



Traffic & Transport and Noise & Vibration Assessment

Scope of Work

A significant amount of technical analysis has been prepared in recent years to investigate the development potential and constraints of the proposed Ingleside Release Area. The Precinct Working Group (PWG) is currently undertaking a gap analysis to confirm those elements of the previous work that are still valid and those areas where further investigation is required. Whilst not currently complete, it is envisaged that the gap analysis report will be available for review once the successful contractor is engaged to undertake this project.

Given the uncertainty of the gap analysis, the Department requires the successful contractor to undertake an initial scoping stage where the final detailed scope of works will be discussed and agreed with the PWG. The gap analysis will be undertaken with reference to the Detailed Scope of Works outlined at Stage 2 below.

Stage 1 – Initial Scoping Stage

The initial scoping stage will require the successful contractor to:

- meet with the PWG to discuss the gap analysis and understanding of the brief as part of the project inception meeting;
- review the completed gap analysis report and provide comment, as required;
- undertake a desktop review of relevant background material;
- discuss and agree with the PWG variations to the detailed scope of works (Stage 2), as necessary;
- prepare a brief report confirming the proposed approach to the Stage 2 works.

Note that the outcomes of this phase of work may result in a variation to the scope of the contract, which will be set on the basis of an upper limiting fee.

Stage 2 – Detailed Scope of Works

The following detailed scope of works will ultimately need to be fulfilled by the successful contractor and should form the basis of quotations.

Transport and Traffic Assessment

In broad terms, the following will be required:

- assess and test the transport impacts of the proposed development of the study area, taking into consideration potential development staging;
- recommend infrastructure upgrades and other measures to address those impacts, with reference to any proposed changes to surrounding transport networks;
- assess the impacts of any works for upgrades of intersections or roads on amenity, safety and liveability of residents and road users;



- prepare an agreed implementation framework and concept-level costings, in negotiation with relevant government transport agencies, DP&I and Council, for the key infrastructure components;
- ensure all modes of transport, including private vehicle, public transport, walking and cycling are considered in the planning and development of the Precinct; and
- assess and recommend options to reduce or limit levels of travel demand and vehicle kilometres travelled.

It is emphasised that the work is of a relatively strategic nature to support the preparation of the Precinct Plan, Section 94 Contributions Plan (or similar) and Infrastructure Delivery Plan. The outcomes of this study are required to provide sufficient detailed advice on the existing and proposed road networks within and adjacent to the Precinct.

Traffic modelling

Undertake network modelling of an integrated road network using Roads and Maritime Services (RMS) adopted input parameters (e.g. population, employment, road network), reflecting the arterial, sub-arterial and collector road networks incorporated in the Indicative Layout Plan (ILP) and the wider locality of the Ingleside Precinct and surrounds. Particular emphasis should be placed on assessing any proposed changes to the road network, providing assessments of the impacts of any such changes. The Contractor shall discuss and agree to the modelling approach with the DP&I, Transport for NSW (TNSW) and Council.

Modelling should determine the intersection controls, identification of road hierarchy and function, and quantities and costing for road infrastructure to be used in infrastructure planning. The contractor shall provide costing spreadsheets and advice. Cost estimates are to be itemised and include all relevant components including utility adjustments and cut / fill, and include design, project management costs and contingencies.

Modelling should also be included for those facilities to be included within the Section 94 Contributions Plan's (or similar) concept design drawings to inform infrastructure costings and land acquisition requirements for representation in both the ILP and Environmental Planning Instrument (EPI) Maps. Detailed cost estimates and up to 3 (costed) options for road construction staging will be required.

To support the preparation of a Section 94 Contributions Plan or similar, modelling will also need to support nexus arguments for the levying of contributions for individual traffic facilities from residential and commercial uses arising from traffic generation. Input from the other contractors may be required to advise on forecast employment and visitation numbers.

Modelling should also consider the ILP and assess traffic routes and flows between key land uses, including town and neighbourhood centres, residential areas, commercial areas.

Traffic modelling should include, but not be limited to:

- connection of the Precinct to external roads, including Mona Vale Road and Powderworks Road;
- options for future staged upgrades to Mona Vale Road (northeast of Powder Works Road), and other existing roads;



- identification of appropriate locations for additional intersections on Mona Vale Road;
- options for augmentation of Powder Works Road, including opportunities and costs of increasing the capacity of Powderworks Road;
- traffic generation from the Precinct and surrounding suburbs;
- modelling horizon years 2021, 2031, 2036 or with full development of the Precinct; and
- priority bus corridors.

Transport proposals

The successful Contractor will be required to undertake the following:

- review intersection arrangements that would be required with existing arterial and sub-arterial roads in the area and along proposed collector roads within the Precinct;
- consult with TNSW and Council in relation to their route network strategies for these roads, and in particular the RMS Mona Vale Road to Macquarie Park Corridor Strategy (2009), RMS' Preferred Option Report for Mona Vale Road upgrade between McCarrs Creek Road, Terrey Hills and Powder Works Road (2013) and the Council engaged Assessment of Powderworks Road Corridor – Preliminary Transport Study (AECOM 2013);
- liaise, through the Project Manager, with Council and TNSW in developing assumptions for the modelling and to ensure proposals identified in the ILP are supported by these agencies;
- assist the PWG in its discussions and negotiations with these agencies;
- liaise with the relevant Contractors (Water Cycle Management, and Bushfire) to assess the need for road upgrades and intersection treatments during times of flooding and bushfire evacuation, and emergency service assistance; and
- make recommendations for the staging of road upgrades and construction to best meet the objectives of this study.

Heavy vehicles

In consultation with the Master Planner, consider the level of heavy vehicle use of proposed major roads within the study area based on land use assumptions, and make recommendations for minimising the impact of heavy vehicles on the amenity of the Precinct.

Public transport

- Review the proposed public transport framework for the Ingleside Precinct, and the Precinct relationship with the wider transport networks, including links to existing centres.
- Review the draft ILP and make recommendations for improving the access of future residents to public transport services.
- Provide advice as to the adequacy of these networks to address the likely public transport demands of future communities.
- Make recommendations for the route and design of strategic public transport corridors through and beyond the precinct, having regard to the potential for these corridors to serve priority bus services.



- Make recommendations for the staging of public transport infrastructure and service provision to best meet the objectives of this study.

Walking and cycling

Identify local and regional pedestrian and bicycle network opportunities associated with the development of the Precinct, including having regard to existing proposals from Council and existing bicycle and road networks within the Precinct area. Cost estimates for inclusion within a local Section 94 Contributions Plan shall also be prepared.

Noise and Vibration Assessment

A broad level investigation is required to:

- undertake a strategic assessment of potential noise and vibration impacts upon existing land uses and future urban development within Precinct;
- investigate and identify any sources of noise on or in the vicinity of the subject land, and on adjacent existing land;
- provide advice on the likely noise and vibration impacts associated with existing uses and the proposed development of the precinct for residential purposes (both during the development phase and post-development);
- develop land use recommendations that provide adequate buffers or transition zones between residential and other land uses, both proposed and existing;
- consider existing and permissible land uses, road expansion requirements, proposed transport routes (including public transport routes), and heavy vehicle traffic levels from existing and proposed development in the region; and
- provide recommendations and management strategies for addressing impacts that reflect best-practice noise abatement whilst delivering superior urban design outcomes.

The following tasks are to be addressed:

- identify noise and vibration generating activities within the Precinct and within close proximity to the precinct, including major roads;
- define and agree on the preferred noise standards with the Project Manager and precinct Working Group (PWG), with reference to the Office of Environment and Heritage's (OEH) standard requirements regarding the assessment of construction and operational noise. For new road traffic noise impacts, the NSW Road Noise Policy and/or Development Near Rail Corridors and Busy Roads – Interim Guideline should apply;
- identify noise sensitive structures in close proximity to higher order roads and noise and vibration generating activities;
- undertake baseline noise monitoring, as follows:
 - obtain information on existing levels of environmental noise at selected locations and times; and
 - assume unattended noise monitoring will be required for at least seven days at various locations and times, or as considered necessary for a strategic project of this nature;
- define the preferred operational noise assessment methodology;
- collaborate with the Master Planner to assess the noise and vibration impacts from anticipated peak traffic flows along roads that are likely to generate traffic



levels that will require noise attenuation, including heavy vehicle levels and buses;

- consider the vibration impacts upon any heritage items within the Precinct, and suggest remedial measures if required;
- consider the impact of noise and vibration on sensitive land uses, having regard to accepted standards;
- recommend building standards and other mitigation measures to be incorporated into the Indicative Layout Plan (ILP) and Development Control Plan (DCP), if required; and
- prepare indicative costs for any mitigation measures to be incorporated into a Section 94 Contributions Plan for the precinct, if necessary.