RESPONSE TO METROPOLITAN STRATEGY REVIEW DISCUSSION PAPER

into

SYDNEY'S FULLY INTEGRATED PLAN

that

REFRESHES THE METROPOLITAN STRATEGY

and

PROVIDES A ROBUST PLANNING PLATFORM

for

THE NEXT 25 YEARS

SELECTIVE UTILISATION OF AIR SPACE

ABOVE RAIL CORRIDORS

within the

GREATER METROPOLITAN REGION

for

TRANSIT ORIENTED DEVELOPMENT

SUBMISSION BY:

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EXECUTIVE SUMMARY

This Submission is in response to the Sydney ***Metropolitan Strategy Review 2036 Discussion Paper***. The purpose of the paper is to describe the scope and opportunities for providing Transit Oriented Development (TOD) over suitable sites within the Sydney Greater Metropolitan Region's rail network.

Given the limited scope of residual 'low hanging fruit' to effect existing urban infill, air space development adjacent to appropriately located rail node stations has the potential to generate a range of benefits including a contributing solution to improved integration of strategic land-use planning and infrastructure.

The paper recognises other government and advocacy documents / reports used in developing the Submission and the key issues raised including:

- the 2008 Auditor General initiated a Performance Audit, ***Connecting With Public Transport***,
- the ***2008 NRMA Audit of Park and Ride Facilities***,
- the ***COAG Communiqué*** of December 2009,
- the ***2008/2009 Metropolitan Development Program Report***,
- the 2010 ***Metropolitan Transport Plan***,
- the ***NSW State Plan 2010***, and
- the Commonwealth's ***National Housing Supply Council's State of Supply Report 2010***.

The key issues identified, include sustainable planning for growing populations, reducing congestion, integration of land-use with transport and infrastructure planning, growing Sydney's value, the treatment of above rail air space as a new portfolio, realisation of unscheduled disposal revenues from the sale of air rights, a substantial increase in the delivery of 'in fill' housing stock and assist in making Sydney climate change ready.

The potential value of an air space portfolio, when applying a notional \$350 / m^2, may yield a disposal revenue in excess of \$2 bn. The estimated additional car parking could exceed 69,000 spaces with an annual emission reduction of some 80,000 tonnes/ CO_{2e}.

The summary of the factors influencing successful TOD includes:

- Integration of land use and transportation planning coordinated at the State level between the relevant Agencies.
- State Governments' realisation of the unscheduled revenue opportunities.
- An appropriate mix of land uses encouraging optimum utilisation of public transport.
- A revised Transport Administration Act to enabling air space development over operating rail corridors with an appropriate stratum subdivision and delivery authority.
- Ownership of the air space vested in a Government planning / development entity such as the Metropolitan Development Authority (MDA) or equivalent and with powers of air space assembly rights and an established interface role with the rail corridor operator.
- The development of realistic and attainable criteria for selecting TOD sites and network assessment being funded from the existing private car levy as collected by the Office of State Revenue.
- The over rail building platform potentially delivered by Government
- Prescribed development controls (maybe contained in a new SEPP) that reflect sustainability in triple bottom line measures.
- The public sector actions that include investment in pedestrian and transit improvements.
- A likely consequential review of the Government's levy allocations for commuter car parking and switched to facilitate the construction of commuter car parking for bus / light rail transit nodes.
- Disposal of Air Space Development rights under competitive market tension arrangements.

Suitably identified TOD Air Space Development projects would substantially increase the available capital expenditure for other public transport infrastructure projects for rail or other modes.

1. INTRODUCTION

The NSW State Government has invited community input regarding the Metropolitan Strategy Review 2036 Discussion Paper for Sydney. The outcomes identified in the Review Discussion Paper, together with the integration of the finalised Metropolitan Transport Plan are acknowledged and supported.

The purpose of this Submission is to assist in the development of a primary focus of the Review: 'improved integration of strategic land use planning and infrastructure'. This Submission outlines a contributing solution which captures added benefits to the NSW State Government and the community of Sydney.

This Submission incorporates and expands on the following sub themes within the Discussion Paper:

- Sustainable planning for a growing population,
- Reducing congestion and controlling urban sprawl,
- Integration of land-use with transport and infrastructure planning,
- Building vibrant and sustainable communities through urban renewal,
- Making Sydney climate change ready, and
- Meeting changing housing needs.

Within the above sub themes, this Submission has its focus on:

- **What** can be done to enhance the existing underutilisation of transit oriented air space development opportunities within Sydney's existing Greater Metropolitan Region (GMR) rail network,
- **Why** the proposal would make a difference in overcoming the current opportunity cost to both Government and community, and
- **How** the new strategy should incorporate an identification of Transit Oriented Development (TOD) sites within the existing and proposed new 'at grade' rail corridor network.

2. BACKGROUND

A major deterrent to the use of public transport is the shortage of sufficient commuter car parking at existing railway stations. The consequential impacts are extensive metropolitan road and CBD congestion and the avoidable emission of greenhouse gases (GHGs). These impacts are clearly identified in Metropolitan Strategy Review Discussion Paper and recognise the extent of GHG reductions with the application of appropriate strategies (both individual and collective).

In June 2007, the NSW State Government's Auditor General initiated a Performance Audit, ***Connecting With Public Transport***. The audit examined the effectiveness of commuter car parking / interchanges in promoting increased use of public transport in Sydney and focused on three specific questions:

- Has the Government adopted a coordinated and strategic approach to developing interchanges?
- Are there adequate information systems to inform the public and management?
- Has funding of interchanges been adequately addressed?

A summary of the Audit findings – Executive Summary and Recommendations are given at Attachment A.

In February 2008, the '***NRMA Investigation and Audit of Park and Ride Facilities'*** within the GMR identified an undisclosed estimate of vehicles that would have utilised commuter parking at railway stations if available.

In July 2008, the Department of Environment and Climate Change (DECC) established a provisional carbon accounting formula that gave a projected annual emissions per car for Sydney equating to 4.3 tonnes of CO_2 (or equivalent). A calculation template for deriving the extent of Avoided Annual Emissions (tonnes of $CO_{2\,e}$ for Metropolitan Sydney, with the provision of large scale metropolitan based commuter car parking) is provided at Attachment B.

The NSW Government, through:

- ***DECCW***, is developing a range of strategies for energy efficiencies to contain the extent of GHG emissions,
- the ***Department of Planning***, has prescribed clear targets for residential and employment growth to meet increased population growth and initiated the policy for the integration of land use and transport planning,
- the ***Department of Transport and Infrastructure***, has a stated goal of developing best practice guidelines for the funding and provisioning of commuter car parking,
- ***RailCorp,*** maintains current control of the rail corridors including a small number of *'above grade'* developed air rights, commuter car parking, all non utilized corridor air space and operates in excess of 300 railway stations within the GMR,
- the ***NSW Treasury,*** has responsibility to ensure optimum utilisation of State owned assets, and
- the ***Department of Premier and Cabinet,*** has finalised the three yearly review of the NSW State Plan (2010).

These various areas of individual Agency responsibilities constitute the prospect for an interdepartmental review. This would have the role of assessing the opportunities and synergies for defining new or enhanced strategic air space for TODs that will yield substantial environmental social and economic benefits for the overall betterment of both the Government and the community. The benefits would arise from a combination of:

- creating and capturing the economic, social and environmental benefits attainable with the existing infrastructure, through : integration and access, rail mode capacity enhancement, optimizing existing infrastructure assets and realizing all potential unscheduled revenues to enhance a sustainable funding regime;
- enhancing a range of specific priorities outlined in the NSW State Plan (2010 Review) as listed at Attachment C; and
- enhancing the range of specific directions outlined in the Strategy Review Discussion Paper and detailed further at Section 7.

At the Federal Government level, the COAG meeting of December 2009, resulted in a communiqué that included a capital city strategic planning systems. The COAG agreed that, by 1 January 2012, all States will have in place plans that meet new national criteria. The extent to which the application of TODs within the rail corridors of Sydney' GMR meets the relevant criteria of COAG's communiqué is outlined at Attachment D.

3. EXISTING PRECEDENTS WITHIN THE SYDNEY GMR

Within the Greater Metropolitan Region (GMR), initial research shows that only four (less than 2 % of the total network of *'at or near grade'* rail station precincts) have air space developments. They are: Central (north for non TOD car parking) and a range of mixed uses at Chatswood, Hurstville, Kogarah, North Sydney, and St Leonards. The five mixed use above rail developments are contiguous to rail stations and with uses ranging from car parking, commercial, retail and residential.

In the case of Chatswood, the over rail building platform has been completed and includes some 500 car parking spaces. The site is currently for sale with an approved Building Rights package for the delivery further parking and three residential towers. The Building Rights Package (as indicated in the EOI release) includes four freehold stratums (3 residential stratum and 1 carpark stratum).

The three residential towers range from 25 to 40 storeys will provide in excess of 500 apartments.

The Gross Floor Area represents some 58,000m^2 and with scope for uplift in area and with an indicated uplift payment impost of $525 /m^2 at the time of the EOI release.

The extent of the building platform for air space development above the rail corridor is portrayed in the aerial photograph following:

In the case of the five mixed use precedents mentioned above, although subject to competitive tension, the created TODs were conceived within the private sector interests for take up. In this regard, and given the projected population growth and prevailing challenges in dealing with existing urban infill, the opportunity exists for Government to accelerate the rate of future TOD deliveries by shifting the initiative from the private sector to the public sector.

4. CURRENT LIMITATION TO EXPANSION POTENTIAL

So long as RailCorp remains the sole authority entrusted with ongoing airspace ownership on railway properties, it is unlikely that the broader social, environmental and economic planning considerations will be contemplated. There is seemingly no corporate driver or requirement for successful outcomes. Whilst rail operators' objectives and responsibilities are confined to rail transport operations they exclude any requirement to realise the broader principle of: ***'the greater good for the greater number'***. Because of this, the Government and the community will continue to forego the potential gains derived from an impelling range of triple bottom line benefits.

In benchmarking terms, the adopted technique for the provision of rail enclosing structures (the equivalent of land creation) could parallel the proven safe and fast method adopted at the 2.5 ha high intensity public domain of Federation Square in Melbourne. This building platform involved the production of off-site pre-stressed pre-cast concrete paneling for vertical and horizontal placements. Such an approach attains a high level of efficiency and effectiveness by reducing the time required for track possessions and overcoming any risk any side load impacts with conventional column placements. Accordingly, a new opportunity prevails in addressing what can be done, why and how.

5. THE OPPORTUNITY

Given the limited scope of residual 'low hanging fruit' to effect existing urban infill, the scale of the GMR rail corridor, the limited uptake on air rights development and the exampled precedent as with Chatswood, there is substantial scope for the assignment of an air space portfolio that is formally assessed and led by Government. A proactively created new strategy for air rights development above rail corridors, in terms of what, why and how, is outlined below:

What: the creation of a new (unscheduled) property portfolio (with a State Significant classification) that:

- recognises the scope to harness air space development for the provision of TODs,
- determines relevant criteria for site analyses in proximity to metropolitan network stations, and
- identifies appropriate mixed use developments that can meet a realisable portion of the forecast demands arising from sustainable urban growth, including the provision of commuter car parking facilities, affordable housing, transit oriented long day child care centres, vertical aged care facilities and residential development.

Why: to enable:

- the integration and more effective use of an existing array of related State Government policy drivers to fulfill metropolitan sustainability as identified in the NSW State Plan (2010 Review),
- optimised utilisation of significant State owned *"lazy asset"*, and
- the creation of substantial revenue from the commercial disposal of '***air space development rights***' to the property market

How: by initiating a formal assessment of air space development contiguous to appropriate rail station precincts with terms of reference to:

- recommend which should be the preferred Agency with ownership / responsibility / delivery of air space building platforms for TODs;
- identify the extent to which the initial corridor assessment should be funded from the existing car parking levy, given that future commuter car parking can be readily integrated with other air space development at suitably identified node sites;
- assess the essential criteria for 'air space' selections within each of the identified network station precincts, as indicated at Attachment E;
- identify suitable sites for TODs that takes account of Site Compatibility Certification under *State Environmental Planning Policy (Infrastructure) 2007* (the Infrastructure SEPP);
- determine the range of appropriate market-derived uses within each identified transit node site; and
- recommend the methods by which the follow-on financial and economic analyses are prepared to derive the respective development rights value.

The aerial below illustrates a potential siting location for air space development in relation to a suburban rail station:

The over rail development enables the provision of commuter car parking, transit oriented child care including car spaces for parents, and other mixed uses including commercial / retail (subject to locality demand), residential including affordable housing and appropriately designed vertical aged care facilities, and with roof top landscaped open space.

Such an approach within the GMR rail network has the potential to generate a worthy range of identifiable outcomes.

Identifiable Outcomes:

Subject to ongoing rail operational and safety requirements, the application of TOD air space development uses would enable an effective merge of the relevant Federal and State guidelines, policies and directions as follows:

- assists in addressing the issues of the funding and provisioning of commuter car parking as identified in the ***NSW State Auditor General's Audit Findings*** as outlined at Attachment A;
- assists in meeting the relevant priorities announced in the ***NSW State Plan review (2010)*** as outlined at Attachment C;
- satisfies selected national criteria from the ***COAG Communiqué December 2009*** for capital city strategic planning systems as identified at Attachment D;
- aligns with and supports the ***National Housing Supply Council's State of Supply Report 2010*** in recognising the importance of State Governments, in addressing 'infill' housing, to take substantial steps to facilitate infill development;
- accelerates TOD delivery through an MDA or equivalent (as identified in the ***Metropolitan Strategy Review Discussion Paper***) enabling additional supply of housing and increased patronage on public transport;
- augments the identified transit nodes sites within the ***NSW Government's Metropolitan Development Program*** (MDP) major sites data base for existing urban areas;
- expands provisioning of long day child care facilities linked with home to work journeys or home to education / training journeys;
- significantly reduces emissions by providing commuter car parking within rail corridors;
- facilitates proactive and attainable infill delivery for increased affordable housing stock and a consequential reduction of development pressure on upon metropolitan fringe agricultural land;
- offers a significant enabler in meeting the brown field dwelling and employment targets (and growing) that have been prescribed within the existing Sub Regional Strategies;
- lessens community opposition compared to compulsory acquisition measures to enable large scale development within existing established transit oriented residential precincts;
- enhances utilisation of State Government owned assets (defining a new portfolio) and with the creation of significant unscheduled revenues to Government; and
- offers the opportunity to redirect unscheduled revenue for the purpose of other transport infrastructure such as upgrades for stations, signaling, stabling yards, new rolling stock, contributions to affordable housing delivery, land purchase to protect urban fringe agricultural lands or a combination of these.

6. INDICATIVE METRICS FOR A NEW TOD PORTFOLIO WITHIN THE GMR

Within the context of Sydney's GMR, an indicative assessment of assumptions and potential floor space (m^2) available for air space development are derived from the following calculation inputs:

- With a network coverage between Maitland, Lithgow and Bomaderry comprising some 250 (approximate) at grade' rail stations, each with 2 potential sites (up line and down line of each station) and applying a notional 15% suitable for development, would yield 75 development sites over time.
- With a rail access precinct (as defined in the MDP) of 400m radius, less the station length of say 200m, would provide for 300m length for each potential up line / down line node site.
- An average corridor width of 40m and allowing 2.5m boundary setbacks.
- An average height of 12 storeys (but subject to relevant constraints such as solar access etc), and each level of elevation with a reduced area to enable a taper effect.
- a generic building efficiency (gross to nett) at 85%.

The indicative measurements for both a node site and the network, factoring the above calculations, are provided at Attachment F. An overview of the calculated findings, as applied to the GMR rail network, is listed below:

Feature	Approximate Findings
Total Base Plate nett area	67 ha
Total Units with allocated car parking	49,500 units
Long Day Child Care [(1)]	3,000 places
Commuter Car Parking	19,800 spaces
GHG Emission Reductions	80,000 tonnes
Network Air Space Value [(2)]	$2.2 billion

Notes:

1. Provisioning subject to locality market demand.

2. A formal valuation would be derived from follow-on ground truthing and subsequent:

   - feasibilities guided by the indicative selection criteria for TOD node sites as indicated at Attachment E;
   - agreed ratios between residential units (and corresponding car parking allocations), and other mixed use elements including commercial, retail, aged care, child care and commuter car parking; and
   - agreed final value for both m^2 and assigned car spaces for residential, commuter and long day care centre uses.

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7. SUMMARY OF POTENTIAL OUTCOMES AGAINST THE PROPOSED DIRECTIONS to 2036

The projected outcomes of the proposal, when compared against the stated Directions in the Discussion Paper, are summarised below:

Planning for a growing population. Implement sustainable planning for a growing and ageing population. By 2036 Sydney will need to accommodate 6 million people. • 1A Should Sydney continue to accommodate the majority of population growth in NSW? What are the alternatives?	• **Continued accommodation of growth subject to the provision of additional land supply including air rights development sites and with linked infrastructure support.**
Making Sydney climate change ready. Address the vulnerability of Sydney to a changing climate and a carbon constrained future. • 2A What land use responses will help Sydney mitigate, and adapt to climate change? • 2B How can the planning system help Sydney adapt to the impacts of climate change? • 2C How can planning in Sydney be improved to boost water, fuel, energy and waste efficiency? • 2D How can we bring more green and open spaces into our communities?	• **Enables the opportunity for accelerated provisioning of TOD delivery enabling reduced car dependency and reduced CO_2 emissions.** • **TOD for fuel and energy efficiency.** • **Enhanced Green outcomes (emission reductions) through TOD.** • **The provision of roof top open gardens**

Integrating land use with transport. Get best value from investment in transport infrastructure with integrated land use planning. • 3A What is the best use of land within walking distance of stations and bus stops? • 3B How can we make our city better for pedestrians, cyclists and public transport users? • 3C How can we reduce the need for people to travel as far or as often?	• **Air Space TOD within relevant rail access precincts and potentially selected bus interchanges.** • **Air Space TOD for mixed uses.** • **Air Space TOD for mixed uses including vertical aged care facilities, child care facilities and commuter car parks.**
More jobs in the Sydney Region. Boost job growth by providing a good supply of land for employment. • 4A Where should we reserve future employment land? • 4B How can we maintain and revitalise older industrial sites in established areas? • 4C What initiatives can boost the success of future employment lands? • 4D How can we ensure sufficient retail and commercial space to support economic growth? • 4E What economic development incentives might attract businesses and increase jobs?	• **Predominately at grade but with provision above grade (air space developments).** • **Combination of renewals and higher densities.** • **Air Space TOD for mixed uses at appropriate rail node precincts.** • **Air Space TOD with mixed uses including employment as appropriate.** • **Employment attractions for both TOD delivery and whole-of-life operations with the provisioning of substantial air space FSR m^2.**
Growing Sydney's value. Increase diversity of employment to strengthen local economies and provide a wider range of jobs closer to home. • 5A What are the ways of facilitating diverse employment and supporting jobs in new and existing centres? • 5B How can we attract diverse employment and new jobs in Western Sydney? • 5C How do we encourage affordable places for small and creative businesses? • 5D How do we enhance Sydney's role as a Global City?	• **Air Space TOD including air space development at relevant rail access precincts and potentially selected bus interchanges.** • **Air Space TOD for mixed uses**
Strengthening a City of Cities. Improve the capacity of Sydney to accommodate the majority of its housing growth within existing urban areas. • 6A What is the best way to unlock the potential for growth in centres and areas within walking distance to stations and bus stops? • 6B How can the planning system support investment and jobs in new and existing centres? • 6C What features are essential to a vibrant centre? • 6D How do we ensure these features are incorporated into our planning?	• **Air Space TOD at relevant rail access precincts and potentially selected bus interchanges.** • **Entire existing rail corridor network potentials formally assessed to optimise opportunities for TOD provisioning.** • **Favourable attributes to health, physical functionality and economic success** • **Relevant criteria of the COAG Communiqué applicable at the localised level.**

Meeting changing housing needs. Ensure a wider mix of housing types and costs across Sydney in response to an ageing population and changing housing preferences. • 7A What housing types will we need in our local areas in the future? e.g. stand– alone or terraced houses, townhouses, tall apartment buildings, small blocks of apartments with shared gardens or big houses divided into two homes? • 7B Which areas are appropriate for higher density housing–such as apartments?	• **Enables the opportunity for accelerated provisioning of affordable housing, commuter car parking, transit oriented child care and vertical aged care facilities.** • **Air space development over appropriately located rail access precincts for selected high rise mixed uses**
Balancing land uses on the city fringe. Plan for new housing in greenfield areas, while protecting land for primary production, open space and conservation needs. • 8A Should we continue to concentrate greenfields development in the Growth Centres? • 8B Should more be done to encourage food production in the Sydney Basin? • 8C To what extent should land on the city fringe be identified and protected for open space and conservation? • 8D How can the process of greenfield land release be improved?	• **Integration of Air space development over appropriately located at grade new rail access precincts within Growth Centres.** • **Lessen the pressure on high cost greenfield lots with the increase in transit node (infill) sites.** • **Greater emphasis on future Air space developments integrated with new rail infrastructure**
Achieving Renewal Build communities through redevelopment. • 9A Which parts of Sydney would benefit from a new centre with shops, small businesses and public transport services? • 9B How can we improve the design of public spaces and new buildings in existing areas? • 9C What are the barriers to accessing key services in your local area? • 9D What future uses, activities and services should be grouped in and around centres?	**The benefit of Air space TOD over appropriately located transit nodes needs to be factored in all forms of renewal /infill assessments.** **Mixed uses including affordable housing, vertical aged care facilities, transit oriented long day care centres, commuter car parking, and other mixed uses as appropriate.**
Implementation Implement a revised Metropolitan Strategy. • 10A What should be the key characteristics of an urban renewal authority (e.g. Sydney Metropolitan Development Authority)? • 10B What legislative and planning tools should be available to such an authority? • 10C What indicators should we use to measure the success of our Metropolitan Plan?	• **Source the provision of unscheduled disposal revenues that could be derived from new air rights development over otherwise existing "lazy assets", enabling: increased available finance for expenditures including network upgrades or new City infrastructure projects or both.** • **Necessary legislation to enable 'air space development rights' and timely enactment.** • **Achievements against the criteria established by the COAG communiqué released December 2009.**

What else? • 11A What top three issues or geographical areas should the next Metropolitan Plan particularly focus on? Why?	• **Issues and areas likely to be derived from appropriately considered, sequenced and evidence-based land creation (over rail corridor), envelop studies, feasibilities and expressions of interest, ensuring an appropriate balance of infill TODs (within existing nodes) and greenfields TODs (at future rail nodes);**
• 11B Do you think the ten proposed directions above are the right way for Sydney to head towards 2036?	• **Provided that clearly identified priorities for policy effort initiatives and investment by governments ensue, and with an effective framework for private sector innovation, investment and delivery.**

8. RELATED ISSUES FOR CONSIDERATION

The range of related issues that may warrant further considerations may include but are not limited to:

a. ***State Government Level***:

- The application of an appropriately modified Government 'Gateway Process' to explore the willingness to adopt existing air space development precedents within Sydney, adapt as appropriate in order to realise adeptness in the highly valued creation of TODs at appropriately identified transit Node Sites.
- The enhanced rail network capacity measures to accommodate increased commuter patronage levels.
- The appropriateness to effect change in the ownership / management the rail corridor air space.
- Realistic and attainable selection criteria for transit node site identification as exampled at Attachment E.
- The scope for change in the relevant enabling legislation to enhance system effectiveness that is simple, rapid and able to deliver land use certainty.
- The costs to examine, test and establish physically and financially viable TOD sites including envelope studies.
- The scope for initial assessment funding being allocated from the existing car parking levy program, given the likelihood of a significant increase in commuter car parking.
- Assessment of costs / revenues for effective park and ride ticketing mechanisms.
- The expenditure priorities of the newly derived revenues from air space development rights disposals.

b. ***Federal Government Level***

- The appropriateness of a national approach for:
  - encouraging TOD outcomes to enhance public rail and road transport ridership with the consequential, economic, social and environmental benefits;
  - managing the containment of infrastructure costs of passenger rail and road networks as experienced with the conventional 'sprawl spread phenomena' of most major cities;
  - including the application of air space TOD as a feature or criteria in the capital cities strategic planning systems and enabling existing urban area infill to aid in meeting the national future housing supply; and
  - liberating the liquidity from existing State / Territory government owned infrastructure property assets for appropriate expenditure on other capital city programs or projects.

9. CONCLUSION

The considered primary factors influencing successful TOD include but not limited to:

- Integration of land use and transportation planning coordinated at the State level between the relevant Agencies.
- The realisation of limited residual 'low hanging fruit' to effect existing urban infill and the importance of State Governments to take substantial steps to facilitate infill development as recognised by the ***National Housing Supply Council's State of Supply Report 2010***.
- State Governments' realisation of the unscheduled revenue opportunities.
- The appropriate mix of land uses deriving optimum utilisation of public transport.
- An appropriate review of the Transport Administration Act to enable Air space development over operating rail corridors with an appropriate stratum subdivision and development delivery authority.
- Realistic and attainable selection criteria for TOD Node Sites identification.
- Ownership of the air space linked to a Government planning / development entity.
- The role of a Metropolitan Development Authority (MDA) or equivalent being vested with the relevant air space assembly rights with stratum subdivision, and established interface role with the rail corridor operator.
- The development of realistic and attainable criteria for selecting TOD Node Sites and network assessment being funded from the existing private car levy as collected by the Office of State Revenue.
- Prescribed development controls (maybe contained in a new SEPP) that reflect sustainability in triple bottom line measures.
- The provision of over rail building platforms being potentially delivered by Government through an MDA or equivalent.
- The public sector actions that include investment in pedestrian and transit improvements.
- A likely consequential review of the Government's levy allocations for commuter car parking and switched to facilitate the construction of commuter car parking for bus / light rail transit nodes.
- Disposal of Air Space Development rights under competitive market tension arrangements.
- Suitably identified TOD Air Space Development projects would substantially increase the Government's available capital expenditure for other public transport infrastructure projects for rail or other modes.

ATTACHMENTS:

A. Executive Summary Auditor General Performance Audit, ***Connecting With Public Transport*** - June 2007

B. Data Table Template- ***Avoided Annual Emissions*** - tonnes of $CO_{2\,e}$

C. Identified ***Draft NSW State Plan (2010)*** Objectives - Enhanced with the Provision of TOD

D. Application of TOD Outcomes Against the ***COAG Communiqué*** December 2009 Criteria

E. Indicative Selection Criteria in Identifying Suitable TOD Node Sites

F. Indicative Yield Calculations for both a TOD Node Site and the GMR Network

AUDITOR GENERAL PERFORMANCE AUDIT - *CONNECTING WITH PUBLIC TRANSPORT*

Executive Summary

The focus of our audit

The NSW Government released the *State Plan – A New Direction for NSW* in November 2006. A priority area is to increase the public transport system's share of peak hour journeys undertaken in Sydney.

Interchanges provide access to public transport. They include bus stops, railway stations, ferry wharves, taxi ranks, kiss and ride areas, cycle racks and park and ride areas. Many key aspects of integration come together at interchanges including information, ticketing, network accessibility, service coordination and personal security.

The looked at the effectiveness of interchanges in promoting increased use of public transport in Sydney. More particularly, the three questions asked:

- Has the Government adopted a coordinated and strategic approach to developing interchanges?
- Are there adequate information systems to inform the public and management?
- Has funding of interchanges been adequately addressed?

The audit included a review of interchange projects built since 1992-93. In more recent years there has been less interchange development. In this context, the audit looked for areas for improvement that the Ministry of Transport can apply in its development of new processes.

Audit opinion

We see considerable potential for the Ministry of Transport to plan and manage interchanges more effectively, so as to make better use of our public transport network.

Interchanges can promote access to the public transport network with good waiting environments and fast transfers. But poor interchanges, with long walks, stairs, long waits, poor travelling information, and poor weather protection can substantially discourage access to public transport.

The State Government has in recent years developed a *State Plan*, a *Metropolitan Strategy* and an *Urban Transport Statement* to encourage development in accessible locations and improve transport between Sydney's centres. During this period, the Ministry has focused particularly on arrangements to improve private bus services.

We believe that the Ministry now needs to focus more on multi-modal transport planning and interchange performance. It needs to assign responsibility for the coordination and oversight of inter-modal operations to an entity resourced for the purpose. Without this it will continue to be very difficult to identify and address unmet needs, seek and secure stakeholder funding, and monitor and evaluate system performance.

Below, we explain in brief the basis for this opinion. Our analysis is set out in the report that follows.

The State's total investment and future requirements cannot be readily identified.

Funding objectives and options for interchanges need to be developed.

There is a potential to make more use of alternative funding sources, such as from private sector investment and multiple use developments.

Recommendations

We recommend that the Ministry of Transport:

Assign clear responsibilities

- establish a coordinating and oversight entity to assess interchange standards, monitor interchange performance, plan access to the public transport system, and plan whole of network development
- establish clear responsibilities for interchange "ownership", operation and maintenance

Develop a more strategic approach

- set performance objectives for interchanges such as demand levels, connectivity offered and cost-effectiveness achieved
- develop multi-modal transport plans to improve interchange planning and overall effectiveness
- further develop the 'quality gap' assessment using facility inspections against a set of specific standards and risk assessments
- develop and publish a ten year rolling plan for interchanges

Develop and promote Best Practice

- develop and issue Best Practice Guidelines for different categories of interchanges, including arrangements for integrated emergency and security response
- carry out a review against Best Practice Guidelines to assess the quality of the present interchange arrangements
- work in partnership with local stakeholders to identify ways of ensuring good quality multi-modal interchanges, particularly those where quality falls short of the Guidelines.

Provide better information

- provide better information to the public, such as by including on the Transport Infoline 131500 website details of interchange layouts, transport services, kiss and ride facilities, park and ride facilities, taxi ranks and amenities
- enhance the Transport Infoline 131500 website journey planner such as by adding an ability to plan part of the journey by taxi or car, as a means of encouraging a change in travel behaviour
- develop a strategy to assess and, if necessary, improve brand awareness of the service
- establish and maintain an accurate inventory of existing facilities, site ownership by facility, transport services provided, capital amenities provided, identification of access attributes, capacity, utilisation and costs
- link the facilities inventory to a map including existing and planned bus, rail and ferry routes and services to develop a context for placing new facilities or expanding those already in existence

Systematically evaluate performance

- establish an evaluation process framework with performance objectives, performance monitoring and post evaluation to establish the impact of the interchange facilities on public transport
- establish a means of systematically reviewing the frequency and character of transport service provided at individual facilities to ensure that it is adequate for the purpose

Address the need for long term funding

- forecast long term funding requirements for development, operations, maintenance and security
- clearly state funding objectives and options for interchanges such as minimising the cost to commuters, minimising the cost to public agencies or promoting joint development
- promote joint development of interchanges using a more market-oriented approach
- continue to improve transparency in how *Parking Space Levy* funds are allocated to infrastructure projects by the use of criteria (including extent of achievement of the object of the PSL legislation) and evaluation of the relative merits of alternatives
- identify and assess the adequacy of funding sources for interchanges, including for operations, maintenance and security
- identify, secure and leverage further funding sources as necessary to address any shortfalls.

ATTACHMENT B

INDICATIVE DATA TABLE TEMPLATE

to

ESTIMATE AVOIDED ANNUAL EMISSIONS

within the

GREATER METROPOLITAN REGION

Railway Station (1)	**Existing Car Spaces** (2)	**Existing Commuters**(2)	**Unmet Demand for Parking Spaces** (3)	**Annual $CO_{2\,e}$ Avoided Emissions (tons)** (4)
(a)	(b)	(c)	(d)	(e)
A				
B				
C				
D				
E				
F				
G				
H				
I				
J				
K				
L				
M				
N				
O				
P				
etc				
Totals			***(x)***	***(y)***

Notes:

1. The 2008 NRMA Audit of Park and Ride Facilities identified 27 Metro stations and 20 Regional stations, but details not available for release.

2. Audit figures identified, but not available for release.

3. An estimate of potential demand for commuter spaces as derived from the column (c) space demand less column (b).

4. Calculation derived from the total of column (d) times the DECCW advised average car emission of 4.3 tons pa of $CO_{2\,e}$ that includes workday metropolitan commuting.

NSW STATE PLAN REVIEW (2010)

RELEVANT PRIORITIES ENHANCED WITH THE PROVISION OF TOD

STATE PRIORITY	ENABLING TOD BENEFITS
Better Transport & Livable Cities	• Supports a new approach to the integration of transport and land use planning • Reduces car dependency and increasing share of peak hour journeys and safe and reliable public transport systems • Improves efficiency of road network • Improves road safety • Increases the supply of affordable housing for low and moderate income households • Creates the opportunity for transit oriented long day child care centres whereby both the child / children is / are placed and the private car is parked • Creates the opportunity for the provisioning of vertical village aged care centres
Supporting Business & Jobs	• Offers unscheduled revenues with the sale of air space development rights • Enhances the maintenance and investment in infrastructure expenditure • Subject to the locality demand for each TOD Node Site, the provision of commercial / retail, increases business investment & support of jobs closer to home
Green State	• Expands sustainable transport options with the provision of TODs within the rail network • Increases rail access commuter car parking and therefore greater public transport patronage • Offers cleaner air and progress on GHG reductions

APPLICATION OF TOD OUTCOMES AGAINST THE COAG COMMUNIQUÉ

CRITERIA - December 2009

Relevant Criteria for Future Strategic Planning	Application to TOD
Capital city strategic planning systems should:	
• be integrated across functions, including land-use and transport planning, economic and infrastructure development, environmental assessment and urban development .	✓
• address nationally-significant policy issues including:	✓
- population growth and demographic change;	✓
- climate change mitigation and adaptation;	✓
- efficient development and use of existing and new infrastructure and other public assets;	✓
- connectivity of people to jobs and businesses to markets;	✓
- development of major urban corridors;	✓
- social inclusion;	✓
- health, liveability, and community wellbeing; and	✓
- housing affordability.	✓

INDICATIVE SELECTION CRITERIA TO

IDENTIFY SUITABLE TOD NODE SITES

The likely selection criteria for both off-site and on-site considerations may include but not limited to:

Off Site:

- site bounded by public road on at least one side or scope for the creation of a boundary road access;
- natural land level along boundaries at or above corridor grade;
- opportunity to create adjoining land amalgamation(s) with private or public property or both;
- adjacent land uses not unduly affected by overshadowing affecting private and public amenity;
- accessible spare capacity of enabling infrastructure (pipes and wires) or scope for amplification;
- existing large scale commuter car parking not provisioned the within rail access precinct;
- potential to interconnect with existing public roads in an economic manner; and
- relationship to existing or proposed road transport interchanges, buses or light rail.

On Site:

- outer distance of each node site up to 300m for up and down line of station structure;
- scope for multi floor plates where 300m node sectors affected by existing above rail structures such as public road / pedestrian bridge(s) or trunk pipeline(s);
- planned provisioning for commuter car parking can be made for another transit node;
- each node site sector not affected by diverging track junctions;
- signaling, cabling infrastructure readily repositioned / integrated with above rail structures;
- tracks being straight lined or large curves to optimize signaling sighting distances;
- the future provisioning of additional track lines will not limit a node site for development; and
- where the underlying ideal geological structures are suitable.

Subsequent to the preliminary identification of suitable node sites, formal assessment by means of Site Compatibility Certification would follow as applicable to:

- *State Environmental Planning Policy (Infrastructure) 2007* (the Infrastructure SEPP) for rail corridor considerations; and
- *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* for vertical village consideration.

INDICATIVE YIELD CALCULATIONS FOR BOTH

A NODE SITE AND THE GMR NETWORK

Within the context of Sydney's GMR, an indicative assessment of assumptions and potential floor space (m^2) available for air space development are derived from the following calculation inputs:

- With a network coverage between Maitland, Lithgow and Bomaderry comprising some 250 (approximate) at grade' rail stations, each with 2 potential sites (up line and down line of each station) and applying a notional 15% suitable for development, would yield 75 development sites over time.
- With a rail access precinct (as defined in the MDP) of 400m radius, less the station length of say 200m, would provide for 300m length for each potential up line / down line node site.
- An average corridor width of 40m and allowing 2.5m boundary setbacks.
- An average height of 12 storeys (but subject to relevant constraints such as solar access etc, and each level of elevation with a reduced area to enable a taper effect.
- a generic building efficiency (gross to nett) at 85%.

Node Site: the indicative measurements for a node site, factoring the above calculations:

1 Node Site Base Plate

Gross area 300 x 35		10,500	m^2 gross
Gross area x 85% (building efficiency)	=	**8,925**	m^2 nett

2 Total Car Spaces per Node (for residential & commuters)

Lower 2 levels (nett) allowing 40% circulation space & $12m^2$ / car	=	**893**	spaces

3 Residential FSR m^2

Say 4 separate Towers each 30m x 50m and average 12 floor levels		72,000	m^2 gross
& 85% building efficiency	=	**61,200**	m^2 nett

4 Indicative Residential Yield for each node site

Net floor plate @ $61,200m^2$ less 15% intenal circulation say $52,000m^2$

Bedroom	Area m^2	% Allocation	Total Net	%	Units
1	60	30	52,000	0.3	260
2	85	50	52,000	0.5	306
3	110	20	52,000	0.2	95
				Total	**660**

5 Long Day Child Care Center [1]

1 x 40 place Lond Day Child Care Center per node sit on landscaped roof top with separate elevator access

6 Car Parking Allocations

Residential				
Bedrooms	Allocation	Units		Spaces
1	0.5/unit	260		130
2	1.0/unit	306		306
3	1.5/unit	95		142
Child Care Spaces				
	1/parent	40		40
	1/ staff	10		10
			sub total	**628**
			Total spaces available	**893**
Spaces available for Commuter Car Parking				**265**

Network: the indicative measurements for the network, factoring the above calculations:

1 Total Network Node Site Areas

Base plate area x 75 sites	=	669,375	m^2

2 Total Units with allocated car parking [1]

Units per node @ 660 x 75 node sites	=	**49,532**	units

3 Total Long Day Care Centre Places

1 x 40 place center per node site x 75 node sites	=	**3,000**	places

4 Total Commutor Car Parking

265 space per node site x 75 node sites	=	**19,860**	car spaces

5 GHG Indicative Annual Reduction

Estimated network commutor car parking capacity 19,860 x DECC estimate of 4 tons CO_{2e} per annum for commuting	=	**79,440**	tonnes

6 Indicative Air Space Value [2] **of the Network to Government**

Applying a notional $350 value for developable m^2 air space within the portfolio (residential and car parking)		
Residential gross area - 72,000m^2 x 350 x 75	=	$1,890,000,000
Long Day Care Centres 1200m^2 x 350 x 75	=	$31,500,000
Car Parking gross x 2 levels x x 350 x 75	=	$275,625,000
Total		**$2,197,125,000**

Note:

1. Provisioning subject to locatlity market demand.
2. A refined valuation would be derived from follow-on ground truthing and subsequent:
   - feasibilities guided by the indicative selection criteria for TOD node sites as indicated at Attachment E;
   - agreed ratios between residential units (and corresponding car parking allocations); and other mixed use elements including commercial, retail, aged care, child care and commuter car parking.
   - agreed final value for both m^2 and assigned car spaces for residential, commuter, long day care centre and retail uses.