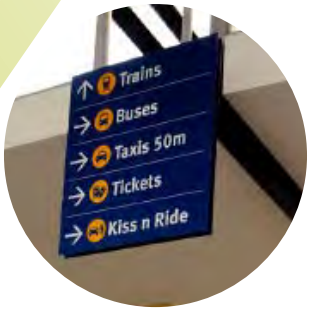

NWRL EIS 2 SUBMISSION

BY THE GPT GROUP

December 2012

The GPT Group

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1 INTRODUCTION

1.1 This submission

This submission is made on behalf of The GPT Group (GPT), in its capacity as the owner and manager of Rouse Hill Town Centre (as may be expanded in accordance with rights granted by the NSW State Government as owner of adjacent lands) (RHTC).

In principle, GPT does not oppose the North West Rail Link (NWRL) project. However, to the extent that the NWRL may have an adverse impact upon RHTC, as detailed in this submission, this document should be read as an objection to the NWRL project.

GPT has a number of key concerns regarding the significant likely impacts of the NWRL project on the ongoing success of RHTC and its future development to reach its ultimate regional potential. To best ameliorate these impacts, GPT requests that the Minister adopt GPT's proposed solutions, as outlined in this submission.

It is essential that resolution of the concerns identified in this submission is achieved by TfNSW to ensure the ongoing viability of the RHTC, one of the two Major Centres for Sydney's North West subregion. If this does not occur, the potential short and long term consequences of the NWRL upon RHTC and its stakeholders could be catastrophic, including, but not limited to substantial loss of revenue; significant social, environmental and economic costs and losses; and, serious reputational damage.

This submission has been prepared by The GPT Group in consultation with BBC Consulting Planners and Cadence Australia with input from other relevant experts from various disciplines. AECOM has provided advice to GPT on the traffic and transport considerations arising from the impact of the NWRL on the RHTC both during construction and operation. In addition, a review of the noise and vibration assessment has been undertaken by Renzo Tonin (refer to Appendix 2).

1.2 Summary of key requests

In response to the EIS 2, GPT has assessed the information made available and the likely impact on the operations and future development of RHTC. In order to mitigate and ameliorate the significant adverse impacts expected GPT makes the following requests. Note that the numbering relates to the order the requests are made in the body of this submission.

1. During the assessment of EIS 2, the Minister revisits and addresses the unresolved issues relevant to the CEMF raised by Cadence Australia on behalf of GPT in EIS 1, which are also integral to EIS 2. These issues are summarised in the table in Appendix 2 of this submission.
2. That the Minister impose a condition of approval on SSI 2 that requires TfNSW to continually consult with GPT on the CEMF to agree detailed design elements and to agree specific strategies to mitigate and ameliorate the impact during construction and operation of the NWRL on the operation and future development of RHTC.
3. That the Minister require TfNSW to prepare and lodge a separate application (for example, a Development Application) for the design and construction of the Rouse Hill Station precinct. Prepared in consultation with GPT, this application should provide a detailed and holistic assessment covering design, construction and impact mitigation, and be assessed through a transparent application process.
4. Alternatively, should the Minister not require a separate application to be lodged, GPT requests clarification from TfNSW as to the mechanism that will be used to ensure key affected stakeholders are adequately consulted on the detailed design of the stations and station precincts, and what recourse is available should the principal contractors not meet pre-agreed principles and outcomes.

5. That a condition of approval be imposed on SSI 2 requiring the Rouse Hill Station Precinct Project Working Group meetings to continue for the duration of the project, with meetings to be held at regular frequency depending on the stage and intensity of work in progress.
6. That the terms of reference for the Project Working Group should be reviewed to ensure that it covers all disciplines and issues for the precinct including but not limited to:

   a. construction programming and scheduling;

   b. design development;

   c. traffic & transport;

   d. business impact and management;

   e. site-specific consultation needs; and,

   f. the CEMP.
7. That the conditions of approval require that an Interface Agreement between GPT and TfNSW, binding the principal contractors, be entered into prior to commencement of any works adjacent to Rouse Hill Town Centre.
8. That the Minister imposes a condition on the approval for SSI 2 which requires TfNSW to continue consultation with GPT with the purpose of agreeing the detailed design of the viaduct, station building and station precinct to ensure the objectives of the Level 1 Masterplan Consent, the Level 2 TCCPP Consent and the Northern Precinct Plan DA are met and the operations and future development of RHTC are not impacted.
9. That the Minister recognises that modifications to the consents and applications for RHTC Town Centre may be required solely as a result of the change from an underground station to an above ground viaduct and station, and that an appropriate condition be imposed on the approval for SSI 2 to address this.
10. That there is recognition of the proposed mixed use development (including residential accommodation) in the vicinity of the rail viaduct, that these uses be incorporated into the impact assessment and that appropriate measures be established to mitigate and ameliorate the impacts.
11. That the Minister require TfNSW to develop a site specific detailed construction programme for RHTC, in consultation with GPT, that clearly identifies:

    a. Total optimum construction timeframe for all works including strategies for reducing the total construction timeframes at each site;

    b. The various construction activities and their proposed timeframes;

    c. Staging implications that accommodates the operational needs of RHTC and future development of the Northern Precinct and Sleeve Buildings;

    d. Strategies for reducing total construction timeframes on each site;

    e. Opportunities to reduce the size of construction zones as works are partially completed; and,

    f. specifies that no construction work that alters or interferes with access and egress arrangements will be undertaken at RHTC at Easter (1 week either side of the designated public holiday dates) and Christmas / year end (between 1 December and 31 January each year).
12. That TfNSW continue to consult with GPT with the purpose of addressing the specific concerns raised with the CEMF. Further, GPT continue to be consulted throughout the conversion of the CEMF into a site specific CEMP for Rouse Hill, including the establishment of critical agreed hold points prior to implementation.
13. That the Minister require that TfNSW and its contractors, in consultation with GPT,

develop a site-specific CEMP for the RHTC as an area of particular significance. The CEMP for RHTC should seek to maintain a high standard of amenity for occupants of and visitors to the town centre, including during extended work hours and peak trading periods.

14. That the Minister require TfNSW to complete its noise impact assessment in accordance with the recommendations in Renzo Tonin's report at Appendix 2.

15. That the Minister require TfNSW to complete, prior to any works commencing at RHTC in consultation with GPT, a site specific Traffic Management Plan that details any temporary or permanent road diversions or amendments to key access routes to the RHTCas detailed within this submission.

16. That the Minister require TfNSW, to continue to work in consultation with GPT to determine suitable alternative car parking arrangements to provide for displaced parking, including the entering of commercial agreements, where required.

17. That the Minister require TfNSW, to continue the effective consultation with GPT for the purposes of confirming the bus interchange relocation, detailed operation of the relocated bus interchange and bus layover, pedestrian access arrangements between the relocated bus interchange and RHTC as well as the impacts of bus re-rerouting and the relocation of the bus layover area on the operation of the RHTC during construction.

18. That the Minister require TfNSW to continue to consult with GPT to develop a Pedestrian and Cyclist Management Plan that shows how pedestrian movements and pedestrian safety for RHTC customers is to be managed, to ensure safe movements to and from the RHTC and its bus stops. The management plan once developed shall consider the relocation of bicycle racks and lockers displaced as a result of the construction works.

19. That the Minister require TfNSW to recognise that not all Areas of Environmental Concern have been targeted, and that the CEMF should specify that the Soil and Water Management Plan contain a transparent process for testing of soils and materials to target all Areas of Environmental Concern, whether or not the soil or materials are bound for offsite disposal.

20. That the Minister require TfNSW to prepare a Soil and Water Management Plan to ensure that the construction activities will not introduce a migration pathway for contaminants onto other land, including the RHTC, either by mobilisation of contaminants through the soil or geology profile, tracking along existing or new utilities, or by wind-blown dust.

21. That the Minister require TfNSW to prepare, in consultation with GPT, a site specific Surface Water and Hydrology Management Plan that addresses the scope of issues detailed in this submission.

22. That the Minister require TfNSW to expand the CEMF to adequately address the requirements of the EIS 1 approval and the detailed mitigation measures provided in Table 13.7 of EIS 2.

23. That the Minister require TfNSW to expand the business impact assessment to cater for the numerous potential business costs which have not been identified in detail in EIS 2, including those outlined above, and to cater for new developments which may occur during the life of the NWRL project.

24. That the Minister require TfNSW to establish Business Consultation Groups and complete Business Management Plans, in consultation with GPT, prior to the commencement of any works associated with the NWRL project that are adjacent to RHTC.

25. That the Minister require TfNSW to undertake a site specific assessment of the visual impacts of Construction Sites 13, 14 & 15 on the RHTC, Sleeve Buildings and Northern Precinct.

26. That the Minister require TfNSW to develop a Visual Impact Management Plan, in consultation with GPT, that addresses the scope of issues detailed in this submission.

27. That the Minister require TfNSW to consult with GPT regarding visual impact on the

Sleeve Buildings and the Northern Precinct in future assessments and management frameworks. Feature hoarding and appropriate signage needs to be planned to coincide with the development of the Sleeve Buildings and the Northern Precinct.

28. That the Minister require TfNSW to develop a site specific Air Quality Management Plan in consultation with GPT that addresses the scope of issues detailed in this submission.

29. That the Minister impose similar conditions on Stage 2 works regarding the adequacy of utility service to those imposed on the approval to the Stage 1 works, with the objective of ensuring that services to RHTC (current and future) will not be compromised or disrupted.

30. That the Minister require TfNSW, as part of the site specific and detailed CEMP, to prepare a site specific assessment of the capability or capacity of existing utilities to support the additional needs of the NWRL development.

31. That the Minister require TfNSW to enable GPT to:

a. Have input into the design of the station precinct, station box and viaduct structures to ensure design compatibility between the existing design principles of RHTC and the key elements of the station precinct;

b. Develop a clear and integrated design, operational and governance structure; and,

c. Include the station precinct and associated public realm into the existing Publicly Accessible Areas Management Plan (PAAMP) and Town Centre and Community Management Scheme.

32. That the Minister impose a condition on the approval for SSI 2 which requires TfNSW to continue consultation with GPT with the purpose of agreeing the detailed design of the viaduct, station building and station precinct to ensure that the ambitions for design for both the NWRL and RHTC are able to be met.

33. That the Minister impose a condition on the approval for SSI 2 that states that Rouse Hill Station should be architecturally distinct, and that its design should be informed by existing approved documents (Town Centre Core Precinct Plans and Design Guidelines) and the currently operating Rouse Hill Regional Centre Design Review Panel.

34. That the Minister require TfNSW to add Design Principles as follows:

a. The consideration of 'value for money' should recognise world's best practice and be assessed based on 'whole of life' criteria;

b. The vision for stations should seek for each station to be a "place of social wellbeing";

c. Station planning should allow for future growth and phased development in areas of high development potential, such as Rouse Hill Town Centre; and,

d. The station design process should closely involve key stakeholders in interface areas.

35. That the Minister impose a condition that requires the Department of Planning and Infrastructure to consult with GPT in the precinct planning and land use integration process, both directly,and through the regular meetings of the Project Working Group.

36. That the Minister require TfNSW to consult with GPT to ensure that any adverse impacts of the additional traffic generated by the kiss and ride activities can be mitigated and ameliorated along Tempus Street, Main Street, key access routes to the RHTC car parks and loading docks and to the operations and future development of the RHTC.

37. That the Minister require TfNSW to continue consultation with GPT to confirm:

a. Final bus interchange / layover arrangements at Rouse Hill Station, which will maximise accessibility with the station entrance and the Rouse Hill Town Centre;

b. Final bus routing accessing Rouse Hill Station Interchange, in particular bus routes travelling between Rouse Hill Two Centre and suburbs / areas to the north;

c. Bus frequency and other operation details at Rouse Hill Station to ensure the current

accessibility to the RHTC by public transport is maintained or improved;

d. Detailed design of bus layovers to the north and south of Rouse Hill Station, and;

e. The final location of kiss and ride zones and taxi rank.

The location and configuration of these installations should not have an adverse impact on the operation and future development of RHTC.

38 & 41. That the Minister require the detailed design of the station precinct to have regard to the need to retain visibility of the RHTC from Windsor Road as detailed within this submission.

39 & 42. That the Minister require a Signage Strategy to be agreed between TfNSW, RMS and GPT to ensure that appropriate Site/Business Identification Signage, and directional and wayfinding signage is able to be erected on land within the rail corridor and/or road reserve.

40. That the Minister require TfNSW to comply with the recommendations in Renzo Tonin's report regarding operational noise as detailed within this submission.

43. That the Minister require TfNSW to prepare an Activation Strategy, in consultation with GPT, for the non-station area under the viaduct.

44. That the Minister require the Department of Planning and Infrastructure to consult with GPT in the precinct planning and land use integration process, both directly with and through regular meetings of the Project Working Group.

45. That the Minister require TfNSW to undertake a more frequent review of environmental impacts to ensure that cumulative impacts are monitored and responded to in a timely fashion. Such impacts should be reported through the Monthly Project Working Group meetings and be supplemented with a quarterly Key Stakeholder Review chaired by the NWRL Project Director.

1.3 Background to Exhibition

In May 2008, approval was granted for a Part 3A Concept Plan for the North West Metro which included an underground railway line and station at Rouse Hill. Since this time, the Concept Plan has substantially changed as follows:

- in lieu of the previous underground proposal, an above ground viaduct (or 'Skytrain') is now proposed immediately adjoining the RHTC;
- a much larger Rouse Hill station building is proposed to accommodate a platform on top of the viaduct;
- a revised route beyond Rouse Hill Station; and
- the 'Metro' concept has been returned to a heavy rail concept.

In March 2012, two applications relating to the NWRL were lodged and exhibited concurrently by the Proponent, TfNSW. The applications are:

- Application no. MP06_0157 MOD 1 - Staged State Significant Infrastructure Modification (SSI Concept Plan modification); and,
- Application no. SSI-5100 -State Significant Infrastructure Application for Major Civil Construction Works (Stage 1 Civil Works application).

The two applications were supported by a single Environmental Impact Statement (EIS) which described and assessed the impacts of each application (EIS 1), accompanied by six Technical Papers. EIS 1 related to the 'Stage 1' construction of the NWRL, including rail tunnels, excavation works for underground railway station construction, and above ground construction, including the 4.2km skytrain viaduct structure between Bella Vista and Rouse Hill. A detailed submission to EIS 1 was made by GPT.

A new SSI application has now been lodged, known as SSI No. 5414 North West Rail Link - Stations, Rail Infrastructure and Systems (SSI 2). The accompanying EIS (EIS 2) and technical papers are on exhibition from 31 October to 3 December 2012, and relate to the operation of the railway as well as the construction of those elements of NWRL not addressed by EIS 1.

EIS 2 addresses:

- Operation and construction of:
  - Stations;
  - Station precincts;
  - Services facilities;
  - Stabling facility at Tallawong Road, Rouse Hill; and
  - Rail infrastructure and systems.
- Any additional land take for station precinct works (such as road works, pedestrian/cycle facilities, landscaping).

According to EIS 1, it was intended that EIS 2 would provide a detailed description of construction works associated with:

- Skytrain design and architectural aspects;
- Rail infrastructure such as railway tracks, signalling systems, ventilation systems, overhead power supply and substations;
- Transport interchanges, park and ride parking facilities, kiss and ride, bus stops, taxi ranks and bicycle storage; and,

- Access roads and landscaping.

As detailed in this submission, GPT does not consider that EIS 2 provides a "detailed description" of any of these works that relate to the RHTC.

1.4 The Rouse Hill Regional Centre and Rouse Hill Town Centre

1.4.1 Rouse Hill now

GPT is proud to be a long-term project partner with Lend Lease, Landcom and the NSW Office of Strategic Lands, tasked with the delivery of the Rouse Hill Regional Centre (RHRC), which has been designated the Major Centre for the North West sector of Sydney.

The Rouse Hill Regional Centre facts:

- 120ha mixed use community is being delivered by Lend Lease and GPT in partnership with Landcom and the NSW Office of Strategic Lands;
- It is located approximately 35 kms north-west of Sydney CBD;
- It will include up to 1,800 homes and include a population of over 4,500 people;
- Key infrastructure has been delivered up front: Rouse Hill Town Centre, schools, community facilities, open space, transport and road infrastructure;
- Emphasis is placed on the quality of urban form, with unified streetscapes, advanced street tree planting and homes designed to address public spaces;
- A walkable community - each home is located within a three minute walk of an open space; and,
- RHTC will incorporate an integrated transit square, designed and approved in the Town Centre Core Precinct Plan (TCCPP).

To date, GPT has delivered the following:

- $470 million of greenfield development;
- 63,600 square metres of retail space;
- Approximately 2,800 square metres of office space;
- Approximately 3,000 square metres of community space; and,
- A range of public spaces including Town Square, Market Square, Food Terrace, The Backyard and The Secret Garden.

The Rouse Hill Town Centre has an annual sales turnover of more than $374 million, accommodates over 200 retailers, provides employment for over 3,000 people, created 104 residential dwellings and has been embraced by Rouse Hill residents as the living heart of their community with over 10 million visitors per year. GPT and its partners have put the customer and their needs at the central focus of this development.

Today, nine years after the NSW Government first awarded the tenders to GPT and its project partners, RHTC is a vibrant, mixed-use town centre that provides a focal point for the local community and surrounding suburbs. The mix of signature architecture, attractive retail choices and active spaces has created an authentic and contemporary Australian town and activity centre.

The public realm of the town centre is critical to its sense of 'civic' place. Streets and pedestrian ways are public and active. Public spaces, including Market Square, Town Square, Food Terrace, The Backyard and The Secret Garden, have been embraced by the community as they are places where people can meet and engage in the town centre environment. GPT's intention is for the future transit square to be similarly integrated into the RHTC, as envisaged and described in the TCCPP.

1.4.2 Rouse Hill future

The RHRC is subject to a staged consent process under the former Section 80(4) of the Environmental Planning and Assessment Act 1979. The approved 2004 Masterplan is a 'Level 1 Consent', each Precinct Plan (including the 2005 Town Centre Core Precinct Plan) is a 'Level 2 Consent' and consents for building works and subdivision are issued as 'Level 3 Consents'.

The Level 1 and Level 2 Consents provide for the development of "Sleeve Buildings" throughout the RHTC. The Sleeve Buildings are designated to be a mix of fine-grain retail, commercial, community and residential uses. Several of these Sleeve Buildings are proposed in close proximity to the rail corridor.

The GPT Group, in conjunction with its project partners, recently lodged a Precinct Plan DA for the Northern Precinct of Rouse Hill with The Hills Shire Council. The Northern Precinct is between Commercial Road and the existing Town Centre and therefore shares an interface with the NWRL. The development of the Northern Precinct for a wide range of retail, office and residential uses was approved by the Level 1 Consent. Further details regarding this application, and associated planning applications, were publicly exhibited by The Hills Shire Council in October 2012.

1.4.3 Rouse Hill Town Centre and North West Rail Link

The North West Rail Link and the delivery of the public realm linking the proposed Rouse Hill station to the existing RHTC, the Sleeve Buildings and the Northern Precinct presents a unique opportunity to create world's best practice in the integration of above-grade heavy rail within a contemporary Australian town centre.

The vision for RHTC, as outlined in the Level 2 TCCPP Consent, describes the transit corridor as being the 'front door' to the centre and is intended to establish an orchard like landscape character that is reminiscent of the rural heritage of the region. Customers shall experience an enhanced pedestrian walking environment that is well designed, cohesive, welcoming and rich in amenity. The transit centre should establish a seamless experience as customers transition between transit options and traverse the public realm, into and around the Town Centre precinct.

GPT shares TfNSW's aspirations for the North West Rail Link stations to integrate with and strengthen the character of the local area. With previous experiences on other transport integration projects, such as Melbourne Central, GPT understands the importance of collaboration with North West Rail Link and the NSW Government. The aim being to efficiently and seamlessly design, deliver and manage the public realm linking Rouse Hill station to the well embraced and established community amenities at RHTC.

1.5 GPT's commitment

Having delivered the $470 million award-winning Rouse Hill Town Centre with its project partners, and in consultation with TfNSW, GPT is committed to working with the North West Rail Link and key stakeholders to seamlessly integrate the new Rouse Hill rail station into the existing transport network, as well as the surrounding urban context of Rouse Hill Town Centre.

Having worked alongside the NSW Government in delivering and meeting the challenging vision established for Rouse Hill Town Centre, GPT well understands the importance of providing industry leadership and building strong community relationships to achieve superior outcomes.

The key goal for GPT is to deliver the best outcomes at a construction management, design, operational and governance level to facilitate a high level of amenity, new street patterns and public spaces that promote and enhance the sustainable, highly liveable built form outcomes that already exist at RHTC. GPT's intention is to bring together the best thinking and best practice locally, nationally and globally to 'get it right – now'.

2 PROCESS ISSUES

2.1 EIS 1 feedback

Submission

GPT is concerned that a number of GPT's submissions regarding EIS 1 have not been satisfactorily resolved in EIS 2.

Scope of issue

GPT prepared a detailed submission to EIS 1. It is recognised that a detailed response to GPT's submission was provided in the Response to Submissions report submitted by TfNSW following the exhibition period. Further, GPT recognises and appreciates that further regard was given to a number of the issues raised by GPT in the Director-General's assessment report (for example, the replacement of car parking lost to construction sites).

However, many of the issues that were raised in the previous submission, particularly those identified by Cadence Australia in respect of the Construction Environmental Management Framework (CEMF), have not been addressed in EIS 2. An observation is that in the vast majority of cases, the TfNSW responses could be categorised as follows:

- **Deferral of response** – that the issue raised would be addressed during detailed design for Stage 1 works in EIS 2;
- **Passing of responsibility to a third party** – that the issue raised would be addressed by the principal contractor/s through management plans and working groups; or,
- **Distancing from responsibility** – that, notwithstanding that the issue arises directly as a result of the proposed NWRL works, the issue is not NWRL's responsibility.

Requests

1. During the assessment of EIS 2, the Minister revisits and addresses the unresolved issues relevant to the CEMF raised by Cadence Australia on behalf of GPT in EIS 1, which are also integral to EIS 2. These issues are summarised in the table in Appendix 2 of this submission.
2. That the Minister impose a condition of approval on SSI 2 that requires TfNSW to continually consult with GPT on the CEMF to agree detailed design elements and to agree specific strategies to mitigate and ameliorate the impact during construction and operation of the NWRL on the operation and future development of RHTC.

2.2 EIS 2 adequacy

Submission

The level of design development contained in EIS 2 does not allow for an adequate assessment to determine impacts on the operation of RHTC, despite the fact that EIS 2 essentially represents a 'development application' stage assessment.

GPT is concerned that important design details have been excluded from the SSI application and are deferred to third party contractors and their sub-contractors under multi-tiered design and construct tender arrangements.

Scope of issue

In EIS 1 and the subsequent related documents, TfNSW repeatedly undertook to provide detailed designs of the station precinct in EIS 2. This has not occurred.

Contrarily, the plans are schematic and generalised. For example, the cross section of Rouse Hill Station is 'indicative' and 'not to scale', while the station layout and movement diagrams are also 'indicative'. Further, the proposed design frameworks appear to be general policies rather than specific proposals for assessment. It is therefore impossible to provide meaningful comment on the proposal.

It is generally unclear whether the diagrams and images purport to show the development for which consent is sought, or are merely illustrative impressions. It is noted that a number of images and diagrams provided across the EIS 2 document, including the EIS 2 summary document, comprise perspectives of station facilities indicating that more detailed work has occurred which, for whatever reason, is not detailed in the EIS 2 plans. For example, page 17 of the Summary Document for EIS 2 (which is not amongst the exhibition materials on the Department's website) contains four possible viaduct design options, while only one 'indicative' option is included in the EIS 2 documents.

EIS 2 suggests that the 'concepts' presented in the document will undergo more detailed design and assessment. EIS 2 notes that as the design evolves, it may be influenced by any number of new or alternative approaches. This highlights that there is significant uncertainty associated with the detail of the proposal.

The design is to be developed in accordance with a series of design principles, as set out in EIS 2. While these design principles are commendable, EIS 2 appears to defer design development entirely to the principal contractors and their sub-contractors, which suggests there will be limited opportunity for meaningful input from stakeholders and the community.

EIS 2 does not include a set of drawings for the proposed railway stations, such as architectural plans, elevations, and sections, nor does it contain a detailed contextual analysis of proposed structures in relation to existing buildings and land uses. GPT also contends that an application for approval of a station precinct should incorporate properly dimensioned drawings prepared by an architect or engineer which clearly show the physical arrangement of uses and structures within the surrounding circulation areas.

Requests

3. That the Minister require TfNSW to prepare and lodge a separate application (for example, a Development Application) for the design and construction of the Rouse Hill Station precinct. Prepared in consultation with GPT, this application should provide a detailed and holistic assessment covering design, construction and impact mitigation, and be assessed through a transparent application process.
4. Alternatively, should the Minister not require a separate application to be lodged, GPT requests clarification from TfNSW as to the mechanism that will be used to ensure key affected stakeholders are adequately consulted on the detailed design of the stations and station precincts, and what recourse is available should the principal contractors not meet pre-agreed principles and outcomes.

2.3 GPT engagement and general consultation approach

Submission

RHTC is one of the two major regional centres in the North West sector, and, as such GPT is a key stakeholder in ensuring the successful integration of the NWRL at the RHTC location.

GPT acknowledges and appreciates the commitment made by TfNSW to regularly consult regarding the project. To ensure that commitments made by TfNSW are honoured by

principal contractors in the design and construction stages, GPT seeks to continue to be involved in regular, ongoing, and meaningful consultation. A framework to ensure that this occurs is set out below.

Furthermore, GPT seeks a review of the framework of discipline-specific working groups. There is a real need to supplement this framework with area-specific working groups and to broaden the generic consultation model.

Scope of issue

GPT appreciates the commitment made by TfNSW to date to recognise the particularly significant relationship between NWRL and RHTC arising from the close interface between the two projects. Over the past several months, GPT has attended regular meetings of the Rouse Hill Station Precinct Project Working Group, largely to discuss interface issues in relation to the Early Works. The need for these meetings will become particularly important once the design and construction contracts are let, work commences and detailed station precinct design is underway.

GPT is concerned that the principal contractors may not be obliged to demonstrate the same level of commitment to working with RHTC as that which has been demonstrated by TfNSW.

In particular, GPT is concerned about working through the complex issues of interface issues, station precinct design and post-completion precinct management with a contracted third party. GPT contends that there should be recourse to address the critical issues which should have been addressed in EIS 2. Unless addressed now, these issues will fall under the design and construction contracts and cascading sub-contracts. It is essential that TfNSW continue to work directly with GPT to coordinate the achievement of public, private and state agency objectives in this location.

As such, GPT welcomes past assurances by TfNSW that an Interface Agreement will be executed between GPT and TfNSW to ensure that customer experiences and expectations of the precinct are not only met but aim to be exceeded. The Interface Agreement will establish further collaboration between GPT, TfNSW and TfNSW's contractors on key interface issues. A draft agreement, tentatively entitled the "Rouse Hill Town Centre NWRL Umbrella Agreement", has previously been tabled with TfNSW through the Project Working Group for further resolution and finalisation at the appropriate time.

In relation to the engagement proposals in EIS 2, we note that EIS 2 commits to the creation of issue-specific working groups, such as business management and traffic liaison. GPT is concerned that this fragments the processes into disciplines across the entire NWRL development. GPT submits there is a need to reconsider this strategy to be area focused rather than purely discipline focused.

Along similar lines, it is noted that the approach to consultation during the construction phase is a rather generic methodology comprising letterbox drops and the like. It is submitted that in the case of RHTC and its multiple stakeholder groups, a more intensive approach may be required, with details to be agreed with the Project Working Group.

Requests

5. That a condition of approval be imposed on SSI 2 requiring the Rouse Hill Station Precinct Project Working Group meetings to continue for the duration of the project, with meetings to be held at regular frequency depending on the stage and intensity of work in progress.

6. That the terms of reference for the Project Working Group should be reviewed to ensure that it covers all disciplines and issues for the precinct including but not limited to:
   a. construction programming and scheduling;
   b. design development;
   c. traffic & transport;
   d. business impact and management;
   e. site-specific consultation needs; and,
   f. the CEMP.

7. That the conditions of approval require that an Interface Agreement between GPT and TfNSW, binding the principal contractors, be entered into prior to commencement of any works adjacent to Rouse Hill Town Centre.

2.4 Masterplanning implications

Submission

The NWRL contemplates an elevated railway structure and station building that is wholly inconsistent with the layout of the RHTC, as approved in the Level 1 Masterplan and Level 2 Town Centre Core Precinct Plan Consents.

Scope of issue

The Level 1 Masterplan Consent, Level 2 Consent for the Town Centre Core Precinct Plan (TCCPP Consent) , and Level 3 Consents for Stage 1 of the Town Centre were each issued in contemplation of an underground railway line and predominantly underground station precinct at Rouse Hill.

The RHTC has been designed to reflect this outcome, and as such the modified concept introduces many challenges in integrating the Skytrain and elevated station. These challenges relate to the protection and enhancement of the pedestrian primacy of the precinct, the operation of an open air town centre and future mixed use development incorporating residential and commercial uses.

The TCCPP Consent provides for a 16 metre high community/commercial building on Market Square, directly to the east of the proposed station. In addition, the Northern Precinct Plan DA, currently under assessment by The Hills Shire Council, proposes a mix of uses in the vicinity of the rail viaduct, including a significant component of residential accommodation.

Requests

8. That the Minister imposes a condition on the approval for SSI 2 which requires TfNSW to continue consultation with GPT with the purpose of agreeing the detailed design of the viaduct, station building and station precinct to ensure the objectives of the Level 1 Masterplan Consent, the Level 2 TCCPP Consent and the Northern Precinct Plan DA are met and the operations and future development of RHTC are not impacted.
9. That the Minister recognises that modifications to the consents and applications for RHTC Town Centre may be required solely as a result of the change from an underground station to an above ground viaduct and station, and that an appropriate condition be imposed on the approval for SSI 2 to address this.
10. That there is recognition of the proposed mixed use development (including residential

3 CONSTRUCTION PHASE ISSUES

3.1 Construction timeframe impacts

Submission

The total construction period for the enabling works, Stage 1 works and Stage 2 works are not detailed in EIS 2, nor is sufficient detail provided in regards to the specific construction activities that will be undertaken. The assessment of impacts should be based on the total construction period, including enabling works, and should include a cumulative impact assessment over the construction period.

Scope of issue

Indicative construction timeframes are included in EIS 2, but no overall construction programme is available specifically for the zone affecting the RHTC. GPT raised this concern in relation to EIS 1, however it has not been satisfactorily addressed.

The programme as shown in EIS 2 appears to have shifted and extended in time from the overall framework provided in EIS 1 without detailed explanation. This issue is significant as the impact assessment is influenced by the time frame of the works taking place at the front door of RHTC.

The programmes are reflected on a trade/discipline basis for most of the scope of EIS 1 and EIS 2. The only scope that is reflected on an area by area basis is the construction of each station structure.

It appears that the work site areas designated to either side of RHTC (Sites 13 and 15) are dedicated to work activities well beyond the scope of the Rouse Hill station precinct. It remains unclear as to what extent these construction sites are utilised in the EIS 2 scope of work and overall construction duration. Chapter 7 of EIS 2 does not contain sufficient clarity about the length of time these sites are proposed to be established as construction sites.

In addition, both Site 13 (Old Windsor Road to White Hart Drive) and 15 (Windsor Road Viaduct) are designated construction zones for EIS 1. These are also highlighted in EIS 2, so it has to be assumed, although it is unclear, that these sites will be utilised for the duration of the works included in EIS 2.

GPT is concerned about the lack of clarity around the proposed construction timeframes. GPT submits that the contractors engaged by TfNSW be required to make efforts to reduce the time over which each of the construction sites are in use, by reducing the size of the compound as certain works are completed, or by releasing the site in its entirety as soon as possible.

GPT seeks to ensure that best practice programming is undertaken and that the key drivers, apart from overall time, cost and quality, also include the minimisation of time that work is undertaken at RHTC. In addition, the safety and convenience (and most importantly the perception of safety and convenience) of customers and commuters at RHTC needs to be paramount.

GPT submits that clarity around the construction is critical due to the interface between the RHTC and NWRL. Given the strategic important of the RHTC, a specific assessment in relation to the impacts on RHTC is warranted.

Requests

11. That the Minister require TfNSW to develop a site specific detailed construction programme for RHTC, in consultation with GPT, that clearly identifies:

a. Total optimum construction timeframe for all works including strategies for reducing the total construction timeframes at each site;

b. The various construction activities and their proposed timeframes;

c. Staging implications that accommodates the operational needs of RHTC and future development of the Northern Precinct and Sleeve Buildings;

d. Strategies for reducing total construction timeframes on each site;

e. Opportunities to reduce the size of construction zones as works are partially completed; and,

f. specifies that no construction work that alters or interferes with access and egress arrangements will be undertaken at RHTC at Easter (1 week either side of the designated public holiday dates) and Christmas / year end (between 1 December and 31 January each year).

3.2 Construction & Environment Management Plan (CEMP)

Submission

GPT is concerned that the content of the Construction Environmental Management Framework (CEMF) is a broad framework not a specific plan. GPT's concerns, with the preparation of all detailed plans being deferred to the contractor/s, relate to the application of the policy framework through the Construction Environmental Management Plans (CEMPs), and the level of overview management of the CEMPs by TfNSW.

Scope of issue

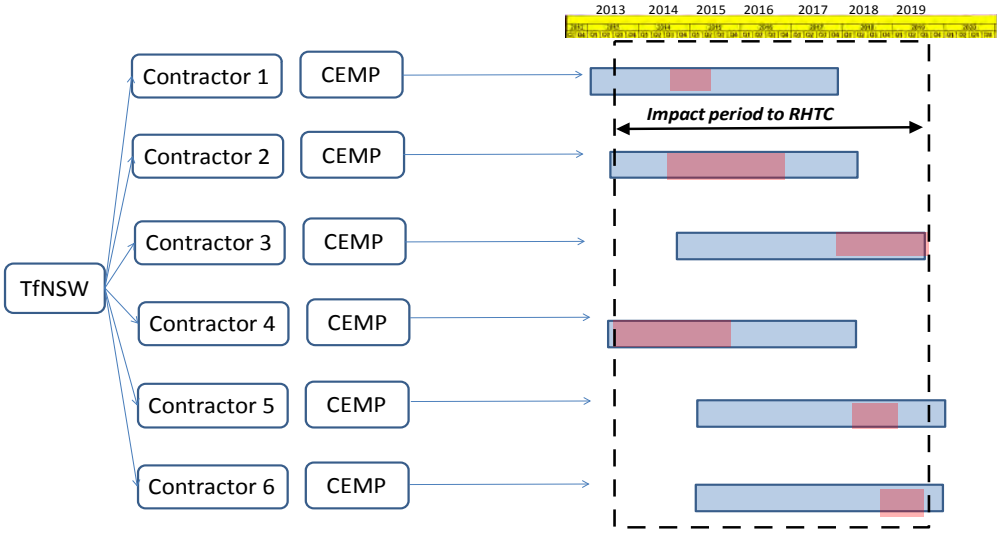
The CEMF document is essentially a policy document with broad, project-wide aims rather than site specific objectives and outcomes. As such, the CEMF does not provide the necessary site-specific assurances relating to pedestrian flow and safety, traffic congestion, parking, amenity of employees, customers, visitors and residents to RHTC, and the everyday operations of the RHTC.

Cadence Australia, in its capacity as expert project management and construction advisor to GPT, has expressed concern that broad aims are not specific enough. The proposed framework does not establish real and quantifiable benchmarks and appropriate hold points to ensure the CEMF is adequately converted into a CEMP, and managed appropriately.

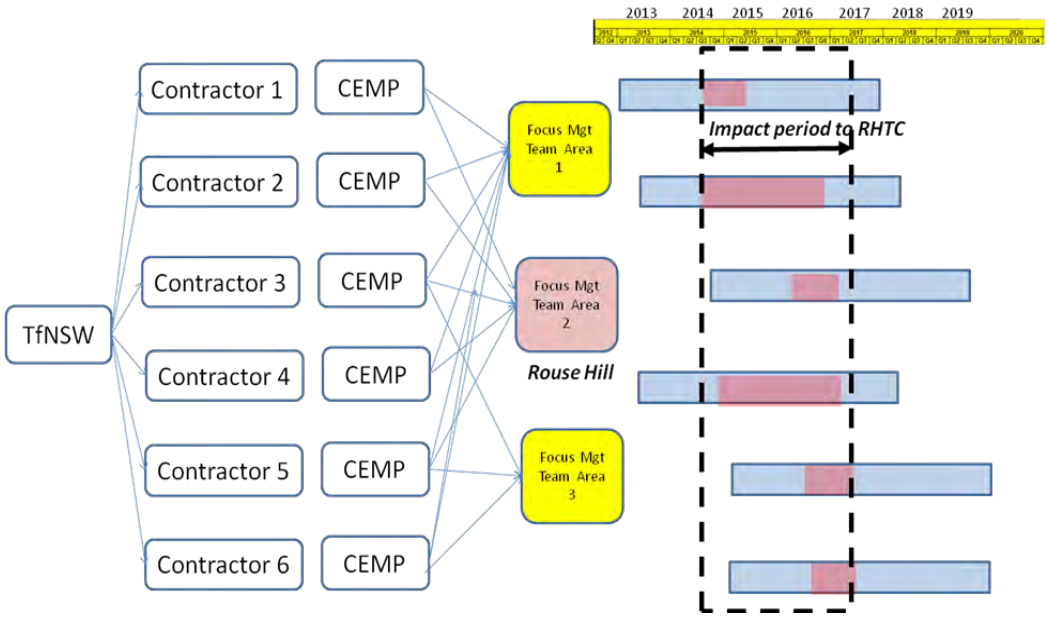
Further, Cadence Australia raised a number of concerns with the CEMF in relation to EIS 1, and GPT have not been advised that these matters will be addressed. A copy of a table prepared by Cadence summarising the status of these issues is provided at Appendix 1.

The following diagrams, prepared by Cadence Australia, aim to describe the project benefits in developing a focused management strategy for areas recognised as having a significant and sensitive interface with NWRL project, such as the RHTC. The diagrams and dates included are illustrative and are provided to demonstrate the decreased impact period to RHTC of the proposal.

CURRENT APPROACH



PROPOSED APPROACH



Requests

12. That TfNSW continue to consult with GPT with the purpose of addressing the specific concerns raised with the CEMF. Further, GPT continue to be consulted throughout the conversion of the CEMF into a site specific CEMP for Rouse Hill, including the establishment of critical agreed hold points prior to implementation.

13. That the Minister require that TfNSW and its contractors, in consultation with GPT, develop a site-specific CEMP for the RHTC as an area of particular significance. The CEMP for RHTC should seek to maintain a high standard of amenity for occupants of and visitors to the town centre, including during extended work hours and peak trading periods.

3.3 Impacts of construction noise and vibration

Submission

GPT submits that the noise and vibration assessment in EIS 2 does not fully assess the construction noise and vibration impacts of NWRL on the RHTC. GPT is also concerned that the noise and vibration impacts from the NWRL will not be properly managed given the unique trading environment of RHTC.

Scope of issue

GPT has appointed Renzo Tonin and Associates to review EIS 2 and provide input to the submission. A full copy of Renzo Tonin's review is provided at Appendix 2.

Renzo Tonin has summarised the construction noise and vibration issues as follows:

(a) EIS 2 does not include assessment of impact on residential premises located within the RHTC;

(b) Construction noise is not assessed against the 'passive recreation' criteria of 60dB(A), as confirmed in the EIS 1 submissions report;

(c) The construction noise assessment excludes assessment of the relocation and reinstate ment of the Bus T-Way. The submissions report states impacts may be similar to earthworks and therefore the assessment needs to be presented, including cumulative impacts;

(d) The EIS 1 submissions report indicates that noise walls around RHTC Station site are unlikely to be considered feasible. However, EIS 1 and EIS 2 state that noise walls have been included in the assessment. The noise assessment is therefore considered to potentially misrepresent the likely impacts;

(e) The 'Additional Mitigation Measures Matrix' (AMMM) included in the Construction Noise and Vibration Strategy (CNVS) appears to omit a mechanism for the assessment of commercial premises and passive recreational spaces; and,

(f) EIS 2 identifies cinemas as critical and sensitive receptors to noise and vibration however the CNVS does not present a criterion for ground borne noise intrusion into the RHTC Reading Cinema. The report indicates that ground borne noise from the operation of vibratory rollers may be audible within the Reading Cinema.

Requests

14. That the Minister require TfNSW to complete its noise impact assessment in accordance with the recommendations in Renzo Tonin's report at Appendix 2. These recommendations are that:

    (a) the construction noise and vibration assessment includes residential premises within RHTC along with assessment to the passive recreation criteria for outdoor areas of RHTC. Appropriate background noise monitoring at residential premises within RHTC are required for this assessment;

    (b) the construction noise and vibration assessment must include the relocation and reinstatement of the Bus T-Way, including any cumulative impacts;

    (c) clarification regarding the implementation of 3m noise walls around the RHTC Station site is required. Consideration of noise barriers around the RHTC construction site should be given for Bus T-Way works, particularly if impacts are to be comparable with the major civil works;

    (d) the 'Additional Mitigation Measures Matrix' (AMMM) included in the 'Construction Noise and Vibration Strategy' (CNVS) should include a mechanism for the assessment of commercial premises and passive recreational spaces; and,

    (e) the CNVS should include a criterion for ground borne noise intrusion into sensitive spaces such as the RHTC 'Reading Cinema'. It is recommended that the evening criteria for residential premises of 40dB(A) be set.

3.4 Construction traffic impacts

Submission

It is appreciated that much of the detailed planning for construction traffic movement surrounding the RHTC cannot be determined until a contractor is appointed. More detailed information on how construction traffic will impact on the servicing and access of RHTC is required.

Scope of issue

More detail will be required regarding any temporary or permanent road diversions or amendments that would impact the operation of the RHTC, as well as management measures to mitigate and ameliorate the impacts on the operation of the RHTC. This detailed information required relates to matters such as:

(a) the proposed changes to Tempus Street (GPT has a registered interest in the land that contains Tempus Street) and its likely impacts to the operation of RHTC;

(b) the management of access to Construction Site 14 from White Hart Dr as there is potential for queuing impacts on to White Hart Drive which is one of the main accesses to RHTC car parks and loading docks. The potential knock-on impacts of queuing from the construction site access requires design review and management to minimise impacts to the operation of one of the main access routes to the RHTC;

(c) the management of access to Construction Site 15 from Commercial Road, Rouse Hill Drive and Windsor Road as there is potential for queuing impacts. The potential knock-on impacts of queuing from the construction site access requires design review and management to minimise impacts to the operation of the main access routes to the RHTC; and,

(d) the likely impacts of construction vehicles on Caddies Boulevard and its key intersections surrounding RHTC as shown in EIS 2, Figure 9.18.

Requests

15. That the Minister require TfNSW to complete, prior to any works commencing at RHTC in consultation with GPT, a site specific Traffic Management Plan that details any temporary or permanent road diversions or amendments to key access routes to the RHTC, including:

(a) proposed changes to Tempus Street and its likely impacts to the operation of RHTC;

(b) the required management of access to Construction Site 14 from White Hart Dr to mitigate and ameliorate the potential for queuing impacts on to White Hart Drive, the RHTC car parks and loading docks;

(c) the required management of access to Construction Site 15 from Commercial Road, Rouse Hill Drive and Windsor Road to mitigate and ameliorate the potential for queung impacts and to mitigate and ameliorate impacts to the operation of the main access routes to the RHTC; and,

(d) the required management of the impacts of construction vehicles on Caddies Boulevard and its key intersections surrounding RHTC as shown in EIS 2, Figure 9.18.

3.5 Construction parking impacts

Submission

EIS 2 has advised that parking spaces will be relocated as a result of establishing construction sites 14 and 15.

Scope of issue

EIS 2 advises that parking areas between Windsor Road and Tempus Street and north of Rouse Hill Drive would be displaced during the construction period. EIS 2 suggests that GPT is able to replace the staff parking area between Windsor Road and RHTC & the Northern Precicnt with parking in other parts of the RHTC. However, the majority of the parking at the area north of Rouse Hill Drive is commuter-related. The current suggestion in EIS 2 is to potentially relocate these parking spaces to other vacant parts of the RHTC or other locations in the vicinity of the RHTC. There have been no detailed arrangements put in place with GPT in this regard. The loss of this parking is contrary to the Level 3 Consents for RHTC and is likely to have impacts on the commercial operation of the RHTC, if not properly addressed.

Requests

16. That the Minister require TfNSW, to continue to work in consultation with GPT to determine suitable alternative car parking arrangements to provide for displaced parking, including the entering of commercial agreements, where required.

3.6 Public transport impacts

Submission

EIS 2 has provided a clear description of the relocated bus stops and bus layover areas at Rouse Hill Station. Further design details for both the relocated bus stops and bus layover areas have not yet been discussed with GPT to ensure the capacity and amenity is maintained for those attending the RHTC.

Scope of Issue

EIS 2 has discussed the need for the relocated bus stops and bus layover areas in order to vacate the space required to set up construction site 14. The temporary bus stops and layover areas will impact on the amenity and accessibility of the RHTC and GPT would like to be consulted with regards to the detailed designs of the temporary facilities when they are available.

Requests

17. That the Minister require TfNSW, to continue the effective consultation with GPT for the purposes of confirming the bus interchange relocation, detailed operation of the relocated bus interchange and bus layover, pedestrian access arrangements between the relocated bus interchange and RHTC as well as the impacts of bus re-rerouting and the relocation of the bus layover area on the operation of the RHTC during construction.

3.7 Pedestrian and cyclist impacts

Submission

The pedestrian safety and amenity between the relocated bus interchange and the RHTC should be maintained to provide a pedestrian friendly environment during all stages of construction in order to minimise the impacts to the operations of RHTC and accessibility and safety of all customers. Good bicycle connections and facilities at the RHTC are key contributors to the success of the RHTC as a sustainable centre.

Scope of issue

EIS 2 suggests that the impact of the construction activity on key pedestrian and bicycle routes would be relatively minor. However, GPT would appreciate appropriate mitigation measures in a management plan to be developed such that any impacts can be managed to minimise impacts to the customers of the RHTC during all stages of construction. Further details are also required to identify appropriate relocation of bicycle racks and lockers within the existing interchange area, such that similar facilities are still available for cyclists.

Requests

18. That the Minister require TfNSW to continue to consult with GPT to develop a Pedestrian and Cyclist Management Plan that shows how pedestrian movements and pedestrian safety for RHTC customers is to be managed, to ensure safe movements to and from the RHTC and its bus stops. The management plan once developed shall consider the relocation of bicycle racks and lockers displaced as a result of the construction works.

3.8 Contamination impacts

Submission

GPT has concerns about the approach to contamination risk assessment and management in relation to the RHTC. It would appear that no testing has or will occur in relation to any civil or building works within the RHTC site unless the spoil is to be transported off site. GPT submits this represents an unacceptable risk to GPT and other stakeholders.

Scope of issue

The risk of contamination at RHTC was largely dismissed in EIS 1 due to RHTC being 'a relatively new development', despite the NWRL involving works on certain former farming land which has never been substantially developed.

GPT raised a concern about this in the submission to EIS 1. In the Proponent's Response to Submissions, TfNSW noted that a desktop study had occurred, and that testing would occur only if off site disposal is to take place. In relation to concerns raised by GPT, the Response to Submissions noted that:

> "The contamination assessment at this stage is not intended to be comprehensive and not all of the Areas of Environmental Concern (AEC) in this area were specifically targeted, ie individual Above-ground Storage Tanks (AST), farm dams, asbestos in buildings, and therefore additional assessment and waste classification may be required."

Condition C16 of the approval to the Stage 1 SSI DA was then imposed in the following terms:

> "C16. Where the investigations identify that the site is suitable for the intended operations and that there is no need for a specific remediation strategy, measures to identify,

handle and manage potential contaminated spoils, materials and groundwater shall be incorporated into the Construction Environmental Management Plan (condition E46)."

Condition E46 requires the preparation of a Soil and Water Management Plan which, inter alia, contains:

"...management measures for contaminated material and a contingency plan to be implemented in the case of unanticipated discovery of contaminated material during construction".

A relevant mitigating measure contained in EIS 2 is as follows:

"SG14 In the event of discovery of previously unidentified area(s) of potentially contaminated material, all work would cease in the vicinity of the discovery and not recommence until the extent of contamination has been assessed and if necessary, a Remediation Action Plan or similar has been prepared and endorsed by an accredited Site Auditor

GPT's concern is that neither EIS 2, nor the draft CEMF, indicate that testing would be done on soil or materials other than that which is intended to be disposed off-site. Accordingly, soil or materials that are retained on-site and turn out to be contaminated are at risk of contaminating adjoining lands, such as RHTC.

Requests

19. That the Minister require TfNSW to recognise that not all Areas of Environmental Concern have been targeted, and that the CEMF should specify that the Soil and Water Management Plan contain a transparent process for testing of soils and materials to target all Areas of Environmental Concern, whether or not the soil or materials are bound for offsite disposal.

20. That the Minister require TfNSW to prepare a Soil and Water Management Plan to ensure that the construction activities will not introduce a migration pathway for contaminants onto other land, including the RHTC, either by mobilisation of contaminants through the soil or geology profile, tracking along existing or new utilities, or by wind-blown dust.

3.9 Impact on surface water and hydrology

Submission

While it is recognised that the Minister for Planning imposed detailed environmental protection conditions on the approval to Stage 1 works, GPT is seeking to ensure that similarly rigorous conditions are placed on Stage 2. As such, GPT now re-states the following submission and recommendations from GPT's submission to EIS 1. Potential impacts on the surrounding environment include altered flood behaviour, drainage patterns, and impact on water quality arising from works and sediment basin overflow. There must be the ability to clearly identify the responsible party in the event of any incident, and further design and management details are required.

Scope of issue

While the majority of impacts are expected to be on the Construction Sites, some potential impacts to the broader surrounding environment have been identified including:

- The potential for works within the floodplain to alter existing flood behaviour and adversely impact the surrounding environment through altered drainage patterns.
- The potential for works to result in exposed soil which could result in erosion and adversely impact downstream water quality.

The disturbance and exposure of soils at designated construction sites has the potential to result in increased erosion and sediment transport with potential impacts on the receiving environment, particularly around and downstream of Tributary 3 (adjacent to RHTC). If RHTC is undertaking construction concurrently, there is a risk that the source of any downstream adverse water quality impacts could be uncertain.

Water quality mitigation and management is proposed to adhere to the relevant Guidelines, and if properly implemented, the proposed mitigation measures are expected to provide a suitable level of risk mitigation. The two key risk elements identifiable for RHTC are the placement of as yet undefined construction sites for laydown/construction support and the ability to clearly define between downstream impacts on water quality if any adverse impact occurs.

The CEMF identifies generic considerations for preparation of CEMPs and soil erosion control plans (SECP) or soil and water management plans but does not identify specific controls to be implemented and affected for site specific conditions at the construction areas most likely to affect RHTC.

The precise location of sediment basins has not been defined. The location will have implications for access needs for construction and maintenance (to retain functionality and capacity) as well as for potential off-site discharge via an assumed spillway into a natural drainage line. The location may also influence the availability of land for RHTC activities and implications for current RHTC land use and access.

EIS 1 noted the potential for significant rainfall events to result in sedimentation basins filling to capacity and overflowing, with higher quantities of sediment being discharged downstream. Although EIS 1 indicated that an appropriate level of dilution is likely given the large volume of runoff associated with such events, there remains potential for downstream impacts and for these impacts to be attributed to RHTC work sites.

Requests

21. That the Minister require TfNSW to prepare, in consultation with GPT, a site specific Surface Water and Hydrology Management Plan that addresses all relevant matters including:

a. Separation of water treatment trains for the NWRL construction phase and the RHTC construction and operation stages;

b. the clear delineation of boundaries, controls and responsibilities at an early stage to be able to determine independent liability for minor or serious pollution events; and,

c. The precise location and operation of sediment basins and any impacts on the operation or future development of RHTC.

3.10 Local business impacts

Submission

During the lengthy construction period of NWRL, the impact may be dire on RHTC, the businesses within the RHTC and the future development of the RHTC (including the Northern Precinct and Sleeve Buildings). There is the potential for the short and long term consequences of the NWRL upon RHTC and its stakeholders to be catastrophic, including, but not limited to substantial loss of revenue; significant social, environmental and economic costs and losses; and, serious reputational damage.

Scope of issue

Within the immediate proximity of the NWRL to the Town Centre, a series of major construction worksites will divide Rouse Hill Town Centre from Windsor Road for a number of years, creating a visual and physical barrier and discourage visitation. The impact on many businesses in RHTC is likely to be negative, for a number of years.

It is apparent that EIS 2 identifies noise impacts, construction traffic impacts, impacts from loss of car parking on the rail corridor, and visual and amenity impacts arising from construction fencing and frequent heavy vehicle movements. EIS 2 does not however properly identify the economic disadvantages that may flow from construction. The positive economic benefits arising from expenditure by NWRL construction staff is recognised but is overstated and is signficantly less than the economic disadvantages imposed.

GPT appreciates that detailed conditions have been placed on the Stage 1 SSI approval by the Minister to address a number of concerns raised in GPT's submission to EIS 1. In addition, GPT is pleased to note that more rigorous mitigation measures are proposed in relation to local business impacts.

GPT is concerned to note, however, that the amended CEMF, which is in practice the document which will guide the third party contractors in satisfying the conditions of approval, does not adequately address the requirements of the EIS 1 approval or the detailed mitigation measures provided in Table 13.7 of EIS 2. For example, while it appears to give all responsibility for business impact management and monitoring to the principal contractor, it does not appear to cater for:

- the requirement for Business Consultation Group/s, their terms of reference and management framework;
- the role, reporting responsibility, and timing of the appointment of, Place Managers; or,
- the establishment of a business impact risk register.

GPT also seeks to ensure that the impact assessment caters for the numerous potential business costs which have not been identified in detail in EIS 2, including:

- Additional costs associated with increased cleaning, security, car park operation, resourcing, maintenance to roads, maintenance to landscaping, maintenance to air conditioning equipment, increased insurances, and increase resourcing to manage stakeholder engagement and complaints;
- Reduced visitation leading to tenant claims for rent abatements/rent reductions due to visual amenity impacts, lack of passing trade, traffic redirection, and problems accessing the centre;
- Increased vehicular traffic through the centre (i.e along Main Street) as a consequence of changes to the existing traffic patterns to the detriment of the open spaces and ambience of the centre;
- Diminished car park capacity resulting in reduced visitation;
- Noise and dust, reducing restaurant's ability to trade in their outdoor licensed areas; and,
- General construction traffic intimidating customers.

Finally, GPT is concerned that EIS 2 does not contain an assessment of the construction phase impacts on businesses in the yet-to-be developed Sleeve Buildings and Northern Precinct of the RHTC. GPT seeks to ensure that future businesses will be protected by all of the proposed mitigation measures that apply to the existing businesses.

Requests

22. That the Minister require TfNSW to expand the CEMF to adequately address the requirements of the EIS 1 approval and the detailed mitigation measures provided in Table 13.7 of EIS 2.
23. That the Minister require TfNSW to expand the business impact assessment to cater for the numerous potential business costs which have not been identified in detail in EIS 2, including those outlined above, and to cater for new developments which may occur during the life of the NWRL project;
24. That the Minister require TfNSW to establish Business Consultation Groups and complete Business Management Plans, in consultation with GPT, prior to the commencement of any works associated with the NWRL project that are adjacent to RHTC.

3.11 Impact of loss of signage and reduced visibility

Submission

There will be significant visual impacts on the RHTC, Sleeve Buildings and Northern Precinct during the construction phase.

Scope of issue

As outlined in GPT's submission to EIS 1, NWRL will establish construction sites in front of the main RHTC frontage and at all four corners of its main entry intersections, creating visual barriers to RHTC signage, major tenant signage, retailers and car park entries.

The placement of facilities and equipment within the construction sites may also impede sightlines to traffic lights, and directional signage risking the safety of pedestrian, cyclists and visitors to RHTC. The existing major entry signage to the RHTC is located within the NWRL construction worksites and will need to be relocated to an equally prominent location.

In addition, the worksites will comprise a major visual barrier between Windsor Road and the town centre, thereby further reducing visibility and impacting way finding.

The magnitude of hoardings around and opposite RHTC has the potential to create the perception of a 'closed shop' for the town centre, and surrounding facilities which could result in reduced visitation and in turn impact on the commercial success of RHTC and the businesses within.

Requests

25. That the Minister require TfNSW to undertake a site specific assessment of the visual impacts of Construction Sites 13, 14 & 15 on the RHTC, Sleeve Buildings and Northern Precinct.

26. That the Minister require TfNSW to develop a Visual Impact Management Plan, in consultation with GPT, that addresses the following:

a. Appropriate replacement signs to be erected by the Proponent, in consultation with GPT;

b. Additional directional and wayfinding signage around RHTC and on construction hoarding to ensure that the reduced visibility and accessibility is addressed;

c. Sight lines to major tenant signage will not be impeded;

d. GPT's artwork, messaging and branding will be included on hoardings and signage; and,

e. A rigorous hoarding maintenance scheme will be implemented to ensure the presentation quality of RHTC is preserved.

27. That the Minister require TfNSW to consult with GPT regarding visual impact on the Sleeve Buildings and the Northern Precinct in future assessments and management frameworks. Feature hoarding and appropriate signage needs to be planned to coincide with the development of the Sleeve Buildings and the Northern Precinct.

3.12 Impact on air quality

Submission

EIS 1 relegated air quality as a non-core issue. GPT's submission for EIS 1 reiterated that, given the unique open air trading environment and the immediate proximity of a transport interchange, outdoor dining and public squares in the RHTC, reduced air quality will have a significant impact on the operations of RHTC and the businesses within. This concern remains for EIS 2, which reports that the NWRL principal contractors will develop and implement an Air Quality Management Plan.

Scope of issue

Given the unique trading environment of RHTC (the open air retail and dining areas and the residential component) it is considered a highly sensitive receptor and the impact on air quality is a key issue, rather than non-core, that must be adequately assessed and managed.

It appears that all critical issues are addressed by suggesting that there will be a plan in place to deal with it, however the scope needs to be clearly defined.

Requests

28. That the Minister require TfNSW to develop a site specific Air Quality Management Plan in consultation with GPT that addresses the following:

a. Recognising air quality as a key issue at RHTC;

b. Location of spoil stockpiles on the construction sites to ensure stockpiles are located away from the boundary with the shopping centre;

c. Stockpile management procedures, including management of any contaminated spoil for prevention of release of dust;

d. Agreement on the method by which the air quality baseline will be set and the appropriate exposure thresholds that will be used for assessing the impact to air quality at RHTC;

e. Any assessment of air quality impacts should include consideration of property damage i.e. dust deposition on land, vegetation, buildings or vehicles, as well as human health impacts;

f. Confirmation of the extent and frequency of monitoring of weather conditions and air quality. Air quality monitoring should be conducted at the boundary with RHTC to ensure that dust or gaseous emissions potentially affecting the site are quantified. Weather conditions should be continuously assessed and measures put in place to restrict certain construction activities during high winds or when the prevailing wind direction is toward sensitive receptors;

g. Details on how air quality impacts to pedestrians accessing RHTC will be assessed and managed;

h. Management of demolition activities to prevent the release of hazardous materials (e.g. asbestos); and,

i. Procedures for consultation / communication with RHTC Management and residents during construction specifically with reference to dust release events, receipt and investigation of complaints and information on construction schedules and activities.

3.13 Impact on utilities

Submission

EIS 1 contained insufficient consideration of the capability or capacity of existing services or mitigation strategies to ensure services for the operation and future development of RHTC are not disrupted. This is not resolved in EIS 2.

Scope of issue

The services identified within EIS 1 as being required for construction include power, water, sewer and communications. It was also identified that intermittent disruption to services could be expected during construction which could have significant impacts to the operation of RHTC and its retailers.

EIS 2 is silent on the potential impact of the power supply requirement on neighbouring users.

NWRL construction works at the RHTC will require water for dust suppression and site amenity buildings. While recycled water would be maximised for dust suppression, the likely volume and proposed sources have not been identified. Similarly, the sewer provisions for site amenities have not been identified (e.g. use of portaloos in comparison to connection to the existing sewerage system).

In summary, there is no site specific assessment that provides quantification around the forecast requirements, loads or demands on existing utilities or that provides an assessment of the implications of loads, demands or disruptions to these services (intentional or

unintentional) to surrounding land users. There is no assessment of the capability or capacity of existing utilities to support the additional needs of the NWRL development.

Requests

29. That the Minister impose similar conditions on Stage 2 works regarding the adequacy of utility service to those imposed on the approval to the Stage 1 works, with the objective of ensuring that services to RHTC (current and future) will not be compromised or disrupted.

30. That the Minister require TfNSW, as part of the site specific and detailed CEMP, to prepare a site specific assessment of the capability or capacity of existing utilities to support the additional needs of the NWRL development.

4 DESIGN AND OPERATION ISSUES

4.1 Governance

Submission

GPT seeks to collaborate with TfNSW to efficiently and seamlessly deliver, operate and manage the public realm linking Rouse Hill station to the wider community at RHTC.

Scope of issue

GPT shares TfNSW's aspirations for the North West Rail Link stations to integrate with and strengthen the character of the local area.Today's customer-centric RHTC caters to the complex requirements of a broad cross section of society, whilst at the same time effectively integrating the needs of a car-based community with enhanced provision for pedestrians and bicycle traffic. GPT is committed to maintaining and enhancing this functionality and connectivity.

A clear governance structure, such as possible inclusion of the station precinct in the existing Rouse Hill Town Centre Publicly Accessible Areas Management Plan (PAAMP) and the Town Centre and Community Management Schemes, would enable effective and successful ongoing management that will ensure customer's experience and their expectations of the precinct are not only met but aspire to be exceeded.

GPT's strong view is that its participation in the planning and design process will deliver a seamless, high quality environment at Rouse Hill rail station and put the customers' needs at the centre of this important transport interchange. It will also continue to build upon GPT's long track record of delivering excellence in design at Rouse Hill Town Centre.

Requests

31. That the Minister require TfNSW to enable GPT to:

a. Have input into the design of the station precinct, station box and viaduct structures to ensure design compatibility between the existing design principles of RHTC and the key elements of the station precinct;

b. Develop a clear and integrated design, operational and governance structure; and,

c. Include the station precinct and associated public realm into the existing Publicly Accessible Areas Management Plan (PAAMP) and Town Centre and Community Management Scheme.

4.2 Urban Design

Submission

GPT is seeking an architecturally distinct design, influenced by local surroundings and context, incorporating RHTC design standards and principles as articulated in the RHRC Masterplan and Town Centre Core Precinct Plan. Given the paucity of design detail at EIS 2 stage, GPT seeks to ensure that the appropriate design principles and details are incorporated into the design evolution of the future station precinct.

Scope of Issue

As outlined previously, EIS 2 is based on a 'concept design', and detailed design will continue 'during the planning approval process'. The lack of detail at EIS 2 stage is of concern, and GPT has requested in this submission that a separate approval be obtained for the design and construction of the station precinct.

The concept design cannot be relied upon by stakeholders as it 'may be refined by TfNSW and its construction contractor and operator within the limits of any conditions imposed by the planning approval and the design constraints, principles and standards used throughout the design development process'. GPT's contentions about the absence of recourse to address the critical issues which was proposed to have been addressed in EIS2, but will now fall under the design and construction contracts, are addressed elsewhere in this submission.

The issue of design excellence is of utmost importance to GPT and, given its Major Centre role, a unique design outcome for Rouse Hill Station is sought. Design Guidelines for the RHTC, and particularly the transport buildings and associated public realm, have been approved by The Hills Shire Council, extracts of which are included at Appendix 3.

EIS 2 proposes a Design Review Panel and engagement of world class and/or award winning architects, engineers, urban designers, and landscape architects. The importance of an appropriate budget to achieve world class and potentially award winning outcomes however is not addressed. Furthermore, any consideration of 'value for money' in station precinct design and construction should be scoped to meet this word-class ambition and also be based on 'whole of life' criteria.

In relation to the proposed Design Review Panel, GPT notes that a Design Review Panel has been in place for the RHRC for around 8 years and is currently operational. A co-ordination of the terms of reference and operation of the panels at Rouse Hill is desirable to avoid conflicting design and to maximise collaboration.

GPT generally supports the Design Principles presented in EIS 2, but requests that certain additional matters be added (listed under Requests, below).

Requests

32. That the Minister impose a condition on the approval for SSI 2 which requires TfNSW to continue consultation with GPT with the purpose of agreeing the detailed design of the viaduct, station building and station precinct to ensure that the ambitions for design for both the NWRL and RHTC are able to be met.

33. That the Minister impose a condition on the approval for SSI 2 that states that Rouse Hill Station should be architecturally distinct, and that its design should be informed by existing approved documents (Town Centre Core Precinct Plans and Design Guidelines) and the currently operating Rouse Hill Regional Centre Design Review Panel.

34. That the Minister require TfNSW to add Design Principles as follows:

a. The consideration of 'value for money' should recognise world's best practice and be assessed based on 'whole of life' criteria;

b. The vision for stations should seek for each station to be a "place of social wellbeing";

c. Station planning should allow for future growth and phased development in areas of high development potential, such as Rouse Hill Town Centre; and,

d. The station design process should closely involve key stakeholders in interface areas.

35. That the Minister impose a condition that requires the Department of Planning and Infrastructure to consult with GPT in the precinct planning and land use integration process, both directly,and through the regular meetings of the Project Working Group.

4.3 Operational traffic impacts

Submission

EIS 2 does not advise of the amount of additional traffic on Tempus Street and Main Street, generated by kiss and ride traffic to Rouse Hill Station. Therefore, the impacts of kiss and ride traffic on these privately owned low traffic town centre roads and its flow-on impacts to the surrounding key access routes to the RHTC car parks and loading docks cannot yet be understood. Greater analysis, understanding and consideration of these potential impacts is necessary to ensure that the existing safe, efficient access to and operation of RHTC can be maintained and enhanced.

Scope of issue

EIS 2 has shown the existing Town Centre Main Street, as a private road within the RHTC, and one of the key in-bound routes for kiss and ride. Given the pedestrian-oriented nature of Main Street, GPT would like to work with the NWRL team to understand the magnitude of the likely increase in traffic volumes on Main Street throughout the day and how the pedestrian-friendly environment of Main Street can be maintained whilst providing good accessibility to the Station. GPT would also like to continue to work with the NWRL to understand the likely impacts of the kiss and ride activities along Tempus Street and to its surrounding intersections and key access routes into the RHTC car parks and loading docks.

Requests

36. That the Minister require TfNSW to consult with GPT to ensure that any adverse impacts of the additional traffic generated by the kiss and ride activities can be mitigated and ameliorated along Tempus Street, Main Street, key access routes to the RHTC car parks and loading docks and to the operations and future development of the RHTC.

4.4 Operational public transport impacts

Submission

EIS 2 has provided an indication of changes to the bus interchange and taxi rank at Rouse Hill Station. Further operational details of changes to bus routes and bus interchange layout are required to confirm the public transport amenity that current exists at RHTC is maintained and improved.

Scope of issue

EIS 2 advises that a new T-way interchange will be created on the western side of the station for northbound and southbound bus access. The interchange will connect to the existing T-way at the intersection with White Hart Drive and continues north through the intersection of Rouse Hill Drive towards Commercial Road to facilitate bus services to the north and the extension of Rouse Hill Town Centre. This is confirmed by diagram shown on page 48 of the EIS 2 Summary Report. However, Figure 9.7 of the EIS 2 document has shown that bus routes may continue to use Windsor Road when travelling to the north of Rouse Hill Station.

GPT welcomes the proposal as this will increase public transport accessibility to a future area of retail and employment. Further clarity is sought in relation to final bus interchange / layover arrangements as well as bus route / frequency details at Rouse Hill Station to ensure public transport accessibility is maintained and maximised to Rouse Hill Station and the Town Centre.

Further discussions would also be appreciated to confirm the location and land requirements for the kiss and ride zone proposed on the eastern side of Tempus Drive (on that land that GPT holds a registered interest in).

Requests

37. That the Minister require TfNSW to continue consultation with GPT to confirm:

a. Final bus interchange / layover arrangements at Rouse Hill Station, which will maximise accessibility with the station entrance and the Rouse Hill Town Centre;

b. Final bus routing accessing Rouse Hill Station Interchange, in particular bus routes travelling between Rouse Hill Two Centre and suburbs / areas to the north;

c. Bus frequency and other operation details at Rouse Hill Station to ensure the current accessibility to the RHTC by public transport is maintained or improved;

d. Detailed design of bus layovers to the north and south of Rouse Hill Station, and;

e. The final location of kiss and ride zones and taxi rank.

The location and configuration of these installations should not have an adverse impact on the operation and future development of RHTC.

4.5 Visual impact during operation

Submission

There is a risk that the viaduct and station building will make RHTC virtually invisible from Windsor Road. GPT submits that this could have significant commercial ramifications and mitigating measures are required.

Scope of Issue

EIS 2 states that the viaduct will "partially screen views to the Town Centre" and identifies a "minor adverse impact on views from Windsor Road due to a noticeable reduction in the visual amenity from a location of local visual sensitivity". GPT contends that this is a significant understatement and no mitigating measures have been proposed.

The following artist impressions contained in EIS 2 indicate the scale of the impact. [BBC Consulting Planners has made annotations in red].

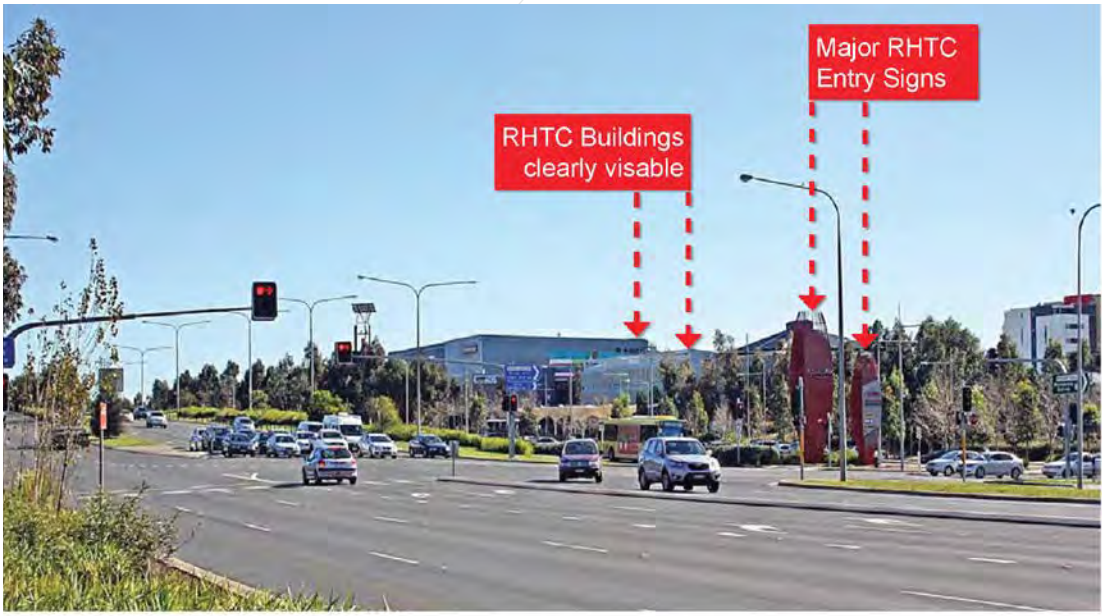


Figure 16.23 Rouse Hill Station from Windsor Road - after development (showing general form and scale of development only)

Requests

38. That the Minister require the detailed design of the station precinct to have regard to the need to retain visibility of the RHTC from Windsor Road, including but not limited to entry points, landmark buildings, and sight lines to major tenant signage. The following specific design elements require careful thought:

a. Viaduct design.

b. Station building design.

c. Need for and placement of ancillary buildings housing services and 'precinct activation'.

d. Landscaping.

e. Signage.

39. That the Minister require a Signage Strategy to be agreed between TfNSW, RMS and GPT to ensure that appropriate Site/Business Identification Signage, and directional and wayfinding signage is able to be erected on land within the rail corridor and/or road reserve.

4.6 Impact of operational noise and vibration

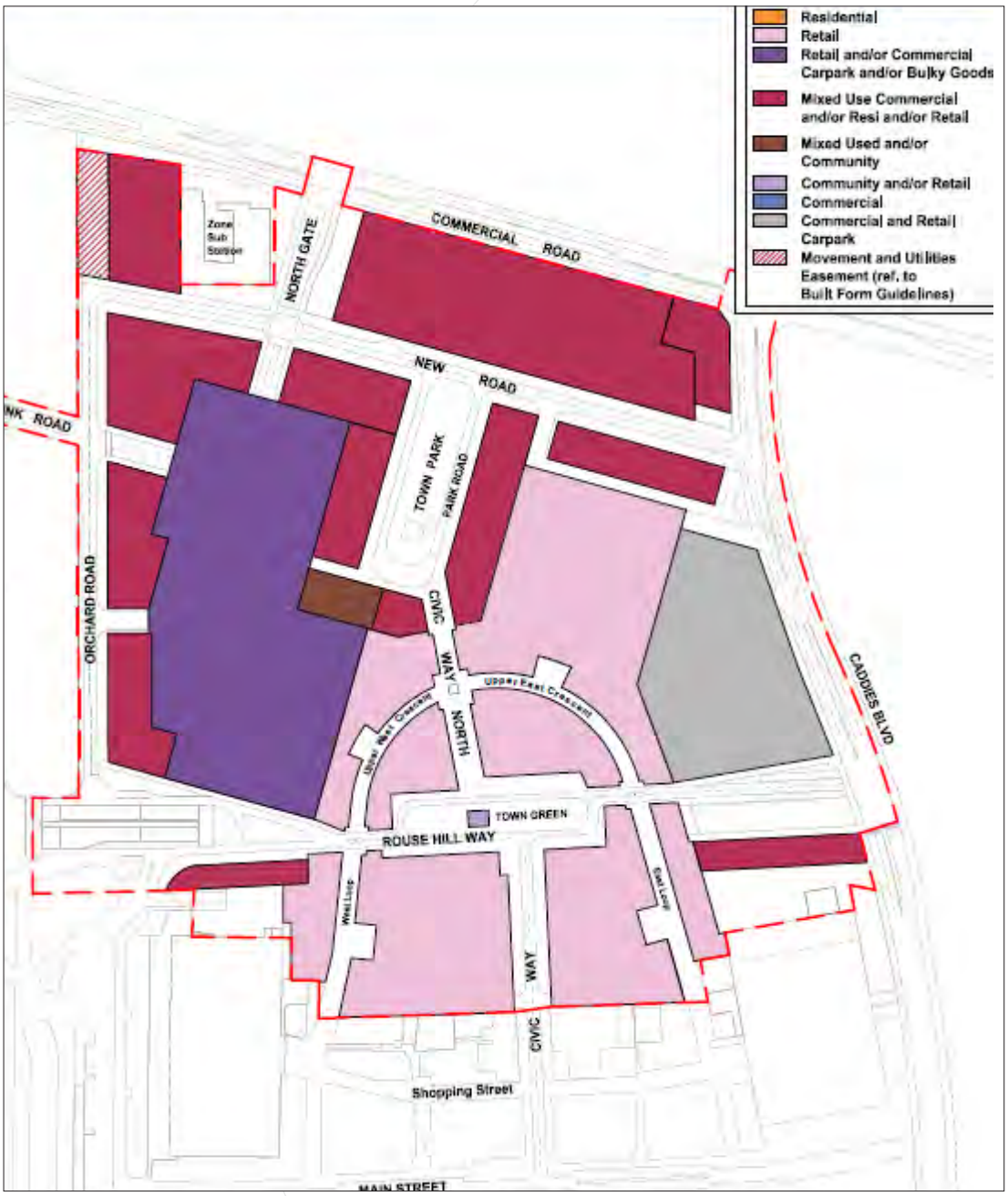
Submission

As previously noted, GPT has appointed Renzo Tonin and Associates to review EIS 2 and provide input to this submission. A full copy of Renzo Tonin's review is provided at Appendix 2. Renzo Tonin has summarised operational noise and vibration issues below.

GPT submits that the noise and vibration assessment in EIS 2 does not properly address the potential operational noise and vibration impacts on the operations and future development of RHTC from the NWRL. GPT is concerned that the impacts are not fully understood nor will they be property mitigated. This is particularly important given the unique trading environment of RHTC, the presence of existing residential receivers in RHTC, and the future residential development in the Northern Precinct.

Scope of issue

EIS 2 omits assessment to residential premises located within the RHTC and also future residential uses within mixed use buildings shown in the Northern Precinct DA. These future mixed-use buildings are located along the proposed Orchard Road within the Northern Precinct, as per the following DA drawing currently under assessment by The Hills Shire Council.



Renzo Tonin has identified the following issues with the noise and vibration assessment in EIS 2:

- Operational rail noise upon outdoor seating areas of RHTC has not been assessed against the passive recreation classification, as considered for construction noise impacts;
- Whilst the Interim Guidelines for the Assessment of Noise from Rail Infrastructure Projects (IGANRIP) neglects commercial premises, design criteria based on the predicted noise levels need to be provided so that GPT can appropriately design buildings for future rail noise impact. Assessment should consider approved but undeveloped commercial sites between Tempus St and the existing RHTC (Level 2 DA);

- The assessment of ground borne noise does not address receivers in proximity to the surface and viaduct sections of track. Potential impact from ground borne noise is not isolated to rail tunnels;
- Noise from the Public Address (PA) system has not been assessed and therefore it cannot be established whether noise will impact nearby receptors. PA noise is not readily controllable, particularly on open platforms as a certain level of audibility is required for commuters, if not addressed at the station design stage; and,
- Relevant data and assessment of operational road traffic noise impact on the Main Street residential premises within RHTC is not provided. Being identified as a route for Kiss & Ride vehicular traffic, the traffic report does not provide existing and future traffic predictions for Main Street to allow assessment of these impacts.

Requests

40. That the Minister require TfNSW to comply with the recommendations in Renzo Tonin's report regarding operational noise, as follows:

(a) Noise impact at upper levels, not just 4.5m above ground, (i.e. not acoustically shielded by the viaduct), need to be provided to allow assessment of high rise commercial and residential buildings. At source treatment such as rail dampers, can reduce impacts to upper level receivers;

(b) Background noise monitoring at residential premises within RHTC is required for the assessment of station noise emission;

(c) Confirmation should be provided that ground borne noise from the operation of the surface and viaduct section of the line will not affect nearby receivers such as the RHTC Reading Cinema;

(d) Noise from the Rouse Hill Station must consider all receivers including approved but undeveloped commercial sites between Tempus Street and the existing RHTC (Level 2 Consent). This includes Transit/Market Square;

(e) An assessment of PA noise emission must be included in the EIS to ensure that the design is capable of complying with the noise criteria. The conditions of approval or contract requirements should not prohibit or discourage the modification of the platform design to effectively mitigate airborne PA noise;

(f) Existing and future operational traffic predictions for Main Street are required, and following an assessment of noise impact onto residential premises in RHTC, must be included in EIS2; and,

(g) A schedule of periodic noise monitoring of the operation of the rail line (at least every two years) is required to be formalised through consent conditions, as noise attenuation methods will largely be reliant upon noise dampeners and noise absorption materials which can perish and wear over time resulting in gradual increases in noise levels.

4.7 Local business impacts

Submission

Whilst GPT recognises that the completion of the NWRL will have broadly positive business impacts, some mitigation of negative local business impacts will be required.

Scope of Issue

EIS 2 identifies the impacts of the operational NWRL on local businesses, and concludes that impacts are entirely positive. On this basis, EIS 2 concludes that there is no need to introduce any mitigation measures. GPT contends that there will be significant impacts due to reduced visibility of the town centre from Windsor Road and the loss of signage.

GPT is also interested in the activation strategy proposed for the station precinct. Currently there is only a small stand alone retail building in the station precinct and little further detail about the environment under the viaduct. Given the immediate proximity of the town centre buildings, both existing and planned (the latter comprising the Level 2 DA-approved building on Market Square, on the eastern side of Tempus Street) GPT is concerned about the size, design, configuration, envisaged uses, and management of this area throughout the 24 hours of a day. Unless this area is properly planned and managed it will result in the creation of an anti-social environment which will be a blight on the front door of RHTC.

Requests

41. That the Minister requires that the detailed design of the station precinct should have regard to the need to retain visibility of the RHTC from Windsor Road, including but not limited to entry points, landmark buildings, and sight lines to major tenant signage. The following specific design elements require careful thought and planning in consultation with GPT and other RHTC stakeholders:

    a. Viaduct design;

    b. Station building design;

    c. Need for and placement of ancillary buildings housing services and 'precinct activation';

    d. Landscapin; and,

    e. Signage.

42. That the Minister require a Signage Strategy to be agreed between TfNSW, RMS and GPT to ensure that appropriate Site/Business Identification Signage, and directional and wayfinding signage is able to be erected on land within the rail corridor and/or road reserve.

43. That the Minister require TfNSW to prepare an Activation Strategy, in consultation with GPT, for the non-station area under the viaduct.

4.8 Land use issues

Submission

Planning for the future use of land within and adjacent to the rail viaduct, and its integration with adjoining land, is a significant issue and requires further resolution to be fully assessed.

Scope of Issue

GPT understands that the relationship between the NWRL and land uses is primarily being addressed through a parallel precinct planning and land use integration process centred around each station location. EIS 2 notes that this process is being lead by the Department of Planning and Infrastructure in consultation with Local Councils and TfNSW.

Based on earlier Rouse Hill Station Precinct Project Working Group discussions, GPT understood that this work would happen contemporaneously with EIS 2, and hence a better level of resolution was anticipated at this stage.

Planning for the future use of land is considered to be an integral part of station precinct planning. For example, the land under the viaduct adjacent to the Rouse Hill Station precinct appears to be redundant and risks being de-activated. Alternate uses could be considered as part of detailed planning.

As a major stakeholder, it is important that GPT is involved in the land use planning process, due to the close interface with the RHTC, including the planned Northern Precinct. Land use planning also has implications for GPT's TCCPP Consent, which allows for future development of 'Sleeve Buildings' and the 'Market Square' Building.

Requests

44. That the Minister require the Department of Planning and Infrastructure to consult with GPT in the precinct planning and land use integration process, both directly with and through regular meetings of the Project Working Group.

5 CUMULATIVE IMPACT ISSUES

Submission

GPT commends TfNSW for preparing a cumulative impact assessment, which identifies a broad range of potential sources of cumulative impact. However, GPT contends that the proposed solution requires further work.

Scope of issue

In the submission to EIS 1, GPT raised concerns that the Cumulative Impact Assessment was extremely brief, and failed to address the compounding impacts of the NWRL during construction and whilst in operation.

EIS 2 contains an assessment, that identifies a broad range of potential sources and types of cumulative impacts. However, the proposed method of addressing the cumulative impacts is somewhat simplistic: that is, prepare a CEMP. EIS 2 states as follows:

> "As part of the CEMP, TfNSW would identify all other significant developments occurring in the vicinity of the construction sites and identify environmental impacts to be monitored during construction which have the potential for cumulative effects to occur. TfNSW would review environmental impacts every six months during the construction phase. Any new impacts identified during construction would be addressed appropriately to reduce the cumulative impacts and reported. [sic].

Subject to the preparation and implementation of the CEMP, EIS 2 proposes that no additional mitigation measures would be required and does not account for future, currently unidentified, development that will arise during the construction phase.

Requests

45. That the Minister require TfNSW to undertake a more frequent review of environmental impacts to ensure that cumulative impacts are monitored and responded to in a timely fashion. Such impacts should be reported through the Monthly Project Working Group meetings and be supplemented with a quarterly Key Stakeholder Review chaired by the NWRL Project Director.

APPENDIX 1
CADENCE AUSTRALIA – STATUS OF CEMF ISSUES RAISED IN EIS 1 SUBMISSION

Status on CEMF Issues raised in EIS 1 Submission

Issue raised in EIS 1	Relevance to EIS 2	Status
Will RHTC management have a role in reviewing the Principal Contractors CEMP?	Yes	Unresolved but expected to be addressed in CEMP
Additional Environmental assessments will be required e.g. High Voltage.	Yes	Unresolved but expected to be addressed in CEMP
Condition / Dilapidation Surveys; RHTC to insist that the Principal Contractor has prepared a Condition / Dilapidation Survey by an agreed independent consultant	Yes	In Consent Conditions Addressed in EIS 2
Hold Points; RHTC to have an input into the creation / approval of the Register of Hold points e.g. water discharge.	Yes	Unresolved but expected to be addressed in CEMP
RHTC to receive copies of Environmental monitoring and audits.	Yes	Unresolved but expected to be addressed in CEMP
RHTC to be provided a copy of all Environmental Non Conformances within a reasonable time.	Yes	Unresolved but expected to be addressed in CEMP
The CEMP should be a live document and as such GPT should have a say in the review and improvement of the CEMP in relation to Rouse Hill Station and RHTC	Yes	Policy included in EIS 2 but GPT input is unresolved
Stakeholder& Community Involvement; as a major stake holder RHTC should have regular meetings with representatives of the TfNSW and the Principal Contractor so that RHTC can be aware and have input in all upcoming scheduled work, allowing RHTC the opportunity to provide input and grant NWRL better public relations and interaction with the operations, businesses and residents of RHTC.	Yes	Interface meetings have commenced between GPT and TfNSW
All urban design of temporary works and signage by the Principal Contractor / NWRL to be approved by RHTC and at all times , signage around the construction site ,hoardings and surrounding environment to be maintained in order that the site is not disadvantaged during the 36 month construction phase .	Yes	Unresolved but expected to be addressed in CEMP

Issue raised in EIS 1	Relevance to EIS 2	Status
Impact on business and property by the works performed by the NWRL is not to disadvantage the RHTC and its tenants and the Principal Contractor is to take all precautions to mitigate any impact on the business.	Yes	Unresolved but expected to be addressed in CEMP
Impact on sensitive business; where certain businesses carry out medical or dental or a business of other sensitive nature, NWRL must ensure that the works do not interfere with these businesses and must take all precautionary means of consultation with RHTC / Centre Management as well as the business in question.	Yes	Unresolved but expected to be addressed in CEMP
Business Disturbances; all businesses have the right to operate with a minimum of disturbances. The Principal Contractor / NWRL must ensure that all steps are taken that this is the case	Yes	Unresolved but expected to be addressed in CEMP
Business Management Plan (BMP) the BMP is to take into consideration the previous three (3) dot points.	Yes	Addressed in EIS 2 Conditions of consent cover this also
Working Hours; The CEMP states that the working hours are > Monday to Friday 7.00 am to 6.00 pm and Saturdays, 8.00 am to 1.00 pm and no work on Sundays or Public Holidays, however, when you read on, the author of the CEMP states that non- disruptive preparatory works, repairs and maintenance may be carried out on Saturday afternoons and Sundays between the hours of 8.00 am and 5.00 pm.	Yes	Addressed in EIS 2
The site layout is to be sensitive to both noise and light, and must be approved by RHTC and its consultants prior to installation by the Principal Contractor.	Yes	Unresolved but expected to be addressed in CEMP
The site layout showing all elements such as hoardings (A or B class) sheds e.g. ablutions ,lunch and change , site offices and entry and exit gates, temporary electrical , and hydraulic services , crane age , must all be detailed and issued to RHTC for review and approval.	Yes	Unresolved but expected to be addressed in CEMP
Reinstatement and Make Good; all make good of the existing RHTC site is the responsibility of NWRL, all works required to reinstate the condition of the RHTC to its pre dilapidation survey requirements are the responsibility of NWRL.	Yes	Unresolved but expected to be addressed in CEMP
Spoil removal traffic requires a traffic management plan to be in accordance with RHTC policy requirements and to address elements such as; pedestrian access, car park traffic,	Yes	Unresolved but expected to be addressed in CEMP

Issue raised in EIS 1	Relevance to EIS 2	Status
shopper and tenant movement, loading dock deliveries to all tenants and bus way traffic.		
A site specific traffic management plan addressing issues such as pedestrian ,cyclists, buses and motorists, entry end exits of heavy vehicles and the effect on RHTC pedestrians and vehicle traffic. A traffic minimisation plan should also be in the forefront of any Traffic Management Plan (TMP)	Yes	Details unresolved but expected to be addressed in CEMP
Management Policy for handling fuels / petrochemicals; for the running of equipment and machines that addresses the control, dispensing, storage, spillage, fire prevention and fire and life safety. This policy will require sanctioning by the appropriate authorities and should be prepared by the Principal Contractor	Yes	Unresolved but expected to be addressed in CEMP
Rubbish removal, cleaning and maintaining a site free of rubbish must be the responsibility of the Principal Contractor.	Yes	Unresolved but expected to be addressed in CEMP
Vermin control on the work site must be controlled by the Principal Contractor in a manner that it does not have a detrimental effect on the ecology of the surroundings and RHTC.	Yes	Unresolved but expected to be addressed in CEMP
Surface water must be controlled and restricted to the work site, therefore adequate drainage to be provided, connection to the RHTC drainage system must be with approval of RHTC.	Yes	Unresolved but expected to be addressed in CEMP
The Principal Contractor must mitigate against surface water flooding from the site.	Yes	Unresolved but expected to be addressed in CEMP
The Principal Contractor must maintain adequate air quality at all times and that any high polluting earth moving equipment and generators are to be controlled and time of operations agreed by RHTC.	Yes	Unresolved but expected to be addressed in CEMP
Dust control and air filtration units to be used where necessary.	Yes	Unresolved but expected to be addressed in CEMP
Connection of onsite ablutions to sewer and potable water usage; if there is a requirement to obtain access of these facilities from the RHTC, all appropriate approvals and consultation between the Principal Contractor and RHTC and the engagement of any consultants to design the appropriate systems will be at the Principal Contractors account.	Yes	Unresolved but expected to be addressed in CEMP

Issue raised in EIS 1	Relevance to EIS 2	Status
How is NWRL going to address the issue of pedestrian movement from the western side of Old Windsor Road as a result of the dislodgement by the construction works? Is the construction of a temporary pedestrian footbridge a feasible option, when you consider the peak hour traffic movements and the number of bus commuters, additional workforce etc., May very well be worthwhile considering a pedestrian footbridge.	Yes	Not addressed/unresolved

APPENDIX 2
RENZO TONIN NOISE AND VIBRATION REVIEW OF EIS 2

Consultants in Acoustics, Vibration & Structural Dynamics
email: sydney@renzotonin.com.au
website: www.renzotonin.com.au

Doc Ref: TF759-02F02 (rev 1) Summary of Key Issues

Date: 21 November 2012

To: Cadence Australia Pty Ltd

Attn: Mr John Zavolokin Email: jzavolokin@cadenceaust.com

From: Glenn Wheatley

RE: ROUSE HILL TOWN CENTRE – NWRL EIS2 - REVIEW OF NOISE & VIBRATION ASSESSMENT

1 Introduction

Renzo Tonin & Associates has carried out a review of the *NWRL Stage 2: Stations, Rail Infrastructure and Systems* (EIS 2) with respect to potential noise and vibration impact onto the Rouse Hill Town Centre (RHTC) and proposed expansion of the Rouse Hill Town Centre to the north. Renzo Tonin & Associates have already carried out a review of *NWRL Stage 1: Major Civil Construction Works* (EIS1) [ref: TF759-01F01 (Rev 2), dated 7th May 2012].

The following documents, obtained from the NSW Department of Planning & Infrastructure website were reviewed:

- 02 Chapter 1 Introduction
- 04 Chapter 3 Statutory Planning
- Chapter 10 Noise and Vibration
- Appendix A Extent of Station Works
- Appendix B Approval Conditions
- Appendix C Statement of Commitements
- Technical Paper 1 Construction Traffic
- Technical Paper 2 Operational Traffic
- Technical Paper 3 Noise and Vibration
- EIS1 Submissions Report

With regard to the proposed future expansion of the RHTC to the north, unlike EIS 1, EIS 2 includes assessment to these locations however it is unclear what plans have been relied upon for the assessment.

2 Construction Noise and Vibration

2.1 Submission

The noise & vibration assessment in EIS 2 does not satisfy GPT that the construction noise and vibration impacts are fully understood nor will they be property managed given the unique trading environment of RHTC.

2.2 Scope of Issue

EIS 2 omits assessment to residential premises located within the RHTC.

Construction noise is not assessed against the 'passive recreation' criteria of 60dB(A), as confirmed in the EIS1 submissions report.

The construction noise assessment excludes assessment of the relocation and reinstatement of the Bus T-Way. The submissions report states impacts may be similar to earthworks and therefore the assessment needs to be presented, including cumulative impacts.

EIS 1 Submissions report indicates that noise walls around RHTC Station site are unlikely to be considered feasible. EIS 1 and 2 however state that noise walls have been included in the assessment. The noise assessment is therefore considered to potentially misrepresent likely impacts.

The 'Additional Mitigation Measures Matrix' (AMMM) included in the Construction Noise and Vibration Strategy (CNVS) appears to omit a mechanism for the assessment of commercial premises and passive recreational spaces.

The EIS identifies cinemas as critical and sensitive receptors to noise and vibration however the CNVS does not present a criterion for ground borne noise intrusion into the RHTC Reading Cinema. The report indicates that ground borne noise from the operation of vibratory rollers may be audible within the Reading Cinema [S 12.13.4, p.174] and recommends monitoring to be carried out. A criterion therefore needs to be set, else there is no requirement to manage or mitigate impacts.

2.3 Recommendation

The construction noise and vibration assessment needs to include residential premises within RHTC along with assessment to the passive recreation criteria for outdoor areas of RHTC. Appropriate background noise monitoring at residential premises within RHTC are required for this assessment.

The construction noise and vibration assessment must include the relocation and reinstatement of the Bus T-Way, including any cumulative impacts.

Clarification regarding the implementation of 3m noise walls around the RHTC Station site is required. Consideration of noise barriers around the RHTC construction site should be given for Bus T-Way works, particularly if impacts are to be comparable with the major civil works.

The 'Additional Mitigation Measures Matrix' (AMMM) included in the Construction Noise and Vibration Strategy (CNVS) should include a mechanism for the assessment of commercial premises and passive recreational spaces.

The CNVS should include a criterion for ground borne noise intrusion into sensitive spaces such as the RHTC Reading Cinema. It is recommended that the evening criteria for residential premises of 40dB(A) be set.

3 Operational Noise and Vibration

3.1 Submission

The noise & vibration assessment in EIS 2 does not satisfy GPT that the operational noise and vibration impacts are fully understood nor will they be property mitigated given the unique trading environment of RHTC, presence of existing residential receivers in RHTC, and future residential development to the north.

3.2 Scope of Issue

The EIS omits assessment to residential premises located within the RHTC and also future residential uses within mixed use buildings shown in the Rouse Hill Regional Centre Illustrative Context Plan. These future mixed-use buildings are located along Orchard Road within the Northern Precinct.

Operational rail noise upon outdoor seating areas of RHTC has not been assessed against the passive recreation classification, as considered for construction noise impacts.

Whilst the IGANRIP neglects commercial premises, design criteria based on the predicted noise levels need to be provided so that GPT can appropriately design buildings for future rail noise impact. Assessment should consider approved but undeveloped commercial sites between Tempus St and the existing RHTC (Level 2 DA).

The assessment of ground borne noise does not address receivers in proximity to the surface and viaduct sections of track. Potential impact from ground borne noise is not isolated to rail tunnels.

Noise from PA system has not been assessed and therefore it cannot be established whether noise will impact nearby receptors. PA noise is not readily controlled, particularly on open platforms, and as a certain level of audibility is required for commuters.

Relevant data and assessment of operational road traffic noise impact on Main St residential premises within RHTC is not provided. Being identified as a route for Kiss & Ride vehicular traffic, the traffic report does not provide existing and future traffic predictions for Main St to allow assessment of these impacts.

3.3 Recommendation

Noise impact at upper levels (i.e. not acoustically shielded by the viaduct barriers), not 4.5m above ground, need to be provided to allow assessment of high rise commercial and residential buildings. At source treatment such as rail dampers, can reduce impacts to upper level receivers.

Background noise monitoring at residential premises within RHTC is required for the assessment of station noise emission.

Confirmation that ground borne noise from the operation of the surface and viaduct section of the line will not affect nearby receivers such as the Reading Cinema should be provided.

Noise from the Station must consider all receivers including approved but undeveloped commercial sites between Tempus St and the existing RHTC (Level 2 DA).

An assessment of PA noise emission must be included in the EIS to ensure that the design is capable of complying with the noise criteria. The conditions of approval or contract requirements should not prohibit or discourage the modification of the platform design to effectively mitigation airborne noise.

Existing and future operational traffic predictions for Main St are required, and following, an assessment of noise impact onto residential premises in RHTC must be included in EIS2.

4 Summary Table

Key component / issue	Comments	Further detail needed (areas of deficiency)	Further issues identified
EIS 1 Submissions Report Responses			
a. "*Noise impacts on the RHTC have been revised to include the evening period for commercial receivers, including outdoor eating areas (assessed under passive recreation criteria).*" "*Viaduct and station platform construction works may extend into the evening, the commercial evening criterion is the same as the daytime criterion.* *Compliance with the daytime and evening NMLs is predicted for commercial receivers during viaduct and station platform construction*"	EIS 2 does not include assessment to the passive recreation criteria of 60dB(A) in RHTC. As noise predictions are not provided in EIS2 it is uncertain whether the station construction will meet the 60dB(A) criteria. Viaduct construction works between Rouse Station and Cudgegong Road (Table 12.43 of EIS 2, TP3) shows exceedance of the 70dB(A) NML, therefore contradicting the submissions report statement. The 60dB(A) passive recreation criteria would therefore be exceeded by more than 10dB(A). EIS2 still does not include assessment to RHTC residential premises.	Justification as to the acceptability of extending the construction of the viaduct and station into the evening period is therefore not justified by the EIS.	
c. "*Predicted noise impacts on RHTC residential receivers indicate that earthworks and site establishment would result in daytime exceedances of the NMLs. Compliance is predicted at these residences during viaduct and station platform construction works.*"	Background noise monitoring and criteria has not been presented for RHTC residential receptors. It is therefore unclear how the assessment to residential premises in RHTC has been carried out.	Further detail regarding background noise monitoring at assessment to RHTC residential premises is requested to be provided for both EIS1 and EIS2 works.	

Key component / issue	Comments	Further detail needed (areas of deficiency)	Further issues identified
g. "*Rouse Hill Station would be elevated and so noise barriers during construction are not likely to be feasible as a mitigation measure. Notwithstanding exceedances are predicted during the earthworks and site establishment phase which occurs prior to installation of site hoarding. Compliance with the NMLs is expected during Viaduct and Station Platform Construction.*"	This response contradicts the last paragraph of 12.4.1 "*For the station sites, the major civil works assessment proposed the construction of noise barriers (hoardings) around the perimeters of the construction sites (3 m high). This 'default' 3 m site perimeter solid timber fence has been assumed in the calculations.*" As the barrier has been included in the calculations then works need to be scheduled such that it can be installed as a priority. The assessment otherwise needs to be carried out on the basis it is not installed. The assessment otherwise misrepresents the likely noise impacts from the works.	The reports contradict one another in regard to the noise mitigation that it is to be provided, and that which has been included in the assessment. It appears that the assessment may misrepresent the likely impacts as a result of the feasibility of including the nominated mitigation measures.	
i. "*The proposed ground-borne noise management level of LAeq (15minute) 60dB(A) for commercial receivers is consistent with that adopted for the proposed CBD Metro Construction Noise Assessment. The ICNG does not provide ground borne NMLs for commercial receivers*" "*At the RHTC site, the assessment indicates that ground-borne construction noise and vibration impacts are not anticipated to be appreciable at the nearest residential and commercial receivers*"	As stated in para.3 of S 3.3 of EIS 1, cinemas are to be considered highly sensitive receivers. Also in A.2 (p.27 of CNVS) cinemas are considered critical spaces. Therefore cinemas require a more stringent criterion than that applied to typical 'commercial' receivers. The adoption of a criteria used for a project that was not carried out, is not considered a suitable justification for its acceptability in managing or assessing potential impact. Giving further consideration of the sensitivity of the cinema use, we request that the evening residential criteria of 40dB(A) be adopted for the Reading Cinema.	A ground borne noise criteria, reflective of the sensitivity of the cinema usage and function needs to be set. The evening residential criteria of 40dB(A) is recommended.	

Key component / issue	Comments	Further detail needed (areas of deficiency)	Further issues identified
j. "*Section 7.11.4 of the Noise and Vibration Technical paper states that ground-borne noise is not expected to be audible in the cinema. This will also be reviewed in the detailed design phase.*"	EIS 2 identified that ground borne noise from the use of vibratory rollers may be audible in the Reading Cinema, however no noise levels are provided to indicate the extent of potential impact.	See item above.	
1 – Operational Rail – Airborne Noise Assessment [TP3, Chapter 5]			
1.1 - Assessment Criteria	The operational rail noise assessment includes only airborne noise from the operation of trains on the rail line. Noise from the stations, car parks and traffic are assessed separately against the relevant noise policy. Noise criteria have been appropriately based upon the NSW '*Interim Guideline for the Assessment of Rail Noise Infrastructure Projects'* (IGANRIP) [TP3, S 5.3, p.24].		
1.2 - Assessment Locations	In accordance with the IGANRIP assessment of airborne noise from rail lines are not assessed to commercial receivers. The following comment is made regarding future residential in RHTC: *"Planning is also underway for further development to the north of the existing Rouse Hill Town Centre area. Current plans indicate that while this development will include residential areas, these will be set back from the rail corridor behind commercial buildings. At this stage, it is considered that rail noise impacts on residential receivers in this development will be low."* [TP.3, S 5.8.1, p.43]	Residential apartments within RHTC have not been identified in the assessment. The predicted noise level contours however indicate that compliance is expected to be achieved at the nearest residential apartments. Estimates however have been made as the noise contours are presented at 4.5m above the ground rather than at the elevated residential locations. Confirmation in the EIS is therefore required. Mixed use development, which may include residential, in the approved Rouse Hill Northern Precinct Concept Plan has not been considered.	

Key component / issue	Comments	Further detail needed (areas of deficiency)	Further issues identified
1.3 - Noise Predictions	Noise predictions are presented within the report and have been assessed against the relevant noise criteria. The daytime period (7am – 10pm) has been established as the worst case scenario for airborne rail impacts.	In accordance with the considerations in the Submissions report for construction noise, airborne operational noise to outdoor areas of the RHTC should be assessed against the 'passive recreation' criteria.	Whilst commercial premises are neglected in the IGANRIP, design of future commercial buildings within RHTC North will need to give consideration of rail noise impact. A request should be made for either noise modelling outputs at heights relevant to the commercial towers, or the noise model be provided to allow assessment of these buildings. Furthermore, some form of assurance needs to be provided regarding the outcomes expected for RHTC.
1.4 - Noise Mitigation Measures	Noise barriers with absorptive facing are assumed in the noise modelling, being 1m high above rail level. Rail dampers are deemed not to be required for existing sensitive receivers between Bella Vista Station and Kellyville Station, or in the immediate vicinity of stations where train speeds are lower and noise levels comply with the trigger levels. Direct fix fasteners with dynamic stiffness 20 kN/mm are assumed in the noise modelling to minimise structure radiated noise from the viaduct and bridges.	As the noise modelling demonstrates compliance with the relevant noise policy, we consider that further discussion or detail regarding noise mitigation is not warranted.	-
2 – Operational Rail - Tactile Vibration [TP3, Chapter 6]			
2.1 - Assessment Criteria	Tactile vibration assessed to relevant NSW policy and international standards [TP3, Table 6.2, p.51].	-	-
2.2 - Assessment Outcomes	The assessment does not cover the surface and viaduct section of track. It is noted that ground borne noise is more sensitive than tactile vibration and therefore compliance with ground borne noise should ensure the tactile vibration requirements are also met. See following section.	-	-

Key component / issue	Comments	Further detail needed (areas of deficiency)	Further issues identified
3 – Operational Rail - Ground borne Noise [TP3, Chapter 7]			
3.1 - Assessment Criteria	Ground borne noise criteria have been appropriately based upon the NSW IGANRIP [TP3, Table 7.2, p.68]	-	-
3.2 - Assessment Outcomes	The assessment does not cover the surface and viaduct section of track. Whilst ground borne noise impact is usually isolated to tunnel operations where there is no airborne noise component to mask the ground borne noise, ground borne noise can impact other locations where airborne noise is well isolated, such as the Reading Cinema. Whilst this has not be directly addressed, based on the data presented in Figure 7.1 ground borne noise from the rail line is not expected to impact the cinema due to the slow operating speed of trains at the Station and the distance from the track.	Confirmation that ground borne noise from the operation of the surface and viaduct section of the line will not affect nearby receivers such as the Reading Cinema should be provided.	-
4 – Operational Noise from Stations and Ancillary Activities [TP3, Chapter 9]			
4.1 - Assessment Criteria	Noise criteria have been appropriately based upon the NSW '*Industrial Noise Policy Document*' (INP) and NSW EPA sleep disturbance policy. [TP3, *S 9.2*].		
4.2 - Assessment Locations	The nearest most potentially affected receiver locations are presented in Table 9.1 [pp. 94-95].	Residential premises within the RHTC have not been identified in the assessment.	

Key component / issue	Comments	Further detail needed (areas of deficiency)	Further issues identified
4.3 – Station Noise Emission	In-principle assessment is presented for mechanical services equipment only. No public car park is included at RH Station.	Noise from the Station PA system is likely to be the most sensitive issue for noise emission from the station. Due to the high peak train movements of 20 per hour proposed for the NWRL, announcements are expected to be frequent. Also, as the ambient noise level is expected to be high as a result of traffic along Windsor Road, the noise level of the PA is expected to be reasonably high. No assessment of PA noise has been included in EIS2. The report therefore is unable to provide indication as to whether noise from the PA system is capable of complying with the relevant criteria. Given the open platform design, there are limited opportunities to mitigation airborne noise from the PA. The conditions of approval or contract requirements should not prohibit or discourage the modification of the platform design to effectively mitigation airborne noise.	
4.4 – Traffic on Local Roads	Assessment of Road traffic noise is presented in Section 9.3.4 [p.113]. Figure 9.7 indicates Kiss and Ride traffic to arrive via the Main St [p.114], and it is stated that RHTC Station is expected to generate "*more than 800 vehicles per hour during the morning peak period including 500-700 kiss and ride trips*." [p.112] The report states that "*traffic noise levels are predicted to increase by less than 2 dB at all receivers. Mitigation of traffic noise from existing roads is therefore not required"* [p.112].	The Operational Traffic Report [EIS Technical Paper 2] does not appear to present any traffic figures for Main St of RHTC. Therefore it is unclear as to how an assessment of traffic noise onto residential receivers within the RHTC has been carried out. Assessment of traffic noise onto RHTC residential receivers should be provided.	
5 - Construction - Airborne Noise Assessment [TP3, Chapter 11 & 12]			
5.1 - Assessment Criteria	Noise criteria have been appropriately based upon the NSW '*Interim Construction Noise Guideline*' (ICNG)		

Key component / issue	Comments	Further detail needed (areas of deficiency)	Further issues identified
	Noise criteria for commercial premises are noted as 'N/A' during evening period [*Table 12.30, p.173*]	Retail premises within Rouse Hill Town Centre operate into the evening period and therefore should be considered for any proposed evening work.	
5.2 - Assessment Locations	The nearest most potentially affected receiver locations to the Rouse Hill Station Works are presented in Figure 12.9 and Table 12.29 [TP3, S 12.13, p. 172]. Assessment to both commercial and residential receivers is required.	Residential premises within the RHTC have not been considered in the assessment. Assessment of construction noise to residential apartments within the Rouse Hill Town Centre is required as they are located closer than other identified residential receivers. Assessment to the approved Level 2 DA of RHTC, to be situated between Tempus St and the existing RHTC, has not been considered in the assessment.	Assessment to closer residential and commercial premises may impact upon the reasonableness of potential evening construction works.
	The nearest most potentially affected receiver locations to the Surface Works between Kellyville Station and RH Station are presented in Figure 12.12 [p.181] and Table 12.38 [p.182]. The nearest most potentially affected receiver locations to the Surface Works between RH Station and Cudgegong Station are presented in Figure 12.13 and Table 12.41 [p.185]. Assessment to both commercial and residential receivers is required.	Residential premises within the RHTC have not been considered in the assessment. Assessment of construction noise to residential apartments within the Rouse Hill Town Centre is required as they are located closer than other identified residential receivers. Assessment to the approved Level 2 DA of RHTC, to be situated between Tempus St and the existing RHTC, has not been considered in the assessment.	Assessment to closer residential and commercial premises may impact upon the reasonableness of potential evening construction works.

Key component / issue	Comments	Further detail needed (areas of deficiency)	Further issues identified
5.3 - Assessment Scenarios and Proposed Construction Plant Equipment	Noise predictions are reported to have been carried out based upon the expected 'worst-case' activities during each of the construction phases. A list of typical equipment is listed in Table 12.3 [p.144]. Independent assessment of Station construction and viaduct construction is presented in Sections 12.13 and 12.15 respectively.	Noise level data of typical road construction equipment are not included within the report and therefore assessment of temporary relocation and reinstatement of the Bus T-Way has not been carried out. This deficiency could alter the duration and proximity of works to the RHTC as well as cumulative impacts. The submissions report stated that construction phases would not overlap. Assurance that the Station construction will not occur at the same time as viaduct construction should be provided.	
	Noise levels of equipment are set out in Table 12.3 [*p.144*] Only brief outline of equipment and activities associated with each construction phase are described in Sections 12.4.1 [*pp.144-145*].	The number of each plant item to be expected at each site during each phase of works, or that assumed in the noise assessment, needs to be provided to ensure an appropriate noise assessment has been carried out.	
5.4 - Noise Predictions	Noise predictions are presented within the report and have been assessed against the relevant noise criteria with the exception of the 'passive recreation' criteria to be applied to outdoor areas of RHTC.	'Passive recreation' criterion has not been used for the assessment of outdoor areas of RHTC as stated in the submissions report.	
	Noise predictions for Station Construction and viaduct construction between Kellyville Station and RH Station indicate compliance with the relevant criteria. Predicted noise levels however are not presented. Noise predictions for RH Station to Cudgegong Road Station indicate exceedance of 5dB(A) to the nearest commercial receivers in RHTC.		
5.5 - Noise Mitigation Measures	A 3m high hoarding is to be provided for Rouse Hill in Table 12.46 [*p.189*]. It is unclear whether this mitigation has been included for station works. No specific measures are stated for Rouse Hill Station to Cudgegong Station where exceedance of the Noise Management Levels (NMLs) is predicted.	The EIS should clarify whether the specific 3m hoardings are to be provided around Rouse Hill Station. It is noted that 10dB(A) exceedances were predicted in EIS1. See comments to Submissions report Item g above.	

Key component / issue	Comments	Further detail needed (areas of deficiency)	Further issues identified
5.6 - Construction Noise and Vibration Strategy	The Construction Noise and Vibration Strategy (CNVS) is attached to TP3 and includes the predicted noise levels and relevant criteria for the nearest receiver locations. The CNVS identifies a mechanism to determine when and what additional mitigation measures should be applied, beyond the Standard Measures. This approach, the Additional Mitigation Measures Matrix (AMMM), is generally well considered and provides some certainty about when mitigation options should be offered to affected receivers. However it is not clear whether the AMMM will be used to assess commercial receivers such as the RHTC. The AMMM refers only to the level at which construction noise exceeds the background noise level [*Appendix J, CNVS, Tables 5.2 to 5.4, p.19*] which ultimately excludes commercial receivers.	The AMMM should ensure a mechanism for assessment of commercial premises. Reference to background noise levels may be appropriate, in particular for external areas of restaurants and cafes where an external amenity is expected.	
6 – Construction Vibration Assessment			
6.1 - Assessment Criteria	Vibration Criteria have been appropriately set in accordance with the Department of Environment and Climate Changes 'Assessing Vibration – A Technical Guideline"		
6.2 - Assessment Locations	The nearest most potentially affected receiver locations have been identified appropriately as the commercial tenancies of the RHTC.		
6.3 – Assessment Outcomes	Vibration impact is predicted to be low based on type of equipment proposed for Station and viaduct construction. There is a discrepancy between the 'Safe Working Distances' quoted for vibration generating equipment between Table 12.4 [TP3, *p.146*] and Table 3.3 [App J, *p.13*], however this is considered inconsequential to the assessment at RHTC. .		

Key component / issue	Comments	Further detail needed (areas of deficiency)	Further issues identified
7 – Construction Ground Borne Noise Assessment			
7.1 - Assessment Criteria	Ground borne noise criteria had been appropriately set for residential premises in accordance with the NSW '*Interim Construction Noise Guideline*' (ICNG) [*S 6.3, p.30*].		
	Unlike EIS1 internal NMLs for commercial premises is not provided, nor is it set in the CNVS.	The internal ground borne noise NML of $L_{Aeq(15minute)}$ 60dB(A), set within the EIS1, is considered too high, being only 10dB(A) below the external NML.	
7.2 - Assessment Findings	Section 12.13.4 [*p.174*] indicates that ground borne noise from the operation of vibratory rollers may be audible within the Reading Cinema. The report does not indicate the likely levels of noise within the cinema.	A criteria needs to be set for the assessment of the Reading Cinema, which would ultimately need to be incorporated into the CNVS.	
8 - Construction Traffic			
8.1 - Assessment Criteria	Noise generation from Construction Traffic has been appropriately set in accordance with the NSW 'Road Noise Policy'.		
8.2 - Noise generated by construction traffic	The Construction Noise Assessment and Traffic Report both identify limited traffic movements to and from the Rouse Hill Station site. Noise impacts have been appropriately assessed and given the traffic volumes on surrounding roads, construction traffic is not expected to generate impacts during the proposed daytime operations.		
8.3 - Parking on the Construction site	The Rouse Hill Station site is allocated with onsite parking, assumed to be for workers. Whilst the activity of light vehicles has not been included in the noise assessment it is not considered of consequence when compared with the general construction activities. Use of the area for car parking would not be dissimilar to existing parking arrangements and usage by the Rouse Hill Town Centre patrons.		

APPENDIX 3
EXTRACT FROM ROUSE HILL TOWN CENTRE DESIGN GUIDELINES

Vision

Within the Community:

The Rouse Hill Regional Centre is conceived as a model for sustainable urban communities that will evidence many dimensions to support the social, environmental, and economic needs of the community.

The Town Centre is a critical component of this vision because it will serve as the hub of activity for the community. It will be a mixed-use, multi-functional, and integrated destination comprised of a full range of retail, entertainment, community, commercial, residential and leisure activities.

The Urban Design Vision:

The urban design vision for the Town Centre is premised on achieving an integrated model. The form of the Town Centre is conceived as a combination of a traditional town, Main Street experience overlayed with a contemporary mix of uses. This combination is intended to integrate current retailing needs and models with the more public life of traditional shopping and civic places - urban places where we all love to spend time because of the intrinsic quality and sense of place they embody.

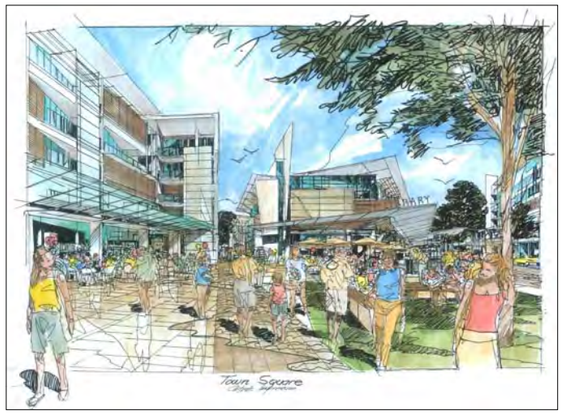
The Town Centre is a mixed use destination comprising retail, public spaces, community facilities, educational facilities, commercial activity, residences and recreational amenities - all integrated into a compact, diverse, interesting and dynamic place.

The public realm of the Town Centre is critical to this sense of 'civic' place by providing vibrant streets and pedestrian ways that are public and active throughout the day and beyond regular trading hours. Presence of residential uses within the centre is critical to its activation and safety.

Town Centre Experience:

The Town Centre experience is very different to visiting a shopping centre. These are the key elements of the Town Centre experience in urban design terms:

- Vibrant and Synergistic Street life
- Controlled Diversity / Chaos
- Being Outdoors / Part of the Environment - Trees, Fountains, Sun, Air
- Civic Gathering Places - Plazas, Courtyards, Streets
- Fine Grain / Many Pathways and Choices
- Many Buildings / Varied Architectural Expressions
- 24 Hour Accessible Streets/Public Spaces
- Mixed-Use Buildings / Multi Functions / Lots of Windows
- A Place to Live / Meet People / Watch People
- Shared Ways / People & Cars / Streets and Footpaths
- Urban Lifestyle - Come Often and Stay Longer
- Many Districts with Different Character



Principles

Master Plan Guiding Principles:

The RHRC Master Plan established key drivers to guide the development of its Town Centre:

1. A Mixed Use Regional Centre:
- Retail, Commercial, Residences, Community, Recreation
- Combined within buildings and within precincts

2. A Distinctive Public Realm and Sense of Place:
- A Traditional Main Street Model as Focus
- Outdoor Streets with Emphasis on Comfort
- Benches, Fountains, Public Art
- Character and Identity Informed by Regional Context

3. A Safe Place with Vibrant Activated Streets:
- Streets with Emphasis on Surveillance from Fronting Uses
- Residential Presence on Main Street and Civic Way
- Visual Legibility and Connectivity of Streets

4. A Pedestrian and Transit Oriented Place:
- Many Streets and Pedestrian Routes Leading to the Transit Centre
- Comfortable Five Minute Walking Distance to All Parts

5. A Place to Live with Diverse Choices:
- Terraces, Apartments, Courtyard Housing
- Diverse Aspects to Nature, Main Street, Parks
- Located in Various Character Precincts

6. A Place to Work Near Amenities:
- Offices Adjacent to Transit Centre/Parks
- Offices Overlooking Plaza and Shopping Street
- Provision of Home/office residential typologies

7. A Place with Diverse Public Gathering Places:
- Market Square, Town Square, Leisure Square
- Urban Courtyards, Green Courts, Cool Places

8. A Place with Emphasis on Complete Civic and Community Facilities:
- Library, Community Centre, Health, Learning
- Police, Transit Centre, Public Markets
- Swimming Pool, Gym, Walking Trails

9. A Compact Place with Identifiable Form, Edges/ Spaces:
- Strong Built Form Edge to Centre
- Strongly Defined Public Spaces and Streets

10. A Connected, Legible and Permeable Public Realm:
- Public Routes Connecting Main Street to All Edges
- Visual Landmarks and Focal Points

11. A Place with Fine Grained Streets and Buildings:
- Human Scale and Pedestrian Interest Emphasis
- Articulated Facades to Achieve Interest and Sense of Detail

12. A Place with Diversity of Architectural Expression:
- Requirement in Design Controls for Diversity of Expression
- Building upon Traditional Diversity and Character of Hawkesbury Towns

13. An ecologically Sustainable Place
- Enhancement of the natural environment to ensure resources are responsibly managed
- Commitment to active management and implementation
- Selected innovation using proven technology and a commercially viable outcome.

Town Centre Components & Extents:

There are two components to the Town Centre:

1. **Town Centre Core; the subject of these guidelines;**
   - Extents are Windsor Road, Town Park Drive, Caddies Creek edge, and Schofields Boulevard.
2. **Town Centre Frame;**
   - Extents are Windsor Road, Schofields Boulevard, Caddies Boulevard, and Commercial Road.
   - Forms a flexible mixed-use area that supports the core.
   - Precinct DA for the Town Centre Frame will incorporate Frame Guidelines.

Town Centre Core Concept Summary

Highlights of the Town Centre:

Organising Structure

1. Town Centre Core comprised of four quadrants.
2. Each quadrant comprised of four building blocks.
3. Each building block comprised of multiple building sites.
4. Building sites comprised of fine scale building expressions.

Public Realm/Streets

1. Main Street and Civic Way as central integrating streets.
2. Quadrant Loop as pedestrian only retail precinct.
3. Perimeter roads as primary vehicular/cycle transit and service routes.
4. Caddies creek promenade as pedestrian/cycle only esplanade.

Public Realm/Gathering Spaces

1. Central Town Square at Main Street and Civic Way Juncture.
2. Market Square at west end of Main Street and Transit Centre.
3. Leisure Square at east end of Main Street and Caddies Creek.
4. Food Terrace Way as link from Town Square to Town Park.
5. Four Courts as secondary plazas and portals to centre from parking.
6. Town Park on south boundary of core.

Land Use Structure

1. Core ground level as primary retail and civic use only.
2. Central Town Square site as Library/Community Centre & café focus.
3. Perimeter and entry road sites as residential and commercial sleeves.
4. Levels above grade as residential/commercial/civic mix.
5. Waterfront zone as special residential/public use district.
6. Windsor Road frontage as landscaped transit corridor.

Transportation/Movement Systems

1. Bus and future rail centre at Windsor Rd. end of Main Street.
2. Primary car access routes limited to perimeter road access points.
3. Dedicated cycle ways designed to encourage cycle use.
4. Pedestrian priority in core to welcome pedestrians.
5. Predominance of parking in underground structures.
6. Street parking on Main Street and Civic Way.
7. Service trucks dispersed to minimize internal impacts.

Built Form

1. Overall minimum two story built form at maturity.
2. Variety of building heights throughout centre.
3. Main Street as predominant urban street.
4. Schofields as 6 story high urban green boulevard.
5. Windsor Road frontage as 3 to 6 story urban edge.
6. Town Park Drive as 3 story residential edge.

Character

1. Main Street as a fine grained animated traditional town focus.
2. Civic Way as a distinctive heritage and residential place.
3. Quadrant loop as a place of high level of diversity and interest.
4. Variety of pedestrian ways of fine grain and pedestrian scale.
5. Caddies Creek precinct as quiet connection with nature.
6. Transit Centre/Market Square as place of activity intensity.
7. Town Square as a resting/meeting and cool place
8. Leisure Esplanade as place of respite and rest.

Framework

Structure of Design Guidelines:

The Town Centre Core Precinct Design Guidelines is a document that functions within, and is part of, a Masterplan and DCP No. 33 (BHSC) for Rouse Hill Regional Centre. They are to be used in conjunction with the Masterplan DA, Caddies Creek Guidelines, the Town Centre Core Precinct Plan (TCCPP) and DA Consent drawings, which contain prescriptive details of a qualitative, quantitative and dimensional nature where required to achieve planning and urban design principles.

These guidelines relate to design as evidenced in the eventual and complete development of the entire Town Centre Core Precinct Plan. Interim development conditions are addressed in Section F Interim Uses.

Application of the Design Guidelines:

- The Town Centre Design Guidelines are comprised of both 'framework' and site-specific guidelines and requirements. They set out the manner in which the principles of the DCP and Masterplan are to be implemented.

The vision for Rouse Hill Regional Centre integrates contemporary retailing needs with the scale, character and diverse activity of a traditional town centre.

- These design guidelines are to form a part of the design brief for detail design of buildings, public spaces, for Council's reviewing (including Design Review Panel) and approving bodies and other reviewing and approving agencies in order for them to assess the compliance of designs with these guidelines.
- The Design Review Panel may review and approve design proposal that vary from the guidelines, but meet the general intent, based on design merit.
- These Design Guidelines have been prepared for the Town Centre Core Precinct in accordance with Condition Number 3 of the Masterplan development consent issued by Baulkham Hills Shire Council on 26 March 2004. They are designed to be read in conjunction with the approved Masterplan for the Rouse Hill Regional Centre site, the Precinct Plan for the Town Centre Core Precinct and the Baulkham Hills Development Control Plan Number 33 – Rouse Hill Regional Centre (DCP 33), which provides the non-mandatory provisions relating to development on the Rouse Hill Regional Centre site. DCP 33 provides that its provisions "apply to the Rouse Hill Regional Centre except to the extent that they are inconsistent with the approved masterplan for the site."
- The principles in the Design Guidelines are generally consistent with the provisions contained in DCP 33. However there are some specific guidelines which are not consistent with the DCP provisions. It is intended that the Design Guidelines will take precedence over the relevant DCP provisions where there is any inconsistency. These inconsistancies are specifically noted in the Design Guidelines at the relevant section.
- Ecologically Sustainable Development (ESD) is a core philosophy of the development of the Regional Centre. In striving for ESD, development should contribute to the enhancement of the natural environment to ensure that land and resources are managed responsibly in consideration of future generations.

  All design development shall consider the implementation of this philosophy, and where relevant, incorporate the particular initiatives outlined in the ESD plan and Stormwater Management Plans.

Guidelines

Overall Town Centre Structure Plan:

Streets:

- Main Street is to extend uninterrupted from Orchard Road to Caddies Boulevard, with public steps at the east end leading down to the Leisure Esplanade.
- Civic Way is to extend through the Town Centre Core, linking the Mungerie House area to the Town Square and linking the Town Square to the Town Centre Frame to the north of Schofields Boulevard.
- The perimeter streets(Town Park Drive, Schofields Boulevard, Orchard Road, Caddies Boulevard) are to provide primary vehicle access to the amenities and facilities of the Town Centre, including parking access.

Quadrant Loops:

- Each Quadrant is to provide a minimum of one intermediary Pedestrian Right-of-Way leading from Main Street through to Civic Way - this being the Quadrant Loop, as a pedestrian street.
- In addition, each portion shall have at least 1 additional connection as a direct linkage to a perimeter street.
- Each portion of Quadrant Loop needs to provide a street crossing on Main Street or Civic Way that facilitates convenient flow of pedestrian traffic across the Street to the adjacent Quadrant.

Quadrants:

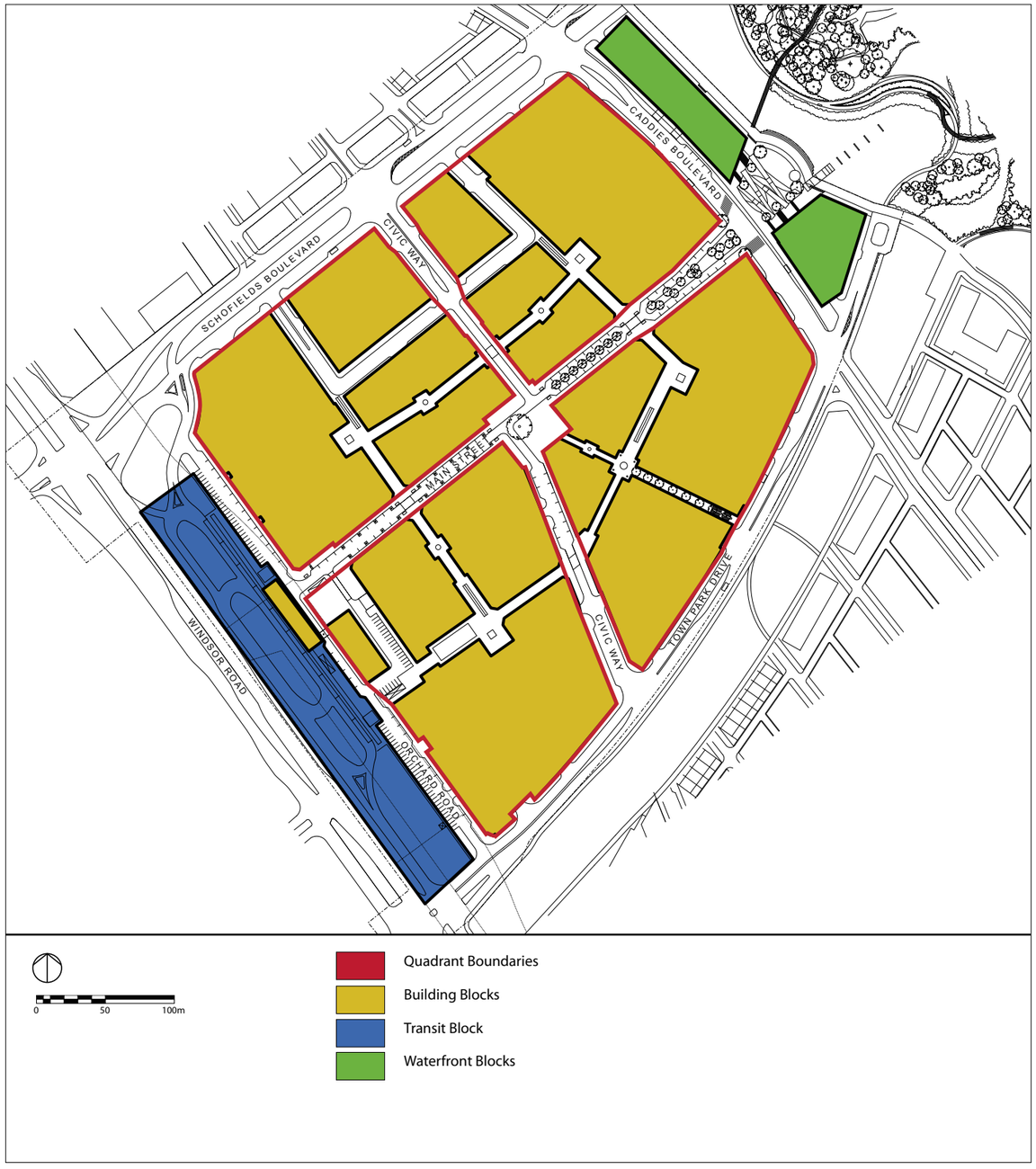
- Each Quadrant is to provide a number of Building Blocks, each with frontage and address onto a Street or Pedestrian Right-of-Way.
- Each Quadrant is to provide a variety of Pedestrian Right-of-Ways thereby establishing a fine-grain public permeability.

Other Components:

- The Waterfront Blocks are to accommodate and front onto a major public accessway - the Leisure Esplanade, and also front onto Caddies Boulevard.
- The Waterfront Blocks also need to address and front onto the Leisure Square steps and park leading from the foot of Main Street down to the Leisure Promenade.
- Leisure Square is to be positioned at the foot of Main Street and provide public access and views from Main Street to the Caddies Creek environment.
- The Transit Block is reserved to accommodate bus movements, taxi stand, bike routes and storage, and associated shelters and structures and a comprehensive Landscaped Zone. In the long-term, the Transit Parcel also accommodates an underground City-rail station.

Building Blocks:

- Each Building Block is to be framed on all sides by either a Street, a roadway, or a Pedestrian Right-of-Way.
- Each Quadrant shall have a minimum of 4 Building Blocks and must comply with the Town Centre Structure Plan(Page 04) in order to ensure a breakdown of the quadrants into a more permeable structure plan.
- The maximum dimension of any one side of a Building Block shall be 130m on the Schofields Boulevard and Town Park Drive frontages and on both sides of Main Street.



Quadrants and Building Blocks Plan

Principles

Building Sites:

- Each Building Block must contain a number of Building Sites.
- Building Sites are a finer scale breakdown within each Building Block which may act as 'sleeve' buildings to visually screen larger blank wall buildings from exposure to the public realm. (See Guidelines B01 also.)
- Within Building Sites an expression of individual buildings is required to provide a further fine grain.

Setbacks:

- Setbacks are applied where residential uses are at the ground floor to ensure that quality livability relationships are achieved at street edges.

Build-To Lines:

- Build-To Lines are established to ensure that desired streetwall location, scale and height is achieved.
- Build-To Lines are intended to prevent the erosion of streetwall and facade along the street where a more urban streetscape is desired.
- A variety of Build-To Line conditions are prescribed to achieve differing streetwall and land use situations.
- In general, a Build-To Line requires that the principal building facade be placed at the outer edge of a Building Block boundary, with allowances for limited insets and projections.
- Extent of shopfront insets must recognise the requirements for public safety.

Additional setback for residential at upper levels, in the form of framed balconies may be desired to provide greater unit privacy and amenity for outdoor spaces, while also providing shade for indoor spaces.

Architectural elements such as roof overhangs, balconies, cornice treatments, and signage may, subject to their relevant guidelines, extend beyond the site envelope.

Building Sites Plan

Principles

Overall Form:

- In broad terms, the overall form of the Town Centre is intended to achieve an urban place with strongly defined and contained public spaces and streets.
- The 9 storey building in Town Square is intended as an iconic architectural statement which responds to its visual prominence as seen from a distance.
- Building envelopes have typically been arranged to provide most height at the Town Square, along the length of Main Street and around the perimeter of the Town Centre.

Maximum Heights:

- Within each Building Block, Maximum Heights have been defined for building footprint areas to establish a coordinated urban form and massing.
- Maximum Heights are also intended to achieve the development of a desired overall built form, in which certain buildings and structures will provide stature, placemaking, focal points and identity within RHRC.
- Buildings and structures do not need to be built to equal indicated maximum heights, in metres, unless a stipulated Minimum Height applies.
- Maximum Heights may be applied to locations where shadowing of the street is to be limited.

Minimum Building Heights:

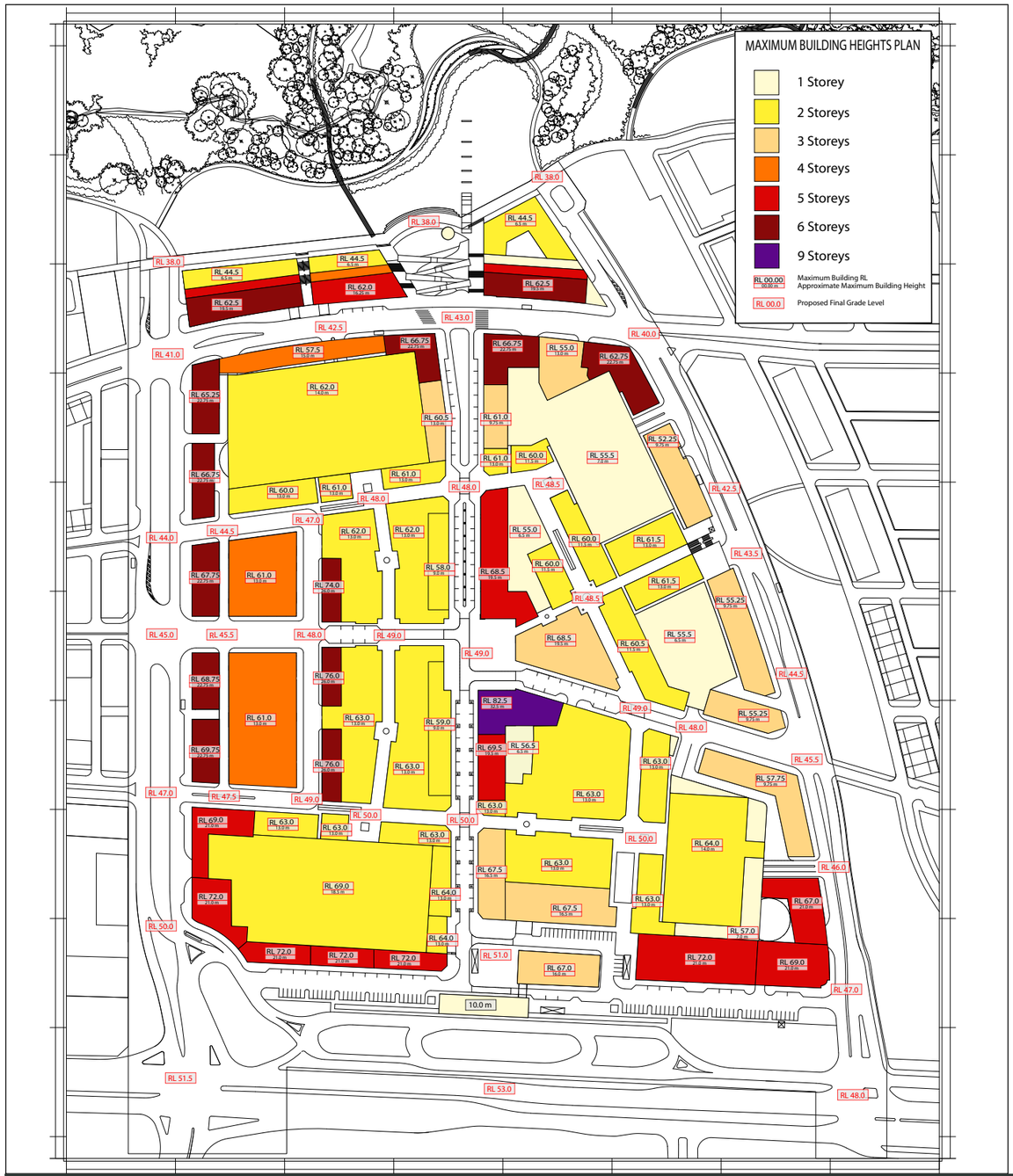
- In certain instances Minimum Storeys have been established to ensure that site-specific urban design objectives are met, such as ensuring a minimum streetwall environment, particularly ensuring that Main Street built form objectives are met.
- At eventual build-out of the Town Centre, all buildings facing Streets and Pedestrian Right-of-Ways must be a minimum of 2 Storey scale to ensure a strongly defined public environment.

Floor to Floor Heights:

- A range of acceptable Floor to Floor Heights have been provided for each use within the Town Centre.
- Floor to Floor Heights provide flexibility of use over time.
- The range of heights are intended to promote quality of internal space and proportion to facades.
- Ground level spaces throughout the Town Centre are generally intended to provide higher volumes suited to retailing and flexible change of use over time.

Building Depth & Length:

- Building Depths have been considered in terms of the range of expected uses in a building including natural light and ventilation.
- Maximum Building Lengths have been introduced to ensure the appearance of a series of smaller buildings within the Town Centre.
- The Town Centre incorporates narrow Sleeve Buildings which wrap larger format retail, and which need to accommodate a mix of uses such as retail, commercial, and residential. (See Guideline B01.)



Building Heights Plan

Principles

Land Uses:

Land use have been established to create an active and vibrant ground plane, pedestrian movement and a mix of uses arranged both vertically and horizontally.

Land uses are consistant with the DCP and Masterplan DA and generally consist of a predominance of retail and residential at grade, with residential, retail, commercial and community on level 1 and a predominance of residential and commercial on level 2 and above.

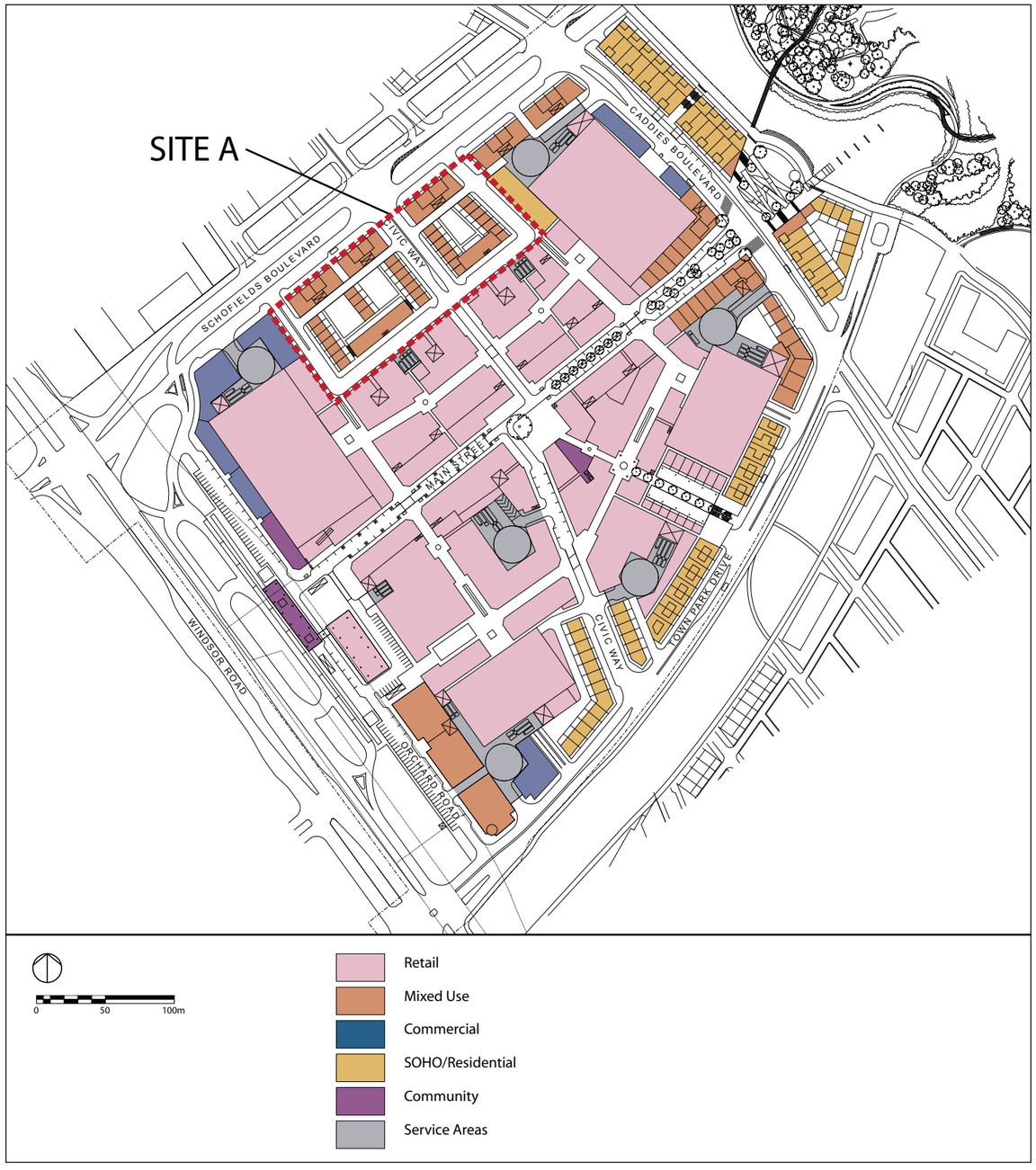
Mixed Use Sites & Buildings:

- Certain sites defined as Mixed-Use do not have predetermined land uses, but are permitted to accommodate a variety of uses. These sites can be for Residential, and/or Retail and/or Commercial uses. This opportunity for flexibility provides additional diversity and activity within the Town Centre.

Sleeve Buildings:

- Throughout the Town Centre, Sleeve Buildings are used to wrap large format uses and service areas in order to mitigate the visual presence of such uses to streets.
- Sleeve Buildings may consist of a mix of fine-grain retail, commercial, community and residential uses.
- Sleeve Buildings should be scaled to hide the rear or blank faces of retail or service areas when viewed from the footpath on the opposite side of adjacent streets.

A diversity of uses at various building levels will help ensure a diversity of activity and character in the Town Centre



Building Use Key Plan - Ground Floor

Principles

Retail / Commercial Entries:

- Building entries should provide increased activity and interest in the Town Centre.
- Maximise the frequency of entries.
- Visually express building entries.

Community Entries:

- Entries to community buildings are to be celebrated in the Town Centre and should convey a sense of stature and civic importance.

Residential Entries:

- Entries to residential lobbies within the core area need to be defined and identifiable as distinct elements along the Street.
- Terrace and SOHO dwelling shall each have a defined front door and address to the Street.
- Entries to at-grade residential units in the Town Centre should provide a vertical separation from the footpath and be integrated with other transition elements such as a raised courtyard. (See Guidelines B05 & B15.)

Retail and commercial entries in the Town Centre should support the fine grain of transparent shopfronts, providing multiple doorways along the street.

Retail at grade is to be activated and transparent to the street such that indoor activities are integrated with footpath activity.

Building Entries Plan

Principles Continued

Character Areas:

Main Street:

- Main Street is conceived as the central activity spine of the town which connects the Transit Centre and Urban Market Square at Windsor Road to the softer landscaped setting of Caddies Creek.

Town Square:

- Town Square is the central heart and principal civic gathering space in the Town Centre.

Civic Way:

- Civic Way is a civic oriented treed street leading from the Town Centre Frame in the north, and the Mungerie House community amenity in the south, to the Town Square.

Courts and Quadrant Loops:

- The Courts and Quadrant Loops are an integrated network of shopping 'streets' and nodes that are pedestrian only.

Market Square:

- Market Square is a significant and highly activated plaza space integrated with Market Hall, Transit Centre and the Town Cinemas.

Transit Centre and Corridor:

- The Transit Centre is a multi-modal transit terminal at the top of Main Street and is integrated into an orchard like landscape setting reminiscent of the rural character of the region, which is the Transit Corridor.

Residential Edges:

- They are intended to provide a sense of activity and human presence in sleeving the inactive parts of the centre increasing the appearance of an active living place throughout the day and evening.

Waterfront Esplanade Residential:

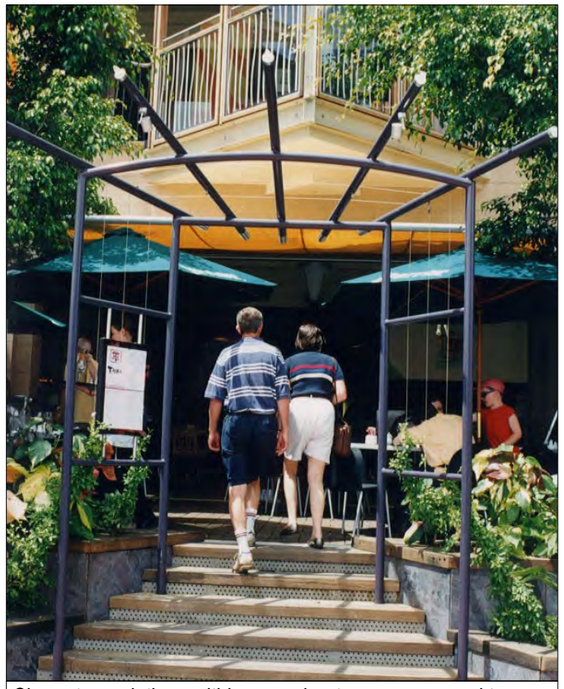
- The Waterfront Residential responds to its water and natural landscape setting and provides a more relaxed, informal, slower-paced and pedestrian dominant environment.

Leisure Square:

- Leisure Square is a more relaxed 'green' gathering place as a transition between the urban Main Street and natural Caddies Creek environments.

Food Terrace Way:

- Special public gathering places with visual and physical connections to Tributary 3, that provides edge food court type seating serviced by food offers either side of the link.



Character variations within a quadrant are encouraged to achieve greater diversity of character and building grain.

The Waterfront precinct should provide a relaxed, informal and slower-paced atmosphere offered by the pond and natural landscape vista of Caddies Creek.

Residential street frontage around the perimeter of the Town Centre shall have formal hard-edged facades.

The Town Centre core area, which is the principal shopping area, should have a vibrant urban retail atmosphere that is reinforced by special character buildings and structures.

Guidelines

Main Street at Block 1 (Market Square):

Main Street at Market Square is the most westerly section of the street and is adjacent to the transit centre and the cinema.

Activities:

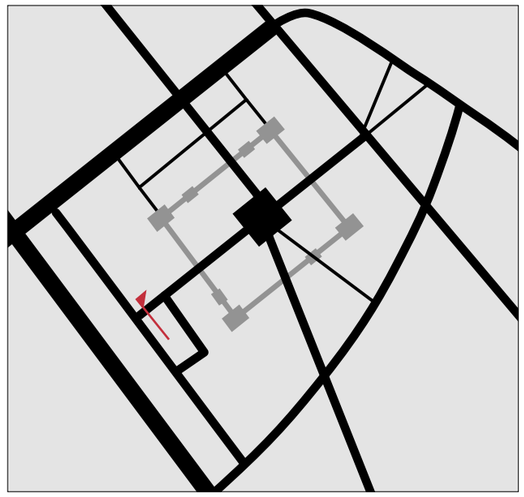
- Activity in Block 1 is generated by the Transit Centre, Market Hall, Cinemas and edge cafes and other retail.
- Market Square plaza space, will be a major pedestrian zone with people exiting and moving between the adjoining facilities.
- Drop-off and pick-up in front of the Cinemas, otherwise no parking in this block.

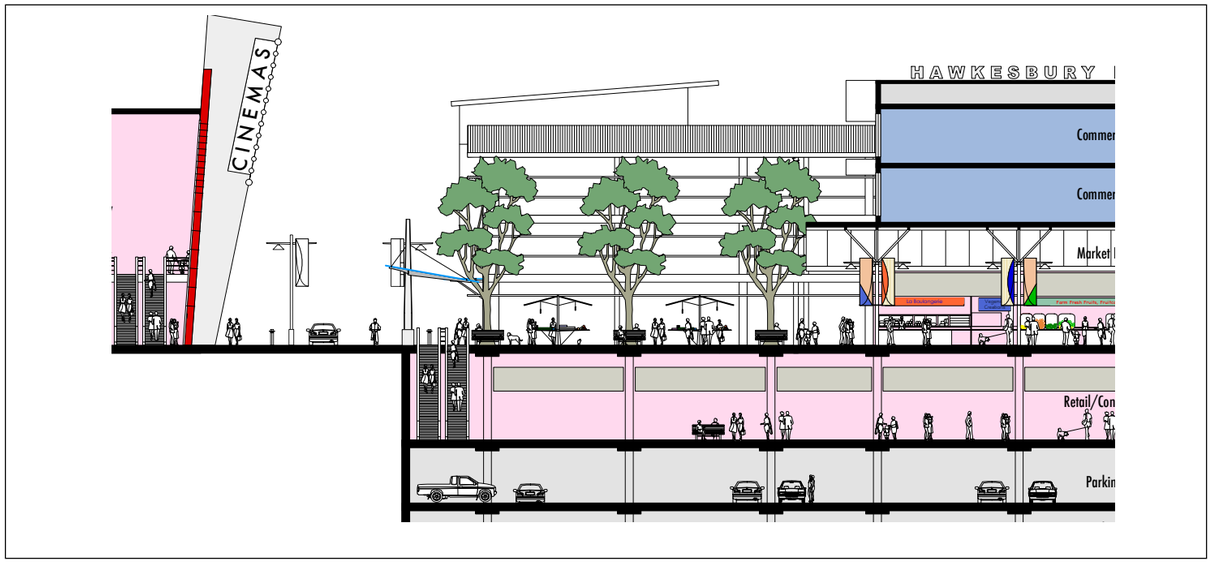
Public Realm:

- This portion of Main Street expands spatially into the Market Square where the street is part of larger gathering place where pedestrians dominate and cars are secondary.
- Street shall have standard vertical edge kerb and gutter. Bollards shall be used to further define the pedestrian zones adjacent to the cinema as well as used to demarcate the traffic zone at Orchard Road and Orchard Lane crossings.
- Shall have one vehicular travel lane in each direction with an approximate speed of 25 km/hr.
- Footpath at cinema lobby is a more generous pedestrian zone.
- Footpath and plazas areas shall also have paving differentiated from carriageway material.
- Trees are generally limited to the adjacent Market Plaza area.

Architecture:

- The Cinema lobby is to emphasise openness to the street with high visual transparency, a pronounced weather protection Awning, and marked by an iconic element.
- The Transit Center is visually open to the street with minimal facade, in essence an outdoor space covered with a light floating roof.
- Market Hall is to be an iconic Civic Structure with its primary entry oriented to Main Street.





Market events shall be a significant feature of Market Square.

Cinema lobby shall create a strong visual landmark.

The transit centre building is visually open to the street with minimal facade..

The pedestrian area on Main Street is to incorporate continuous weather protection, and numerous individual shopfronts. Where needed, lobby entries to residential above retail are to be incorporated along the street.

Principles

Orchard Road Character:

- Orchard Road is intended as a symbolic Town Centre edge defining street with entries to buildings oriented to it.
- With its emphasis on Civic Uses along the majority of its length it must have a high level of convenience and accessibility for short term facility users.
- Along its west edge it faces the Transit Corridor intended to visually provide a generous broad orchard like landscape character.
- At its mid point the central Transit Station becomes a focal point of more intense urban activity.
- Its built form is to provide a substantial physical edge to the Town Centre with a sense of facing and orientation towards Windsor Road.

Guidelines

Orchard Road:

Activities:

- The Transit Centre and adjacent Cinema Entry are expected to attract a high level of activity along this street from early to late.
- On street parking is to be provided and maximised so as to encourage convenient and kiss and ride access to the station.
- The ability to host weekend markets on Market Square will define one edge of the street at the centre point.
- Lobbies to a number of commercial buildings and health facility are to be oriented to face this street and encourage convenient access to transit.

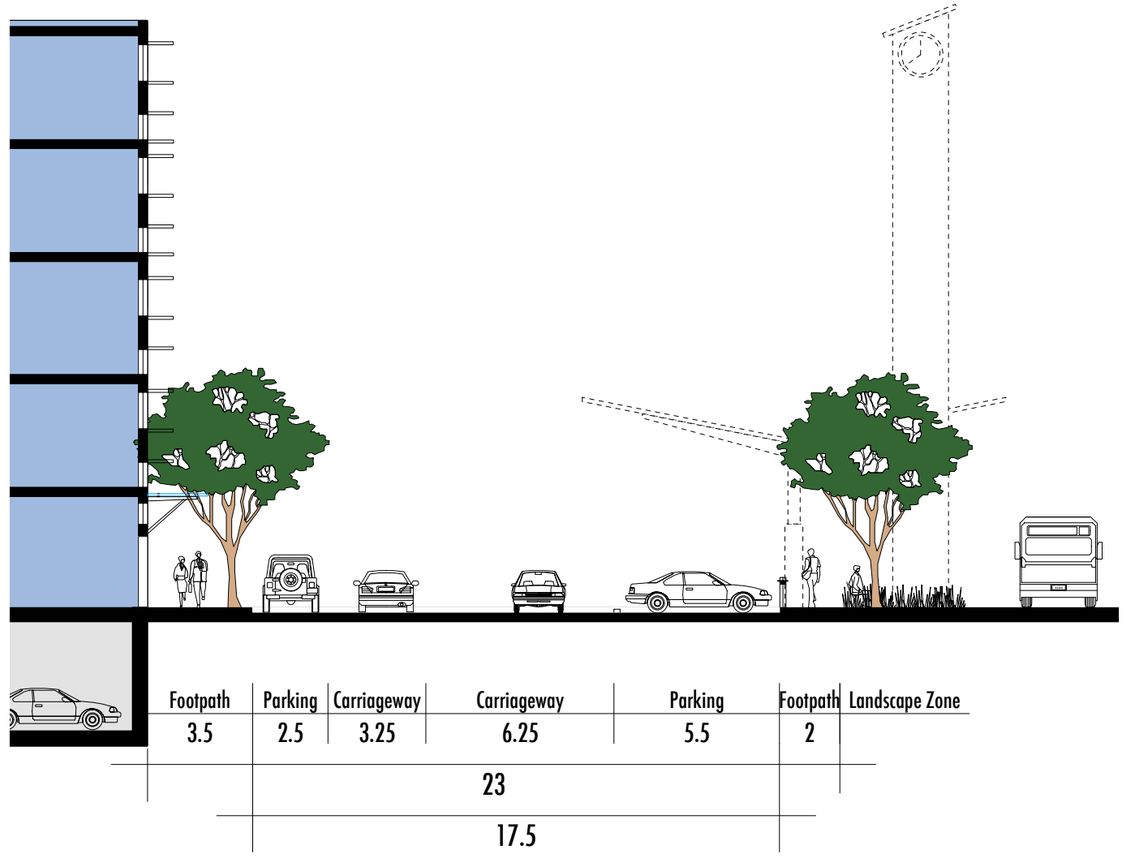
Public Realm:

- The north and south portions are to be lined with avenue trees.
- In the central portion no tree planting is required due to the level of intensity of pedestrian activity.
- Pedestrian crossings of the roadway are to be pronounced with use of bollards and extensions of the Market Square paving across the roadway into the Transit Centre waiting area.
- Cycle parking stations shall be provided at the Transit Centre.

Architecture:

- Buildings facing Orchard Road shall form a strong built edge to the street.
- As a reflection of its westerly orientation, a expression of solar protection devices along the building frontage.
- The Transit Building and its protected waiting areas are to have a high level of visual transparency and sulptural quality in its form in response to its high visability as a focal building along Windsor Road.

▲This requirement varies from DCP 33 and once endorsed shall take precedent over the DCP.



▲

Orchard Road - Detail Section

Principles

Market Square Character:

- Market Square is intended as an active plaza space that is integrated with the Market Hall and Transit Centre.
- Market Hall should extend functionally into the Market Square, which will accommodate flexible market activity, with demountable structures, attracting people in addition to those using transit, thereby increasing the safety and security of the spaces.
- The plaza space is intended to provide a gathering space for transit users, and is further activated into the evenings by adjacent entertainment related uses.
- The plaza is to be a 'green' environment providing shade and seating areas in the gathering space and extending the image of the Windsor Road green corridor into the centre.

As the hub at the end of Main Street, the Market Square, is intended to be a very active and vibrant area as a forecourt to the Market Hall and Transit Centre.

The Market Plaza should be expressed as a flexible urban plaza that can vary in use and function on a day by day basis.

The Market Square and Hall should provide a venue for spontaneous gathering in the plaza space such as weekend markets.

Market Square Character Area Plan

Guidelines

Activities:

- The Market Square should be expressed as a flexible urban plaza that can vary in use and function on a day by day basis.

Public Realm:

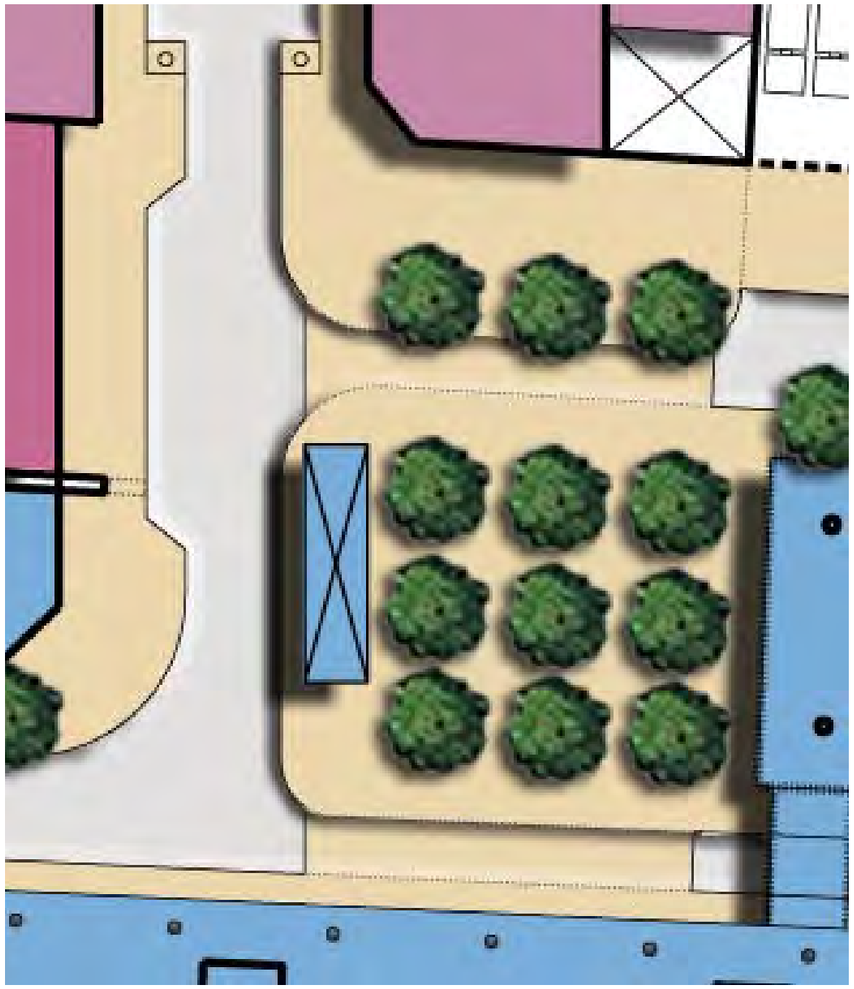
- The plaza should be configured as an open, hard surface area that can accommodate a diversity of temporary structures and activities and permanent seating.
- The plaza is to be planted with a "Basque" of trees placed in a regular grid pattern with provision made in the spaces between for demountable structures in the surface of the plaza. These trees provide an inviting and shaded place to relax on benches.
- Providing for flexible public use, such as the market pavilions, which will attract people in addition to those using transit, thereby increasing the safety and security of the facilities.
- The dimension of the Market Square extending between surrounding building faces shall be approximately 45m x 45m.
- Orchard Street and Lane shall be raised to tie into Market Square level and have the same materials to emphasize pedestrian priority.

Architecture:

- Provide for a cafe location on the east facade of the square with awning cover for sun and weather and an area for seating extending into the square.
- The three major 'civic' uses being the Cinema, Transit Centre and Market Hall shall have a landmark element or sign.
- The Market Hall should be expressed at grade as an open building with significant interior volume suited to a flexible market use.
- The Market Hall design needs to accommodate uses that can vary on a day by day basis.
- The Market Hall needs to open onto the Market Square as a principal entry but generally be openable along the majority of its facade on all 4 sides.
- Facades surrounding Market Square shall form a strong defined edge.

The Market Square should provide for semi-permanent or temporary market pavilions, which will generate retail and local market activity in the space. The plaza can function as an anchor in the Town Centre at the end of Main Street.

Provide for a cafe location on the east facade of the square with awning cover for sun and weather and an area for seating extending into the square.



Market Square Concept Plan

Principles

Transit Centre Character:

- The Transit Centre is positioned to create a significant transit related circulation place. Transit uses may be supported with community, service retail, and community spaces, such as a post office and news agent.
- As the hub on the west end of Main Street, this Centre is intended to be a very active and vibrant area.
- This is a major pedestrian movement space with the Transit Centre building providing access/waiting areas for the bus, rail, and taxi users and as a pedestrian entry portal into the town.
- The Transit Centre should have the look and feel of a public building that opens to the plaza area, so that the space flows into and through the building.
- The Transit Centre building will spatially define the west edge of the plaza.
- The Transit Centre is also intended to serve as a focal point and an architectural statement for the RHRC
- The Transit Centre building and surrounds are to ensure high visibility across the space.

Transit Corridor Character:

- The Transit Corridor forms the western edge of the Town Centre adjacent to Windsor Road and functions as a transit corridor with multiple transportation modes linking at this hub. As a Public Realm, this corridor is the 'front door' to the centre and is intended to establish an orchard like landscape character that is reminiscent of the rural heritage of the region.

The Transit Centre shall have a strong architectural character and serve as a strong feature in the Town Centre.

Transit Centre & Corridor Character Area Plan

Guidelines

Activities:

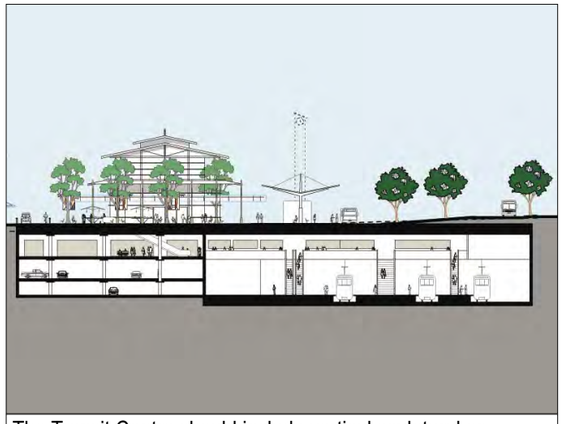
- An efficient and accessible place to catch public transport.
- The character of the Corridor is to establish a landscape presence and identity for RHRC.

Public Realm:

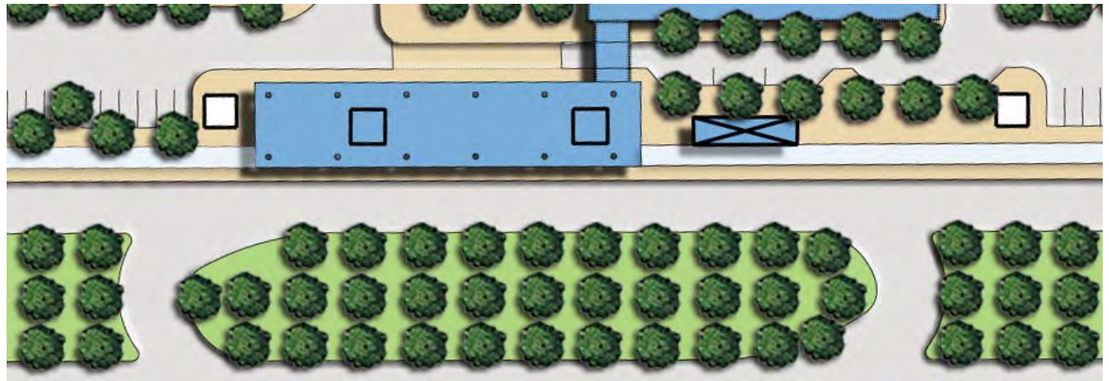
- The Transit Centre opens to the plaza area, so that the space flows into and through the building into the Market Square. The facade fronting the plaza should be open and contribute to animating the plaza space.
- Taxi stand and kiss 'n' ride provisions shall be provided on Orchard Road.
- The Transit Corridor will primarily accommodate at-grade bus movements, which is to be set within an orchard like planting of trees extending from Town Park Drive to Schofields Boulevard and from Windsor Road to Orchard Street.
- The Corridor will also accommodate an alignment for commuter off-road bikes leading to the Transit Centre.

Architecture:

- The Transit Centre may be physically connected to the Market Building, at the north edge, with a light weather protection roof crossing Orchard Street.
- The form of the Transit structure shall be a sculptural "floating" roof with a minimal structure and be a plan dimension of approximately 10m x 50m and generally sized to frame the west edge of Market Square. As weather protection, this roof is to provide a transit waiting area with seating for at least 25-30 people.
- This main Transit structure is also to incorporate an enclosed transit driver facilities.
- The Transit Centre shall include a vertical sculptural clock tower element that contributes to the regional identity of the Town Centre. Visible from approaches on Windsor Road and from all parts of Main Street, it should be no less than 20m in height.
- To the north and south edges of the Transit Centre a long, continuous weather protection canopy shall be provided.
- These linear elements serve as protected queuing areas for bus patrons and can be of either glass or metal construction.
- The Transit Centre building and surrounding landscape are to provide clear sightlines across the space for safety, with the bottom of the tree canopy maintained above eye level. This is further reinforced by the planting of trees in an orchard like fashion above eye level.



The Transit Centre should include vertical sculptural or architecture features that contribute to the identity of the Town Centre and are visible from approaches on Windsor Road.



Transit Centre Concept Plan

Principles

Gathering Spaces:

- Provide a hierarchy of gathering spaces ranging from large squares to more intimate courts.
- Promote a sense of community in Town Centre public spaces by ensuring a range of activities and uses throughout the day and year.
- Promote place identity by employing a cohesive family of site features and materials. The identity of the Town Centre can be defined as a contemporary juxtaposition of natural and industrial styles.
- Provide a fine-grain visual richness for gathering spaces in the Town Centre through the imaginative and deliberate use of texture, colour, form and landscape.
- Provide a pleasant and comfortable environment that protects users, where appropriate, from inclement weather and offers enjoyable microclimates. Use appropriate modes of climate amelioration such as weather protection, plant material, paving materials, and water features.
- Support the retail and commercial functions of the Town Centre. Public spaces should complement adjoining retail, residential, community and commercial uses. The transition from private to public space should be seamless and pleasant.

Typology of Gathering Spaces:

- Squares
- Courts
- Secondary Courts

At-grade public spaces should enhance the retail functions of the Town Centre by creating defined flexible places where retail uses can overlap into public open space edges.

Promote a sense of community in Town Centre public spaces by ensuring a range of activities and uses throughout the day and year.

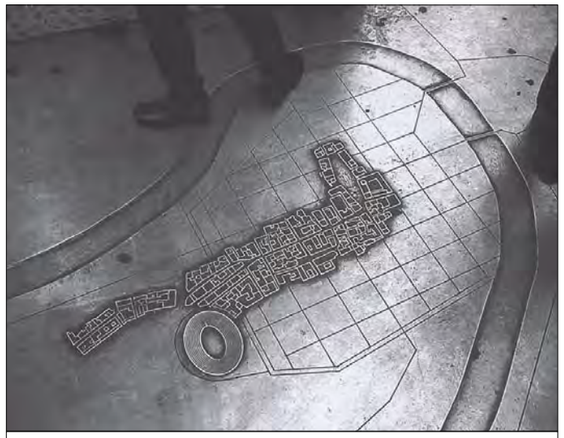
Gathering Spaces Location Plan

Guidelines

Surfaces and Materials:

- In situ paving materials (i.e, materials such as asphalt and concrete) may be appropriate for the majority of the carriageways and secondary footpaths in the Town Centre. Finer grain and texture paving materials and colours, such as borders and edging, may be utilized in limited areas of the public realm to visually enhance spaces where large areas of in situ materials are used.
- Higher quality paving (i.e., interlocking concrete pavers, brick and stone, concrete and/or asphalt with banding.) may be appropriate in highly public, special spaces such as squares, courts, pedestrian right of ways, and primary footpaths.
- The character of materials for walls and/or site features can represent a fusion of contemporary and natural materials, with industrial and urban detailing. Appropriate materials can include timber, concrete, stainless steel, aluminium, glass and concrete.
- Recycled and reclaimed materials such as recycled hardwoods and reclaimed stone or metal may be incorporated into the materials palette.
- Colour selections should compliment the character of Rouse Hill. Some examples for colours could include green tones inspired by the native landscape palette, earth tones such as beiges, warm browns, and yellow and red ochres, greys and soft blacks.
- Materials that do not need additional finishing after construction should be selected where feasible.

Example of asphalt with feature details to deliver a higher quality paving selection.



Specialised paving applications, such as maps or graphics imprinted into concrete, may be appropriate for special places such as the Town Square and Civic Way.

The character of materials for walls can represent a fusion of urban contemporary, industrial and natural materials and add visual interest.

Unit pavers are appropriate for highly public, special spaces such as squares, mews, and gateways.

The character of materials can represent a fusion of contemporary and natural materials, with industrial and urban detailing.

Principles

Landscaping General:

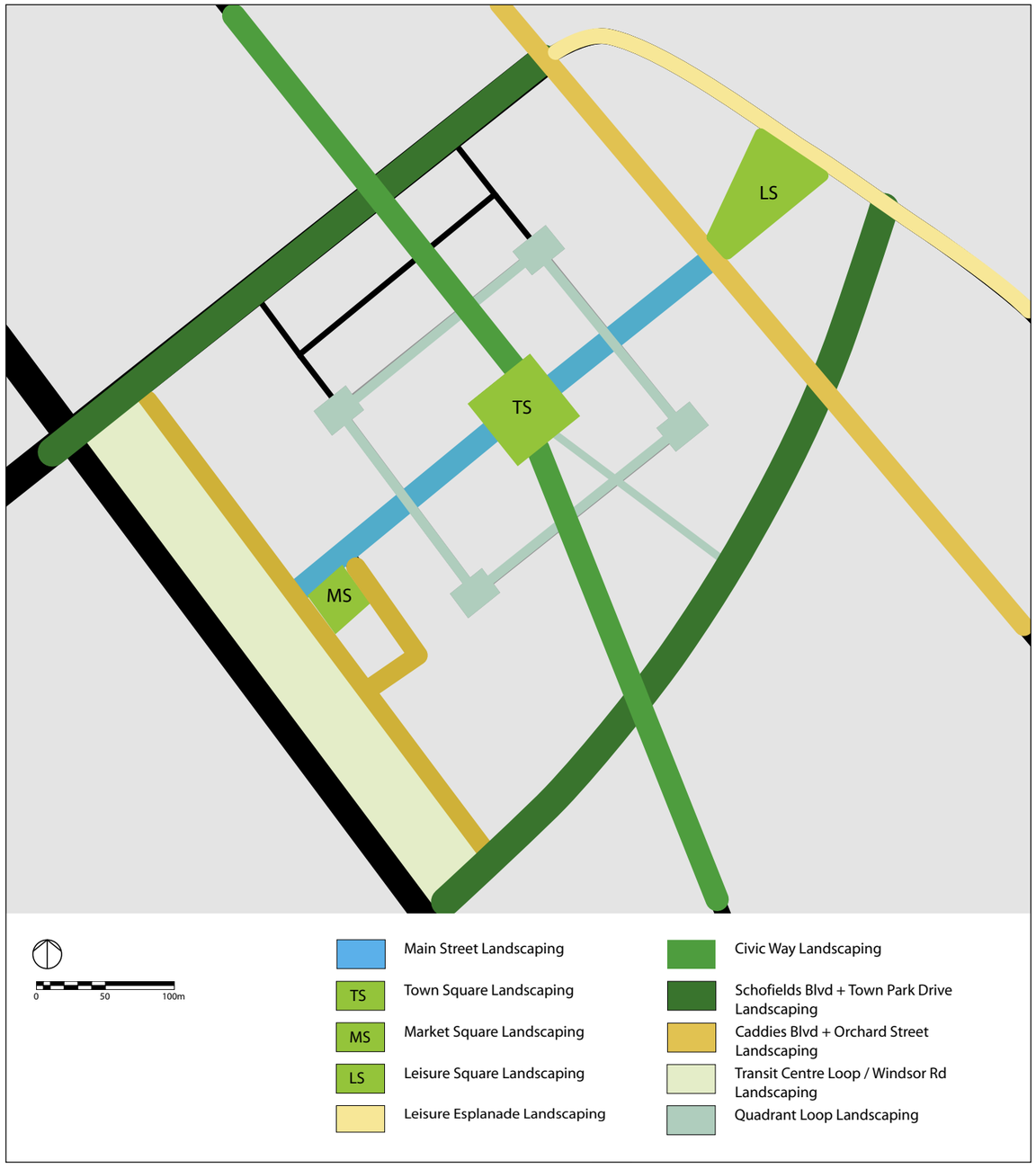
- Use landscaping to provide shade and help ameliorate unpleasant climatic conditions.
- Size of plant should be used to enhance the pedestrian scale of public spaces.
- Planting design should increase the visual interest in the public realm by providing texture, colour and shadow patterning.
- Use tree planting to help unify the public realm and provide definition to edges.
- Specify plant material that is robust, native where possible, and suitable to an urban environment.

Typology:

- Main Street Landscaping
- Town Square Landscaping
- Market Square Landscaping
- Leisure Square Landscaping
- Leisure Esplanade Landscaping
- Civic Way Landscaping
- Scofields Blvd and Town Park Drive Landscaping
- Caddies Blvd and Orchard Street / Lane Landscaping
- Transit Centre and Windsor Road Frontage Landscaping
- Quadrant Loop Landscaping

Native tree species should be the predominant plant material in the Town Centre Precinct.

Ornamental exotics may be appropriate for highlighting key areas in the Town Centre.



Landscaping Key Plan

Guidelines

General:

- At least 80% of plant species in public areas of the Town Centre will be indigenous. This requirement excludes the landscape plantings associated with European Heritage such as Orchards along Windsor Road.

Main Street:

- Median Planting at blocks 3 and 4 to provide transition from urban character of East Main Street to natural character of Caddies Creek Precinct.
- Native species recommended.
- Low, native shrubs and grasses recommended for understory. Vehicular and pedestrians should have unimpeded visibility through planting areas.
- Potential planter boxes in blocks 1 and 2.
- Quadrant loop crossing point planting zones.

Town Square:

- Focal square in the Town Centre shall have a distinctive and iconic specimen tree.
- Tree to provide shade to seating area.
- Deciduous or evergreen may be appropriate.
- Open branching structure recommended; multi-trunk may be appropriate.

Market Square:

- Shall have trees that allow for flexible uses such as weekend markets and overflow seating from the Transit Centre.
- Comfort shall be a priority in Market Square. Deciduous trees would provide shade in summer and allow for light and warmth in the winter.
- Trees shall be sized to provide clearance for pedestrian movement and carts/stalls set-up beneath.
- Tree colour and texture shall be used to help define the unique character and identity of this square.

Leisure Square:

- Shall have plant material that emphasises the 'natural' transition from Main Street to Caddies Creek Precinct.
- Low, native shrubs and grasses recommended for understory to increase sense of pedestrian security.

Leisure Esplanade:

- Trees shall be pedestrian-scaled and reinforce a park-like waterfront character.
- Tree clearance shall allow for unobstructed movement and views of pedestrians and cyclists.

Civic Way:

- Street trees shall be pedestrian-scaled and reinforce the urban and historic character of the street.
- Trees shall be visually distinctive via the use of colour, texture or form.
- Deciduous trees are recommended to achieve shade in summer and light/warmth in winter.
- Tree clearance shall allow for unobstructed movement and views of pedestrians, cyclists and vehicles.

Schofields Blvd & Town Park Drive:

- North and South perimeter streets shall maximise environmental benefits (e.g., habitat and drought tolerance) by emphasising native tree, shrub and grass plant material. This is especially important in the Bio-Swale in the median of Schofields Blvd and the area fronting Tributary 3 on the south side of Town Park Drive.
- Vehicles and pedestrians should have unimpeded visibility through planting areas, and tree clearance shall allow for unobstructed movement and views of pedestrians, cyclists and vehicles.
- Tree planting adjacent to pedestrian and cycleways shall emphasise broad canopies that provide scale and shade.
- Shrubs and hedges may help define the pedestrian and cycleways from the carriageway, and provide a 'green' buffer from vehicles.

Caddies Blvd & Orchard Street:

- Urban streets shall emphasise pedestrian scale.
- Tree clearance shall allow for unobstructed movement and views of pedestrians, cyclists and vehicles.

Transit Centre Loop & Windsor Road:

- Area shall emphasise 'orchard character' with formal grid planting of broad leafed, domed deciduous or evergreen trees.
- Select use of low, native shrubs and grasses recommended for understory for ease of maintenance and sense of security.
- Tree clearance shall allow for unobstructed movement and views of transit drivers, pedestrians, cyclists and vehicles.

Quadrant Loop (Courts, Arcades & Food Terrace Way):

- Trees that mark the entry point from Main Street into the Quadrant Loop shall be medium size and have a strong visual identity to mark the sense of entry into the pedestrian realm.
- Typically pedestrian right of way trees shall be small sized and shall provide focal features, thereby encouraging pedestrians to move through the spaces.
- Variations in colour, texture and form should all be used.
- Container planting may also be appropriate in these areas.

Street trees should be the correct size and scale to the adjacent architecture and/or open space.

Deciduous trees can help provide sun access in winter and provide a sculptural element that helps provide the public realm with a sense of place.

Principles

Evening Activity:

- Some areas within the Town Centre are intended to be active and vibrant into the evening hours, others are intended to be quieter but frequented by pedestrians, and yet others may be closed due to their principal retailing function.
- Portions of the Public Realm need to be identified that can support activity during evening, post retailing hours.
- Not all pedestrian areas can be activated at all hours of the evening and night, particularly in areas where the predominant Shopfront activity is retail and the Public Realm is limited to pedestrians.
- Adopt Key Safety by Design Principles in developing the design for this zones.

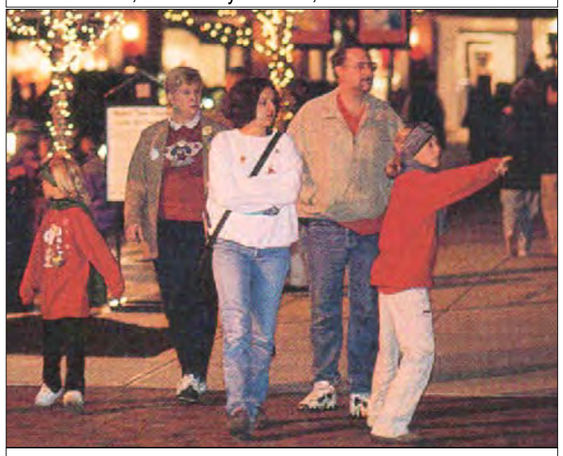
Primary Routes:

- Primary activity routes are to be activated with uses such as cafes, restaurants, library, community centre, learning, cinemas, and transit; all activities that extend beyond normal trading hours and that generate significant foot traffic.

Secondary Routes:

- Secondary activity routes are those routes residents within the Town Centre are expected to walk when going to the water edge and adjacent parks and neighbourhoods, for strolling and exercise, for transit access, for learning, for dining and entertainment, and for retail activity and window shopping. These areas are less frequented but safe pedestrian areas generally with surveillance from other uses or convenient connection to transit.

Primary evening activity routes are focused around dining and entertainment, community facilities, and connections to transit.



Secondary evening activity routes are focused around uses and amenities frequented by local residents.

Evening Activity Zones

Guidelines

Evening Activity:

- Establish within the Town Centre a safe and connected network of Public Realm routes that support varying levels of activity during evening, post retailing hours.

Primary Routes:

- Primary activity routes are focused on areas activated by cafes, restaurants, library, community centre, cinemas, and transit, all of which are to be operated and open beyond normal retail trading hours.
- The primary activity routes is to be focused in area within the Town Centre to the western half of Main Street to minimize those areas impacted by late evening noise, particularly residential units above.
- The primary routes is to be compact and intensely activated in order to achieve a critical mass of amenities which support one another.

Secondary Routes:

- Secondary activity routes are to be more diverse throughout the Town Centre and in general extend beyond the primary activity routes.
- Secondary routes are to encompass uses and amenities including Leisure Square and Esplanade, access to Caddies Creek and Town Park areas, as well as and those routes residents within the Town Centre will walk to access these amenities.
- Secondary routes are also to connect to the primary routes.
- Particularly in the initial stages of the Town Centre development, some of these areas may be required to be secured outside of pedestrian times.

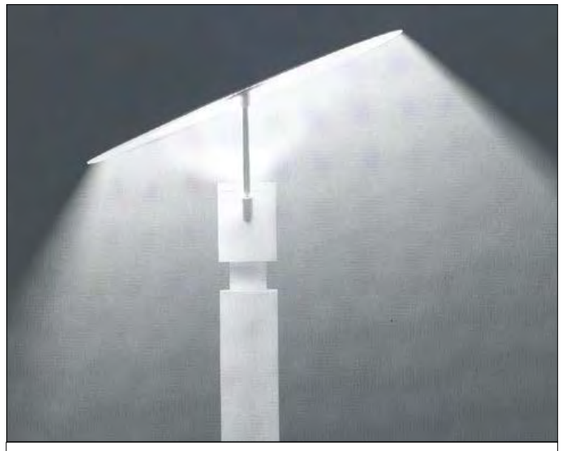
Principles

Illumination of the public realm will affect the experience and character of town centre spaces. Lighting within the public realm together with borrowed light from buildings will create an identity and ambience which reinforces the intended character and hierarchy of these spaces at night.

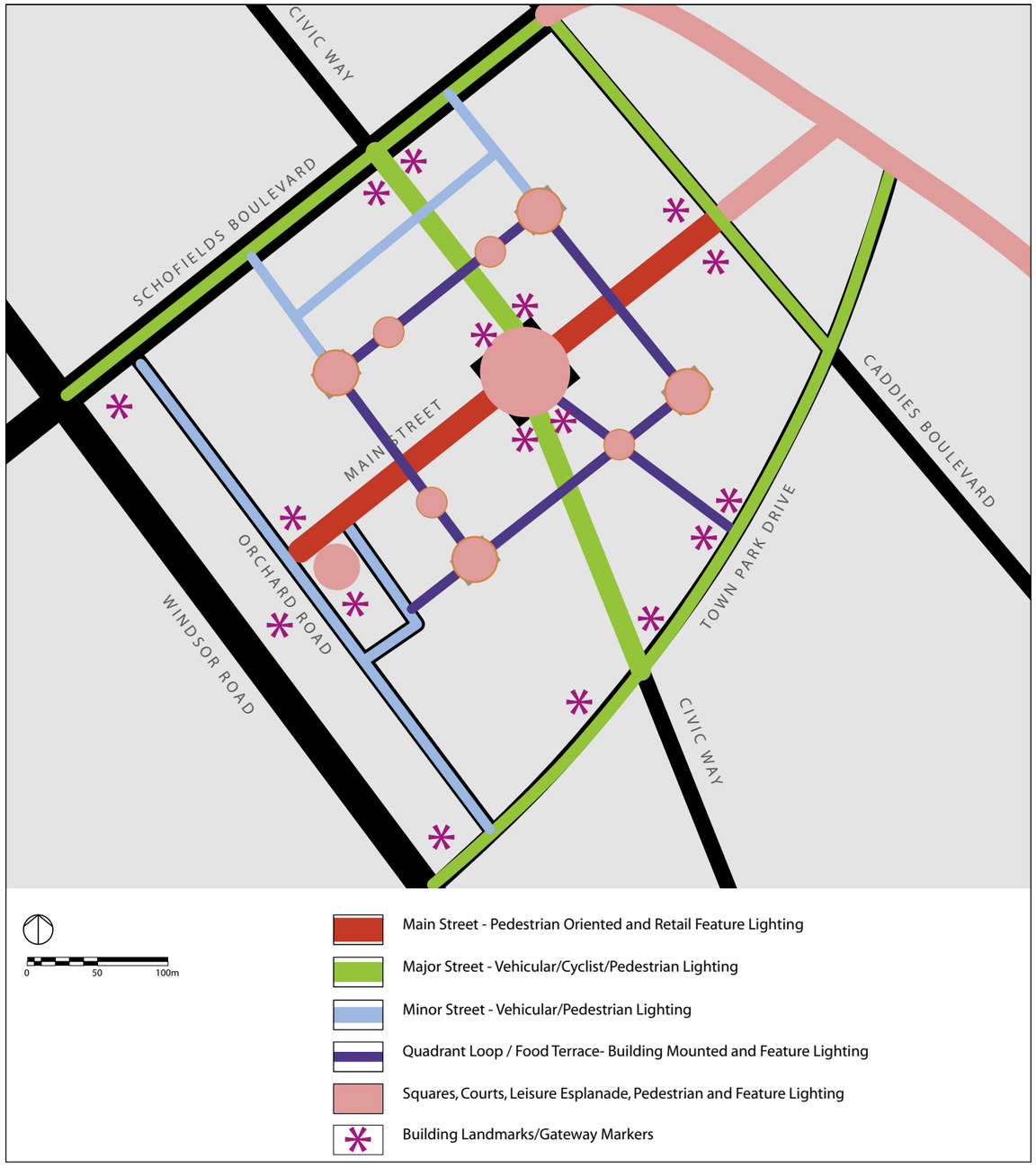
Lighting:

- Should clarify and highlight linkages within the Town Centre.
- Should aid in wayfinding and orientation.
- Should promote the perceived and actual safety and security of spaces.
- Should emphasise the hierarchy, function, and use of spaces in the public realm.
- Should respond to crime prevention, public safety and maintenance issues.
- Should illuminate key features and focal points in the public realm to help enliven spaces and provide a sense of drama that in turn can help activate the public realm at night.
- Must minimise the amount of light pollution or obtrusive spillover into surrounding natural habitats and residential areas.
- Should utilize building facades as a surface on which to mount lighting fixtures for the public realm as well as enhancing building image.
- Should provide highlighting for facade detailing and provide focus and attention on entryways along a street.
- Should provide a family of fixtures compatible and consistant in colour and character on all streets in the Town Centre.
- All pedestrian right-of-ways shall be lit.
- Should establish a hierarchy of functional luminaires for specific uses to comply with mandatory code requirements and standards.

Provide appropriate lighting levels for pedestrian and vehicular movement. Lighting should aid in wayfinding and orientation in the Town Centre.



Specify light standards and fixtures that emit the appropriate light levels for public spaces and minimise light spillovers to residential units located above shops and along major streets.



Lighting Typologies Plan

Principles

Public Transit:

- Encourage and promote transit use by providing safe, comfortable and convenient public transport, at the Town Centre.
- The Town Centre and the transit centre shall be co-located to promote transit use within and beyond the region as well as to promote Rouse Hill as a destination.
- The Town Centre shall be serviced at various key points with convenient and pleasant bus stops at key points around the perimeter of the Town Centre.
- Provide a Transit Centre that combines T-Way buses and local bus network.

Typology:

- A (future) heavy-rail station at the foot of Main Street on Windsor Road will provide convenient access to the greater region and be integrated with Bus Interchange.
- Local buses shall provide transport within the community to adjacent communities and amenities, and to the Bus Interchange / Transit Centre.

A regional bus system shall provide regional transport to local and surrounding communities.

Bus Routes & Stops Concept Plan

Guidelines

Bus Stop Components:

- Bus stops should be clearly marked with legible signage.
- The size of bus shelters should be carefully considered relative to street widths and pedestrian footpaths.
- Bus stop shelters shall provide temporary shelter from the elements, when appropriate. Roof coverings and side and back panels shall provide some refuge from inclement weather.
- Bus stop shelters should be visually attractive and blend into the overall aesthetic of the streetscape. The materials and colours should be consistent with the overall scheme of streetscape site elements and approved by relevant authorities.
- Bus stop shelters or site furniture associated with bus stops should be vandal resistant and low maintenance.
- Provide real time transport information at Transit Interchange and Town Square if T-Ways(RTA) provides required supporting Infrastructure/Network.

Bus shelters may have a more sculptural quality to highlight key areas such as Main Street and the Main Square.

Bus stops should be convenient to amenities such as retail, entertainment, community uses, and public open spaces. They should be integrated with the character of all the street elements, including signage, lighting and street furniture.

Bus Stops can offer temporary shelter from the elements with roof coverings and side and back panels.

Contact details

David Sleet
Development Manager

david.sleet@gpt.com.au

+ 61 2 8239 3741

+ 61 401 992 967