



WAVERLEY TRAFFIC COMMITTEE MEETING

Due to the coronavirus pandemic and the social distancing requirements in place a meeting of the WAVERLEY TRAFFIC COMMITTEE will be held by video conference at:

10AM, THURSDAY 23 APRIL 2020

Dan Joannides
Executive Manager, Infrastructure Services

Waverley Council
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AGENDA

Apologies

Declarations of Interests

Adoption of previous Minutes by Council - 26 March 2020 6

The recommendations contained in Part 1 - Matters Proposing That Council Exercise Its Delegated Functions - of the Minutes of the Waverley Traffic Committee meeting held on 26 March 2020 are scheduled to be adopted by Council at its meeting on 21 April 2020.

PART 1 – MATTERS PROPOSING THAT COUNCIL EXERCISE ITS DELEGATED FUNCTIONS

NOTE: The matters listed under this part of the agenda propose that Council either does or does not exercise the traffic related functions delegated to it by TfNSW. The recommendations made by the Committee under this part of the agenda will be submitted to Council for adoption.

TC/C STATE ELECTORATE OF COOGEE

TC/C.01/20.04 Ocean Street South, Bondi - Temporary Road Closure for Crane Lifts (CD-58/2020) 13

COUNCIL OFFICERS PROPOSAL:

That Council:

1. Approves the temporary closure of Ocean Street South, Bondi, between Bondi Road and Birrell Street over two days during a working week (7.00 am on Day 1 to 11:30 pm on Day 2) on dates to be agreed with Council in accordance with the Construction Traffic and People Plan of Management attached to this report, subject to the Applicant:
 - (a). Notifying NSW Police and Transport for NSW and obtaining relevant approvals.
 - (b). Obtaining relevant approvals from the National Heavy Vehicle Regulator.
 - (c). Notifying the State Transit Authority, NSW Ambulance Service and NSW Fire and Rescue.
 - (d). Notifying local residents and businesses around 5 working days prior to the event with a follow up notification on the day prior to Day 1 of the closure.
 - (e). Obtaining approval of any tree pruning from Council's tree management team.
 - (f). The applicant liaising with and assisting affected residents and other people during the two days of operation.

- (g). Using RMS-accredited traffic controllers.
 - (h). Covering all costs associated with closing the road, including traffic control.
 - (i). Completing all work by 11.30 pm on Day 2 when full access to Ocean Street South and residences will be restored.
- 2. Delegate's authority to the Executive Manager, Infrastructure Services to approve the dates that the operation will occur.
 - 3. Requires a Council compliance officer to be on-site for the duration of the works at the Applicant's expense, and that this be communicated to the Applicant.

TC/V STATE ELECTORATE OF VAUCLUSE

TC/V.01/20.04 64 Blair Street, North Bondi - Construction Zone (A03/2514-04) 58

COUNCIL OFFICER'S PROPOSAL:

That Council:

- 1. Installs an 11 metre long 'No Parking 7AM-5PM Mon-Fri / 8AM to 3PM Sat Council Authorised Vehicles Excepted Excludes Public Holidays' zone fronting 64 Blair Street, North Bondi.
- 2. Delegates authority to the Executive Manager, Creating Waverley, to adjust the length and duration of, or remove the construction zone, as necessary.

TC/V.02/20.04 Barracluff Avenue, Bondi Beach - Traffic Assessment (A03/0042-04)..... 61

COUNCIL OFFICER'S PROPOSAL:

That Council prepares a preferred option and alternatives for community consultation that include:

- 1. Preferred option:
 - (a) Construction of pedestrian/traffic islands with associated line marking and signage at the intersections of Barracluff Avenue and Francis Street, and Barracluff Avenue and Lamrock Avenue, Bondi Beach, as shown in Drawing 9005 Issue A attached to this report.
 - (b) Kerb extensions in Barracluff Avenue on both sides of the road opposite:
 - (i) 23 Barracluff Avenue and 25 Barracluff Avenue.
 - (ii) 5 Barracluff Avenue and 7 Barracluff Avenue.
- 2. Alternative option: closure of Barracluff Avenue in the vicinity of 21 Barracluff Avenue.

TC/CV ELECTORATES OF COOGEE AND VAUCLUSE

TC/CV.01/20.04	Reduction in the number of parking meters installed in beach front locations (A20/0145).....	81
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COUNCIL OFFICER'S PROPOSAL:

That Council reduces the number of parking meters installed in Queen Elizabeth Drive, Park Drive North, Park Drive South and Bronte Cutting from 36 to 19 at the locations identified in this report.

PART 2 – TRAFFIC ENGINEERING ADVICE

NOTE: The matters listed under this part of the agenda seek the advice of the WTC only and do not propose that Council exercise its delegated functions at this point in time (though they may or may not require it in the future).

TC/TEAC STATE ELECTORATE OF COOGEE

Nil.

TC/TEAV STATE ELECTORATE OF VAUCLUSE

Nil.

TC/TEACV ELECTORATES OF COOGEE AND VAUCLUSE

Nil.

TC/TEAL ITEMS WITHOUT NOTICE

Nil.

**MINUTES OF THE WAVERLEY TRAFFIC
COMMITTEE MEETING SCHEDULED TO BE
HELD AT WAVERLEY COUNCIL CHAMBERS,
CNR PAUL STREET AND BONDI ROAD, BONDI
JUNCTION ON THURSDAY, 26 MARCH 2020**



Voting Members Present:

Cr P Masselos	Waverley Council – Chair
Sgt L Barrett	NSW Police – Eastern Suburbs Police Area Command – Traffic Services
Mr M Carruthers	Transport for NSW – Network and Safety Officer
Mr P Pearce	Representing Marjorie O’Neill, MP, Member for Coogee
Ms J Zin	Representing Gabrielle Upton, MP, Member for Vaucluse

Also Present:

Cr T Kay	Waverley Council – Alternate Chair
Mr B Gidies	State Transit – Traffic and Services Manager (Eastern Region)
Mr D Joannides	Waverley Council – Executive Manager, Infrastructure Services

This meeting was scheduled to be held at Waverley Council Chambers on Thursday, 26 March 2020. Due to the coronavirus and social distancing requirements, the meeting was held by email between 23 March 2020 and 2 April 2020, in accordance with clause 5.4 of the Waverley Traffic Committee Charter.

Apologies

There were no apologies.

Declarations of Pecuniary and Non-Pecuniary Interests

There were no declarations of interest.

Adoption of Previous Minutes by Council - 27 February 2020

The recommendations contained in Part 1 – Matters Proposing that Council Exercise its Delegated Functions – of the minutes of the Waverley Traffic Committee meeting held on 27 February 2020 were adopted by Council at its meeting on 17 March 2020 with the following changes:

1. TC/C.06/20.02 – Macpherson Street/St Thomas Street, Bronte – Intersection Upgrade.

Council adopted the recommendation of the Traffic Committee subject to clause 1 being amended to read as follows:

‘Improved street lighting for the pedestrian crossing including the installation of a dimmer switch.’

2. TC/C.07/20.02 – Macpherson Street, Bronte – Temporary Road Closure for Tower Crane Installation.

Council adopted the recommendation of the Traffic Committee subject to clause 1(c) being amended to read as follows:

‘Providing Council with a Resident Notification Letter and Plan detailing the timing and method of notifying local residents, Charing Cross Precinct, Bronte Beach Precinct and businesses of the road closure for Council’s approval.’

Items by Exception

The following items on the agenda were dealt with together, and the Council Officer’s Proposal for each item was unanimously supported by the Committee:

1. TC/C.01/20.03 – Read Lane, Bronte – No Parking Restrictions.
2. TC/C.02/20.03 – Albion Street, Waverley – Timed Parking.
3. TC/C.04/20.03 – 13 Gordon Place, Bronte – ‘P Disability Only’ Zone.
4. TC/C.05/20.03 – 22 Philip Street, Bondi – ‘P Disability Only’ Zone.
5. TC/V.02/20.03 – Bondi Public School – School Pick-up/Drop-off – No Stopping Zone.
6. TC/V.03/20.03 – 17 Simpson Street, Bondi Beach – ‘P Disability Only’ Zone.
7. TC/V.04/20.03 – 25 Glasgow Avenue, Bondi Beach – Construction Zone.

The following items were dealt with separately:

1. TC/C.03/20.03 – 16 Thompson Street, Tamarama – Construction Zone.
2. TC/V.01/20.03 – Barracluff Avenue, Bondi Beach – Traffic Assessment.

PART 1 – MATTERS PROPOSING THAT COUNCIL EXERCISE ITS DELEGATED FUNCTIONS

NOTE: *The matters listed under this part of the agenda propose that Council either does or does not exercise the traffic related functions delegated to it by TfNSW. The recommendations made by the Committee under this part of the agenda will be submitted to Council for adoption.*

TC/C STATE ELECTORATE OF COOGEE**TC/C.01/20.03 Read Lane, Bronte - No Parking Restrictions (A14/0145)****COUNCIL OFFICER'S PROPOSAL:**

That Council installs No Parking restrictions on the northern side of Read Lane between Murray Street and Alfred Street, Bronte.

WTC RECOMMENDATION (UNANIMOUS SUPPORT):

That the Council Officer's Proposal be adopted.

Voting members present for this item: Representative of the Member for Coogee, NSW Police representative, TfNSW representative and Waverley Council representative (Chair).

TC/C.02/20.03 Albion Street, Waverley - Timed Parking (A16/0643)**COUNCIL OFFICER'S PROPOSAL:**

That Council writes to Randwick Council requesting consideration of changes to parking restrictions on the eastern side of Albion Street north of Wallace Street, Waverley. These restrictions involve conversion of 10.5 m of unrestricted parking to a 10.5 m '1P 8.30 am–6 pm Mon–Fri, 8.30 am–12.30 pm Sat' zone eastern side of Albion Street, as shown in Figure 2 in this report.

WTC RECOMMENDATION (UNANIMOUS SUPPORT):

That the Council Officer's Proposal be adopted.

Voting members present for this item: Representative of the Member for Coogee, NSW Police representative, TfNSW representative and Waverley Council representative (Chair).

TC/C.03/20.03 16 Thompson Street, Tamarama - Construction Zone (A03/2514-04)**COUNCIL OFFICER'S PROPOSAL:**

That Council:

1. Installs a 12 m long 'No Parking 7 am–5 pm Mon–Fri, 8 am–3 pm Saturday Council Authorised Vehicles Excepted Excludes Public Holidays' zone in Thompson Street, Tamarama.
2. Delegates authority to the Executive Manager, Infrastructure Services, to adjust the length and duration of, or remove, the construction zone, as necessary.

WTC RECOMMENDATION (UNANIMOUS SUPPORT):

That:

1. The Council Officer's Proposal not be adopted.
2. Council notes that the construction zone application has been withdrawn.

Voting members present for this item: Representative of the Member for Coogee, NSW Police representative, TfNSW representative and Waverley Council representative (Chair).

TC/C.04/20.03 13 Gordon Place, Bronte - 'P Disability Only' Zone (A18/0719)**COUNCIL OFFICER'S PROPOSAL:**

That Council installs a 5 m long 'P Disability Only' zone outside 13 Gordon Place, Bronte.

WTC RECOMMENDATION (UNANIMOUS SUPPORT):

That the Council Officer's Proposal be adopted.

Voting members present for this item: Representative of the Member for Coogee, NSW Police representative, TfNSW representative and Waverley Council representative (Chair).

TC/C.05/20.03 22 Philip Street, Bondi - 'P Disability Only' Zone (A18/0719)**COUNCIL OFFICER'S PROPOSAL:**

That Council installs a 5 m long 'P Disability Only' zone outside 22 Philip Street, Bondi.

WTC RECOMMENDATION (UNANIMOUS SUPPORT):

That the Council Officer's Proposal be adopted.

Voting members present for this item: Representative of the Member for Coogee, NSW Police representative, TfNSW representative and Waverley Council representative (Chair).

TC/V STATE ELECTORATE OF VAUCLUSE**TC/V.01/20.03 Barracluff Avenue, Bondi Beach - Traffic Assessment (A03/0042-04)****COUNCIL OFFICER'S PROPOSAL:**

That Council prepares a preferred option and alternatives for community consultation that include:

1. Preferred option:

- (a) Construction of pedestrian/traffic islands with associated line marking and signage at the intersections of Barracluff Avenue and Francis Street, and Barracluff Avenue and Lamrock Avenue, Bondi Beach, as shown in Drawing 9005 Issue A attached to this report.
- (b) Kerb extensions in Barracluff Avenue on both sides of the road opposite:
 - (i) 23 Barracluff Avenue and 25 Barracluff Avenue.
 - (ii) 5 Barracluff Avenue and 7 Barracluff Avenue.

2. Alternative option: closure of Barracluff Avenue in the vicinity of 21 Barracluff Avenue.

WTC RECOMMENDATION (UNANIMOUS SUPPORT):

That:

- 1. The Council Officer's Proposal not be adopted.
- 2. This item be deferred to the next Traffic Committee meeting.

Voting members present for this item: Representative of the Member for Vacluse, NSW Police representative, TfNSW representative and Waverley Council representative (Chair).

A submission from L Coleman was circulated to Committee members.

TC/V.02/20.03 Bondi Public School - School Pick-up/Drop-off - No Stopping Zone (A03/0042-04)

COUNCIL OFFICER'S PROPOSAL:

That Council:

- 1. Installs No Stopping restrictions:
 - (a) On the western side of Moore Street, Bondi, with an unbroken yellow (C3) line from the southern side of the Bondi Public School teachers' car park to 10 m north of the car park, as shown in Figure 2 in this report. No stopping signs are to be installed to reinforce the line marking.
 - (b) On the eastern side of the Moore Street/Moore Street intersection with an unbroken yellow (C3) line extending 8 m into both Moore Street and Henderson Street, as shown in Figure 2 in this report.
- 2. Relocates the existing car share space outside the school gate on Moore Street 10 m to the north, as shown in Figure 2 in this report.
- 3. Installs a new kerb ramp (Type A) as per Council's Standard Footpath Drawing (F3) on the school (western) side of Moore Street opposite the existing ramp on the eastern side of the road, as shown in Figure 4 in this report.

WTC RECOMMENDATION (UNANIMOUS SUPPORT):

That the Council Officer's Proposal be adopted.

Voting members present for this item: Representative of the Member for Vaucluse, NSW Police representative, TfNSW representative and Waverley Council representative (Chair).

TC/V.03/20.03 17 Simpson Street, Bondi Beach - 'P Disability Only' Zone (A18/0719)

COUNCIL OFFICER'S PROPOSAL:

That Council installs a 5 m long 'P Disability Only' zone outside 17 Simpson Street, Bondi Beach.

WTC RECOMMENDATION (UNANIMOUS SUPPORT):

That the Council Officer's Proposal be adopted.

Voting members present for this item: Representative of the Member for Vaucluse, NSW Police representative, TfNSW representative and Waverley Council representative (Chair).

TC/V.04/20.03 25 Glasgow Avenue, Bondi Beach - Construction Zone (A03/2514-04)

COUNCIL OFFICER'S PROPOSAL:

That Council:

1. Installs a 15 m long 'No Parking 7 am–5 pm Mon–Fri, 8 am–3 pm Sat Council Authorised Vehicles Excepted Excludes Public Holidays' zone in front of 25 Glasgow Avenue, Bondi.
2. Delegates authority to the Executive Manager, Infrastructure Services, to adjust the length and duration of, or remove, the construction zone, as necessary.

WTC RECOMMENDATION (UNANIMOUS SUPPORT):

That the Council Officer's Proposal be adopted.

Voting members present for this item: Representative of the Member for Vaucluse, NSW Police representative, TfNSW representative and Waverley Council representative (Chair).

TC/CV ELECTORATES OF COOGEE AND VAUCLUSE

Nil.

PART 2 – TRAFFIC ENGINEERING ADVICE

NOTE: The matters listed under this part of the agenda seek the advice of the WTC only and do not propose that Council exercise its delegated functions at this point in time (though they may or may not require it in the future).

TC/TEAC STATE ELECTORATE OF COOGEE

Nil.

TC/TEAV STATE ELECTORATE OF VAUCLUSE

Nil.

TC/TEACV ELECTORATES OF COOGEE AND VAUCLUSE

Nil.

.....
SIGNED AND CONFIRMED
MAYOR
21 APRIL 2020

REPORT
TC/C.01/20.04

Subject: Ocean Street South, Bondi - Temporary Road Closure for Crane Lifts

TRIM No.: CD-58/2020

Author: Hamoon Bahari, Professional Engineer, Traffic and Transport
Calum Hutcheson, Service Manager, Traffic and Transport

Authoriser: Dan Joannides, Executive Manager, Infrastructure Services

COUNCIL OFFICERS PROPOSAL:

That Council:

1. Approves the temporary closure of Ocean Street South, Bondi, between Bondi Road and Birrell Street over two days during a working week (7.00 am on Day 1 to 11:30 pm on Day 2) on dates to be agreed with Council in accordance with the Construction Traffic and People Plan of Management attached to this report, subject to the Applicant:
 - (a). Notifying NSW Police and Transport for NSW and obtaining relevant approvals.
 - (b). Obtaining relevant approvals from the National Heavy Vehicle Regulator.
 - (c). Notifying the State Transit Authority, NSW Ambulance Service and NSW Fire and Rescue.
 - (d). Notifying local residents and businesses around 5 working days prior to the event with a follow up notification on the day prior to Day 1 of the closure.
 - (e). Obtaining approval of any tree pruning from Council's tree management team.
 - (f). The applicant liaising with and assisting affected residents and other people during the two days of operation.
 - (g). Using RMS-accredited traffic controllers.
 - (h). Covering all costs associated with closing the road, including traffic control.
 - (i). Completing all work by 11.30 pm on Day 2 when full access to Ocean Street South and residences will be restored.
2. Delegate's authority to the Executive Manager, Infrastructure Services to approve the dates that the operation will occur.
3. Requires a Council compliance officer to be on-site for the duration of the works at the Applicant's expense, and that this be communicated to the Applicant.

1. Executive Summary

Council has received an application from Modscape requesting the temporary closure of Ocean Street South in the vicinity of No. 90 (between Bondi Road and Birrell Street) in order to deliver and install 8 components of a modular home.

A copy of the Construction Vehicle and Pedestrian Plan of Management (CVPPM) submitted by the applicant for the road closure and other aspects of the construction is attached.

The installation of the modules involves three stages:

1. Stage 1 – Pre-Installation Works
2. Stage 2 – Installation Works (road closure)
3. Stage 3 – Post Installation Works

The proposed closure will occur during the Stage 2 installation works. It will affect sections of Ocean Street South over two days. Full road closure in the vicinity of No. 90 Ocean Street South will occur from 5.30 pm on Day 1 until 11.30 pm on Day 2.

The applicant has nominated a Tuesday and Wednesday for the operation. Actual days and dates are to be approved by Executive Manager, Infrastructure Services.

The approach and departure route for a crane and 8 articulated trailers for Stage 2 will be applied for to the National Heavy Vehicle Regulator (NHVR). RMS (now part of Transport for NSW) approval will be sought for the use of state roads up to and including Bondi Road and Council Street. Council approval is required for the use of local roads including Ocean Street, Birrell Street, Ewell Street, and Bennet Street.

Truck routes for Stage 1 and Stage 3 do not require NHVR approval as the truck lengths will comply with current restrictions for general access. Assessment of Stage 1 and Stage 3 do not require traffic committee review. They will be assessed separately by Council officers with appropriate conditions imposed.

There will be some pruning of tree branches in order to facilitate access to the site and for the crane operations. This is being assessed separately by Council's tree management team.

Council will need to exercise its delegated functions to approve the proposal.

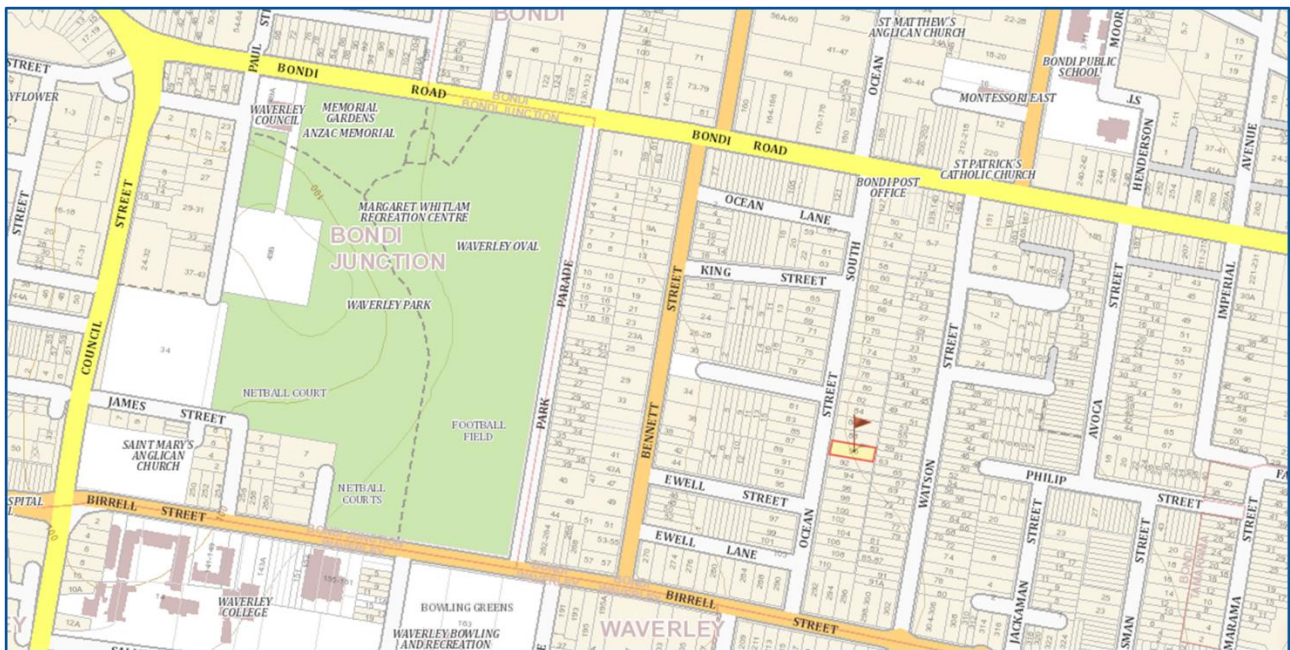


Figure 1.1: Site location

2. Introduction/Background

2.1 The development

The development at 90 Ocean Street South involves demolition of an existing house (completed), the construction of a swimming pool, and the construction of a 4 bedroom house with a double garage. Each component has been approved by a private certifier under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The relevant approvals are:

1. CD-26/2020 – Swimming Pool.
2. CD-6/2020 – Demolition of existing dwelling.
3. CD-58/2020 – Construction of a new two storey dwelling excluding swimming pool.

Waverley Council has not been involved in the approvals.

The CVPPM relates to CD-58/2020, the construction of the new dwelling.

The proposed dwelling is a prefabricated building constructed off-site. The dwelling comprises 8 welded steel modules. Each module will be independent when fabricated off-site and transported individually. The modules will be welded and bolted together on site to form the overall frame.

2.2 Resident consultation

The applicant is currently in the process of consulting residents in relation to the proposed road closure. Feedback from the consultation to date will be presented by the applicant to the Traffic Committee at the April 2020 meeting. The consultation area specified by Council is shown in **Figure 2.1**.

A copy of the consultation letter delivered by the applicant to residents is contained in **Appendix G** of the attached CVPPM.

Note that at the time of specifying the resident consultation area Council was not aware that the application would include the use of Ewell Street and Bennet Street for four of the trucks to exit the area. Impacts here are not severe.

Note also that the results of the community consultation were not available at the closing of the agenda.

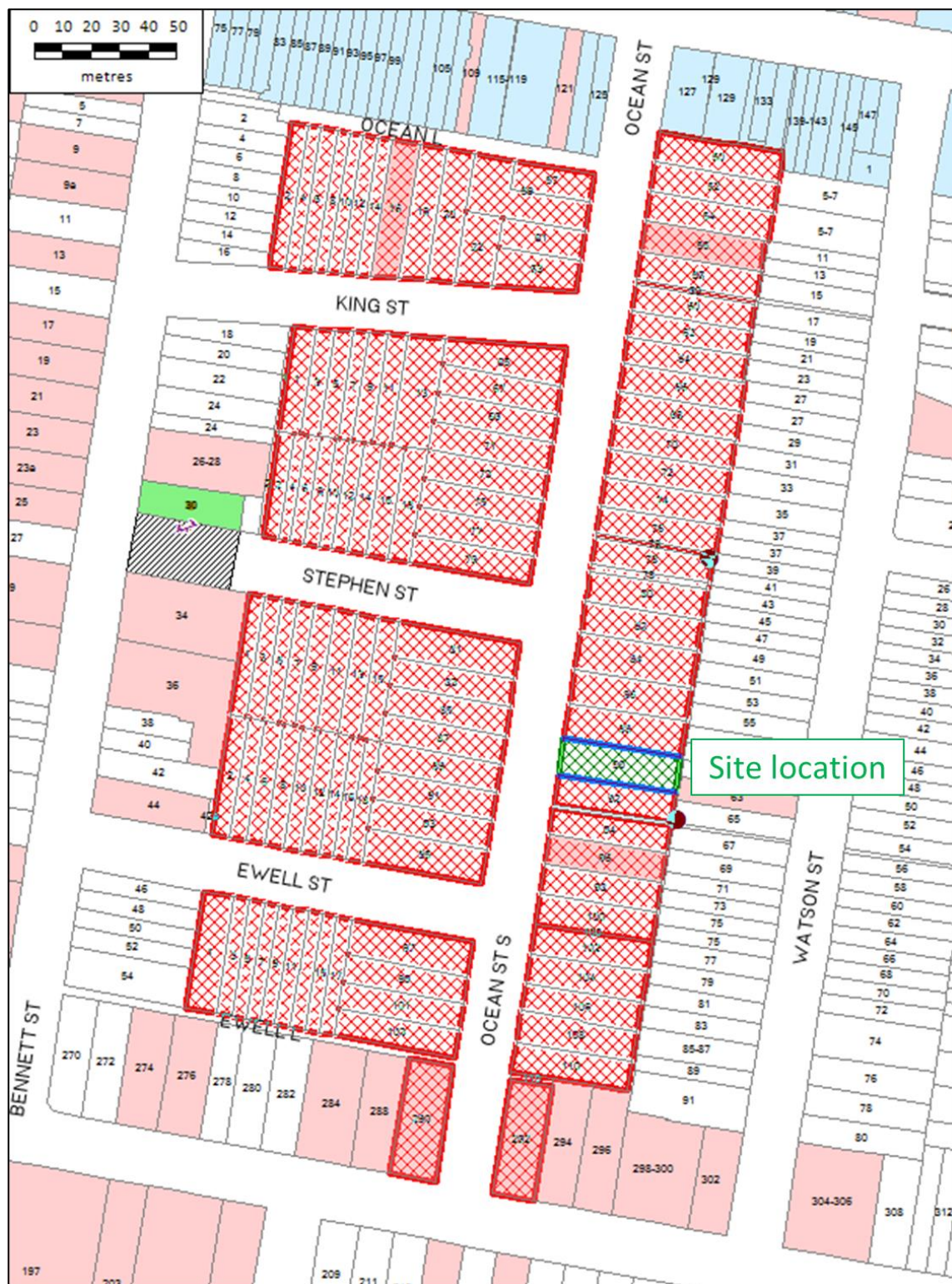


Figure 2.1: Resident consultation area specified by Council

3. Technical Analysis

3.1 Schedule of operations

Traffic control plans for the proposed operations are contained in **Appendix E** of the attached CVPPM.

The trucks will deliver the modules from a site in Victoria. The delivery of the 8 modules to the site must occur prior to 5.00 am due to time restrictions specified under the approval required by the National Heavy Vehicle Regulator (NHVR). Delivery and installation of a crane will occur on the day prior to the module delivery.

Eight trucks will access the site during the delivery. Lengths of the trucks including the module load are:

- 3 x 17.540 metre trucks with modules,
- 1 x 16.627 metre truck with module,
- 2 x 18.340 metre trucks with modules,
- 1 x 20.513 metre truck with module, and
- 1 x 23.200 metre truck with module.

Key activities during the operation are:

1. Day 1:
 - a. 7.00 am – commencement of traffic management to restrict parking.
 - b. 5.30 pm – full closure outside No. 90.
 - c. 5.30 pm to 12.30 am Day 2 – delivery of crane components and setup of crane.
2. Day 2:
 - a. 3.00 am to 5.00 am – arrival of 8 trucks containing modules by 5.00 am to meet NHVR time restrictions. Trucks are parked in a nominated sequence (see **Figure 3.1**). Engines are turned off until trucks are required to move up to the crane after 7.00 am.
 - b. 7.00 am to 1.00 pm – Modules south of No. 90 (E, D, C, and B) are transferred to the building site. Ocean Street South, south of No. 90 is now cleared for general traffic by 1.00 pm.
 - c. 1.00 pm to 5.00 pm – Modules north of No. 90 (A, H, G, and F) are transferred to the building site. Ocean Street South, north of No. 90 is cleared for general traffic by 5.00 pm.
 - d. 5.00 pm to 11.30 pm – Crane is dismantled and removed from Ocean Street South. Ocean Street South is to be fully opened to general traffic by 11.30 pm.

The applicant has nominated a Tuesday and Wednesday for the operation. Actual days and dates are to be approved by Executive Manager, Infrastructure Services.

Further details are contained in **Appendix H** of the attached CVPPM.

3.3 Truck movements

The location of the trucks upon arrival is shown in **Figure 3.1**.



Figure 3.1: Truck parking locations

Trucks A, H, G, and F will enter and exit via Bondi Road. Three point turns will be undertaken in Stephen Street.

Trucks B, C, D, and E will enter via Birrell Street and exit via Ewell Street, Bennett Street, and Birrell Street.

3.2 Proposed Crane Works

The crane and 4 large modular pieces will be delivered by trucks entering and exiting via Bondi Road. The trucks will undertake a 3 point turn at Stephen Street under traffic control. Trucks will be parked between the crane and Ocean Lane during the crane setup. Cars will not be able to pass once trucks are within the zone.

The crane will block Ocean Street South at No. 90. during installation, operation and prior to completion of dismantling.

Specifications of the crane are contained in the attached CVPPM.

3.3 Pedestrians and driveway access

The applicant will have on site traffic controllers to ensure safe passage of pedestrians and access to and from individual houses.

Two driveways opposite No. 90 will be inaccessible while the crane is operating. One requires access for motorbikes only. The other is a private driveway. The applicant will be required to liaise with and assist residents and other people of these properties as well as any other affected residents during the closure period.

3.4 Implications for on-street parking

On-street parking will be severely impacted during the operations. **Figure 3.4** shows the parking restrictions proposed by the applicant to complete the installation of the housing modules. The restrictions are marked as:

- Purple line → “No Street parking at any time from 5:30am to 11:59pm Wednesday”. Note the 11.39 pm restriction will need to be adjusted to 11.30 pm in accordance with the submitted schedule.
- Blue line → “Restricted access between the following hours on Day 2: 12:15am to end of works”
- Blue dashed line → “Restricted access between the following hours on Day 2: 12:15am to 2pm”
- Yellow line → “No Parking Tuesday from 2pm to 6pm”

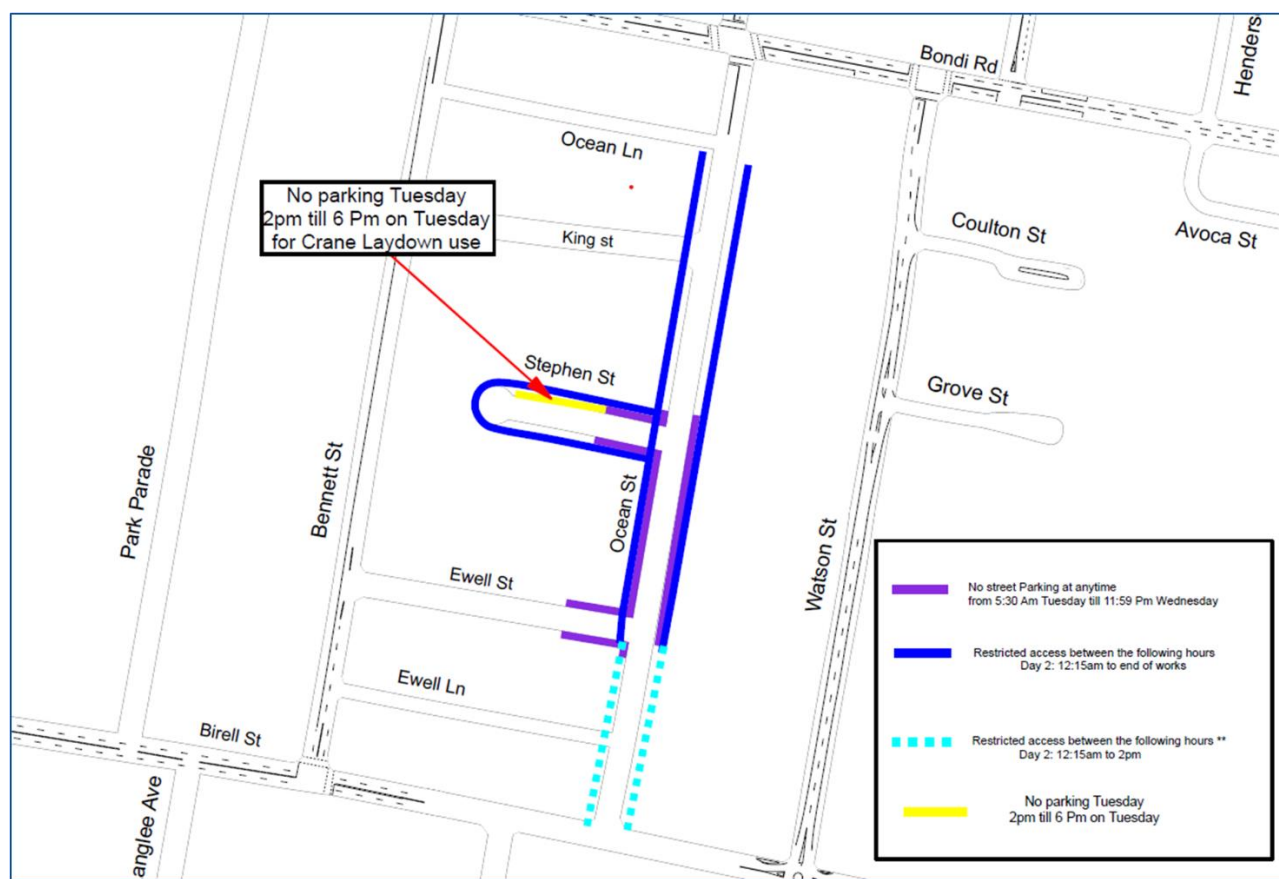


Figure 3.2: Proposed parking restrictions

4. Financial Information for Council’s Consideration

The applicant will be required to meet the cost of all traffic control, rubbish removal and damage restoration associated with the road closure.

5. Attachments:

1. 90 OCEAN STREET BONDI - Construction Vehicle and Pedestrian Plan of Management [↓](#)

PROPOSED RESIDENTIAL DEVELOPMENT

90 OCEAN STREET BONDI

Construction Vehicle and Pedestrian Plan of Management

APRIL 2020

MODSCAPE.

MODULAR BUILDER
TRAFFIC AND TRAFFIC REPORT
430 Francis Street
Brooklyn VIC 3012
Tel: (03) 9316 6000
Email: robert@modscape.com.au



TABLE OF CONTENTS

1.0 INTRODUCTION.....	4
2.0 PROPOSED DEVELOPMENT.....	5
1. Site, Context and Existing Use.....	5
2. Proposed Development.....	5
3. Construction Program.....	6
4. Construction Process	6
3.0 TRAFFIC CONDITIONS.....	7
1. Traffic Conditions.....	7
2. Transport Services.....	7
4.0 PROPOSED CONSTRUCTION TRAFFIC MANAGEMENT PLAN.....	8
1. Construction Vehicle Route.....	8
2. Truck Movements.....	9
3. Construction Hours.....	9
4. Crane and Materials Handling.....	9
5. Site Induction.....	9
6. Traffic Control Plans.....	9
7. Pedestrian Management.....	10
8. Hoardings.....	10
5.0 CRANAGE WORKS.....	11
1. Crane Lifting Plan.....	11
2. Risk Assessment.....	11

APPENDIX A	ARCHITECTURAL PLANS
APPENDIX B	TRANSPORT SERVICES
APPENDIX C	MODULES/TRUCK SIZES
APPENDIX D	TURNING PATH ASSESSMENT
APPENDIX E	TRAFFIC CONTROL PLAN
APPENDIX F	CRANE LIFT STUDY/RISK ASSESSMENT
APPENDIX G	RESIDENT NOTIFICATION
APPENDIX H	PROPOSED RUNNING SHEET FOR INSTALLATION

MODSCAPE.

LIST OF ILLUSTRATIONS

FIGURE 1	SITE PLAN
FIGURE 2	VEHICLE ROUTE

MODSCAPE.

1.0 INTRODUCTION

The client is currently in the process of building for a nsw modular dwelling for installation at 90 Ocean Street Bondi.

This Construction Vehicle and Pedestrian Plan of Management has been prepared to assist council and or others understand the building process involved in the new dwelling and any impacts that may arise with the installation of a modular dwelling.

The proposed building is to be a pre-fabricated building constructed off-site. The proposed building methodology is a full welded steel structure which comprises 8 modules in total. Each module will be independent when fabricated off-site and transported individually, but upon installation on-site, the dwelling will be welded and bolted together to form one complete diaphragm. The modules are designed, engineered, built and installed using fully qualified contractors and consultants.

Modscape has been in business for over 13 years and have successfully delivered hundreds of new projects across Australia.

MODSCAPE.

2.0 PROPOSED DEVELOPMENT

2.1 SITE, CONTEXT AND EXISTING USE

The Site (Figure 1) is Lot 1 of 1099292 which occupies a rectangular shaped block of approximate 536m² with a street frontage of 13m to 90 Ocean Street Bondi.

The Site is adjoined by residential dwellings, while there are several parks, schools and other types of accommodation in the surrounding area.

The Site is currently occupied with an existing dwelling which is owner-occupied.

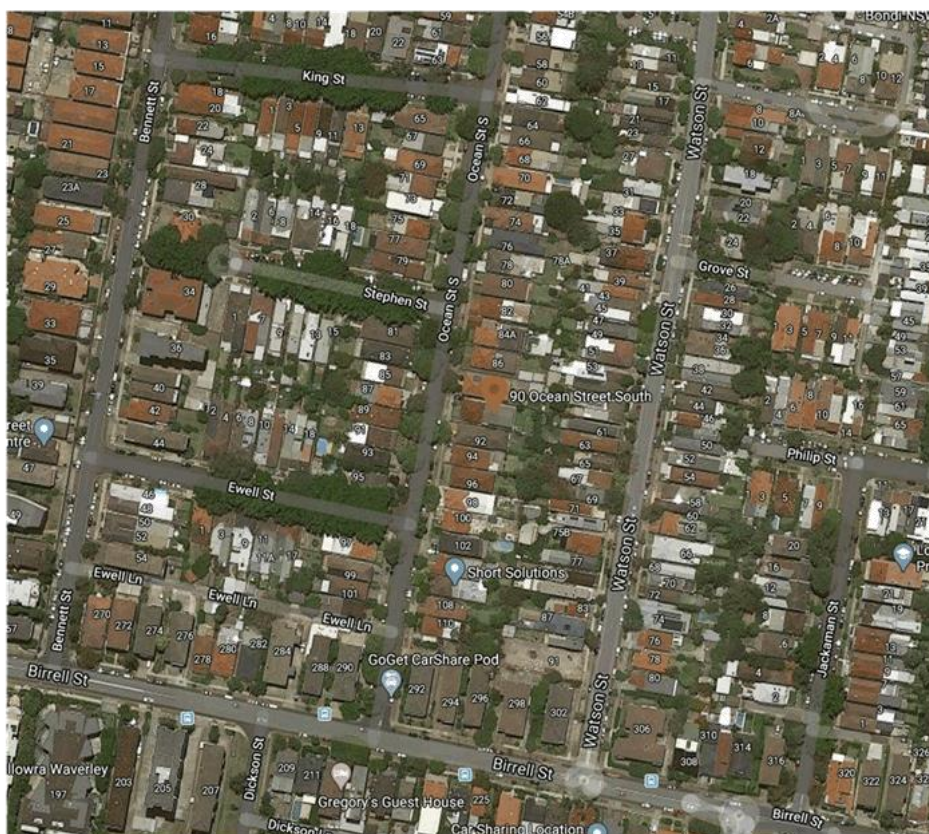


FIGURE 1 SITE PLAN

2.2 PROPOSED DEVELOPMENT

It is proposed to construct a new dwelling on the property.

The proposed dwelling consists of;

- 4 Bedrooms with 3 bathrooms
- Living, Dining and Kitchen, Pantry
- Rumpus

MODSCAPE.

- Laundry
- Double Garage
- External landscaping

A copy of the proposed Architectural Plans are provided in Appendix A.

A copy of the Town Planning Drawings have been submitted to council for DA approval.

2.3 CONSTRUCTION PROGRAM

The proposed timelines for various stages of the works are as follows;

Earthworks/In-Ground Services	6 weeks
Construction (including off-site fabrication)	12 weeks
Post Install Construction	4 weeks
Total	16 weeks

The total construction program of 16 weeks is considerably less than an average conventional building.

2.4 CONSTRUCTION PROCESS

The proposed development will be a new modular dwelling, which will comprise of on-site works and off-site works.

The works are best separated into 3 stages;

- Stage 1 – Pre-Installation Works
- Stage 2 – Off-Site Manufacturing and Installation Works
- Stage 3 – Post Installation Works

Stage 1 Works will consist of earthworks and in-ground services and considered the enabling works prior to the installation of the modules.

Stage 2 works will consist of the off-site manufacture of the dwelling and the process of transportation and installation of the modules. The works are built off-site in a controlled environment in Brooklyn, Victoria. The dwelling is a fully welded structural steel frame which is then manufactured completely off-site. Each module is non-typical in size and site dependant. The installation of the dwelling is achieved by a crane lift on-site undertaken by a suitably qualified crane contractor.

Examples of Modscape residential dwellings can be found on our website www.modscape.com.au

Stage 3 works will consist of the completion of works post the installation of the modules (i.e installation of floor coverings and final commissioning of services)



3.0 TRAFFIC CONDITIONS

3.1 TRAFFIC CONDITIONS

Observations of traffic activity via the proposed vehicle route on the main arterial as well as the ancillary road to enter site for the modular installation was completed during typical morning, business and afternoon peak periods.

The observations revealed relatively free flowing conditions except for minor stoppages due to signal operations and any on-street parking/stoppages.

A Traffic Management Plan and VMS Board will be required for the assistance of the installation of the modular buildings. Applications will be submitted to council for approval upon DA approval.

3.2 TRANSPORT SERVICES

Our Traffic Management Plan and Traffic Control Plan will take public transport routes into consideration and alternative routes will be provided at all times to maintain transport services.

MODSCAPE.

4.0 PROPOSED CONSTRUCTION TRAFFIC MANAGEMENT PLAN

As described previously, there are 3no. stages throughout the project lifecycle. They are as follows;

- Stage 1 – Pre-installation Works
- Stage 2 – Installation Works
- Stage 3 – Post Installation Works

4.1 CONSTRUCTION VEHICLE ROUTE

All trucks involved during Stage 1 and Stage 3, including but not limited to earthworks machinery, will access the site normally.

The approach and departure route for the crane and articulated trailer for Stage 2 module delivery and installation will be applied for to the National Heavy Vehicle Regulator (NHVR) and will go through the typical application process.

It is confirmed that Modscape transport subcontractor Nunn Bros Haulage has already been to site to assess the vehicle route. The proposed entry and exit to Ocean Street for Modules A, H, G and F through Bondi Road, and the proposed entry for Module B, C, D and E through Birrell Street and exit via Ewell and Bennet Streets.



MODSCAPE.



FIGURE 2 VEHICLE ROUTE

It is proposed that the laydown area for the articulated trucks is along Ocean Street and partial use of Stephen Street.

To enable the installation to occur we confirm that we will require a road closure in Ocean Street and Stephen Street. The confirmed times/dates will be based on the approval given to us by council, however, a full Traffic Control Plan will be issued to council For Approval once we have confirmed conditions as set out in the DA approval.

Modscape can confirm that a swept path assessment has been undertaken and was deemed achievable.

4.2 VEHICLE MOVEMENTS

The proposed truck and vehicle movements are as follows;

- Stage 1 – Pre-Installation Works
 - Earthworks/In-Ground Services – 2 to 3 per day
- Stage 2 – Installation Works
 - Vehicle movement will be confirmed upon application, however the proposed running sheet during the installation works is described in Appendix H
- Stage 3 – Post Installation Works
 - Services Trades – 2 to 3 per day
 - Finishing Trades – 3 to 4 per day

MODSCAPE.

4.3 CONSTRUCTION HOURS

The approved hours of on-site construction during Stage 1 and Stage 3 works will be determined as part of the DA Process.

The approved hours of installation works will be determined upon application to council and the NVHR.

4.4 MATERIALS HANDLING

All deliveries during Stage 1 will loaded/unloaded within the work zone (i.e the site).

There will be minimal to no deliveries once the modules have been installed as all works will have been completed prior to arrival. Any materials that are required post installation will have already been loaded into the building to enable for completion of works.

4.5 SITE INDUCTION

All workers and visitors on the site will be subject to a formal site induction process and all the inductions will be performed specific to each trades according to Modscape OH&S requirements.

4.6 TRAFFIC CONTROL PLANS

Traffic Control Plans will be prepared by a suitably qualified Traffic Control contractor and will be submitted to Council for approval.

There will be 2 Traffic Control Plans for the project.

1. Stage 1 and Stage 3 for all on-site works.
2. Stage 2 for installation works. A copy of this will be submitted upon DA approval, which will confirm date and time of works to be completed. This will enable a full TCP to be detailed for submission.

4.7 PEDESTRIAN MANAGEMENT

Site Fencing will be installed at all times on the site boundary. Footpaths will be accessible at all times, apart from any deliveries, during Stage 1 and Stage 3 of the works.

Full Traffic Management will be in place during Stage 2 installation works. RMS accredited Traffic Controllers will be on-site at all times, as well as Senior Modscape management.

4.8 HOARDINGS

Site Fencing will be installed at all times. Any other conditions will be adhered to as required.

MODSCAPE.

5.0 CRANAGE WORKS

We note that we will require a crane lift for the modular building, which are works pertaining to Stage 2 as noted above.

It is confirmed that Modscape crane subcontractor WGC Cranes has already been to site to assess the access and lift capacities and any restrictions.

5.1 CRANE LIFTING PLAN

A crane lifting plan has been developed.

This assessment confirmed that a 400T crane would be used.

All relevant permit applications will be made once DA is received.

5.2 RISK ASSESSMENT

A site inspection has been completed and the key item identified was the required for Tiger Tales to certain locations.

These have been identified within the crane lifting plan which forms part of the permit applications.

MODSCAPE.

APPENDIX A

ARCHITECTURAL PLANS

MODSCAPE.

APPENDIX B

TRANSPORT SERVICES

N/A

MODSCAPE.

APPENDIX C

MODULE/TRUCK SIZES

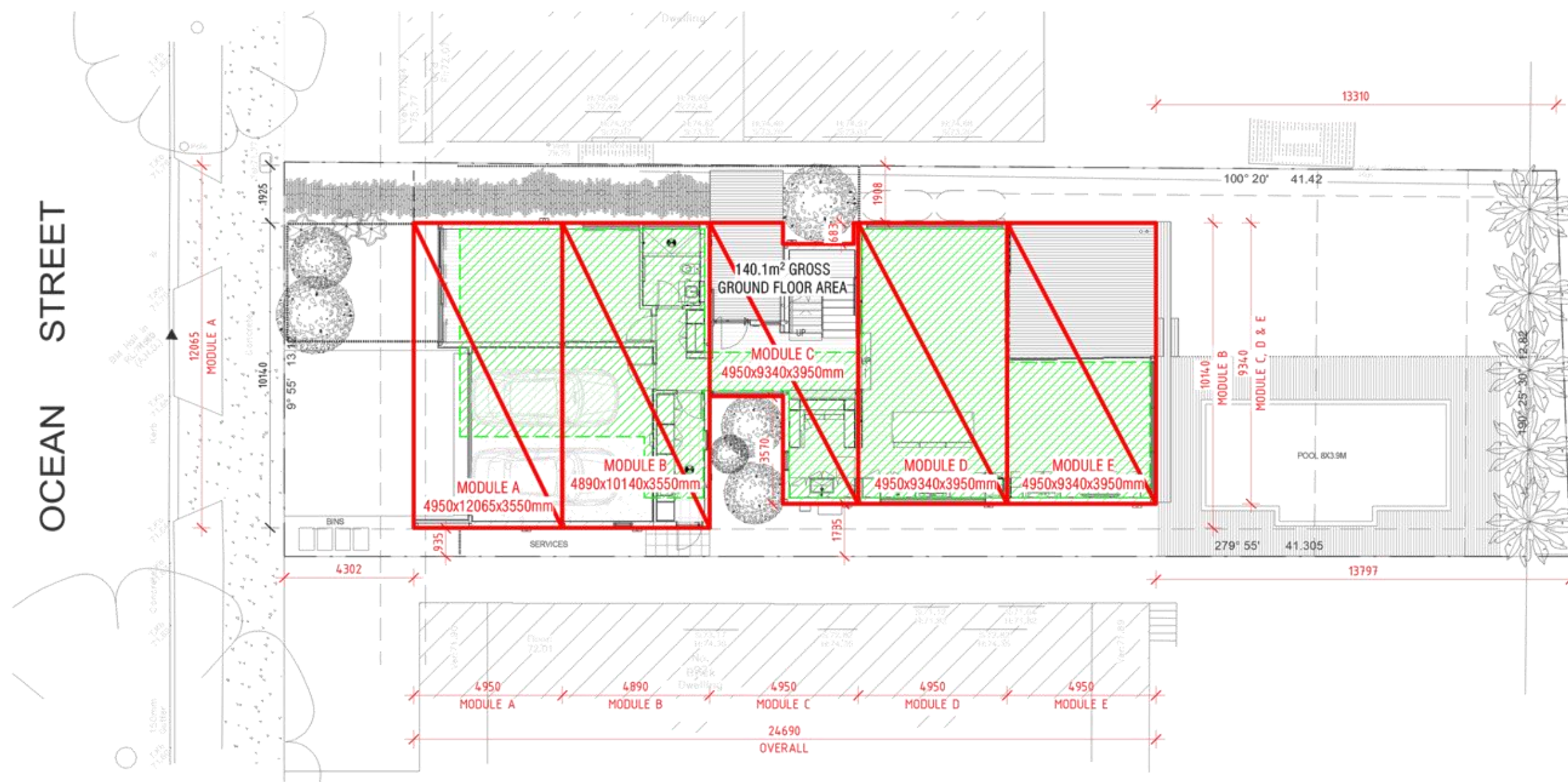


90 Ocean Street, Bondi NSW

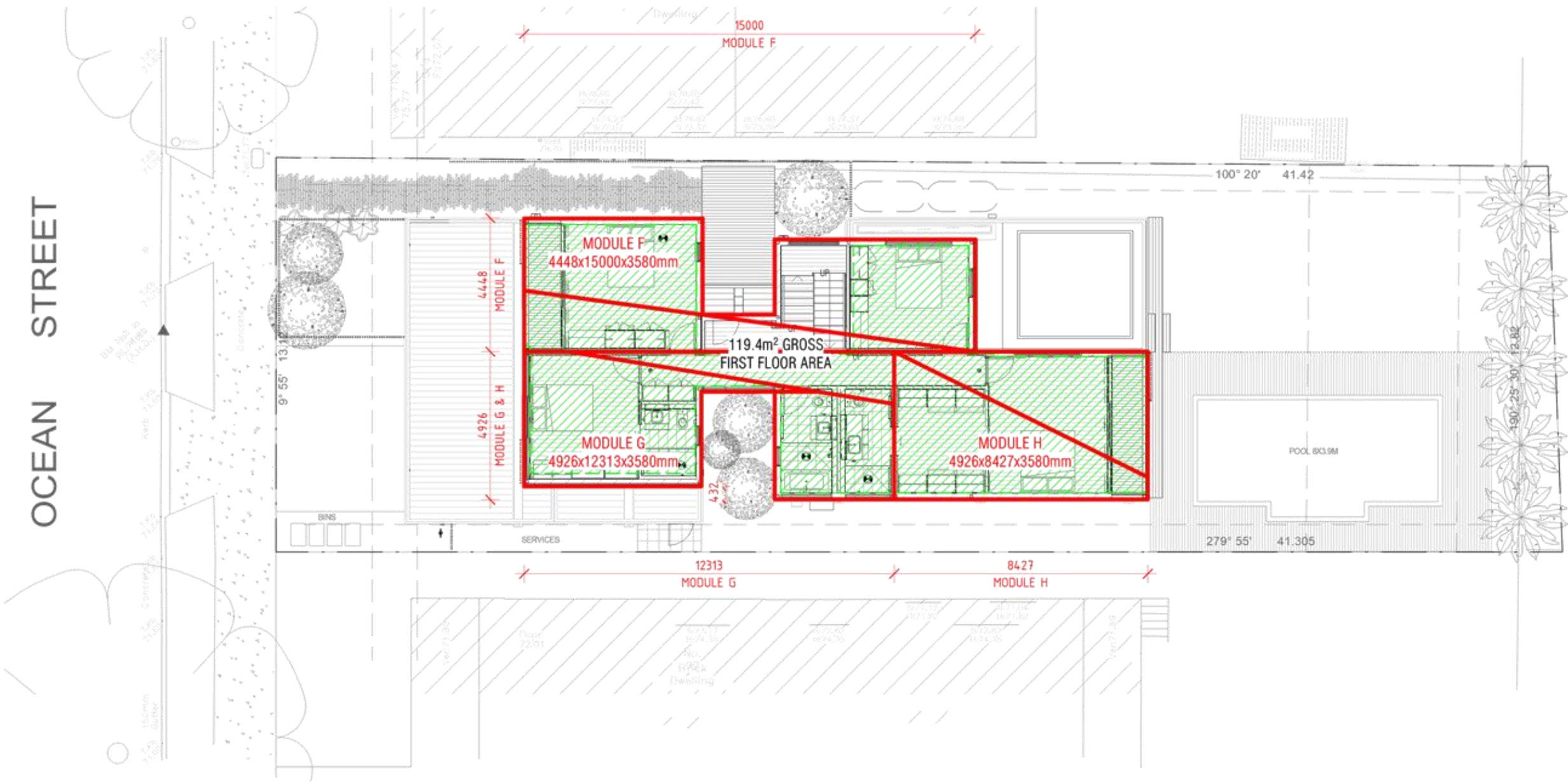
Module and Truck Sizes

Actual As Built Module Size				
Module	Width (mm)	Length (mm)	Height (mm)	Weight (t)
Module A	4,950	10,140	3,550	10
Module B	4,890	10,140	3,550	10
Module C	4,950	9,340	3,950	10
Module D	4,950	9,340	3,950	10
Module E	4,950	9,340	3,950	10
Module F	4,448	15,000	3,580	15
Module G	4,926	12,313	3,580	12
Module H	4,926	8,427	3,580	9

Truck size including Module Load					
Truck	Module	Width (mm)	Length (mm)	Height (mm)	Weight (t)
Truck 1	Module E	4,950	17,540	3,950	30
Truck 2	Module D	4,950	17,540	3,950	30
Truck 3	Module C	4,950	17,540	3,950	30
Truck 4	Module B	4,890	18,340	3,550	30
Truck 5	Module A	4,950	18,340	3,550	30
Truck 6	Module H	4,926	16,627	3,580	29
Truck 7	Module G	4,926	20,513	3,580	32
Truck 8	Module F	4,448	23,200	3,580	35



CONSTRUCTION ISSUE																	
<div><div>A</div><div>CONSTRUCTION ISSUE</div><div>20.01.20</div><div>AC</div></div> <div><div>issue</div><div>description</div><div>date</div><div>initials</div></div>				<div>Design Manager:</div> <div>Design Manager:</div> <div>Technical:</div> <div>Design Intent:</div>		<div>(C) THESE PLANS, DESIGN AND THE COPYRIGHT THEREIN ARE THE PROPERTY OF MODSCAPE HOLDINGS PTY LTD AND ITS SUBSIDIARIES AND MUST NOT BE REPRODUCED OR COPIED, WHOLLY OR IN THE PART WITHOUT THE WRITTEN PERMISSION OF MODSCAPE HOLDINGS PTY LTD</div>		<div>MODSCAPE.</div> <div>430 Francis Street, Brooklyn, VIC 3012</div> <div>Ph 93166000</div>		<div></div> <div>Kerr & Alessandra Bray</div> <div>90 Ocean Street Bondi, NSW</div> <div>2026</div>		<div>Architectural Set</div> <div>Ground Floor Module</div> <div>Plan</div> <div>AC</div> <div>JAN 2020</div> <div>Drawn</div> <div>Date</div>		<div>Drawing No.</div> <div>1-60</div> <div>1 : 150</div> <div>Scale</div> <div>A3</div> <div>Sheet Size</div> <div>498</div> <div>Job No.</div>		<div>Revision</div> <div>A</div>	
revision				sign off		copyright		company		orientation		project		drawing		details	



CONSTRUCTION ISSUE																			
A	CONSTRUCTION ISSUE			20.01.20	AC	Design Manager:	(C) THESE PLANS, DESIGN AND THE COPYRIGHT THEREIN ARE THE PROPERTY OF MODSCAPE HOLDINGS PTY LTD AND ITS SUBSIDIARIES AND MUST NOT BE REPRODUCED OR COPIED, WHOLLY OR IN THE PART WITHOUT THE WRITTEN PERMISSION OF MODSCAPE HOLDINGS PTY LTD	MODSCAPE.		Kerr & Alessandra Bray 90 Ocean Street Bondi, NSW 2026	Architectural Set First Floor Module Plan	Drawing No.	Revision						
				Design Manager:	1-61	A													
				Technical:															
				Design Intent:															
issue		description		date	initials			430 Francis Street, Brooklyn, VIC 3012	Ph 93166000			AC Drawn	JAN 2020 Date	1 : 150 Scale	A3 Sheet Size	498 Job No.			
revision						sign off		copyright		company		orientation		project		drawing		details	

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APPENDIX D

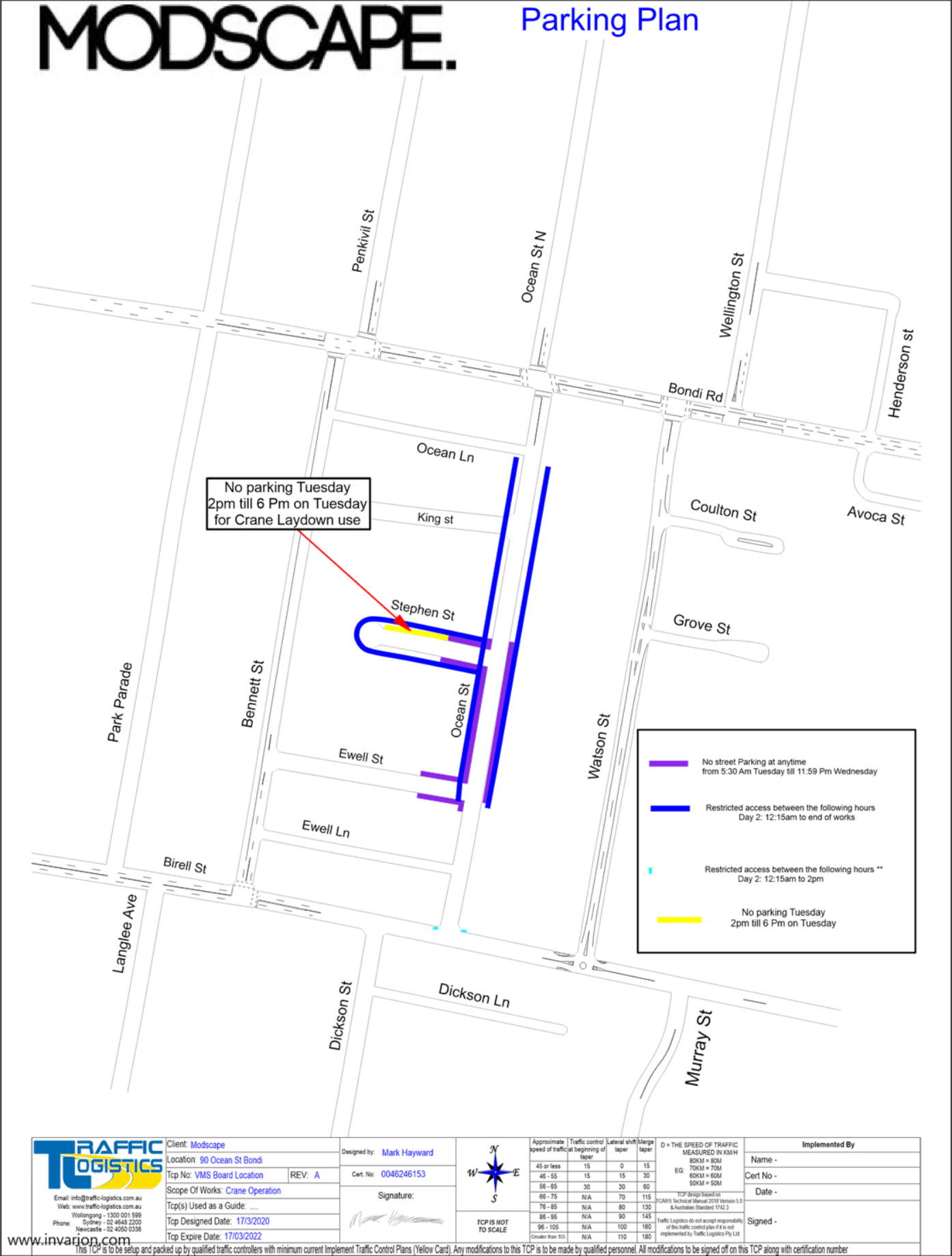
TURNING PATH ASSESSMENT

N/A – CAN BE PROVIDED IF REQUIRED

MODSCAPE.

APPENDIX E

TRAFFIC CONTROL PLAN

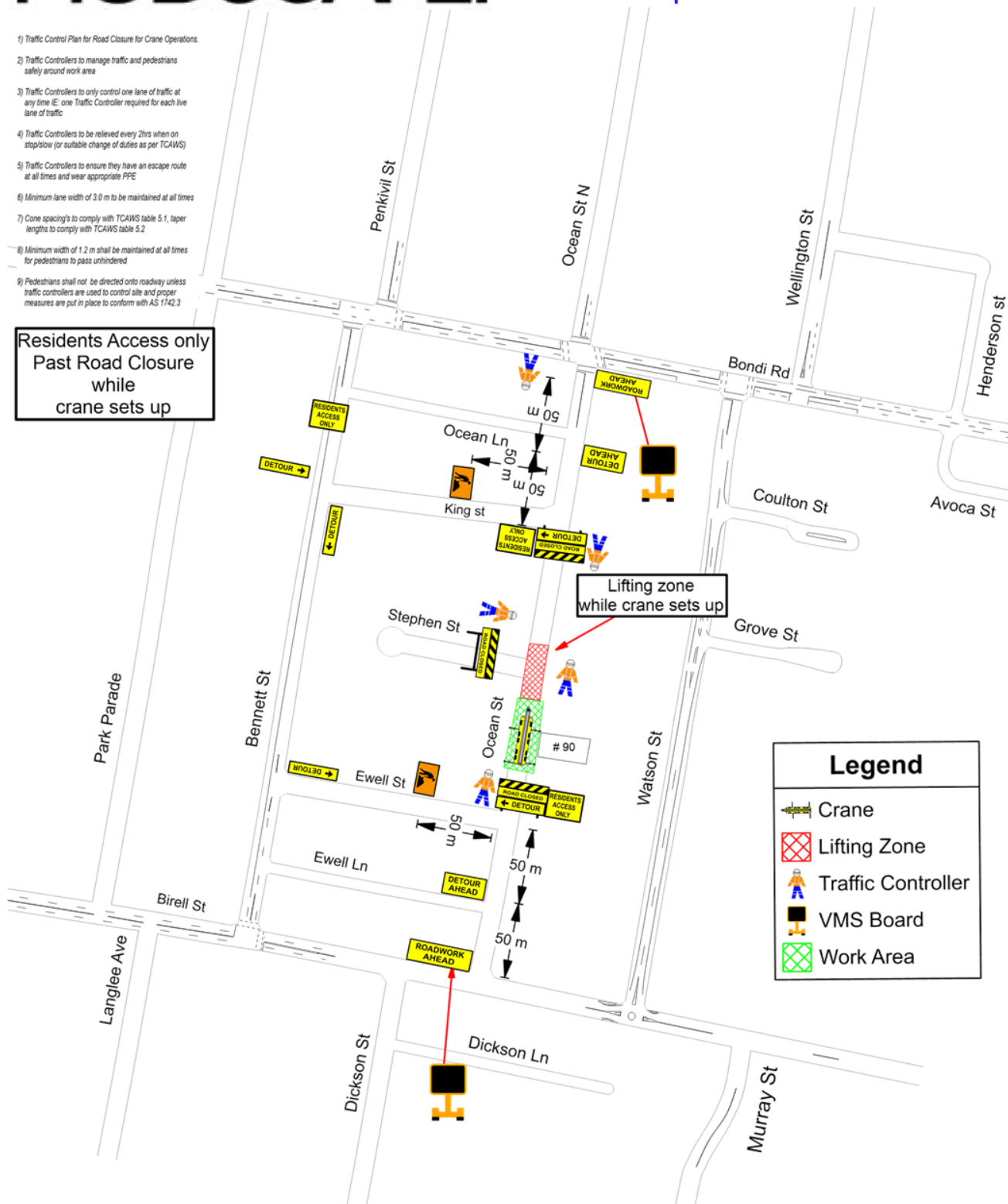


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90 Ocean St Bondi Crane Setup and Pack Down TCP

- 1) Traffic Control Plan for Road Closure for Crane Operations.
- 2) Traffic Controllers to manage traffic and pedestrians safely around work area
- 3) Traffic Controllers to only control one lane of traffic at any time (i.e. one Traffic Controller required for each live lane of traffic)
- 4) Traffic Controllers to be relieved every 2hrs when on stop/slow (or suitable change of duties as per TCAWS)
- 5) Traffic Controllers to ensure they have an escape route at all times and wear appropriate PPE
- 6) Minimum lane width of 3.0 m to be maintained at all times
- 7) Cone spacing's to comply with TCAWS table 5.1, taper lengths to comply with TCAWS table 5.2
- 8) Minimum width of 1.2 m shall be maintained at all times for pedestrians to pass unhindered
- 9) Pedestrians shall not be directed onto roadway unless traffic controllers are used to control site and proper measures are put in place to conform with AS 1742.3

**Residents Access only
Past Road Closure
while
crane sets up**



Legend	
	Crane
	Lifting Zone
	Traffic Controller
	VMS Board
	Work Area



Email: info@traffic-logistics.com.au
Web: www.traffic-logistics.com.au
Wollongong - 1300 001 589
Phone: Sydney - 02 4648 2200
Newcastle - 02 4050 0336

www.invarion.com

Client: Modscape
Location: 90 Ocean St Bondi
Top No: TLTCP-AS-59714
Scope Of Works: Crane Operation
Top(s) Used as a Guide: 54
Top Designed Date: 16/3/2020
Top Expire Date: 16/03/2022

Designed by: Mark Hayward

Cert No: 0046246153

Signature:



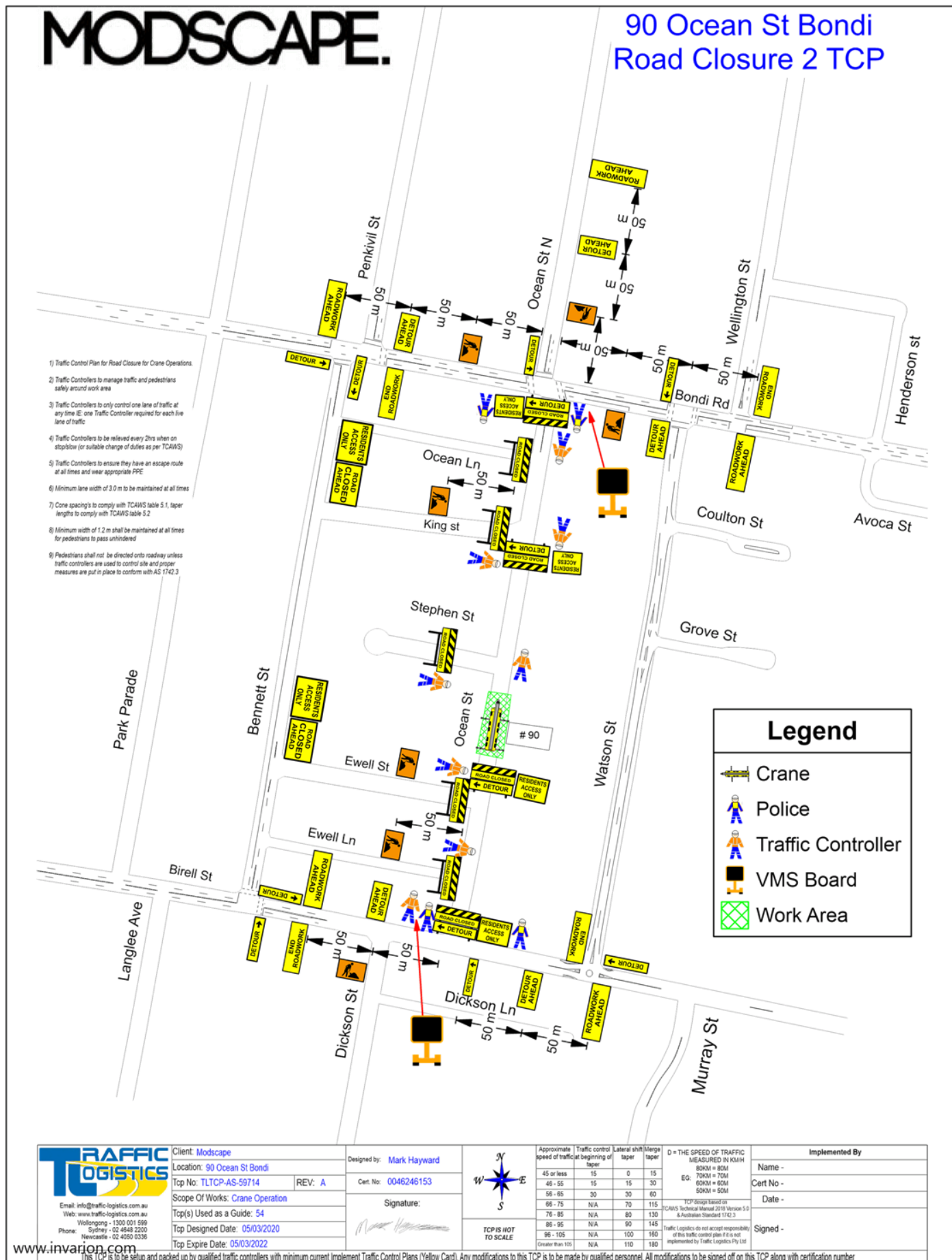
TCP IS NOT TO SCALE

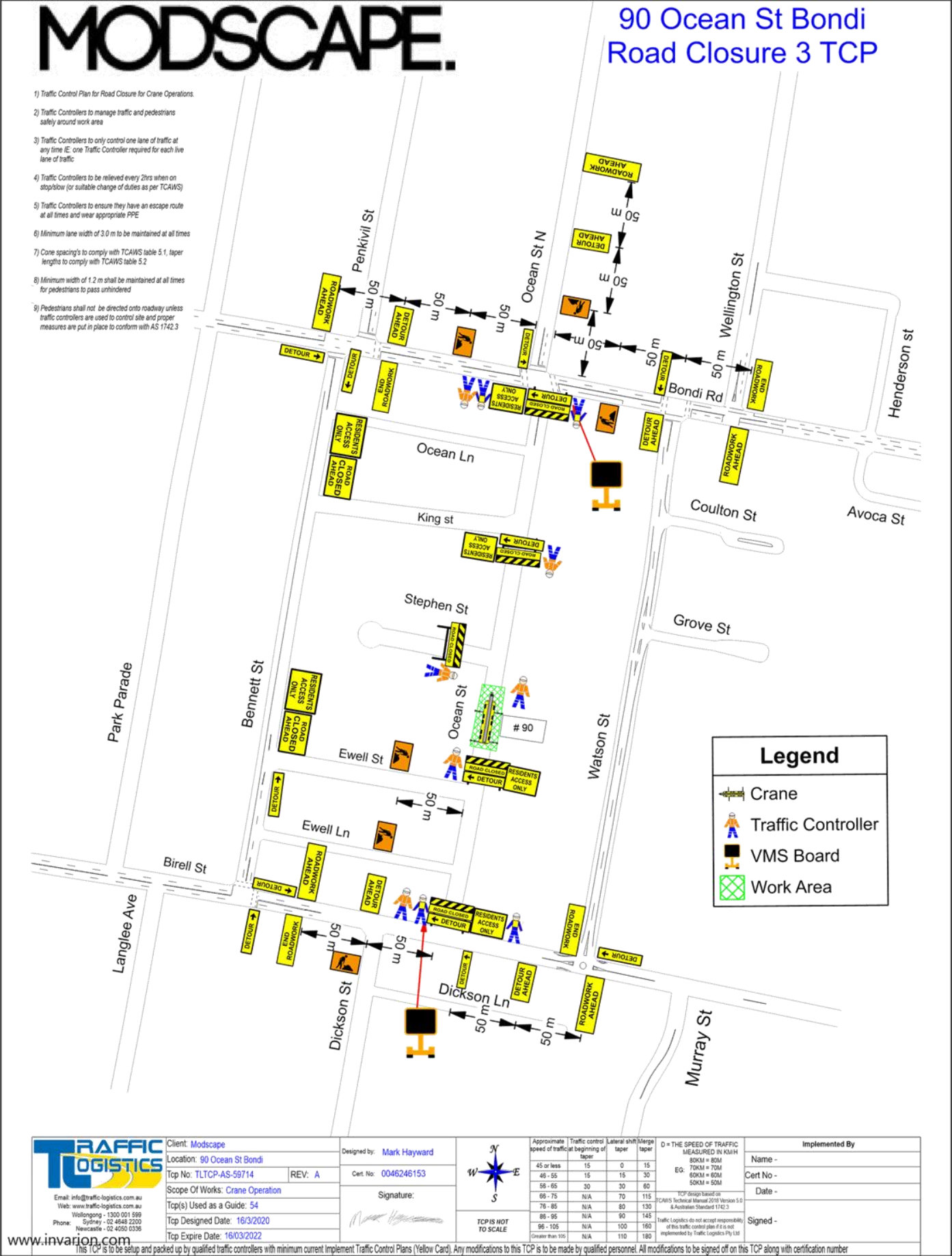
Approximate speed of traffic at beginning of taper	Traffic control taper	Lateral shift taper	Merge taper
45 or less	15	0	15
46 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	115
76 - 85	N/A	80	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
Greater than 105	N/A	110	180

D = THE SPEED OF TRAFFIC MEASURED IN KM/H
80KM = 80M
70KM = 70M
60KM = 60M
50KM = 50M
TCP design based on TCAWS Technical Manual 2019 Version 5.0 & Australian Standard 1742.3
Traffic Logistics do not accept responsibility of this traffic control plan if it is not implemented by Traffic Logistics Pty Ltd

Implemented By	
Name -	
Cert No -	
Date -	
Signed -	

This TCP is to be setup and packed up by qualified traffic controllers with minimum current Implement Traffic Control Plans (Yellow Card). Any modifications to this TCP is to be made by qualified personnel. All modifications to be signed off on this TCP along with certification number

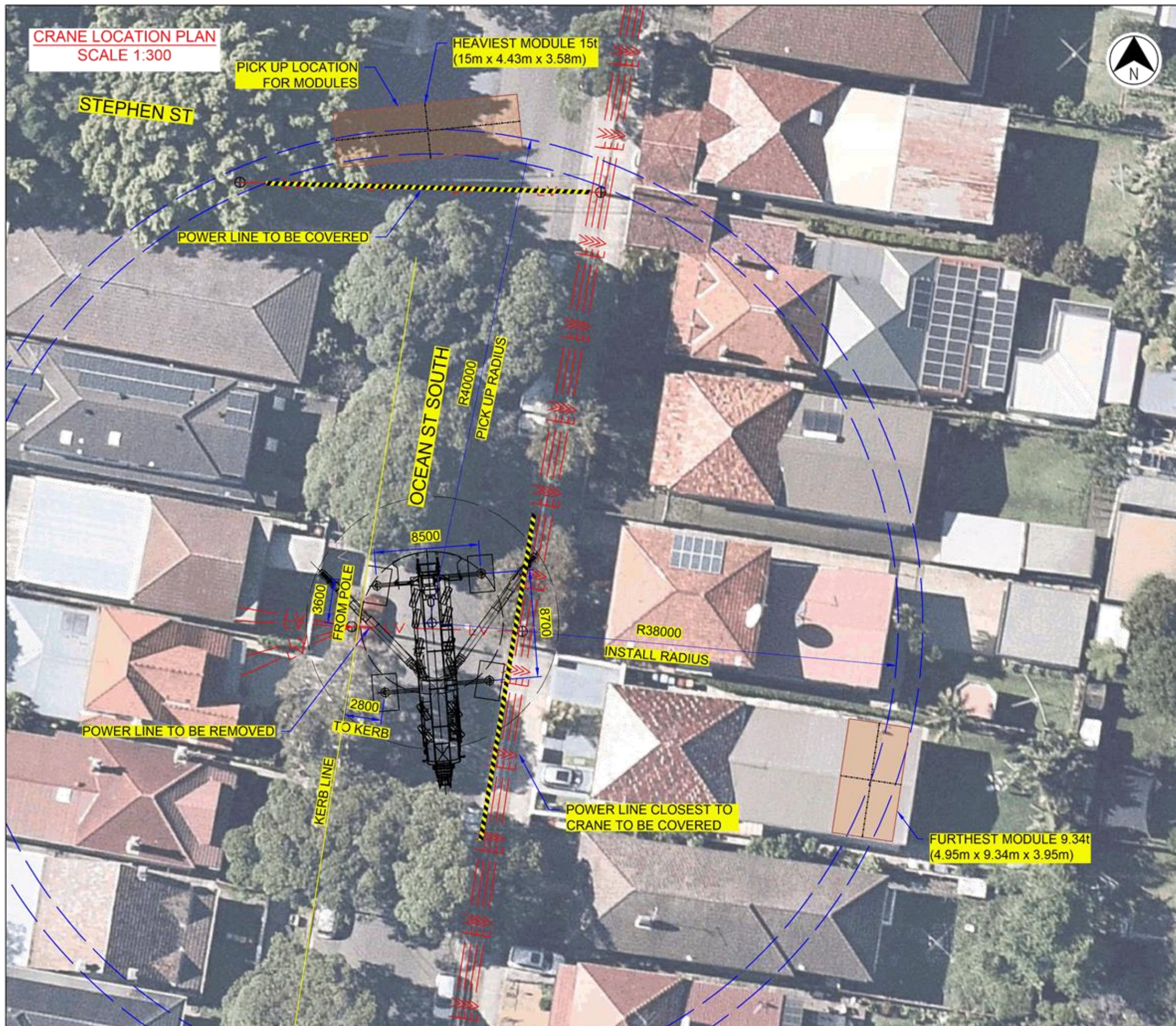




MODSCAPE.

APPENDIX F

CRANE LIFT STUDY/RISK ASSESSMENT



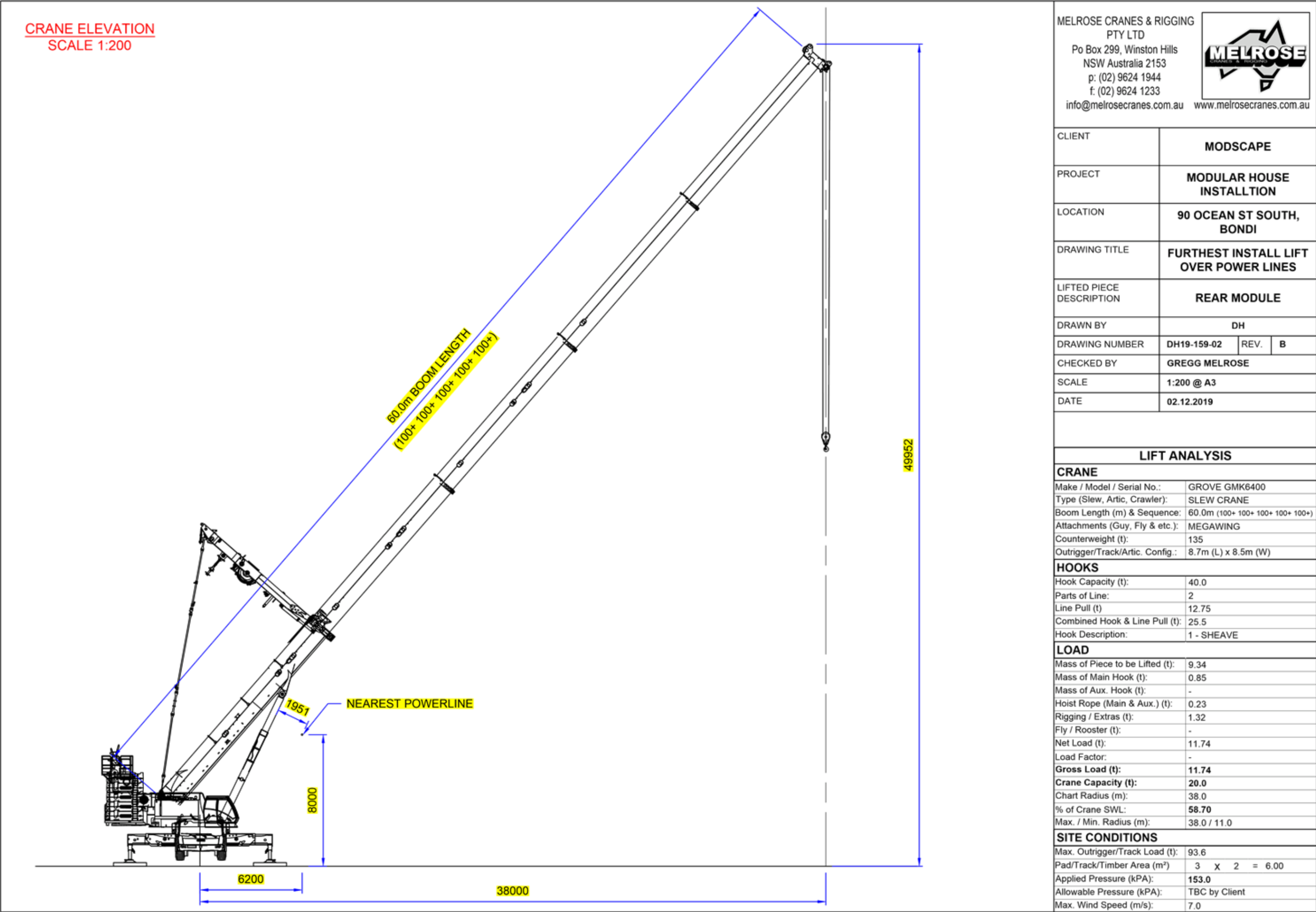
**MELROSE CRANES & RIGGING
PTY LTD**
Po Box 299, Winston Hills
NSW Australia 2153
p: (02) 9624 1944
f: (02) 9624 1233
info@melrosecranes.com.au

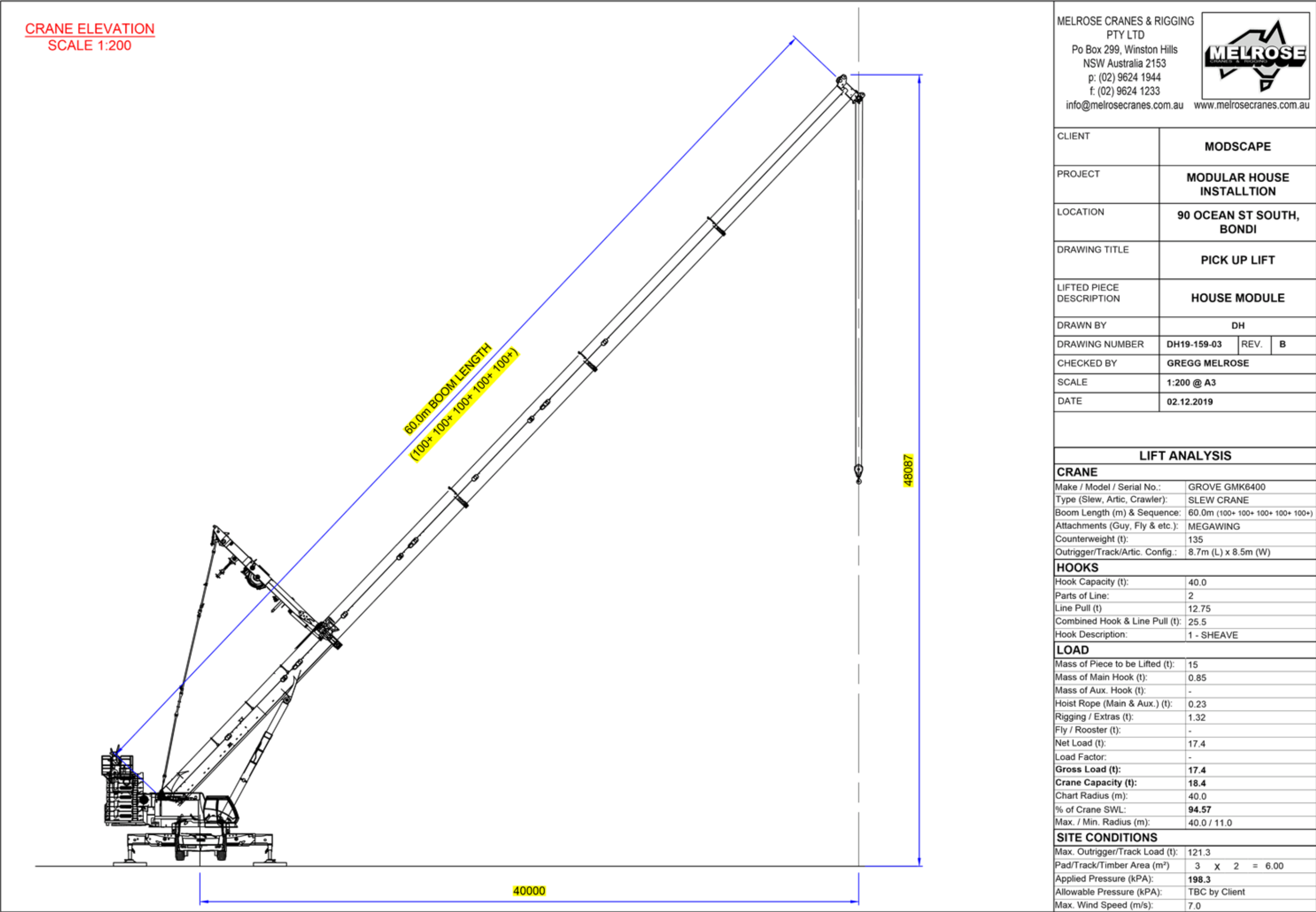


MELROSE
CRANES & RIGGING

www.melrosecranes.com.au

CLIENT	MODSCAPE		
PROJECT	MODULAR HOUSE INSTALLATION		
LOCATION	90 OCEAN ST SOUTH, BONDI		
DRAWING TITLE	CRANE LOCATION PLAN		
LIFTED PIECE DESCRIPTION	MODULAR BUILDING		
DRAWN BY	DH		
DRAWING NUMBER	DH19-159-01	REV.	B
CHECKED BY	GREGG MELROSE		
SCALE	1:300 @ A3		
DATE	02.12.2019		





Main boom with Mega Wing Lift

Lifting capacity charts acc. to EN 13000 (DIN / ISO)

3 208 940

	Crane with 135 t counterweight									
	Outrigger base - length 8,700 m - width 8,500 m									
	Main boom - fixed length in m									
	34.99	34.99	39.89	39.89	44.79	44.79	49.69	49.69	54.59	60.00
Tel. sec. I	0.44	0.00	0.88	0.00	0.88	0.00	0.88	0.44	0.88	1.00
Tel. sec. II	0.44	0.00	0.44	0.44	0.88	0.88	0.88	0.88	0.88	1.00
Tel. sec. III	0.44	0.87	0.44	0.87	0.44	0.87	0.87	0.87	0.87	1.00
Tel. sec. IV	0.44	0.88	0.44	0.88	0.44	0.88	0.44	0.88	0.88	1.00
Slewing range	360°									
Radius in m	Lifting capacities in t									
8.0	109.0		105.0		103.0		92.0			
9.0	101.0		97.0		94.5		92.0			
10.0	94.5	96.5	90.0	93.0	87.5	90.0	86.0	87.5	76.0	
11.0	88.5	90.5	84.0	87.0	81.5	84.0	80.0	81.5	76.0	64.0
12.0	83.5	85.5	79.0	82.0	76.5	79.0	75.0	76.5	74.0	64.0
13.0	78.5	80.5	75.0	77.5	72.0	74.5	70.5	72.0	69.5	61.5
14.0	72.5	74.5	71.0	74.0	68.0	70.5	66.5	68.0	65.5	59.5
15.0	67.5	70.0	66.5	70.0	65.0	67.5	63.0	64.5	62.0	57.0
16.0	63.0	65.5	63.0	65.5	61.5	64.0	60.0	61.5	59.0	55.0
18.0	55.5	57.5	55.0	58.0	55.5	58.0	55.0	56.5	54.0	51.5
20.0	49.0	50.5	48.5	51.0	49.0	51.0	49.5	51.0	49.5	48.0
22.0	43.0	45.0	42.5	45.5	43.0	45.5	44.0	45.0	45.0	44.5
24.0	38.0	40.0	37.5	40.5	38.0	40.5	39.0	40.0	39.5	40.0
26.0	34.0	36.0	33.5	36.0	34.0	36.0	34.5	36.0	35.5	36.0
28.0	29.5	31.5	30.0	32.5	30.5	32.5	31.0	32.5	32.0	32.0
30.0	26.0	28.0	27.0	29.5	27.0	29.5	28.0	29.0	29.0	29.0
32.0			23.5	26.5	24.5	26.5	25.5	26.5	26.0	26.5
34.0			19.1	22.0	22.0	24.5	23.0	24.0	24.0	24.0
36.0			15.0	18.0	19.9	22.5	21.0	22.0	21.5	22.0
38.0					16.3	18.8	18.9	20.0	19.8	20.0
40.0					13.8	16.3	17.2	18.5	18.1	18.4
42.0							14.3	15.8	16.6	16.9
44.0							12.7	14.2	15.2	15.5
46.0							7.7	9.2	12.9	14.2
48.0									11.6	13.1
50.0									8.3	11.4
52.0										9.3
54.0										8.3
56.0										4.7
RCL code	2900									
Max. permitted	14 m/s									
windspeed	9 m/s				8 m/s				7 m/s	



Outrigger Pad Load Calculator

Crane setup

crane model: **GMK6400**configuration: **MB_MWL**

ident number: 3208940

outrigger base: **8.70x8.50m**

standard: EN13000

LMB-code:

slew range: 0 to 360 °

superstructure-angle: 0 °



58.7%

max

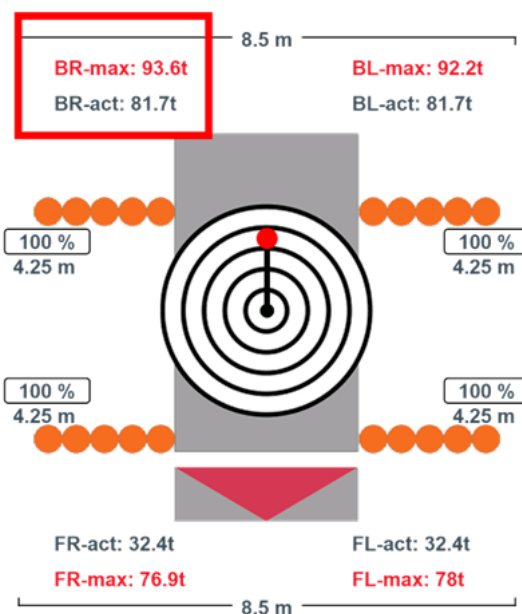
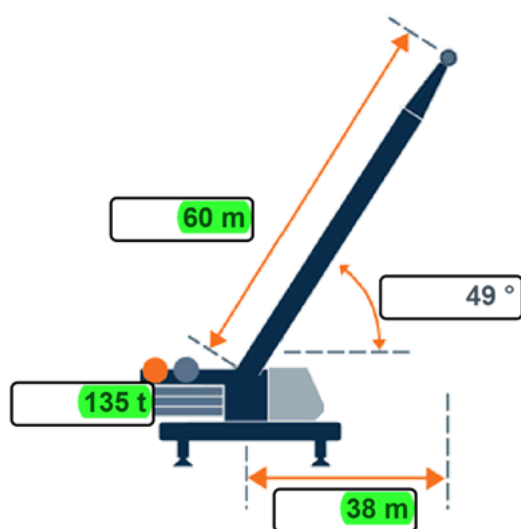
20 t

act

11.74 t

Side view

Top view (incl. ground bearing pressures)



Load charts / load graphs

Radius m	Load t	Height m
11	64	62.51
12	64	62.27
13	61.5	62.02
14	59.5	61.74
15	57	61.45
16	55	61.14
18	51.5	60.45
20	48	59.69
22	44.5	58.84
24	40	57.91
26	36	56.88
28	32	55.76
30	29	54.53
32	26.5	53.19
34	24	51.73
36	22	50.13
38	20	48.39
40	18.4	46.49
42	16.9	44.39
44	15.5	42.08
46	14.2	39.5
48	13.1	36.6
50	11.4	33.27
52	9.3	29.36
54	8.3	24.53
56	4.7	17.84

Disclaimer


The Outrigger Pad Load calculations produced by this software are not a substitute for adherence to all load chart requirements and safe crane operating practices and limitations. Always confirm that the lifted load and the actual crane configuration are approved by the applicable load chart. In addition, the accuracy of the Outrigger Pad Load calculations is entirely dependent upon the user inputting proper data/information. If inaccurate data is input, the Outrigger Pad Load calculations will not be accurate.

Design of ground support sufficient to withstand calculated loads is within the sole responsibility of the user of this software and/or the Site Supervisor (see ASME B30.5-2007 5-3.1.3.2.1(e)(3)). Reliance upon inaccurate calculations and/or improper ground support could lead to tip over (and potentially result in death, serious bodily injury, damage to the crane and/or damage to other property). If you have any questions as to whether the data/information you are inputting into the software is accurate, please contact Product Marketing.





Outrigger Pad Load Calculator

Crane Control Screen





360°







135t













5







100>100>100>100 (60m)





Outrigger Pad Load Calculator

Crane setup

crane model: **GMK6400**configuration: **MB_MWL**

ident number: 3208940

outrigger base: **8.70x8.50m**

standard: EN13000

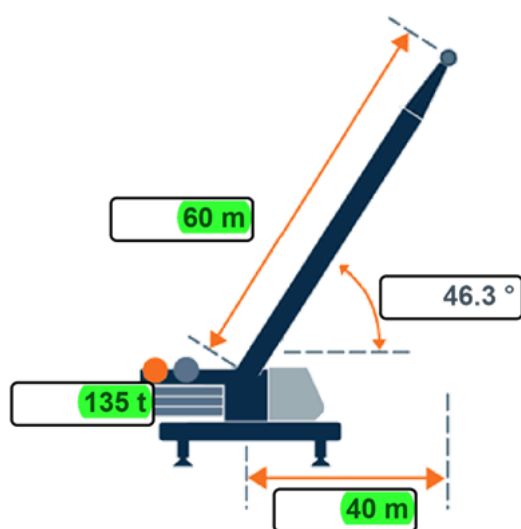
LMB-code:

slew range: 0 to 360 °

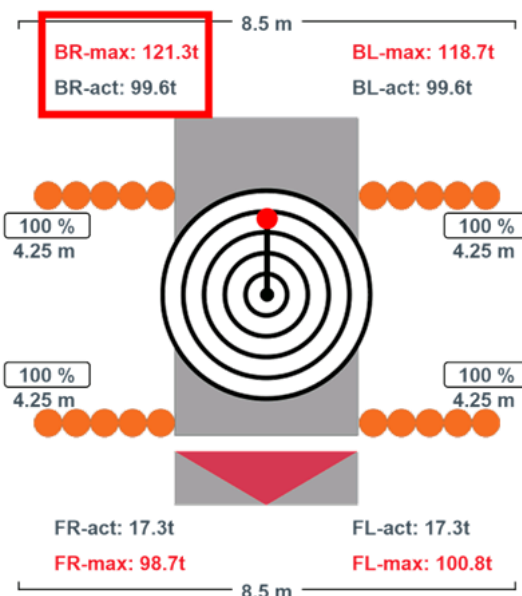
superstructure-angle: 0 °



Side view



Top view (incl. ground bearing pressures)



Load charts / load graphs

Radius m	Load t	Height m
11	64	62.51
12	64	62.27
13	61.5	62.02
14	59.5	61.74
15	57	61.45
16	55	61.14
18	51.5	60.45
20	48	59.69
22	44.5	58.84
24	40	57.91
26	36	56.88
28	32	55.76
30	29	54.53
32	26.5	53.19
34	24	51.73
36	22	50.13
38	20	48.39
40	18.4	46.49
42	16.9	44.39
44	15.5	42.08
46	14.2	39.5
48	13.1	36.6
50	11.4	33.27
52	9.3	29.36
54	8.3	24.53
56	4.7	17.84

Disclaimer


The Outrigger Pad Load calculations produced by this software are not a substitute for adherence to all load chart requirements and safe crane operating practices and limitations. Always confirm that the lifted load and the actual crane configuration are approved by the applicable load chart. In addition, the accuracy of the Outrigger Pad Load calculations is entirely dependent upon the user inputting proper data/information. If inaccurate data is input, the Outrigger Pad Load calculations will not be accurate.

Design of ground support sufficient to withstand calculated loads is within the sole responsibility of the user of this software and/or the Site Supervisor (see ASME B30.5-2007 5-3.1.3.2.1(e)(3)). Reliance upon inaccurate calculations and/or improper ground support could lead to tip over (and potentially result in death, serious bodily injury, damage to the crane and/or damage to other property). If you have any questions as to whether the data/information you are inputting into the software is accurate, please contact Product Marketing.





Outrigger Pad Load Calculator

Crane Control Screen





360°







135t












5







100>100>100>100 (60m)

MODSCAPE.

APPENDIX G

RESIDENT NOTIFICATION

MODSCAPE.

430 francis street, brooklyn vic 3012

187-197 military road, neutral bay, nsw, 2089

03 9316 6000

www.modscape.com.au08th April 2020**RE: Building Works to 90 Ocean Street, Bondi**

Dear Resident,

Modscape is a modular home builder who specialize in designing and building beautiful and functional modular homes. Modular building is a modern building process, where homes are built off-site (in our case, a factory in Melbourne) then transported and lifted into their permanent location. This makes for a faster on-site build process and far less disruption on-site when compared to a standard house build. This process is well-established in Australia, and we have been in business for over 13 years and have installed hundreds of modular buildings across Australia.

In approximately 8 weeks from now Modscape will be delivering and installing a new modular home at 90 Ocean Street, Bondi. During this period, we will be setting up a crane and there will be semi-trailer trucks entering and exiting or passing through your street. The works take place under the supervision of experienced traffic management professionals, with representatives from Modscape on-site at all times.

The attached Parking Plan shows the proposed impact on your area during the installation period. As you live in the area, you may experience minor delays entering or exiting your property during the times noted on the attached plan.

Modscape's normal process would be to door-knock the local area, however we understand that under the current circumstances this may not be appropriate. If you feel more comfortable with a phone or email discussion please text 0475 248 477 or email michelle@modscape.com.au with your street number no later than Tuesday 14/04/20, and I will ensure you are contacted.

We will be back in contact closer to the date of installation, either in person, over the phone or through a letter box drop to keep you informed of the exact date of the works. We want to inform all residents of our plan as part of process, we kindly request that you acknowledge in writing that you understand the impact of these temporary changes in traffic conditions during the installation window.

If you have any questions on the process, or on modular building more broadly, please contact us on (03) 9316 6000 or through our website, www.modscape.com.au

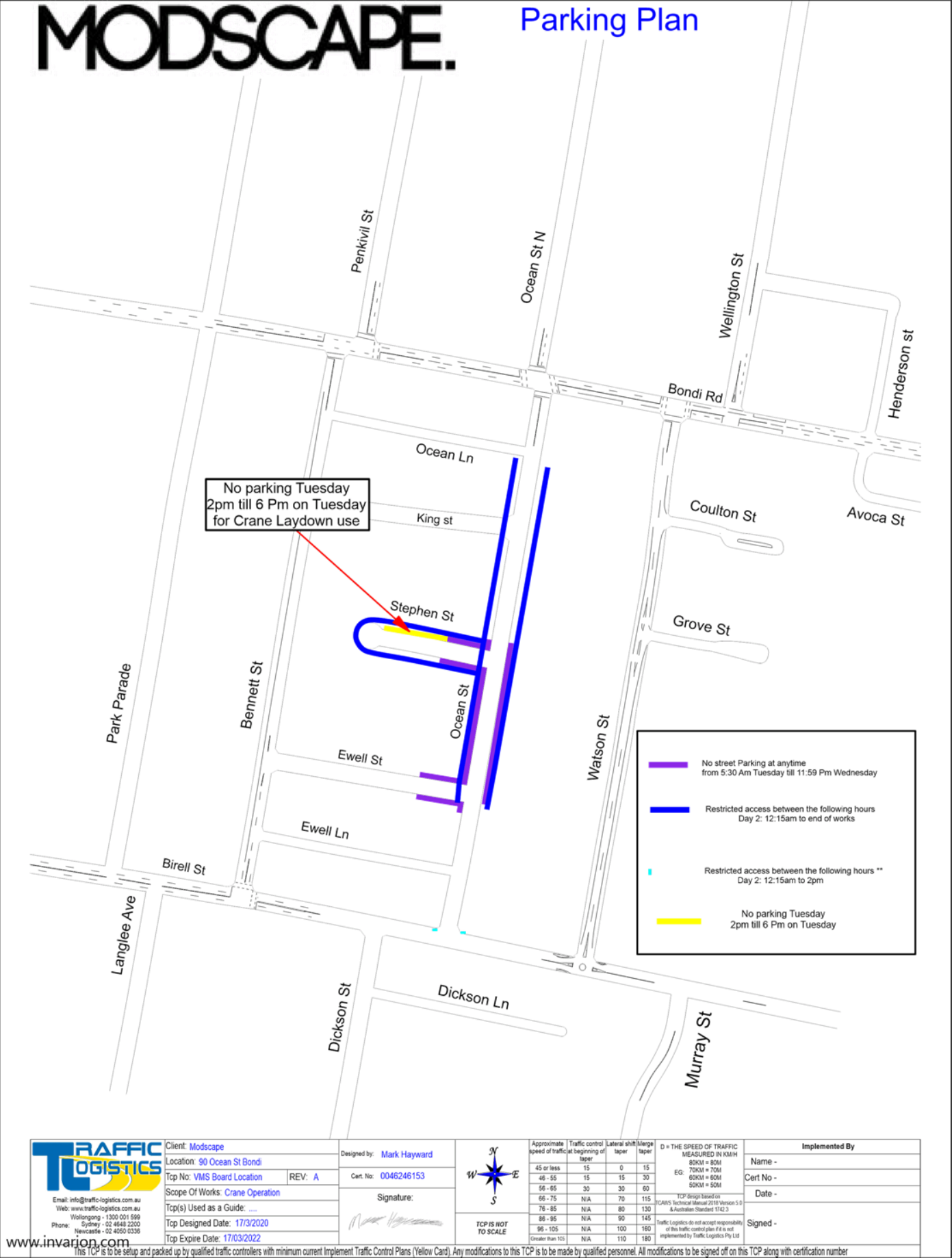
We appreciate your understanding.

Yours Sincerely



Brendan Farquhar
Project Manager
0401 118 096
Modscape





MODSCAPE.

APPENDIX H

PROPOSED RUNNING SHEET FOR INSTALLATION



a 430 Francis Street Brooklyn VIC 3012 p 03 9314 7769 f 03 9314 7789 e info@modscape.com.au w www.modscape.com.au

Re: Building Works to 90 Ocean Street, Bondi
Proposed Running Schedule of Installation of Modules works

On the assumption that works are being completed on a Tuesday and Wednesday, the proposed running schedule of works would be as follows;

Tuesday 7:00AM

- Traffic Management commence on-site to notify residents of the impending works and restricted parking

Tuesday 2:00PM-6:00PM

- Parking restricted on Stephen Street for temporary laydown of Crane & "wings truck"

Tuesday 2:30-3:00PM

- 400T Crane & "Wings truck" arrives on-site prior to RMS curfews and parks in Stephen Street
- (Oversize travel curfews, NO travel after 3.00pm)

Tuesday 4:30PM to 5:30PM

- Traffic Management to prepare for TCP #1 – Crane Set-up
- Closure to commence from 5:30pm

Tuesday 5:30PM to 6:30PM

- Franna crane and 1st support truck to arrive
- Franne crane to place outrigger pads in required layout on Ocean Street
- 400T Crane sets up in Ocean Street

Tuesday 6:30PM to Wednesday 12:30AM

- Counterweight trucks will be entering and existing the street
- Trucks will arrive at approximately 45-minute intervals via phone communication from designated parking area

Wednesday 3:00AM to 5:00AM

- Modules arrive on-site and set up as per TCP #2 ready for first install
- All 8x modules are required to be parked up in nominated sequence / position by 5:00AM to meet NHVR permit guidelines
- Truck drivers and pilot vehicles to park up and remain vehicles until 7:00am

MODSCAPE.

Wednesday 7:00AM

- First module to be lifted into place

Wednesday 7:00AM- Approx. 1:00pm

- Installation of Modules E, D, C & B
- On completion of installation of the 4th module (Mod B), the southern section of Ocean Street – Ewell St through to Birrell St, will be re-opened.
- We anticipate modules will all be lifted into place by 4:00PM

Wednesday Approx. 1:00pm-5:00pm

- Installation of Modules A, H, G & F
- On completion of installation of the 8th module (Mod F) all module trucks will have left Ocean Street.
- We anticipate modules will all be lifted into place by 5:00PM

Wednesday 5:00PM to 11:30PM

- Crane to pack up and leave Ocean Street
- Counterweight trucks will be entering and exiting the street
- Trucks will arrive at approximately 45-minute intervals via phone communication from designated parking area
- We anticipate Ocean Street will all be fully re-opened by 11:30PM

a 430 Francis Street Brooklyn VIC 3012 p 03 9314 7769 f 03 9314 7789 e info@modscape.com.au w www.modscape.com.au

REPORT
TC/V.01/20.04

Subject: 64 Blair Street, North Bondi - Construction Zone

TRIM No: A03/2514-04

Author: Emraul Kayes, Traffic Engineer

Authoriser: Dan Joannides, Executive Manager, Infrastructure Services

COUNCIL OFFICER'S PROPOSAL:

That Council:

1. Installs an 11 metre long 'No Parking 7AM-5PM Mon-Fri / 8AM to 3PM Sat Council Authorised Vehicles Excepted Excludes Public Holidays' zone fronting 64 Blair Street, North Bondi.
2. Delegates authority to the Executive Manager, Creating Waverley, to adjust the length and duration of, or remove the construction zone, as necessary.

1. Executive Summary

Council has received an application from Sunlight Project Pty Ltd for the installation of a construction zone outside 64 Blair Street, North Bondi. Council will need to exercise its delegated function to implement the proposal. The works involve internal refurbishment of individual units on behalf of the NSW Department of Housing.

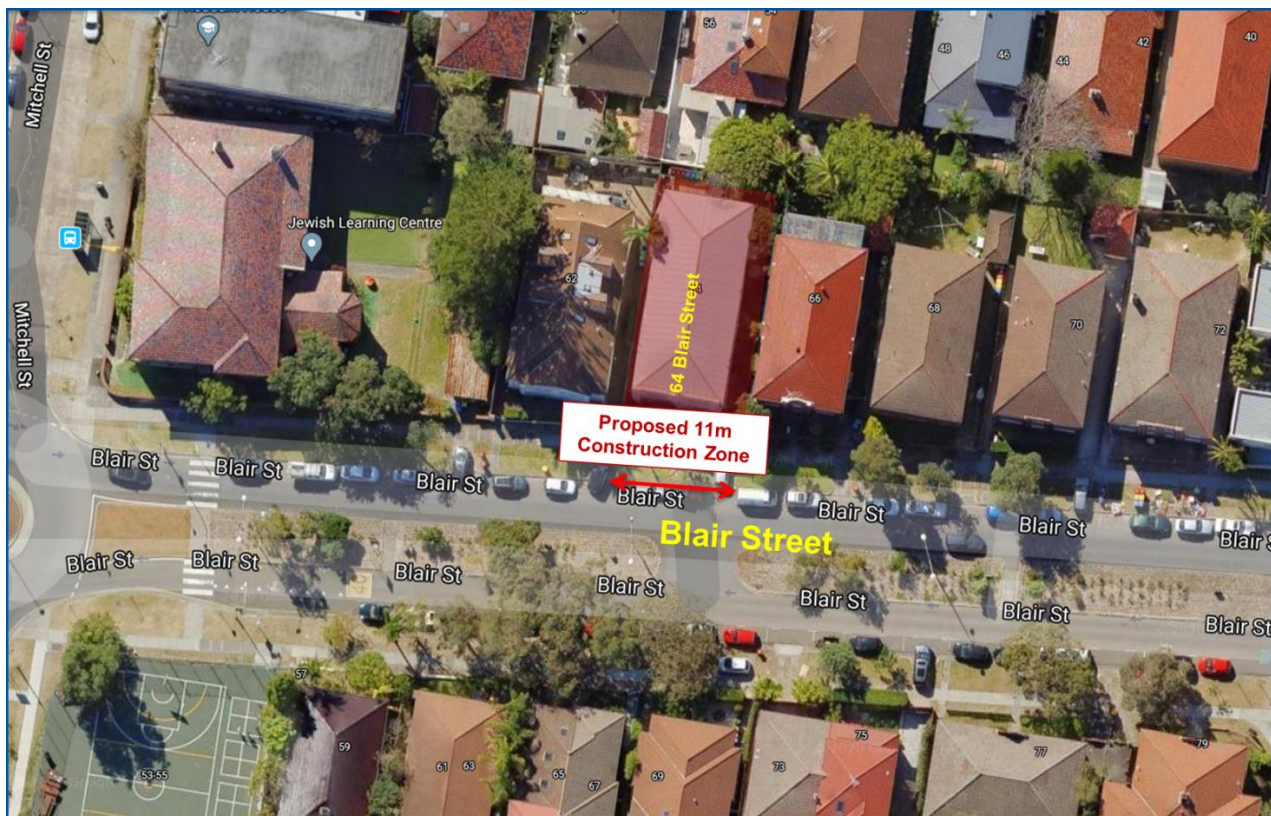


Figure 1: Aerial image of 64 Blair Street, North Bondi**2. Introduction/Background**

It is proposed that the zone is signposted 'No Parking Council Authorised Vehicles Excepted Excludes Public Holidays' for the approved construction hours under the development consent. Council will then issue the applicant with a number of transferable permits to be used on their construction-related vehicles. The Traffic Committee and Council generally only approve construction lengths of 9 metres or greater and periods of 13 weeks or more.

3. Technical Analysis

The site is located on the northern side of Blair Street near the intersection of Mitchell Street, North Bondi. There is a driveway to the property from Blair Street. It is proposed to install an 11 metre construction zone at 64 Blair Street fronting the property.

Table 1: Application details for Bronte Road, Bronte.

Applicant	Sunlight Project Pty Ltd
Development Application	The refurbishment of the individual units (No DA number)
Works	Internal refurbishment of individual units on behalf of the NSW Department of Housing
Approved Hours of Construction	7 am–5 pm Mon–Fri; 8 am–3 pm Saturday, except for public holidays
Frontage Length	14 metres
Road	Blair Street North Bondi
Existing Parking	Unrestricted
Requested Length	11 metres
Proposed Length	11 metres
Duration	13 weeks
Beginning	April 2020
Fee Area	Residential with no parking restrictions
Estimated Fees	\$732.60 per week (based on 11 metres)



Figure 2: Proposed 11 metre construction zone on Blair Street fronting property number 64, North Bondi

4. Financial Information for Council's Consideration

The applicant will be required to pay the approved application fee, which covers the cost of administration and signage.

The approved usage charges for the 2019/20 financial year are:

- \$66.60 per metre per week in a Residential Development Area.
- \$92.20 per metre per week in a Commercial and mixed-use Development Area.
- \$370 per metred (ticket) car parking space per week in addition to above fees (where applicable).

5. Attachments

Nil .

REPORT
TC/V.02/20.04

Subject: Barracluff Avenue, Bondi Beach - Traffic Assessment

TRIM No: A03/0042-04

Author: Calum Hutcheson, Service Manager, Traffic and Transport

Authoriser: Dan Joannides, Executive Manager, Infrastructure Services

COUNCIL OFFICER'S PROPOSAL:

That Council prepares a preferred option and alternatives for community consultation that include:

1. Preferred option:
 - (a) Construction of pedestrian/traffic islands with associated line marking and signage at the intersections of Barracluff Avenue and Francis Street, and Barracluff Avenue and Lamrock Avenue, Bondi Beach, as shown in Drawing 9005 Issue A attached to this report.
 - (b) Kerb extensions in Barracluff Avenue on both sides of the road opposite:
 - (i) 23 Barracluff Avenue and 25 Barracluff Avenue.
 - (ii) 5 Barracluff Avenue and 7 Barracluff Avenue.
2. Alternative option: closure of Barracluff Avenue in the vicinity of 21 Barracluff Avenue.

1. Executive Summary

This matter was previously considered by the Committee at its meeting in March 2020. At that meeting the Committee resolved to defer the matter to this meeting.

This report considers traffic data, resident submissions, and physical road conditions for Barracluff Avenue, Bondi Beach. Resident requests for a road closure or traffic calming treatments have been reviewed taking into consideration the efficiency of the road network, local amenity, and road safety.

A road closure for Barracluff Avenue is not recommended as the volumes are low and any closure would adversely impact other streets already carrying significant levels of traffic. Traffic speeds can be better addressed in the consideration of traffic calming.

Traffic calming is preferred over road closures. Traffic calming is the appropriate measure for reducing speeds at the intersections resulting in reduced mid-block speeds. It also improves amenity and safety for pedestrians and cyclists.

The introduction of pedestrian refuges at intersections is recommended to improve pedestrian safety and slow traffic turning into and out of Barracluff Avenue. Locations recommended for pedestrian refuges are:

- Barracluff Avenue at Francis Street.

- Barracluff Avenue at Lamrock Avenue
- Lamrock Avenue at Barracluff Avenue

Mid-block kerb extensions with plantings can also be introduced to keep traffic near the centre of the road reducing potential conflict with people accessing parked cars. Plantings in mid-block kerb extensions assist in enhancing the urban environment. Two mid-block kerb extensions are possible. They are:

- Kerb extension outside 23 Barracluff Avenue and 25 Barracluff Avenue.
- Kerb extension outside 5 Barracluff Avenue and 7 Barracluff Avenue.

Installation of the kerb extension will require consultation with the directly affected residents. This does not defer the recommendation for intersection treatments.

Mid-block pedestrian refuges are not recommended as they result in the loss of significant on street parking spaces.

2. Introduction/Background

Traffic concerns in relation to Barracluff Avenue have been raised by residents for a considerable number of years. In more recent times, Council has determined the need to investigate traffic calming and/or road closures for Barracluff Avenue. Council considered a June 2019 report from Traffic Committee recommending construction of pedestrian refuges at Barracluff Avenue/Francis Street, and Barracluff Avenue/Lamrock Avenue. Council determined that this report should be deferred until consideration of the potential closure of Barracluff Avenue at the north end, south end or centre was also investigated.

Barracluff Avenue is a 12.8 m wide two-way local road with parking on both sides. The default speed limit is 50 km/h. It is around 185 m long between Francis Street and O'Brien Street (see Figure 1).

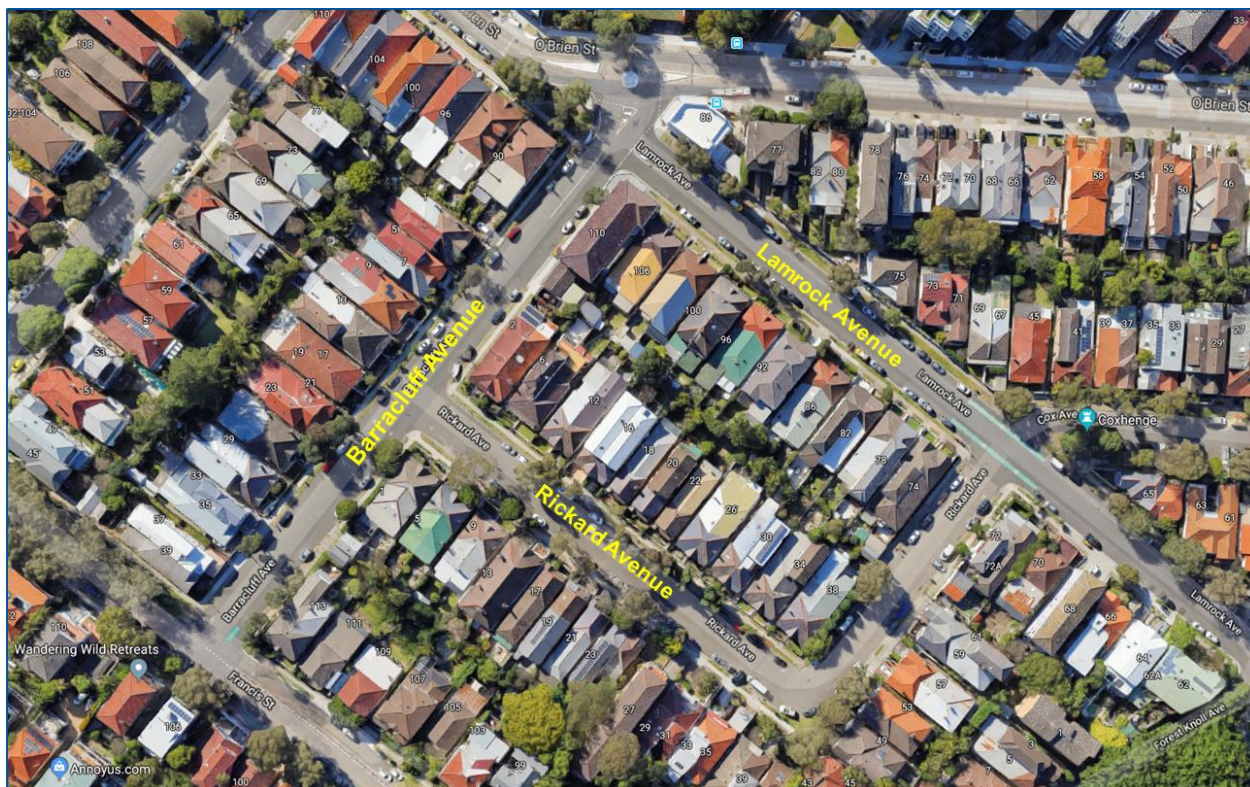


Figure 1. Aerial image of Barracluff Avenue, Bondi Beach.

A part of Barracluff Avenue includes a designated marked bike route as shown in Figure 2.

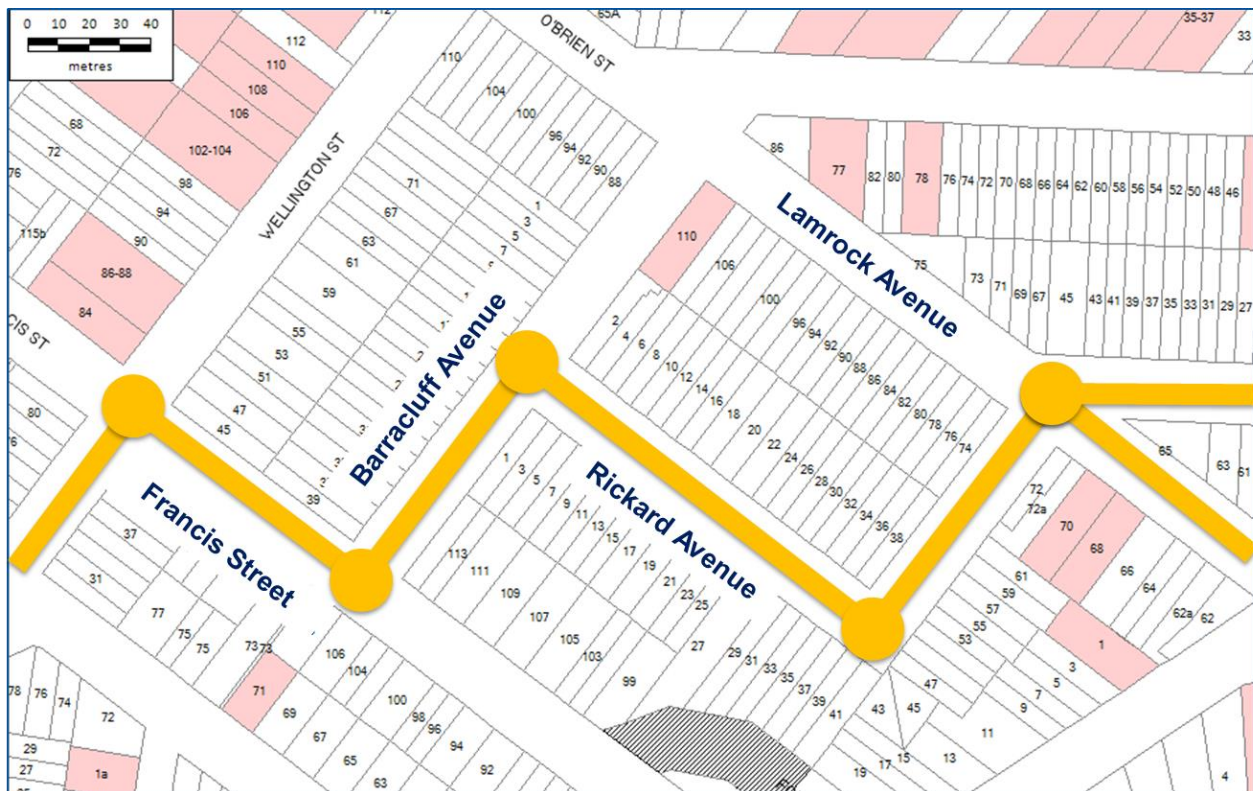


Figure 2. Bike route in Barracluff Avenue and Rickard Avenue.

Traffic concerns in relation to Barracluff Avenue (and Rickard Avenue) have been raised by residents for a considerable number of years. The most recent issues considered by Council are summarised below.

1. November 2016 – Council passed a motion that:
 - (a) Notes that in 2006 plans were prepared for Barracluff and Rickard Avenues to reduce traffic speed and provide more parking (angle parking and refuges). Based on residents' responses the Waverley Traffic Committee determined to not implement these plans.
 - (b) Notes that in April 2014 the Waverley Traffic Committee concluded that no action be taken on Barracluff Avenue traffic calming due to reported speed counts at the time.
 - (c) Notes that an incident occurred in Barracluff Avenue on 22 October 2016. The Police are investigating the circumstances of the matter to determine its classification.
 - (d) Notes that a speed counter has been installed around mid-block in Barracluff Avenue, near Rickard Avenue, and results will be available in a few weeks.
 - (e) Continues the investigation into traffic calming in Barracluff Avenue subject to speed count results, including a reassessment of the 2006 plans and other traffic calming measures.
2. June 2018 – A request was received for the removal of 'No Parking' signage across the driveways of 1 Rickard Avenue and 115 Francis Street.

Council resolved to implement the measure.
3. September 2018 – Council considered a petition containing 51 signatures from the residents of Rickard Avenue, Bondi Beach, requesting the closure of Rickard Avenue at its intersection with

Lamrock Avenue, and the installation of central refuges in Rickard Avenue at its intersection with Barracluff Avenue.

The petition raised '*Safety concerns for the large number of children living in Rickard Avenue from traffic*'. It requested that Council '*Close Rickard Avenue at its intersection with Lamrock Avenue and place central refuges in Rickard Avenue at its intersection with Barracluff Avenue and at the "dog leg" bend.*'

Council resolved that the petition requesting the closure of Rickard Avenue at its intersection with Lamrock Avenue, and the installation of central refuges in Rickard Avenue at its intersection with Barracluff Avenue, be forwarded to the Executive Manager, Creating Waverley, for appropriate action, including consideration of closure and/or traffic calming at the intersection of Barracluff Avenue.

4. November 2018 – A petition was received from residents with properties fronting or adjacent to Barracluff Avenue requesting that traffic calming measures be installed in Barracluff Avenue to reduce vehicle speeds in the street. The petition contained 22 signatures from 19 households in Barracluff Avenue and 1 signature from a household in Rickard Avenue adjacent to Barracluff Avenue. Residents raised concerns regarding the speed of vehicles and the street being used as a short cut principally in peak times.

Council referred the matter to the Executive Manager, Creating Waverley, for consideration.

5. June 2019 – A report was prepared for Waverley's Local Traffic committee recommending construction of pedestrian refuge islands at the intersections of Barracluff Avenue/Francis Street, and Barracluff Avenue/Lamrock Avenue.

Council deferred this matter this item for an investigation into the closure of Barracluff Avenue at the north end, south end or centre.

6. June 2019 – A petition was received from residents who live in or directly beside Barracluff Avenue requesting that Barracluff Avenue be converted into a cul-de-sac. A second preference for centre island treatments to be installed at each end of the street. The petition contained:

- (a) 13 signatures from households in Barracluff Avenue.
- (b) Two signatures from households in Rickard Avenue adjacent to Barracluff Avenue.
- (c) One signature from a household in Francis Street adjacent to Barracluff Avenue.
- (d) One signature from a household in O'Brien Street adjacent to Barracluff Avenue.

Council referred the matter to the Executive Manager, Creating Waverley, for appropriate action

7. November 2019 – Council noted previous motions in relation to Barracluff Avenue and Rickard Avenue. It was resolved by Council to:
 - (a) Prepares options for community consultation to:
 - (i) Fully or partially close Barracluff Avenue with partial closure being for exit from Barracluff into Francis Street.

- (ii) Install traffic calming devices on the corner of Barracluff and Lamrock Avenues and at other points along Barracluff as deemed appropriate.
- (b) Officers report back to Council prior to community consultation.

This report addresses the November 2019 motion and previous submissions.

2014 investigation

Council had considered traffic conditions in Barracluff Avenue in 2014 (referred to above). This was part of an overall assessment of traffic conditions at specific locations within the Council area. Traffic volumes and speeds were surveyed at 23 locations. The survey results for Barracluff Avenue are presented in Table 1.

Table 1. Surveyed traffic speeds and volumes on Barracluff Avenue (November 2013).

Location	Speed Limit (km/h)	Direction	85th %ile Speed (km/h)	Morning Peak Hour Volume	Evening Peak Hour Volume	Daily average
near No. 1	50	Northeast	47	33	33	387
		Southwest	49	83	66	780
		Combined	49	111	96	1167
near No. 29	50	Northeast	46	27	35	366
		Southwest	48	94	64	795
		Combined	47	119	94	1161

** The 85th percentile speed is defined as 'the speed at or below which 85 percent of all vehicles are observed to travel under free-flowing conditions past a monitored point.'*

The assessment criteria for traffic conditions at that time were:

Council would generally only consider the installation of LATM treatments if:

- a) the 85th percentile speed is considerably above the posted speed limit,*
- b) a speed-related crash history is known, or*
- c) volumes suggest that the road is being used as a "rat-run".*

Barracluff Avenue was deemed to not meet the criteria and was excluded from further analysis. This assessment was primarily vehicle based. It could have placed more weight on residential amenity considerations.

Resident petitions from 2018 and 2019

Two resident petitions from 2018 and 2019 are documented below. They relate to requests from residents of Barracluff Avenue. They do not include petitions related to Lamrock Avenue.

Figure 3 shows the coverage of the households from which the petitions were signed. It shows good support for traffic improvements.

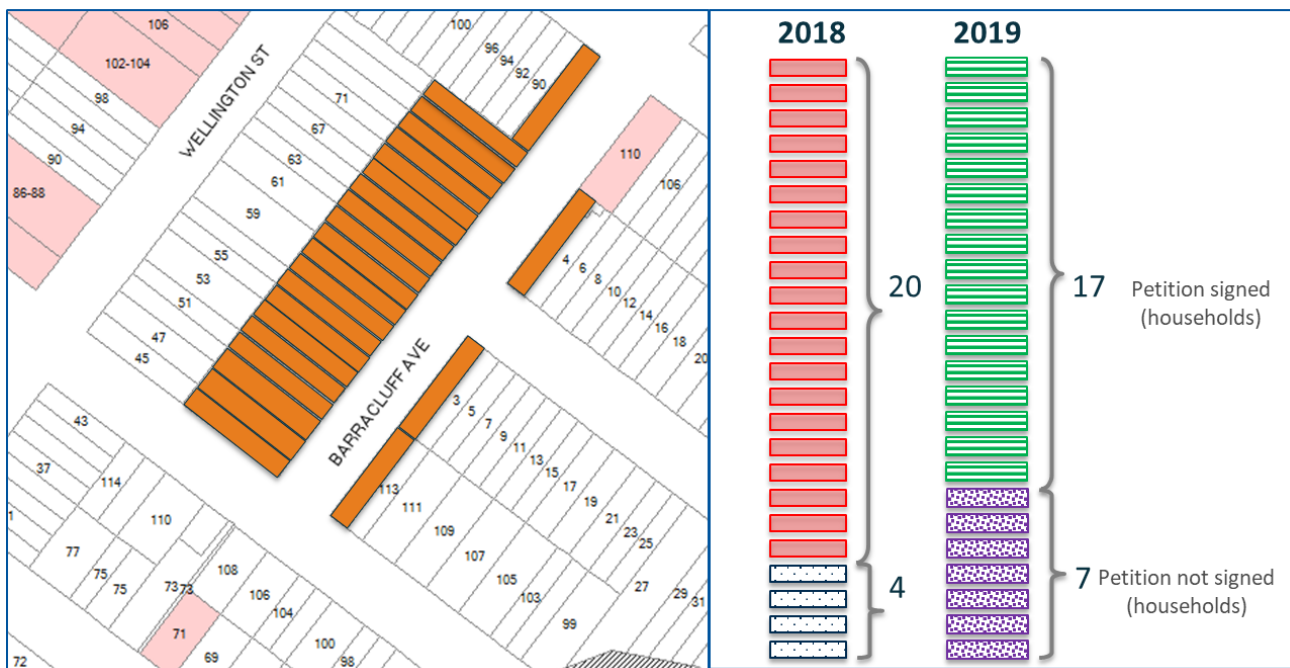


Figure 3. Resident petitions (2018 for traffic calming and 2019 for road closure).

Council survey from 2019

Council undertook a survey of resident views on implementing traffic calming in Barracluff Avenue in April 2019. Residents were presented with 3 locations for treatments and asked whether they supported these treatments. The information sent to residents is shown in Figure 4. The facilities included:

1. A pedestrian refuge island on Barracluff Avenue at Francis Street.
2. A pedestrian refuge island on Barracluff Avenue at Lamrock Avenue.
3. Replacement of a splitter island with a pedestrian refuge island on Lamrock Avenue at Barracluff Avenue.

Figure 5 shows the feedback from the Council survey. It indicates good support for consideration of the traffic calming approach with 14 responses in favour and four against.



Figure 4. Council survey information submitted to residents.

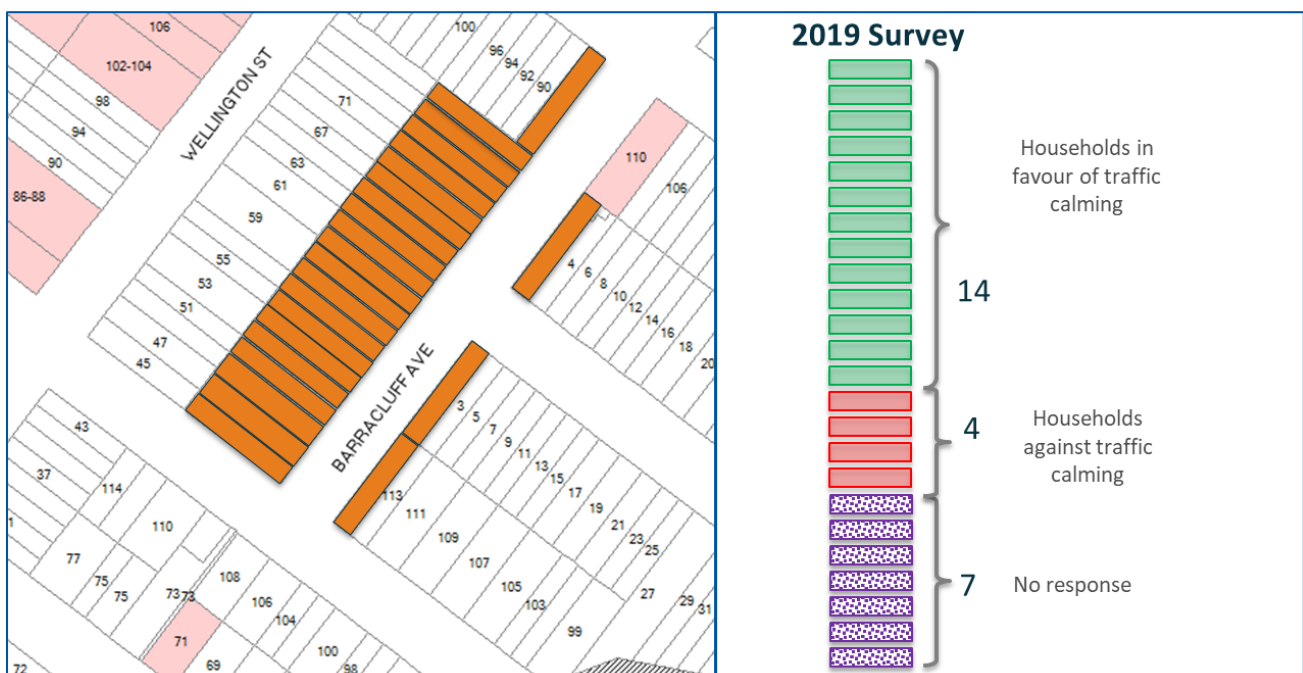


Figure 5. Resident response to Council Survey (2019 for traffic calming).

3. Technical Analysis

Assessment criteria

It is appropriate at this stage to revisit the criteria from which road closures and traffic calming measures should be assessed.

The RMS Guide to Traffic Generating Developments identifies ways in which traffic can have an impact. Ways relevant to the assessment of Barracluff Avenue include:

1. Impact on traffic efficiency.
2. Impact on amenity.
3. Impact on safety.

Traffic efficiency

Impact on traffic efficiency essentially relates to the capacity of the road system to accommodate the traffic demands. Delays mid-block and at intersections determine the efficiency. The efficiency is reported within a range from Level of Service A (free flow conditions) to Level of Service F (forced flow conditions).

Level of Service C is the point at which consideration of future traffic growth could warrant upgrades to the road system. It is in the zone of stable flow, but most drivers are restricted to some extent in their freedom to select their desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience declines noticeably at this level.

Traffic amenity

Traffic amenity for local roads is best addressed by comparison against environmental capacity criteria. Traffic characteristics to consider include:

1. Traffic volume.
2. Traffic composition, particularly proportion of heavy vehicles.
3. Vehicle speed.

The RMS Guide to Traffic Generating Developments specifies criteria by which amenity can be assessed. These are shown in Table 2.

Table 2. Environmental capacity performance standards on residential streets.

Road class	Road type	Maximum speed (kilometres per hour)	Maximum peak hour volume (vehicles per hour)
Local	Access way	25	100
	Street	40	200 environmental goal 300 maximum
Collector	Street	50	300 environmental goal
			500 maximum

Source: RMS Guide to Traffic Generating Developments (2002)

Note that the threshold speeds for local streets are 40 km/h. The general urban speed limit of 50 km/h does not apply when assessing impacts on amenity.

Traffic safety

Traffic safety is initially assessed by comparison against historical crash data. This data contains records of all crashes which involved an injury or fatality that has been reported to police. It does not include lower order crashes or near misses. These are best assessed by on site observations and feedback from residents who see traffic conditions on their streets on a daily (and nightly) basis.

Survey data – December 2018

Council carried out speed and volume tube counts in Barracluff Avenue, Rickard Avenue and Francis Street in early December 2018. The results of the surveys are presented in Tables 3 and 4 and Figures 6 and 7.

Traffic flows on Barracluff Avenue are up to 140 vehicles in peak hours which is below the environmental goal of 200 vehicles. Traffic speeds are around 45 km/h, which is higher than the desirable maximum of 40 km/h.

Table 2: Traffic volumes on Barracluff Avenue, Rickard Avenue, and Francis Street (December 2018).

Location	Speed Limit (km/h)	Direction	Morning Peak Hour Volume	Daily average
Barracluff Avenue (north of Rickard Avenue)	50	Northeast	29	380
		Southwest	104	891
		Combined	133	1,271
Barracluff Avenue (south of Rickard Avenue)	50	Northeast	29	380
		Southwest	111	891
		Combined	140	1,271
Rickard Avenue	50	Southeast	13	213
		Northwest	24	195
		Combined	37	408
Francis Street (north of Barracluff)	50	Southeast	37	487
		Northwest	166	1,080
		Combined	203	1,567
Francis Street (south of Barracluff)	50	Southeast	29	446
		Northwest	72	544
		Combined	101	990

Table 3: Traffic speeds on Barracluff Avenue, Rickard Avenue, and Francis Street (December 2018).

Location	Speed Limit (km/h)	Direction	85th %ile Speed (km/h)
Barracluff Avenue (higher 85%ile speed)	50	Northeast	41
		Southwest	45
		Combined	43
Rickard Avenue	50	Southeast	38
		Northwest	40
		Combined	39
Francis Street (higher 85%ile speed)	50	Southeast	43
		Northwest	45
		Combined	44

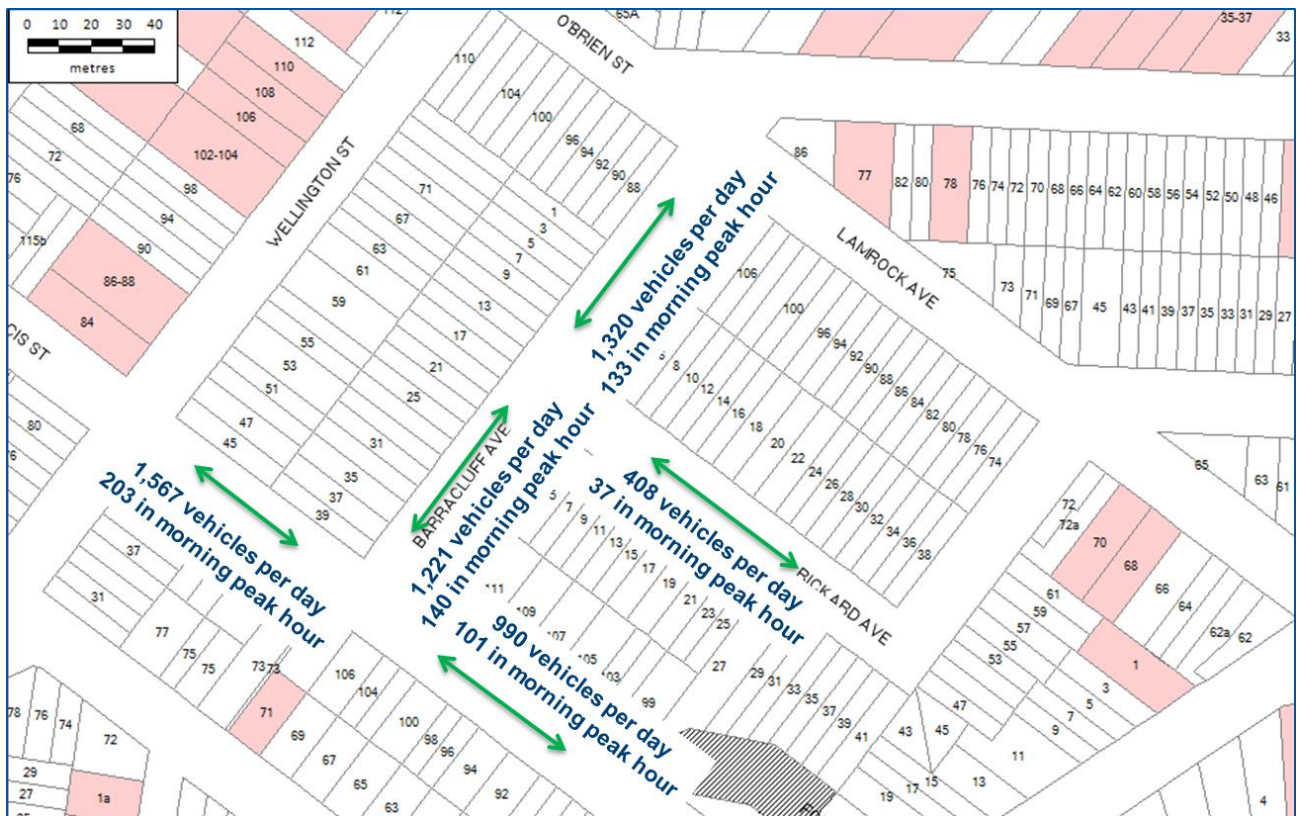


Figure 6. Traffic volumes on Barracluff Avenue, Rickard Avenue, and Francis Street (December 2018).

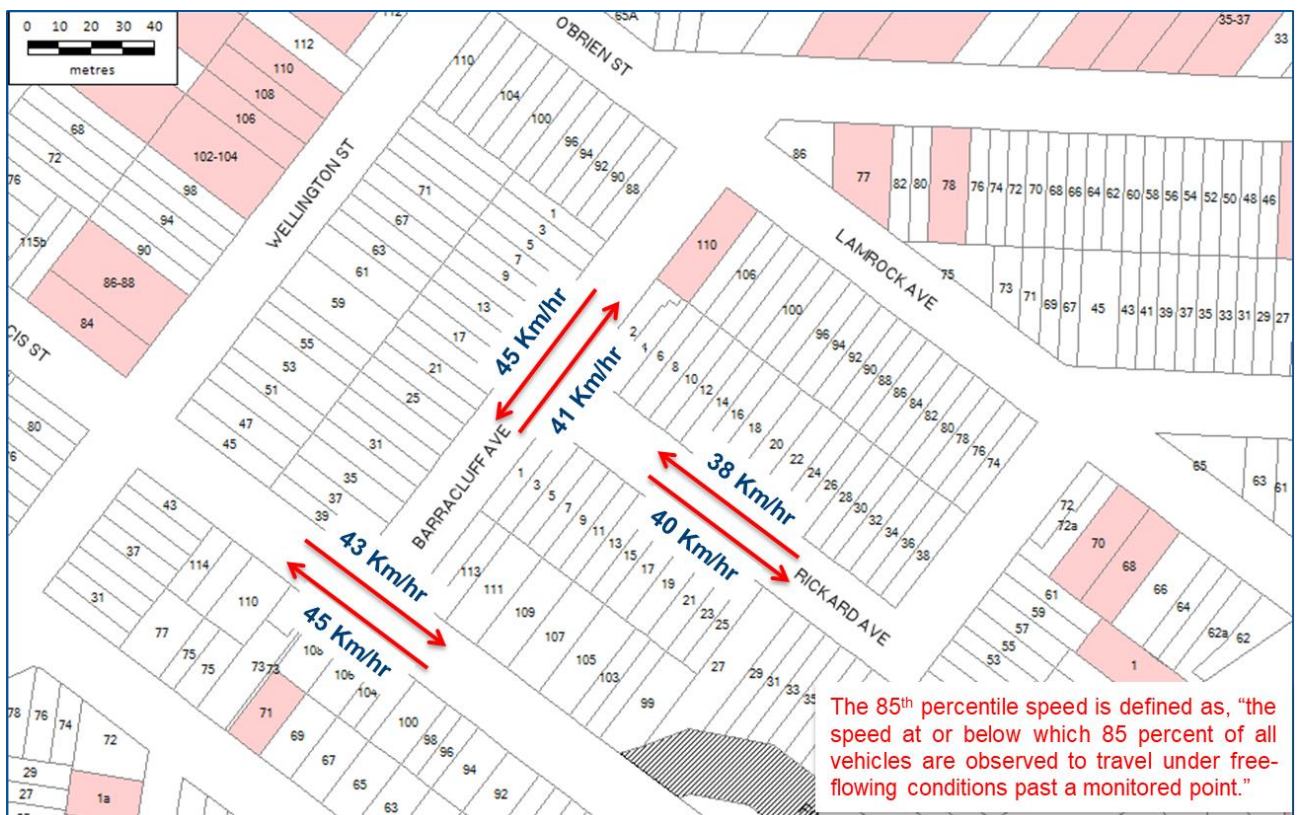


Figure 7. Traffic speeds on Barracluff Avenue, Rickard Avenue, and Francis Street (December 2018).

Impacts of Rickard Avenue closure

Rickard Avenue was closed at Lamrock Avenue on 25 September 2019 for a six-month trial. The six-month trial is now complete.

Traffic volumes and speeds counts were undertaken during the closure. These counts as well as the pre-closure counts from 1998 are presented in Table 4.

Table 4. Changes in traffic flows and speeds with Rickard Road closure.

Location	Direction	2018	2019	Change
Average daily traffic (7 days)				
Francis Street to Rickard Avenue	Two - way	1221	1189	-3%
Rickard Avenue to Lamrock Avenue	Two - way	1319	1440	9%
Morning peak hour traffic (5 days)				
Francis Street to Rickard Avenue	Two - way	129	158	22%
Rickard Avenue to Lamrock Avenue	Two - way	129	168	30%
Average speed (7 days)				
Francis Street to Rickard Avenue	Northbound	42	42	0%
Rickard Avenue to Lamrock Avenue	Northbound	42	45	7%
Rickard Avenue to Francis Street	Southbound	46	46	0%
Lamrock Avenue to Rickard Avenue	Southbound	45	41	-9%

The traffic data from before and during the trial closure of Rickard Avenue shows no significant impact on Barracluff Avenue except for the peak hour. Diversions by 'rat-running' traffic using Rickard Avenue has now diverted back to Barracluff Street. The volumes are not significant.

The trial closure of Rickard Avenue can be treated as a separate item to be reported to an upcoming traffic committee.

Traffic assessment

Traffic efficiency

Traffic conditions in Barracluff Avenue and surrounding streets operate at a Level of Service C or better. Congestion in the immediate surrounds is low. There is some through traffic on Barracluff Avenue. This is primarily local residents travelling between streets and the homes.

There are no traffic efficiency grounds for modifying the road infrastructure of Barracluff Avenue.

Traffic amenity

Traffic volumes on Barracluff Avenue are well below the RMS environmental limits. The speeds of around 45 km/h are slightly higher than the 40 km/h threshold set by the RMS. Speeds on the other adjacent streets are similar.

The 40 km/h threshold is an important factor to consider in streets where there is significant pedestrian and cyclist activity. It is desirable that this is achieved as part of the long-term planning for a better community environment. Slowing of traffic at intersections assists in reducing mid-block speeds to the benefit of vulnerable road users.

It is justified to undertake works that aim to reduce traffic speeds on Barracluff Avenue.

Traffic safety

There was one crash recorded on Barracluff Avenue in NSW Roads and Maritime Services records of crashes for the period from January 2010 to September 2018 (just under nine years). The crash occurred at 4.20 pm in October 2016. It was around 20 m south of Rickard Avenue. A 29-year-old female standing in the roadway was struck by a station wagon driven by a 57-year-old male driver. The station wagon was reported to be reversing on Barracluff Avenue at around 20 km/h.

Note that RMS records do not contain some 'minor' crashes. Regardless, it is apparent that the number of crashes which have resulted in injuries are low. Traffic calming can still be considered where there is a view that potential conflicts could occur.

Common to the petitions received from Barracluff Avenue and the Council survey was the theme from residents that they are concerned about conflicts between pedestrians and vehicles. Residents have reported near misses with children as well as injuries to pets. Conflicts between vehicles is not mentioned.

Traffic safety is a concern for all local neighbourhoods. Measures have recently been undertaken with a six-month trial of the closure of Rickard Avenue. This has a low to negligible impact on conditions in Barracluff Avenue. In other words, conditions in Barracluff Avenue remain relatively the same as prior to the closure.

It is justified to undertake works that minimise conflicts between vulnerable road users and vehicles on Barracluff Avenue.

Other issues

Circulating traffic

Barracluff Avenue is used as a cross link by circulating traffic accessing Edward Street, Francis Street, Lamrock Avenue, and O'Brien. This traffic is generally associated with local resident movements and activities at Bondi Beach itself. The Bondi Beach traffic is generally looking for parking close to the beach.

Circulating traffic will continue with or without the introduction of traffic calming. Road closures are the only measure available to address excessive circulation. However, closures also affect access to neighbours' properties and local shops.

Impact on cyclists

Traffic calming at intersections improves safety for cyclists by slowing traffic and allowing for identification of cyclist routes. Providing access is maintained, road closures for vehicles do not affect cyclists.

Potential road treatment 1 – Road closure

There are four potential locations where Barracluff Avenue could potentially be closed to prevent through traffic. They are shown in Figure 8. Location 2 in the vicinity of 21 Barracluff Avenue has been nominated by residents in the 2019 petition as a preferred location.

Closure at any of the locations impacts residents beyond those who live in Barracluff Street. Road closure would transfer through and circulating traffic movements to other residential streets, particularly Wellington Street. Wellington Street already carries significant levels of traffic performing a collector as well as a local road function. Traffic flows on Wellington Street are around 6,000 vehicles per day (600 peak hour vehicles). These flows are already in excess of the desirable maximum for Wellington Street functioning as a collector road (500 vehicle per hour maximum threshold).

Road closures affect accessibility for the residents within the affected street in two ways. The first is loss of parking due to an area required to turn vehicles around at the dead end. The second is impacts on manoeuvrability of larger vehicles making deliveries and waste vehicles undertaking weekly collections.

Road closure for Barracluff Avenue is not recommended as the volumes are low and any closure would adversely impact other streets already carrying significant levels of traffic. Traffic speeds can be addressed in the consideration of traffic calming. Nevertheless, road closure option 2 in the vicinity of 21 Barracluff Avenue should be presented to the community as part of further consultation.



Figure 8. Potential road closure locations.

Potential road treatment 2 – Traffic calming

Traffic calming will not reduce traffic flows. Given the low volumes, this is not the main issue. The main issue is safety for pedestrians and other vulnerable road users including cyclists.

Traffic calming at intersections and/or mid-block can be used to reduce traffic speeds and improve accessibility for pedestrians.

Mid-block treatment in the form of speed humps will slow speeds but has the negative effect of noise impacts on nearby residents.

Mid-block pedestrian refuges are not recommended as they result in the loss of significant on street parking spaces.

Mid-block kerb extensions with plantings are preferred.

The introduction of pedestrian refuges at intersections is recommended to improve pedestrian safety and slow traffic turning into and out of Barracluff Avenue. Locations recommended for pedestrian refuges are:

- Barracluff Avenue at Francis Street.
- Barracluff Avenue at Lamrock Avenue.
- Lamrock Avenue at Barracluff Avenue.

Mid-block kerb extensions with plantings can also be introduced to keep traffic near the centre of the road reducing potential conflict with people accessing parked cars. Plantings in mid-block kerb extensions assist in enhancing the urban environment. Two mid-block kerb extensions are possible. They are:

- Kerb extension outside numbers 23 and 25 Barracluff Avenue.
- Kerb extension outside numbers 5 and 7 Barracluff Avenue.

Installation of the kerb extension will require consultation with the directly affected residents. This does not defer the recommendation for intersection treatments.

Traffic calming at intersections is preferred over road closures. Mid-block speed humps are not preferred. Traffic calming is the appropriate measure for reducing speeds at the intersections resulting in reduced mid-block speeds.

Traffic calming treatments at intersections have been examined in the past. They have been re-examined and updated to incorporate the needs for cyclist safety. Plans of these treatments are attached.

4. Financial Information for Council's Consideration

Works will be funded from existing budgets.

5. Attachments

1. Barracluff Avenue - Pedestrian Refuge Island Design - Updated [↓](#) .

GENERAL NOTES

1. THE DESIGN DRAWINGS SHOULD BE READ IN CONJUNCTION WITH RELEVANT COUNCIL'S STANDARD DRAWINGS.
2. DURING CONSTRUCTION THE WORK IS TO BE SIGNPOSTED AND MARKED TO THE REQUIREMENTS OF AS1742.2-2009 AND AS1742.3-2009 "TRAFFIC CONTROL DEVICES FOR WORKS ON ROADS".
3. A TRAFFIC MANAGEMENT PLAN & SITE SAFETY PLAN IS TO BE SUBMITTED TO COUNCIL'S PROJECT MANAGER PRIOR TO IMPLEMENTATION.
4. SOIL AND WATER MANAGEMENT PLAN IS TO BE SUBMITTED TO COUNCIL'S PROJECT MANAGER PRIOR TO IMPLEMENTATION.
5. ALL WORK IS TO BE CARRIED OUT TO BEST PRACTICE STANDARDS AND TO THE SATISFACTION OF COUNCIL'S PROJECT MANAGER.
6. THE WORK SITE IS TO BE PROTECTED USING APPROPRIATE SIGNAGE, FENCING, BARRICADING, AND PARABEYING FOR DURATION OF PROJECT CONSTRUCTION.
7. WHERE TRAFFIC CONDITIONS HAVE CHANGED DUE TO WORKS, CONTRACTOR TO INSTALL TEMPORARY SIGNS - "CHANGED TRAFFIC CONDITIONS AHEAD" ON ALL APPROACHES 75-100M IN ADVANCE OF THE WORK SITE AND MAINTAIN FOR 3 MONTHS AFTER COMPLETION OF WORKS.
8. ALL RESIDENTS AFFECTED BY THE PROPOSED WORKS ARE TO BE NOTIFIED AT LEAST 3 WORKING DAYS BEFORE THE COMMENCEMENT OF ROADWORKS.
9. SUITABLE VEHICULAR ACCESS SHALL BE MAINTAINED TO EACH DRIVEWAY OR ALTERNATIVE ARRANGEMENTS MADE WITH THE OWNERS.
10. WORK IS TO BE CARRIED OUT WITH IN THE APPROVED TIMINGS ONLY.

SERVICES

11. UTILITIES (IF SHOWN) ARE DIAGRAMMATIC ONLY AND HAVE BEEN PREPARED FROM THE INFORMATION PROVIDED BY THE RELEVANT SERVICE AUTHORITIES. CONTRACTORS ARE RESPONSIBLE TO LOCATE AND AVOID DAMAGE TO THE SERVICE AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDELINES.
12. AUGURD REQUIRES THAT CONTRACTOR SHOULD CONTACT THEM IF WORKING WITHIN 5.0M FROM UNDERGROUND ELECTRICITY CONDUITS.
13. EXISTING SERVICE COVERS SHALL BE ADJUSTED TO DESIRED LEVELS TO THE REQUIREMENTS OF THE RELEVANT SERVICE AUTHORITY.
14. NO SERVICE COVERS ARE TO BE COVERED.

SIGNS & LINEMARKING

15. ALL TRAFFIC SIGNS TO COMPLY WITH AUSPEC 262 & RMSQA SPECIFICATION R65 AND TO BE OF HIGH INTENSITY CLASS 1 REFLECTIVITY.
16. ALL LINE MARKING IS TO COMPLY WITH AUSPEC 261 & RMS SPECIFICATION R141 - "PAVEMENT MARKING"
17. LINE MARKING TO BE IN THERMOPLASTIC TYPE (UNLESS STATED OTHERWISE) AND INCLUDE GLASS BEADS IN ACCORDANCE WITH RMS SPECIFICATIONS 3357 AND 3353 RESPECTIVELY. ALL RRP/M TO COMPLY WITH RMS SPECIFICATION R62.
18. KERB FACES OF ALL ISLANDS TO BE PAINTED WHITE AND TO INCLUDE GLASS BEADS IN ACCORDANCE WITH RMS SPECIFICATION NO. 3353.
19. ALL LINE MARKING AND RRP/M'S REMOVED OR AFFECTED DURING THE COURSE OF THE WORKS IS TO BE REINSTATED UNLESS NOTED OTHERWISE.
20. ALL EXISTING SIGNS TO REMAIN UNLESS OTHERWISE NOTED.
21. LINE MARKING AND SIGNPOSTING TO BE INSTALLED AS SOON AS PRACTICABLE.
22. REDUNDANT LINE MARKING IS TO BE REMOVED BY GRINDING WHERE SHOWN ON PLANS OR WHERE NEW LINE MARKING IS PROVIDED.
23. ALL SIGNPOSTING ON SPLITTER, KERB OR PEDESTRIAN REFUGE ISLANDS TO BE ERCTED USING VERTICAL INSERTS, UNLESS OTHERWISE NOTED.
24. UNLESS SHOWN ON PLANS, NO STATE SURVEY MARKS ARE TO BE REMOVED PRIOR TO CONSULTING WITH COUNCIL'S SENIOR DESIGN TEAM LEADER.
25. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS STATED OTHERWISE.

IN CASE OF EMERGENCY, CONTACT
THE FOLLOWING UTILITIES IF THEIR
SERVICES ARE INVOLVED :

TELSTRA	: 132203
AGL (GAS)	: 131909
SYDNEY WATER	: 132090
AUSGRID	: 131388

CONCRETE

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
2. CONCRETE QUALITY.

ELEMENT	SLUMP	MAX AGGREGATE SIZE	CEMENT TYPE	CEMENT GRADE
ALL	80mm	20mm	GP	25MPa

NO ADMIXTURES SHALL BE USED WITHOUT THE APPROVAL OF THE MANAGER DESIGN.

3. CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN-

ELEMENT	SURFACE OF MEMBER IN INTERIOR ENVIRONMENT	SURFACE OF MEMBER IN ABOVE GROUND EXTERIOR ENVIRONMENT	SURFACE OF MEMBER IN CONTACT WITH GROUND (1)	SURFACE OF MEMBER WATER
ALL	35	45	55	75

NOTE:

1. COVER MAY BE REDUCED BY 10mm IF THE SURFACE IS PROTECTED BY A DAMP-PROOF MEMBRANE.
2. SLABS EXPOSED TO CORROSIVE VAPOURS, CORROSIVE GROUND WATER, SEA WATER, OR SPRAY ARE TO HAVE REINFORCEMENT COVER AS NOTED ON THE DRAWINGS.



UTILITIES, ARE DIAGRAMMATIC ONLY. CONTRACTORS ARE RESPONSIBLE TO LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDELINES.

DRAWING SCHEDULE

- 1/4 - NOTES AND SCHEDULES
2/4 - LAYOUT, SIGNS AND LINEMARKING PLAN (1)
3/4 - LAYOUT, SIGNS AND LINEMARKING PLAN (2)
4/4 - DETAILS

RELEVANT STANDARD DRAWINGS:

FOLLOWING ARE WAVERLEY COUNCIL'S STANDARD DRAWINGS
RELEVANT TO THIS PROJECT

- R1 - STANDARD KERB PROFILES
- G1 - SEDIMENT & EROSION CONTROL PLAN

LEGEND

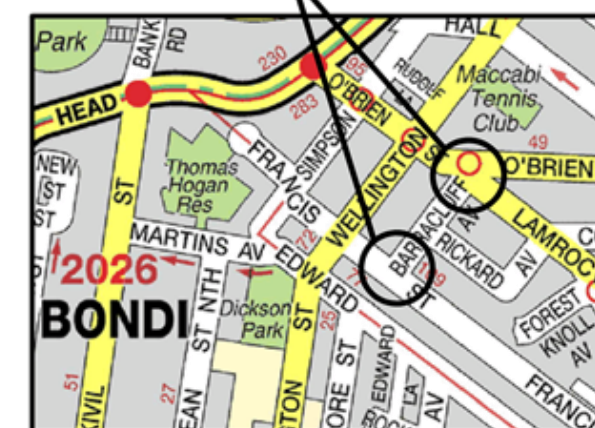
SYMBOLS

- STATE SURVEY MARK
- ▲ PERMANENT SURVEY MARK
- SURVEY STATION
- DRILLED HOLE
- SURVEY NAIL
- ▲ SIGN
- SILENT COP
- COLUMN
- EXISTING SURFACE LEVEL
- BOLLARD
- HIGHWAY
- POWER POLE
- LIGHT POLE
- ELECTRICITY & LIGHT POLE
- TELECOMMUNICATION PILLAR
- ☎ MAIL BOX
- ☎ TELECOMM. SERVICE COVER
- ☎ TELECOMMUNICATION PILLAR
- RUDDISH B/N
- STORMWATER MANHOLE
- SEWER MANHOLE
- STOP VALVE
- WATER METER
- GAS VALVE
- TRAFFIC LIGHT BOX
- TRAFFIC LIGHT
- UNKNOWN SERVICE COVER
- PARKING METER
- TREE


LINE STYLES

- | | |
|--|----------------------------|
| | FENCELINE |
| | WOODEN FENCE |
| | HAND RAIL |
| | GUARD RAIL |
| | GATE |
| | BOUNDARY LINE |
| | TOP OF BANK |
| | TABLE DRAIN |
| | EXISTING DRAINAGE LINE |
| | NEW DRAINAGE LINE |
| | HEDGE |
| | EDGE OF TREE CANOPY |
| | EDGE OF BITUMEN |
| | LINEMARKING (TBLCT, etc.) |
| | LINEMARKING (E1, E4, etc.) |

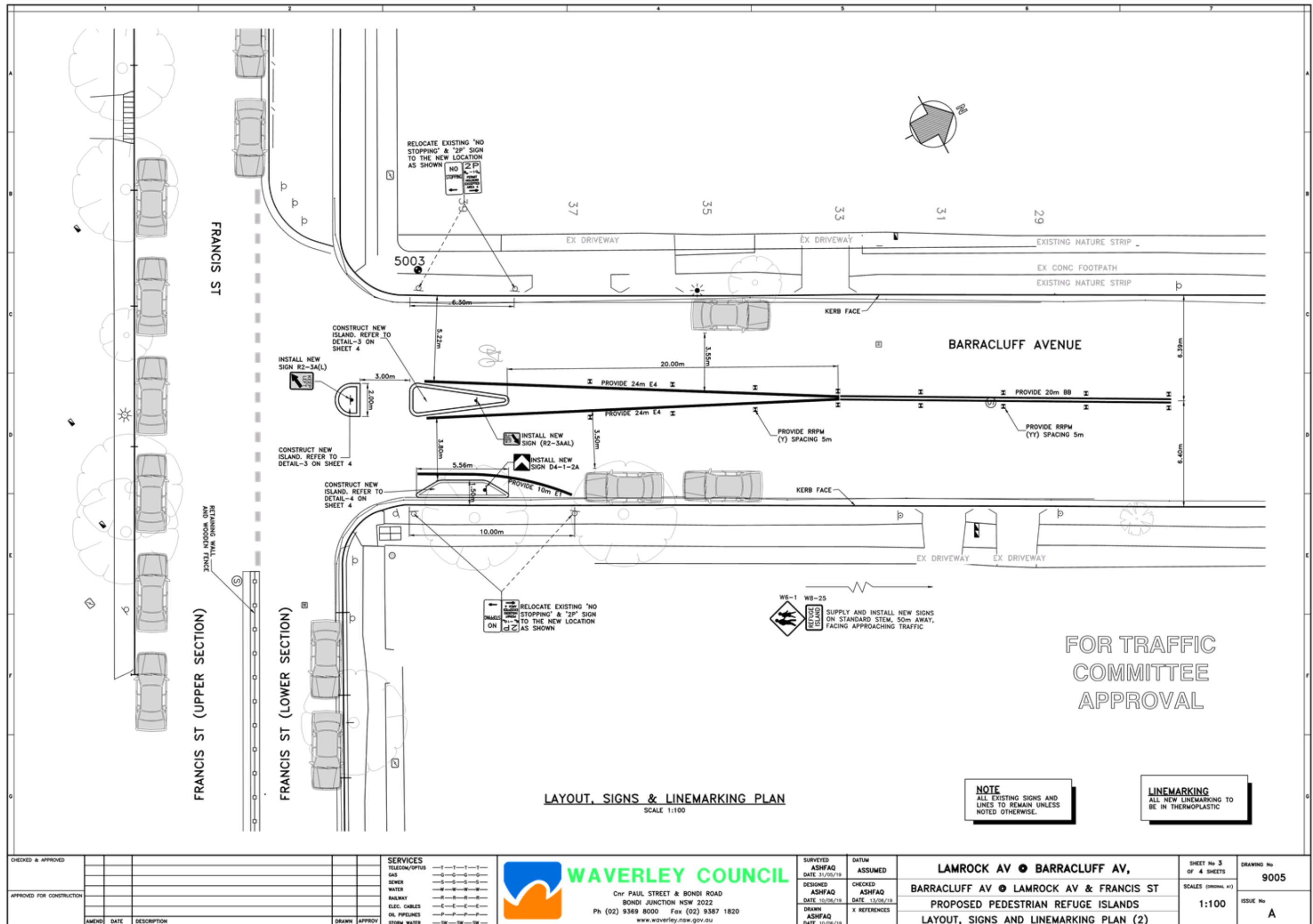
LOCATION OF WORKS



LOCALITY PLAN
(NTS)

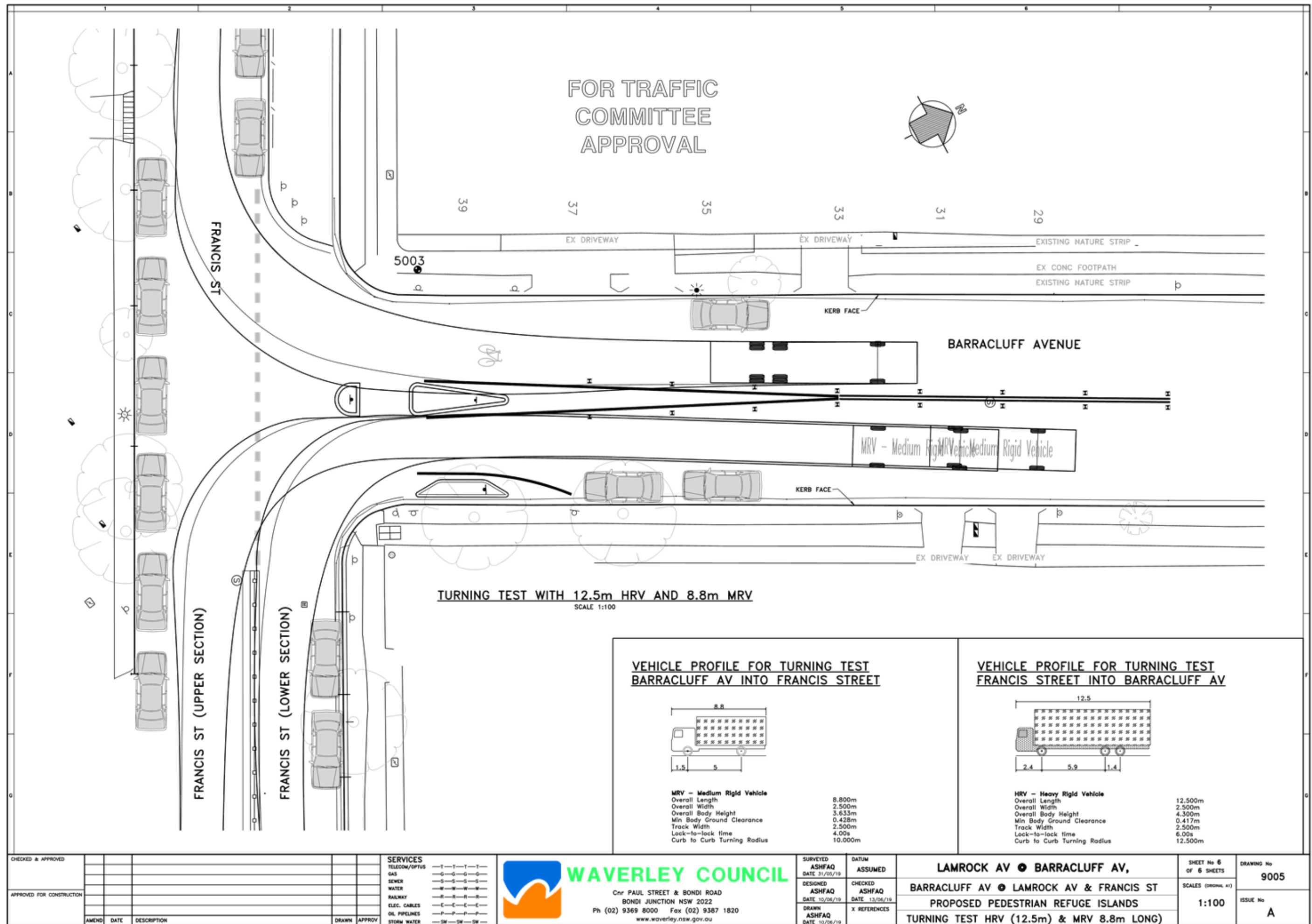
CHECKED & APPROVED					SERVICES			WAVERLEY COUNCIL Cnr PAUL STREET & BONDI ROAD BONDI JUNCTION NSW 2022 Ph (02) 9369 8000 Fax (02) 9387 1820 www.waverley.nsw.gov.au	SURVEYED		DATUM		LAMROCK AV ● BARRACLUFF AV, BARRACLUFF AV ● LAMROCK AV & FRANCIS ST PROPOSED PEDESTRIAN REFUGE ISLANDS NOTES AND SCHEDULES		SHEET No 1		DRAWING No			
					ASHFAQ GAS SEWER WATER RAILWAY ELEC. CABLES OIL PIPELINES				31/05/19 31/05/19 31/05/19 31/05/19 31/05/19 31/05/19		ASSUMED ASSUMED ASSUMED ASSUMED ASSUMED ASSUMED				OF 4 SHEETS		9005			
APPROVED FOR CONSTRUCTION									DESIGNED DATE 15/06/19		CHECKED DATE 15/06/19				X REFERENCES		N.A.		ISSUE No	
									DRAWN ASHFAQ										A	
AMEND	DATE	DESCRIPTION			DRAWN	APPROVED														











REPORT

TC/CV.01/20.04



Subject: Reduction in the number of parking meters installed in beach front locations

TRIM No: A20/0145

Author: Colin Handsaker, Manager, Customer Parking

Authoriser: Dan Joannides, Executive Manager, Infrastructure Services

COUNCIL OFFICER'S PROPOSAL:

That Council reduces the number of parking meters installed in Queen Elizabeth Drive, Park Drive North, Park Drive South and Bronte Cutting from 36 to 19 at the locations identified in this report.

1. Executive Summary

Council recently went to market via tender to replace all current on street parking meters (ticket machines) after expiry of the contract with the current provider.

The successful tenderer has been selected and endorsed by Council at the February 18, 2020 Council meeting.

Council officers have identified opportunities to reduce the number of parking meters installed in the Bondi and Bronte beach carparks without reducing the service provided.

It is proposed to remove 18 parking meters located in Queen Elizabeth Drive, Park Drive North, Park Drive South and Bronte Cutting. A breakdown of parking meters by location is presented in **Table 1**.

Table 1: Current and proposed parking meters

Location	Number of parking meters		
	Meters currently installed	Meters to be removed	Meters to be retained
Queen Elizabeth Drive South	6	3	3
Queen Elizabeth Drive North	4	2	2
Park Drive North	8	4	4
Park Drive South	8	4	4
Bronte Cutting	10	5	5
Total	36	18	18

2. Introduction/Background

Council recently went to market via tender to replace all current on street parking meters (ticket machines) after expiry of the contract with the current provider.

The successful tenderer has been selected and endorsed by Council at the February 18, 2020 Council meeting (CM/7.19/20.02 - Tender Evaluation - Replacement of parking meters).

Council authorised “the General Manager, or delegated representative, to enter into contract on behalf of Council with the recommended tenderer for five years with options for a further three years plus two-and-a-half years” (10.5 years in total).

Council officers have identified opportunities to reduce the number of parking meters installed in the Bondi and Bronte beach carparks without reducing the service provided. The reduction in the number of parking meters results in savings on initial installation costs and ongoing maintenance fees.

The parking meters currently installed issue a ticket that customers need to display on the dashboard of their car. This means that they will sometimes have to back track from the direction they wish to go in order place the ticket on their vehicle.

The new parking meters are pay by plate and pay by bay machines. This means customers will enter their vehicle registration number or bay number into a parking meter removing the need to return to their vehicle.

The parking meters in the beachside locations can be spaced further apart taking into consideration the above functionality and the availability of pay by phone app (PayStay) in the paid on street parking areas.

The most suitable areas are the beach front areas in Queen Elizabeth Drive, Park Drive North, Park Drive South, and Bronte cutting. These locations contain 4P and long stay parking (elsewhere) which is with the long term parking classification/definition.

Under the revised Pay Parking Guidelines the maximum distance from a parking space to a machine can be up to around 50 metres in these areas. Even longer distances are possible where people walking to and from their cars do so via one or more common points. Bronte Cutting has a common point at the beach end of the carpark.

The proposal has been reviewed by Transport for NSW and Council’s Service Manager, Traffic and Transport.

3. Technical Analysis

3.1 Queen Elizabeth Drive South – removal of 3 parking meters on the north western side



Figure 3.1: Queen Elizabeth Drive South

The removal of parking meters currently designated as WGED02, WQED04 and WQED06 on the north western side of Queen Elizabeth Drive South is proposed.

This would result in the maximum distance a motorist needs to walk to get to a parking meter is 56 metres.

The removal of these parking meters and associated signage would also improve the visual amenity of the area.

As the majority of movements in this location would be toward the beach front, the removal of the proposed parking meters would not pose an inconvenience to motorists.

3.2 Queen Elizabeth Drive North – removal of 2 parking meters on the north western side

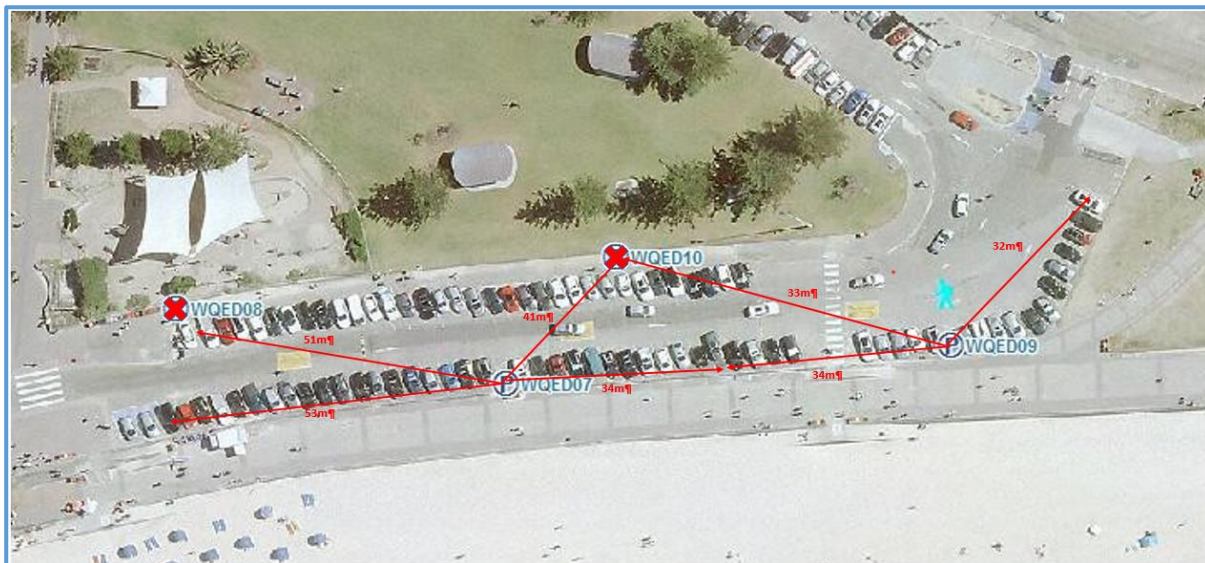


Figure 3.2: Queen Elizabeth Drive North

The removal of parking meters currently designated as WQED08 and WQED10 on the western side of Queen Elizabeth Drive South is proposed.

As for Queen Elizabeth Drive South this will result in improved visual amenity and not pose an inconvenience to motorists.

3.3 Park Drive North – removal of 4 parking meters on the northern side

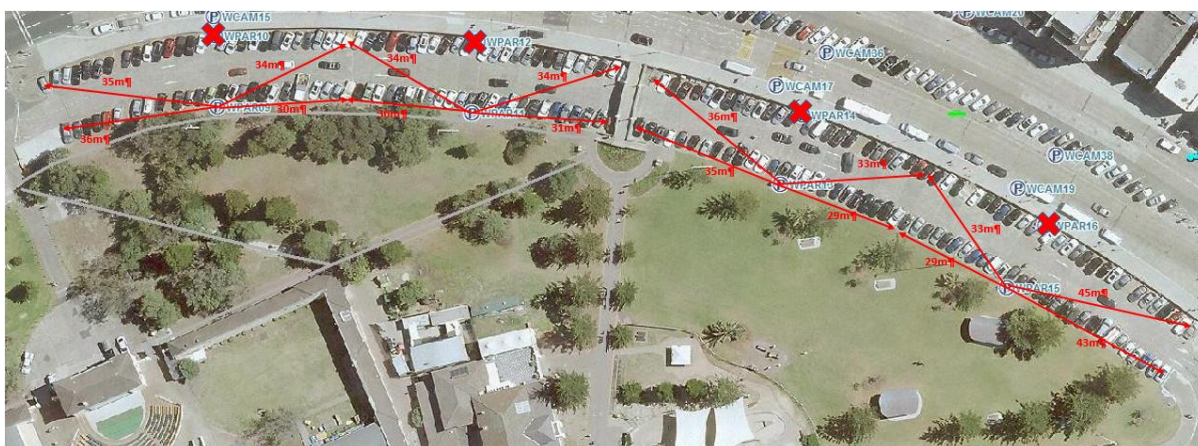


Figure 3.3: Park Drive North

The removal of parking meters currently designated as WPAR10, WPAR12, WPAR14 and WPAER16 on the northern side of Park Drive North is proposed.

This would result in the maximum distance a motorist needs to walk to get to a parking meter is 43 metres.

The parking meters to be removed are up against a high wall. Motorists would be walking past the remaining meters anyway.

The removal of these parking meters and associated signage would also improve the visual amenity of the area. The signs associated with the nominated parking meters have become a target for vandalism and can be unsightly.

3.4 Park Drive South – removal of 4 parking meters on the north western side

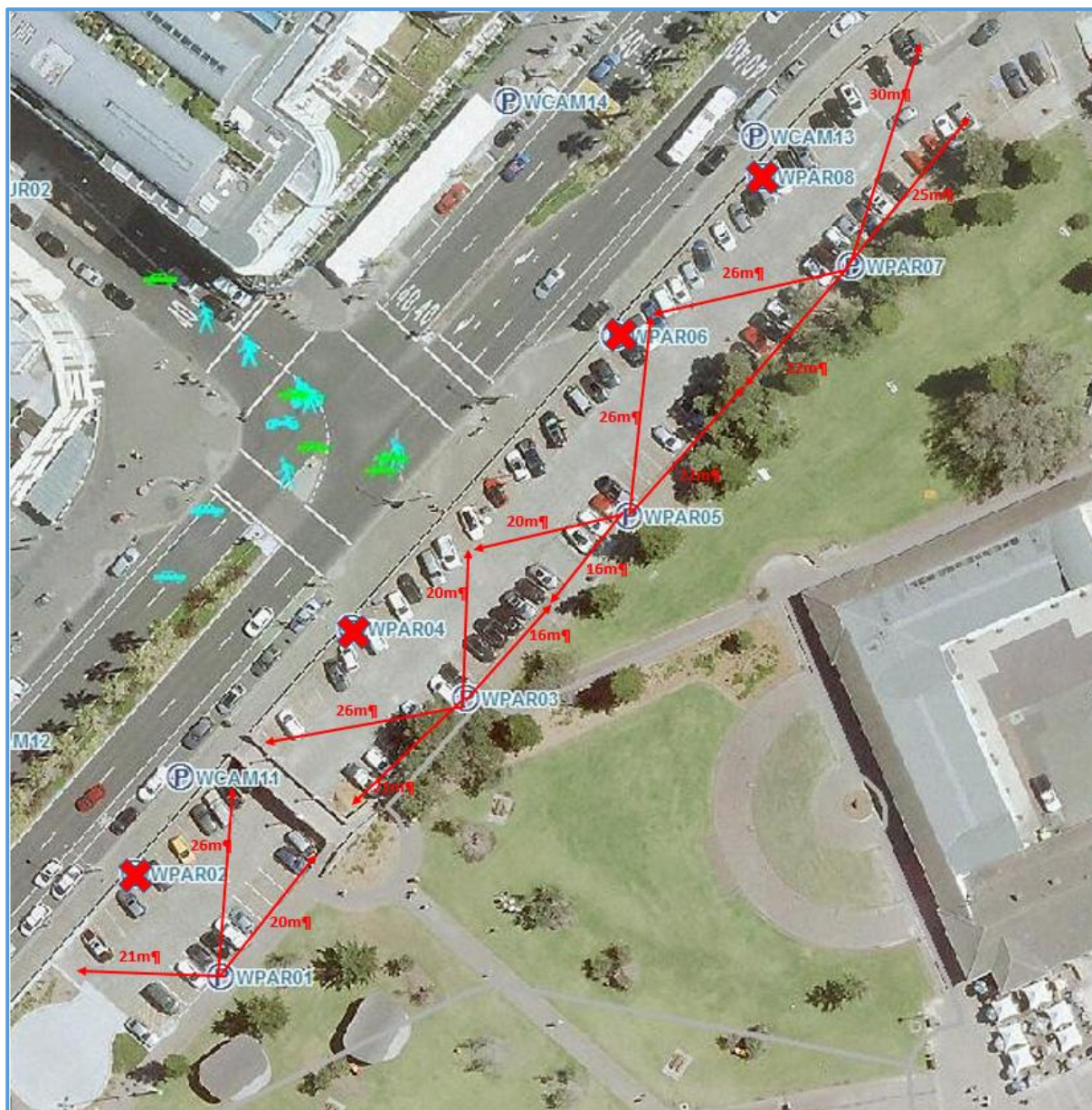


Figure 3.4: Park Drive South

The removal of parking meters currently designated as WPAR02, WPAR04, WPAR06 and WPAR08 on the northern western side of Park Drive South is proposed.

This would result in the maximum distance a motorist needs to walk to get to a parking meter is 30 metres.

The parking meters to be removed are up against a high wall. Motorists would be walking past the remaining meters anyway.

The removal of these parking meters and associated signage would also improve the visual amenity of the area. The signs associated with the nominated parking meters have become a target for vandalism and can be unsightly.

3.5 Bronte Cutting - removal of 5 parking meters



Figure 3.5: Bronte Cutting

Meters designated as WBRC06 and WBRC08 are currently not in use due to the pedestrian walkway trial, this is likely to be permanent. The removal of parking meters WBRC01, WBRC03 and WBRC10 as well as WBRC06 and WBRC08 is proposed.

This would result in the maximum distance a motorist needs to walk to get to a parking meter is 50 metres.

The geography of the area naturally directs customers down the cutting toward Bronte Beach past the remaining parking meters.

Relevant guidelines and legislation:

- RMS Pay Parking guidelines v5.0 - November 2019
- Transport Administration Act 1988
- RMS Delegation to Councils; Regulation of Traffic
- RMS Traffic Signs Database
- Road Transport General Regulation 2013
- [NSW] Road Rules 2014

4. Financial Information for Council's Consideration

The savings to Council by removing the 18 parking meters are presented below.

Cost savings from removal of 18 parking meters	
Initial Installation	\$ 138,150.35
Yearly costs over 10.5 Years	\$ 285,768.00
Total	\$ 423,918.35

5. Attachments

Nil.