

ITEM 2.4 LEICHHARDT INDUSTRIAL PRECINCT PLANNING INTERIM REPORT

Division	Environment and Community Management
Author	Team Leader Strategic Planning
Meeting date	8 March 2016 Policy Meeting
Strategic Plan Key Service Area	Community well-being Accessibility Place where we live and work A sustainable environment Business in the community

SUMMARY AND ORGANISATIONAL IMPLICATIONS

Purpose of Report	To inform Council of the findings of the Leichhardt Industrial Precinct Planning interim report and to seek endorsement of the Industrial Precinct Planning interim report as the basis for completion of the Industrial Precinct Planning Project.
Background	<p>At the Policy Meeting of 10 February 2015, Council considered a report on the Strategic Sites, Centres and Corridors – Parramatta Road project and the Leichhardt Industrial Lands Study. Council subsequently resolved (in part) to endorse the Leichhardt Industrial Lands Study and forward a copy to UrbanGrowth NSW as part of its submission on the <i>Draft Parramatta Road Urban Renewal Strategy (C04/15P)</i>.</p> <p>The Industrial Lands Study concluded that in light of future population and employment growth in the LGA, Leichhardt would see a deficit in industrial floorspace of between 7,500sqm and 55,000sqm by 2036.</p> <p>In accordance with actions of the Industrial Lands Study, Council engaged SGS Economics & Planning to undertake a subsequent phase of industrial precinct planning.</p> <p>In addition, Architectus were engaged to provide urban design input into the process for specific precincts, Camperdown, Tebbutt Street/Parramatta Road and Moore Street South, selected for their significance, size and industrial profile mix. This work would inform the development of appropriate and feasible urban form outcomes for the precincts.</p> <p>Subject to Council endorsement of the interim</p>

	<p>SGS Industrial Precinct Planning report Architectus will complete the associated urban design work to make final recommendations for built form controls and outputs as part of the overall Final Industrial Precinct Planning Project.</p> <p>The commencement of the industrial precinct planning work in September 2015, coincided with the release of the Draft Parramatta Road Urban Transformation Strategy by UrbanGrowth NSW.</p> <p>Council’s submission on the draft Strategy in December 2015 advised that the findings of the industrial precinct planning would be provided in 2016. UrbanGrowth NSW subsequently advised Council officers that additional information could be accepted only up until mid-March 2016.</p> <p>Given the complex nature of the industrial precinct planning, the coordination required between the two consultant firms (SGS and Architectus) and the multiple other studies they have been simultaneously undertaking for Council, completion of the work by Council's March Policy meeting was not possible.</p> <p>Notwithstanding, to enable Council to present a more informed position to UrbanGrowth NSW, SGS have prepared an interim report. It is envisaged that a final report will be presented to Council for endorsement in May 2016. The final report will include recommendations for the planning of all the industrial precincts in the Leichhardt local government area and for the review of the Leichhardt Local Environmental Plan 2013 and Leichhardt Development Control Plan 2013.</p>
<p>Current Status</p>	<p>Council made a submission on the Draft Parramatta Road Urban Transformation Strategy in December 2015. UrbanGrowth NSW subsequently advised Council officers that additional information could be accepted up until mid-March 2016.</p>
<p>Relationship to existing policy</p>	<p>The Strategic Sites, Centres and Corridors – Parramatta Road project is identified in the Employment and Economic Development Plan and incorporates actions of the Community and Cultural Plan, Integrated Transport Plan, Affordable Housing Strategy and a number of</p>

	Council resolutions.
Financial and Resources Implications	<p>The Industrial Precinct Planning work is being funded from the \$160,000 Council allocated to the Strategic Sites, Centres and Corridors – Parramatta Road project.</p> <p>This proposal is consistent with the recent s23A Guidelines issued by the OLG in relation to financial expenditure.</p>
Recommendation	<p>That Council:</p> <ol style="list-style-type: none"> 1. Endorse the approach of the Industrial Precinct Planning interim report as the basis for the completion of the Industrial Precinct Planning Project for the Leichhardt local government area; and 2. Forward a copy of the Industrial Precinct Planning interim report to UrbanGrowth NSW for consideration in the preparation of the Parramatta Road Urban Transformation Strategy.
Notifications	Community and stakeholder engagement in the review of Leichhardt Local Environmental Plan 2013 and Leichhardt Development Control Plan 2013.
Attachments	<ol style="list-style-type: none"> 1. SGS Interim Report Leichhardt Industrial Precinct Planning. 2. Architectus Interim Indicative Structure Plans and Urban Form Illustrations. 3. Save Lewisham Group Strategy

Purpose of Report

To inform Council of the findings of the Leichhardt Industrial Precinct Planning interim report and to seek endorsement of the Industrial Precinct Planning interim report as the basis for completion of the Industrial Precinct Planning Project.

Recommendation

That Council:

1. Endorse the approach of the Industrial Precinct Planning interim report as the basis for the completion of the Industrial Precinct Planning Project for the Leichhardt local government area; and
2. Forward a copy of the Industrial Precinct Planning interim report to UrbanGrowth NSW for consideration in the preparation of the Parramatta Road Urban Transformation Strategy.

Background

At the Policy Meeting of 10 February 2015, Council considered a report on the Strategic Sites, Centres and Corridors – Parramatta Road project and the Leichhardt Industrial Lands Study. Council subsequently resolved (in part) to endorse the Leichhardt Industrial Lands Study and forward a copy to UrbanGrowth NSW as part of its submission on the *Draft Parramatta Road Urban Renewal Strategy* (C04/15P).

The Industrial Lands Study concluded that in light of future population and employment growth in the LGA, Leichhardt would see a deficit in industrial floorspace of between 7,500sqm and 55,000sqm by 2036.

In accordance with actions of the Industrial Lands Study, Council engaged SGS Economics and Planning to undertake a Stage 2 of the industrial precinct planning.

In addition, Architectus (Architects and Urban Designers) were engaged to provide urban design input into the process for specific precincts. Camperdown, Tebbutt Street / Parramatta Road and Moore Street South were selected for their significance, size and industrial profile mix. Subject to Council endorsement of the interim SGS Industrial Precinct Planning report Architectus will complete the associated urban design work to make final recommendations for built form controls and outputs.

The commencement of the industrial precinct planning work in September 2015, coincided with the release of the Draft Parramatta Road Urban Transformation Strategy by UrbanGrowth NSW. Council's submission on the draft Strategy in December 2015 advised that the findings of the industrial precinct planning would be provided in 2016. UrbanGrowth NSW subsequently advised Council officers that additional information could be accepted only up until mid-March 2016.

Given the complex nature of the industrial precinct planning, the coordination required between the two consultant firms (SGS and Architectus) and the multiple other studies they have been simultaneously undertaking for Council, completion of the work by Council's March Policy meeting was not possible.

Notwithstanding, to enable Council to present a more informed position to UrbanGrowth NSW, SGS have prepared an interim report. It is envisaged that a final report will be presented to Council for endorsement in May 2016. The final report will include recommendations for the planning of all the industrial precincts in the Leichhardt local government area and for the review of the Leichhardt Local Environmental Plan 2013 and Leichhardt Development Control Plan 2013.

Report

The report identifies the industry trends and drivers as well as industrial land provision and anticipated population growth and major development in the Central Sydney subregion, before making the following observations:

- Inner city industrial precincts are evolving. As larger floorplate industries move out, they are being replaced by emerging industries such as higher value urban manufacturing as well as creative industries that require large floorspace but are not classified as 'traditional' industrial uses.
- Maintaining the status quo either side of Parramatta Road will not be sufficient. Simply protecting industrial land with current floorspace provision will not meet future demand.
- Many traditional industries are moving westward. Across Sydney, the competition for land coupled with the need for some industries to operate on large lots with few encumbrances has meant that some industries have moved out of inner city precincts. The large industrial land releases of western Sydney are more attractive to some of these uses.
- Industries that remain do so for a reason. Many businesses that remain in inner-city precincts do so as they have strong links to surrounding business networks and are important parts of the supply chain. They may support the operations of a nearby centre, rely on infrastructure to operate or act as a subregional distribution point for goods and services that cannot locate away from their market.
- Industrial land is being rezoned, but not necessarily to residential. Although demand for new housing places significant pressure on inner city industrial lands, the need for other commercial uses to operate in areas other than commercial cores is driving rezoning away from industrial uses. These tend to be towards B5 (Business Development), B6 (Enterprise Corridor) or B7 (Business Park).
- A growing population needs local services. Future population growth, coupled with major urban renewal projects, will place pressure on remaining industrial lands to turn over to higher value land uses whilst simultaneously increasing demand for population-serving industries.

A review of trends and influences affecting inner city industrial lands as well as analysis of the LGA's industrial precincts identified four key issues that impact on these precincts:

1. There is a shortage of industrial land at a subregional level. The nature of inner-city industrial lands and the patterns of urban growth limit the ability for these precincts to expand. This constrains the ability of inner-city industrial lands to meet the future demand for industrial uses.
2. There is a shortage of local services within Leichhardt. These are services that are traditionally found within local industrial estates, are necessarily located to service a local community and could not operate if forced to move away from this market.
3. There is a need to provide sufficient floorspace and appropriate built form configurations to support emerging uses. Inner city industrial estates must retain a degree of agility to facilitate the transition from 'traditional' functions and to accommodate a range of evolving industries and businesses which require industrial precinct characteristics to operate.
4. Industrial precincts are under threat from other uses. Competition for inner city land is placing pressure on industrial precincts to turn over to 'higher value' uses. While residential development is a persistent threat, industrial lands also face a threat from other employment uses that compete for larger floorplates and locations but aren't necessarily defined as 'industrial'.

The driving force behind the industrial precinct planning process is the need to increase the provision of industrial floorspace so as to reduce or eliminate the forecast industrial floorspace deficit. The interim report examines how feasible it is to provide this additional floorspace.

Following analysis of the urban structure and built form of the selected precincts, Camperdown, Tebbutt Street/Parramatta Road and Moore Street South, Architectus developed principles and subsequently built form options for sites within these precincts. Built form options were prepared and feasibility analysis undertaken for three sites of varying sizes (small, medium and large) in each of the three precincts. Using the initial design options prepared by Architectus as a basis, SGS undertook a 'goal seeking' exercise to determine how the floorspace quantum needed to change in each scenario to achieve a financially viable development outcome. Architectus subsequently made revisions to the built form options before further feasibility testing by SGS. The purpose was not to identify the exact quantum of floorspace required to feasibly develop, but to identify patterns that could inform policy recommendations.

The testing process uses three land use scenarios to test what land use and built forms could feasibly deliver an increase in industrial floorspace:

1. industrial only – additional industrial floorspace for industrial uses only
2. industrial + commercial – includes some commercial floorspace as a higher value land use lever to increase feasibility
3. industrial + commercial + residential – includes all three land uses as a means of further increasing the likelihood of feasibility.

Application of this sequential testing is important because the introduction of alternative land uses to industrial precincts increases the risk of land use conflict and potential fragmentation. Notwithstanding, it is recognised that because of the relatively low value of industrial floorspace (compared with other uses such as

commercial or residential) it is unlikely that an increase in industrial floorspace alone could deliver a feasible return.

Feasibility findings

The feasibility testing process identified several headline findings:

- **Industrial development alone will not provide additional industrial floorspace.** The cost of development in all instances was above the revenues generated by industrial floorspace rents. This is because even though development costs are low relative to those of more complicated (or taller) buildings, industrial uses are rarely high-value and therefore cannot afford high rents. This is exacerbated when land acquisition costs are factored in.
- **The addition of commercial floorspace can return a feasible result.** Adding commercial floorspace to the floorspace mix of buildings increases development costs and requires taller buildings, however the higher rent per square metre can, in some instances, enable a development to cross the feasibility threshold. However, this tends to require a significant amount of commercial floorspace which is likely to exceed market demand and could result in an unfavourable urban design outcome.
- **Residential is the easiest way to generate additional industrial floorspace.** Residential returns the highest land values on a per square metre basis and it is therefore the most efficient at returning a feasible result. It also does not necessarily require a significant proportion of total Gross Floor Area (GFA). In most cases, the introduction of residential floorspace resulted in a feasible outcome for development.
- **Lot size does not appear to matter.** In the scenarios and sites tested, there does not appear to be a pattern where lot size provides a better or worse feasibility result.

Multi-Criteria Analysis

To inform recommendations for the future planning of Leichhardt's industrial precincts, SGS prepared a Multi-Criteria Analysis (MCA) framework through which the different development options were assessed. This framework brings together the findings of feasibility modelling, urban design assessment and policy/strategy assessment. The purpose of the MCA is to determine which option most appropriately addresses the LGA's forecast industrial floorspace supply deficit and protects the industrial precincts.

The MCA tests each option against the following criteria:

- Feasibility ratio
- Total floor space demand
- Depth within the likely target market segment
- Impact on the role and function of the precinct
- Impact on the surrounding precinct and broader economy
- Urban design considerations

Each criteria was given a positive, negative or neutral score to determine whether, on balance, the tested land use mix is of benefit to the LGA.

Each option was then assessed against the primary objectives of protecting existing industrial land and providing additional industrial floorspace. The outcomes from this analysis are summarised in the SGS table below:

Options	Positives	Negatives
Industrial only	<ul style="list-style-type: none"> • Increase in industrial floorspace within the precinct supports existing industrial function. • Additional industrial floorspace will provide support for the local population and businesses served by the industrial tenants. 	<ul style="list-style-type: none"> • Additional floorspace is likely to increase the volume of traffic and impact on the local road network. • For the development of additional floorspace to be feasible, the rent per square metre has to increase. Increased rents will put pressure on the more traditional existing industrial businesses.
Industrial and commercial	<ul style="list-style-type: none"> • Increasing commercial floorspace will provide an opportunity for a range of different commercial types including creative, health services and CBD fringe office space. • Supplying commercial floorspace will reduce the commercial floorspace deficit (88,283 sqm) for the LGA. • The demand for commercial floorspace is aligned with population and employment growth. • Commercial floorspace is less conflicting with industrial activity especially where precincts already have a mix of commercial and industrial activity (e.g. Camperdown) • There is the potential to attract new tenants to the Camperdown precinct given proximity to Sydney University and RPA. 	<ul style="list-style-type: none"> • Potential for cannibalisation of other commercial centres e.g. Norton Street. • Likely to give rise to increased parking and accessibility problems. • High increase in commercial rents. • The introduction of commercial floorspace has the potential to change the industrial sense of address in the precincts – jeopardising the continued operation of industrial business as well as the attraction of new industrial activity. • Feasible development requires significant commercial floorspace which will fundamentally reshape the precinct.
Industrial, commercial and residential	<ul style="list-style-type: none"> • Introducing residential floorspace will contribute to the overall supply of housing • There is market demand for residential floorspace in the LGA. There is an opportunity to provide affordable housing and housing for key workers in these precincts. • Council can benefit from Section 94 contributions and add value to the surrounding area. 	<ul style="list-style-type: none"> • Integrating three land use types on one site will be likely to generate land use conflicts. • Introducing residential land uses will create long term implications as residential is a competing land use and potentially dominate the site and push industrial uses out of the precinct. • Pressure on social infrastructure and local services with an increasing residential and business population. • If residential is developed in the core of a site, it will be especially harmful to the function of the precinct. Residential needs to be developed on the periphery. • Introducing residential to industrial precincts sets a precedent for the

		development in other industrial precincts.
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Based on the precinct profiling, feasibility analysis and MCA process, a number of potential outcomes may be available to Council for planning industrial and employment land. These outcomes have been considered both in terms of their ability to deliver additional industrial floorspace and the risks that might arise from particular policy actions for individual precincts or for the overall supply of industrial floorspace in the local government area.

SGS assessed the above industrial, industrial/commercial, and the industrial/commercial/residential options against the following categories of policy risk:

- Low risk - Likely to be suitable for the LGA
- Medium risk - Careful consideration of policy benefits and dis-benefits required.
- High risk - Highly likely to fundamentally and adversely impact future industrial floorspace supply.

Overall SGS conclude that industrial development alone will not facilitate the provision of increased industrial floorspace supply as the cost of development outweighs the revenues received. As a consequence, other land uses are required to improve the feasibility aspect.

The potential integration of commercial and/or residential elements in new developments as levers to increase industrial floorspace supply present a number of risks. The volume of commercial floorspace required to cross the feasibility threshold is likely to fundamentally alter the function of an industrial precinct and shift the commercial gravity of the local government area away from existing commercial centres such as Norton Street.

The introduction of residential development brings with it extremely high risks of precinct fragmentation and land use conflicts that will significantly limit the ongoing function of the precinct. The extreme end of this scenario is that within a relatively short period of time, the pressure of residential would lead to the complete loss of industrial precincts.

With this in mind SGS have recommended two potential options for industrial precincts in the local government area and their possible implications the Camperdown and Tebbutt Street industrial precincts. These recommendations address the risks inherent in retaining the industrial zoning or of any potential rezoning within industrial precincts. Both options will require further consideration in

the completion of the Industrial Precinct Planning Project, but in the interim they provide a strong rationale for sound employment and industrial land planning that reflects the policy direction of the completed Parramatta Road / Norton Street Strategic Sites, Centres and Corridors Project studies. More particularly these options provide Council with a policy platform to influence how UrbanGrowth NSW formulates the next more detailed stage of the development of the Draft Parramatta Road Urban Transformation Strategy.

The two SGS options are explained in detail below:

(Please note: 1. the maps in the following options are SGS indicative illustrations of possible zonings that will require further consideration in the completion of the Final Industrial Precinct Planning Project for the entire local government area; 2. SGS's options refer to a number of business land use zones and the following definitions of these zones are useful in envisaging what types of land use they can incorporate

B4 Mixed Use

This zone is generally used where a wide range of land uses are to be encouraged, including commercial, residential, tourist and visitor and community uses. The residential development component in this zone can form an important element in revitalising and sustaining the area, and increasing housing diversity close to Commercial Cores and major transport routes.

B5 Business Development

This zone is to provide for business, warehouse and bulky goods retail uses that require a large floor area, in locations that are close to, and that support the viability of, centres. This zone provides for employment generating uses such as 'warehouses or distribution centres,' 'bulky goods premises,' 'hardware and building supplies,' 'landscaping material supplies' and 'garden centres.'

The zone may be applied to areas that are located close to existing or proposed centres, and which will support (and not detract from) the viability of those centres.

B6 Enterprise Corridor

The zone is generally intended to be applied to land where commercial or industrial development is to be encouraged along main roads such as those identified by the metropolitan, regional and subregional strategies. The zone provides for uses such as 'business premises,' 'hotel or motel accommodation,' 'light industries,' 'hardware and building supplies,' 'garden centres' and 'warehouse or distribution centres.' Retail activity needs to be limited to ensure that Enterprise Corridors do not detract from the activity centre hierarchy. Residential accommodation can be prohibited or permitted with consent as part of mixed use development.

Option 1: Business as usual approach

This option assumes that the risk of precinct fragmentation and land use conflict that could come with additional uses is too great to entertain and would involve no change to the zoning in the local government area's IN2 zoned precincts.

1: Protection

Strategy 1 : Retain industrial (IN2) categorisation in majority of industrial

ACTION 1.1 Retain IN2 zoning and continue to protect from re-zoning for the following precincts:

- Balmain East
- Balmain Road
- Lilyfield Road
- Marion Street
- Moore Street North
- Terry Street
- White Bay
- Camperdown
- Moore Street South
- Tebbutt Street
- Lords Road

Rationale The Industrial Land Use Study (2014) identified a shortage of industrial floorspace in the LGA by 2036. The retention of all IN2-zoned land and active protection of it against future development or adjacent development that may lead to land-use conflicts will not increase industrial floorspace. However, it is the best way to ensure that there is no continual erosion of remaining stock.

2: Strengthening of industrial character

Strategy 2 : Differentiate between industrial uses in the LGA

ACTION 2.1 Introduce IN1 zoning into LEP land use classifications.

Rationale There are subtle differences in the role of Leichhardt’s industrial precincts and many of the precincts are small clusters of industrial units which fit into the IN2 category. There are some precincts, however, that due to their size and role, are more ‘traditional’ industrial precincts. The introduction of an IN1 categorisation would add weight to the precincts that have such a zoning. This would send a clear message of intent regarding these precincts.

ACTION 2.2 Rezone Moore Street South industrial precinct to IN1

Rationale Moore Street South is Leichhardt’s largest ‘traditional’ industrial precinct with regards to role and function. A re-zoning to IN1 would signal that this precinct is not one to consider peripheral industrial uses and will not be a location for alternative uses such as commercial or residential. Although feasibility testing suggested that in some instances, the introduction of commercial and/or residential could deliver an increase in floorspace, the possible loss of this precinct due to land-use conflicts is too great to contemplate seeking a marginal increase in floorspace.

Option 2: Step change approach

Option 2 – a ‘Step Change Approach’ assumes the following scenario:

- a) Pressure from the State Government to redevelop the Parramatta Road Corridor requires Council to take a lead in considering alternative land use arrangements; OR
- b) Council wishes to consider options that may deliver additional floorspace.

This would be mutually exclusive to Option 1 Action 1 and would reconceive the future roles of the Council’s major industrial precincts for new forms of industry and business.

The following recommendations envisage how Camperdown and Tebbutt Street precincts may function as new non-traditional industrial precincts.

1: Vision for Camperdown precinct

Camperdown’s location in relation to the CBD and other neighbouring institutions such as the University of Sydney and Royal Prince Alfred Hospital means it is well positioned to accommodate supporting industries. The Camperdown precinct could accommodate higher-value industrial and commercial users that support the operations of nearby institutions and businesses operating in the CBD. Leichhardt Council’s Employment and Economic Development Plan encourages creative industries and with an identity that supports physical production in partnership with aligned commercial interests, Camperdown could attract these types of use.

2: Vision for Tebbutt Street Precinct

Tebbutt Street’s identification as a centre in the Parramatta Road Urban Transformation Strategy and its location near to the Taverners Hill Light Rail station make it a logical place for mixed use development. A residential component, with a mix of business and industrial uses could enable a range of land uses to co-exist with minimal conflict. Each of these would benefit from the precinct’s location and transport access.

3: Step-change in key precincts

Strategy 3 : Make amendments to standard instrument LEP and Development Control Plan

ACTION 3.1 Introduce B6 (Enterprise Corridor) zoning into LEP land-use classifications

Rationale Leichhardt currently has four Business use-class zones identified in its LEP. The introduction of B6 (Enterprise Corridor) will enable Council to provide a more nuanced set of business-oriented centres.

B6 (Enterprise Corridor) provides Council with an additional business zoning that aligns with a number of the uses currently found within the IN2 zoning. This provides Council with a more refined set of zoning classifications to address future land-use pressures, particularly along the Parramatta Road corridor.

ACTION 3.2 Introduce B5 (Business Development) zoning into LEP land-use classifications and include ‘Residential Accommodation’ as a use permitted with consent.

Rationale Allowing some residential development within business zones will encourage a mix of uses where it is applied. It will also assist with the feasibility equation of new developments where this use is being encouraged.

Unlike B4 (Mixed Use), which usually has residential providing a significant proportion of floorspace in developments, the intent with this amendment is to retain the predominant land use as business-focus.

ACTION 3.3 Provide additional direction with regards to floorspace proportions for B5 (Business Development) zoning in Development Control Plan. This would limit the total amount of residential GFA to approximately 20% of total GFA for individual development within a B5 zone.

Rationale To ensure that residential does not dominate the development and alter the intent of the precinct, additional directions to limit floorspace to a minimal proportion can provide design guidance to developers to articulate how and why this proportional cap is required.

Strategy 4 : Position Camperdown as a mixed business precinct aligned with surrounding industries

ACTION 4.1 Re-zone the identified area to B5 (Business Development). This assumes that the inclusion of residential is permitted in the B5 zone.



Rationale The Camperdown Precinct's location in relation to the CBD and other neighbouring institutions such as the University of Sydney and Royal Prince Alfred Hospital means it is well positioned to accommodate supporting industries. A B5 zone would permit a more commercial focus while retaining much of the existing industrial uses. The introduction of capped residential development would act as a lever to increase industrial and commercial floorspace.

A B5 zone on the precinct's periphery will capture much of the existing land use profiles such as Bulky Goods Retail that current line Parramatta Road.

ACTION 4.3 Retain existing IN2 zone in identified area (below).



Rationale It is important to protect the industrial core of the precinct to continue to accommodate the range of light industrial users that require the close-to-CBD position of the precinct. It will also help to retain the overall intention of the precinct.

ACTION 4.4 Set a clear vision for the future industry identity of the Camperdown Precinct

Rationale In order for the strategic intent of any changes to Camperdown being made clear, a statement in the DCP that outlines what type of precinct Camperdown will be should be made. This can build off the statement in this section about what the intention for Camperdown’s proposed rezoning is.

Strategy 5 : Be proactive in aligning Tebbutt Street with the future of the Parramatta Road Strategy

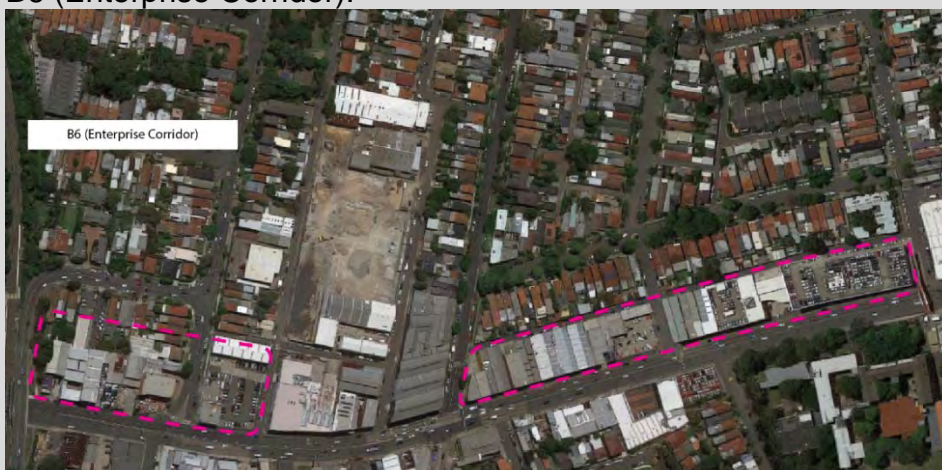
ACTION 5.1 Re-zone eastern edge of Tebbutt Street to B4 (Mixed Use) north of Number 5 Tebbutt Street (see map)



Rationale The intention of UrbanGrowthNSW to redevelop this precinct as part of the Parramatta Road Urban Transformation Strategy puts pressure on Tebbutt Street to remain as an industrial precinct. This stretch already has a B4 zone to its east and its location near the Taverners Hill Light Rail Station makes it suitable for residential.

This approach also demonstrates a proactive approach by council to work with UrbanGrowth NSW and may help to protect more of the industrial precinct than otherwise would have.

ACTION 5.2 Re-zone IN2 zoned land in precinct between Tebbutt Street and Hathern Street and between Flood Street and Elswick Street to B6 (Enterprise Corridor).



Rationale A B6 zoning aligns with much of the current use along Parramatta Road and still retains opportunity for some industrial uses. It does provide a more commercial opportunity to support any future residential development in the area.

ACTION Retain IN2 zoning between Flood Street and Upward Street.

5.3



Rationale This part of the precinct retains a cluster of larger lots that centre on the newly built Best and Less distribution facility. Given that Best and Less has committed to the precinct, it suggests that this warehousing and supply chain role is still relevant in this location.

Urban Form

Architectus will complete their urban design report to contribute to the Final Industrial Planning Precinct Project study after Council have considered this report, however extracts from their ongoing design work to inform the SGS feasibility testing so far are provided in **Attachment 2: Architectus Interim Indicative Structure Plans and Urban Form Illustrations.**

These illustrations include indicative structure plans and possible built forms that were provided to SGS for testing for each of the SGS Options for Camperdown and Tebbutt Street; international examples of non-traditional industrial precincts and developments; and images of recent high-tech, medical research and educational redevelopments including some incorporating heritage items in and around the Royal Prince Alfred and University of Sydney precinct.

Save Lewisham Group Strategy

In December 2015 Council resolved **(C608/15)** in relation to Council's submission to Urban GrowthNSW on the Draft Parramatta Road Transformation Strategy that: *"Officers collaborate with the Save Lewisham Group to analyse the alternative proposals they have developed and report back to the February 2016 Policy Council Meeting on how they relate to Council's submission."*

Council officers met with representatives of the Save Lewisham Group to discuss their alternative strategy **(Attachment 3)**. In summary their strategy proposes to:

- Protect the existing low density residential areas north and south of Parramatta Road by only rezoning the industrial and commercial properties along Parramatta Road
- Allow a higher built form on the north side of Parramatta Road (up to 12 storeys and stepping down to 6 storeys)
- Require a lower built form on the southern side of Parramatta Road (4-6 storey and stepping down to 3 storeys) to minimise overshadowing
- Extend the Taverners Hill Precinct west of the light rail (Ashfield Council)

- It also envisages a new signalised intersection to align Old Canterbury Road with Tebbutt Street to allow north - south traffic movement to bypass Brown Street. This would provide an opportunity for the Brown Street overpass to become a pedestrian/cycle link with direct access to the Light Rail Station.

Taking into consideration recent approvals they have calculated their strategy will deliver the Urban Growth Target of 3064 dwellings by 2050.

Relationship with the Draft Parramatta Road Urban Transformation Strategy

The table after the Summary / Conclusions includes relevant recommendations from Council's submission to UrbanGrowth NSW on the Draft Parramatta Road Urban Transformation Strategy (DPRUTS) and how they broadly relate to the findings of the Industrial Precinct Planning interim report.

Summary / Conclusions

Given the complex and local government area wide nature of the Industrial Precinct Planning Project, the coordination required between the two consultant firms (SGS and Architectus) and the multiple other studies they have been simultaneously undertaking for Council, completion of the Project by Council's March Policy meeting was not possible.

SGS have prepared the interim report (**Attachment 1**) to enable Council to present a more informed position to UrbanGrowth NSW. It is envisaged that a final report will be presented to Council for endorsement in the near future. The final report will include recommendations for the planning of all the industrial precincts in the Leichhardt local government area and for the review of the Leichhardt Local Environmental Plan 2013 and Leichhardt Development Control Plan 2013.

In summary SGS suggest that Council has two options:

- Option 1: Business as usual - retain IN2 zoning of all the area's industrial precincts and consider rezoning Moore Street to IN1 with IN1 land use classifications in some other IN2 precincts in order to attempt to prevent continuing erosion of the remaining stock of industrial land.
- Option 2: Step change approach - to respond tactically to ongoing pressure from State government to redevelop Parramatta Road corridor and /or to allow Council to consider possible ways of delivering additional industrial, non-traditional industrial and other forms of employment development in the key Camperdown and Tebbutt Street precincts.

These recommendations address the risks inherent in retaining the industrial zoning or of any potential rezoning within industrial precincts. Both options will require further consideration in the completion of the Industrial Precinct Planning Project, but in the interim they provide a strong rationale for sound employment and industrial land planning that reflects the policy direction of the completed Parramatta Road / Norton Street Strategic Sites, Centres and Corridors Project studies. More particularly these options provide Council with a policy platform to influence how UrbanGrowth NSW formulates the next more detailed stage of the development of the Draft Parramatta Road Urban Transformation Strategy.

Consequently it is recommended that Council:

1. Endorse the approach of the Industrial Precinct Planning interim report as the basis for the completion of the Industrial Precinct Planning Project for the Leichhardt local government area; and
2. Forward a copy of the Industrial Precinct Planning interim report to UrbanGrowth NSW for consideration in the preparation of the Parramatta Road Urban Transformation Strategy.

Next Steps

Subject to the endorsement of the Industrial Precinct Planning interim report and presentation of the Final Industrial Precinct Planning Project report to Council in May 2016 the following steps will be taken to progress Council's approach to the planning the local government area's industrial precincts:

- Confirmation of final planning objectives and principles through community and stakeholder engagement.
- Report community engagement outcomes to Council.
- Application of Council endorsed objectives and principles to the review of Leichhardt Local Environmental Plan 2013 and Leichhardt Development Control Plan 2013.
- Preparation of draft Leichhardt Local Environmental Plan (LEP) 2013 and Leichhardt Development Control Plan 2013 amendments and presentation of these to Council for endorsement to submit a draft LEP Amendment Planning Proposal for Gateway Determination.
- Report Gateway Determination to Council and subject to Gateway approval proceed to public exhibition of Planning Proposal and associated DCP Draft Amendments.
- Report public exhibition submission to Council and proceed to publication for the LEP and DCP Amendments.

Issue	Initial Council recommendation	Study findings
<p>Land use – Employment and economic activity</p>	<p>11. <i>Council does not support the loss of IN2 zoned lands in accordance with the recommendations of the Leichhardt Industrial Lands Study.</i></p> <p>12. <i>Council requests that UrbanGrowth NSW review the Leichhardt Industrial Lands Study (Parts 1 and 2) and undertake discussions with Leichhardt Council regarding the findings and recommendations.</i></p>	<p>The findings of the interim report acknowledge this position. The loss of industrial zoned land or the introduction of additional land uses would jeopardise the industrial precincts and their ability to adequately provide for the future population of the LGA, which is likely to increase substantially as a result of major urban renewal projects proposed in the vicinity.</p> <p>The interim report shows that there is a need to provide additional industrial floorspace within Leichhardt to meet the LGA's future demands, however industrial development alone will not facilitate this and other land uses are required to improve the feasibility aspect. Accordingly, consideration must be given to the risks associated with seeking this additional floorspace and whether they outweigh the reward.</p> <p>Introducing commercial and/or residential as levers to increase industrial floorspace supply presents a number of risks. The volume of commercial floorspace required to cross the feasibility threshold is likely to fundamentally alter the function of the precinct and shift the commercial gravity of the LGA away from its identified commercial centres such as Norton Street. The introduction of residential development brings with it extremely high risks of precinct fragmentation and land use conflicts</p>

		<p>that will significantly limit the ongoing function of a precinct.</p> <p>The report concludes that the risk/reward equation is clear. Although the aspiration of increasing industrial supply is supported and founded in and strong evidence base, the implications for delivering on this objective is that it may perversely lead to a significant reduction of industrial floorspace over the medium-to-long term.</p>
<p>Mixed use in the Taverners Hill Precinct is unlikely to support existing industrial uses</p>	<p>14. <i>Council recommends that the IN2 Industrial zone be retained in Taverners Hill Precinct. Council notes that any introduction of Mixed Use would include a Residential component which would not be compatible with the IN2 land use. Council's Industrial Lands Study (Part 1) recommends that there be no further loss of industrial land in the LGA and that Council finds locations to increase floorspace zoned for IN2. Further rezoning of land to B4 Mixed Use is therefore not supported in this location.</i></p> <p>17. <i>Council recommends that the IN2 zoning in Taverners Hill be protected and retained, with additional permissible uses in the zone.</i></p> <ul style="list-style-type: none"> • <i>Council's consultants are currently testing land use options for sites in</i> 	<p>On two of the sites tested in the Tebbutt Street/Parramatta Road precinct, none of the development scenarios returned a feasible result. On the remaining site, only Option 3 (industrial + commercial + residential) proved to be feasible.</p> <p>The interim report states that the introduction of residential accommodation would negatively affect the positioning of the precinct as an industrial area. Furthermore, it identifies the following potential issues with the introduction of residential and commercial floorspace to the precinct:</p> <ul style="list-style-type: none"> - the positioning of the precinct as an industrial area would be negatively affected, with commercial and/or residential uses potentially redefining the precinct. With regard to the introduction of commercial uses only, it is acknowledged that the extent

	<p><i>the IN2 Zone and Council will provide detailed future provisions to UrbanGrowth NSW in the first half of 2016.</i></p> <p>18. <i>Council does not support the loss of IN2 zoned land in Taverners Hill but if lost Council recommends that commercial development should be included in any mixed use area and include large, flexible floorspace to support businesses aligned with creative industries and similar industries that require non-traditional commercial floorspace.</i></p> <p>19. <i>Council notes that it needs to make provision for an increase in IN2 floorspace in the LGA and notes that if any industrial floorspace is lost in the Taverners Hill Precinct that it must be made up elsewhere.</i></p> <p>20. <i>Council requests that UrbanGrowth NSW consider the Leichhardt Industrial Lands Study (Parts 1 and 2) and the Industrial Precincts Urban Design Study in detail and in consultation with Council and that the findings and recommendations be used to inform the next iterations of any Transformation Strategy for the corridor.</i></p>	<p>of redefinition would depend on the types of the uses introduced.</p> <ul style="list-style-type: none"> - the introduction of land use conflicts arising from accessibility issues, noise and amenity. - an increased number of employees and/or residents would adversely impact traffic movement in the precinct, particularly at peak times. - increased public transport demand associated with additional residents and workers. - accessibility and parking issues given the small size of lots in the precinct. - additional demand for services that support the local population such as social infrastructure and retail services and to a lesser extent, industrial services. - competition with established commercial areas. Given the proximity to Norton Street, significant commercial activity in the precinct may adversely affect commercial attraction to Norton Street. The commercial and retail study undertaken by SGS identified the reactivation of Norton Street as a priority. <p>The report recommends that if residential were to be located in the precinct, it should be on the periphery so as to not impact on the industrial core. It is also acknowledged that there may be opportunities to provide housing for key workers and affordable housing within the precinct.</p>
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		<p>In the development of built form outcomes for testing, options comprising two industrial levels and between two and four levels of commercial and/or residential achieved appropriate urban design outcomes on sites within the Tebbutt Street/Parramatta Road precinct. Industrial uses were designed with a 6m floor to ceiling height to accommodate a range of uses and servicing, including truck access. Commercial and residential floorplates were both designed with a 3.6m floor to ceiling height. A two storey, 12m street wall was recommended to ensure retention of the existing character of the precinct.</p> <p>In summary SGS have concluded so far that the local government area's projected industrial land supply deficit cannot be addressed through new industrial development alone and that therefore Council has two options:</p> <ul style="list-style-type: none">• Option 1: Business as usual - retain IN2 zoning of all the area's industrial precincts and consider rezoning Moore Street to IN1 with IN1 land use classifications in some other IN2 precincts in order to attempt to prevent continuing erosion of the remaining stock of industrial land.• Option 2 : Step change approach - to respond tactically to ongoing pressure from State government to redevelop Parramatta Road corridor and /or to allow Council to consider possible ways of
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		<p>delivering additional industrial, non-traditional and other forms of employment development in the key Camperdown and Tebbutt Street precincts.</p> <p>Both options will require further consideration in the completion of the Industrial Precinct Planning Project, but in the interim they provide a strong rationale for sound employment and industrial land planning that reflects the policy direction of the completed Parramatta Road / Norton Street Strategic Sites, Centres and Corridors Project studies.</p> <p>These options provide Council with a policy platform to influence how UrbanGrowth NSW formulates the next more detailed stage of the development of the Draft Parramatta Road Urban Transformation Strategy.</p>
<p>Camperdown Precinct: The strategy makes no allowance for industrial use</p>	<p>32. <i>Council does not support the loss of IN2 – Industrial land in the Camperdown Precinct. The industrial floorspace in the Camperdown precinct should be protected and retained, with opportunities for an increase in floorspace explored where possible. The strategic importance of the precinct’s current function is such that the existing quantum of floorspace should be retained and protected for continued industrial use. Council is undertaking detailed Precinct</i></p>	<p>The multi-criteria analysis, which considered the findings of the feasibility modelling, urban design assessment and policy/strategic direction, has determined that there is no ability to increase floorspace. Accordingly, the remaining industrial area is critical in providing floorspace for local population serving industries and backroom activities for businesses in the CBD and commercial centres.</p> <p>As identified by the Industrial Lands Study, the Camperdown industrial precinct has locational</p>

	<p><i>Planning for Camperdown, including an Urban Design Study and further feasibility testing. This work should be used to inform the future for land use zones and FSR in the precinct.</i></p> <p>33. <i>Council recommends that this land is reserved for industrial uses into the future with no decrease in flexibility due to residential uses; and to avoid land use conflicts.</i></p>	<p>and operational characteristics that make it important to Leichhardt and the broader inner Sydney subregion. It is important for this land to be protected for essential industries and urban services.</p> <p>In summary SGS have concluded so far that the local government area's projected industrial land supply deficit cannot be addressed through new industrial development alone and that therefore Council has two options:</p> <ul style="list-style-type: none"> • Option 1: Business as usual - retain IN2 zoning of all the area's industrial precincts and consider rezoning Moore Street to IN1 with IN1 land use classifications in some other IN2 precincts in order to attempt to prevent continuing erosion of the remaining stock of industrial land. • Option 2 : Step change approach - to respond tactically to ongoing pressure from State government to redevelop Parramatta Road corridor and /or to allow Council to consider possible ways of delivering additional industrial, non-traditional and other forms of employment development in the key Camperdown and Tebbutt Street precincts. <p>Both options will require further consideration in the completion of the Industrial Precinct Planning Project, but in the interim they provide</p>
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		<p>a strong rationale for sound employment and industrial land planning that reflects the policy direction of the completed Parramatta Road / Norton Street Strategic Sites, Centres and Corridors Project studies.</p> <p>These options provide Council with a policy platform to influence how UrbanGrowth NSW formulates the next more detailed stage of the development of the Draft Parramatta Road Urban Transformation Strategy.</p>
<p>Camperdown Precinct: Residential development will undermine industrial use</p>	<p>35. <i>Council does not support the introduction of residential development into the Camperdown precinct as it will undermine the important industrial uses. Council is currently undertaking more detailed Precinct Planning for Camperdown to identify future built form and land use scenarios which support its ongoing feasibility as Industrial land. It is recommended that this work be provided to UrbanGrowth NSW to inform its next iteration of the DPRUTS.</i></p>	<p>The introduction of appropriately scaled development comprising industrial, commercial and residential floorsapce did not produce a feasible outcome on any of the sites tested in the Camperdown precinct.</p> <p>Of all the scenarios tested across the three selected sites in the precinct, the only feasible result was development comprising industrial and residential on the small (1000m²) site.</p> <p>While the industrial precinct planning work acknowledges that there would be demand from medium to high income households for residential development in the Camperdown precinct that adapts the existing building stock to provide a niche product, it advises that there are significant risks associated with the introduction of residential development to the precinct. These include:</p>

		<ul style="list-style-type: none"> - existing tenants being driven out due to increased property values and rents. - land use conflicts associated with noise, access, amenity and operation. - increase in traffic volumes placing pressure on the road network. - increased demand for services that support the local population such as social infrastructure and retail services and to a lesser extent, industrial services. - fragmentation of the precinct and impairment of its functioning, particularly if residential accommodation was provided in the core of the precinct. - restricting the ability of the precinct to accommodate additional industrial floorspace in the future. - sending a strong signal to existing owners and the market that the area is in transition away from industrial use or no longer has an industrial future.
<p>Camperdown Precinct redevelopment should only be considered as a means to increasing or reorganising industrial floorspace</p>	<p>36. <i>Council strongly recommends that an Industrial only scenario is the preferred outcome for the precinct. Council notes that if its sequential testing demonstrates there is a need for redevelopment in order to gain additional industrial floorspace, then a floorspace mix of industrial and commercial uses is the preferred option. This would accommodate a range of commercial</i></p>	<p>Industrial only scenarios on sites within the Camperdown precinct did not produce feasible outcomes.</p> <p>Similarly, the industrial + commercial option did not produce feasible outcomes in the Camperdown precinct and would require a significant shift in the market value of the industrial floorspace or a more than doubling of the amount of floorspace, resulting in a</p>

	<p><i>uses that support the precinct's operations and align with council's aspirations to encourage creative industries in the area.</i></p> <p>37. <i>Council recommends that residential uses should only be considered as a last option (due to its ability to fragment industrial precincts and create land use conflicts) and that it should only be located on the precinct's edges and should not impede the ongoing operations of the precinct. More detailed site testing must be undertaken prior to any decisions in relation to this Precinct.</i></p> <p>38. <i>Council notes that the Camperdown Precinct is well located to provide industrial, employment lands for uses associated with the growth of industries associated with the research and production activities of the Royal Prince Alfred Hospital and Sydney University, in particular in relation to biomedical industries. Council recommends that further consideration of the strategic importance of the Precinct in light of this potential growth is imperative.</i></p> <p>39. <i>Council requests that UrbanGrowth NSW considers, in detail, the findings and recommendations of the Leichhardt</i></p>	<p>substandard urban design outcome.</p> <p>The final step of sequential testing included the introduction of residential floorspace, however for the reasons outlined above this is considered a high risk option. Notwithstanding, with consideration of the urban design outcomes, this scenario only produced a feasible result on one of the three sites tested.</p> <p>While maintaining that there should be no loss of industrial floorspace and continued protection of the Camperdown industrial precinct, the interim report concludes that if there is any flexibility with precinct roles, Camperdown is best suited to be one that may evolve to encourage new 'higher value' industrial tenants, particularly due to its proximity to the CBD, RPA and Sydney University.</p> <p>Any redevelopment of this nature, which cannot be easily tested by the feasibility modelling, should consider the built form outcomes prepared by Council's urban design consultants. Possible options developed by Architectus for the three test sites in the Camperdown industrial precinct included two and three industrial levels with two to four commercial or residential levels above. Industrial uses were designed with a 6m floor to ceiling height to accommodate a range of uses and servicing, including truck access. Commercial and residential floorplates were both</p>
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	<p><i>Industrial Lands Study (Parts 1 and 2) including the finding that the precinct is important on a subregional basis and should not be rezoned to other uses.</i></p>	<p>designed with a 3.6m floor to ceiling height. A two storey, 12m street wall was recommended to ensure retention of the existing character of the precinct.</p> <p>SGS's interim options cover both no change and tactical step change possible solutions for Camperdown that can be used to influence the next steps in the UrbanGrowthNSW development of the Draft Parramatta Road Transformation Strategy.</p> <p>Option 2 may create an opportunity to provide industrial, employment lands for uses associated with the growth of the research and production activities of the Royal Prince Alfred Hospital and Sydney University, in particular in relation to biomedical industries.</p>
<p>Camperdown Precinct - Retain storage facility as part of enterprise corridor</p>	<p>40. <i>Council recommends that the storage facilities located in the Camperdown Precinct are an important land use which supports the population and businesses and should not be rezoned.</i></p>	<p>Any growth in residential population within the locality will see increased demand for storage facilities. The importance of this land use in the Camperdown precinct is further reinforced by the proximity to the CBD and the support role it plays for businesses.</p>
<p>Camperdown precinct: Streetscape upgrades should not compromise precinct operations</p>	<p>41. <i>Council requests that any streetscape improvement works be developed in conjunction with Council and that the design of the public domain be appropriate for an industrial core including consideration of the requirements of trucks in relation to</i></p>	<p>Given the findings of the interim report, Council's position on streetscape improvements in the Camperdown precinct should remain unchanged. Changes to the public domain should not compromise the ability of industrial uses to operate.</p>

	<p><i>footpath and carriageway widths, pedestrian and cycle networks and street tree planting.</i></p>	
<p>Camperdown Precinct: Enterprise and business zone</p>	<p>42. <i>Council does not support the proposed Enterprise and Business Zone in the Camperdown Precinct as it is unable to ascertain from the DPRUTS what the permissible land uses would be for the proposed Enterprise and Business Zone and notes that any additional uses permitted in this area (compared to the IN2 Zone) are likely to result in light industrial and creative uses being forced out of the area, and therefore a loss of lands available for employment uses and essential urban services.</i></p>	<p>The interim report states that the rezoning of land within the Camperdown precinct to facilitate additional uses would introduce a high risk of precinct fragmentation or dilution due to conflicting land uses as well as a loss of industrial uses priced out due to increased land values.</p> <p>However SGS's interim options cover both no change and tactical step change possible solutions for Camperdown that can be used to influence the next steps in the UrbanGrowthNSW development of the Draft Parramatta Road Transformation Strategy.</p> <p>Option 2 may create an opportunity to provide industrial, employment lands for uses associated with the growth of the research and production activities of the Royal Prince Alfred Hospital and Sydney University, in particular in relation to biomedical industries through a partial rezoning to B5.</p>

Attachments

Attachment 1: SGS Interim Report Leichhardt Industrial Precinct Planning.

Attachment 2: Architectus Interim Indicative Structure Plans And Urban Form Illustrations.

Attachment 3 : Save Lewisham Group Strategy

Leichhardt Industrial Precinct Planning

Interim report

Leichhardt Municipal Council

February 2016



Independent insight.



This report has been prepared for Leichhardt Municipal Council. SGS Economics and Planning has taken all due care in the preparation of this report. However, SGS and its associated consultants are not liable to any person or entity for any damage or loss that has occurred, or may occur, in relation to that person or entity taking or not taking action in respect of any representation, statement, opinion or advice referred to herein.

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EXECUTIVE SUMMARY

An Executive Summary will be produced with the final report

1 SUMMARY OF INDUSTRIAL LAND STUDY

In 2014, SGS were commissioned by Leichhardt Municipal Council to undertake an Industrial Lands Study for all industrially-zoned land in the LGA. This report was underpinned by a land-use audit that determined the floorspace, industry type and broad land-use categorisation of each lot across the LGA's industrial precincts.

Future demand for industrial floorspace was forecast from employment projections for Leichhardt produced by the Transport for NSW's Bureau of Transport Statistics (BTS). These were converted to floorspace projections using SGS's in-house modelling, derived from land-use audits undertaken across Sydney.

The report concluded that in light of future population and employment growth in the LGA, Leichhardt would see a deficit of between 7,500 sqm and 55,000 sqm by 2036. The range is due to a number of scenarios being tested. The most conservative of these was that no additional development would take place in industrial precincts to provide more floorspace, while the most optimistic assumed that all lots in all precincts developed to the maximum theoretical capacity under existing planning controls (Floorspace Ratio and building height).

The study was adopted by Council in early 2015.

2 ECONOMIC CONTEXT

11 Industry trends and drivers

The story of Sydney's inner city industrial lands

Businesses and industries that locate within inner city industrial lands play an important role in the functioning of cities. These precincts vary in size and make-up. They support commercial centres and the businesses that locate in them, through functions such as archiving, print, wholesale retail and food and beverage preparation. These precincts also serve the needs of surrounding local and sub regional populations through panel beaters, specialised retailers (such as builders' merchants), storage facilities and works depots of municipal councils.

Aside from simply providing appropriate land to accommodate these functions, the zoning of these precincts under industrial classification (IN1, IN2) serves also to suppress land values. This is especially significant in cities such as Sydney, where inner-city land values have risen dramatically in recent years. In Leichhardt, the median house and apartment price is \$1,367,500 and \$852,500 respectively (compared to a Sydney-wide median of \$900,000 and \$650,000 respectively), highlighting the demand for land and the premium that is placed on proximity to the CBD.

The suppression of land values through zoning mechanisms is an important function of planning. On face value, industrial land uses cannot compete on a dollar per square metre basis against higher value uses such as residential. This, however, masks the value-add that industrial land in proximity to commercial centres and population contribute. Businesses that operate in industrial precincts can do so due to the lower cost environment that industrial zoning permits. Without the suppression of land values through zoning, a plumbing supplier or storage facility could not compete with the returns that residential would provide on that land. These uses would be forced away from the area, increasing the operating cost of the business.

It is important to note that there are two distinct functions that businesses operating in inner-city industrial precincts tend to serve. The first is of a sub regional nature, with the business (or collection of complementary businesses within an industrial precinct) providing a service that supports the operation of the sub region or even metropolitan region. These include secondary freight and logistics distribution facilities such as Australia Post depots that support a wide range of LGAs.

The second function is of a more local nature, with a precinct's operations servicing a smaller network. These include council depots, storage facilities or print operations and differ depending on whether their local network is predominantly business or residentially-oriented.

Multi-functional precincts

Industrial lands deliver a diverse mix of jobs. Across Sydney, almost two-thirds of jobs in industrial lands relate to five industrial sectors collectively referred to as 'production and manufacturing'¹. This, however, means that one third of Sydney's industrial lands comprise of a range of other activities. These vary significantly across districts and precincts but can include arts and recreation, financial and insurance services and education and training.

¹ These industries are Manufacturing, Wholesale Trade, Transport, Postal and Warehousing, Construction and Electricity, Gas, Water and Waste Services. LEP 1995

While production and manufacturing reflect common perceptions of industrial precincts, they are transitioning from traditional production and manufacturing uses and adapting to meet the needs of Sydney's global economy. These transitions are resulting in:

- an increasing demand for larger floor space to accommodate freight/logistics
- increasing competition from other land uses, such as residential, in inner city districts
- a greater need to maximise transport accessibility to link to customers and distributors
- a greater emphasis on the economic value of agglomeration opportunities

The distinction between large industrial lands in Sydney's west and more concentrated inner-city precincts is also growing. The inner city industrial lands, in particular, contain a complex mix of local services and businesses locating near clients in strategic centres and customers in surrounding areas. The mix of activities in industrial precincts varies greatly. Against the Sydney-wide figure of two-thirds, the proportion of jobs located in the Central subregion's industrial precincts is closer to half, meaning that over fifty percent of jobs located in these precincts are something other than 'traditional' industrial uses.

Transitioning functions

The role of inner-city industrial precincts is evolving alongside the industries locating within them. Changing business models that promote 'factory door' shops fronting a production facility have begun to attract people to precincts that were previously utilitarian in nature. This adds a degree of activity to precincts and supports businesses but can impact on more traditional operations that require, for instance, regular heavy vehicle access. Urban manufacturing has also shifted the focus from large floorplate manufacturing techniques towards smaller-scale operations. This has coincided with the rise of strata-ed business park-style industrial developments. The rise of 3D printing is expected to continue the growth of small-scale, higher-value production in precincts close to clients.

Land use contestability

Competition for industrial lands in the inner city is high. These lands are often well located near public transport, main roads and, in the case of Leichhardt in particular, close to services and local amenities such as shopping centres and high streets. These characteristics are attractive to residential development, particularly because the land values under industrial zoning are lower than surrounding residential land values. This often leads to land holdings being speculatively acquired in the hope that sustained pressure will see land values turn over to higher-value residential use.

Industrial lands also face pressure from other business and retail sectors. The transition of many traditional 'heavy' manufacturing businesses to larger, unencumbered precincts in Sydney's west has seen many of the remaining buildings filled with emerging industries as well as opportunistic businesses with no real need to locate in industrial precincts aside from the versatility of the building floorplates and lower rents. Retail use, particularly bulky-goods retail is also drawn to these precincts – again due to lot sizes and lower land values.

3.2 Subregional snapshot

As an LGA within Sydney's Central subregion, Leichhardt has a relatively small amount of industrially-zoned land. Its approximately 100 hectares equates to 7 percent of the subregion's total. Although already small, Leichhardt's industrially-zoned land is continuing to reduce. Between 2011 and 2015, Leichhardt saw a net loss of almost 5 Hectares, 4.5% of the LGA's 2011 total (Table 1). This loss, coupled with Leichhardt's small amount of industrial land and neighbouring Marrickville's similar amount (170 hectares in 2015) has meant that continued demand, in particular for population-serving industries such as self-storage services or automobile maintenance and repairs, are facing increasing pressures on decreasing available land.

TABLE 1. CHANGE IN INDUSTRIALLY-ZONED LAND BY LGA, 2011-2015

LGA	Total industrial lands 2011 (Ha)	Total industrial lands 2015 (Ha)	Net change (2011 to 2015) (Ha)
Ashfield	7.9	7.0	-0.9
Botany Bay*	398.6	483.1	84.5
Barwood	1.2	0.7	-0.5
Canada Bay	31.1	30.4	-0.7
Leichhardt	106.6	101.7	-4.9
Marrickville	167.2	169.2	2.0
Randwick	234.7	204.3	-30.4
Strathfield**	198.7	287.0	88.3
City of Sydney	154.1	161.1	7.0
Waverley	0.0	0.0	0.0
Woolloomooloo	0.0	0.0	0.0
TOTAL	1,300.1	1,444.5	144.4

Source: NSW Department of Planning and Environment's Employment Land Development Program (ELDP) 2015
 * Includes the City of Botany Bay
 ** Includes the City of Parramatta

Demand for these lands is evident when examining vacancy rates for each LGA in the Central subregion. Vacancy rates are measured by the proportion of undeveloped land as a percentage of an LGA's total industrial lands (developed plus undeveloped land). This is defined through the NSW Department of Planning and Environment's Employment Lands Development Program (Table 2).

TABLE 2. INDUSTRIAL LANDS VACANCY RATE, 2015

LGA	Vacancy rate (percentage of undeveloped land)
Ashfield	1%
Botany Bay	5%
Barwood	0%
Canada Bay	1%
Leichhardt	3%
Marrickville	4%
Randwick	0%
Strathfield	8%
City of Sydney	4%
Waverley	0%
Woolloomooloo	0%
SUBREGIONAL TOTAL	4%

Source: NSW Department of Planning and Environment's Employment Land Development Program (ELDP) 2015

As discussed in section 2.1, competition for inner city industrial land comes from a number of alternate land uses. Table 3 identifies what uses industrial land in the subregion has been rezoned to between 2011 and 2014. Although residential is cited as the largest threat to industrial lands, employment and business rezonings clearly dominate.

This suggests that inner city councils, landowners and businesses are seeing continued demand for the type of floorspace and location that these precincts provide and are seeking to adapt them to meet emerging needs of a diverse set of industries.

TABLE 3. LAND REZONING AWAY FROM INDUSTRIAL, CENTRAL SUBREGION, 2011-2014

Subregional rezonings (Hectares)			
Year	Total rezoned to residential	Total rezoned to business (B1, B2, B4)	Total rezoned to employment (B5, B6, B7)
2014	0.8	0.7	0.5
2013	11.7	0.7	0
2012	0.7	1	0
2011	5	2.5	26.7
Total	18.2	4.9	27.2

Source: 2015 Development Plan for the Central Subregion, 2015-2016, Table 3.1.1: Land Use Change, 2011-2014

This transition away from industrial uses to other employment uses reflects the observation made in the 2015 ELDP (and discussed in Section 2.1) that a significant proportion of industrial land use is outside of what many people would consider 'traditional' industry. This important distinction highlights the transition that many industrial precincts are undergoing, in particular in inner city industrial precincts where competition for alternate uses is high.

2.3 Future growth

Subregional population growth

Demand for inner city living and the benefits many derive from it will see the population of the central subregion continue to grow. Across the subregion, Bureau of Transport Statistics (BTS) population projections indicate an overall growth of 40% above 2011 population levels by 2036 (Table 4). Leichhardt is forecast to grow by 27% over this period.

TABLE 4. PROJECTED SUBREGIONAL POPULATION GROWTH BY LGA

Ashfield	43,538	55,245	27%
Botany Bay	41,504	59,456	43%
Berwood	34,176	49,942	46%
Canada Bay	80,065	117,002	46%
Leichhardt	55,642	70,588	27%
Marrickville	81,121	107,594	33%
Randwick	137,792	182,537	32%
Strathfield	37,239	53,411	43%
City of Sydney	183,281	291,878	59%
Waverley	68,698	85,427	24%
Woolloomooloo	56,320	70,109	24%
TOTAL	819,376	1,143,189	40%

Source: Bureau of Transport Statistics (2015)

Major subregional development

In addition to BTS projections, a number of significant urban renewal projects are in various stages of planning. These will directly impact Leichhardt with concentrated population growth in specific areas. They are also likely to increase demand for local services in centres such as Norton Street.

Parramatta Road Corridor

Urban Growth NSW recently released their Draft Parramatta Road Urban renewal Strategy (September 2015). This provides a planning framework and vision for the entire length of Parramatta Road, driven by the need to better utilise the major transport corridor. The corridor's development is precipitated by the delivery of the Westconnex Motorway which UrbanGrowth NSW contend will reduce vehicular movements along Parramatta Road and facilitate mixed use development.

The Draft strategy proposes 70,000 additional residents in 40,000 new dwellings, along with 50,000 new jobs will be accommodated along the corridor. Three of the corridor's eight precincts; Taverer's Hill, Leichhardt and Camperdown are partially located in the Leichhardt LGA. Collectively, UrbanGrowth NSW propose that these precincts could accommodate up to 9310 new residents and a net loss of 164 jobs by 2050.

FIGURE 1. PARRAMATTA ROAD URBAN TRANSFORMATION STRATEGY



These proposed precincts will place significant pressure on Leichhardt's existing industrial lands, in particular Tebbutt Street and Camperdown. Camperdown in particular is of concern as it still retains a strong industrial character which the strategy proposed to supplant with more mixed use and residential land use.

Bays Precinct

Urban Growth NSW are also in the process of developing a plan for the renewal of the Bays Precinct, an 80 hectare site with over five kilometres of waterfront stretching around White, Rozelle and Blackwattle Bays. The plan is in its infancy and will be delivered over the next 30 years. The nature of the project is such that no firm population or job numbers have been provided. However, it can be expected that across the precinct, in both Leichhardt and the City of Sydney, the Bays Precinct will provide new homes and places of work for thousands of people.

FIGURE 2. BAYS PRECINCT TRANSFORMATION AREA



The Bays Precinct incorporates or sits adjacent to some of Leichhardt's last remaining significant industrially-zoned lands. The White Bay industrial precinct may face pressure from development that occurs along the White Bay foreshore.

Westconnex

Westconnex is a 33 kilometre motorway project, adopted by the State Government in 2012 and scheduled for staged completion between 2019 and 2023. The motorway is proposed to deliver vehicles into the CBD from the west and help to alleviate congestion along Parramatta Road. As mentioned above, it is identified by UrbanGrowth NSW as a piece of catalytic infrastructure that will enable the revitalisation of the Parramatta Road corridor.

FIGURE 3. WESTCONNEX CONCEPT DESIGN



The final alignment of Stage Three of the Westconnex project is yet to be confirmed. This is the section that would go under Leichhardt and the uncertainty regarding any potential on/off ramps makes planning for future land use more difficult due to a lack of clarity regarding potential land acquisition requirements.

Port Botany and Sydney Airport

Port Botany and Sydney Airport are critical pieces of freight infrastructure for NSW. Both are identified in *A Plan for Growing Sydney* as Transport Gateways. Between 2011 and 2015, Port Botany expanded its operational area by over 80 hectares in order to accommodate future growth. This has been driven, in part, by a State-identified need to increase the proportion of freight containers transported by rail from 20% to 40% in an attempt to better utilise freight rail networks and reduce road congestion. This expansion of freight networks is supported by improvements to and delivery of new intermodal terminals across Sydney, such as Enfield and Moorebank.

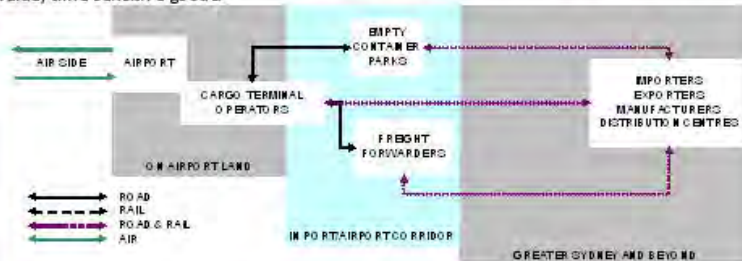
FIGURE 4. SYDNEY'S FREIGHT PRECINCTS AND FREIGHT NETWORK



Both the port and airport precincts, however, suffer from an inability to dramatically expand due to constraints presented by surrounding land uses. As freight requirements continue, industrial precincts in surrounding LGAs such as Leichhardt and Marrickville may see an increase in demand for port and airport-related services, due to their proximity.

The Sydney Airport logistics chain

The figure below shows a simplified logistics chain linking Kingsford Smith Airport with the Sydney region. Around 80 percent of airfreight arrives and leaves in the belly of passenger aircraft. The remaining 20 percent is carried on dedicated freight aircraft. Air freight tends to be low volume, high value, time sensitive goods.



Cargo Terminal Operations (CTOs) currently reside within the Airport's Freight Precinct. CTOs include Qantas, Auspost, DHL and Patrick. The onsite location offers a contiguous airside-landside interface. CTOs bring freight in, and move it onto the plane, and vice versa. Due to space constraints on the airport site, some CTO operations overlap onto the surrounding land area, for example Qantas' landholdings in Botany Bay LGA, which include private road access to the Airport.

Airfreight forwarders are located close to the airport, and pack/unpack consignments into air freight containers referred to in the industry as Unit Load Devices (ULDs). Consignments that are not processed by airfreight forwarders are transported directly between CTOs and importers, exporters, manufacturers, and distribution centres. Because of the low volume, high value, time sensitive characteristics of air freight, small truck transport tends to be favoured over rail. Empty ULDs are returned to container parks near the airport for repacking or empty export.

Subregional supply and demand

SGS has undertaken industrial land studies for Leichhardt and neighbouring LGAs, including Marrickville and the City of Sydney. Both Leichhardt and Marrickville used the same methodology and were undertaken in 2014. In both, future employment demand (using BTS employment projections converted to floorspace) has been compared with the LGA's current supply under various development scenarios.

TABLE 5. FORECAST LGA INDUSTRIAL LAND SUPPLY-DEMAND GAP, 2014 TO 2036

	Min	Med (40%)	Med (60%)	Max
Leichhardt	-54,965	-33,811	-22,325	-7,568
Marrickville	-39,932	168,522	249,985	750,452
TOTAL	-94,897	134,711	227,660	742,884

Source: SGS Research and Planning, 2014

Maintaining current lot arrangements and usage across both LGAs in industrial precincts would create a deficit of almost 100,000 sqm by 2036. Some development, particularly in Marrickville where building controls enable greater intensity of floorspace per lot would, however, return a surplus. This is precipitated on Marrickville retaining its industrial lands, however it too is facing increasing pressure for residential and mixed use development within its precincts.

A study was undertaken by SGS for the City of Sydney's industrial and employment lands in 2013. This found that there was sufficient zoned land to accommodate the LGA's future demand, however the precinct's proximity to the airport and port mean that industries requiring this proximity will look to locate in the city of Sydney and possibly push industries without such a tie to nearby precincts such as Marrickville and Leichhardt. It is also important to note that much of Leichhardt's uses are local in nature and not easily transferable to other LGAs.

2.4 Key messages

- Inner city industrial precincts are evolving. Inner city precincts are still important for a number of industries. As larger floorplate industries move out, they are being replaced by emerging industries such as higher value urban manufacturing as well as a number of creative industries that require large floorspace but are not classified as 'traditional' industrial uses.
- Maintaining the status quo either side of Parramatta Road will not be sufficient. Simply protecting industrial land with current floorspace provision will not meet future demand.
- Many traditional industries are moving westward. Across Sydney, the competition for land coupled with the need for some industries to operate on large lots with few encumbrances has meant that some industries have moved out of inner city precincts. The large industrial land releases of western Sydney are more attractive to some of these uses.
- Industries that remain do so for a reason. Many businesses that remain in inner-city precincts do so as they have strong links to surrounding business networks and are important parts of the supply chain. They may support the operations of a nearby centre, rely on infrastructure to operate or act as a subregional distribution point for goods and services that cannot locate away from their market.
- Industrial land is being rezoned, but not necessarily to residential. Although demand for new housing places significant pressure on inner city industrial lands, the need for other commercial uses to operate in areas other than commercial cores is driving rezoning away from industrial uses. These tend to be towards B5 (Business Development), B6 (Enterprise Corridor) or B7 (Business Park).
- A growing population needs service provisions. Future population growth, coupled with major urban renewal projects, will place pressure on remaining industrial lands to turn over to higher value land uses whilst simultaneously increasing demand for population-serving industries.



3 PRECINCT PROFILES

3.1 Introduction

Leichhardt has eleven industrial precincts scattered throughout the LGA. These vary in size and function. The following profiles provide a snapshot of each precinct's land use, built form and industry characteristics. Information is also provided regarding floorspace by industry for the four largest precincts

FIGURE 5. LEICHHARDT'S INDUSTRIAL PRECINCTS



Source: SGS Economics and Planning, 2014

3.2 Camperdown precinct

FIGURE 6. CAMPERDOWN PRECINCT



Land use and built form

The Camperdown precinct is dominated by local light and bulky goods retail land uses. The large proportion of floor space within the local light category is aligned with the significant amount of large floorplate self-storage buildings located within the precinct. The precinct has the greatest total gross floor area (GFA), as well as the greatest GFA in the local light, bulky goods retail and residential Broad Land Use Categories (BLCs). The precinct contains 27% of the LGA's supply of local light floorspace and 56% of the supply of bulky goods retail floor space across the entire study area.

TABLE 6. CAMPERDOWN PRECINCT SUMMARY TABLE

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Total floorspace (sqm)	26,339	2,587	330	4,134	-	40,983	474	677	-	-
Number of lots	35	1	1	31	-	38	2	2	-	-
Number of buildings	7	1	2	18	-	10	1	-	-	-
Average FSR	1.2	1.5	0.5	0.8	-	1.1	0.4	1.2	-	-

Camperdown has a range of lot sizes accommodating a diverse group of land uses. Most lots within the precinct fall between 100m² and 500m², however the Camperdown precinct contains the highest total amount of lots with size in excess of 1000m².

TABLE 7. CAMPERDOWN PRECINCT LOT SIZES

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Min	75	1,691	451	89	-	23	54	683	-	-
Max	1,583	1,691	451	793	-	5,420	1,050	1,079	-	-
Average	577	1,691	451	227	-	1,082	552	881	-	-

FIGURE 7. CAMPERDOWN PRECINCT LOT SIZE RANGE

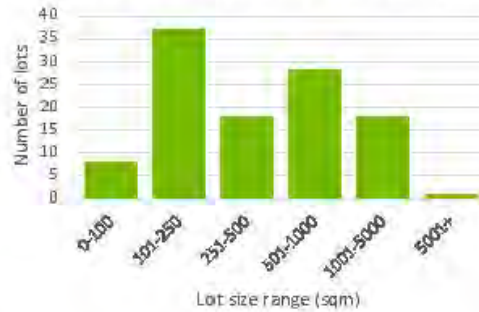


TABLE 8. CAMPERDOWN PRECINCT BUILDING HEIGHTS

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Zone 9
Min	1	2	1	1	-	1	1	-	-
Max	2	2	2	2	-	2	1	-	-
Average	2	2	2	1	-	2	1	-	-

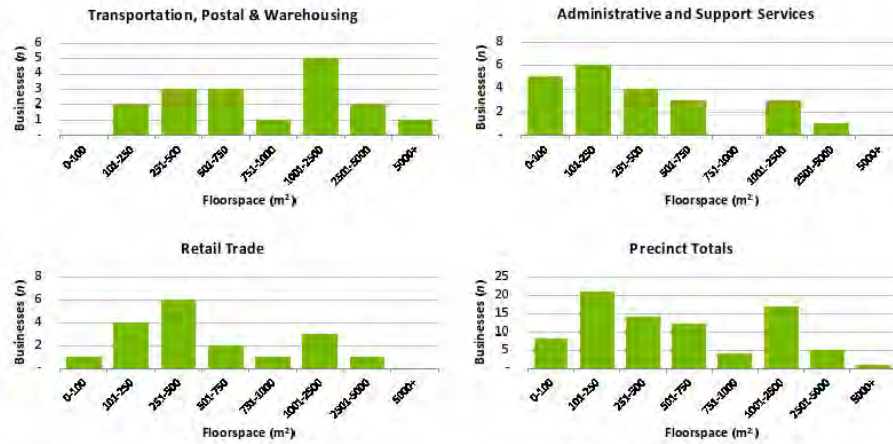
Employment profile

The industries locating within the Camperdown precinct are largely dominated by retailing and wholesaling, reflecting the prominence of floorspace utilised by bulky goods retail. The precinct consists of the following industries (at a three-digit ANZSIC level):

- Beverage Manufacturing
- Printing and Printing Support Services
- Building Installation Services
- Other Machinery and Equipment Wholesaling
- Motor Vehicle and Motor Vehicle Parts Wholesaling
- Textile, Clothing and Footwear Wholesaling
- Fuel Retailing
- Furniture, Floor Coverings, Houseware and Textile Goods Retailing
- Electrical and Electronic Goods Retailing
- Recreational Goods Retailing
- Clothing, Footwear and Personal Accessory Retailing
- Pharmaceutical and Other Store-Based Retailing
- Cafés, Restaurants and Takeaway Food Services
- Warehousing and Storage Services
- Motor Vehicle and Transport Equipment Rental and Hiring
- Real Estate Services
- Architectural, Engineering and Technical Services
- Legal and Accounting Services
- Other Administrative Services
- Sports and Physical Recreation Activities
- Automotive Repair and Maintenance



FIGURE 8. FLOORSPACE RANGE OF TOP THREE PRECINCT INDUSTRIES (BY NUMBER OF BUSINESSES) COMPARED WITH TOTAL PRECINCT FLOORSPACE (ANZSIC 1 DIGIT)



ANZSIC	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	X	Precinct
Total	-	-	3,065	-	367	2,621	11,943	179	31,724	-	-	2,578	2,945	13,206	-	-	-	3,156	1,238	1,775	74,798
Average	-	-	613	-	184	874	663	90	1,866	-	-	1,289	982	600	-	-	-	1,578	413	592	467



3.3 Tebbutt Street precinct

FIGURE 9. TEBBUTT STREET PRECINCT



Land use and built form

The Tebbutt Street precinct is the fourth largest by GFA within the Leichhardt LGA. It contains a high proportion of local light and bulky goods retail, with the third (14%) and second highest (24%) total amount of GFA for each of these BLCs respectively. The precinct also contains the highest total amount of office space from the LGAs precincts.

TABLE 9. TEBBUTT STREET PRECINCT SUMMARY TABLE

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manufacturing	Urban Services
Total floorspace (sqm)	11,108	7,776	2,092	1,205	639	21,142	104	-	3,130	-
Number of lots	3	9	5	8	3	42	1	-	1	-
Number of buildings	2	2	2	7	1	9	1	-	2	-
Average FSR	1.4	1.7	0.5	0.6	0.2	1.0	0.4	-	1.2	-

There are a range of lot sizes contained within the Tebbutt Street precinct, with the majority being of small-medium size (100-500m²). There is also a substantial proportion of lots greater than 1000m².

TABLE 10. TEBBUTT STREET PRECINCT LOT SIZES

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manufacturing	Urban Services
Min	804	119	92	268	154	48	283	-	2513	-
Max	4,257	1,093	740	518	1,981	1,742	283	-	2513	-
Average	2,583	526	440	344	916	446	283	-	2513	-

FIGURE 10. TEBBUTT STREET PRECINCT LOT SIZE RANGE

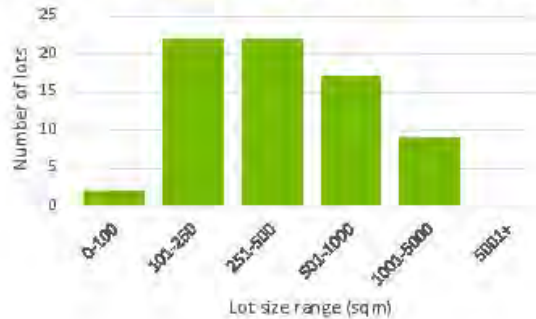


TABLE 11: TEBBUTT STREET PRECINCT BUILDING HEIGHTS

	0-100	101-250	251-500	501-1000	1001-5000	5001+	Total	Average	Min	Max
Min	1	3	1	1	1	1	1	1	-	2
Max	3	3	2	1	1	3	1	1	-	2
Average	2.0	3.0	2.0	1.0	1.0	2.0	1.0	-	2.0	-

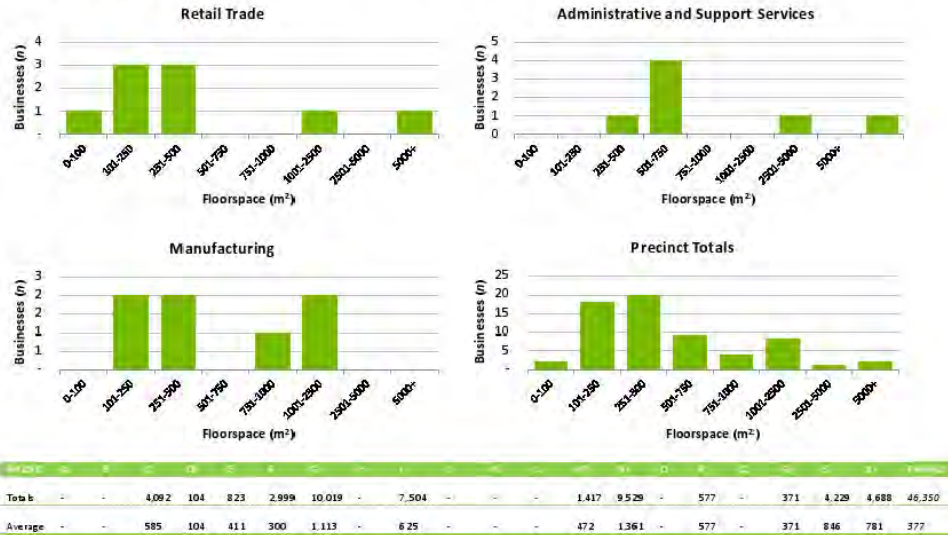
Employment profile

The employment profile of the area reflects the prominence of local light services and bulky goods retail within the precinct. There are also professional services located within the precinct, reflecting its relatively substantial office floorspace. The precinct consists of the following industries (at a three-digit ANZSIC level):

- Other Food Product Manufacturing
- Printing and Printing Support Services
- Specialised Machinery and Equipment Manufacturing
- Furniture Manufacturing
- Electricity Distribution
- Building Installation Services
- Mineral, Metal and Chemical Wholesaling
- Other Machinery and Equipment Wholesaling
- Motor Vehicle Retailing
- Motor Vehicle Parts and Tyre Retailing
- Specialised Food Retailing
- Recreational Goods Retailing
- Pharmaceutical and Other Store-Based Retailing
- Warehousing and Storage Services
- Legal and Accounting Services
- Advertising Services
- Other Professional, Scientific and Technical Services
- Other Administrative Services
- Educational Support Services
- Creative and Performing Arts Activities
- Automotive Repair and Maintenance



FIGURE 11. FLOORSPACE RANGE OF TOP THREE PRECINCT INDUSTRIES (BY NUMBER OF BUSINESSES) COMPARED WITH TOTAL PRECINCT FLOORSPACE (ANZSIC 1 DIGIT)



Leichhardt Industrial Precinct Planning 19



3.4 White Bay precinct

FIGURE 12. WHITE BAY PRECINCT



Land use and built form

The White Bay precinct provides the second largest amount of GFA within the LGA's precincts. It contains a substantially high proportion of the LGA's supply of local light floorspace (25%), similar to the Camperdown precinct. The precinct has the highest total GFA for the light manufacturing BLC within Leichhardt's precincts, comprising 37% of supply.

TABLE 12: WHITE BAY PRECINCT SUMMARY TABLE

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Total floorspace (sqm)	1,650	897	-	847	1,483	37,948	480	376	16,393	-
Number of lots	3	3	-	8	3	49	7	3	-	-
Number of buildings	-	-	-	-	-	-	-	-	-	-
Average FSR	0.7	1.3	-	0.7	1.2	1.1	0.6	0.5	-	-

The lot sizes contained within the White Bay precinct are largely contained within the small-medium ranges (100-500m²). The White Bay precinct contains the largest sized lot within the study area, in excess of 19,000m², greater than twice the second largest (in the Lords Rd precinct).

TABLE 13: WHITE BAY PRECINCT LOT SIZES

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Min	259	135	-	80	260	27	65	120	-	-
Max	1,077	395	-	293	997	19,820	188	298	-	-
Average	543	231	-	168	506	911	123	238	-	-

FIGURE 13: WHITE BAY PRECINCT LOT SIZE RANGE

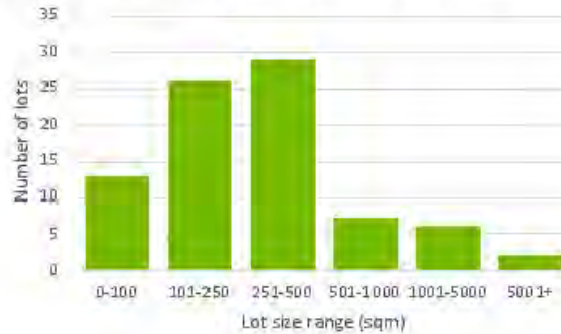


TABLE 14: WHITE BAY PRECINCT BUILDING HEIGHTS

	Residential Single Dwellings	Residential Medium Density	Residential Medium Density (Low Rise)	Residential High Density (Low Rise)	Commercial Low Rise	Commercial Medium Rise	Commercial High Rise	Industrial Low Rise	Industrial Medium Rise	Industrial High Rise
Min	1	2	-	1	2	1	1	1	1	-
Max	2	2	-	2	2	4	1	1	1	-
Average	1.5	2.0	-	1.3	2.0	2.2	1.0	1.0	1.0	-

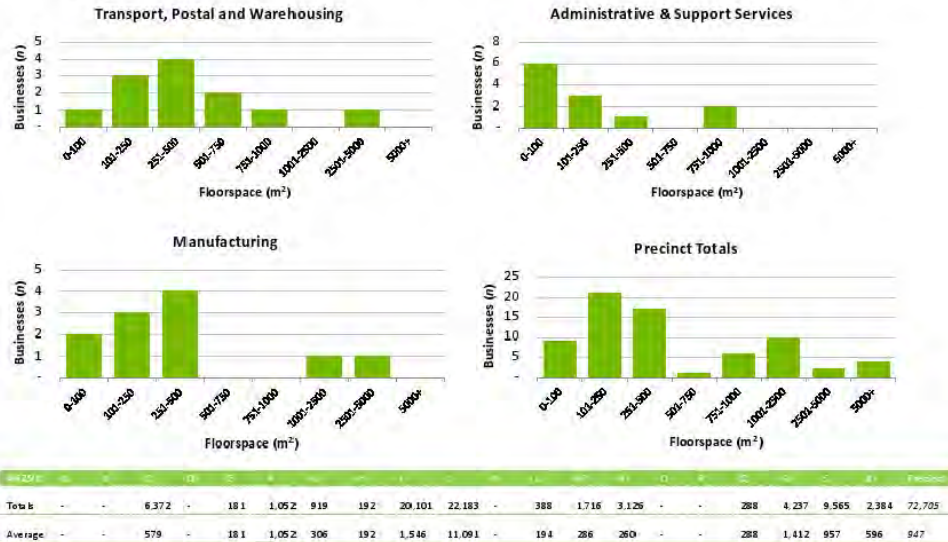
Employment profile

The precinct accommodates a diverse range of industries, including various manufacturing uses. There are also mix of motor vehicle repair and retailing services located within the precinct. The precinct consists of the following industries (at a three-digit ANZSIC level):

- Other Food Product Manufacturing
- Other Wood Product Manufacturing
- Printing and Printing Support Services
- Reproduction of Recorded Media
- Furniture Manufacturing
- Other Manufacturing
- Other Construction Services
- Grocery, Liquor and Tobacco Product Wholesaling
- Motor Vehicle Retailing
- Motor Vehicle Parts and Tyre Retailing
- Recreational Goods Retailing
- Cafes, Restaurants and Takeaway Food Services
- Postal and Courier Pick-up and Delivery Services
- Warehousing and Storage Services
- Motion Picture and Video Activities
- Motor Vehicle and Transport Equipment Rental and Hiring
- Other Goods and Equipment Rental and Hiring
- Architectural, Engineering and Technical Services
- Legal and Accounting Services
- Management and Related Consulting Services
- Other Administrative Services
- Allied Health Services
- Sports and Physical Recreation Activities
- Automotive Repair and Maintenance
- Other Repair and Maintenance
- Funeral, Crematorium and Cemetery Services
- Religious Services

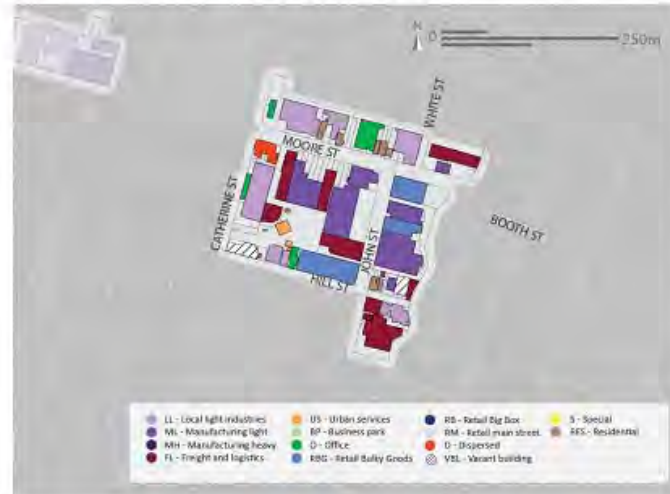


FIGURE 14. FLOORSPACE RANGE OF TOP THREE PRECINCT INDUSTRIES (BY NUMBER OF BUSINESSES) COMPARED WITH TOTAL PRECINCT FLOORSPACE (ANZSIC 1 DIGIT)



3.5 Moore Street South precinct

FIGURE 15. MOORE STREET SOUTH PRECINCT



Land use and built form

The Moore Street South precinct is the third largest by GFA within the study area. It contains the most substantial amount of floorspace occupied by freight and logistics land uses, being 11,375 m², or 73% of the total GFA in the study area, along with a high proportion of light manufacturing uses (13,875 m², or 31% of the BLC’s GFA within the LGA). There are also notable proportions of bulky goods retail and office floor space (13% and 16% of study area supply, respectively). Moore Street South has the highest vacancy rate of three precincts observed to have vacant lots, at just fewer than 4% of the precinct’s total GFA.

TABLE 15: MOORE STREET SOUTH PRECINCT SUMMARY TABLE

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu.	Urban Services
Total floorspace (sqm)	6,098	3,314	-	1,107	11,375	10,216	1,111	1,960	13,875	434
Number of lots	2	5	-	11	13	16	7	4	23	1
Number of buildings	3	4	-	8	9	7	1	2	6	1
Average FSR	0.8	1.6	-	0.4	2.6	0.8	1.0	1.6	0.9	3.2

The vast majority of lots within the Moore Street South precinct fall in to the medium size category (250-500 m²). Despite being dominated by lots of this size, there is a substantial proportion of lots which are in excess of 1000m².

TABLE 16: MOORE STREET SOUTH PRECINCT LOT SIZES

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu.	Urban Services
Min	2,371	332	-	122	264	132	31	180	273	352
Max	2,794	1,127	-	413	2,662	6,998	372	695	4,735	352
Average	2,582	540	-	265	765	1,099	164	313	859	352

FIGURE 16. MOORE STREET SOUTH PRECINCT LOT SIZE RANGE

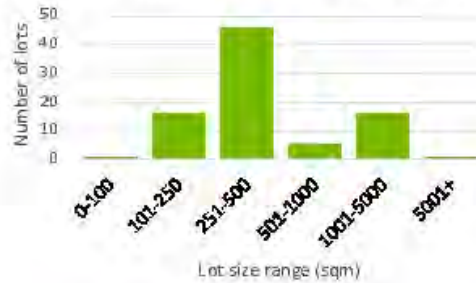


TABLE 17: MOORE STREET SOUTH PRECINCT BUILDING HEIGHTS

	Industrial 1	Industrial 2	Industrial 3	Industrial 4	Industrial 5	Industrial 6	Industrial 7	Industrial 8	Industrial 9	Industrial 10
Min	1	1	-	1	1	1	2	2	1	1
Max	2	2	-	1	3	2	2	2	2	1
Average	1.7	1.5	-	1.0	1.4	1.3	2.0	2.0	1.5	1.0

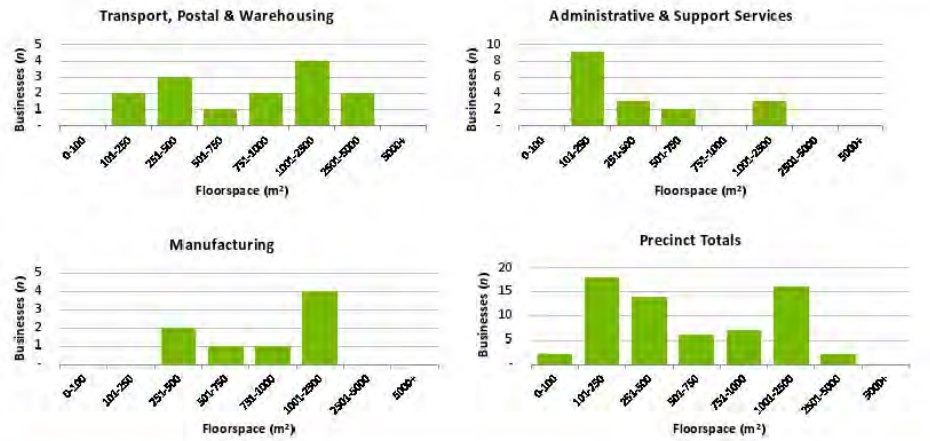
Employment profile

There is a diverse mix of industries located within the Moore Street South precinct. There are a range of manufacturing activities, along with a small mix of retailing, professional and technical services, and maintenance services. The precinct consists of the following industries (at a three-digit ANZSIC level):

- Seafood Processing
- Other Food Product Manufacturing
- Textile Product Manufacturing
- Pulp, Paper and Paperboard Manufacturing
- Glass and Glass Product Manufacturing
- Other Non-Metallic Mineral Product Manufacturing
- Basic Ferrous Metal Product Manufacturing
- Furniture Manufacturing
- Other Manufacturing
- Residential Building Construction
- Building Installation Services
- Building Completion Services
- Mineral, Metal and Chemical Wholesaling
- Motor Vehicle Parts and Tyre Retailing
- Furniture, Floor Coverings, Houseware and Textile Goods Retailing
- Recreational Goods Retailing
- Pharmaceutical and Other Store-Based Retailing
- Warehousing and Storage Services
- Financial Asset Investing
- Architectural, Engineering and Technical Services
- Management and Related Consulting Services
- Veterinary Services
- Other Professional, Scientific and Technical Services
- Computer System Design and Related Services
- Other Administrative Services
- Local Government Administration
- Other Social Assistance Services
- Automotive Repair and Maintenance
- Other Repair and Maintenance



FIGURE 17. FLOORSPACE RANGE OF TOP THREE PRECINCT INDUSTRIES (BY NUMBER OF BUSINESSES) COMPARED WITH TOTAL PRECINCT FLOORSPACE (ANZSIC 1 DIGIT)

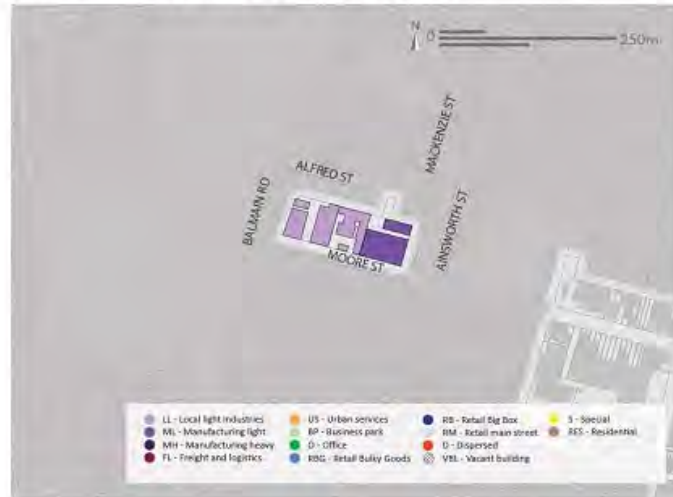


	0-100	101-250	251-500	501-750	751-1000	1001-2500	2501-5000	5000+
Total	440	3,468	8,005	434	2,404	1,721	1,985	48,739
Average	440	694	471	434	2,404	574	662	447



3.6 Moore Street North precinct

FIGURE 18: MOORE STREET NORTH PRECINCT



Land use and built form

The Moore Street North precinct is comprised of only three lots and seven buildings, split between local light and light manufacturing land uses. The light manufacturing within the precinct comprises 12% of the GFA of this BLC within the LGA's precincts.

TABLE 18: MOORE STREET NORTH PRECINCT SUMMARY TABLE

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu.	Urban Services
Total floorspace (sqm)	-	-	-	-	-	6,360	-	-	5,256	-
Number of lots	-	-	-	-	-	2	-	-	1	-
Number of buildings	-	-	-	-	-	5	-	-	2	-
Average FSR	-	-	-	-	-	0.9	-	-	1.3	-

The allotments within the Moore Street North precinct are all large in size, ranging from 2798 to 4059m².

TABLE 19: MOORE STREET NORTH PRECINCT LOT SIZES

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu.	Urban Services
Min	-	-	-	-	-	2,798	-	-	4,059	-
Max	-	-	-	-	-	3,851	-	-	4,059	-
Average	-	-	-	-	-	3,324	-	-	4,059	-

FIGURE 19: MOORE STREET NORTH PRECINCT LOT SIZE RANGE

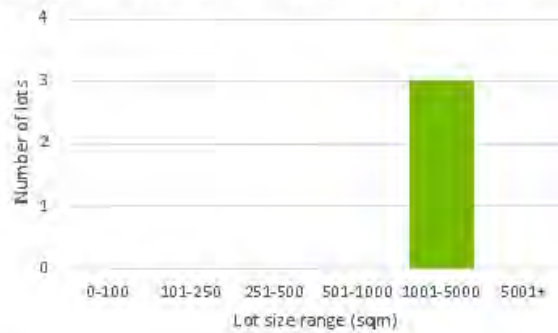


TABLE 20: MOORE STREET NORTH PRECINCT BUILDING HEIGHTS

	0-100	101-250	251-500	501-1000	1001-5000	5001+
Min	-	-	-	-	1	2
Max	-	-	-	-	2	3
Average	-	-	-	-	1.8	2.5

Employment profile

The industries within the precinct reflect its role in manufacturing floor space provision within the LGA, along with its provision of space for local light land uses. The precinct consists of the following industries (at a three-digit ANZSIC level):

- Bakery Product Manufacturing
- Textile Manufacturing
- Printing and Printing Support Services
- Furniture Manufacturing
- Building Installation Services
- Textile, Clothing and Footwear Wholesaling
- Pharmaceutical and Toiletry Goods Wholesaling
- Hardware, Building and Garden Supplies Retailing
- Recreational Goods Retailing
- Clothing, Footwear and Personal Accessory Retailing
- Cafes, Restaurants and Takeaway Food Services
- Warehousing and Storage Services
- Motion Picture and Video Activities
- Sound Recording and Music Publishing
- Architectural, Engineering and Technical Services
- Other Professional, Scientific and Technical Services
- Other Administrative Services
- Building Cleaning, Pest Control and Gardening Services
- Automotive Repair and Maintenance
- Civic, Professional and Other Interest Group Services



3.7 Lords Road precinct

FIGURE 20. LORDS ROAD PRECINCT



Land use and built form

The Lords Road precinct comprises of two lots and two buildings, one being a large floorplate development with a local light BLC. The 11,111m² of local light floorspace equates to 7% of the local supply.

TABLE 21: LORDS ROAD PRECINCT SUMMARY TABLE

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manufacturing	Urban Services
Total floorspace (sqm)	-	-	-	-	-	11,111	243	-	-	-
Number of lots	-	-	-	-	-	2	-	-	-	-
Number of buildings	-	-	-	-	-	1	1	-	-	-
Average FSR	-	-	-	-	-	1.1	-	-	-	-

Both of the lots contained within the precinct are large, with one being 1599m², with the other being 9025m².

TABLE 22: LORDS ROAD PRECINCT LOT SIZES

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manufacturing	Urban Services
Min	-	-	-	-	-	1599	-	-	-	-
Max	-	-	-	-	-	9,025	-	-	-	-
Average	-	-	-	-	-	5,312	-	-	-	-

FIGURE 21: LORDS ROAD PRECINCT LOT SIZE RANGE

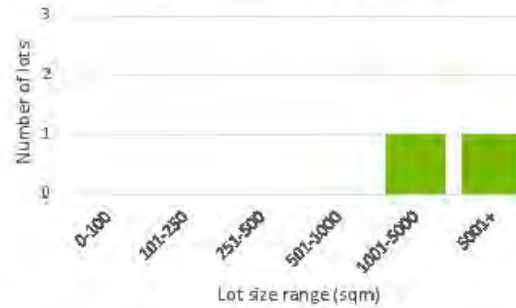


TABLE 23: LORDS ROAD PRECINCT BUILDING HEIGHTS

	General Business	General Industrial	Community	Special Use	Local Urban	Community	Industrial	Residential	Other
Min	-	-	-	-	2	1	-	-	-
Max	-	-	-	-	2	1	-	-	-
Average	-	-	-	-	2.0	1.0	-	-	-

Employment profile

Given the small scale nature of the precinct, there is minimal diversity in the industries which occupy this land; the dominant class of industry are local services. The precinct consists of the following industries (at a three-digit ANZSIC level):

- Furniture Manufacturing
- Building Installation Services
- Warehousing and Storage Services
- Other Administrative Services
- Creative and Performing Arts Activities
- Sports and Physical Recreation Activities
- Civic, Professional and Other Interest Group Services



3.8 Marion Street precinct

FIGURE 22. MARION STREET PRECINCT



Land use and built form

The Marion Street precinct contains three buildings over three lots, consisting of a large aged care facility (the dispersed activities BLC), a development that provides local services at a total GFA of 3752m², and a small amount of floorspace for freight and logistics

TABLE 24: MARION STREET PRECINCT SUMMARY TABLE

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manufacturing	Urban Services
Total floorspace (sqm)	-	-	-	-	651	3,752	8,441	-	-	-
Number of lots	-	-	-	-	1	1	1	-	-	-
Number of buildings	-	-	-	-	1	1	1	-	-	-
Average FSR	-	-	-	-	1.7	0.7	1.1	-	-	-

TABLE 25: MARION STREET PRECINCT LOT SIZES

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manufacturing	Urban Services
Min	-	-	-	-	372	5,240	7,852	-	-	-
Max	-	-	-	-	372	5,240	7,852	-	-	-
Average	-	-	-	-	372	5,240	7,852	-	-	-

FIGURE 23: MARION STREET PRECINCT LOT SIZE RANGE

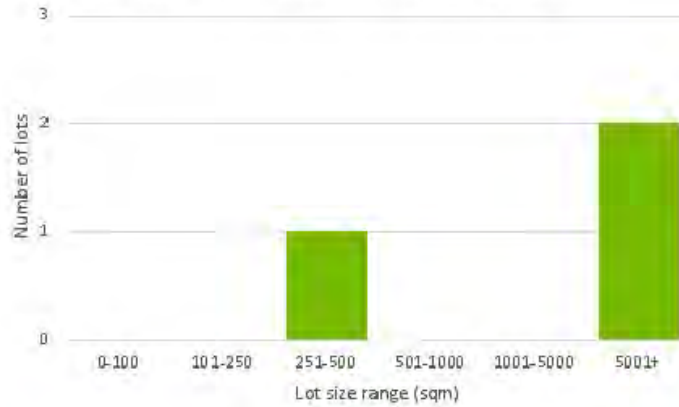


TABLE 26: MARION STREET PRECINCT BUILDING HEIGHTS

	Retail (Small Shops)	Office	Retail (Medium Shops)	Residential	Freight & Logistics	Local Light	Office/Shop Admixtures	Industrial	Light Industrial	Other Warehouses
Min	-	-	-	-	1	1	2	-	-	-
Max	-	-	-	-	1	1	2	-	-	-
Average	-	-	-	-	1.0	1.0	2.0	-	-	-

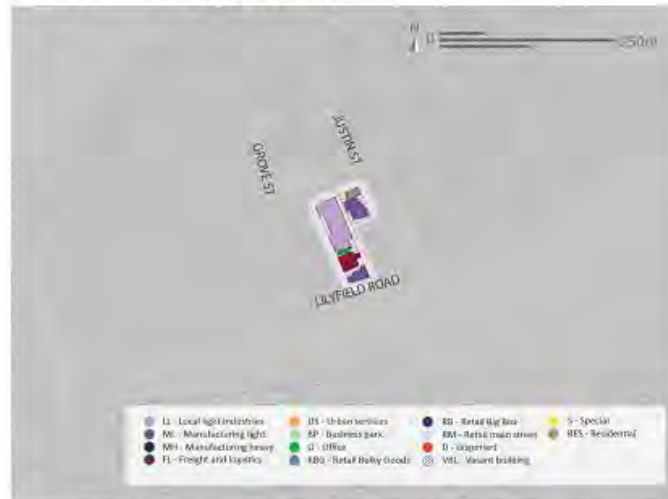
Employment profile

The precinct consists of the following industries (at a three-digit ANZSIC level):

- Cafes, Restaurants and Takeaway Food Services
- Warehousing and Storage Services
- Auxiliary Finance and Investment Services
- Architectural, Engineering and Technical Services
- Other Professional, Scientific and Technical Services
- Other Administrative Services
- Residential Care Services
- Other Social Assistance Services

3.9 Lilyfield Road precinct

FIGURE 24. LILYFIELD PRECINCT



Land use and built form

The Lilyfield Road precinct is the second smallest precinct within the study area by GFA. It is comprised of a series of small scale lots, with dominant land uses being local light industries and light manufacturing (being 2% and 3% of local supply respectively).

TABLE 27: LILYFIELD ROAD PRECINCT SUMMARY TABLE

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Total floorspace (sqm)	-	214	-	428	779	2,794	-	-	1,150	-
Number of lots	-	2	-	5	1	2	-	-	9	-
Number of buildings	-	1	-	2	1	1	-	-	2	-
Average FSR	-	0.6	-	0.5	1.2	1.3	-	-	0.8	-

Almost all of the allotments within the Lilyfield Rd precinct fall within the small size category (100-250 m²).

TABLE 28: LILYFIELD ROAD PRECINCT LOT SIZES

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Min	-	145	-	144	651	154	-	-	143	-
Max	-	233	-	195	651	1,978	-	-	284	-
Average	-	189	-	160	651	1,066	-	-	165	-

FIGURE 25: LILYFIELD ROAD PRECINCT LOT SIZE RANGE

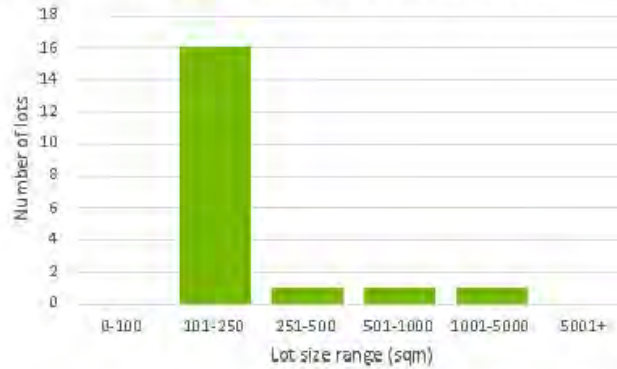


TABLE 29: LILYFIELD ROAD PRECINCT BUILDING HEIGHTS

	Code 1 Sub-Station	Code 2 Office	Code 3 Warehouse	Code 4 Residential	Code 5 Freight & Logistics	Code 6 Local Light	Code 7 Drainage	Code 8 Aerial	Code 9 Light Rail
Min	-	2	-	1	2	2	-	-	1
Max	-	2	-	2	2	2	-	-	2
Average	-	2.0	-	1.5	2.0	2.0	-	-	1.5

Employment profile

The most significant industry within the precinct is Automotive Repair and Maintenance, occupying just under 1800 m² of floorspace within the precinct (under a local light BLC). The precinct consists of the following industries (at a three-digit ANZSIC level):

- Textile Product Manufacturing
- Printing and Printing Support Services
- Textile, Clothing and Footwear Wholesaling
- Warehousing and Storage Services
- Other Professional, Scientific and Technical Services
- Other Administrative Services
- Packaging Services
- Automotive Repair and Maintenance
- Other Repair and Maintenance



3.10 Balmain Road precinct

FIGURE 26. BALMAIN ROAD PRECINCT



Land use and built form

The Balmain Road precinct is the fourth smallest of the precincts located within the LGA. Its dominant land use is local light services, however there is a significant component of office floorspace (30% of the precinct; 26% of supply within the study area).

TABLE 30: BALMAIN ROAD PRECINCT SUMMARY TABLE

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Total floorspace (sqm)	1,027	5,534	533	-	-	7,365	-	-	3,613	-
Number of lots	6	12	3	-	-	3	-	-	4	-
Number of buildings	1	2	1	-	-	2	-	-	1	-
Average FSR	0.8	1.9	1.3	-	-	0.8	-	-	1.8	-

The precinct is comprised predominantly of small lots (100-250m²), however there are some lots within the precinct which are of larger size, with the largest being 6,874 m².

TABLE 31: BALMAIN ROAD PRECINCT LOT SIZES

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Min	197	152	197	-	-	189	-	-	215	-
Max	234	816	204	-	-	6,874	-	-	1,483	-
Average	215	260	201	-	-	2,421	-	-	653	-

FIGURE 27: BALMAIN ROAD PRECINCT LOT SIZE RANGE

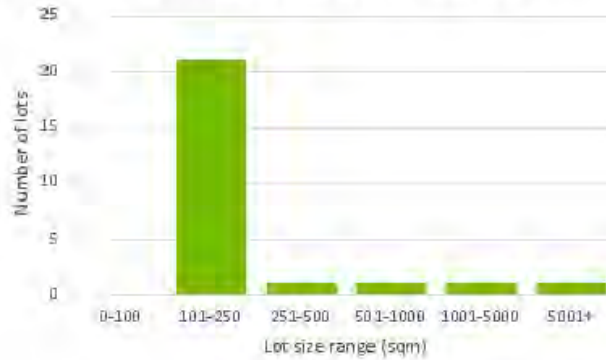


TABLE 32: BALMAIN ROAD PRECINCT BUILDING HEIGHTS

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Min	1	2	2	-	-	1	-	-	2	-
Max	1	2	2	-	-	2	-	-	2	-
Average	1.0	2.0	2.0	-	-	1.5	-	-	2.0	-

Employment profile

Reflecting the precinct’s high office component, there are a range of technical and consulting services within the precinct’s industry profile, along with some manufacturing and wholesaling activities. The precinct consists of the following industries (at a three-digit ANZSIC level):

- Other Wood Product Manufacturing
- Other Fabricated Metal Product Manufacturing
- Building Installation Services
- Timber and Hardware Goods Wholesaling
- Other Machinery and Equipment Wholesaling
- Furniture, Floor Coverings, Houseware and Textile Goods Retailing
- Cafes, Restaurants and Takeaway Food Services
- Warehousing and Storage Services
- Architectural, Engineering and Technical Services
- Management and Related Consulting Services
- Other Professional, Scientific and Technical Services
- Computer System Design and Related Services
- Other Administrative Services
- Allied Health Services
- Other Repair and Maintenance



3.11 Terry Street precinct

FIGURE 28. TERRY STREET PRECINCT



Land use and built form

The Terry Street precinct is the third smallest within the LGA, holding 12,254m² of floorspace (excluding residential BLCs). The dominant BLC is Local Light, with 8,929m² of floorspace, and most allotments within the precinct (90.7%) fall within the ranges of 100m² to 500m².

TABLE 33: TERRY STREET PRECINCT SUMMARY TABLE

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Total floorspace (sqm)	728	-	-	2,907	560	8,929	1,007	-	976	52
Number of lots	2	-	-	21	2	13	10	-	5	1
Number of buildings	2	-	-	18	1	9	3	-	2	1
Average FSR	0.5	-	-	0.6	1.0	0.8	0.3	-	0.4	0.2

TABLE 34: TERRY STREET PRECINCT LOT SIZES

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Min	616	-	-	105	282	115	121	-	113	216
Max	701	-	-	372	284	4,627	306	-	252	216
Average	659	-	-	215	283	621	247	-	207	216

FIGURE 29. TERRY STREET PRECINCT LOT SIZE RANGE

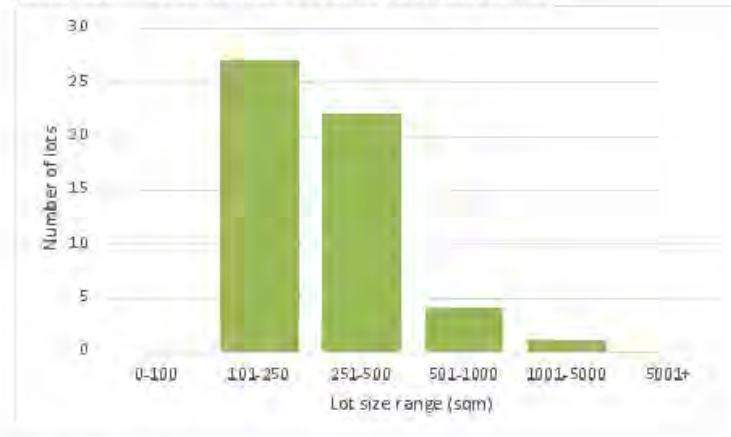


TABLE 35: TERRY STREET PRECINCT BUILDING HEIGHTS

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Min	1	-	-	1	2	1	1	-	1	1
Max	2	-	-	2	2	3	2	-	2	1
Average	2.0	-	-	1.0	2.0	1.0	1.0	-	2.0	1.0

Employment profile

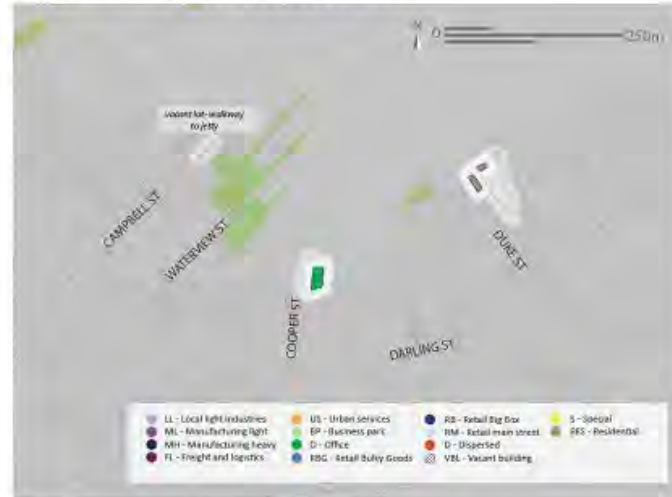
The precinct has an employment profile which reflects the dominance of the small scale, local light BLC allotments, with a range of activities including local services and small scale manufacturing. The precinct consists of the following industries (at a three-digit ANZSIC level):

- Sugar and Confectionery Manufacturing
- Other Food Product Manufacturing
- Printing and Printing Support Services
- Other Fabricated Metal Product Manufacturing
- Electricity Distribution
- Building Installation Services
- Motor Vehicle Retailing
- Fuel Retailing
- Furniture, Floor Coverings, Houseware and Textile Goods Retailing
- Cafes, Restaurants and Takeaway Food Services
- Warehousing and Storage Services
- Other Administrative Services
- Sports and Physical Recreation Activities
- Automotive Repair and Maintenance
- Other Repair and Maintenance
- Other Personal Services



3.12 Balmain East precinct

FIGURE 30. BALMAIN EAST PRECINCT



Land use and built form

The Balmain East precinct is the smallest precinct within the study area by GFA. It is comprised of two sites of industrially zoned land, with a total floorspace of just under 1,570m² (exclusive of residential land uses).

TABLE 36: BALMAIN EAST PRECINCT SUMMARY TABLE

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Total floorspace (sqm)	-	1,298	-	2,033	272	-	-	-	-	-
Number of lots	-	1	-	3	1	-	-	-	-	-
Number of buildings	-	1	-	2	-	-	-	-	-	-
Average FSR	-	0.6	-	1.1	1.4	-	-	-	-	-

TABLE 37: BALMAIN EAST PRECINCT LOT SIZES

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Min	-	1,298	-	13	272	-	-	-	-	-
Max	-	1,298	-	1,789	272	-	-	-	-	-
Average	-	1,298	-	678	272	-	-	-	-	-

FIGURE 31. BALMAIN EAST PRECINCT LOT SIZE RANGE

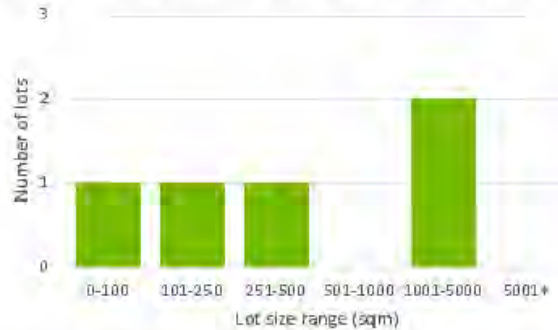


TABLE 38: BALMAIN EAST PRECINCT BUILDING HEIGHTS

	Retail – Bulky Goods	Office	Retail – Main Street	Residential	Freight & Logistics	Local Light	Dispersed Activities	Vacant	Light Manu	Urban Services
Min	-	2	-	1	-	-	-	-	-	-
Max	-	2	-	2	-	-	-	-	-	-
Average	-	2.0	-	1.5	-	-	-	-	-	-

Employment profile

Data relating to the specific industries of employment within the precinct is not available from the land study.

4.1.8 Summary of issues

The review of trends and influences affecting inner city industrial lands as well as the precinct-level analysis undertaken in the previous chapters has identified four key issues that impact on Leichhardt's industrial precincts and how they are perceived into the future.

1. There is a shortage of industrial land at a subregional level. The nature of inner-city industrial lands and the patterns of urban growth that have grown around them limit the ability for these precincts to expand. This constrains the ability of inner-city industrial lands to meet the future demand for industrial uses. This is most acute in subregionally-oriented uses that often require larger floorplate sites, which are increasingly rare in the inner city.
2. There is a shortage of local services within Leichhardt. The 2014 industrial lands study undertaken by SGS identified an industrial floorspace shortfall of between 7,000 sqm and 55,000 sqm by 2036. These are services that are traditionally found within local industrial estates, are necessarily located to service a local community and could not operate if forced to move away from this market.
3. There is a need to provide sufficient floorspace and appropriate built form configurations to support emerging uses. Inner city industrial estates must retain a degree of agility in order to transition from 'traditional' functions and accommodate a range of evolving industries and businesses who require industrial precinct characteristics to operate. These businesses may require the floorplate characteristics, ability to manufacture products or benefit from the lower rents in order to establish themselves.

4. **Industrial precincts are under threat from other uses.** Competition for inner city land is placing pressure on industrial precincts to turn over to 'higher value' uses. Residential development is a persistent threat, due to continued demand for inner city living. However, industrial lands also face a threat from other employment uses that compete for larger floorplates and locations but aren't necessarily defined as 'industrial'.

4 FEASIBILITY TESTING

4.1 Introduction

Following the profiling of Leichhardt's industrial precincts, Leichhardt Council engaged an urban design firm (Architectus) to develop built form options that tested how precincts may be redeveloped in order to increase industrial floorspace. This is driven by the Industrial Land Strategy prepared by SGS in 2014 that identified a shortfall of nearly 55,000 sqm of industrial floorspace by 2036.

The driving force for this is the desire to increase floorspace provision in the LGA and attempt to reduce or eliminate the forecast industrial floorspace deficit.

With this in mind, a feasibility testing process has been applied to Architectus' built form options in order to establish how additional industrial floorspace can be delivered. Feasibility testing is a useful approach as it examines the costs and revenues of a development. Broadly, development where revenues exceed costs is feasible and developments where costs exceed revenues are not feasible.

It is important to note that the feasibility testing process for this report is necessarily high-level. This is because it is limited to only a few sites in a few precincts. The intent is that running several tests on identified sites will reveal sufficient information to guide the development of recommendations that are applicable across the LGA.

4.2 The need for sequential testing

The 2014 Industrial Lands Study identified that the forecast deficit in industrial lands should be reduced. In order to do this, more industrial floorspace is required to be developed because there is almost no chance that additional land within the LGA will be rezoned to IN2. As such, this report examines *how* this floorspace may be provided, through the lens of feasibility.

It is critical that a logical sequence of options testing is undertaken to provide a strong evidence base for any future policy recommendations. The relatively 'low value' of industrial land (when compared with alternative uses such as commercial or residential) means that it is unlikely that an increase in industrial floorspace alone will deliver a feasible return.

This testing process therefore uses three land-use scenarios to test what can feasibly deliver an increase in industrial floorspace. Throughout this process, both the increase in industrial floorspace and the protection of the existing industrial precincts is central to the development of recommendations. These three scenarios are:

- Industrial only – additional industrial floorspace for industrial only
- Industrial + commercial – includes some commercial floorspace as a higher value land use lever to increase feasibility
- Industrial + commercial + residential – includes all three land uses as a means of further increasing the likelihood of feasible development

It is important that this sequence be tested because the introduction of alternative land uses to industrial within these precincts increases the risk of land use conflict and potential precinct fragmentation.

4.3 Method

The testing of feasibility in this report uses a Residual Land Value (RLV) model in order to compare costs (construction, land acquisition, professional fees, taxes etc) and revenues (rents) to calculate whether a development option is feasible or not. It also includes consideration of developer profit margins in the equation. Where a development's total revenues exceed costs and profit margins, a development will have a feasibility ratio of 1 and therefore be deemed feasible.

In order to try and achieve a degree of understanding regarding a precinct's development potential, three sites of varying sizes (broadly small, medium and large) were tested in each precinct.

Once initial design options were tested, SGS undertook a 'goal seeking' exercise to determine what floorspace quantum in each scenario needed to change in order to get closer to a feasible result. These were then tested by Architectus prior to further feasibility testing by SGS.

The purpose was not to necessarily identify the exact amount required to feasibly develop, but to identify patterns that could inform policy recommendations.

4.4 Assumptions

A number of inputs go into the feasibility testing process. The following tables outline broadly these inputs and the assumptions that are made in order to enable the model to run. The inputs and assumptions apply to each precinct.

TABLE 39: FEASIBILITY MODEL COST INPUTS AND ASSUMPTIONS

Input	Assumption	Value
Construction and demolition costs	Rawlinson's Construction Handbook 2015	Varies
Land acquisition costs	Localised median sales value analysis for industrial land	Varies
Professional fees	Various sources using industry standards	Varies

TABLE 40: FEASIBILITY MODEL REVENUE INPUTS AND ASSUMPTIONS

Input	Assumption	Value
Industrial rents (\$/sqm)	Agency consultation – same across all precincts	\$200/sqm
Commercial rents (\$/sqm)	Agency consultation and market analysis	\$350/sqm
Median sales values	Median prices for 2-bed units in the immediate area	\$790,000

Given the high-level nature of the feasibility testing, the same prices have been used across all of the precincts. This is because the product that is being tested is simply floorspace, rather than having a distinction between quality made in the modelling. In reality, there is likely to be some variance between precincts due to the type or age of the building stock, its location in the precinct or the location of the precinct itself. The median sales value of residential units is a conservative number, based on median sales values in the area. If these were to be new-builds, this is likely to be higher. However, as this is for comparative purposes, these inputs are kept consistent for the sake of comparison.

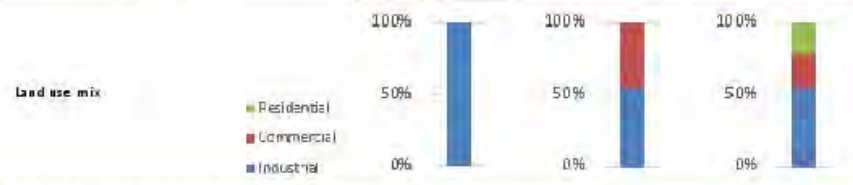
It is important to note that the consideration of residential has assumed that land values are based on the existing land use (i.e. industrial zone) and not residential. In practice, if the council were to signal that residential development were to be permitted, it would result in an underlying land value uplift and this would alter the feasibility proposition.

4.5 Camperdown precinct

Lot A

TABLE 4.1. FEASIBILITY TESTING – LOT A

		Option 1	Option 2	Option 3
Lot A	Existing amalgamated lot area	12,536 sqm	12,536 sqm	12,536 sqm
	Total Industrial floorspace (sqm)	17,718	17,718	17,718
Development Costs	Total Commercial floorspace (sqm)	n/a	14,508	7,512
	Total Residential floorspace (sqm)	n/a	n/a	6,996
	Total development costs	\$50,454,378	\$98,196,008	\$108,677,173
Revenues	Industrial GFA (sqm)	15,946	15,946	13,246
	Commercial GFA (sqm)	n/a	13,057	6,761
	Residential (no. of apartments)	n/a	n/a	62
	Total revenues (excl. sales expenses)	\$30,616,320	\$74,487,840	\$95,170,080
	Residual Land Value	-\$19,838,058	-\$23,708,168	-\$13,507,093
Acquisition costs	Estimated land costs	\$9,868,464	\$9,868,464	\$9,868,464
	Feasibility Ratio	-2.01	-2.40	-1.37

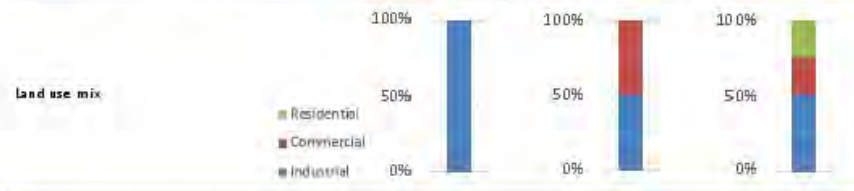


Source: SES Economics and Planning (2016)

Lot I & J

TABLE 4.2. FEASIBILITY TESTING – LOT I & J

		2015	2016	2017
Lot I & J	Existing amalgamated lot area	2,170 sqm	2,170 sqm	2,170 sqm
	Total Industrial floorspace (sqm)	4,330	4,330	4,330
Development Costs	Total Commercial floorspace (sqm)	n/a	3,984	1,992
	Total Residential floorspace (sqm)	n/a	n/a	1,992
	Total development costs	\$12,282,197	\$27,872,458	\$29,916,220
Revenues	Industrial GFA (sqm)	3,897	3,897	3,897
	Commercial GFA (sqm)	n/a	3,586	1,793
	Residential (no. of apartments)	n/a	n/a	18
	Total revenues (excl. sales expenses)	\$7,482,240	\$19,531,200	\$27,157,920
	Residual Land Value	-\$4,799,957	-\$8,341,258	-\$2,758,300
Acquisition costs	Estimated land costs	\$5,954,269	\$5,954,269	\$5,954,269
	Feasibility Ratio	-0.81	-1.40	-0.46

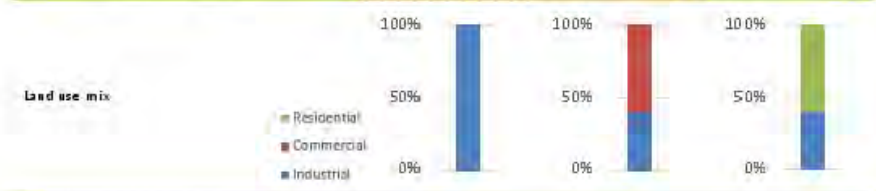


Developed by Economic & Planning Unit

Lot AC

TABLE 4.3. FEASIBILITY TESTING – LOT AC

		2015	2016	2017
Lot AC	Existing amalgamated lot area	1,001 sqm	1,001 sqm	1,001 sqm
	Total Industrial floorspace (sqm)	2,002	2,002	2,002
Development Costs	Total Commercial floorspace (sqm)	n/a	2,912	n/a
	Total Residential floorspace (sqm)	n/a	n/a	2,912
	Total development costs	\$6,280,019	\$15,229,351	\$18,216,437
	Industrial GFA (sqm)	1,802	1,802	1,802
Revenues	Commercial GFA (sqm)	n/a	2,621	n/a
	Residential GFA (sqm)	n/a	n/a	26
	Total revenues (excl. sales expenses)	\$3,459,840	\$12,266,400	\$22,946,259
	Residual Land Value	-\$2,820,179	-\$2,962,951	\$4,729,822
Acquisition costs	Estimated land costs	\$2,740,099	\$2,740,099	\$2,740,099
	Feasibility Ratio	-1.03	-1.08	1.73



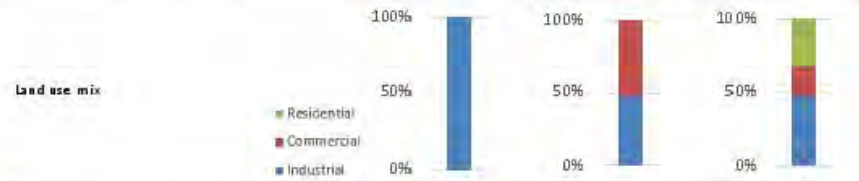
SOURCE: S&P Economics Pty Ltd (2015)

4.6 Tebbutt Street precinct

Lot H, I & J

TABLE 4.4. FEASIBILITY TESTING – LOT H, I&J

Lot H, I & J				
Lot H, I & J	Existing amalgamated lot area	3,110 sqm	3,110 sqm	3,110 sqm
	Total Industrial floorspace (sqm)	4,764	4,764	4,764
Development Costs	Total Commercial floorspace (sqm)	n/a	5,072	1,988
	Total Residential floorspace (sqm)	n/a	n/a	3,156
	Total development costs	\$ 13,757,444	\$30,448,840	\$35,889,173
Revenues	Industrial GFA (sqm)	4,288	4,288	4,288
	Commercial GFA (sqm)	n/a	4,565	1,789
	Residential GFA (sqm)	n/a	n/a	28
	Total revenues (excl. sales expenses)	\$8,232,960	\$23,571,360	\$35,479,200
	Residual Land Value	-\$5,524,484	-\$6,877,480	-\$409,973
Acquisition costs	Estimated land costs	\$9,686,131	\$9,686,131	\$9,686,131
	Feasibility Ratio	-0.57	-0.71	-0.94

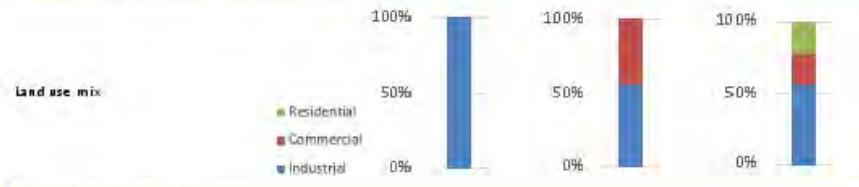


Source: SES Economics and Planning (2017)

Lot L

TABLE 45. FEASIBILITY TESTING – LOT L

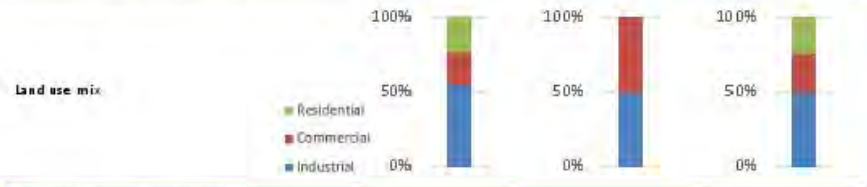
		Scenario 1	Scenario 2	Scenario 3
Lot L	Existing amalgamated lot area	1,592 sqm	1,592 sqm	1,592 sqm
Development	Total Industrial floorspace (sqm)	3,180	3,180	3,180
	Total Commercial floorspace (sqm)	n/a	2,496	1,252
	Total Residential floorspace (sqm)	n/a	n/a	1,244
Costs	Total development costs	\$9,122,176	\$18,888,829	\$20,164,707
	Industrial GFA (sqm)	2,862	2,862	2,862
	Commercial GFA (sqm)	n/a	2,246	1,127
Revenues	Residential GFA (sqm)	n/a	n/a	11
	Total revenues (excl. sales expenses)	\$5,495,040	\$13,041,600	\$17,624,160
	Residual land value	-\$3,627,136	-\$5,847,229	-\$2,540,547
Acquisition costs	Estimated land costs	\$4,423,511	\$4,423,511	\$4,423,511
	Feasibility Ratio	-0.82	-1.32	-0.57



Lot AD & AE

TABLE 4.6. FEASIBILITY TESTING – LOT AD & AE

		Type 1		
Lot AD & AE	Existing amalgamated lot area	887 sq m	887 sq m	887 sq m
Development	Total Industrial floorspace (sqm)	4,794	4,794	4,794
	Total Commercial floorspace (sqm)	n/a	4,668	2,408
	Total Residential floorspace (sqm)	n/a	n/a	2,260
Costs	Total development costs	\$ 13,472,131	\$ 20,923,220	\$ 24,783,837
	Industrial GFA (sqm)	4,315	4,315	4,315
Revenues	Commercial GFA (sqm)	n/a	4,201	2,167
	Residential GFA (sqm)	n/a	n/a	20
	Total revenues (excl. sales expenses)	\$8,284,800	\$22,400,160	\$30,689,308
	Residual land value	-\$5,187,331	\$1,476,940	\$5,905,471
Acquisition costs	Estimated land costs	\$2,870,048	\$2,870,048	\$2,870,048
	Feasibility Ratio	-1.81	0.51	2.06

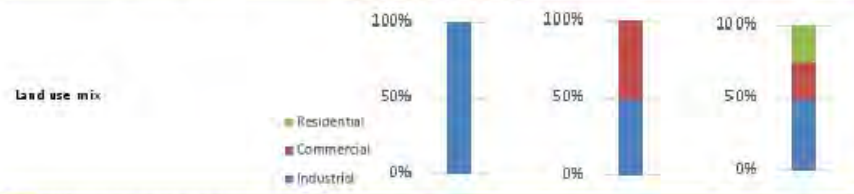


4.7 Moore Street South precinct

Lot B & C

TABLE 4.7. FEASIBILITY TESTING – LOT B & C

		Option 1	Option 2	Option 3
Lot B & C	Existing amalgamated lot area	828 sq m	828 sqm	828 sqm
	Total Industrial floorspace (sqm)	1,656	3,312	3,312
Development Costs	Total Commercial floorspace (sqm)	n/a	1,490	n/a
	Total Residential floorspace (sqm)	n/a	n/a	621
	Total development costs	\$4,671,777	\$13,797,350	\$12,631,903
Revenues	Industrial GFA (sqm)	1,490	1,490	1,490
	Commercial GFA (sqm)	n/a	1,490	745
	Residential GFA (sqm)	n/a	n/a	7
	Total revenues (excl. sales expenses)	\$2,860,800	\$7,867,200	\$10,672,800
	Residual Land Value	-\$1,810,977	-\$5,930,150	-\$1,959,103
Acquisition costs	Estimated land costs	\$2,889,300	\$2,889,300	\$2,889,300
	Feasibility Ratio	-0.63	-2.05	-0.68



Source: SGS Economics and Planning (2017)

Lot H & I

TABLE 4.8. FEASIBILITY TESTING – LOT H&I

		Type 1		
Lot H & I	Existing amalgamated lot area	2,682 sqm	2,682 sqm	2,682 sqm
Development	Total Industrial floorspace (sqm)	2,682	1,692	2,692
	Total Commercial floorspace (sqm)	n/a	4,740	2,370
	Total Residential floorspace (sqm)	n/a	n/a	2,370
Costs	Total development costs	\$7,619,829	\$23,747,086	\$28,626,126
	Industrial GFA (sqm)	2,423	2,423	2,423
	Commercial GFA (sqm)	n/a	4,266	2,133
Revenues	Residential GFA (sqm)	n/a	n/a	21
	Total revenues (excl. sales expenses)	\$4,652,160	\$18,985,920	\$27,745,440
	Residual land value	-\$2,967,669	-\$4,761,166	-\$980,686
Acquisition costs	Estimated land costs	\$3,096,635	\$3,096,635	\$3,096,635
Feasibility Ratio		-0.96	-1.54	-0.28



Source: SGS Economics & Planning, 2016

Lot 5

TABLE 4.9. FEASIBILITY TESTING- LOT 5

		Scenario 1	Scenario 2	Scenario 3
Lot 5	Existing amalgamated lot area	4,733 sqm	4,733 sqm	4,733 sqm
	Total Industrial floorspace (sqm)	9,466	9,466	9,466
Development	Total Commercial floorspace (sqm)	n/a	9,466	4,733
Costs	Total Residential floorspace (sqm)	n/a	n/a	4,733
	Total development costs	\$ 26,682,311	\$ 43,024,503	\$ 47,878,598
	Industrial GFA (sqm)	8,519	8,519	8,519
Revenues	Commercial IGFA (sqm)	n/a	8,519	4,260
	Residential IGFA (sqm)	n/a	n/a	42
	Total revenues (excl. sales expenses)	\$ 16,356,480	\$ 44,980,320	\$ 62,342,202
	Residual Land Value	-\$ 10,325,831	\$ 1,955,817	\$ 14,463,604
Acquisition costs	Estimated land costs	\$ 5,475,810	\$ 5,475,810	\$ 5,475,810
	Feasibility Ratio	-1.89	0.36	2.64



4.9 Summary of findings

The feasibility testing process has identified several headline findings.

Industrial development alone will not provide additional industrial floorspace

Rental in industrial rates have been used and are capitalised within the feasibility model. The cost of development in all instances was above the revenues generated by industrial floorspace rents. This is because even though development costs are low relative to those of more complicated (or taller) buildings, industrial uses are rarely high-value and therefore cannot afford high rents. This is exacerbated when land acquisition costs are factored in.

Across all precincts, regardless of lot sizes, the industrial only development options uphold a negative feasibility ratio. For development on industrial only sites to be feasible, the rent must increase from \$200 per square metre to over \$400 per square metre and in some cases significantly more than \$400. This creates implications for the industrial rental market as increasing the cost of rent per square metre, means that renting becomes unaffordable.

Alternatively, to achieve feasible result, the amount of additional industrial floorspace must be increased. This creates issues with urban design outcomes, particularly on smaller lots, which in some cases require an increase from 4,000 square meters to 11,300 square meters for development to return a feasible result.



The addition of commercial floorspace brings the result closer to feasible

Adding commercial floorspace to the floorspace mix of buildings increases development costs and requires taller buildings, however the higher rent per sqm can, in some instances, enable a development to cross the feasibility threshold. However, this tends to require a significant amount of commercial floorspace in order to achieve this.

Residential is the easiest way to generate additional industrial floorspace

Residential returns the highest land values on a per square metre basis and it is therefore the most efficient at returning a feasible result. It also does not necessarily require a significant proportion of total GFA, however it does necessitate the construction of taller buildings.

In some cases, the introduction of residential floorspace resulted in a feasible outcome for development. The findings indicate that there are no patterns associated with land size as the smallest lot in Camperdown, Lot AC stands at a feasibility ratio of 1.73. This lot achieved a feasible outcome by providing 1,802 sqm of industrial floorspace and 2,184 sqm of residential floorspace with 26 units. Notably, the site achieved a feasible outcome without commercial floorspace. However, in Camperdown, the largest lot, Lot A, did not result in a feasible outcome. For Lot A to be feasible, the additional commercial and industrial floorspace must more than double, the median residential sales price must increase to \$4,462,155 and the development must supply 80 units.

Lot size does not appear to matter

In the scenarios and sites tested, there does not appear to be a pattern where lot size provides a better or worse feasibility result.

5 MULTI-CRITERIA ANALYSIS

5.1 Purpose

To arrive at recommendations for the future planning of Leichhardt's industrial precincts, options have been assessed through a Multi-Criteria Analysis (MCA) framework. This framework brings together the findings of feasibility modelling, urban design assessment and policy/ strategy assessment. The purpose of the MCA is to determine which option is most suitable to address the problem of Leichhardt LGA's forecast industrial floorspace supply deficit.

5.2 Method

The MCA tests each option against the following criteria:

- Feasibility ratio
- Total floor space demand
- Depth within the likely target market segment
- Impact on the role and function of the precinct
- Impact on the surrounding precinct and broader economy
- Urban design considerations

MCA Structure

Given the number of sites, the MCA has been distilled into tables by precinct. The tables are to be read as a cumulative assessment. For instance, the analysis in Option 1 focuses on industrial only use against the MCA criteria, whereas Option 2 (which builds on Option 1) focuses on the introduction of commercial floorspace. Finally, the analysis of Option 3 focuses on the introduction of residential floorspace. This is to avoid repetition.

Market analysis and feasibility

An analysis of market conditions, feasibility outputs and data reported in SGS's 2014 Industrial Land Use Study has been included in the MCA. It also includes a qualitative assessment of urban design and risk issues that such developments may present.

Following the feasibility ratio reported in Section 4, the MCA undertakes a goal seeking exercise to determine what additional floorspace requirements or per square metre value would be needed to return a feasible result. The feasibility ratio for each lot is presented in Section 5.4 under the MCA tables. For lots that resulted in a negative feasibility ratio, the feasibility ratio column has assessed the amount of additional floorspace or an increase in rent required to achieve a feasibility ratio of 1. Notably, the feasibility model does not account for the construction and associated costs involved with additional floorspace. Under the floorspace demand column, the additional floorspace for each land use has been calculated as a total of all lots for each precinct.

There is a total industrial floorspace deficit of 20,733 sqm and 38,552sqm commercial floorspace deficit at the LGA level. Overall, the average annual growth rate of industrial floorspace is 3% to 2036 and 0.4% for commercial floorspace to 2036 at the LGA level.

Scoring

Each criteria has been given a positive, negative or neutral score (see below) to determine whether, on balance, the tested land use mix is of benefit to the LGA. This is considered in terms of its ability to deliver additional industrial floorspace as well as the impact that it will have on the ability to protect the industrial precincts.

+	Positive
-	Neutral
X	Negative

The MCA informs the recommendations outlined in Chapter 6.

Policy context

The NSW Government's *A Plan for Growing Sydney* provides strategic guidance for the future of industrial lands in Sydney. Key directions from the Plan outline the need to:

- Support key industrial precincts with appropriate planning controls.
- Identify and protect strategically important industrial-zoned land.

SGS completed an Industrial Lands Study for Leichhardt Council in 2014. The report contained a series of recommendations to protect industrial lands in the LGA. The recommendations included:

- Protect Leichhardt's industrially-zoned precincts for their important employment and service functions.
- Develop a profile and plan for each industrial precinct.
- Develop a clear vision for the future of the Camperdown precinct and maintain industrial zoning.
- Ensure adequate provision of industrial land for population-serving industries.
- Ensure the vision for Leichhardt's industrial lands considers possible impacts of the Bays Precinct.
- Work with neighbouring councils to ensure a sub-regional approach to industrial land provision.



Camperdown precinct

Option 1: Industrial only

Indicator	Indicator Description	Expected Outcome / Assumptions	Assessment	Assessment	Assessment	Assessment
Lot A	<ul style="list-style-type: none"> Feasibility ratio -2.01 With all other factors being equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$450 or the amount of additional industrial floorspace from 15,946 sqm to 31,148 sqm. 	<ul style="list-style-type: none"> Net additional industrial floorspace for total lots tested under this option is 21,645 sqm. The industrial floorspace deficit for the LGA is 20,733 sqm (2036). The net additional industrial floorspace for Camperdown results in an industrial floorspace surplus of 912 sqm. 	<ul style="list-style-type: none"> 27% of the LGA's supply of local light floorspace and 56% of the supply of bulky goods retail floorspace across the LGA. Growth of residential developments in the area (for instance City Quarter) and proximity to CBD is driving some demand for industries that service a localised need 	<ul style="list-style-type: none"> Maintaining and increasing industrial floorspace will have a positive impact on the precinct's role and function by reaffirming its primary function. This provides a strong signal to existing owners and the market that industrial use will continue in the precinct. In turn, this may encourage investment in building improvement. 	<ul style="list-style-type: none"> Additional industrial floor space will likely increase the volume of heavy vehicle traffic accessing the precinct, placing pressure on the local road network and potentially increasing conflict with surrounding land uses. More industrial floorspace in the Camperdown precinct will serve the growing local population and business demand in the CBD. 	<ul style="list-style-type: none"> Architectus has determined that the industrial site will consist of a two storey building. Given that the existing built form is two storeys, it is unlikely that there will be implications with building height such as overshadowing and solar access.
Lot I and J	<ul style="list-style-type: none"> Feasibility ratio -0.81 With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$487 or the amount of additional industrial floorspace from 3,897 sqm to 9,498 sqm. 	<ul style="list-style-type: none"> With the additional industrial floorspace supplied, it will provide 22 years of industrial floorspace. 	<ul style="list-style-type: none"> Industrial rent is higher in the Camperdown precinct (average \$270/sqm) in comparison to Moore Street and Tebbutt Street precincts (\$200/sqm). Therefore, the types of businesses locating in Camperdown industrial precinct will be relatively high value. This also suggests greater demand for floorspace in Camperdown 			
Lot AC	<ul style="list-style-type: none"> Feasibility ratio -1.03 With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$521 or the amount of additional floorspace must increase from 1,802 sqm to 4,698 sqm. 					
SCORING						
INDICATORS						RESULTS
Provision of industrial floorspace	✓		✓	-	✓	✓✓✓
Protection of industrial precinct	✓		✓	✓	✓	✓✓✓✓



Option 2: Industrial + Commercial

Indicator	Indicator Description	Indicator Status	Indicator Weight	Indicator Score	Indicator Results
Lot A	- Feasibility ratio -2.4	- Net additional industrial floorspace for total lots tested under this option is 21,645 sqm	- The Health Care and Social Assistances industry and retail industries are expected to experience significant growth to 2036 (BTS 2015).	- Introducing commercial uses will likely redefine the precinct. This is dependent on both the type and scale of commercial use, and may position the precinct as something other than industrial	- Architectus has determined that the building structure would likely be four storeys consisting of two storeys of industrial use and two storeys of commercial use. While not out of scale, this type of built form is less of an impact in lower areas
	- With all other factors being equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$450 or the amount of additional industrial floorspace from 15,946 to 33,434 sqm. OR,	- Net additional commercial floorspace for total lots tested under this option is 9,573 sqm	- The precinct's proximity to RPA Hospital may enable larger-scale health and allied services to link into the hospital network	- The Sydney CBD averages requires 24sqm of floorspace per job. This would create approximately 400 additional jobs. This level of employment would affect local traffic movement within the precinct- particularly at peaktimes.	- There may be implications associated with solar access and overshadowing. This is likely to impact the surrounding residential uses. This would require further urban design assessment
	- The commercial rent per square metre must increase from \$350 to \$618 or the amount of additional commercial floorspace from 13,057sqm to 23,050 sqm.	- The industrial floorspace deficit for the LGA is 20,733 sqm (2036). The net additional industrial floorspace for Camperdown results in an industrial floorspace space surplus of 912 sqm.	- The commercial market segment of Camperdown is likely to attract fringe CBD seeking premium office space.	- Commercial floorspace in the Camperdown precinct may compete with Norton Street, attracting commercial tenants that would otherwise locate there and jeopardise the Council's vision for Norton Street.	
Lot I and J	- Feasibility ratio -1.40	- The commercial floorspace deficit for the LGA is 38,552 sqm (2036). The net additional commercial floorspace for Camperdown results in a commercial floorspace surplus of 28,979 sqm.	- The precinct is also likely to attract creative industries drawn to its built form and character	- Introducing commercial floorspace to Camperdown may lead to a competitive commercial market and affect other centres in the LGA with increased vacancy rates and a lack of active investment.	
	- With all other factors being equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$582 or the amount of additional industrial floorspace from 3,897 to 11,343 sqm. OR,	- With the additional industrial floorspace supplied, it will provide 22 years of industrial floorspace.	- Given that the retail industry is forecast to experience significant growth to 2036, the large scale industrial floor plan and premium offices, central location of Camperdown will be attractive to retail investors.	- The additional workforce will create accessibility and parking issues and impact the local road network.	
Lot AC	- Feasibility ratio -1.08	- With the additional commercial floorspace supplied, it will provide 5 years of commercial floorspace	- The introduction of premium commercial floorspace is likely to compete with other commercial centres that are located on the periphery of the CBD such as Pymont, Ultimo and Darlinghurst.		
	- With all other factors being equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$530 or the amount of additional industrial floorspace from 1,802 sqm to 4,772 sqm. OR,				
	- The commercial rent per square metre must increase from \$350 to \$577 or the amount of additional commercial floorspace from 2,621 to 4,318 sqm.				

INDICATORS	SCORING				RESULTS
Provision of industrial floorspace	✓		✓	-	✓✓-
Protection of industrial precinct	-		✗	✓	-✗✓✓



Option 3: Industrial + Commercial + Residential

INDICATORS	PROVISION OF INDUSTRIAL FLOORSPACE	PROTECTION OF INDUSTRIAL PRECINCT	SCORING	RESULTS	
<p>Lot A</p> <ul style="list-style-type: none"> - Feasibility ratio -1.37 - With all other factors being equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$384 or the amount of additional industrial floorspace from 13,246 to 25,421 sqm. OR, - The commercial rent per square metre must increase from \$350 to \$710 or the amount of additional commercial floorspace from 6,761 sqm to 25,421 sqm. OR, - The median residential sales price must increase from \$790,000 to \$4,462,155 or increase the number of residential units from 18 to 80. <p>Lot I and J</p> <ul style="list-style-type: none"> - Feasibility ratio -0.66 - With all other factors being equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$441 or the amount of additional industrial floorspace from 3,897 sqm to 8,435 sqm. OR, - The commercial rent per square metre must increase from \$350 to \$875 or the amount of additional commercial floorspace from 1,793 sqm to 4,386 sqm. OR, - The median residential sales price must increase from 790,000 to \$1,325,000 or increase the number of residential units from 26 to 29. <p>Lot AC</p> <ul style="list-style-type: none"> - The lot achieves a positive feasibility ratio of 1.73 	<ul style="list-style-type: none"> - Net additional industrial floorspace for total lots tested under this option is 18,945 sqm - This will result in a reduction of 221 sqm of commercial floorspace due to the loss of existing commercial floorspace on the site. - The industrial floorspace deficit for the LGA is 20,733 sqm (2036). The net additional industrial floorspace for Camperdown results in an industrial floorspace surplus of 1,788 sqm. - The commercial floorspace deficit for the LGA is 38,552 sqm (2036). The net additional commercial floorspace for Camperdown results in a commercial floorspace surplus of 38,773 sqm. - With the additional industrial floorspace supplied, it will provide 19.9 years of industrial floorspace. With the additional industrial floorspace supplied, it will provide 19 years of industrial floorspace. - With the additional commercial floorspace supplied, it will provide 5 years of commercial floorspace. 	<ul style="list-style-type: none"> - It is evident that there is demand for housing in Sydney. The NSW Government has identified the need for housing under A Plan for Growing Sydney Direction 2.1 "accelerate housing supply across Sydney". - Recent residential development along Pyrmont Bridge Road and Mallett Street have typically been the conversions of old industrial stock for contemporary living. This indicates that the housing market want the industrial inner city character of the built form. - There are opportunities in Camperdown to respond to this niche market by utilising the existing building stock. - As the land value of the Camperdown precinct is high, the demand will be driven by the medium to high income households attracted to inner city location. 	<ul style="list-style-type: none"> - The introduction of residential use to industrial areas should be treated with extreme caution. Residential development will send a strong signal to existing owners and the market that the area is in transition away from industrial use or no longer has an industrial future. - Residential development within the precinct would likely increase property values and rents, driving out existing tenants - Residential development is likely to result in significant land use conflicts given there are fundamental difference in operation for each land use type. - Residential use in particular will have a negative effect if it is located in the core of the precinct. - Residential needs to be located on the periphery of each site for commercial, residential and industrial uses to function effectively on each site. 	<ul style="list-style-type: none"> - Integrating industrial, commercial and residential land uses will increase the volume of traffic and place pressure on the surrounding road network. - Introducing commercial and residential floorspace into the precinct will increase the local resident and employment population. This will likely increase public transport demand. - Introducing commercial and residential floorspace into a previous industrial precinct will create land use conflicts predominately associated with noise, access and amenity. - The amenity of the public domain may be impacted given the urban design outcome, particularly around building heights - Introducing residential floorspace in the precinct will drive demand for an increase in services that support the local population such as social infrastructure and retail services and to a lesser extent, industrial services. - Intensification of use will likely deliver Section 94 contributions that can be used to fund capital improvements in surrounding areas - Residential development will assist in the provision of additional housing stock 	<ul style="list-style-type: none"> - Given the size of Lot A, it may have the potential to accommodate the three land use types. - There may be implications associated with solar access and overshadowing. This is likely to impact the surrounding residential uses. - Architectus has suggested that the smaller lots including AC and I&J consist of four storey buildings. - There will be urban design implications for the smaller lots such as overshadowing, solar access, vehicle access, parking and consistency with the built form.
Provision of industrial floorspace	✘	✘	✓	✘	✘ ✓ ✘ ✘
Protection of industrial precinct	✘	✘	✘	✘	✘ ✘ ✘ ✘

Tebbutt Street precinct

Option 1: Industrial only

Indicators	Provision of industrial floorspace	Protection of industrial precinct	SCORING	RESULTS		
<p>Lot H, I, J</p> <ul style="list-style-type: none"> - Feasibility ratio -0.57 - With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$570 or the amount of additional industrial floorspace from 4,288 sqm to 12,210 sqm. <p>Lot L</p> <ul style="list-style-type: none"> - Feasibility ratio -0.82 - With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$493 or the amount of additional floorspace must increase from 2,862 sqm to 7,055 sqm. <p>Lot AD, AE, AF, AG</p> <ul style="list-style-type: none"> - Feasibility ratio -1.81 - With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$395 or the amount of additional industrial floorspace from 4,315 sqm to 8,512 sqm. 	<ul style="list-style-type: none"> - Net additional industrial floorspace for total lots under this option is 11,465 sqm. - The industrial floorspace deficit for the LGA is 20,733 sqm (2036). The net additional industrial floorspace for Tebbutt Street results in an industrial floorspace surplus of 9,268 sqm. - With the additional industrial floorspace supplied, it will provide 11.6 years of industrial floorspace. 	<ul style="list-style-type: none"> - There are a range of lot sizes contained within the Tebbutt Street precinct, with the majority being of small-medium size (100-500m²). This is likely to attract smaller tenancies - The precinct is the fourth largest industrial precinct in the LGA by GFA. - Tebbutt Street contains a high proportion of local light and bulky goods retail. - Industrial rent in the Tebbutt Street precinct is typically more affordable than Camperdown at approximately \$200/sqm. - The layout of the bulk form in the Tebbutt Street precinct is attractive for industries seeking affordable rent and close proximity to arterial roads. - The type of industries that are likely to locate in the precinct will predominately be bulky goods retail and local population-driven services due to the increasing population. 	<ul style="list-style-type: none"> - Maintaining and increasing industrial floorspace will have a positive impact on the precinct's role and function by reaffirming its primary function. This provides a strong signal to existing owners and the market that industrial use will continue in the precinct. - In turn, this may encourage investment in building improvement. 	<ul style="list-style-type: none"> - The precinct is located within close proximity to residential uses, if additional industrial floorspace is provided, land use conflicts may arise due to increased traffic volume and noise. - The LGA is experiencing growth in the local residential population. Industrial floorspace will increase the demand for population driven industrial uses such as storage facilities and local services. - Additional industrial floor space will likely increase the volume of heavy vehicle traffic accessing the precinct, placing pressure on the local road network. 	<ul style="list-style-type: none"> - Architectus has determined that the industrial site will consist of a two storey building. - There may be urban design implications for Lot H, I & J as the site adjoins residential land uses to the rear and other side of Tebbutt Street. 	<p>✓ ✓ - ✓</p>
<p>INDICATORS</p>	<p>✓</p>	<p>✓</p>	<p>✓</p>	<p>✓</p>	<p>✓ ✓ ✓ ✓</p>	



Option 2: Industrial + Commercial

INDICATORS	Provision of industrial floorspace	Protection of industrial precinct	SCORING	RESULTS
Provision of industrial floorspace	✓	✓	✓	✓✓-
Protection of industrial precinct	-	✗	✓	-X✓✓

INDICATORS	Provision of industrial floorspace	Protection of industrial precinct	Provision of commercial floorspace	Provision of additional commercial floorspace	Provision of additional commercial floorspace	Provision of additional commercial floorspace
Lot H, I, J	<ul style="list-style-type: none"> Feasibility ratio -0.71 With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$602 or the amount of additional industrial floorspace from 4,288 sqm to 12,915 sqm. OR, The commercial rent per square metre must increase from \$350 to \$728 or the amount of additional commercial floorspace from 4,565 sqm to 9,495 sqm. 	<ul style="list-style-type: none"> Net additional industrial floorspace for total lots tested under this option is 11,465 sqm. Net additional commercial floorspace for total lots tested under this option is 6,646 sqm. The industrial floorspace deficit for the LGA is 20,733 sqm (2036). The net additional industrial floorspace for Tebbutt Street results in an industrial floorspace surplus of 9,268 sqm. The commercial floorspace deficit for the LGA is 38,552 sqm (2036). The net additional commercial floorspace for Tebbutt Street results in a commercial floorspace surplus of 31,906 sqm. With the additional industrial floorspace supplied, it will provide 11.6 years of industrial floorspace. With the additional commercial floorspace supplied, it will provide 3.6 years of commercial floorspace. 	<ul style="list-style-type: none"> The type of tenants attracted to a suburban office centre include real estate agents, accountants and legal services and creative industries. The proximity to the arterial road network, public transport and other commercial centres provides an opportunity for suburban commercial floorspace to be introduced to the precinct. 	<ul style="list-style-type: none"> Introducing commercial uses will define the precinct. However, this is dependent on the type of commercial use. Commercial floorspace typically requires 24sqm/job. If this scenario was applied to Tebbutt Street, it would mean close to 275 jobs. This level of employment would affect local traffic movement within the precinct—particularly at peak times. Given that the lots in the precinct are small, there will be implications associated with accessibility and parking as each land use operates differently. This is dependent on the layout and function of the development. 	<ul style="list-style-type: none"> Developing commercial floorspace in the precinct may create competition with established commercial areas. Given the proximity to Norton St, significant commercial activity at Tebbutt St may adversely affect commercial attraction to Norton St. Additional commercial floorspace will increase the total workforce travelling to the precinct. This will create accessibility and parking issues given the relative distance from major transport arteries and public transport networks. It is also likely to impact the local road network. 	<ul style="list-style-type: none"> Work undertaken by Architectus identified that the building structure would likely be four storeys consisting of two storeys of industrial use and two storeys of commercial use. There may be implications associated with solar access and overshadowing. This is likely to impact the surrounding residential uses. There will be vehicle access issues and parking given the nature and size of Lot L.
Lot L	<ul style="list-style-type: none"> Feasibility ratio -1.32 With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$574 or the amount of additional industrial floorspace from 2,862 sqm to 8,211 sqm. OR, The commercial rent per square metre must increase from \$200 to \$826 or the amount of additional commercial floorspace from 2,246 sqm to 5,303 sqm. 	<ul style="list-style-type: none"> Net additional industrial floorspace for total lots tested under this option is 11,465 sqm. Net additional commercial floorspace for total lots tested under this option is 6,646 sqm. The industrial floorspace deficit for the LGA is 20,733 sqm (2036). The net additional industrial floorspace for Tebbutt Street results in an industrial floorspace surplus of 9,268 sqm. The commercial floorspace deficit for the LGA is 38,552 sqm (2036). The net additional commercial floorspace for Tebbutt Street results in a commercial floorspace surplus of 31,906 sqm. With the additional industrial floorspace supplied, it will provide 11.6 years of industrial floorspace. With the additional commercial floorspace supplied, it will provide 3.6 years of commercial floorspace. 	<ul style="list-style-type: none"> The type of tenants attracted to a suburban office centre include real estate agents, accountants and legal services and creative industries. The proximity to the arterial road network, public transport and other commercial centres provides an opportunity for suburban commercial floorspace to be introduced to the precinct. 	<ul style="list-style-type: none"> Introducing commercial uses will define the precinct. However, this is dependent on the type of commercial use. Commercial floorspace typically requires 24sqm/job. If this scenario was applied to Tebbutt Street, it would mean close to 275 jobs. This level of employment would affect local traffic movement within the precinct—particularly at peak times. Given that the lots in the precinct are small, there will be implications associated with accessibility and parking as each land use operates differently. This is dependent on the layout and function of the development. 	<ul style="list-style-type: none"> Developing commercial floorspace in the precinct may create competition with established commercial areas. Given the proximity to Norton St, significant commercial activity at Tebbutt St may adversely affect commercial attraction to Norton St. Additional commercial floorspace will increase the total workforce travelling to the precinct. This will create accessibility and parking issues given the relative distance from major transport arteries and public transport networks. It is also likely to impact the local road network. 	<ul style="list-style-type: none"> Work undertaken by Architectus identified that the building structure would likely be four storeys consisting of two storeys of industrial use and two storeys of commercial use. There may be implications associated with solar access and overshadowing. This is likely to impact the surrounding residential uses. There will be vehicle access issues and parking given the nature and size of Lot L.
Lot AD, AE, AF, AG	<ul style="list-style-type: none"> Feasibility ratio 0.51 With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$234 or the amount of additional industrial floorspace from 4,315 sqm to 5,041 sqm. OR, The commercial rent per square metre must increase from \$350 to \$385 or the amount of additional commercial floorspace from 4,201 sqm to 4,616 sqm. 	<ul style="list-style-type: none"> Net additional industrial floorspace for total lots tested under this option is 11,465 sqm. Net additional commercial floorspace for total lots tested under this option is 6,646 sqm. The industrial floorspace deficit for the LGA is 20,733 sqm (2036). The net additional industrial floorspace for Tebbutt Street results in an industrial floorspace surplus of 9,268 sqm. The commercial floorspace deficit for the LGA is 38,552 sqm (2036). The net additional commercial floorspace for Tebbutt Street results in a commercial floorspace surplus of 31,906 sqm. With the additional industrial floorspace supplied, it will provide 11.6 years of industrial floorspace. With the additional commercial floorspace supplied, it will provide 3.6 years of commercial floorspace. 	<ul style="list-style-type: none"> The type of tenants attracted to a suburban office centre include real estate agents, accountants and legal services and creative industries. The proximity to the arterial road network, public transport and other commercial centres provides an opportunity for suburban commercial floorspace to be introduced to the precinct. 	<ul style="list-style-type: none"> Introducing commercial uses will define the precinct. However, this is dependent on the type of commercial use. Commercial floorspace typically requires 24sqm/job. If this scenario was applied to Tebbutt Street, it would mean close to 275 jobs. This level of employment would affect local traffic movement within the precinct—particularly at peak times. Given that the lots in the precinct are small, there will be implications associated with accessibility and parking as each land use operates differently. This is dependent on the layout and function of the development. 	<ul style="list-style-type: none"> Developing commercial floorspace in the precinct may create competition with established commercial areas. Given the proximity to Norton St, significant commercial activity at Tebbutt St may adversely affect commercial attraction to Norton St. Additional commercial floorspace will increase the total workforce travelling to the precinct. This will create accessibility and parking issues given the relative distance from major transport arteries and public transport networks. It is also likely to impact the local road network. 	<ul style="list-style-type: none"> Work undertaken by Architectus identified that the building structure would likely be four storeys consisting of two storeys of industrial use and two storeys of commercial use. There may be implications associated with solar access and overshadowing. This is likely to impact the surrounding residential uses. There will be vehicle access issues and parking given the nature and size of Lot L.



Option 3: Industrial + Commercial + Residential

Indicators	Industrial	Commercial	Residential	Integration	Amalgamation
<p>Lot H, I, J</p> <ul style="list-style-type: none"> - Feasibility ratio -0.04 - With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$44.8 or the amount of additional industrial floorspace from 4,288 sqm to 9,607 sqm. OR, - The commercial rent per square metre must increase from \$350 to \$945 or the amount of additional commercial floorspace from 1,798 sqm to 4,828 sqm. OR, - The median residential sales price must increase from \$790,000 to \$1,172,000 or increase the number of residential units from 28 to 41. <p>Lot L</p> <ul style="list-style-type: none"> - Feasibility ratio -0.57 - With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$454 or the amount of additional industrial floorspace from 2,862 sqm to 6,498 sqm. OR, - The commercial rent per square metre must increase from \$350 to \$895 or the amount of additional commercial floorspace from 1,127 sqm to 3,205 sqm. OR, - The median residential sales price must increase from \$790,000 to \$1,452,000 or increase the number of residential units to 20. <p>Lot AD, AE, AF, AG</p> <ul style="list-style-type: none"> - The Lot achieves a positive feasibility ratio of 2.06 	<ul style="list-style-type: none"> - Net additional industrial floorspace for total lots tested under this option is 11,465 sqm. - Net additional commercial floorspace: 2,814 sqm. - Net additional commercial floorspace for total lots tested under this option is 717 sqm. - The industrial floorspace deficit for the LGA is 20,733 sqm (2036). The net additional industrial floorspace for Tebbutt Street results in an industrial floorspace surplus of 32,198 sqm. - The commercial floorspace deficit for the LGA is 38,552 sqm (2036). The net additional commercial floorspace for Tebbutt Street results in a commercial floorspace surplus of 37,835 sqm. - With the additional industrial floorspace supplied, it will provide 11.6 years of industrial floorspace. - With the additional commercial floorspace supplied, it will provide 0.4 years of commercial floorspace. 	<ul style="list-style-type: none"> - It is evident that there is demand for housing in Sydney. The NSW Government has identified the need for housing under A Plan for Growing Sydney Direction 2.1 "accelerate housing supply across Sydney". - There has been recent residential development and investment surrounding the precinct. This reflects a strong market demand for residential. This is only going to increase with Urban Growth NSW's vision for Parramatta Road - It is likely that the introduction of residential floorspace will be new building stock. - Tebbutt presents an opportunity to supply housing for key workers given affordable housing. This may be achieved on Lot H I J as it is a larger lot enabling greater density and a feasible return. 	<ul style="list-style-type: none"> - Residential use will have a negative effect on the positioning of the precinct as an industrial area - If residential is located in the precinct, it should be on the periphery so as to not impact on the industrial core. - Developing industrial, commercial and residential land uses is likely to lead to land use conflicts that arise from accessibility issues and noise. 	<ul style="list-style-type: none"> - Integrating industrial, commercial and residential land uses on one site will increase the volume of traffic and essentially place pressure on the surrounding road network. - Introducing commercial and residential floorspace into the precinct will increase the local residential and employment population. This will likely increase public transport demand. - Introducing commercial and residential floorspace into a previous industrial precinct will create land use conflicts predominately associated with noise, access and amenity. - The amenity of the public domain may be impacted given the urban design outcome. - Introducing residential floorspace in the precinct will drive demand services that support the local population such as social infrastructure and retail services and to a lesser extent, industrial services. - Introducing residential floorspace into Tebbutt Street Precinct may set a precedent for surrounding sites to be developed 	<ul style="list-style-type: none"> - Given the size of the amalgamated Lot AD, AE, AF, AG, it may have the potential to accommodate the three land use types. - There will be urban design implications for the smaller lots such as overshadowing, solar access, vehicle access, parking and consistency with the built form. Depending on the nature of the lot and the urban design outcome, the design implications may be addressed through site amalgamation.

INDICATORS	SCORING					RESULTS
Provision of industrial floorspace	x		✓	x	-	x ✓ x -
Protection of industrial precinct	x		x	x	x	x x x x



5.5 Moore Street South precinct

Option 1: Industrial only

Considerations	Benefits/Tariffs	Challenges for Aims and Objectives	Impacts	Other Issues	Key Recommendations
<p>Lot B & C</p> <ul style="list-style-type: none"> - Feasibility ratio -0.63 - With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$529 or the amount of additional industrial floorspace from 1,390 sqm to 3,938 sqm <p>Lot H & I</p> <ul style="list-style-type: none"> - Feasibility ratio -0.96 - With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase to from \$200 to \$461 or the amount of additional industrial floorspace from 2,243 sqm to 6,083 sqm. <p>Lot 5</p> <ul style="list-style-type: none"> - Feasibility ratio -1.89 - With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$393 or the amount of additional floorspace must increase from 8,519 sqm to 16,749 sqm. 	<ul style="list-style-type: none"> - Net additional industrial floorspace for total lots tested under this option is 12,432 sqm - The industrial floorspace deficit for the LGA is 20,733 sqm (2036). The net additional industrial floorspace for Moore Street results in an industrial floorspace surplus of 8,301 sqm. - With the additional industrial floorspace supplied, it will provide 12.6 years of industrial floorspace. 	<ul style="list-style-type: none"> - The Moore Street precinct is the third largest by GFA within the study area. It contains the most substantial amount of floorspace occupied by freight and logistics/land uses, being 11,375m², or 73% of the total GFA in the study area, along with a high proportion of light manufacturing uses (13,875m², or 32% of the BLC's GFA within the LGA). - There are also notable proportions of bulky goods retail and office floor space. - Industrial rent in the Moore Street precinct is typically more affordable than Camperdown at \$200/sqm (based on agency consultation). - The layout and the built form in the precinct is attractive for industries seeking affordable rent and traditional industrial building stock. - The function of the precinct is predominately local service industries which are likely to remain attracted to it. 	<ul style="list-style-type: none"> - Maintaining and increasing industrial floorspace will have a positive impact on the precinct's role and function by reaffirming its primary function. This provides a strong signal to existing owners and the market that industrial use will continue in the precinct. - In turn, this may encourage investment in building improvement. 	<ul style="list-style-type: none"> - The precinct is located in close proximity to residential uses, if additional industrial floorspace is provided, land use conflicts may arise due to increased traffic volume and noise. - The locality is experiencing growth in the local residential population. Industrial floorspace will increase the demand for population driven industrial uses such as storage facilities. - Additional industrial floor space will be likely to increase the volume of heavy vehicle traffic accessing the precinct, placing pressure on the local road network. 	<ul style="list-style-type: none"> - Architectus has determined that the industrial site will consist of a two storey building. - There may be urban design implications for Lot H & I as the site is surrounded by residential uses.

INDICATORS	SCORING					RESULTS
Provision of industrial floorspace	✓		✓	-	✓	✓✓✓
Protection of industrial precinct	✓		✓	✓	✓	✓✓✓✓



Option 2: Industrial + Commercial

INDICATORS	SCORING	RESULTS
Provision of industrial floorspace	✓	✓✓-
Protection of industrial precinct	-	-x✓✓

Option 3: Industrial + Commercial + Residential

Indicator	Indicator Description	Indicator Description	Indicator Description	Indicator Description	Indicator Description
<p>Lot B & C</p> <ul style="list-style-type: none"> - Feasibility ratio -0.6 - With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$523 or the amount of additional industrial floorspace from 1,490 sqm to 4,015 sqm. OR, - The commercial rent per square metre must increase from \$350 to \$995 or the amount of additional commercial floorspace from 745 sqm to 2,188 sqm. OR, - The median residential sales price must increase from \$790,000 to \$1,511,488 or increase the number of residential units from 7 to 13. <p>Lot H & I</p> <ul style="list-style-type: none"> - Feasibility ratio -0.28 - With all factors equal, to achieve a feasibility ratio of 1, the industrial rent per square metre must increase from \$200 to \$374 or the amount of additional industrial floorspace from 2,423 sqm to 4,529 sqm. OR, - The commercial rent per square metre must increase from \$350 to \$548 or the amount of additional commercial floorspace from 2,133 sqm to 3,337 sqm. OR, - The median residential sales price must increase from \$790,000 to \$991,000 or increase the number of residential units from 21 to 26. <p>Lot 5</p> <ul style="list-style-type: none"> - The Lot achieves a positive feasibility ratio of 2.64 	<ul style="list-style-type: none"> - Net additional industrial floorspace for total lots tested under this option is 12,432 sqm - Net additional commercial floorspace for total lots tested under this option is 2,542 sqm - The industrial floorspace deficit for the LGA is 20,733 sqm (2036). The net additional industrial floorspace for Moore Street results in an industrial floorspace surplus of 8,301 sqm. - The commercial floorspace deficit for the LGA is 36,552 sqm (2036). The net additional commercial floorspace for Moore Street results in a commercial floorspace surplus of 36,010 sqm. - With the additional industrial floorspace supplied, it will provide 12.6 years of industrial floorspace. - With the additional commercial floorspace supplied, it will provide 1.4 years of commercial floorspace. 	<ul style="list-style-type: none"> - It is evident that there is demand for housing in Sydney. The NSW Government has identified the need for housing under A Plan for Growing Sydney Direction 2.1 "accelerate housing supply across Sydney". - It is likely that the introduction of residential floorspace will be new building stock. However, given that surrounding residential is low density, it is important that the new stock is consistent with the existing character. - Moore Street presents an opportunity to supply housing for key workers and affordable housing. This may be achieved on Lot 5 as it is a larger lot enabling greater density and a feasible return. 	<ul style="list-style-type: none"> - With Moore St being the most traditional industrial precinct, introducing residential risks jeopardising its industrial role and function - If residential is located in the precinct, it should be on the periphery (rather than the core) so as to limit the operational impact on the industrial core. - Developing industrial, commercial and residential land uses is likely to lead to significant land use conflicts 	<ul style="list-style-type: none"> - Integrating industrial, commercial and residential land uses will increase the volume of traffic and place pressure on the surrounding road network. - Introducing commercial and residential floorspace into the precinct will increase the local resident and employment population. This will likely increase public transport demand. - Introducing commercial and residential floorspace into a previous industrial precinct will create land use conflicts predominately associated with noise, access and amenity. - The amenity of the public domain may be impacted given the urban design outcome. - Introducing residential floorspace in the precinct will drive demand for an increase in services that support the local population such as social infrastructure and retail services and to a lesser extent, industrial services. - Intensification of use will likely deliver Section 94 contributions that can be used to fund capital improvements in surrounding areas 	<ul style="list-style-type: none"> - Given the size of Lot 5, it may have the potential to accommodate the three land use types. - There may be implications associated with solar access and overshadowing. This is likely to impact the surrounding residential uses. - Work undertaken by Architectus suggests that B & C could accommodate four storey buildings. - There will be urban design implications for the smaller lots such as overshadowing, solar access, vehicle access, parking and consistency with the built form.

INDICATORS	SCORING					RESULTS
Provision of industrial floorspace	x		✓	x	-	x ✓ x -
Protection of industrial precinct	x		x	x	x	x x x x



8.7 Summary of MCA

Table 40 provides an overview of the positives and negatives of each development option. This consolidates each of the scenarios tested so that key issues are identified based on the potential land-use mix.

TABLE 50. SUMMARY OF OPTIONS

Development Option	Positives	Negatives
Industrial only	<ul style="list-style-type: none"> Increase in industrial floorspace within the precinct supports existing industrial function Additional industrial floorspace will provide support for the local population and businesses served by the industrial tenants 	<ul style="list-style-type: none"> Additional floorspace is likely to increase the volume of traffic and impact on the local road network. For the development of additional floorspace to be feasible, the rent per square metre has to increase. Increased rents will put pressure on the more traditional existing industrial businesses
Industrial and commercial	<ul style="list-style-type: none"> Increasing commercial floorspace will provide an opportunity for a range of different commercial types including creative, health services and CBD fringe office space. Supplying commercial floorspace will reduce the commercial floorspace deficit (88,283 sqm) for the LGA. The demand for commercial floorspace is aligned with population and employment growth. Commercial floorspace is less conflicting with industrial activity especially where precincts already have a mix of commercial and industrial activity (e.g. Camperdown) There is the potential to attract new tenants to the Camperdown precinct given proximity to Sydney University and RPA. 	<ul style="list-style-type: none"> Potential for cannibalisation of other commercial centres e.g. Norton Street Likely to give rise to increased parking and accessibility problems. High increase in commercial rents. The introduction of commercial floorspace has the potential to change the industrial sense of address in the precincts – jeopardising the continued operation of industrial business as well as the attraction of new industrial activity Feasible development requires significant commercial floorspace which will fundamentally reshape the precinct.
Industrial, commercial and residential	<ul style="list-style-type: none"> Introducing residential floorspace will contribute to the overall supply of housing There is market demand for residential floorspace in the LGA. There is an opportunity to provide affordable housing and housing for key workers in these precincts. Council can benefit from Section 94 contributions and add value to the surrounding area. 	<ul style="list-style-type: none"> Integrating three land use types on one site will be likely to generate land use conflicts. Introducing residential land uses will create long term implications as residential is a competing land use and potentially dominate the site and push industrial uses out of the precinct. Pressure on social infrastructure and local services with an increasing residential and business population. If residential is developed in the core of a site, it will be especially harmful to the function of the precinct. Residential needs to be developed on the periphery. Introducing residential to industrial precincts sets a precedent for the development in other industrial precincts.

6 RISK ASSESSMENT

6.1 Introduction

Based on the precinct profiling, feasibility analysis and MCA process, a number of potential outcomes may be available to Council in the planning for the future of IN2 land. These outcomes have been considered both in terms of their ability to deliver additional industrial floorspace and the respective risks that actions present to a precinct or the overall supply of industrial floorspace.

Actions are identified with regard to their risk using the following consideration:

- Low risk: Likely to be suitable for the LGA
- Medium risk: Careful consideration should be paid to whether action is considered appropriate
- High risk: Highly likely to fundamentally and adversely impact future industrial floorspace supply

These scenarios inform the recommendations in Chapter 7.

6.2 Industrial only option

This option assumes that the current IN2 zoning remains in place and the focus is on retaining the predominantly industrial nature of the precinct.

Potential action	Justification	Risk assessment
Do nothing	<p>Redevelopment of industrial floorspace simply through the increase of industrial floorspace is not feasible under any scenario tested.</p> <p>To achieve a feasible result would require significant amounts of non-industrial floorspace to be introduced, compromising the role of the primary role of the precincts.</p>	<ul style="list-style-type: none"> - LGA continues to have a shortage of industrial floorspace into the future. The protection of the remaining industrial area limits the ability of new land uses to erode the primary role of industrial precincts. - The demand for residential use will continue to place pressure on industrial land under the do nothing scenario.
Stronger focus on preservation of remaining industrial land	<p>With no ability to increase floorspace, the remaining industrial area is critical in providing floorspace for businesses that require industrial space to provide services for the local population and other businesses in commercial centres and the CBD. This industrial floorspace should continue to be protected.</p>	<ul style="list-style-type: none"> - As above - Stronger focus on the preservation of remaining industrial land through policy will reduce the risk of losing industrial land.
Tighten range of permitted uses in IN2	<p>If no additional floorspace can be induced through development, a longer-term strategy to gradually 'claw back' industrial floorspace from non-industrial users could help to reduce the deficit, albeit marginally. This may</p>	<ul style="list-style-type: none"> - Unlikely to significantly increase floorspace - May lead to conflict of industrial land uses

include limiting non-industrial uses such as offices that seek to locate in industrial precincts due to the character and identity, rather than a specific need.	<ul style="list-style-type: none"> requiring an office component May limit uses that require industrial space but have a legitimate commercial function
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Industrial + Commercial option

This option introduces commercial floorspace as a development feasibility lever to aide the delivery of additional industrial floorspace. Commercial is introduced as a lower impact alternative land use than residential.

Potential option	Rationale	Risk assessment
Re-zone all IN2 land to a business-use zone (for example B5 or B6)	In acknowledgement of the dynamic nature of inner city industrial precincts, a wider business-focussed zone will encourage commercial development	<ul style="list-style-type: none"> Higher land values may drive 'lower value' uses out with potential flow on effects to the businesses they serve in existing commercial centres and the CBD The introduction of commercial activity may alter the precinct role and function. This is most pronounced for MooreSt being the most traditional industrial precinct in the LGA Prohibits fundamental light industrial uses such as car repair workshops
Rezone all IN2 land, or particular precincts, to a Business zoning (B5, B6 or B7) with tailored permissible land uses	No B5 or B6 zone currently exists in the LGA. As such, a tailored permissible uses list could be considered that focuses on industrial as the primary land use whilst enabling some office-related floorspace as a means of inducing development feasibility.	<ul style="list-style-type: none"> Council amalgamations may expose this to weakness Still exposes precincts to non-industrial uses Feasibility testing suggests that significant commercial floorspace is still required to deliver industrial floorspace This may encourage commercial development in areas that are less suitable than local centres (such as Norton Street)
Retain IN2 zoning, but allow commercial floorspace with a proportional cap	The intention is to increase industrial floorspace. If commercial is necessary to do this, the primary function of the precinct can be maintained by capping the amount of commercial floorspace (either by site or precinct) at a proportion of total floorspace, for instance 25%	<ul style="list-style-type: none"> Cap may need to be high to reach a development feasibility threshold. Permitting commercial floorspace may result in a loss of the defined

industrial precinct and a poor urban design outcome

Industrial + Commercial + Residential option

This option introduces residential in addition to commercial floorspace as the most intensive means of delivering development feasibility. Residential development within industrial precincts brings with it increased risk of precinct fragmentation and land-use conflict.

Potential Action	Rationale	Risk Statement
Re-zone Camperdown to a Business use classification such as B6 or B7 and allow residential flat buildings as a permitted use, as long as industrial floorspace is a majority floorspace component	<p>In order to enable residential development to feasibly deliver additional industrial floorspace, residential development in precincts that are locationally suited to high density residential could trigger an increase in industrial floorspace.</p> <p>Given the housing agenda of the NSW Government with major state significant projects in the pipeline, it would be of Council's interest to get on the front foot and identify the future use of the Camperdown precinct. To respond to pressure for residential development in the Camperdown precinct, Council must permit residential and commercial uses within industrial lands. This will require Council to implement policies that allow the introduction of residential and commercial floorspace, yet protect industrial floorspace. As residential is a dominant land use, the DCP must be amended to implement controls that protect employment land uses.</p>	<ul style="list-style-type: none"> High risk of precinct fragmentation or dilution due to conflicting land use Sets a precedent for future industrial lands to undergo similar rezoning process Increases land values to such an extent that industrial uses are priced out
Spot-rezone identified sites on periphery of industrial precincts to allow residential development	In some precincts, some candidate sites are separated from the main part of a precinct to the extent that residential uses would be unlikely to significantly impact on the industrial function, while still enabling increased industrial floorspace in an industrial area	<ul style="list-style-type: none"> Individual site rezonings are not strategic in their nature and can lead to increased requests for rezoning on other sites that have more adverse impacts
<p>Develop specific criteria for site consideration, allowing residential use within IN2 if it:</p> <ul style="list-style-type: none"> -Significantly increases industrial floorspace -Ensures residential is less than 20% of total GFA -Is on a peripheral site -Is a lot size over 1,000sqm 	These particular criteria could be applied on a case-by-case basis where there is demonstrated focus on increasing industrial floorspace, using residential as a lever.	<ul style="list-style-type: none"> Gradual erosion of precincts Encourages land speculation and land banking Encourages land owner not to invest in industrial land upkeep

7 RECOMMENDATIONS

2.1 Introduction

It is clear that there is a need within Leichhardt to provide additional industrial floorspace to meet the LGA's future demands. However, this objective must be tempered against the risks involved in seeking this additional floorspace. Ultimately, the decision to consider redevelopment within any of Leichhardt's industrial precincts as a means to increasing supply must be considered against a fundamental question:

"Do the risks of development outweigh the reward?"

In this light, the reward is the increase of industrial floorspace while the risks are those listed in the assessments above.

Industrial development alone will not facilitate the provision of increased industrial floorspace supply as the cost of development outweighs the revenues received. As a consequence, other land uses are required to improve the feasibility aspect.

The consideration of commercial and/or residential as levers in increasing industrial floorspace supply present a number of risks. The volume of commercial floorspace required to cross the feasibility threshold is likely to fundamentally alter the function of the precinct and shift the commercial gravity of the LGA away from its identified commercial centres.

The introduction of residential development brings with it extremely high risks of precinct fragmentation and land use conflicts that will significantly limit the ongoing function of the precinct. The extreme end of this scenario is that within a relatively short period of time, the pressure of residential will lead to the complete loss of precincts.

With this in mind, the strategies below are split into two options that recognise the risks inherent in any rezoning attempt within the precincts.

7.1 Option 1: Business as usual approach

This option assumes that based on the risk equation articulated above, the risk of precinct fragmentation and land use conflict that comes with encouraging additional uses is too great to entertain. As such, it recommends no change to any zoning within the LGA's IN2 zoned land.

Protection

Strategy 1: Retain industrial (IN2) categorisation in majority of industrial precincts	
ACTION 1.1	Retain IN2 zoning and continue to protect from re-zoning for the following precincts: <ul style="list-style-type: none"> - Balmain East - Balmain Road - Lilyfield Road - Marion Street - Moore Street North - Terry Street - White Bay - Camperdown - Moore Street South - Tebbutt Street - Lord's Road
Rationale	<i>The Industrial Land Use Study (2014) identified a shortage of industrial floorspace in the LGA by 2036. The retention of all IN2-zoned land and active protection of it against future development or adjacent development that may lead to land-use conflicts will not increase industrial floorspace. However, it is the best way to ensure that there is no continual erosion of remaining stock.</i>

Strengthening of industrial character

Strategy 2: Differentiate between industrial uses in the LGA	
ACTION 2.1	Introduce IN1 zoning into LEP land use classifications
Rationale	<i>There are subtle differences in the role of Leichhardt's industrial precincts and many of the precincts are small clusters of industrial units which fit into the IN2 category. There are some precincts, however, that due to their size and role, are more 'traditional' industrial precincts. The introduction of an IN1 categorisation would add weight to the precincts that have such a zoning. This would send a clear message of intent regarding these precincts.</i>
ACTION 2.2	Rezone Moore Street South industrial precinct to IN1
Rationale	<i>Moore Street South is Leichhardt's largest 'traditional' industrial precinct with regards to role and function. A re-zoning to IN1 would signal that this precinct is not one to consider peripheral industrial uses and will not be a location for alternative uses such as commercial or residential. Although feasibility testing suggested that in some instances, the introduction of commercial and/or residential could deliver an increase in floorspace, the possible loss of this precinct due to land-use conflicts is too great to contemplate seeking a marginal increase in floorspace.</i>

Option 2: Step change approach

This option assumes that a scenario such as the following were in effect:

- a) Pressure from the State Government to redevelop the Parramatta Road Corridor requires council to take a lead in considering alternative land use arrangements; OR
- b) Council wishes to consider options that may deliver additional floorspace.

As such, it is mutually exclusive Option 1's Action 1 and seeks to reconceive the future roles of the Council's major precincts.

The recommendations that follow are predicated on the following visions for how Camperdown and Tebbutt Street precincts may function as non-traditional industrial precincts.

Vision for Camperdown precinct

Camperdown's location in relation to the CBD and other neighbouring institutions such as the University of Sydney and Royal Prince Alfred Hospital means it is well positioned to accommodate supporting industries. The Camperdown precinct could accommodate higher-value industrial and commercial users that support the operations of nearby institutions and businesses operating in the CBD. Leichhardt Council holds aspirations for encouraging creative industries and with an identity that supports physical production in partnership with aligned commercial interests, Camperdown could attract these type of use.

Vision for Tebbutt Street Precinct

Tebbutt Street's identification as a centre in the Parramatta Road Urban Transformation Strategy and its location near to the Taverners Hill Light Rail station make it a logical place for mixed use development. A concentrated residential component, with a mix of business and industrial uses could enable a range of land uses to co-exist with minimal conflict. Each of these benefit from the precinct's location and transport access.

Step-change in key precincts

Strategy 3 : Make amendments to standard instrument LEP and Development Control Plan	
ACTION 3.1	Introduce B6 (Enterprise Corridor) zoning into LEP land-use classifications
<i>Rationale:</i>	<i>Leichhardt currently has four Business use-class zones identified in its LEP. The introduction of B6 (Enterprise Corridor) will enable Council to provide a more nuanced set of business-oriented centres.</i>
	<i>B6 (Enterprise Corridor) provides Council with an additional business zoning that aligns with a number of the uses currently found within the IN2 zoning. This provides Council with a more refined set of zoning classifications to address future land-use pressures, particularly along the Parramatta Road corridor.</i>
ACTION 3.2	Introduce B5 (Business Development) zoning into LEP land-use classifications and include 'Residential Accommodation' as a use permitted with consent.
<i>Rationale:</i>	<i>Allowing some residential development within business zones will encourage a mix of uses where it is applied. It will also assist with the feasibility equation of new developments where this use is being encouraged.</i>
	<i>Unlike B4 (Mixed Use), which usually has residential providing a significant proportion of floorspace in developments, the intent with this amendment is to retain the predominant land use as business-focus.</i>

ACTION 3.3 Provide additional direction with regards to floorspace proportions for B5 (Business Park) zoning in Development Control Plan. This would limit the total amount of residential GFA to approximately 20% of total GFA for individual development within a B5 zone.

Rationale To ensure that residential does not dominate the development and alter the intent of the precinct, additional directions to limit floorspace to a minimal proportion can provide design guidance to developers to articulate how and why this proportional cap is required.

Strategy 4 : Position Camperdown as a mixed business precinct aligned with surrounding industries

ACTION 4.1 Re-zone the identified area to B5 (Business Development). This assumes that the inclusion of residential is permitted in the B5 zone.



Rationale The Camperdown Precinct's location in relation to the CBD and other neighbouring institutions such as the University of Sydney and Royal Prince Alfred Hospital means it is well positioned to accommodate supporting industries. A B5 zone would permit a more commercial focus while retaining much of the existing industrial uses. The introduction of capped residential development would act as a lever to increase industrial and commercial floorspace.

A B5 zone on the precinct's periphery will capture much of the existing land use profiles such as Bulky Goods Retail that current line Parramatta Road.

ACTION 4.3	Retain existing IN2 zone in identified area (below)
	
<i>Rationale</i>	<p><i>It is important to protect the industrial core of the precinct to continue to accommodate the range of light industrial users that require the close-to-CBD position of the precinct. It will also help to retain the overall intention of the precinct.</i></p>
ACTION 4.4	Set a clear vision for the future industry identity of the Camperdown Precinct
<i>Rationale</i>	<p><i>In order for the strategic intent of any changes to Camperdown being made clear, a statement in the DCP that outlines what type of precinct Camperdown will be should be made. This can build off the statement in this section about what the intention for Camperdown's proposed rezoning is.</i></p>

Strategy 5 : Be proactive in aligning Tebbutt Street with the future of the Parramatta Road Strategy

ACTION 5.1 Re-zone eastern edge of Tebbutt Street to B4 (Mixed Use) north of Number 5 Tebbutt Street (see map)



Rationale *The intention of UrbanGrowthNSW to redevelop this precinct as part of the Parramatta Road Urban Transformation Strategy puts pressure on Tebbutt Street to remain as an industrial precinct. This stretch already has a B4 zone to its east and its location near the Taverners Hill Light Rail Station makes it suitable for residential.*

This approach also demonstrates a proactive approach by council to work with UrbanGrowth NSW and may help to protect more of the industrial precinct than otherwise would have.

ACTION 5.2 Re-zone IN2 zoned land in precinct between Tebbutt Street and Hathern Street and between Flood Street and Elswick Street to B6 (Enterprise Corridor).



Rationale *A B6 zoning aligns with much of the current use along Parramatta Road and still retains opportunity for some industrial uses. It does provide a more commercial opportunity to support any future residential development in the area.*

ACTION 5.3 Retain IN2 zoning between Flood Street and Upward Street



Rationale This part of the precinct retains a cluster of larger lots that centre on the newly built Best and Less distribution facility. Given that Best and Less has committed to the precinct, it suggests that this warehousing and supply chain role is still relevant in this location.



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ARCHITECTUS INTERIM INDICATIVE STRUCTURE PLANS AND URBAN FORM ILLUSTRATIONS

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OPTION 1: CAMPERDOWN PRECINCT STRUCTURE PLAN

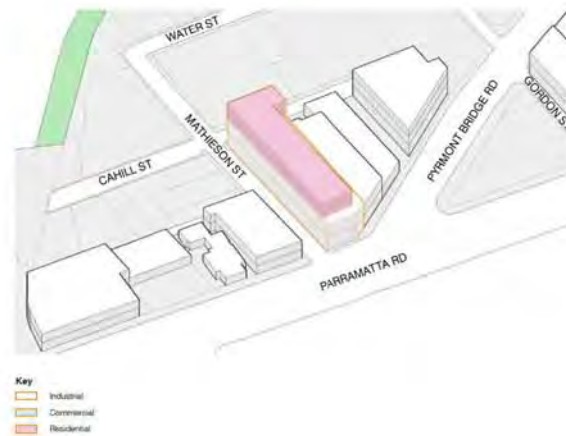
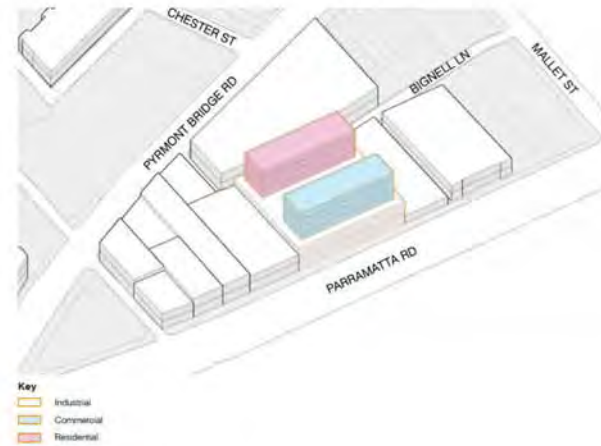


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OPTION 1: TEBBUTT STREET PRECINCT STRUCTURE PLAN

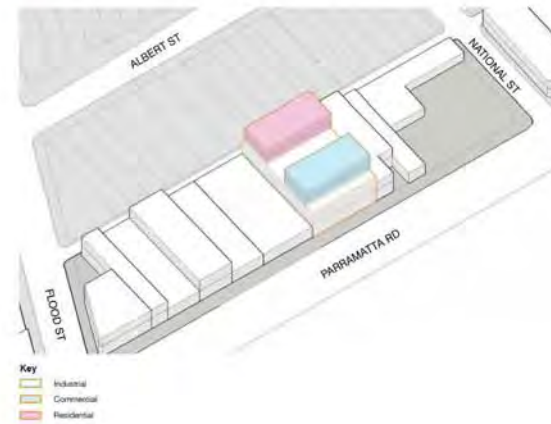
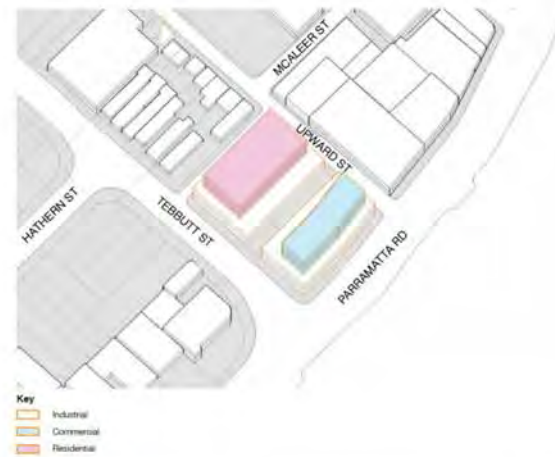
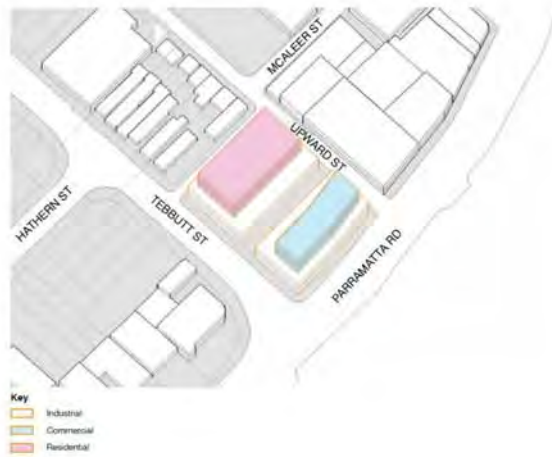


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**CAMPERDOWN PRECINCT
BUILT FORM TEST OPTIONS**

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**TEBBUTT STREET PRECINCT
BUILT FORM TEST OPTIONS**

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OPTION 2: CAMPERDOWN PRECINCT STRUCTURE PLAN



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OPTION 2: TEBBUTT STREET PRECINCT STRUCTURE PLAN



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International Case studies- planning for mixed use industrial precincts

A critical part of Council's vision for Leichhardt is the retention of the area's diverse, mixed use character. The following projects highlight opportunities for Leichhardt - that could be achieved through revised planning controls and urban renewal of the industrial precincts.



IRMX Zoning Code specifications for adaptive reuse of old industrial warehouses into mixed industrial developments. Image source Plan Philly by Matt Reuben 2015

South of Market Area (SoMA) District, San Francisco

SoMA District has been zoned as a mixed use industrial district and comprises of several specific land use zones such as SLI (Serviced/ light Industrial) and SLR (Serviced/Light Industrial/ Residential) that have been designed specifically to preserve manufacturing and industrial uses from other competing residential and commercial land uses. Additionally, planning regulations within the district require all developments to dedicate a percentage of floor space to Production, Distribution and Repair Services.

At its base, the district uses good design principles to articulate the built form. Street networks are designed as pedestrian and cycle friendly spaces that also cater to service and delivery vehicle requirements. Several recent proposals such as 100 Hooper Street seek to integrate commercial, manufacturing and retail space with other uses including classroom space for the adjacent California College of Arts.

350 Eighth Street is yet another development of approximately 3.36 acres (1.2 ha) within SOMA district that is being redeveloped for residential blocks containing 444 units, light industrial and artist space including community space.



100 Hooper Street, SoMA District, San Francisco
Image source: Campus Planning 2015



350 Eighth Street Project, SoMA
Image source: San Francisco Curbed by Michael Conrad 2014

Navy Yard & Washington Avenue, Philadelphia

Deterioration of existing industrial warehouse sites, coupled with the simultaneous growth of small scale manufacturing and light industries (artisan industries including breweries, wood working and metal working, and engineering-oriented activities, such as software design, electronics, and robotics) has steered Philadelphia to implement new zoning codes such as ICMX (Industrial/commercial mixed uses) and IRMX (Industrial/ residential mixed uses) to allow for mixed industrial development.

A strategic remapping process guided by Philadelphia 2035 District Plan Process will consider areas with existing industrial land uses such as Navy Yard and Washington Avenue among others to be zoned for mixed industrial use including residential, commercial, IRMX zoning codes even allows for the conversion of old industrial warehouse buildings into live-work arrangement for artisan industries.



Urban Outfitters Headquarters, Navy Yard, Philadelphia
Image source: The American Institute of Architects by Lara Swimmer

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Brooklyn Navy Yard (BYN), New York

Several of New York's industrial precincts (Queens, Brooklyn, Bronx) experienced a decline in manufacturing in the 1970's attributable to the shift of freight transportation from primarily rail facilities to trucks and road network. As such industries no longer required sites close to city centres and port facilities.

However, manufacturing industries provided employment to a large number of inner city residents and in an attempt to protect the manufacturing economy within the city, rezoning initiatives were introduced as early as 1997 to "encourage investment in, and enhance the vitality of, existing neighbourhoods with mixed residential and industrial uses in close proximity and create expanded opportunities for new mixed use communities".

Mixed Industrial land use zones include MX (Mixed industrial and residential) and IBZ (Industrial Business) zones.

BYN is an example of New York's mixed industrial and commercial sites zoned 'Industrial Business Zone' (IBZ). The site is a 300 acre (approximately 121 ha) old navy yard that has been adaptively reused to develop several blocks of mixed use-industrial development. Uses on site range from light industrial, commercial and retail developments, creative industries (film studios, high-end designers) to on-site manufacturing including maritime ship repair and warehouse distribution. The inclusion of



Admiral Row, Brooklyn Navy Yard, New York, image from Municipal Art Society of New York.

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residential development within the site is also being considered. Admiral's Row is proposed to be a 26477 sqm development within BYN industrial site that adaptively reuses two historic buildings and integrates a range of uses within the development including 6875 sqm of supermarket floor space, 7990 sqm of neighbourhood retail, commercial and office space and 11613 sqm of light industrial spaces.

In addition to mixed use-industrial zones, New York City Council recognises the importance of additional zoning controls to preserve the industrial uses against competing residential and commercial developments. Additional controls include vertical zoning, along with proportional floor space incentives for industrial space provisions.

Strathcona Village, Port of Vancouver, Vancouver, Canada

The Port of Vancouver involves a range of enterprises such as cargo terminals, cruise terminals, shipyards, tugboats, railways, trucks, shipping agents, freight forwarders, suppliers, builders, and administrative agencies. A new development called Strathcona Village includes industrial uses on the ground and first floor and above ground residential levels. The development is permissible under the new MX zone, a strip bordering the port industrial zone which allows condominiums with production, design and repair industrial (termed PDR) uses. The full residential offer, 280 units, have been sold, with industrial tenants currently being



Vertical Zoning, City of New York, Image Source Engines of Opportunity 2014

investigated. 70 additional units are being dedicated to social housing.

The developer of Strathcona Village, Wall Financial Corp, has taken on additional construction costs to comply with requirements of the zone which seek to minimise conflict between the uses, such as separate ventilation systems for the two uses.

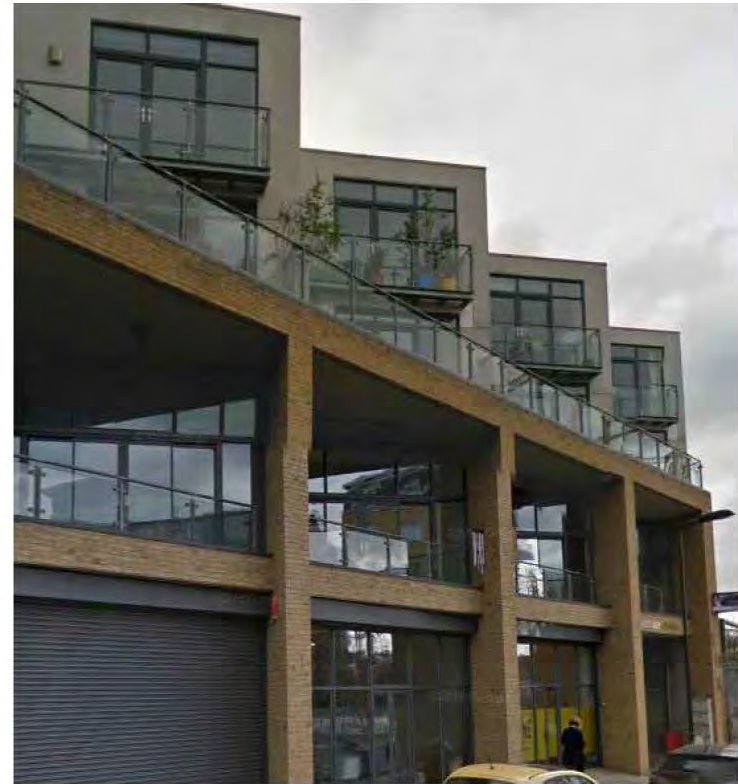
The City of Vancouver have been cautious in implementing the MX Zone and have only applied it in a small strip along East Hastings near the Port of Vancouver, seeking to avoid the kind of speculation on the industrial land that might drive up prices and compromise the preservation of affordable employment lands that the MX Zone aims to achieve.

Industrial uses in the zone are limited to restricted manufacturing and production and research and development (bulk sales and repair-oriented general retail uses are also permissible, as well as most motor-vehicle related services such as car and fuel sales, servicing and repair which would generally be classified as light industrial uses in NSW).

Since the approval of the Strathcona Village project, the City has implemented new requirements for a higher proportion of any similar development to be dedicated to social housing.



Strathcona Village, image from Vancouver Real Estate by Mike Stewart 2015



Andrews Road, Hackney,
London: mixed use industrial
(light manufacturing) with
residential above.

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Mix-Use Development Vulkan, Cologne . 'Industrial reclamation': mix of old and new transforms this site into an economic prospering and desirable area to live and work.



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RPA- THE CHRIS O' BRIEN LIFEHOUSE

119-143 Missenden Road, Camperdown



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UNIVERSITY OF SYDNEY BUSINESS SCHOOL

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ABERCROMBIE STUDENT ACCOMMODATION

University Of Sydney Student Accommodation, Abercrombie St, Darlington



Urban Nest
Student Accommodation

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URBAN NEST STUDENT ACCOMMODATION

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