Marsden Park Developments Pty Ltd
920 Richmond Road
Marsden Park
New South Wales 2765

7 July 2017

Department of Planning & Environment
Level 5, 10 Valentine Avenue
Parramatta
New South Wales 2150

Dear Department of Planning & Environment,

RE: MARSDEN PARK STRATEGIC CENTRE
SUBMISSION ON THE DRAFT NORTH WEST PRIORITY GROWTH AREA LAND USE AND INFRASTRUCTURE IMPLEMENTATION PLAN

Introduction

The following is a submission prepared by Marsden Park Developments Pty Ltd in response to the draft North West Priority Growth Area Land Use and Infrastructure Implementation Plan (draft Plan) released by the Department of Planning & Environment (the Department) in May 2017, specifically as they relate to the planning of the Marsden Park Strategic Centre.

At 566.8 hectares, the Marsden Park Strategic Centre is the largest employment zone in the North West of Sydney, planning to provide 23,500 direct jobs. Marsden Park Strategic Centre is twice the size of the Sydney Central Business District and Macquarie Park, and 50% bigger than Norwest Business Park.

Marsden Park Developments Pty Ltd is the developer of Sydney Business Park - a $2.9 billion, master-planned, campus style development with a broad range of uses including commercial, industrial, retail, educational and medical that is located within the Marsden Park Strategic Centre. Spanning 256 hectares, the Sydney Business Park masterplan and flexible zoning allows the project to tailor to each incoming business and be positioned for change in the market, while providing a wide range of retail amenity to both support and facilitate the diverse employment. This amenity includes a supermarket, childcare, medical centre, gymnasium, cafes and eateries, a 90,000 sqm homemaker and trade centre, all of which is adjacent to the planned 35,000 sqm Marsden Park Town Centre that SGS Economics & Planning advise can be extended to 110,500 sqm by 2036.

Although only just completing the first stage of the development, Sydney Business Park and the Marsden Park Strategic Centre already has 315,039 sqm of floor space completed along with 2,720 jobs placed and $600 million of investment – with national and international businesses such as IKEA, Bunnings Warehouse, Home Consortium, Lindt & Sprungli, Home Hub Marsden Park, Reece, ALDI, Dulux, Swire Cold Storage, Costco Wholesale, Actron Air & Medline Pharmaceuticals.

Our vision for Sydney Business Park and the Marsden Park Strategic Centre is to be known internationally as the destination for multinational companies to locate their head office in Australia and to become the major active urban centre in the North West Priority Growth Area.

Background

Marsden Park Developments has been engaged with the NSW planning authorities since the identification of the North West Growth Centre in 2005. Throughout the intervening time, we have understood our obligation to participate in and contribute to the evolving regional and metro planning. This participation has informed Marsden Park Developments of the long term needs of the community, beyond our immediate land interest, and established a very clear understanding of the contribution that the Marsden Park Strategic Centre needs to make.

We see that the Marsden Park Strategic Centre has a critical role to play in both the Department and Industry being able to deliver on the key objectives of the draft Plan.

Our submission has been developed from the perspective of our knowledge of the prior planning status of Marsden Park, our market knowledge and awareness and our commitment to contribute to meeting the community needs beyond the time frame of our direct development interests. This perspective has been endorsed by the response of the market to the location.

Each of the attached reports has been developed within this context. Consequently, through these reports we seek to make a broad contribution to the deliberations of the Department to establish a planning framework and strategy that realises the full potential of Marsden Park as a major Urban Centre. This framework and strategy extends the status of Marsden Park beyond that previously contemplated.

A key influence on our evolved vision has been the comparatively recent very dynamic market response to develop at higher density and at a greater speed than anticipated as little as five years ago.

The Scale and Opportunity of Marsden Park

We submit that the scale and pace of development at Marsden Park continues to be under represented by the Department and the Greater Sydney Commission. We highlight the most apparent variances in the plan being:

- With the updated SGS Economics & Planning jobs figures compared against the Greater Sydney Commission's own forecasts for all Centres, Marsden Park will deliver the fourth most jobs of any Centre in Sydney over the coming 20 years – coming behind only the Sydney CBD, Parramatta/Westmead and North Sydney (see figure 1);
- The employment area within the draft Plan is understated at only 300 hectares when the actual area of the broader employment precinct is 556.8 hectares as detailed in the Department's own Post Exhibition Planning reports for the Marsden Park Residential and Industrial Precincts; and
- The jobs forecast of 10,000 noted in the draft Plan, where by:
    - The Department's own 2010 rezoning of the Marsden Park Industrial Precinct which planned to deliver 11,000 jobs and a further 1,300 jobs within the Marsden Park Precinct Town Centre within the Marsden Park Residential Precinct, being a total of 12,300 jobs;
    - The current targets of Blacktown City Council and Marsden Park Developments of 17,000 jobs, with 2,720 already committed (see figure 2); and
    - The updated study by SGS Planning & Economics forecasts that the Centre will deliver over 23,532 jobs (see SGS Planning & Economics report for details).

Submission

Our submission requests the Department make the following amendments to the draft Plan as it relates to Marsden Park:

- Reinstate the status of Marsden Park as a Strategic Centre. Marsden Park meets the Greater Sydney Commission's objectives of "having the scale, industries and location needed to specifically support a city with smart jobs and the success of the Eastern, Central and Western Cities." This amendment is sought to recognise Marsden Park as a future major mixed use urban centre and to ensure the appropriate commitments to transport infrastructure and future planning can be delivered;

- Support the continued identification of the key corridor between Rouse Hill and Marsden Park, and the planned delivery of transport and additional development along this key east-west route for the North West Priority Growth Area;
- Seek a commitment to the extension of the Sydney Metro North West to Marsden Park along existing reserved corridor created for this purpose, in lieu of the non-specific "Transport Corridor". Commercial office tenants we are dealing with are seeking the confidence and certainty of rail to Marsden Park;
- Plan, by way of initially creating a corridor reserve, for the extension of the rail beyond Marsden Park through to Werrington/St Mary's to enable the Sydney Metro North West to be able to be connected to the South West Rail line and link the North West Priority Growth Area to the Western Sydney Airport, and the various employment hubs along the way;
- The fragmented landownership and the widely acknowledged inappropriate planning framework that has prevented any development within the Marsden Park Town Centre, may well actually be an advantage to the North West Priority Growth Area. As the draft Plan reports, we have seen an intensification of development in the major Centres, and a clarification that centres such as Marsden Park will need to make a greater contribution to meet the needs of the future urbanisation. The fact that inadequate and inappropriate development has not occurred creates the opportunity for a new masterplan and a dense, diverse and mixed use Urban Centre to be planned and delivered. We therefore support a re-master planning of the Marsden Park Town Centre on both sides of South Street, including the planning for the underground railway station linking both sides. We submit our vision for the mixed use centre to inform this re-master planning;
- Support the delivery of additional bus services, and note that we are working to deliver the Daniels Road bus only road connection to Mt Druitt with another landowner within the Marsden Park Industrial Precinct;
- Provide aspirational targets for Marsden Park to become the largest employment centre in North Western Sydney and to deliver a major, diverse, active, mixed use urban centre serviced by rail;
- Lift the job targets to the revised SGS Economics & Planning figures of 23,500 employees. Sydney Business Park are currently targeting 30,000 employees;
- Increase the permitted retail space, within a revised Marsden Park Town Centre to 83,000sqm in 2021 and 110,500 in 2036; and
- Update the Marsden Park structure plan to incorporate the vision outlined in the attached plans and the existing commitments for infrastructure and transport within the area;
- Merge the existing R3 and B7 land uses at the northern part of the Marsden Park Industrial Precinct, to deliver a more urban, mixed use outcome that provides for activity in the Centre at all times of the day and week, and critically meets the employment and service needs of the region;
- The GHD social infrastructure report calls out the need for additional open space to be provided for within the Marsden Park Industrial area - we support this need. We note however that their report incorrectly suggests more is social infrastructure is required based on only 1,000 jobs and zero population being delivered in the Marsden Park Industrial Precinct. This is obviously an incorrect forecast and we are planning at between 10 and 30 times this amount of jobs and a residential population of over 3,500 residents;
- We support the infrastructure planning within the draft Plan, and we continue to work with the various Agencies to ensure that significant lead in infrastructure is provided in a timely manner to support the full development of the Marsden Park area; and
- We seek release the Marsden Park Strategic Centre for rezoning as a Priority Precinct to enable the appropriate cross Agency and Department re-master planning to be undertaken.

Supporting Studies

In preparing our submission to the on the draft Plan, we sought to provide detailed justification for these amendments by providing the following reports:

- Architectus - presents the vision for the Marsden Park Strategic Centre. This study has focused on the area surrounding the Marsden Park rail station and details the pathway to create a major, adaptable, mixed use urban structure capable of responding to the future needs of the community and supporting Global Sydney;
- SGS Economics & Planning - present a detail analysis of the strategic opportunity that is Marsden Park in the context of the Metropolitan Plan and the District Plans. Consequently, that its identification as a Strategic Centre will enable Marsden Park to make a substantial contribution to the economic and job location objectives established by the Greater Sydney Commission for the Western City and beyond; and
- Arup - demonstrate the transport requirements arising from the reinstatement of Marsden Park as a Strategic Centre. They also present the traffic and travel implications if Marsden Park is not serviced by an extension of the Sydney Metro Northwest rail.

Individually and in combination these reports present a compelling case to reinstate Marsden Park as a Strategic Centre for the purposes of future planning and infrastructure investment decisions.

Next Steps

We have presented our further vision to Blacktown City Council, the Greater Sydney Commission and the Department. We seek the following:

- The commencement of a broader master planning and rezoning of the Marsden Park Strategic Centre with a view to amending the relevant planning controls to enable the delivery of the Active Urban Centre to proceed;
- The lodgement of our first development application for the first exclusive 32,000sqm office buildings within the Marsden Park Strategic Centre delivery over 1,500 pure office jobs as a catalyst to the Centres success; and
- Engage the NSW Government to establish an appropriate Value Capture mechanism for the extension of the Sydney Metro Northwest to Marsden Park and seek confirmation of its delivery.

Should you have any queries regarding our submission, please do not hesitate to contact me.

Yours sincerely
SYDNEY BUSINESS PARK

OWEN WALSH
Development Director

Attach	Architectus	Vision for Marsden Park Strategic Centre
	SGS Economic & Planning	Economic & Employment Analysis of Marsden Park Strategic Centre
	ARUP	Rail Needs Study for Marsden Park Strategic Centre

FIGURE 1 FORECAST JOBS GROWTH FOR ALL SYDNEY CENTRES

Centre	District	Centre Type	2016 Jobs Estimate	2036 High Jobs Estimate	
				Total	New
Sydney City	Central	Strategic	496,900	732,000	235,100
Parramatta/Westmead	West Central	Strategic	96,500	170,500	74,000
North Sydney	North	Strategic	60,400	81,500	21,100
Marsden Park	West Central	District	2,720	23,532	20,812
Norwest	West Central	Strategic	32,400	53,000	20,600
Macquarie Park	North	Strategic	58,500	79,000	20,500
Green Square/Mascot	Central	Strategic	59,500	80,000	20,500
Sydney Olympic Park	West Central	Strategic	30,100	46,500	16,400
St Leonards	North	Strategic	47,100	63,500	16,400
Bankstown	South	District	12,100	25,000	12,900
Randwick	Central	Strategic	22,800	35,500	12,700
Leppington	South West	District	400	12,500	12,100
Greater Penrith	West	Strategic	33,400	45,000	11,600
Campbelltown	South West	Strategic	20,400	31,000	10,600
Liverpool	South West	Strategic	29,000	39,000	10,000
Rhodes	Central	Strategic	15,700	25,500	9,800
Castle Hill	West Central	District	9,800	19,500	9,700
Kogarah	South	Strategic	11,800	20,500	8,700
Hurstville	South	District	11,600	20,000	8,400
Chatswood	North	Strategic	24,700	33,000	8,300
Hornsby	North	District	14,300	22,000	7,700
Rouse Hill	West Central	District	4,200	11,000	6,800
Bondi Junction	Central	District	13,800	20,500	6,700
Sydney Airport	Central	Strategic	18,100	24,500	6,400
Blacktown	West Central	Strategic	13,200	19,500	6,300
Richmond-Windsor	West	District	10,300	16,500	6,200
Brookvale/Dee Why	North	District	20,000	26,000	6,000
Narellan	South West	District	10,600	16,500	5,900
Fairfield	South West	District	5,400	10,000	4,600
Miranda	South	District	7,000	11,500	4,500
Bankstown Airport	South	District	15,700	20,000	4,300
Northern Beaches	North	Strategic	9,300	13,000	3,700
Burwood	Central	District	10,300	14,000	3,700
Port Botany	Central	Strategic	14,900	18,500	3,600
Sutherland	South	District	5,700	9,000	3,300
St Marys	West	District	8,300	11,500	3,200
Katoomba	West	District	2,700	5,500	2,800
Campsie	South	District	4,800	7,500	2,700
Eastgardens/Maroubra	Central	District	6,900	9,000	2,100
Mount Druitt	West Central	District	6,700	8,500	1,800
Mona Vale	North	District	4,300	6,000	1,700
Manly	North	District	5,000	6,500	1,500

Source: Greater Sydney Commission Draft District Plans
Note: Marsden Park Jobs forecast updated to latest SGS Economics & Planning report attached

FIGURE 2 MARSDEN PARK EXISTING COMMITMENTS

Business	Consent	Land Area	Floor Space	Value	Approval	Opening	Jobs
Bunnings Warehouse	DA 11-00785	33,405	13,678	$ 23,145,000	June 2012	January 2015	120
McDonalds	DA 13-02105	3,447	520	$ 3,369,924	April 2014	December 2014	120
IKEA Store	DA 13-00745	76,060	26,000	$ 64,228,433	December 2013	May 2015	320
Home Consortium	DA 13-00048	34,920	13,221	$ 26,810,625	Nov 2013	May 2015	150
Shell	DA 13-01955	2,689	500	$ 3,400,000	April 2014	July 2015	20
Lindt & Sprungli	SSD 14-0664	65,940	29,000	$ 52,000,000	Nov 2014	October 2015	325
Dulux	DA 15-00679	44,500	25,000	$ 34,018,750	August 2015	April 2016	85
Reece	DA 15-01985	3,085	944	$ 2,500,000	December 2015	June 2016	10
ALDI	DA 14-01674	8,048	1,000	$ 7,000,000	March 2015	August 2016	20
Home Hub	DA 14-01499	39,900	23,060	$ 44,847,200	April 2015	October 2016	200
IKEA Distribution Centre	SSD 15-0695	125,400	70,000	$ 147,494,600	May 2016	May 2017	200
Costco Wholesale	DA 14-01343	59,830	18,109	$ 35,000,000	August 2015	July 2017	250
Medline Pharmaceuticals	DA 15-0289	42,000	23,000	$ 33,350,000	September 2016	July 2017	230
Storage King	DA 16-03796	6,572	7,214	$ 4,500,000	December 2016	Sept 2017	2
Tough Dog	DA 16-04599	10,010	5,020	$ 5,000,000	March 2017	December 2017	30
Ausreo	DA 17-00281	3,308	1,511	$ 1,300,000	Pending	December 2017	8
Actron Air	DA 16-03176	41,390	22,439	$ 30,292,650	January 2017	December 2017	260
Laundy Hotel & Pub	DA 16-03328	15,000	2,823	$ 26,025,000	Pending	February 2018	120
Swire Cold Storage	SSD 15-06799	70,170	32,000	$ 54,472,175	July 2016	June 2018	250
Total		**685,674 sqm**	**315,039 sqm**	**$ 598,754,357**			**2,720 Jobs**

Source: Development Applications to Blacktown City Council and the Department as referenced per the Consent number.

architectus™

Vision for Marsden Park Strategic Centre

Prepared for:
Marsden park Developments

Date:
March 2017

Vision for the central open space in the new Marsden park town centre - mixing retail, employment and residential uses and supported by essential social infrastructure and green open spaces. The opportunity is to plan for a mixed-use high density centre.

Executive Summary

Objective

Our objective is to present the case and vision for Marsden Park to be a next generation, diverse, active, mixed use urban centre supported by rail. The vision responds to current and future demands for jobs and homes and provides capacity and resilience to meet future demands in the context of a long term plan for Sydney.

The realisation of this vision requires the Draft West Central District plan to be amended to reinstate Marsden Park as a Strategic Centre.

Strategic justification (where are we?)

Marsden Park is the largest employment precinct in the North West Priority Growth Area and is the key location for new jobs and homes in Sydney's west and will also be instrumental in providing support to the new Western Sydney Airport.

Marsden Park is identified as a District Centre in the Draft West Central District Plan. District Centres should comprise primarily of services for the immediate community with a mix of uses and quality public domain.Of all of the District and Strategic Centres, Marsden Park presents the following unique opportunities:

- The dynamics and pace of development at Marsden Park is exceeding all expectations and presents new opportunities to create a new and vibrant urban centre.
- A rail corridor reservation exists connecting to the Sydney Metro Northwest rail at Cudgegong.
- The potential for rail connection to the city and to the Western Sydney Airport.
- Large, and largely unconstrained land parcels near the planned rail station, and with a relatively uncomplicated land ownership pattern (2 land owners within 800m of the station on the south side of South Street).
- Marsden Park contributes and supports the development of a polycentric global city. Linking transport and urban centres is a key priority of the Commission.
- Marsden Park has a significant role to play in the development of Global Sydney.
- Opportunity to partner with Government to deliver a next generation urban centre.
- Additional intensity of Marsden Park centre can use value capture to contribute funding infrastructure investments.

The Vision (where do we want to be?)

With the finalisation of the Draft District Plans and revision of the Metropolitan Strategy in 2017, there is an opportunity to recast Marsden Park as a next generation urban centre that maximises jobs diversity, employment and investment in infrastructure. Highlights include:

- A well-designed urban centre that spans both sides of South Street and serves the broader growth area: catering for the entertainment, community, business and service needs for the immediate population.
- A unique offering for employment uses. Opportunity for office uses in the centre and plan early for the infrastructure to support these uses. Consider the role of large format employment uses in this area, and how they will continue to support a range of other employment uses in the corridor.
- A carefully planned hierarchy of green spaces and public domain that connects people and workers to their community and to the environment. The site is large enough to provide for a planned green open space and regional parks.
- A high density mixed use centre and the adjacent residential suburbs of Marsden Park North and Marsden Park East serviced by a frequent service rail connection to Sydney Metro Northwest; - ,Norwest, Macquarie Park, Chatswood, St Leonards, North Sydney and Sydney CBD in less than 1 hour. There is an opportunity for significant mode shift and improvement on the 3% of people currently using public transport for journeys to work in the Central West District.
- The planning forecasts had anticipate 18,300 new homes in the four growth area precincts adjoining the Marsden Park Town Centre (Marsden Park North, Colebee, West Schofields, Marsden Park). However the density being achieved in these suburbs is substantial higher than forecast and could ultimately be more than twice this amount. The revised vision for the new Marsden Park Town Centre has the potential to provide for key missing social, cultural and health infrastructure to support this significant population and employment density.

Next steps (How do we get there?)

Establish a shared vision and the principal land owners to work and partner with Government to reposition Marsden Park in the West Central District Plan and Metropolitan Strategy as a next generation, diverse urban centre, complete with a rail line extension and train station.

The Vision - where do we want to be?

1. A high quality, next generation urban centre within 800m of the station that delivers the critical infrastructure required to make the West City liveable and resilient.

- A new retail precinct that connects mixed use precincts to the north and south of South Street, allowing for future expansion to serve the growing population.
- Infrastructure to support emerging cultural activities, community spaces and program.
- Investigate potential for university / TAFE and hospital in the right location - near people, jobs, transport and other infrastructure.
- **A high density mixed use centre for approximately 127 ha. (25% of the Precinct) that delivers diverse, high quality housing, jobs, services and public domain.**

2. A new Strategic Centre for higher order employment that complements the growth of other Strategic Centres in Sydney.

- Marsden Park can grow to over 20,000 employees by 2036, based on conservative projections.
- This growth can be achieved without any significant impacts on the growth of identified Strategic Centres.
- Importantly, Marsden Park as a Strategic Centre does not result in any need to depart from the hierarchy and strategic planning for Metropolitan Sydney.

3. Extension of the Sydney Metro Northwest from Cudgegong Road to Marsden Park.

- $1.5B estimated cost to develop the rail line extension to Marsden Park from Cudgegong including all infrastructure (eg. creek crossings, stations etc).
- The rail will have a significant impact on the timing of business investment in Marsden Park.
- Securing Government's commitment to rail at Marsden Park effects investment decision being made now.
- Potential need for a secondary local serving transport system and active transport connections that connects the population of Marsden Park to the train station

The benefits of rail for Marsden Park:

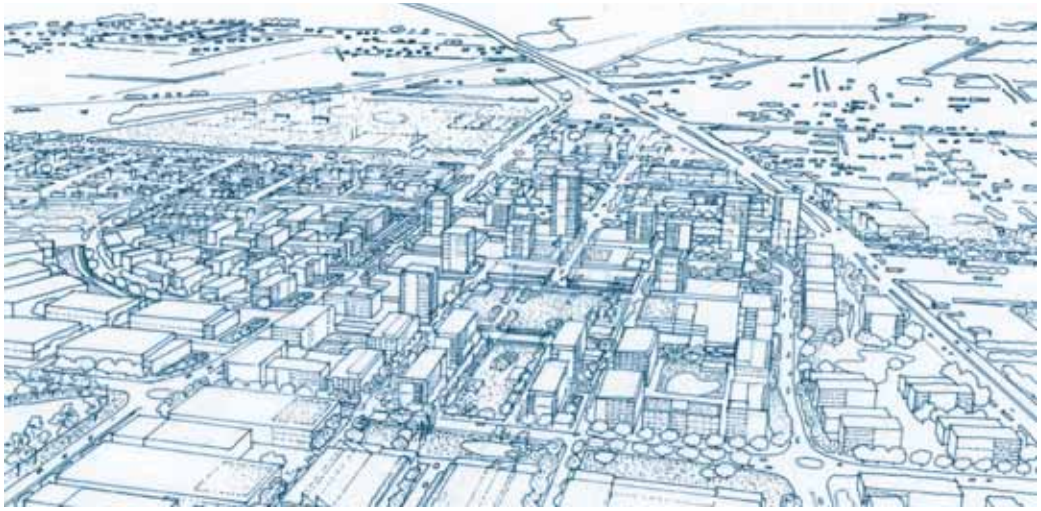
- reduced travel time to other centres, better access to jobs;
- productivity improvements, ease congestion;
- lower transport costs for residents.

4. Reposition Marsden Park as a Strategic Centre, supporting and contributing to a polycentric global city and the 3-city concept.

- A Strategic Centre that provides the foundations for the Aeropolis, and supports the population already moving into the area.
- Allow for staging and evolution of businesses in the Western City, until the Airport centre emerges in 2056.
- Employment growth in Marsden Park is exceeding other Strategic Centres in Western City.

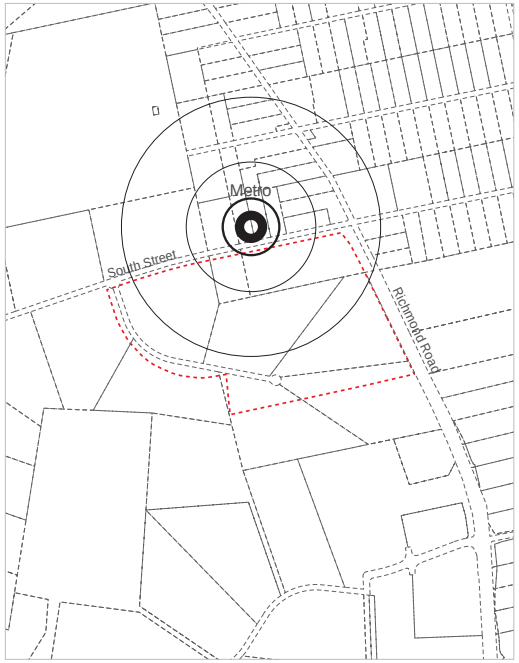
Vision for Marsden Park: view from one of the north-south streets showing a mix of uses and active, walkable town centre.

SECURING GOVERNMENT'S COMMITMENT TO RAIL AT MARSDEN PARK AFFECTS INVESTMENT DECISION BEING MADE NOW.

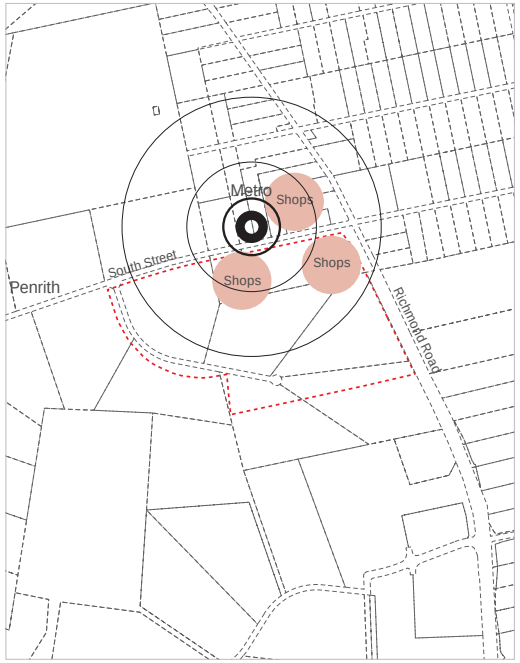


Aerial sketch of the proposed new town centre.

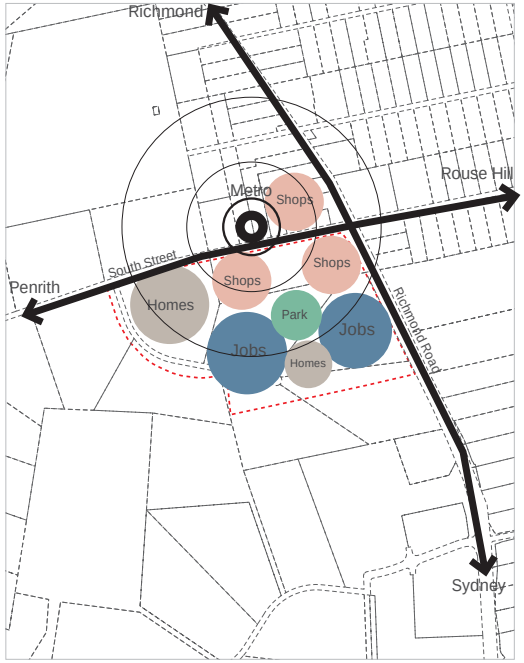
Secure the train line extension to Marsden Park.



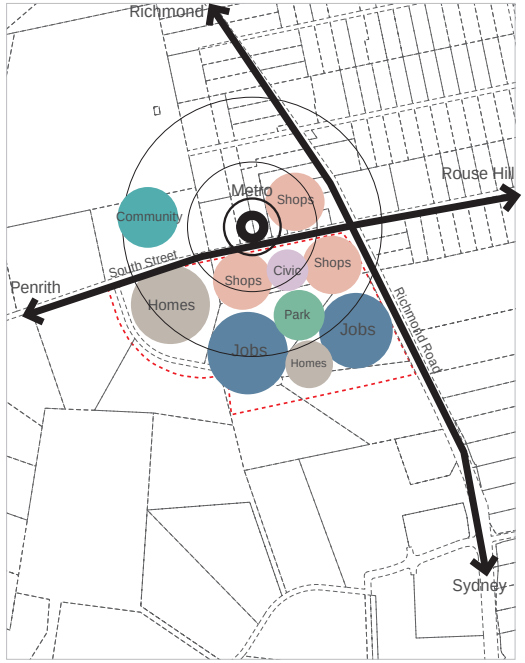
Maximise retail development close to the station.



Balance new housing, jobs and services.



Provide high quality open spaces, civic and community uses.



The site's strategic location, land ownership and Greenfield status present a unique opportunity for Sydney

Strategic location and land ownership
The scope of the project is visionary – it represents at least one quarter of a new Strategic Centre for metropolitan Sydney being in single landownership adjacent to a future rail station and with excellent access to the metropolitan expressway system (M7 / M2).

The Centre has the great advantage of being part of a newly established employment area in Western Sydney and offers the Government real urban growth potential on extremely well located land to meet its own high demographic growth targets.

Relationship to the new Marsden Park Town Centre
The Town Centre is planned as a Strategic Centre in the Sydney Metropolitan Panning Strategy and is located around the future Marsden Park Rail Station earmarked for construction as part of the extension of the NW Rail Line Sydney Metro Northwest. The opportunity is for the Town Centre to become a Strategic Centre – one of the highest categories of Centre under the Metro Strategy.

The subject site is immediately to the south of the new rail station and consequently development within 800m and 1.2km of the rail station is appropriate for achieving the Town Centre with a mix of employment and residential uses as well as open space amenity and a permeable street block pattern suited to walkability.

Amenity and social infrastructure
A key aspect of future revision of the planning controls for Marsden Park will be to allocate sufficient land area for parks, school and health facilities. While the site represents one of four quadrants of land (the quadrants being created by the east-west rail line and the north-south Richmond Road within 800m or so of the future rail station) it is the only quadrant under single ownership and therefore provides the Government with certainty about the planning of the new Marsden Park Town Centre – thus assisting the case to have the rail link provided at the earliest opportunity.

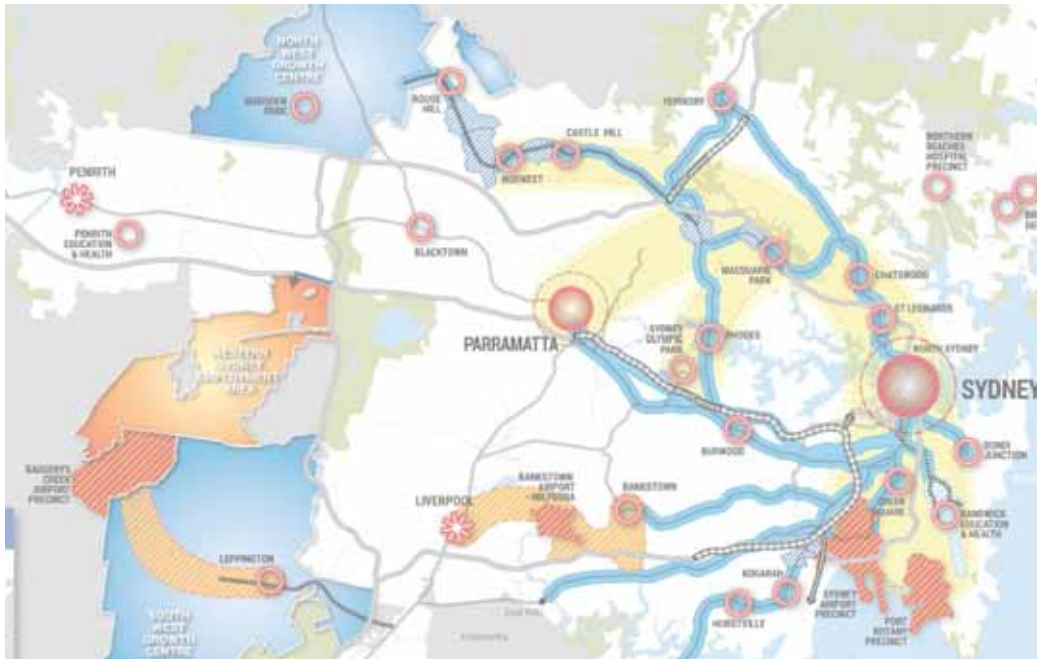
Vision for Marsden Park: view from one of the north-south streets showing a mix of uses and active, walkable town centre.

NSW Government's Plan for Growing Sydney

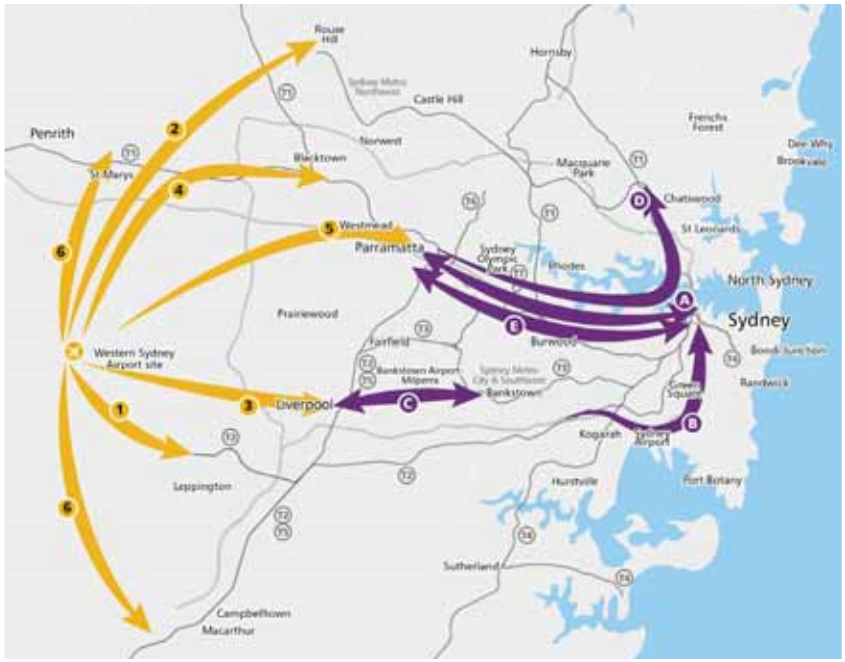
- Marsden Park is identified as a Strategic Centre, and within the North West Growth Centre.
- Marsden Park is just to the west of the termination of the Sydney Metro Northwest - a new high frequency fast train that will connect people to the City in less than 50 minutes at most, and planned to open in 2019.
- Currently, the plan identifies the need to extend the rail line from Cudgegong Road to Marsden Park, to complement the strategies for job and population growth in the Growth Centre, and particularly near the Sydney Business Park.
- Within the rail corridor, there are three other Strategic Centres (Norwest, Rouse Hill, Castle Hill) where high density mixed uses are being planned, and that would benefit from connection to Marsden Park by rail. Of these, Marsden Park has the greatest potential for future employment growth.
- The land use vision is for high value economic activity in Marsden Park, integrated with a vibrant new Town Centre and new public domain.
- Badgerys Creek is the confirmed location of a new Western Sydney Airport and a new hub of intense economic activity. The airport will enable Penrith to grow as a Regional Centre, and change the nature and scale of economic activity in the North West Growth Centre.
- The Plan also aims to develop new strategic employment corridors along transport infrastructure investments that will service Western Sydney Airport.

Transport for NSW's North West Rail Link Corridor Strategy

- Now called 'Sydney Metro Northwest', the NWRL opens in the first half of 2019 with a metro train every four minutes in the peak. It includes eight new metro stations, five upgraded stations and 4,000 commuter car spaces.
- The new railway will provide frequent, high speed services connecting Cudgegong Road to Martin Place in only 48 minutes. To the very east, rail services will connect Cherrybrook Station to Martin Place in just 32 minutes.
- The 2013 Rail Corridor Strategy identifies the opportunity to extend the rail link to the significant employment and growth areas at Marsden Park. This strategy was developed prior to the release of the Plan for Growing Sydney's and the identification of Marsden Park as a Strategic Centre. This highlights the need for a reinstatement of this opportunity to extend rail to Marsden Park.
- Cudgegong Road Station (with 1000 commuter spaces) serves the residents of Rouse Hill and The Ponds. To terminate at this location represents a lost opportunity to create early sustainable travel behaviour for the Marsden Park communities, which will be locked into car dependency..
- Separate structure plans have been developed for each of the centres, and provides a framework for high density mixed use centres at each of the station site. Building heights of up to 30 storeys are envisaged for Strategic Centres Norwest and Castle Hill.

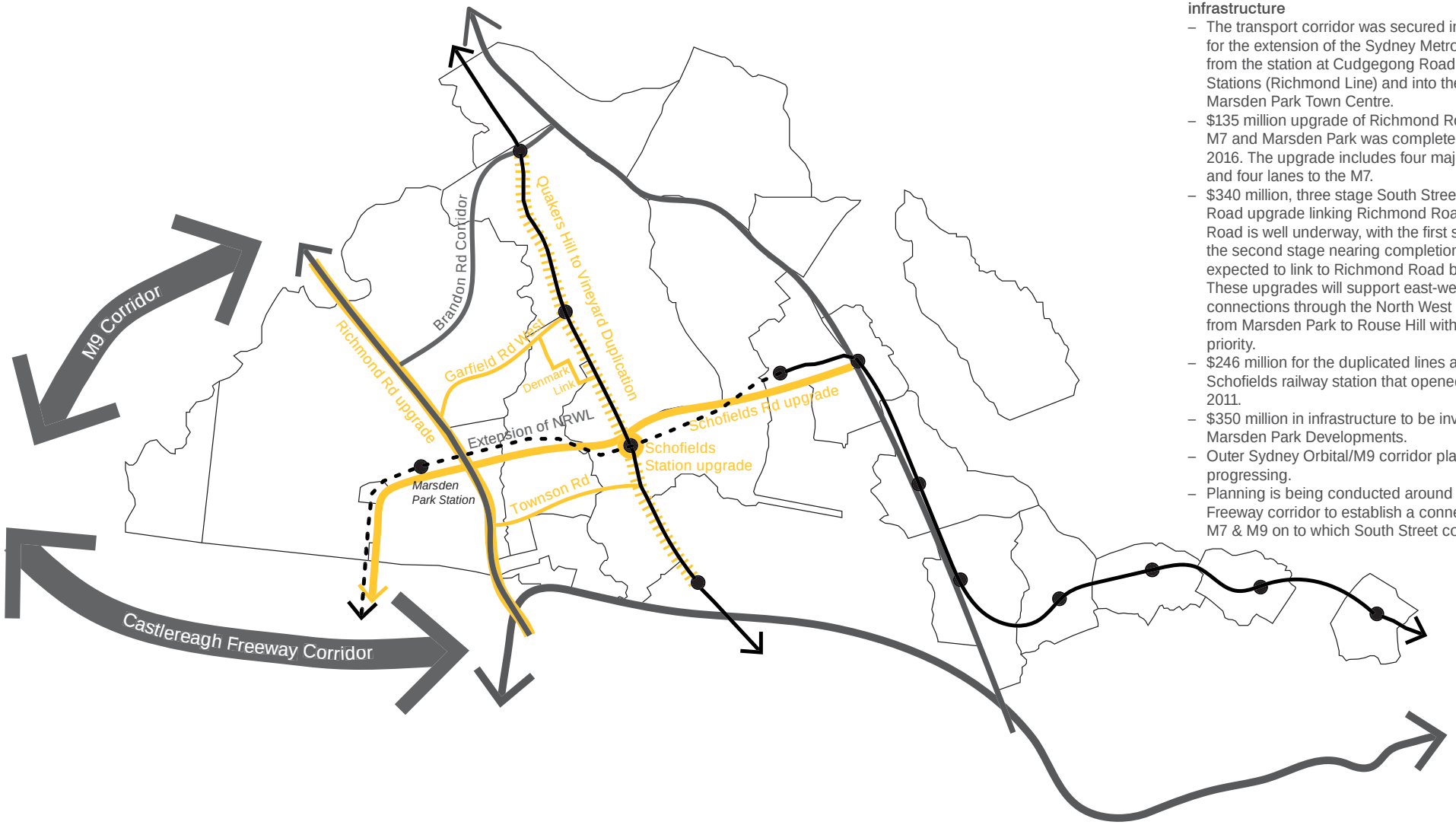


Marsden Park is a Strategic Centre in the Plan for Growing Sydney. Currently, the plan identifies the need to extend the rail line from Cudgegong Road to Marsden Park, to complement the strategies for job and population growth in the Growth Centre, and particularly near the Sydney Business Park.



The Western Sydney Rail Needs Study identifies the potential for rail connections between the new airport and Marsden Park to connect the NWPGA to the SWPGA and the new Western Sydney Priority Growth Area via a metro system.

Committed infrastructure investment



Government investment in transport and road infrastructure

- The transport corridor was secured in 2012 to provide for the extension of the Sydney Metro Northwest from the station at Cudgegong Road past Schofields Stations (Richmond Line) and into the planned new Marsden Park Town Centre.
- $135 million upgrade of Richmond Road between the M7 and Marsden Park was completed in November 2016. The upgrade includes four major intersections and four lanes to the M7.
- $340 million, three stage South Street/ Schofields Road upgrade linking Richmond Road and Windsor Road is well underway, with the first stage complete, the second stage nearing completion and the third expected to link to Richmond Road by mid-2018. These upgrades will support east-west arterial connections through the North West Growth Centre from Marsden Park to Rouse Hill with integrated bus priority.
- $246 million for the duplicated lines and new Schofields railway station that opened in October 2011.
- $350 million in infrastructure to be invested by Marsden Park Developments.
- Outer Sydney Orbital/M9 corridor planning progressing.
- Planning is being conducted around Castlereagh Freeway corridor to establish a connection between M7 & M9 on to which South Street could connect.

Opportunities

- The new Marsden Park Town Centre can be enlarged on both sides of the train station and South Street to increase the opportunity for retail, commercial, residential and civic uses within a walkable catchment to the train station.
- Marsden Park Developments control a large landholding to the south and have a long term investment horizon focused on place making and legacy.
- Sydney Business Park to the south is an established employment centre with substantial momentum of high quality employment investments which has established a significant amenity as a platform to support the development of the mixed used Town Centre.
- Opportunity for a different combination of employment uses on the site that is unique and exciting. A new type of industrial / office typology – Lindt, IKEA, Medline, Actron Air are examples on site that co-locate head office, manufacturing, warehouse, distribution & retail.

Constraints

- Lack of public transport.
- Richmond Road and South Street are large roads that create barriers to pedestrian movement within the currently proposed Town Centre.
- Disconnected, disadvantaged communities. South Street ends in a cul-de-sac and does not connect to Wilmot, Shalvey and Bidwell - some of the most disadvantaged communities in Sydney. Making connections to the south and the west of the site will improve access to employment for the residents of these suburbs.
- Staging for the delivery of the currently planned Town Centre [currently restricted by fragmented landownership and separated from 17,000 jobs within the business park]
- Underdevelopment of land within close proximity of the future train station. Housing types being developed in the area should be revisited in light of the transport corridor potential
- The planned recreation area on the putrescible waste landfill site in Marsden Park may not be suitable. Alternatives should be considered that could be delivered earlier.

Aerial view showing Richmond Road and the planned rail station location for Marsden Park with an 800m radius.

The recently completed Lindt development co-locates head office, manufacturing, warehouse, distribution & retail.

Strategic justification to revise the planning controls

1. Marsden Park contributes and supports a polycentric global city. Linking transport and urban centres is a key priority for Sydney.

- Sets up Sydney with three cities: Global Sydney (Eastern City); Parramatta (Central City); and Aerotropolis (Western City).
- Each city to be supported by Strategic Centres.
- Attracting people, jobs, and planning infrastructure at Marsden Park supports this vision by setting up settlement and employment patterns now,supporting development around the airport for 2030 and beyond.
- Rail connections in both directions will become strategically important.

2. The dynamics and pace of development at Marsden Park is exceeding all expectations.

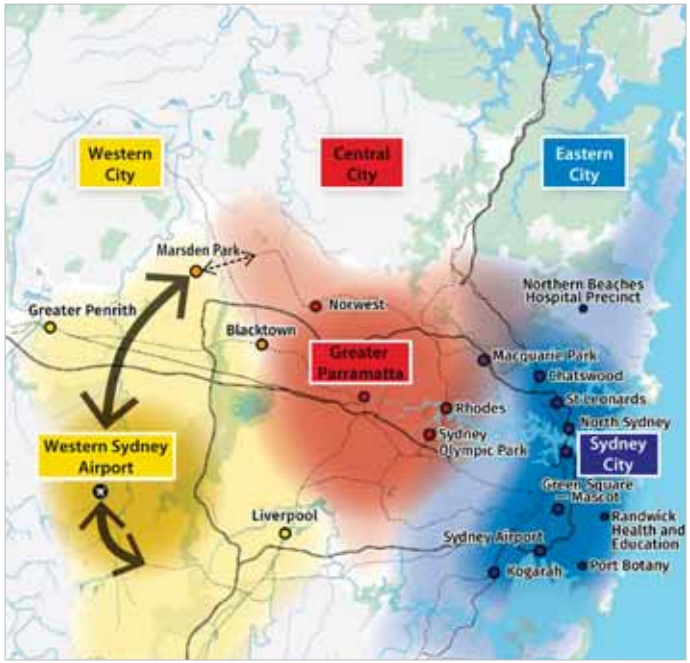
Population growth exceeding targets:

- Population target for the NWPGA is 200,000 people.
- Actual growth is likely to be upwards of 250,000 people. The Department is currently reviewing figures as part of their SIC review.
- Evidence suggests that dwelling densities in the NWPGA have increased from an average of 15 dw/ha. to at least 18 dw/ha. And are likely to continue to increase.
- Centres in other growth areas are demonstrating that there is demand for high density development in outer ring centres, a trend that supports the 30-minute city concept (eg. Edmondson Park was originally planned for 3 storeys and now 22 storeys are underway).
- Number of jobs exceeding targets:
- Area of employment zoned land in Precinct is over 550 hectares.
- Existing committed jobs in the Sydney Business Park is 2,720 with only 20% of their employment land committed (68 ha.).
- Forecast is between 15,000-23,500 jobs.

3. Marsden Park is part of Global Sydney and beyond - not just a local centre.

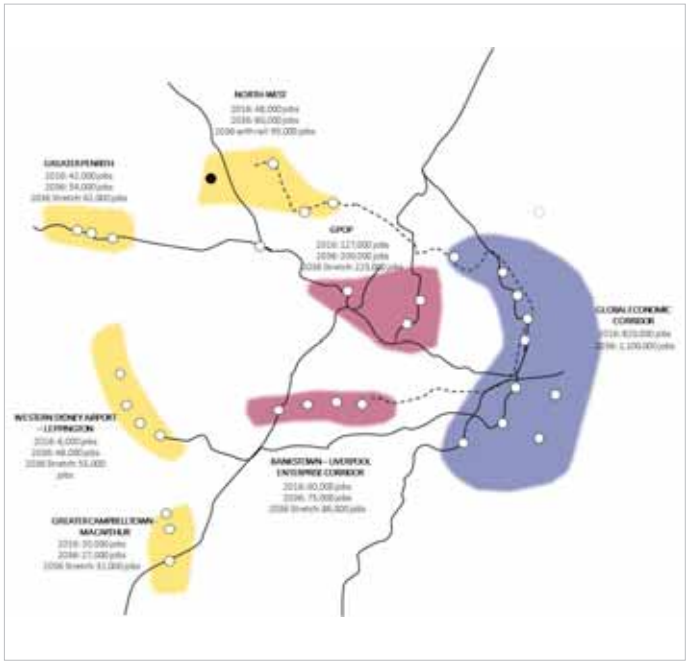
Types of jobs and businesses are evolving rapidly:

- Marsden Park is attracting major global companies across industries such as pharmaceutical, food manufacturing, retail, and high-tech industries.
- Marsden Park is attracting businesses that serve the whole Sydney Metropolitan Region and beyond.
- Employment typologies are changing fast, with businesses setting up mixed-use typologies that co-locate retail, office, manufacturing and distribution functions in one building.
- The Sydney Business Park employment initiative has placed 10% of new jobs to disadvantaged communities of Willmot, Hassall Grove, Bidwell and Mt Druitt, including over 50 secure indigenous placements at IKEA.



Sydney's three cities showing potential of the Northwest and Southwest Growth Centres to link via the Western Sydney Airport 'Aerotropolis'. (diagram adapted from the Draft District Plan).

Edmondson Park is now planning for significant higher densities than originally envisaged.(source: Frasers).



Employment clusters across Sydney (source: SGS).

4. There is a rail corridor reservation already in place for the extension of the Sydney Metro Northwest to the centre of Marsden Park and significant investment in roads in the area.

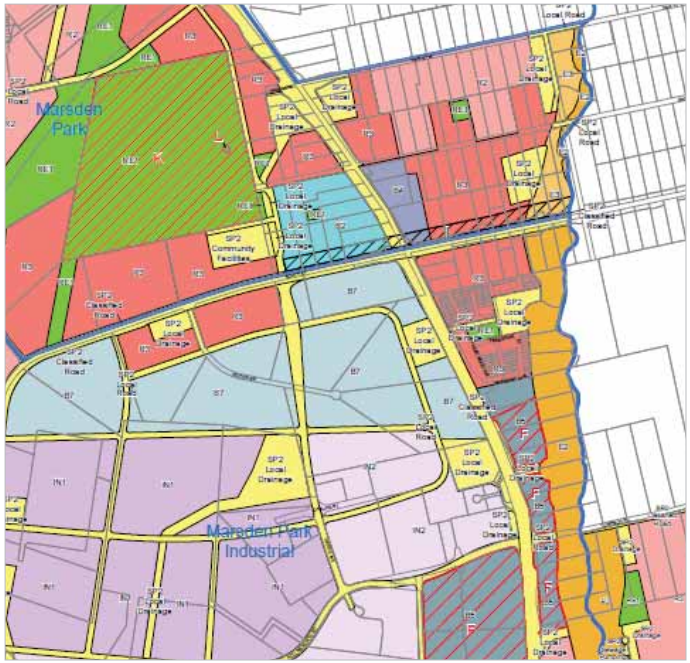
- The rail reservation between Marsden Park and Cudgegong Road allows for the extension of the rail network and a connection to Martin Place in under 60 mins (48 mins from Cudgegong Road).
- Over $700M is being spent on road and rail network in the area, with a further $350M in infrastructure to be invested in Marsden Park.
- The Western Sydney Rail Needs Study identifies the potential for rail connections between the new airport and Marsden Park to connect the NWPGA to the SWPGA and the new Western Sydney Priority Growth Area via a metro system.

5. Opportunity to partner with Government to deliver a next generation urban centre.

- The Employment Precinct is over 550 hectares – 2x the size of Central Sydney and Macquarie Park.
- Sydney Business Park (which forms the majority park of the Precinct) is 256 hectares, similar size to Central Sydney.
- The currently planned Town Centre retail GFA is only 25,000-30,000sqm - this is not big enough to serve the needs of a growing population. The SGS forecast into the retail demand to service the future population is 110,000sqm by 2036.
- There is strong interest from a major retail developer to develop 80,000+ sqm of retail.
- The existing zoned Town Centre for Marsden Park (on the north side of South Street) is in fragmented ownership.

6. Additional intensity of Marsden Park centre can use value capture to fund missing local and regional infrastructure.

- The following chart is based on a population target of 200,000 residents, which should be treated as a base case, and utilises benchmarks for services from the Department of Planning and Environment and Blacktown's Section 94 Plan. This clearly highlights the shortfall in planned infrastructure for the area when compared to the benchmarks.
- Locating additional infrastructure at Marsden Park close to other uses will support the creation of a more vibrant and active urban centre.
- There is growing demand for retail, services and better public transport. The existing planned town centre is of insufficient size and is incorrectly located which will lead to delayed delivery and constrained outcomes.



The LEP land zoning map for Marsden Park showing the transport corridor reservation.


Rotterdam reinvented the marketplace: the Markthal (market hall) has become a destination and lifted economic activity for the whole city - within the first 7 months of its opening, over 5 Million people visited (source: MVRDV).

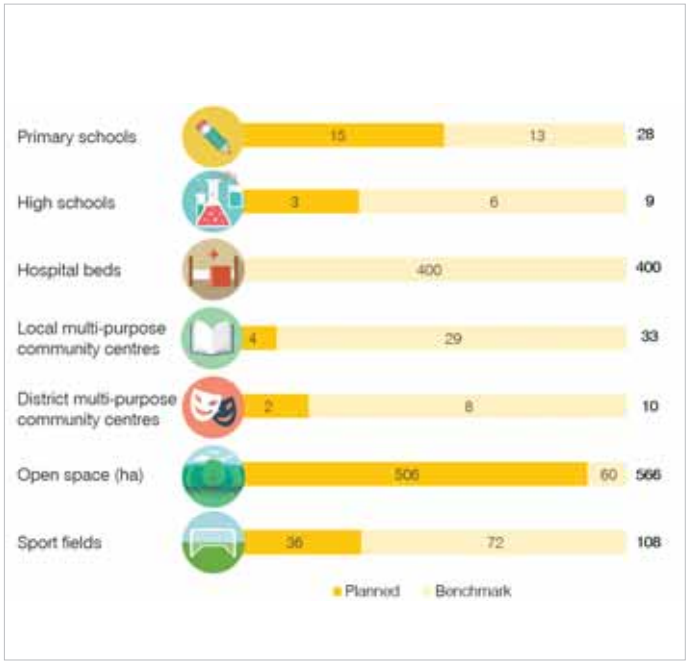


Chart showing planned infrastructure compared to Blacktown Council's S94 plan and Department of Planning and Environment's benchmarks.

The master plan

Key elements of the master plan for activating and increasing densities for Marsden Park Strategic Centre are:

Density and Land Uses

- Increasing density on the site and mixing of uses will make the centre more walkable and increase opportunities for activation. Increasing density on the site will make basement parking more feasible.
- Careful location of residential within the centre to support and enhance the appeal of commercial office.
- Retail should be located on the site to service the local population and should take advantage of proximity to the train station and key pedestrian desire lines.
- Sense of Place. Encourage a range of building heights, fine-grain street frontages, and high quality architecture to create a unique character.

Access and Movement

- Increased densities would require a finer grain road network for building frontages and address points, and to facilitate a permeable pedestrian network and active frontages. Some of these proposed roads could be initially 'paper' roads that can be delivered in later stages as the site progressively increases in density. Some of the larger lots on the 800m edge of the urban centre could be developed in initial stages at low densities that are readily redeveloped in future stages as the centre evolves over time, with a plan to later intensify these sites with mixed use.
- A clear and legible street hierarchy should be established in concert with the land use and built form master plan..
- Smaller and more cycle / pedestrian friendly streets will provide opportunities for street retail activation – and these should exclude heavy vehicles. These should be positioned in clear desire lines to and from the proposed Marsden Park Town Centre and train station.
- A highly permeable ground plane fronted by a variety of activities for pedestrians in urban centres is key to a sense of vibrancy and interest. People should be able to see where they are going which means direct lines of sight between streets along mid-block links – such connections should be mostly open to the sky to give a sense of knowing where you are.

Public Domain and Landscape

- The high quality of the public domain needs to be extended to the whole centre to ensure excellence in public domain presentation and how private development reinforces and interfaces with it. The Precinct needs to think of itself as the highest quality major urban centre in NSW on a par with the quality of the very best development in Sydney - paving quality, trees, parks, streetscapes, street fronting activities etc.
- Views and vistas to the broader landscape can assist in creating a unique experience and make the site feel more generous and connected to the surrounding area. The setting will provide an important backdrop to the development and is a key point of difference. The master plan needs to make the most of the existing surrounding green space and connect to it.

Vision for Marsden Park: view from the central open space area looking towards the retail centre and future rail station location.

Axonometric view of the master plan showing a mix of land uses close to the proposed train station location.

Legend:

- Retail
- Commercial office
- Campus
- Residential
- Light industrial
- Open Space

Land Use	BEA (sqm)	GFA (sqm)		Dwellings	Jobs	Rate
Retail	106,000	79,500	14%		994	80
Residential	308,000	231,000	40%	2,310		100
Office	325,000	243,750	42%		9,750	25
Campus	37,878	28,408	5%		568	50
total non-residential		351,658	60%			
Total	**776,878**	**582,658**	**100%**	**2,310**	**11,312**	

site area	485,000	
FSR (gross)	1.20	
Building Footprint Area	144,354	30%

Urban centre at Marsden Park - key design principles

Provide a strategic centre with appropriately scaled the built form, character and streetscape amenity by:

- Creating a compact, dense urban centre with a wide range of services.
- Planning a fine grain structure with a mix of street types and lanes.
- Maximising active uses to the street, including community and retail.
- Providing a diverse mix of uses that will encourage 24/7 activity.
- Creating a walkable pedestrian-friendly place.
- Locating car parking primarily underground.
- Varying building heights to maximise sunlight to streets and public spaces.

Encourage an active urban centre with vibrant public spaces and a strong sense of community by:

- Creating an ‘urban heart’ with community uses, civic spaces, restaurants and shops.
- Creating a critical mass of commercial, retail, community and residential uses that will become a destination and a pleasant place to linger.
- Providing an active retail core with street-facing specialty stores and sleeved large retailers.
- Locating residential apartments within the urban centre.
- Providing streets that encourage pedestrian activity and interaction.

Ensure a comfortable microclimate and high levels of environmental sustainability by:

- Creating a north-south urban structure that can maximise sunlight to streets, urban spaces and buildings.
- Providing viable alternatives to private car use including rail, bus and bicycle.
- Reducing energy consumption through providing all the daily needs of work, live, play by increased densities and mix of land uses. This reduces reliance on car trips.
- Creating a highly walkable urban centre with shaded streets, awnings and a connected public open space network.
- Using water bodies in open spaces to cool adjacent areas.

Deliver a high amenity open space network and community-building social infrastructure by:

- Providing a legible public open space network that is anchored by a large 3 hectare central park and dual urban plazas.
- Developing the urban centre around the central park and two active urban plazas.
- Providing a series of supporting green spaces with a water cleansing role and spaces for a wide range of passive and informal active recreation that appeals to all age groups and is accessible to the whole community.
- Including community uses (types to be determined following a needs analysis) in the heart of the urban centre close to plazas and parks.

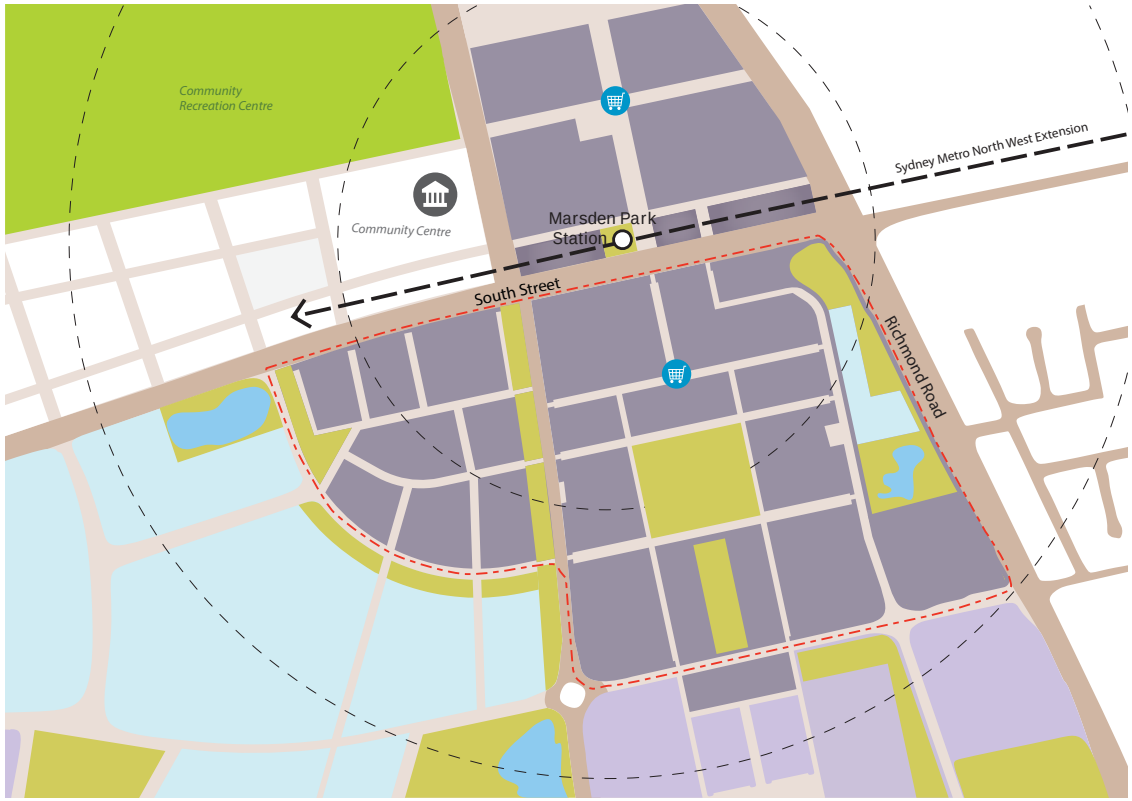
Provide safe, convenient and high amenity pedestrian and cycle connections to the rail station and within the centre by:

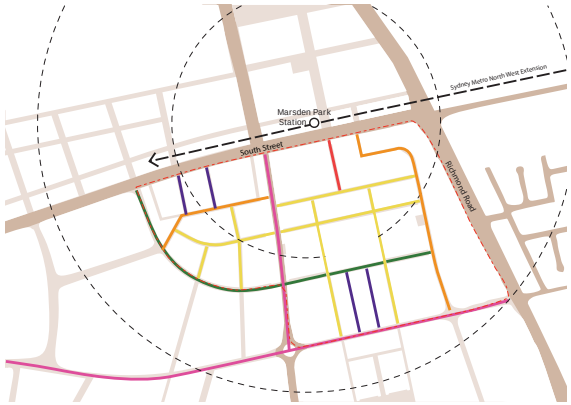
- Providing a permeable grid of north-south and east-west links to public transport, green spaces and throughout the urban centre.
- Facilitating easy and comfortable north-south bicycle and pedestrian movement via shareways, street closures and green spaces.
- Knitting the street structure into neighbouring development areas.
- Incorporating existing overland flows into green open spaces and providing pedestrian and bicycle pathways.
- Retaining the alignment of Fulton Road and conserving existing mature trees into a linear greenway.

Prioritise employment opportunities within the mixed use urban centre by:

- Clearly identifying employment precincts including a mixed use urban core and adjoining business parks.
- Providing excellent road and public transport access including a railway station.
- Offering excellent amenity, including green spaces, that will encourage businesses to locate themselves in the urban centre.
- Providing a range of block and lot sizes to accommodate a wide range of business sizes and uses.
- Encouraging non-residential ground floor uses.

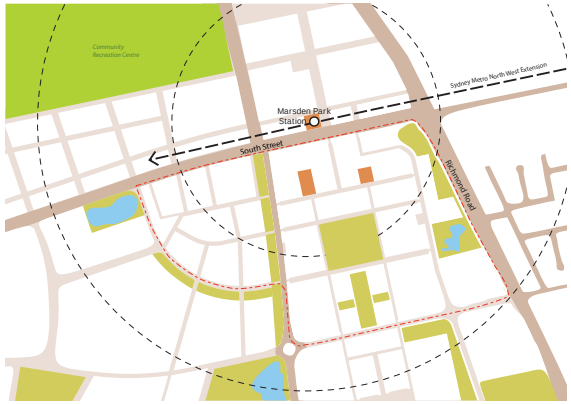
Structure plan





Legend:

- Main street 20m reserve
- Collector 25-30m reserve
- Town Street 15-20m reserve
- Green street 30m reserve
- Shared street 15m reserve
- Access street 24m reserve



Legend:

- District o pen space
- Local open space
- Urban plazas

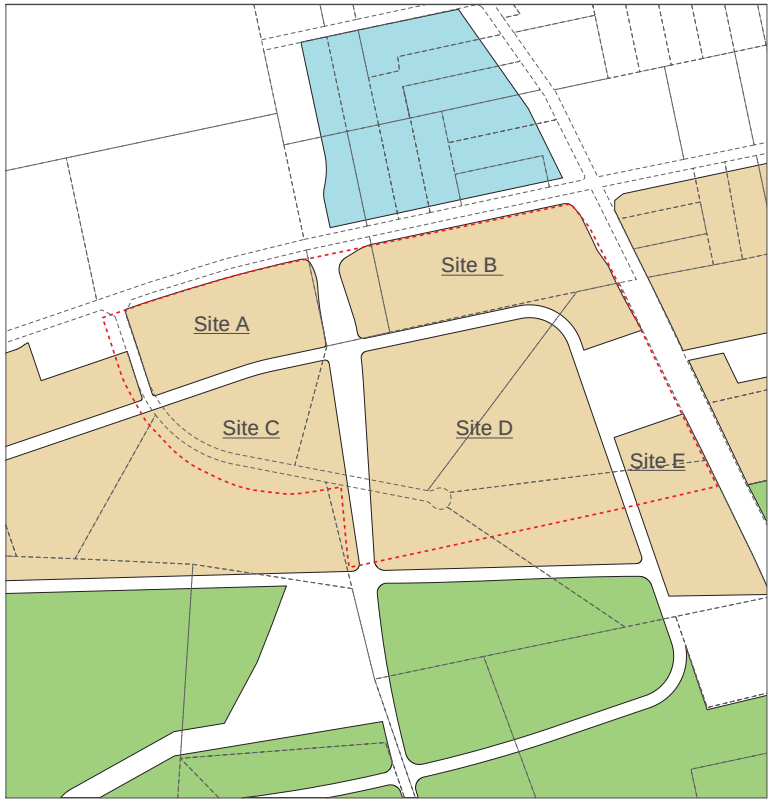
- Priority Urban Renewal Precinct
- UrbanGrowth NSW Projects
- Retail hub
- Local Government Office
- Education
- Industrial
- Business
- Mixed Use
- Local Public Open Space
- District Public Open Space
- Regional Public Open Space
- Waterways
- Sydney Metro — Stage 1 Northwest
- Sydney Metro Station
- Motorway
- Major Road
- Local Road

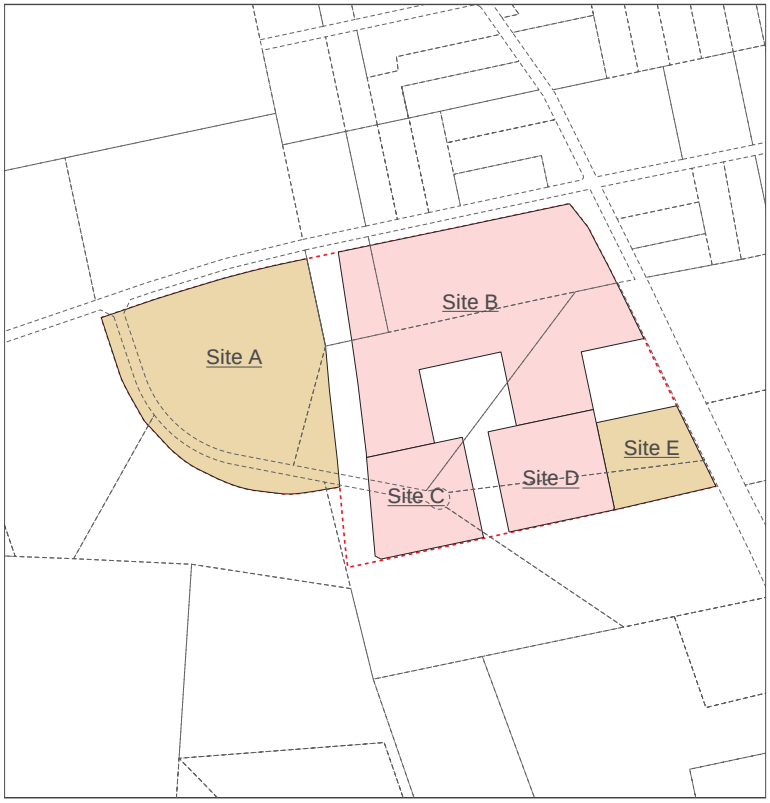
Proposed FSR

LEGEND

Maximum Floor Space Ratio (n:1)

B	0.4
D	0.5
F	0.6
H	0.7
I	0.75
N	1
P	1.25
S	1.75
T	2
U	2.75
V	3
W	3.5





Capacity under existing controls

	FSR	Area	GFA
Site A	1	59,101	59,101
Site B	1	92,080	92,080
Site C	1	66,319	66,319
Site D	1	164,607	164,607
Site E	1	20,212	20,212
total GFA			402,319
Total Area		402,319	

Proposed FSR changes and capacity

	FSR	Area	GFA
Site A	1.0	136,812	136,812
Site B	1.75	162,566	284,491
Site C	1.75	37,299	65,273
Site D	1.75	38,674	67,680
Site E	1.0	28,715	28,715
total GFA			582,970
Total Area		404,066	

Vision for Marsden Park: view from one of the north-south streets next to the central open space area looking towards the retail centre and future rail station location.

Conclusion and next steps

The following next steps are proposed to progress the site to its highest and best use as a next generation mixed use urban centre:

- Identify the rail extension and revised vision for Marsden Park as a Strategic Centre in the West Central District Plan and Metropolitan Plan.
- Detailed master planning and infrastructure planning with the community, council and State Government.
- Rezoning process for the limited area of the new Marsden Park Town Centre can commence in 2017, with the right strategic planning framework established in the District Plan.
- Work collaboratively with Government to secure funding for the rail extension and other infrastructure.
- Collaboration with universities, TAFE, NSW Health and Infrastructure and Department of Education to identify opportunities for new campuses.
- Continue to attract high quality tenants, supported by clear strategic planning direction for the centre.

Revised structure plan for Marsden Park as a Strategic Centre in the West Central District Plan and Metropolitan Plan.

architectus™

Economic & employment analysis: Marsden Park Strategic Centre

Final report

Marsden Park Developments Pty Ltd.
March 2017

SGS Economics & Planning

Independent insight.

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EXECUTIVE SUMMARY

Report purpose

Marsden Park is an emerging urban centre (identified by various policies) located within the North West Priority Growth Area, in close proximity to key strategic centres and transport corridors across Western Sydney. Commercial development commenced in 2013 and a considerable number of light industrial and larger retail tenants have already established operations within the centre. SGS has been commissioned to provide an independent appraisal of the impacts and implications of a potential rail link to Marsden Park and recent policy positions taken by the NSW Government and the Greater Sydney Commission.

Policy and current position review

Policy framework

This report has found that Marsden Park can play a greater role in the economic fabric of Western Sydney than is currently envisaged under the draft District Plan in particular. One of the fundamental challenges in Sydney's continued growth in future decades is to redress the imbalance of jobs (particularly high value-added jobs such in the knowledge economy) and prosperity between the East and West of the city. This is particularly so for the outer west, which is to become a 'city' in its own right under *Towards our Greater Sydney 2056*, and where the bulk of the additional one million residents forecast for the West will locate by 2036.

Marsden Park presents an opportunity to play a key supporting role to the Western Sydney 'city' around the future airport by extending the arc of connectivity and economic activity from the airport regional to the outer north west. Rapid population growth in the outer north west is already well underway but the airport and surrounding economic geography to provide employment to support the future population is still several decades away at the earliest. Marsden Park provides a more immediate and adaptable opportunity for responding to the urgent challenge of providing employment for existing and future residents. Particular consideration needs to be given to higher order jobs; long identified as a shortfall in Sydney's outer west. This identified opportunity is consistent with planning strategies whilst recognising the need for adaptability to respond to future needs

SGS believes the designation of Marsden Park as a strategic centre is consistent with the strategic frameworks and policy that has been announced by the NSW Government and Greater Sydney Commission.

Current performance & near-term prospects

The number of firms and jobs per firm already operating in Marsden Park is already well in excess of the number implied and quantified (respectively) in existing employment forecasts available from Transport Planning Analytics (TPA), which have underpinned the projections in the draft District Plan. This data also outlines the pipeline of future firms which have committed to locating in the precinct over the next few years. The volume of firms, land take up and jobs from this data indicates that the investment momentum of the early years of the centre will be sustained.

Overlaying policy aspirations to 'change the game' in the West and shift the mix in centres like Marsden Park to integrate in the knowledge economy jobs, the centre is at a critical juncture in its evolution.

The forecast impacts of a rail extension to Marsden Park

Employment and investment implications – commercial evolution trajectories

Reflecting the higher than expected employment growth to date, SGS has revised its forecast of employment growth in the precinct, reflecting the rate of take up of land and the significant volume of employment land available. Consequently, even under a moderate (base) growth case assessed without rail, SGS expects the Marsden Park to support nearly 14,200 jobs by 2036.

SGS has reviewed the competitive characteristics of Marsden Park as a commercial centre and found that rail connection at least to the Metro North West will address its connectivity shortfall relative to the existing major employment centres in Western Sydney. It would be the key part of a suite of amenities that would make the centre suitable for an integrated commercial precinct, and meet the connectivity needs of firms in the higher-order knowledge sector.

Reflecting this, were the Sydney Metro North West to be extended to Marsden Park, an additional 6,200 knowledge sector jobs are forecast by 2036, depending on the timing and roll out of the rail extension (assumed for this report to be in operation by the early-mid 2020s). The total employment for the centre is forecast under these assumptions to be over 20,000 employees by 2036 and shift the centre from space-intensive uses to a balanced industry mix in an integrated commercial centre.

The methodology used for these forecasts is outlined in detail for transparency and reflects benchmarking against the observed roll out of firms in both Marsden Park itself and the rate of growth achieved in Norwest. This approach grounds the forecasts with a factual basis and does not project rates of growth in excess of what has been observed.

Population

As well as changing the employment profile of the centre, with a rail connection to the Metro North West, a moderate intensification of population through greater demand for apartments is also forecast using SGS's accessibility model. Whilst not of a 'game changing' scale in and of itself, this has positive implications for strategic & local business development, providing more demand, more lifestyle options supporting mixed use commercial centre evolution (home/work proximity). The outcome, being an integrated urban centre, has historically been hard to achieve in outer areas of Australia's capital cities.

Socio economic benefits

A definitive quantification of the financial and social benefits is beyond the scope of this study and should be undertaken as part of a Cost Benefit Analysis within a broader rail needs study. But an initial review of the likely socio-economic impacts from rail indicates a variety of positive outcomes for both future residents in Marsden Park, and existing residents in established suburbs in the district.

A decision needs to be taken on the level of cost-recovery for a rail link by the NSW and Australian Governments if built. A Special Infrastructure Change (SIC) levied to assist with funding for an extension of the Sydney Metro North West has been reviewed and should be investigated in detail.

Retail potential

Retail's evolution in Marsden Park is vastly less sensitive to rail connectivity, but has been reviewed as part of this project to provide a holistic evolution of the centre's potential and suite of economic characteristics. SGS's Retail Gravity Model is an ideal tool for modelling a viable provision of floorspace at Marsden Park without over-provisioning such that turnover densities would drop below a viable threshold. It also has identified an optimal level and mix of retail space that could be delivered without excessive impacts on nearby centres which would undermine their commercial viability or strategic role.

Given the scale of population and workforce growth in the centre and throughout the district, a retail centre at Marsden Park of between 70,000sq.m. to around 83,000sq.m. GLAR in the market by around 2021 would be consistent with these parameters. Population and workforce growth post-opening would warrant provision of around 110,500sq.m. GLAR by 2036 in Marsden Park, maintaining the parameters outlined above and accounting for probably future centres being developed in the market.

1 INTRODUCTION

1.1 Introduction

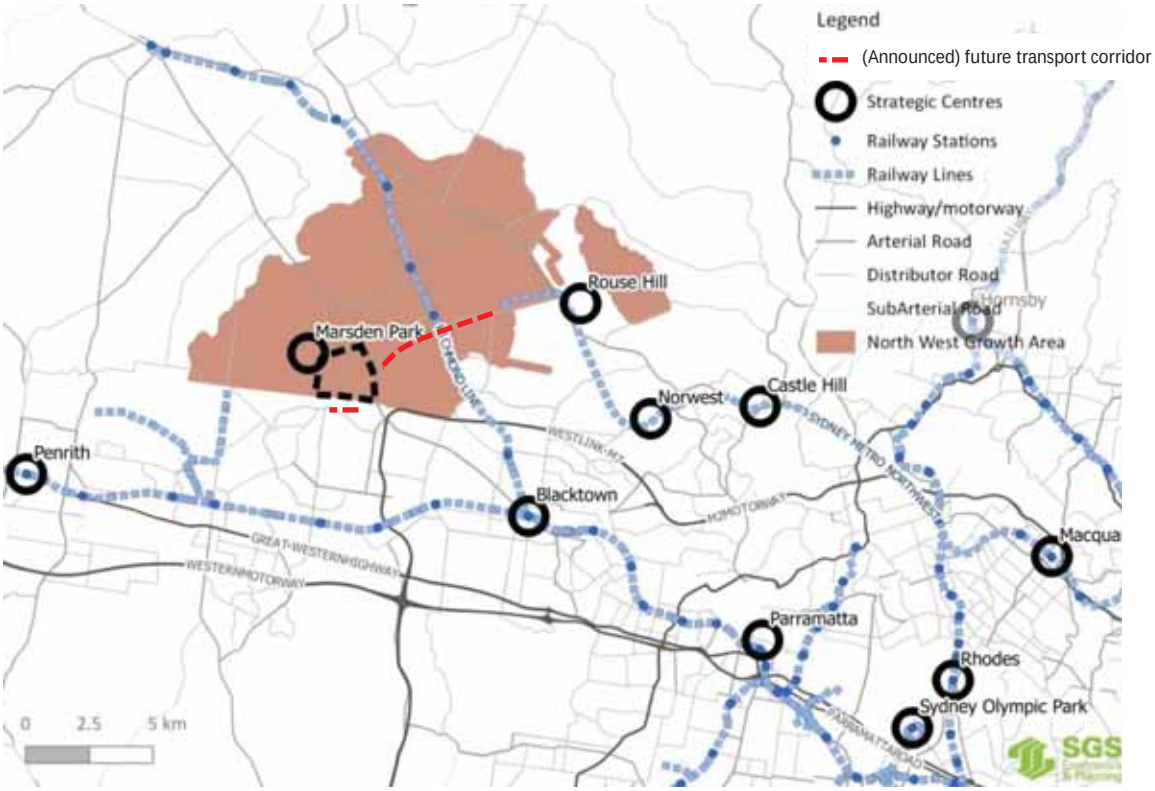
SGS has been commissioned to provide an independent appraisal of the impacts and implications of a potential rail link to Marsden Park and recent policy positions taken by the NSW Government and the Greater Sydney Commission (GSC). In particular, this study has reviewed the impacts on Marsden Park were the Sydney Metro North West to be extended to in line with the corridor reserved by the NSW Government in 2012. The integrity of this independence has been maintained by a detailed evaluation of the policy priorities and aims for Western Sydney's evolution by the respective policy makers. SGS's interpretation of the policy implications for Marsden Park has been based on work already undertaken for, and presented to the NSW Government and GSC *prior* to undertaking this work.

While SGS has relied on updated survey data provided by the client on the quantum of firms and jobs which have established & will establish in the centre in the near future, this has been verified by a site visit cross check, summarised in this report for transparency. A detailed outline of the methodology and data sources for all forecasts undertaken for this report have been provided to substantiate the findings and projections.

1.2 Site and planning context

Marsden Park is located within the North West Priority Growth Area (NW PGA) (formerly the North West Growth Centre), around eight kilometres from Blacktown and eight kilometres from Rouse Hill. The key employment precinct in Marsden Park is Sydney Business Park shown in relation to the NW PGA, Marsden Park (centre), the existing Richmond railway line and proposed Sydney Metro Northwest (under construction) and the other strategic centres in Figure 1. Marsden Park is one of the key commercial precincts of the NW PGA. The site is predominantly zoned for business and industrial uses.

FIGURE 1 NORTH WEST PRIORITY GROWTH AREA REGIONAL CONTEXT



Source: SGS Economics & Planning, 2016.

The Marsden Park Industrial precinct was rezoned in 2010 with the clear intent to to play both a strategic and local economic role in the WS PGA. The Indicative Layout Plan prepared in 2010 as part of the rezoning process shows that adjacent to the industrial and business park uses, there are sites for medium density residential uses, and some lower density parcels at the north-west boundary. The transformation and pace of development gives rise to a fundament reassessment of the nature of the development adjacent to the 2010 Town Centre site.

The recently released draft West Central District Plan identifies Marsden Park as a District Centre within the West Central District. Under the District Plans, District Centres are largely retail-based centres that support the District's growing population. District centres play a significant district role due to the presence of one or more of the following characteristics:

- the scale of retail activity, generally over 50,000 square metres of floor space
- the presence of health and education facilities that serve the district and the local community
- the level of transport services.

District centres are expected to contain between 5,000 and 10,000 jobs. Marsden Park is identified as containing 300 jobs with a job target of between 5,000 and 8,500 jobs by 2036. As this report will show there is already well over 300 jobs at Marsden Park in 2017, and the job target will be easily exceeded in coming years. In 2012 the NSW Government established a transport corridor reserve between the terminus of the Sydney Metro North West through to Marsden Park and towards St. Marys This corridor is suitable for the extension of the Metro North to Marsden Park in the first instance and beyond if required.

A rail corridor between Rouse Hill and the proposed Western Sydney Airport, which would pass through Marsden Park, is being considered by the Australian and NSW Governments. This has the potential to

provide greater connections between existing and future residential and employment locations within this corridor and to other locations in western Sydney and the metropolitan area as a whole. This potential rail connection is not shown in the draft West Central District Plan.

More details on the site and planning context are included in Appendix A.

1.3 Report structure

This report is structured as follows:

Section	Content	Purpose
1	Introduction	
2	Strategic narrative for a growing city	*Contextualising roles for Marsden Park within SGS' interpretation of the NSW Government's preferred evolution of Western Sydney*
3	Integrated commercial precincts	*Theoretical (literature) and empirical (case study) evidence on the likely development paths for Marsden Park as a commercial centre*
		Identifying the success factors for commercial precincts
4	Current position review	*Summary of progress and investment to date*
5	Rail extension impacts on employment	*Reviewing the strategic and theoretical potential of Marsden Park against the evidence of growth trajectories*
		Scenario testing where rail is introduced
6	Impacts from rail on population and dwellings	*Application of SGS's Accessibility Model to forecast likely changes to residential development if rail connectivity to Marsden Park is provided.*
7	Socio-Economic Evaluation Framework	*Outlining the benefits and costs from improved connectivity*
8	Value Capture Opportunities	*Introduction to a framework for funding rail extensions*
9	Retail	*Retail potential and impacts testing using SGS' Gravity Model*
10	Conclusion and Recommendations	
Appendix		

2 STRATEGIC NARRATIVE FOR A GROWING CITY

2.1 Introduction

The development of Marsden Park is interdependent with the development of the fast growing North West and Western Sydney parts of metropolitan Sydney. A successful Marsden Park can underpin government objectives for jobs growth in western Sydney and the promise of 'jobs closer to home' which has been included in recent metropolitan plans. This section places Marsden Park in both its strategic metropolitan and north west context.

2.2 Marsden Park in its strategic development context

Western Sydney is a priority for the NSW Government

Western Sydney is identified as a priority within *A Plan for Growing Sydney* as evidenced by the following statements:

- *"Many of Sydney's greatest opportunities lie in Western Sydney. At the same time many of the challenges Sydney faces are most pressing in Western Sydney"* (page 16).
- *"A Plan for Growing Sydney includes a vision for Western Sydney that will secure the city's productivity into the future – so that Western Sydney can meet its full potential, build strong centres and be an even greater place to live. Western Sydney will drive the future productivity of Sydney and NSW"* (page 16).
- *"Western Sydney's knowledge economy is growing. Delivering new office markets within strategic centres in Western Sydney will require flexible and timely planning approvals, accompanied by ongoing improvements to public transport" (page 17).*
- *"Improving transport connections between centres will improve access to jobs and support the location of economic activity in centres, unlocking Western Sydney's full economic potential.*

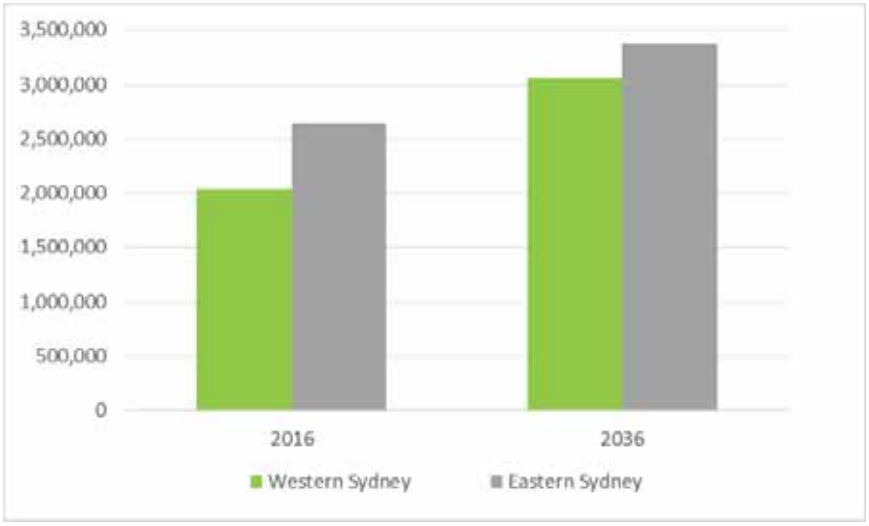
  Integrating land use decisions with transport improvements will lift the overall economic productivity of Western Sydney and create new opportunities for new investment in housing and jobs" (page 17).

There is a clear focus on directing employment growth to centres in Western Sydney and supporting this with adequate transport infrastructure.

The population of Western Sydney will grow rapidly, without intervention the significant gap in the share of employment will worsen compared to Eastern Sydney

The population of Western Sydney is forecast to grow from 2.04 million residents in 2016 to 3.05 million residents in 2036. As illustrated in Figure 2, the proportion of residents living in Western Sydney is increasing and by 2036, the population of Greater Sydney will be much more evenly distributed between Eastern and Western Sydney.

FIGURE 2 PROPORTION OF POPULATION IN WESTERN VS EASTERN SYDNEY (2016 AND 2036)



Source: SGS Economics and Planning, 2017 using Transport Performance Analytics, 2016

Employment in Western Sydney is forecast to grow from 810,000 jobs to 1.2 million jobs in 2036. While the share of population in Western Sydney and Eastern Sydney is converging, the proportion of jobs located in Western Sydney compared to Eastern Sydney remains a significant gap (refer to Figure 3).

FIGURE 3 PROPORTION OF EMPLOYMENT IN WESTERN VS EASTERN SYDNEY (2016 AND 2036)

Source: SGS Economics and Planning, 2017 using Transport Performance Analytics, 2016

This gap is similarly reinforced by the job to resident ratio. By 2036, there will be 0.4 jobs per resident in Western Sydney but 0.6 jobs per resident in Eastern Sydney.

The mismatch between population and employment needs to be reversed to address challenges in Western Sydney and meet the policy aims detailed in both *A Plan for Growing Sydney* and the draft District Plans.

Western Sydney needs to generate economic outcomes through enhanced agglomeration economies

The share of jobs in centres is much lower in Western Sydney compared to Eastern Sydney, and is predicted to remain unchanged over the next twenty years (Table 1):

TABLE 1. PROPORTION OF JOBS IN CENTRES

	2016	2026	2036
Eastern Sydney	64%	64%	65%
Western Sydney	45%	46%	46%
Total Sydney	58%	58%	58%

Source: SGS Economics and Planning, 2017 using Transport Performance Analytics, 2016

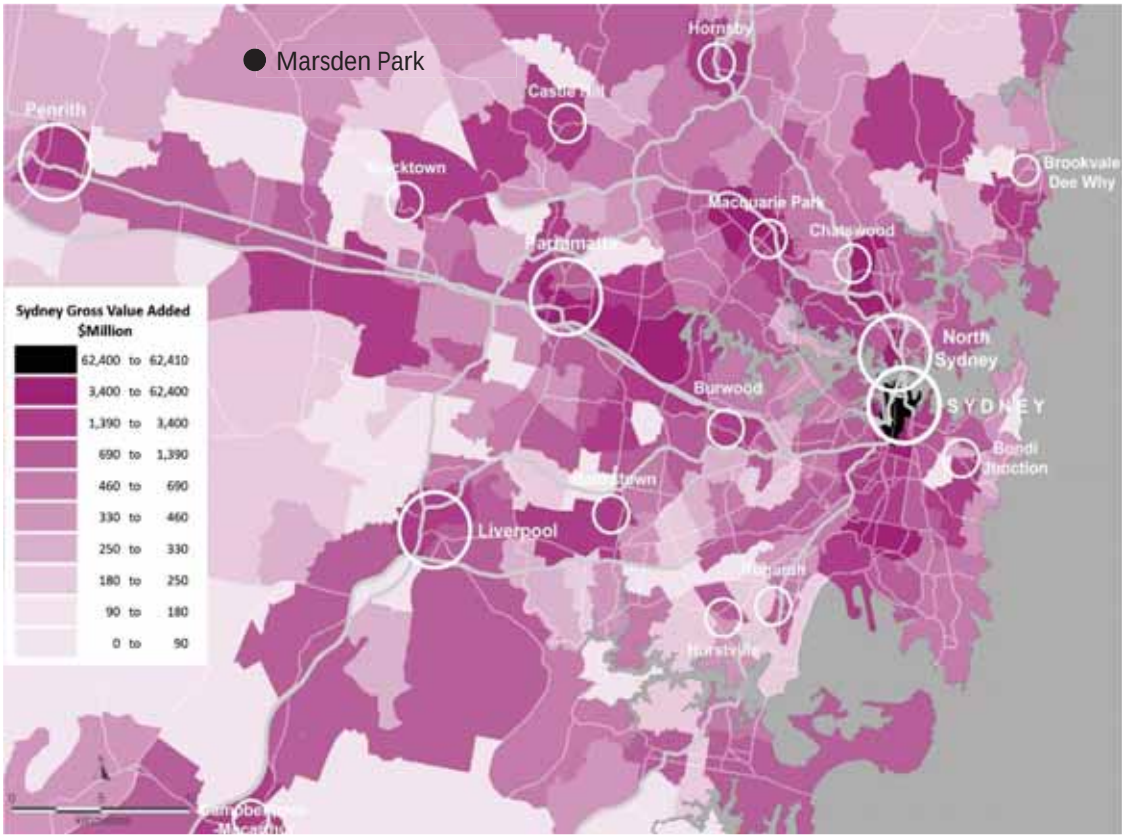
A higher value economic and employment future in Western Sydney will depend on a deeper clustering and agglomeration of jobs in centres.

Much more attention needs to be given to how the future economic geography of Western Sydney might evolve and how a network of centres might be encouraged to emerge. There is still significant improvement to be made.

For example, the north west of Sydney has:

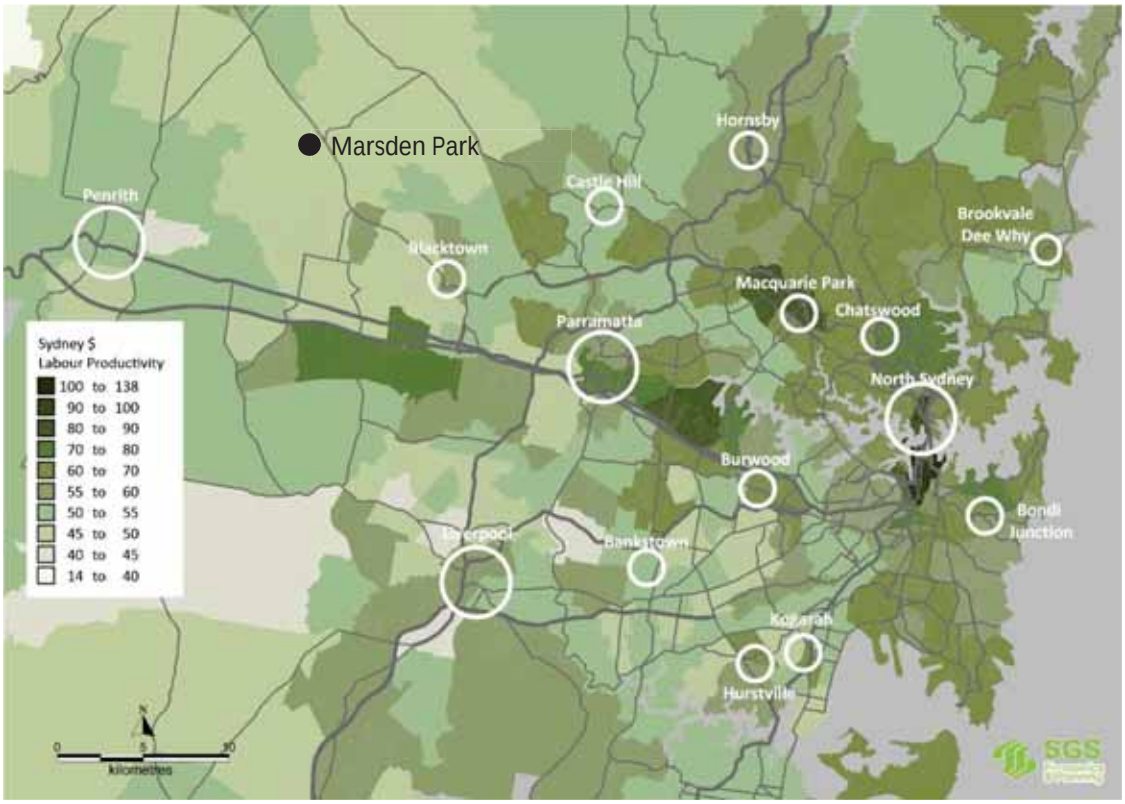
- a mid-range ranking for gross value added (refer to Figure 4) which is a measure of productivity.
- a low-range ranking for labour productivity (refer to Figure 5).
- a low-to-mid-range ranking for Effective Job Density (agglomeration) (refer to Figure 6).
- poor accessibility to jobs via private vehicle and public transport (refer to Figure 7 and Figure 8)

FIGURE 4 GROSS VALUE ADDED (2015): NW SYDNEY MID RANKING



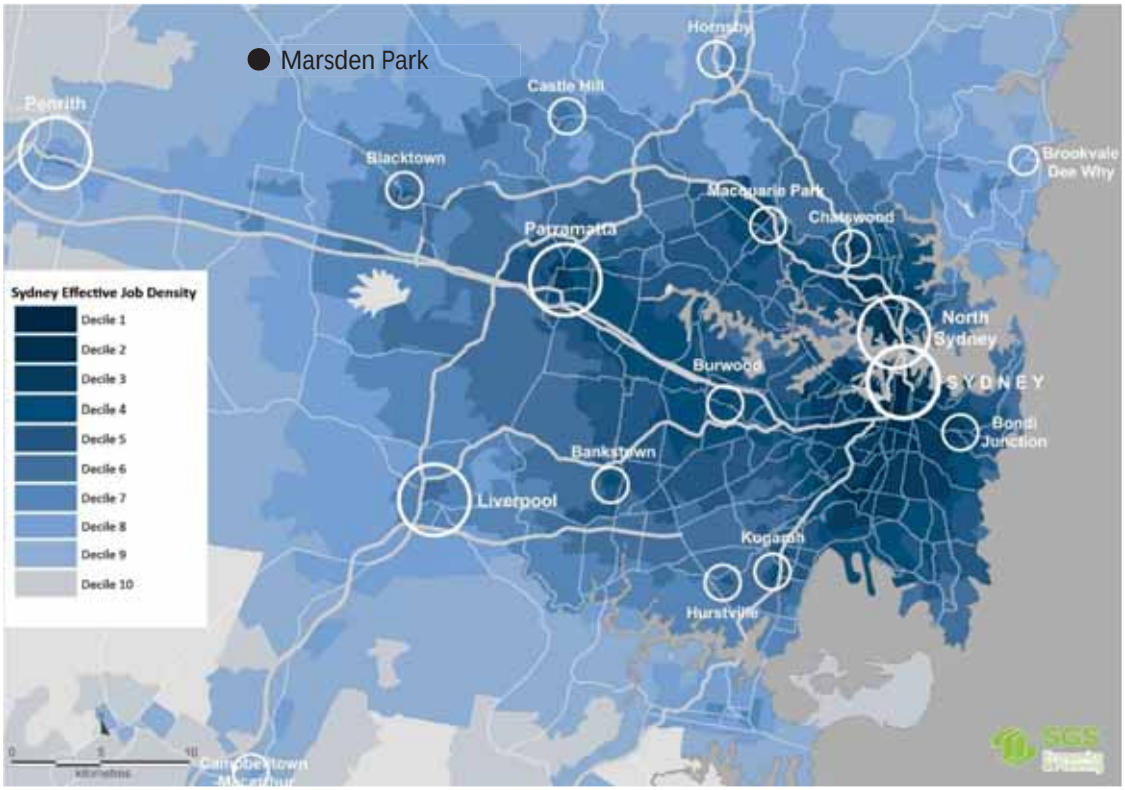
Source: SGS Economics and Planning, 2017

FIGURE 5 LABOUR PRODUCTIVITY: NW SYDNEY LOW RANKING



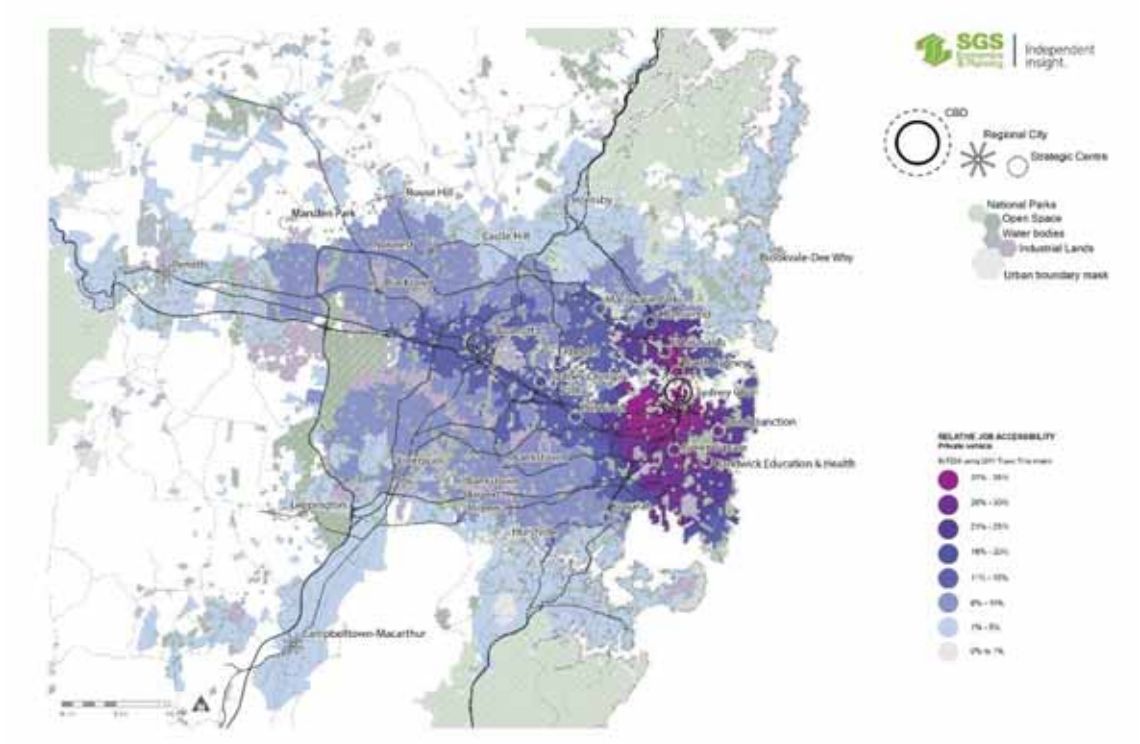
Source: SGS Economics and Planning, 2017

FIGURE 6 EFFECTIVE JOB DENSITY: NW SYDNEY LOW TO MID RANKING



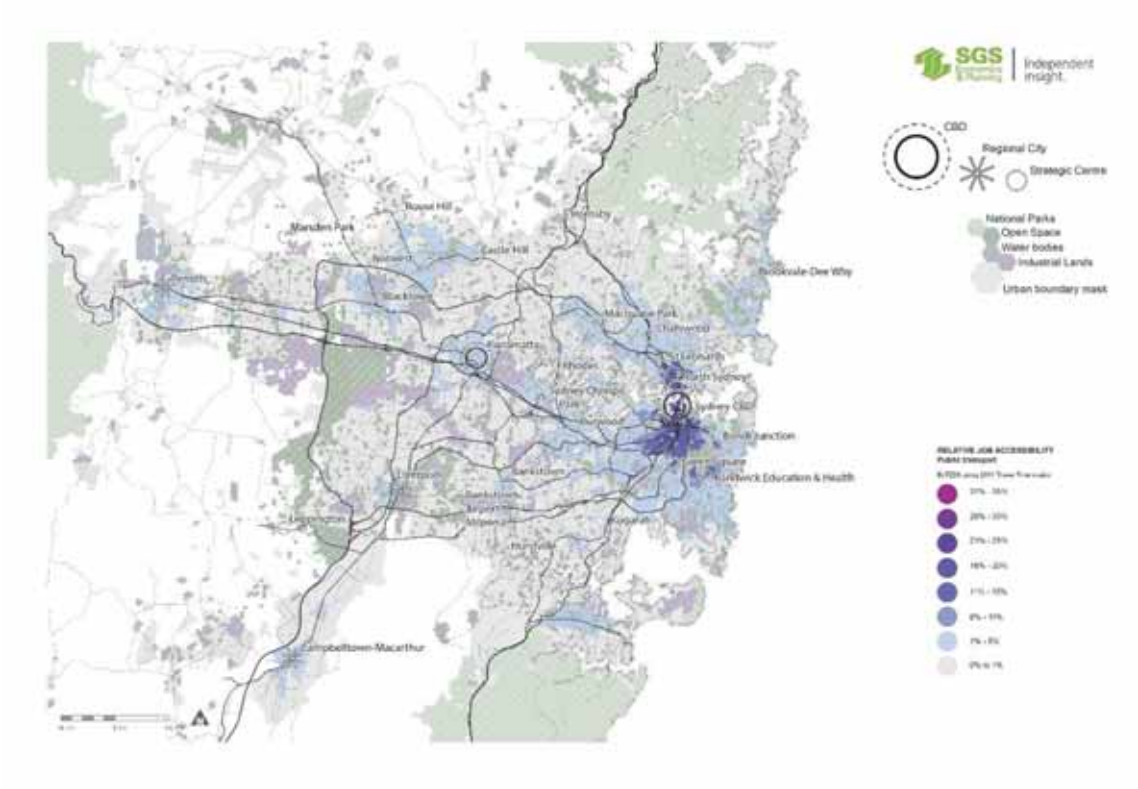
Source: SGS Economics and Planning, 2017

FIGURE 7 ACCESSIBILITY BY PRIVATE VEHICLE



Source: SGS Economics and Planning, 2017

FIGURE 8 ACCESSIBILITY BY PUBLIC TRANSPORT



Source: SGS Economics and Planning, 2017

A network of Western Sydney centres should be fostered

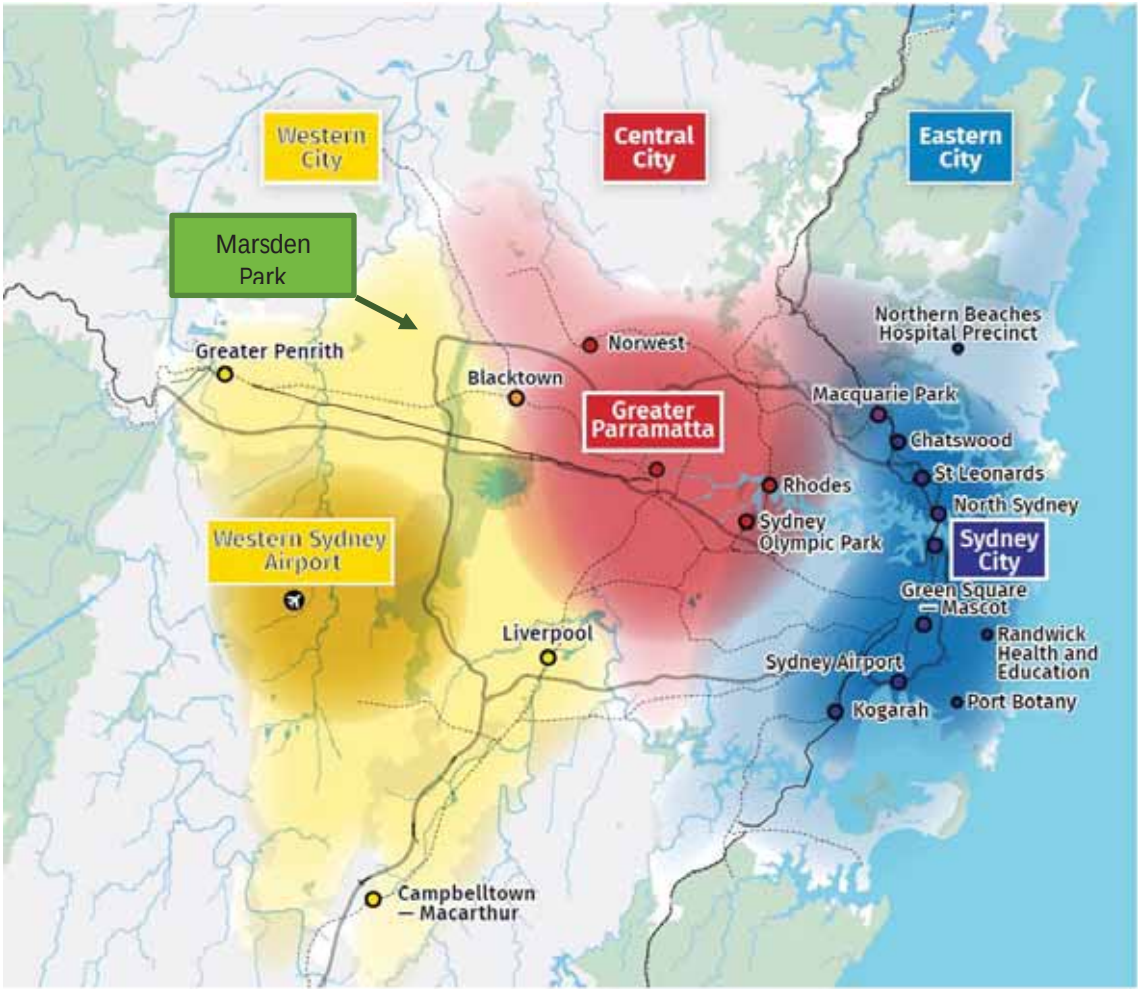
Two strategies are required to deepen Effective Job Density and accelerate growth in centres in Western Sydney:

- encourage and facilitate jobs growth, particularly in centres
- connect to enhance accessibility to other centres and job rich locations

The north west region including Marsden Park is currently well placed compared to the rest of Western Sydney, particularly south west Sydney, but is a long way behind Eastern Sydney on indicators of economic output, productivity and agglomeration (as detailed above)

The Western City concept in *Towards our Greater Sydney 2056*, based around the Western Sydney Airport (refer to Figure 9), is a good starting point, but it needs further articulation to guide future planning and infrastructure investment decisions.

FIGURE 9 A METROPOLIS OF THREE CITIES



Source: Greater Sydney Commission, 2016

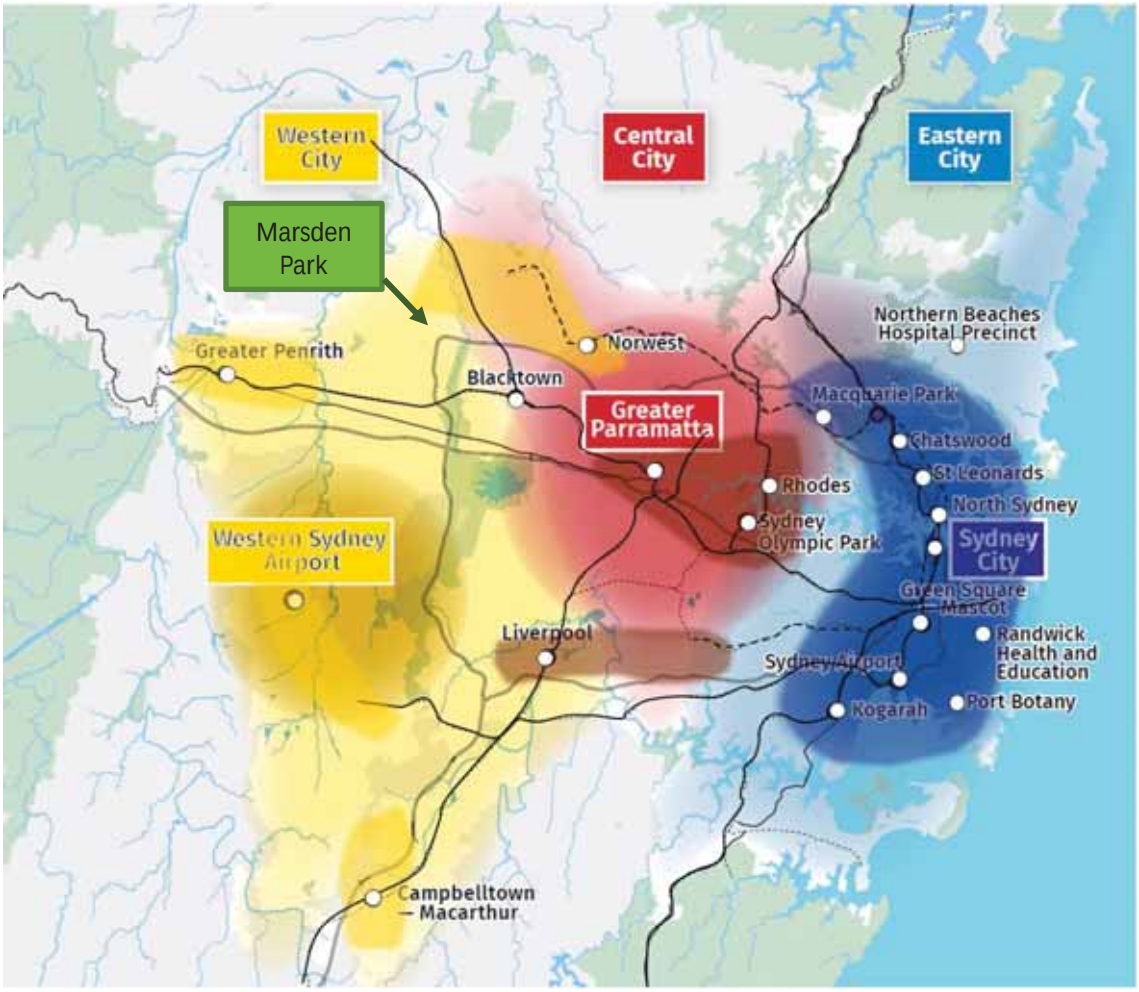
Economic clusters need to be identified and coordinated through strategic planning

A set of principles for 'city shaping' economic cluster development and transport networking in Western Sydney should:

- Identify economic assets to renew, strengthen, connect – including health, education, industrial, centres, retail, diverse housing
- Be planned as a comprehensive economic cluster with high density and complementary residential areas and affordable housing
- Incorporate high quality amenities and open space links (e.g. address micro climate)
- provide high quality internal transport connections e.g. light rail, walking, cycling

A number of potential clusters with a focus on health and education assets have been identified in Figure 10.

FIGURE 10 POTENTIAL CLUSTERS INCLUDING HEALTH AND EDUCATION ASSETS

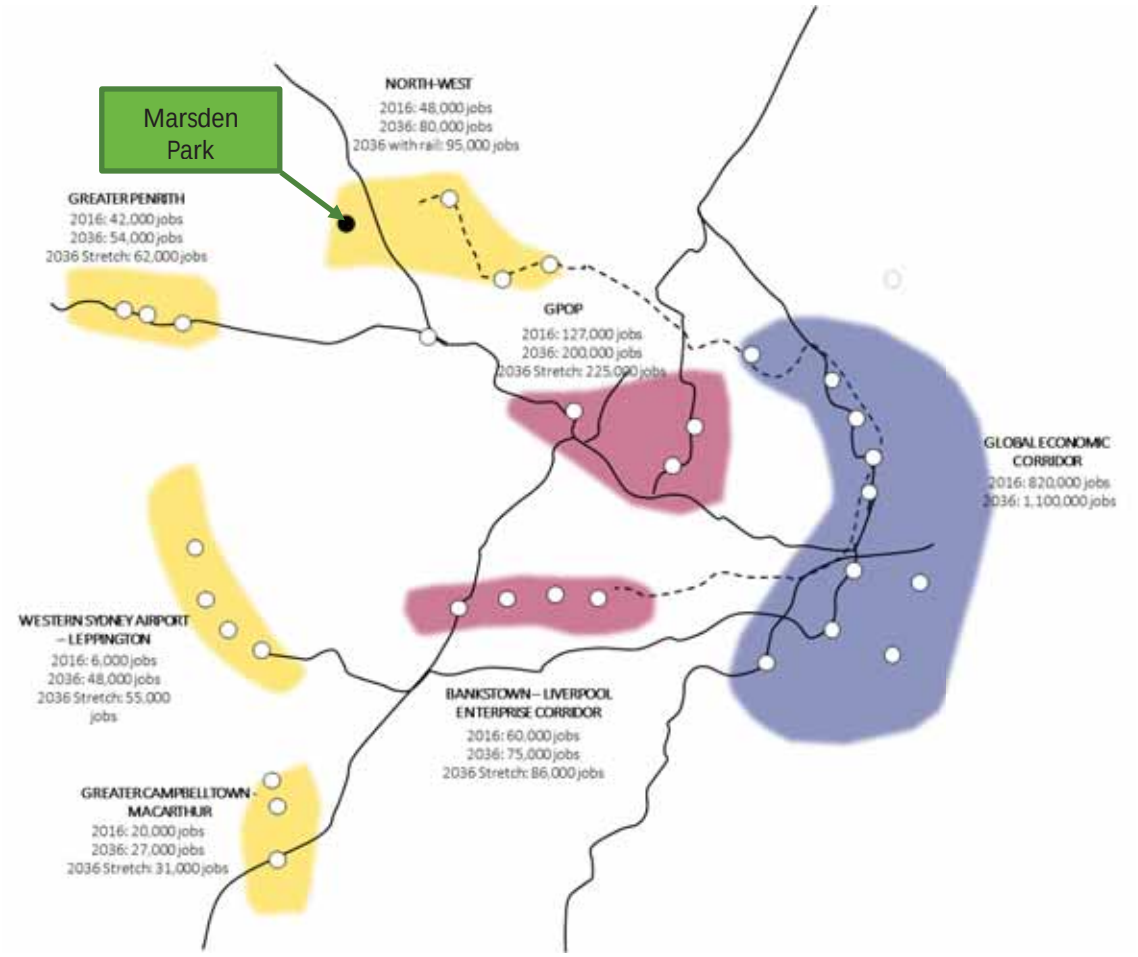


Source: SGS Economics and Planning, 2017 using base from Greater Sydney Commission, 2016

These clusters can develop as major concentrations of employment across Greater Sydney

The number of jobs concentrated in each of the clusters is detailed in Figure 11 along with the projected population in 2036. A stretch target has also been identified which represents the employment potential of these clusters if the appropriate investment is achieved, particularly in transport infrastructure.

FIGURE 11 EMPLOYMENT CLUSTERS ACROSS SYDNEY



Source: SGS Economics and Planning, 2017

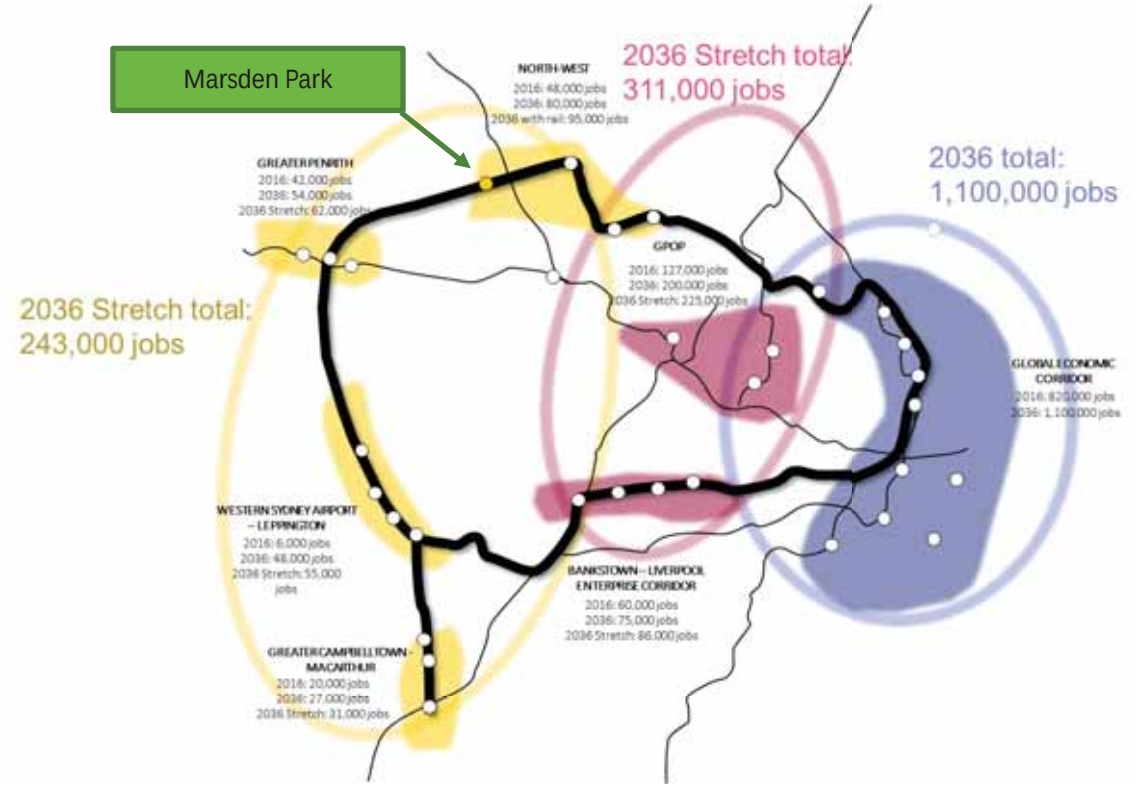
These clusters should be networked via well-connected public transport

The principles for connection could comprise the following:

- Contribute to rail operational requirements from a 'system' perspective (e.g. stabling, etc.)
- Access to existing and future residents and potential workers
  - e.g. connecting and developing education/health assets
  - e.g. maximising opportunities for the dense urban clusters
- Access to other transport modes and lines
- Accessibility to / 'hubbing with' Western Sydney Airport.

An example of how these clusters might be connected is detailed in Figure 12. This illustrates the employment potential across the three greater cities, reflecting the objective of the Greater Sydney Commission for Sydney to become a genuine polycentric city.

FIGURE 12 NETWORK OF EMPLOYMENT CLUSTERS ACROSS 3 GREATER CITIES



Source: SGS Economics and Planning, 2017

The north-west contains a potential cluster of existing and emerging centres with varied employment roles

The north-west cluster contains the following centres which are expected to evolve over the next 20 years:

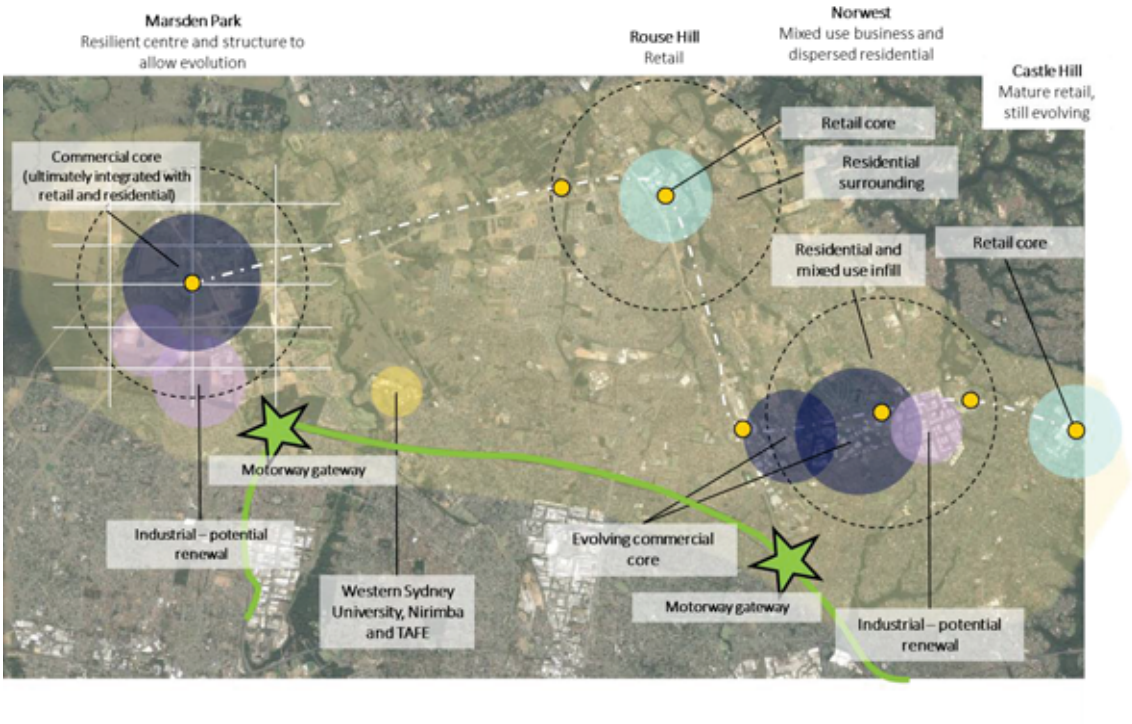
- **Castle Hill**: a mature retail centre which has experienced significant growth in residential and employment due to the presence of the metro rail station.
- **Norwest**: an increasingly mixed use centre which has evolved from the primarily business park focus to a mix of knowledge intensive employment and a growing residential population.
- **Rouse Hill**: a retail centre serving the growing population in the NW PGA.
- **Marsden Park**: an emerging employment centre with a significant commercial core within evolving adjacent industrial and residential development.

A broad view of the opportunities within this corridor is illustrated in Figure 13.

It is crucial that Marsden Park has a resilient and adaptable centre structure to facilitate its evolution as an employment centre and a major urban activity centre for the north west.

- The centre needs to be able to respond to changing employment land use preferences, especially if connected with city-shaping transport infrastructure such as rail
- A flexible centre structure will allow it to shift and reconfigure to accommodate emerging industries (especially in the knowledge sector, the expansion of which is a key priority identified repeatedly by the NSW Government and GSC for Sydney's West)

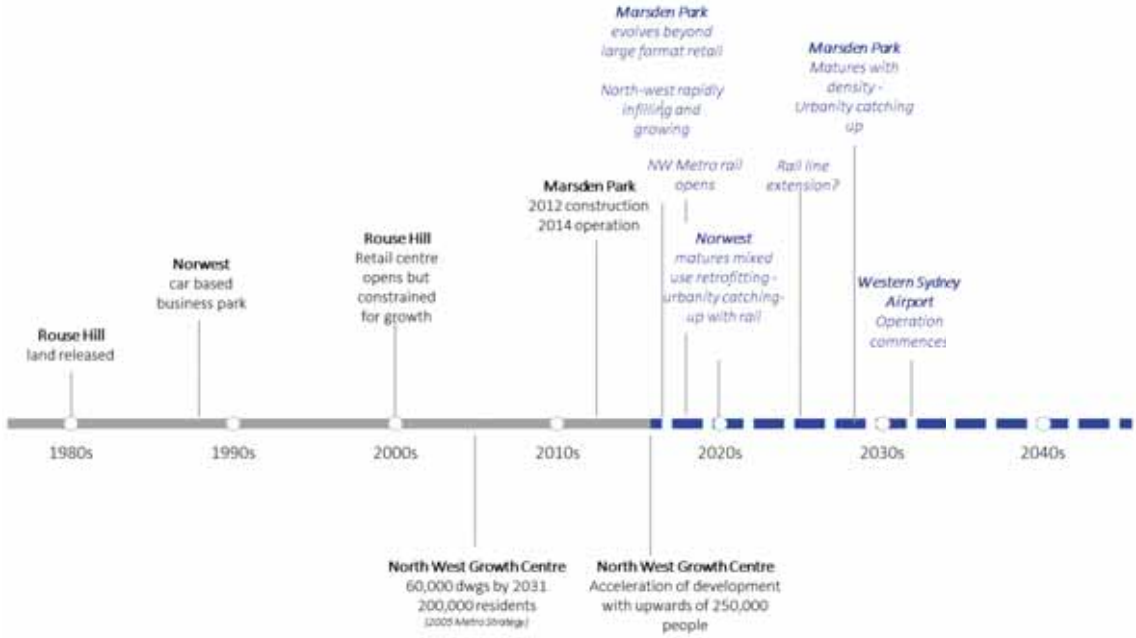
FIGURE 13 TOWARDS A NEW URBAN ECONOMIC CLUSTER IN THE NORTH WEST



Source: SGS Economics and Planning, 2017

The potential evolution of the centres within this cluster over time is illustrated in Figure 13, signifying that the change will not happen immediately, though it is accelerating given the rapid recent and predicted future growth and needs to be supported by a long term vision and investment in the appropriate infrastructure.

FIGURE 14 DEVELOPMENT TIMELINE



Source: SGS Economics and Planning, 2017

2.3 Summary

- Western Sydney is considered to be an urgent priority in policy and will increase in political importance.
- Western Sydney's growth is accelerating. The city is growing more rapidly than originally forecast and it is important that strategic planning, including infrastructure provision, takes account of this.
- There are challenges associated with not only servicing this growth in Western Sydney but also addressing the jobs access deficit in a timely way.
- For Western Sydney to thrive as a growing area of Sydney, there is a need for jobs and connectivity and early planning to accelerate.
- The Vision for Western Sydney is focussed on the airport and this is important but it also needs to evolve to include connections with 'new' urban economic clusters (based on existing and new centres).
- Existing centres in the north west cluster including Marsden Park are performing well. However, there is a need to build structure, amenity, diversity and connectivity to promote the long term strategic potential of these centres.
- Government decisions will shape Sydney through investment in transport infrastructure. An extension of the metro through the reserved transport corridor to Marsden Park is logical as part of a wider Western Sydney strategy focused on the airport and its associated opportunities.
- The intensification of Marsden Park as a preeminent emerging urban centre in the North West Growth Area flows from this strategic thinking.

3 INTEGRATED COMMERCIAL PRECINCTS

3.1 Introduction

This section provides an overview of the literature evolution from logistics-focused precincts to commercially-focused and more recently, mixed use precincts. A number of success factors, or criteria, are identified which will inform opportunities at Marsden Park.

However, arising from the strategic narrative summary in the previous section, it is critically important to acknowledge that the urban planning for Marsden is not predicated or modelled on these past developments. Rather, the vision and planning specifically addresses the need for adaptability and in particular greater densification and urbanisation over time.

3.2 Evolution of commercial precincts

The concept of the business park has evolved over time from the early industrial park model, which has been implemented in various forms since the nineteenth century. Initially, industrial parks were intended to provide an optimal environment for industrial businesses, including through the provision of dedicated infrastructure and transport, and tailored regulations to overcome barriers to economic development. The underlying premise on which the industrial park model was based was that of agglomeration, where specialised industries are concentrated in a particular locality and benefit from their proximity to each other, a concept first identified in 1890 (Rodriguez-Pose & Hardy, 2014).

Today, there are many terms which are used to describe areas where industries and businesses cluster, such as innovation districts or hubs, and technology or knowledge parks. The general benefits of co-location and agglomeration by industry sectors are seen to include:

- Access to potential employees, suppliers and other firms and their practices,
- Economies of scale, and access to specialised facilities, services and infrastructure,
- The knowledge spill-over effects of businesses being closely located, and
- Lower costs associated with transport and communications (McDougall & Witte, 2010).

The shift in Australia and internationally towards more knowledge-intensive jobs has meant that employment is increasingly drawn to inner city areas and areas where there are opportunities for agglomeration (Katz & Wagner, 2014). Firms today typically want to cluster where they can have access to the benefits described above, and this is not always the case with stand-alone business precincts or parks in suburban areas.

The decline of commercial business parks in other locations, such as the United States, and particularly for those which are in suburban locations, has been attributed in part to a lack of amenity and accessibility for workers (Marshall, 2016). Changes in work patterns, including an increase in the number of people telecommuting or working electronically as opposed to travelling to a physical office building, is also been seen to have contributed to the decline in the use of commercial business park spaces.

Business parks today tend to cater to predominantly light industrial, business services and IT sectors, and attract tenants which operate in both the industrial and commercial sectors rather than in one or the

other (SGS Economics & Planning, 2014). Business parks are typically less capital-intensive and have fewer constraints in terms of accessibility and potential environmental impacts than traditional heavy industry uses. They also allow for a mix of uses to be accommodated together, such as office and retail spaces with lighter industrial facilities in more attractive environments with access to amenities (Rodriguez-Pose & Hardy, 2014). It is generally recognised that centres which have a diversity of economic uses are likely to offer more opportunities and to be more successful than those focused solely on one industry.

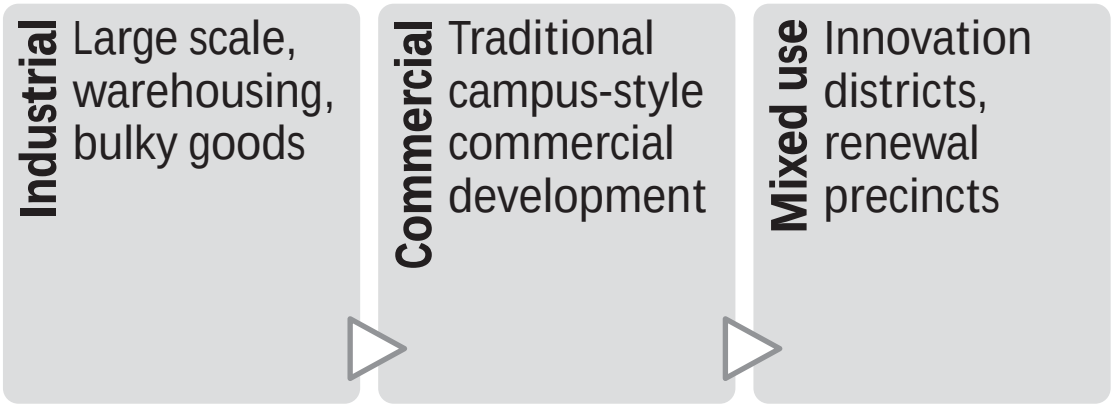
Some of the key success factors in the literature on modern innovation precincts have been identified as:

- The geographic concentration of firms, creating a critical mass of related industry sectors,
- The accessibility of the area to major employment centres and knowledge workers,
- Access to adequate infrastructure,
- High standards of urban amenity to attract and retain workers,
- The presence of social equity and inclusion, and
- The promotion of networking and interaction between workers (SGS Economics & Planning, 2016).

Adequate strategic planning and governance for precincts, such as through a master plan, are also identified as important to the success of business parks and innovation districts.

In recent years, there have been a number of industrial parks proposed and established in the Western Sydney region (Business News Australia, 2015). There are also number of existing business and technology parks in Sydney, including Australian Technology Park, Macquarie Business Park and Norwest Business Park, and others around Australia that have a similar mix of commercial and industrial land to Marsden Park. A business hub has also been announced for Eastern Creek, which is expected to cater to convenience, bulky and large format retail uses (Western Sydney Parklands, 2015). In recent times there have also been proposals to rezone some areas of existing business parks for residential uses (Tan, 2016).

FIGURE 15. EVOLUTION OF BUSINESS PARKS



Source: SGS Economics and Planning, 2016

3.3 Case studies

A number of case studies have been reviewed to identify the success factors for development as well as the potential role of transport infrastructure in driving particular types of employment uses and densities. The case studies reviewed include:

- Central Hills Business Park (bulky goods industrial park)
- Eastern Creek Business Park (industrial park)
- Erskine Park (industrial park)
- Macquarie Park (commercial business park)

- Norwest (commercial business park)
- Ansty Park (England) (research and innovation business park).

The detailed analysis is contained in Appendix B of this report.

The key findings of the analysis are as follows:

- The different types of business parks have different locational requirements. For example, an industrial business park requires proximity to road infrastructure whereas a commercial focused business park benefits from proximity to public transport infrastructure.
- There are different opportunities associated with location and its surrounding residential population. For example, proximity to professionals drives success of Macquarie Park.
- Rail access is a significant driver of density which is seen through rezonings that have occurred in Norwest associated with the commitment to the rail line.

3.4 Summary

Based on the analysis above, there are a number of attributes that will drive the strategic vision, land use and what is achievable onsite at Marsden Park:

- Accessibility to arterial roads and rail
- Proximity to an appropriately skilled workforce
- Proximity to retail and other population serving land uses
- Proximity to education institutions
- Amenity and public domain
- The economic market and position of the centre within the regional context.
- Embedding the capacity to adapt and evolve to satisfy future needs

4 CURRENT POSITION REVIEW

4.1 Current industry profile

The current and proposed tenants within Sydney Business Park (as at October 2016) are detailed in Table 2. Many of these are part of the Home Hub centre which has recently been developed. These tenants have been categorised into broad land use categories (BLCs)[1] to provide an understanding of existing land use concentrations. The identified BLCs include:

- **Big Box retail**: large shopping complexes, supermarkets and factory outlets, which typically are purpose built and require high levels of visibility and accessibility.
- **Main Street retail:** small scale and local retailing, including clothing and convenience stores, restaurants or cafes.
- **Bulky Goods retail**: businesses where large buildings are needed for storage of larger items, including automobile, furniture and homemaking stores.
- **Freight and Logistics**: businesses whose primary activities include warehousing and distribution.
- **Urban Services**: land uses which involve infrastructure and activities to support the functioning of the urban environment, including waste processing and utilities infrastructure.
- **Local Dispersed**: local social and community services, such as medical centres, and
- **Service Stations**: purpose built facilities for road vehicles.

There is limited commercial office uses currently onsite as limited development has occurred within the B7 Business Park zone. However, it is likely that some of the industrial businesses contain ancillary office uses.

The initial business mix which has located in the centre reflects early stages of business precinct evolution, with floorspace intensive uses such as manufacturing and bulky goods retail locating the centre. However, this is also the result of a deliberate strategy by the landholder to raise initial investment capital and momentum. The future business mix is intended to be diversified, including commercial uses in higher order industries in an integrated precinct. This report has been commissioned early in the centre's development to identify the preconditions and infrastructure requirements to achieve this.

[1] BLCs are broad groupings of employment land uses developed by SGS.

TABLE 2 CURRENT AND PROPOSED BUSINESSES AT SYDNEY BUSINESS PARK

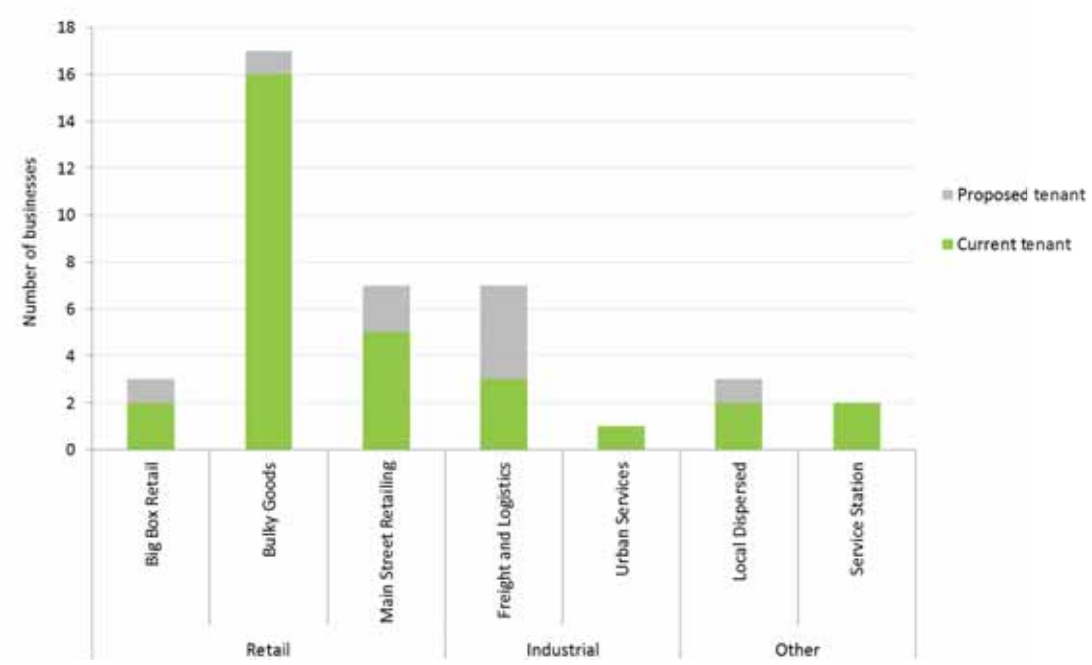
Business name	*Status*	*Type of business*
Aldi	Current tenant	Retail – Big Box Retail
Baby and Toddler Town	Current tenant	Retail – Main Street Retailing
Beacon Lighting	Current tenant	Retail – Bulky Goods
Blacktown Waste Services	Current tenant	Industrial – Urban Services
Bristol Paints	Current tenant	Retail – Bulky Goods
Bunnings Warehouse	Current tenant	Retail – Bulky Goods
Burger Point	Current tenant	Retail – Main Street Retail
Carpet Call	Current tenant	Retail – Bulky Goods
Coles Express	Current tenant	Other – Service Station
Costco Wholesale	Proposed tenant	Industrial – Freight and Logistics
DecoRug	Current tenant	Retail – Bulky Goods
Dulux Distribution Centre	Proposed tenant	Industrial – Freight and Logistics
Enhance Furnishing	Current tenant	Retail – Bulky Goods
Forty Winks	Current tenant	Retail – Bulky Goods
IKEA Store	Current tenant	Retail – Bulky Goods
IKEA Distribution Centre	Proposed tenant	Industrial – Freight and Logistics
JB Hi-Fi Home	Current tenant	Retail – Bulky Goods
Knotts Pine	Current tenant	Retail – Bulky goods
Laundy Pub & Micro Brewery	Proposed tenant	Retail – Main Street Retail
Lindt factory Outlet	Current tenant	Retail – Big Box Retail
Linfox	Current tenant	Industrial – Freight and Logistics
McDonald's	Current tenant	Retail – Main Street Retail
Marsden Park Medical Centre	Proposed tenant	Other – Local Dispersed
Masters Home Improvement	Current tenant	Retail – Bulky goods
Performance 360	Current tenant	Other – Local Dispersed
PET Stock	Current tenant	Retail – Main Street Retail
Plus Fitness 24/7	Current tenant	Other – Local Dispersed
Reece	Current tenant	Retail – Bulky Goods
Repco	Current tenant	Retail – Bulky Goods
Sleeping Giant	Current tenant	Retail – Bulky Goods
Shell	Current tenant	Other – Service Stations
Snooze	Current tenant	Retail – Bulky Goods
Storage King	Current tenant	Industrial – Freight and Logistics
Supplement Warehouse	Proposed tenant	Retail – Big Box Retail
Sushi Choice	Proposed tenant	Retail – Main Street Retail
Swire Cold Storage	Proposed tenant	Industrial – Freight and Logistics
The Good Guys	Current tenant	Retail – Bulky Goods
Toll	Current tenant	Industrial – Freight and Logistics
Tough Dog	Proposed tenant	Retail – Bulky Goods
Zambrero	Current tenant	Retail – Main Street Retail

FIGURE 16 EXISTING DEVELOPMENT AT SYDNEY BUSINESS PARK

Source: SGS Economics and Planning
From top: Lindt Headquarters, IKEA distribution centre currently under construction, IKEA retail store

Figure 17 summarises the number of businesses in each land use category:

FIGURE 17 NUMBER OF BUSINESSES BY LAND USE CATEGORY AND BUSINESS TYPE



Source: SGS Economics and Planning, 2016

Majority of the current businesses at the Park are retail based, with many bulky goods and big box retailing stores selling furniture, home improvement and automotive products. In terms of industrial businesses, there are several current and prospective business tenants that are involved in transportation and logistics, and some involved in storage and warehousing.

4.2 Summary

Marsden Park's current and expected future tenants include a mix of bulky goods retail, big box retail and industrial businesses, particularly freight and logistics. There are also a number of businesses which offer localised and main street retail services. This suggests that the current focus of the industrial area is retail, though there are a number of industrial businesses planned for the site or currently under construction. It is evident that the rapid pace of development to date is reflective of the market's recognition of the location advantages of the centre. This initial development has created substantial amenity upon which to leverage the future commercial office development.

There is limited commercial office use on site – relatively little development has occurred within the B7 Business Park zone. Commercial or office premises are not permissible in the B5 Business Development IN2 Light Industrial zones where the majority of development has occurred. However, ancillary office uses are evident (e.g. Lindt). The realisation of the commercial and office development will emerge following the resolution of the current strategic and infrastructure planning, to which this report is responding.

5 EMPLOYMENT FORECASTS AND RAIL IMPACTS

5.1 Introduction

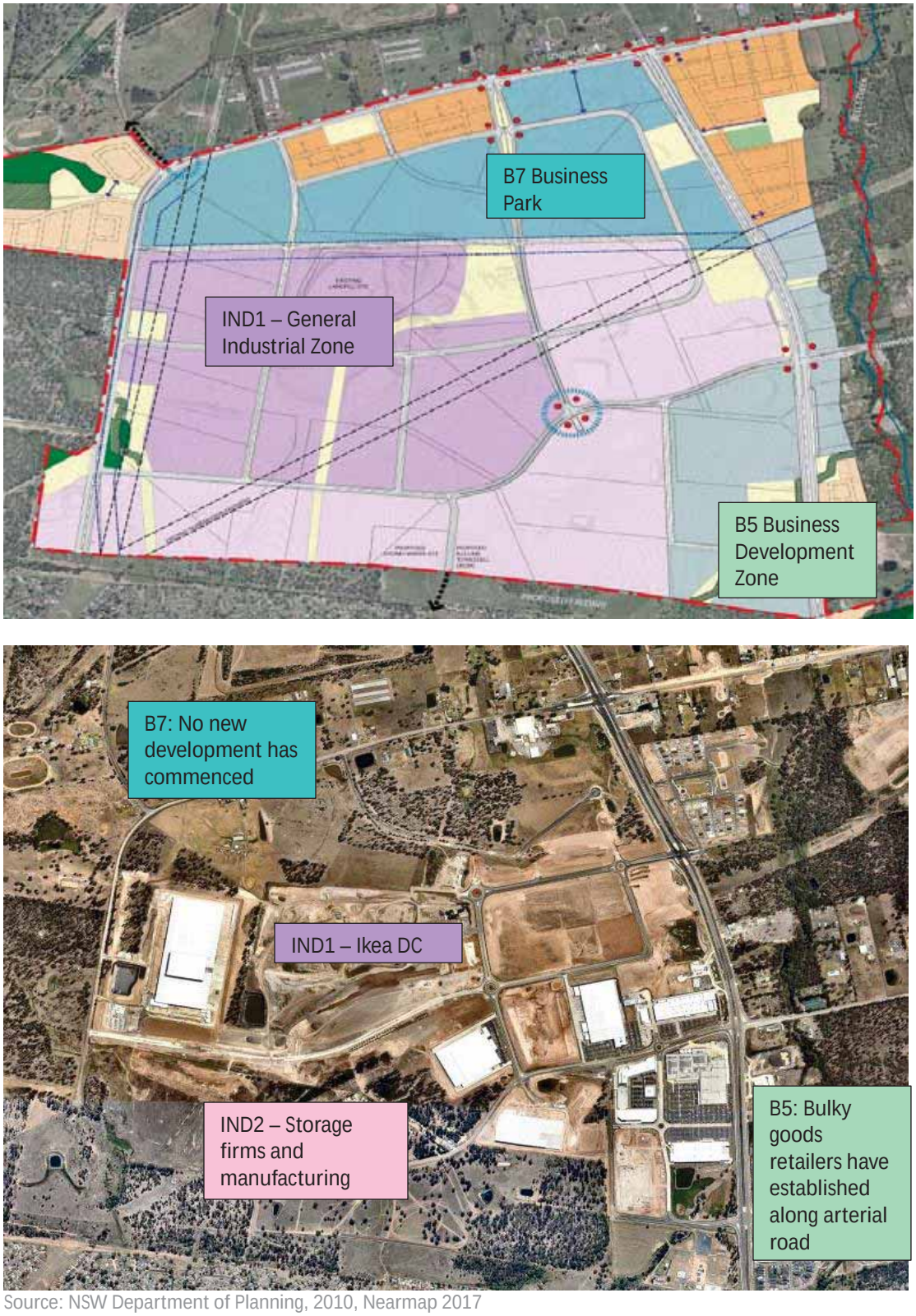
The quantity and profile of businesses which have opened in the industrial and bulky goods retail precincts of Marsden Park over the last few years as outlined in Section 4 (Table 2) is a particularly strong start for a commercial centre that was greenfield until a few years ago. The continued momentum of further commitments to locate in the centre by prominent businesses indicates that the market recognises the strategic value of the centre, and this gives confidence that momentum will likely be sustained.

Forecasts of employment growth for Marsden Park for the next few decades have been commissioned by the NSW Government and have informed *A Plan for Growing Sydney* and the draft District Plans. However, the first section of this chapter identifies that these forecasts have already been exceeded by the actual number of firms and jobs in the district and this gap is likely to rapidly increase.

Accordingly, an updated forecast of the precinct based on this momentum will be made in the second part of this Section. From this basis, the trajectory of the Business Park zoned land (yet to be developed) will be reviewed in light of the commercial strengths of Marsden Park as a location for higher order (e.g. Knowledge economy) firms to locate in and provide jobs for workers in this sector. This will establish what (if any) interventions or conditions exist in which the centre could *accelerate* its progress to a modern integrated commercial centre (with characteristics as outlined in Section 3).

This quantitative basis, drawn from analysis of primary data of the progress to date and benchmarked against comparable centres, will finally be reviewed against the potential strategic niche that was outlined in Section 2.

FIGURE 18. ZONES AND DEVELOPMENT PROGRESS SUMMARY AS AT FEBRUARY 2017



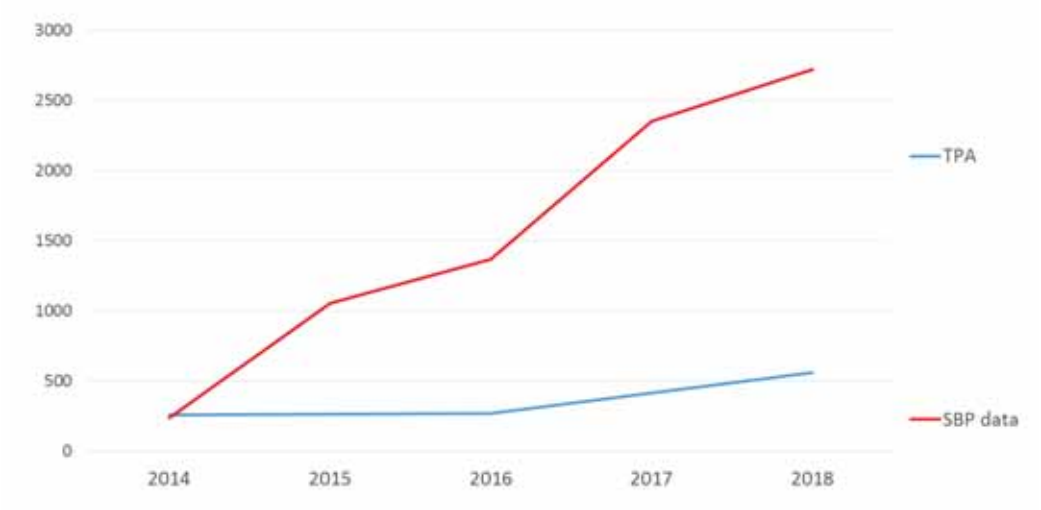
Source: NSW Department of Planning, 2010, Nearmap 2017

5.2 Data reconciliation and forecast methodologies

The number of businesses already operating in Marsden Park as at January 2017, supported by employment data by firm provided by Marsden Park Developments Pty Ltd (MPD) identifies a disparity

to the latest NSW Government's Transport Planning Analytics (TPA) forecasts. This includes MPD data on commitments from individual businesses locating in the precinct to 2018, which are already well in excess of the (pro-rated) TPA estimates of employment through to 2021 Figure 19:

FIGURE 19. ACTUAL & FORECAST JOBS IN MARSDEN PARK, KNOWN AND COMMITTED FIRMS VS TPA FORECASTS (PRO-RATED)



Source: Transport Planning Analytics, 2016, Marsden Park Developments Pty Ltd. 2016

Reflecting this significantly larger and more rapid employment roll out than the TPA forecast, SGS has re-forecast the expected employment for the precinct. Jobs provide a good proxy for the number and scale of firms investing in the precinct. Data provided by MDP on actual and committed development with land take up and employment estimates has been summarised with averages and trends in Table 3. This has been categorised by zoned land use type, excluding the as of yet undeveloped B7 Business Park land. A different methodology is required for the B7 land (see Table 4).

TABLE 3 LAND AND JOBS BY LAND USE TYPE, MARSDEN PARK TO 2018

Forecast by 2018	Bulky Goods Retailing	General Industrial	Light Industrial
Total developed land (ha.)	21.1	21.2	26.3
Total land available (ha.)	39.8	99.3	107.3
% developed as at 2018	53%	21%	25%
Years since establishment (by 2018)	5	5.0	5.0
Est. years from start to capacity:	**8.4**	**22.4**	**19.4**
Employment	920	515	1,285
Jobs p/ha	44	24	49
Jobs p.a.	**206**	**108**	**270**

Source: Marsden Park Developments Pty Ltd. 2016 with SGS calculations (2017)

As at the time of data issued for this report by MPD (October 2016), no specific information on prospective tenants for the Business Park B7 zoned part of the precinct is available. The trend approach using the average annual rate of land take up and jobs created as undertaken above for the existing precincts cannot also be undertaken for this precinct.

The current zoning of the land is Business Park B7 however the intentions of Marsden Park Developments Pty Ltd. Is to seek a rezoning to the appropriate zone to facilitate an integrated commercial centre.

To benchmark the likely rate of land take up and jobs delivered by this precinct by year, the trajectory of growth at Norwest has been analysed. Marsden Park is expected to follow a different development and pattern than Norwest, as the latter was conceived in the 1980s and follows earlier investment patterns and development aspirations than the contemporary integrated precinct as described in Section 4.2. Nevertheless, Norwest provides a recent, geographically comparable example of a successful commercial precinct in Western Sydney, against which the expected growth at Marsden Park can be reviewed.

1. The first column of data provides an 'upper bracket' best case rate of transition with a rapid establishment of knowledge sector firms and employees. This data reflects the actual rates of land developed and employment yielded at Norwest (average per annum) since its inception. This data provides two options for forecasting the rate of growth that could be expected in the commercial precinct (which will occur *in addition* to the forecast jobs and land take up per year for the precincts in Table 3):

2. **Moderate case (i.e. base case):** where Marsden Park will take approximately the same development period (number of years) to reach capacity as projected for Norwest (c. 40 years) and no rail is assumed. This option has the lower resulting annual land take up and emp. growth. As a mature commercial centre, Norwest has a greater density of employment (jobs/ha.) than has been found by SGS in previous studies of outer-metropolitan commercial parks, and a lower jobs/ha. (150) forecast has been assumed.

3. **'High' case:** Business Park (B7) zoned section of Marsden Park grows at the same average annual take up rate of land and similar jobs yield p.a. as Norwest has had (therefore c.20 year development period to capacity). This case assumes that all the competitive factors influencing firms' location decisions are optimised at Marsden Park (See Appendix C for the Multi Criteria Assessment for a breakdown of these), including a hypothetical immediate extension (or announcement) of rail. This is to provide an 'upper bracket' best case to the rate of transition to a knowledge economy based integrated commercial precinct.

TABLE 4 EMPLOYMENT GROWTH P.A. AND LAND DEVELOPMENT: MARSDEN PARK (FORECASTS) C/F. NORWEST (ACTUAL TO 2016)

	Norwest - 2016	Marsden Park B7 Zone– Forecasts		Marsden Park (Other employment land see table 3)
		Moderate Case	High Case	
Undeveloped land (ha.)	31.7	70.6	70.6	246.4 (+12.9 town centre)
Total Developed Land (ha.)	125.0	0	0	68.3
Total Land available (ha.)	156.7	70.6	70.6	
% developed	80%	0%	0%	
Years since development commencement (as at 2016)	33	-	-	
Est. years from start to capacity:	41	41	19	
H.a. take up per annum	3.8	1.7	3.8	
Est Employment	**32,377**	**10,590**	**14,438**	
Jobs p/ha	259	150	205	
Jobs p.a.	**981**	**256**	**775**	

Source: Employment Lands Development Program (2016), SGS calculations (2017)

Jobs in the Business Park zoned precinct of Marsden Park are expected to primarily comprise Knowledge Sector (see Appendix C) firms & employees, given the permissible building typologies & intended uses.

5.3 Scenarios

The per annum forecasts of jobs yield per commercial precinct in Marsden Park has been summarised in Figure 20. This graph compares:

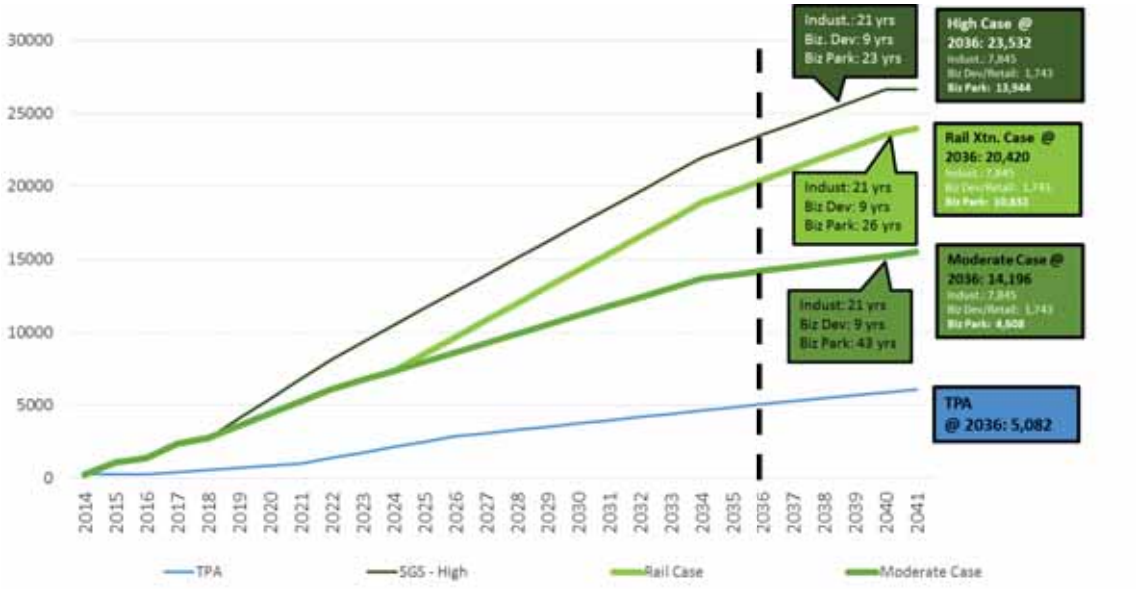
- Jobs by year estimated for Transport Planning Analytics (using a metropolitan-wide forecast of Travel Zone-level projections). These have been used as the basis of the assumptions in the draft District Plan.
- 3 revised employment growth scenarios – these reflect actual take up and commitments by industrial and bulky goods businesses expected to open over the next two years (Table 3). The annual increase in jobs reflects the recent trends and increases at trend rates until each precinct runs out of available land. After this, a modest annual intensification of employment in line with long term economic growth has been assumed.

The rate of employment in the Industrial and Business Development/Bulky Goods precincts has been kept consistent for each three revised scenarios, as these uses are predominantly private vehicle and freight based, and will be only marginally affected by the introduction of passenger rail to the centre.

The three scenarios differ in their assumptions about the timing and rate of growth in the B7 Business Park zoned precinct:

1. **Moderate Case –** Annual jobs growth as per Table 4
2. **High Case –** Annual jobs growth as per Table 4
3. **Rail Extension (Sydney Metro North West):** Moderate Case rates assumed until rail announced/opened, after which a higher rate of the (currently) Business Park B7 Zoned land is developed each year (i.e. at the rate of the High Case). The effects have been assumed to commence around 2025 due to limited details on when the rail link would be operational). Once this occurs, Marsden Park will shift to the rate of growth per annum observed at Norwest: this reflects that the competitive disadvantages that the centre has relative to Norwest (and to a lesser extent Parramatta), will be mitigated by the improved connectivity and amenity from rail. See the Multi-Criteria Assessment in Appendix C

FIGURE 20. FORECAST JOBS BY INDUSTRY IN MARSDEN PARK, 2014 - 2041



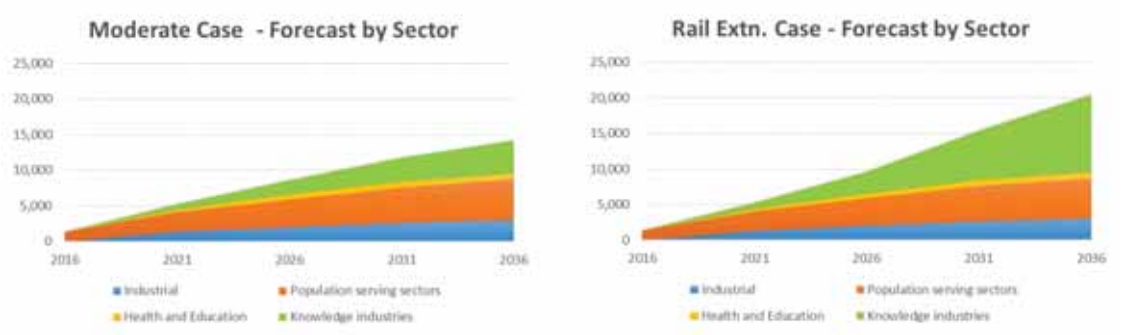
Source: BTS (2016) with SGS calculations (2017)

Reflecting the disparity in Figure 19 earlier, the TPA forecasts are likely too conservative given the land available and existing rates of take up.

Acknowledging the difficulty of forecasting probable rates of growth for greenfield sites, SGS' view is that Marsden Park will likely follow the Moderate Case trend until such time as a detailed commitment (at the very least) on the extension of the Sydney Metro North West is made by the government. As noted in the MCA, this commitment will close the overall competitive gap for prospective knowledge industry firms between Marsden Park and Norwest, and shift the former into the high rate of growth that the latter enjoyed.

The composition by Broad Industry Categories (BIC) of the forecast employment under the Moderate and Rail Extension cases are shown in Figure 21. The difference in outcome between the scenarios by 2036 is approximately 6,200 additional knowledge sector employees where rail connectivity is provided.

FIGURE 21. FORECAST JOBS BY BIC IN MARSDEN PARK, 2016 - 2036



Source: SGS (2017)

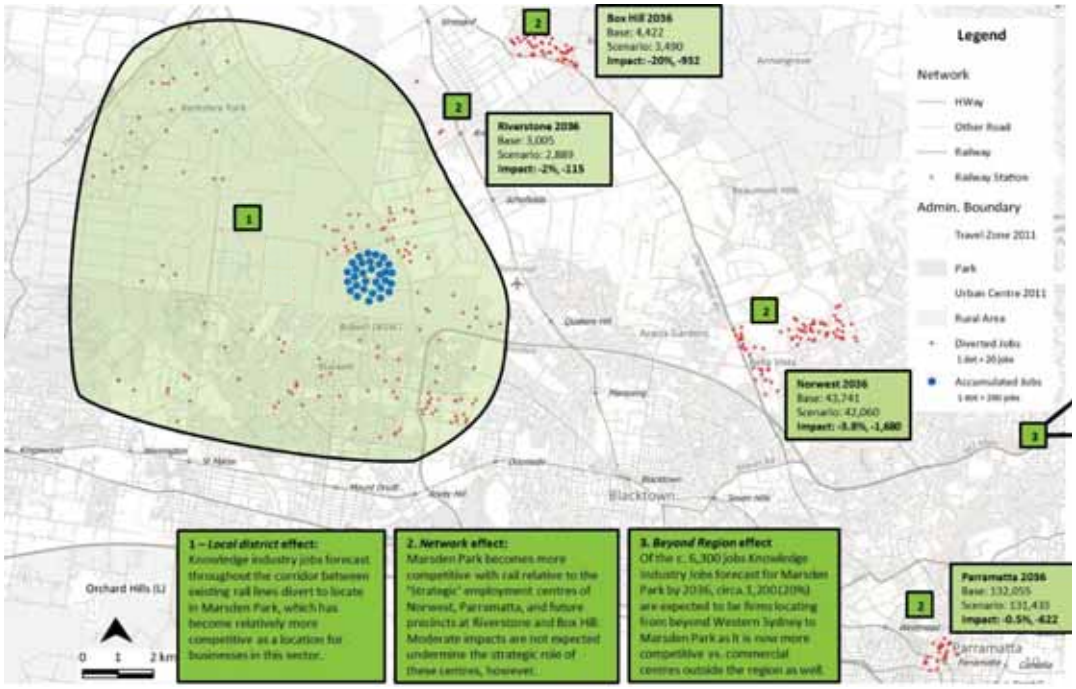
Impacts

The increased jobs forecast for Marsden Park by SGS are not simply 'new' jobs to Sydney that will be created out of latent demand. Instead, they reflect that the centre is a more competitive locational offer at a regional level for firms than the metropolitan-wide forecasts for TPA assumed. Therefore, it should be expected that increased jobs (and therefore firms) at Marsden Park will come at the expense of relocations of existing firms from elsewhere (reflected in the Base Case), or investment diverted from other employment precincts in the region that would otherwise occur (see below for the rail-case).

Figure 22 shows these impacts under Rail Extension Case by 2036, where the additional knowledge sector jobs cluster in the integrated commercial precinct at a Metro-connected Marsden Park (blue dots). This would otherwise have located in other centres throughout the region (red dots).

These impacts have been distinguished by location into three categories of impacts, reflecting the relativity of the competitive improvement of Marsden Park with rail connectivity with differing scale and distance.

FIGURE 22. RAIL EXTENSION CASE – FORECAST IMPACTS ON OTHER COMMERCIAL CENTRES BY 2036



Source: SGS (2017)

It should be noted that while these are 'impacts' in the sense that these diverted jobs will come at the expense of other centres, in SGS' view these will not be of the scale to undermine their intended role, particularly Norwest or Parramatta. The concentration of jobs at Marsden Park will have other economic benefits, such as agglomeration (discussed further in Section 6).

5.4 Floorspace demand at Marsden Park

The forecast jobs by industry can be converted to expected floorspace demand by development type using standard Broad Landuse Categories (BLCs) which SGS has developed in previous commercial and employment land analysis:

TABLE 5 DEMAND FOR FLOORSPACE AT MARSDEN PARK: BASE CASE AND WITH RAIL, 2036 & TOTAL CAPACITY ('000 SQ.M.)

	Total	Campus style	Office	Short-term Accom.	Dispersed Activities	Special Activities	Local light indust.	Manuf. - Light	Manuf. - Heavy	Freight and Logts.	Urban Servs.
Moderate case	823.3	58.7	51.1	8.0	12.3	45.3	83.9	27.3	8.4	265.7	136.0
Rail Extn Case	1,127.8	58.7	150.5	8.3	12.6	57.3	97.5	34.8	9.2	330.6	193.2
Total Capacity	**1,142.0**	**58.7**	**198.4**	**8.4**	**12.8**	**62.6**	**157.6**	**42.1**	**9.6**	**370.2**	**221.7**

Source: SGS Economics and Planning, 2016

Note that this excludes retail, which has been analysed using specialised techniques in Section 9.

5.1 Summary

The impacts of a railway extension to Marsden Park

In addition to the amenity benefits of rail connection to the Sydney Metro North West for local residents, a rail extension to Marsden Park would have direct benefits for the employment offer in the centre.

As noted earlier, the commercial property market is dynamic and evolving, and this is particularly pertinent as Marsden Park's location in the growth corridor means that is ultimate evolution is subject to a wide variety of metropolitan factors (e.g. the commercial and residential property markets' performance) and state and national performance (e.g. overall economic growth, continued expansion of knowledge-based industries).

Marsden Park has competitive characteristics which could position it to have a greater provision of commercial (particularly office) floorspace than current employment forecasts from the BTS imply. However, the stimulus for this is likely to be a rail extension to Marsden Park and amenity suitable for a modern office precinct to be delivered. Such an outcome would address a number of competitive shortfalls in the centre identified in the Multi-Criteria Analysis.

Evaluating the appropriate designation and support for Marsden Park as a centre in the metropolitan context

SGS' interpretation of the 'narrative' of the aspirations for Sydney under the latest District and Metropolitan Plans was outlined in Section 3. It was identified that planning, infrastructure and policy support for a stronger role at a metropolitan level did not conflict with the desired economic geography of Sydney in the decades to come.

This section has reviewed at a micro level the employment potential of the centre against existing expectations and found that a reconsideration of the centre as a regional-scale employment hub, instead of simply a district-scale centre is warranted.
Under the draft District Plans, Strategic centres have or will have:

- A higher proportion of knowledge economy jobs, principally relating to the presence of major hospitals, tertiary education institutions, stand alone office development or a combination of these
- The presence of existing or proposed major transport gateways
- A major role in supporting the increased economic activity of the Eastern, Central or Western Cities.

With the quantified economic distinctions between District and Strategic Centres as follows:

	Typical Employment	Retail Floorspace
District Centre	5,000 – 10,000	50,000+ sq.m. GLAR
Strategic Centre	20,000+ (Large proportion in knowledge industry)	(Not specified – Bankstown @ 85,000sq.m+ GLAR)

Source: Greater Sydney Commission (2016)

Even under the Moderate (base) case without rail, SGS expects the Marsden Park to support nearly 14,200 jobs by 2036 on the available evidence. With rail, the forecast is expected to meet the notional 20,000 job threshold to be considered a Strategic Centre and also would deliver the qualitative characteristics (in particularly knowledge economy jobs).

SGS believes that the strategic alignment identified in Section 2 is therefore also reflected in realistic expectations for the employment potential of Marsden Park, based on the available information and performance of the precinct to date. Integration of Marsden Park with the metropolitan rail network via the Sydney Metro North West would expedite the transition of the centre to a mature integrated commercial precinct (from Section 3), maximising the value and uses of the land to employers and the community.

6 IMPACTS FROM RAIL ON POPULATION AND DWELLINGS

6.1 Introduction – opportunities for an integrated urban centre

Rail will have quantifiable implications for population growth and dwelling types, in addition to the number of firms and employees locating in and around the centre. SGS has developed an Accessibility Model used to estimate these effects for previous metropolitan-scale infrastructure (including the Sydney Metro North West). This has been applied to simulate the effects of an extension of the Metro to Marsden Park.

6.2 Conceptual framework and methodology

The statistical analysis is based on earlier work by SGS for the Australian Government to estimate the extent to which infrastructure investment that improves connectivity to areas influences housing development. The analysis was undertaken at a metropolitan level given the strong inter-relationships between localised housing markets. That is, an increase in supply in one location is likely to impact supply in another.

Figure 23 overleaf provides an overview of the approach, key inputs/outputs and analytical tasks competed during this stage of the project. The statistical analysis and subsequent redistribution model has been created based on the ABS Statistical Area 2 (SA2) geography. There are approximately 250 SA2s across the Sydney metropolitan area. These are similar in size to a suburb; an SA2 typically has between 4,000 and 7,000 dwellings.

See Appendix D for the full range of explanatory variables tested.

Effective Job Density

A change in travel times for an area has a direct relation to its value as an employment or residential location for many reasons, but particularly for the change in the number of jobs that can be accessed. The significance of this connectivity phenomena to dwelling patters and investment decisions has been identified by SGS in the past and was one of the strongest explanatory variables found in the regression analysis.

SGS has developed a spatial index of this phenomena which is referred to as Effective Job Density or EJD. EJD is a measure of the relative concentration of employment, derived from the density and accessibility of all jobs across a region, and is calculated as follows:

- Number of Knowledge Industry jobs at Travel Zones (b) - sourced from the 2016 BTS employment estimates
- Public transport travel time from location Marsden Park (a) to Travel Zones (b):

$$EJD_{\text{at a}} = \sum_{a}^{n} \frac{\text{Jobs}_{\text{at b}}}{\text{Travel time}_{\text{a to b}}}$$

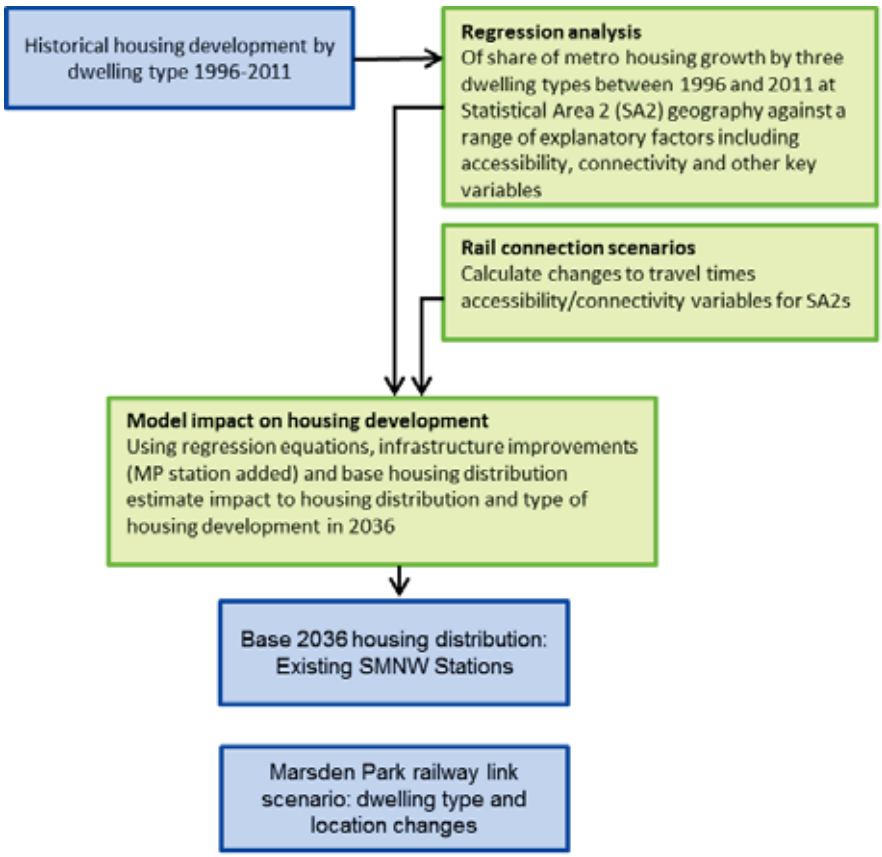
From the regression analysis it was found that as connectivity (via EJD) increases for an area there is likely to be an increase in the number of dwellings developed in that location.

The strength of the relationship of increased EJD to increase dwelling density was found to vary by the different development types. It was found that apartment development exhibited the strongest relationship with connectivity, as part of a shift in the mix of housing types which will be developed:

- Separate houses are less likely to be developed;
- Semi-detached houses will remain relatively the same; and
- Apartments are more likely to be developed.

For this reason only the apartment regression equation was used in the Accessibility Model. Detached and semi-detached had a very weak relationship, with most of the variation being explained by other factors such as land supply.

FIGURE 23. SGS ACCESSIBILITY MODEL FRAMEWORK



Source: SGS Economics and Planning, 2016

Application to Marsden Park

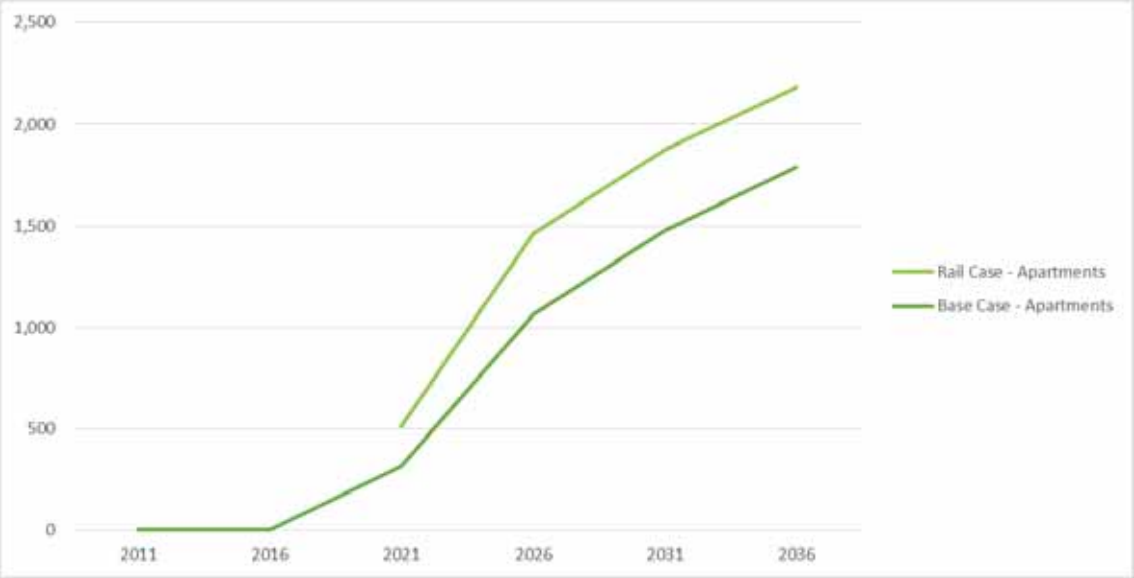
The NSW Government's quotes 48 minute travel time to Martin Place from Cudgegong Station by 2024 upon completion of the network, close to halving the current time.

Applying a similar reduction to the public transport travel times for the SA2 in which Marsden Park is located increases the EJD score for this SA2, as substantially more jobs are now accessible within 30 minutes of Marsden Park via public transport. The relative EJD coefficient in the model has then been applied to forecast the change in the share of dwellings expected to location in Marsden Park and output shifts in dwelling mixes, factoring in the model's density equivalence ratio[2].

Population and dwelling changes

The changes in apartment activity under the rail/no rail scenarios in and around Marsden Park town centre are graphed below:

FIGURE 24. SGS ACCESSIBILITY MODEL – MARSDEN PARK FORECAST APARTMENT QUANITY BY SCENARIO



The model indicates circa 400 additional apartments by 2036 over the base case – an increase of 20 per cent. This impact has been front-ended to apply early in the forecast period given:

- The accelerating rollout of apartments in the SA2 (source: ABS building approvals to Nov 2016[3])
- The probability that apartment construction will commence even ahead of the stations' completion, corroborated by media reports

The model's density equivalence ratio indicates that the additional apartments will displace 60 detached dwellings that will be constructed around the centre in the base case. In net terms, approximately additional 800 residents will live in the town centre.

[2] A density equivalence ratio estimates the number of detached houses that are replaced by new apartment development (i.e. increased density). Using historical trends in housing demolition and apartment construction the ratio was estimated to be 1:9, i.e. 1 house to 9 apartments.

[3] Australian Bureau of Statistics, *ABS Stat. Building Approvals by Statistical Area 2*, January 2017, http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_BA_SA2

6.3 Summary

The medium term impact of a rail extension on dwelling mix and overall population intensity around the centre will be to increase the overall intensity and accelerate the rate of apartment roll out. But this impact should not be over stated given:

- There is clear existing market interest in higher intensity dwelling typologies even without a firm rail commitment
- The relative attractiveness of living close to a railway station in the district is not exclusive to Marsden Park with several precincts with new stations along the SMNW corridor splitting the demand for apartments in the region.
- There is also mixed evidence of the empirical effect of rail on dwelling construction: Schofields railway station completed was completed in 2012; as at January 2017, the adjacent Stockland development is still embryonic and significant holdings of land in the vicinity remain to be developed.

The objective, modelled approach indicates that the extension of rail to Marsden Park will increase the number of residents living in proximity to the centre and will shift dwelling mix to more apartments. Whilst not 'game changing' in and of itself, this has positive implications for strategic & local business development in the centre: more demand, more lifestyle options supporting mixed use commercial centre evolution (home/work proximity)

7 SOCIO-ECONOMIC EVALUATION FRAMEWORK

7.1 Introduction

Beyond reconfiguring the population and economic trajectories of Marsden Park, transport accessibility improvements have broader socio-economic benefits in terms of equity, environmental improvements, local amenity and diversity.

It is beyond the scope of this study to fully cost these factors into a broader Cost-Benefit Analysis (CBA), but the analysis in this section has been undertaken to categorise and list specific benefits (and costs) to the socio-economic characteristics of the area. These can be quantified in future work evaluating the economic case for a rail extension.

7.2 Project Case

The benefits tabulated in the framework in 7.3 (overleaf) reflect the project case, where the Sydney Metro North West has been extended as previously proposed by the NSW Government. It has been assumed that logical supporting projects have been undertaken such as optimised bus services to nearby suburbs to maximise the connectivity of the station with the district.

These benefits should be considered incremental of the base case where Marsden Park develops in line with the employment trajectory forecast in Section under the 'no rail' scenario.

Italicised benefits in 7.3 refer to a hypothetical future extension of heavy rail (Metro or otherwise) from Marsden Park to the south, connecting the centre to a broader orbital network which would fully integrate it into the future economy geography of Sydney's 'Third City' in the west. This would comprehensively activate the future economic opportunities of the broader region available to residents in and around Marsden Park. It would also improve the ability of residents in low socio-economic areas to the south of Marsden Park such as Mount Druitt to access the considerable future investment and economic opportunities in the precinct.

These benefits are contingent on development the rail link – primarily to the Sydney Metro (and a future rail connection to the south, where noted): without rail, these benefits will not materialise.

7.3 Framework

To provide the 'modularity' to feed into a future CBA, the framework has been categorised to reflect themed social objectives:

FIGURE 25. SOCIO-ECONOMIC APPRAISAL FRAMEWORK

Social Asset	**Summary improvements:**	**Specific benefits with rail link (to Sydney Metro,** *italicised reflects extension to future rail to the south as well)*
Transport	• Equity through increased number of jobs accessible • Productivity through agglomeration • Integration into broader economic structure of Western Sydney	• Reduces environmental impacts associated with reduction in car usage • Greater access to employment opportunities for Marsden Park (+ local district) residents e.g. Norwest now ~30 min. journey by rail • Greater access to Marsden Park firms from external clients (better B2C connections and improved market access for firms) • Productivity benefits with reduced travel time – increased EJD and improved B2B connections • Increased in public transport usage will reduce car dependency • Reduction in congestion and frees up road space for buses as well as freight + commercial vehicles • *Potential rail extension to Airport would consolidate economic links to airport employment and fully link Marsden Park within the "Third City"* •
Services and other infrastructure	• Access to services and education	• Increased access to specialised services throughout the regional for residents including educational, health, social, recreational and cultural institutions and other community services
Social diversity	• Local amenity through a new community focal point for isolated residents • Equity through increased type of jobs accessible	• Rail, with supporting bus links to suburbs to the south (including Bidwell, Wilmot and Shalvey), will integrate the existing residents into the broader sphere of Marsden Park; addressing the lack of town centre for these suburbs as well as spreading the accessibility benefits listed above. • Greater mix and variety of local employment: the change in locational preferences for Knowledge Sector firms to locate in Marsden Park will increase local provision of higher order office jobs in an integrated commercial precinct – Delivering high value jobs in Western Sydney supports strategic directions within metropolitan Sydney. • *A southern orbital rail link will provide greater access to employment opportunities and services in Marsden Park for lower socio economic areas such as St Marys or Mt Druitt – providing far better access for those who cannot afford to drive*
Public domain	• Town Centre anchored by pedestrian & public transport focus	• Opportunity to plan for and develop a town centre which has greater amenity benefits; pedestrian oriented centre and promotes greater use of public domain • Mitigates risk of Rouse-Hill style town centre near-exclusively focused on car and bulky retail

Source: SGS (2016)

Costs

Beyond the purely financial quantification of net up front and ongoing costs offset by revenues, an objective assessment of the public interest considerations of a rail extension need to also consider the costs of the proposal.

In this instance, the most important consideration is *opportunity cost*: Marsden Park and the surrounding suburbs may not necessarily be the district for which rail (or other uses of government funds) will have the largest improvement in outcomes. The socio-economic benefits listed above should therefore be compared at the time of decision-making against the improvements that other projects of equivalent expense would yield (be they project or others).

8 VALUE CAPTURE OPPORTUNITIES

8.1 Introduction

SGS noted in the technical report undertaken for Infrastructure Australia in 2015[4] that other things equal, proximate state level infrastructure investments such as rail will cause an episodic value uplift against background trends of growth (e.g. base case population growth). This would of course apply in the case of an extension of the Sydney Metro North West to Marsden Park.

An effective land value capture mechanism would ideally capture a large portion of the windfall or unearned gains arising from public investment without penalising or inhibiting property development and investment that generates earned value added and new economic contribution.

SGS and other firms have found ample evidence that the provision of transit infrastructure can improve property values[5], although proximity alone will not guarantee this and a holistic and nuanced approach should be taken when assessing the potential for land value uplift from new infrastructure. Incremental value created by proximity to or flow-on benefits from transport infrastructure is clearly created by government investment. The incremental land value uplift attributable to the transport project is therefore legitimately subject to a value sharing or value capture arrangement to share costs amongst those who will receive a windfall from the project.

8.2 Value capture mechanism options

Uplift associated with proximate state level infrastructure provision may be staggered with a jump at project announcement and then another at project opening, and gradual increases as user benefits are realised. However, distinguishing any of these tranches of uplift for particular sites or precincts may be difficult given the dynamics and multiple potential influences on underlying land value.

Value capture mechanisms currently or theoretically operable in NSW have been summarised in Figure 26.

[4] http://infrastructureaustralia.gov.au/policy-publications/publications/files/SGS_Technical_paper_on_value_capture-September_2016.pdf

[5] See also Consult Australia and AECOM (2016) Value Capture Road Map http://www.aecom.com/au/wp-content/uploads/2015/12/Value-Capture-Roadmap-2015.pdf

FIGURE 26. VALUE CAPTURE MECHANISMS

Type	In place?	Notes
State land tax	Yes – applies to all properties outside primary places of residences	Not a comprehensive value capture measure, not hypothecated to state
Local rates	Yes, but not as a value capture measure	
VPA	Yes, applied site by site dependent on circumstances of rezonings and DAs	Typically negotiated between councils and developers, and applied to local infrastructure. Uncertain if appropriate to apply to state infrastructure
Special Infrastructure Contribution	Yes – NW Growth Centre, proposed for Parramatta Light Rail	Currently only to pay for 50% of roads, bus services, open space, planning and delivery costs, and land for social infrastructure Initial literature review suggests a variation or additional SIC to fund rail for Marsden Park is the most suitable
New arrangement based on land value uplift	No	Mechanism TBD with further work

Source: SGS Economics and Planning (2016)

Financial and economic modelling of each of the options to determine the optimal option is beyond the scope of this report, however the research undertaken for this report indicates that a Special Infrastructure Charge is most likely applicable option to fund all or part of the costs of an extension of the Metro to Marsden Park.

8.3 Special Infrastructure Contribution (SIC)

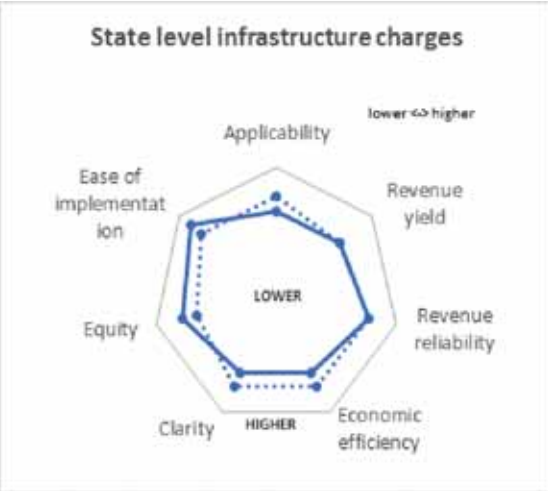
Where applied, state level infrastructure charges are paid during the development process (payable or provided as works in kind by development proponent prior to granting of Subdivision or Construction Certificate), and contribute towards infrastructure costs at the state or regional level, such as for roads and major transport projects as well as social infrastructure. As currently applied, state level infrastructure charges are notionally user pays charges (or at times in NSW, 'impact mitigation payments). In reality though, they are value capture levies not directly related to anticipated value uplift, that nevertheless recognise that beneficiaries of infrastructure investment should contribute to its funding.

Special Infrastructure Charges (SICs) have been applied in the North West and South West Growth Centres of Sydney, with the funding raised contributing to state level infrastructure (state and regional roads, land needed for social infrastructure elements such as schools). SICs are applied through a determination made under Section 94EE of the EP&A Act, allowing the government to collect special contributions to support the provision or extension of infrastructure, including for transport.

The rate of contribution is indexed annually and is dependent on the class, type and location of the development, and is intended to contribute 50% of infrastructure provision costs in the Growth Centres. SICs are payable on the granting of a Subdivision or Construction Certificate from Council. Funding generated by SICs is held in a Special Contributions Area Fund, though most SIC liabilities have been met by works-in-kind. SICs can be used to fund infrastructure outside the special contribution area, as long as it benefits the development in some way, such as regional public transport. Other examples of these include the Special Infrastructure Contributions (SICs) imposed in NSW for Sydney's Growth Centres, Growth Areas Infrastructure Contributions (GAICs) in Victoria, and infrastructure charges for Priority Development Areas (PDAs) in Queensland.

Figure 27 is an excerpt from SGS' 2015 technical paper, depicting the relative strengths of SICs against the framework of optimal characteristics value capture mechanisms. The dotted line refers to an alternative application to the current approach, whereby application is broadened to infill development areas to improve efficiency and clarity, at the cost of increase complexity and possible equity impacts.

FIGURE 27. ASSESSMENT OF SIC AGAINST VALUE CAPTURE MECHANISM OBJECTIVES



Solid line and marker
Current role in funding greenfield state level infrastructure–

Reflects existing arrangements for funding infrastructure in greenfield areas (NSW and Vic)

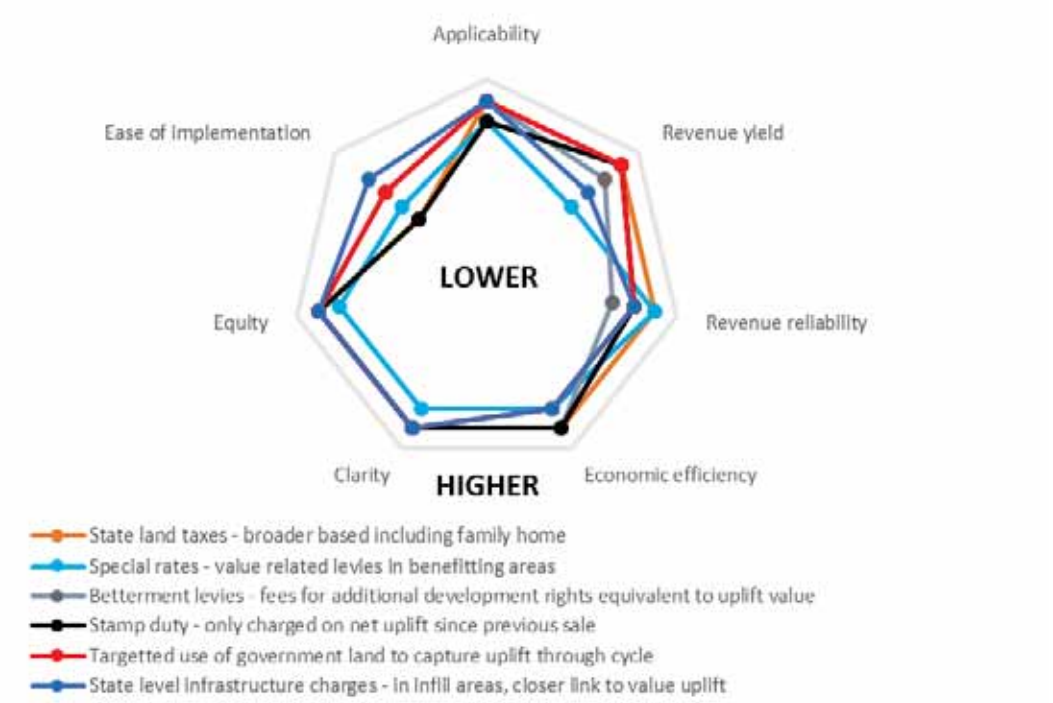
Dotted line and marker
Possible future 'value capture' role for major infrastructure funding –

SGS recommended reform to widen state level infrastructure charges to infill areas for nominated major infrastructure

Source: SGS Economics & Planning (2015)

The relative strengths and weaknesses of SICs against other options (throughout Australia) for value capture are depicted in Figure 28:

FIGURE 28. ASSESSMENT OF SIC AGAINST VALUE CAPTURE MECHANISMS



Source: SGS Economics & Planning (2015)

The SIC scores relatively well against the other methods in general; in particular its existing application makes it the easiest option to implement.

8.4 Summary - benefits and drawbacks of the SIC as a value capture mechanism

A decision needs to be taken on level of cost-recovery for project. The practice in Australia has been to only partial recoup costs due to broader social and economic benefits of projects and avoid punitive charges marginalising developments. In the case of Marsden Park, an optimised SIC levied to pay for an extension of the Sydney Metro North West are as follows:

Benefits

- A SIC is already in operation in the North West Growth Centre, making it a reasonably easy option to adapt, or duplicated in the area of which land values will be affected by an extension of the Metro.
- This option provides good clarity to market and public on purpose, the tangible nature of the rail link extension allows a clear connection to be made between the benefits to the collected revenues.
- SICs are economically efficient due to their limited distortions (i.e. they are levied on immobile land, and are already in operation in the largest Australian cities)
- Also a relatively equitable measure given the straightforward link that can be established between the requirement to pay the SIC and the beneficiaries of the Metro extension.

Drawbacks

- Hypothecation to the Metro project means revenue is sensitive to property market fluctuations.

9 RETAIL

9.1 Introduction

As noted in section 2.4, Marsden Park's role as a district centre under the draft District Plan includes functioning as a major retail node within the district. This section evaluates the retail potential of a proposed town centre located in Marsden Park through defining the centre's geographic catchment, factoring in population and market growth, modelling the roll out of other retail floorspace throughout the region and testing the floorspace supportable.

9.2 Approach – Retail Gravity Model

To address the study brief, a Retail Gravity Model has been constructed which covers the Western Sydney region. This section describes the mechanism of the gravity modelling as well as the key inputs to the model.

The Western Sydney Retail Model distributes the retail expenditure using a gravity distribution mechanism. A gravity model, as its name implies, looks at the likelihood or propensity of a particular person to gravitate towards a retail centre. These types of models estimate how much of a person's retail expenditure will be spent at a particular centre based on two opposing forces.

- **An attracting force** – if all retail centres were at your doorstep people will still have a preference to visit one centre over the other. This is a result of floorspace (as shoppers tend to enjoy greater variety and choice), the quality of the retailers, the price, the supplementary businesses (for example cinemas, entertainment) and so on.

- **A detracting force** – this is generally represented as how far away the centre is. Given the associated costs of travel (all other things equal between two centres) a shopper will try and shop at the closer centre.

These two forces determine the market pull of a particular centre which is then used to determine how much of each resident's retail expenditure (that is, market share) will be spent at that particular centre. For a particular group of residents the market pull of a centre is calculated as follows:

$$\text{Market Pull} = \frac{\text{Attraction Force}}{\text{Detracting Force}}$$

$$= \frac{('Attractiveness' \, of \, the \, centre) * (Floorspace \, of \, the \, centre)}{(Travelling \, time \, from \, the \, customer \, to \, the \, centre)^2}$$

As described above, the 'attractiveness' is a measure of a wide range of factors that make a shopper prefer one centre over another. All these factors are captured in the actual current performance of the centre.

The market share, or percent of expenditure that is likely to be spent at a particular centre, is then calculated as follows:

$$\text{Market Share} = \frac{(Market\ Pull\ of\ Centre\ X)}{Sum\ of\ (Market\ Pull\ to\ all\ Centres\ within\ the\ Model)}$$

As opposed to making assumptions to try to directly calculate the relative 'attractiveness' of each centre, the 'attractiveness' of a centre is determined within the model, using the estimated retail turnover as a basis and working backwards to find the 'attractiveness' value at the present time.

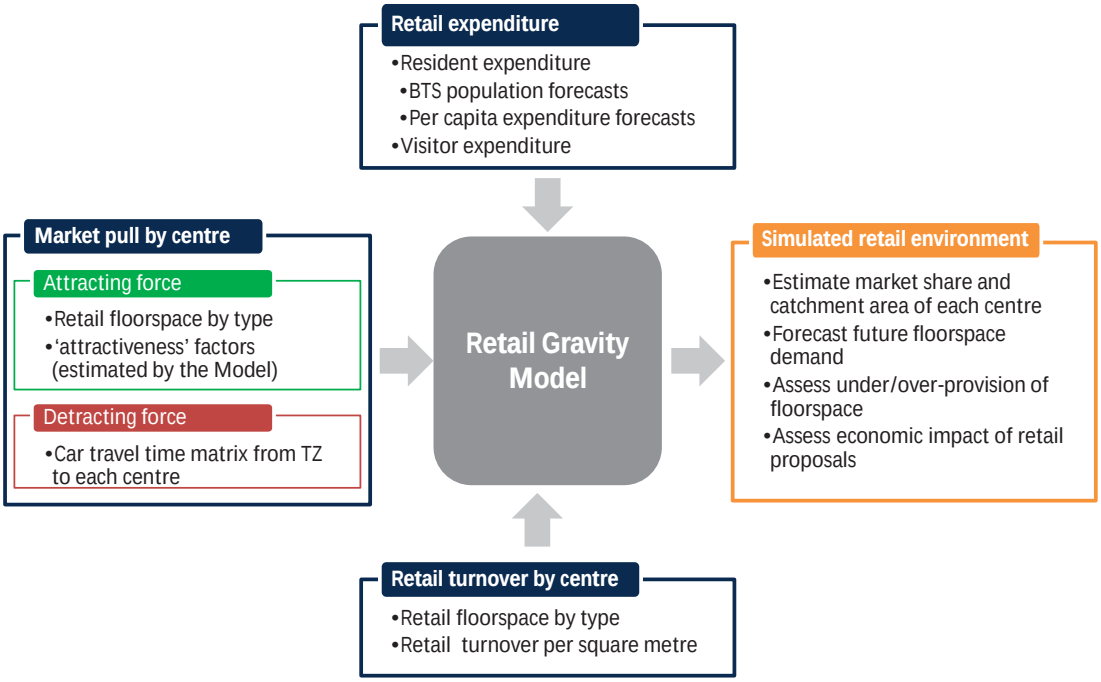
The calculated 'attractiveness' index value will be set as a constant for each centre, unless otherwise altered in a specific scenario.

In order to simulate current and future retail environments in Western Sydney, using the gravity model, four basic components are required:

- Retail expenditure by travel zone (that is the smallest geography used by the official population forecast);
- Retail turnover by centre;
- The attracting force of each centre;
- The detracting force of each centre (in relation to customers residing in different travel zones).

The above components as well as the model outputs are illustrated in the diagram below:

FIGURE 29. RETAIL GRAVITY MODEL INPUTS AND OUTPUTS



Source: SGS, 2016

A fundamental premise for the gravity model is that the current retail system, which is the Western Sydney region in this case, is in balance. That means that the total retail expenditure equals the total turnover at various retail centres within the system. The model then estimates the 'source' of retail turnover and 'destination' of retail expenditure based on the market pull equation described above.

9.3 Model inputs

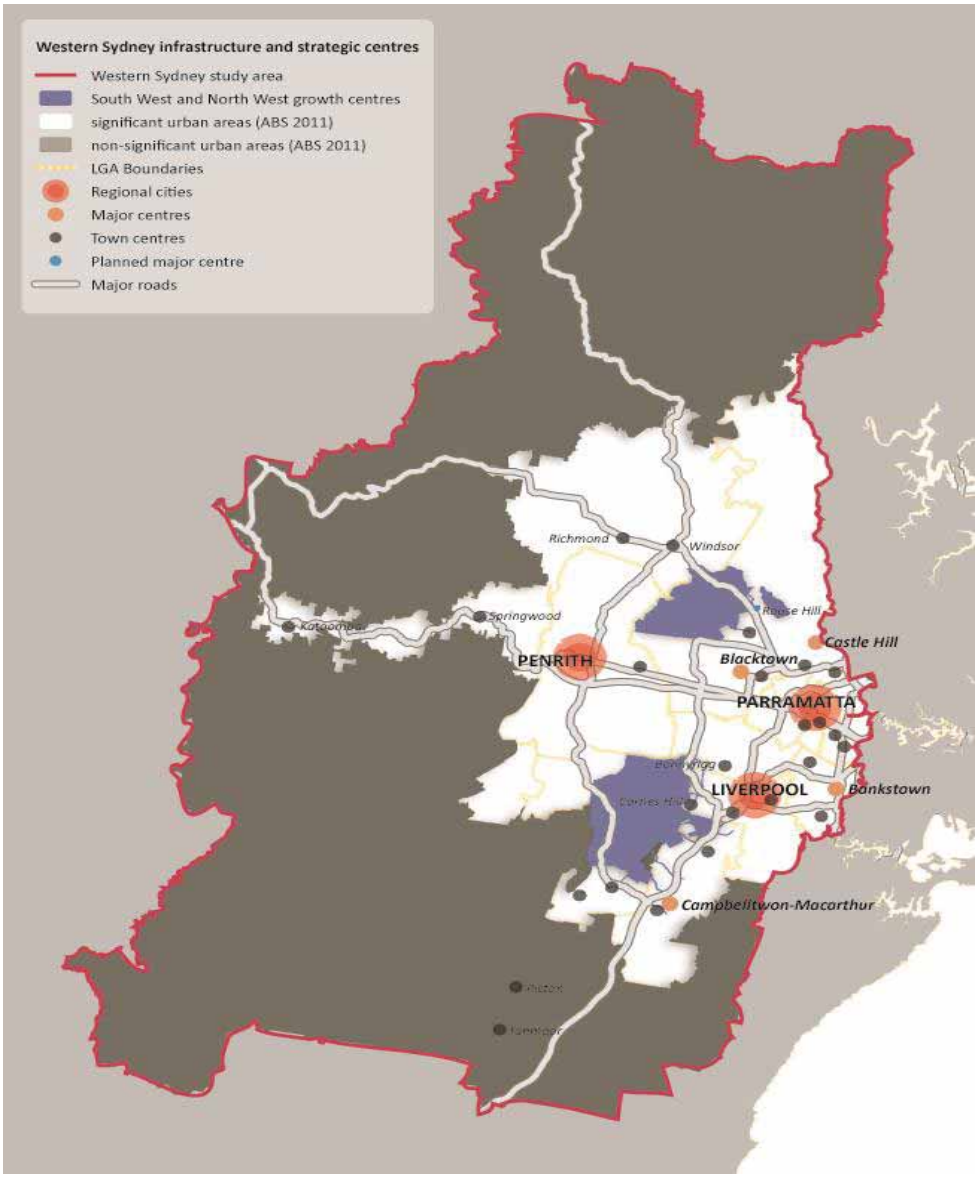
Resident retail expenditure

The estimated resident population and expenditure per capita are taken into consideration to estimate the retail expenditure generated by the residents in Western Sydney.

Market boundaries defined

As indicated earlier, retail expenditure patterns are not simply a question of proximity. Local convenience shops serving daily retail needs will serve a very different geographic catchment to large-scale centres with higher order retail offers (such as department stores). These centres function as a 'destination' in their own right, and attract shoppers beyond the local area. A retail centre at Marsden Park will be trading in this regional retail market context as part of a hierarchy of centres. Figure 30 delineates the geographic boundaries of the Western Sydney market for which retail expenditure demand and supply (retail floorspace) have been modelled to reflect market relationships at a regional level:

FIGURE 30. WESTERN SYDNEY RETAIL MARKET



Source: SGS 2016, Google Earth 2016

Population

Population (both current and projected) has been sourced from the Bureau of Transport Statistics (2014) at a Travel Zone level within the market boundaries. The total market population is presented in five year intervals:

TABLE 6 WESTERN SYDNEY RETAIL MARKET POPULATION, 2011 - 2036

	2011	2016	2021	2026	2031	2036
Total population	**2,001,564**	**2,218,016**	**2,450,073**	**2,686,835**	**2,920,711**	**3,163,606**
Additional population		+216,451	+232,058	+236,761	+233,876	+242,895
Average annual rate of growth		2.07%	2.01%	1.86%	1.68%	1.61%

Source: BTS 2014, with SGS Economics and Planning calculations, 2016

Retail expenditure per capita

Market Data Systems' MarketInfo modelled expenditure by residents at an SA1 level has been selected for retail expenditure. MarketInfo is seen as an 'industry standard' model of forecast demand and is used by major retailers and consultancies nationally. The data comprises estimates of per capital retail expenditure per annum for all SA1s in Australia (2014 edition used) for the following commodity categories:

- Food & groceries
- Bottleshop expenditure
- Restaurants, cafes & takeaway food
- Clothing & shoes
- Furniture, whitegoods, homeware, manchester & electronics
- Other retail (personal items, newsagents, pharmacies & fitness)
- Retail services

MarketInfo's modelled expenditure is based on population characteristics and socio-economic status variables from ABS 2011 Census data and the Household Expenditure Survey. This approach allows the modelled demand in the Gravity Model to reflect the differences in not just the *number* of residents within each small area (e.g. Travel Zone, once concordances with SA1s are applied), but also how their *expenditure patterns differ* based on variances such as household structure and age.

The commodity categories have been converted by SGS to the following retail floorspace categories to align with the surveyed retail floorspace supply within each Travel Zone (e.g. shopping centres and high streets).

- Supermarkets
- Specialty store – other food
- Specialty store – clothes & soft goods
- Specialty store – other retail
- Department store
- Bulky goods stores
- Hospitality

The modelled demand was then converted from SA1 to BTS Travel Zones to align build a demand surface comprising Travel Zones with both population and expenditure by retail floorspace category. MarketInfo's expenditure was kept in constant prices (rather than be inflated each year for an estimate of CPI growth) in order to model results in real terms: i.e. market growth driven only by additional residents living in Western Sydney over the five year intervals.

Supply

SGS has an existing database of retail floorspace by Travel Zone in the Western Sydney retail market and reviewed Cordell Connect to identify commenced, firm and possible major retail projects known to be rolled out within the district. This is to ensure that supply in the market (by a realistic time that retail at Marsden Park could be opened and trading) reflects that other investors will be seeking to serve the additional residents coming into the market, as well as increasing their existing market share. The roll out of retail projects can be found at Appendix E and comprise the total additional retail floorspace assumed to be trading in the region by c.2021, summarised as follows:

TABLE 7. ADDITIONAL RETAIL FLOORSPACE FORECAST FOR WESTERN SYDNEY

Supermarket	Other Food	Hospitality and Services	Clothing and Soft Goods	Household Goods	Other Retail	Department Stores
43,629 m²	**7,515 m²**	**7,713 m²**	**8,383 m²**	**47,450 m²**	**7,063 m²**	**14,000 m²**

Source: Cordell Connect 2016, with SGS Economics and Planning calculations, 2016

9.4 Results

As noted in the section introduction, the gravity model is able to forecast the relative attractiveness, and therefore the geographic market share for a given amount and mix of retail floorspace. In this case, market shares are calculated for both the Marsden Park town centre and also for all other centres trading within the Western Sydney retail market.

The model allocates market shares for the modelled market (population multiplied by per capita expenditure) within each individual Travel Zone. Applying the market shares to each zone's market gives the turnover generated for each centre per zone. The sum of calculated turnover for each centre from all zones gives a forecast total turnover for each centre. Note that this does not imply that each centre will have market share and turnover in *every* zone, as distant zones with competitor centres located between it and the destination centre will have negligible market shares, reflecting the improbability that shoppers will travel a great distance and past other centres.

The advantage of Gravity Model is not only the realistic calculation of these geographic interactions between distance and competing centres in terms of turnover, but also its ability to calculate impacts on existing centres from the introduction of new centres. Each new centre will carve out its own market share per travel zone, but this will come at the expense of existing centres. The extent of the impact will depend on other factors, such as the relative attractiveness of each centre and the mix of retail (e.g. a new department store has a different product offering to a local neighbourhood centre of convenience shops).

This provides the Gravity Model with a flexibility to test various levels of floorspace and retail mix to observe what changes in the market interactions these induce. As this relates to the Marsden Park submission, SGS tested various amounts of floorspace and mixes that could be delivered in the town centre such that the impact on the turnover of nearby centres did not exceed c-10%. This testing found that around 70,000sq.m. of retail floorspace with the following mix of floorspace type:

TABLE 8. RETAIL MIX TESTED AT MARSDEN PARK

Supermarket	Other Food	Hospitality and Services	Clothing and Soft Goods	Household Goods	Other Retail	Department Stores
8,000 m²	10,000 m²	10,000 m²	10,000 m²	10,000 m²	10,000 m²	10,000 m²

Source: SGS Economics and Planning, 2016

This level and mix is realistic given both the district centre role identified for Marsden Park and the large population growth forecast for the North West Growth Centre. This p opulation growth allows a large retail offer to be introduced at Marsden Park without inordinately impacting the surrounding centre network. The modelled impacts on the surrounding centres are as follows:

TABLE 9. IMPACTS ON CENTRES IN WESTERN SYDNEY

Centre	*% impact* *@ 70,000sq.m. GLAR*	*Sensitivity* **% impact** **@ 83,000 sq.m. GLAR**
Riverdale	-10%	-13%
Plumpton	-3%	-4%
Castle Hill	-2%	-3%
Rouse Hill	-3%	-5%
Kellyville Village	-2%	-3%
Mount Druitt	-3%	-4%
Stanhope Gardens	-2%	-3%
The Ponds	-2%	-2%
Blacktown	-3%	-4%
Doonside	-2%	-3%
Marayong	-3%	-4%
Minchinbury	-1%	-2%
St Clair	-1%	-2%
Schofields	-3%	-4%
Riverstone	-5%	-7%
Box Hill (Future)	-5%	-7%
Baulkham Hills	-1%	-1%
Merrylands	-1%	-1%

Source: SGS Economics and Planning Retail Gravity Model, 2016

The sensitivity column reflects the effects of increasing the GLAR at Marsden Park to the maximum amount before the impacts become such that turnover densities in the impacted centres fall below calculated NSW averages.

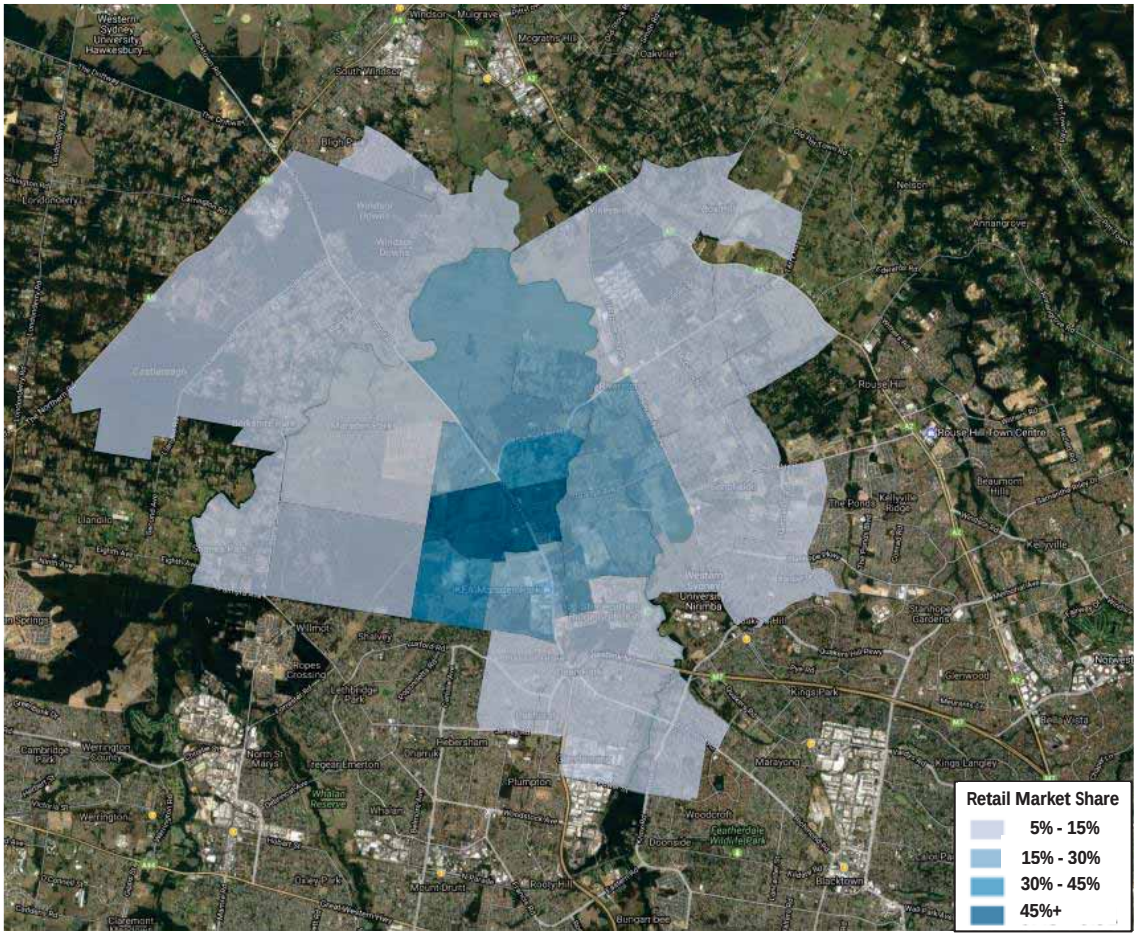
The 'wide and shallow' impacts modelled are consistent with industry experience of new major centre openings (when well planned as part of a rational spatial hierarchy); smaller centres nearby with a greater convenience focus are the most heavily impacted, but not to an extent which would undermine their businesses viability. These centres are typically configured for quick ingress and egress for daily or weekly retail needs such as food.

Conversely, the price larger centres pay for their scale is the pressure from large volumes of shoppers on their carparks, access and circulation points. This means that they typically cannot serve a 'convenience' shopping mission and instead serve higher order retail needs over a large geographic catchment. This is why impacts are modelled on larger centres over some considerable distances in Western Sydney such as Rouse Hill and Castle Hill: only centres of this scale have department stores and quantities of mini majors, and so shoppers who would have had to travel a great distance to access these are instead diverted to a closer offer at Marsden Park.

Note that the competitive nature of the retail market means that impacts on individual businesses may differ from the modelled total impact, the impacts reflect estimates on the centre as a whole.

Figure 31 presents the modelled catchment of a c70,000sq.m. retail offer at Marsden Park. Like the forecast impact, the thematic market shares are highest closest to the centre and taper by distance an in proximity to competitor centres.

FIGURE 31. MODELLED CATCHMENT OF MARSDEN PARK TOWN CENTRE RETAIL



Source: SGS Economics and Planning Retail Gravity Model, 2016, Google 2016

9.5 Post 2021 floorspace potential

Further population growth North West Growth Centre means that additional floorspace beyond what has been modelled for the period around 2021 can be supported at Marsden Park. Maintaining the market shares modelled above (which ensures impacts on other centres do not increase) population growth will increase retail floorspace supportable at Marsden Park to 137,418sq.m. by 2036.

However, this assumes no further entrants to the retail market, and whilst this reflects the limited data available on future competitors it is unrealistic to assume that none will enter. Given this, SGS recommends floorspace at Marsden Park at around 110,500 sq.m. by 2036, to reflect the likelihood of a major competitor centre (as well as smaller centres) opening roughly every five years after 2021. This would avoid the risk of retail turnover densities dropping below 2021 levels, which would affect firms' profitability and risk vacancies in the centre.

9.6 Summary

SGS's Retail Gravity Model is an ideal tool for modelling a viable provision of floorspace at Marsden Park but without over-provisioning such that turnover densities for such a centre would drop below a viable threshold. It also has identified an optimal level and mix of retail space that could be delivered without excessive impacts on nearby centres which would undermine their commercial viability or strategic role in a planning context.

A retail centre of 70,000sq.m. to around 83,000sq.m. GLAR is consistent with these parameters, and being significantly larger than the 50,000sq.m. threshold for a district centre also indicates a strategic-level role for Marsden Park[6]. A centre of this scale would be well positioned to serve a reasonable share of the retail needs of the incoming residential population and workforce.

[6] The draft District Plans do not have a specific threshold for GLAR for Strategic Centres but references Blacktown, which has 85,000sq.m.

10 CONCLUSION AND RECOMMENDATIONS

10.1 The appropriate classification of Marsden Park

Marsden Park has clear potential as a valuable strategic node in Sydney's future growth

This report has found that Marsden Park can play a greater role in the economic fabric of Western Sydney than is currently envisaged under the draft District Plan. One of the fundamental challenges in Sydney's continued growth in future decades is to redress the imbalance of jobs (particularly high value-added jobs such in the knowledge economy) and prosperity between the East/West of the city. This is particularly so for the outer west, which is to become a 'city' in its own right under *Towards our Greater Sydney 2056*.

Marsden Park can play a key supporting role to the Western Sydney 'city' around the future airport by extending the arc of connectivity and economic activity from the airport regional to the outer north west. Rapid population growth in the outer north west is already well underway but the airport and surrounding economic geography is still several decades away at the earliest. Marsden Park provides a more immediate opportunity to provide existing and future residents some of the higher order jobs that has long been identified as a key need of the outer west.

Polycentric cities have long been a feature of Sydney and reflect best-practice urban-planning principles. Within the 'third city' of future Western Sydney, Over the long term, a strategic-scale employment precinct in Marsden Park can play a complimentary role to the economic geography of Western Sydney. Executed correctly, the centre can function as a key node in the network of transport and commercial centres connecting the emerging outer West to the established centres which generate prosperity in the North (particularly Norwest and Parramatta).

Marsden Park's rapid progress to date shows that its potential is not just theoretical

The jobs and firms already operating in Marsden Park is already in excess of existing forecasts, and further firms committed to locating in the precinct over the next few years suggests that this momentum will be sustained.

The initial business mix reflects something of a 'business as usual' trajectory for a precinct in the outer west, with space (rather than employment) intensive uses such as manufacturing and retail locating the centre. This is consistent with the typical evolution of business precincts. Overlaying the current policy aspirations to 'change the game' in the West and shift the mix in precincts such as Marsden Park to also include knowledge economy jobs, the centre is at a critical juncture in its evolution.

Realistic expectations for rail link and supporting infrastructure can realise the full potential of Marsden Park

Given the existing strength of the precinct to date, Marsden Park will clearly be close to the threshold of characteristics for a strategic centre as outlined in the draft District Plan by around 2036. The analysis undertaken for this report has found that were rail announced, the increase the provision of knowledge sector jobs in the centre would hit both the nominal threshold of jobs and industry mix to warrant classification as a strategic centre. The forecast changes in the jobs and mix at Marsden Park within the

next two decades does not require any suspension of disbelief or aggressive assumptions, as 20,000 jobs in the centre can be achieved by 2036 by assuming the industrial and bulky goods grow at around their current rate of growth, and firms and jobs in the knowledge sector open in the park at a rate comparable to what has been observed at Norwest.

With a rail connection to the Metro North West, a moderate intensification of population is also expected. Whilst this is not expected to be a truly 'transformative' effect of itself for a variety of reasons, it does support sound urban planning principles of dwelling variety and a balanced mix in growth areas which have been traditionally hard to achieve with policy in outer areas of Australia's capital cities.

A definitive quantification of the financial and social benefits is beyond the scope of this study and should be undertaken as part of a Cost Benefit Analysis within a broader rail needs study. But an initial review of the likely socio-economic impacts from rail indicates a variety of positive outcomes for both future residents in Marsden Park, and existing residents in established suburbs in the district. This is important as the areas of the south are socio-economically disadvantaged and equity considerations warrant the investigation of policy and infrastructure support to improve outcomes for these residents.

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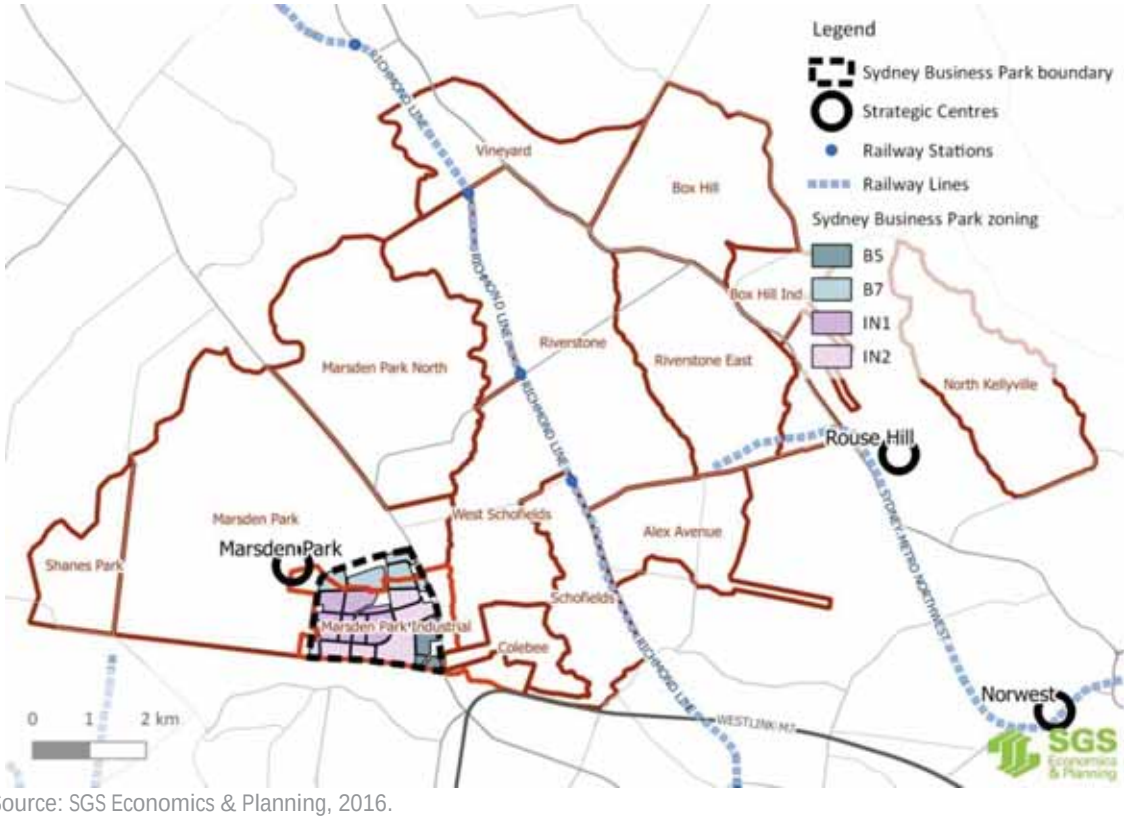
APPENDIX A SITE AND PLANNING CONTEXT

Location

Marsden Park is located the north west of Sydney. Marsden Park is located around eight kilometres from Blacktown and eight kilometres from Rouse Hill, and is part of the North West Priority Growth Area (NW PGA) (formerly the North West Growth Centre). The centre was previously identified as a potential centre for future employment and housing.

Marsden Park is one the key commercial precincts of the NW PGA, as shown in Figure 32**Error! Reference source not found.** The site is predominantly zoned for business and industrial uses. The new Marsden Park town centre is being developed to the northern boundary of the site adjacent to South Street.

FIGURE 32 MARSDEN PARK IN NORTH WEST GROWTH CENTRE CONTEXT



Source: SGS Economics & Planning, 2016.

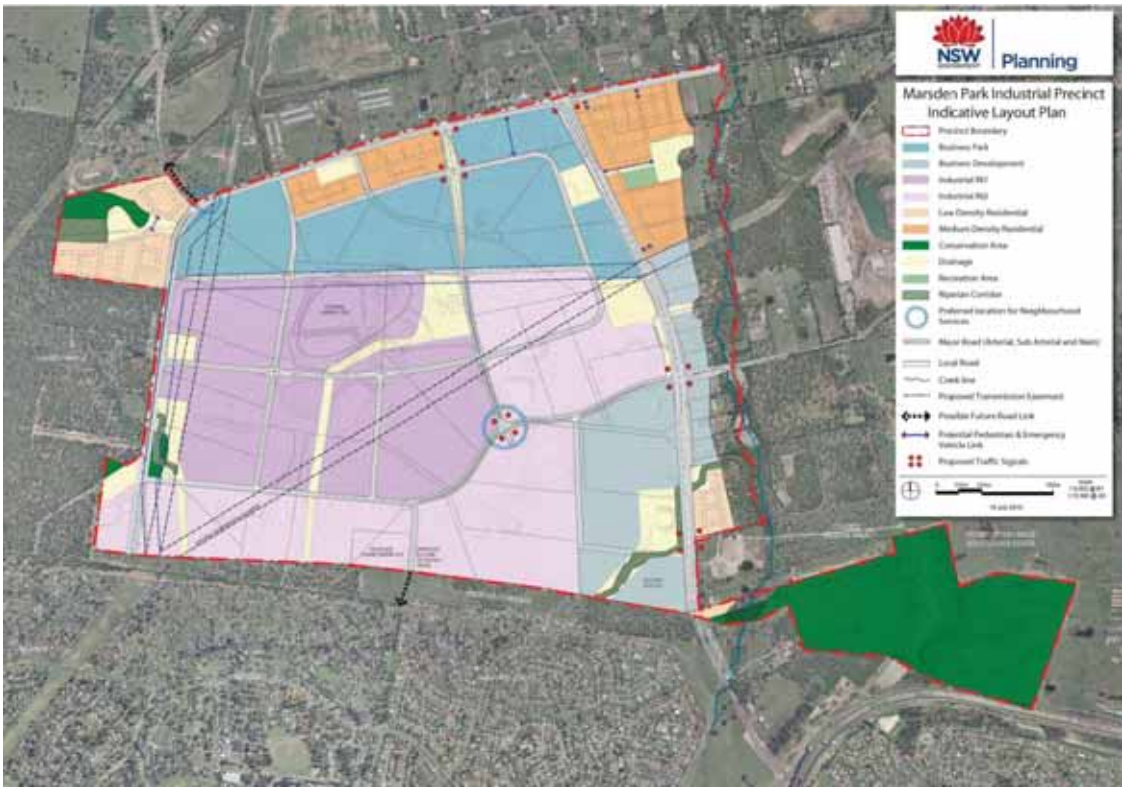
History of the site

Precincts within the NW PGA have been rezoned under *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*. Marsden Park Industrial was fast-tracked under the Precinct Acceleration

Protocol with the intention of bringing forward the rezonings and development to help meet the need for homes and employment land in Sydney. The rezoning took place in 2010.

The Marsden Park Industrial precinct is intended to play both a strategic and local economic role in the WS PGA. At the time of the rezoning it was expected that the precinct would accommodate up to 10,000 new jobs and 1,200 dwellings (3,500 residents) (Department of Planning, 2010). The Indicative Layout Plan prepared in 2010 as part of the rezoning process shows that adjacent to the industrial and business park uses, there are sites for medium density residential uses, and some lower density parcels at the north-west boundary (refer to Figure 33).

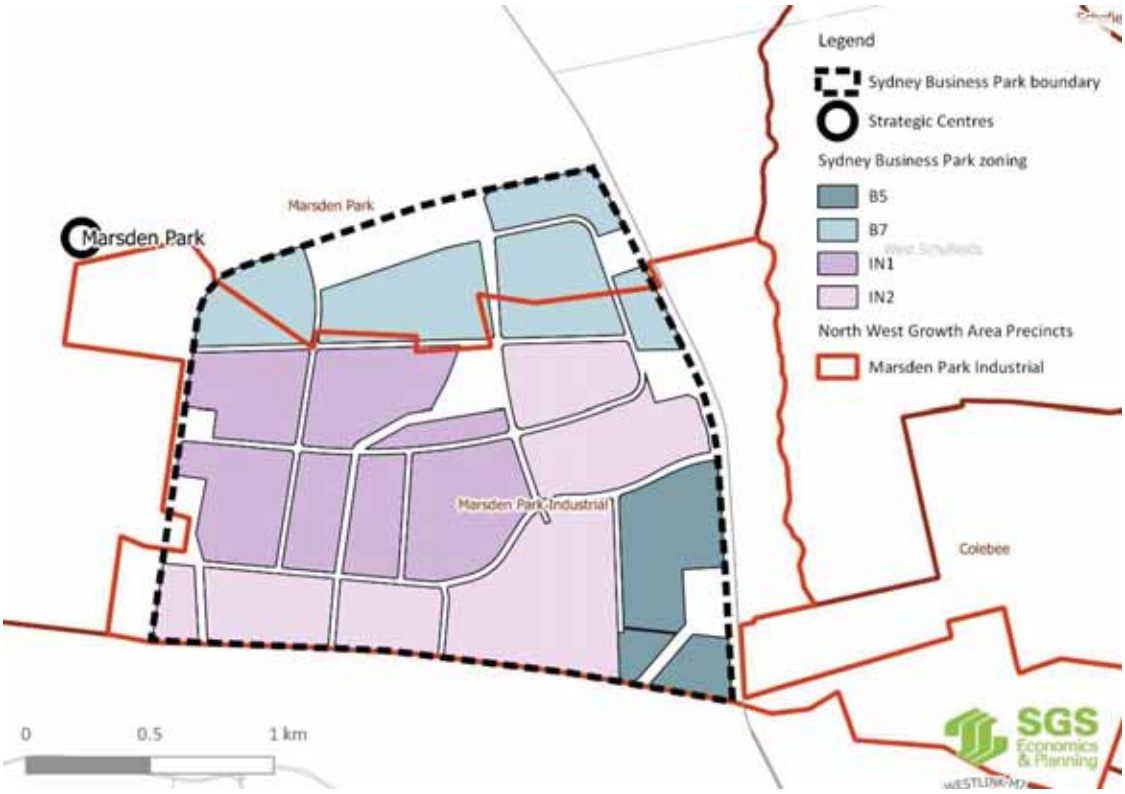
FIGURE 33 MARSDEN PARK INDUSTRIAL PRECINCT INDICATIVE LAYOUT PLAN



Source: NSW Department of Planning, 2010.

The current zoning of the precinct is illustrated in Figure 34**Error! Reference source not found.**.

FIGURE 34 CURRENT ZONING



Source: SGS Economics & Planning, 2016.

At a local level, Blacktown City Council's *Growth Centre Precincts Development Control Plan* (Blacktown City Council, 2016) outlines a vision for the industrial precinct. This includes that the precinct:

- be attractive for employment,
- provide a range of job opportunities to support growing residential areas of north-west Sydney,
- support a mix of employment generating uses, such as industrial (general and light), business parks and commercial uses, and
- include some smaller medium and low density residential areas near the future town centre.

This vision is reflected in the zoning plan and controls of the site.

Industrial land is expected to make up the majority of the precinct, supporting a range of uses from large floor-plate warehousing and storage to smaller factory units with intensive trade based activities.

Land for business development is intended to be focused on Richmond Road, with active businesses able to take advantage of passing traffic, such as service stations and fast food restaurants. Business park uses are to be concentrated in the north of the precinct close to the new town centre. This area is intended to accommodate buildings of six to seven storeys, be pedestrian friendly and have active street frontages. The business park area is intended to complement the town centre through providing high value commercial employment in close proximity to the retail activity.

The location of housing within the precinct is intended to be close to the town centre, particularly the medium density housing, with the lower density areas intended to provide both detached and semi-detached dwellings to meet housing needs.

Marsden Park is currently in the development phase with a number of sites under construction (refer to Figure 35**Error! Reference source not found.**).

FIGURE 35 MARSDEN PARK AERIAL VIEW

Source: Google Earth, 2016.

To date, the majority of development has taken place in the B7 Business Park and IN2 Light Industrial zones (refer to Figure 36)

FIGURE 36 CURRENT AND PROPOSED DEVELOPMENTS IN MARSDEN PARK

Source: Marsden Park Developments Pty Ltd., 2016

Existing policy and strategic framework

State government policies have identified visions and strategies for the development of Marsden Park, and are outlined in this section.

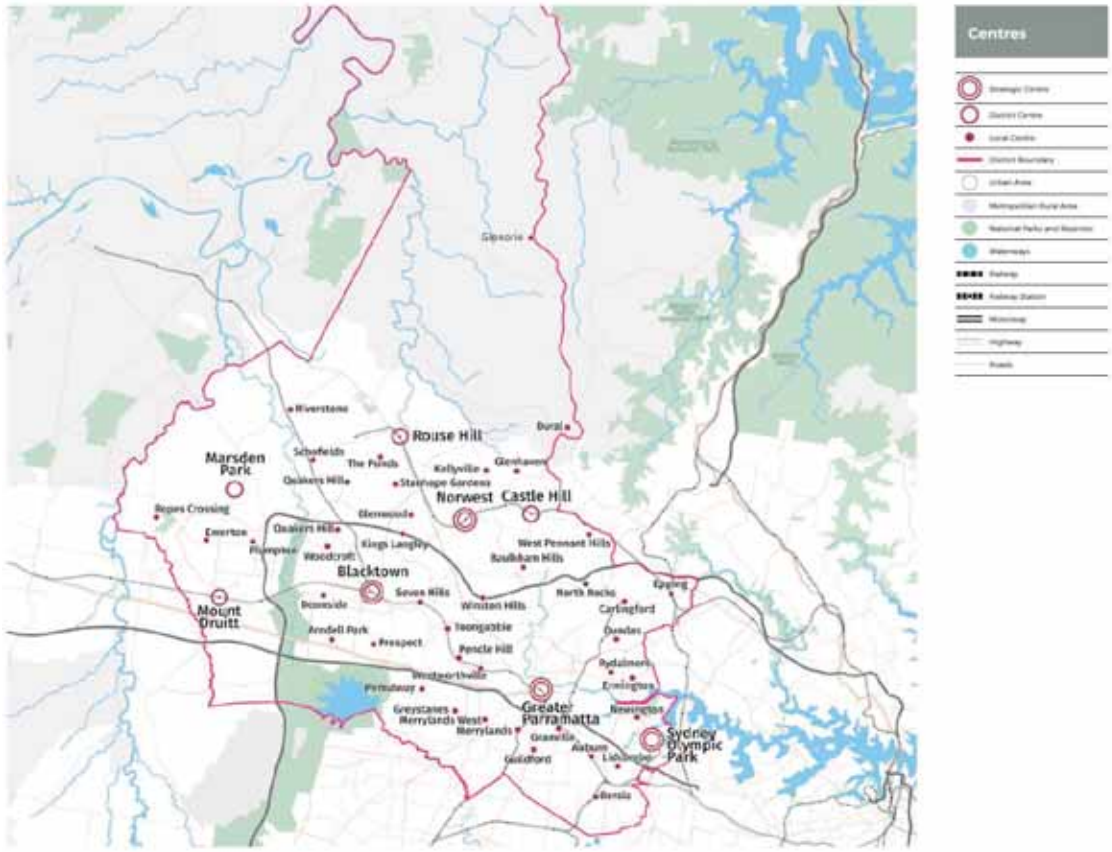
Draft West Central District Plan
The recently released draft West Central District Plan identifies Marsden Park as a district centre within the West Central district. Under the district plans, district centres are largely retail-based centres that must support the District's growing population. District centres play a significant district role due to the presence of one or more of the following characteristics:

- the scale of retail activity, generally over 50,000 square metres of floor space
- the presence of health and education facilities that serve the district and the local community
- the level of transport services.

District centres are expected to contain between 5,000 and 10,000 jobs.

Marsden Park is identified as containing 300 jobs with a job target of between 5,000 and 8,500 jobs by 2036.

FIGURE 37 CENTRES ACROSS THE WEST CENTRAL DISTRICT



Source: Greater Sydney Commission 2016

The key priorities for Marsden Park include the following:

- work with Transport for NSW to improve public transport connectivity to Mount Druitt, Western Sydney Employment Area and the Western Sydney Airport

- work with Blacktown City Council and key stakeholders to coordinate the planning and delivery of the Marsden Park Town Centre as a major retail, commercial and mixed use hub for the new communities in the North West Priority Growth Area
- support the funding and delivery of recreation and community facilities within the centre
- promote iconic buildings of high architectural design on key gateway sites in Marsden Park's Town Centre in order to reinforce its important role and function in providing services for new communities
- ensure the centre is permeable and connected within the surrounding businesses and the community
- promote a high quality landscaped, pedestrian orientated and vibrant public domain throughout the centre.

A Plan for Growing Sydney

The policies and strategies identified for Marsden Park within *A Plan for Growing Sydney* have been somewhat superseded by the recent draft District Plans. Under *A Plan for Growing Sydney*, Marsden Park was identified as main strategic centre within the NW PGA. Marsden Park is identified as a strategic centres. Strategic centres are areas of intense and mixed economic and social activity, built around transport and major public infrastructure including health, education and sports facilities. Specific priorities identified for Marsden Park include:

- work with council to plan for a concentration of high value economic activity in Marsden Park in the area zoned for business and industrial activities.
- work with council to plan for integration of Marsden Park employment precinct with Marsden Park town centre, including walking and cycling connections.
- plan for transport connections from Marsden Park to the North West Rail Link (now Sydney Metro Northwest).

Western Sydney Rail Needs Scoping Study Discussion Paper

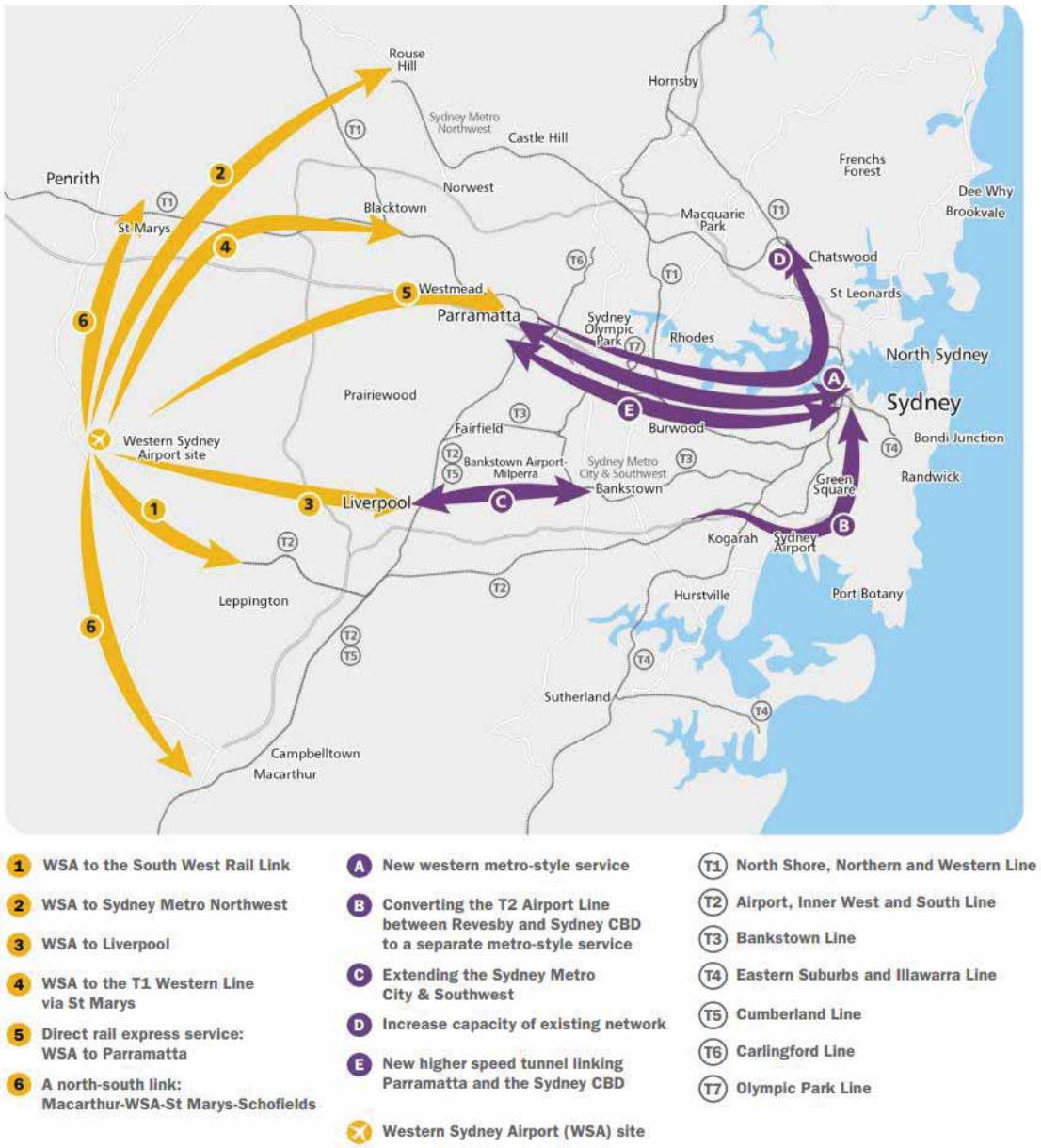
The Australian and NSW Governments are investigating the need, timing and service options for future investment in rail to support the expected growth in population in Western Sydney and the proposed Western Sydney Airport (Commonwealth of Australia and State of New South Wales 2016).

A number of potential routes and service options have been identified based on customer demand, population growth and consultation. This includes six potential lines to service the proposed airport. Option 2 (refer to Figure 38**Error! Reference source not found.**) would link Rouse Hill to Badgerys Creek through an extension of Sydney Metro Northwest. This link is proposed to provide connections to both the existing rail network and to future housing, employment developments and intermediate locations. Marsden Park is identified as one of these potential locations. A separate, stand-alone, metro-style service is proposed for this connection.

Over the coming months, the impacts of each of the corridors and potential funding options will be identified.

The Discussion Paper also identifies a number of planned rapid bus routes for Western Sydney, which are intended to support population growth up to 2031. A route between Rouse Hill, Schofields, Marsden Park and Penrith is identified as one of these.

FIGURE 38 PROPOSED WESTERN SYDNEY RAIL OPTIONS



Source: Transport for NSW, 2016.

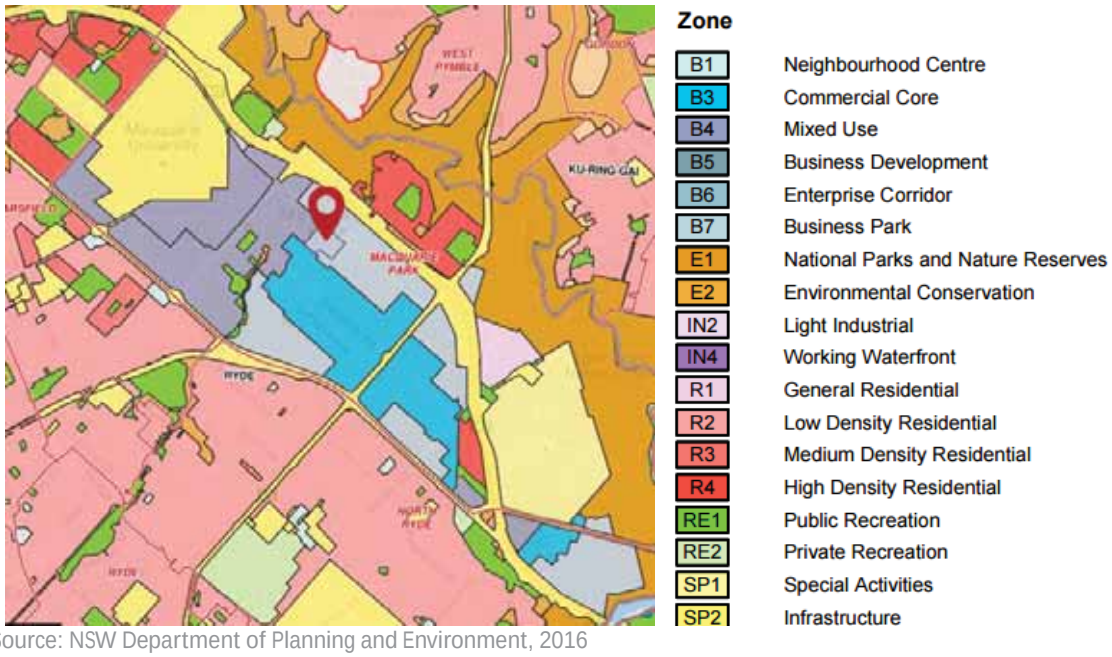
APPENDIX B: CASE STUDIES

Macquarie Park

Background and development context

Macquarie Park is located in Sydney's north, and forms part of the Global Economic Corridor. According to the draft North District Plan, the centre currently contains 58,500 jobs and is expected to accommodate between 73,000 and 79,000 by 2036. Macquarie Park contains a B3 Commercial Core zone which is surrounded by B7 Business Park zones. The areas adjacent to Macquarie University are zoned B4 Mixed Use with a high density residential zone recently introduced towards the south of the precinct (refer to Figure 39).

FIGURE 39. MACQUARIE PARK ZONING MAP



Source: NSW Department of Planning and Environment, 2016

The development of the area as an employment centre began with the establishment of Macquarie University during the 1960s (Macquarie Park, 2015). The rezoning of land to accommodate commercial and industrial uses drew more businesses to the area, along with the close proximity of the University and the relative accessibility of the precinct to the CBD. Through the 1970s biotechnology, pharmaceutical and science based companies drove growth in the area, and major companies soon followed in the 1980s. The Park became popular with companies looking to consolidate their office, warehousing and research functions, as well as those with traditional office needs, and the area was seen as a more affordable alternative to the central CBD. Major development occurred in the late 1990s and early 2000s, with more demand for commercial office space with the growth of the IT, biomedical and pharmaceutical sectors (BIS Shrapnel, 2015).

The area has seen significant transformation over the last 20 years, with a large amount of land rezoned from industrial to business, mixed and residential. It is now the second largest office market in Sydney, and has had the fastest growth in stand-alone office employment over the last two decades, with most jobs in knowledge intensive industries such as medical research, technology and electronics sectors, and office employment is expected to be the main driver of future growth in the area (BIS Shrapnel, 2015).

There is estimated to be around 850,000 square metres of office space in the precinct, and possibly capacity for this to increase to 2,000,000 square metres in future (Macquarie Park, 2015).

Currently, the NSW Government and City of Ryde are investigating ways to revitalise the area through enhancing its role as a major centre for commercial activity in providing opportunities for more housing, shops, dining and quality public spaces close to the train stations. Other future development plans include an additional 500,000 square metres of office space at Macquarie University, the redevelopment of the shopping centre to add more specialty stores and car parking, and the development of two office towers by the Goodman Group to house Canon and Fujitsu (Macquarie Park, 2016a).

Current and proposed tenants

The majority of businesses located at Macquarie Park are high-tech industries, including pharmaceutical, information technology and well-known electronics companies. Current tenants of the Park include 3M, Cochlear, Foxtel, Johnson & Johnson, Microsoft and Optus.

There are much fewer industrial and retail based businesses at Macquarie Park compared to Marsden Park. Macquarie University has recently joined with some of the major companies in Macquarie Park to develop the area as an 'innovation precinct,' which indicates that the focus of the area is increasingly on knowledge intensive and high-tech industries rather than traditional industrial and manufacturing sectors (Redrup, 2016).

Public transport access

The Epping to Parramatta line was first identified in the 1998 NSW transport strategy *Action for Transport 2010* (NSW Government, 1998). Construction began in 2002. However, the stretch between Epping and Parramatta was cancelled in 2003 due to concerns about funding. The Epping to Chatswood Line opened in 2009, and has been integrated as part of the North Shore, Northern & Western Line since 2013. There are three stations within the Macquarie Park precinct, with Macquarie Park station at Lane Cove Road, Macquarie University station at Herring Road, and North Ryde station on Delhi Road.

Sydney Metro Northwest is expected to increase accessibility to and from Macquarie Park. The new link to Rouse Hill will connect directly to the existing line, and at peak times there are expected to be trains arriving at least every four minutes. The new line is intended to open in 2019 (Sydney Metro, 2016b).

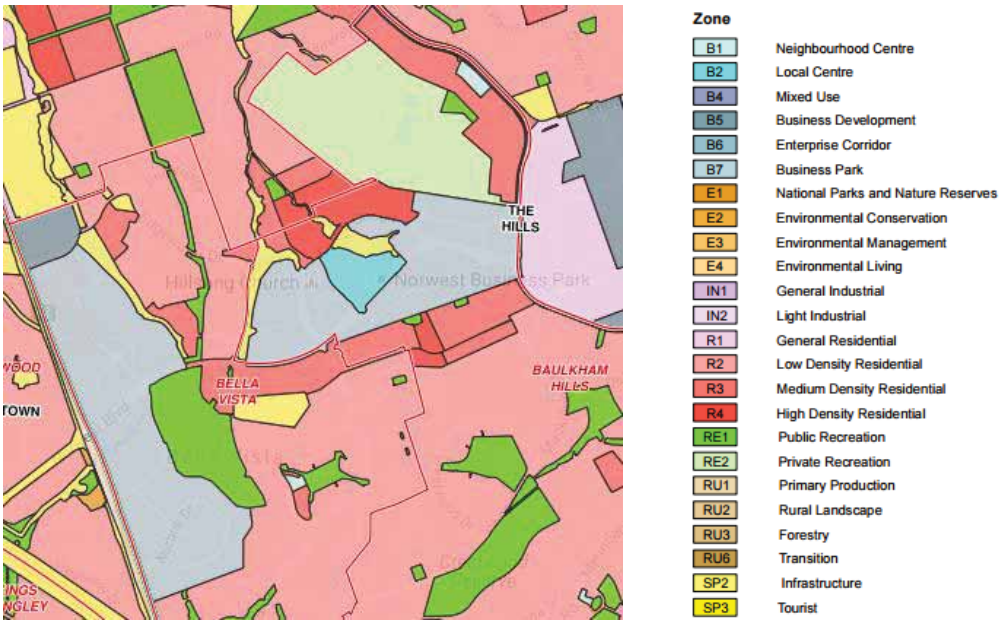
Norwest

Background and development context

Norwest is located in Baulkham Hills in Sydney's north-west. The centre is 337 hectares, and primarily comprises business (221 ha) and residential (122 ha) uses. According to the draft West Central District Plan, the centre currently contains 32,400 jobs and is expected to accommodate between 49,000 and 53,000 by 2036.

The centre is primarily zoned B7 Business Park, with B2 Local Centre providing for retail at the core (refer to Figure 40). It is surrounded by some R4 High Density Residential areas, and a mix of R2 Low Density Residential and R3 Medium Density Residential. The Business Park is currently managed by Norwest Association Limited, which was established to oversee and maintain development standards within the Business Park area (Norwest Association Limited, 2016b).

FIGURE 40. NORWEST ZONING MAP



Source: NSW Department of Planning and Environment, 2016

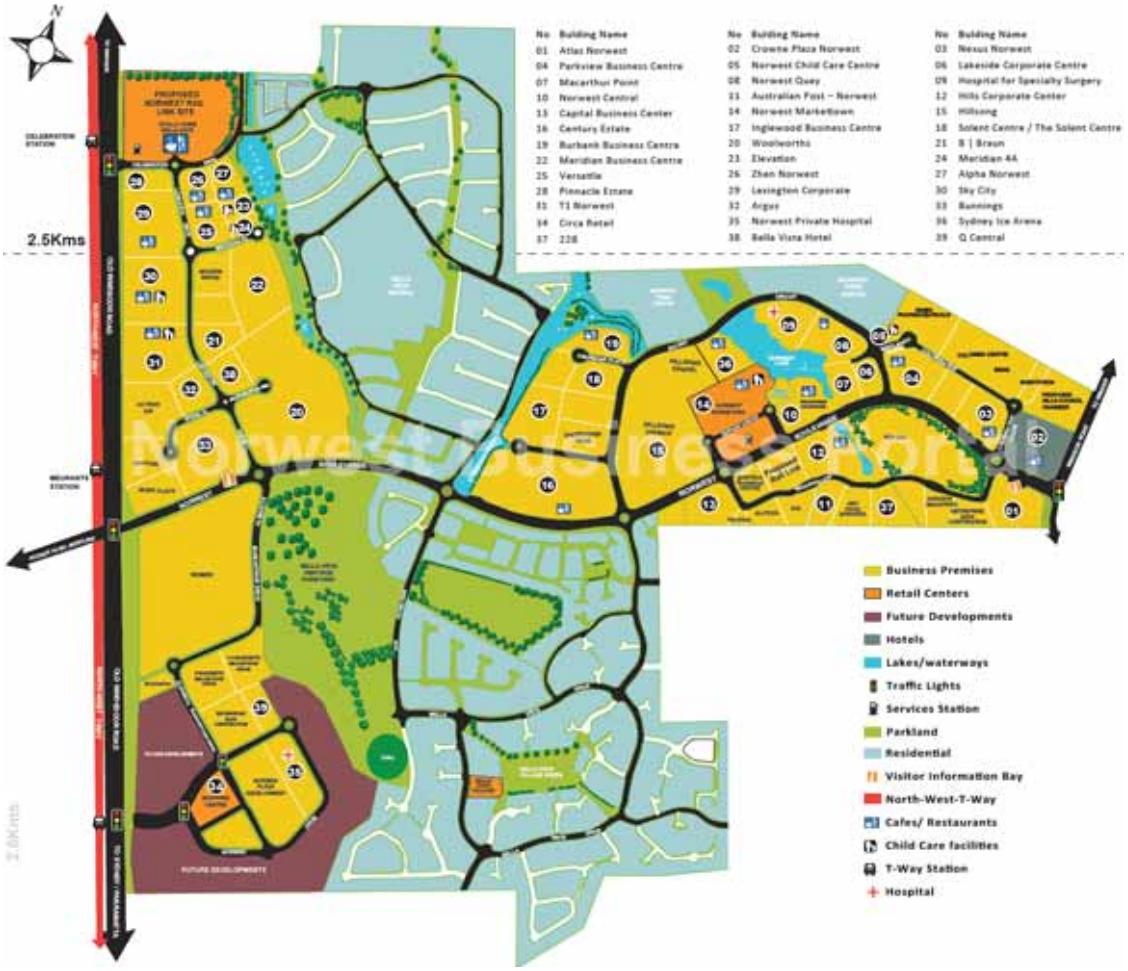
Development at Norwest began in the early 1990s. Initial occupants included Australia Post, Cathay Pacific and Hillsong Church. Residential development began at the same time with the Bella Vista Village precinct. In the late 1990s the Homemaker centre opened. From 2000, major companies including Woolworths began to buy land to use as national headquarters and further residential development continued. In 2005, the final precinct of the Park (known as Circa) was completed, and included the Norwest Private Hospital (Norwest Association Limited, 2016c). The current site plan is shown in Figure 41.

Current and proposed tenants

The Park offers smaller offices spaces (50 to 100 square metres) as well as sites for larger businesses. There is consequently a mix of business types among at least 400 companies in the Park, which include Res Med, Health Scope Hospitals, Woolworths Limited, Subaru Australia and Actron Air.

The Hills Shire Council also has its office located within the Business Park (Norwest Association Limited, 2016). Many of the current and expected businesses at Norwest are similar to those at Marsden Park, though there a number that are more service-oriented businesses targeted to the nearby residential population, and there are also fewer industrial businesses.

FIGURE 41 NORWEST BUSINESS PARK LAYOUT



Source: Norwest Association Limited, 2016d.

Public transport access

While there is currently no rail access to Norwest, it will be a beneficiary of the Sydney Metro Northwest (formerly the North West Rail Link). Rail has been proposed since 1998 with various commitments made and retracted up until 2012 when a commitment was made. The location of the new stations along the route were confirmed in 2012, when the NSW Government committed to building the project with or without a federal government funding contribution (ABS News, 2012).

Two of eight new stations for the line will be constructed within the Park –Norwest and Bella Vista stations. It is intended that the Norwest station will allow for new retail space at its entry, traffic improvements and active travel upgrades, and opportunities for landscaping and improvements to the public realm. Construction of the Bella Vista station is expected to provide easy access for pedestrians, retail space, improvements to traffic and pedestrian infrastructure, and a car park for commuters (Sydney Metro, 2016a). A corridor planning process was undertake for each of the station precincts to determine the potential development and renewal opportunities around each station associated with the increase accessibility. The area around the Bella Vista Station was designated as a priority precinct for urban renewal in 2015.

Central Hills Business Park

Background and development context

Central Hills Business Park is located in the suburb of Gregory Hills in Sydney's south west. The site is 45 hectares, and is part of a Greenfield development within the Turner precinct in the South West Priority Growth Area. The Business Park is located close to the major road of Camden Valley Way, which is the process of being upgraded, and to Gregory Hills Drive, which will connect to Campbelltown. The Business Park has also been marketed as being close to the proposed Western Sydney Airport (WSA) at Badgerys Creek.

The site is zoned as primarily B5 Business Development, with a portion of IN1 General Industrial uses under SEPP (Sydney Region Growth Centres) 2006. The adjacent housing precinct is zoned R1 General Residential. All of the land at Central Hills has now been sold, with the final lot sold in June 2016.

FIGURE 42 CENTRAL HILLS BUSINESS PARK CONTEXT

Source: Google Earth, 2016.

Public transport access

There is currently no rail access to or around the site, with the closest being the Campbelltown line to the east. The South West Rail Link provides access to Oran Park and Leppington, but not directly to Gregory Hills or the Business Park. The corridors being investigated as options for connections to the WSA are also not expected to extend to within direct proximity to the site (Transport for NSW, 2016).

The Business Park was developed by Dart West, which is also the developer for the adjacent residential precinct of Gregory Hills, will have its own town centre.

Current and proposed tenants

The Central Hills Business Park has similar types of current and proposed tenants to the Marsden Park, with several home improvement and homemaker stores, other bulky goods retailers, fast food outlets and businesses in the logistics, construction and automotive industries. These include Masters and other bulky goods retailers, fast food restaurants such as McDonalds and Toyota/Lexus dealership.

Paul's Warehouse recently announced it will be a tenant of the Home Centre, which also houses Service NSW, Total Tools, Macarthur Pets, Eurolight and League Zone. The Home Centre is targeting large format retail businesses, and has 21 separate tenancies (Home Centre Gregory Hills, 2016).

The Business Park will also be home to the Gregory Hills Private Hospital, and the Gregory Hills Hotel, which is intended to cater to the nearby residential population.

Eastern Creek Business Park

Background and development context

Eastern Creek Business Park is located in Sydney's west, and is in the north east corner of the Western Sydney Employment Area (WSEA) (refer to Figure 43). WSEA is focused on promoting economic development and employment creation through providing for major warehousing, distribution, freight transport, industrial, high-technology and research facilities. Most of the employment in the WSEA is expected to be in the industrial sector, with 36,000 industrial jobs over the next 30 years compared to 21,000 office jobs (Department of Planning & Environment, 2014).

The Park is adjacent to the M4 motorway in the north and in close proximity to the M7 motorway to the east. Majority of the land is zoned IN1 General Industrial, with some land parcels E2 Environmental Conservation sites. Between 2011 and 2014, 28% of new industrial space in Sydney was located at Eastern Creek (Knight Frank, 2015).

FIGURE 43 INDUSTRIAL PRECINCTS IN WESTERN SYDNEY EMPLOYMENT AREA

Source: RMS, 2016.

Public transport access

There is currently no rail access near the Park. In terms of future rail routes, the South West Rail Link will link to the proposed WSA, and is expected to travel through the broader Western Sydney Employment Area. However, the proposed corridor options do not appear likely to travel close to the Park.

Eastern Creek Business Park has good motorway access due to its proximity to the M4 and M7 Motorways. There is also a bus service between Penrith and Prairiewood which travel to the Park via Wonderland Drive.

Current and proposed tenants

Tenants in the stage 1 and 2 areas include ASICS Oceania, Manassen Foods, Ontex Industries, LG Electronics, Costa Logistics SK Steel, Nover, Milton Tradings, and Post Logistics. Among the tenants in stages 3 and 4 of the Business Park are DB Schenker, Kmart, Best & Less, OfficeMax, Fisher & Paykel, One Steel, Cassons, QLS Group, CEVA Logistics, and Keuhne & Nagel (Frasers Property, 2016).

Most of these business are within warehousing, manufacturing, distribution and logistics sectors. The proximity of Eastern Creek to the M4 and M7 motorways is seen as an attraction for large businesses and logistics providers in particular (Schlesinger, 2015).

Erskine Park

Background and development context

The Erskine Park also forms part of WSEA as identified above in Figure 43. The area was first identified for employment uses as the Erskine Park Employment Area in the City of Penrith's 1994 LEP. Much of the Business Park is zoned IN1 General Industrial, with some sections zoned as E2 Environmental Conservation under SEPP (Western Sydney Employment Area) 2009. Approximately 17% of Sydney's new industrial development between 2011 and 2014 was at Erskine Park (Knight Frank, 2015).

The objectives for the area included making land available for economic and employment generating development, promoting the development of land for industrial uses which require a variety of land types, and to promote a variety of employment based activities while protecting the viability of existing centres (Penrith City Council, 1994).

Public transport access

Erskine Park is not in close proximity to any existing rail lines. The Erskine Park Link Road was completed in 2013, which was intended to allow for better access to the employment area and connect the area to the M4 and M7 motorways. Upgrades to Old Wallgrove Road to the east of the Business Park are also currently underway, which is intended to improve east-west traffic flow in the area.

Current and proposed tenants

The Erskine Park Business Park is not marketed or operated as one overall entity as is the case with the Marsden Park and some of the other case studies, and includes several smaller industrial estates. The majority of the businesses in the area are involved in warehousing, transport and logistics, construction product manufacturing, and product distribution.

Among the current businesses located at Erskine Park are TNT Express, Goodman Fielder, Linfox, Woolworths Liquor Distribution Centre and Kimberly-Clark Distribution Centre. Current listings for sites within the Business Park suggest that most of the available spaces are designed for warehousing with small attached office spaces.

Ansty Park

Ansty Park was established in 2011 by Highbridge Properties and the UK Government Homes and Communities Agency. The site is 40 ha (refer to Figure 44) and located 8 km from Coventry. It currently contains around 44,000 sqm of employment floorspace and 400 jobs.

FIGURE 44. AERIAL OF ANSTY PARK

Source: Google Maps, 2016

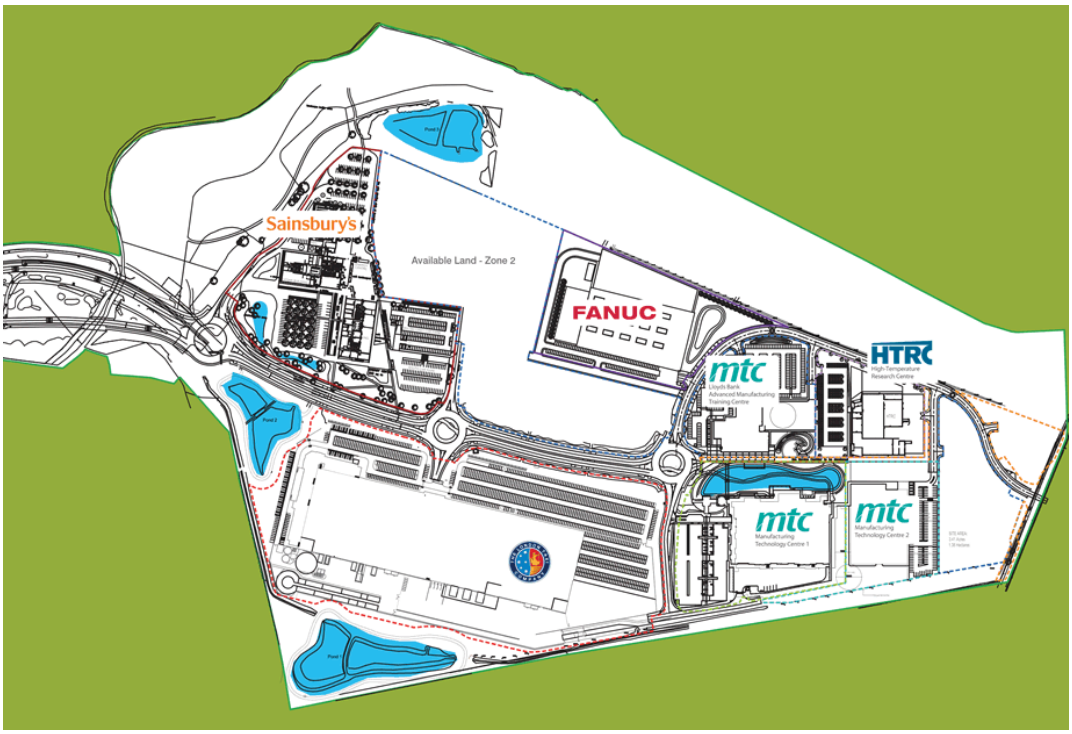
The site was acquired by government in the 1990s but largely remained vacant. In the 2000s it was earmarked for advanced manufacturing uses, however there was limited development during the early 2000s. With the effects of the Global Financial Crisis (GFC), only limited development occurred until 2010. In 2011, the site was developed in partnership by the UK Government (currently Homes and Communities Agency) and Highbridge Properties.

The Park has an advanced manufacturing focus and current tenants include the Manufacturing Technology Centre (MTC), High Temperature Research Centre (HTRC) and Sainsbury's (refer to Figure 45 and Figure 46). The London Taxi Company and FANUC (Fuji Automatic NUmerical Control) will occupy space which is currently under construction. The Park is currently within the developing phase, and is envisaged to eventually cover 140,000 sqm and house 5,000 jobs.

FIGURE 45. FIRM LOCATIONS AND DEVELOPMENT SITES AT ANSTY PARK

Source: Ansty Park, 2016

FIGURE 46. SITE MAP OF ANSTY PARK



Source: Ansty Park, 2016

Coventry, including Ansty Park, has an Assisted Area status:

> *'Assisted Areas are recognised in European state aid rules as being less economically advantaged places that would benefit from additional support for development. As a result, financial support from Government is permitted to undertakings, typically businesses, for new investments in these areas. Being located in an Assisted Area does not confer any right to financial assistance; rather, it allows the public sector to provide certain types of assistance if it wishes' (UK Government 2014).*

This means that companies which locate in Ansty Park may have access to additional funding which would not be available in other locations across the UK.

The MTC was established in 2010 by the University of Birmingham, Loughborough University, University of Nottingham and The Welding Institute as a collaboration between academia and industry. According to the MTC it represented one of the largest public sector investments in UK manufacturing.

The 12,000 sqm facility was opened in 2011. According to the MTC, Ansty Park was identified as the optimum location, with excellent links to the UK motorway network and easy access to European and global markets from Birmingham and East Midlands airports (MTC 2016). The MTC did not want to locate in a typical business park and wanted to be in a location known for research and development. A grant of £40 million was awarded by the Advantage West Midlands and the East Midlands Development Agency, which provided the backing to create the facility.

The first three industrial members of the MTC were Rolls-Royce, Aero Engines Control and Airbus. This has reportedly grown to over 90 members. Membership allows access to the facilities on-site.

Key initiatives
The following initiatives have been implemented at Ansty Park:

- Public-private development partnership between Highbridge Properties and the UK Government Homes and Communities Agency.
- Firms are given a share in the ownership of the management company as part of the government exit strategy. This ensures that there is 'buy in' into the concept and management of the park.
- Quarterly meetings are held with the Managing Directors from each firm to encourage collaboration.
- Shared facilities with firms having access to the equipment within the MTC.
- Pre-approvals for the site to fast track development. Limited detail is available on this but it is understood that approvals have been obtained for all sites and new development just needs to comply with certain guidelines.
- A shuttle bus from the closest railway station to Ansty Park is provided for workers. A transport survey was recently conducted across the site with the expectation that further opportunities to improve transport access will be implemented.

Lessons
This review of Ansty Park has identified the following lessons for similar developments:

- The vision needs to be credible and capable of delivery.
- Government backing and commitment to the delivery of the vision is required so that firms are clear on what will be provided on-site and the timing of this. In addition occupiers need to understand the vision for the site in 5-10 years and be committed to this.
- An anchor research institution such as MTC is a driver for firms to locate in a precinct because of the access to facilities and equipment, as well as knowledge.
- The delivery of the site through government and private partnerships allows the government to focus on the delivery of infrastructure and the private sector on attracting firms.
- Development can be fast-tracked through ensuring there are planning approvals in place for the development sites. This means future occupiers can quickly receive approval for developments which fit within the design guidelines of these pre-approvals. This allows for greater certainty.
- Deal with planning and infrastructure early, particularly services. This de-risks the development as much as possible and makes it much easier to attract firms and research institutions.
- It is important not to waste time during a booming market as this is the appropriate time to attract firms. There was reportedly little movement in terms of development and planning prior to the GFC when there was significant opportunity to attract tenants.
- Retail and other facilities can generally only be provided once there is a critical mass of around 10,000 employees. However, subsidised public transport needs to be provided upfront.
- Financial grants for firms and financial backing for development will be beneficial.
- The exit strategy should ensure that the vision for the site is retained. The approach at Ansty is to provide each firm on-site with a share of the management company and when 90 percent of sites are sold the ownership of the site will then be transferred to the management company. This ensures that each of the firms are represented.

APPENDIX C: MULTI-CRITERIA ASSESSMENT

		Marsden Park – no rail (with rail)			Norwest		Parramatta	
		Assessment	Score		Assessment	Score	Assessment	Score
Proximity & Access	Access to arterial roads	More Favourable	3		Average	2	More Favourable	3
	Access to rail	Less Favourable (More Favourable)	1 (3)		More Favourable (upon SMNW completion)	3	More Favourable	3
	Agglomeration opportunities (EJD[7] of Knowledge Industries within 20 mins as measure): Public Transport	Less Favourable (Average)	1 (2)		Average (upon SMNW completion)	2	More Favourable	3
	EJD by Private Vehicles	Less Favourable	1		Average	2	More Favourable	3
	Proximity to significant retail and services offer/centre	More Favourable (assuming town centre development)	3		Less favourable	1	More Favourable	3
	Proximity to residential workforce	Less Favourable	1		Average	2	More Favourable	3
	Proximity to future residential workforce	Average	2		More Favourable	3	More Favourable	3
	Travel time to CBD by Public Transport	Average	2		Average (upon SMNW completion)	2	More Favourable	3
	Time to CBD by Private Vehicle	Less Favourable	1		Less favourable	1	Average	2
	Proximity to universities/research	Average	2		Average	2	More Favourable	3
	Proximity to schools	Average	2		Average	2	More Favourable	3
Amenity	Existing commercial floorspace within centre (sq.m.)	Less Favourable	1		Average	2	More Favourable	3
	Quality of public domain	Average	2		Average	2	Average	2
	Ease of traffic circulation in district	More Favourable	3		More Favourable	3	Less Favourable	1
Market	Redevelopment pressure from residential	More Favourable	3		More Favourable	3	Less Favourable	1
	Rents	More Favourable	3		More Favourable	3	Average	2
	Strata ownership	More Favourable	3		More Favourable	3	Less Favourable	1
Policy Support	Land Use mix/activity	More Favourable	3		Average	2	Average	2
	Policy prioritises Office & employment uses in centre	More Favourable	3		More Favourable	3	More Favourable	3
	Building controls (e.g. Min lot size, FSR/Height controls	More Favourable	3		More Favourable	3	More Favourable	3
	Competitiveness Score:		**43 (46)**			**46**		**50**

[7] *Effective Job Density*: *EJD* is a measure of the relative concentration of employment, derived from the density and accessibility of all jobs across a region.

Source: SGS Economics and Planning, 2016

The MCA reflects some of the most important site and context factors that have been identified in business locational decisions. Marsden Park's MCA score without rail of 43 is driven by the flexibility the centre has in being a 'blank slate' and future opportunities such as forecast local workforce growth. The MCA identifies three separate but related variables (Access to Rail, Public Transport EJD and Public Transport time to CBD) which relate to the lack of rail access to Marsden Park which disadvantage it as a precinct of choice for prospective commercial tenants relative to Norwest and Parramatta.

The separation of these factors to separate categories is to reflect the significance of public transport connectivity to high value but relatively footloose industries in the Knowledge and Professional Services Sector (as termed 'Knowledge Industries', see below). These industries differ from population-serving industries and health & education sectors, for which proximity to the local populace is key, and (typically) do not have the capital and land intensive needs of industrial sector industries

Industry Name	Broad Category
Agriculture, Forestry and Fishing	Industrial
Mining	Industrial
Manufacturing	Industrial
Electricity, Gas, Water and Waste Services	Industrial
Construction	Population serving sectors
Wholesale Trade	Industrial
Retail Trade	Population serving sectors
Accommodation and Food Services	Population serving sectors
Transport, Postal and Warehousing	Industrial
Information Media and Telecommunications	Knowledge and Professional Services
Financial and Insurance Services	Knowledge and Professional Services
Rental, Hiring and Real Estate Services	Knowledge and Professional Services
Professional, Scientific and Technical Services	Knowledge and Professional Services
Administrative and Support Services	Knowledge and Professional Services
Public Administration and Safety	Knowledge and Professional Services
Education and Training	Health and Education
Health Care and Social Assistance	Health and Education
Arts and Recreation Services	Population serving sectors
Other Services	Population serving sectors
Unclassifiable	Population serving sectors

APPENDIX D: ACCESSIBILITY MODEL – TESTED REGRESSION VARIABLES

REGRESSION DATASET (NOTE THAT SOME MELBOURNE VARIABLES WERE USED WHERE SYDNEY DATA WAS UNAVAILABLE)

Set	Name	Source and notes
Independent Variables		
Share of housing development	Share of net change in total dwellings - 1996-01 - 2001-06 - 2006-11	
	Share of net change in detached dwellings - 1996-01 - 2001-06 - 2006-11	Source: ABS Census and SGS SGS used GIS analysis to align historical small area (Collection District/Statistical Area 1) Census data to a consistent Statistical Area 2 geography. Where boundary conflicts occurred a land area proportion split was used to redistribute data.
	Share of net change in semi-detached dwellings - 1996-01 - 2001-06 - 2006-11	
	Share of net change in apartments dwellings - 1996-01 - 2001-06 - 2006-11	
Explanatory Variables		
Existing Stock/Land	Share of total dwellings - 1996 - 2001 - 2006	Source: ABS Census and SGS
	Share of detached dwellings - 1996 - 2001 - 2006 - 2011	Source: ABS Census and SGS
	Share of semi-detached dwellings - 1996 - 2001 - 2006 -2011	Source: ABS Census and SGS
	Share of apartment dwellings - 1996 - 2001 - 2006 - 2011	Source: ABS Census and SGS
	Share of urban land - 1996 - 2001 - 2006 - 2011	Source: Urban Centre/Locality from the Australian Standard Geographic Classifications (ASGC) - ABS (see Figure x)
Land Supply	Share of change in urban land - 1996-01 - 2001-06 - 2006-11	Source: Urban Centre/Locality from the Australian Standard Geographic Classifications (ASGC) - ABS (see Figure x)

Set	Name	Source and notes
Connectivity and accessibility measures	Effective Job Density - 1996 - 2001 - 2006 - 2011	Source: SGS based on Total employment data - ABS Census AM peak car and public transport travel times - Melbourne Integrated Transport Model (MITM) - Department of Transport
	Public Transport Access Levels (Train)	Source: SGS A measure of a locations public transport access as of 2010 based on the walk distance to stops and the number, frequency and type of services available.
	Public Transport Access Levels (Tram)	
	Public Transport Access Levels (Bus)	
	Public Transport Access Levels (Combined)	
	Distance to Train	Based on crow fly distance to closest train station (km)
	Distance to Tram	Based on crow fly distance to closest tram stops (km)
	Distance to Fixed Public Transport	Based on crow fly distance to closest train/tram stops (km)
	Distance to Public Transport	Based on crow fly distance to closest train/tram/bust stop (km)
Other explanatory factors	Distance to CBD	Based on crow fly distance to CBD (km)
	Distance to Central Activity Area	Based on crow fly distance to a CAA (km)
	Distance to principal activity area	Based on crow fly distance to a PAA (km)
	Distance to major activity area	Based on crow fly distance to a MAA (km)
	Distance to industrial node	Source: Designated industrial nodes - 2010 Urban Development Program - Department of Planning and Community Development Based on crow fly distance to industrial node (km)
	Near an industrial node	
	Distance to coast	Based on crow fly distance to coastline (km)
	Near the coast	
	Distance to coast/Yarra	Based on crow fly distance to coastline or Yarra river (km)
	Near to the coast/Yarra	
	Distance to coast/Yarra/major park	Based on crow fly distance to coastline, Yarra river or metropolitan level park(km)
	Near to the coast/yarra/major park	
	Distance to a university	Based on crow fly distance to university (km)
	Near a university	
	Targeted Urban Renewal Location	Based on metropolitan strategic planning documents.
Region identifiers	Development Rings	Based on historical development patterns. Inner established areas, middle established areas, outer established areas, remnant broad hectare, growth areas (See Figure X)
	Self-contained housing markets	Source: SGS based on ABS data Using migration patterns from 2006 to 2011 eight sub-markets for Melbourne have been defined: Inner South-East, West-South, West, North-West, North-East, East, Outer South-East and Mornington Peninsula (See Figure X).
	Self-contained labour markets	Source: SGS based on ABS data Using 2011 journey to work patterns six sub-markets for Melbourne have been defined: Inner, West, North, East, South-East and Mornington Peninsula (See Figure X).

APPENDIX E: ADDITIONAL RETAIL PIPELINE

Development name	Floor Area (sqm)
Glenmore Park Town Centre	7,603
Wetherill Park Market Town	1,526
Eastern Creek Retail Centre	49,300
Windsor & Seven Hills Rds Mixed Development - Modena	5,050
Greenway Village Centre	4,163
Woolworths Retail Development Kellyville	4,990
Cranebrook Village Shopping Centre	4,550
Costco Marsden Park	13,000
Bunnings Bonnyrigg	2,000
North Rocks Shopping Centre	2,500
Quarrywest Project Dexus Estate	1,070
Box Hill Town Centre Precinct	14,000
Bunnings Smithfield	13,000
Nelson Road Village	13,000

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SGS Economics & Planning

Marsden Park Developments Pty Ltd

Final Report | 19 March 2017

Marsden Park Strategic Centre:

Providing rail to meet the needs of a key emerging centre

253779-00

ARUP

Executive Summary

Providing rail to Marsden Park addresses key strategic needs in Marsden Park and Western Sydney

A range of strategic documents identify infrastructure and service improvements in Western Sydney as an urgent priority for NSW. Structurally, there is a mismatch between population and employment provision that needs to be addressed with additional employment located near to people living in Western Sydney.

Current job numbers in Marsden Park already exceed NSW Government forecasts. Continued strong employment growth forms the basis on new employment forecasts by SGS Economics and Planning (SGSEP).

The importance of providing rail to Marsden Park has been identified by the NSW Government through the Western Sydney Rail Needs Scoping Study. The proposed corridor, nominally an extension of the Sydney Metro: North West, would connect Marsden Park with the Global Economic Corridor, T1 Western Line and potentially on to the Western Sydney Airport.

In 2012, the NSW Government reserved a transport corridor between the terminus of the Sydney Metro – Northwest at Cudgegong Road, through Marsden Park and towards St Marys. This transport corridor is highly suitable for a future rail extension that supports proposed development at Marsden Park.

Rail is a transport and land use integrator

The integration and alignment of transport and land use is essential to maximising the efficient movement of people, good and services in cities. Rail has wide-ranging benefits and is generally considered as a top-tier public transport solution that is able to provide strong transportation outcomes as well as structurally organise and support land use in urban areas.

Key benefits of rail from a mobility and access perspective are:

- The provision of a fast, reliable and prioritised public transport that can transport people vast distances in times that are competitive with or superior to travel by car.
- A mass transit solution that can carry large volumes of people, and support peak demands between strong demand generators and attractors.

The key benefits of rail in relation to land use include:

- Increasing the accessibility of employment locations by increasing the catchment of labour markets.
- Productivity benefits
- Establishing a permanent infrastructure corridor, with stations that act as structural nodes around which land use can be focussed.
- Enhancing the opportunity for development

Furthermore, rail has been proven to provide property value uplift and presents a key opportunity for governments to capture value through financial mechanisms such as property levies.

It is for these reasons that rail is the most suitable mode of transportation to support the development of Marsden Park as a strategic centre.

Rail will help to establish sustainable travel patterns for Marsden Park and the surrounding area

Serving Marsden Park by rail will be key to establishing sustainable travel behaviours, and ultimately reducing reliance on cars for travel.

The beneficial impacts of rail on the sustainable travel behaviours of people travelling to and from employment centres has been demonstrated both in Sydney and elsewhere in Australia. Evidence from Sydney shows that the establishment of rail in commercial centres has resulted in significant increase in shares of people using public transport. Additionally, it is clear that people traveling to and from employment centres that are not served by rail are less likely to use public transport than those centres served by rail.

Marsden Park currently has relatively low levels of public transport accessibility compared to other nearby centres including Rouse Hill, Blacktown and Mount Druitt. If rail were extended to Marsden Park, public travel times to and from key destinations would be significantly reduced – in some cases to a third of current travel times. This will greatly extend the catchment of workers within reach of the centre and make travel time to many locations more competitive than travel by car. Accessibility analysis suggests that if rail were extended today, there would be a nine-fold increase in the number of residents within a one hour public transport trip of Marsden Park.

Major employment centres that have been established without rail access experience significant traffic congestion, with limited alternate opportunities for access. Norwest Business Park is a prime example of a centre that is almost exclusively accessed by car, and experiences significant traffic congestion without alternate options for access.

A high-level analysis of forecast employment in Marsden Park indicates that rail has the potential to significantly enhance the public transport mode share for people travelling to and from Marsden Park. Despite an 44% increase in employees between the SGS Moderate Case and SGS Rail Case employment forecasts, there would be only a 4% increase in car use to access Marsden Park for work. This can be attributed to a significant increase in public transport use due to a new rail connection.

The time for action is now

The growth and Marsden Park, and its establishment as a Strategic Centre requires clarity regarding the provision of future transport infrastructure. There a series of next steps and ongoing planning activities that are pivotal to realising the potential of Marsden Park as a strategic centre that can meet Western Sydney's growing employment needs. The NSW Government is currently undertaking major strategic planning activities that will establish the land use and transport outcomes for Sydney over the next 40 years. The appropriate consideration of Marsden Park as a strategic centre that needs rail access is crucial.

1.0 Introduction

This study considers the case to provide a connected rail service to Marsden Park through the corridor reserved by the NSW Government in 2012. The NSW Government is currently considering the future for land use and transport in Sydney through the District Plans of the Greater Sydney Commission and the Future Transport Strategy of Transport for NSW.

This report is structured in four parts:

Section 2 outlines the strategic needs of Marsden Park

Section 3 outlines the role of rail as a land use and transport integrator and a range of benefits that rail can provide

Section 4 demonstrates how rail can be used to establish sustainable travel behaviours in Marsden Park specifically. This section also outlines how rail can help to mitigate the impacts of future traffic congestion in the area.

Section 5 discusses the next steps required to prosecute the case for rail investment to Marsden Park

2.0 Strategic needs of Marsden Park

Providing rail to Marsden Park addresses key strategic needs in Marsden Park and Western Sydney. A range of strategic documents identify infrastructure and service improvements in Western Sydney as an urgent priority for NSW. Structurally, there is a mismatch between population and employment provision that needs to be addressed with additional employment located near to people living in Western Sydney.

Current job numbers in Marsden Park already exceed NSW Government forecasts. Continued strong employment growth forms the basis on new employment forecasts by SGS Economics and Planning (SGSEP).

The importance of providing rail to Marsden Park has been identified by the NSW Government through the Western Sydney Rail Needs Scoping Study. The proposed corridor, nominally an extension of the Sydney Metro: North West would connect Marsden Park with the Global Economic Corridor, T1 Western Line and potentially on to the Western Sydney Airport. Furthermore, a transport corridor has already been reserved to meet future transport needs, and runs adjacent to the Marsden Park Strategic Centre.

2.1 The growing importance of Western Sydney

Western Sydney is considered to be an urgent priority by the NSW Government and will increase in political importance due to:

- Accelerated growth occurring in the region – including the new Western Sydney Airport
- The strong performance of existing centres within the region
- The need to address jobs deficit and improve connectivity and access to jobs across the region
- The need for early planning prior to growth occurring to support the long term potential of centres across the region
- The need for improved connections between urban economic clusters emerging across the region
- The need for investment in transport infrastructure to support and shape the growth in Western Sydney.

2.2 Mismatch between population and employment provision

Western Sydney's job to resident ratio will be 0.4 jobs per resident by 2036 compared to the 0.6 jobs per resident in Eastern Sydney. Businesses often cite poor connectivity and lower-quality transport connections as a barrier to relocating to Western Sydney.

Improving transport connections across Western Sydney to residential areas, commercial and business precincts, university and health precincts as well as a Western Sydney Airport will help to unlock Western Sydney's full economic potential.

The mismatch between population and employment needs to be reversed to address challenges in Western Sydney and meet the policy aims detailed in both A Plan for Growing Sydney and the draft District Plans. Better matching between jobs and skills results in productivity growth. For more detail see See SGSEP Report, Section 2.

2.3 Employment growth in Marsden Park

As cited in the 'Economic and Employment Analysis: Marsden Park Strategic Centre' report prepared by SGSEP, Marsden Park has competitive characteristics which could position it to have a greater provision of commercial (office-based) floor space than current employment forecasts from NSW Government indicate.

Employment growth forecasts for Marsden Parxk for the next few decades, commissioned by the NSW Government, have already been exceeded by the actual number of firms and jobs in the district and the gap is likely to rapidly increase. Accordingly, SGSEP has undertaken a task to update the forecast of the precinct based on the past momentum.

The three employment forecasts developed by SGSEP are:

1. Moderate Case: assumes same development period to capacity as projected for Norwest – lower resulting annual land take up and employment growth (Norwest: c. 40 year development period).
2. High Case: Business Park (B7-zoned) section of Marsden Park grows at the same average annual take up rate of land and jobs yield p.a. as Norwest has had (therefore c.20 year development period to capacity).
3. Rail Extension Case: Moderate Case rates assumed until rail announced/opened, higher rate of business park developed forecast thereafter (timing TBC - applied to c.2025 due to uncertainty).

Forecast name	Forecast employment in 2036
SGSEP Moderate Case	14,200
SGSEP High Case	23,500
SGSEP Rail Extension Case	20,400

Table 1 Employment forecast scenarios developed by SGSEP

However, the stimulus for this growth is likely to require significant transport investment to meet demand and improve accessibility between Marsden Park and other centres across Sydney. This would require something in the order of a rail extension to Marsden Park. Such an outcome would address a number of competitive shortfalls in the centre identified by SGSEP, preventing Marsden Park from reaching its full potential contribution to Sydney's economy.

2.4 Population growth throughout the North West Priority Growth Area

Analysis from Architectus indicates that the growth forecasts for the North West Priority Growth Area are likely to be exceeded up to 100,000 dwellings will be established within the area by 2036. This will result in over 280,000 additional people throughout the region. The limited public transport provision throughout the NWPGA will need to be expanded to ensure the access requirements of future residents will be met.
A rail connection at Marsden Park will provide an opportunity for people to access Sydney's rail network closer to home, and reduce regional traffic associated with access to rail stations such as Rouse Hill and Blacktown.

2.5 Need for rail infrastructure and service provision

The Western Sydney Rail Needs Scoping Study Discussion Paper (2016) illustrates that the rail network in Western Sydney is projected to be constrained without further rail investments. As a result the scoping study proposes an initial set of six rail options that could service Western Sydney and the proposed Western Sydney Airport.

Option 2 advises a new line that links the proposed Western Sydney Airport with Sydney Metro – Northwest via the North West Priority Growth Area and provides potential connections to existing rail network at St Marys and Schofields. This option could provide rail connections for housing and employment developments at intermediate locations such as Penrith Health precinct and Marsden Park.

Figure 1 Western Sydney Airport Route Options – Option 2. (Source: Western Sydney Rail Needs Options Paper)

2.6 Opportunities to leverage off existing transport infrastructure

Marsden Park is located adjacent to a dedicated public transport corridor which is identified in option 2 of the Western Sydney Rail Needs Scoping Study. In 2012, the NSW Government reserved a transport corridor between the terminus of the Sydney Metro – Northwest at Cudgegong Road, through Marsden Park and towards St Marys. This transport corridor has the potential to cater for a future rail extension to Marsden Park.

3.0 Rail is a land use and transport integrator

The integration and alignment of transport and land use is essential to maximising the efficient movement of people, good and services in cities. Rail has wide-ranging benefits and is generally considered as a top-tier public transport solution that is able to provide strong transportation outcomes as well as structurally organise and support land use in urban areas.

Key benefits of rail from a mobility and access perspective are:

- The provision of a fast, reliable and prioritised public transport that can transport people vast distances in times that are competitive with or superior to travel by car.
- A mass transit solution that can carry large volumes of people, and support peak demands between strong demand generators and attractors
- A range of benefits where there is a mode shift from car to rail as a mode of transport including reduced congestion costs and increased walking and active transport use to access train stations.

The key benefits of rail in relation to land use include:

- Increasing the accessibility of employment locations by increasing the catchment of labour markets.
- Productivity benefits related to shorter trip times
- Establishing a permanent infrastructure corridor, with stations that act as structural nodes around which land use can be focussed.
- Enhancing the opportunity for development adjacent to high quality public transport

Furthermore, rail has been proven to provide property value uplift and presents a key opportunity for governments to capture this value through financial mechanisms such as property levies.
It is for these reasons that rail is the most suitable mode of transportation to support the development of Marsden Park as a strategic centre.

3.1 The importance of aligning transport and land use

The integration and alignment of transport and land use is essential to maximising the efficient movement of people, good and services in cities. Integration should be considered at regional and local scales. At the metropolitan scale, land use patterns and the structure of major transport networks directly influence the connectivity of people with opportunities including jobs, education and healthcare that are required to participate in society. The closer, or more connected opportunities and people are, the more efficiently an urban system functions.

In the case of Marsden Park this primarily means connecting people from across Sydney to jobs in the centre. A future rail connection to Marsden Park would also provide the opportunity to connect nearby residents of the North West Priority Growth Area (NWPGA) to key employment centres throughout western and northern Sydney.

At the local scale, the alignment of the physical design and layout of land use with access points to transport networks is able to drive sustainable travel behaviour and maximise the benefits of transport and land use investments. For Marsden Park, focussing the intensity of development nearby to a future rail station, and facilitating access between the centre and future rail services would optimally integrate transport and land use at the local scale. Further, clear direction on a rail alignment serving Marsden Park would provide certainty in strategic planning, which would help to attract development ahead of delivery of the station.

3.2 The benefits of rail

“Rail stations play a defining role in the form and function of urban land use and transport systems. Given the accessibility gains generated by new and existing rail stations, planners have increasingly sought to intensify density within station precincts in order to capture greater public transport mode share through increased walk-on ridership” [1].

High quality transit

Providing a high quality rail service, and public transport improvements generally, can provide numerous benefits. Public transport intervention can lead to greater numbers of discretionary travellers and helps stimulate transit-oriented development. This, in turn, can leverage additional vehicle travel reductions and benefits. Rail transit is considered a prestige service that gains more public support, has a stronger impact on reducing car dependency and provides a catalyst for urban redevelopment and more compact, multi-modal development patterns.

Rail infrastructure is able to support fast, frequent, mass transit connections across metropolitan areas to open access between centres that is not otherwise feasible. As a result of this level of transport connectivity centres businesses are able to reach large labour markets and people are able to access a range of work-related, educational, civic and recreational destinations. Furthermore, rail provides a permanence that is unable to be matched by other transport modes. Establishing a permanent infrastructure corridor, with stations that act as structural nodes around which land use can be focussed is an important.

1 Babb et al (2015) - The performance and potential of rail stations in and outside freeway medians

A wide range of benefits that can be monetized

There are a range of wide-ranging benefits to rail investment that can be monetized to support the case for rail investment. A study by Litman (2015) found that urban-peak commute trips shifted from car to public transport provide significant monetized benefits, as well as additional non-monetized benefits. A breakdown of these costs can be found in Figure 2. The benefits include parking cost savings, reduction in fuel cost, traffic safety, pollution reduction, climate change emission reductions as well as several more qualitative improvements.

Many of the benefits related to rail are derived from the additional transport choice that is provided to people. In particular, the attractiveness of rail has been demonstrated to lead to a greater number of people using public transport, and reductions in the number of people driving cars. This has a great many benefits for individuals (reduced travel costs such as fuel, parking and maintenance), and for wider society (e.g. reduced congestion, local pollution reduction). By leading to increases in public transport use, rail also provided a range of public fitness and health benefits for people through the inherent active transportation involved in using public transport.

Parking cost savings	Enhanced traffic safety	Local pollution reduction	Improved user convenience and comfort
Congestion reduction	Reduced resource externalities	Reduced distance-based depreciation	Improved mobility options for non-drivers
Fuel savings (net taxes)	Vehicle ownership savings	Climate change emissions reductions	Improved public fitness and health

Figure 2 Benefits of Reduced Urban-Peak Automobile Trips (Litman, 2015)

More efficient land use

Rail is a strong mechanism for delivering efficient land use outcomes. In addition to significant value uplift, rail allows a greater number of people to access places without using less space efficient travel modes such as car. Removing the imperative to drive results in less space required for car parking, the ability to use employment land for more intense and focussed development, and more walkable places.

Figure 3 Built form of Norwest (left) and Chatswood (right). Norwest is a car-domanated and car-centric employment centre with a largely inefficient land use allocation. Multiple at-grade car parks are required to serve demands. Chatswood is rail-based centre with higher density employment, residential and retail development. Higher and more productive land uses are located throughout the centre

Opportunities for value capture

Rail has been proven to provide property value uplift and presents a key opportunity for governments to capture this value through financial mechanisms. A study by the Journal of Real Estate Finance and Economics published in 2007 found that overall mean impact of a railway station on property values within 400m of a station compared to the value of properties beyond this range was 8.6%.

Value capture can be achieved when the introduction of transport infrastructure or services are linked to land value or property value uplift. The increase in value can captured in part by government through a variety of financial mechanisms including taxes and levies. The funds raised can then be used to partly fund the costs of the infrastructure and services, or be hypothecated into other improvements.

Further detail on options for value capture mechanism options can be found in Section 8 in the SGSEP report.

4.0 Using rail to establish sustainable travel behaviours in Marsden Park

Serving Marsden Park by rail will be key to establishing sustainable travel behaviours, and ultimately reducing reliance on cars for travel.

The beneficial impacts of rail on the sustainable travel behaviours of people travelling to and from employment centres has been demonstrated both in Sydney and elsewhere in Australia. Evidence from Sydney shows that the establishment of rail in commercial centres has resulted in significant increase in shares of people using public transport. Additionally, it is clear that people traveling to and from employment centres that are not served by rail are less likely to use public transport than those centres served by rail.

Marsden Park currently has relatively low levels of public transport accessibility compared to other nearby centres including Rouse Hill, Blacktown and Mount Druitt. If rail were extended to Marsden Park, public travel times to and from key destinations would be significantly reduced – in some cases to a third of current travel times. This will greatly extend the catchment of workers within reach of the centre and make travel time to many locations more competitive than travel by car.

Major employment centres that have been established without rail access experience significant traffic congestion, with limited alternate opportunities for access. Norwest Business Park is a prime example of a centre that is almost exclusively accessed by car, and experiences significant traffic congestion without alternate options for access.

A high-level analysis of forecast employment in Marsden Park indicates that rail has the potential to significantly enhance the public transport mode share for people travelling to and from Marsden Park. Despite an 44% increase in employees between the SGS Moderate Case and SGS Rail Case employment forecasts, there would be only a 4% increase in car use to access Marsden Park for work. This can be attributed to a significant increase in public transport use due to a new rail connection.

4.1 Rail at employment centres leads to public transport use

The development of rail infrastructure and services has been demonstrated to result public transport use for access to employment. Macquarie Park, in Sydney's northern suburbs experienced a dramatic shift towards public transport use once the Epping to Chatswood rail line was opened in 2010. Public transport use access to Macquarie Park increased from 9% in 2006 to 19% in 2011 – just two years after the railway line opened. Given the growth experienced on the line since 2011, the public transport mode share for Macquarie Park is expected now exceed 25% - a 15% increase in less than 10 years.

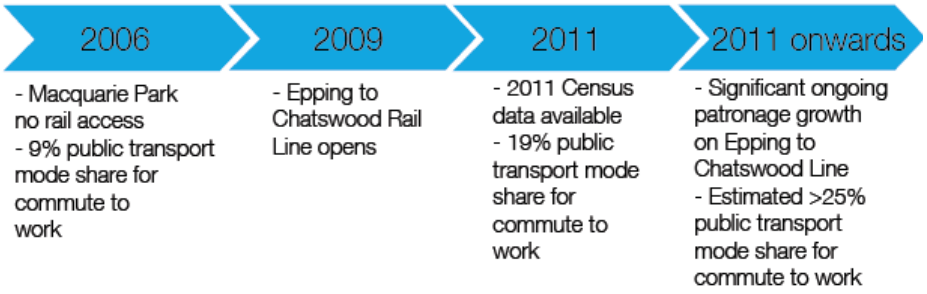

Figure 4 Timeline of rail investment and mode shift at Macquarie Park. Source: Journey to Work, 2011

Establishing rail in line with development has also been shown to lead to strong public transport uptake amongst new residents. In Perth, Western Australia, the extension of the Joondalup Line to Clarkson in 2004 – led to 29% of commuters that moved in next to the train station catching a train to work – higher than many inner-urban areas of Perth that are not located nearby to rail.

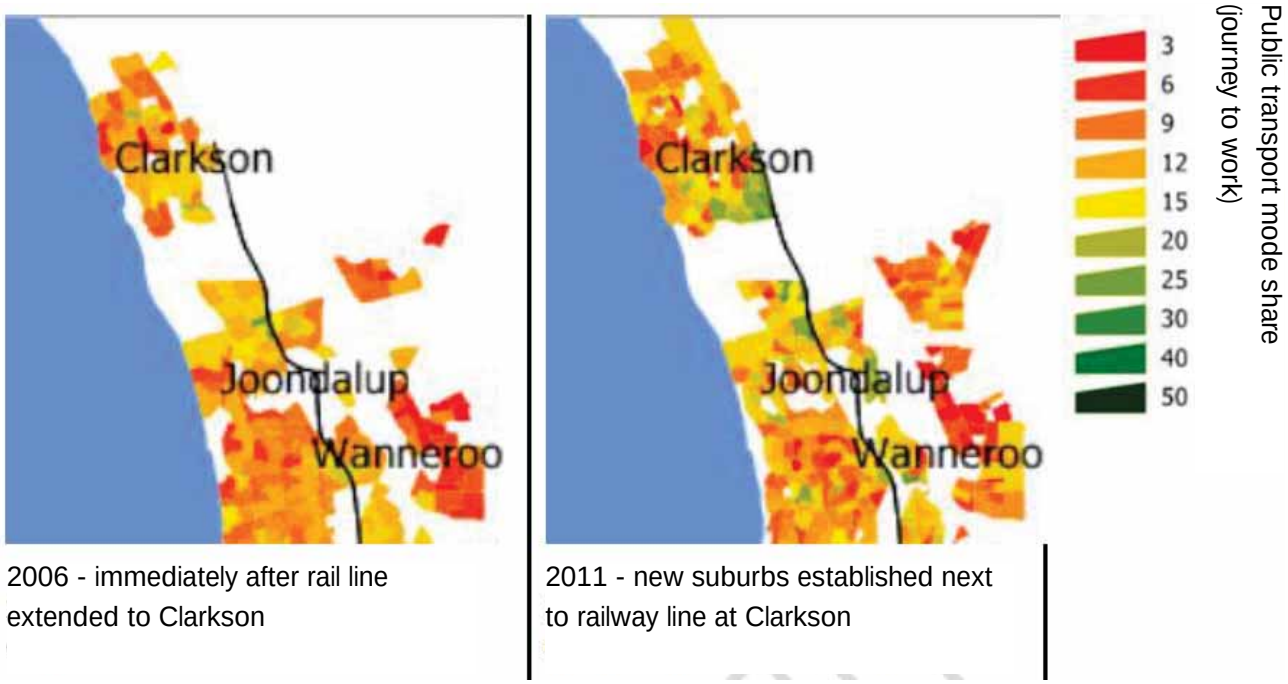

Figure 5 The positive impact of the Joondalup Line extension on public transport mode share for commuters in Clarkson. Source: Charting Transport.

Similar outcomes have also been observed along the Mandurah Line to the south of Perth. These observations have particular relevance to Marsden Park as a future centre to support major residential growth in the North West Priority Growth Area. Establishing a rail connection to Marsden Park will not only support the establishment and performance of the commercial centre, but also support public transport uptake for people travelling from residential neighbourhoods.

4.2 Centres away from rail have lower public transport use

In Sydney, centres that are served by rail have higher levels of public transport access than those served only by bus-based transportation (see Figure 4). Mona Vale, Rouse Hill, Castle Hill and Norwest are all major employment centres that are not currently served by rail. Less than ten percent of commuters travelling to these destinations travel by public transport. Mount Druitt, Blacktown, Hornsby and Macquarie Park are rail-based employment centres served by rail and bus networks. Due to rail, these centres have between 12 and 22 per cent of commuters accessing jobs by public transport.

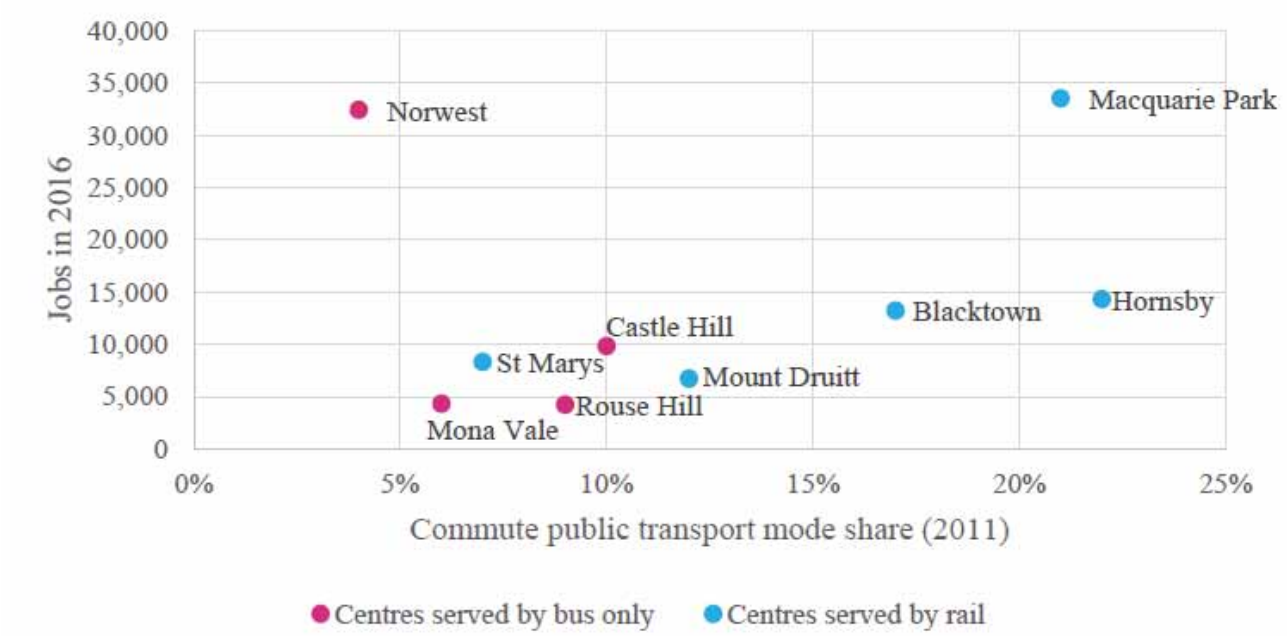

Figure 6 Commute public transport mode share for centres with and without rail access in Sydney (Source: ABS Journey to Work, 2011 and NSW Government employment forecasts 2014)

4.3 Rail to Marsden Park will greatly improve travel times and access to jobs and residents

Currently there is limited public transport provision at Marsden Park. This means that access to the jobs and population in Sydney by public transport is significantly limited compared to locations such as Rouse Hill, Norwest, Mount Druitt and Hornsby. If rail were extended form Cudgegong Road to serve Marsden Park there would be significant improvements in travel time to and from key destinations. Figure 7 shows likely travel time improvements to key destinations. Travel between Marsden Park and key destinations in northern and north-western Sydney are particularly improved. This will support further connectivity between the clusters of employment centres in the North West.

The extension of the Sydney Metro: North West to Marsden Park has the potential to significantly improve access to and from Marsden Park, making it a more competitive centre. Analysis undertaken using the Arup Transport Travel Time Analyst (T3a) tool indicates that the number of residents accessible within a 60 minute public transport trip would increase 9-fold if rail was extended today. Additionally, the number of jobs within 60 minutes could increase from approximately 14,000 to over 398,000, with the majority jobs throughout the Global Economic Corridor accessible within 60 minutes. Access throughout north-west Sydney is particularly important as there are almost as many jobs between Marsden Park in the Sydney CBD as there are in the CBD itself and the connections to, from and between these job centres will be key to Sydney's productivity.

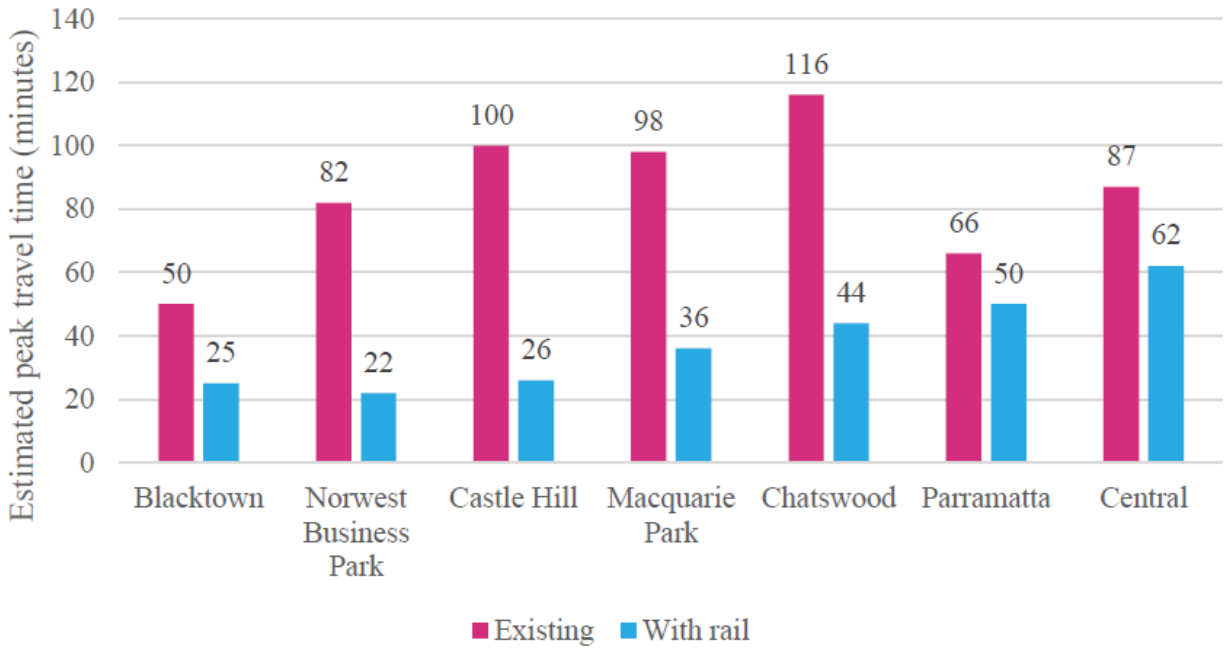

Figure 9 Estimated travel time improvements between Marsden Park and key destinations in northern and western Sydney

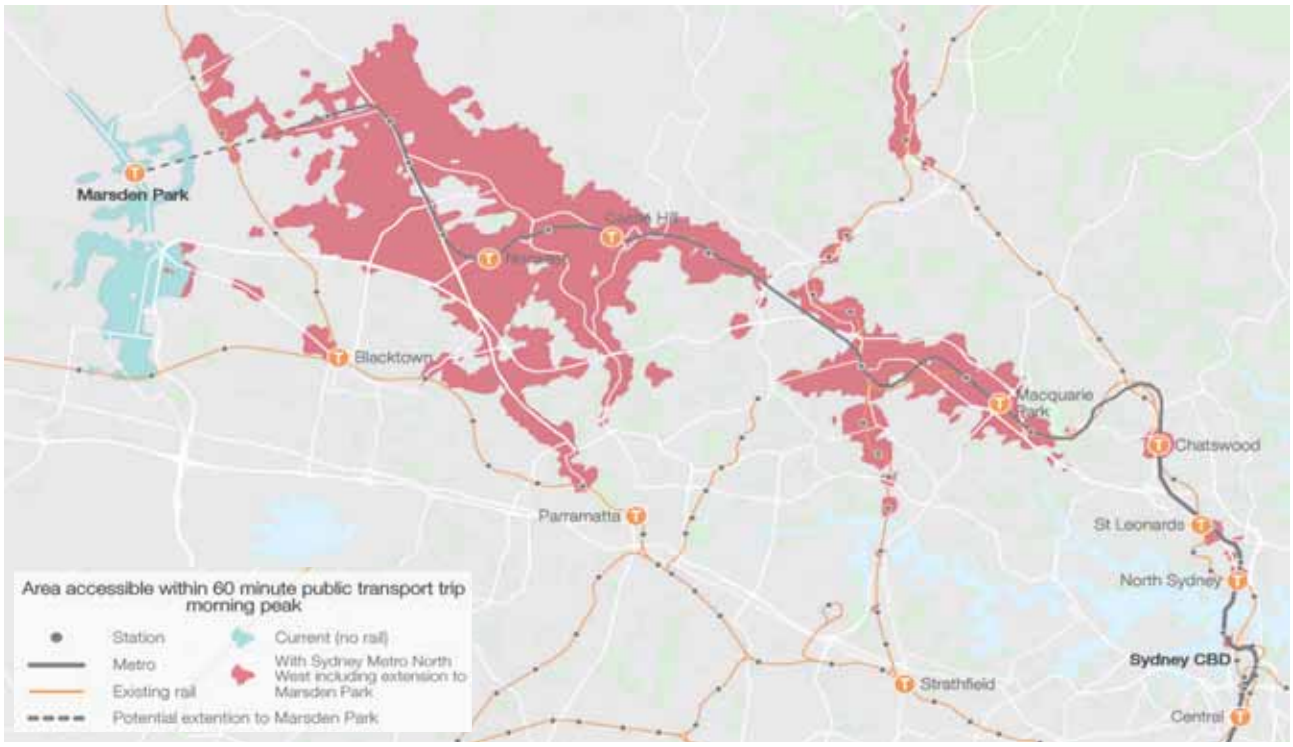

Figure 7 Area accessible within a 60 minute public transport trip of Marsden Park, with and without rail connection. Source: Arup T3a tool.

Residents within 60 minutes			Jobs within 60 minutes		
Without rail	With rail	% increase	Without rail	With rail	% increase
71,800	673,850	+938%	13,980	398,620	+2,851%

Figure 8 Current jobs and residents within 60 minute public transport trip of Marsden Park, departing at 8:00am. Source: Arup T3a tool. Based on 2016 jobs and population figures.

4.4 Rail will allow significant more jobs, without significantly more cars

Many major employment centres in Sydney experience significant traffic congestion at peak times. The challenge for those centres without priority public transport access, notably rail, is that there are limited alternate options for access other than driving. Norwest Business Park is a prime example of a centre that is almost exclusively accessed by car, and experiences significant traffic congestion at peak times. The commitment of NSW Government to serve the centre by rail will provide key alternate access to car.

Marsden Park is currently poorly served by public transport leading to high levels of car travel for access to jobs in the area. Estimates suggest that with employment growth continuing at current rates (SGS Moderate Case), the expected 14,200 employees in Marsden Park will almost exclusively travel by car. This will lead to 12,700 car trips for work. An investment in rail is estimated to lead to a 15% shift towards public transport use for work travel to Marsden Park as well as modest increases in active transport use due to the compact and urban nature of a more dense and higher job future for Marsden Park. Using the SGS Rail Case an employment base, 20,500 employees at Marsden Park would generate 13,200 daily work car trips.

In short, preliminary analysis indicates that despite an 44% increase in employees between the SGS Moderate Case and SGS Rail Case employment forecasts, there would be only a 4% increase in car use to access Marsden Park for work. This can be attributed to a significant increase in public transport use due to a new rail connection.

	Marsden Park without rail	Marsden Park served by rail
Employees in Marsden Park (2036)	14,200 employees (SGS moderate case)	20,500 employees (+44% from moderate case)
Transport mode share assumed (work trips)	Car driver - 89% Car passenger - 5% Public Transport - 5% Active - 1%	Car - 69% Car passenger - 5% Public Transport - 20% Active - 6%
Indicative daily work car trips	12,700 car trips	13,200 car trips (+4% from moderate case)

Table 2 Understanding the impact of different employment options and transport scenarios on Marsden Park. Note, mode share estimates have been derived from observed behaviours elsewhere in Sydney. Detailed assessment and modelling should be undertaken to determine detailed travel impacts.

5.0 Now is the time to act

The growth and Marsden Park, and its establishment as a Strategic Centre requires clarity on the details and timing of future transport infrastructure. There a series of next steps and ongoing planning activities that are pivotal to realising the potential of Marsden Park as a strategic centre that can meet Western Sydney's growing employment needs. The NSW Government is currently undertaking major strategic planning activities that will establish the land use and transport outcomes for Sydney over the next 40 years. The appropriate consideration of Marsden Park as a strategic centre that needs rail access is crucial.

In order unlock the full potential of Marsden Park as a strategic centre supported by rail the following actions are proposed:

- Establish Marsden Park as a strategic centre within the planning framework for Greater Sydney and inclusion in Greater Sydney Commission's District Plans
- Establish a timeline for rail investment in Marsden Park with Transport for NSW and inclusion in the ongoing drafting of the Future Transport strategy for NSW.
- Respond to the findings of the Western Sydney Rail Needs Scoping study.
- Establish an urban structure for the Marsden Park strategic centre that responds to the future provision of rail to serve the precinct.
- Identify intermediate public transport and active transport networks to support the growth of Marsden Park strategic centre prior to the establishment of rail.
- Develop public and active transport networks that will support rail once implemented on the site.