

ITEM-2	NWRL CORRIDOR STRATEGY AND STRUCTURE PLANS (FP50)
THEME:	Balanced Urban Growth
HILLS 2026 OUTCOME/S:	BUG 1 I can get where I need to go.
COUNCIL STRATEGY/S:	BUG 1.1 Facilitate the provision of integrated transport alternatives that link residents to their home, places of work and services and facilities.
GROUP:	STRATEGIC PLANNING
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EXECUTIVE SUMMARY

The Department of Planning & Infrastructure has prepared a North West Rail Link Corridor Strategy which has been placed on public exhibition until 30 April 2013. Council has been granted an extension for lodging a submission until 17 May 2013.

A number of concerns have been identified with the projected residential and employment figures in the Corridor Strategy and the approach to implementation. It is recommended that these concerns form part of a submission on the Corridor Strategy and the Department of Planning & Infrastructure be requested to work closely with Council to ensure that the Corridor Strategy is realistic and implementable prior to being finalised.

The North West Rail Link Corridor Strategy includes the draft Structure Plans for each station and its surrounds, which have been prepared to guide development over the next 20-25 years. The Corridor Strategy provides a summary of the strategic context as a priority railway transport infrastructure project, the method in which the study was undertaken, an outline of the developed draft Structure Plans for each station and projected residential and employment growth around each future station. Delivery of the draft Corridor Strategy's projected residential and employment growth will require a review of current zoning and development controls.

An analysis of the draft Structure Plans has indicated that the overall amount of residential growth projected under the draft Structure Plans is over 4000 dwellings higher than that anticipated under the Council review. It would appear that the Corridor Strategy figures do not have sufficient regard to the yield that is capable of being achieved under current planning controls. In this regard it is noted that past Council planning for much of the Rouse Hill, Kellyville and Balmoral Precincts has been predicated on the eventual delivery of the rail. Closer review of many identified opportunity sites also indicated that there has not been sufficient regard to some potential constraints such as significant vegetation, community title developments, size of future development sites and the relationship with existing development.

It is apparent that there is a need for State government to work closely with Council in relation to the identification of opportunity sites and built form outcomes. A collaborative approach will assist in determining realistic and achievable housing and employment opportunities that respond to the local circumstances.

While the NWRL project is one of the largest infrastructure project ever undertaken by any NSW State Government, its successful completion will provide a critically important public transport option for existing and future residents in North West Sydney. The Project will generate housing and employment around the stations and it is important that such land uses have regard to station function, purpose and lifestyle characteristics to ensure such growth maintains quality of life.

REPORT

The purpose of this report is to consider the outcomes of the draft North West Rail Link Corridor Strategy prepared by the Department of Planning & Infrastructure. It provides an overview of the Corridor Strategy and the structure plans designed to guide the development from around the future rail stations of the NWRL project. An assessment is made of the suitability of the future housing and employment growth projections around each Station.

North West Rail Link Corridor Strategy

The North West Rail Link Corridor Strategy provides a summary of the strategic context as a priority railway transport infrastructure project, the method in which the study was undertaken, an outline of the developed Draft Structure Plans for each station and projected residential and employment growth around each future station.

Delivery of the draft Corridor Strategy's projected residential and employment growth will require a review of the current zoning and development controls.

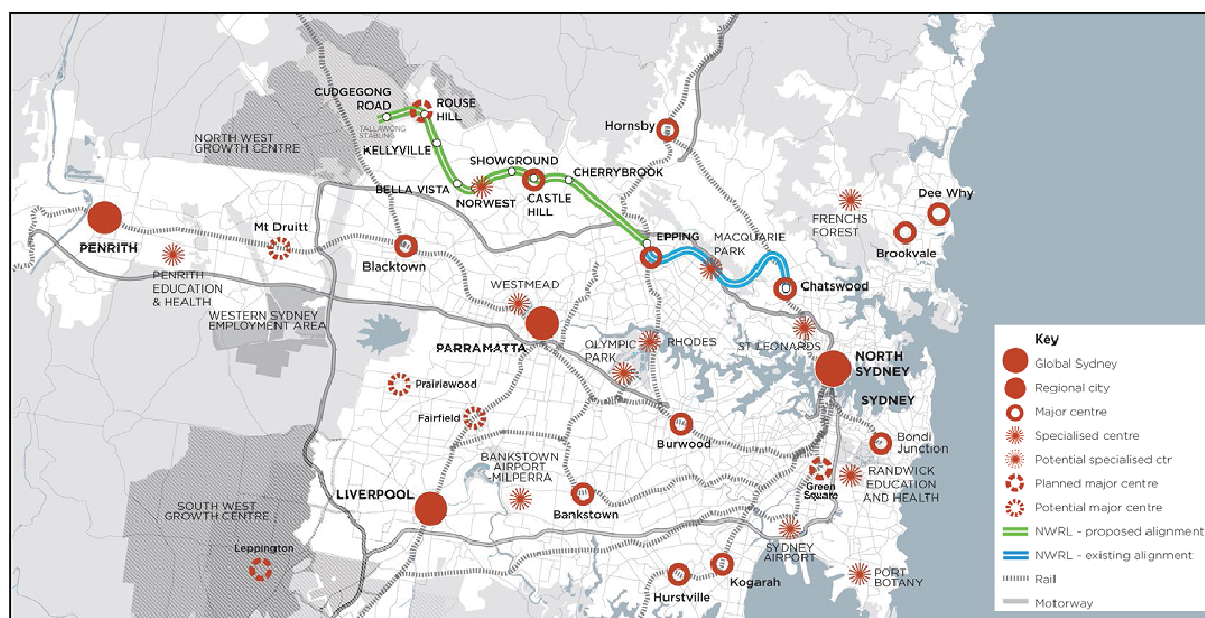


Figure 1
NWRL - Regional Context

Vision and Draft Structure Plans

The existing level of development around the eight (8) new NWRL stations varies greatly and given this, the study has considered the area surrounding each of the proposed NWRL stations as separate precincts. The boundary for each precinct roughly based on

approximately 800m from each station, which is generally considered to reflect a 10 minute walking trip. However, the boundaries have also been adjusted to account for subdivision pattern, roads, surrounding topography and other local features.

The NWRL Station Precincts that are of significance to The Hills Shire Council are:

- Cherrybrook Station;
- Castle Hill Station;
- Showground Station;
- Norwest Station;
- Bella Vista Station;
- Kellyville Station; and
- Rouse Hill Station.

Figure 2 below provides an overview of the Rail Corridor, Stations and Precincts.

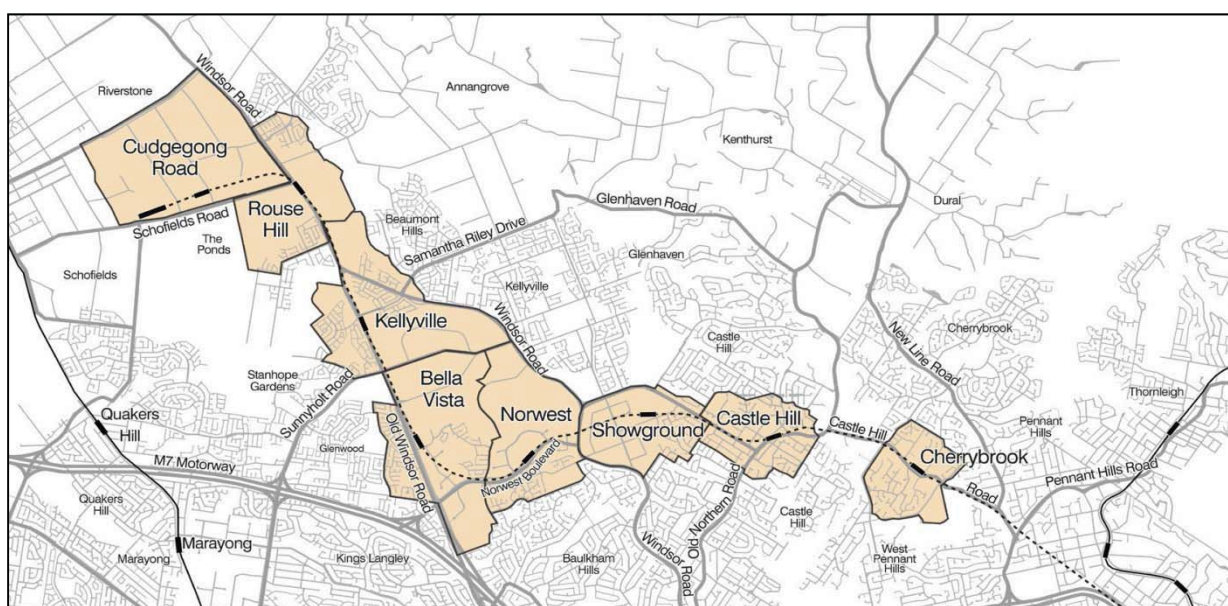


Figure 2
North West Rail Link - Proposed Alignment, Stations and Precincts

Whilst the broad assumptions have been documented in the Corridor Strategy, detail as to how the figures were calculated has not been made available. In order to determine the validity of the growth figures contained in the Corridor Strategy a review (Attachment 1) has been undertaken of all of the opportunity sites identified within each of the draft Structure Plans. Consideration has been given to existing development (land use survey), development approvals, the age of existing housing stock, the availability of vacant land and the potential achievable under existing planning controls. The review has focussed upon the potential growth over and above that which could be achieved under Council's existing controls to give a true picture of the outcomes arising from the delivery of the new infrastructure. Based on the analysis, revised projected growth areas have been mapped.

PROJECTED RESIDENTIAL GROWTH

In order to calculate projected residential growth the draft Structure Plans for each Precinct mapped the existing constraints to development and identified the unconstrained areas or 'opportunity sites'. The characteristics of the opportunity sites have been identified and a proposed land use and floor space ratio has been nominated.

A number of assumptions are set out in the draft Corridor Strategy relating to residential floor space for different development types and average lot sizes for detached dwellings. Demand analysis has then been undertaken to inform expected take up or realisation rates for each land use.

For the whole of the Corridor from Cherrybrook Station to Cudgegong Road Station the Strategy identifies the projected growth in dwellings as an additional 27,400 dwellings by 2036. It is important to note that the study areas include land to the west of Old Windsor Road and Windsor Road, within Blacktown LGA, and land to the east of Castle Hill Road, within Hornsby Shire, however the majority of the projected growth is located within the Hills Shire.

A summary of the projected dwelling growth contained within the Corridor Strategy by development type is shown in the table below.

	2012		2036		GROWTH	
	TOTAL	%	TOTAL	%	TOTAL	%
SINGLE DETACHED	9,200	85%	10,050	26%	850	3%
TOWNHOUSE	100	1%	5,100	14%	5,000	18%
3-6 STOREY APARTMENT	1,450	13%	15,750	41%	14,300	52%
7+ STOREY APARTMENT	100	1%	7,350	19%	7,250	27%
TOTAL DWELLINGS	10,850	100%	38,250	100%	27,400	100%

Table 1

Projected dwelling growth within the NWRL corridor by 2036

Analysis has highlighted that some of the sites identified in the draft Structure Plan are not likely to be available for the extent of housing growth projected, as detailed in the previous sections of this report. This may be due to some locations being inappropriate or not available for the projected level of residential growth. For example the potential may be limited by recent approvals for uses other than residential, existing small lot housing development, strata and community title ownership constraints, and constraints such as significant vegetation.

The main variations from the NWRL Strategy include the following:

- Deletion of townhouse and apartment capabilities where land is already zoned and available for such uses;
- Replacement of some apartment capability with townhouse capability in areas with recent low density residential character;
- Introduction of new capability for higher density in locations such as Windsor Road Kellyville;
- Inclusion of additional townhouse capability in the amended Showground Study Area;
- Inclusion of higher density outcomes (7-20 storeys) in key locations such as the rail corridor within the Bella Vista, Kellyville and Showground precincts; and
- Deletion of redevelopment potential in recently constructed residential precincts (Rouse Hill and BRR).

Using similar assumptions to those identified in the draft Structure Plans the projected residential growth figures have been revised. The following table compares the growth projected under the NWRL Strategy with that projected under the revised opportunity sites. This table only considers those stations within the Hills Shire where opportunity

sites are identified. In this regard Cherrybrook Station and surrounds has not been included given the constrained nature (geotechnical) of land south of Castle Hill Road.

While the geotechnical limitations present around Cherrybrook Station are a significant issue for potential redevelopment, it may be possible to consider more intense forms of development in this locality. This would require a substantial amount of detailed investigation, which should be undertaken by the Department of Planning & Infrastructure at this level of planning rather than dealt with as a separate Planning Proposals at a later stage, as any Planning Proposal for this work would be undertaken by the applicant and potentially result in a more adhoc approach to development in this locality.

	NWRL STRATEGY		COUNCIL ESTIMATE	
	TOTAL	%	TOTAL	%
SINGLE DETACHED	-300	-1%	-1,231	-7%
TOWNHOUSE	3,600	16%	511	3%
3-6 STOREY APARTMENT	11,550	52%	6,666	38%
7-20 STOREY APARTMENT	7,250	33%	9,182	52%
MIXED USE (7-20 STOREY)			2,518	14%
TOTAL DWELLINGS	22,100	100%	17,646	100%

Table 2

Comparison of projected dwelling growth within Castle Hill, Showground, Norwest, Bella Vista, Kellyville and Rouse Hill precincts 2012-2036

In determining the revised Council estimates, consideration has also been given to the projected take up rates with a lower level of uptake in the order of 30% expected where there is existing housing stock and a higher level of uptake of 50%-90% (depending on development type) where land is mostly vacant or housing stock is already aged. The figures in the table assume that most of the opportunities in close proximity to the station will be taken up. In fact an increased yield of up to 20 storeys has been identified for locations that are in close proximity to the rail line. Such locations are relatively isolated ensuring amenity impacts can be appropriately contained and there is the opportunity to encourage a range of uses to provide an attractive living environment for the future population.

PROJECTED EMPLOYMENT GROWTH

To determine the likely employment numbers to be delivered under the proposed Draft Structure Plans, a capacity and demand study was undertaken. The result of this study was an estimate of projected employment growth by industry sector, achievable under the draft Structure Plan as provided in the table below. The projected growth for employment to be delivered for the North West Rail Corridor is an additional 49,500 jobs.

	2012		2036		GROWTH	
	TOTAL	%	TOTAL	%	TOTAL	%
COMMERCIAL	22,500	52%	60,850	66%	38,350	77%
RETAIL	9,600	22%	17,750	19%	8,150	16%
BULKY GOODS	8,500	20%	7,500	8%	-1,000	-2%
INDUSTRIAL	2,500	6%	6,500	7%	4,000	8%
TOTAL JOBS	43,100	100%	92,600	100%	49,500	100%

Table 3

Projected Employment Growth

As shown in Table 3 there is a predominance of future jobs in the commercial sector followed by jobs in the retail sector. None of the projected industrial jobs are located within the Hills Shire making up the area around Cudgegong Road depot and stabling yards.

The breakdown of the projected employment growth by precinct is set out below and indicates that within the Shire approximately 45,000 additional jobs are anticipated to be delivered under the proposed structure plans. These jobs would be focussed around Norwest, Bella Vista, Castle Hill and Showground precinct.

PRECINCT	2012	2036	GROWTH
Castle Hill	7,000	16,500	9,500
Showground	7,500	15,200	7,700
Norwest	13,000	26,200	13,200
Bella Vista	9,500	20,000	10,500
Kellyville	100	900	800
Rouse Hill	4,000	7,500	3,500
TOTAL JOBS	41,100	86,300	45,200

Table 4

Projected Employment Growth within the Hills Shire by Precinct

Whilst the broad assumptions have been documented in the Corridor Strategy, detail as to how the figures were calculated has not been made available.

Councils Employment Lands Direction adopted in June 2009 examined the capacity to accommodate additional jobs to 2031. At this time it was identified that there was sufficient capacity to accommodate the targets contained within the Draft North West Subregional Strategy (additional 47,000 jobs by 2036). Some of the locations identified for growth within the Draft Structure Plans have already been identified within Council's Employment Lands Direction. For example retail jobs within Castle Hill and Rouse Hill major centre and some business park jobs.

The main new opportunities identified within the draft structure plans relate to:

- Redevelopment of light industrial premises for large commercial floor plates in the eastern section of the Castle Hill trade area;
- Development of a local centre and mixed use core around the Showground station; and
- Increased scale of commercial development in all locations with assumed floor space ratios between 2:1 and 4:1 as compared to current maximum standard of 1:1.

The extent of commercial and thereby employment opportunities within the Norwest Business Park, which falls within both the Norwest and Bella Vista Precincts, may not reflect the local situation. In this regard to reinforce Norwest Business Park as a Specialised Centre within the North West, the Corridor Strategy seeks to accommodate 13,200 additional jobs in the Norwest Precinct and 10,500 additional jobs in the Bella Vista precinct by 2036. To achieve this increase, the Strategy has identified specific high quality commercial redevelopment opportunities surrounding the proposed stations. These identified opportunities are located around Norwest Lake and along part of Brookhollow Avenue and are designed to provide a high intensity commercial core within the centre of the Business Park. Within the Bella Vista Precinct the northern end of the Bella Vista precinct will be opened to enable future expansion for 4-6 storey commercial offices.

Further redevelopment around Norwest Lake will however be limited as parts of this area are already developed. Sites to the east and south of the lake are either strata subdivided, restricting redevelopment potential, or relatively new developments. To the east of the commercial core greater redevelopment potential is available as the majority of these sites include low lying older commercial and industrial developments. The extent shown in structure plans however is not likely.

Peak redevelopment potential around the lake is most likely available on the existing Norwest Marketown Shopping Centre site, the Hillsong Church, and the ice skating rink. The existing shopping centre site is identified in the draft Structure Plan as an existing local centre. The Hillsong Church site is approximately 8 hectares and whilst existing development on the site is relatively recent, the site area and close proximity to the station provides a key redevelopment and employment opportunity for the Business Park. Similar opportunity applies to the existing ice skating rink.

Sites along the southern side of Brookhollow Avenue are generally older in nature and provide appropriate land area to accommodate the floor space ratios required to achieve the employment targets. These sites are generally in single ownership facilitating greater redevelopment potential.

The main impediment to redevelopment in this location will be traffic access along Brookhollow Avenue. This road provides a narrow curvilinear alignment with existing traffic calming measures and round-a-bouts at either end. While the train station will facilitate public transit access to these key opportunity sites, traffic generation will still need to be managed with specific consideration of the environmental capacity of the local road network and functionality of Norwest Boulevard being the key east – west connection through the Business Park. In addition redevelopment must have due regard to potential amenity, private and solar access implications for the existing residential properties immediately to the south of the Business Park.

Overall, it is not considered that the employment numbers presented in the draft structure plan are likely to provide a true representation of future employment growth as a result of the rail delivery. As indicated in the report part of the projected growth has already been anticipated within the major centres of Castle Hill and Rouse Hill. Within the Norwest Business Park and Castle Hill trade area new opportunities exist but will require careful management of traffic generation and integration with existing and new residential development. As for residential opportunities there is a need for State government to work closely with Council in relation to the identification of opportunity sites and built form outcomes and to facilitate the completion of necessary investigations. A collaborative approach will assist in determining appropriate employment growth and that responds to the local context.

IMPLEMENTATION (GOVERNANCE)

The draft Corridor Strategy and Structure Plans for the NWRL Station Precincts are intended to provide guidance for more detailed planning around the future stations. It is considered a strategic level document, similar to that of the Subregional Strategies for Sydney. The Corridor Strategy indicates that the Structure Plans will inform, and be implemented through, appropriate zonings, amendments to built form controls to guide the assessment of major projects and development applications within the Station Precincts.

The strategy notes that to deliver the corridors projected growth, zoning and development controls will require review. Current controls such as those relating to minimum lot size, height, floor space ratio, minimum apartment sizes and parking are seen as potentially constraining the intensification of land uses or limiting the type and

variety of dwellings being offered. Similarly Development Control Plans, Contribution Plans and Public Domain Strategies are identified as needing review.

The Corridor Strategy does not unequivocally state the responsibilities of State and Local Government in terms of future detailed planning and statutory arrangements for implementation. As Council is aware, in developing a new planning system for NSW the State Government has advocated an evidence based whole of government approach to strategic planning to better facilitate the delivery of housing and jobs. The White Paper has recently been released and maintains this approach of a hierarchy of plans including Subregional Delivery Plans which will provide the delivery framework with a focus on integrating infrastructure and identifying a framework for rezoning areas of significance. Local plans will be the principal legal document that delivers the strategic vision through zoning, development guides and infrastructure.

In delivering growth related to the rail project it would be expected that Local Plans would be the principal mechanism for implementation. To undertake planning and implementation by State policies such as has been the case for Box Hill and North Kellyville would be contrary to the principles of the new planning system and would fail to recognise the expertise and resources available within local government. In this regard it is recommended that key responsibility for future planning and identification of zones and drafting of development controls (guides) should rest with Council. Based on the current framework, Council's Local Environmental Plan 2012 zonings and provisions relating to minimum lot size, height, and floor space ratio will be required to be amended. These amendments would be undertaken through planning proposals. As can be seen from the analysis contained within this report, Council has a better understanding of the existing development and future opportunities around each station. Therefore it is appropriate that Council is the lead agency for future detailed planning.

It is recognised however, that timely and effective support will be needed from State Agencies to assist the undertaking of necessary studies and to ensure the delivery of key infrastructure in line with demand. In terms of studies this report has identified the need for further investigations such as urban design work, ecological, flooding and traffic reports, local infrastructure costings and public domain plans to support more detailed planning and implementation. Funding assistance from State government for such investigations will facilitate timely and effective planning outcomes.

In terms of infrastructure the Corridor Strategy notes that the projected growth in population and employment will require consideration of transport, movement and accessibility as well as the infrastructure networks such as water, sewer electricity and gas to meet the projected demand. Critical agencies will be Roads and Maritime Services, Transport for NSW, Sydney Water and other service providers. Therefore whilst Council is well equipped to undertake the future planning and implementation of growth around the rail corridors, in order to ensure successful and timely delivery, there is a need for clear State Government commitment to the delivery of the required supporting infrastructure.

CONCLUSION

While it is important to remember that the Corridor Strategy is intended to indicate the future form that development should take around each Station, the analysis behind the Strategy is based on site potential that it anticipates being realised over the next 20-25 years.

From the analysis above it is clear that the overall amount of residential growth projected under the draft Structure Plans is approximately 4000 dwellings higher than

that anticipated under the Council review. It would appear that the Strategy figures do not have sufficient regard to the yield that is capable of being achieved under current planning controls. In this regard it is noted that past Council planning for much of the Rouse Hill, Kellyville and Bella Vista Precincts has been predicated on the eventual delivery of the rail.

For all stations it would be expected that the mix of development types would be different from that identified under the Corridor Strategy with a higher proportion of apartments over 7 storeys in height, reflecting the opportunity offered by relatively vacant sites within the closest proximity to stations.

From the foregoing it is apparent that there is a need for State government to work closely with Council in relation to the identification of opportunity sites and built form outcomes. Prior to finalisation of the North West Rail Corridor Strategy the Department of Planning & Infrastructure should undertake future work, with a more inclusive approach, to determine realistic and achievable housing growth and employment growth targets that respond to the local circumstances.

The NWRL project is one of the largest infrastructure project ever undertaken by any NSW State Government. Its successful completion will provide a critically important public transport option for existing and future residents of The Hills Shire and the North West Growth Centre. The Project has been and will continue to be supported by both Council and general community.

Overall it is considered that the proposed Corridor Strategy satisfactorily reflects the development forms required to support a modern rail line and its stations. However Council officers have identified a number of concerns and recommendations which should be submitted to the Department of Planning and Infrastructure for consideration, prior to the Corridor Strategy being finalised.

IMPACTS

Financial

Construction of the NWRL project will have a wide range of financial impacts on Council. Indirect financial impacts will primarily involve the large amount of time that will be spent by officers from across the organisation liaising with the NWRL project team on a variety of matters throughout the duration of the project. These indirect costs will be accommodated within Council's existing staff establishment and budget allocations.

Hills 2026

The NWRL is a significant State infrastructure project that addresses many of the factors identified by our community's strategic vision that contributes to our quality of life.

RECOMMENDATION

This report and the following recommendations form the basis of The Hills Shire Council's submission to the North West Rail Link Corridor Strategy and the accompanying draft Structure Plans:

1. The Department of Planning and Infrastructure be requested to undertake further work on the capacity and capability of each Station Precinct to accommodate housing and employment growth and to closely involve Council in developing realistic and achievable housing and employment outcomes.

2. Showground Station Precinct be extended to the south to include a small area of land zoned R2 – Low Density Residential to ensure that a satisfactory transition in built form is provided. This will align the boundary with the existing R3 Medium Density Residential zone and prevent an isolated area of low density between the high and medium density housing sites.
3. Council should be nominated as the lead agency for detailed planning and implementation of growth within the rail corridor given detailed local knowledge and understanding of issues.
4. State Government assistance is requested to facilitate the timely and effective implementation of growth by way of funding assistance for necessary detailed investigations, studies and strategies.
5. The following detailed studies are to be undertaken by the Department of Planning & Infrastructure at this level of planning:
 - a. Detailed ecological studies will be required to identify impacts on native vegetation and threatened flora and fauna as part of any future rezoning investigations within the study areas which are affected by threatened species.
 - b. The flooding information captured within the draft structure plans are preliminary and detailed flooding studies will need to be undertaken at master plan, rezoning or development of the affected study areas.
 - c. Detailed traffic and access studies are to be undertaken to provide alternative movement and improve connectivity within the Study Areas.
 - d. The drainage information captured within the draft structure plans are preliminary only and detailed drainage studies will need to be undertaken.
 - e. Detailed Heritage studies will be required to be undertaken to ensure protection of Council's listed heritage items.
 - f. Geotechnical studies for the locality around Cherrybrook Station to determine the potential for redevelopment to accommodate additional growth within the Station Precinct.
6. Upfront and clear State Government commitment is required to ensure the timely delivery of key necessary infrastructure to support the projected housing and employment growth within the identified rail precincts.
7. A Public Domain Strategy for each station precinct to guide the character within the study area and include the following: streetscape, treatment of open spaces and plazas, preservation of ecological corridors, pedestrian and cycling linkages should be prepared by the working party for inclusion into the final structure plan.

ATTACHMENTS

1. Review of Station Precincts (22 pages)

1. Cherrybrook Station

ATTACHMENT 1

The Cherrybrook Study Area (Figure 1) is an established low density residential area that covers approximately 187 hectares, and encompasses lands within both Hornsby Shire and The Hills Shire Local Government Areas (LGAs).

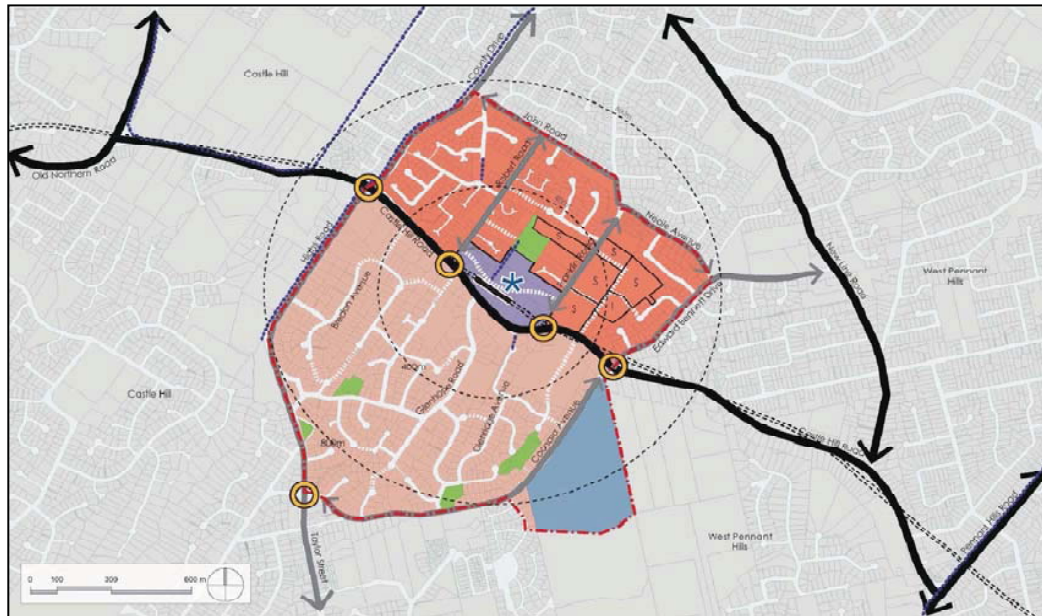


Figure 1
Cherrybrook Station Precinct

For the Cherrybrook Study Area the Draft Structure Plan anticipates a total capacity for 1,800 additional dwellings by 2036. This entire additional yield is indicated on the northern side of Castle Hill Road within the Hornsby Local Government Area.

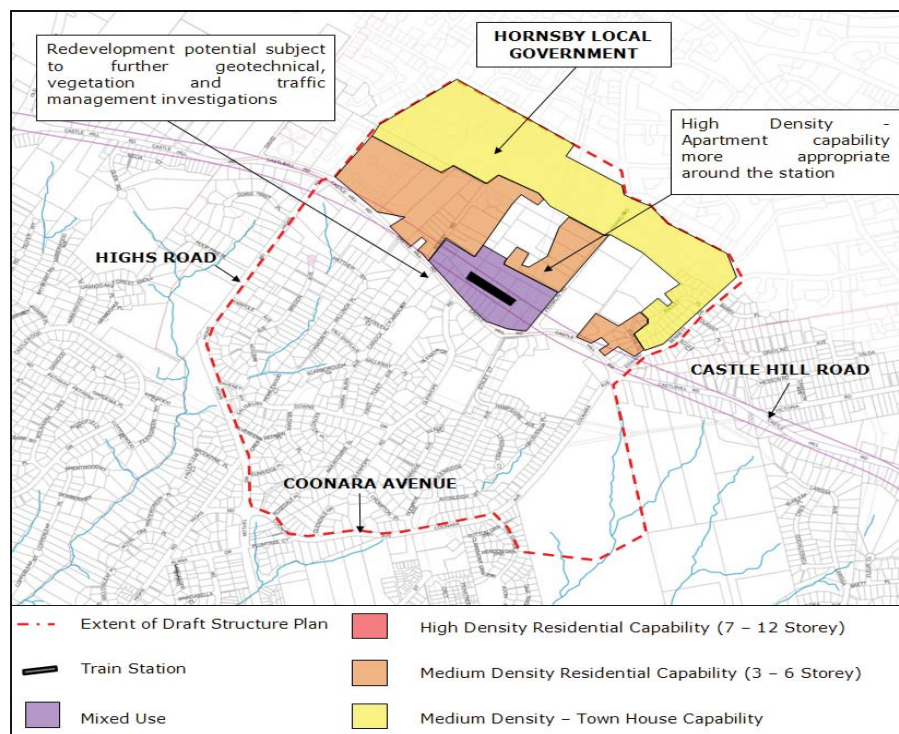


Figure 2

North West Rail Link Strategy – Cherrybrook Station Surrounds - Projected Growth Areas

The strategy does not sufficiently capitalise on opportunities to allow higher density housing that are considered achievable on the northern side of Castle Hill Road or those that may possibly be achieved, after investigation of the constraints, on the southern side of Castle Hill Road. The draft Structure Plan indicates a medium density capability of 3–6 storeys surrounding the Cherrybrook Station with medium density – townhouse capability along the northern periphery of the study area. It is considered more appropriate to encourage 7–12 storey capability immediately surrounding the train station, transitioning to medium density apartment and townhouse capability within a radiating arc out from the station. This is generally the case for all other stations outlined within the strategy and is encouraged to maximise housing opportunity and choice surrounding key mixed use and transit locations.

Based on the analysis, revised projected growth areas in The Hills local government area have been mapped and are shown in the figure 3.

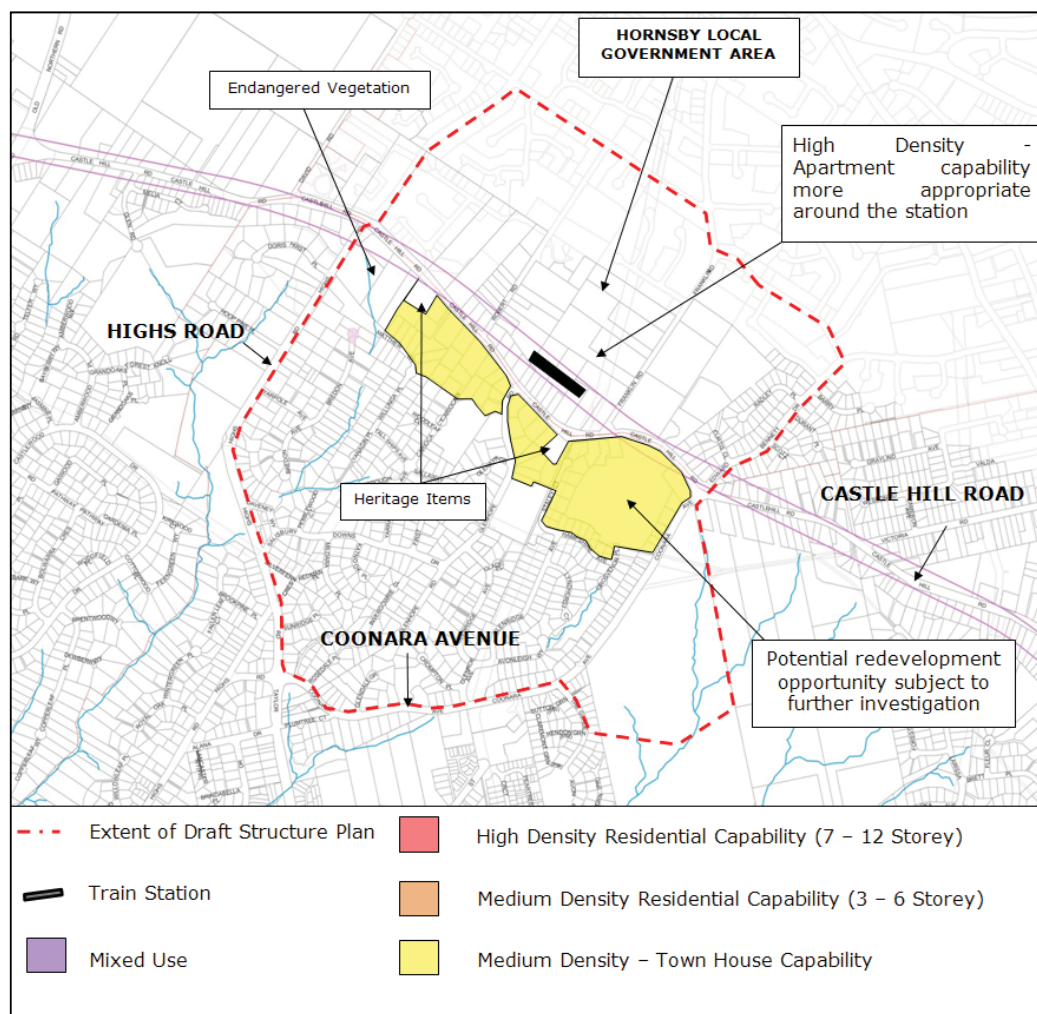


Figure 3

Council Review – Cherrybrook Station Surrounds - Projected Growth Areas

The main variations from the NWRL Strategy include the following:

- Encouragement of High Density Residential (7–12 storey) around the proposed station within the Hornsby Local Government Area.
- Identification of potential redevelopment capability on the southern side of Castle Hill Road subject to further geotechnical, vegetation and traffic management investigations.

A review of all of the opportunity sites identified in the draft Structure Plan has indicated some redevelopment potential may be available along the southern side of Castle Hill Road. Any redevelopment potential will require further detailed investigation to consider geotechnical stabilisation requirements, potential impact upon critically endangered vegetation (Sydney Blue Gum High Forest) and traffic management impacts. These investigations will be essential to ascertain a reasonable growth potential within this area giving due regard to the environmental constraints of the land. It is also noted that this growth potential could be further encouraged by improving pedestrian linkages across Castle Hill Road by way of a pedestrian bridge or additional traffic signalisation and crossings. Some sites in this location are considered to be constrained by gradient, existing vegetation or contain existing heritage items and have been excluded from the mapped projected growth areas under the Council review.

Much of this land has restricted potential for increased density due to landslip risks along the southern side of Castle Hill Road and there is a long history associated with this matter, and a number of studies have been undertaken which have informed current controls and mapping.

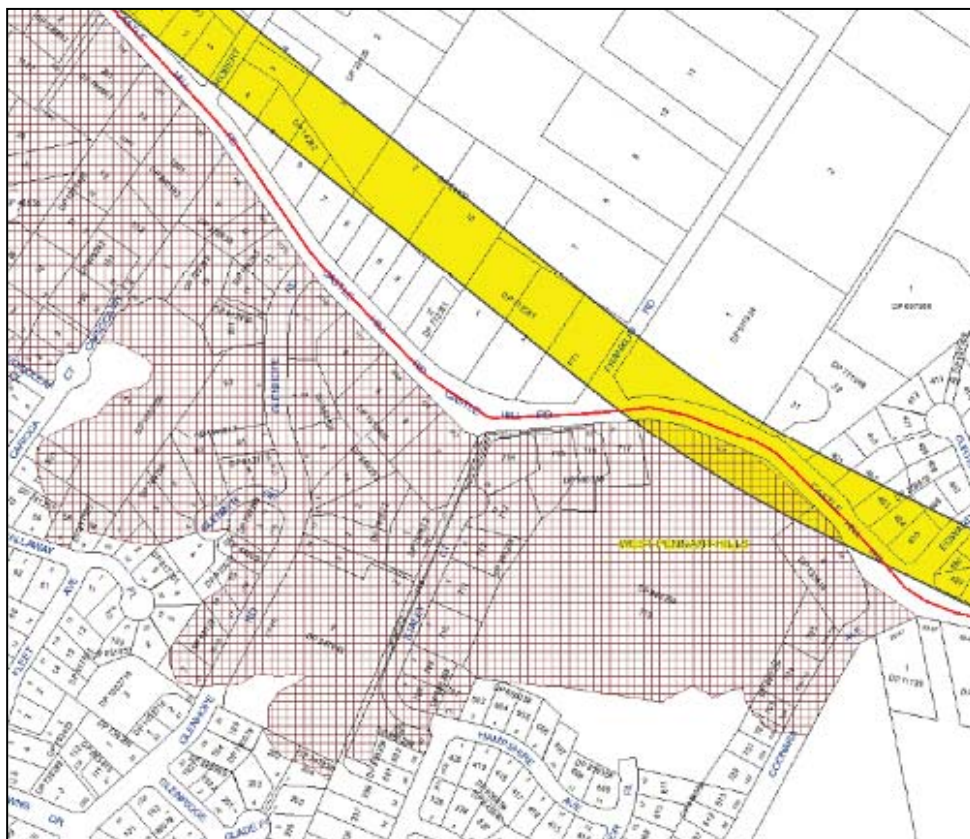


Figure 4

Extract from LEP 2012 – Landslip Constraints

2. CASTLE HILL STATION

Castle Hill is considered a destination station and only a point of origin for those who live within walking distance of the station, which should be encouraged.

The Study Area comprises the existing Castle Hill commercial/retail centre at its core, which includes a main street, Castle Towers shopping centre, and Castle Mall Shopping Centre. The Study Area contains four schools, Castle Hill Primary School and Castle Hill High School, in the west, and Hills Adventist School and St Bernadettes Catholic School,

to the east of the core. The area also includes Castle Hill RSL, Castle Hill Bowling Club and a number of parks, play areas, reserves and community facilities.

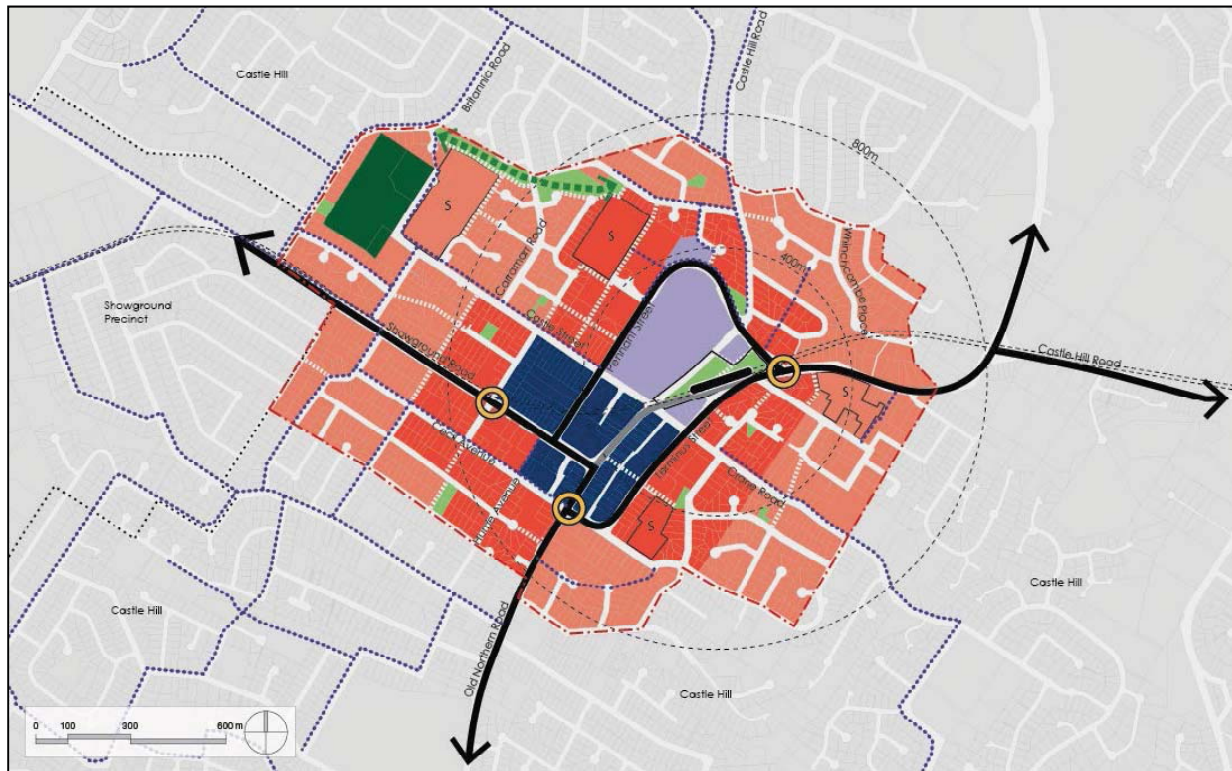
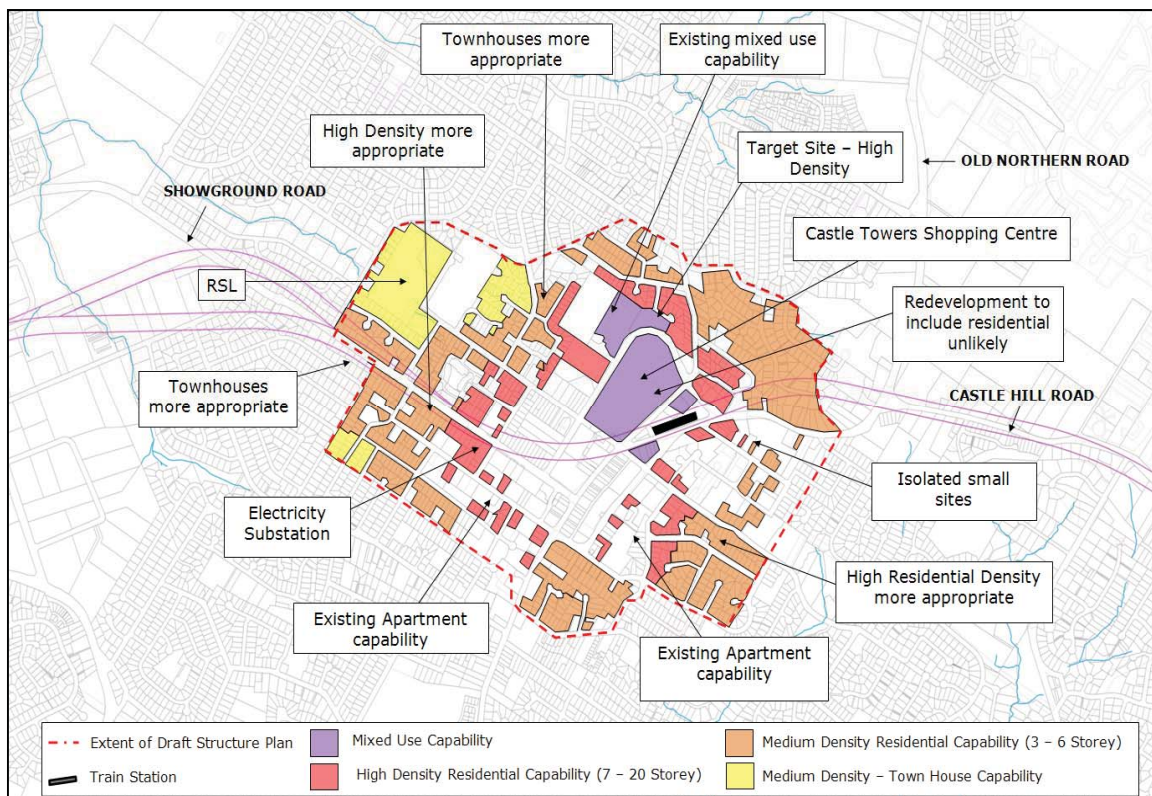


Figure 5
Castle Hill Station Precinct

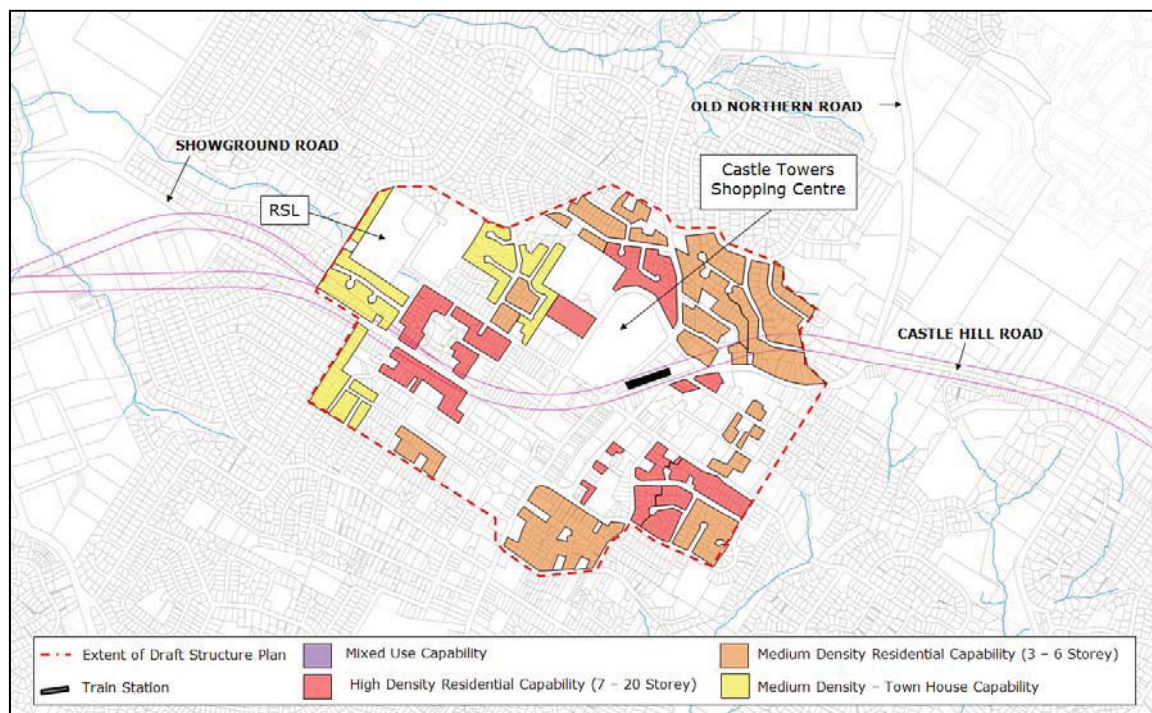
For the Castle Hill Study Area the Draft Structure Plan anticipates a total capacity for 7,100 additional dwellings by 2036. However based on feasibility analysis it is expected that take up of opportunities will be 62%, thereby delivering a potential 4,400 additional dwellings within the study area. The future demand for residential development in this study area is estimated to be in the order of 200 dwellings per annum.

The opportunity sites identified for the Castle Hill Precinct and surrounds are generally considered appropriate as the Precinct incorporates the Castle Hill Major Centre and can accommodate increased housing density. A review of all of the opportunity sites identified in the draft Structure Plans has indicated that numerous sites are not appropriate for the density capability indicated. These sites are considered to be constrained by restrictive allotment size, strata title ownership, inappropriate built form interface or unlikely redevelopment potential due to existing land use. In addition allotments in the south west corner of the Precinct are also considered to be more appropriate for medium density – townhouse capability to better reflect the existing and future character of this portion of the Precinct and integrate with the density recommendations outlined within the draft Structure Plan for the Showground Precinct.

**Figure 6**

North West Rail Link Strategy – Castle Hill Station Surrounds - Projected Growth Areas

Based on the analysis, revised projected growth areas have been mapped and are shown in figure 7.

**Figure 7**

Council Review – Castle Hill Station Surrounds - Projected Growth Areas

The main variations from the NWRL Strategy include the following:

- Replacement of medium density apartment capability in the west and south east of the precinct by 7 plus storey apartment capability due to exiting built form and town centre location;
- Deletion of capability for isolated sites that would not achieve sufficient area for a higher density outcome;
- Deletion of opportunities for 3-6 storey apartments as capability already exists under the current R4 High Density Residential zone;
- Deletion of capability on the RSL site in the north west of the precinct due to unlikely redevelopment potential;
- Replacement of 6-12 storey apartment capability south of the RSL with townhouse capability to better interface with the proposed outcome in the Showground Precinct;
- Pennant Street Target Site is indicated as providing mixed use potential but is considered to be more appropriate as high density apartments with capability for 7-20 storeys;
- Deletion of land between Castle Hill Primary School and Castle Towers due to ownership and greater opportunity for commercial yield; and
- Deletion of potential capability on the Castle Towers site given unsuitability of adding residential to the existing retail built form.

Using similar assumptions to those identified in the draft Structure Plan the projected residential growth figures have been revised. The following table compares the growth projected under the NWRL Strategy with that projected under the revised opportunity sites.

	NWRL STRATEGY		COUNCIL ESTIMATE	
	TOTAL	%	TOTAL	%
SINGLE DETACHED	-200	-5%	-262	-5%
TOWNHOUSE	100	2%	-197	-4%
3-6 STOREY APARTMENT	1,400	32%	1,720	35%
7-20 STOREY APARTMENT	3,100	70%	3,650	74%
TOTAL DWELLINGS	4,400	100%	4,911	100%

Table 1

Castle Hill precinct – Projected Residential Growth 2012-2036

From the analysis above it is clear that, for the Castle Hill locality, the overall amount of residential growth projected under the draft Structure Plan is reasonable reflecting the importance of the centre within the Shire. The mix of dwelling types obtained under Council's review indicates a similarity to that anticipated under the draft Structure Plan. However, as is the case for all precincts, detailed planning and investigation will be required to validate the appropriateness of the higher density outcomes, particularly in terms of meeting demand for infrastructure.

3. SHOWGROUND STATION

The precinct covers approximately 271 hectares and is entirely located within the Hills Shire Local Government Area (LGA) and currently contains a number of distinct precincts such as industrial, residential, and commercial.

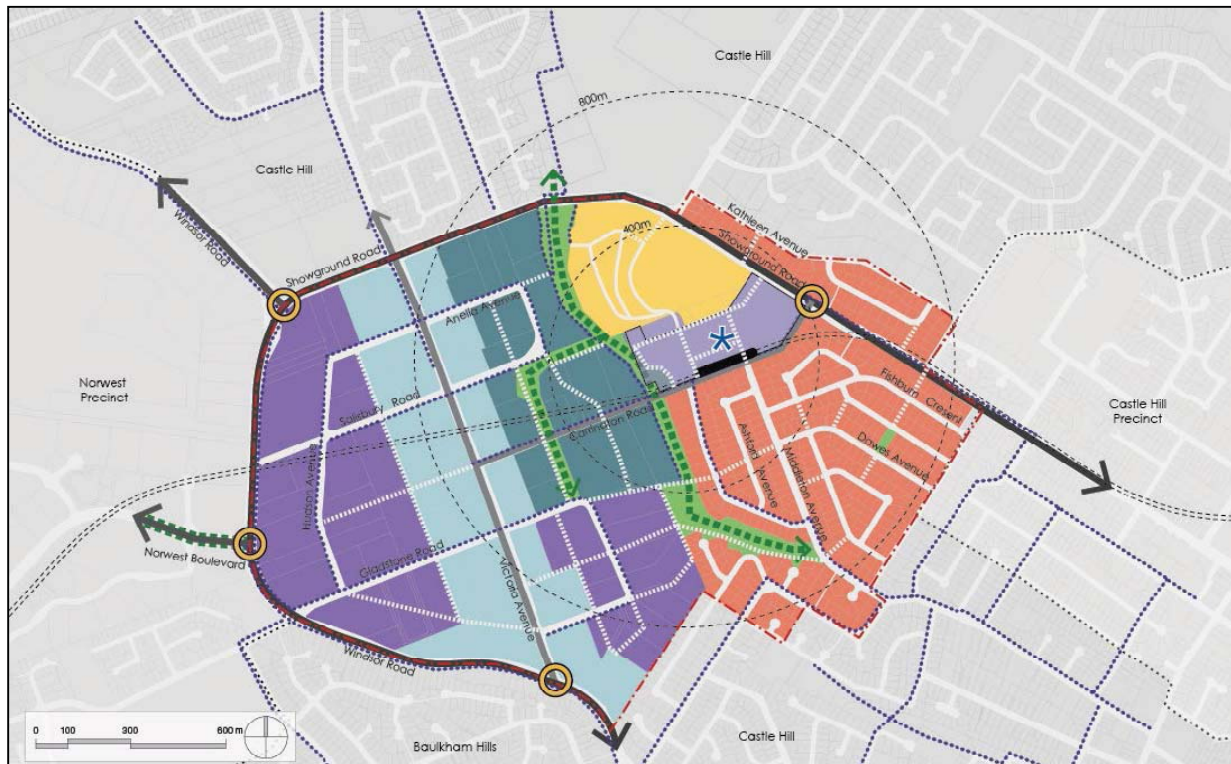
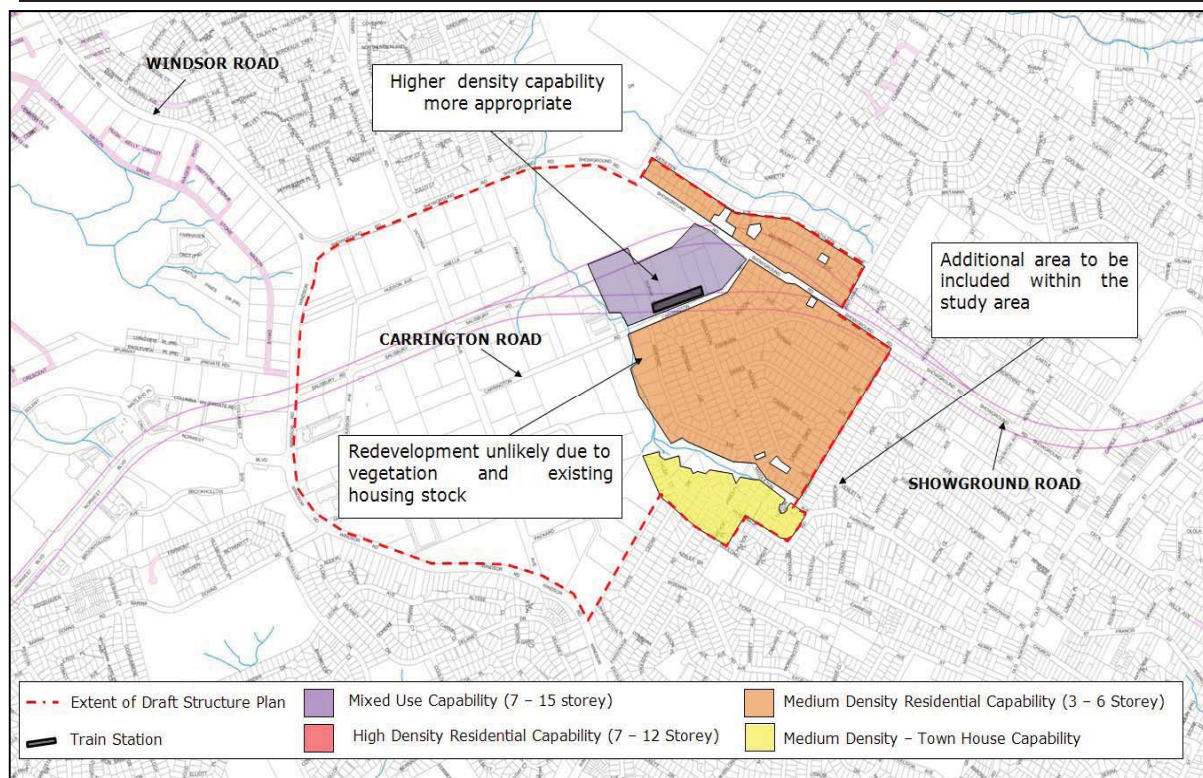


Figure 8
Showground Station Precinct

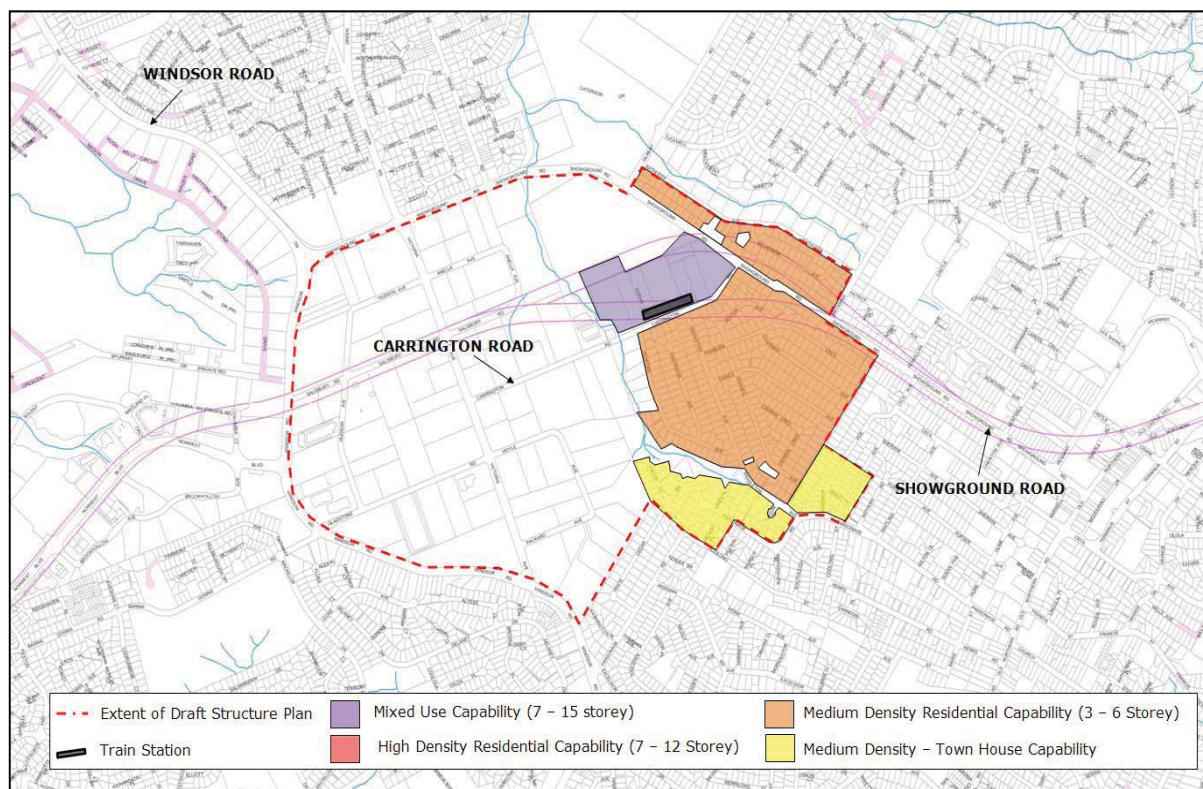
For the Showground Study Area the Draft Structure Plan anticipates a total capacity for 6,900 additional dwellings by 2036. However based on feasibility analysis it is expected that take up of opportunities will be 53%, thereby delivering a potential 3,600 additional dwellings within the study area. The future demand for residential development in this study area is estimated to be in the order of 165 dwellings per annum.

The high density residential capability identified in close proximity to the rail station and corridor is considered appropriate, however it is considered that an increased yield may be possible. A review of all of the opportunity sites identified in the draft Structure Plan has indicated that part of the area identified for 3-6 storey apartments is not suitable for the anticipated level of growth due to vegetation constraints and the quality of existing housing stock. It is also recommended that the study area boundary be extended to the south and capacity provided for townhouses in the extended area. This will align the boundary with the existing R3 Medium Density Residential zone and prevent an isolated area of low density between the high and medium density housing sites.

**Figure 9**

North West Rail Link Strategy – Showground Station Surrounds - Projected Growth Areas

Based on the analysis, revised projected growth areas have been mapped and are shown in figure 12.

**Figure 10**

Council Review – Showground Station Surrounds - Projected Growth Areas

The main variations from the NWRL Strategy include the following:

- Reduction of land available for 3-6 storey apartment capability on Ashford Avenue based on environmental constraints and the quality of existing housing stock (land is currently zoned E4 Environmental Living);
- Introduction of townhouse capability for land in the Fishburn Crescent and Warwick Parade area to avoid an isolated pocket of low density residential between apartments and townhouses;
- Introduction of increased density yield of 7-15 storeys for the administration centre site. The site is relatively isolated ensuring amenity impacts can be appropriately contained with opportunity to encourage a range of uses such as recreation and social opportunities to create a vibrant living environment for future residents. It is noted that some preliminary urban design work was undertaken for the precinct which involved more detailed site specific analysis. Potential development scenarios across the site ranged from 6 to 14 storeys with a potential tower element in the western portion of the site (depot location) to create a distinctive feature providing an entry presence and identity to the precinct.

Using similar assumptions to those identified in the draft Structure Plan the projected residential growth figures have been revised. The following table compares the growth projected under the NWRL Strategy with that projected under the revised opportunity sites.

	NWRL STRATEGY		COUNCIL ESTIMATE	
	TOTAL	%	TOTAL	%
SINGLE DETACHED	-100	-3%	-206	-8%
TOWNHOUSE	350	10%	136	5%
3-6 STOREY APARTMENT	2,350	65%	1,583	61%
7-15 STOREY APARTMENT/MIXED USE	1,000	28%	1,098	42%
TOTAL DWELLINGS	3,600	100%	2,611	100%

Table 2

Showground Precinct - Projected residential growth 2012-2036

From the analysis above it is clear that, for the Showground locality, the overall amount of residential growth projected under the draft Structure Plan is approximately 1,000 dwellings higher than that projected by Council officer's review. Additionally the mix of dwelling types obtained under Council's review indicates a higher proportion of 7-15 storey apartments (a total of 42%) and a slightly lesser proportion of 3-6 storey apartments and townhouses (total 66%). This is due to consideration of uptake which is expected to be higher where land is not occupied by existing reasonable quality housing that would require consolidation of a number of sites to undertake apartment development.

Concern is raised with the study area boundary for Showground Station. The study area should be extended to include a small area of land zoned R2 – Low Density Residential under the provisions of The Hills Local Environmental Plan 2012. This area has been omitted from the Castle Hill study area which is immediately to the east. The area to be included within the Showground study area is adjacent to the eastern boundary, which is generally zoned R3 – Medium Density Residential.

Given this, it is considered appropriate that the remaining R2 – Low Density Residential zoned land between the study area, R3 – Medium Density Residential zoned land and the Castle Hill study area be included into the Showground Station Precinct as 'Medium Density – Townhouse' capability.

This inclusion will increase development capability and ensure that a satisfactory transition in built form is provided. This will align the boundary with the existing R3 Medium Density Residential zone and prevent an isolated area of low density between the high and medium density housing sites.

The proposed amended study area and land to be included (shown in yellow) is depicted in Figure 13 below:

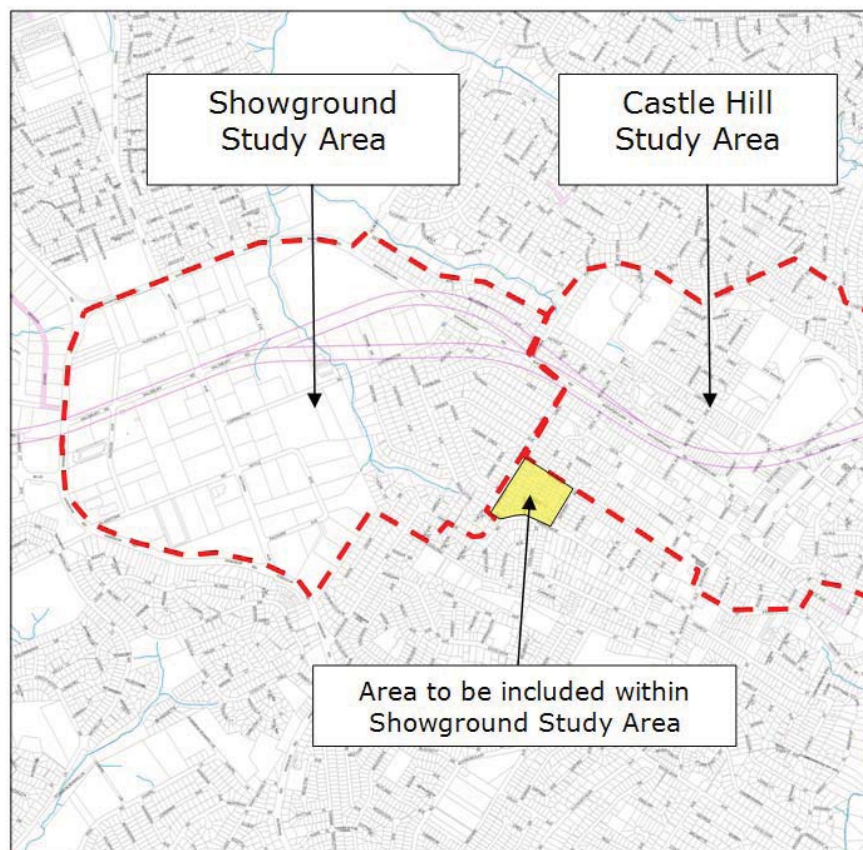


Figure 11
Proposed change to Showground Station Precinct

4. NORWEST STATION

The Study Area also contains Norwest Marketown shopping centre and Hillsong Church. The commercial core includes two bodies of water, Norwest Lake and Stranger's Lake, and also contains the St Joseph's Convent site in the south-east, a large single landholding comprising convent buildings in a landscaped setting.

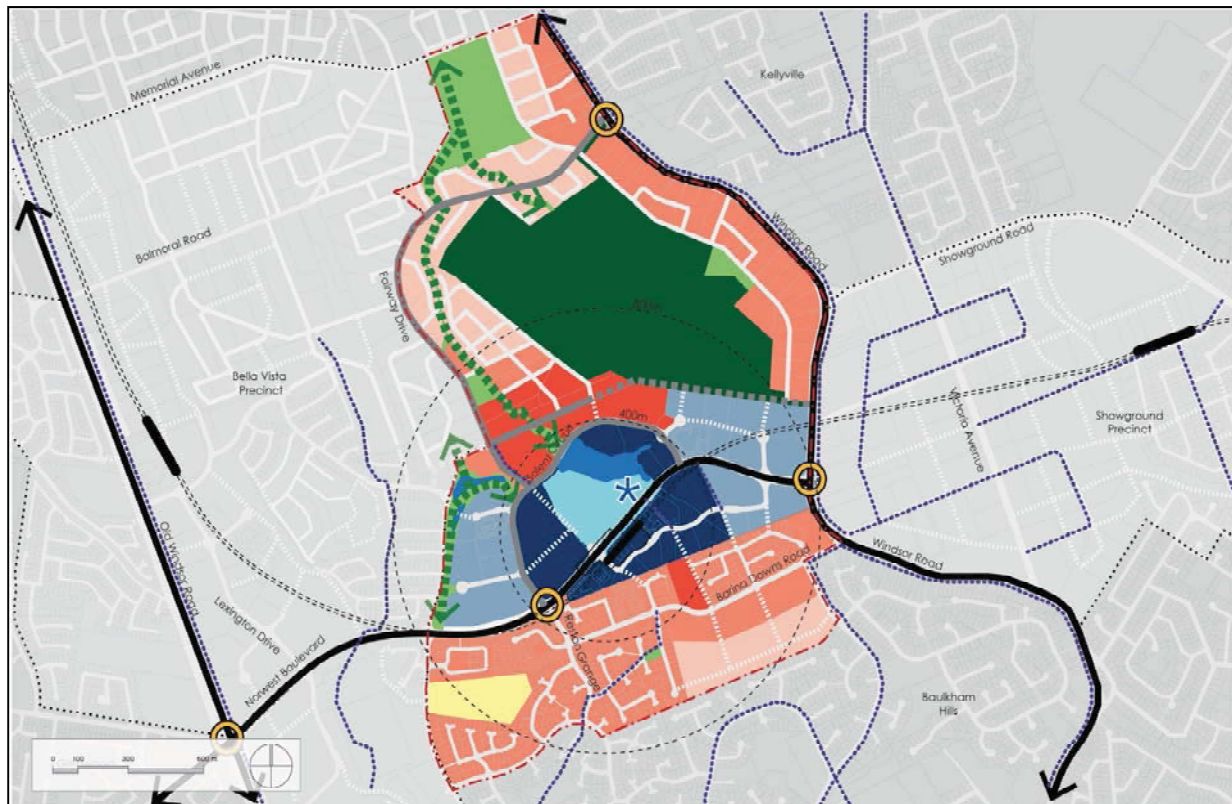
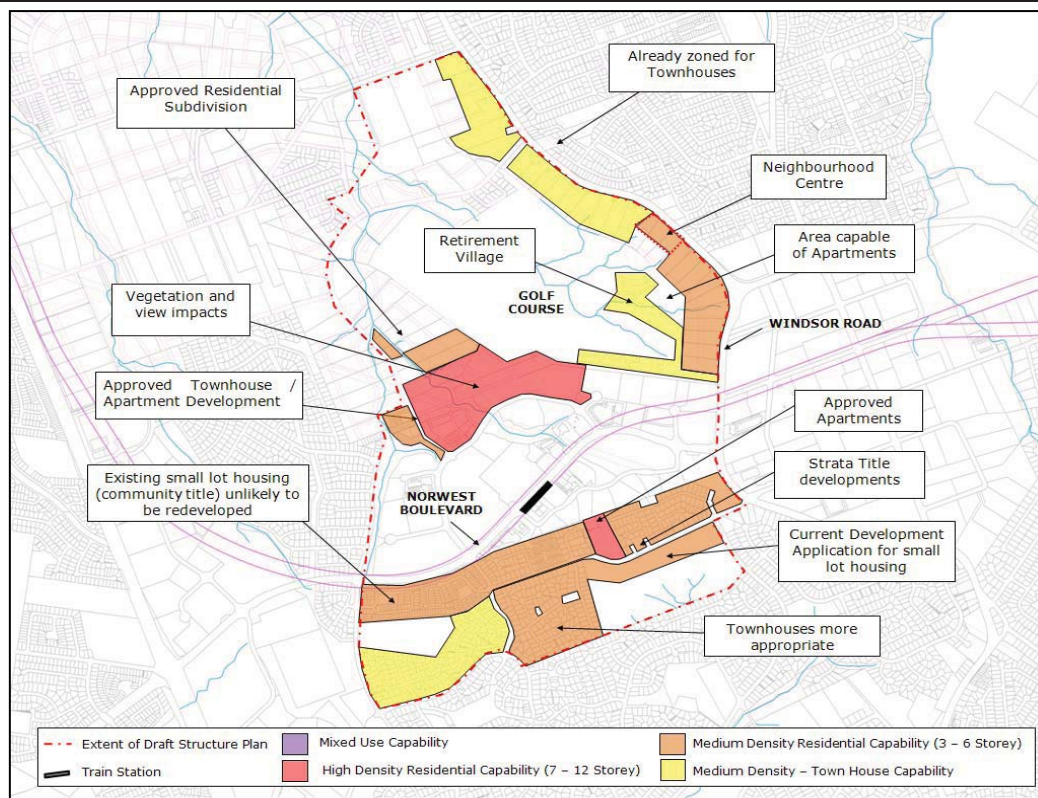


Figure 12
Norwest Station Precinct

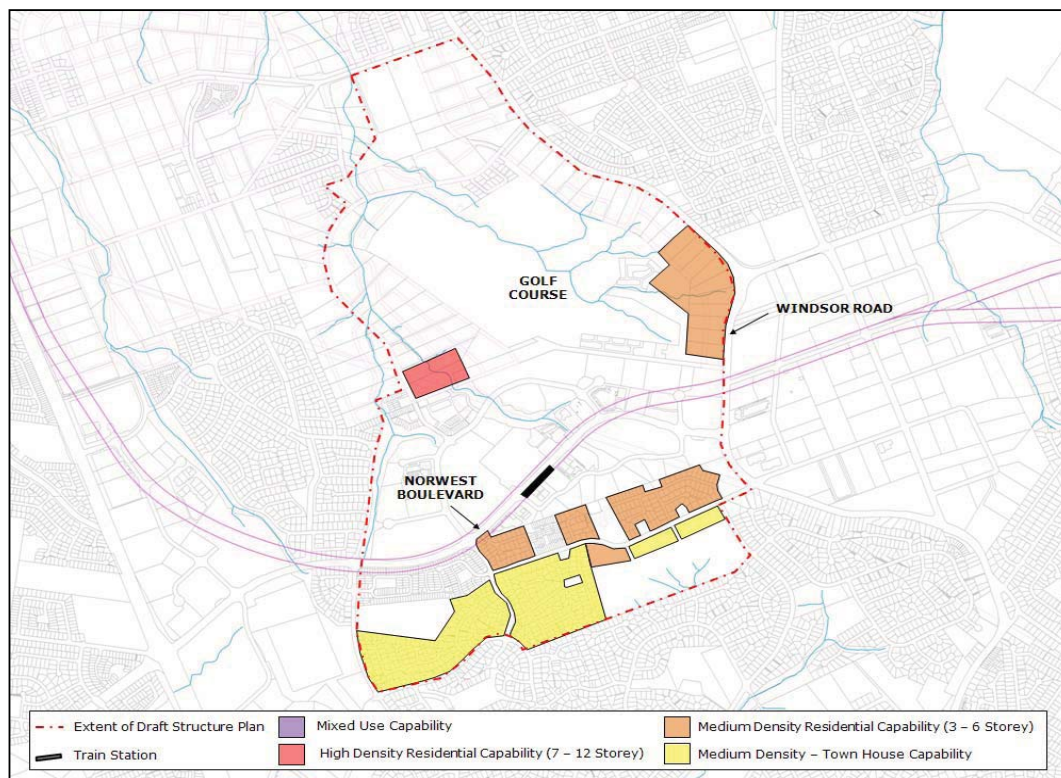
For the Norwest Study Area the Draft Structure Plan anticipates a total capacity for 4,350 additional dwellings by 2036 with 100% take up. The future demand for residential development in this study area is estimated to be in the order of 200 dwellings per annum.

A review of all of the opportunity sites identified in the draft Structure Plan has highlighted that some of the sites identified are not likely to be available for housing growth. The following figure shows locations identified in the draft Structure Plan for different housing types and annotates locations that are considered to be inappropriate or not available for the projected level of residential growth. For example the potential for 3-6 storey apartment development to the south of the rail line is limited by existing community title development. Additionally for the location south of Barina Downs Road, given the existence of quality low density housing stock it is considered that townhouses is a more realistic outcome than 3-6 storey apartment development.

**Figure 13**

North West Rail Link Strategy - Norwest Station Surrounds - Projected Growth Areas

Based on the analysis, revised projected growth areas have been mapped and are shown in figure 14.

**Figure 14**

Council Review - Norwest Station Surrounds - Projected Growth Areas

The main variations from the NWRL Strategy include the following:

- Deletion of townhouse capabilities along Windsor Road as the land is already zoned and available for such uses;
- Replacement of 3-6 storey apartment capabilities with town house capability south of Barina Downs Road based on existing housing stock and a current proposal for the Sisters of St Joseph site;
- Deletion of some 3-6 storey apartment capabilities south of the rail line given the constraint imposed by strata and community titling arrangements;
- Deletion of sites which are approved or under construction for apartments, for example 40-52 Barina Down Road;
- Introduction of new 3-6 storey apartment capability on land west of Stone Mason Drive (between the golf course and Windsor Road); and
- Deletion of some of 7-12 apartment capability in the central part of the precinct given existing proposals and constraints imposed by view corridors and significant vegetation (Cumberland Plan Woodland).

Using similar assumptions to those identified in the draft Structure Plan the projected residential growth figures have been revised. The following table compares the growth projected under the NWRL Strategy with that projected under the revised opportunity sites.

	NWRL STRATEGY		COUNCIL ESTIMATE	
	TOTAL	%	TOTAL	%
SINGLE DETACHED	200	5%	-196	-14%
TOWNHOUSE	1,100	25%	34	2%
3-6 STOREY APARTMENT	2,700	62%	1,020	73%
7-12 STOREY APARTMENT	350	8%	542	39%
TOTAL DWELLINGS	4,350	100%	1,399	100%

Table 3
Norwest Precinct - Projected residential growth 2012-2036

From the analysis above it is clear that, for the Norwest locality, the overall amount of residential growth projected under the draft Structure Plan is approximately 2,950 dwellings higher than that projected by Council officer's review. The considerable difference in figures would appear to be primarily due to over estimation of townhouse and 3-6 storey apartments in locations where capability already exists or where potential is constrained by existing community/strata title developments. Additionally the mix of dwelling types obtained under Council's review indicates a higher number of 7-12 storey apartments (a total of 39%) which represents the assessment of potential on land to the north of Solent Circuit.

5. BELLA VISTA STATION

The Bella Vista study area has an area of 472 hectares, and is located within the Hills Shire and Blacktown Local Government Areas (LGAs). The Study Area extends to Memorial Avenue in the north, along Old Windsor Road, Glenwood Park Drive and Meurants Lane to the west, Prestige Avenue to the south and Westwood Way, Edgewater Drive and Fairway Drive to the east.

The Study Area also includes Norwest Private Hospital, Circa shopping centre and Bella Vista Park Farm.

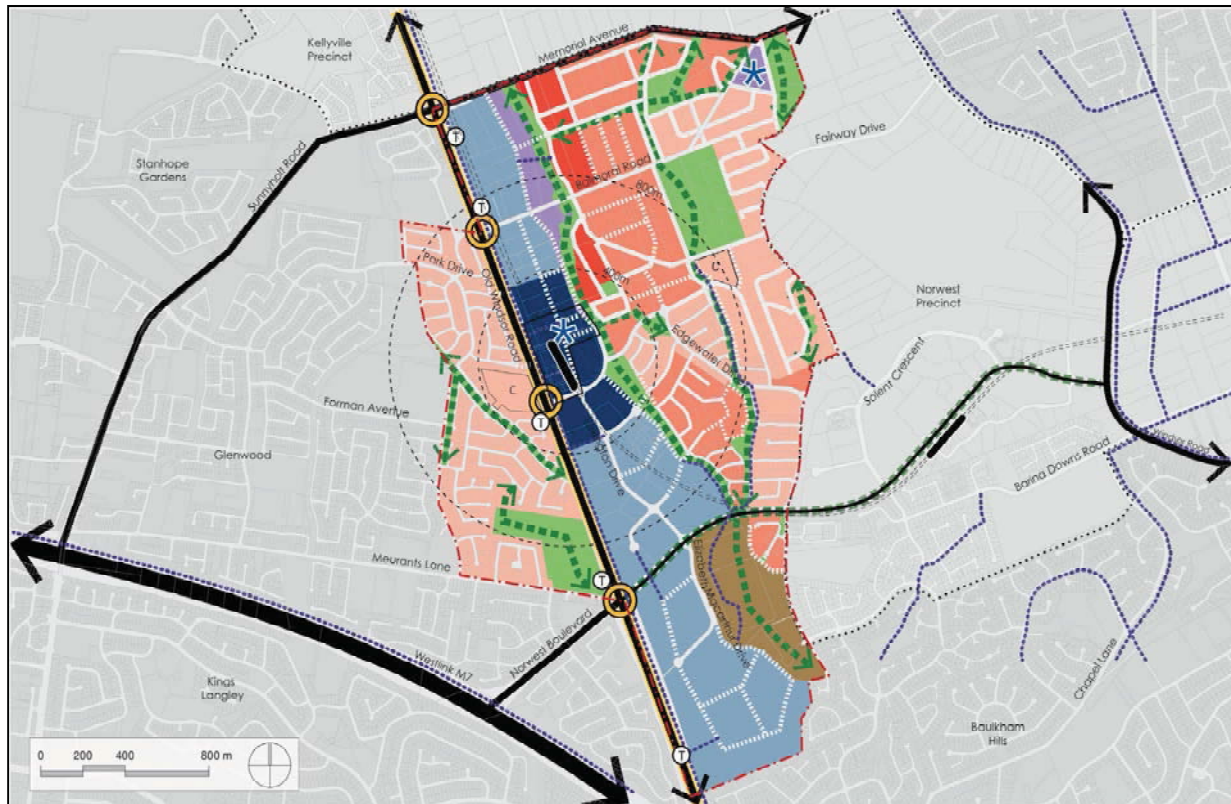
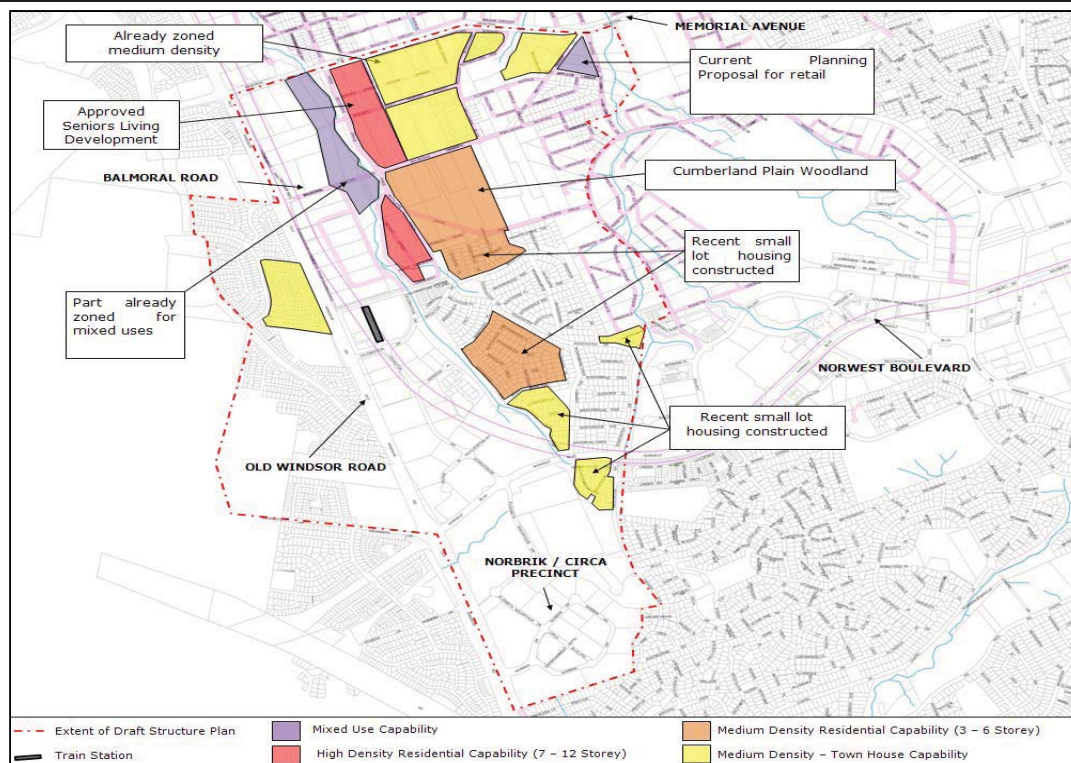


Figure 15
Bella Vista Station Precinct

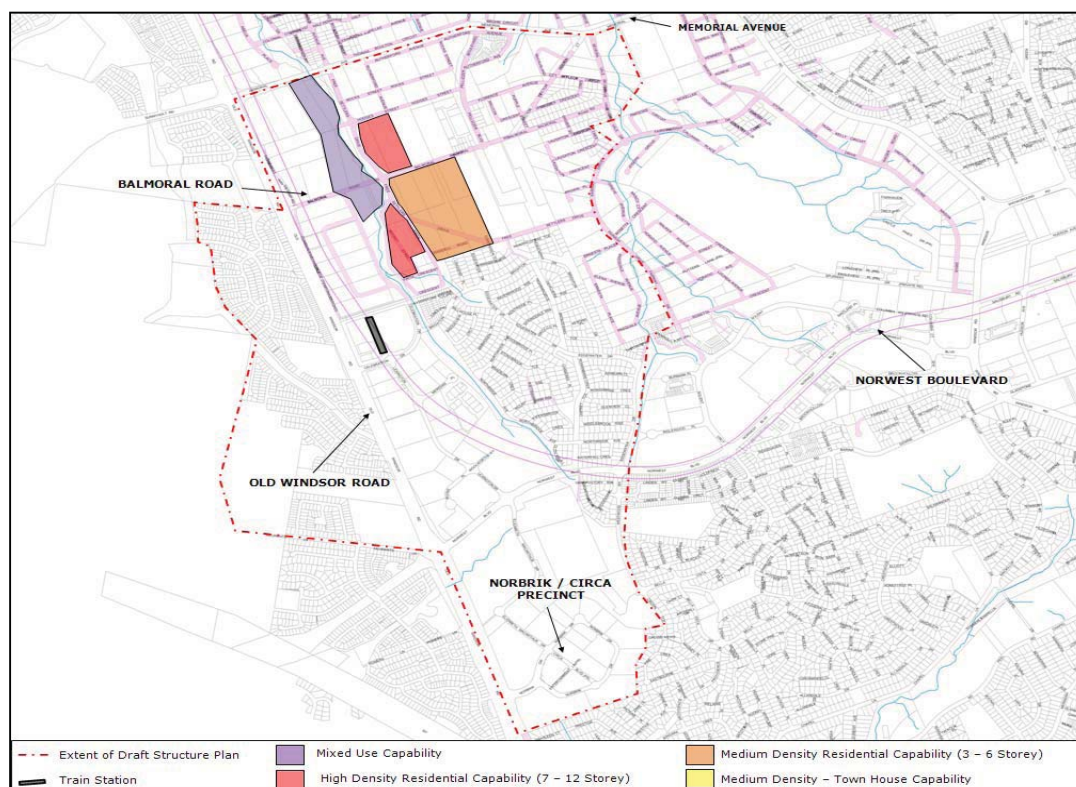
For the Bella Vista Study Area the Draft Structure Plan anticipates a total capacity for 5,300 additional dwellings by 2036. However based on feasibility analysis it is expected that take up of opportunities will be 83%, thereby delivering a potential 4,400 additional dwellings within the study area. It is important to note that the study area includes land to the west of Old Windsor Road, within Blacktown LGA, however the majority of the projected growth for the Bella Vista precinct is located within the Hills Shire. The future demand for residential development in this study area is estimated to be in the order of 200 dwellings per annum.

The high density residential capability identified in close proximity to the rail station and corridor is considered appropriate, however it is considered that an increased yield may be possible in some locations. A review of all of the opportunity sites identified in the draft Structure Plan has also highlighted that some of the sites identified are not likely to be available for housing growth. The following figure shows locations identified in the draft Structure Plan for different housing types and annotates locations that are considered to be inappropriate or not available for the projected level of residential growth. For example the potential for 3-6 storey apartment development is limited by recent small lot housing construction as well as the location of a critically endangered ecological community, Cumberland Plain Woodland.

**Figure 16**

North West Rail Link Strategy – Bella Vista Station Surrounds - Projected Growth Areas

Based on the analysis, revised projected growth areas have been mapped and are shown in figure 17 (No review has been undertaken of housing potential within Blacktown Local Government Area).

**Figure 17**

Council Review – Bella Vista Station Surrounds - Projected Growth Areas

The main variations from the NWRL Strategy include the following:

- Deletion of townhouse capabilities between Memorial Avenue and Balmoral Road as the land is already zoned and available for such uses;
- Deletion of townhouse capabilities either side of Norwest Boulevard (Bella Vista Waters) as small lot housing has recently been constructed in this location;
- Deletion of 3-6 storey apartment capability within Bella Vista Waters as small lot housing has been constructed in this locality;
- Deletion of mixed use housing opportunities at the intersection of Memorial Avenue and Hector Court as this is the site of a centre within Council's hierarchy and is the subject of a current proposal which indicates a retail/commercial outcome, not residential;
- Deletion of part of mixed use capability south of Memorial Avenue as land is already zoned and available for such uses; and
- Introduction of increased density yield to 20 storeys for the locations within the rail corridor. There is appropriate separation to the east by way of the riparian corridor to address amenity impacts and each site could provide for a range of uses such as recreation and social opportunities to create a vibrant living environment for future residents.

Using similar assumptions to those identified in the draft Structure Plan the projected residential growth figures have been revised. The following table compares the growth projected under the NWRL Strategy with that projected under the revised opportunity sites.

	NWRL STRATEGY		COUNCIL ESTIMATE	
	TOTAL	%	TOTAL	%
SINGLE DETACHED	200	5%	-126	-4%
TOWNHOUSE	1,000	23%	0	0%
3-6 STOREY APARTMENT	1,800	41%	530	15%
7-20 STOREY APARTMENT	1,400	32%	1,834	52%
MIXED USE (7-20 STOREY)	Included above		1,271	36%
TOTAL DWELLINGS	4,400	100%	3,510	100%

Table 4

Bella Vista Precinct - Projected residential growth 2012-2036

From the analysis above it is clear that, for the Bella Vista locality, the overall amount of residential growth projected under the draft Structure Plan is somewhat higher than that projected by Council's review. Even discounting the single detached dwelling projection and part of the townhouse potential as being in Blacktown LGA, the projections for the Hills Shire exceed what could reasonably be expected by at least 500 dwellings. The mix of dwelling types obtained under Council's review indicates a significantly higher number of 7-20 storey apartments and mixed use development (a total of 88%). Subject to more detailed planning, this is considered appropriate given the proximity to the new rail infrastructure.

6. KELLYVILLE STATION

The Kellyville Study Area is an established residential and retail/commercial centre that covers approximately 437 hectares and is located within the Hills Shire and Blacktown Local Government Areas (LGAs).

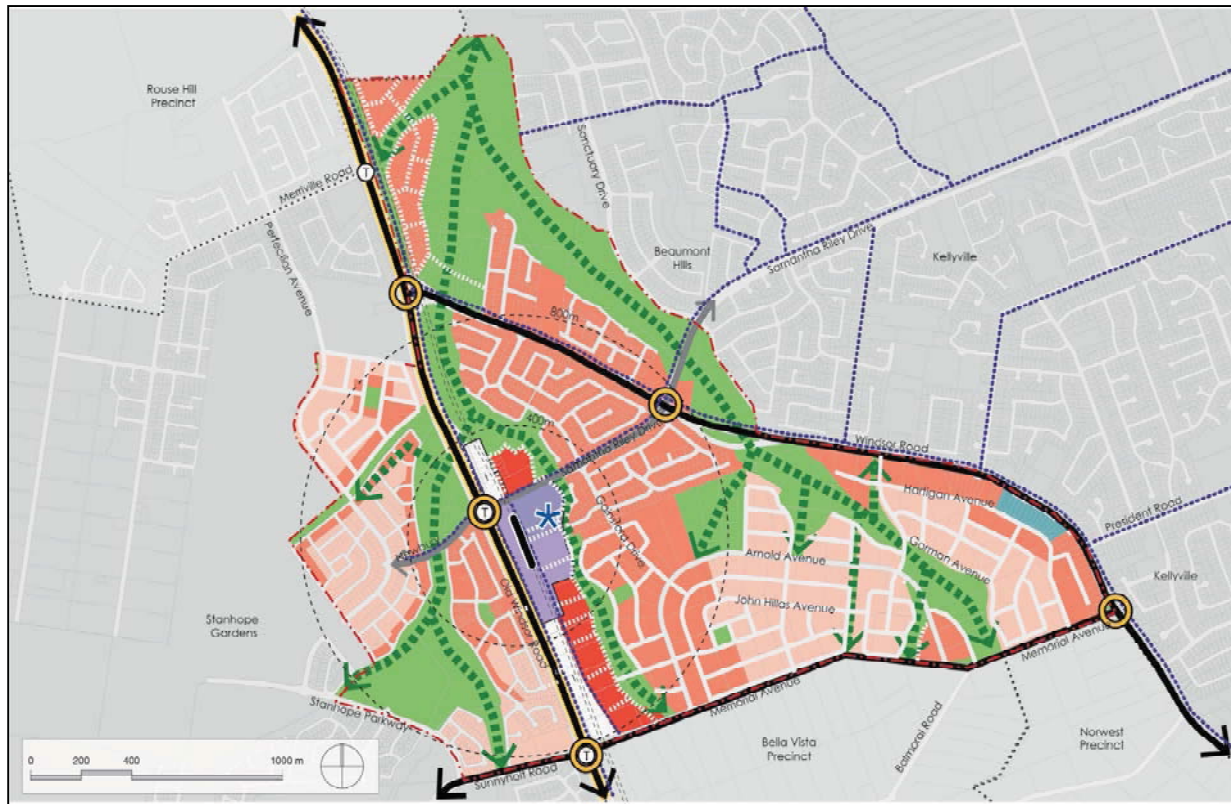
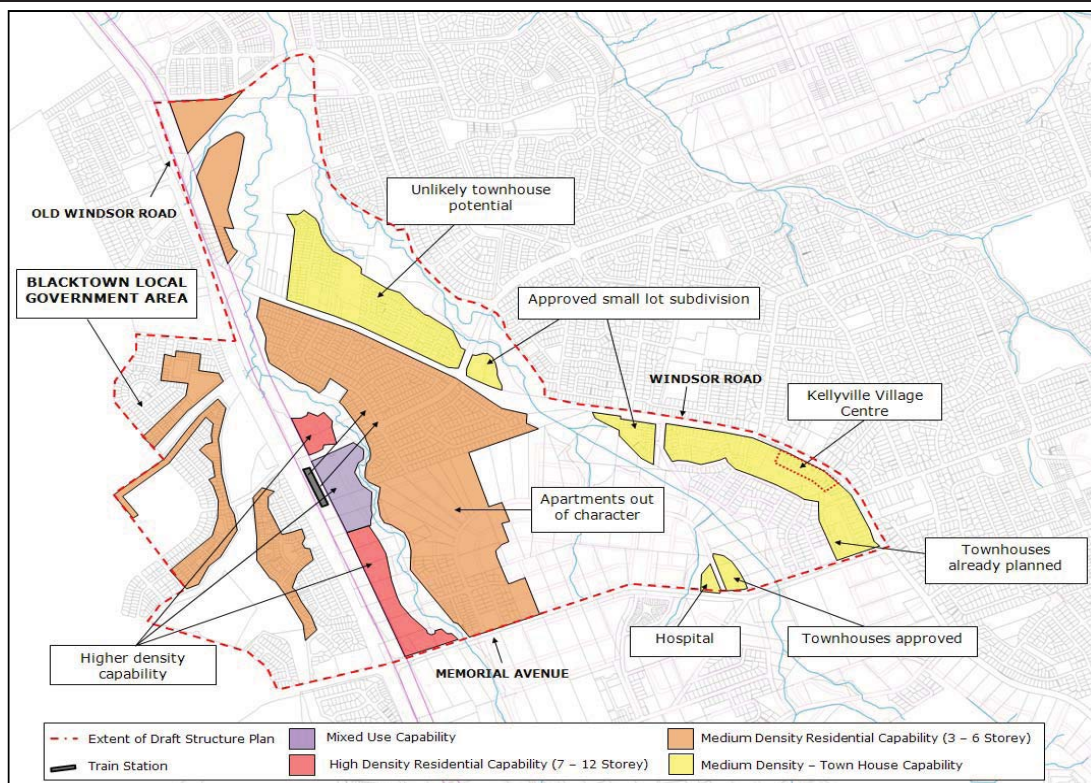


Figure 18
Kellyville Station Precinct

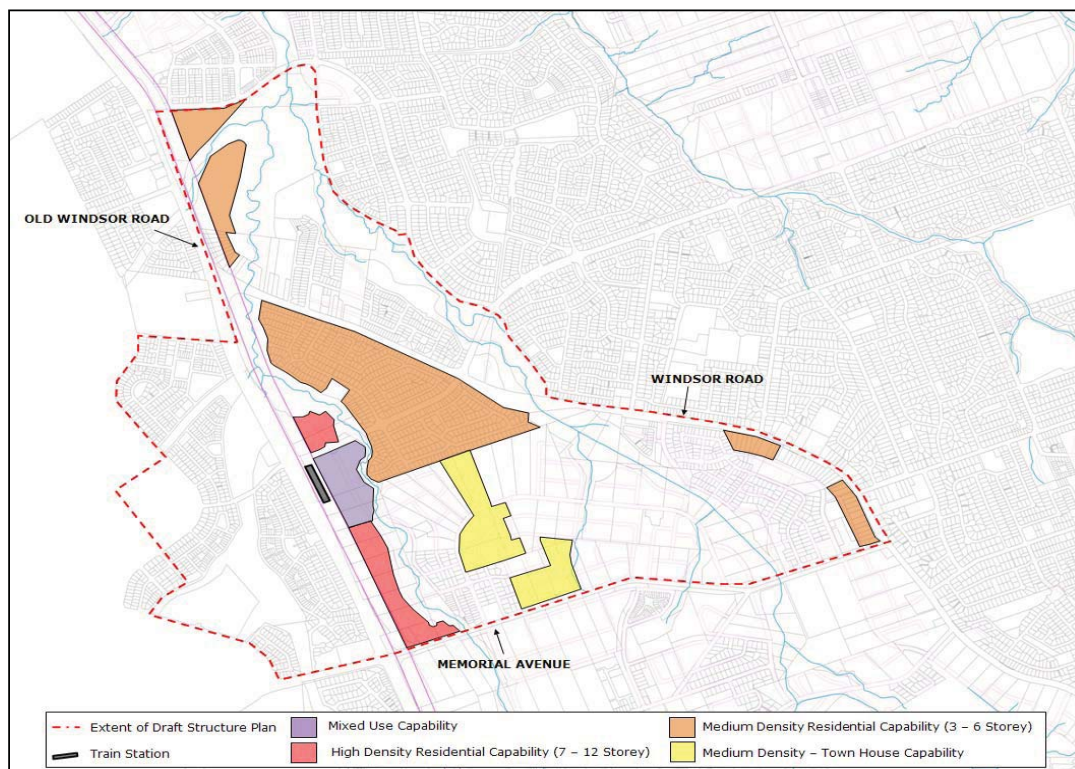
For the Kellyville Study Area the Draft Structure Plan anticipates a total capacity for 8,400 additional dwellings by 2036. However based on feasibility analysis it is expected that take up of opportunities will be 52%, thereby delivering a potential 4,400 additional dwellings within the study area. It is important to note that the study area includes land to the west of Old Windsor Road, within Blacktown LGA, however the majority of the projected growth for the Kellyville precinct is located within the Hills Shire. The future demand for residential development in this study area is estimated to be in the order of 200 dwellings per annum.

The high density residential capability identified in close proximity to the rail station and corridor is considered appropriate, however it is considered that an increased yield may be possible. A review of all of the opportunity sites identified in the draft Structure Plan has also highlighted that some of the sites identified are not likely to be available for housing growth. The following figure shows locations identified in the draft Structure Plan for different housing types and annotates locations that are considered to be inappropriate or not available for the projected level of residential growth. For example the extent of townhouse potential is limited by recent approvals (psychiatric hospital on Memorial Avenue and integrated housing developments) and existing development (Kellyville village centre and relatively recent small lot housing north of Windsor Road).

**Figure 19**

North West Rail Link Strategy – Kellyville Station Surrounds - Projected Growth Areas

Based on the analysis, revised projected growth areas have been mapped and are shown in figure 22 (No review has been undertaken of housing potential within Blacktown Local Government Area).

**Figure 20**

Council Review – Kellyville Station Surrounds - Projected Growth Areas

The main variations from the NWRL Strategy include the following:

- Deletion of townhouse capabilities along Windsor Road as land is already zoned and available for such uses;
- Deletion of 3-6 storey apartment capability south of Memorial Avenue to be replaced with townhouse capability more compatible with the low density residential character that is currently occurring in nearby area;
- Introduction of capability for 3-6 storey apartments along Windsor Road Kellyville; and
- Introduction of increased density yield to 20 storeys for the locations within the rail corridor. There is appropriate separation to the east by way of the riparian corridor to address amenity impacts and each site could provide for a range of uses such as recreation and social opportunities to create a vibrant living environment for future residents.

Using similar assumptions to those identified in the draft Structure Plan the projected residential growth figures have been revised. The following table compares the growth projected under the NWRL Strategy with that projected under the revised opportunity sites.

	NWRL PROJECTED GROWTH		COUNCIL ESTIMATED GROWTH	
	TOTAL	%	TOTAL	%
SINGLE DETACHED	-800	-18%	-330	-7%
TOWNHOUSE	1,000	23%	384	8%
3-6 STOREY APARTMENT	3,100	70%	1,496	31%
7-20 STOREY APARTMENT	1,100	25%	2,058	42%
MIXED USE (7-20 STOREY)	Included above		1,247	26%
TOTAL DWELLINGS	4,400	100%	4,855	100%

Table 5

Kellyville Precinct - Projected residential growth 2012-2036

From the analysis above it is clear that, for the Kellyville locality, the overall amount of residential growth projected under the draft Structure Plan is reasonable, particularly as the NWRL Strategy figures include some opportunity sites in Blacktown LGA. The mix of dwelling types obtained under Council's review indicates a higher proportion of 7-20 storey apartments and mixed use development (a total of 68%). Subject to more detailed planning, this is considered appropriate given the proximity to the new rail infrastructure.

7. ROUSE HILL STATION

The Rouse Hill Study Area is an established residential and retail/commercial centre that covers approximately 327 hectares and is located within both Blacktown and The Hills Shire Local Government Area (LGA).

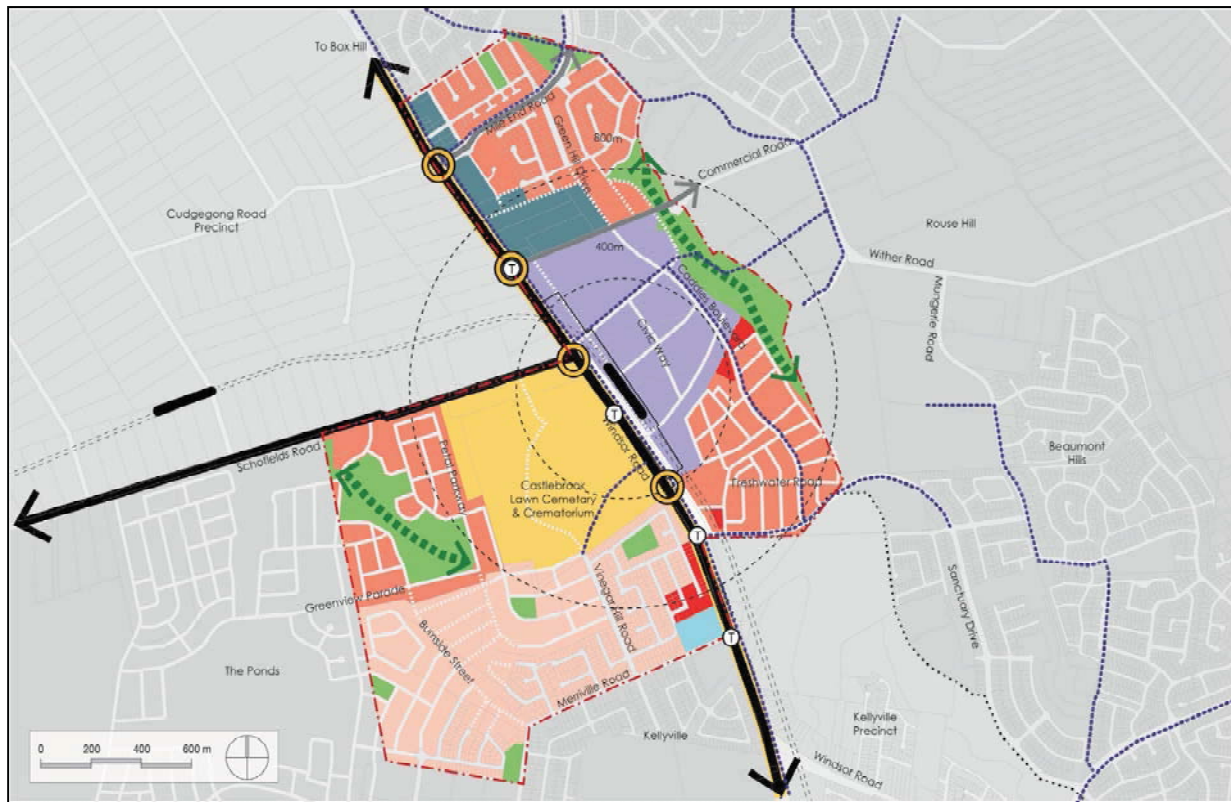
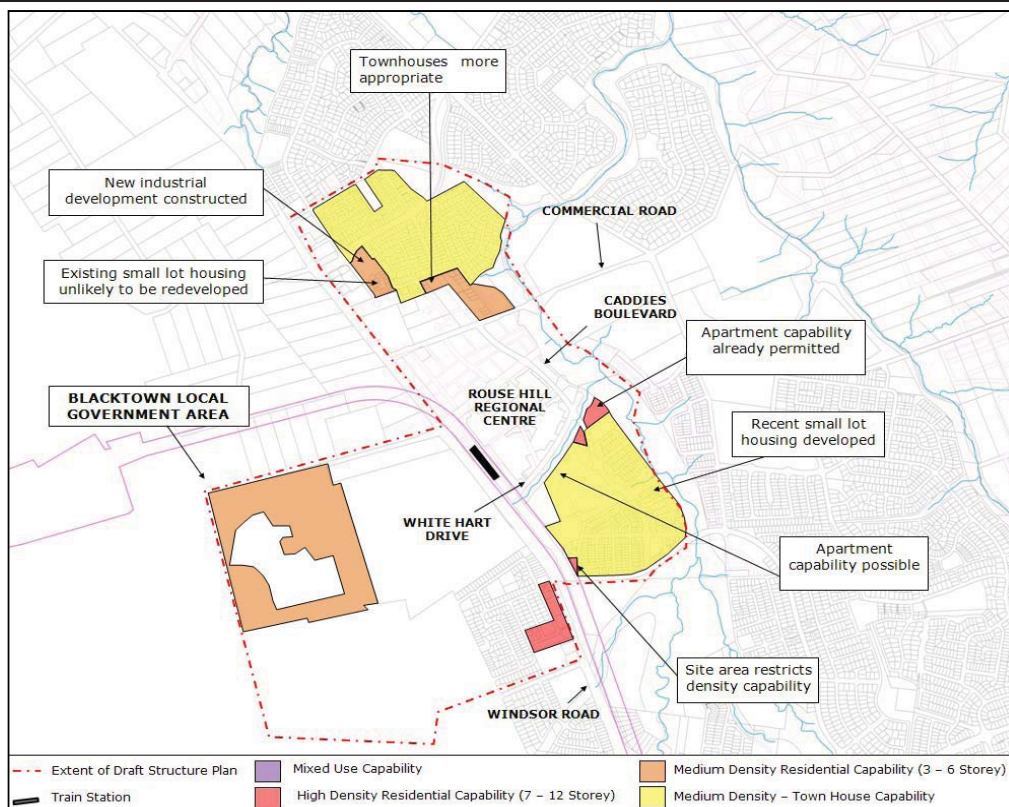


Figure 21
Rouse Hill Station Precinct

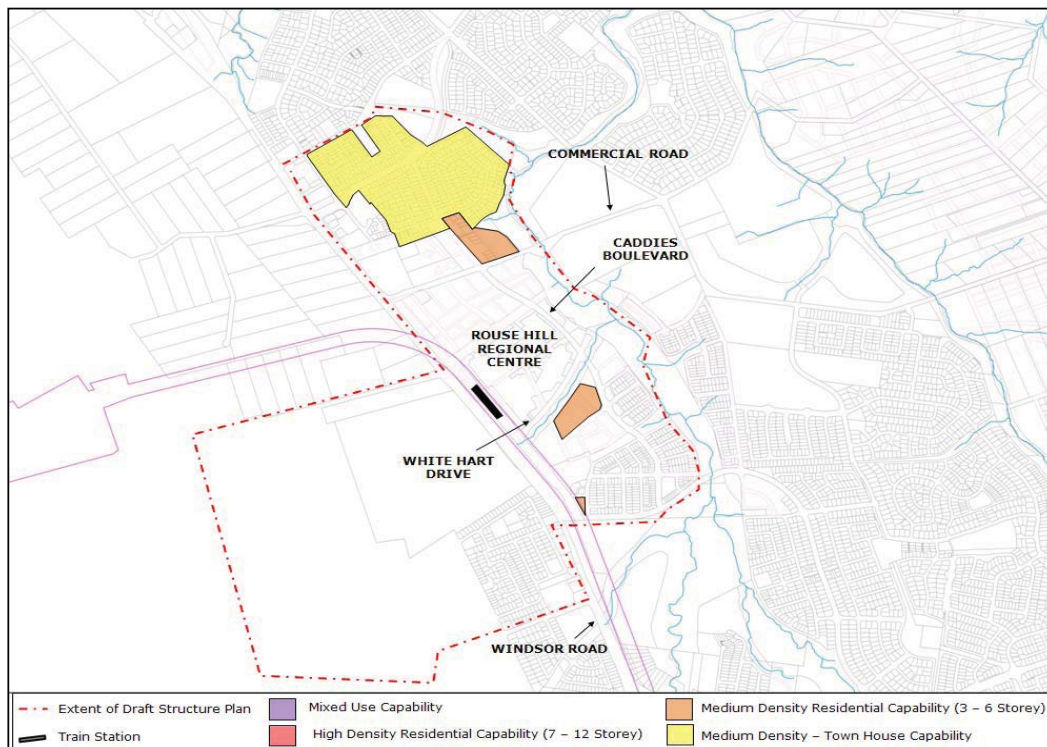
For the Rouse Hill Study Area the draft Structure plan anticipates a total capacity for 950 additional dwellings by 2036. It is important to note that the study area includes land to the west of Windsor Road, within Blacktown LGA. It is estimated that at least half of the projected growth is located within Blacktown LGA given that the projections include low density dwellings within The Ponds. The future demand for residential development in this study area is estimated to be in the order of 40 dwellings per annum.

A review of all of the opportunity sites identified in the draft Structure Plan for Rouse Hill Station surrounds has highlighted that some of the sites identified in the draft Structure Plan are not likely to be available for housing growth. The following figure shows locations identified in the draft Structure Plan for different housing types and annotates locations that are considered to be inappropriate or not available for the projected level of residential growth. For example land identified for townhouse potential in the south eastern part of the precinct has recently been developed for small lot housing.

**Figure 22**

North West Rail Link Strategy – Rouse Hill Station Surrounds - Projected Growth Areas

Based on the analysis, revised projected growth areas have been mapped and are shown in figure 23 (No review has been undertaken of housing potential within Blacktown Local Government Area).

**Figure 23**

Council Review – Rouse Hill Station Surrounds - Projected Growth Areas

The main variations from the NWRL Strategy include the following:

- Deletion of townhouse capabilities in the south eastern portion of the precinct as the land is already developed as small lot housing;
- Deletion of 3-6 storey apartment capability in the northern part of the precinct that has recently been developed for light industrial and small lot housing;
- Deletion of 7-12 storey capability south of White Hart Drive based on a current planning proposal for a 6 storey outcome;
- Introduction of capability for 3-6 storey apartments south of White Hart Drive where a townhouse outcome was identified in the NWRL strategy; and
- Reduction of the capability identified for a small triangle of land in the south of the precinct from 7-12 storey to 3-6 storeys. This land has a site area of 2000m² which restricts the capability for higher density.

Using similar assumptions to those identified in the draft Structure Plan the projected residential growth figures have been revised. The following table compares the growth projected under the NWRL Strategy with that projected under the revised opportunity sites.

	NWRL PROJECTED GROWTH		COUNCIL ESTIMATED GROWTH	
	TOTAL	%	TOTAL	%
SINGLE DETACHED	400	42%	-111	-31%
TOWNHOUSE	50	5%	154	43%
3-6 STOREY APARTMENT	200	21%	317	88%
7-12 STOREY APARTMENT	300	32%	0	0%
TOTAL DWELLINGS	950	100%	360	100%

Table 6

Rouse Hill Precinct - Projected residential growth 2012-2036

It is noted that at least half of the NWRL Strategy figures are based upon opportunity sites in Blacktown LGA. Analysis of the foregoing figures indicates that, for that part of the precinct located within the Hills Shire, the capacity for residential growth is not expected to be as high as that identified in the Structure Plan with a total of 360 dwellings over and above that currently possible under existing controls. Whilst a higher proportion of town houses (43%) and 3-6 storey apartments (88%) are likely, it is not anticipated that capacity will exist for any significant amount of 7-12 storey apartment development given site constraints and current proposals.