Submission No 41

LAND RELEASE AND HOUSING SUPPLY IN NEW SOUTH WALES

Organisation: Inner West Council

Name: Ms Tatjana Djuric-Simovic

Position: Executive Strategic Planner

Date Received: 4 October 2017

From: Tatjana Djuric-Simovic [redacted]
Sent: Tuesday, 19 September 2017 3:50 PM
To: David Hale
Cc: Simon Lowe
Subject: Inquiry on land release and housing supply in NSW

Dear Mr Hale
Attached to this email please find Inner West Council submission (with three appendices) to the Parliamentary inquiry on land release and housing supply in NSW.
Please note that the submission has been prepared by Council's Planning team. It has not been endorsed by the Council which has just been elected.

Should you have any queries about this submission, please feel free to contact me or Simon Lowe, A/Manager Policy and Strategy (phone [redacted] or [redacted]

Thank you for the opportunity to comment after the closing date.

Regards
Tatjana Djuric-Simovic | Executive Strategic Planner
Inner West Council
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INNER WEST COUNCIL

Council acknowledges the traditional Aboriginal owners of this land.

Tatjana Djuric-Simovic | Executive Strategic Planner
Inner West Council
P: [redacted]

Ashfield Service Centre: 260 Liverpool Road, Ashfield NSW 2131
Leichhardt Service Centre: 7-15 Wetherill Street, Leichhardt NSW 2040
Petersham Service Centre: 2-14 Fisher Street, Petersham NSW 2049

Council acknowledges the Traditional Custodians of this land, the Gadigal-Wangal people of the Eora Nation.

INNER WEST COUNCIL

PARLIAMENTARY INQUIRY INTO LAND RELEASE AND HOUSING SUPPLY IN NEW SOUTH WALES

Inner West Council (IWC) acknowledges the challenges of Sydney's growth and the benefits of additional housing and jobs in already established and accessible urban areas. A number of state government directions to increase housing supply are already being progressed by Council, including the rezoning of some industrial areas into residential, allowing additional shop top housing in the strip centres or infill residential development in our fine grain historic inner city suburbs.

However, intervention in the supply of housing cannot be guided predominantly by privately led rezonings with poor and uncoordinated planning outcomes. The overarching purpose of the NSW housing supply policy is heavily skewed towards promoting economic development and competitiveness rather than focusing on improving people's quality of life, effectively managing change and protecting the environment. The government has privileged private sector investment in housing property as the key mechanism for delivering housing. Such policy results in residential development that is not driven by a set of moral principles around housing but rather by the highest value in real estate terms. Lower standards of housing are forced on sections of the population that cannot afford the choice. The governing principle for the development in our cities should be based on an economy organized around social needs rather than growth.

Council will continue to strive to protect the unique, historic Inner West urban character, not only for the existing residents but for the future ones as well. Protection of townscape quality of our heritage neighbourhoods is in the interest of all Sydneysiders whether they are residents of our local government area or not.

In this submission we refer mostly to Council's experience of the effects of two recent state urban renewal strategies that include land in our local government area: *Parramatta Road Corridor Urban Transformation* (Nov 2016 – final) and *Sydenham to Bankstown Urban Renewal Corridor* (June 2017 – on exhibition). The main objective in both strategies is to increase residential density in existing built-up areas. To illustrate the implications of the government's strategic urban renewal plans on local government role as a planning authority and provider of local infrastructure, the following Council documents are attached:

Appendix A – Report to Council (March 2017) - *Parramatta Road Corridor Urban Transformation*
Appendix B – Council's Submission to the DPE on *Sydenham to Bankstown Urban Renewal Corridor*, Sep 2017
Appendix C – *Liveability Benchmarks for Central and Southern Sydney*, SGS Economics & Planning, Nov 2015

Housing supply and the role of local government

The NSW Government does not control some of the main levers that affect housing demand – interest rates, tax laws, trends in property ownership across age groups, access to mortgage finance or migration. Within such a socioeconomic context and being aware of its own limited political power, the NSW Government still insists that the only answer to improving housing affordability is to increase the supply of housing and that this be led by the private sector and driven by profit margin. The outcome is overdevelopment of our sites and urban environments, which detracts from high standards of liveability. In response to the state lack of focus on liveability benchmarks, Southern Sydney Regional Organisation of Councils (SSROC), which includes IWC, has identified liveability benchmarks that relate to the wellbeing of a community that could be subject to change as a result of urban intensification (see Appendix C).

Powers to control the levers that affect housing affordability are split between governments at national and sub-national levels. The role of local government has gradually been reduced to a mostly consultative one. Planning controls imposed by local councils and perceived negatively in state policies have little effect on housing affordability because they cannot address the macroeconomic/taxation factors that are the major barriers to the supply of housing diversity and affordability. The planning framework is only one element of a systemic solution. Many of the factors affecting demand and supply of housing are outside the control of the planning system. Planning policies should not be shaped by market desires and speculative profits; rather they should try to direct market activity. Private developers are profit-making entities; project success is tied to maximising investor return. This takes priority over delivering the best housing outcomes for residents, particularly lower-income households.

The relationship between state and local government seems to be predominantly adversarial rather than the collaborative relationships that are fundamental to achieving good delivery of service to the community and stakeholders. A fundamental feature of a good planning system is the movement towards cooperation and consensus and away from schemes that are only regulatory and impose 'upper hand' state controls.

Housing supply and the role of Greater Sydney Commission

Good strategic planning should be more about proactive anticipation of future changes and less of hastily played catch-up with what political and economic forces cause to be. It should be integrated between levels of government and consensus-oriented.

The need to establish the Greater Sydney Commission (GSC) to undertake a role that has in the past and should be undertaken by the NSW Department of Planning & Environment (DPE) demonstrates inadequacies in the capabilities of the latter organisation. Planning officers in local government have observed that a high number of DPE staff are not specialist town planners for example.

In 2016, the GSC released a draft Central District Plan (dCDP) that included the Inner West Council area. Council welcomed the introduction of district planning as a 'missing middle' level of planning, connecting local planning measures with metropolitan planning for Greater Sydney. However, one of Council's main criticisms of the dCDP was that in many respects the level of detail it contained was more akin to that which would be in a metropolitan level plan. The dCDP was expected to provide a clear link between the broad strategic direction for metropolitan

Sydney provided by *A Plan for Growing Sydney* and local level planning. This simply has not eventuated as the focus of the dCDP does not provide the anticipated level of guidance to local planning. Many of the directions and actions in the dCDP are indirect, ambiguous and in most cases identify opportunities without clear metrics or targets.

Principle No.1 in the draft Central District Plan was '*to increase housing choice around all centres through urban renewal in established areas'*. We expect that the final Central District Plan would include benchmarking to evaluate the liveability performance of areas identified for increased residential and employment densities. One of the main government arguments in favour of increased residential density is that the new transport infrastructure (i.e. Metro line) is creating additional population capacity along the Sydenham to Bankstown corridor. Whilst there will be a more frequent service and resultant increased capacity, it may not suffice particularly at the eastern end of the extension given the substantial increases in residential density proposed to the west in Canterbury and Bankstown. Final decisions on the extent of the increase of residential density should be determined through the local housing strategies and be led by local government where a proper evaluation of the impacts of increased densities can be established.

The New South Wales strategic planning hierarchy

Metropolitan and district planning strategies are seen as an essential plank in the NSW planning framework. Planning legislation allows state government to exercise control over the local government jurisdiction.

Since the unsuccessful attempt to redraw the planning system in 2013, the government was actively searching for a new approach to give strategic plans more statutory weight. Planning strategies are not statutory documents although they have statutory consequences because they advise changes to local government development controls. Strategic documents are given legislative weight through the use of Ministerial Directions under Section 117 of the *Environmental Planning & Assessment Act* making them overriding planning instruments at the local level.

The current system of state government planning controls and directions is cumbersome and confusing. The failed Planning Bill 2013 proposed to repeal the mechanism of Section 117 Directions in articulating the government's planning policy framework relating to land use and development for a range of sectors. The Bill proposed to incorporate the strategic elements of existing State Environmental Planning Policies, Section 117 Directions and other current provisions under various instruments into the relevant Local Plan, equivalent to current Council's Local Environmental Plan. This approach has been abandoned and there is now a more ad hoc, uncoordinated strategic planning enforced by the continuous use of Section 117 Directions.

Local government strategic land use plans have no statutory weight and even if expressed in the current Local Environmental Plan, often does not achieve its long-term intent as it can be overridden by state strategic plans at any point in time.

As an example, DPE's *Parramatta Road Corridor Urban Transformation* and *Sydenham to Bankstown Urban Renewal Corridor* strategies both allow developers to use these plans to support their rezoning (planning) proposals – even when the strategy is still on public

exhibition and has not been finalised. This appears to be the antithesis of good administration, governance and orderly planning. Strategic land use capacity and capability in local government has been diminished through the implementation of initiatives such as the planning proposal process. These have undermined long term planning and created ad-hoc decision making that often pre-empts and is contradictory to proper strategic planning.

Council argues that strategic land-use plans should have some form of statutory weight that will provide certainty to the community and business sector likewise. In this way, Council's strategic land-use plans will provide a stronger reference to the local environment plan and more robust guidance to development assessment process. As it is now, many important policy issues are not fully resolved in government strategic plans, which leads to de facto policy-making at the development assessment end. For example, in the *Parramatta Road Corridor Urban Transformation* and *Sydenham to Bankstown Urban Renewal Corridor* strategies, there is no policy on affordable housing, standard benchmarks for recreation/open space or what level of charges/'works in kind' should be borne by the private sector.

In addition, recent government introduction of mandatory Independent Hearing and Assessment Panels will significantly reduce Council's consent authority except for individual houses or alterations to existing houses.

The NSW Planning framework suffers from a lack of effective strategic planning and a clear vision. The main components of the planning system require public consultation, expert opinion and political debate where any progress is measured in years and not months. *Parramatta Road Corridor Urban Transformation* and *Sydenham to Bankstown Urban Renewal Corridor* strategies can be described as capacity assessment tools, concerned primarily with identifying land to accommodate forecast population growth, albeit without proper physical or social infrastructure plans. There is no vision for the future on what sort of city we want to build; very often state urban policies ignore the very principle they are trying to set, e.g. turnover of employment and industrial land to residential in the face of a stated intention to retain local employment land.

Engaging the community in strategic planning is a challenging issue. Recent community consultation organised by the DPE regarding *Sydenham to Bankstown Urban Renewal Corridor Strategy* seems to be regarded as a way to minimise community opposition rather than engaging the community to express preferences in formulating strategic plans. The concept of community engagement is meaningful only if it enables existing or future residents to add value to the planning process that cannot be provided by the professional planners or the elected politicians.

Delivery of physical and social infrastructure

Housing supply and the provision of and planning for infrastructure are inextricably linked. The anticipated increase in population will undoubtedly result in increased need for affordable housing, schools, health care facilities, open space, recreation facilities, road upgrades, new or improved pedestrian and cycling connections and community facilities. Urban densification strategies supported by NSW Government must provide adequate infrastructure and services to support higher-density living. Brownfield urban redevelopment requires an integrated model of infrastructure as much as land release in the greenfield area. As a minimum, the capacity of

existing infrastructure and services such as water, sewerage, gas and power will need to be upgraded to support residential growth.

There is insufficient direct connection between DPE strategic plans for housing supply and the integration of state agencies' activities at the local level. There is no meaningful infrastructure plan included alongside the strategic plans which would outline how schools, health facilities, affordable housing and other categories of social infrastructure will be provided to facilitate population growth in existing suburbs. The evidence for this can be found in the example of *Sydenham to Bankstown Urban Renewal Corridor Strategy* that relies on Special Infrastructure Contribution Plan (SIC) to improve regional infrastructure. However, the SIC Plan is yet to be finalised. If the total cost of infrastructure is determined before the Strategy is finalised, a portion of the uplifted land values could be redirected to pay for some of the infrastructure cost, but only if this occurs before such uplift is capitalised, as land is traded. However, provision of/improvements to infrastructure cannot rely on land value capture alone.

The state government recommended mechanism for delivery of some infrastructure as '*works in kind'* by developers is an ad-hoc tool that does not provide certainty to the community. All other works apart from public transport and major road works shown in the Infrastructure Schedule for urban renewal strategies initiated by state government are to be funded from S94 developer contributions, which are inadequate. Government initiatives to increase housing supply places heavy demands upon Councils' S94 Contribution Plans to build the financial capacity for much of the required additional infrastructure, including the purchase of land for open space, particularly sports fields and local area parks. With high land values and the $20k cap on levies, the purchase of open space is not feasible to meet current needs, let alone with the planned growth. Continued reliance on S94 developer contributions to provide necessary infrastructure to service increased housing supply is not sustainable.

As an example, IWC currently does not meet the minimum floor area requirement per person for libraries as recommended by the State Library of NSW. Council's current properties cannot accommodate the level of growth required to meet this standard, and due to the increasing land values it is not expected that IWC would be able to meet this standard. Funds and/or strategies to address this shortage are required to ensure IWC meets the standards, or at the very least does not reduce the current level, of library floor space provided per person.

Despite evident uncertainty on funding to cover the investment in streetscape, public domain improvement and related community infrastructure, government strategic plans are proposed to be implemented through planning regime changes led by the private sector.

Rigidly applied housing and employment targets are prone to failure in terms of achieving the desired vision for sustainable and attractive communities, particularly when supporting infrastructure is not delivered in the required timeframe. *Sydenham to Bankstown Social Infrastructure Study*, prepared by ARUP, finds it hard to establish the capacity of existing social infrastructure and to apply trustworthy benchmark standards for the urban renewal area. If that is the case, then social infrastructure requirements provided for each of the precincts are inaccurate and unreliable.

Social infrastructure is the interdependent mix of places, buildings, facilities, projects, services and networks that holds a community together. Affordable housing is a category of social infrastructure that was purposely omitted from the revised *Sydenham to Bankstown Strategy*

and final *Parramatta Road Corridor Urban Transformation*. Despite our repeated request to the DPE for affordable housing targets or reference to the mechanisms that are needed (value uplift capture or mandatory contributions on all residential development), the government's urban renewal strategies still do not provide any policy options to address the issue of affordable housing.

Research shows that increasing supply, without intervention in the market, will not achieve housing diversity, choice or affordable supply. It is widely accepted that a complex range of demand and supply drivers must be addressed to achieve housing affordability and that, if change is adopted, the effects will be long term. The needed actions are amply documented in the *Report on the NSW Parliamentary Inquiry into Social, Public and Affordable Housing*, and the *Report on the Commonwealth Senate Economic References Committee Inquiry into Affordable Housing in Australia*. Both documents identified the need for immediate action to address the escalating housing affordability crisis in Sydney (and elsewhere in Australia) and indicated that a mandatory inclusion of affordable housing (inclusionary zoning) and value uplift capture are the most workable and successful mechanisms to achieve affordable housing in the short term.

The only way to achieve affordable housing that will address the immediate housing and homelessness crisis is to mandate a component of all residential development as affordable housing (3-4% is a generally proposed rate in Sydney, although higher rates of 10-50% are used in other global cities' urban renewal projects). Further, there needs to be capture of the value uplift that is created by upzoning, and significant investment of public money in public transport infrastructure for public benefit. Most authorities push for capture of 50% of land value uplift as contribution towards public benefits (including affordable housing) in renewal areas.

The NSW Government needs to provide clarity on the concept of value capture and Voluntary Planning Agreements (VPAs). The DPE's draft guideline on VPAs is unclear as to whether VPAs can be used for value capture. The guideline emphasised that VPAs should not be used to capture 'windfall gain', yet what exactly constitutes 'windfall gain' within the NSW planning system was not defined. The rezoning of land for higher density housing delivers windfalls in value to the land owner at the time of the rezoning. Value capture is an approach to 'capture' a share of this increased value for the community to be used to build new or improve existing amenities and infrastructure.

Council requests, in addition to mandating a component of developments as affordable housing, that affordable housing be funded in part by land value capture created by the increased density rather than the value being solely directed to a few fortunate landowners.

Liveability of our neighbourhoods and increased urban density

Recent state government strategies for urban densification and increased housing supply did not consider liveability as one of the key outcomes for planning. Southern Sydney Regional Organisation of Councils (SSROC), of which IWC is a member council, adopted a report and position on liveability (see http://ssroc.nsw.gov.au/planning-and-advocacy/liveability-benchmark-report/) A copy of the report is attached as Appendix C (*Liveability Benchmarks for Central and Southern Sydney, SGS Economics &Planning, 2015*).

The IWC area estimated resident population for 2016 is 192,030, with a population density of approximately 55 persons per hectare. The average household size is 2.35 people so the overall urban residential density (including open space, commercial uses and transport) can be expressed as approx. 22 dwellings per hectare. The fine grain, heritage conservation areas of the Inner West may accommodate some infill development with higher density but not the density proposed by the latest government strategic plans, without losing what makes the Inner West so attractive a place to live and spend time in.

Residential, employment and social infrastructure targets for each of the precincts along the *Sydenham to Bankstown Urban Renewal Corridor* are based on the DPE feasibility model whose criteria and parameters are not made public. Furthermore, the capacity of residential zoned land to accommodate new dwellings considered only the physical ability of land to be developed (planning capacity) and commercial viability (market capacity). The social impact of the dramatically increased density and loss of existing affordable housing due to gentrification have not been examined at all. Council holds grave concerns for the sudden and divisive impact this significantly increased residential density will have on established communities. Detailed investigation is needed to validate the actual capacity of nominated precincts to accommodate the stated dwelling or employment numbers in a realistic and sustainable manner.

A good urban plan examines a city not as population densities and transport lines but as an evolved and refined habitat. Sydney's densification is ad hoc and uneven, led by politicised planning decisions. The department's strategy for increased residential and employment density, expressed as numbers of storeys, is only a broad planning tool. The blanket increase of building heights does not take into consideration building footprint, which can easily lead to overdevelopment with unacceptable site density.

There is no strategy for the orderly development of potentially amalgamated blocks. We have asked for greater detail in master planning and a staged implementation approach for all urban renewal precincts to avoid uncoordinated private sector responses. In respect of large projects, a master plan should be created within the plan itself to reduce the amount of discretion for developers. This should be a government-led initiative and not wait on the preparation of a plan by developers.

Government initiatives for the increase of housing supply and increased density in established areas must include benchmarking to evaluate the liveability performance of areas identified for increased residential and employment densities. There also needs to be an open source data platform that enables people to monitor compliance with the benchmarks to ensure full transparency and accountability is successfully achieved.

Retention of industrial land

Increased housing supply in established brownfield urban areas relies on the conversion of industrial land into residential. The state strategic plans treat industrial zones as redundant assuming that manufacturing is in a state of decline. On the contrary, manufacturing activities interwoven with creative industries have found their home in the Inner West local government area. They generate jobs close to homes, contribute to liveability and enliven local communities.

A recent study published by the Australian Research Council Discovery Project examined the enterprise and cluster dynamics at the creative industries/manufacturing interface in the Carrington Road precinct in Marrickville[1] . The Study conclusion is that *the creative industries/manufacturing interface is vital to the economic functioning of cities*. Proposed rezoning of Carrington Road in *Sydenham to Bankstown Urban Renewal Corridor* threatens a unique creative industries/manufacturing interface precinct. The assumption that inner-city manufacturing can and will simply relocate to large greenfield sites on the city fringe is not borne out empirically. Whatever is left of industrial land in the inner city area is an asset and should not be turned into apartments with a broad brush planning approach.

[1] Gibson, C, Grodach, C, Lyons, C, Crosby, A and Brennan-Horley, C (2017) *Made in Marrickville: Enterprise and cluster dynamics at the creative industries-manufacturing interface, Carrington Road precinct*. Report DP170104255-2017/02, Australian Research Council Discovery Project: Urban Cultural Policy and the Changing Dynamics of Cultural Production, QUT, University of Wollongong and Monash University.

Item No: **L0417 Item 1**

Subject: **PARRAMATTA ROAD URBAN TRANSFORMATION STRATEGY**

File Ref: 17/6032/22203.17

Prepared By: Con Colot - Senior Strategic Planner & Projects and Roger Rankin - Team Leader Strategic Planning

Authorised By: Simon Manoski - Group Manager Strategic Planning

SUMMARY

This report is a follow-up to the December 2016 report to Council, which summarised the main elements of the Parramatta Road Urban Transformation Strategy (the PRUTS) adopted by the NSW State government in November 2016. This report provides a more detailed analysis of the implications of the Strategy for the Inner West Council, identifies areas of concern and recommends next steps

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RECOMMENDATION

THAT the report be received and noted and LRAC provide any feedback.

Proposed Council Recommendation

THAT:

1. **Council resolves to receive and note the report.**
2. **Council's Group Manager Strategic Planning report back to Council with a draft 'policy guide' for considering proposed Local Environmental Plan (LEP) amendments for areas affected by the PRUTS.**
3. **Council maintains an evidence-based approach to policy development for the PRUTS area.**
4. **Council's Group Manager Strategic Planning reports back to Council with a draft project plan which outlines additional strategic land use and growth infrastructure analyses required to underpin increased density within the Corridor and its surrounds as identified within the PRUTS.**
5. **A meeting be sought with the Greater Sydney Commission to:**
   - i. **request assistance for the preparation of new planning instruments required to implement PRUTS;**
   - ii. **request funding for local infrastructure and services in the Corridor;**
   - iii. **request advice on other forms of developer contributions available to Council to implement within the Corridor such as voluntary planning agreements or value capture mechanisms; and**
   - iv. **discuss details of the competitive application process through which Council will obtain funds from the PRUTS Urban Amenity Improvement Plan.**

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1. BACKGROUND

Parramatta Road urban transformation plans were published by NSW UrbanGrowth in November 2016. The area spans a distance of 20km from Granville in the west to

Camperdown in the east and comprises eight Precincts that have been identified for further growth, with four of those Precincts being located in the Inner West Council area (see Figure)

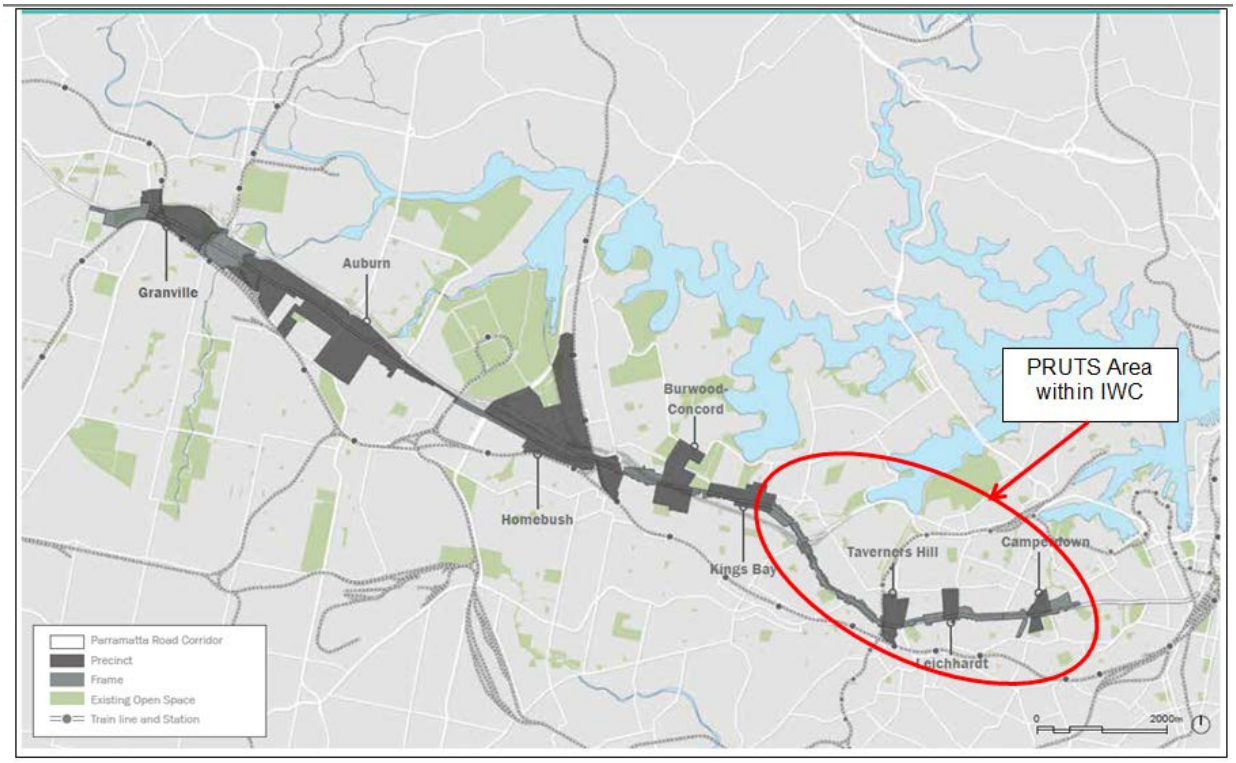

Figure 1 PRUTS Area

These are:

- Kings Bay (mostly in Burwood & Canada Bay with a small section in the Inner West Council area);
- Taverners Hill;
- Leichhardt; and
- Camperdown.

Government plans comprise the following main documents:

- Parramatta Road Urban Transformation Strategy (**the PRUTS**)

- Implementation Tool Kit
  - Implementation Plan 2016-2023
  - Planning and Design Guidelines (**the Guidelines**)
  - Infrastructure Schedule
  - Urban Amenity Improvement Plan

- Section 117 Ministerial Direction 7.3 Parramatta Road Urban Transformation Strategy.

A previous report was provided to Council on 6 December 2016 and Council resolved (C1216) that:

1. *The report be noted and a further report be brought back to the February 2017 Council Meeting with a more detailed analysis;*
2. *Council work collaboratively with Strathfield, Burwood, Canada Bay and City of Sydney councils in advocating for provision of centre running public transport on Parramatta Road from "Day 1";*
3. *Could work collaboratively with other councils along the Corridor to adopt a consistent approach to assessing Planning Proposals where proponents want to the Out of Sequence Checklist; and*
4. *An urgent meeting be sought with the Department of Planning & Environment and Greater Sydney Commission to resolve the implications of having to consider Planning Proposals prior to the required precinct wide studies and planning being completed.*

The resolutions have been actioned as follows:

2. Council officers have discussed provisions for centre running public transport on Parramatta Road with the other four councils referred to in point 2. Inner West and Canada Bay Councils have moved forward on this front and are co-funding the Parramatta Road Light Rail Opportunity Study. This study considers the merits of appropriate environmentally sustainable centre running public transport options. This will be the subject of a report to Council in April 2017.
3. Council officers have initiated discussions with other PRUTS corridor councils to consider how Planning Proposals in the area should be dealt with.
4. Council officers have held a meeting with the Department of Planning and Environment (DPE) and UrbanGrowth NSW. The Greater Sydney Commission has delegated liaison on implementation of PRUTS to the Department of Planning and Environment. Issues discussed at that meeting and the Department's responses to these matters are considered in this report.

The remaining sections of this report address Council resolution C1216 point 1 above. It describes each of the main Strategy documents (**See Attachment 1**), their potential implications for the Inner West Council, and possible actions that respond to these implications. These might be actions Council can pursue on its own such as Local Environmental Plan (LEP) and Development Control Plan (DCP) amendments, issues that may justify advocacy by Council to State Government either solely or in collaboration with other Councils and bodies, or possible partnerships, for example with the University and NSW Health Sydney Local Health District for the Camperdown Biotechnology Precinct.

1. STATUTORY WEIGHT OF THE PRUTS

The PRUTS and the Parramatta Road Corridor Implementation Tool Kit are the subject of a Section 117 Ministerial Direction, 7.3 *Parramatta Road Corridor Urban Transformation Strategy*. The Direction, issued on 9 December 2016, gives the PRUTS and the Implementation Tool Kit significant weight in assessing proposed Local Environmental Plan (LEP) amendments (also known as planning proposals). The Direction explicitly requests that a planning proposal must be consistent with the PRUTS and provisions of the Guidelines, in particular '*the requirements set out in Section 3 Corridor-wide Guidelines and the relevant Precinct Guidelines'*.

Section 3 of the Strategy contains strategic maps that identify urban structure, heritage, subdivision pattern, open space, public domain and transport in the relevant areas. Precinct Guidelines contains new planning controls for zoning, building heights and floor space ratio (FSR) to provide for the increase of both residential and employment densities.

The Strategy does not rezone land in Councils' LEPs but enables spot rezoning to occur progressively. Page 78 states that "*local planning proposals can be prepared by land-owners to amend the zoning and/or planning controls that apply to their land. Planning proposals will need to be generally consistent with the Strategy. Any departures from the Strategy will need to be supported by a detailed justification. The Minister for Planning will decide whether the planning proposal has adequate justification to proceed to the next stage, and whether it has met any requirements for community consultation and further studies'.*

The Strategy claims that current local planning controls such as zoning, height and floor space ratios constrain development renewal to justify State intervention through PRUTS to increase the density and scale of development and deliver additional growth.

UrbanGrowth NSW suggested at a meeting held on 1 February 2017, that rezonings of the Taverners Hill, Leichhardt and Camperdown Precincts should not be approved until public transport service improvements on Parramatta Road that are related to the completion of West Connex are implemented. This advice contradicts the obvious intention of the Strategy to enable planning proposals to proceed prior to the traffic and transport improvements being completed.

It should be noted that the major inconsistencies between the PRUTS and Council's current development controls are not particularly related to land use but to the density expressed through floor space ratio (FSR) controls. The exception is the proposed rezoning of industrial land at Taverners Hill and Camperdown. The recommended planning provisions in the PRUTS are largely consistent with the industrial precinct study options approved for exhibition by Leichhardt Council in 2016.

Redevelopment of the priority precincts to higher densities will be enabled by planning proposals which respond to the recommendations of the PRUTS. It is necessary to continue a dialogue with the Department of Planning & Environment, UrbanGrowth NSW and Greater Sydney Commission to clarify the hierarchy of planning instruments at local and State level.

3. A CHALLENGE TO COUNCIL IN ASSESSING PLANNING PROPOSALS

The PRUTS allows submission of planning proposals that rely on the Guidelines and other supporting documents. The governance framework applying to the corridor gives the role of relevant planning authority to councils. Assessment of private planning proposals and decisions whether Council should support proposals to progress through to the LEP Gateway for determination will consider the PRUTS and other relevant planning controls.

The Implementation Plan 2016-2023 recommends that councils amend their LEPs and DCPs to incorporate the Strategy's provisions in the longer term with planning proposals able to be submitted in the initial release areas immediately.

It is expected that planning proposals will be lodged and LEP amendments made prior to finalisation of planning for enhanced public transport services along Parramatta Road by Transport for NSW (TfNSW) or review of Council's developer contribution plans. This means that future land use and provisions of transport, other infrastructure and amenities may not be adequately coordinated. It is also unclear how local infrastructure will be provided (amended Section 94 Plans or voluntary planning agreements), or how the inconsistency between the Strategy's affordable housing contribution rate (minimum 5%) and Council's own higher affordable housing rate (15%) will be resolved.

It is critical that these issues are resolved prior to council having to evaluate planning proposals within the corridor. Currently, affordable housing and other identified contributions can only be provided through a voluntary planning agreement (VPA). VPAs are however voluntary and developers are not obliged to enter such agreements with Council.

Table 1: Issue and Recommendations

No.	Issues for Council	Suggested or Recommended Approach
1	**Spot Rezonings vs Precinct Planning** There is a significant risk that there would be developer pressure for spot rezonings to move faster than the infrastructure and precinct planning resulting in poor developmental outcomes. This is most likely to occur in the short to medium term period leading up to Council implementing a comprehensive Local Environmental Plan, Development Control Plan and a Section 94 Developer Contribution Plan. Council officers note that the area has, and is continuing to experience, a high level of developer interest since the Strategy publication in November 2016.	It is recommended that an approach be prepared that outline how Council will consider LEP proposals in the interim period until comprehensive plans are established. This multi-faceted approach should include: • Council officers report back to Council with a draft 'policy guide' for considering proposed LEP amendments for areas affected by the Strategy. • Council liaise with the GSC and DPE in preparing its policy guide.
2	**Development Applications along the PRUTS Corridor** Council is already experiencing pressure from developers to in relation to Development Applications seeking height and a FSR reflecting those stated in the PRUTS. For example, D/2015/744 for 447-451 Parramatta Road, 32 Jarret Street, Leichhardt, lodged an appeal against a deemed refusal of the application for a 6 storey mixed use building along Parramatta Road. The Land and Environmental Court upheld the appeal and up-lift in FSR from	It is recommended that a joint approach to such development applications be developed by Council's Development Assessment Group. This approach will be shaped by the relevant studies and policies of Ashfield, Marrickville and Leichhardt Councils such as the Parramatta Road/Norton Street Urban Design Study. This could be achieved by the 'policy

No.	Issues for Council	Suggested or Recommended Approach
	1.5:1 to 2.12:1, and as part of the judgement stated "*the State Government has flagged its intent in terms of desired future development form along this section of Parramatta Road. If implemented as proposed the Strategy would result in changes to the character of Parramatta Road and the development would not be incompatible with that character. I accept that in the interim however, this application must be determined under the existing controls not potential future controls*".	guide' as recommended in the above comment.

4. MAJOR INCONSISTENCIES BETWEEN COUNCIL'S CONTROLS and RECOMMENDED PLANNING CONTROLS IN THE GUIDELINES

4.1 Taverners Hill (Precinct and Frame Area)

Please refer to Attachment 3 for comparison maps between existing and proposed zoning, FSR and height maps for Taverners Hill Precinct.

Proposed Growth Projections in the Guidelines

	2023	2050
Population	900	3265
Dwellings	451	1,350
Jobs	3,720	4,110

Precinct

	The Guidelines	Leichhardt LEP 2013	Marrickville LEP 2011
Zone	B4 Mixed Use	IN2 Light Industrial	B6 Business Development
	R3 Medium Density Residential *Note: Kegworth Public School shown as R3 Medium Density Residential	R1 General Residential SP2 Special Activities (Educational Establishment)	R2 Low Density Residential
Building Heights	17-21m along Parramatta Road 30m for 67-73 Lords Rd 32m for Kolotex site	No controls except for Kolotex site (16/32m)	9.5m except on the corner of Old Canterbury Rd and railway line (17m)
FSR	1 – 2.4	0.5 - 1	0.6 – 1.1

Frame Area

	The Guidelines	Ashfield LEP 2013
Zone	B6 Enterprise Corridor	B6 Enterprise Corridor
Building Heights	16m along Parramatta Road	10-15m
FSR	2	1.5-2

Comment:
The Guidelines allocates the B4 Mixed Use zone to Precinct land along Parramatta Road to facilitate residential development, with some non-residential uses at the ground level. The Standard Instrument lists mandatory objectives and land uses in the B4 Mixed Use zone; however, Council has the opportunity to provide additional objectives and land uses to shape the character of this zone.

Despite the statement that permissible uses in the recommended zones will be determined by Inner West Council there is little opportunity for Council to determine the character of this zone, which is defined by Standard Instrument mandatory land uses.

The Guidelines suggests that alternatively a B6 Enterprise Corridor could be considered for land fronting Parramatta Road, subject to residential development being a permissible use in the B6 zone. Currently the B6 Zone in both Marrickville LEP 2011 and Ashfield LEP 2013 prohibits residential accommodation. DPE advice on the use of Standard Instrument zone B6 Enterprise Corridor (Practice Note PN 11-002) is that it should be used '*only as part of a mixed use development*'. This is to occur on land currently zoned IN2 Light Industrial to provide for the growth of future employment lands that contribute to the LGA's diversity and local services.

The alternative B6 Enterprise Corridor is consistent with the Leichhardt Industrial Precinct Planning study options endorsed for exhibition by Leichhardt Council in 2016. A B6 Enterprise Corridor zoning aligns with much of the current uses along Parramatta Road and still retains opportunity for some light industrial uses. It would provide more commercial opportunities to support any future residential development in the area, particularly for affordable and key worker housing. Consequently, a proposed rezoning to B6 Enterprise Corridor from IN2 Light Industrial land should not be viewed as a loss of industrial land but rather an evolution to 'new economy' employment land.

Consistent with the Department of Planning and Environment's LEP Practice Note (10-001) the site of the Kegworth Public School adopts the adjoining land use (R3 Medium Density Residential). This is a departure from the policy of Leichhardt LEP 2013 to adopt a SP2 Special Infrastructure (Educational Establishment) zoning in order to protect educational land from redevelopment. Council should seek to retain the SP2 Special Infrastructure zoning in the new Inner West LEP safeguard educational land uses.

The proposed development standards (FSR and heights) mean that most of the residential density growth will be accommodated along the Parramatta Road. Low

density areas are planned to be up-zoned to medium density where town houses or terraced type dwelling may be built where lots were amalgamated.

The Planning Proposal at 67-75 Lords Road, Leichhardt exemplifies this point. The former Leichhardt Council strongly opposed the rezoning from IN2 Light Industrial to R3 Medium Density Residential due to loss of employment lands, however DPE issued a Gateway Determination and the Sydney Central Planning Panel exhibited the planning proposal.

Council held a public meeting on 7 February 2017 to discuss the planning proposal with over 50 local residents and stakeholders in attendance. The planning proposal is strongly opposed by both Council, local residents and stakeholders due to loss of employment land and overdevelopment. Currently over 30 businesses and 60 workers operate on site however the proposed redevelopment seeks to replace this employment with a child care centre and a café.

4.2 Leichardt (Precinct and Frame Area)

Please refer to Attachment 4 for comparison maps between existing and proposed zoning, FSR and height maps for Leichhardt Precinct.

Proposed Growth Projections in the Guidelines

	2023	2050
Population	1,680	2,160
Dwellings	880	1,100
Jobs	3,250	3,602

Precinct

	The Guidelines	Leichhardt LEP 2013	Marrickville LEP 2011
Zone	B2 Local Centre is proposed for the majority of the Precinct Note: Leichhardt Public School is shown as B2 Local Centre	B2 Local Centre SP2 Special Activities (Educational Establishment)	B2 Local Centre
	R3 Medium Residential for selected pockets fronting Balmain Road and along Crystal St.	R1 General Residential	B2 Local Centre
Building Heights	22 metres (approx. 6 storeys) along Parramatta Road, Norton Plaza site and adjacent lots 17 metres (approx. 4-5 storeys) along Norton Street	No controls	14m

FSR	1.9 – 3	0.5 - 1	1.5

Frame Area

	The Guidelines	Leichhardt LEP 2013	Marrickville LEP 2011
Zone	B2 Local Centre	IN2 Light Industrial (Western side) B2 Local Centre (Eastern side)	B2 Local Centre and B6 Enterprise Corridor (Western side) B2 Local Centre (Eastern side)
Building Heights	17 – 22m	No controls	14m
FSR	1	1	1.5

Comment:
The population growth in the Guidelines may be slightly underestimated. A report to the former Leichhardt Council on 6 February 2014 on Demographic projections for Leichhardt confirmed that the dominant migration pattern in Leichhardt has been one of young adults (20-35) with growing families. This trend is confirmed in the draft Central District Plan (Nov 2016).

The PRUTS recommends a R3 Medium Density Residential zone across four areas in the Precinct. The recommended scale of development (FSR and height of building) is consistent with residential flat buildings of 4 to 6 storeys. The mandatory land use that defines this Standard Instrument zone is '*multi dwelling housing*' (villas and townhouses with the height of up to 2 stories); however, Council has the opportunity to include additional objectives and land uses to shape local characteristics. It is noted that the current zoning of either R1 or B2 already permits all types of residential accommodation, including '*residential flat building*'.

Consistent with the Department of Planning and Environment's LEP Practice Note (10-001) the site of the Leichhardt Public School adopts the adjoining land use (B2 Local Centre). This is a departure from the policy of Leichhardt LEP 2013 to adopt a SP2 Special Infrastructure (Educational Establishment) zoning in order to protect educational land from redevelopment. Again, Council is likely to retain the SP2 Special Infrastructure zoning in the new Inner West LEP to safeguard educational land uses.

The PRUTS recommends the retention of the B2 Local Centre zoning along Norton Street, representing no policy change from Leichhardt LEP 2013. However, the PRUTS recommends substantial increases to maximum building heights and FSRs to allow 4 to 6 storeys developments. At this stage of redevelopment, it is not possible to precisely align proposed FSR and building heights due to existing fine grain subdivision pattern that would require site amalgamation in order to enable higher residential density. These proposed development controls should be interpreted as maximum figures.

An analysis of heritage elements is provided within the Parramatta Road Corridor Fine Grain Study, detailing proposed local character areas zones, heritage interface, potential heritage items and more detailed built form guidance (proposed massing) on

2 study sites along Parramatta Road. The Study supports reuse and additional storeys above an original significant heritage building with the front wall setback from the existing parapet/front building line to minimise its visibility from the street.

The *Parramatta Road and Norton Street Urban Design Study*, endorsed for exhibition by Leichhardt Council (Feb 2016) demonstrated that this approach is not always desirable. The upper setback can increase the visibility of the upper levels and may make the additional mass to the building appear bulkier. This could present a problem in the conservation areas along Parramatta Road where higher building heights are recommended. More innovative design approaches are needed instead of broad brush controls requiring setback for additional storeys above the existing buildings.

4.3 Camperdown (Precinct and Frame Area)

Please refer to Attachment 5 for comparison maps between existing and proposed zoning, FSR and height maps for Camperdown Precinct.

Proposed Growth Projections in the Guidelines

	2023	2050
Population	720	1,390
Dwellings	389	700
Jobs	1,400	2,285

Precinct

	The Guidelines	Leichhardt LEP 2013	Marrickville LEP 2011
Zone	B5 Business Development (north of Parramatta Road)	IN2 Light Industrial	N/A
	R3 Medium Density Residential (along Johnston Creek)	IN2 Light Industrial	N/A
	B4 Mixed Use (along southern side of Parramatta Road)	N/A	B2 Local Centre
	R4 High Density Residential (Hordern Place Industrial Estate)	N/A	IN2 Light Industrial
Building Heights	16 – 17m 24m along Parramatta Road 32m along Mathieson & Water Street 17m (Hordern Place Industrial Estate)	No controls	17-23m (along Parramatta Road) 14-20m (along Denison Street) No controls for Hordern Place Industrial Estate
FSR	1.5-1.6 (along Johnston Creek) 2.1 - 4 (along Parramatta Road	1	1.5-2 (along Parramatta Road) 0.95 (Hordern Place Industrial Estate

	1.6 (Hordern Place Industrial Estate)

Frame Area

	The Guidelines	Leichhardt LEP 2013	Marrickville LEP 2011
Zone	B2 Local Centre along Parramatta Road B4 Mixed Use along Parramatta Road B6 Enterprise Corridor along Bridge Road	B2 Local Centre along Parramatta Road	B4 Mixed Use along Parramatta Road B5 Business Development along Bridge Road
Building Heights	14-17m	No controls	14m
FSR	1.5-2	1	0.95 - 1.5

Comment:
The PRUTS identifies the Camperdown Precinct as a specialist biotechnology hub anchored by the activities of both the University of Sydney and the NSW Health Sydney Local Health District. The aim is that health and education partnerships with private industry will attract relevant industries such as medical device companies, imaging companies, radiology intervention technologies, bioinformatics companies, surgical suppliers, pharmaceutical companies, medical fabrication and health-related start-ups. In order to facilitate the development of the biotechnology hub, it is critical that adequate employment floor space is provided and safeguarded from encroaching residential development as the Precinct redevelops.

The Guidelines propose supporting land uses associated with the Royal Prince Alfred Hospital and University of Sydney in the form of student accommodation or '*short-stay visitors accommodation'*, as with serviced-apartments. Allocated areas for this type of residential accommodation are along Johnston Creek and Hordern Place Industrial Estate. It is not clear if student and other types of accommodation are calculated towards the proposed growth projections in the Strategy.

The PRUTS states that "*residential uses are not encouraged in the Enterprise and Business areas*" (page 122). However Council is already experiencing developer pressure to allow student housing in the area shown as B5 Business Development zone in the Guidelines. The B5 Business Development zone is consistent with the Leichhardt Industrial Precinct Planning Study policy options endorsed for exhibition by Leichhardt Council in 2016, to cater for the future employment floor space of the biotechnology hub. The incorporation of student housing threatens the Precinct's potential to redevelop as an employment Strategic Centre.

The protection of the B5 Business Development zone from residential uses is hampered by the text and the map of Camperdown recommended land uses in the Guidelines (pgs.268/269). The text and map are erroneous and do not match, making no reference to the importance of the B5 Business Development zone. Additionally, it is assumed that the B6 Business Enterprise zone shown on the northern side of Parramatta Road in the PRUTS Guideline has been incorrectly referenced as being "recently rezoned to B6', this area has actually been recently rezoned to B5 Business

Development as part of LEP Amendment No. 4 to the Marrickville Local Environmental Plan 2011 (MLEP).

The Guidelines propose terrace type dwellings and residential flat buildings for Hordern Place Industrial Estate. However, the permissible heights (17m/4 storeys - 24m/6 storeys) will facilitate residential flat buildings and not terraced houses. The DPE description of terraced houses (multi dwelling housing/terraces) in the recently exhibited draft Medium Density Housing package is that they have a maximum height of 9m.

Similar to the Taverners Hill precinct, a challenge for Council in the Camperdown Precinct will be to develop planning controls which will safeguard adequate future employment lands and the needs of the biotechnology hub, against pressure from developers for residential development in the B5 and B6 zones.

4.4 Kings Bay Precinct

Please refer to Attachment 6 for comparison maps between existing and proposed zoning, FSR and height maps for Kings Bay Precinct.

The area is predominantly in Canada Bay and Burwood, with a relatively small area on the south side of Parramatta road in Haberfield affected by the Ashfield LEP 2013.

Precinct

	The Guidelines	Ashfield LEP 2013
Zone	B6 Enterprise Corridor along Parramatta Road	B6 Enterprise Corridor
	R2 Low Residential along Dalmar Street	R3 Medium Density Residential
Building Heights	21m along Parramatta Road	10m
	12m along Dalmar Street	8.5m
FSR	2.4 along Parramatta Road	1.5- 2
	1.4 along Dalmar Street	0.7

Frame

	The Guidelines	Ashfield LEP 2013
Zone	B6 Enterprise Corridor along Parramatta Road	B6 Enterprise Corridor
	R3 Medium Density Residential along Dalmar Street	R2 Low Residential
Building Heights	21m along Parramatta Road	10-15m
	12m along Dalmar Street	8.5m

FSR	2.4 along Parramatta Road	1.5- 2
	1.4 along Dalmar Street	0.7

Comment:
A B6 Enterprise Corridor is proposed for land along Parramatta Road. Currently B6 Zone in Ashfield LEP 2013 prohibits residential accommodation and is designed to achieve employment uses and local services. Areas along Dalmar Street are proposed to be upzoned from current R2 Low Density Residential to R3 Medium Density zone. A new local centre is planned in the Precinct but not on the land within IWC. The tallest buildings permitted will be located in the centre of the Precinct, next to Rosebank College and will be up to 80 metres (25 storeys).

5. INFRASTRUCTURE FUNDING

Corridor infrastructure (social and physical) must respond to population growth and change. Some existing infrastructure is ageing or is insufficient to meet the needs of increased residential density. The PRUTS identifies the transport, open space, community, education and health facilities required to support the proposed growth across the Corridor.

The Urban Amenity Improvement Program (UAIP) will provide $198 million to the Corridor for streetscape upgrade (tree planting, lighting, new pavements), new or improved open spaces, plazas and town square and new walking and cycling links to key transport nodes and open spaces. The UAIP has identified improvement works for each of the precinct within the IWC to be delivered in the next five years. (See **Attachment 1** for more details).

Councils are expected to apply to the State Government for the funding to build the UAIP infrastructure through a competitive process. In the event that councils do not take up the opportunity to have those specific works funded under the UAIP, it is assumed they will be funded through local development contributions and/or directly funded by the respective council/s.

The Strategy proposes '*a combination of State and local contributions in the Corridor, along with the use of the UAIP to fund the additional works and services required*' (pg.73). The GSC has been tasked to '*establish a robust funding mechanism to apply to new/rezoning/development proposals that will fund the local and regional infrastructure demands required to service the future population growth in the renewed Corridor*'.

The Parramatta Road Corridor Infrastructure Schedule (the Schedule) is one of four documents that forms the Implementation Tool Kit. It is recommended that local councils amend their development contributions plans to account for the proposed population growth and local infrastructure using the Schedule as a guide.

Council's current Contributions Plans need to be amended as a matter of urgency, in order to build financial capacity for much of the additional infrastructure required in the Parramatta Road Corridor, Sydney Metro, and other IWC wide major redevelopment

sites. Table 2 below identifies each Section 94 Developer Contribution Plan currently applicable to IWC, some of which are over 18 years old.

Table 2 Applicable Section 94 Plans to IWC

Section 94 Development Contribution Plans currently applicable to IWC	Date of Commencement
1. Leichhardt Council Section 94 Developer Contributions Plan for Transport and Access	**1999**
2. Leichhardt Council Section 94 Developer Contributions Plan for Community Facilities and Services	**2005**
3. Leichhardt Council Section 94 Developer Contributions Plan for Open Space and Recreation	**2005**
4. Marrickville Section 94/94A Developer Contributions Plan	**2014**
5. Ashfield Council Section 94 Developer Contributions Plan	**2010**
6. Ashfield Council Section 94A Developer Contributions Plan	**2011**

The PRUTS has generated an immediate need to review all Section 94/94A Developer Contribution Plans in order to adequately resource the envisaged growth. The former Leichhardt Councils' current Section 94 Developer Contribution Plans are outdated and all three of the former Ashfield, Leichhardt and Marrickville areas are subject to the government-imposed $20K developer contribution cap. There is no mechanism to enable IWC to levy for the additional local infrastructure generated by PRUTS through any of its existing Section 94 Developer Plans.

The PRUTS Infrastructure Schedule contains a guide to what the Section 94 Developer Contribution Plan should contain. The Schedule is however not complete and has numerous limitations which include:

- Not having considered increased development in adjacent areas;
- Not specifying locations or costs for new embellishment projects such as new community facilities or open space;
- Many projects described and listed require additional investigation and modelling;
- Some may have varying delivery times, some identified infrastructure is to be provided outside of IWC in other LGA areas; and
- All costs listed are based on a 2016 cost unit.

Accordingly, local infrastructure will not be adequately levied for spot rezonings occurring along the PRUTS corridor until such time as IWC implements a new Section 94 Developer Contribution Plan. IWC should address this issue as a matter of urgency. Notwithstanding, the $20K developer contribution cap will mean that it is very unlikely that the full cost of infrastructure delivery will be met.

The Strategy assigns responsibility to the Greater Sydney Commission (GSC) to '*advise and assist councils in the revision of local contributions plans to address funding of local infrastructure and services in the Corridor*'.

The Strategy also requests councils to prepare model 'development consent' conditions for inclusion into future planning proposals/rezonings to enable the levying of monetary contributions that can be used to fund Affordable Housing. However, unless *State Environmental Planning Policy No. 70 - Affordable Housing (Revised Scheme)* is amended to include IWC then affordable housing can only be delivered through Voluntary Planning Agreements (VPAs).

The IWC should request GSC financial assistance to review all contributions plans, rezonings proposals, planning controls, and develop mechanisms to help deliver more Affordable Housing within the area as soon as practicable.

6. OTHER ISSUES AND RECOMMENDATIONS

The successfully implementation of the PRUTS is reliant on Council's ability to find effective solutions to the issues outlined in Table 3 below. It represents a significant workload which will predominantly fall to IWC's Strategic Planning team, which will need to be adequately resourced by Council.

Table 3: Other Issues and Recommendations

No.	Issues for Council	Suggested or Recommended Approach
1	**Scheduling of Projects** The PRUTS tasks 30 Strategic Actions to the Inner West Council, these are listed in detail as **Attachment 2** however briefly they include: • Preparing a new Local Housing Strategy (includes a residential development strategy, affordable housing strategy and an exploration of incentives for value sharing); • Preparing new comprehensive Local Environmental Plans and Development Control Plans which are consistent with PRUTS; • Updating Section 94 Developer Contribution Plans to account for the local infrastructure necessitated by the increase in growth and development envisaged in the LGA. • Preparation of a Voluntary Planning Agreement Strategy. • Preparation of a Design Excellence Strategy. It is important that these documents	It is recommended that Council adopts an evidence-based approach to formulating these policy documents. In preparation of the comprehensive Local Environmental Plans, Development Control Plans and Section 94 Developer Contribution Plans, Council should acknowledge that a number of needs-based analysis studies are required at both the precinct and LGA wide levels. This will need to be underpinned by: • Traffic & transport precinct planning and modelling; • Economic feasibility and timing of delivery; • Recreation needs analysis; • Heritage Conservation Policies and redevelopment incentives; • Social and Cultural needs analysis; • Environmental and Biodiversity Analysis; • Public Domain and urban design needs analysis studies and testing; and

No.	Issues for Council	Suggested or Recommended Approach
	progress in a concerted, timely manner to ensure that local infrastructure is appropriately afforded for in the relevant Section 94 Developer Contribution Plans.	• All of the above should be subject to community and stakeholder consultation. Not all of the research requirements are known at this stage and as many of the projects will require cross-collaboration between teams within Council, with other councils, and consultants, it is recommended that Council request that the Group Manager Strategic Planning draft a project plan for implementing the expected need-based analysis studies that will underpin the comprehensive LEP, DCP and S.94 Plans. This should be reported back to Council so the necessary framework for scheduling and resourcing can be understood and incorporated into Council plans and budgets.
2	**Resourcing** A combination of factors have generated the need for Council to undertake LGA wide planning studies, these include: • Council amalgamation; • Parramatta Road Corridor Urban Transformation; • Draft Central District Plan; • Bays Precinct (plans pending) • Metro Corridor Proposal & Westconnex; • S94 Development Contribution Plans; and • Draft Amendments to the *Environmental Planning & Assessment Act 1979*.	It is recommended that Council acknowledge the large generation of work required to be undertaken by Strategic Planning in developing urban planning policies by ensuring that this task is adequately resourced and supported.
3	**Affordable Housing Targets** In order for councils to incorporate affordable housing provisions into their Local Environmental Plans an amendment is required to *State Environmental Planning Policy No. 70 - Affordable Housing (Revised Schemes)* by the State Government. Until this occurs the Strategy assumes that affordable housing provisions can be acquired through Voluntary Planning Agreements. Council has commenced discussions with DPE in relation to amending SEPP 70 as soon as possible.	Voluntary Planning Agreements are voluntary. Council can advocate for affordable housing on PRUTS corridor sites, but these contributions may not be forthcoming. Council should investigate alternative methods of collecting affordable housing contributions from developers until affordable housing provisions are able to be incorporated into Local Environmental Plans.
4	**Development Standards** The development standard provisions relating to maximum floor space ratios (FSR) and Maximum Building Heights for	Council will need to undertake further detailed work to resolve how to encourage appropriate redevelopment that meets the objectives of the strategy,

No.	Issues for Council	Suggested or Recommended Approach
	the Precincts are the result of broad brush calculation techniques. These calculations do not take into account environmental design guidelines but rather uses the 'rule of thumb' that 75% of the site can be built upon. There are many varying factors which impact on FSR and Building Height which include topography, type of land uses proposed, adjacent uses, and proposed future uses in the surrounding area.	in the context of appropriate floor space ratios, land use composition, building heights and other urban design parameters. These evolve in the preparation of Local Environmental Plans, Development Control Plans and Section 94 Developer Contribution Plans. This will form part of Council's overall project plan as recommended previously.
5	**Section 94 Plans $20,000 Contribution Cap** Noting that the longstanding $20,000 contribution cap (unindexed) applies, and that some contributions are already at the contribution limit, the additional local infrastructure that the Plan identifies as necessary may not be able to be delivered via this means.	The State Government is able to levy for Regional Infrastructure funds via a Special Infrastructure Contribution (SIC). Although subject to further review, Council could advocate that the State Government levy for local infrastructure funds via the SIC. Council should also seek legal advice about how this may be achieved by other means. This would form part of the development of future Section 94 Plans projects.
6	**Council's Parramatta Road Light Rail Opportunity Study** Council's investigations are assessing the preferred option for public transport preferring environmentally sustainable centre running transport. Council has commissioned a comparative study of the known elements of the proposed Parramatta Road Bus Rapid Transit system with GET, a future report to Council will determine Council's preferred option to cater for the transport needs of the population.	Once the preferred model for public transport is determined, Council is to liaise with Transport for NSW (TfNSW) to discuss the findings of the study. Resolution of this issue is required prior to undertaking precinct-wide traffic studies or rezonings.
7	**Westconnex** It is important to note that much of the PRUTS's transport assessment is based on the 'Sydney CBD to Parramatta Strategic Transport Plan' which was finalised in September 2015. Since that time the alignment of WestConnex Stage 3 has been amended, several public transport initiatives have been proposed in other parts of Sydney and the Bays Precinct has progressed. In recognition of this highly dynamic transport environment the Westconnex Road Traffic Model (WRTM) is currently being revised, concern is expressed that the transport modelling supporting the PRUTS may be based on obsolete data.	The changes to the Westconnex design will need to be calculated and modelled which may result in amendments to the growth envisioned by PRUTS. It is likely that this will have implications for all elements contained within PRUTS. Resolution of this issue is required prior to undertaking precinct-wide traffic studies or rezonings. Council is in the process of commissioning a study to assess the impacts of stage 1 (Haberfield /Ashfield) and Stage 2 (St Peters). Council should continue to lobby State government to provide an updated,

No.	Issues for Council	Suggested or Recommended Approach
		reliable and transparent traffic and transport assessment of the impacts of the completed WestConnex on all affected neighbourhoods and streets.
8	**Developer Contributions for Education** Although regional issue for the NSW Government, the Infrastructure Schedule does not attribute costs of primary schools and secondary schools as a short term priority, but rather a medium term priority (2024+). This is despite substantial increases in population in the 2016-2023 release areas identified in the Implementation Plan 2016-2023. Accordingly, there is the potential for residential proposals in the Precinct Plans identified by the Implementation Plan 2016-2023 to avoid paying any educational developer contributions despite increasing demand.	It is recommended that this issue is addressed with the NSW Department of Education and NSW Department of Planning & Environment.
9	**UAIP funds** The Infrastructure Schedule states that Councils are expected to apply to the State Government for the funding to build this infrastructure through a competitive process. It is stated that if councils do not take up the opportunity to have those specific works funded under the UAIP, it is assumed they will be funded through developer contributions. Notwithstanding, the UAIP Schedule does not specify an application process that Council can apply for UAIP.	There are a number of short-term 2016-2023 projects the Infrastructure Schedule indicates are applicable to the UAIP, Council is to query the Greater Sydney Commission the application process and expectations. Council should note that these projects may need to commence over the short term period of 2016-2023.

Until the above issues have been addressed, Council is in a precarious position that allows developer-led rezoning planning proposals to proceed without full considerations of all the required objectives of the PRUTS.

FINANCIAL IMPLICATIONS

Nil at this stage, a future report will outline a draft project plan and identify resource requirements.

OTHER STAFF COMMENTS

Nil at this stage

PUBLIC CONSULTATION

Nil at this stage

CONCLUSION

The PRUTS allocates a number of tasks to Council. It is crucial that Council liaise with and lobby relevant State Agencies to share their expertise and provide resources to deliver successful planning outcomes. Council also needs to resource its internal Strategic Planning team to project manage comprehensive LEP/DCP, Section 94 Developer Contribution Plans.

These new planning instruments will require a suite of substantial preparatory studies including:

- Local housing strategy covering issues such as affordable rental housing, housing supply, diverse housing, aged care and design innovation;
- Traffic and transport precinct modelling and plans;
- Economic feasibility;
- Heritage;
- Environmental and biodiversity analysis;
- Public domain and urban design; and
- Recreation, social and cultural needs analysis.

These in turn will inform the preparation of an IWC PRUTS area structure plan that will be used in the development of a comprehensive Inner West Local Environmental Plan.

ATTACHMENTS

1. Detailed Summary of PRUTS & Implementation Tool Kit
2. Strategic Actions tasked to IWC Council (as stated by the PRUTS)
3. Taverners Hill Precinct Comparison Maps
4. Leichhardt Precinct Comparison Maps
5. Camperdown Precinct Comparison Maps
6. Kings Bay Precinct Comparison Maps

INNER WEST COUNCIL

INITIAL SUBMISSION ON THE REVISED DRAFT SYDENHAM TO BANKSTOWN URBAN RENEWAL CORRIDOR STRATEGY

A draft detailed submission will be reported to the incoming elected Council at the first available meeting for its consideration, which is anticipated to be in October 2017. Following which, Council will forward its formal position on the revised draft strategy to the Department.

Council acknowledges the challenge of providing the required housing and jobs to meet Sydney's forecast growth and the strategic merit in focusing renewal around transport infrastructure and within urban centres. It is also noted that a number of amendments have been made from the initial draft Strategy which will have a positive local impact including the retention of high quality character areas.

Notwithstanding, Council continues to have concerns with the revised draft Strategy. In this regard, Council's initial key concerns with the Strategy are:

- Lack of transparency about the forecast dwelling and employment numbers in the revised draft Strategy. Given the removal of areas and reduced heights from the draft Strategy, it is difficult to understand how a similar or significantly greater number of dwellings are now forecast, especially in the Marrickville Precinct, which has 2,000 additional dwellings.
- Some areas being included for zoning uplift, especially in the Marrickville Precinct, resulting in the loss of character and fabric. Some of the areas requested to be removed by Council have instead been reduced to low rise housing. Our detailed submission will identify areas where height continues to be a concern and areas recommended to be removed for zoning uplift.
- The removal or impact on key Marrickville employment and businesses lands which have been identified to be in high demand through independent analyses. This is of particular relevance within the Sydenham Precinct.
- Not providing a comprehensive whole-of-government plan for the required additional infrastructure and services. The anticipated increase in population will undoubtedly result in increased need for affordable housing, child care, schools, health care facilities, open space, recreation facilities, road upgrades, new or improved pedestrian and cycling connections and community facilities. No mechanism has been devised that will efficiently and transparently fund the delivery and/or upgrade of local or regional level infrastructure items. This is a significant shortfall of the revised strategy and must be addressed prior to the final strategy being released. Failing to address this issue will delay the delivery of housing and jobs across the Corridor.
- The proposed Greenway South West is strongly supported. However, the draft Strategy has, not adequately addressed the provision of local open space, only specifying that new parks would be left to Council to provide and that there is the potential for part of the Marrickville Golf Course to be repurposed for open space. Land for open space should be identified upfront and funding mechanisms identified. Section 94 will not be sufficient to provide the new open space areas required for the incoming community identified in the Strategy.

- Despite Council's previous request for affordable housing targets or provision of an inclusionary mechanism, the revised draft Strategy still has not provided any policy or regulatory options to address the issue of affordable housing. This critical issue must be addressed by the final strategy.
- Implementing the Strategy will require funding to be made available from the State. Prior to any planning proposals being supported by Council detailed studies such as traffic, urban design and infrastructure planning must be prepared and finalised to ensure incoming growth and associated cumulative impacts can be appropriately managed by Council Commitment to such funding has yet to be made by the State.
- The revised draft Strategy has not adequately considered urban design criteria such as orientation, topography, lot depths and configuration, width of streets, views, relationships with open space and development parcels. Council's previous submission considered that detailed precinct wide master planning was integral to progress the Strategy, ensuring optimal planning outcomes, however this has not been undertaken. Council is concerned that some blocks and groups of blocks designated for medium-high and high rise housing will cause significant overshadowing, visual bulk, streetscape and view impacts on existing residences.

As indicated above, Council will lodge a detailed submission following the formal consideration of a report by the newly elected Inner West Council.

Liveability Benchmarks
for Central and Southern Sydney
Final Report

SGS Economics & Planning

Southern Sydney Regional Organisation of Councils
November 2015

Independent insight.

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EXECUTIVE SUMMARY

Southern Sydney Regional Organisation of Councils (SSROC) want to ensure that process of urban intensification delivers benefits to local communities in terms of amenity, liveability and access to employment and services. In particular, SSROC is interested in mechanisms that can be used to ensure state agencies and local governments are accountable for the delivery of additional services and infrastructures needed in areas that are subject to significant intensification and change.

SGS has been commissioned to identify **liveability benchmarks** that might be used to influence future planning, investment and infrastructure delivery in established urban areas.

In this report the term **liveability** includes a range of issues that relate to the wellbeing of a community (e.g. accessibility, amenity, quality of life, sustainability, etc.) that could be subject to change as a result of urban intensification. The concept of a **benchmark** refers to the standard or point of reference against which an alternative or future situation would be compared or judged. The benchmarks apply to different **dimensions** (or themes) of liveability such as open space or housing affordability. The actual measures of performance towards achieving a benchmark are termed **indicators**.

The following benchmarks and indicators (**table below**) were tested using a hypothetical case study and observations were made on their usefulness as measures for performance of urban intensification precincts and for wider districts. Several important observations made in the analysis are:

- The expectations of new versus existing residents vary on what represents 'good' liveability – this necessitates a needs based assessment.
- While some indicators are scalable between precinct and district – many offer more relevant results at a single scale.
- Some indicators (especially those relating to transport accessibility) are not sensitive to local changes but are very important at a district scale over the long term – addressing such indicators requires the time and resources of an integrated district planning strategy – rather than responding to a single indicator.
- It is important to determine whether available capacity is present in existing facilities before applying new metrics for future provision.
- Combining liveability measures to form an index would <u>not</u> be useful until a database of comparable case studies enables meaningful comparison.

Theme	Outcome/s sought	Benchmark/s	Indicators/s
District open space and recreation	No net loss in the area of available active recreational space (including playing fields) in the South and Central Districts	Existing levels of playing field provision and usage represent the minimum benchmark due to council advice that usage is already at capacity across the district.	Area and number of playing fields available in the district (by sport) (annually)
	Increased availability and utilisation of playing field assets; – up to the utilisation maximum in hours of use for natural grass surfaces – with the provision of suitable lighting and maintenance – asset usage metered to spread the peak demand	Existing levels of availability and programmed usage represent the minimum benchmark. Existing level of available playing field hours for each player for each sport represents the minimum benchmark	Number of days fields closed / unavailable for use (annually). Available playing field hours per sport per participant
	Increased range of active recreational opportunities	To be determined based on a needs assessment of existing and new residents	Completion and adoption of the recreational needs assessment– including the diversification of playing field type / needs
Housing affordability	Increase in supply of affordable rental accommodation for low income households	30 percent of renewal stock to be affordable rental housing. [1]	Affordable housing to make up an increase share of total dwelling stock.
Access to centres and employment	Increase in average accessibility to district centres and employment	Averaged private AND public travel times to district centre not to exceed 30 minutes from new renewal project sites	Project catchments to be determined by Travel time matrices on Journey to Work and social trips patterns
	Local centre social infrastructure to be accessible within 20 minutes of active transport modes to create a '20 minute city' urban topography.[2]	Average travel time to key community infrastructure not to exceed 20 minutes by active transport modes	Project catchments to be determined by Travel time matrices on social trips patterns and network analysis
Parking	Assessment of current parking provision across a district	A baseline assessment of current parking demand and supply and the financial model of the parking item	Documentation of the location and quantity of public parking and its management and maintenance regime (annual review) in a Transport Management and Accessibility Plan (TMAP)
	Justified additions to parking supply. Supply that does not generate unnecessary travel demand, yet provides a sufficient level of parking to support the functions of the location	Provision of adequate and justified parking supply in line with forecast demand from renewal project	Provision of parking in accordance with the TMAP standards.
Schools and other education facilities	Provision of local primary schools (and classroom space) to meet demand (and expectations) created by population growth and changing demographics at the local level.[3]	Achieving the nominal provision rates (e.g. ratios of population per school) but also consideration of: – Local accessibility – local school catchments to adhere to the '20 minute city' model – Needs based assessment referring to existing and new population expectations	Measure of school population by accessible catchment population School catchments to be determined by Travel time matrices and network analysis

Parking benchmarks are impractical due to the vast range of parking needs and are addressed via local government codes and controls.

[1] Provision of affordable housing should not create concentrations of affordable social housing or affordable additional needs housing to levels where it creates negative social environments.

Theme	Outcome/s sought	Benchmark/s	Indicators/s
	Optimise efficiency of use and maintenance structure for school infrastructure (between schools).	Usability and availability of opportunities for shared use of external facilities for confined schools (e.g. open space, planning fields, halls, libraries / resource centres)	Shared facilities audit to assess comparable access to facilities between different school models (acknowledging the limitations of maximum usable hours for natural surfaces).
Hospitals and other health facilities	Provision of hospital beds and other health facilities to meet demand created by population growth and change.[4]	The availability of suitably zoned and serviced space for supporting health facilities / enterprises associated with major hospitals and health centres	Audit of land supply in parallel with health and allied industry needs assessment
	Lower average travel times to key health facilities by public transport and walking	Improved accessibility of key health facilities by public transport and walking to the standards of the '20 minute city'	Catchments to be determined by Travel time matrices and network analysis
Community and cultural facilities, including childcare	Response to a needs based assessment for types of community and cultural facilities targeting new and existing residents (with reference to available capacity)	Improving existing ratios of population per community and/or cultural facility for those facilities at capacity	Preparation and implementation of a needs assessment
	Improving population access to community facilities – using the '20 minute city' model and transit connectivity as a measure for accessibility of community and cultural facilities	Ensuring access to the full range of community facilities within 20 minutes by public transport (the '20 minute city' model)	Project catchments to be determined by Travel time matrices on social trips patterns and network analysis
	Those councils who provide public childcare places seek to provide 1 space for between every 2-7 children aged 1- 5 yo.		
Precinct sustainability	Environmental costs to be minimised and the environmental performance of a precinct to be improved overall as a result of new development and growth.	Establish precinct specific environmental targets for energy, CO2, water, runoff (WSUD), waste, local access, heat stress and biodiversity	Apply most relevant precinct sustainability measurement instrument (i.e. PRECINX, Green Star), shaded public spaces

[2] This '20 minute City' model would include the ambition of increased accessibility to district centres and employment of trips no longer than 20 minutes (average of both car and public transport modes)

[3] Independent schools and other private infrastructure are considered to operate outside of benchmarking outcomes

[4] Access to local commercial floorspace (for supportive commercial and local dispersed activities) is needed for the support of primary health services

1 INTRODUCTION

1.1 Background and aim

SGS has been commissioned by the Southern Sydney Regional Organisation of Councils (SSROC) to undertake analysis of liveability benchmarks and opportunities to incorporate these into the planning process to ensure that urban intensification delivers measurable benefits to local communities in terms of improved amenity, liveability and job prospects. These include:

- increasing the share of social and affordable dwellings,
- reducing the average travel time to employment,
- increasing the share of trips made by active transport modes,
- increasing the ratio of public education places to school age children,
- increasing the area of active open space assets, and
- increasing the length of publicly accessible harbour foreshore.

SSROC mayors are seeking a means of making state agencies more accountable for the funding and delivery of new infrastructure needed to improve areas undergoing rapid change. This infrastructure includes community facilities such as open space and playing fields, affordable housing as well as transport and other physical infrastructure.

SGS facilitated a workshop with SSROC council planners to discuss the liveability issues which are important to each council and existing and potential measures. The outcomes of this workshop have been incorporated within this report.

1.2 Approaches to benchmarking

Two broad approaches can be applied to benchmarking districts and precinct within cities. One approach is to compare metrics from one location to those of a **benchmark location**. This approach assesses how the comparator location is 'performing' relative to the benchmark location. An alternative and more complex approach is to compare the location to what is deemed to be an optimal quantity or requirement, e.g. the required number of schools per head of population; or the optimal amount of local open space per capita.

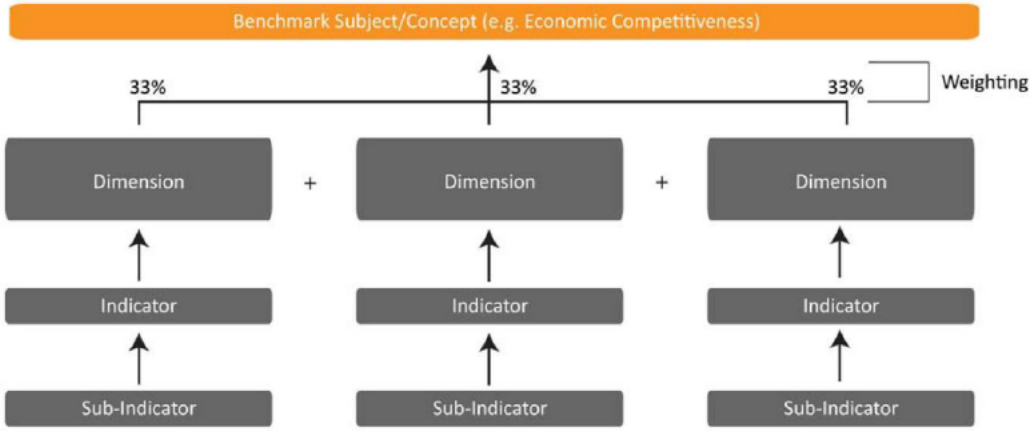
The advantage of the former approach is that the 'burden of proof' is derived from simple comparisons between locations. If District A has less open space per capita than the benchmark location (District B) we might conclude that District A is disadvantaged. However, if District B has too much open space – such that it cannot be adequately maintained or its maintenance diverts funds from other facilities or programs – then District A might in fact be the better of the two. Using the second approach and comparing locations to **normative benchmarks** overcomes this problem, but such normative benchmarks can be difficult to objectively 'prove' and can therefore be contested.

1.3 Benchmarking, dimensions and indicators

Benchmarking of whole cities has become a common with a range of organisations now undertake surveys and preparing city ranking indices on an annual basis[5]. These surveys typically use a hierarchical arrangement of **benchmarks**, **dimensions** and **indicators** (see the figure 1 below). For example, the benchmark of 'quality of life', might include the dimension 'political stability', and indicators of this dimension might include crime statistics, law enforcement, internal stability, and/or ease of entry and exit, or, a composite of these metrics (Holloway and Wajzer, 2008).

The concepts of 'amenity', 'liveability' and 'sustainability' that are the broader issues of concern to SSROC might be best thought of as benchmarks; each has multiple dimensions; and to measure performance of these dimensions requires the choice of one or many relevant indicators. Further analysis and consultation is recommended to apply this or a similar framework to the specific interests and issues raised by SSROC in the project brief and liveability issues workshop.

FIGURE 1: TYPICAL BENCHMARKING FRAMEWORK



Insights on benchmarks:

- Be clear whether **normative** or **positive benchmarks** are most appropriate for the task at hand
- Adopt a **benchmarking framework** that traces the dependencies between the various indicators and key elements liveability that are of interest to SSROC
- **Subjective indicators** derived from surveys might be used alongside **objective indicators** (e.g. see Lowe, et al, 2013) to provide a more robust assessment
- There are generally two components to benchmarking: **what to measure** and **what can be done about it (**Luque-Martinez and Munoz-Leiva (2005)). In the case on the SSROC liveability indicators consideration of the second component should inform the choices of the first.

1.4 Liveability and intensification in Central / Southern Sydney

A workshop was held with planners from the SSROC councils to identify those elements of liveability that can be impacted by urban intensification. This main issues discussed are listed below. The **scale** or scales at which each element be impacted (and therefore might be measured) is indicated in parenthesis. 'Precinct', LGA, 'district' and 'metropolitan' representing increasingly larger geographic areas.

- Equality of access to quality open space (district scale)
- Provision of affordable housing (precinct, LGA or district)

[5] For example: the Mercer Quality of Living Survey, the Economist Intelligence Unit Quality of Life Index, the Demographia International Housing Affordability Survey, the MasterCard Worldwide Centres of Commerce, the GaWC World Cities Index, and the Monocle Global Quality of Life Survey.

- Accessibility to employment and key community facilities (precinct, LGA or district)
- Adequate schools and other education facilities (LGA or district)
- Adequate hospital and health care (LGA or district)
- Community and cultural facilities, particularly child care (precinct or LGA)
- 'Precinct sustainability' (precinct)
- Retention of local employment (district)
- Increased risk of flooding or pollution (precinct or LGA)

Other issues that might be worthy of consideration in the development if liveability indicators could include social and cultural dimensions, physical health, walkability and place quality (i.e. urban design).

A second workshop was held to consider the validity of benchmarks and indicators on the above themes. These benchmarks and indicators were then tested using a hypothetical case study based on Green Square.

2 LIVEABILITY OUTCOMES AND BEST PRACTICE MEASUREMENT

2.1 Dimensions of liveability

The following section headings represent ten dimensions of liveability that could be influenced by urban intensification. They were identified by SSROC officers in the Regional Strategic Analysis workshops[6].

Liveability can be broadly defined as the well-being of a community and represents the characteristics that make a place where people want to live now and in the future[7]. It is the sum of the aspects that add up to the quality of life of a place, including its economy, amenity, environmental sustainability, health and wellbeing, equity, education and learning, and leadership[8].

2.2 District open space and recreation

Outcomes

An increase in the population of Southern and Central Sydney, including specific projects such as F6 Motorway, will place pressure on existing district open space and recreation facilities. There are limited opportunities to purchase large areas of new land, particularly for recreation purposes, in terms of both cost and availability of land parcels over several hectares. A significant issue raised during the workshop with council planners was equality of access and ensuring that all groups within the community have access to quality open space.

In terms of quality, usability was raised as an issue particularly flood prone land and impact of heavy rainfall. This highlights an opportunity to think more widely at active open space to include indoor space as well (e.g. basketball courts and other indoor facilities). Feedback from the council officer workshop indicated that grassed active recreation space – especially playing fields are close or at capacity in Central and Southern Sydney.

The overarching goal is the adequate provision of open space (active and passive) in terms of quantity and quality including accessibility and fit for purpose. However, given the difficulty in securing new large scale facilities and the changing recreational needs of future communities, reasonable outcomes in the face of urban intensification would be to ensure:

- **There is no net loss in the area of available active recreational space (including playing fields) in the South and Central Districts**
- **That the reliability and availability of playing fields is increased by improvements to the maintenance regime, surface or provision of lighting**

[6] SGS (2015) SSROC Regional Strategic Analysis
[7] http://www.highdensityliveability.org.au/about130_liveablility_research.php
[8] http://livable.org.au/index.php?id=12

- **That the efficiency of usage of playing fields is improved by further spreading peak demand to weekdays and after hours booking time slots**
- **That the availability of a range of active recreational opportunities is increased in accessible locations (based on a needs assessment - this may include basketball courts and other non-playing field facilities)**

Liveability benchmarks should promote the adequate provision of open space (active and passive) in terms of quantity and quality including accessibility and fit for purpose.

Existing best practice measures

Existing measures include:

- Area per capita: direct measurement of provision rates within a study area, expressed as area provided (normally in hectares) per count of population.
- Catchment Coverage: measurement of the proportion of houses that fall within a standardised catchment distance from varying categories of open space.
- Inventory of provided facilities/services/capabilities: an audit of the currently provided open space and recreation areas within a specific study area.
- User/Resident Survey: a direct survey of residents within the local community and/or users of open space.
- Comprehensive Needs-Based Assessment: a direct survey of residents within the local community and/or users of open space.

OS&R Measure 1: Area per capita	
Description:	Direct measurement of provision rates within a study area, expressed as area provided (normally in hectares) per count of population.
Data output:	Area(ha)/1000 persons – Easy to interpret
Data input(s):	GFA of open space and population counts – Easy to obtain.
Relevant Scale:	Precinct, LGA and Subregion
Location & Source:	N/A
Relevance to outcome:	Low
Comments:	This is the historically implemented method of measuring required and actual open space provision. It fails to provide a nuanced metric that accounts for the quality of open space and distribution and accessibility to open space and demographic factors influencing demand.

OS&R Measure 2: Catchment Coverage	
Description:	Measurement of the proportion of houses that fall within a standardised catchment distance from varying categories of open space.
Relevance to outcome:	Medium
Data output:	Coverage of area (%) by population or dwellings – Easy to interpret
Data input(s):	Location of open space and recreational facilities and categorisation thereof – Easy to obtain
Relevant Scale:	Precinct, LGA and Subregion
Location & Source:	Department of Planning's *Open Space Guidelines for Local Government* (2010)
Comments:	This method uses a simple measure of accessibility (radial distance) to determine the accessibility to varying scales of open space within an urban environment, allowing spatial gaps in provision to be determined via an overlay of the radial distance on the subject area. This provides for a more refined measure of provision due to its basic inclusion of accessibility; however these types of analysis typically do not include an assessment of the quality of open space, obstacles or barriers in accessibility (such as major roads) and do not account for a demographic based needs assessment.

OS&R Measure 3: Inventory of provided facilities/services/capabilities	
Description:	An audit of the currently provided open space and recreation areas within a specific study area.
Relevance to outcome:	Medium
Data output:	Varied unit of measure – Data is of moderate difficulty to interpret
Data input(s):	Dependant on the scale/detail of the study, a substantial amount of data may be available to the local government authority/authorities in the study area. Further study may be required to gain a comprehensive dataset. Data is of moderate to easy difficulty to obtain, dependant on current amounts of information retained by local authorities. Difficulty and cost increases inversely proportional to this level.
Relevant Scale:	Precinct, LGA and Subregion
Location & Source:	Department of Planning's *Open Space Guidelines for Local Government* (2010); SEQ Council of Mayors' *Open Space and Medium Density Living Toolkit* (2011); Byrne, J. & Sipe, N., 2010, *Green and open space planning for urban consolidation – a review of the literature and best practice,* Griffith University Urban Research Program
Comments:	An audit of the current capabilities of the open space provided within an area can help to identify gaps in provision of certain capabilities (for example, a deficiency in sporting fields at a subregional scale). It also helps to identify deficiencies in amenity, such as areas which do not have adequate lighting at night on thoroughfares.

OS&R Measure 4: User/Resident Survey	
Description:	A direct survey of residents within the local community and/or users of open space.
Relevance to outcome:	Medium
Data output:	Varied unit of measure – Data is of moderate to high difficulty to interpret
Data input(s):	Data is of moderate difficulty to obtain and there is cost involved with conducting the survey. The cost varies dependant on the scale and extent of the survey conducted.
Relevant Scale:	Precinct and LGA
Location & Source:	Department of Planning's *Open Space Guidelines for Local Government* (2010); SEQ Council of Mayors' *Open Space and Medium Density Living Toolkit* (2011); Byrne, J. & Sipe, N., 2010, *Green and open space planning for urban consolidation – a review of the literature and best practice,* Griffith University Urban Research Program
Comments:	The use of a survey helps to identify user concerns regarding adequate provision of certain types of open space and recreational facilities, as well as barriers which residents experience, which in turn can identify deficiencies in factors such as accessibility or amenity.

OS&R Measure 5: Comprehensive Needs-Based Assessment	
Description:	A comprehensive analysis of the open space demand and supply within an area, taking input from socio-demographic characteristics of the area, capabilities of the current level of provision and accessibility within and throughout the study area.
Relevance to outcome:	High
Data output:	Composite output measuring need open space and recreational infrastructure – moderate to high difficulty in interpretation
Data input(s):	Some data is readily accessible, such as locations/categorisation of parks or ABS Census data, however data pertaining to the specific amenities in each parks may necessitate an audit to be conducted, and additionally this method requires highly complex and specialist analysis, leading to high time and capital costs.
Relevant Scale:	Precinct, LGA and Subregion
Location & Source:	Byrne, J. & Sipe, N., 2010, *Green and open space planning for urban consolidation – a review of the literature and best practice,* Griffith University Urban Research Program
Comments:	This method of analysis presents a composite view of demand and supply of open space within an area. It provides the highest level of detail in regard to the need for open space and recreational infrastructure provision, and becomes useful in consolidation and intensification situations where there is limited land available for the provision of open space, informing potential changes to existing open space to achieve an optimal level of use and capability.

2.3 Housing affordability

Outcomes

The intensification of housing actually improves affordability at a citywide scale and over the long term by the increase in overall stock - and especially where new stock responds to market need for housing supply in accessible locations that enable residents to reduce transport and other living costs[9].

However, the benefits are not spread evenly, there are 'losers' in the short/medium term in intensified local areas where low cost stock has been lost and especially for renters who do not experience capital gain. In the immediate area there is likely to be a lower proportion dwellings available at prices affordable for lower income households. The redevelopment of existing low cost housing is an issue which was raised during the SSROC workshop with council planners. The issue of location was discussed, highlighting the need for affordable housing in locations close to employment, particularly for 'key workers' such as near hospital precincts.

A workable goal for housing affordability in the face of intensification is to maintain or improve the proportion of stock that is available (for rent) to low income households (including 'key' workers) in the areas impacted and to avoid concentrations of disadvantage. This implies generating a net increase in the stock of the lower rent housing available to a growing population – assuming there is an identified need. The specific outcome could be to:

- **Increase the supply of affordable rental accommodation for low income households (and middle income workers in essential activities) at a rate that exceeds the growth in households in a local area**
- **Ensure provision of affordable rental housing does not create concentrations of disadvantage**
- **Preserving the share of social (public) housing available for very low income households and additional needs groups**

The UK practice of mandating a significant proportion (~30%) of new dwellings in renewal estates to be available to low income households is an example of good practice.

There is the potential for urban intensification projects to contribute a certain proportion of the development as affordable housing or a contribution in lieu to fund housing in the vicinity. There are opportunities where uplift has occurred through a rezoning for value capture or conditions for affordable housing to be applied to a development. Timing is crucial in relation to value capture as site viability will be impacted and developers will need to factor this into the purchase cost of land. It is important to review existing approaches and international benchmarks to assess effectiveness of implementation, particularly the use of targets.

Existing best practice measures

There is a mix of existing measures relating to both the affordability of housing and the supply of 'affordable housing':

- Housing Stress - 30:40 Rule: a measurement of the population who paying greater than 30% of their income in housing costs and who fall in the bottom 40% of incomes.
- Housing Stress - Residual Income: a measurement of what remains of a household's disposable income to meet basic needs after paying for its housing costs.
- Rental/Housing costs to Incomes/CPI: a ratio of the cost of housing to incomes or the consumer price index.
- Provision of Affordable Housing: measurement of the levels of affordable housing being provided as part of government or community programs within a certain area.

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[9] Grattan Institute 2011 The housing we'd choose.

Affordable Housing Measure 1: Housing Stress - 30:40 Rule	
Description:	A measurement of the population who paying greater than 30% of their income in housing costs and who fall in the bottom 40% of incomes
Relevance to outcome:	Medium
Data output:	Total counts of households and proportional split (%)
Data input(s):	Data pertaining to median rents and house prices is readily available, as is data on recent leases and sales of properties at the local area level. Longitudinal data is available from the Housing, Income and Labour Dynamics (HILDA) survey.
Relevant Scale:	Precinct, LGA and Subregion
Location & Source:	O'Flynn, L., 2011, *Housing affordability briefing paper,* NSW Parliamentary Library Research Service Gabriel *et al,* 2005, *Conceptualising and measuring the housing affordability problem,* Australian Housing and Urban Research Institute
Comments:	This measurement has become a standardised measurement of housing stress within Australia. It could be used to identify the levels of housing stress currently being experienced within an area to determine which areas could be more vulnerable to increases in property values due to intensification processes.

Affordable Housing Measure 2: Housing Stress - Residual Income	
Description:	A measurement of what remains of a household's disposable income to meet basic needs after paying for its housing costs.
Relevance to outcome:	Medium
Data output:	Total counts of households or proportional split (%) – Has a moderate to high level of difficulty in interpretation
Data input(s):	Data is not readily available from published sources, and would involve a more comprehensive collection of data and a greater degree of analysis.
Relevant Scale:	Precinct, LGA and Subregion
Location & Source:	O'Flynn, L., 2011, *Housing affordability briefing paper,* NSW Parliamentary Library Research Service Gabriel *et al,* 2005, *Conceptualising and measuring the housing affordability problem,* Australian Housing and Urban Research Institute
Comments:	The residual income method presents a more accurate depiction of housing stress than the 30:40 rule due to the way it accounts for variations in household composition (and therefore expenditure). The cost of collecting and interpreting this this data makes it less applicable to use

Affordable Housing Measure 3: Rental/Housing costs to Incomes/CPI	
Description:	A ratio of the cost of housing to incomes or the consumer price index
Relevance to outcome:	Low
Data output:	Ratio – Easy to interpret
Data input(s):	Data for this method is easy to obtain via census data and from various sources which track and publish property prices and rental costs.
Relevant Scale:	Precinct, LGA, Subregion and Metropolitan
Location & Source:	O'Flynn, L., 2011, *Housing affordability briefing paper,* NSW Parliamentary Library Research Service
Comments:	This method is relatively easy to extrapolate from the readily available data, however it provides little nuance in its potential analysis, presenting a relatively flat picture of housing unaffordability within an area.

Affordable Housing Measure 4: Provision of Affordable Housing	
Description:	Measurement of the levels of affordable housing being provided as part of government or community programs within a certain area
Relevance to outcome:	High
Data output:	Total counts or proportional split of dwellings – Easy to interpret
Data input(s):	Will require gathering data on the affordable housing programs within a specific area – Data is easy and cheap to obtain
Relevant Scale:	Precinct and LGA
Location & Source:	
Comments:	The monitoring of affordable housing provision rates (in conjunction with other measures) can be used to identify which areas are in need of an increased provision of affordable housing through programs supported by state government.

2.4 Accessibility to centres and employment

Outcomes

Urban intensification and growth can occur in areas where access to centres and employment, particularly by public transport is not adequate.

New development will generate demand for travel to work and for local activities this has the potential to lead to traffic growth and congestion. Given there is commitment to accommodate growth in the district, the key issue is the relative merit of a location for intensification to manage demand for the amount and distance of travel. It should enable travel to be undertaken in ways that have the least impact on congestion such as by walking, cycling and public transport.

The desired goal for accessibility should be reflected in outcomes at two scales:

- **At a district scale, urban intensification and growth should be focused in areas where there is good access to district centres and employment especially by public transport**
- **At a local or suburban scale, key community facilities should be focused in local centres that can be readily reached by walking and active transport from intensification areas located within their catchment.**

The performance of urban intensification could be tracked against whether it results in:

- **the increase of the total number and proportion of households in the district within say 30mins from centres of employment by both private vehicle and public transport**
- **the increase in the total number and proportion of households within the walking catchment (say 20 mins) of local centre community facilities.**

Existing best practice measures

Existing measures include:

- Public transport provision: a direct measurement of the levels of provision of public transport in a subject area, in terms of population, households or area covered
- Service uptake: a measurement of the level at which a transport service is used relative to its capacity
- Mode share: proportional split between various modes of transport within a specific area.
- Relative accessibility to employment: the distance between two small area geographies (place of employment and residence) applied to a time travel matrix

In terms of measuring accessibility, it is important to identify to what accessibility will be measured, for example employment, transport nodes or centres. The idea of a 20 minute neighbourhood was considered where a resident can access a particular proportion of their daily needs within 20 minutes by walking or public transport. Mode share is also important in relation to access and targets could be set for new developments to achieve.

The potential measures which could be implemented include:

- Mode share targets for new developments
- Setting a target for the proportion of trips which should be 'local' or using pedestrian sheds as a measure
- Points system for new developments based on public transport trips and mode share

These measures could be implemented at a precinct, LGA or district level. The measures would be more focussed and outcome oriented if they were integrated within a Transport Management and Accessibility Plan (TMAP)[10] for a location.

Accessibility Measure 1: Public Transport Provision	
Description:	A direct measurement of the levels of provision of public transport in a subject area, in terms of population, households or area covered.
Relevance to outcome:	High
Data output:	Proportion (%) or total counts of unit (pop/households/area) serviced by public transport (based on an appraisal of adequate service eg 15 min bus service to nearest major centre) – Easy to interpret, however this will require GIS modelling. Difficulty in interpretation increases when demographic factors are considered.
Data input(s):	Data is readily available, with population & employment counts/forecasts published by BTS at the travel zone level and data obtainable regarding location of public transport stops. Demographic data can also be integrated into this analysis to determine a more detailed, needs-based analysis.
Relevant Scale:	Precinct, LGA and Subregion
Location & Source:	
Comments:	This measurement can be used to identify deficiencies in or areas of high public transport provision in regards to suitability for urban intensification, as well as being used over time in a longitudinal dataset to determine the impacts of intensification on local or subregional transport networks. A varied level of detail can be included in this analysis through the inclusion of demographic data pertaining to community groups which have greater needs for public transport services.

Accessibility Measure 2: Service Uptake	
Description:	A measurement of the level at which a transport service is used relative to its capacity
Relevance to outcome:	Medium
Data output:	Percentage of total capacity within a mode of transport along a specific route or in a specific area – Moderate to high difficulty to interpret.
Data input(s):	Data will not likely be easy to obtain at high levels of accuracy, as it will require directly taking measurements of the rate at which a service is used. Generalised observations regarding congestion can be made easily, however this reduces the value of the data.
Relevant Scale:	Precinct and LGA
Location & Source:	
Comments:	This measurement allows for the identification of parts of the transport network which have available capacity or are experiencing stress, which can then feed in to decision making regarding areas best suited to intensification or improvements in the transport network. The high cost of obtaining data directly will likely preclude this method from being undertaken by most LGAs, however it remains possible to identify areas of high congestion/low available capacity to then undertake detailed data collection.

[10] TMAP Guidelines (TFNSW undated) http://www.transport.nsw.gov.au/sites/default/files/b2b/abouttrans/trans-management-accessibility-plans.pdf

Accessibility Measure 3: Mode Share	
Description:	Proportional split between various modes of transport within a specific area.
Relevance to outcome:	High
Data output:	Proportion (%) of persons utilising each different mode of transport. The data is of moderate to low difficulty to interpret.
Data input(s):	BTS publishes results from its Household Travel Survey free of charge on their website at the LGA level, however smaller statistical geographies may be obtainable from BTS upon request.
Relevant Scale:	LGA, Subregion and Metropolitan
Location & Source:	
Comments:	The proportional split between different modes of transport is a simple measure to access which incurs very little cost. This measure can be used to identify areas which have overall higher or lower use of public transport, and thereby give a focus for potential upgrades or modifications to the public transport network, or to encourage greater levels of cycling or walking.

Accessibility Measure 4: Relative Accessibility to Employment	
Description:	The distance between two small area geographies (place of employment and residence) applied to a time travel matrix.
Relevance to outcome:	High
Data output:	Amount of jobs accessible from a certain location within a determined cut off time period. Data is not hard to interpret when produced.
Data input(s):	Data pertaining to employment counts and forecasts is available from BTS, however data pertaining to the travel time matrix of the city is more difficult to obtain and will require a high degree of specialist knowledge to reproduce accurately.
Relevant Scale:	Precinct, LGA, Subregion and Metropolitan
Location & Source:	
Comments:	Relative accessibility to employment presents a measurement of how many jobs area accessible to a specific location using either public or private transport. This measure is useful for assessing to what extent an area has access to a diverse range of job opportunities, and could be used to identify areas suitable/unsuitable for intensification with or without transportation improvements or to be implemented. This analysis has potential to include demographic factors, as well as data pertaining to spatial variations in employment.

2.5 Parking

Outcomes

Urban intensification will place pressure on existing parking spaces and generate demand growth for parking spaces for a range of uses including residential car storage, access to retail / community facilities, employment and for deliveries. It is important that the level of supply of parking does not generate unnecessary travel demand but provides a sufficient level of parking to support the functions of the location.

It is counterproductive to match parking supply with demand from intensification in accessible precincts – especially when demand estimates are based on formulae derived from low density and low accessibility settings. Correction factors weighted for accessibility are often applied to ensure that sufficient minimum parking is available to support local functions, but overprovision with the potential to generate excessive travel is avoided by limiting maximum parking supply. This concept has been widely applied for residential and most commercial development – but less so for retail parking provision.

Sydney's metropolitan strategies have previously identified a negative feedback between residential parking provision and the affordability of new residential unit and townhouse development due to the space and excavation construction costs for parking.

The overall goal should be to achieve level of parking supply and availability which does not generate unnecessary travel demand, however provides a sufficient level of parking to support the functions of the location.

Achieving this goal and applying appropriate parking standards would require understanding and measuring:

- **the functions of a precinct undergoing intensification with respect to the role and operation of residential and commercial / retail precincts**
- **the relative accessibility and availability of transport choice (i.e. public transport connectivity)**
- **review of the pricing and duration of on-street parking spaces**

The preparation of a **Transport Management and Accessibility Plan** (TMAP) for renewal precincts would provide a context and rationale for applying a relevant parking supply regime for an intensification precinct. This would include a weighting on parking supply requirements depending on the level of accessibility.

Existing best practice measures

Parking Measure 1: Provision of parking in new development	
Description:	The rate of provision of parking in new developments as part of an intensification process.
Relevance to outcome:	High
Data output:	Car spaces per dwelling – Easy to interpret
Data input(s):	Data is easy to obtain for local government authorities
Relevant Scale:	Precinct and LGA
Location & Source:	Should reference a precinct TMAP
Comments:	The rate of car parking provision in new developments greatly influences the car ownership of the residents. In areas of high accessibility and connectivity of public transport, the reduced rates of car parking provision can reduce the usage of private automobiles both locally and regionally. Best practice parking rates for new development express both minimum and maximum provision.

Parking Measure 2: Public transport provision for new developments	
Description:	The accessibility and connectivity of public transportation in proximity to new developments/areas of intensification.
Relevance to outcome:	Medium
Data output:	Total numbers or proportions of households by quality of the public transport options available to them – Data is of moderate to high difficulty in its interpretation
Data input(s):	Number of new dwellings and their location, along with public transport provision in these areas – data on the new dwellings will be easy to obtain, however the transportation data will be of greater (and likely cost) to obtain and manipulate.
Relevant Scale:	Precinct, LGA and Subregion
Location & Source:	Should reference a precinct TMAP and respond and influence a broader district transit servicing strategy.
Comments:	Development away from effective public transport access creates or reinforces car dependency within those areas. Rather than simply examining the proximity to public transport of a development, the connectivity of the public transport services, particularly to nearby local centres and employment, is of relevance to reducing demand for parking in these areas.

2.6 Schools and other education facilities

Outcomes

Population increase will place pressure on existing facilities, alongside new education demands. The key focus of the discussion with SSROC council planners was the provision of local primary schools and issues

associated with increasing catchments of existing schools, particularly a lack of walkability and pressures placed on road infrastructure. The council planners observed that there are substantial land cost and site availability constraints for acquiring new schools with substantial grounds.

State public school provision ratios are based on either the school age population or number of dwellings and there are a variety of ratios which have been identified for a range of new precincts or green field growth areas. However, these ratios cannot be readily applied in existing urban areas in because of both the take up of independent school capacity and the level of acceptance of new models for high density (even high rise) schools needs to be taken into account.

New residents of intensification areas may be more likely to accept a trade-off for a more confined public school setting assuming that open space and high quality education facilities were available and highly accessible. This trade-off is less likely to be acceptable to existing residents who experience the expansion of classrooms and de-mountables over existing school grounds.

A key goal for liveability will be the 'adequate' provision of local primary schools (and classroom space) to meet demand created by population growth and changing demographics at the local level.

Achieving the goal of adequate provision should be determined not only by nominal provision rates (e.g. ratios of population per school) but also consideration of:

- **Local accessibility – 'ped-sheds' as a measure for local primary school walkable catchments**
- **Needs based assessment referring to existing and new population expectations**
- **Availability of opportunities for shared use of external facilities for confined schools (e.g. open space, planning fields, halls, libraries / resource centres)**

This suggests an integrated assessment of needs and school capacity and available facilities alongside the application of conventional ratios. This assessment should be undertaken at a district scale – with additional emphasis on the needs and preferences of new residents of local intensification areas.

Existing best practice measures

Education Measure 1: Victorian Growth Areas Authority Guide to Social Infrastructure Planning	
Description:	• Level 1 - Provision ratios up to 10,000 people - Government Primary Schools (including out of schools hours care)/Early Years Facility, 1 Council Community Centres/ Early Years Facility/Neighbourhood House, Long Day Child Care Centres • Level 2 - Provision ratios between 10,000 and 30,000 people – Level 1, Government Secondary Schools Catholic Primary Schools • Level 3 - Provision ratios between 30,000 and 60,000 people – Level 1, Level 2, Catholic Secondary Schools, Other independent schools
Relevance to outcome:	Medium (prepared for greenfield areas)
Data output:	There are five levels of community infrastructure provision based on population size. There is a clear indication of the social infrastructure provision required for each level of population increase. Easy to understand, provides for primary and secondary education
Data input(s):	Number of people in a precinct (can be scaled up to LGA)
Relevant Scale:	Precinct or LGA
Location & Source:	Wyndham City Council (outer Melbourne) : http://www.mpa.vic.gov.au/wp-content/Assets/Files/Planning_for_Community_Infrastructure_in_Growth_Areas_Apr08.pdf
Comments:	This metric is used for greenfield development.

Education Measure 2: Green Square Social Infrastructure Provision Report (2014)	
Description:	SGS report for City of Sydney regarding social infrastructure benchmarks in Green Square. 1 primary school for 500 students. 1 government high school for up to 1,200 students 1 TAFE to cater for a population of 300,000 – 500,000 1 university for every 150,000 people
Relevance to outcome:	High
Data output:	Easy to understand. Provides for primary, secondary and tertiary education
Data input(s):	Based on number of students – need to know the number of students forecasted for urban renewal projects
Relevant Scale:	Precinct
Location & Source:	Green Square, SGS report located here
Comments:	Based on benchmarks for VIC, QLD, and ACT Assumes 100% of students are enrolled in Government schools.

Education Measure 3: ACT Desired Standards of Service	
Description:	1 preschool for every 5,000 population. 1 public primary school for every 7,500 population. 1 public high school (years 7-10) for every 20,000 population. 1 public secondary college (years 11-12) for every 30,000 population. 1 special school for every 60,000 population
Relevance to outcome:	High
Data output:	Simple benchmark, provides for primary and secondary education levels
Data input(s):	Based off population size
Relevant Scale:	Unclear
Location & Source:	ACT
Comments:	From an unpublished document. Cited by SGS in Green Square social infrastructure planning project, found here.

Education Measure 4: Fisherman's Bend Urban Renewal Area	
Description:	1 government primary school (450 capacity) per 10,000 dwellings (approx.) 1 government secondary school (1100 capacity) per 40,000 dwellings (approx.)
Relevance to outcome:	High (relates to an urban renewal area rather than a greenfield site.)
Data output:	Simple benchmark, provides for primary and secondary education levels
Data input(s):	Based off dwelling numbers
Relevant Scale:	Precinct
Location & Source:	Victoria – urban renewal in inner Melbourne : http://www.mpa.vic.gov.au/wp-content/uploads/2014/07/Fishermans-Bend-Strategic-Framework-Plan-The-strategic-framework.pdf
Comments:	Fisherman's Bend is an urban renewal site proposed to contain 40,000 dwellings over 40 years. Expected to contain at least 80,000 people.

Education Measure 5: Implementation Guideline No. 5—Social Infrastructure Planning	
Description:	Preschool – 1:7,500-10,000 people Primary school - 1:7,500 people Secondary school - 1:20,000 people TAFE – 1:150,000+ population University – 1:250,000+ population
Relevance to outcome:	High (relates to all forms of development)
Data output:	Easy to understand ratio of facilities to population
Data input(s):	Based off population numbers
Relevant Scale:	Precinct
Location & Source:	Queensland: http://www.dilgp.qld.gov.au/resources/guideline/ImplementationGuideline5.pdf
Comments:	From 2006

Education Measure 4: Leppington Precinct Study	
Description:	Primary school – 1:2,000 dwellings Secondary school – 1:6,000 dwellings TAFE – 1:150,000 population University – 1:150,000-200,000 population
Relevance to outcome:	Medium (relates to greenfield development)
Data output:	Simple benchmark, provides for primary and secondary education levels
Data input(s):	Based off dwelling or population numbers
Relevant Scale:	Precinct
Location & Source:	SGS report
Comments:	

2.7 Hospitals and other health facilities

Outcomes

Population increase will place pressure on existing facilities and potential new health demands. A key goal for liveability will be the adequate provision of hospital beds and other health facilities to meet demand created by population growth and changing demographics (such as ageing population).

The state government is responsible for this area of infrastructure and SSROC supports current strategic planning directions[11]. From an urban planning perspective, it will be important to ensure that there is enough land available for hospital expansion, health research facilities and supporting clinical and business enterprises. Health facilities should be accessible to all residents across the SSROC region.

Although the overall goal is for adequate provision of hospital beds and other health facilities to meet demand created by population growth and change, the realistic outcomes for SSROC to pursue are:

- **The availability of suitably zoned and serviced space for supporting health facilities / enterprises associated with major hospitals and health centres**
- **Improved accessibility of key health facilities (eg medical centres) by public transport and walking**

Existing best practice measures

As with education facilities, provision ratios are used and based on population size or number of people within a certain demographic (e.g. ageing population).

[11] NSW Health (2014) State Health Plan: Towards 2021 (http://www.health.nsw.gov.au/statehealthplan/Pages/default.aspx)

Health Measure 1: Green Square Social Infrastructure Provision Report (2014)	
Description:	1 GP per 4,000 of the population 1 new primary care centre per 50,000 of the population 2.3 hospital beds per 1,000 of the population plus 1 mental health bed/placement for every 2,700 people 1 early childhood nurse per 2,000 children Aged care - 88 places per 1000 people 70+.
Relevance to outcome:	High
Data output:	Simple benchmark based on population numbers and age
Data input(s):	Need to know the population number and ages (children and over 70s)
Relevant Scale:	Precinct
Location & Source:	Green Square, CoS Social Infrastructure Report 2014
Comments:	Based on consultation with contact in NSW Health

Health Measure 2:	Australian Institute of Health and Welfare 2014
Description:	The average number of hospital beds per 1,000 population in NSW is 2.7 for public hospitals and 1.0 for private hospitals.
Relevance to outcome:	Medium
Data output:	Easy to understand and monitor increased demand for hospital beds
Data input(s):	Based off population
Relevant Scale:	Precinct, LGA, Subregion and Metropolitan (scalable)
Location & Source:	NSW – Australian Institute of Health and Wellbeing
Comments:	These are averages, not best practice. Does give an indication on current level of service.

Health Measure 3: Infrastructure Development Guidelines: City of Greater Geelong 2010	
Description:	Maternal and Child Health 1.2 to 1.4 sessions: 100 children aged 0-2 Early Childhood Centre (Child health and parenting information and referrals, children's medical services) 1:4,000-6,000 General Practitioners 1.48:1,000 Aged Care Centre 1:10,000-20,000 Community Health Centre 1:20,000-30,000 Hospital Public - 2.6 beds: 1,000 people Private - 1.7 beds: 1,000 people Aged Persons Housing High Care (Nursing Home) - 40 beds: 1,000 people 70+ Low Care (Hostel) - 48 places: 1,000 people 70+ Community Aged Care Packages (CACPs) - 20 CACPs: 1,000 people 70+ Self care - 50 places: 1,000 people 70+
Relevance to outcome:	Medium (new development in Geelong could be greenfield)
Data output:	Ratio easy to understand
Data input(s):	Require population numbers and ages (under 2s and over 70s)
Relevant Scale:	LGA and Subregion
Location & Source:	Geelong
Comments:	

Health Measure 4: National planning benchmark	
Description:	Residential aged care spaces - 88 residential places per 1,000 people aged 70 and over is the target
Relevance to outcome:	Medium (not specifically for urban renewal but is the national benchmark)
Data output:	Ratio easy to understand
Data input(s):	Require population numbers
Relevant Scale:	Precinct, LGA, Subregion and Metropolitan
Location & Source:	National benchmark from 2011
Comments:	Found here: https://www.health.gov.au/internet/budget/publishing.nsf/Content/2011-12_Health_PBS_sup1/$File/2011-12_Health_PBS_10_Outcome4.pdf

Health Measure 5: Implementation Guideline No. 5—Social Infrastructure Planning	
Description:	Residential aged care facility - 1:7,000–10,000 population Hospital catchment – 1:100,000 population
Relevance to outcome:	High (for infill and greenfield)
Data output:	Ratio easy to understand
Data input(s):	Require population numbers
Relevant Scale:	Precinct, LGA, Subregion and Metropolitan
Location & Source:	Queensland Government: http://www.dilgp.qld.gov.au/resources/guideline/ImplementationGuideline5.pdf
Comments:	From 2006

2.8 Community and cultural facilities, including childcare

Outcomes

Population increase will place pressure on existing facilities and create new demand. The goal sought should be an adequate provision of community facilities, including childcare, to meet demand created by population growth and changing demographics.

Local councils within SSROC will need to work with the state government to ensure there is adequate provision of community facilities across each local area and the district. Existing s94 planning regimes have established methodologies for this task.

Provision ratios are widely used to determine existing and future need and are based on total population or a specific demographic such as children aged between 0-5 years for childcare. However, new communities in higher density areas are likely to emphasise different or multi-use facility needs especially locally accessible cultural facilities, recreation and resources centres to improve their quality of life. A needs based assessment would be needed to discern the type of facilities valued by new and existing communities.

The outcomes sought could include:

- **Response to a needs based assessment for types of community and cultural facilities targeting new and existing residents**
- **Improving population access to community facilities - using ped shed and transit connectivity as a measure for accessibility of community and cultural facilities**
- **Maintaining or improving existing ratios of population per community and/or cultural facility.**

Existing best practice measures

Community Facilities Measure 1: Infrastructure Development Guidelines: City of Greater Geelong 2010	
Description:	Community meeting room/Multi-purpose hall - 1:6,000-10,000 Neighbourhood Centre - 1:3,500-15,000 Neighbourhood Library - 1:6,000-15,000 Childcare centre (long day care) 120 place childcare centres now seem to be the preferred number for viability. 1:4,000-8,000 population or 1:5-7 children aged 0-4 Occasional Care 1:12,000-15,000 Multi-purpose Community Centre 1:20,000-30,000 Youth Facility/Service 1:20,000 Branch Library 1:15,000-30,000 Art Gallery 1:30,000-150,000 Museum 1:30,000-130,000 Central Library 1:50,000-150,000 Civic Centre 1:30,000-120,000 Performing Arts/Exhibition/Convention Centre 1:50,000-200,000
Relevance to outcome:	Medium, however form of new development in Geelong may vary compared to SSROC
Data output:	Easy ratio based off population numbers
Data input(s):	Need population numbers and possibly ages of population for childcare centres
Relevant Scale:	LGA or subregion
Location & Source:	Geelong
Comments:	

Community Facilities Measure 2: City of Sydney Child Care Needs Assessment	
Description:	Child care - One place for every two children aged 0 to 5 years for residents.
Relevance to outcome:	Medium (Not all areas of SSROC have similar demographics to City of Sydney)
Data output:	Unit of measure and ease of interpretation
Data input(s):	Need to know population numbers aged 0-5 – Census or profile id
Relevant Scale:	LGA
Location & Source:	City of Sydney
Comments:	

Community Facilities Measure 3:	
Description:	Level 1 Provision ratios up to 10,000 people • Level 1 Council Community Centres/ Early Years Facility/Neighbourhood House • Long day care child care centres Level 2 Provision ratios between 10,000 and 30,000 people • Council Community Centres/Early Years Facility/Neighbourhood Houses • Low order child care facilities • Occasional Child Care (as part of every neighbourhood house and leisure centre) • Low order youth facilities Level 3 Provision ratios between 30,000 and 60,000 people • 1 multipurpose community facility (could contain a mix of these facilities listed) • 1 library • 1 community arts centres • High Order Dedicated Youth Facilities • Level 3 Council Community Centres • Delivered meals facility • 1 public art project • 1 performing arts facility
Relevance to outcome:	Medium
Data output:	Unit of measure and ease of interpretation
Data input(s):	Availability & quality/cost of necessary data inputs
Relevant Scale:	Precinct/LGA /Subregion/Metropolitan
Location & Source:	e.g. Auckland (refer Ref)
Comments:	

Community Facilities Measure 3: SGS Auckland libraries work	
Description:	Libraries - 41 square meters per 1,000 people
Relevance to outcome:	Medium
Data output:	Unit of measure and ease of interpretation
Data input(s):	Availability & quality/cost of necessary data inputs
Relevant Scale:	Precinct/LGA /Subregion/Metropolitan
Location & Source:	e.g. Auckland (refer Ref)
Comments:	

Community Facilities Measure 5: Bankstown Area Plans	
Description:	Youth facilities – 1 per 20,000 people Community centre (local) – 1 per 6,000 people Community centre (district) – 1 per 20,000 people Branch library – 1 per 33,000 people District library – 1 per 40,000 people
Relevance to outcome:	Medium
Data output:	Unit of measure and ease of interpretation
Data input(s):	Availability & quality/cost of necessary data inputs
Relevant Scale:	Precinct/LGA /Subregion/Metropolitan
Location & Source:	Bankstown Council https://www.bankstown.nsw.gov.au/index.aspx?NID=216
Comments:	From needs analysis prepared by Elton Consulting

2.9 Precinct sustainability

Outcome

There is an increasing expectation that high intensity living should be accompanied by superior environmental performance. Kogarah town centre and Central Park are good examples.

The goal is for environmental costs to be minimised and the environmental performance of a precinct to be improved overall as a result of new development and growth.

Existing best practice measures

Existing precinct sustainability measurement approaches include:

- Green Star Communities: rating system for the sustainability of a precinct, can be greenfield or urban renewal. The tool has a holistic approach to sustainability, considering environmental, economic, social and governance initiatives included in the development.
- Ecological footprint: calculates land and water area a city requires to produce the resources it consumes and to absorb its wastes
- PRECINX: models potential environmental, economic and asocial impacts of a development.
- Specific goals: models potential environmental, economic and asocial impacts of a development.

The potential measures which could be implemented include:

- PRECINX tool to assess sustainability of a development at a precinct level (requiring a certain performance standard for intensification precincts
- Set tailored precinct targets in relation to a range of relevant environmental performance metrics

Sustainability Measure 1: Green Star Communities	
Description:	Rating system for the sustainability of a precinct, can be greenfield or urban renewal. The tool has a holistic approach to sustainability, considering environmental, economic, social and governance initiatives included in the development. In particular, environmental considerations are: • Protecting natural and cultural heritage • Promoting biodiversity • Reducing ecological footprint • Reducing GHG emissions and pollutants • Environmentally efficient systems (water, energy etc.) and resource efficiency Credits are awarded for each criteria met (see page 12 of local government guide)
Relevance to outcome:	High
Data output:	Rating, need 4 (Best Practice), 5 (Australian Excellence) or 6 stars (World Leadership) to be worthwhile (1 to 3 stars not reported)
Data input(s):	A lot of work and cost, submission to the Green Building Council of Australia. There is a submission process to the Green Building Council, which involves multiple rounds and several documents. Data needs to come from a wide of sources to develop a comprehensive view of sustainability.
Relevant Scale:	Precinct
Location & Source:	Green Building Council of Australia: https://www.gbca.org.au/uploads/152/2712/GBCA015_Framework_Final_SinglePages.pdf Guide for local government: https://www.gbca.org.au/uploads/189/2749/Green_Star_Communities_Guide_for_Local_Government_For_Web.pdf
Comments:	Labour intensive

Sustainability Measure 2: Ecological footprint	
Description:	Calculates land and water area a city requires to produce the resources it consumes and to absorb its wastes. Land and water areas considered are: • CO2 area for energy production • Cropland for food and consumer goods • Pasture land for food and consumer goods • Forest land for timber • Fisheries for marine products • Built land to determine land required for infrastructure, buildings and urban environment The activities considered in an ecological footprint which contribute to these hectares are: • Housing • Mobility • Food • Goods • Services • Government
Relevance to outcome:	Medium
Data output:	Output is global hectares per capita (lower the better). Could be scaled up to say how many hectares are used by everyone in a given.
Data input(s):	Needs multiple, complex inputs. Time consuming and potentially costly. Complex methodology.
Relevant Scale:	Precinct, LGA, Subregion and Metropolitan
Location & Source:	Examples from Calgary: http://www.footprintnetwork.org/pt/index.php/GFN/page/calgary_case_study/ and San Francisco: http://www.footprintnetwork.org/en/index.php/GFN/blog/san_francisco_looks_at_its_footprint Methodology outlined here: http://www.footprintnetwork.org/en/index.php/GFN/page/methodology/
Comments:	Can be scaled to apply to households up to states and nations. Has been used by local government in North America to calculate their environmental performance. A before and after snapshot of ecological footprint could demonstrate if the ecological footprint of an area is improved, worsened or remains the same with an urban renewal project.

Sustainability Measure 3: PRECINX	
Description:	Models potential environmental, economic and asocial impacts of a development. Can tailor key outcomes to project (e.g. focus on environmental aspects) Can be used for different types and mixes of development and enables different scenarios to be modelled. Compares the scenarios to current practice and metropolitan averages.
Relevance to outcome:	Medium
Data output:	Easy to understand and compare
Data input(s):	Data required includes tons of CO2 emitted per year, energy consumption as kW per year, kL of water used per year, vehicle hours travelled and affordability as $ per year. Costs are set by the developers of the model.
Relevant Scale:	Precinct
Location & Source:	Example – Parramatta Road for Urban Growth: http://www.kinesis.org/case-studies/parramatta-rd
Comments:	

Sustainability Measure 3: Specific goals	
Description:	Models potential environmental, economic and asocial impacts of a development. Can tailor key outcomes to project (e.g. focus on environmental aspects) Can be used for different types and mixes of development and enables different scenarios to be modelled. Compares the scenarios to current practice and metropolitan averages.
Relevance to outcome:	High
Data output:	Dependent on variables monitored
Data input(s):	Data required is based on what the goals aim to achieve. Generally involves water consumption, electricity consumption, vehicle kilometres travelled, waste, and tree cover.
Relevant Scale:	Precinct
Location & Source:	Specific goals set for: • Fishermans Bend, Melbourne • Elephant and Castle, London • Kings Cross, London • Docklands, Melbourne • HafenCity, Hamburg
Comments:	Goals to tailor for specific local circumstances and expectations.

2.10 Local employment and economic development

Outcomes

There is a potential spatial imbalance between location of new homes and new jobs which gives rise to a range of issues associated with transport, sustainability and job accessibility. The overall goal for a district is to ensure that its residents have access to employment (across a range of industries) and the urban services necessary for the functioning of the district and metropolitan economy.

The pragmatic outcomes for the district should be:

- **ensuring there is no net loss of capacity in employment and commercial lands and therefore maintenance of the current levels of local job provision - if not improvement with increased density of employment and economic activity.**
- **Improved access to employment concentrations primarily by public transport which increase the 'effective job density' and boost productivity**

Existing approaches have been targeted at assessing existing demand or project demand and include job to resident ratios or an assessment of supply of employment and commercial land. Aspirations for employment self-containment in a district have not been successful due to the powerful market forces which dictate the growth and change of employment across the metropolitan area.

Existing best practice measures

Employment Measure 4: Effective Job Density (EJD)	
Description:	Employment contained within an area and externally, with employment in other areas divided by the travel time required to reach these external jobs, weighted for transport mode.
Relevance to outcome:	High/Medium
Data output:	Job density (total counts) – Data requires a high level of skill for interpretation
Data input(s):	Data pertaining to employment counts and forecasts is available from BTS, however data pertaining to the travel time matrix of the city is more difficult to obtain and will require a high degree of specialist knowledge to reproduce accurately, which will also incur substantial cost.
Relevant Scale:	Precinct/LGA /Subregion/Metropolitan
Location & Source:	SGS Economics and Planning, 2012, *Productivity and agglomeration benefits in Australian capital cities*
Comments:	Effective job density presents a measurement of how many jobs area accessible to a specific location using either public or private transport. This measure is useful for assessing to what extent an area has access to a diverse range of job opportunities, and could be used to identify areas suitable/unsuitable for intensification with or without transportation improvements or to be implemented.

Employment Measure 1: St Marys Job Ratio	
Description:	1:1 residents to workers proposed as part of the SREP affecting St Marys. Validity of this measure to increase self containment rates was considered by SGS in our report. Problems identified include: • Scale – the smaller the scale, the less of the economic system included and the lower the self containment rate • Existing residents to jobs rate is lower (more like 0.6:1) and self containment even lower (35% in Penrith, 27% in Blacktown) • Land uses (primarily residential) and location of employment lands 0.4:1 was found to be more feasible in this case
Relevance to outcome:	Low
Data output:	Ratio – easy to understand and apply
Data input(s):	Need to know the number of residents and workers in a specified area for ratio. Need to know workers in an area reside (BTS Travel data) for self containment rate.
Relevant Scale:	Precinct, LGA, Subregion and Metropolitan (scalable)
Location & Source:	SGS Economics and Planning – Revised St Marys EIS here
Comments:	The range of uncontrolled regional / national factors at play have limited the usefulness of this measure.

Employment Measure 2: Supply of employment lands	
Description:	The supply of employment lands (industrial, office and business) can be used to determine if there is sufficient land to accommodate employment uses and maintain current levels of local employment. Could also determine how many jobs the hectares of zoned land applied by determining the GFA permitted under controls (heights and FSR) and a standard ratio of jobs to floorspace.
Relevance to outcome:	High
Data output:	Area of land
Data input(s):	Size of land zoned industrial and business zones, size of areas proposed to be rezoned. Should be available for each council. ELDP has industrial land summarised by precinct in hectares.
Relevant Scale:	Precinct or LGA (could be used for subregion or metropolitan level – data collation may be more difficult than LGA. ELDP provides industrial land data for zoned industrial precincts)
Location & Source:	Internal discussions
Comments:	Useful – if background strategic planning establishes capacity and identifies strategic priorities.

Employment Measure 3: Local occupation of new jobs	
Description:	Establish a % of new jobs to be taken up by local residents. Has been used in Kings Cross redevelopment in London in 2004 (target of 15% of jobs by 2012). Other measures generally adopted include X amount of floorspace for employment uses (e.g. 45,000sqm for retail)
Relevance to outcome:	Low
Data output:	Unit of measure and ease of interpretation
Data input(s):	Availability & quality/cost of necessary data inputs
Relevant Scale:	Precinct
Location & Source:	Kings Cross, London. Reviewed as part of SGS work for CoS
Comments:	Unclear whether local employment factors can influence the outcome to any great degree.

2.11 Utilities and stormwater

Outcomes

New development can increase the runoff and impact downstream water quantity and quality where there are increased impervious surfaces, filling or ground disturbance / erosion. The overall goal should be to ensure that intensification does not give rise (or exacerbate) flooding or pollution.

This goal is implicit in council and state environmental design and engineering standards required for new development. However there are opportunities to promote best practice performance in water sensitive urban design.

Existing approaches include Water Sensitive Urban Design general code and catchment management principles. These measures can be applied at a site, precinct or catchment scale.

Existing best practice measures

Utilities Measure 2: Water sensitive urban design general code	
Description:	Adoption of water sensitive urban design guidelines
Relevance to outcome:	Medium
Data output:	Qualitative, multiple factors. May be qualitative (e.g. reduce pollutants) or more quantitative and detailed (e.g. reduce pollutant X by Y)
Data input(s):	Various and detailed – development design, current floodway and overland flow, stormwater engineering etc.
Relevant Scale:	Precinct/LGA /Subregion/Metropolitan
Location & Source:	ACT
Comments:	http://www.legislation.act.gov.au/ni/2008-27/copy/56032/pdf/2008-27.pdf http://www.environment.act.gov.au/__data/assets/pdf_file/0010/621568/Water-Sensitive-Urban-Design_ACCESS.pdf http://www.landcom.com.au/downloads/uploaded/wsud_book3_casestudies_0409_3da4.pdf

Utilities Measure 3: Catchment management principles	
Description:	Upstream catchment management principles particularly important to improve water quality, reduce run off and flooding incidences.
Relevance to outcome:	Medium
Data output:	Unit of measure and ease of interpretation
Data input(s):	Availability & quality/cost of necessary data inputs
Relevant Scale:	Precinct/LGA /Subregion/Metropolitan
Location & Source:	e.g. Auckland (refer Ref)
Comments:	

3 BENCHMARKS

3.1 Overview of potential benchmarks and indicators

The development of practical liveability benchmarks and indicators is dependent on the criteria chosen to monitor, and the effective ability to monitor these benchmarks.

The criteria include:

- Effectiveness: Does the indicator provide an accurate measure of achievement of desired outcomes?
- Efficiency: How easy is it to measure and what might be the cost of measurement (data availability)?
- Interpretation for action: Does the measurement allow ready interpretation as evidence for action, including infrastructure provision?

This process would identify those themes for which:

- there are practical quantitative measures currently available – or could be readily developed
- where other types of qualitative performance measures (e.g. comparative case studies / needs assessments) are more appropriate to determine whether an amenity outcome is met

The range of potential benchmarks below were considered by an SSROC working group prior to testing.

3.2 Implementation

The aim of the benchmarking process is to set appropriate ambitious policy targets in line with best practice. Projects should be held to these targets unless they are able to demonstrate through proof of analysis the reasons why the targets are unachievable.

3.3 Benchmarks

Theme	Outcome/s sought	Benchmark/s	Indicators/s
District open space and recreation	No net loss in the area of available active recreational space (including playing fields) in the South and Central Districts	Existing levels of playing field provision and usage represent the minimum benchmark due to council advice that usage is already at capacity across the district.	Area and number of playing fields available in the district (by sport) (annually)
	Increased availability and utilisation of playing field assets; – up to the utilisation maximum in hours of use for natural grass surfaces – with the provision of suitable lighting and maintenance – asset usage metered to spread the peak demand	Existing levels of availability and programmed usage represent the minimum benchmark. Existing level of available playing field hours for each player for each sport represents the minimum benchmark	Number of days fields closed / unavailable for use (annually). Available playing field hours per sport per participant
	Increased range of active recreational opportunities	To be determined based on a needs assessment of existing and new residents	Completion and adoption of the recreational needs assessment– including the diversification of playing field type / needs
Housing affordability	Increase in supply of affordable rental accommodation for low income households	30 percent of renewal stock to be affordable rental housing. [12]	Affordable housing to make up an increase share of total dwelling stock.
Access to centres and employment	Increase in average accessibility to district centres and employment	Averaged private AND public travel times to district centre not to exceed 30 minutes from new renewal project sites	Project catchments to be determined by Travel time matrices on Journey to Work and social trips patterns
	Local centre social infrastructure to be accessible within 20 minutes of active transport modes to create a '20 minute city' urban topography.[13]	Average travel time to key community infrastructure not to exceed 20 minutes by active transport modes	Project catchments to be determined by Travel time matrices on social trips patterns and network analysis
Parking	Assessment of current parking provision across a district	A baseline assessment of current parking demand and supply and the financial model of the parking item	Documentation of the location and quantity of public parking and its management and maintenance regime (annual review) in a Transport Management and Accessibility Plan (TMAP)
	Justified additions to parking supply. Supply that does not generate unnecessary travel demand, yet provides a sufficient level of parking to support the functions of the location	Provision of adequate and justified parking supply in line with forecast demand from renewal project	Provision of parking in accordance with the TMAP standards.

Parking benchmarks are impractical due to the vast range of parking needs and are addressed via local government codes and controls.

[12] Provision of affordable housing should not create concentrations of affordable social housing or affordable additional needs housing to levels where it creates negative social environments.

[13] This '20 minute City' model would include the ambition of increased accessibility to district centres and employment of trips no longer than 20 minutes (average of both car and public transport modes)

Theme	Outcome/s sought	Benchmark/s	Indicators/s
Schools and other education facilities	Provision of local primary schools (and classroom space) to meet demand (and expectations) created by population growth and changing demographics at the local level.[14]	Achieving the nominal provision rates (e.g. ratios of population per school) but also consideration of: – Local accessibility – local school catchments to adhere to the '20 minute city' model – Needs based assessment referring to existing and new population expectations	Measure of school population by accessible catchment population School catchments to be determined by Travel time matrices and network analysis
	Optimise efficiency of use and maintenance structure for school infrastructure (between schools).	Usability and availability of opportunities for shared use of external facilities for confined schools (e.g. open space, planning fields, halls, libraries / resource centres)	Shared facilities audit to assess comparable access to facilities between different school models (acknowledging the limitations of maximum usable hours for natural surfaces).
Hospitals and other health facilities	Provision of hospital beds and other health facilities to meet demand created by population growth and change.[15]	The availability of suitably zoned and serviced space for supporting health facilities / enterprises associated with major hospitals and health centres	Audit of land supply in parallel with health and allied industry needs assessment
	Lower average travel times to key health facilities by public transport and walking	Improved accessibility of key health facilities by public transport and walking to the standards of the '20 minute city'	Catchments to be determined by Travel time matrices and network analysis
Community and cultural facilities, including childcare	Response to a needs based assessment for types of community and cultural facilities targeting new and existing residents (with reference to available capacity)	Improving existing ratios of population per community and/or cultural facility for those facilities at capacity	Preparation and implementation of a needs assessment
	Improving population access to community facilities – using the '20 minute city' model and transit connectivity as a measure for accessibility of community and cultural facilities	Ensuring access to the full range of community facilities within 20 minutes by public transport (the '20 minute city' model)	Project catchments to be determined by Travel time matrices on social trips patterns and network analysis
	Those councils who provide public childcare places seek to provide 1 space for between every 2-7 children aged 1- 5 yo.		
Precinct sustainability	Environmental costs to be minimised and the environmental performance of a precinct to be improved overall as a result of new development and growth.	Establish precinct specific environmental targets for energy, CO2, water, runoff (WSUD), waste, local access, heat stress and biodiversity	Apply most relevant precinct sustainability measurement instrument (i.e. PRECINX, Green Star), shaded public spaces

[14] Independent schools and other private infrastructure are considered to operate outside of benchmarking outcomes
[15] Access to local commercial floorspace (for supportive commercial and local dispersed activities) is needed for the support of primary health services

4 PROOF OF CONCEPT TESTING

4.1 Testing benchmarks in an intensification area

This chapter demonstrates how the benchmarks discussed in the preceding chapter might be applied to an actual place, in this case, a hypothetical regeneration precinct called *Green 'Circle'* Urban Renewal area. Although inputs used have been taken from Green Square, this is a 'theoretical' proof of concept test in that it was not possible to gather accurate data given the limited scope of this assignment. An 'actual' proof of concept testing would require the verification of data which is beyond the scope of this work.

We have estimated the likely performance of Green 'Circle' against each indicator and, in the process, hypothesised about the usefulness of each indicator based on the following considerations:

- Effectiveness: Does the indicator provide an accurate measure of achievement of desired outcomes?
- Efficiency: How easy is it to measure and what might be the cost of measurement (data availability)?
- Interpretation for action: Does the measurement allow ready interpretation as evidence for action, including infrastructure provision?

The next section outlines some of the key characteristics for Green 'Circle'. The final section is the theoretical proof of concept application of the benchmarks and indicators.

4.2 Green 'Circle' Urban renewal Area

Green 'Circle' Urban renewal Area falls within the City of Sydney Local Government Area (LGA) boundary. The City of Sydney identify significant growth in population and employment for the wider Green 'Circle' area forecasting population to reach 61,000 residents and employment to reach 21,000 jobs. The majority of this growth to occur post 2030 which is the scheduled completion date for major development of the precinct.

In the short to medium term, the BTS identify modest growth in population and employment out to the mid-2030s; an additional 7,200 and 8,400 respectively.

TABLE 1: PROJECTED GROWTH AT GREEN 'CIRCLE' (TOTAL FOR THE 3 X TZS THAT ARE SHOWN BELOW)

Year	2011	2016	2021	2026	2031	2036	2041	Growth (2011 – 2036)
Population	1,507	4,170	6,404	8,109	8,585	8,796	9,011	**7,289**
Employment	4,734	8,679	10,599	12,161	12,934	13,123	13,337	**8,389**
Workforce	963	2482	3,899	5,113	5,491	5,568	5,649	**4,605**

BTS 2015, September 2014 release

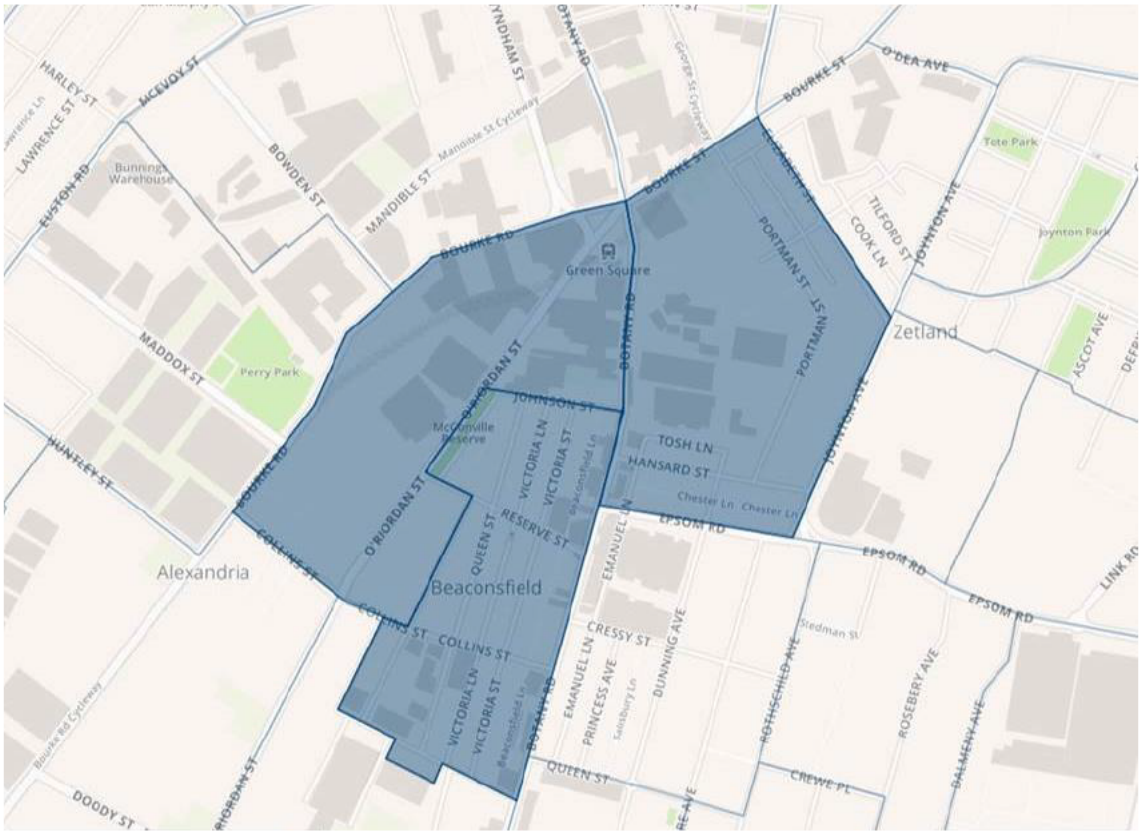
A 2014 SGS Economics and Planning report reference a population profile across the whole City of Sydney LGA (sourced from id. – the population experts 2013), which outlines the following key findings for the period 2011 to 2036;

- a 44 percent increase in the number of infants and pre-schoolers (0 to 4 years)
- a 49 percent increase in the number of primary school aged children (5 to 11 years)
- a 40 percent increase in the number of empty-nesters and retires (60 to 69 years)
- a 55 percent increase in the number of seniors (70 to 84 years)

Due to the intended density and proposed built form of the Green 'Circle' study area, the reliance of apartment/unit and town house living the occupancy of new residents is likely to be young families and young professionals with an eye to start a family which follows the projection curve as noted for the whole LGA.

The growth in employment is likely to be primarily made up of office and retail jobs, including service office industries (accounting, local banking and legal services), as well as more significant floorplate office for medium to large firms with ties to the airport and freight and logistics.

FIGURE 2: TRAVEL ZONES THAT COMPRISE THE GREEN 'CIRCLE' RENEWAL AREA



BTS 2015

4.3 Proof of concept testing (theoretical)

Theme	Indicator/s	Estimated score (Green 'Circle')	Effectiveness, efficiency, interpretation
District open space and recreation	Area and number of playing fields available in the district (by sport) (annually)	**3 – High performance** Proximity to both natural surface district public ovals and fields and district public hard surfaced courts from Centennial Parklands (including Moore Park), Sydney Park, Redfern Park, Waterloo Oval, Erskineville Oval. Provision of space for mixed activities.	**Effective** Measurement of the supply of open space on an annual basis is relatively straight forward using GIS techniques. Requires maintenance of an open space data 'layer' which would most likely me maintained by Council.
	Number of days fields closed/unavailable for use (annually).	**1 – Low performance** High provision and proximity however these recreational and open spaces are (estimated to be) highly utilised	**Satisfactory** Gap assessment of demand (in days) against appropriate supply (including closure days for maintenance and upkeep). Understanding of current usage and management of spaces is required. A consolidated list would need be created and most likely be maintained by council.
	Completion and adoption of the recreational needs assessment– including the diversification of playing field type/needs	-	Developed and maintained by councils, and reviewed by SSROC for district and regional coherence.
Housing affordability	Affordable housing to make up an increase share of total dwelling stock.	**0 – Failed performance** CoS's affordable housing levy in Green 'Circle' has seen more than 100 affordable rental housing units built there. Based on the figures cited above the total increase is new dwellings between 2011 and 2016 will be about 1,200. The affordable rental proportion is therefore around 8%. Green 'Circle' has not reached this benchmark of 30 percent.	**Effective** This benchmark is relatively easy to monitor for Green 'Circle' in terms of new affordable rental dwellings due to established monitoring systems for the AH levy. Measurement of affordable rental housing in the SSROC region might require additional data: the existing supply of public housing stock; and monitoring of existing 'market affordable' housing, that is, market housing that is available for rent for less than 30% of the median income.

Theme	Indicator/s	Estimated score (Green 'Circle')	Effectiveness, efficiency, interpretation
Access to centres and employment	District centres and employment – Project catchments to be determined by Travel time matrices on Journey to Work and social trips patterns	**3 – High performance** The average travel time (car and PT) from the Green 'Circle' renewal area to the CBD or the Airport (a Specialised Centre) is likely to be less than 30 minutes. Certainly PT access via rail to these centres would be considerably less than 30 minutes. The Green 'Circle' renewal area is likely to perform well on this metric as the majority of new housing will be near the station and walk distances to the station will be short by virtue of the permeable street network proposed in the Town Centre area.	**Effective** To measure performance against these indicators required identification of those areas within a 30 minutes average (PT and car) travel time of district centres. This would require travel time modelling, and a calculation of composite travel times. The modelling might need to be updated in response to changes in the levels of service offered by PT providers and/or changes to traffic flows, congestion, and/or roads widening.
	Local centre social infrastructure – Project catchments to be determined by Travel time matrices on social trips patterns and network analysis	**2 – Medium performance** The proposed Town Centre upgrades will see the provision of walkable access to local social infrastructure (which will raise this performance to a 3 – High performance). However the current provision within a walkable catchment is relatively low – public and private travel modes do provide acceptable travel times to surrounding existing services.	Opportunity for a baseline data set/map layer to be created to identify how potential renewal sites rank against this indicator through engagement with private sector or through Departmental assistance. However, it would be unrealistic to assume local councils would have the resourcing and skills internally to do this task of setting up a baseline data set and maintaining/updating it. Base data layer of types and locations of existing social infrastructure would also increase the ease to which this indicator is assessed. Councils could build local provision map for this purpose.
Schools and other education facilities	Measure of school population by accessible catchment population School catchments to be determined by Travel time matrices and network analysis	**2 – Medium performance** Numerous Primary Schools within identified catchments. These schools however are likely to be at or approaching capacity. Short term demand as identified by the BTS (out to 2036) would likely be accommodated within existing infrastructure, however the high growth post 2036 would require further provision of schools Secondary schools face a similar position in terms growth in demand. However, has a lower performance against existing provision of infrastructure and accessibility to this infrastructure.	**Satisfactory** Relatively straight forward to measure at the broader scale (first benchmark). The interpretation of these results is slightly murky when considering the 20 minutes city model as it raises two solutions: is the objective that we only want renewal in areas that are within 20 min catchment? OR build more schools so everywhere is within 20 min catchment?

Theme	Indicator/s	Estimated score (Green 'Circle')	Effectiveness, efficiency, interpretation
	Shared facilities audit to assess comparable access to facilities between different school models (acknowledging the limitations of maximum usable hours for natural surfaces).	1 – Low performance Due to the (estimated) little capacity in existing schools, it is unlikely that this initiative would succeed. Existing school infrastructure would be unlikely to take on the additional usage and remain up to standard.	Ineffective This would most likely be very hard to assess with existing data and would require collection of *new* data. As a result it is likely to be time consuming and expensive to monitor this indicator in a reliable way.
Hospitals and other health facilities	Audit of land supply in parallel with health and allied industry needs assessment	2 – Medium performance Question of capacity of hospitals in the broader Subregion: Royal Prince Alfred at Camperdown, Prince of Wales at Randwick, or even Royal North Shore. Is there capacity? Probably.	Satisfactory There is a level of difficulty in measuring 'other health facilities' as these dispersed activities can move locations with ease. Any baseline data would need to be monitored and updated regularly – most likely by Council. Would rely on the development of the baseline travel time working.
	Catchments to be determined by Travel time matrices and network analysis	2 – Medium performance Good in Green 'Circle'- Or at least better than it was before the renewal of the area and it was a largely industrial precinct.	Effective Requires identification of health facilities and of the areas within the 20 minute PT or walking catchment of each.
Community and cultural facilities, including childcare	Preparation and implementation of a needs assessment	-	Developed and maintained by councils, and reviewed by SSROC for district and regional coherence.
	Project catchments to be determined by Travel time matrices on social trips patterns and network analysis	1 – Low performance Good in Green 'Circle'? Or at least better than it was before the renewal of the area and it was a largely industrial precinct.	Effective Requires identification of health facilities and of the areas within the 20 minute PT or walking catchment of each.
	Baseline collection size provision is maintained as a minimum collection size Provision of seating and study space at a minimum set by population benchmark	2 – Medium performance In the long term, the Town Centre will have a "new creative centre, **library**, child care centre, parks, and public art." Conceivable, when the library is built, the rate of provision of books and seats will be much better than it is currently.	Ineffective In the case of major social /community infrastructure which might be provided at a later date in responses to growth so it's perhaps unreasonable to expect it to 'keep pace' with growth on an annual basis. This type of benchmarking is perhaps not very effective at monitoring the impact of growth in the short term.

Theme	Indicator/s	Estimated score (Green 'Circle')	Effectiveness, efficiency, interpretation
Precinct sustainability	Apply most relevant precinct sustainability measurement instrument (i.e. PRECINX, Green Star), shaded public spaces	**2 – Medium performance** Various ESD measures – and in particular WSUD – were features of the planning for Green 'Circle'. Some ESD features are evident in the Victoria Park precinct. Other measure such as tri-generation, the use of Solar PV and water saving/harvesting are mention in the Infrastructure Strategy. (The extent to which these have been implemented is unclear.) It is likely that Green 'Circle' is performing better than many renewal areas with respect precinct sustainability.	**Effective** Relative ease in access and understanding of data for new development, means that this indicator can be assessed by Councils.
Local employment and economic development	Development of a baseline of role and function for employment lands at a local, regional and metropolitan level (Employment lands study or similar).	**2 – Medium performance** There *is* likely to have been a loss in employment land in Green 'Circle' as it was an employment precinct that has been rezoned for mixed uses. However, it might be argued that intensity of employment uses in the remaining employment land is (or will be) high and therefore the may be to net loss of *employment* (i.e. jobs) as opposed to no net loss of employment land.	**Ineffective** Retention of employment land alone might be too simplistic a measure. In a changing economy it is possible to retain the same level of employment – or more – with less land. (It is however difficult to get regular, up to date data on employment. It usually comes out every 5 years.)
	No decrease in employment lands area or decrease in employment lands occupancy rates due (as direct a result of any renewal outcomes)	**1 – Low performance** The shift from existing industrial lands to mixed use (predominantly office), is counter to the argument of preservation of industrial lands for future potential. The overall utilisation is expected to increase due to the higher job to floorspace ratios of office activities. However the local needs versus regional and metropolitan needs of inner ring industrial lands may not have been adequately valued during this rezoning.	**Satisfactory** Although the amount of employment land is easy to be measured, the results of assessment against the indicator /measure can be hard to interpret.

4.4 Performance against all indicators

A threshold point could be agreed for precinct performance. However, aA bank of case histories would need to be understood to make sense of aggregated scores and determine whether a score or index is meaningful. A score of 24/42 derived for Green 'Circle' is meaningless in the abstract.

5 CONCLUSION

5.1 Active Open Space and Recreation

It is necessary to determine the level of utilisation of playing fields and the availability of any capacity for existing uses prior to applying the benchmark.

Once at capacity, the outcome sought is no net loss of available playing field hours (per participant) for each sport. This may be achieved by investing in improving the amount of hours in the day the facility is able to be used, or reducing the time/range of condition in which facility is unavailable (i.e. maintenance, lighting resurfacing, improved scheduling). Ultimately new facilities will be required to achieve the benchmark once options for more efficient use are exhausted This point would reached based on a judgement of the point at which a significant proportion of users turn away from the activity in the district.

Once investment in new facilities is required, the assumption should not be that the same range of recreational facilities should be provided. A recreation needs assessment should inform the mix of new facilities recognising the interests of new and existing residents.

5.2 Housing Affordability

The benchmark is to achieve a net increase in the stock of affordable housing in each district relative to the total stock. This would be achieved by requiring 30 percent of renewal stock to be available in the market as affordable housing (including both social and affordable rental housing).

Given the rate of provision in other locations where a specific affordable housing levy has been applied is below 10 percent of the total housing stock (e.g. Green Square and Pyrmont/Ultimo) this requirement of 30 percent is unlikely to be achieved.

5.3 Access to centres and employment

The benchmark sought is an improvement in the accessibility of housing in the district to strategic centres and local centres in the face of urban intensification. The indicator is maintain the average travel time per person to under 30 minutes (by all modes) to nominated strategic centres serving the district. For local centres the benchmark is 20 minutes.

Measurement of indicators requires access to and detailed analysis of journey to work data. This would be a lag indicator. While the measure is plausible it requires detailed technical analysis of information that may be 2-5 years old. Changes in the indicator would be very gradual even with the introduction of major new infrastructure or service improvements. The indicator would be confounded by factors influencing the extent to which local residents choose to visit and work in district centres. The complexity and difficulty in interpretation of results suggest that this information would be more useful in major regional landuse and transport planning strategies rather than in response to local urban intensification.

5.4 Parking

The most practical benchmark would be whether new traffic generating development responds with both minimum and maximum off street parking requirements that respond to the level of accessibility and the local objectives of a Transport Management and Accessibility Plan (TMAP).

Setting an absolute benchmark and ensuing indicators for parking would not recognise local conditions and may perpetuate conditions that generate traffic especially in areas that are accessible by public transport. There is also the potential for negative feedback into housing costs due to the potential for over provision of parking and the associated development costs.

5.5 Schools and Other Education Facilities

The achievement of nominal school provision rates without a local context, is insufficient due to the emerging opportunities for high quality schooling on well designed, highly accessible sites which have access to quality open space, recreational and cultural facilities.

The measurement of public primary school provision rates (per thousand population within 20 minute walkable catchments) is only a starting point to gauge pressure on local schools. A qualitative assessment of the adequacy of school grounds, its accessibility and access to supporting facilities is needed to determine whether a school is approaching capacity – and whether the school is scalable to accommodate growth. Where the existing schools do not show capacity for growth – then new school sites and / or innovative school redevelopment is needed.

A comparable approach can be applied for high schools based on a 30 minute walking and public transport catchment.

The measurement and analysis required for this indicator is complex and would be more appropriate to undertake as part of an integrated district infrastructure planning exercise.

5.6 Hospitals and Health facilities

The measurement and analysis required for this hospital provision is complex and should be undertaken as part of an integrated district infrastructure planning exercise. The most appropriate district strategic planning response to a perceived need is an audit of land supply in parallel with health and allied industry needs assessment.

Improving accessibility to local health facilities is the other element to the benchmark. This requires the provision of suitable floorspace in accessible centres for facilities such as medical centres. Again this is an exercise best suited to be undertaken as part of local strategic planning investigations.

5.7 Community and cultural facilities, including childcare

Community facilities provision lends itself to a tailored intervention due to the different expectations of residents. Libraries (including IT resource hubs) and other community facilities for youth, aged and childcare are increasingly being offered in flexible multi-use facilities. Best practice is achieved via a response to a needs based assessment supported by a s94 plan.

Child care services are not offered by all councils. Councils respond by enabling the market to deliver these services in suitable locations according to their development control plans.

5.8 Precinct sustainability

Best practice is tailoring existing precinct sustainability measurement instruments (i.e. PRECINX, Green Star) to achieve environment goals set under a district plan. Precinct specific objectives should be set to ensure that the measure is relevant to local conditions.

5.9 Local employment and economic development

It is necessary to development of a baseline of the role and function for employment lands at a local, regional / metropolitan level (via an Employment lands study). Having established the location and area of regionally important employment land there should be no loss in site area in each identified precinct. For locally important employment land there should be no net loss in floorspace for employment uses – noting that some sites may be converted to other uses while others may intensify as commercial or higher density industrial uses.

5.10 Utilities and stormwater

Councils provide assurance that appropriate design standards and environmental monitoring conditions are implemented via the approval and certification process. Where major flooding and drainage issues are identified their resolution becomes a threshold issue before redevelopment (e.g. Green Square). The adoption of water sensitive urban design principles is best practice.

APPENDIX: LITERATURE REVIEW

Open Space

The Department of Planning's *Recreation and Open Space Planning Guidelines for Local Government* (2010, p27) discusses the use of 'default' or standardised rates of provision for open space. The document cautions against the use of metrics expressed as a required area per capita, as this tends to discount the relative accessibility of open space within the urban environment. With the higher densities of the inner urban areas, provision of open space is quoted observed at 5% of urban residential areas (which is below the traditionally applied standard of 2.38ha/1000 persons, which would equate to 10%), however residents of these areas often have a range different types of open spaces in proximity to the homes.

The Guidelines advocate instead for the provision of open space based upon catchment access to a variety of types of open space. Whilst it is emphasised that a locally specific variations should be developed in order to appropriately address community needs, default standards derived from the West-Central Subregion are provided within the document and are included in Table 2 and a pictorial depiction in Figure 3 below.

FIGURE 3: COVERAGE AS A BENCHMARK FOR OPEN SPACE PROVISION

TABLE 2: DEFAULT STANDARDS OF OPEN SPACE PROVISION (DEPARTMENT OF PLANNING 2010)

	Hierarchy level	Size	Distance from most dwellings	Locally specific alternatives to meeting this standard
Parks	Local	0.5-2 ha	400m	Civic spaces, plazas, pocket parks, portion of a regional park or quarantined area of a conservation or landscape area
	District	2-5 ha	2km	Beach and river foreshore areas, or quarantined area of a conservation or landscape area
Linear and Linkage	Local	Up to 1km	n/a	Local primary schools, portion of a district park
	District	1-5km	n/a	Secondary schools, portion of a regional park
Outdoor sport	Local	5ha	1km	Local primary schools, portion of a district park
	District	5-10ha	2km	Secondary schools, portion of a regional park
Parks	Regional	5+ ha	5-10km	
Linear and Linkage	Regional	5+ km	5-10km	
Outdoor Sport	Regional	10+ ha	5-10km	

Source:

The catchment access metric applies as a reasonable measure of both provision and accessibility; however there are certain qualitative factors that further influence accessibility to and effective use of areas of open space, particularly for sections of the community with differing or special needs. The Premier's Council for Active Living (PCAL) (2011) notes that providing safety and amenity, such as the provision of appropriate passive surveillance and lighting within open spaces and along access routes, are important considerations in allowing for the utilisation of spaces. Further to this, the South-East Queensland Council of Mayors' *Open Space and Medium Density Living Toolkit* (2012) indicates that accessibility may be impeded by barriers such as major roads or steep inclines.

Different sections of the community are recognised to have different needs in accessing and utilising open space. For example, areas with higher proportions of families with young children will require adequate provision of appropriate play equipment to meet these needs (SEQ Council of Mayors 2012). A literature review conducted by Byrne and Sipe (2010, p26) as part of Griffith University's Urban Research Program found certain elements of the community have a higher need for access to open space, such as those younger than 15 and older than 55, those with low incomes and lower education levels and single-parent households.

A range of sources reviewed (Department of Planning 2010; Byrne & Sipe 2010; SEQ Council of Mayors 2012) recommend conducting surveys of residents' attitudes towards, usage of and barriers to usage of open spaces as part of measuring the effective provision of open space. Surveys of park users or residents are well suited to ascertaining (via direct responses from communities) what specifically prevents people from utilising provided public space, for example as a result of a lack of public transport

provision which may exclude certain community elements, or what facilities are lacking in provision within a study area. Conducting surveys also helps to control for variations in needs across heterogeneous communities (Byrne & Sipe 2010).

As an alternative to the standards based approach outlined above, Byrne and Sipe (2010) advocate for a needs-based assessment of open space demand. This includes demographic variations within an area to refine the modelling of demand in open space past the comparatively simplistic measurement catchment coverage described above. They note that:

> *"while considerably more time consuming and resource intensive than a standards approach, a needs-based assessment may provide the capability to better estimate the amount of open space required, the design of that space, and the facilities and programs that foster recreation within that space. This is especially important for areas where density increases are planned, but where there is little or no opportunity for additional greenspace."*
>
> *Byrne and Sipe (2010, p23)*

They propose that such an analysis would require the use of a GIS platform and an audit of all park facilities within the study area (such as an LGA or an area targeted for higher densities), along with comprehensive current demographic data and projected changes therein.

Affordable Housing

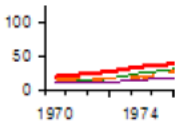
There is a range of different measures of housing affordability that can be used to determine changes in affordability over time. Three potential metrics are presented below with supporting information from relevant literature.

A generally accepted measurement of housing affordability levels within an area is the levels of housing stress experienced by the community. The Australian Housing and Urban Research Institute (AHURI) provide discussion through various research papers into the issue, wherein they have noted that housing stress is frequently being measured through a ratio metric, with the '30:40 rule' – those who spend more than 30% of their income on housing costs and who fall in the bottom 40% of incomes – applied as a standardised test for housing stress within Australia (Gabriel *et al* 2005), having been introduced through the Federal Government's National Housing Strategy in 1991-92 (O'Flynn 2011). In further AHURI research, Yates *et al* (2007, p4) have found this to be both a conservative and robust method of measurement.

The NSW Parliamentary Library's Research Service has prepared a briefing paper on housing affordability within NSW (O'Flynn 2011) which discusses several methods of measuring affordability. Assessment of the affordability of housing can be taken using the residual income method, which measures the disposable income of a household and examines adequacy and capacity to maintain an acceptable standard of living at that income. This method holds advantage in the way in which it accounts for the differences in household structure (which inherently impacts upon non-housing needs and expenditure thereon), a factor which is dynamic within communities experiencing intensification and consolidation, in order to derive levels of housing stress based upon ability to meet post-housing needs rather than simply housing cost (Yates & Gabriel 2006). This method has drawbacks in that it relies upon "detailed analysis of both housing and non-housing consumption and expenditure patterns" (Smith 2009), which imposes a more onerous requirement for data collection, along with higher complexity and time consumption in its implementation than other methods of measurement (Yates & Gabriel 2006).

A further measurement of housing affordability explored in the Parliamentary Library's briefing (O'Flynn 2011, p12) is the comparison of house prices to consumer prices or incomes. The literature widely recognises that there has been a dramatic increase in the disparity between house prices and household incomes, along with CPI, within Sydney since the 1970's, being demonstrated in Figure 4 below (O'Flynn 2011, p12), which shows that by 2007 median house prices in Sydney had climbed to approximately $450,000 with CPI at 100.

FIGURE 4: HOUSE PRICES AND CPI OVER TIME (O'FLYNN 2011)



Source:

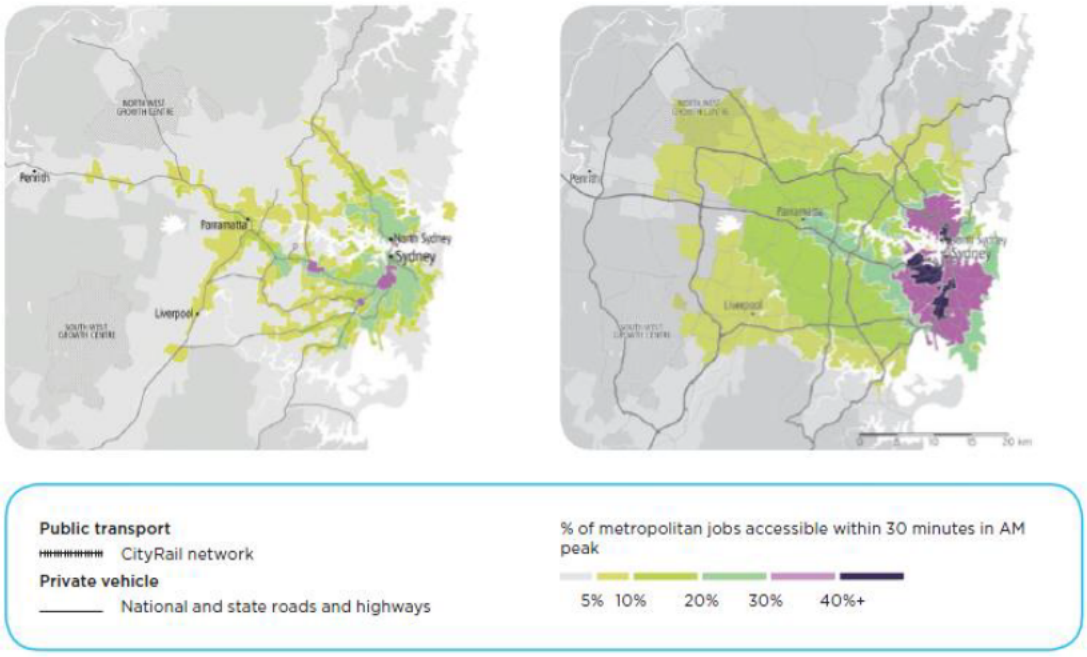
Accessibility

The federal Department of the Environment's (2011) State of the Environment Report (SoE) identifies that "transport-related issues are a significant factor in the liveability of cities", and notes the relevance of the current state of the road network, traffic congestion, access to and use of public transport in affecting the liveability of cities. Sydney is heavily dependent on automobile use, with 68.6% of all trips undertaken by car (Transport for NSW 2012). The relative accessibility of employment by car compared with heavy rail in Sydney is displayed below in Figure 5.

There is a widespread literature on the negative impacts of high levels of road congestion, with social and economic costs being added to a range of factors including decreased productivity, poorer air quality and public health and increased incidences of traffic accidents (VTPI 2013; Department of Environment 2011; Infrastructure NSW 2012, Cosgrove & Gargett 2007). In their working paper, Cosgrove and Gargett (2007, p13) estimated that the 2005 level congestion costs within Sydney were at $3.5bn, to climb to $7.8bn by 2020 in a 'no improvement' scenario.

The provision of public transport reduces dependence upon and demand for automobile travel, and the need for roadway and associated space such as parking, freeing these areas for more attractive or productive uses, as well as reducing energy demand (Department of Environment 2011). Intensification of areas which do not have adequate access to public transport will invariably lead to greater proportions of the population being automobile dependant, particularly so if they do not have access to centres or employment within walking distance. The relative accessibility of urban centres and employment can be derived by using population and employment forecasts produced by the Bureau of Transport Statistics, which are then applied to a time travel matrix.

FIGURE 5: RELATIVE ACCESSIBILITY TO EMPLOYMENT BY CAR OR PUBLIC TRANSPORT (TRANSPORT FOR NSW 2012)



Source:

Parking

The impacts of intensification upon parking availability, use and provision are inherently tied to broader accessibility concerns within a local area.

Schools and other education facilities

A range of benchmarks are discussed in Australia for the provision of primary and secondary schools. The data output for benchmarks primarily takes the form of a ratio of student places required for a portion of the population, school aged students, or dwellings in an area, for example, one primary school for every 5,000 population.

There is considerable variability between different benchmarks for primary and secondary schools. Table 3 summarises the different metrics reviewed and highlights the difference between measurements and outputs. This variation prevents many benchmarks from being directly comparable. It is important to note that the requirements for education infrastructure vary between infill and greenfield areas. This is demonstrated in the table below when comparing the number of dwellings required for schools in infill and greenfield developments.

TABLE 3. QUANTITATIVE BENCHMARKS FOR EDUCATION INFRASTRUCTURE

Project/program	Greenfield/infill	Primary school	Secondary school	Benchmark
Victorian Growth Areas Authority Guide to Social Infrastructure Planning	Greenfield	1:10,000	1:10,000-30,000	Total population
Green Circle Social Infrastructure Provision	Infill	1:500	1:1,200	Student population
ACT Desired Standards of Service	Unknown	1:7,500	1:30,000	Total population
Fisherman's Bend Urban Renewal Area	Infill	1:10,000	1:40,000	Dwellings
Department of Education and Communities Advisory Notes	Greenfield	1:2,000-2,500	1:6,000-7,500	Dwellings
Qld Social Infrastructure Guidelines benchmarks	Both	1:7,500	1:20,000	Total population
Leppington Precinct Study	Greenfield	1:2,000	1:6,000	Dwellings

Some consideration has been given to the student body size of schools. For instance, the Fishers Bend Urban Renewal Area in Victoria assumes a primary school has capacity for 450 students which a high school has an assumed capacity of 1,100 students. There is limited information available regarding different types of schools, for instance when a selective (academic, sports, performance etc.) school or special needs school needs to be provided. Benchmarks for the provision of Catholic and Independent schools are also limited.

These benchmarks do not consider the land area required for new and expanding schools. The benchmark size for a new school in a greenfield development area is 3 hectares for primary schools and 6 hectares for high schools (these figures include open space requirements for schools, which may be met by co-locating with sporting fields for community uses). These land areas are unrealistic for the majority of areas in SSROC which are highly urbanised and have high land values constraining land acquisition. The *State Infrastructure Strategy Update* (2014) calls for the intensification of uses on existing school sites and larger schools in urbanised areas to minimise land acquisition costs, but does not provide an indication of optimal school size.

Some quantitative benchmarks have been utilised for preschool education. These benchmarks are based on population and range between 1 preschool for every 5,000 population (as per the ACT Desired Standards of Service) and one for every 7,500 population (as per the Queensland Social Infrastructure Planning Guideline).

Tertiary education facility benchmarks require a significantly larger population. One TAFE could be triggered for every 150,000-500,000 people. The benchmarks reviewed indicated that a university campus may be required for every 250,000 people.

Hospitals and other health facilities

The majority SSROC falls into two local health districts by the NSW Department of Health, Sydney and Sydney South-East. Bankstown LGA falls into the Sydney South West Local Health District. This may see the types and rates of service provision differ between local government areas in different local health districts. Different health priorities and profiles of population may also be identified in different health districts, e.g. the rate of smoking may differ.

The quantitative benchmarks reviewed suggest between an additional 2 and 2.6 public hospital beds should be provided for every 1,000 people. These benchmarks are close to the average number of hospital beds per 1,000 people in NSW, which is 2.7 (AIHW 2014). The benchmark of 2.7 public hospital beds for every 1,000 is considered appropriate if a specific number for the current ratio of public hospital beds in SSROC is unknown.

A benchmark for the number of private hospital beds to be provided has been considered by the City of Greater Geelong in the development of their benchmarks for social infrastructure provision (1.7 beds per 1,000 people). This is in excess of the 1.0 beds per 1,000 experienced on average in NSW. As with public hospital beds, it is considered appropriate to adopt the average number for NSW if a specific number for the current ratio of public hospital beds in SSROC is unknown.

There is general consensus among the quantitative benchmarks reviewed for the provision of beds in aged care facilities. The benchmarks reviewed suggest 88 beds per 1,000 of the population aged 70 and above. This figure has been adopted as the national provision standard for Australia by the then Department of Health and Aging in 2011. The social infrastructure benchmarks prepared by the City of Greater Geelong suggest that 40 of these beds are provided in high care facilities and the remaining 48 are provided in low care facilities.

Two benchmarks considered the population trigger for the provision of a new GP, however the benchmarks chosen are significantly different (1.48 per 1,000 and 1 per 4,000). If a numerical benchmark is required for the provision of GP services, it is recommended that research be conducted by SSROC to determine the current ratio of GPs o population in areas where the service is considered adequate.

It should be noted that demand for health infrastructure is likely to increase as Australia's population ages.

While not directly related to health infrastructure, the importance of healthy built environments should not be underestimated. Healthy built environments provide for physical activity (in particular active transport), encourage social interaction, have improved perceptions of safety and in general promote improved health and wellbeing. Healthy built environments can assist in the prevention of health problems and in particular chronic lifestyle related illness. The development and encouragement of healthy build environments can assist in reducing demand for health infrastructure and contribute to the liveability and amenity a precinct.

Community and cultural facilities including childcare

Community and cultural facilities cover a broad range of social infrastructure items including:
- Community centres
- Libraries
- Youth facilities
- Art galleries
- Museums
- Performing Arts Centre
- Seniors Centre
- Childcare centre (including long day care, family day care, occasional care)
- Public art

It has been noted that the provision of community infrastructure in urban renewal areas is not as straightforward as in greenfield developments as some service provision of varying qualities already exists (Weston, 2014). Furthermore, many community infrastructure benchmarks relate specifically to greenfield areas, which have a different demographic and attract different populations to infill areas and therefore may not be directly applicable (Weston, 2014)

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