All enquiries to Louise Howells on 9526 1167
Our ref:
Electronic Ref:

10 May 2010

Garry Pratley

Dear Garry

MUNDIJONG WHITBY DISTRICT STRUCTURE PLAN
PROPOSED RELOCATION OF FREIGHT RAIL

Thank you for meeting with Eric Lumsden, myself and the Shire President on 22 March 2010 to discuss Serpentine Jarrahdale planning issues. At the meeting the problems associated with the current alignment of the freight railway within the proposed Mundijong/Whitby District Structure Plan were discussed. The DSP is currently being prepared as required due to the creation of the urban zone in the Metropolitan Region Scheme.

The purpose of this letter is to seek your support to allocate funds for a study to investigate a new railway alignment to the west of the Tonkin Highway reserve. It is expected that an amount of $200,000 to $300,000 will be required to define the land requirement and carry out preliminary environmental investigations.

The need for the study and the preliminary cost estimate was discussed at a 12 March 2010 meeting which was held with various officers at the Department of Planning and Transport, David van den Dries from Main Roads WA, officers from the Shire of Serpentine Jarrahdale and the Shire's consultant Laurie Piggott.

The meeting was requested by the Shire of Serpentine Jarrahdale to discuss the results from the DSP process which includes the need to relocate the Cockburn – South West freight line from its current alignment to a new alignment immediately west of the proposed Tonkin Highway extension. A copy of the Minutes of the Meeting prepared by Don Challis from the Department of Planning is attached.

It was generally agreed at the meeting that a three stage approach would be required to successfully secure a new corridor. This will involve:

- developing the case for a new alignment before proceeding with more detailed planning;
- undertaking more detailed engineering, environmental and economic evaluation to establish the corridor alignment, identify any fatal flaws and establish the cost (and benefit) of the proposal; and
- initiating a formal planning amendment for the new corridor.

The subsequent meeting held with yourself and Eric Lumsden on 22 March 2010 brought this matter to your attention.

As outlined at the meeting, the location of the freight rail through the centre of Mundijong Whitby has significant implications on the design of the DSP and subsequent implementation steps.

The key freight railway issues are:

a) Splitting the town site into two separate cells with no increase in the limited number of crossing points due to 34 freight train movements per day. This division of urban cells threatens the ability to create a single significant town centre.

b) Increased road traffic and informal pedestrian crossings of the railway will create a growing and ultimately significant safety and urban amenity problem. The crossings of Bishop Street and Soldiers Road already have a substandard alignment.

c) There is now an urgent need to protect land for the new alignment particularly because of existing and potential rural living lots along the eastern boundary of the Tonkin Highway reservation where the possible realignment is proposed.

There are also a number of significant benefits that will arise from relocation of the freight railway particularly if the realignment is progressed at an early stage:

a) It could provide the opportunity for an intermodal terminal to be developed adjacent to the realigned rail corridor. The Shire's Transport Consultant has advised that a terminal in this area is supported from a strategic freight perspective and would support the proposed future industrial development currently being investigated by the Department of Planning.
b) Lesser cost of land to acquire – currently zoned Rural.
c) Certainty that the District Centre will be able to be developed and effectively service the catchment.
d) Avoidance of future conflicts between rail and road users and political pressures as a result of this conflict.
e) Avoidance of significant safety/emergency access issues due to limited east/west crossings.
f) Significantly reduced noise impact on urban development.
g) Assist in avoiding pressure from landowners whose land is constrained from developing in earlier stages due to the location of the freight line.

It was originally raised with yourself and Eric Lumsden that there would be a significant cost saving associated with the realignment of the freight rail due to the reduced cost of constructing Tonkin Highway. Further investigations have found, however, that there is likely to be little cost difference whether the freight rail is realigned or retained in its current position. This is further detailed within the business case.

A report is attached which addresses the first stage of the three stage approach agreed at the meeting with the various government agencies. It provides further details on why the proposal should proceed, issues associated with the realignment and other relevant information.

The relocation of the freight railway is an issue that should be dealt with at a strategic state level and the Shire is willing to cooperate in a Department of Planning and Department of Transport led initiative to create a new rail reserve in the MRS, including linking it into the potential industrial estate.

The Council is strongly supportive of the relocation of the freight rail and believes it is critical to enable the ultimate development of Mundijong Whitby.

Yours faithfully

Joanne Abbiss
CHIEF EXECUTIVE OFFICER

cc: Eric Lumsden

MUNDIJONG/WHITBY DISTRICT STRUCTURE PLAN

Business Case – Freight Railway Relocation

1. Background

The purpose of this study is to compare the costs and benefits of two options:

1. Retaining the freight railway on its current alignment; and
2. Relocating the freight railway to the west of the new Tonkin Highway reserve.

The analysis addresses construction cost, urban amenity and safety. It follows the report on "Freight Railway Urban Design Issues" which addresses the impact of the freight railway on the new Mundijong/Whitby urban area and recommends relocation of the railway.

2. Construction Cost Comparison

This section compares costs of the two railway options; including Tonkin Highway interface elements. The exercise is designed to indicate the differences between the options and does not include components that are common to both options. For this reason and because the cost estimates are indicative the results should only be used for comparison between the options. They cannot be used for any other purpose including budgeting.

Timing: Rail relocation timing will be dependent on several factors:

- The rate of urban growth and consequent road traffic volume.
- Establishment of the new town centre to a district facility standard.
- Tonkin Highway construction timing.

Key question are:

- When will the existing railway become an impediment to development as defined in the DSP?
- Will there be a requirement for grade separation of the railway for safety reasons at major roads such as Soldiers Road at a possible cost of $20M each?
- What is the optimum timing to relocate the freight railway?

Without answers to these questions it is not possible to develop cash flow estimates or an Internal Rate of Return analysis.

Tonkin Highway Construction Standard: Because all Tonkin Hwy scenario intersections which are over or near rail must be grade separated those intersections and therefore their costs are the same for both a stage 1 construction standard and an ultimate construction standard.

Costs shown below at Tonkin Highway intersections are limited to the rail impact at those intersections and do not include normal road flyover works.

Table 1 – Rail Influenced Variable Costs.

Item	Description	Cost	
		Option 1 Retain Existing Alignment	Option 2 New Alignment West of Tonkin Hwy
1.	Relocation costs for 6km of freight railway	0	$20M
2.	Railway cost at the Bishop Road Interchange/crossing (rail at right angles to Tonkin Hwy upgrades the interchange from a diamond to a half clover leaf)	$20M (grade separated)	$1M (at grade)
3.	Railway cost at the Mundijong Road Crossing (rail parallel to Tonkin Hwy passes under or west of Mundijong Road/Freeway ramp intersections)	0	$10M (grade separated)
4.	Rail crossing South of Mundijong Road combined with Tonkin Hwy/Wright Street grade separation	$5M	$5M
5.	Soldiers Road crossings	$2M - $20M	0
	Total Variable Costs	$27M-$47M	$36M

The Table shows that the new alignment is $9M more expensive than the existing alignment option if there is no road/rail grade separation in the urban area. However, if grade separation is provided at Soldiers Road the new alignment is $11M less than the existing alignment.

Given the indicative nature of the estimates there is little to pick between the options with regard to rail infrastructure cost because the scale of the difference is small compared to the total construction cost of Tonkin Highway.

Staging will be important. Relocating the railway after Tonkin Highway is constructed will result in expenditure of $20M which would not have been necessary if the deviation were constructed before or at the same time as Tonkin Hwy. Refer Item 2 Bishop Road Crossing cost.

3. Urban Amenity and Safety

Option 1 – Retention of Existing Freight Rail Alignment

Retaining the existing rail alignment will reduce urban amenity by dividing the town site; and this will be exacerbated if more level crossings cannot be added due to the number of freight train movements per day. This division of urban cells threatens the ability to create a single significant town centre.
There are five existing railway level crossings within the DSP area which from north to south are:

- Norman Street Australind service only
- Bishop Street freight and Australind
- Soldiers Road freight and Australind
- Keirnan Street freight and Australind
- Mundijong Road freight and Australind

Three additional crossings (all east/west) are proposed but are unlikely to be approved because of rail safety policy and regulations:

- An extension of Bishop Street across the Australind railway.
- Across the freight railway immediately south of the existing Soldiers Road level crossing providing east/west access to the new town centre.
- Across the freight railway as an extension of Whitby Street providing east/west access to the existing town centre.

If approval for the above crossings cannot be obtained there will be continuing division of the town unless grade separation is provided. With respect to cost, grade separation tips the balance in favour of the new alignment (Option 2) but with the possible exception of Soldiers Road the new bridges and their ramps will have major negative impact on urban form.

Town Centre:

If the proposed new railway crossing adjacent to the town centre is approved the impact will be minimised but some loss of attractiveness will result from level crossing boom gate closures which can be for periods of several minutes (resulting from slow moving trains due to the passing loop). Provided shoppers can get across the Soldiers Road crossing there may be a tendency to travel to Byford or elsewhere which may result in some loss of viability for the town centre.
If a new level crossing is not approved the town centre may be better located in a position adjacent to the existing level crossing at Keirnan Street. Otherwise it may not be able to be developed to its full potential.

Accessibility and Safety:

Increased road traffic and informal pedestrian crossings of the railway will create a growing and ultimately significant safety and urban amenity problem. This will affect emergency vehicle access bearing in mind the area can be subject to ember strike during bush fire events.

At thirty four freight rail movements per day, boom gate closures will be relatively frequent and will last for long periods due to slow moving trains which stop at a loop to allow passing on the single track line.

Limited road and pedestrian crossings will exacerbate the division of the urban area resulting in an increased safety risk as population levels and road and rail traffic volumes increase. Frustration about delays can result in informal unsafe pedestrian crossing routes and boom gate running on the road network. The diagonal alignment at the existing crossings of Bishop Street and Soldiers Road increases the risk.

Option 2 – Relocate Freight Railway

Relocation of the freight railway will resolve most of the issues described in Option 1 above. The benefits, which cannot be quantified at this time, include reduced urban infrastructure costs, better urban design, social issues and safety.
Benefits that will arise particularly if the realignment is progressed at an early stage are:

a) It could provide the opportunity for an intermodal terminal to be developed adjacent to the realigned rail corridor. A terminal in this area is supported from a strategic freight perspective and would support the proposed future industrial development currently being investigated by the Department of Planning.
b) Relatively low cost of land – currently zoned Rural.
c) Certainty that the District Centre will be able to be developed and effectively service the catchment.
d) Avoidance of future conflicts between rail and road users and political pressures as a result of this conflict.
e) Avoidance of significant safety/emergency access issues due to limited east/west crossings.
f) Significantly reduced noise impact on urban development.
g) Assist in avoiding pressure from landowners whose land is constrained from developing in earlier stages due to the location of the freight line.

4. Conclusions

1. This assessment cannot be expressed in terms of cash flow or Internal Rate of Return because of uncertainty about timing and scope of works.

2. The cost of relocating the railway will be in the order of $20M. Subject to risk management assessment, various road/rail grade separation costs, particularly with respect to Tonkin Highway, can make relocation of the railway cost neutral, cost positive or cost negative.

3. Delaying rail relocation until after Tonkin Highway is constructed will result in the abandonment of $20M worth of works at the existing rail route under the new Tonkin Highway.

   Realignment of the railway should therefore be programmed to be before or at the same time as the Tonkin Highway construction.
4. Option 2 – Rail Relocation has the following benefits compared to Option 1 – Rail Retention:

   a) It could provide the opportunity for an intermodal terminal to be developed adjacent to the realigned rail corridor. A terminal in this area is supported from a strategic freight perspective and would support the proposed future industrial development currently being investigated by the Department of Planning.
   b) Lesser cost of land – currently zoned Rural.
   c) Certainty that the District Centre will be able to be developed and effectively service the catchment.
   d) Avoidance of future conflicts between rail and road users and political pressures as a result of this conflict.
   e) Avoidance of significant safety/emergency access issues due to limited east/west crossings.
   f) Significantly reduced noise impact on urban development.
   g) Assist in avoiding pressure from landowners whose land is constrained from developing in earlier stages due to the location of the freight line.

5. Relocation could provide the opportunity for an intermodal terminal to be developed adjacent to the realigned rail corridor serving the proposed future industrial development currently being investigated by the Department of Planning.