

30th May 2012

Charles Casuscelli  
Committee Chair  
Committee of inquiry into the utilisation of rail corridors

Dear Charles,

This letter is in response to a series of questions placed by the committee further to the appearance of Andrew McCusker, Director Rail Logistics, SMART Infrastructure Facility, and University of Wollongong before the Committee of Transport and Infrastructure on Monday March 26<sup>th</sup>, 2012.

### **1. Approvals Framework**

Rail Corridor development will be subjected to a raft of planning and development approvals as required for land allocation and infrastructure development. Rail Corridors can be regarded as “Brownfield development” which may generate the need for additional approvals or even legislation where changes to the land grant for the rail corridor are embedded within existing legislation.

Development in or in the near vicinity to railway lines and facilities will require adherence to the Railways Safety Act and be subject to complex state and in the future commonwealth safety regulations.

Maintaining railway services for users will provide significant constraints on construction programming and methods, again this will require multiple approvals with the corresponding cost and program risk.

Railways in NSW have existed for a hundred years or more, the history of land occupation and usage may not be easily recoverable leading to elevated risks. Resolution of environmental aspects associated with rail corridor use in terms of ground conditions or dispensations granted to railways which would not apply to developers is a further key risk consideration.

Developing a standard approval framework and carrying out preliminary evaluation of risk against the preferred development site will identify where developers must evaluate and allow for additional risk.

An approval framework will seek to identify and track approvals as outlined above. For rail corridor development, a generic set of approvals can be identified as a first step in establishing an oversight plan and identify risks.

## **2. Rail Corridor Planning & Implementation**

Society through its appointed government seeks to grow an efficient economy to increase the standards of living for its citizens. To meet this aspiration rail corridor development needs to create vibrant mixed use developments which link residence and place of work more effectively.

Australia is predicted to continue to grow and like other countries the growth in cities will proceed at a faster rate with growth higher in existing areas being greater than that of new areas.

Facilities developed on rail corridors need to be places where people seek to go and to live. To achieve this and to be successful, mixed development which blends into and augments the existing local built environment is essential. Complementation of the precincts being considered with a mix of commercial, residential and service facilities to improve the overall attractiveness of the areas will require different solutions for individual development proposals.

The establishment of development goals which meet the needs of society and the identification of guiding principles for developers and project proponents to achieve should be established for inclusion in project objectives.

For example in meeting a goal to improve transport and to meet the principle of moving people between residence and place of employment more efficiently developers may be obliged to provide better transport interchange and parking within a particular development proposal.

As indicated, growth through development in existing areas can be expected to exceed growth in green field areas. A dedicated government agency that can be a single source of approvals can better administer development programs and achieve policy goals.

### **3. Towards Best Practice**

NSW faces significant problems where transport strategies have been based on the car which has supported the horizontal growth of cities. In turn horizontal expansion has emerged as the preferred land development mechanism.

Horizontal expansion of the city increasingly is facing problems of road congestion and since the 21<sup>st</sup> century rail congestion. The development of rail corridors in tandem with the development of public transport services through rapid bus, faster and more frequent rail services linked to places of residence by light bus and light rail services is crucial to providing effective transport.

To approach best practice rail corridor development must seek to provide connectivity to the people through providing better connection to the last mile or in best practice terms the last 500m.

Developments must provide attractive facilities, which are secure and facilitate easier travel with more options than today. The challenges to this must be viewed as only being resolved over a generation or more, therefore developing a strategy for integrated transport and land usage which will move society towards best practice and being able to bring this into play in an affordable manner are the key obstacle to progress if we are not to perpetuate the mistakes of the past.

### **4. Freight considerations**

There are conflicts with freight in that more consideration to the impact on citizens from freight will be necessary for rail corridor development.

The submittal encourages the separation of passenger and freight rail in order to give due consideration to freight. Freight is a key driver of the economy. Providing freight with dedicated rail infrastructure which can avoid conflict with the citizen

and passenger rail services is a crucial step to lift export capacity and grow the economy.

Increasing freight capacity is primarily an issue for track and train path allocation. The conflict with building on or adjacent to rail corridors relate to vibration which in turn can affect sensitive equipment within health and light industry facilities.

### **5. Freight and residential conflicts**

Passenger rail services are predominantly provided from electric trains while freight is generally hauled by diesel locomotives which have polluting emissions. Noise and vibration can be higher from freight trains especially where long haul coal and ore is concerned, these aspect will involve greater costs to mitigate.

### **6. Simulation a support to development**

The great advantage of simulation is that it can support the decision makers at each phase of the development cycle. At the initial feasibility stage city wide or local aspects can be simulated and what if scenarios carried out. With the power of modern computers and the sophisticated programming available to SMART the effects of planning options on the as built environment can be examined down to street level. Simulation better enables the planner to engage with those who will be affected by the development and to involve them in the final planning stages through street and facility modeling to a detailed level. Local knowledge can be gathered and how the development will effect citizens can be demonstrated in 3D street simulation.

### **7. Avoiding mistakes through simulation**

Simulation tools can be developed to assist decision makers by reviewing the interaction of people with the proposed build and can also simulate the effects to the surrounding environment.

When complimented with agent based modeling what if scenarios for the technical solution can be combined with scenarios for the population and changes to demographics over appropriate periods, such as 30 years. This approach

assists decision makers in avoiding mistakes which would be costly to rectify in the future.

I trust the above commentary provides sufficient response to satisfy the committee in its review on the utilisation of rail corridors.

In addition I have been in contact with the MTR Co. Ltd in Hong Kong in connection with your request for a visit at some future date to view developments associated with the Rail system. They are happy to make arrangements for a visit and have asked for some details on the role of the committee, members who will visit and main areas of interest so that an appropriate visit schedule may be arranged.

If I can be of further assistance to the Committee please do not hesitate to contact me.

Yours sincerely,



**Andrew McCusker**  
**Director of Rail Logistics**  
**SMART Infrastructure Facility**