

Arncliffe and Banksia

Precinct Proposal

NOVEMBER 2016



Cover image: Artist impression of Wooroona Reserve

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Provided in separate volume

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Glossary

Act	Environmental Planning and Assessment Act
AEP	Annual exceedance probability
AHD	Australian Height Datum
ANEF	Australian Noise Exposure Forecast
CBD	Central Business District
DCP	Development Control Plan
Department	Department of Planning and Environment
FSR	Floor space ratio
GFA	Gross floor area
ha	Hectare
LEP	Local Environmental Plan
LGA	Local government area
Minister	Minister for Planning
OLS	Obstacle Limitation Surface
PANS-OPS	Procedures for Air Navigation Services – Aircraft Operations Surfaces
RMS	Roads and Maritime Services
SEPP	State Environmental Planning Policy
Sydney Airport	Sydney (Kingsford Smith) Airport International and Domestic Terminal
TfNSW	Transport for New South Wales

The objective for the Arncliffe and Banksia Precincts, is to create a vibrant, attractive and connected communities, where people can live and work with good access to public transport, community facilities, open space, shops and cafes.

The Department of Planning and Environment has prepared a draft Land Use and Infrastructure Strategy (the Strategy) for the Bayside West Precincts which includes the Arncliffe and Banksia Precincts as well as the Cooks Cove Precinct. The purpose of the Strategy is to outline the vision for growth and to plan for the infrastructure needs to support this growth.

The Strategy identifies areas within the Arncliffe and Banksia Precincts that are suitable for rezoning in the short term. This report outlines the rezoning proposal for these areas.

The rezoning proposal

The objective for the Arncliffe and Banksia Precincts, given in the Strategy, is to create a vibrant, attractive and connected communities, where people can live and work with good access to public transport, community facilities, open space, shops and cafes.

The key elements of the rezoning proposal are:



Create vibrant and connected town centres

The rezoning proposal seeks to encourage growth and revitalisation of the existing Arncliffe and Banksia centres by expanding the area in both centres zoned for mixed use (B4). This will extend the commercial area around the stations and allow shop top housing to bring vibrancy and life to the centres.

In Arncliffe, the mixed use zone will be extended either side of the rail corridor and in Banksia the mixed use zone will be applied to the block bound by Hattersley Street east of the railway station.



Improve accessibility

The rezoning proposal seeks to improve pedestrian and cycling connections across the precincts to ensure homes, jobs and local facilities are well connected and accessible. It also ensures new homes are well connected to public transport so that more residents will be able to benefit from being close to the railway stations as well as local shops.



Provide more homes and housing choice

The rezoning proposal seeks to increase residential densities in appropriate locations. These areas are consistent with those identified in the Strategy and generally include areas within walking distance to public transport and other community facilities. The rezoning proposal will assist in providing approximately 4,100 additional dwellings in the Arncliffe Precinct and 1,000 dwellings in the Banksia Precinct by 2036.



Revitalise the Princes Highway Corridor

The rezoning proposal proposes revitalisation of the Princes Highway into a tree lined road corridor with large setbacks and wide footpaths to enhance pedestrian safety and amenity. Changes in land uses adjoining the corridor through Arncliffe will allow for a wider range of commercial uses with residential apartments on upper levels. The Enterprise Corridor Zone (B6) will be retained along the highway corridor through Banksia to ensure employment uses are prioritised.

To implement the rezoning proposal an amendment to the *Rockdale Local Environment Plan 2011* (LEP) is required. A description of the changes to the LEP are provided in this report and an explanation of intended effect is attached.

Infrastructure and Funding

The Strategy identifies the infrastructure required to support growth over the next 20 years. This includes upgrades to State, regional and local infrastructure to be progressively implemented as development occurs. The timing and prioritisation of infrastructure delivery is dependent on where development occurs first. Monitoring of growth will be undertaken to inform infrastructure delivery.

Growth in this area of the Bayside Local Government Area will require upgrades to key State infrastructure networks over the next 20 years. This includes planning for an increased demand on the T4 Illawarra and T2 Airport railway lines and the implementation of the WestConnex South Link project to alleviate volumes along the Princes Highway. Preliminary investigations into these infrastructure needs have commenced.

Upgrades to regional infrastructure will also be required. This includes upgrades to the regional road network and providing connections to regional open space. In light of the growth anticipated the State government is investigating the application of a Special Infrastructure Contribution (SIC) to assist in funding regional upgrades.

A number of upgrades to local infrastructure have also been identified. This includes local road upgrades, upgrades to the drainage infrastructure and provision of additional social infrastructure, such as new open space. Bayside Council will undertake a review of relevant local infrastructure contribution plans developed under Section 94 of the *Environmental Planning and Assessment Act 1979* (the Act) to accommodate these required upgrades. It is likely that an increase to the current rates will be required.

In addition to local development contributions, the NSW Government has allocated approximately \$10 million to fund local infrastructure upgrades in the Arncliffe and Banksia Precincts. The funding will enable Council to provide early delivery of local infrastructure that will directly benefit the community.

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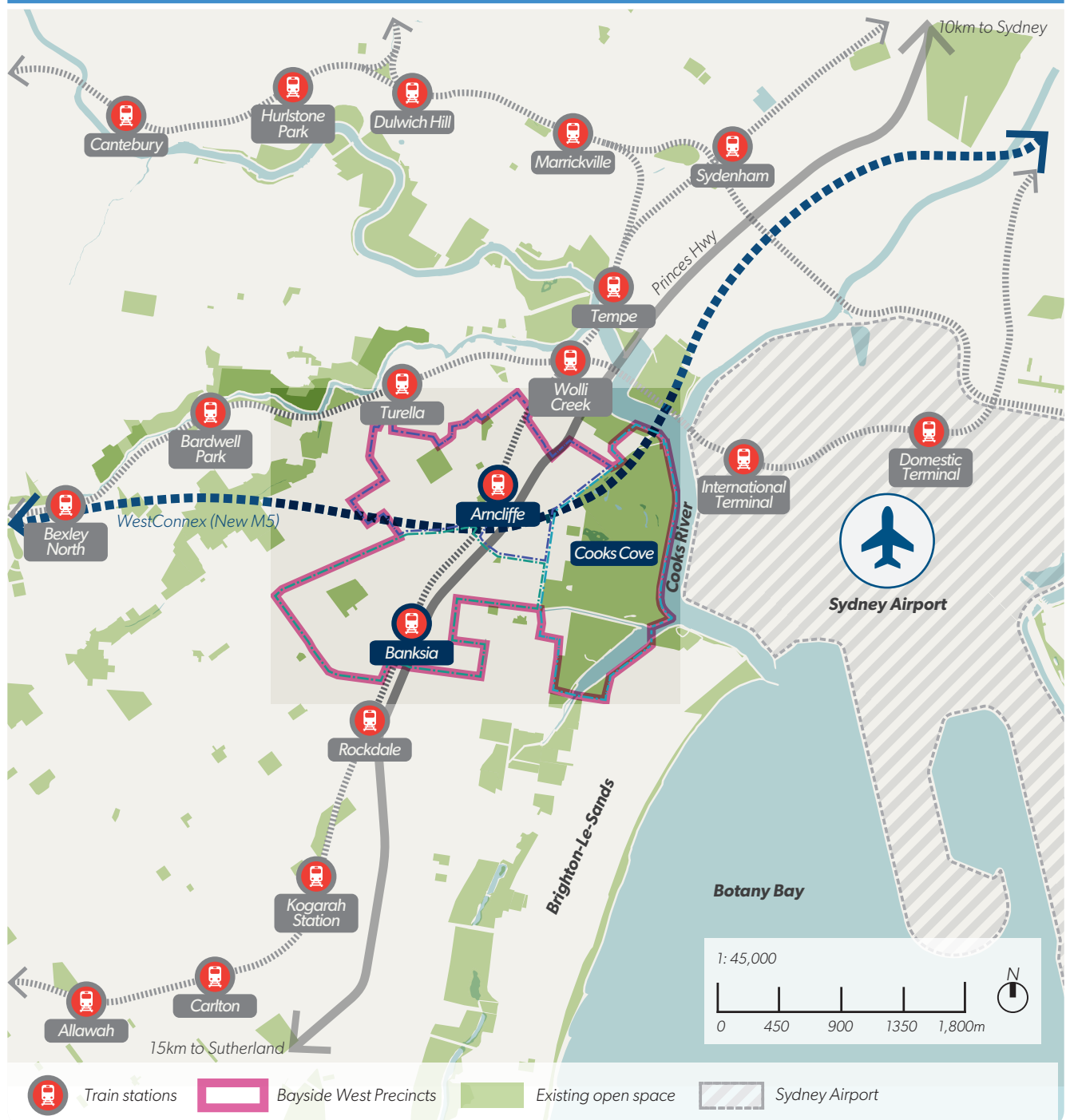
This report has been prepared by the Department of Planning and Environment in consultation with Bayside Council to provide an overview of the rezoning proposal for the Arncliffe and Banksia Precincts.

The Arncliffe and Banksia Precincts are located within the western part of the Bayside (formerly Rockdale) Local Government Area (Bayside LGA), approximately 10-12 kilometres south of the Sydney

CBD and to the west of Sydney Airport. The Arncliffe Precinct is located to the north of the Banksia Precinct and both are located generally to the west of the Cooks Cove Precinct.

The precincts present an opportunity for urban renewal to provide more homes and jobs in accessible locations. The proposal focuses redevelopment opportunities within close proximity to key transport nodes, including the Arncliffe and

FIGURE 1: REGIONAL CONTEXT



Banksia Railway Stations on the T4 Illawarra rail line and the Princes Highway. Allowing for urban renewal also provides an opportunity to reinvigorate the town centres and improve access to services for existing residents.

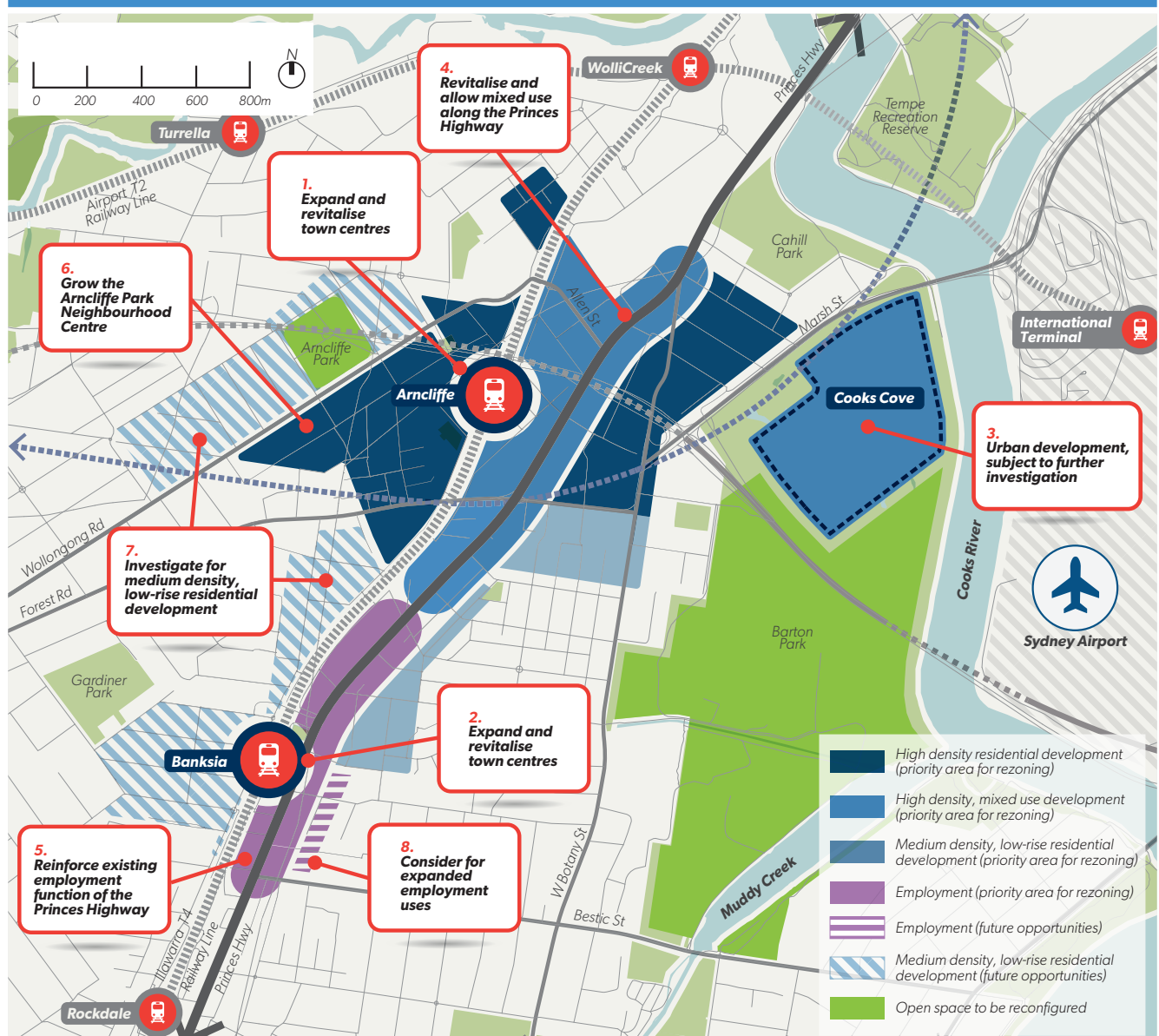
The precincts adjoin the southern end of the 'Global Economic Corridor'. This is defined in *A Plan for Growing Sydney* as a corridor of concentrated jobs and activities in strategic centres, transport gateways and industrial lands. The planned growth in the corridor is focused on sustaining and expanding the economy and on providing more jobs closer to where people live. The precincts are well placed to support the growth of this corridor.

1.1 The rezoning proposal for Arncliffe & Banksia

The draft Land Use and Infrastructure Strategy (the Strategy) for the Bayside West Precincts includes the Arncliffe and Banksia Precincts and also the Cooks Cove Precinct. The Strategy identifies areas within the Arncliffe and Banksia Precincts which have short term opportunities for growth and are identified as priority areas for rezoning. This report outlines a proposed rezoning proposal for these parts of the Arncliffe and Banksia Precincts.

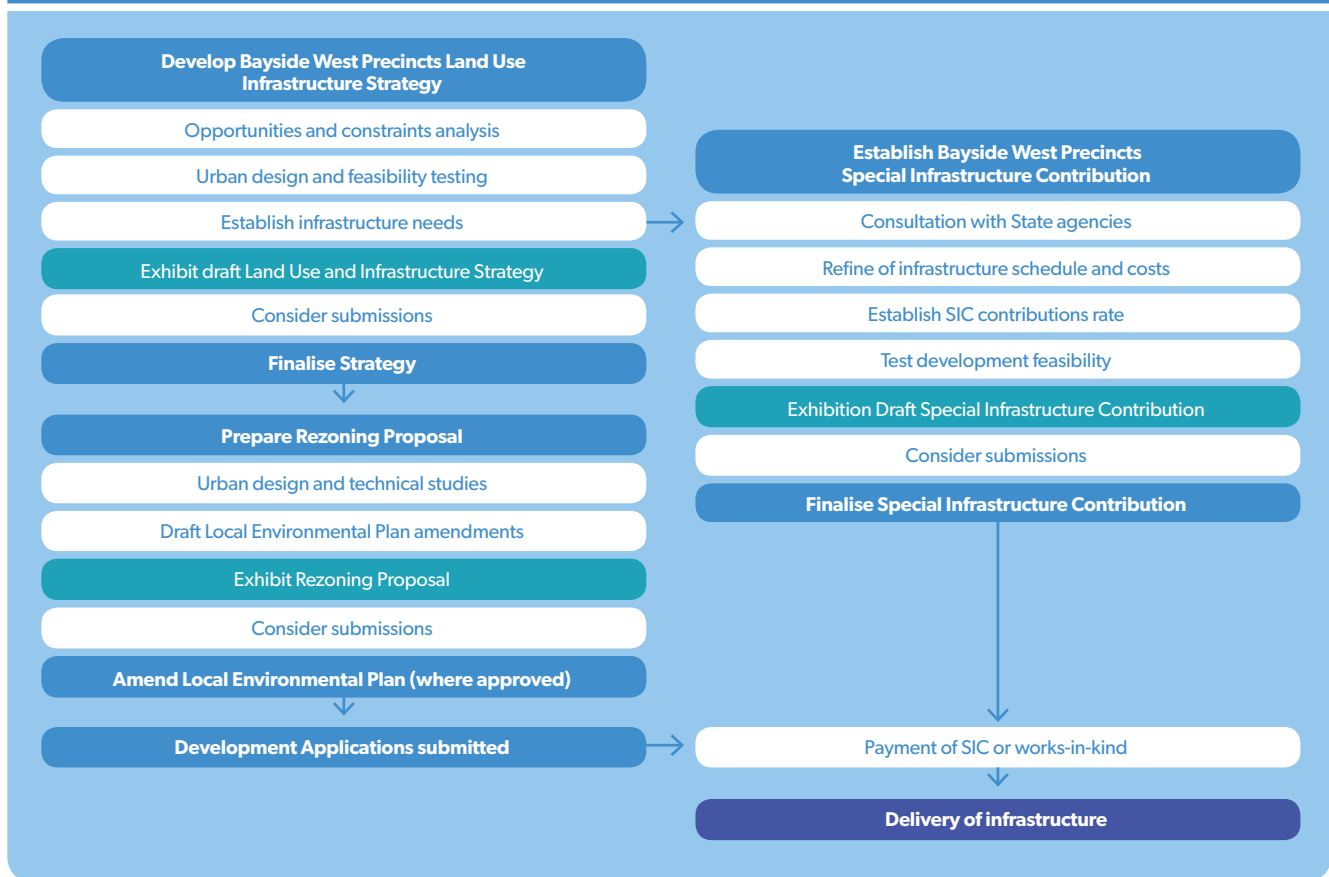
As shown in Figure 2, the areas identified for rezoning in the shorter term, are generally those located closest to the Arncliffe and Banksia railway stations and along the Princes Highway. These areas have been identified as having capacity to accommodate additional homes and jobs. In addition to increasing density, the changes recommended in these areas also aim to revitalise the town centres, improve amenity and access to services for the existing and new community. This report outlines a proposed amendment to the current land use zoning and built form controls identified in the Rockdale LEP for these areas.

FIGURE 2: LAND USE AND INFRASTRUCTURE STRATEGY – LAND USE PLAN



1.2 The Investigation Process

FIGURE 3: THE INVESTIGATION PROCESS



1.3 Priority Precincts Program

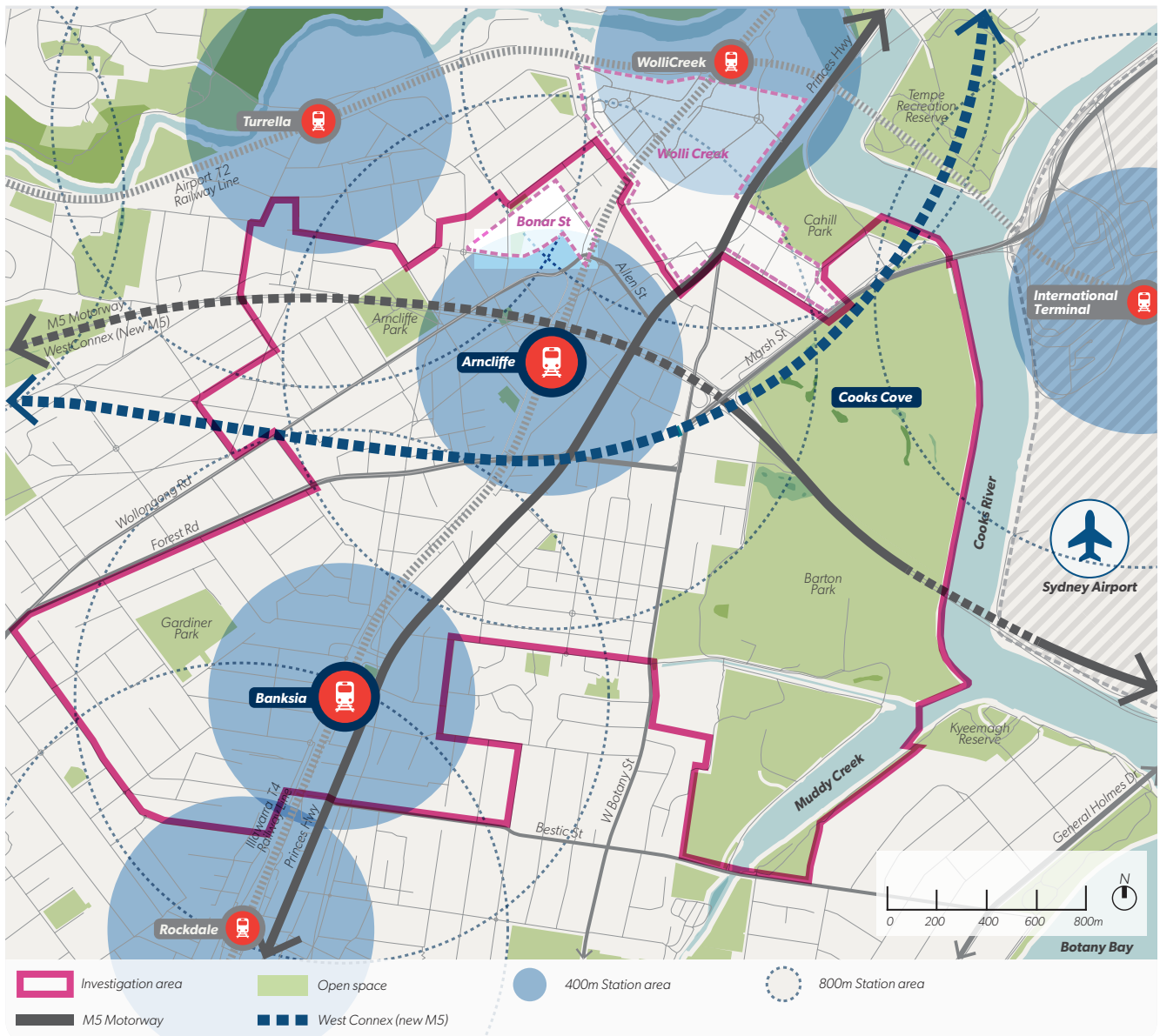
The Arncliffe and Banksia Precincts were nominated as Priority Precincts by the former Rockdale City Council in 2013.

Priority Precincts are identified as areas with good access to existing or planned transport infrastructure and that have the potential to provide for significant growth in housing and jobs. The purpose of the Priority Precincts Program is to ensure these important areas are strategically planned and infrastructure is delivered in a coordinated manner. They are planned to

accommodate growth, while providing for the needs of the community. It is a NSW Government led program based on collaboration with local councils and comprehensive community consultation.

Since the endorsement of the nomination, the Department has undertaken detailed investigations into the opportunities and constraints at each of the precincts. This report is a result of these investigations.

FIGURE 4: PRECINCT LOCATION

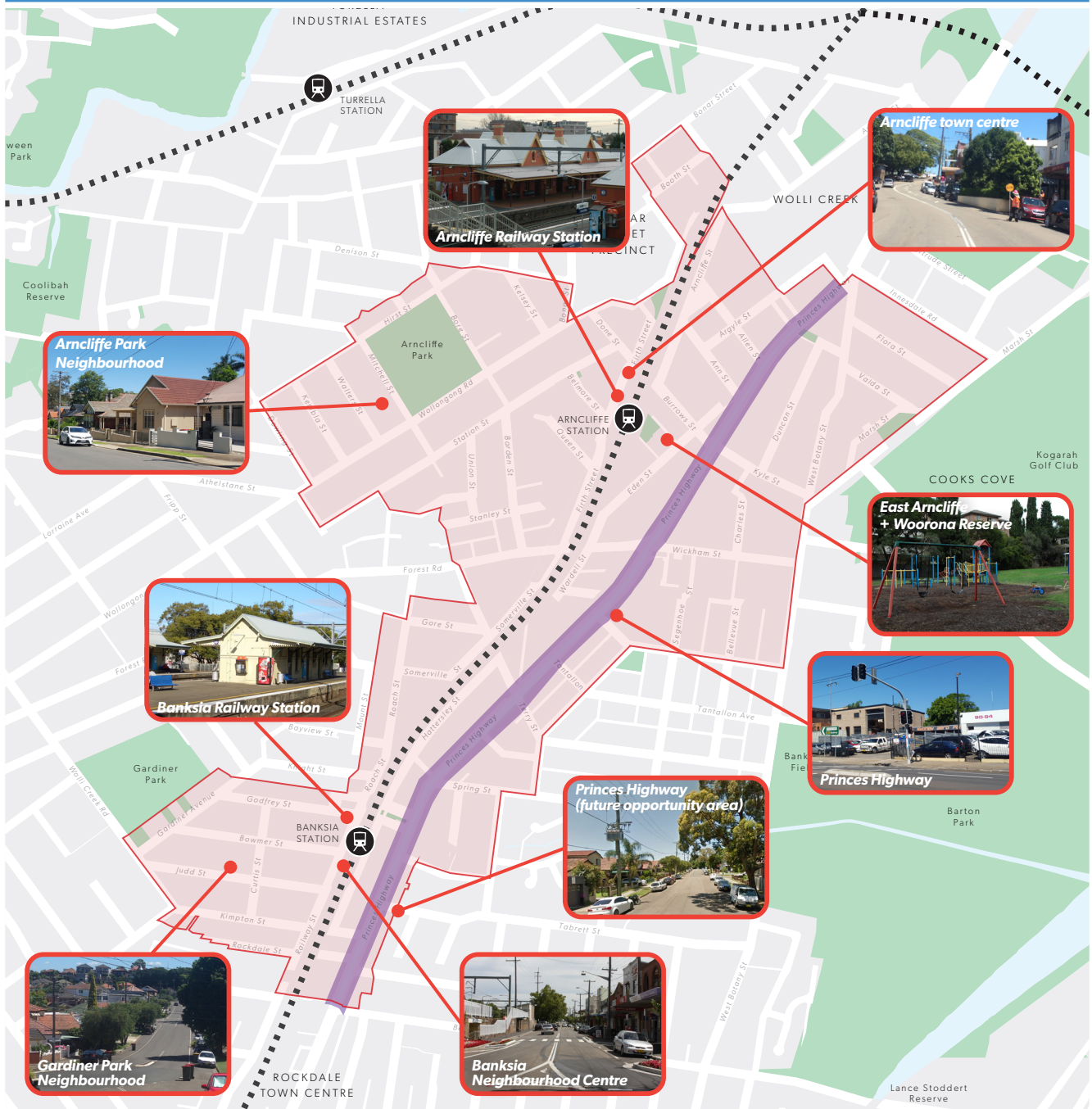


2.1 The Arncliffe Precinct

The area investigated for the Arncliffe Precinct generally includes the area within an 800 metre radius, or roughly a 10 minute walk, of the Arncliffe Railway Station. It includes a 2 kilometre stretch of the Princes Highway Corridor. It is located approximately 10 kilometres south of the Sydney CBD and 3 kilometres west of Sydney Airport.

There are a range of land uses and built form within the precinct. To the west of the Arncliffe Railway Station is a local shopping area focused along Firth and Belmore Streets. A range of commercial and light industrial uses are located along the Princes Highway and the surrounding neighbourhoods are characterised by low scale single dwellings with some three and four storey walk up apartments.

FIGURE 5: PRECINCT AREAS



Arncliffe Railway Station

Arncliffe Railway Station is located at the centre of the Arncliffe Precinct. The railway station is an important landmark and visual feature in the local landscape. The significance of the railway station is reflected in its listing on the State Heritage Register as an example of railway station architecture spanning from 1884 to 1925.

Arncliffe Town Centre

Located to the west of the railway station is the Arncliffe town centre, focused on Firth and Belmore Streets. Firth Street provides the main shopping street and has a direct connection with the railway station. It includes local shops and eateries and provides access to community services including the Arncliffe Library and Post Office.

Firth Street and the town centre are important to the local character and heritage values of Arncliffe. The streetscape within the vicinity of the railway station is characterised by a row of mature Cypress trees which creates a distinctive character to this part of Firth Street. These trees are included in the streetscape area listed as a heritage item in the Rockdale LEP. The landform rises south from Arncliffe Railway Station up to Forest Road, where a collection of historic buildings are located along upper Firth Street and Forest Road.

East Arncliffe and Woorona Reserve

Woorona Reserve, a commuter car park and sports club are located adjacent to the eastern entrance of the railway station.

The surrounding area to the east of the railway station and west of the Princes Highway is predominantly residential in character,

centred on Eden Street. The character of this area includes a mix of medium density residential units and low density detached and semi-detached dwellings on leafy streets.

Further east on the other side of the Princes Highway Corridor, the residential area is characterised by low scale single dwelling houses. The landform slopes down towards Cooks Cove and the Cooks River.

The Arncliffe Park Neighbourhood – future opportunity area

The Arncliffe Park neighbourhood, located north of Wollongong Road, is currently a low-density residential area. It is not included in this rezoning proposal but has been identified in the Strategy as an area may be able accommodate medium density, low rise residential development in the future.

2.2 The Banksia Precinct

The area investigated for the Banksia Precinct includes the area within an 800 metre radius, or roughly a 10 minute walk of the Banksia Railway Station. It includes a 700 metre stretch of the Princes Highway Corridor between Terry Street and Bestic Street. It is located approximately 10 kilometres south of the Sydney CBD and 3 kilometres west of Sydney Airport.

There are a range of land uses and built form within the precinct. The land around Banksia Railway Station is a predominantly residential area, with some local shops (referred to as the Banksia Neighbourhood centre) closest to the railway station and towards the Princes Highway. The Princes Highway Corridor is characterised by clusters of automotive showrooms and related services. The surrounding neighbourhoods are characterised by low scale single dwellings with some three and four storey walk up apartments.

Banksia Railway Station

Banksia Railway Station opened on 21 October 1906 with one island platform. In 1923, as part of the quadruplication of the Illawarra line from Wolli Creek to Rockdale, Platforms 1 and 4 were built along with an underpass. The railway station is a locally significant heritage item and combines buildings from two periods. The railway station is served by the Illawarra rail line services.

Banksia Neighbourhood Centre

A small neighbourhood centre is located to the west of Banksia Railway Station providing a number of local shops and services to Banksia residents. It has a distinct local character with standalone single storey shops facing the street and one to two storey residential homes behind.

East of the railway station is an area between Hattersley Street and the Princes Highway comprising a mix of residential and commercial uses.

There are some landmark figs and tree planting along the railway corridor, which are key existing features contributing to the character of this centre.

Gardiner Park Neighbourhood – Future Opportunity Area

The Gardiner Park neighbourhood, located west of Wollongong Road, has been identified as an area that may be able accommodate medium density, low rise residential development on the basis that it falls within the 800m walking

catchment of the Banksia Railway Station and local centre. It is also currently a low-density residential area. This area is not included in this rezoning proposal.

Princes Highway – Future Opportunity Area

An existing residential area, which backs onto commercial properties location along the Princes Highway close to Banksia Railway Station, has been identified as a future opportunity area. This area is not included in this rezoning proposal but will be further assessed to determine if site amalgamations could occur to allow for expanded uses fronting the highway with rear lane access.

2.3 Princes Highway

The Princes Highway Corridor is a major north-south arterial road which serves the southern Sydney region. The stretch of the Princes Highway Corridor between Banksia and Arncliffe is characterised by clusters of automotive showrooms and related services, large retail stores, warehouse spaces, fitness centres and other various retail uses. Other land uses along the corridor include social housing, educational facilities including the Arncliffe Public School and places of public worship including Masjid Durul Imaan.

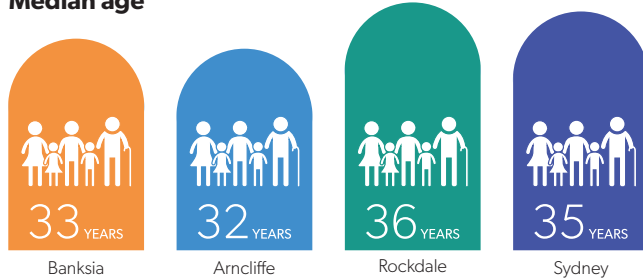
2.4 Demographic profile

In 2011, Arncliffe was home to 5,107 residents and Banksia was home to 5,938 residents, representing 11% of population of the former Rockdale LGA population .

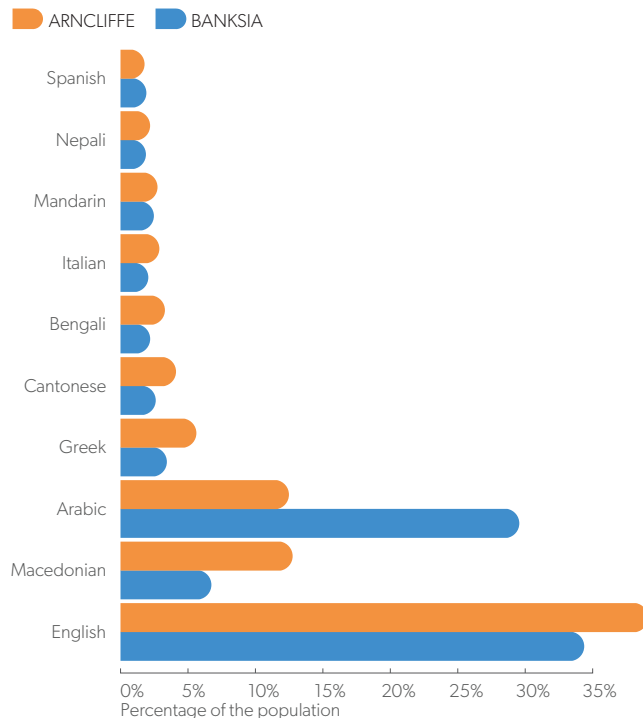
Demographic profiles for the precincts have been prepared using data from the Australian Bureau of Statistics 2011 Census. Copies of these reports are provided as Appendix D and E. The demographic profiles reveal the following key characteristics of the population living within Arncliffe and Banksia:

- Both suburbs have a relatively young community with a very low median age of 32 years in Arncliffe and 34 in Banksia. Both suburbs have a higher proportion of children under 15 years compared to the Rockdale and Sydney average;
- Both suburbs are culturally diverse with a high proportion of people born overseas and people who speak a language other than English at home. English was only spoken in 34% of homes in Arncliffe and in 39% of homes in Banksia;
- Both suburbs have a high proportion of families experiencing housing stress and low average household incomes compared to Sydney overall. Approximately 49.3% of families in Arncliffe and Banksia have experienced housing stress compared to 44.7% for Sydney. The average household income was between \$52,000 and \$64,999 per annum;
- A higher proportion of the Arncliffe population live in rented accommodation than in Banksia. In 2011 approximately 40% of dwellings in Arncliffe were rented compared with 28% in Banksia; and
- While private car was the most common mode of transport used to get to work, the residents of Arncliffe and Banksia were more likely to have used public transport to get to work compared to the Rockdale population and Sydney overall.

Median age



Languages spoken at home in 2011



2.5 Existing Planning Context

The *Rockdale Local Environmental Plan 2011* applies to the Arncliffe and Banksia Precincts. The precincts are currently zoned for a range of employment, housing and recreational uses (See Figure 6).

The current zoning allows for:

- A strip of commercial operations (B6 Enterprise Corridor) along the Princes Highway Corridor through Arncliffe and Banksia;
- Pockets of mixed use (B4 Mixed Use) on the western side of Arncliffe Railway Station and Princes Highway;
- A small area of local shops (B2 Neighbourhood Centre) on the western side of Banksia Railway Station;
- A mix of residential densities including:
 - Residential areas in close proximity to the Arncliffe station (west of the Princes Highway) are zoned R4 High Density Residential allowing apartments along with office and business uses, neighbourhood shops and restaurant and cafes; and
 - Residential areas in Banksia and the outer areas of the Arncliffe precinct (surrounding Arncliffe Park and West Botany Street) are generally zoned R2 Low Density Residential allowing single detached homes and dual occupancies; and
- Arncliffe Park, Gardiner Park and Wooroona Reserve are zoned RE1 Public Recreation. Recreational and community facilities are permitted in this zone.

Building heights are limited to 8.5 metres (approximately 2 storeys) within the low density residential areas. In the areas adjacent to Arncliffe Railway Station, permitted building heights generally range between 14.5 metres and 16 metres (approximately 4-5 storeys). Along the Princes Highway, building height limits range between 8.5 metres up to 31 metres (approximately 9 storeys).

Floor space ratio (FSR) controls within the low density residential areas range between 0.5:1 and 0.6:1. Density in the areas adjacent to Arncliffe Railway Station allow for a FSR of between 1:1 up to 2:1. Along the Princes Highway, the permitted FSR ranges between 0.5:1 up to 2.5:1.

A minimum lot size of 450m² applies to the areas zoned R2 Low Density Residential.

SECTION 2: PRECINCT DESCRIPTION

FIGURE 6: EXISTING LAND USE ZONING – ROCKDALE LEP 2011

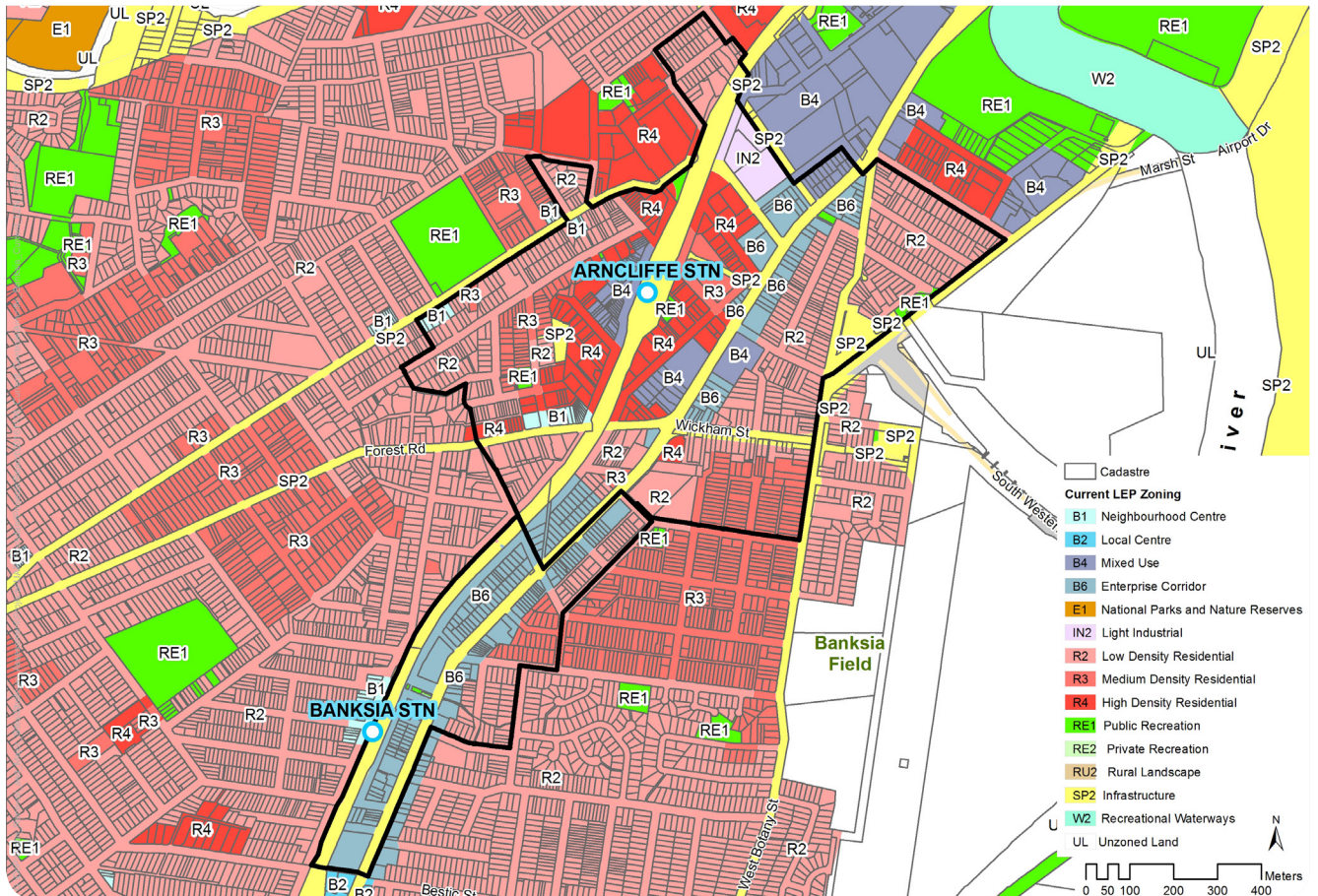
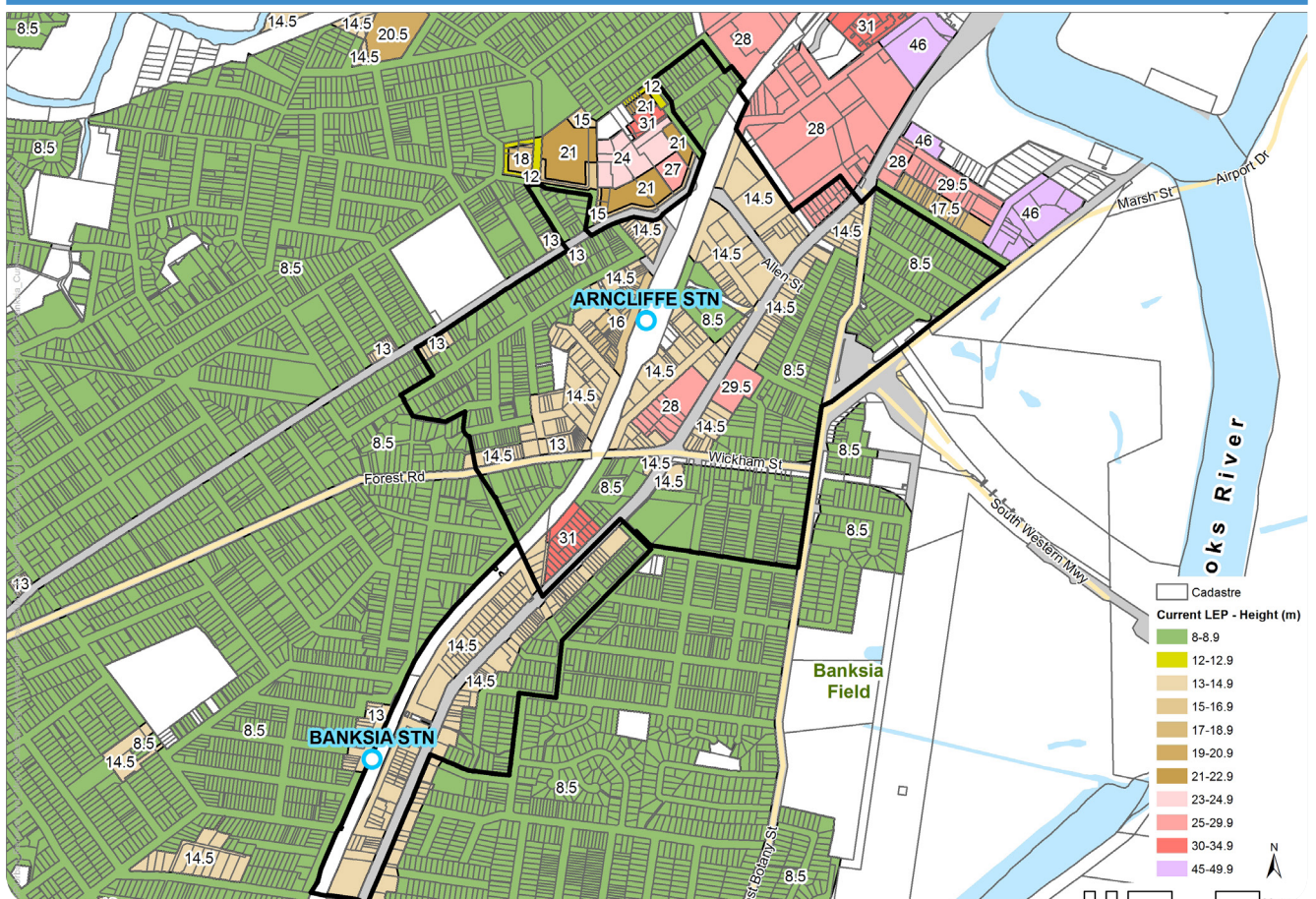


FIGURE 7: EXISTING HEIGHT CONTROLS – ROCKDALE LEP 2011



3

This section of the report provides an analysis of the existing environmental and social features of the Arncliffe and Banksia Precincts. This analysis has been used to inform the proposed amendment to the land use controls.

3.1 Proximity to the Sydney Airport

The Arncliffe and Banksia Precincts are located 3 kilometres west of Sydney Airport. Due to the close proximity to the airport, development within the precincts is subject to additional constraints relating to aircraft noise and air space restrictions to ensure that the normal operation of the airport is not adversely impacted upon. An Aeronautical Impact Assessment was undertaken by APP Limited in April 2015 to inform the precinct planning and is included as Appendix F.

Aircraft Noise

Aircraft and operational noise levels from Sydney Airport have been mapped across the precincts (Figure 8).

The south east section of the Arncliffe Precinct and the majority of the Banksia Precinct is located within the 20 to 25 ANEF (Australian Noise Exposure Forecast) contour and is therefore impacted by moderate aircraft and operational noise from Sydney Airport. New residential development in these areas are subject to additional design and construction requirements as specified in the Rockdale LEP to allow for suitable indoor noise levels.

A small area at the southern extent of the Banksia Precinct (on Princes Highway where Storage King is currently located) is within the +25 ANEF contour. Residential development is not

FIGURE 8: AREAS MOST AFFECTED BY PAN-OPS 50 AND ANEF 25+ CONTOURS



SECTION 3: KEY CONSIDERATIONS

proposed in this area as it experiences more significant noise impacts from the airport. This portion of the Princes Highway corridor will retain its Enterprise Corridor (B6) zoning.

Airspace

There are two air space controls which extend over the Arncliffe and Banksia Precincts – the Pans-OPS surface and the Obstacle Limitation Surface.

PANS-OPS surface

The PANS-OPS surface is the upper height limit which should be kept free of obstacles at all times. The PANS-OPS surface varies across the precincts from 60m AHD (around West Botany Street) to 126.4m AHD (around Arncliffe Park), or around 20m above ground level (West Botany Street) to around 112m above ground level (near Arncliffe Park). All proposed building height limits are well below the PANS-OPS heights.

Obstacle Limitation Surface (OLS)

The OLS defines the airspace in proximity to the airport which should be kept free of obstacles that may cause danger during visual operations. The intention of this surface is not to prohibit buildings at this height but to ensure they are examined for impact on aircraft operations.

Generally the OLS sits at 51m AHD (Australian Height Datum) across the precincts. The majority of the maximum height limits proposed are at or below the OLS. Future developments that

are below the OLS will not need to apply to Sydney Airport for separate approval. This ensures more certainty about the approval timeframes and processes.

In some locations, where opportunities exist to achieve a good design outcome with taller buildings, proposed height limits do exceed the OLS. This includes the key opportunity sites located around Arncliffe Railway Station. Future development exceeding the OLS, will need to apply to Sydney Airport for separate approval to ensure that the proposed structure will not adversely impact upon the operation of the airport.

3.2 Transport network

The Arncliffe and Banksia Precincts are well connected by road being traversed by a number of State roads, including the Princes Highway, the M5 East Motorway (M5) and the future WestConnex motorway project. They also have access to key regional roads, including Forest/Wickham Road and West Botany Street (see Figure 9). The precincts also have good access to public transport infrastructure being centred on Arncliffe Railway Station as well as several existing bus routes.

Princes Highway

The Princes Highway extends for the full length of both the precincts. The highway is part of the national highway network. It provides the main road access from the precinct to the Sydney CBD and is also the spine of the local road network. As a result it is subject to high traffic volumes for both private vehicles and freight.

FIGURE 9: ESTABLISHED TRANSPORT NETWORK



M5 East Motorway

The Arncliffe Precinct also includes access to and from the M5. The M5 forms part of the Sydney Orbital, enabling access between the inner south and south-western Sydney. There are two access locations to or from the M5 within the precinct, with an all movements interchange at Marsh Street as well as an east facing exit ramp at the Princes Highway.

WestConnex

WestConnex is a 33 kilometre motorway project linking Sydney's west and south-west with the Sydney CBD, Sydney Airport and Port Botany. The NSW Government is currently investigating extending the motorway further south to link with the F6 corridor. The extension would reduce through traffic volumes on the Princes Highway in the vicinity of Arncliffe and Banksia.

Rail

The Arncliffe and Banksia railway stations are located on the T4 Illawarra Rail Line, approximately 10 and 8 kilometres south-west of Central Railway Station. The services operating through the Arncliffe and Banksia railway stations provide public transport access to the CBD (via Central, Town Hall and Martin Place Stations), Bondi Junction to the north, as well as centres to the south, such as Rockdale, Kogarah, Hurstville and Cronulla.

The Strategic Transport Plan prepared for the precincts (Appendix G) includes a high level assessment of the existing projected passenger demand on the T4 Illawarra Rail Line. It concludes that without additional passenger capacity enhancements to the rail, it is expected that acceptable load limits will be reached before the year 2036. The Government is currently investigating options for improving rail services to southern Sydney.

Arncliffe Railway Station has recently been upgraded to improve overall access at the railway station. The upgrade includes: new lifts; new canopies and security screens; upgraded CCTV camera surveillance; accessible toilets; new sheltered bus stops; a taxi and 'kiss and ride' area on Firth Street; new accessible parking spaces; and new bicycle racks.

Bus

A number of bus services currently run through Arncliffe and Banksia. East of the railway line is serviced by buses connecting to Central Sydney, Bondi Junction, and Randwick (routes 442, 400 and 410). West of the railway line is serviced by a local bus service which meanders through Rockdale (route 473).

Sydney's Bus Future is the NSW strategic plan for bus services. It proposes a core bus network, which has a new suburban route from Bondi Junction to Miranda via Sydney Airport and Eastgardens. This service would help meet higher customer demand along the Princes Highway, providing high frequency services and improved accessibility from the Arncliffe and Banksia Precincts to Sydney Airport, Eastgardens and Randwick areas.

Pedestrian connections

Pedestrian connections between major destinations within the precincts are currently limited due to topography and barriers created by the rail and road corridors. The rail corridor forms a barrier to east-west pedestrian movement. Pedestrian crossings are limited to the crossings provided at the railway stations and through the underpasses at Wollongong Road and Subway Road.

A new pedestrian tunnel is currently being constructed adjacent to the Wollongong Road Underpass in Arncliffe to provide a safer path for pedestrians away from traffic.

The Princes Highway corridor also forms a barrier to east-west pedestrian movement. Traffic signals are set at large cycle times during peak periods and prioritise north-south traffic movements.

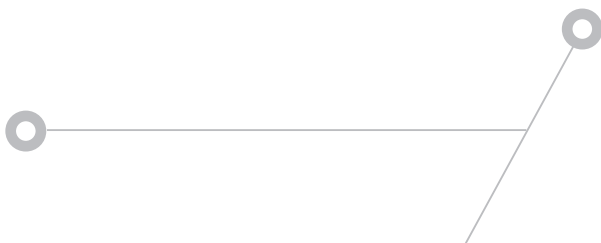
There are two walking 'connecting trails' identified by Bayside Council within the vicinity of Arncliffe and Banksia. The first connects the Cook Park Trail to Bardwell Park via Arncliffe. The second route is between Riverine Park and Bardwell Park via Banksia. These routes are informal and for the purposes of leisure walking, as such, they are somewhat circuitous.

Cycle routes

Dedicated cyclist facilities within the area include a mix of on and off road facilities. Cycle routes tend to radiate from Wolli Creek with few east-west connections. On road facilities are provided along the western side of the rail corridor. The route includes parts of Arncliffe Street, Firth Street, Somerville Street, Gore Street, Roach Street and Railway Street. This is the only formal cycle route within the precincts.

While a level of north-south connectivity is provided at the railway stations, there is limited east-west connectivity. It is difficult for cyclists to move in an east-west direction across the rail way line.

A regional cycle route connecting Botany Bay to Homebush Bay currently meanders through Cooks Cove.



3.3 Open space

The majority of open space within the Arncliffe Precinct is provided in two parks:

- Arncliffe Park - a 4ha area of open space within a 9 minute (700m) walk to the railway station. It is used for both passive and active recreation and includes an oval and playground; and
- Wooroona Reserve - located adjoining the railway station. It is approximately 0.1ha and includes a small playground.

Open space within Banksia includes:

- Gardiner Park - a 3.6 ha area of open space approximately a 10 minute walk from the Banksia Station. Access to Gardiner Park is available at the precincts western boundary at Gardiner Avenue; and
- Marinea St Reserve - a smaller park, approximately 0.2ha, located at the north eastern boundary of the precinct. It provides local open space for surrounding residents and includes a small playground.

The precincts have good access to regional open space due to the close proximity of Barton Park, Cahill Park and a number of regionally significant sports facilities near the Cooks River and Muddy Creek. Large portions of this area are also dedicated to private facilities such as Kogarah Golf Club.

Other areas of open space include informal reserves adjoining the road corridor.

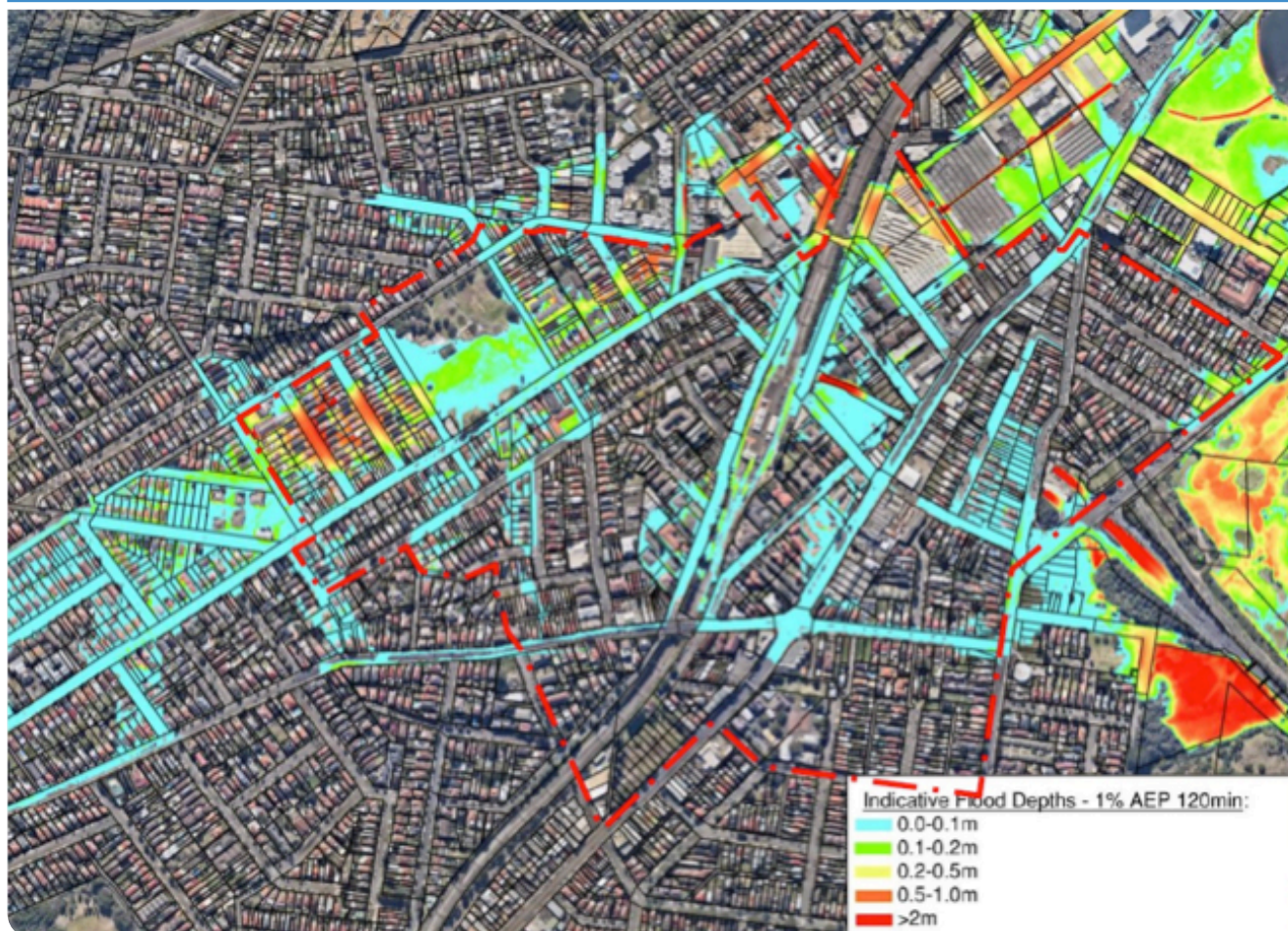
3.4 Topography and flooding

The Arncliffe and Banksia Precincts are located either side a ridge line that slopes down towards the Cooks River. The top of the ridge generally follows Forest Road with the lower, flatter areas located to the east of the rail corridor. The geology is generally sandstone slopes and alluvial floodplains.

FIGURE 10: EXISTING OPEN SPACE AND SOCIAL INFRASTRUCTURE



FIGURE 11: INDICATIVE FLOOD DEPTHS ARNCLIFFE, 1% AEP EVENT 120MM DURATION



Source: Mott MacDonald, 2016

The precincts straddle four drainage catchments being the:

- Wolli Creek Catchment;
- Bonnie Doon Catchment;
- Spring Street Catchment; and
- Eve Street Catchment.

Both Arncliffe and Banksia are subject to some flooding following significant rainfall events (see Figure 11 and 12). In major storm events (the 1% Annual Exceedence Probability flood), flooding occurs generally in the following locations:

- North of Wollongong Road (Dowling Street through Arncliffe Park to Bonar Street);
- Wollongong Road Railway underpass (intersection of Wollongong Road and Allen Street);
- Firth Street adjoining the Illawarra railway line;
- Gardiner Avenue to Godfrey Street;
- Bestic Street to Banksia Avenue; and
- Holland Avenue to Wolli Creek Road

Generally flooding in these areas is below 100mm and is therefore categorised as a low hazard. In some locations, in particular on Walters Street and Kembla Street southwest of Arncliffe Park and land around the rail underpass, flood depths are greater than 1m and therefore have a medium to high flood hazard.

A review of existing flood studies has been undertaken by Mott MacDonald, October 2015 (Appendix J and K). The review identifies a number of improvements are required to the current drainage infrastructure to support growth. The works generally include improvements to existing piped drainage systems, works to improve run off flows and modifications to the river bank levee to improve drainage capacity.

The properties within the precincts, which are subject to flooding, are identified on the Rockdale LEP Flood Planning Map. Any redevelopment of these properties will continue to be subject to the controls applied by the Rockdale LEP which specifies that residential uses be raised ('freeboard') 500mm above the 1:100 flood planning level. Future development applications will also need to comply with the existing water sensitive urban design controls in the *Rockdale Development Control Plan 2011* (Rockdale DCP).

FIGURE 12: INDICATIVE FLOOD EXTENT BANKSIA, 1% AEP EVENT 120MM DURATION



Source: Mott MacDonald, 2016

3.5 Views

The significant ground level changes across the precincts and in the surrounding area result in views towards a number of areas being achieved from the higher ground. Views towards the Sydney CBD can be achieved from the northern and eastern parts of both precincts and towards the Cooks River and Botany Bay from the Forest Road ridgeline in Arncliffe.

The Rockdale DCP identifies the importance of maintaining and enhancing views to significant landmarks which include the Cooks River area. It also specifically identifies the views of the St Francis Xavier's Church and St David's Church spires on Forest Road as key landmarks which should be considered in site planning.

The former Rockdale City Council previously released a view analysis in June 2013 as part of the Princes Highway Corridor Strategy. This view analysis concluded that the existing building heights permissible under the Rockdale LEP already have the potential to obscure the views to the Forest Road ridge and the spires of St David's Church and St Francis Xavier's Church and the Arncliffe Public School.

Section 4.1.1 of the Rockdale DCP includes guidelines requiring view corridors to landmarks and significant heritage items to be protected where possible. Both church spires have been identified as 'landmarks' in the DCP, and other significant views have been identified towards the Cooks River, CBD and Botany Bay. The DCP will continue to apply and appropriate view protection should be addressed at the design stage with site design and setbacks to encourage view sharing where possible.

3.6 Vegetation

Vegetation within the precincts is predominantly located within existing public open space and reserves. It includes remnants of the original vegetation communities (Swamp Oak Floodplain Forest and Sandstone Woodland) alongside introduced native and exotic tree species. There are also large numbers of trees located within private land to the west of the rail corridor. This includes clusters of trees at the rear of property boundaries which creates some connected canopy. To the east there is limited canopy cover and trees are primarily located within local street reserves. There is very limited tree planting along the Princes Highway corridor.

Tree protection controls currently in the DCP will continue to apply.

FIGURE 13: PHOTOS OF KEY VIEWS



3.7 Heritage

European Heritage

The Rockdale LEP and the State Heritage Register identifies 47 heritage items within the Arncliffe and Banksia Precincts. The majority of these items are Victorian or federation houses and public buildings, such as the post office and Arncliffe Public School.

Two heritage items within the Arncliffe Precinct are listed as having State heritage significance. This includes the Arncliffe Railway Station (item 3) and the Southern and Western Suburbs Ocean Outfall (SWSOOS) (item 4).

The Arncliffe Railway Station is of historical significance as one of three remaining stations with 1880s 'second class' brick platform buildings on the Illawarra Rail Line and is one of the best examples of suburban station architecture from the first period of construction on the Illawarra Rail Line.

The SWOOS is an original section of one of Sydney's oldest main sewers, built in the 1890s to end the discharge of sewage into Sydney Harbour.

New developments will be subject to Council's existing heritage conservation guidelines in section 4.1.2 of the Rockdale DCP. These guidelines aim to conserve significant fabric, their curtilage and settings and to ensure that new development will be sympathetic to an historic streetscape and not adversely impact on the significance of heritage items.

Guidelines include specific requirements for the submission of heritage reports and guidelines for the development of heritage items and new buildings in their vicinity.

The Department will work with Bayside Council to update the Rockdale DCP to ensure that suitable street wall heights and

upper level setbacks are included as guidelines for the future development of Firth Street.

Aboriginal Heritage

The Register of Aboriginal Sites maintained by the National Parks and Wildlife Service of New South Wales does not record any Aboriginal sites within the precinct.

Where Aboriginal sites are located during development the DCP controls will continue to apply to ensure they are protected.

3.8 Existing community facilities

The Arncliffe and Banksia Precincts have a good supply of social infrastructure. The precincts are well served by regional health, tertiary education, cultural and emergency services, at Kogarah and by district level services in Rockdale.

This includes St Georges Hospital, the Kogarah Ambulance Station, the Kogarah Police Station and the St George campus of the Sydney Institute of TAFE. Other district level services are provided in Rockdale, including a new central library and a recently refurbished town hall.

At the local level, the Arncliffe Precinct contains a good range of community facilities. There are several local primary schools located within close proximity. Tempe High School is the closest government high school. There are also a number of local childcare centres. The precinct contains a branch library on Firth Street, a council community centre and a YMCA centre. However, these facilities are older style and generally located on small constrained sites.

FIGURE 14: MAP OF HERITAGE ITEMS



There are limited local community facilities currently provided at Banksia. Residents of Banksia are serviced by the facilities provided at Arncliffe and Rockdale.

A review of social infrastructure requirements for Arncliffe and Banksia has been undertaken by Elton Consulting, 2015. The study notes that while the Arncliffe Precinct contains a branch library and a Council community centre, these facilities are older style, on small constrained sites that are not well located or able to meet contemporary needs. In order to meet the needs of the population growth anticipated in Arncliffe and Banksia it is recommended that a larger branch library at Arncliffe and additional community centre space is planned for. This need has been included in the Infrastructure Schedule and the Department will work with Council to ensure it is included in the relevant Section 94 Development Contributions Plan.

3.9 Contamination

Potential contamination issues must be taken into consideration as part of a rezoning to ensure that the land is suitable or can be made suitable for the uses that would be permitted in the proposed zone, in accordance with *State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)* and the *Department's Managing Land Contamination: Planning Guidelines*.

The proposed rezoning of the Arncliffe Precinct includes amending the land use zoning sites that are currently zoned B6 Enterprise Corridor to a B4 Mixed Use zone (refer to section 4.6). This may result in residential land uses locating on lands previously used for warehousing or light industry.

Clause 6 of SEPP 55 requires the planning authority to consider contamination and remediation in a rezoning application. Under clause 6(1) of SEPP 55, certain classes of land must be excluded from a rezoning (where it would permit a change of use), unless:

- the planning authority has considered whether the land is contaminated, and
- if the land is contaminated, the planning authority is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for all the purposes for which land in the zone concerned is permitted to be used, and
- if the land requires remediation to be made suitable for any purpose for which land in that zone is permitted to be used, the planning authority is satisfied that the land will be so remediated before the land is used for that purpose

SECTION 3: KEY CONSIDERATIONS

A desktop contamination review of the precinct's history has been undertaken to identify both existing and potential contamination sources throughout the precinct (Appendix I). The review identified a number of past uses that could potentially cause contamination on individual sites such as; market gardening, possibly a quarry for road materials, vehicle sales and maintenance operations, metal fabrication and associated manufacturing and textile purposes.

For a precinct wide rezoning such as this, it can be difficult for the planning authority to be satisfied that every part of the land is suitable for the uses permitted within the zones. The desktop review concluded that the past uses identified in the precincts are considered representative of potentially contaminating land use activities which can be readily dealt with during later development application stages.

The Department's Managing Land Contamination – Planning Guidelines – SEPP 55 Remediation of Land outlines that in such cases, the rezoning process should proceed provided measures are in place to ensure that the potential for contamination and suitability of the land for the permitted uses will be further assessed once detailed proposals are made at the development application stages.

Clause 7 of SEPP 55 will ensure that contamination and remediation will be properly addressed and considered by the planning authority at future development application stages and that the land will be required to be made suitable for the proposed developments, prior to those developments being carried out. It is therefore unnecessary to include additional provisions in the recommended Planning instrument for contamination and remediation purposes.

FIGURE 15: CONSTRAINTS AND OPPORTUNITIES

