

Urban Design Report

104-128 Princes Highway, Arncliffe

Appendix 1.

Oct 2014

This report reviews the urban design potential of the site at 104-128 Princess Highway, Arncliffe in the context of existing planning parameters particularly the Princess Highway Corridor Strategy.

Prepared for:

Combined Projects (Arncliffe) Pty Ltd
Suite 301, Level 3
161 Redfern Street
Redfern NSW 2016

Prepared by:

Annand Associates Urban Design Pty Ltd
Urban Designers
Level 9
50 Carrington Street
Sydney NSW 2000
Tel: 0418 280 154
Email: peter@aaud.com.au

1.0	Context	1
2.0	Land Use	2
3.0	Built Form	5
4.	Floor Space Ratio	8
5.	Building Setbacks	9
6.	Articulation	9
7.0	Open Space	10
8.0	Conclusion	14
	Attachment	15

1.0 CONTEXT

The proposal sits on a significant site on the corner of Kyle Street and the Princes Highway. It is one of the most significant and readily developed sites within the 400m/5min walk from Arncliffe Station.

It is in effect (see Corridor Strategy) a part of the future Arncliffe Transit Oriented Development/Urban Activation Area and is significant in this context because it is a large consolidated site.

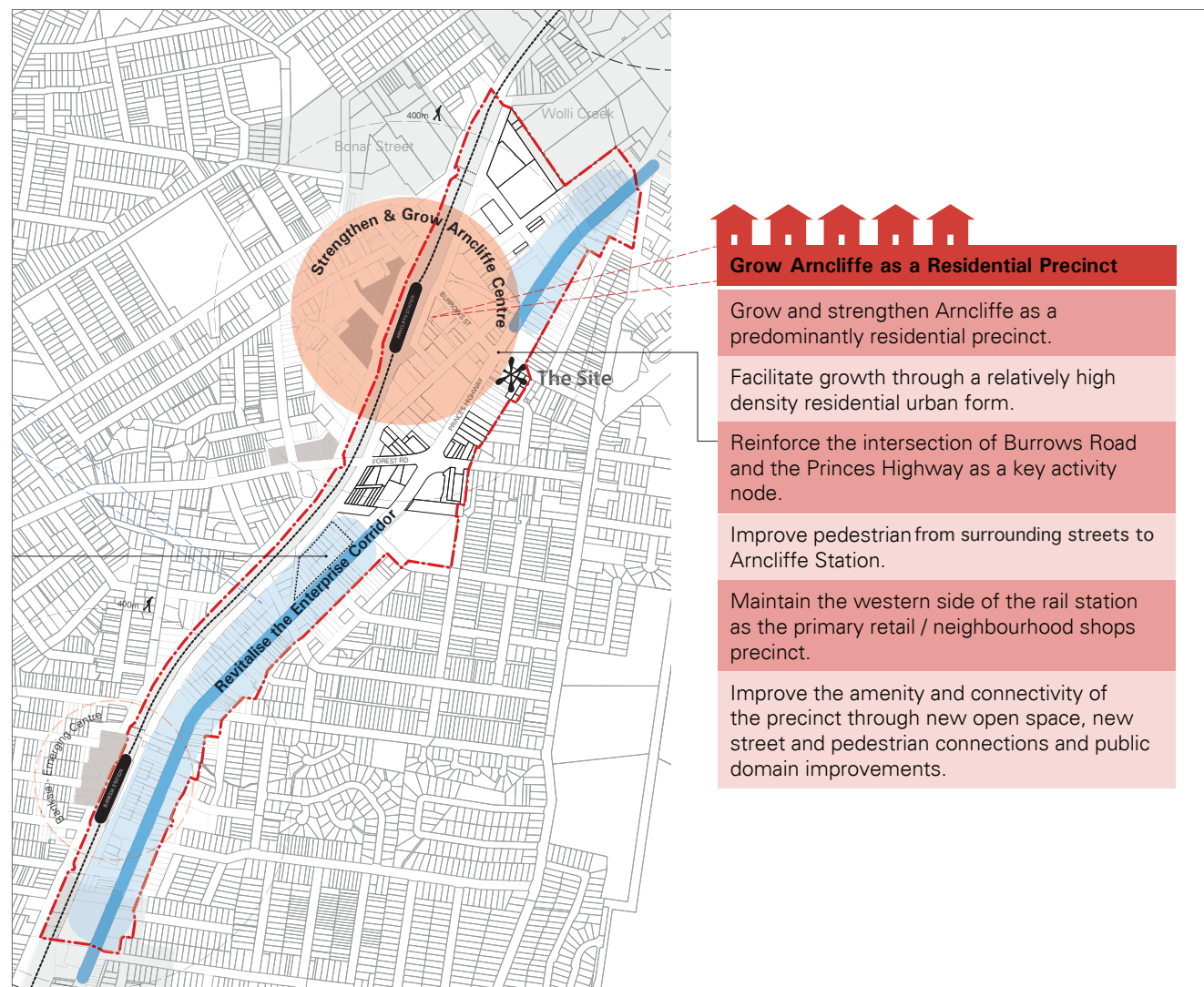
1.1 AMALGAMATION

The site comprises 16 amalgamated sites totalling 7,417 sqm. This is a major site permitting major urban renewal opportunities.

1.2 NODE VS CORRIDOR

The Corridor Strategy clearly indicates that this site is within the Arncliffe Transit Oriented Development node or Urban Activation Area ... a node within the Corridor (Banksia is another node and then Rockdale ... a more significant node) rather than a part of the corridor itself.

In this context it is appropriate that this "node" is emphasised over the corridor framework and thus should accommodate additional FSR and height (within environmental capacity).



Source: Princes Highway Corridor Strategy : August 2013

2.0 LAND USE

The site is proposed as mixed-use under the Princes Highway Corridor Strategy. The Economic Study (Jones Lang La Salle) which accompanies the Highway Corridor Strategy is less than confident about the potential for significant employment generation along the highway particularly in the short term.

Note that mixed use was not required on the other side of the highway and that high density mixed use was recommended between Kyle and Wickham Streets (includes the subject site).

- 3** New high density, mixed use precinct adjacent to the station
 - Encourage the longer term redevelopment of the area for a mix of high density residential use and local retail uses adjacent the station.
 - Provide an active street frontage addressing Arncliffe Street and the station and wrapping the corner of The Arcade to improve security and amenity for patrons of Arncliffe station.
 - Explore options to relocate or redevelop Wooroona Park (No. 13A Eden Street) for local retail and or mixed use residential uses.
- 4** Facilitate new high density mixed use or residential uses at the corner of Kyle Street and the Princes Highway
 - Rezone No. 96 - 102 Princes Highway for high density residential and / or mixed use
 - Encourage active ground floor frontages around the key intersection.
- 5** Consolidate block as high density residential area
 - Rezone No. 161-173 Princes Highway to high density residential uses and encourage for pure residential development without the requirement for non-residential uses along the Princes Highway.
- 6** Facilitate new high density mixed use or residential uses between Kyle Street and Wickham Street
 - Rezone the street block for high density residential and / or mixed use
 - Encourage active ground floor frontages around the key intersection.

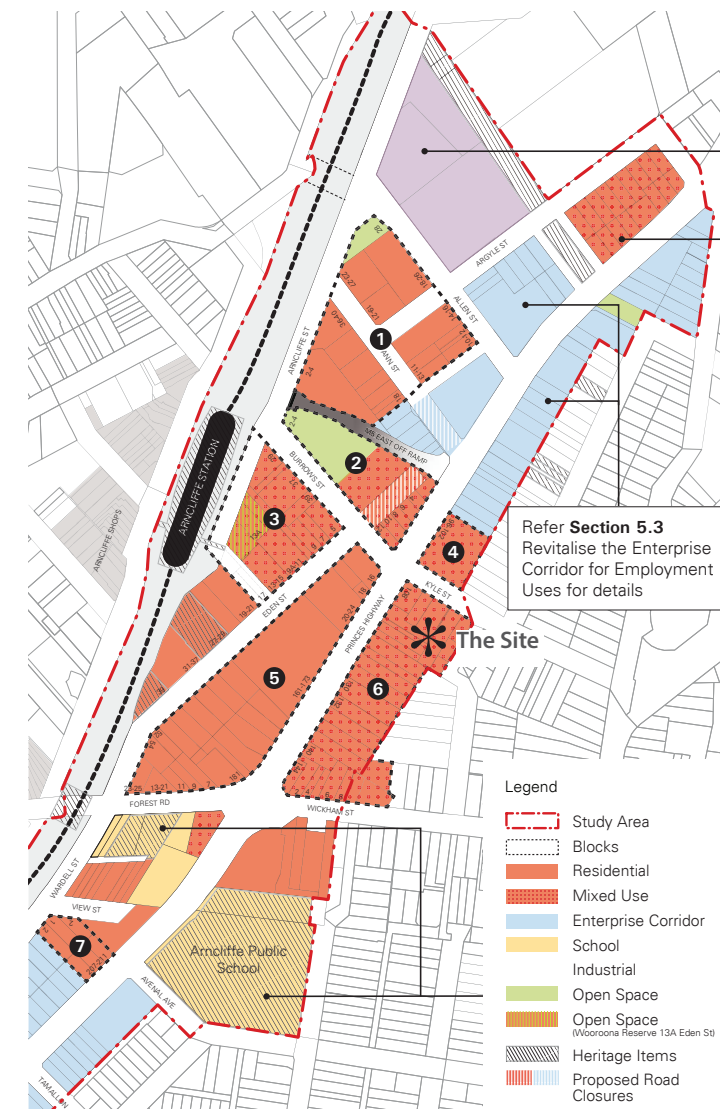
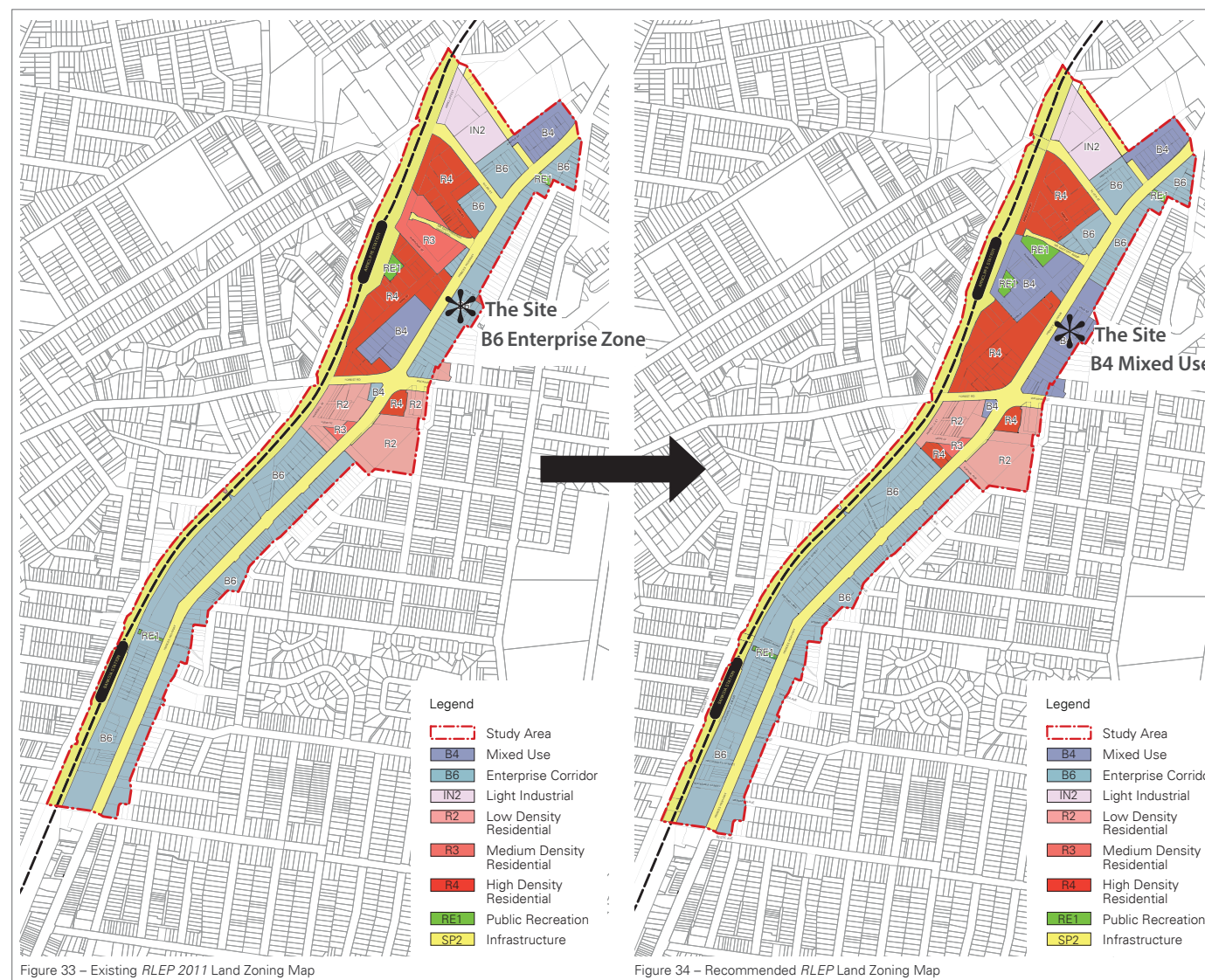


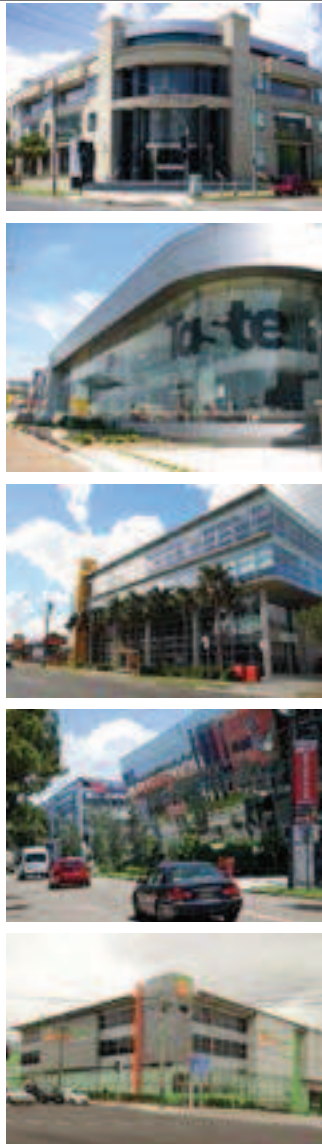
Figure 26- Proposed Land uses

Land Use Zoning and Permitted Land Uses

The attached figures illustrate the existing and recommended Land Zoning Map under RLEP 2011 respectively.

It is also recommended in the Corridor Strategy that the Land Use Table for the B6 Enterprise Corridor Zone to permit the following uses: amusement centres; entertainment facilities; food and drink premises (ie restaurants, cafes, small bars); function centres; registered club; shops; kiosk, market, industrial retail outlet and veterinary hospitals.





Revitalise the Highway Enterprise Corridor for Employment Uses

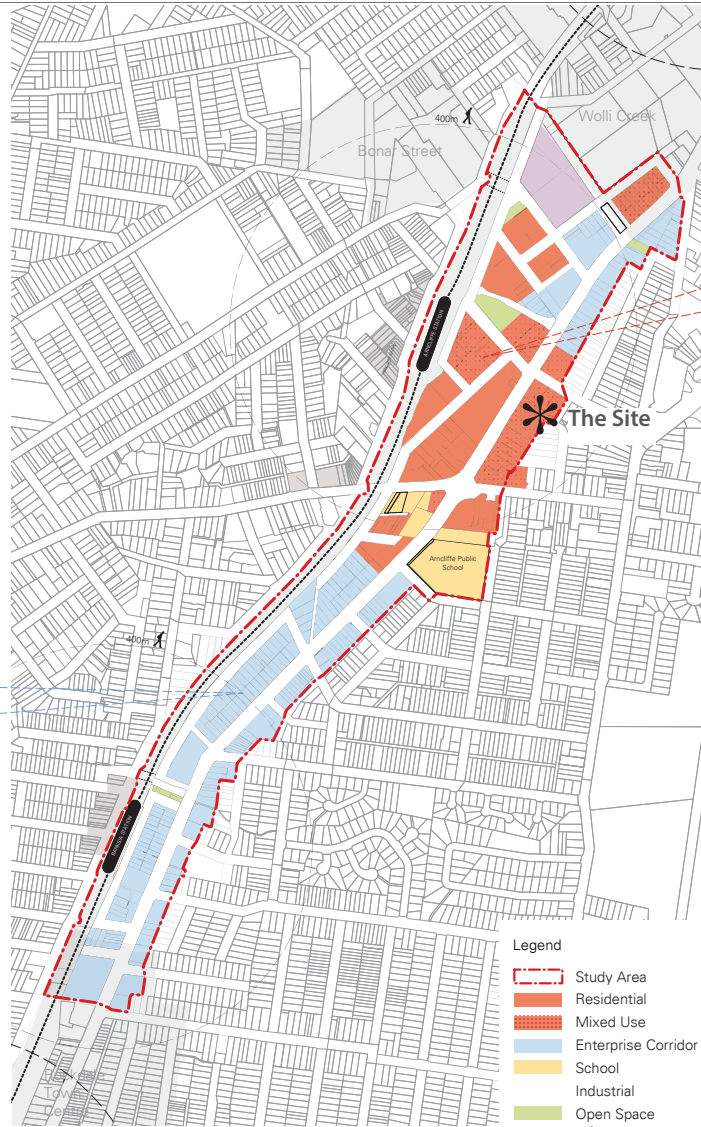


Figure 25 – Proposed Land Use Plan

Grow Arncliffe as a Residential Precinct



3.0 BUILT FORM

The Corridor Strategy proposes a maximum building height of 29m (8 storeys) with an FSR of 2.5:1 over this site.

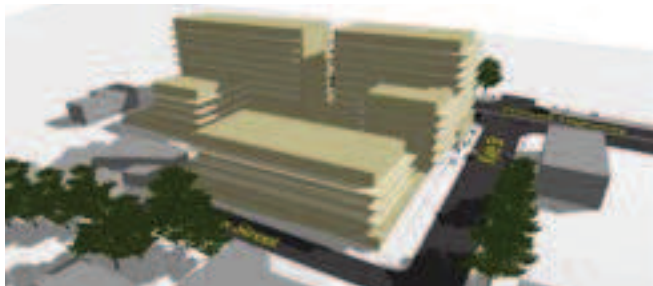
A 3-D model developed in the Corridor Strategy shows 8 storeys to the Princes Highway stepping down to 5 storeys on Charles Street. This model has some (but not significant) overshadowing impact on the residential property on the other side of Charles Street (although the significant avenue of planting along the Charles Street frontage already overshadows the rear yard).

There is potential for some additional height in the vicinity of the highway as this will only overshadow the site and not increase shadow impact off-site (and across Charles Street).

3.1 HEIGHT

The Corridor Strategy permits 29m maximum height i.e. 8 floors. This will need to step down from the Princes Highway to Charles Street in order to protect solar access to residential property across the street.

Our massing studies suggest that a rear (Charles Street) height maximum should be approximately 4-5 storeys (14-18m). This can be calculated from a 45° height plane from the top of a 2m fence on the residential property boundary.



- 4 High Density / Mixed Use Residential (No. 96-102 Princes Highway)**
 - Building heights up to 8 storeys with step down to interface with residential area to east.
 - Predominantly residential character with active / semi-active frontages to Kyle Street and at corner with Princes Highway.
 - Emphasise street corner with prominent built form.
 - 6m setback to Princes Highway (away from corner).
 - 0-3m setback to Kyle Street.
 - Vehicular access preferred from Kyle Street.
- 6 High Density Residential (Eden Street, Princes Highway and Forest Road)**
 - Building heights up to 8 storeys (No. 16-24 Eden Street and No. 161-173 Princes Highway)
 - Predominantly residential character.
 - Buildings to address Eden Street and Princes Highway.
 - Emphasise street corners with prominent built form.
 - 6m setback to Princes Highway (to retain existing trees where possible).
 - 3-6m setback to Eden Street.
 - Vehicular access preferred from Eden Street.
- 7 High Density / Mixed Use Residential (No. 108-144 Princes Highway and No. 2-8 Wickham Street)**
 - Building heights up to 8 storeys (No. 108-130 Princes Highway) and 6 storeys (No. 132-144 Princes Highway and No. 2-8 Wickham Street).
 - Buildings to step down to interface with residential area to east.
 - Predominantly residential character with active / semi-active frontages to Kyle Street and at corner with Princes Highway.
 - Emphasise streets corner with prominent built form.
 - 6m setback to Princes Highway (away from corners).
 - 0-3m setback to Kyle Street.
 - 6m setback to Wickham Street.
 - Minimise vehicular access to Princes Highway and Wickham Street.

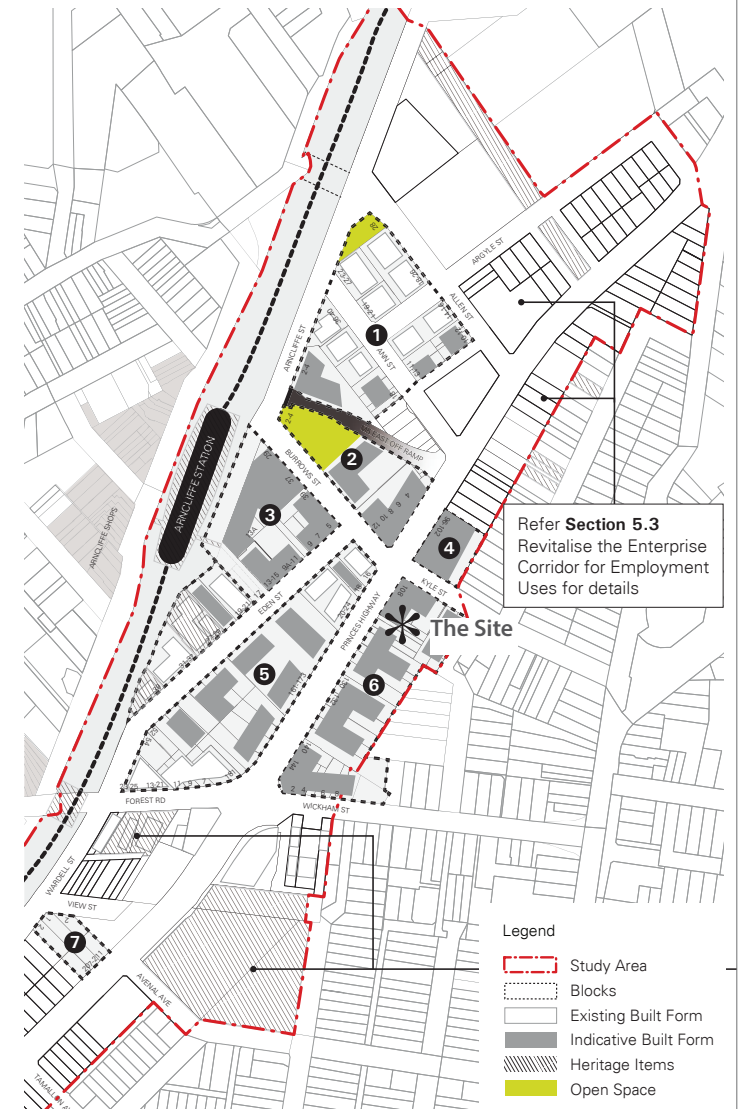


Figure 27- Built form strategies

Maximum Building Height

The attached figures illustrate the existing and recommended Maximum Building Height under RLEP 2011 respectively. In general, the proposed building heights around Arncliffe range from 6 to 8 storeys with up to 10 storeys at immediately at the rail station.

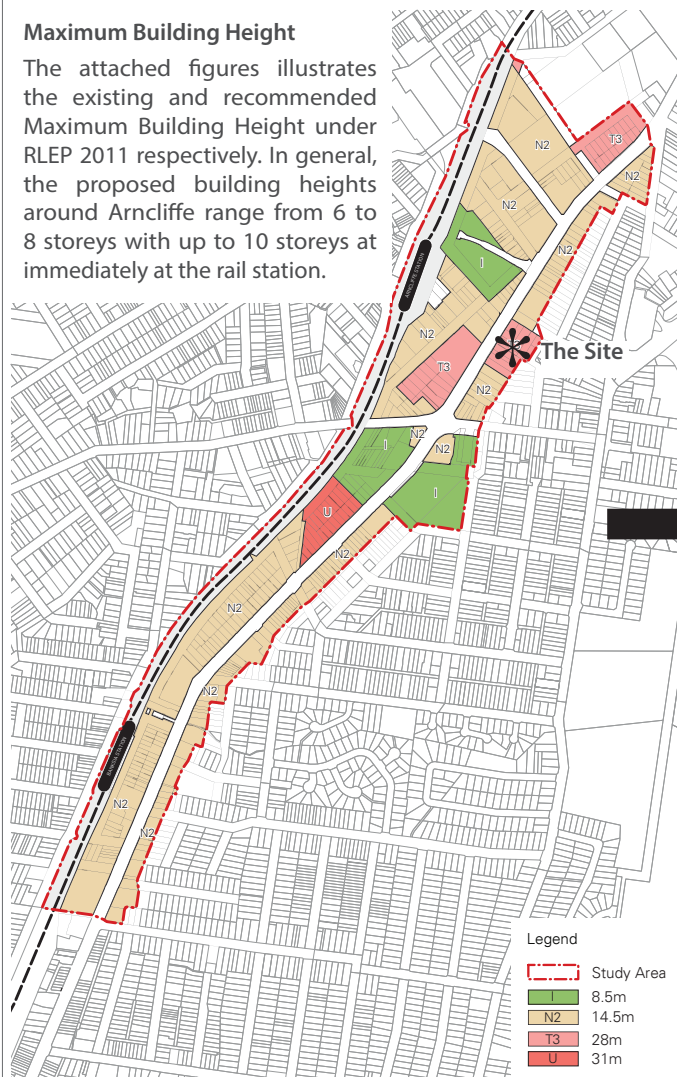
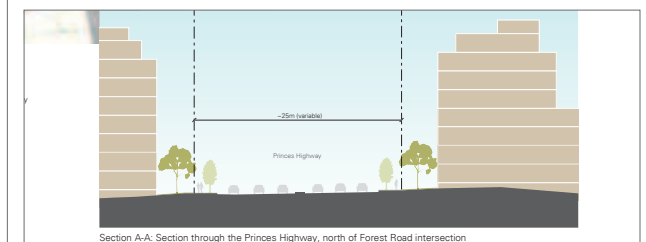


Figure 35 – Existing RLEP 2011 Height of Buildings Map



Figure 36 – Recommended RLEP Height of Buildings Map



3.2 DEPTH

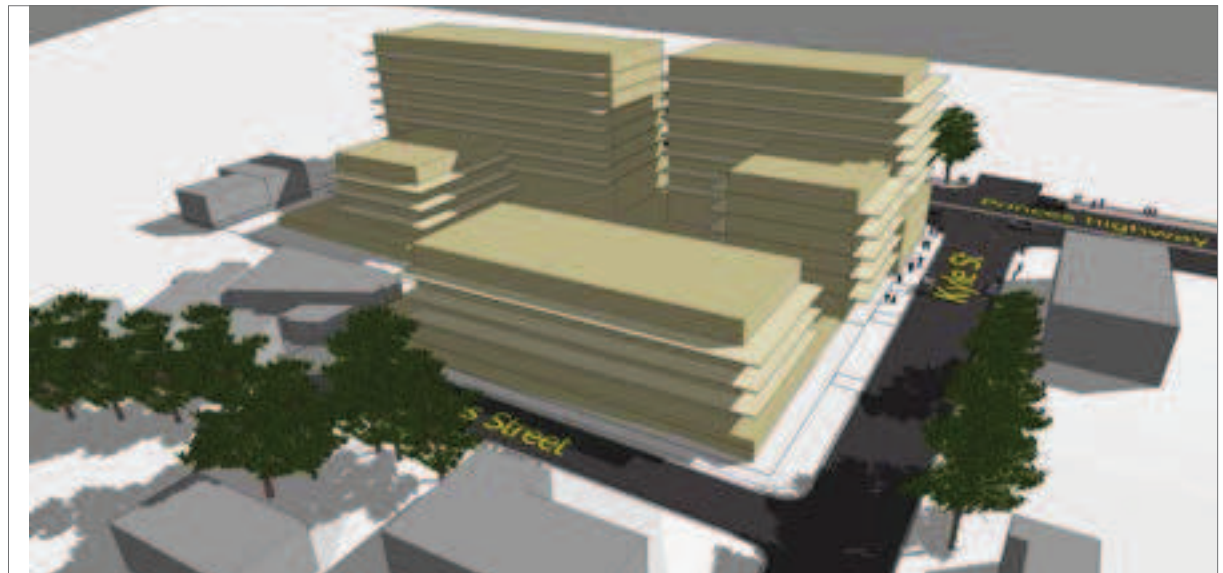
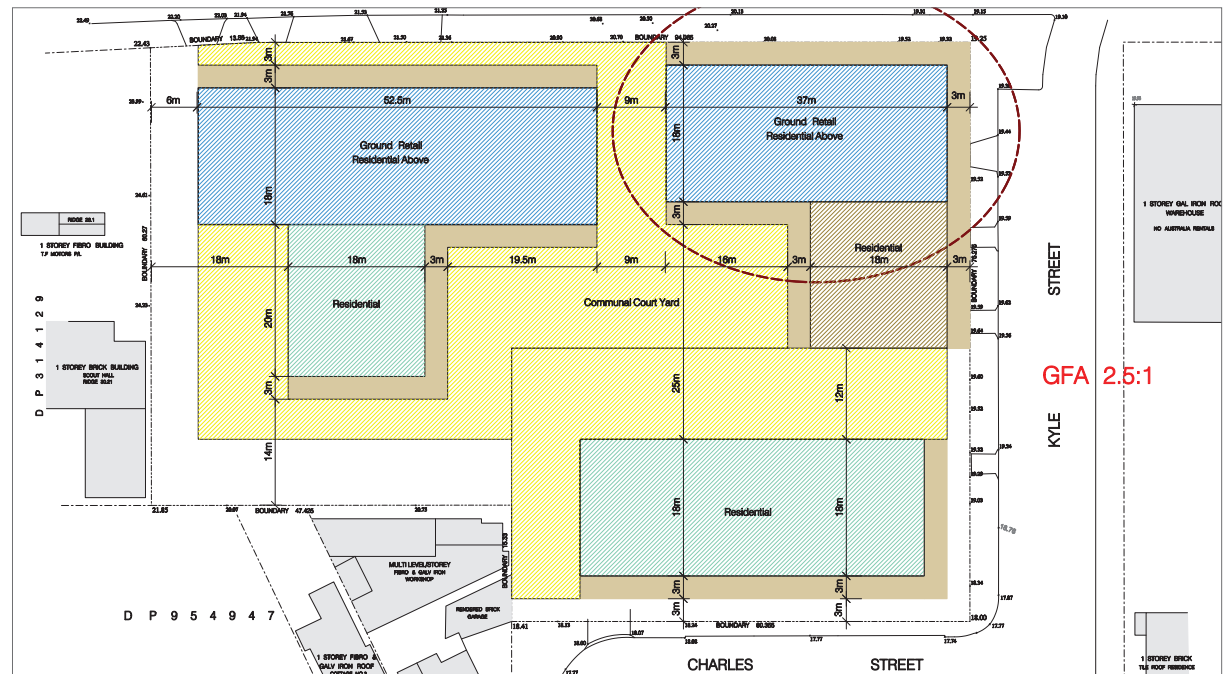
Building depths of 18m have been used in the massing studies as permitted under SEPP No. 65.

3.3 SEPARATION

Building separation between Princes Highway slabs and Charles Street slabs and between Kyle Street perimeter slabs and southern finger are greater than 18m which is as required in SEPP No. 65.

3.4 TYPOLOGY

The proposal is able to create a hybrid building typology which combines perimeter slab buildings of different heights with stepped development stepping down towards nearby residential development (across Charles Street) to form a residential development around a landscaped central courtyard.

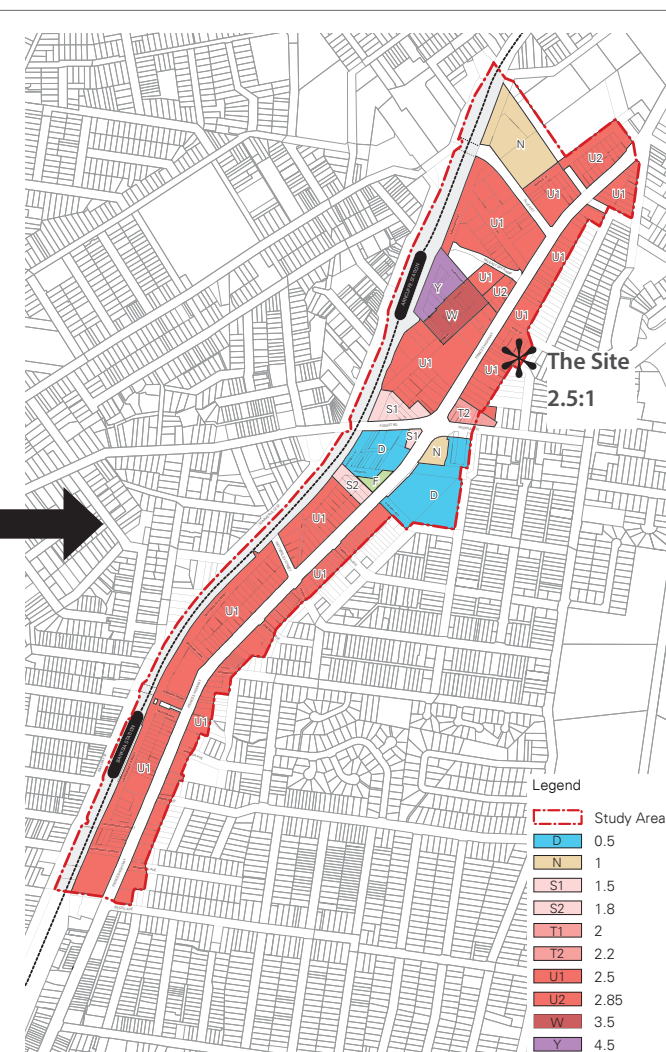
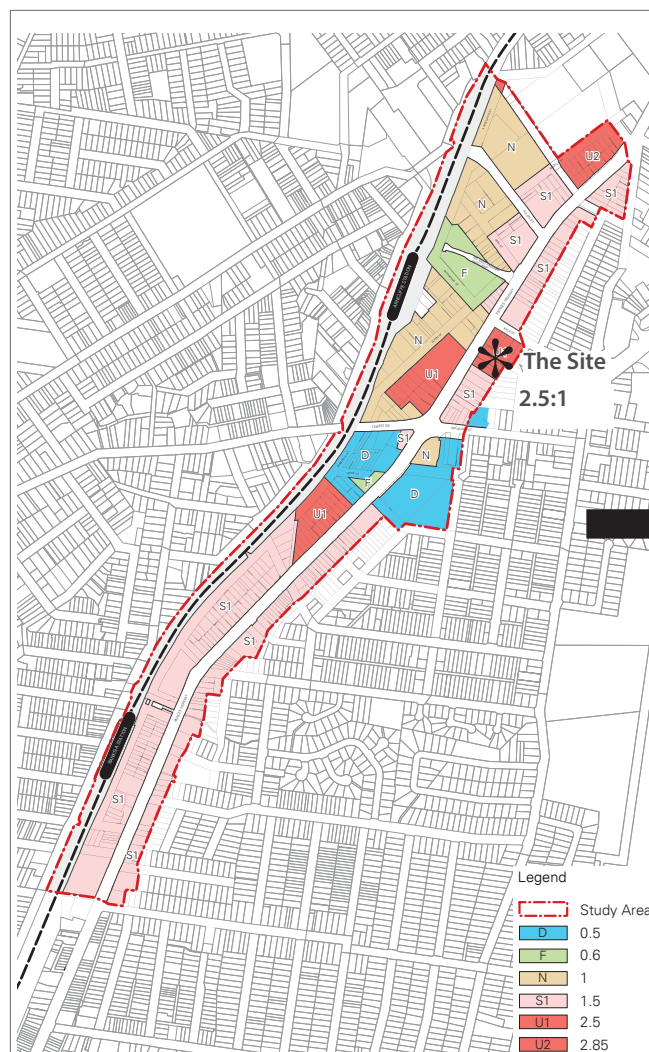


4. FLOOR SPACE RATIO

The Corridor Strategy proposes an FSR of 2.5:1 on the site and requires 1.5:1 of that to be employment generating.

This is economically unsound (see Jones Lang La Salle Study). As this is a major site within the Arncliffe TOD or Urban Activation Area it is proposed that some additional FSR be permitted so long as no further impacts are generated.

Our studies have shown that an increase in residential FSR within the overall 2.5:1 will generate no additional impact but will generate an additional units as a contribution to Transit Oriented Development in Arncliffe and provide more flexibility to enable built form to represent the gateway into the Arncliffe residential precinct.



5. BUILDING SETBACKS

Princes Highway – A 3m setback is required along the highway frontage with a further building articulation zone.

This promotes a wider landscaped footpath/verge which will reduce the impact of traffic on the development (particularly residential) and allow for deep soil planting.

The building frontage is required to the building line (3m behind property line) as indicated and setback of 3-5m is promoted above Level 3. This can be incorporated into the building form to assist with amelioration of traffic impacts (noise and pollution) (DSP).

Kyle Street – A setback of 0-3m is required on Kyle Street to permit some deep soil planting adjacent to the street.

Charles Street – A residential setback of 3m is also proposed for Charles Street to facilitate DSP.

Ground floor residential units should be accessed directly from Kyle Street and Charles Street where appropriate and wherever possible.

Side Setback – An 18m sde setback is proposed on the Southern boundary to assist with the articulation of the highway frontage but with intrusion of frontage building which can orient away from boundary (this setback is proposed at 6m).

6. ARTICULATION

The highway frontage buildings are 40-50 m long as are the buildings fronting Kyle and Charles Street. This is intended to minimise the canyon effect and to permit ventilation of the corridor pollutants.

Building facades can be regularly articulated in both horizontal and vertical directions. The precise form of articulation will be developed with the architectural scheme at a later date.



7.0 OPEN SPACE

7.1 PUBLIC DOMAIN

The Corridor Strategy proposes a major new park at the station and off Burrows Street (Burrows Street Park). A variety of other public domain improvements are also proposed including:

- Kyle Street Shared Zone**

As part of proposed development extend kerb line of Kyle Street (southern side) to create shared zone/plaza.

Open Kyle Street to two way traffic.

The proposal is able to facilitate these works.

- General Streetscape Improvements**

Progressively providing a consistent footpath treatment along the corridor, a reduction in visual clutter.

Improved avenue planting should be facilitated in the deep soil setback zone to strengthen the landscape corridor and ameliorate the impact of the highway.

At corner of secondary streets create landscaped kerb extensions (see above) within parking lanes.

The proposal is able to facilitate this.

- Street Verges**

Facilitate avenue planting in all street verges.

The proposal is able to facilitate this in collaboration with Council and RMS.

- 3 Burrows Street Park (No. 2-4 Arncliffe Street)**
 - Establish a new local park at No. 2-4 Arncliffe Street (south) of approximately 3,200m², provide an open and accessible park which will be designed to be safer and more inviting for future residents.
 - Formally close and dispose of the northern end of Eden Street (north of Burrows Street).
- 7 Kyle Street Shared Zone**
 - As part of future redevelopment of adjacent sites, extend kerb line on the southern side on Kyle Street and create shared zone /plaza space in Kyle Street road reserve.
 - Open Kyle street to two way traffic to allow for better access.
- 8 General Streetscape Improvements**
 - Progressively provide a consistent footpath treatment along the length of the corridor, starting in key locations such as the Banksia Precinct.
 - Reduce visual clutter through undergrounding of all overhead power lines and telephone cables.
 - At the corners of secondary streets created landscaped kerb extensions within the parking lane of the secondary street to provide a sense of entry and transition to the residential areas as well as slow traffic entering from the highway.
- 9 Arncliffe Rail Station Upgrade**
 - Upgrade works are currently proposed to Arncliffe Station in accordance with the Transport for NSW Transport Access Program 2012. Consider the installation of lifts either side of the station as part of future upgrade works to coincide with the creation of the Arncliffe Street Extension.

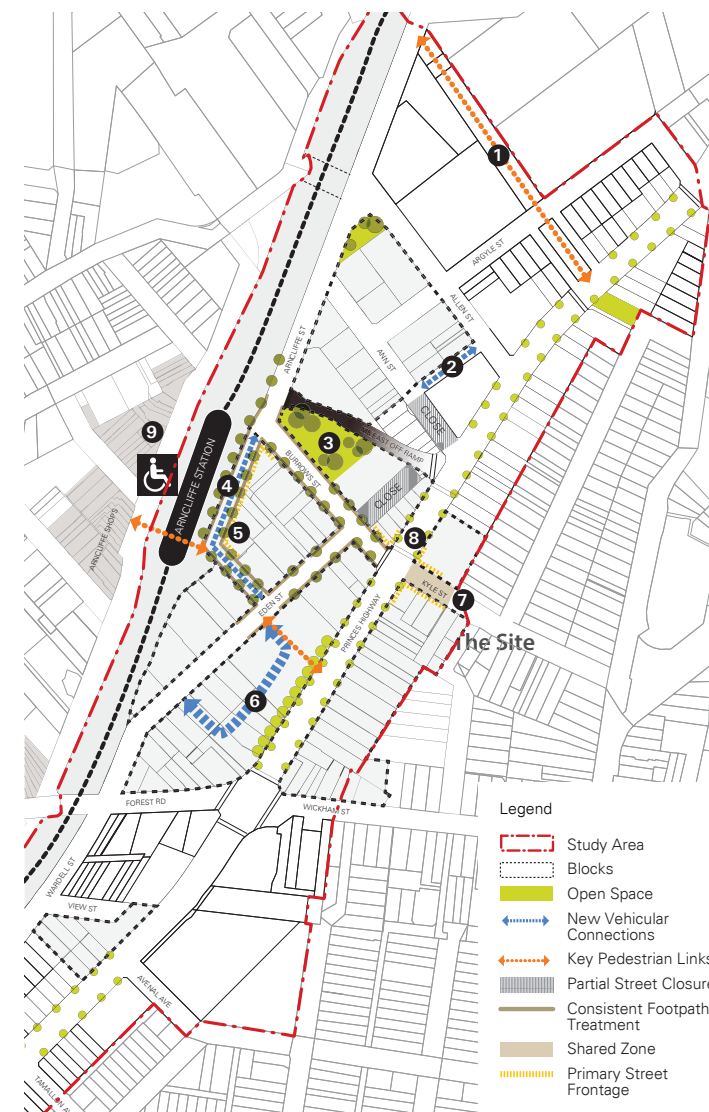


Figure 28 - Public Domain

Public Domain Strategies

The quality of the public domain (ie the streetscapes, footpaths etc) along the length of the Princes Highway Corridor is generally poor. High traffic volumes coupled with land uses that do not rely on pedestrian activation have led to a generally inhospitable pedestrian environment.

The public domain of the Princes Highway falls within the controls of the Roads and Maritime Services (RMS). While these issues are unlikely to change in the near future there are ways to improve the visual amenity of the corridor that will help re-image the corridor and provide consistency to reinforce the built form edge. The recommended strategies are set out below.

Street Trees

Street trees provide rhythm, structure, reinforce the built form edge, mask unsightly uses and provide shade for pedestrians. Encourage street trees, where possible, along the length of the corridor.



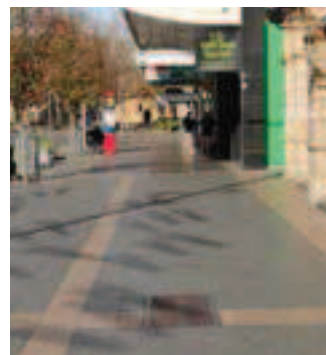
Utilities and Services

Reduce visual clutter through undergrounding of all overhead power lines and telephone cables.



Footpaths

Progressively provide a consistent footpath treatment along the length of the corridor, starting in key locations such as the Banksia Precinct.



Signage

Reduce signage and sign poles through the collocation of directional signage.



Landscaped Kerb Extensions

At the corners of secondary streets created landscaped kerb extensions within the parking lane of the secondary street to provide a sense of entry and transition to the residential areas as well as slow traffic entering from the highway.



These images from the strategy provide a starting point for Public Domain improvements.

Princes Highway – landscape setback along highway to build a softening avenue layer to ameliorate traffic impacts

- **Deep Soil Planting**

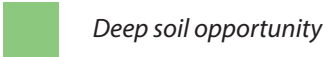
- » Maintaining deep soil zones along all setback boundaries
- » Seek to maintain a consolidated area of deep soil planting somewhere on the site (probably along southern boundary)
- » Planting on structure

Provide a generous, attractive and useful central courtyard. This may comprise a mix of public, semi-public and common open space for use by residents and local visitors, shoppers etc.

Units opening onto the central court should include a small private courtyard.

Units opening onto streets (Kyle and Charles street) should provide direct garden access from the street whenever possible.

All units should be provided with balcony spaces to SEPP No. 65 specification.



8.0 CONCLUSION

The following Urban Design Benefits can flow from the planning proposal for 104-128 Princes Highway, Arncliffe.

Transit Oriented Development of the Arncliffe Centre including:

- Major mixed-use development within 400m (5 minute) walk of Arncliffe station. Note that the subject is one of the easiest development sites within the 400m walk. Other sites are constrained need for amalgamation of residential cottages, major public housing ownership, and/or strata-title development
- The subject site is designated as part of the Arncliffe Centre as well as the Highway Corridor
- The subject site is a prime candidate for increased development potential (height and floor space ratio) as part of the future designation of the Arncliffe Centre as an Urban Activation Area.

Activation/Enhancement of Princes Highway

The proposal has the potential to:

- Create some active frontages (retail/commercial/entertainment) along the highway frontage
- Create a strong “context sensitive”, articulated building form along the corridor which will enclose and enhance the corridor experience
- Facilitate “context sensitive” corridor landscaping to improve the corridor experience in terms of:
 - » climatic comfort
 - » softening and screening
 - » improved walkability
- Improve walkability with detailed treatments of:
 - » Kyle Street verge widening and two way access/egress
 - » design treatments at intersection of Kyle Street and Highway
 - » improved connections, paving, landscaping to station
 - » improved paving, landscaping, underground servicing to highway

Employment Generation

The background economic analysis (by Jones Lang La Salle) to the Corridor Strategy is not particularly confident about employment growth along the corridor particularly in the short term. The proposal provides for retail/commercial use at street level to the highway and on the corner of Kyle Street.

The increased residential population gained by increasing the residential component of total floor space will generate customers and demand for an approximate additional 13,000 m² retail space at least half of which is likely to be provided within the Arncliffe Centre directly adjacent to the railway station.

Residential Amenity

The Princes Highway frontage is not a perfect residential environment. It will be impacted by traffic noise, pollution and particulate matter.

However, careful treatment of the highway frontage can ameliorate these issues. Treatments should include:

- enclosed/screened balconies to highway (to reduce noise and particulate penetration)
- a strong avenue planting of particulate-tolerant deciduous trees (such as London Planes)
- appropriate setbacks and design elements (screenings, louvres, winter-gardens, etc)

Landmark/Character

The long frontage of the site and its corner position at the turnoff for Arncliffe station allows for the creation of a strong landmark and highly articulated facade to the highway.

Parking

The current and proposed highway condition restricts parking on the highway frontage. This significantly reduces the retail/commercial opportunity and thus employment capacity of the frontage.

It is possible however to circulate around the rather large block (Princes Highway, Wickham Street, Charles Street, Kyle Street) and find on-street parking or access on-site visitor parking.

Building Form

The current controls propose an FSR of 2.5:1 and a building height of 29m for the subject site.

We propose:

- a building setback to the highway of 3 m to retail/commercial frontages with a further 2m articulation zone
- a building setback of 3-5m on Kyle Street and Charles Street to residential frontages

Council have indicated that the Arncliffe area is to be proposed as an Urban Activation Area under State Government Policy.

This is likely to lead to higher FSR and building heights for the area immediately around the station (including the subject site).

Public Amenity

The substantial area of open space (approximately 50% of the site) can be designed as a very attractive semi-public open-space/courtyard which can function as communal open space for the residents and a generous public space, a refuge from the busy highway. This could facilitate restaurants, cafes etc. as well as communal open space for residents.

A careful design of below ground structure will enable generous area of Deep Soil Planting along street frontages and internally.

High quality landscape treatments can be provided to the Highway, Kyle and Charles Streets including enhancements to the Kyle Street/ Princes Highway intersection.

The massing investigations completed with the architect indicate the following:

- The site can readily accommodate the Council's proposed building height and FSR*
- Indeed, the studies indicate that additional height and FSR can be readily accommodated on-site with no additional off-site impacts*
- Thus we propose an FSR of 2.5:1 and a maximum building height of 29m (8 floors)*
- This is appropriate given that Arncliffe is proposed as a Transit Oriented Node or an Urban Activation Area and thus should be emphasised over other corridor areas.*

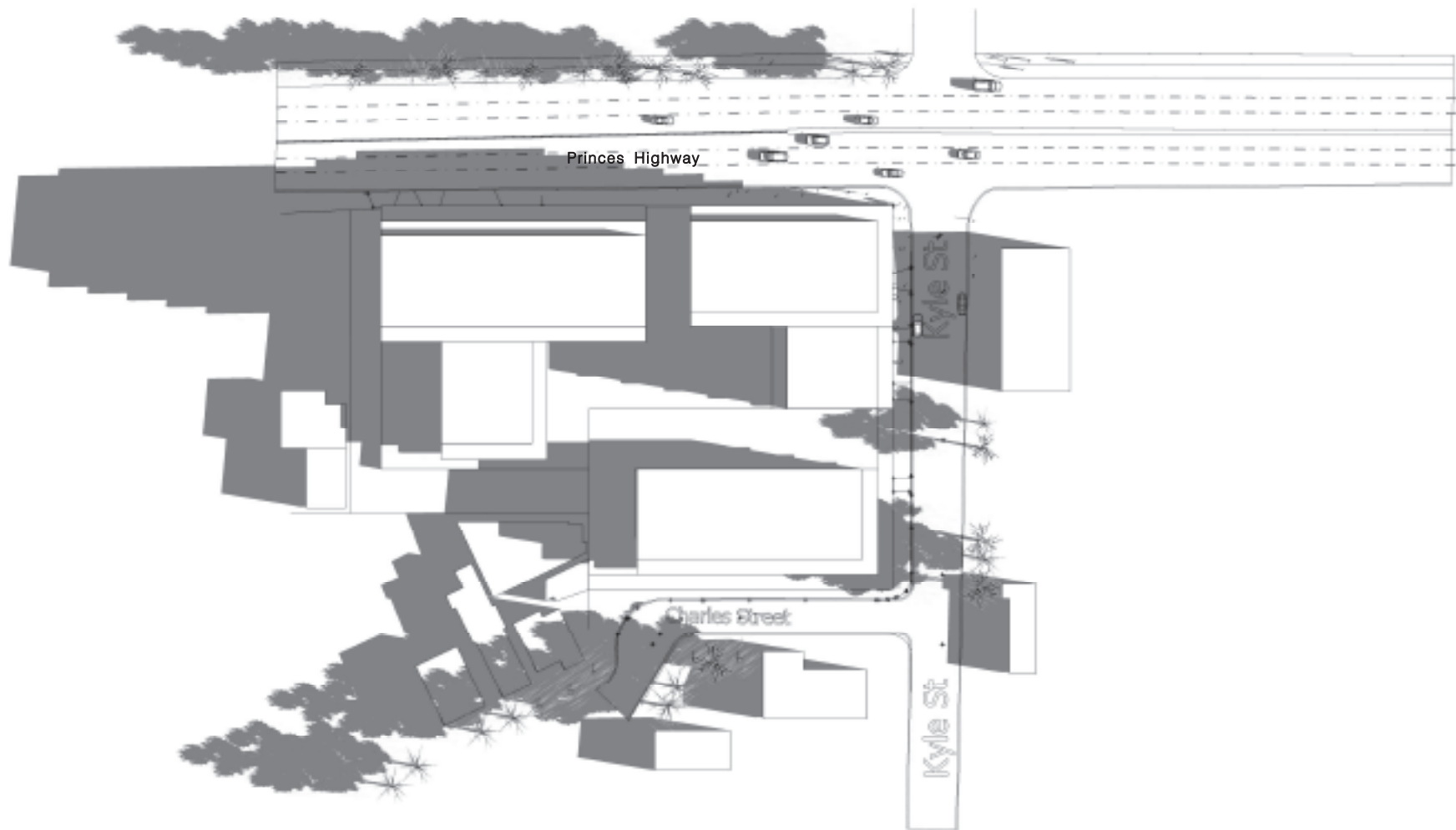
- 1. Complying Scheme
- 1.1 Plan A
- 1.2 Massing A
- 1.3 Shadows A1
- 1.4 Shadows A2
- 1.5 Shadows A3

Attachment



Scale: 1:500 (Site) 1:500 (Plan) Date: 20/08/2014 Project: 104-128 Princes Highway Arncliffe	ARCHITECTURE & BUILDING WORKS 104-128 PRINCES HIGHWAY 104-128 PRINCES HIGHWAY 104-128 PRINCES HIGHWAY 104-128 PRINCES HIGHWAY	MIXED USE DEVELOPMENT 104-128 PRINCES HIGHWAY, ARNCLIFFE DEICORP	COUNCIL PLANNING REPORT: A Project No: 104-128 PRINCES HIGHWAY Author: 104-128 PRINCES HIGHWAY Version: 1.0 Date: 20/08/2014
---	--	---	---

1.2 Massing A



01 JUNE SHADOWS 09:00 AM
SCALE 1:800@A3

Scale: 1:200 @A1 1:400 @A3
0 2 4 6 8 10 20m

Date Printed: 22/10/2014

H:\Pn_0409_104-128 Princes Highway Arncliffe\archive\20140512\plotA-008_PROPOSED BUILDING MASSING SHADOWS.dgn



PLOT GENERATED BY: ARCHITECTURE & BUILDING WORKS

ARCHITECTURE &
BUILDING WORKS

ABW 58 085 191 010
L1 / 40 Montgomery Street,
Sydney NSW 2017
Australia
Tel: (02) 9654 9211
Email: admin@abworks.com.au

Architect
Construction Managers
Interior Designers
Town Planners

Project Details:

MIXED USE DEVELOPMENT
104-128 PRINCES HIGHWAY, ARNCLIFFE
Client:
DEICORP

Drawing Title:

PROPOSED BUILDING
MASSING SHADOWS

Drawing Status:

AUTHORITY APPROVAL

Project Number:

Pn-0409

Issue:

A -

Date Printed:

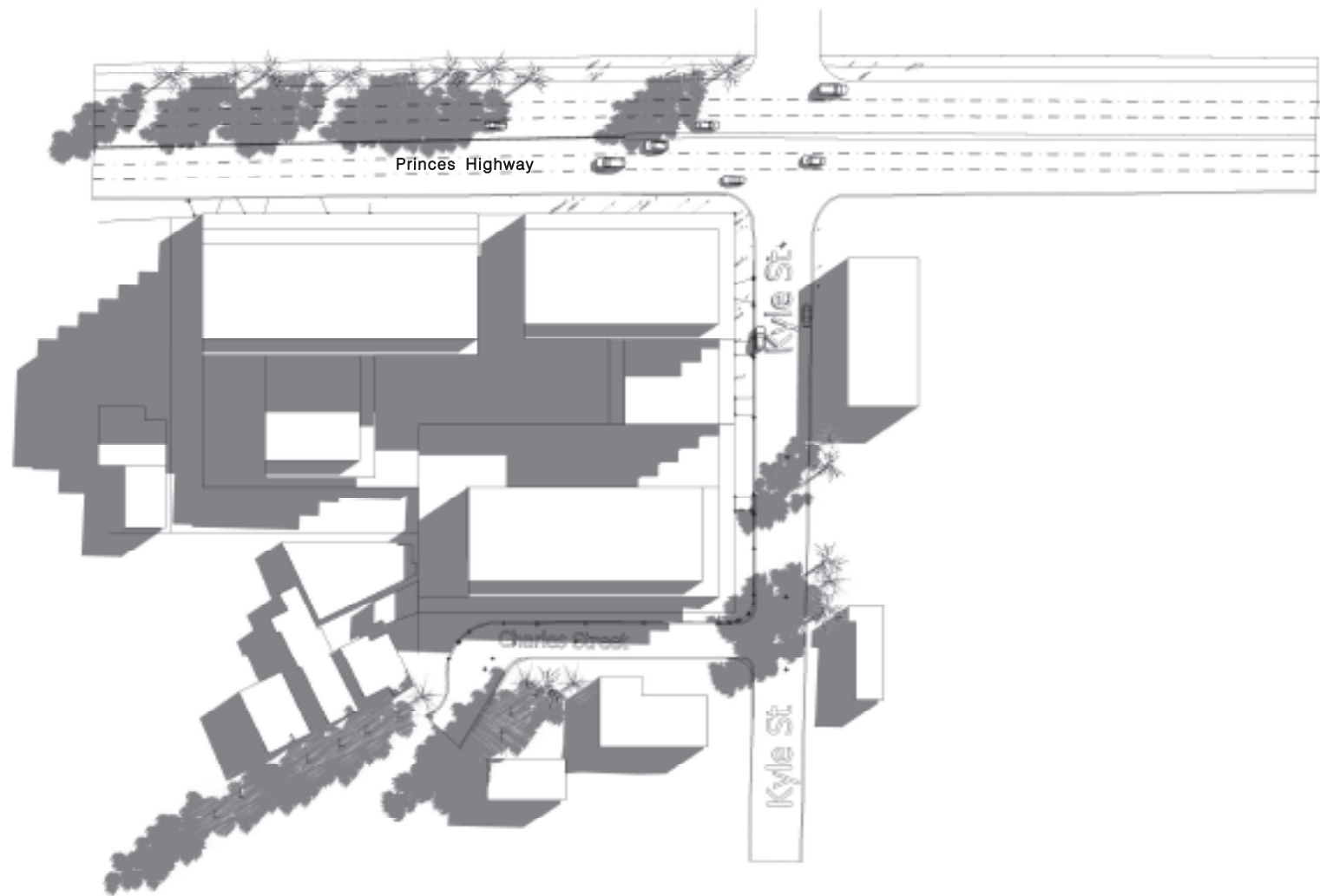
24/09/2014

Drawing Number:

A-008

COPYRIGHT OF THIS DRAWING IS VESTED IN ARCHITECTURE AND BUILDING WORKS

1.3 Shadows A1



02 JUNE SHADOWS 12:00 PM
SCALE 1:800@A3

Scale: 1:200 @A1 1:400 @A3
0 2 4 6 8 10 20m

Date Printed: 22/10/2014

H:\Pn_0409_104-128 Princes Highway Arncliffe\archive\20140512\plotA-009_PROPOSED BUILDING MASSING SHADOWS.dgn



Plot generated by: ARCHITECTURE & BUILDING WORKS

THIS DRAWING IS AN UNCONTROLLED COPY UNLESS STAMPED OTHERWISE

ARCHITECTURE &
BUILDING WORKS

ABW 58 085 191 010
L1 / 40 Montgomery Street,
Sydney NSW 2017
Australia
Tel: (615) 9454 9251
Email: admin@abwworks.com.au

Architects
Construction Managers
Interior Designers
Town Planners

Project Details:

MIXED USE DEVELOPMENT
104-128 PRINCES HIGHWAY, ARNCLIFFE
Client:
DEICORP

Drawing Title:
PROPOSED BUILDING
MASSING SHADOWS

Drawing Status:
AUTHORITY APPROVAL

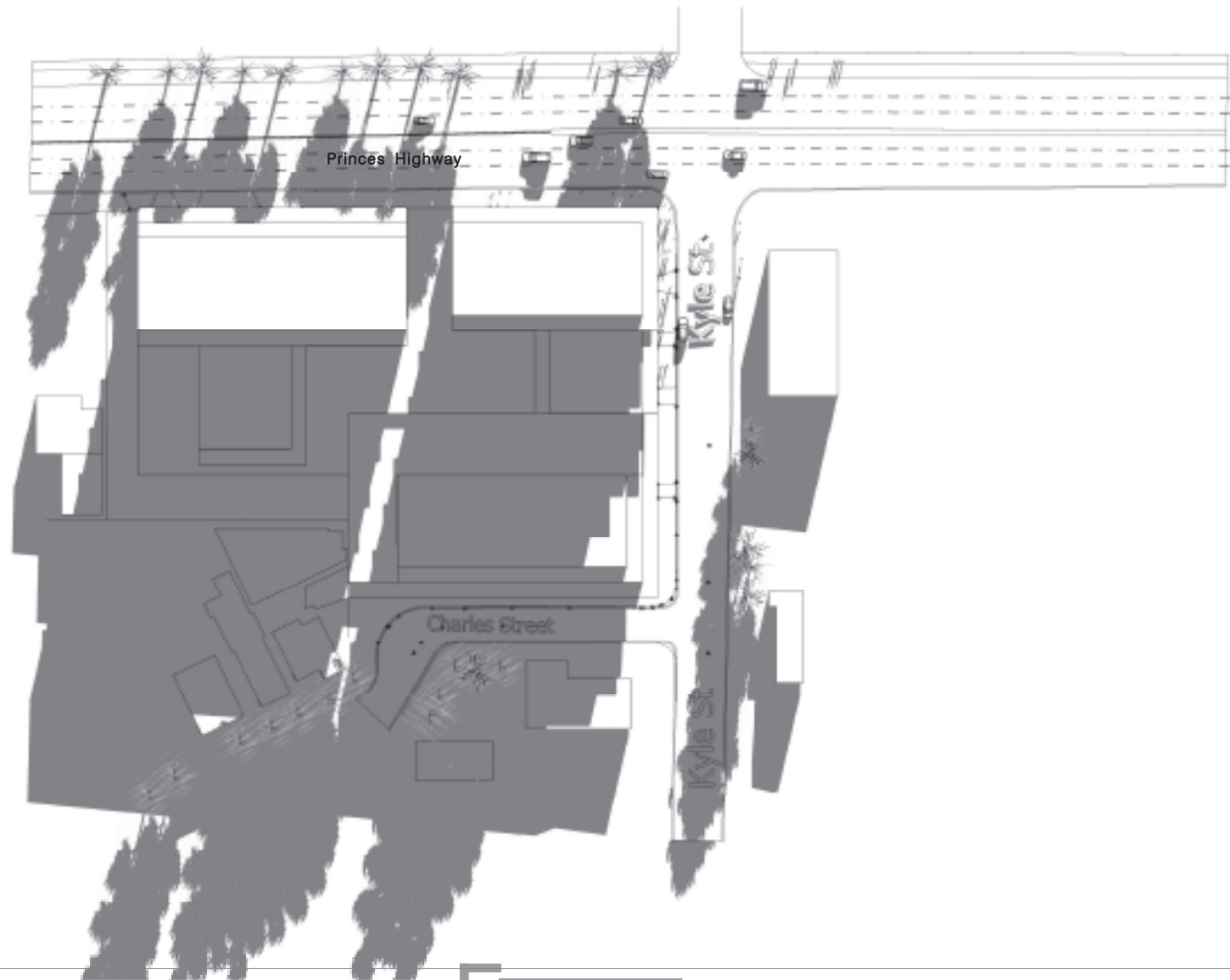
Project Number:
Pn-0409

Issue: A - Date Printed: 24/09/2014

Drawing Number: A-009

COPYRIGHT OF THIS DRAWING IS VESTED IN ARCHITECTURE AND BUILDING WORKS

1.4 Shadows A2



03 JUNE SHADOWS 03:00 PM
SCALE 1:800@A3

Scale: 1:200 @A1 1:400 @A3
0 2 4 6 8 10 20m

Date Printed: 22/10/2014

H:\Pn_0409_104-128 Princes Highway Arncliffe\archive\20140512\plotA-010_PROPOSED BUILDING MASSING SHADOWS.dgn



PLOT GENERATED BY: ARCHITECTURE & BUILDING WORKS

ARCHITECTURE &
BUILDING WORKS
ABN 58 085 191 818

L1 / 40 Montgomery Street,
Sydney NSW 2017
Australia
Tel: (02) 9694 9211
Email: admin@abwworks.com.au

Architects
Construction Managers
Interior Designers
Town Planners

Project Details:

MIXED USE DEVELOPMENT
104-128 PRINCES HIGHWAY, ARNCLIFFE
Client:
DEICORP

Drawing Title:
PROPOSED BUILDING
MASSING SHADOWS

Drawing Status:
AUTHORITY APPROVAL

Project Number:
Pn-0409

Issue: A Date Printed: 24/09/2014

Drawing Number: A-010

COPYRIGHT OF THIS DRAWING IS VESTED IN ARCHITECTURE AND BUILDING WORKS

1.5 Shadows A3