

FIGURE 19: INFRASTRUCTURE MAP



SECTION 7: INFRASTRUCTURE STRATEGY

The following tables provide an overview of the infrastructure projects that have been identified to support growth in the Bayside West Precincts.

TABLE 1: CURRENT PROJECTS

Item	Delivery	Status
Upgrade rail infrastructure to increase capacity and services	TfNSW	Rail network planning to increase services to Southern Sydney is underway. Preferred option to be determined by end of 2017. Timing and delivery are subject to funding and business case.
Upgrade to Banksia and Arncliffe Stations	TfNSW	Arncliffe Station upgrade is underway and due for completion at the end of 2016. TfNSW to undertake scoping investigations for Banksia Station upgrade.
Improvements to bus services, including: <ul style="list-style-type: none"> • a new route between Bondi Junction and Miranda • Extending the Kogarah to Tempe service • Increase services running through the Growth area, in particular the Burwood to Bondi Junction route 	TfNSW	Need for improvements to be investigated by TfNSW as part of regular monitoring and planning program.
Construction of WestConnex South Link connecting the M5 to South Sydney	TfNSW	Detailed planning and feasibility assessment by TfNSW is underway. Preferred option to be determined by end of 2017. Timing and delivery are subject to funding and business case.

TABLE 2: REGIONAL INFRASTRUCTURE UPGRADES IDENTIFIED

Measure	Delivery	Timing and delivery	Assumptions
Public transport			
B1 New bus stops on Marsh Street	Cooks Cove developer & TfNSW/Council	Bus stops to be provided prior to construction certificate for first dwelling at Cooks Cove. To be partly funded by Special Infrastructure Contribution or satisfactory arrangements.	New bus stops are required on Marsh Street to accommodate access from Cooks Cove to bus network (AECOM, 2016)

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Measure		Delivery	Timing and delivery	Assumptions
Regional/State road network				
R1	New major intersections on Marsh Street to provide access to Cooks Cove.	Cooks Cove developer & RMS/TfNSW	Intersections to be completed prior to construction certificate for first dwelling at Cooks Cove.	New intersections are required at two points along March St to provide access to the Cooks Cove Precinct (AECOM, 2016).
R2	Improvements to Marsh Street and Airport Drive. Including improved pedestrian connections to the Giovanni Bridge and upgraded pedestrian crossing of Marsh Street (potential pedestrian over pass).	RMS/TfNSW/ Cooks Cove developer	Upgrades to be completed prior to construction certificate for first dwelling at Cooks Cove. To be partly funded by Special Infrastructure Contribution or satisfactory arrangements.	Improvements to Marsh Street and Airport Drive will be required to support the growth in traffic volumes from Cooks Cove precinct (AECOM, 2016).
R3	Upgrades to the Kyle Street / West Botany Street intersection	RMS/TfNSW	Thresholds for infrastructure delivery and costings to be established prior to the rezoning of Arncliffe and Banksia Precincts. To be partly funded by Special Infrastructure Contribution or satisfactory arrangements.	Upgrades to the Kyle Street/West Botany Street intersection to allow left turn from Kyle Street onto West Botany is required (AECOM, 2015).
R4	Upgrade to the existing signalised intersection at Princes Highway / Burrows Street	RMS/TfNSW	Thresholds for infrastructure delivery and costings to be established prior to the rezoning of Arncliffe and Banksia Precincts. To be partly funded by Special Infrastructure Contribution or satisfactory arrangements.	Upgrades to the Princes Highway / Burrows Street intersection is required to permit movements from Kyle Street (AECOM, 2015).
R5	Review configuration of Duncan and West Botany Street intersections.	Council MS/ TfNSW	Thresholds for infrastructure delivery and costings to be established prior to the rezoning of Arncliffe and Banksia Precincts. To be partly funded by Special Infrastructure Contribution or satisfactory arrangements.	The need for review of the configuration of Duncan and West Botany Street intersections to accommodate growth (AECOM, 2015).
R6	Upgrade the Allen Street / Princes Highway intersection.	Council MS/ TfNSW	Thresholds for infrastructure delivery and costings to be established prior to the rezoning of Arncliffe and Banksia Precincts. To be partly funded by Special Infrastructure Contribution or satisfactory arrangements.	Upgrades to the Princes Highway/ Allen Street intersection is required to accommodate growth (AECOM, 2015).
R7	Upgrades to the intersection of Forest Road at Firth and Eden Streets.	Council MS/ TfNSW	Thresholds for infrastructure delivery and costings to be established prior to the rezoning of Arncliffe and Banksia Precincts. To be partly funded by Special Infrastructure Contribution or satisfactory arrangements.	Review of the intersections of Forest Road with Firth and Eden Streets required with consideration of constraints posed by rail overpass bridge nearby required. (AECOM, 2015).
R8	Review intersection treatments on either side of the railway underpass between Allen Street and Wollongong Road.	Council/ RailCorp	Detailed planning and timing to be undertaken by Council in consultation with TfNSW and RailCorp. To be partly funded by Special Infrastructure Contribution or satisfactory arrangements.	Review intersection treatments on either side of the railway underpass between Allen Street and Wollongong Road.
R9	Upgrade to the Spring Street / Princes Highway intersection.	Council/ RailCorp	Detailed planning, timing and thresholds to be investigated by RMS and TfNSW as precincts develop. To be partly funded by Special Infrastructure Contribution or satisfactory arrangements.	Upgrades to Spring Street / Princes Highway intersection is required to accommodate growth (AECOM, 2015).

SECTION 7: INFRASTRUCTURE STRATEGY

Measure		Delivery	Timing and delivery	Assumptions
Improvements for Pedestrians and Cyclists				
P1	Investigate provision of a new walking and cycling bridge over the Cooks River to the Sydney Airport	Developer/ Council	Investigations into new crossing to be incorporated into any planning proposal for Cooks Cove.	Opportunities exist to provide new walking and cycling connections across the Cooks River, to enhance complementary land uses with Sydney Airport (AECOM 2016).
P2	A direct foreshore bicycle/pedestrian path along the Cooks River	Cooks Cove Developer/ Council	Construction of path to commence prior to construction certificate for first dwelling at Cooks Cove. To be partly funded by Special Infrastructure Contribution or satisfactory arrangements.	A direct foreshore bicycle path along Cooks River with improved connectivity across Muddy Creek should be provided (AECOM 2016).
P3	New and improved cycle and pedestrian crossing of the Princes Highway from Cahill Park to Brodie Spark Drive. Consider pedestrian over pass.	Cooks Cove Developer RMS/TfNSW	Improved crossing to be completed prior to construction certificate for first dwelling at Cooks Cove. To be partly funded by Special Infrastructure Contribution or satisfactory arrangements.	An upgrade to the pedestrian crossing of Princes Highway from Cahill Park is required to provide a better connection from Wolli Creek Station to Cooks Cove (AECOM 2016).
Education				
E1	New school infrastructure	Department of Education	Provision for additional school infrastructure is to be allowed for, as agreed to by the Department of Education Contribution to land costs to be partly funded by Special Infrastructure Contribution or satisfactory arrangements	Opportunities exist within Cooks Cove for provision of new school infrastructure (AECOM, 2016). This is subject to detailed review and planning to be undertaken by the Department of Education.

TABLE 3: LOCAL INFRASTRUCTURE UPGRADES

Measure	Delivery	Timing	Assumptions
Roads			
L1 Charles St realignment	Council/ developer	Preliminary design and costings of upgrades to be undertaken by Council for inclusion in the Development Control Plan (Strategy Action 1) and review of the Section 94 Plan (Strategy Action 3).	Upgrades require to the local road network required to support anticipated growth (AECOM 2015).
L2 Gertrude St extension	Council/ developer		
L3 Intersection upgrades at: <ul style="list-style-type: none"> ● Wolli Creek Rd / Wollongong Rd ● Fripp St / Wollongong Rd ● Dowling St / Wollongong Rd ● Wickham / Charles Street 	Council/ developer		
L4 <ul style="list-style-type: none"> ● Upgrade to rail underpass at Railway Street and Subway Road 	Council/ RailCorp	Detailed planning and timing to be undertaken by Council in consultation with TfNSW and RailCorp for inclusion in the review of the Section 94 Plan (Strategy Action 3).	Upgrades to the rail underpass at Railway Street and Subway Road are required to accommodate growth (AECOM, 2015).
Improvements for Pedestrians and Cyclists			
p4 New on-road cycle paths along: <ul style="list-style-type: none"> ● Wollongong Rd and Allen St ● Wollongong Rd to Bonar St via Wardell St / Avenal St / Marinea St ● Burrows St / Kyle St ● Duncan Street to Allen St ● Spring St (including improved crossing of West Botany St) 	Council/ developers	Preliminary design and costings of upgrades to be undertaken by Council for inclusion in the Development Control Plan (Strategy Action 1) and review of the Section 94 Plan (Strategy Action 3).	Upgrades required to the local road network to support anticipated growth (AECOM 2015).
p5 Upgrades to the existing cycle network including: <ul style="list-style-type: none"> ● North-south route between Arncliffe Station and Banksia Station Arncliffe Street / Burrows St / Eden Street north 	Council/ developers	Preliminary design and costings of upgrades to be undertaken by Council for inclusion in the Development Control Plan (Strategy Action 1) and review of the Section 94 Plan (Strategy Action 3).	Upgrades recommended to the local cycle network to support anticipated growth (AECOM 2015).
p6 Improvements to pedestrian crossings at: <ul style="list-style-type: none"> ● Forest Way at Eden Street / Wardell Street Arncliffe Street / Allen Street roundabout ● Wollongong Road / Firth Street roundabout 	Council/ developers	Preliminary design and costings of upgrades to be undertaken by Council with support from the Department (Strategy Action 1) and review of the Section 94 Plan (Strategy Action 3).	Upgrades recommended to pedestrian facilities on the local road network to support anticipated growth (AECOM 2015).
p7 Improved pedestrian facilities, on new and existing streets at key locations to accommodate increased pedestrian activity, including along: <ul style="list-style-type: none"> ● Wollongong Road close to Arncliffe Park Burrows Road, Godfrey Street and Gardiner Avenue ● Spring Street 	Council/ developers	Preliminary design and costings of upgrades to be undertaken by Council with support from the Department for inclusion in the Development Control Plan (Strategy Action 1) and review of the Section 94 Plan (Strategy Action 3).	

SECTION 7: INFRASTRUCTURE STRATEGY

Measure		Delivery	Timing	Assumptions
Drainage and flooding				
D1	Upgrade trunk drainage across the catchment and upgrade existing drainage network, including: <ul style="list-style-type: none">● Drainage network along Wollongong Road from Dowling Street to Bonar Street, and under the railway line● Additional inlets and drainage works at Valda Avenue● Pipe upgrades at Eve Street Brick arch openings under sewer carrier● Modifications to Bonnie Doon Channel● Dedicated overland flow paths	Council/ developers	Preliminary design and costings of upgrades to be undertaken by Council with support from the Department for inclusion in the Development Control Plan (Strategy Action 1) and review of the Section 94 Plan (Strategy Action 3).	Arncliffe and Banksia subject to some areas of flooding following significant rainfall events and require upgrades to the existing drainage infrastructure (Mott MacDonald, 2015).
D2	New flood storage and detention basins to mitigate future flooding			
D3	New levee to provide additional drainage capacity and reduce inundation from the Cooks River			
Community infrastructure				
C1	A new district level branch library and community centre	Council or Developers	Preliminary design and costings of upgrades to be undertaken by Council for inclusion in review of the Section 94 Plan (Strategy Action 3).	New population anticipated requires a new district level branch library and community centre at Arncliffe (Eltons, 2015)
C3	Upgrade to existing parks at Wooroona Reserve, Marinea Reserve and Marsh Street Reserve		To be funded by Section 94 Contributions or priority precinct support scheme.	Arncliffe and Banksia have limited areas of local open space. Opportunities to upgrade existing and provide new areas of open space should be considered (Rockdale City Council, 2014)
C4	New lighting and safety upgrades at Gardiner Park and Arncliffe Park		To be funded by Section 94 Contributions or priority precinct support scheme.	
C6	Investigate new local parks as part of redevelopment of sites on Eden Street (Land and Housing Site) and 12 Allen Street		Investigations into new parks to be incorporated into any planning proposal or development application for these sites. To be partly funded by Section 94 Contributions or satisfactory arrangements.	
C7	Provision of new active recreation facilities at Cooks Cove		Construction of recreation areas to commence prior to construction certificate for first dwelling at Cooks Cove. To be partly funded by Section 94 Contributions or satisfactory arrangements.	

7.2 Transport

As outlined in Section 5.4, the current road and rail networks have limited capacity to accommodate significant growth. The Infrastructure Schedule highlights that major State infrastructure upgrades including upgrades to the railway lines and the proposed WestConnex South Link are required to accommodate growth in the Bayside West Precincts and also other areas of the south Sydney District.

Assessment of the road network capacity and performance was undertaken for the Arncliffe and Banksia precincts to identify the range of potential infrastructure upgrades needed to support growth in these areas. For the Cooks Cove Precinct, a preliminary traffic assessment was conducted to understand future access requirements.

Both assessments were based on the key assumption that the WestConnex South Link would be operational by 2026, reducing the role of Princes Highway accommodating through traffic in the Arncliffe and Banksia precincts. Key recommendations from these studies are the basis for the infrastructure upgrades identified in the infrastructure schedule and the further study requirements outlined for Cooks Cove.

The Cooks Cove investigations show that significant investment along Marsh Street will be required. Additional investment would also be required on surrounding roads to reduce the effect of queuing traffic on the access to the M5 Motorway and Sydney Airport. The queues forecast on Marsh Street could be especially long, possibly stretching longer than 2km and creating serious impacts on the surrounding road network. Investment should also be placed upon secondary access locations such as Levey Street to reduce the demand on Marsh Street.

7.3 Open space

The Strategy seeks to improve access to open space within the growth area by identifying where new areas of open space could be provided and improving access to existing areas.

The open space provision within Arncliffe and Banksia is limited and typical of an urban built up area (refer to Section 5.7). Cooks Cove provides large areas of open space, including Barton Park which provides a range of sporting fields and courts, and to the north at Cahill Park. To increase usage of these areas and to provide better access for new and existing residents, the Strategy identifies the need to provide better pedestrian and cycling linkages to Cooks Cove and other neighbouring areas of open space.

The provision of upgraded open space in Cooks Cove is to be assessed as further planning for the precinct. Redevelopment of the Arncliffe and Banksia precincts also provides an opportunity to open up additional areas of public open space. As large sites redevelop, portions of these sites could be provided as new open space to meet the needs of the new residents.

The following opportunities to provide additional open space areas have been identified in Arncliffe and Banksia:

1. Eden St Park

A new park could be provided close to the Arncliffe town centre, east of the station, between Eden Street and the Princes Highway as part of any future redevelopment of the public housing estate. The park could provide passive recreation opportunities.

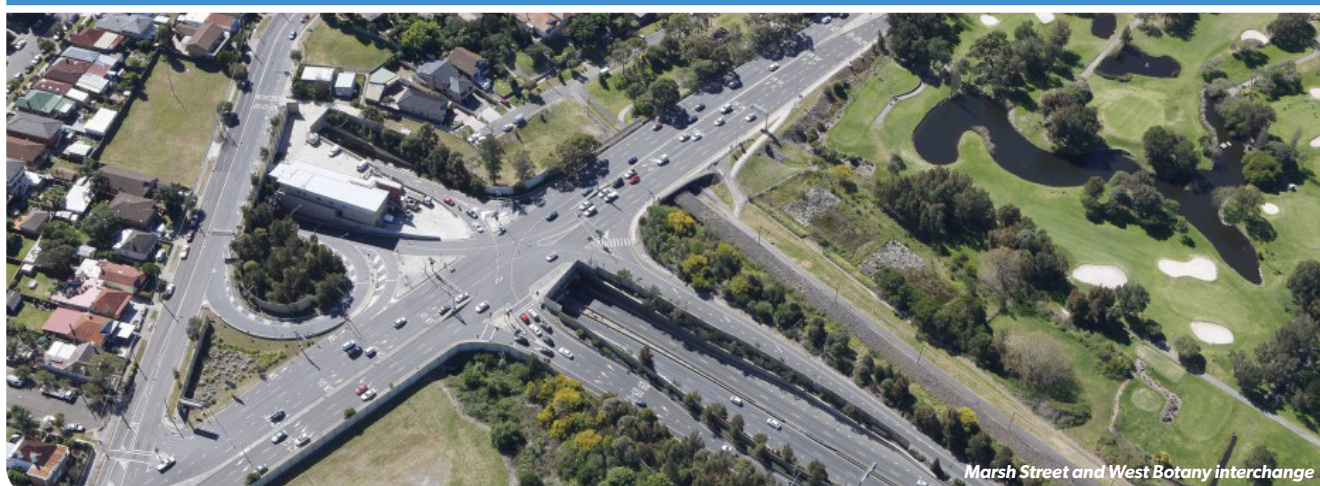
2. Allen St Park

A new park could be located adjoining the precinct boundary with Wolli Creek incorporating the heritage listed Southern and Western Suburbs Ocean Outfall Sewer as part of any future development of the Ford Service Centre. This park could provide playground facilities and passive recreation opportunities.

3. Wollongong Road Park

A new local park could be provided as part of the redevelopment of a large site at the Arncliffe Precinct boundary with the Bonar Street Precinct. It could provide an area of open space for the residents of both precincts.

FIGURE 20: M5 INTERCHANGE



7.4 Pedestrian and cycling connections

The Strategy seeks to improve connections for pedestrians and cyclists throughout the Bayside West Precincts.

The improvements to pedestrian and cycling connections include:

1. Providing a new shared pedestrian and cycle path following the Cooks River, through the Cooks Cove Precinct. This link would provide the missing link to the Botany Bay to Homebush Bay regional cycle network. The location for this path will be subject to detailed design as part of future investigations for the precinct.
2. Providing improved pedestrian and cycling crossings across Marsh Street and Princes Highway to provide better access between Cooks Cove and the Wolli Creek railway station.
3. Improvements to footpath connections linking the precincts to the railway stations so that they are safe, well-lit and have pedestrian crossings at key locations.
4. A new pedestrian connection along the heritage listed Southern and Western Suburbs Ocean Outfall Sewer from the railway line to Marsh Street and Cooks Cove.
5. New on-road cycleways connecting the railway stations to the Eve Street Cycleway and Wolli Creek to form part of a new east-west cross regional route, ensuring space is provided to cyclists through the existing rail underpass.
6. Improvements to the existing north-south on-street cycleway between Banksia and Arncliffe Railway Stations.

7.5 Schools

The Strategy identifies a potential school to be located within the Cooks Cove Precinct. This should be considered in the planning for this precinct.

The NSW Government is preparing a School Assets Strategic Plan which will establish the vision, outcomes and priorities for asset planning and delivery of schools within the metropolitan area in line with the State Infrastructure Strategy.

Projected growth in the Bayside West Precincts, including the new school to be located within Cooks Cove, will be taken into account in the preparation of the asset plan.

7.6 Affordable housing and housing affordability

The NSW Government is committed to delivering more opportunities for affordable housing across Sydney. Action 2.3.3 of A Plan for Growing Sydney outlines that the NSW Government will provide more affordable housing in Government-led urban renewal projects and on Government-owned sites to meet the shortfall in affordable housing. In response to this action, the Government is currently preparing a policy on affordable housing provision and once finalised will be applied to development within the precincts.

A target of up to 10% affordable housing will be required as part of new development within the precincts.

The target is subject to further feasibility analysis undertaken as part of the establishment of the Special Infrastructure Contribution (refer to section 9.5).

The Land and Housing site located on Eden Street within the Arncliffe Precinct presents an opportunity to provide more affordable housing. This site is located within areas identified in the Strategy to be rezoned for an increase in residential densities allowing for potential redevelopment.

FIGURE 21: KEY ACTIONS



Note: Proposed pedestrians and cycle connections are indicative only and are subject to detailed designs and approvals

SECTION 8: KEY ACTIONS

Action 1



The Department will exhibit a rezoning proposal for those areas identified within Arncliffe and Banksia as priority areas for rezoning. Following exhibition, the Department will review submissions and make a recommendation to the Minister about what areas are to be rezoned by way of a State Environmental Planning Policy. Bayside Council will, with assistance from the Department, prepare a Development Control Plan for the priority areas to be rezoned. It is recommended that this Development Control Plan be exhibited at the same time or shortly after exhibition of the Department's rezoning proposal.

Action 2



The Department will recommend a Special Infrastructure Contribution (SIC) be applied to the growth area. The SIC will assist in funding regional infrastructure upgrades identified in this Strategy to support growth over a 20 year timeframe.

Action 3



Bayside Council will review the way local infrastructure contributions are to be collected within the growth area. The Department will assist the Council to cost local infrastructure upgrades recommended in the Strategy and co-ordinate with the infrastructure items to be partly funded through the SIC. This will include preliminary design and costings for the key regional cycling and pedestrian link along the Cooks River and the pedestrian crossings of Marsh Street and the Princes Highway.

Action 4



The NSW Government will assist to fund community projects within the Growth Area up to \$10 million as part of the Priority Precinct Support Scheme. The Department will undertake community consultation to assist the Council to select the projects to be funded.

Action 5



Proponent to lodge a planning proposal with Council for urban development at Cooks Cove.

Action 6



The Department will work with the Land and Housing Corporation to enhance and increase capacity for social housing on their site located on Eden Street in Arncliffe.

Action 7



Improvements to pedestrian and cycling connections through Cooks Cove will be provided as part of the precincts development. The new connections will improve regional cycling and walking links and improve accessibility to the precinct. The location of the new connections are to be refined through detailed design as part of future investigations for Cooks Cove.

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9.1 Finalisation of the Strategy

Following exhibition of this Draft Strategy, the Department of Planning and Environment, in consultation with Council and key stakeholders will make any amendments required prior to finalisation.

The Strategy will inform future land use change and guide development in the Bayside West Precincts. Once finalised, the Strategy will be implemented through amendments to local planning instruments, local planning investigations and planning proposals.

Local Planning Direction

To ensure future land use change is consistent with the Strategy, the Department has recommended that a local planning direction (Section 117 Direction) be applied to the draft and finalised Strategy.

The proposed local planning direction, will require future amendments to any local or state planning instruments or planning proposals to be consistent with the draft and finalised Strategy.

In particular, future rezoning proposals should demonstrate consistency with the following sections of the strategy:

- Section 6, Land Use Strategy and the strategic intent
- Section 7, Infrastructure Strategy
- Section 9, Implementation

9.2 Planning Pathways

To achieve the objectives of the Strategy, changes to the current planning controls in the Rockdale LEP or in the case of Cooks Cove the controls within SREP 33 are required. This includes amendments to the zoning, height and floor space ratio (FSR) controls. This can occur via a State Government led, local council led or private proponent led process.

State Rezoning of Priority Precincts

The Minister is able to amend the Rockdale LEP through a State Environmental Planning Policy (SEPP) under Section 37 of the EPA Act. In accordance with Section 38 of the EPA Act, an explanation of intended effect of the proposed amendment would be publicly exhibited.

Council rezoning

Local councils periodically review the land use zoning planning controls that apply in their local government area. This is normally undertaken as comprehensive review of a councils LEP. The local council would prepare a planning proposal detailing the amendments to the LEP, which would need to be generally consistent with the Strategy.

Planning Proposals

Local planning proposals can be prepared by land owners or developers to amend the zoning and/or planning controls that apply to their land. Planning Proposals will need to be generally consistent with this Strategy.

9.3 Planning Pathways – Cooks Cove

For the Cooks Cove Precinct, the Department recommends that Council assess any future planning proposal relating to the precinct.

A planning proposal for Cooks Cove will need to outline any change required to the land use controls currently applying to Cooks Cove under SREP 33. In accordance with Section 74 of the EPA ACT the repeal of the SREP and amendment to the LEP to incorporate the new land use controls can occur as part of the planning proposal process.

A future planning proposal would need to be consistent with this Strategy and in particular the following urban design principles and study requirements.

Cooks Cove Urban Design Principles

The key urban design principles that should inform future development within Cooks Cove include:

● Create a highly permeable precinct

To overcome the existing barriers to access and connectivity into the Cooks Cove Precinct, a high degree of permeability throughout the precinct for all modes should be encouraged including the prioritising pedestrians and cyclists.

● Create a vibrant livable centre

Provide for the needs of the new Cooks Cove community to ensure residents and workers are connected to facilities such as neighbourhood shops, primary schools, community centres, libraries, health services and public transport.

● Build upon the existing water frontage

Leverage the amenity and function of the existing water systems within and adjacent to Cooks Cove to create a distinct identity for Cooks Cove.

● Respect the natural and cultural heritage

Maximise the existing heritage elements of the precinct that make Cooks Cove distinct and identifiable. This encompasses ecological, environmental and cultural elements which meaningfully contribute to the history of the precinct and its sense of place.

FIGURE 22: COOKS COVE



Cooks Cove

Further investigations to be undertaken in Cooks Cove are outlined in the following table.

Study Requirement	Key Issues to be Addressed
1. Detailed economic and social analysis	<p>Undertake a market assessment to determine a viable mix of land uses in the short, medium and long term and identify key market drivers.</p> <p>Analyse integration with nearby land uses including the high density residential suburbs of Wolli Creek and Arncliffe and the industrial land in Mascot and Botany</p> <p>Investigate the potential to strengthen the precinct's relationship with Sydney Airport to complement its activities and maximise opportunities for success.</p> <p>Include provision for new school infrastructure to meet the needs of the new population, in consultation with the Department of Education.</p>
2. Urban design analysis	<p>Prepare a detailed site and context analysis, including opportunities and constraints mapping.</p> <p>Prepare a structure plan for the precinct and demonstrate how this addresses the key principles of the Bayside West, Land Use and Infrastructure Strategy.</p> <p>Provide a view corridor and visual assessment, with particular focus on significant view lines, as well as analysis of any visual impacts on surrounding areas and mitigation measures.</p> <p>Provide a shadow analysis for the overall precinct and on adjoining land, including Winter Solstice and Equinox.</p> <p>Provide an analysis of proposed distribution of gross floor area, development yields, building typologies, building envelopes and heights.</p> <p>Provide a Public Domain Plan identifying proposed open space, public domain and pedestrian/cycle links, including an accurate CAD set-out of streets, parks and open spaces.</p> <p>Outline the proposed design excellence/integrity process to be adopted for the precinct.</p>
3. Traffic and transport assessment	<p>Prepare a Strategic Transport Plan, in consultation with Transport for NSW which includes:</p> <ul style="list-style-type: none"> ● Agreed study area and travel characteristics (including trip generation rates) with Transport for NSW and Roads and Maritime Services. ● A Traffic and Transport Impact Assessment Study in accordance with the Draft Interim Guidelines on Transport management and Accessibility Plans and the Guide to Traffic Generating Developments (and relevant technical directions), including: <ul style="list-style-type: none"> ○ Description of future travel patterns and behaviours based on existing data and benchmarking. ○ An analysis of public transport provision, cycling and pedestrian connections to, from and within the precinct, including access to nearby rail stations. ○ A detailed traffic analysis, including micro-simulation traffic modeling, of the impact of the proposed development on the State and Regional road network. Key considerations include increased pedestrian activity at major intersections, impact of queuing across access roads to the Sydney Airport and impacts on access to the Sydney motorway network. ○ Provision of on-site car parking, including car share and pool parking having regard to the site's accessibility to public transport, and local planning controls. ○ The potential for implementing a location-specific sustainable travel plan such as a Green Travel Plan (GTP) for workers and/or travel access guide for residents and visitors of the future site. ○ Assessment of the cumulative impacts of proposed major local development and regional traffic impacts associated with the development ○ Development of a package of (short, medium and long term) traffic and transport infrastructure and travel demand management measures to support future development. ○ Timing and cost of infrastructure works and funding responsibilities. ● Infrastructure requirements, including timing and commitments, outlined in the Bayside West Land Use and Infrastructure Strategy and how these influence the feasibility of development in the precinct. ● Review of existing bus infrastructure and services and identify any need for additional bus infrastructure and service and identify any need for additional bus infrastructure and services within and adjoining the site. ● Review of rail network capacity and committed Government investments in rail infrastructure and the ability of the network to accommodate the proposed growth. ● Provide consideration of how both construction traffic and long term tenant traffic is going to be managed and the impacts on existing local roads and the wider road network.

SECTION 9: IMPLEMENTATION

4. Detailed assessment of flood mitigation and stormwater management	<p>Provide a flood risk assessment developed in consultation with Council, identifying and mapping the extent of potential flood events and outlining the suitability of the land for proposed uses, including consideration of the rate of rise of flood waters across the precinct.</p> <p>Address the impact of flooding on future development proposed and any flood risk to people and properties for the full range of floods up to the probable maximum flood (PMF) event including potential long term cumulative impacts from staged development.</p> <p>Provide concept level information on the impacts of future earthworks and filling of land within the proposal. This assessment should be based on an understanding of staging and cumulative flood impacts.</p> <p>Provide concept level details of the drainage associated with the proposal, including stormwater drainage infrastructure and address the impact of stormwater flows on the site from other catchments, overland flow paths and mainstream flooding.</p> <p>Provide a concept emergency response plan for floods up to the PMF level. This should include an assessment of isolation possibility and the impacts from future development on the capacity or operation of existing local evacuation routes.</p> <p>An assessment of possible impacts of the proposal on the flood behaviour (i.e levels, velocities and duration of flooding) and the impact of the proposal on adjacent, downstream and upstream areas.</p> <p>Provide a concept Stormwater Management Plan outlining the general stormwater management measures for the proposal, with particular emphasis on possible Water Sensitive Urban Design (WSUD) options.</p>
5. Infrastructure and staging	<p>Detailed investigation of infrastructure requirements ensure proposed structure plan can be accommodated. This should include an assessment of the impact of the proposal on State and regional infrastructure, and the estimated costs and timing of the works required.</p> <p>Undertake consultation with relevant agencies to understand works proposed and timeframes for completion.</p> <p>Outline the proposed staging of the precinct redevelopment and trigger points for infrastructure provision. Scope and costs for inclusion in a future infrastructure funding strategy.</p>
6. Biodiversity and sustainability	<p>Provide an ecological study including assessment of threatened species, populations and endangered ecological communities in accordance with the Office of Environment and Heritage (OEH) Threatened Species Survey and Assessment Guidelines and any relevant draft or final recovery plans.</p> <p>Outline the proposed development of, and impact on ecological corridors that link flora and fauna on and adjoining the site.</p> <p>Provide an assessment of ESD principles and demonstrate compliance with BASIX.</p>
7. Heritage	<p>Provide an archaeological and Aboriginal cultural heritage assessment including a landscape heritage assessment taking into consideration the cultural landscape of the precinct and the landscape master plan.</p>
8. Geotechnical and contamination	<p>Provide an assessment of the local soil, outlining its suitability for the proposed uses with respect to erosion, salinity and acid sulphate soils.</p> <p>Provide an assessment of the proposed land uses in accordance with State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55).</p>
9. Aeronautical	<p>Provide an assessment of the impact of Sydney Airport operations including National Airports Safeguarding Framework affectations.</p>
10. Consultation	<p>Consult with key stakeholders and the community to discuss, evaluate and confirm the desired structure for the precinct.</p>

9.4 Future Opportunities

This Strategy identifies opportunities for redevelopment and renewal throughout the Bayside West Precincts. It identifies the specific locations to be rezoned in the shorter term and also other areas that offer potential future opportunities for medium density development.

The areas identified as having future potential for medium density development include some of the outer areas of Arncliffe and Banksia. This Strategy outlines the key opportunities and constraints in these areas and identifies what further investigation is required.

The key issues to be addressed for these areas are outlined below.

Arncliffe Park Neighbourhood

The Arncliffe Park neighbourhood, located north 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 Arncliffe Railway Station and is located close to community amenities including Arncliffe Park and neighbourhood shops along Wollongong Road. It is currently a low-density residential area.

Further assessment of this area should include:

- Urban design to determine built form outcomes that are respectful of local character
- Consideration of impacts on local heritage items
- Consideration of how to enhance access to Arncliffe Park and consider how the park could be upgraded
- Ways to activate the park edges
- Address drainage issues, in consultation with Council
- Investigate opportunities for expanding the neighbourhood centre along Wollongong Road.

The Gardiner Park Neighbourhood

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.

Further assessment of this area should include:

- Urban design to determine built form outcomes that are respectful of local character
- Consideration of impacts on local heritage items
- Consideration of how to enhance access to Gardiner Park and Banksia Railway Station
- Address drainage issues, in consultation with Council
- Investigate opportunities for expanding the Banksia neighbourhood centre.

The Princes Highway - Future Investigation Area

This is an existing residential area located behind commercial properties fronting the Princes Highway and within the vicinity of the Banksia Railway Station. Further assessment of this area should consider how properties can be amalgamated to allow for increasing densities along this section of the Princes Highway subject to airport and site access requirements.

9.5 Infrastructure Provision and Funding

A critical element of the Strategy is to identify the infrastructure required to support growth. This includes upgrades to the State, regional and local infrastructure.

As outlined in Section 7 of this Strategy, growth in the Bayside West Precincts is reliant on upgrades to key State infrastructure networks. This includes increasing capacity of the Illawarra Rail Line and implementation of the proposed WestConnex South Link to alleviate traffic volumes along the Princes Highway. The purpose of this Strategy is to provide clear direction to the government agencies providing this infrastructure of what the likely needs will be now and into the future.

Special Infrastructure Contribution

Upgrades to regional infrastructure is also required. This includes upgrades to the regional road network, providing connections to regional open space and potentially increasing capacity of local schools. In light of the growth anticipated in the precincts and other priority growth areas, the State government is investigating the application of a Special Infrastructure Contribution (SIC) to assist in funding regional upgrades.

The SIC is a levy that developers will be required to pay to contribute to the cost of providing regional infrastructure upgrades. The infrastructure schedule included at Section 7 of this Strategy identifies items that could be funded by the SIC. This includes regional road upgrades, land for the new school site and the proposed connection to the regional cycle network along the Cooks River.

The Department will work with infrastructure agencies and stakeholders to refine the key infrastructure items that could be partly funded by the SIC and the estimated cost and timing for delivery of this infrastructure. A SIC rate will be determined through an analysis of the precincts' growth patterns, infrastructure needs and costs, and development feasibility to ensure any change does not impact on the development feasibility. The infrastructure list and SIC rate will be publicly exhibited prior to being established. In the event that the SIC is not in place prior to development occurring, approval for development will require satisfactory arrangements to be in place for the provision of required regional infrastructure.

Local Infrastructure upgrades

A number of upgrades to local infrastructure have also been identified. This includes local road upgrades, upgrades to the local 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 Act to accommodate these required upgrades. It is likely that an increase to the current rates will be necessary.

9.6 Precinct Support Scheme

Through the Precinct Support Scheme, the NSW Government has allocated approximately \$10 million of additional funds for local infrastructure upgrades. The intention of the funding is to enable Council to provide local infrastructure that will directly benefit the community. The funding is additional to development contributions (that is, Section 94 contributions), and could be used by Council to develop a new local park, upgrade existing open space, improve the local streetscape or provide additional community facilities and the like.

Precinct support scheme projects need to satisfy a number of criteria including that the project:

- can be delivered in a short timeframe;
- will provide direct benefits to the community; and
- has not already been funded by other means.

The precinct planning process, along with community consultation will identify a number of projects which could be funded through this scheme. Potential projects are identified in the Precinct Proposal attached to this document. Through the exhibition process, the Department is seeking community feedback on the types of projects the community would like to see funded through the Precinct Support Scheme.

Following public exhibition, Bayside Council and the Department would work together to review the shortlisted projects and reach agreement on the recommended project(s) to receive Precinct Support Scheme funding for each precinct. The Department and Council would then enter into a funding agreement to detail the works to be delivered, the projects costs, project completion milestones and payment arrangements.

9.7 Monitoring

To provide a valuable evidence base to inform service and infrastructure delivery as the precincts redevelop over the next 20 years, the Department will monitor and report annually on the:

- Number of housing approvals, construction commencements and completions for all housing types within the precincts;
- Pipeline for additional housing throughout the South District; and
- Performance of Bayside Councils development processing times.

The Department will also monitor population, household and dwelling projections for the South District and Bayside LGA.

The Department's Employment Lands Development Program will continue to monitor and audit the supply of employment lands throughout the precinct and surrounding area to inform policy development, infrastructure co-ordination and future planning for employment lands.

References

AECOM (2015) Arncliffe and Banksia Priority Precincts,
Strategic Transport Plan

AECOM (2016a) Cooks Cove Urban Design Report

AECOM (2016b) Cooks Cove Strategic Transport Study

AECOM (2016c) Cooks Cove Flood Impact Assessment

Elton Consulting (2015a) Arncliffe Priority Precinct,
Social Infrastructure Study

Elton Consulting (2015b) Banksia Priority Precinct,
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