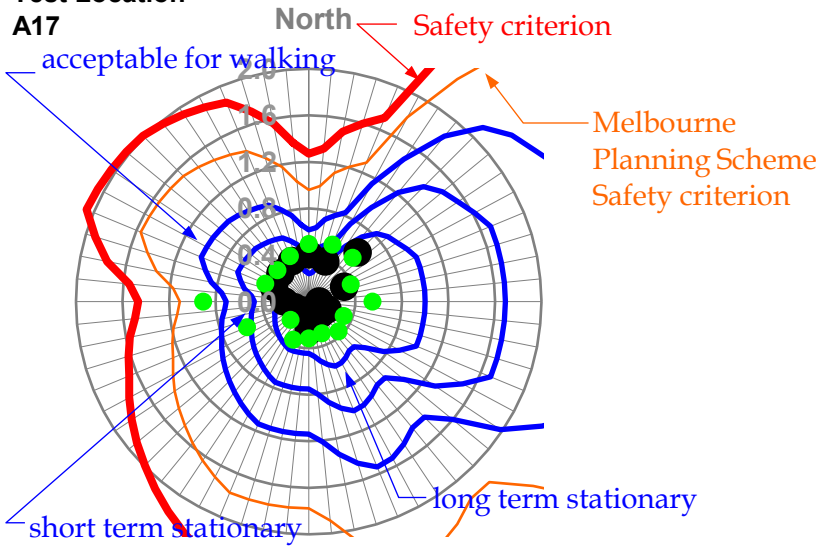


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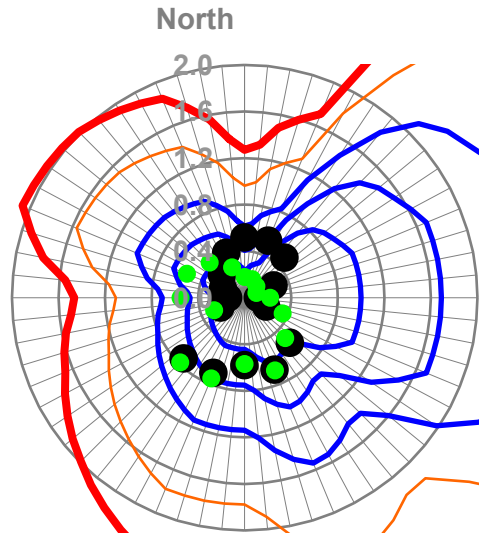


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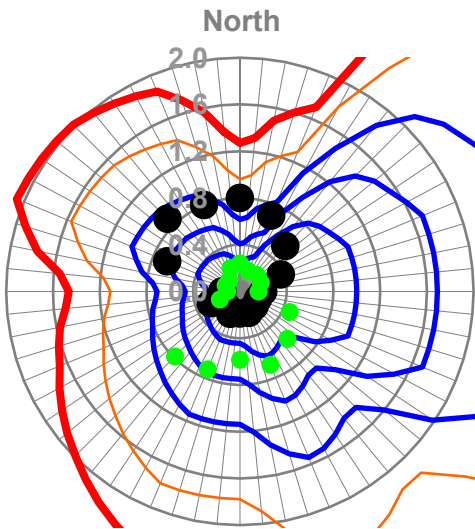
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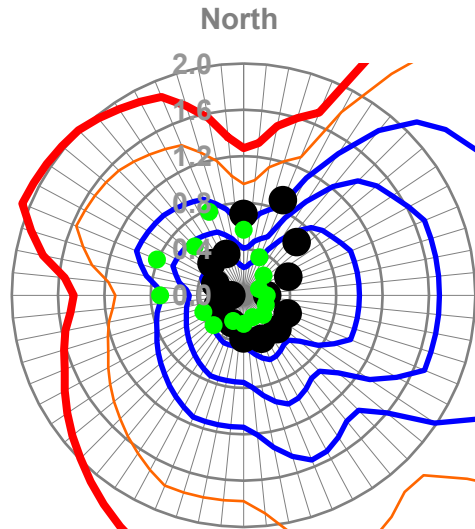
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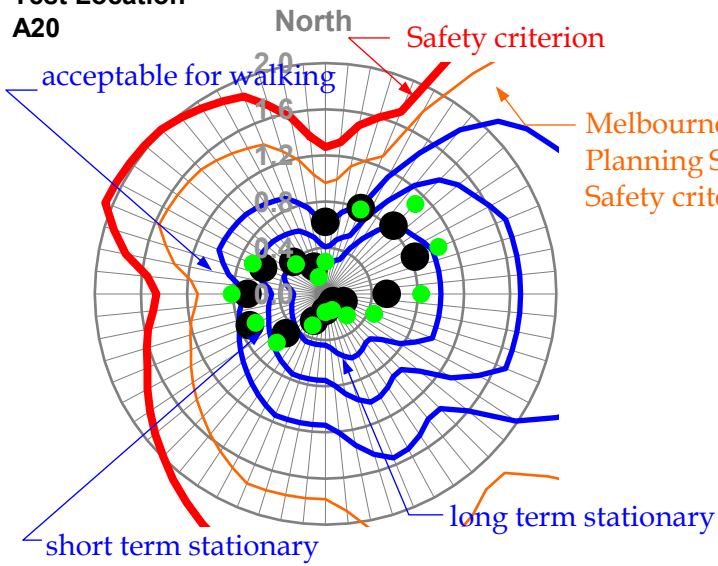


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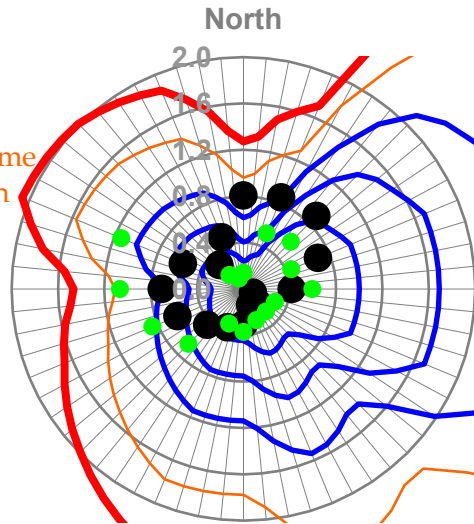


Figure A6 - Docklands Drive - continued

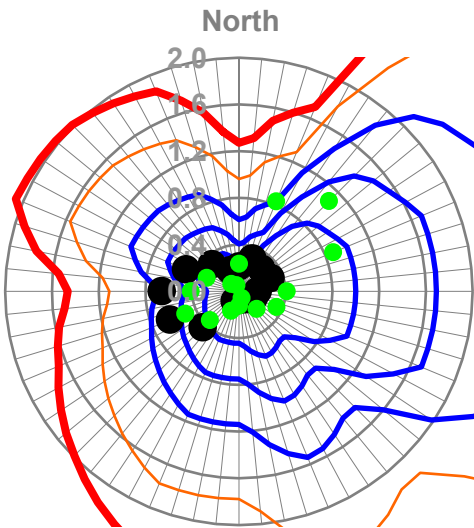
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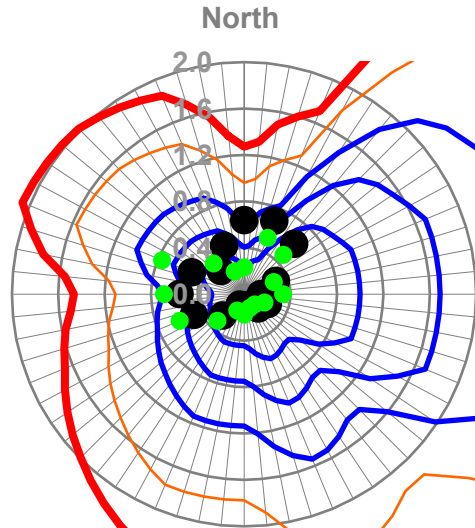
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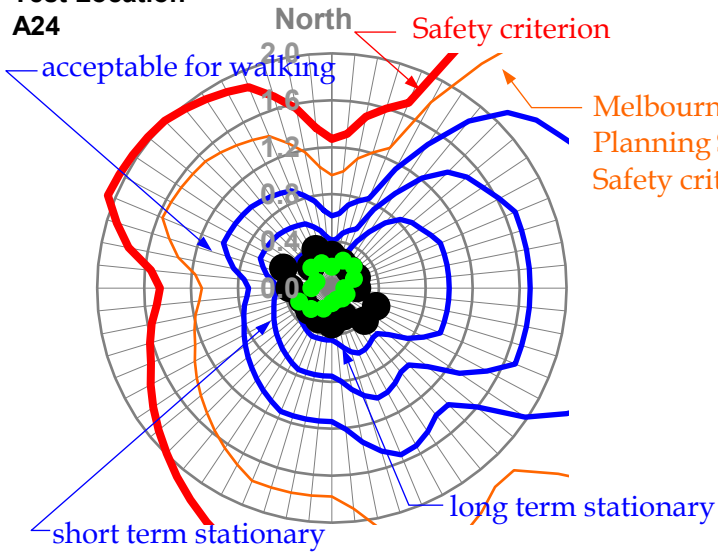


Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\bar{V}_{300m}} \right|^2$ as a function of wind direction

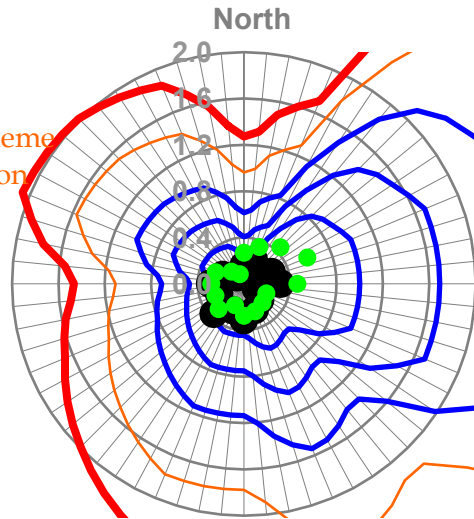


Figure A7 - Waterfront Way

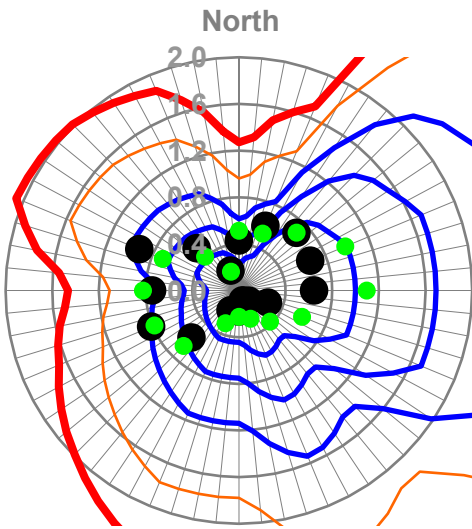
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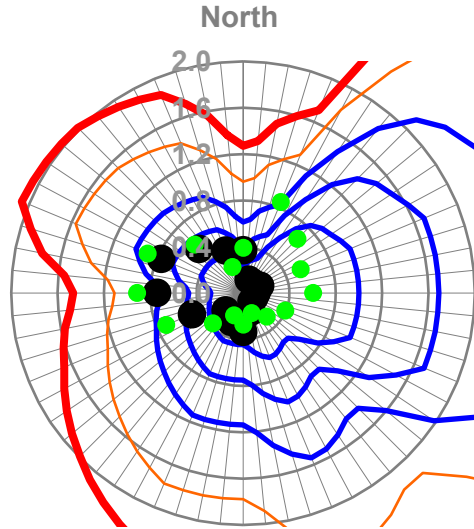
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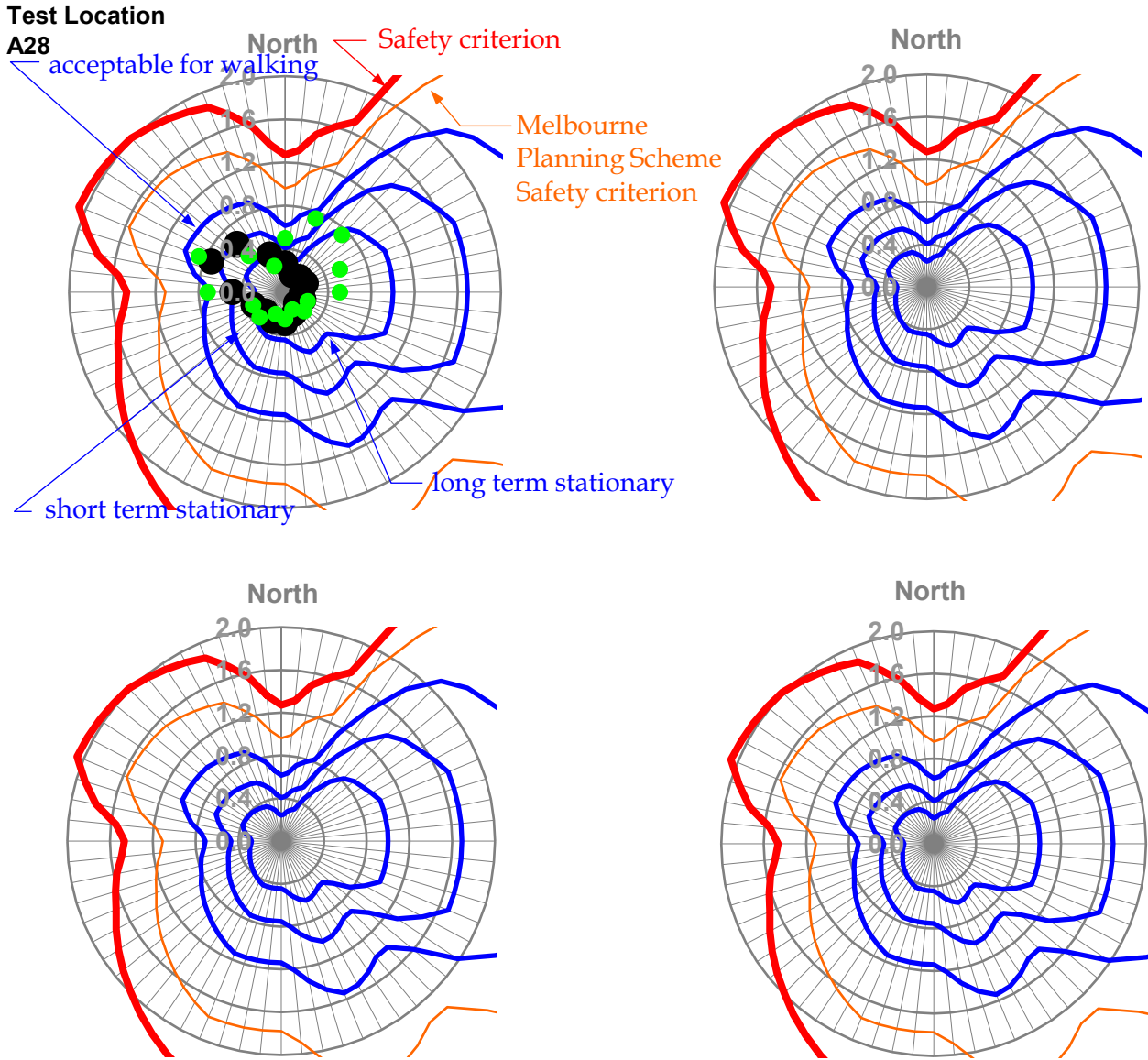
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Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\bar{V}_{300m}} \right|^2$ as a function of wind direction



Figure A8 - Waterfront Way - continued

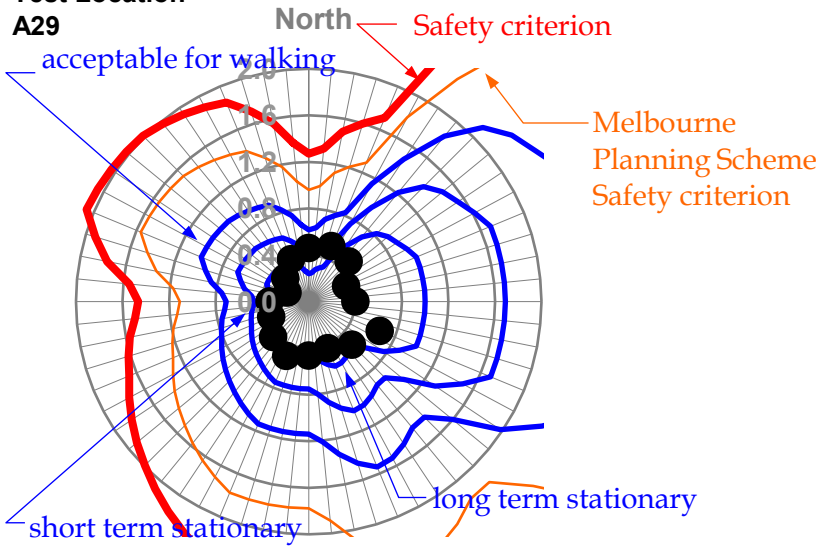


Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\bar{V}_{300m}} \right|^2$ as a function of wind direction

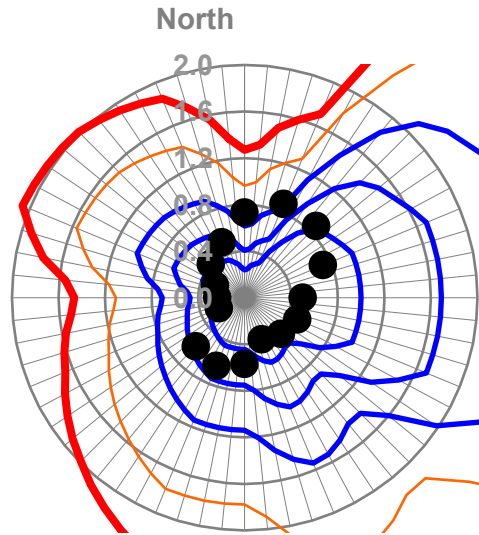


Figure A9 - Waterfront Way - continued

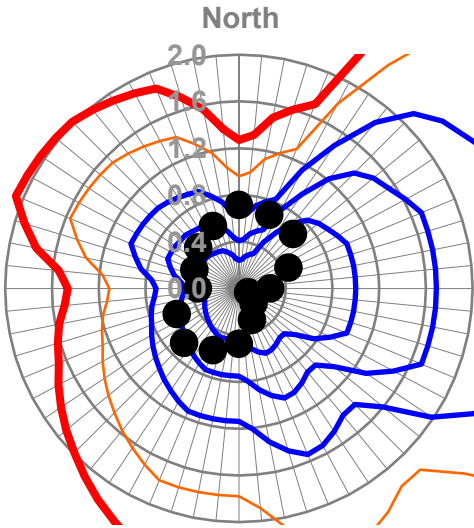
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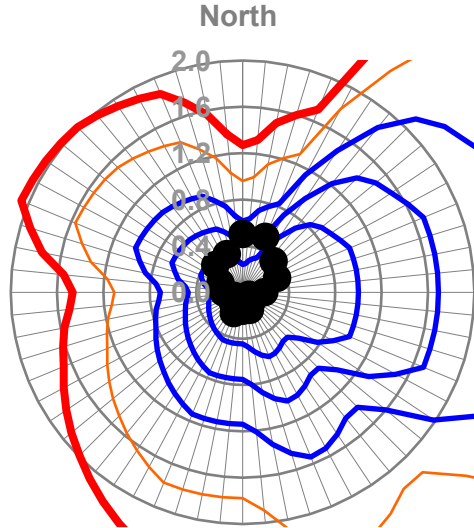
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Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\hat{V}_{300m}} \right|^2$ as a function of wind direction

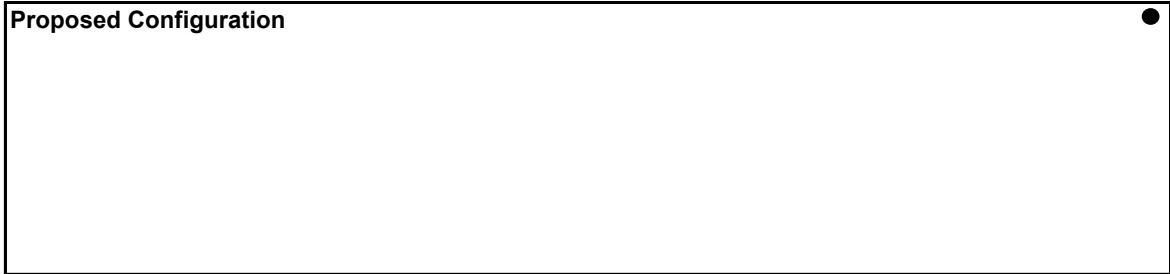
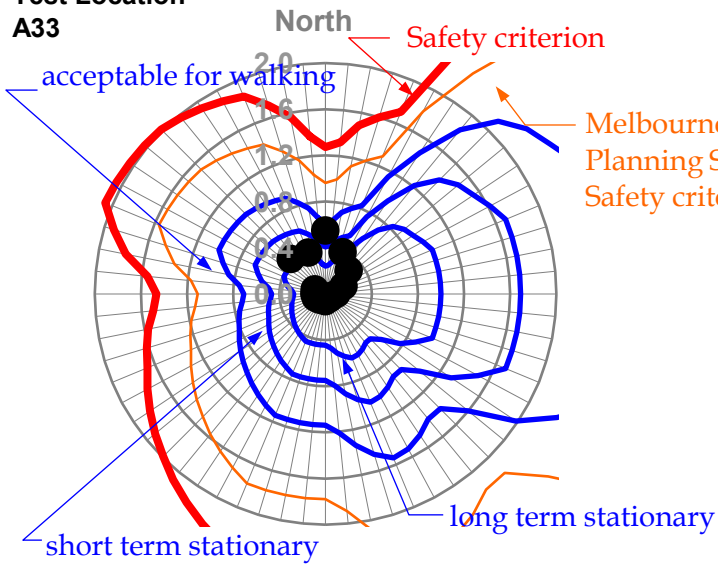
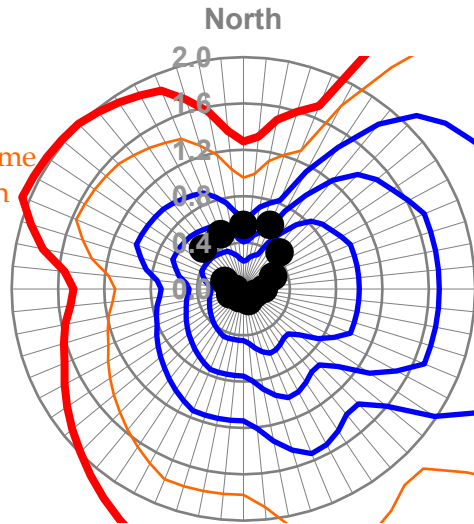


Figure A10 - Diagonal Lane

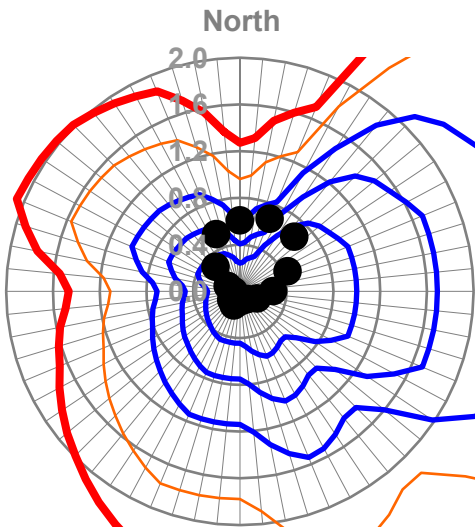
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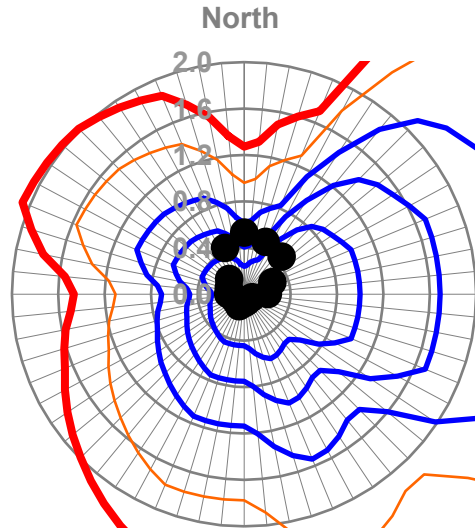
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Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\bar{V}_{300m}} \right|^2$ as a function of wind direction

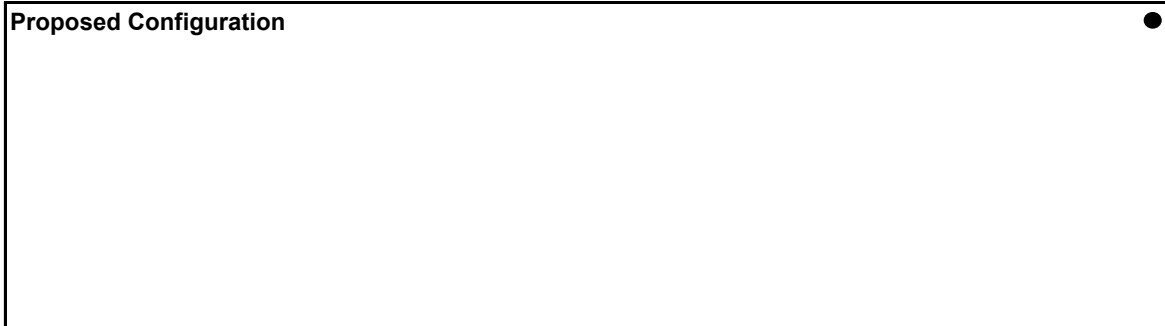
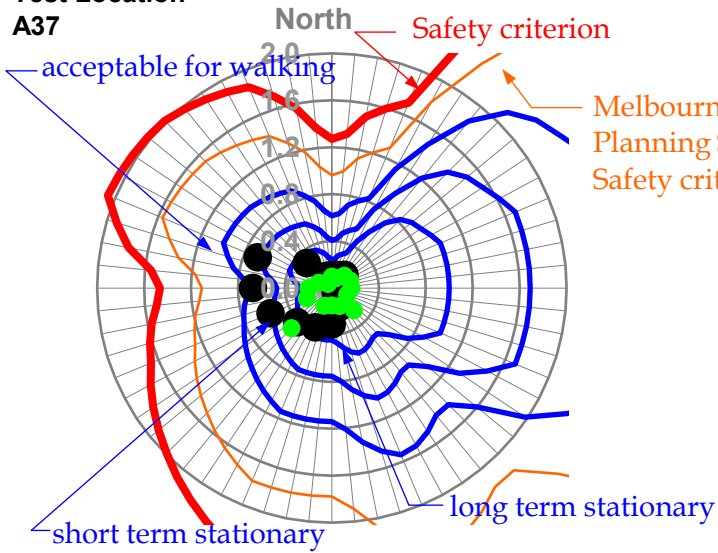
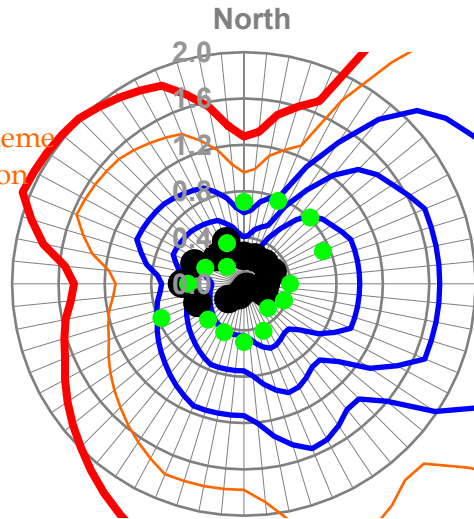


Figure A11 - Diagonal Lane - continued

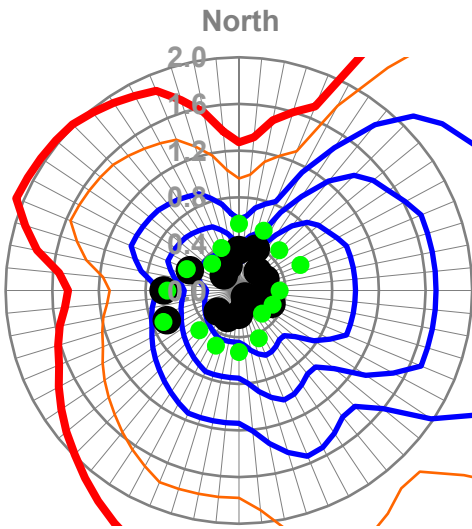
Test Location
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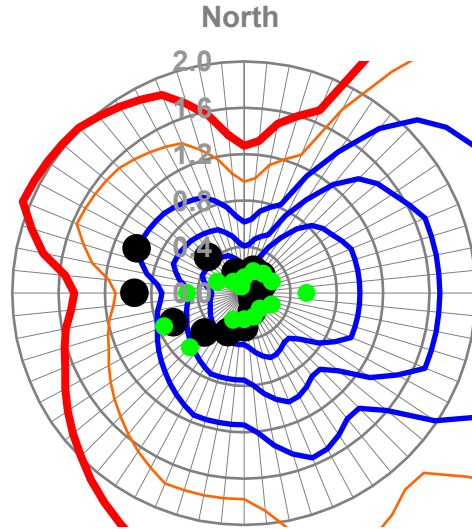
A38



A39



A40



Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\hat{V}_{300m}} \right|^2$ as a function of wind direction



Figure A12 - Little Docklands Drive

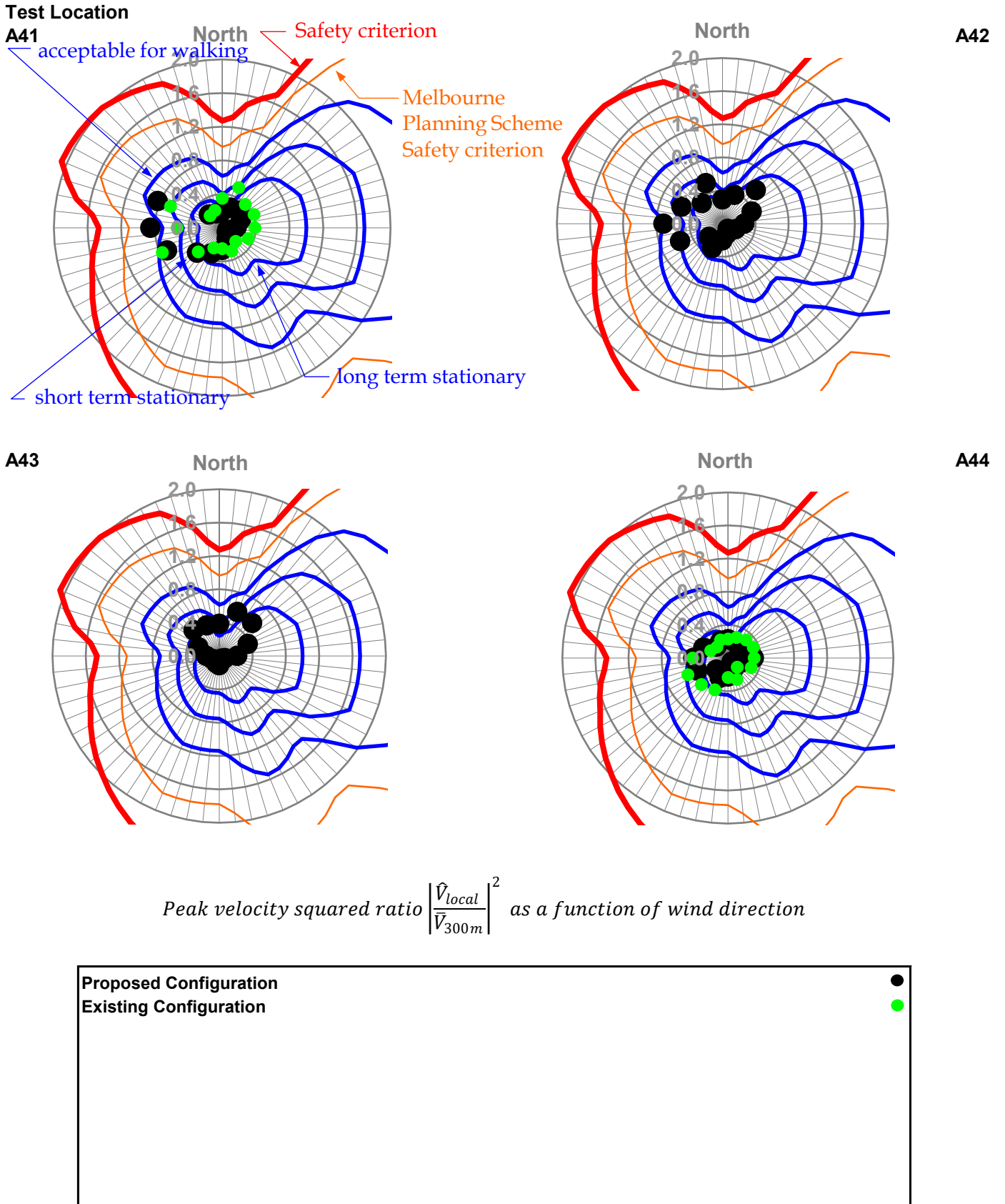
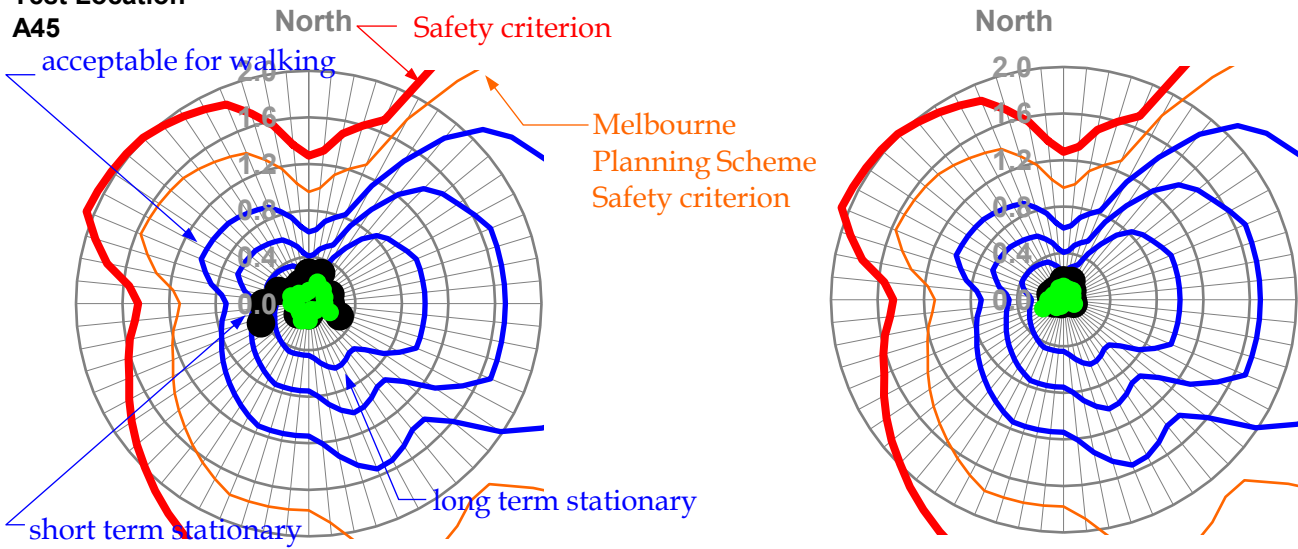


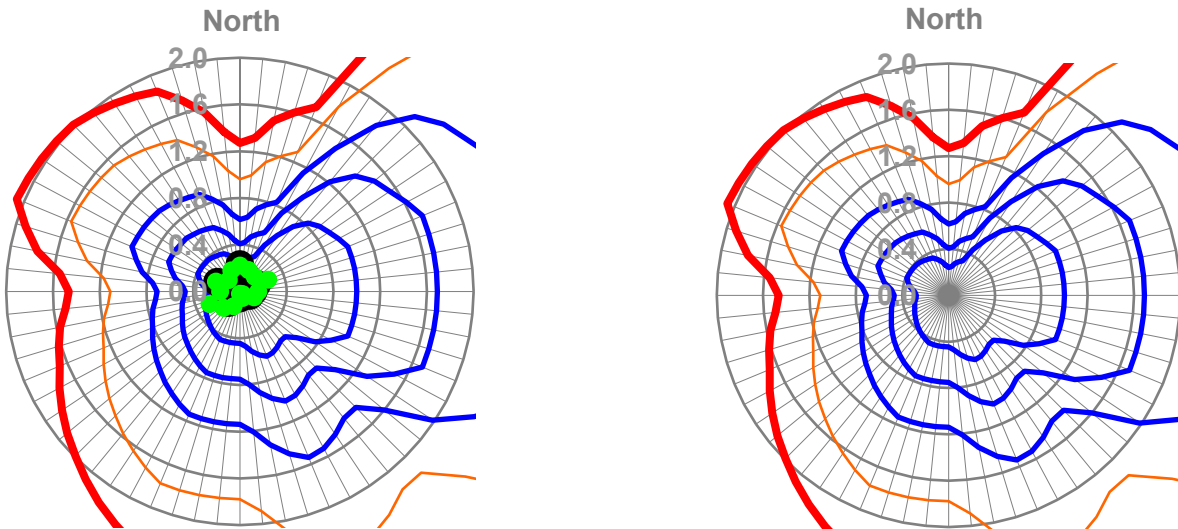
Figure A13 - Little Docklands Drive - continued

Test Location
A45

A46



AP1

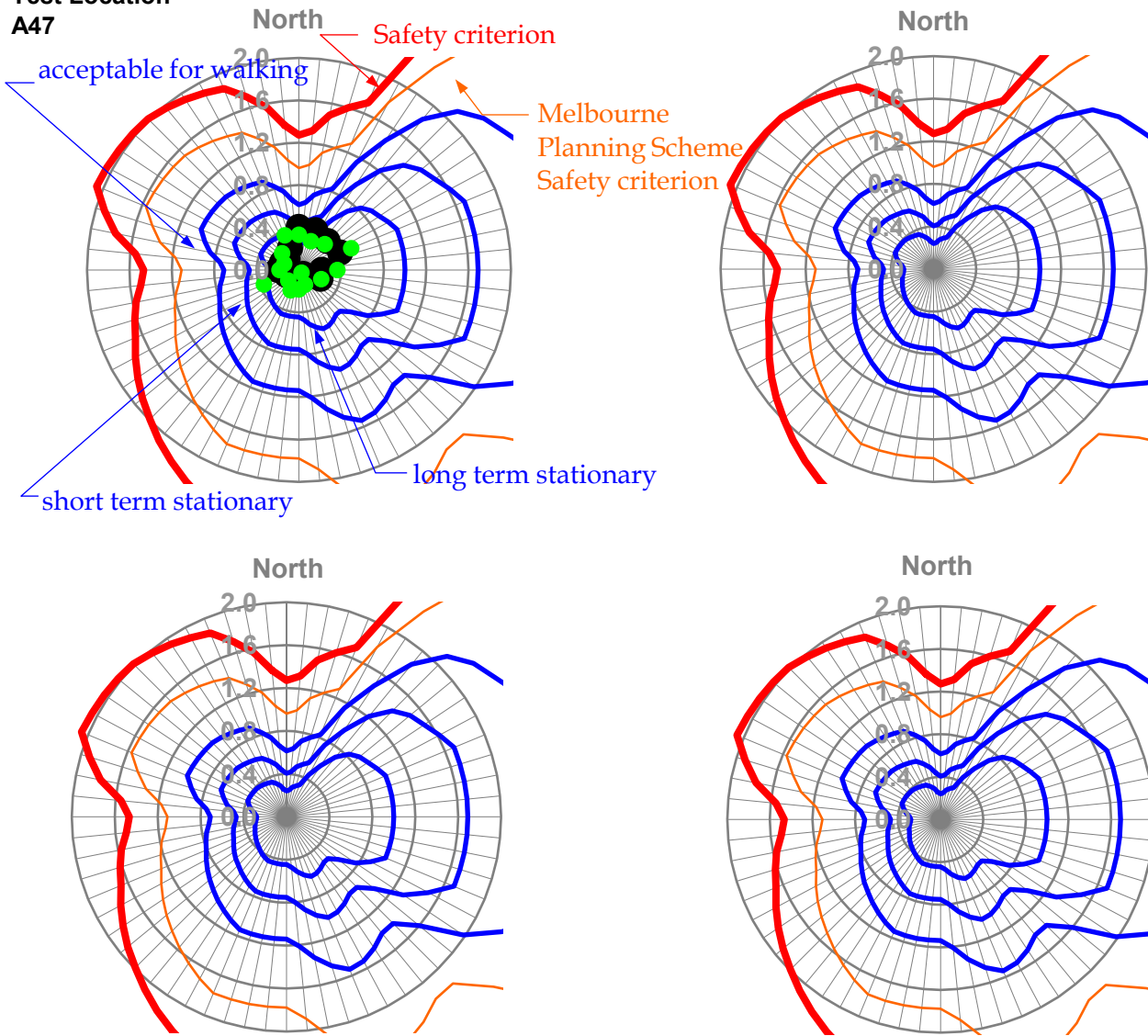


Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\hat{V}_{300m}} \right|^2$ as a function of wind direction



Figure A14 - Docklands Primary School

Test Location
A47

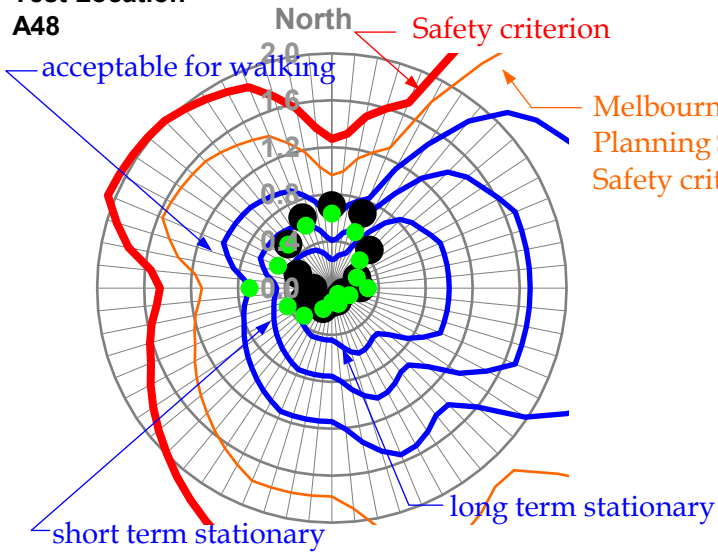


Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\bar{V}_{300m}} \right|^2$ as a function of wind direction

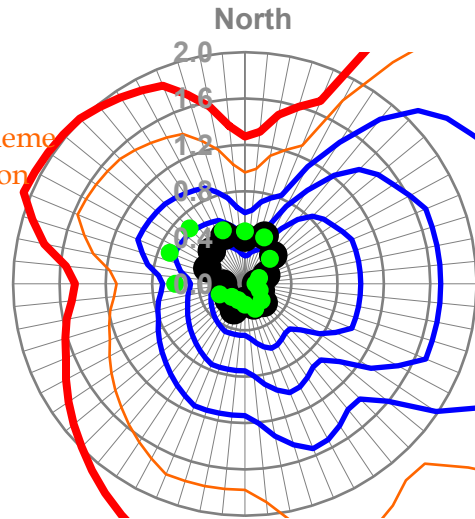


Figure A15 - The District Development Site

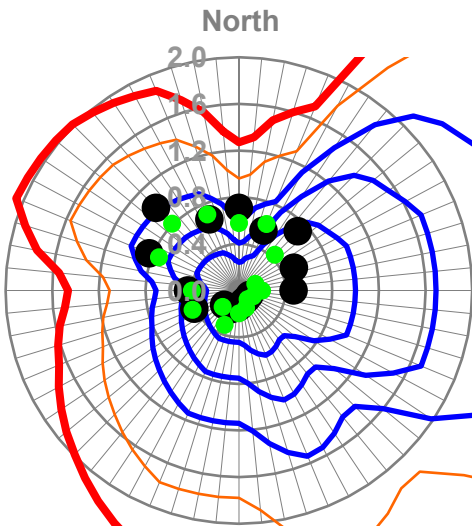
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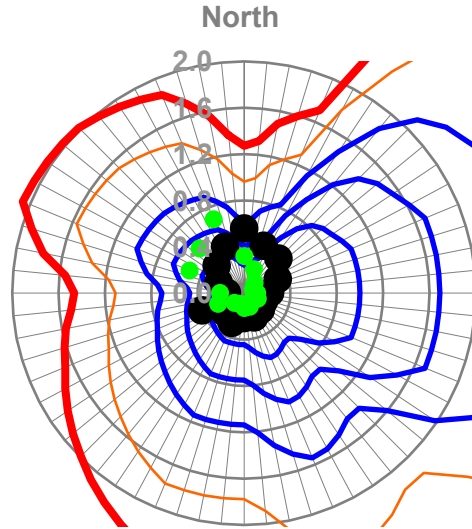
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Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\hat{V}_{300m}} \right|^2$ as a function of wind direction

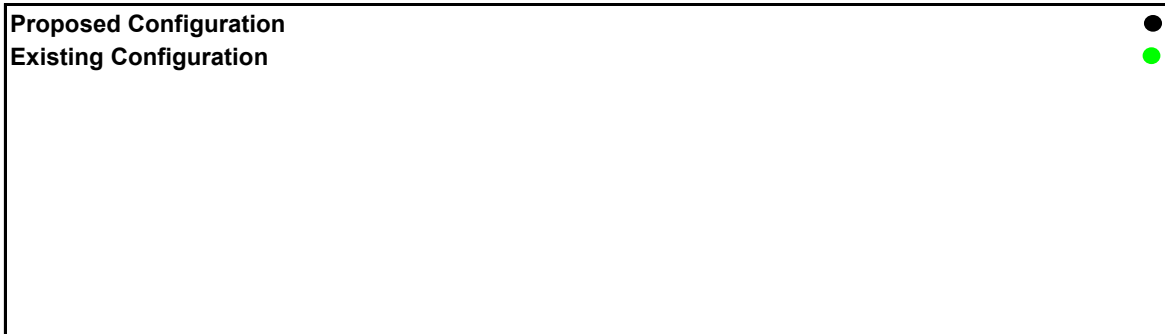
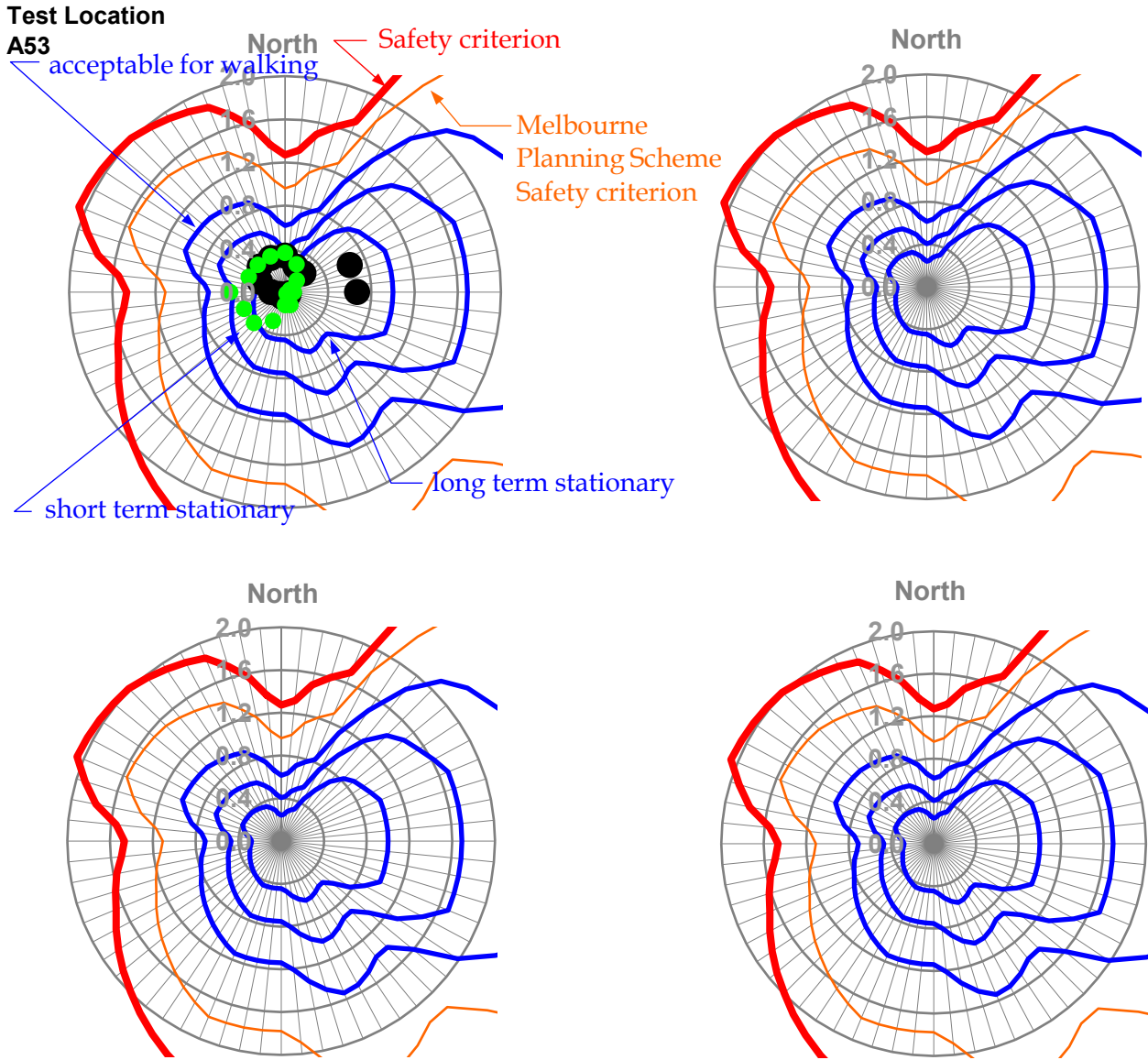


Figure A16 - St Mangos Lane



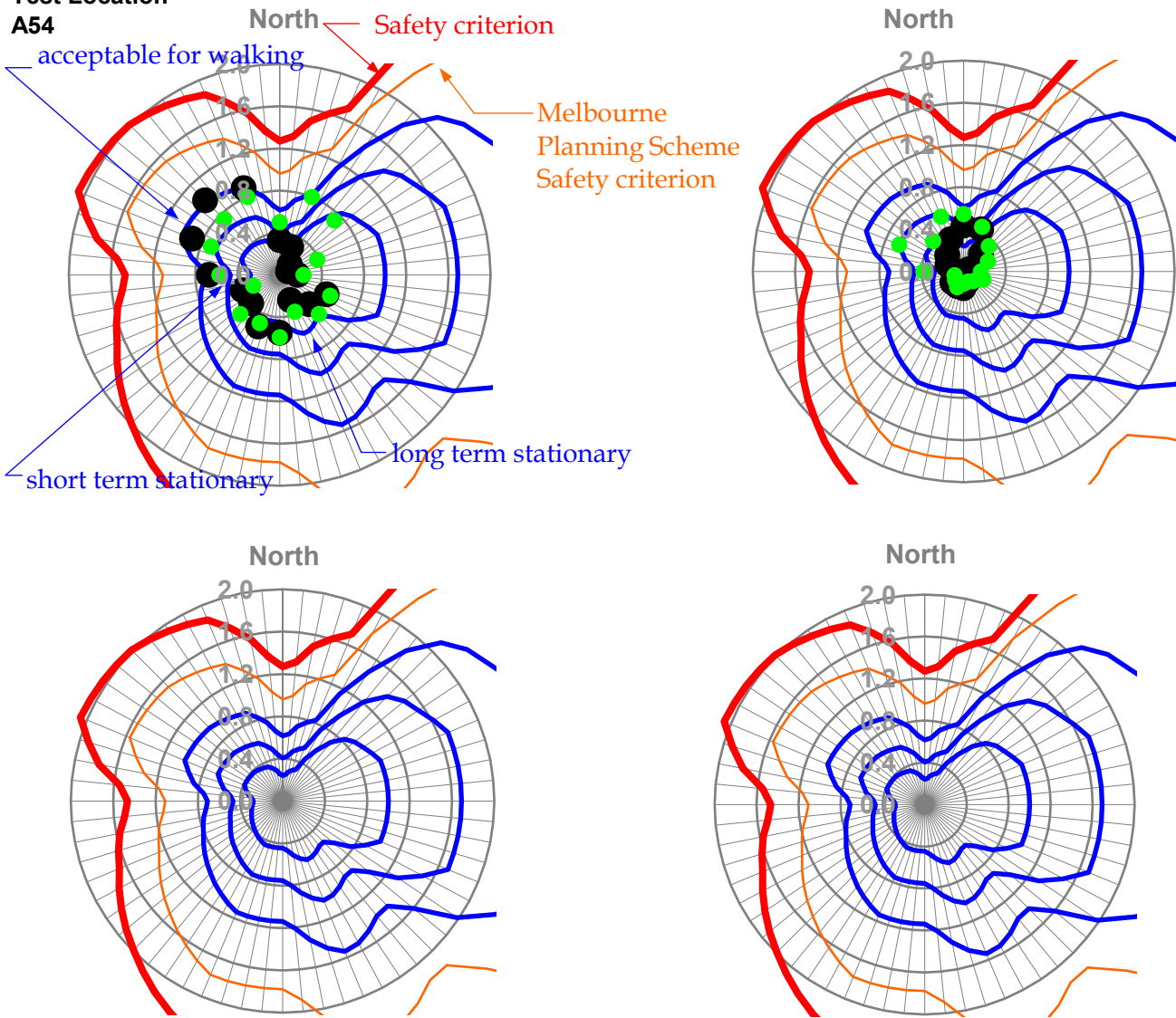
Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\bar{V}_{300m}} \right|^2$ as a function of wind direction



Figure A17 - Anchor Lane

Test Location
A54

A55



Peak velocity squared ratio $\left| \frac{\hat{V}_{local}}{\hat{V}_{300m}} \right|^2$ as a function of wind direction



Figure A18 - Doepel Way and Rakaia Way

Appendix 3 Traffic Report

Proposed Amended Development Plan

396-416 (Lot 14A) Docklands Drive,
Docklands

Transport Impact Assessment

15/08/2023

Ref: 301400489

PREPARED FOR:

Stefan Miles
MAB Corporation Pty Ltd

PREPARED BY:

Stantec

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	30/08/2022	Final	Goran Mihic	David Graham	David Graham	DG
B	26/09/2022	Revised Final	Goran Mihic	David Graham	David Graham	DG
C	10/07/2023	Revised Final	Goran Mihic	David Graham	David Graham	DG
D	15/08/2023	Revised Final	Goran Mihic	David Graham	David Graham	<i>DG</i>

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1. Introduction

1.1 Background & Proposal

In April 1999, the Minister for Planning approved the 'Outline Development Plan, MAB Business Park Precinct, Docklands' which was developed with the concept and vision to integrate commercial, residential, retail and recreational facilities into a vibrant, cosmopolitan urban precinct in the Docklands that will complement the Melbourne CBD. Subsequently, in November 1999, an updated document 'MAB Docklands Development Plan', was approved by the Minister for Planning.

The approved Development Plan includes a diversity of building types and land uses within the MAB Docklands precinct, including:

- 1,753 residential dwellings
- 254 hotel / serviced apartments
- 30,900sqm mixed use
- 87,700 sqm commercial
- 6,937 car spaces.

Approval is now being sought to amend the approved Development Plan to alter the proposed uses of the remaining undeveloped parcel of this development plan, Lot 14A (396-416 Docklands Drive), to decrease the approved commercial floor area and include a mixture of residential dwellings and a hotel, as summarised below in Table 1.1.

Table 1.1: Development Summary (Lot 14A)

Description	Use	Type	Size / No.		Difference
			Approved Schedule	Amended Schedule	
Commercial	Office	-	11,150sqm	8,000sqm	-3,150sqm
	Hotel	-	-	200 rooms	+200 rooms
Dwelling	Dwelling	Studio	-	156 dwellings	+156 dwellings
		1-bedroom	-	232 dwellings	+232 dwellings
		2-bedroom	-	203 dwellings	+203 dwellings
		3-bedroom	-	9 dwellings	+9 dwellings
Car Parking Spaces			900 spaces	370 spaces (160 resident spaces + 140 office and 70 hotel spaces)	-530 spaces

Table 1.1 indicates that it is proposed to provide 3,150sqm less commercial (office) floor area, which will be replaced by 600 residential dwellings and 200 hotel rooms.

It is also proposed to provide 370 on-site car parking spaces within a basement, ground and four podium level car parks, which represents a reduction of 530 spaces from the approved development plan.

It is proposed to provide in the order of 700 bicycle parking spaces across the subject site.

Vehicle access is proposed to occur via two separate locations, as summarised below:



- Via Saint Mangos Lane, approximately 35m north of Docklands Drive
- Via Waterfront Way, approximately 50m north of Docklands Drive.

Dedicated areas for bin storage (for both residential and commercial waste) are proposed to be provided on the ground floors. It is understood that waste will be collected by Council's regular waste collection services using the 8.8m long medium rigid vehicle from within the on-site loading bays.

1.2 Purpose of this Report

This report sets out a transport engineering review of the proposed amendments to the Development Plan, including consideration of the following:

- Roads, pedestrian, cyclist and vehicle access locations, including parking areas, both internal and external to the site.
- Any traffic management measures.
- Location of, and linkages to, public transport.
- Car parking rates for all uses, including visitor parking.
- Establish a design for the improved bike lane on Docklands Drive.
- Propose an alternate parking scenario for Docklands Drive.

1.3 References

In preparing this report, reference has been made to the following:

- plans for the proposed development prepared by ARM Architecture, dated June 2023
- Melbourne Planning Scheme
- MAB Docklands Development Plan, dated 8 October 1999
- Australian Standard / New Zealand Standard, Parking Facilities (AS2890)
- traffic surveys undertaken on behalf of Stantec, as referenced in the context of this report
- a desktop review of the site and its surrounds
- other documents as nominated.



2. Existing Conditions

2.1 Subject Site

The subject site is located at 396-416 Docklands Drive in Docklands. The site is bounded by Little Docklands Drive to the north, Saint Mangos Lane to the east, Docklands Drive to the south and Waterfront Way to the west. The site is located within the Docklands Zone (DZ6) and is subject to Parking Overlay – Precinct 10 (PO10).

The site is currently occupied by an at-grade open-air commercial car park. The surrounding properties include a mixture of residential, retail and commercial land uses.

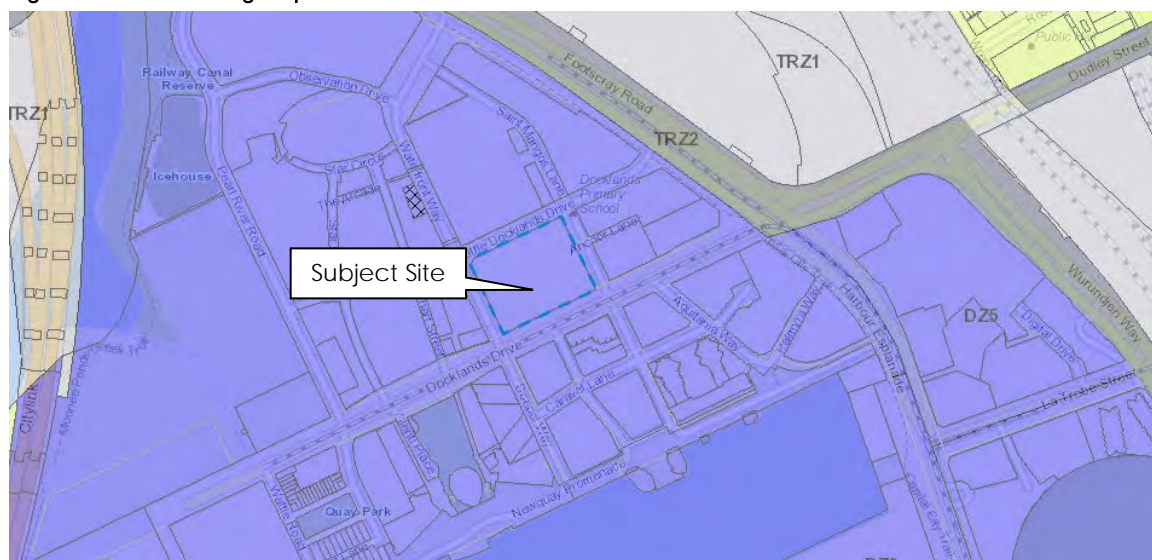
The location of the subject site and the surrounding environs is shown in Figure 2.1, and the land zoning is shown in Figure 2.2.

Figure 2.1: Subject Site and its Environs



(Reproduced with Permission from Melway Publishing Pty Ltd)

Figure 2.2: Land Zoning Map



(Reproduced from VicPlan)



2.2 Road Network

2.2.1 Adjoining Roads

Docklands Drive

Docklands Drive functions as a collector road. It is a two-way road aligned in an east-west direction and configured with one through lane in each direction, turn lanes at intersections, and tram tracks within a median, set within a 30 metre wide road reserve (approximately). Kerbside parking is permitted at some locations, subject to time restrictions. Docklands Drive carries approximately 4,315 vehicles per day¹, east of Waterfront Way.

Waterfront Way

Waterfront Way is a local road (managed by Council). It is a two-way road aligned in a north-south direction and is configured with a two-lane, 11.5 metre wide carriageway set within an 18 metre wide road reserve (approximately). Kerbside parking is permitted on both sides of Waterfront Way, subject to restrictions. Waterfront Way carries approximately 2,120 vehicles per day¹, north of Docklands Drive.

Little Docklands Drive

Little Docklands Drive functions as a local road and is managed by Melbourne City Council. Between Waterfront Way and Saint Mangos Lane it is a two-way road aligned in an east-west direction and configured with a two-lane, 9m wide carriageway set within a 17.5m wide road reserve (approximately). Kerbside parking is permitted on the northern side, subject to 2 hour time restrictions. Little Docklands Drive carries approximately 530 vehicles per day¹, east of Waterfront Way.

Saint Mangos Lane

Saint Mangos Lane functions as a local road and is managed by Melbourne City Council. It is a two-way road aligned in a north-south direction and configured with a two-lane, 8m wide carriageway set within a 15m wide road reserve (approximately). Kerbside parking is permitted on the western side, between Docklands Drive and Little Docklands Drive, subject to 2 hour time restrictions. Saint Mangos Lane carries approximately 895 vehicles per day¹, north of Docklands Drive.

2.2.2 Surrounding Intersections

Key intersections in the vicinity of the site include:

- Docklands Drive / Waterfront Way (unsignalised T-intersection)
- Docklands Drive / Saint Mangos Lane (unsignalised T-intersection)
- Waterfront Way / Little Docklands Drive (unsignalised T-intersection)
- Little Docklands Drive / Saint Mangos Lane (unsignalised T-intersection)

2.2.3 Traffic Volumes

Stantec commissioned traffic movement surveys at the above intersections on Tuesday 10 May 2022 between 7:00am-9:00am and 4:00pm-6:00pm.

The weekday AM and PM peak hour traffic volumes are shown in Figure 2.3 and Figure 2.4, respectively.

¹ Based on the peak hour traffic counts undertaken by Stantec in May 2022 and assuming a peak-to-daily ratio of 10%.



Figure 2.3: Existing AM Peak Hour Traffic Volumes

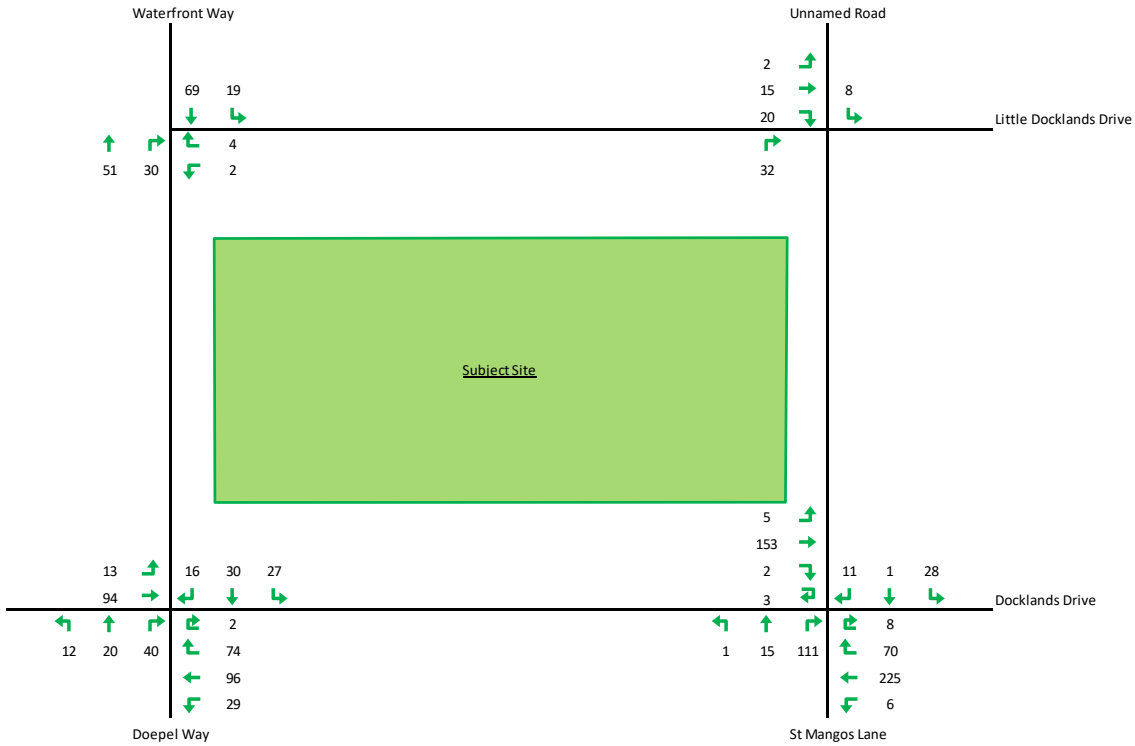
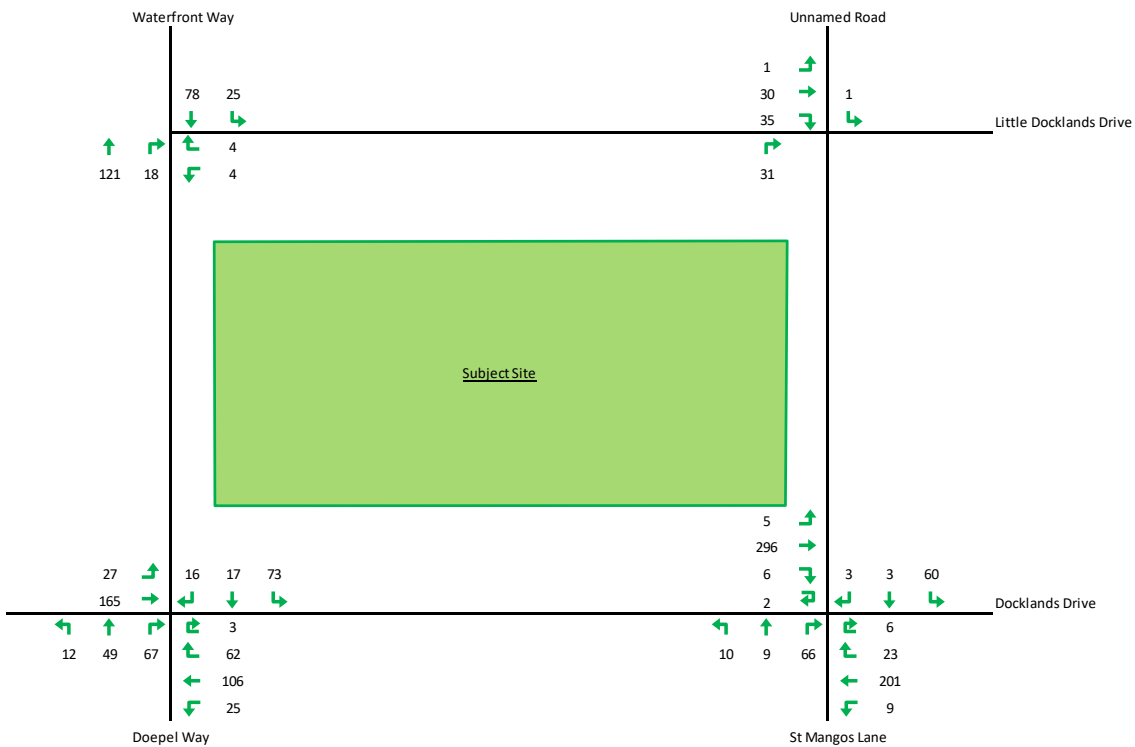


Figure 2.4: Existing PM Peak Hour Traffic Volumes

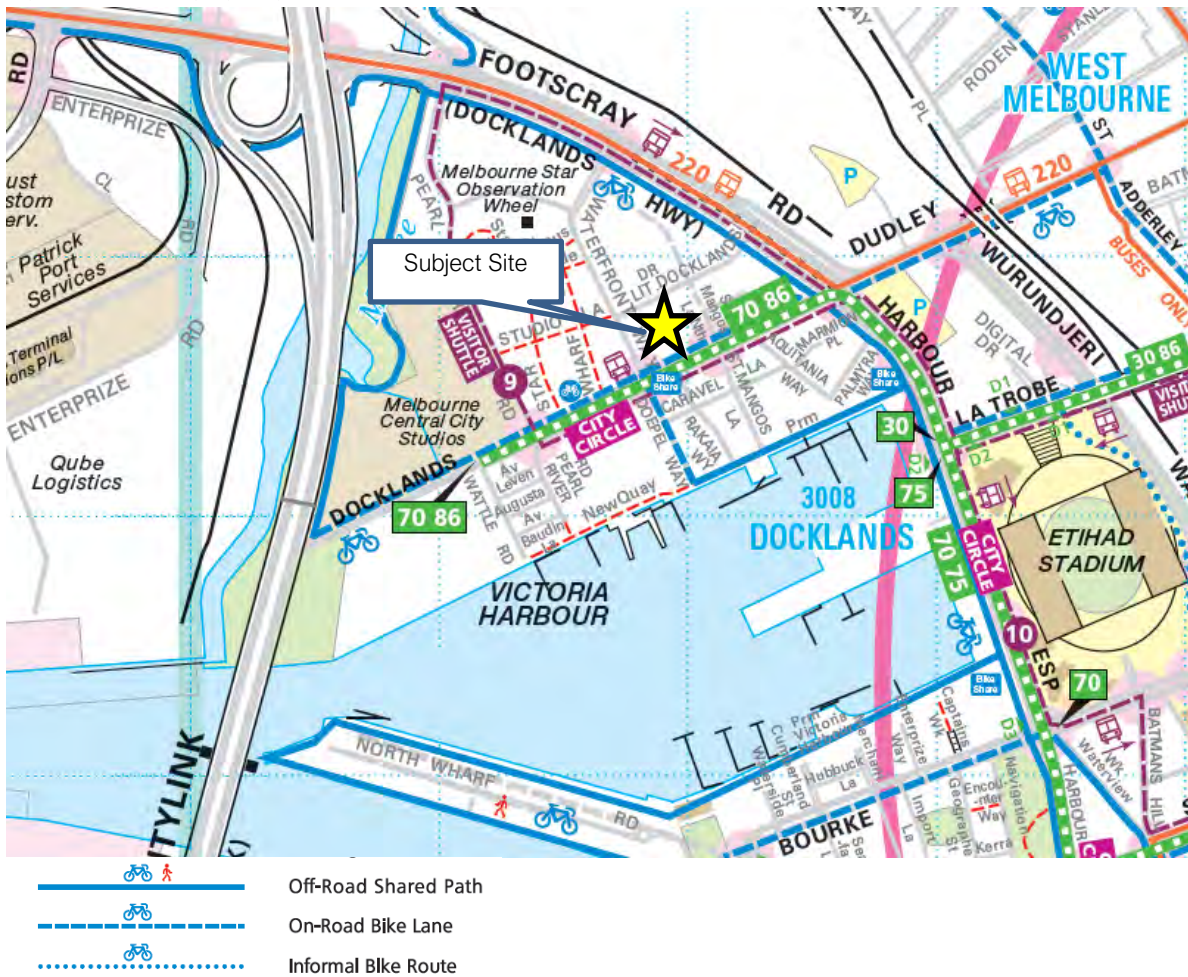


2.2.4 Public Transport Network

Figure 2.5 shows the site in relation to existing public transport routes within its vicinity whilst Table 2.1 summarises the road-based routes and major destination that can be reached using these services



Figure 2.6: Existing Cycling Infrastructure



Notable cycling routes in the area include:

- On-road bike lanes along Docklands Drive, between Wattle Road and Harbour Esplanade.
- On-road bike lanes along La Trobe Street, between Harbour Esplanade and Spencer Street.
- Segregated bicycle lanes on each side of La Trobe Street, between Spencer Street and Victoria Street.
- Segregated bicycle lanes along the southwest side of Harbour Esplanade between Docklands Drive and Navigation Drive.
- Off-road shared path along the southwest side of Footscray Road between Docklands Drive and Moreland Street (Docklands Highway).
- Off-road shared path along the east side of Moonee Ponds Creek, north of Docklands Drive (Capital City Trail).

2.2.6 Local Car Sharing Services

There are local car sharing services available within the vicinity of the subject site.

The locations of the nearby car sharing pods are as listed in Table 2.2.

Table 2.2: Local Car Sharing Pods

Company	Location
Flexicar	Doepel Way, just south of Docklands Drive
GoGet	Pearl River Road
	Doepel Way near Caravel Lane
	Docklands Drive near Rakaia Way
	Saint Mangos Lane near Docklands Drive
Green Share Car	Docklands Drive near Waterfront Way
	Saint Mangos Lane near Docklands Drive



3. Traffic Impact

3.1 Traffic Generation

3.1.1 Approved Development Plan (Lot 14A Only)

Lot 14A of the approved development plan included 11,150sqm of commercial (office) floor area.

Guidance on an appropriate traffic generation rate for an office use has been sought from surveys undertaken by Stantec and other traffic engineering consultants, as well as from data contained within the Inner Municipalities Parking Study (IMPS). Based on these sources the following traffic generation rates are considered appropriate for the proposed development:

- AM Peak Hour: 0.57 vehicle movements per car space
- PM Peak Hour: 0.50 vehicle movements per car space.

Application of these rates to the approved office use with 900 car spaces equates to 513 vehicle movements in the weekday AM peak hour and 450 vehicle movements in the weekday PM peak hour.

During the weekday AM peak hour, approximately 90% of vehicle movements will be inbound with 10% outbound movements. The reverse will apply in the PM peak hour.

Additionally, offices typically generate a rate of in the order of 3.25 daily vehicle movements per car space. Application of this rate to the approved office use with 900 staff car spaces equates to 2,925 daily vehicle movements.

3.1.2 Proposed Amended Development Plan

Residential (600 Dwellings)

A single house on a standard lot in an outer metropolitan area will typically generate up to 1 trip in the peak hour and 8 to 10 trips per day. Medium density dwellings generally exhibit a lower traffic generation rate. In the outer metropolitan areas, where public transport accessibility is relatively low, the rate for medium density units is typically in the order of 6 to 8 trips per day. Closer to the Melbourne CBD the rate reduces to in the order of 3 to 6 trips per day depending on dwelling size, parking provisions and accessibility to public transport and local amenities, among other things. Peak hour rates are typically 10–12% of daily rates.

Having consideration to the location of the subject site, among other things, it is estimated that the proposed apartments will generate up to 0.2 vehicle movements per apartment in each peak hour, and 2 daily vehicle movements per apartment.

The expected directional split of development traffic entering and exiting the site is estimated as follows:

- Weekday AM Peak Hour: 20% inbound / 80% outbound
- Weekday PM Peak Hour: 70% inbound / 30% outbound.

Application of the above rate to the 600 dwellings equates to 120 peak hour vehicle movements and 1,200 daily vehicle movements.

Office

As previously mentioned, the amended Development Plan is proposed to provide 3,150sqm less commercial (office) floor area on the site.

Application of the above office rates to the 140 spaces proposed to be allocated to the office use equates to 455 daily vehicle movements, including 80 vehicle movements in the weekday AM peak hour and 70 vehicle movements in the weekday PM peak hour.



Residential Building (Hotel)

Surveys of the Crowne Promenade Hotel in Southbank found that it generated 0.3 vehicle movements per occupied room in an AM peak hour and 0.17 vehicle movements per occupied room in a PM peak hour.

Adopting these rates for the 200 hotel rooms proposed on the site would equate to 60 vehicle movements in an AM peak hour and 34 vehicle movements in a PM peak hour.

The expected directional split of development traffic entering and exiting the site is estimated as follows:

- Weekday AM Peak Hour: 20% inbound / 80% outbound
- Weekday PM Peak Hour: 70% inbound / 30% outbound.

Traffic Generation Summary

Based on the above, Table 3.2 presents the estimated peak hour and daily traffic generation of the proposed amended development.

Table 3.1: Traffic Generation Summary

Description	Size / No. Of Spaces	AM Peak Hour		PM Peak Hour		Daily
		In	Out	In	Out	
Residential	600 dwellings	24vph	96vph	84vph	36vph	1,200vpd
Office	140 spaces	72vph	8vph	7vph	63vph	455vpd
Hotel	200 rooms	12vph	48vph	24vph	10vph	470vpd [1]
Total		108vph	152vph	115vph	109vph	2,125vpd

[1] For the purpose of this assessment, a peak to daily ratio of 10% has been assumed.
 vph denotes vehicles per hour.
 vpd denotes vehicles per day.

Table 3.2 indicates that the proposed amended development is anticipated to generate up to 260 and 224 vehicle movements respectively in the weekday AM and PM peak hours on a typical weekday, and up to 2,125 daily vehicle movements.

3.2 Traffic Impact

Based on the above discussion and analysis, the proposed amended Development Plan can be expected to generate 253 less vehicle movements in the weekday AM peak hour, 226 less vehicle movements in the weekday PM peak hour and 800 less daily vehicle movements than the uses in the approved Development Plan.

It is not proposed to alter the road network in the vicinity of the site.

Therefore, there will be adequate capacity in the surrounding road network to cater for the traffic generated by the proposed amended Development Plan.



4. Bicycle Parking

4.1 Statutory Requirements

Statutory requirements for the provision of bicycle parking are set in out in Clause 52.34 of the Melbourne Planning Scheme. Based on this, the statutory requirements for the provision of bicycle facilities for the development proposal are set out in Table 4.1.

Table 4.1: Statutory Requirement for Bicycle Facilities

Use	Size / No.	Statutory Rate		Statutory Requirement	
		Resident/Employee	Visitor	Resident/Employee	Visitor
Dwelling	600 apartments	In developments of four or more storeys, 1 to each 5 dwellings	In developments of four or more storeys, 1 to each 10 dwellings	120 spaces	60 spaces
Office	8,000sqm	1 to each 300sqm of net floor area if the net floor area exceeds 1000sqm	1 to each 1000sqm of net floor area if the net floor area exceeds 1000sqm	27 spaces	8 spaces
Residential Building (Hotel)	200 rooms	In developments of four or more storeys, 1 to each 10 lodging rooms	In developments of four or more storeys, 1 to each 10 lodging rooms	20 spaces	20 spaces
Total				167 spaces	88 spaces

Table 4.1 indicates that the proposed development has a statutory bicycle parking requirement of 255 spaces, including 167 resident/employee spaces and 88 resident visitor spaces.

4.2 Adequacy of Provision

It is proposed to provide in the order of 700 bicycle parking spaces across the subject site. This supply is above the statutory requirement and is considered acceptable.

4.3 Bicycle Parking Layout & Access

Bike parking will be provided in common areas, locked storage areas and at key entry points (for visitors).

The bicycle parking layout should be designed in accordance with AS 2890.3:2015. In summary:

- Vertical (wall mounted) bicycle parking spaces should be 1.2m long and at least 0.5m wide, accessed from a 1.5m wide aisle.
- Bicycle spaces in a horizontal alignment (on ground) should be 1.8m long with access via a minimum 1.5m wide aisle.
- Floor or pavement surfaces on which bicycle parking facilities are placed will have a maximum slope of 1 in 20 (5%).
- At a minimum, 20% of the statutory requirement will be in a horizontal alignment.
- A clear pathway width of at least 1.5m will be provided to the bicycle storage area.

4.4 On-Road Bicycle Lane (Docklands Drive)

Council has requested a permanent separated bicycle lane be provided on Docklands Drive between Waterfront Way and Saint Mangos Lane, to provide a link between the existing separated bicycle lanes to the west and east, which lead to Footscray Road and the Principal Bicycle Network.



It was proposed and agreed that this would be achieved by mirroring the Council design on the south side of Docklands Drive east of St Mangos Lane. In this instance, a 1m wide bike lane was established by line marking. An indicative concept plan showing such an arrangement on Docklands Drive between Waterfront Way and Saint Mangos Lane is provided in Appendix A, with an extract Figure 4.1.

Figure 4.1: Docklands Drive On-Road Bicycle Lane – Concept Plan



5. Car Parking

5.1 Statutory Requirements

The site is located within the Parking Overlay 10 area in the Melbourne Planning Scheme. Therefore, the requirements of Schedule 10 to Clause 45.09 of the Scheme apply to the site. This Schedule specifies *maximum* parking provisions.

An assessment of the statutory car parking requirements for Lot 14A in the amended Development Plan is set out in Table 5.1.

Table 5.1: Statutory Car Parking Requirements

Description	Use	Size	Statutory Parking Rate	Statutory Parking Limit
Apartments	Dwelling	600 apartments	1.5 spaces per dwelling	900 spaces maximum
Commercial	Office	8,000sqm	3 spaces to each 100 sqm of gross floor area	240 spaces maximum
Hotel	Residential Hotel	200 rooms	0.4 spaces to each room	80 spaces maximum
Total				1,220 spaces maximum

Table 5.1 anticipates the amended Development Plan has a statutory maximum car parking provision of 1,220 spaces for Lot 14A.

5.2 Adequacy of Car Parking Provision

The proposed amended plans include a car parking provision of 370 car parking spaces on Lot 14A. Therefore, the provision of car parking will continue to meet the requirements of Schedule 10 to Clause 45.09 of the Melbourne Planning Scheme.

5.3 Removal of Public Car Park

The site is currently occupied by a temporary at-grade open-air commercial car park. The proposed development on the site will result in the removal of this public car parking. It is likely that some of the existing (low to moderate) car parking demands will be displaced in the surrounding area.

The following commercial car parks are located in the immediate vicinity of the subject site:

- The District East car park: 1,100 car spaces
- The District West car park: 480 spaces
- Aqua Vista car park: 295 car spaces.

Having regard to the existing car parking demands on the site and the available car parking supply in the surrounding area, it is expected that the displaced car parking demands following the development of the subject site will be able to be readily accommodated within these other car parks.

5.4 Docklands Drive Car Parking

Subject to Council approval, it is proposed to convert the four car spaces on Docklands Drive (fronting the subject site) to short term (i.e., 15-minute parking) as part of the proposed development. In addition, it is proposed to relocate the 'Go-Get' car share space currently on Docklands Drive in front of the site into the Build to Rent (BTR) car park, in a position that will be publicly accessible.



6. Loading and Waste Collection

6.1 Statutory Requirement

Clause 65 of the Melbourne Planning Scheme indicates that, “Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate: ... The adequacy of loading and unloading facilities ...”.

6.2 Loading Demand

It is anticipated that loading activities associated with the proposed development will be moderate, with infrequent deliveries associated with the office use, and furniture deliveries for the residential use.

6.3 Proposed Loading and Waste Collection Arrangement

The proposed development will include dedicated areas for bin storage (for both residential and commercial waste) on the ground floors. It is understood that waste will be collected by Council’s regular waste collection services using the 8.8m long medium rigid vehicle from within the on-site loading bays.



7. Site Access Arrangements

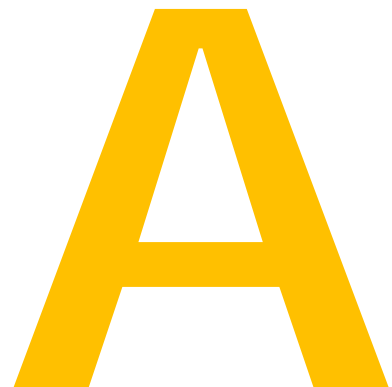
The existing road network adjacent to the subject land provides a suitable framework of key roads for future site access and circulation. Given the size of the subject land, vehicle access is proposed to be provided at multiple locations from these roads. Little Docklands Drive, Saint Mangos Lane and Waterfront Way are relatively flat and straight. Therefore, good sight distance is available for potential future access points along most of the lengths of these roads adjacent to the subject land.

To this end, the exact location of site access points will be subject to detailed design and the consideration of an efficient internal lot layout. However, consistent with the approved Development Plan, vehicular access will not be obtained directly from Docklands Drive.



Appendix A

Bicycle Lane Concept Plan





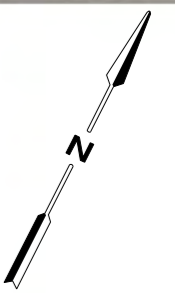
DOCKLANDS

DRIVE

LANE

MANGOS

SAINT



MAP REF 43/C8

ON 09/08/2023 AT 2:08:06 PM
PLOTTED BY : paulnguyen



PRELIMINARY PLAN
FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

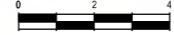
WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE
APPROXIMATE ONLY AND THEIR EXACT POSITION
SHOULD BE PROVEN ON SITE. NO GUARANTEE IS
GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DESIGNED
P. NGUYEN

DESIGN CHECK
D. GRAHAM

APPROVED BY
D. GRAHAM

DATE ISSUED
9 AUGUST 2023

SCALE
A3  1:200

CAD FILE NO.
300305014-01-P1.dgn

PROPOSED BICYCLE LANE
DOCKLANDS DRIVE, DOCKLANDS 3008

CONCEPT PLAN
DRAWING NO. 300305014-01-01

ISSUE P1



Level 25, 55 Collins Street
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Appendix 4 ESD & Acoustic Report

Consultant Advice Notice

From	Nicholas Hill	Advice No.	CAN No-04
Project	396 – 416 Docklands Drive (Lot 14), Docklands	Project No.	MEL2669
Date	16 October 2023	Pages	1/6
Subject	Development Plan Amendment Application: Sustainability and Acoustics	Revision:	06

Distribution to:

Attention	Company	Email
Stefan Miles	MAB	smiles@mab.com.au

Introduction

The following CAN details the benchmark guidelines that will be utilised for future planning permit applications resulting from the amended Development Plan affecting the undeveloped parcel at 396 – 416 Docklands Drive, Docklands (Lot 14). The benchmarks detailed in this CAN will form part of the Development Plan Amendment application and respond to the sustainability aspects, specifically, with response to the following Melbourne Planning Scheme parts:

- > **Sustainability**
 - 13.01-1s Natural Hazards and Climate Change
 - 15.01-2S Building Design
 - 15.01-2L-01 Energy and Resource Efficiency
 - 19.03-3L Stormwater Management (Water Sensitive Urban Design)
 - 53.18 Stormwater Management in Urban Planning
- > **Acoustic**
 - Schedule 12 to the design and development overlay – Noise Attenuation Area

Sustainability

The project has been registered with the Green Building Council of Australia (GBCA) to be delivered across two use stages, The Build to Rent North Block and Hotel + Commercial South Block. These buildings are each targeting a 5-star Design and As-Built certified rating. A minimum of 60 points is required to achieve the certifications. The projects have been registered with the Green Building Council of Australia, therefore, all points listed below including design documentation, will be independently reviewed for approval by the GBCA.

13.01-1s Natural Hazards and Climate Change

The objective of this planning scheme requirement is to minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning. The project is committed to achieving 2 points in the Green Star design and As-Built credit 3.0 Adaptation and Resilience. As part of this credit, the project will develop a project-specific Climate Adaptation Plan (CAP) in accordance with recognised standards and will implement solutions into the design and operation of the building that respond to the climate change risks identified within the CAP.

The CAP will directly respond to the strategies outlined within this planning scheme. It will,

- > Consider the risks associated with climate change in planning and management decision making processes.
- > Identify at risk areas using the best available data and climate change science.
- > Develop adaptation response strategies for the development to accommodate change in climate over time.
- > Site and design development to minimise risk to life, property, the natural environment and community infrastructure from natural hazards.

15.01-2S Building Design

The objective of this planning scheme requirement is to have building design and siting outcomes that contribute positively to the local context, enhance the public realm and support environmentally sustainable development.

The project utilises the following initiatives to address the objectives of this section:

- > Develop a project-specific waste management plan
- > Incorporate passive design responses to reduce the need for mechanical heating and cooling
- > Incorporate Solar PV, where feasible
- > Utilise Low Carbon materials such as concrete that has a reduction in Portland cement
- > Utilise rainwater tanks to use rainwater for toilet flushing

15.01-2L-01 Energy and Resource Efficiency

The objective of this planning scheme requirement is to encourage land use and development that is energy and resource efficient, supports a cooler environment, and minimises greenhouse gas emissions. In response to this, the project has set targets as noted in Table 1 which will establish benchmarks to use energy, water, and waste resources efficiently and reduce the greenhouse gas emissions when compared to a benchmark building. Furthermore, the project is committed to:

- > Reduce the urban heat island effect by achieving the criteria set out in Credit 25: Urban Heat Island Effect,
- > Reduce emissions associated with transportation by promoting active modes of transport (walking and cycling) and public transport use to,
- > Provide on-site landscaping to support a cooler environment, reduce stormwater runoff, and connect the building users to nature
- > Creating a project-specific Sustainable Management Plan

Table 1 Project Benchmarks for Energy, Water, and Waste Efficiency

Type of Building	Energy, Water, and Waste Efficiency Targets	Project Benchmarks
> Office over 5,000m ² gross floor area	<ul style="list-style-type: none"> > Compliance with the energy efficiency requirements of the Sustainable Design Scorecard or equivalent. > NABERS Office – Energy 5 Stars or Equivalent 	> The project is committed to a 5-star Green Star Design and As-Built Certified Rating. MAB has registered the project with the GBCA.

	<ul style="list-style-type: none"> > 5 Star rating under the Green Star – Office rating tool or equivalent > 3 points for Wat-1 credit under a current version of the Green building Council of Australia’s Green Star – Office rating tool or equivalent > A Waste Management Plan prepared in accordance with the current version of the City of Melbourne’s Guidelines for Waste Management Plans 	<ul style="list-style-type: none"> > The office portion of the commercial mixed-use building will be designed with the potential to achieve a 5-star NABERS Energy Office Base Build rating or above. > As part of the Design and As-Built pathway, the project is committed to achieving at least 5 points within Credit 18: Potable Water, for the commercial mixed-use building. > A Waste Management Plan will be prepared in accordance with the current version of the City of Melbourne’s Guidelines for Waste Management Plans. Credit 8 of Green Star Design & As Built v1.3 will be pursued and requirements will be integrated into the Waste Management Plans.
<ul style="list-style-type: none"> > Retail over 5,000m² gross floor area 	<ul style="list-style-type: none"> > 5 Star rating under the current version of Green Star – Retail Centre rating tool or equivalent > 5 points for Wat-1 credit under a current version of the Green building Council of Australia’s Green Star – Office rating tool or equivalent > A Waste Management Plan prepared in accordance with the current version of the City of Melbourne’s Guidelines for Waste Management Plans 	<ul style="list-style-type: none"> > The project is committed to a 5-star Green Star Design and As-Built Certified Rating. MAB has registered the project with the GBCA. > As part of the Design and As-Built pathway, the project is committed to achieving at least 5 points within Credit 18: Potable Water, for the commercial mixed-use building. > A Waste Management Plan will be prepared in accordance with the current version of the City of Melbourne’s Guidelines for Waste Management Plans. Credit 8 of Green Star Design & As Built v1.3 will be pursued and requirements will be integrated into the Waste Management Plans.
<ul style="list-style-type: none"> > Accommodation over 5,000m² gross floor area 	<ul style="list-style-type: none"> > 5 Star rating under the Green Star – Multi Unit Residential rating tool or equivalent > 1 point for Wat-1 credit under a current version of the Green building Council of Australia’s Green Star – Office rating tool or equivalent > A Waste Management Plan prepared in accordance with the current version of the City of Melbourne’s Guidelines for Waste Management Plans 	<ul style="list-style-type: none"> > The project is committed to a 5-star Green Star Design and As-Built Certified Rating. MAB has registered the project with the GBCA. > As part of the Design and As-Built pathway, the project is committed to achieving at least 1 point within Credit 18: Potable Water, for the commercial mixed-use building. > A Waste Management Plan will be prepared in accordance with the current version of the City of Melbourne’s Guidelines for Waste Management Plans. Credit 8 of Green Star Design & As Built v1.3 will be pursued and requirements will be integrated into the Waste Management Plans.

19.03-3L Stormwater Management (Water Sensitive Urban Design)

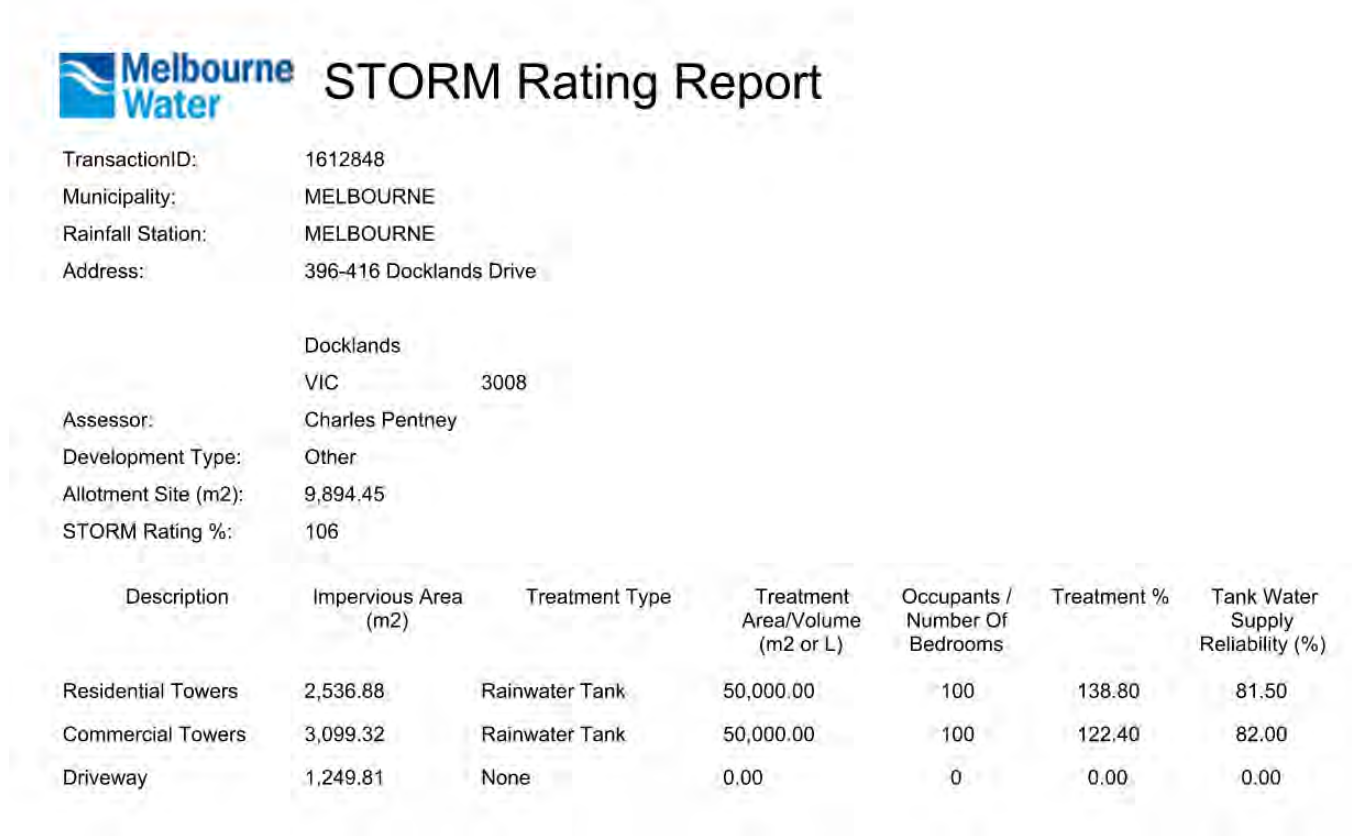
The objective of this planning scheme requirement is to achieve the best practice water quality performance objectives set out in the Urban Stormwater Best Practice Environmental Management Guidelines, CSIRO 1999 (or as amended). Currently, these water quality performance objectives are:

- > Suspended Solids - 80% retention of typical urban annual load

- > Total Nitrogen - 45% retention of typical urban annual load
- > Total Phosphorus - 45% retention of typical urban annual load
- > Litter - 70% reduction of typical urban annual load.

The project is committed to achieving the above objectives and will demonstrate this through a STORM calculations assessment or MUSIC modelling. At the current stage of design, the development can achieve a STORM rating of 106%.

Figure 1 STORM Assessment



53.18 Stormwater Management in Urban Planning

Clause 22.23 is the Local Planning Provision for the City of Melbourne. Clause 53.18 is the equivalent Victorian Planning Provision which covers similar objectives and strategies of protecting waterways.

As noted above, the project is committed to meeting the objectives of both Stormwater Management clauses by assessing the project against the objectives for pollution and flow reduction. The project will utilise stormwater harvesting and reuse onsite to minimum the pollutants and flow from the site. As the design progresses, size and re-use demand, as well as the overall strategy to meet the objectives, may vary. However, the objectives are committed to be met

Acoustic

The project is within the design and development overlay (schedule 12) – noise attenuation area, which the planning scheme provides the following design objectives:

- > *To ensure that new or refurbished developments for new residential and other noise sensitive uses constructed in the vicinity of the Docklands Major Sports and Recreation Facility include appropriate acoustic measures to attenuate noise levels, in particular music noise, audible within the building.*

- > *To ensure that land use and development in the vicinity of the Docklands Major Sports and Recreation Facility is compatible with the operation of a Major Sports and Recreation Facility.*

Schedule 12 Requirements

Any new or refurbished development or any conversion of part or all of an existing building that will accommodate new residential or other noise-sensitive uses must:

- > *Be designed and constructed to include noise attenuation measures. These measures must achieve a maximum noise level of 45 dB in habitable rooms with windows closed when music is emitted from the Major Sports and Recreation Facility in the Melbourne Docklands Area.*

ADP: The site is located at 396-416 Docklands Drive, Docklands, with tram lines to the southeast (on Docklands Drive, stop: New Quay Prom/ Docklands Drive) and Docklands Highway to the east (approximately 190m), which fall within the "noise influence area" as defined by Table D3,

- > *Be fitted with ducted air conditioning if the new or refurbished development is within 400 metres of the centre point of the Docklands Major Sports and Recreation Facility.*
- > *Have external glazing and doors and the air conditioning or ventilation system in all new residential and other noise-sensitive use and development designed by a recognised acoustic consultant.*

For the purpose of this requirement, noise-sensitive uses are those that have an element of residential accommodation and are nested under the definition of accommodation in the planning scheme.

Nicholas Hill
Sustainability Consultant
ADP Consulting Pty Ltd

Appendix 5 Waste Management Report



Leigh Design

waste management plans for all urban developments

Leigh Design Pty Ltd

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DEVELOPMENT PLAN AMENDMENT

WASTE MANAGEMENT STATEMENT

396 Docklands Drive, Docklands, Victoria

<u>Report Date:</u>	30 July 2023 (supersedes all prior reports)
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<u>Prepared By:</u>	Carlos Leigh, MIEAust
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It is understood that the proposed Development Plan Amendment would enable a future development of two podiums, west and east, on which three towers shall be constructed over the west podium and two over the east podium, for five towers in total. The towers shall incorporate residential apartments and commercial tenements.

A Facility Manager shall oversee building operations at each podium (and associated towers). Each podium shall feature a Loading Bay, which shall be utilised for waste collections.

A notional waste strategy is presented in this document, which shall be adapted during the future planning phase of the development. In particular, the future planning application shall include a detailed Waste Management Plan for consideration by the Responsible Authority.

The following table summarises the waste estimate for the Development Plan:

Waste Source	Base Qty (est.)	Garbage	Food	Recyc.	Glass
Residential	No. of units = 600	39.32	13.11	36.69	15.73
Café	No. of units = 180	3.02	0.76	1.76	0.76
Retail Shops	area (m ²) = 750	2.63	0.00	2.36	0.26
Offices	area (m ²) = 6200	3.91	0.43	3.91	0.43
Hotel	No. of rooms = 200	9.00	2.07	6.97	2.77
TOTAL (m³/wk)		57.87	16.36	51.69	19.94

Note: Waste figures are based on Council guidelines.

Council shall collect residential waste. For commercial waste, the Facility Manager shall engage a private contractor.

Based on the waste estimate, the Development Plan Bin Schedule is as follows:

Waste Source	Waste Stream	Bin Qty	Bin Litres	Collections per Week	Net Area m ²
Residential (shared system)	Garbage (3:1)	13m ³ Compactor		1	28.0
	Comm. Recyc. (3:1)	18m ³ Compactor		1	30.0
	Spare Garb. Bins	6	1,100	-	9.6
	Spare Recyc. Bins	6	1,100	-	9.6
	Food Organics	19	240	3	9.5
	Future Glass	22	240	3	11.0
	Charity Bin	3	240	At Call	1.5
	Hard/E-Waste	-	-	2/Month	6.0
Cafe (dedicated bins)	Garbage	1	1,100	3	1.6
	Food Organics	2	240	3	1.0
	Recycling	1	1,100	3	1.6
	Future Glass	2	240	3	1.0
	Hard/E-Waste/Other	-	-	At Call	1.5
Retail (shared bins)	Garbage	1	1,100	3	1.6
	Recycling	1	1,100	3	1.6
	Future Glass	1	240	3	0.5
	Hard/E-Waste/Other	-	-	At Call	1.5
Offices (shared bins)	Garbage	2	1,100	3	3.2
	Food Organics	1	240	3	0.5
	Recycling	2	1,100	3	3.2
	Future Glass	1	240	3	0.5
	Hard/E-Waste/Other	-	-	At Call	1.5
Hotel (dedicated bins)	Garbage	3	1,100	3	4.8
	Food Organics	3	240	3	1.5
	Recycling	3	1,100	3	4.8
	Future Glass	4	240	3	2.0
	Hard/E-Waste/Other	-	-	At Call	2.0
Net Waste Storage Area (excludes circulation), m²:					141.1

Suitable facilities for onsite waste storage and loading shall be provided, with adequate ventilation.

Also, in each dwelling and commercial tenancy, suitable waste receptacles shall be provided. In order to facilitate waste disposals at upper apartment levels, twin chutes shall be provided in each residential building.

Waste shall be collected within the Loading Bays by 8.8m long rear-lift trucks and 9.8m long hook-lift trucks. Loading Bays shall feature a 4.5m height clearance (5m at the point of compactor lift).

The Facility Manager shall be responsible for maintaining the waste system and for educating residents and commercial tenants on the proper use of the waste system.

Appendix 6

Interface and Design Principles



INTERFACES

The interfaces respond to their immediate neighbourhood character providing streetscapes with a varied architectural character and language.

All interfaces should be designed so that uses within the new buildings provides surveillance into the surrounding public spaces.

Robust and high quality materials are focused towards the lower levels. Service cupboards and vehicle entries are concentrated in areas with lower footfall and internalised where possible.

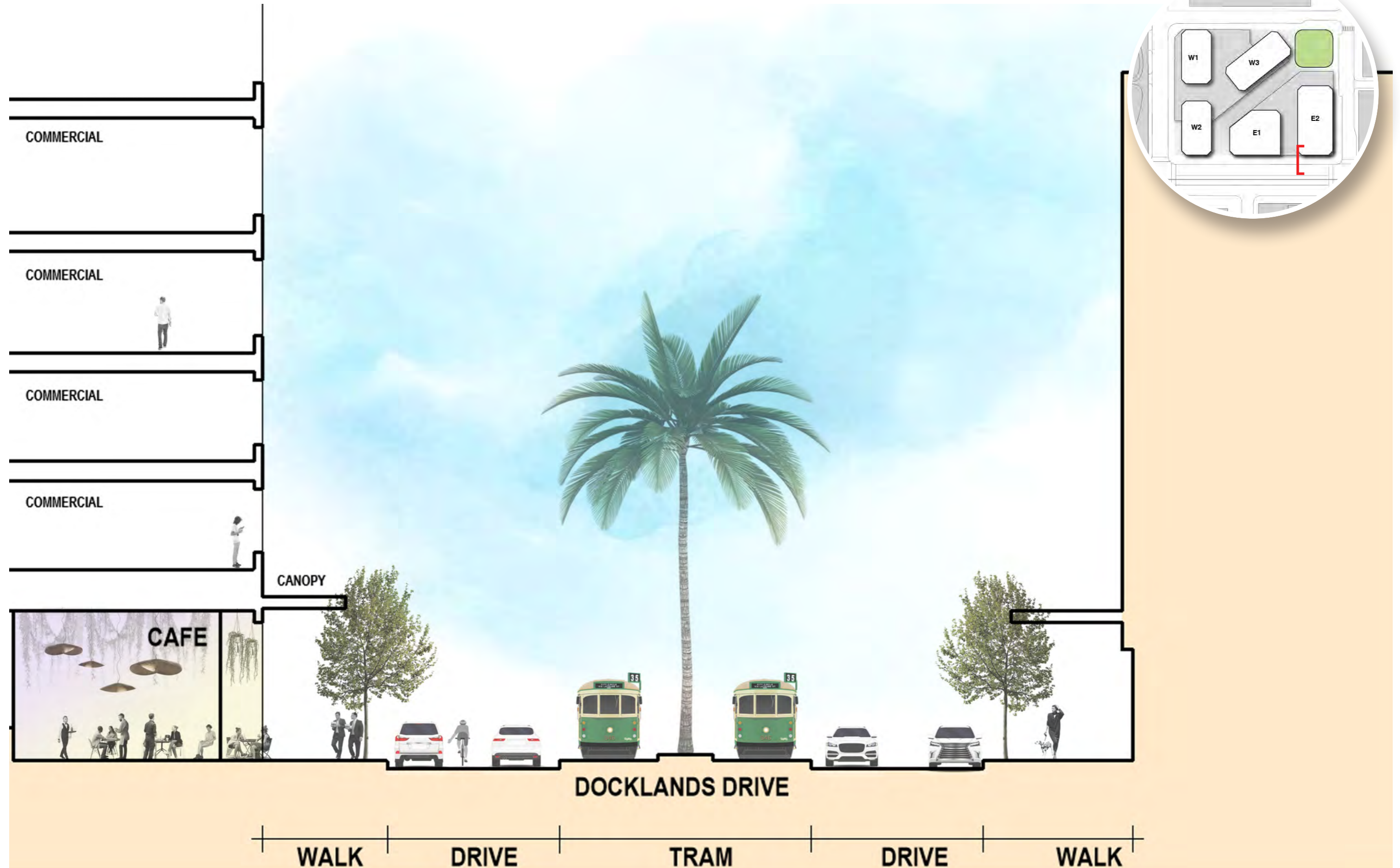


DOCKLANDS DRIVE INTERFACE DESIGN PRINCIPLES 'CIVIC STREET'

- Existing road, kerb and footpath alignment are unchanged.
- Retail, commercial or lobbies to activate the street level interface.
- Building facades predominantly set on property boundary reflecting the existing Docklands Drive streetscape. Undercroft and recessed areas on the street frontage may be considered to facilitate outdoor seating or for footpath widening at the major entries if the following design parameters are met:
 - The proportion of the undercroft or recessed areas are contained to the extent of highly active street interfaces, including retail or cafe spaces
 - The extent of undercroft or recessed areas have a minimum soffit height that is double its proposed depth
 - The undercroft or recessed areas achieve an exceptional level of design quality to ensure pedestrian comfort, safety, passive surveillance and pedestrian movement across the entire building elevation
- Services and vehicle access generally located away from this street frontage.
- Residential spaces elevated from ground for privacy and to maintain the predominantly commercial character of Docklands Drive.
- Well-designed, light weight street awnings are provided for weather protection over the footpath across active interfaces, within the height range of 3.5 - 5m from the ground level.
- Ensure all public realm interfaces adopt a fine grained design with high quality, robust and natural materials as depicted in provided renders.



DOCKLANDS DRIVE

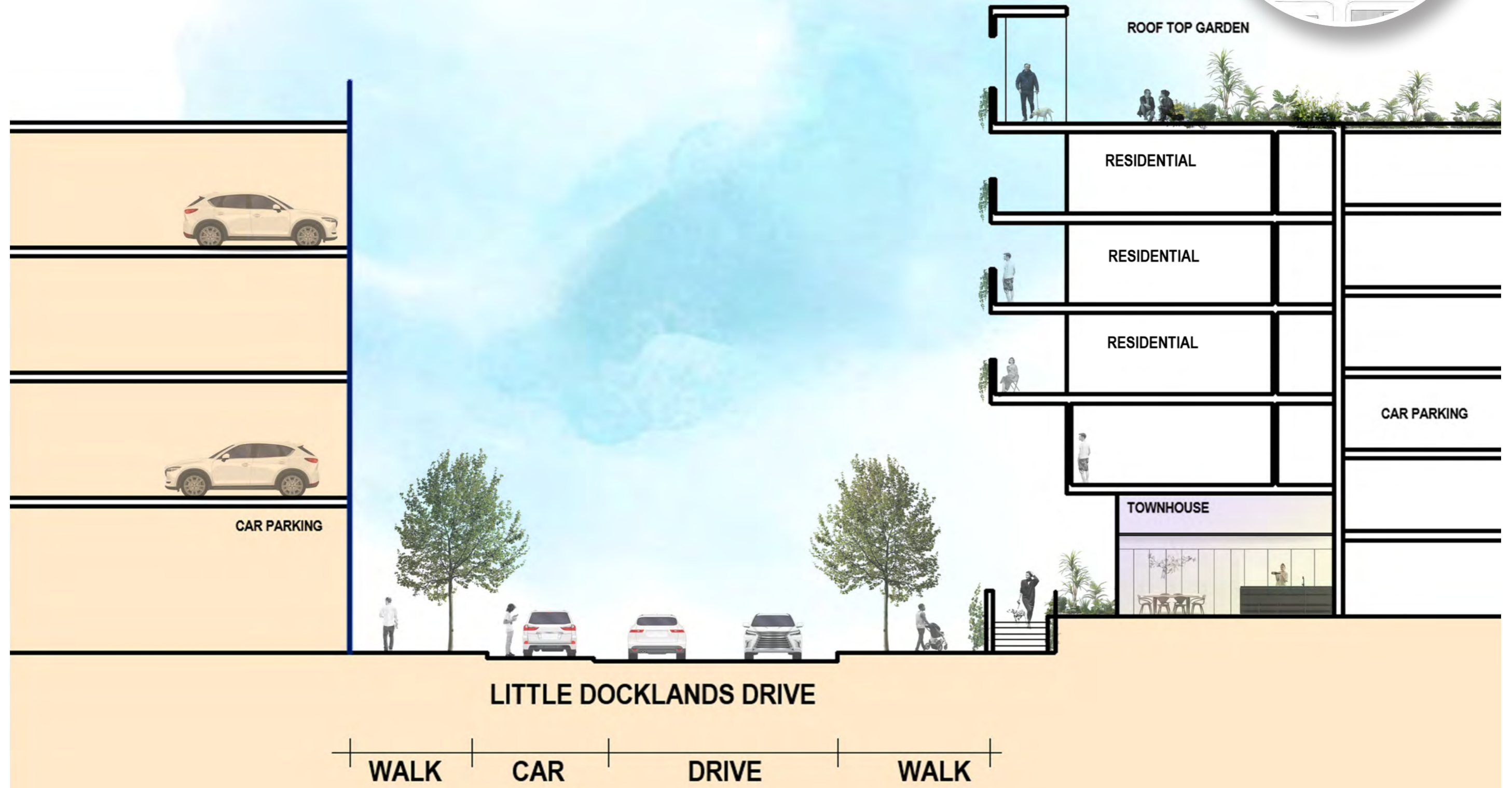
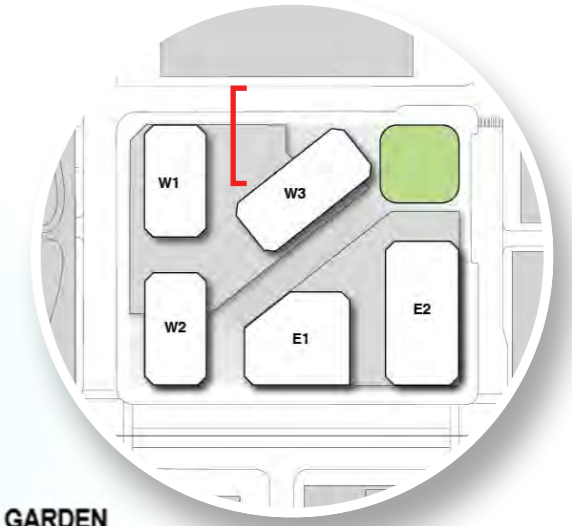


LITTLE DOCKLANDS DRIVE INTERFACE DESIGN PRINCIPLES

- Existing road, kerb and footpath alignment are unchanged.
- Residential townhouse typology to activate the street level interface, with direct street access and a recessed façade which provides elevated courtyard spaces.
- Potential for Undercroft and recessed areas on the North West corner for footpath widening at the lobby entry if the following parameters are met:
 - The design of the integrated design or landscape elements such as planting/seating, or an activating use (cafe kiosk or retail) are considered to better facilitate public occupation of the space
 - The proportion of the undercroft or recessed area is contained to the extent of the highly active public interfaces, such as retail or cafe spaces or the direct lobby entrance
 - The extent of undercroft or recessed areas have a minimum soffit height that is double its proposed depth
 - The undercroft or recessed areas achieve an exceptional level of design quality to ensure pedestrian comfort, safety, passive surveillance and pedestrian movement across the entire building elevation
- Services and vehicle access generally located away from this street frontage.
- Opportunity for additional façade greening to enhance the pedestrian experience.
- Primary building entries to be weather protected and legible for visitors and designed with high quality, light-weight materials.
- Potential for café/restaurant use overlooking park to be designed with a unique and publically inviting design language that further invites public through the community park space.
- Upper level/podium residential set to the property boundary (no setback) with balconies providing a high quality streetscape.
- Ensure all public realm interfaces adopt a fine grained design with high quality, robust and natural materials.

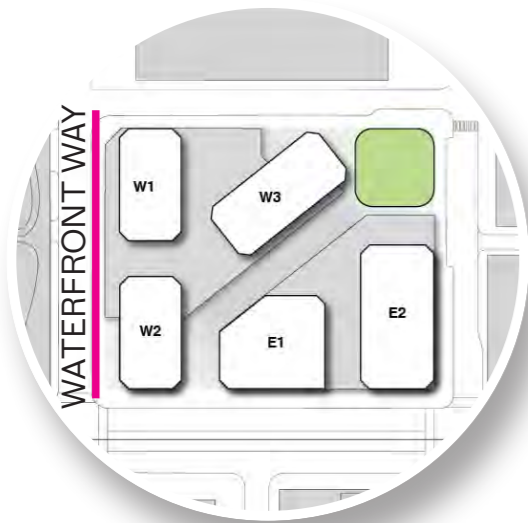


LITTLE DOCKLANDS

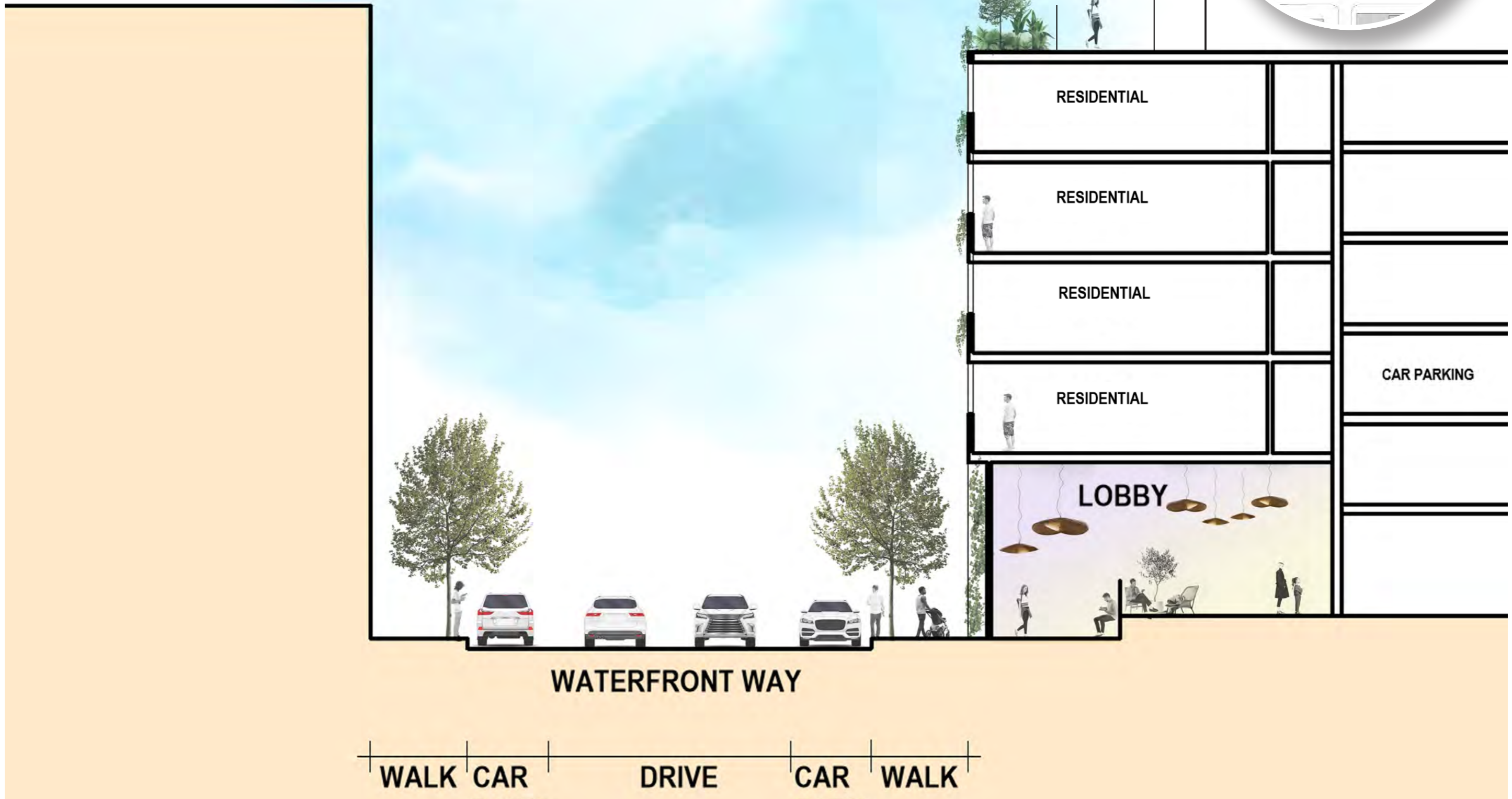
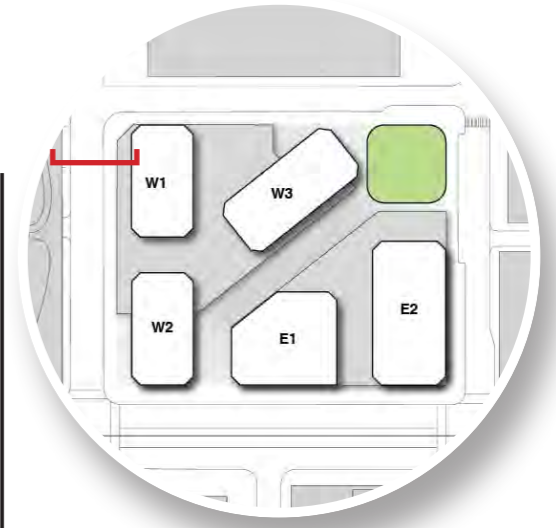


WATERFRONT WAY INTERFACE DESIGN PRINCIPLES

- Existing road, kerb and footpath alignment are unchanged.
- Waterfront Way (south section): Lobbies and active uses wrapping the corner of Docklands Drive, to provide active program opposite the Marriott hotel public entry.
- Waterfront Way (north section): Services, loading and vehicle entry to mirror opposing buildings.
- Podium residential set to the property boundary (no setback) with inset balconies providing a high quality streetscape.
- Opportunity for additional façade greening to enhance the pedestrian experience.
- Primary building entries to be weather protected and legible for visitors and designed with high quality light-weight materials.
- Maximised active edges to match Marriott Hotel extent.
- Services, loading and vehicle entry located mid-block should be designed with quality materials and design details that maintain visual interest at the street level.

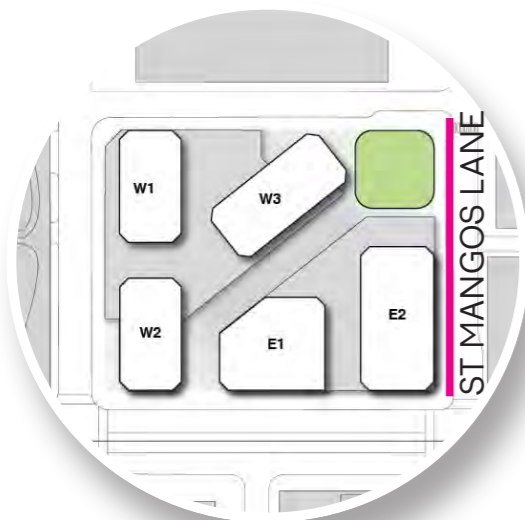


WATERFRONT WAY

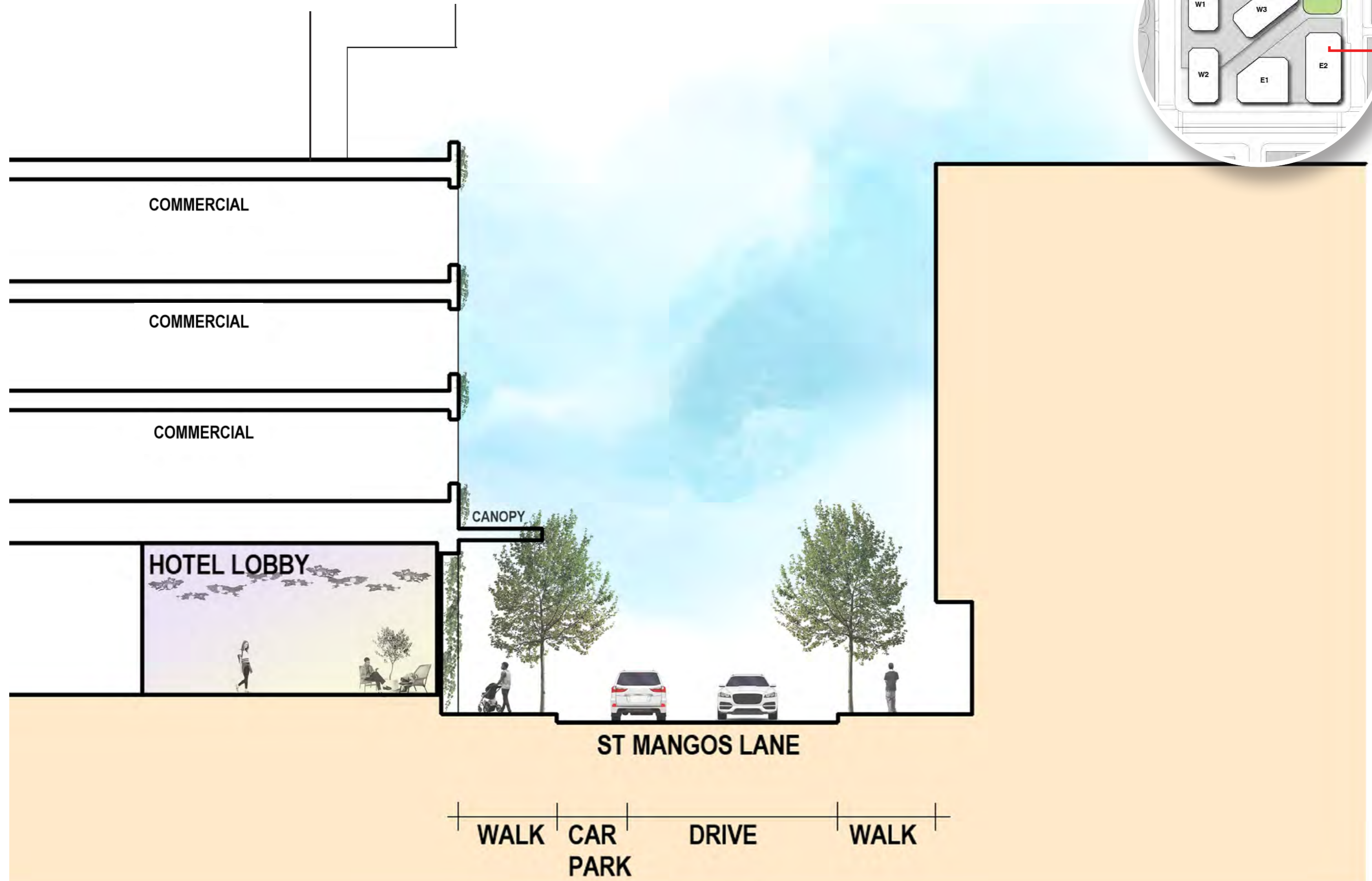
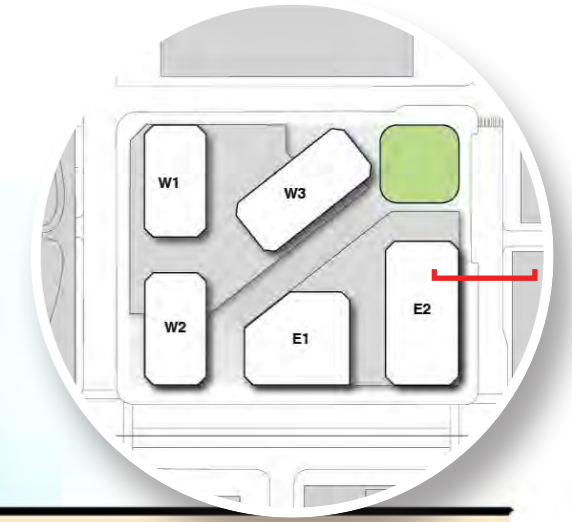


ST MANGOS LANE INTERFACE DESIGN PRINCIPLES

- Existing road, kerb and footpath alignment are unchanged.
- Lobbies and active uses wrapping the corner of Docklands Drive.
- Services, loading and vehicle entry located mid-block.
- Podium residential and commercial set to the property boundary with inset balconies providing a high quality streetscape.
- Primary building entries to be weather protected and legible for visitors and designed with high quality light-weight materials.
- Consideration given for passive surveillance of the park space and activation of this key corner.
- Services, loading and vehicle entry located mid-block should be designed with high quality materials and design details that maintain visual interest at the street level.
- Well designed, light-weight street awnings are provided for weather protection over the footpaths across the active interfaces, within the height range of 3.5 - 5m from the ground level.

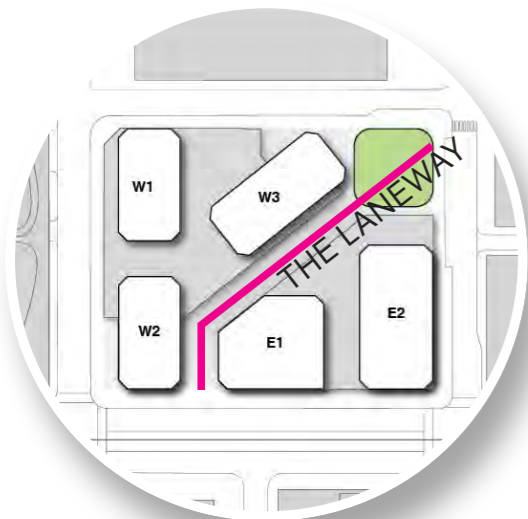


ST MANGOS LANE

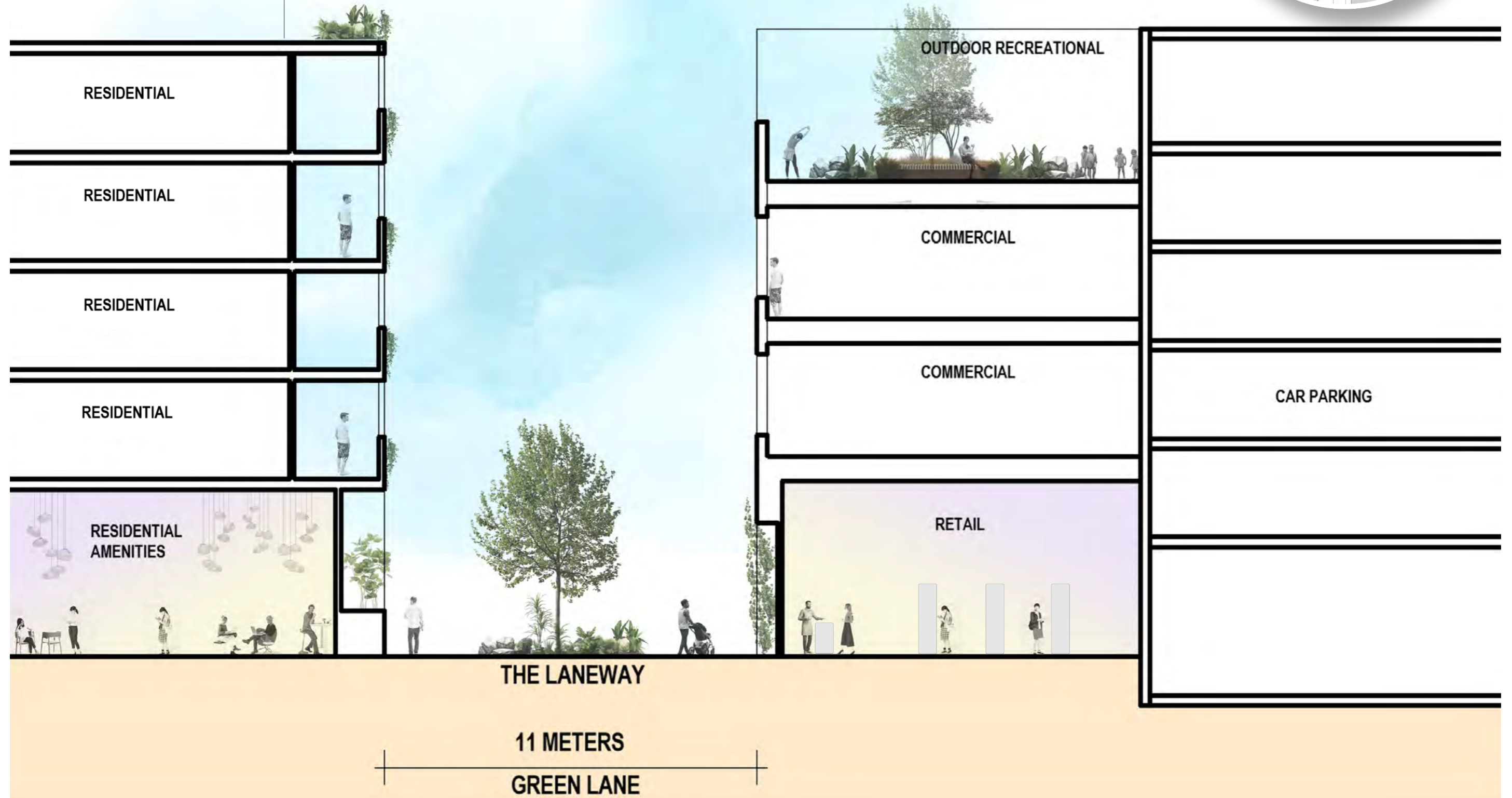
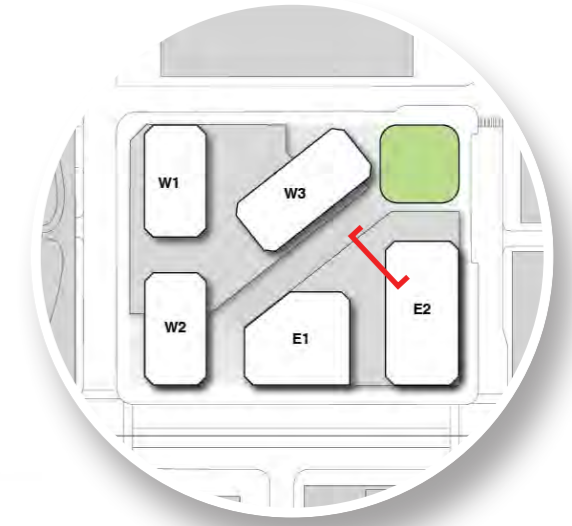


THE LANEWAY INTERFACE DESIGN PRINCIPLES

- A new eleven meter wide pedestrian lane.
- A simple and accessible arrangement of steps and ramp(s) lifting the laneway to the floor level of the adjacent building providing accessible transitions.
- Opportunity for landscaping, maintaining adequate room for pedestrian circulation.
- Frontages flanked with active uses where possible, providing a diverse and varied laneway experience.
- Podium residential and commercial set to the property boundary (no setback) with balcony projections of up to 1,000mm for juliet balconies which create a more fine-grain and animated laneway experience.
- Opportunity for additional façade greening to enhance the pedestrian experience.
- Consideration given for passive surveillance of the park space.
- The treatment of the lobby to the south-west corner should be visually permeable so there are views into the laneway from the corner of Docklands Drive and Waterfront City



THE LANEWAY



FACADE PRINCIPLES

Development Facades must be architecturally designed to a high standard with the designs incorporating:

- Visual breakdown of massing should be achieved through a highly articulated horizontal and vertical expression, with robust, high quality and textured materials as depicted in 3D visualisations.
- A defined shift in fenestration pattern should be achieved across wide building frontages to visually break-down perception of bulk.
- A defined shift from podium to tower treatments should be explored to create a visually defined street-wall where a distinct setback is not accommodated.
- High quality materials should be used across all visible building interfaces, with more robust and textured surfaces focused towards the podium levels.
- Services frontages require a high quality and visually interesting treatment that is cohesive with the architectural quality of the interface.



DOCKLANDS DRIVE AT LINKAGE OF COMMERCIAL BUILDING LOOKING NORTH



CORNER OF DOCKLANDS DRIVE AND ST MANGOS LANE LOOKING NORTH TOWARDS LITTLE DOCKLANDS DRIVE



DOCKLANDS DRIVE LOOKING EAST TOWARD HARBOUR ESPLANADE



WATERFRONT WAY LOOKING EAST



DOCKLANDS DRIVE AT ENTRY TO LANEWAY



LITTLE DOCKLANDS DRIVE LOOKING SOUTH TOWARDS DOCKLANDS DRIVE



LITTLE DOCKLANDS DRIVE LOOKING EAST TOWARD FOOTSCRAY ROAD



CORNER LITTLE DOCKLANDS DRIVE AND WATERFRONT WAY LOOKING SOUTH TOWARD DOCKLANDS DRIVE



VIEW OF LANEWAY LOOKING TOWARDS COMMUNITY PARK



COMMUNITY PARK AT CORNER OF LITTLE DOCKLANDS AND ST MANGOS LANE (LOOKING DOWN LANEWAY)