3.2 Kybong

Since the public display of the proposed corridor in March 2007, significant interest has focused on the corridor and interchange location in the Kybong area.

3.2.1 Queensland Water Infrastructure

Discussions with Queensland Water Infrastructure (QWI) has highlighted the benefits to community of co-ordinating the Dam access road and associated dam infrastructure with the Kybong Interchange. QWI are in the process of designing an overpass of the existing highway to enable construction access for the proposed dam. Opportunity exists for detailed planning of the interchange to;

- Provide direct access to the dam, the proposed Freshwater Species Conservation Centre and associated recreational facilities (a significant generator of vehicle trips);
- make use of properties already acquired for dam purposes;
- make use of the proposed overpass bridge;
- provide connectivity for the area including Traveston Road and Traveston Crossing Road; and
- improved access to the Bruce Highway in times of large floods.

3.2.2 Feedback

The study team received a 64-signature petition supporting the proposed corridor location from the local community. Additionally, Matilda Fuel Supplies have expressed concerns regarding access to their Kybong site from the proposed corridor. Regular discussions have taken place with Matilda to better understand their issues and determine what changes to the proposed corridor, if any, may be recommended by the study team.

Matilda has advised of two main issues;

1) The economic implications to their business and the impact on fuel prices in Queensland based on the proposed corridor access.
2) The provision of an alternative alignment and interchange to achieve, what Matilda advocates to be a better engineering solution and provide improved access to their Kybong site. The alternative alignment is directly in front of the Matilda Kybong site and involves moving the Traveston Road interchange north (by approximately 2km) to immediately south of Tandur Road.

3.2.3 Matilda Issue 1 – Effect on Fuel Prices

An independent report was undertaken by PricewaterhouseCoopers to understand the economic implications on the Matilda business and fuel prices in Queensland. PricewaterhouseCoopers found that:

- If the new Bruce Highway is constructed on the proposed corridor, it is unlikely that Matilda Kybong would continue to operate in its current capacity as a supplier of fuel and other services to highway traffic.
- Matilda Fuel Supplies currently receives a number of volume discounts on fuel and non-fuel products. Matilda Kybong is the major Matilda outlet and its closure, or scaling back, would reduce the company's terms of trade.
- Matilda's fuel prices are consistently cheaper than the market average and it is positioned to exert some influence over fuel prices. However, its sales are not significant compared with the total sales in Queensland.
- At present, two Matilda sites have earnings below normal viability and, with the potential reduction in terms of trade for Matilda Fuel Supplies, two to eight of its other sites may be come unviable.

Main Roads acknowledges that the highway corridor alignment will have significant impact on the Matilda Kybong site and a potential flow on to the Matilda Fuel Supplies network. The importance of Matilda Fuel Supplies as an independent in the fuel supply network is also acknowledged. The Matilda Kybong site also provides service centre functions which provide a benefit to the travelling public in fatigue management. Main Roads has considered in detail the options that may be available to service the continued operation of Matilda Kybong. Particular issues have been additional costs, continued viability as a service centre, community views and additional land requirements. Since the PricewaterhouseCoopers report was prepared, Matilda Fuel Supplies has become part of Neumann Petroleum and consequently the report may not reflect the present condition.

3.2.4 Matilda Issue 2 – Better Alignment

The study team has reviewed Matilda's alternative alignment and modified it to achieve the study's technical highway engineering requirements in terms of sight distances, access arrangements and intersection forms. Figure 3.2a shows the study team's version of the Matilda proposal for a Kybong Interchange.

Standards

The alignment of the Matilda proposal and the proposed corridor are similar in regards to standards by way of horizontal and vertical curves and vertical grades. When considering the stageable section for construction (leaving the existing highway at Kybong and reconnecting to the existing highway via the Woondum interchange) both options have similar earthworks, construction costs and environmental impacts. The Matilda proposal is considered further below:

Access and Land Requirements

For the new highway corridor to pass in front of the Matilda site, the existing road reserve (generally 60m wide; 75m directly in front of Matilda) must be increased significantly. The road corridor would need to provide interchange entry/exit ramps and service roads on both sides of the corridor in this vicinity. This combined with the earthworks required to achieve the high standard alignment, requires the corridor to be at least 130m wide. Therefore the Matilda proposal generally creates a land requirement 70m wider than the existing highway reserve.

Matilda's proposal aligns the new corridor as far to the east as possible without resumptions on the eastern side (ie within the highway reserve).

This creates a land requirement on the properties fronting the western side of the existing highway, including Matilda's site. Other properties with land implications on the western side include a large ginger seed farm and long narrow rural properties which back onto the Mary River.

The land take on Matilda's site requires the relocation of the fuel bowsers, associated covered structure and parking hardstand areas. The bowser relocation and amended access/circulation would require significant reinvestment to develop the site and allow it to function at an acceptable standard as a service centre (ie. circulation of traffic flow between bowsers, payment for fuel, dining facilities and rest stop amenities).

The potential implications to Main Roads of a significant impact on the existing Matilda Kybong outlet both financially and on program timing/flexibility would need to be considered in detail.

Additional Costs

The new corridor has limited access, with movements onto and off the new corridor at widely spaced interchanges. The Matilda alignment uses the existing highway reserve; therefore the existing highway needs to be reinstated to continue to perform the functions of a local service road. Additional costs in the order of $10M (in today's dollars) are associated with this road relocation and related works.

Interchange location

One of the differentiators between the Matilda proposal and the proposed corridor is the location of the interchange. Interchange locations are primarily determined by the road network requirements for accessibility and route interconnectivity. However, there are limits to the number of interchanges that can be accommodated and the spacing of ramp terminals without compromising the capacity and safety of the road.

Having the interchange located at Traveston Road connects the local arterial road around the proposed Traveston Crossing dam, Traveston Road and Traveston Connection Road. These roads link surrounding areas of Federal, Coles Creek, Traveston and the area to the west of the proposed dam (including Gympie-Woolooga Road) and provide access to the proposed corridor. If the interchange was moved to Tandur Road, significant volumes of traffic would stay on the existing highway for an additional 2km. The predicted volumes in 2026 include 2400vpd from the new service road, 3800vpd on Traveston Road and 4600vpd on Traveston Crossing Road. In comparison Tandur Road carries approximately 600vpd. Typically interchanges are located at intersections with the more significant roads in the road network. From a road network perspective, the interchange at Traveston Road best meets this requirement.

Visibility vs. Site Viability

One of the key considerations in determining a service centre's viability is its visibility from the highway and accessibility. It would be generally expected that a site would not be successful if the advertising/petrol pricing sign is not visible from the highway prior to the exit ramp. Visibility for southbound motorists is achieved with the Matilda proposal. However, the nose of the northbound exit ramp is required to be set back so far to achieve the desired sight distance for 120km/h design speed that motorists will not see the site before making the decision to exit the highway. Highway signage in the form of advanced directional signs can provide some guidance for motorists; however this is seen as less of a benefit than direct visibility from the highway to the site. The site access arrangements will be compromised which is likely to affect its ability to function in a manner as envisaged by Main Roads service centre policy.

The preferred layout for service centres involves separate exit and entry ramps for northbound and southbound service centres located opposite each other on the highway.

However where traffic volumes are sufficiently low enough not to warrant service centres on both sides of the highway, the preferred location for the site would be immediately adjacent to the interchange to minimise the distance travelled.

With the Matilda proposal, access to the site is less than ideal due to the interchange location. It requires northbound motorists to exit the highway and travel approximate 800m on the exit ramp, negotiate a roundabout, travel a further 400m on the service road to enter the site. To rejoin the highway motorists must backtrack approx 400m to reach the interchange. The reciprocal movements are required for southbound motorists.

Social Impact

One of the major influences identified through the community consultation, CCCCs and shortlisting processes was the evaluation criteria weighting allocated to the social/residential impact. This was a pivotal driver in the selection of the proposed corridor and why it follows existing severances wherever possible. This section of the proposed corridor is a transition between running adjacent to the Traveston dam and aligning to the high voltage powerlines. This Matilda proposal is marginally different from the options R(R) and R(S) considered during Stage C. As reported in table 14.5 of the Stage C report, these options had the highest social impact and the proposed corridor had the lowest. Table 3.2a below compares the social impact of the new Matilda option and the proposed corridor.

Table 3.2a: comparison of social impacts

Description	Approximate number of impacted properties	% increase compared to best performing option
Proposed Corridor – Interchange at Traveston Road and align to the powerlines	14	0% (best performing)
Matilda proposal – Interchange immediately south of Tandur Road	21	50%

Based on the evaluation criteria agreed through previous stages of the study, the Matilda proposal has greater social impact on properties than the proposed corridor. The Matilda proposal also affects properties that were not previously impacted by the proposed corridor. Additionally, the proposed corridor has significant community support with the study team receiving a petition from the local Kybong/Tandur Road community which included 64 signatures.

The new Matilda proposal has comparable environmental effects to the proposed corridor option. Creek crossing requirements differ, but are of a similar scale. Both options avoid direct impacts on the Traveston Homestead complex.

Possible Alternative Service Centre Locations

The Matilda site is located within sections BH1 and BH2 (northbound and southbound carriageways between Coles Creek and Jackass Creek) of the existing Main Roads Service Centre Strategy No1/97.

This strategy was developed in 1996, which is 8 years prior to the commencement of the strategic planning study and as such the strategy not able to predict the location of a realigned highway corridor. However the strategy states that:

- No new service facilities will be permitted while the highway remains in the present location and as a single carriageway road.
- Upgrading of the highway ultimately to four lanes will permit up to one centre in each direction.
- Permission for white on blue signs at Matilda until a service centre is established in zones BH1 and BH2.

The strategy needs to be reviewed to account for the new opportunities created by the proposed corridor. There are many locations that may perform the fatigue management functions required by the service centre:

a) North eastern side of Traveston Road Interchange;
b) Traveston Crossing Dam access interchange (if the dam proceeds);
c) Caltex Gold Nugget near Woodum Interchange (vicinity of Keefton Road); and
d) Gympie Connection Road Interchange

Consultation with Matilda Fuel Supplies

The study team recognised the importance of the Matilda Kybong facility in providing for the public and commercial traveller and the investment that has been made by Matilda Fuel Supplies. The study team met with Matilda Fuel Supplies numerous times to listen and consider their concerns and viewpoint. Matters raised and discussed were more extensive and detailed than addressed above.

3.2.5 Recommendation

Given the need to provide rest stops along the highway, Main Roads intends to review the current service centre strategy and policy once the highway corridor is finalised. It is recommended that the proposed corridor and interchange between Coles Creek Road and the Woondum Interchange be retained. During detailed planning for the Traveston Crossing

Dam the location and arrangement for the interchange is to be reviewed and opportunities investigated to achieve the best overall community benefit.

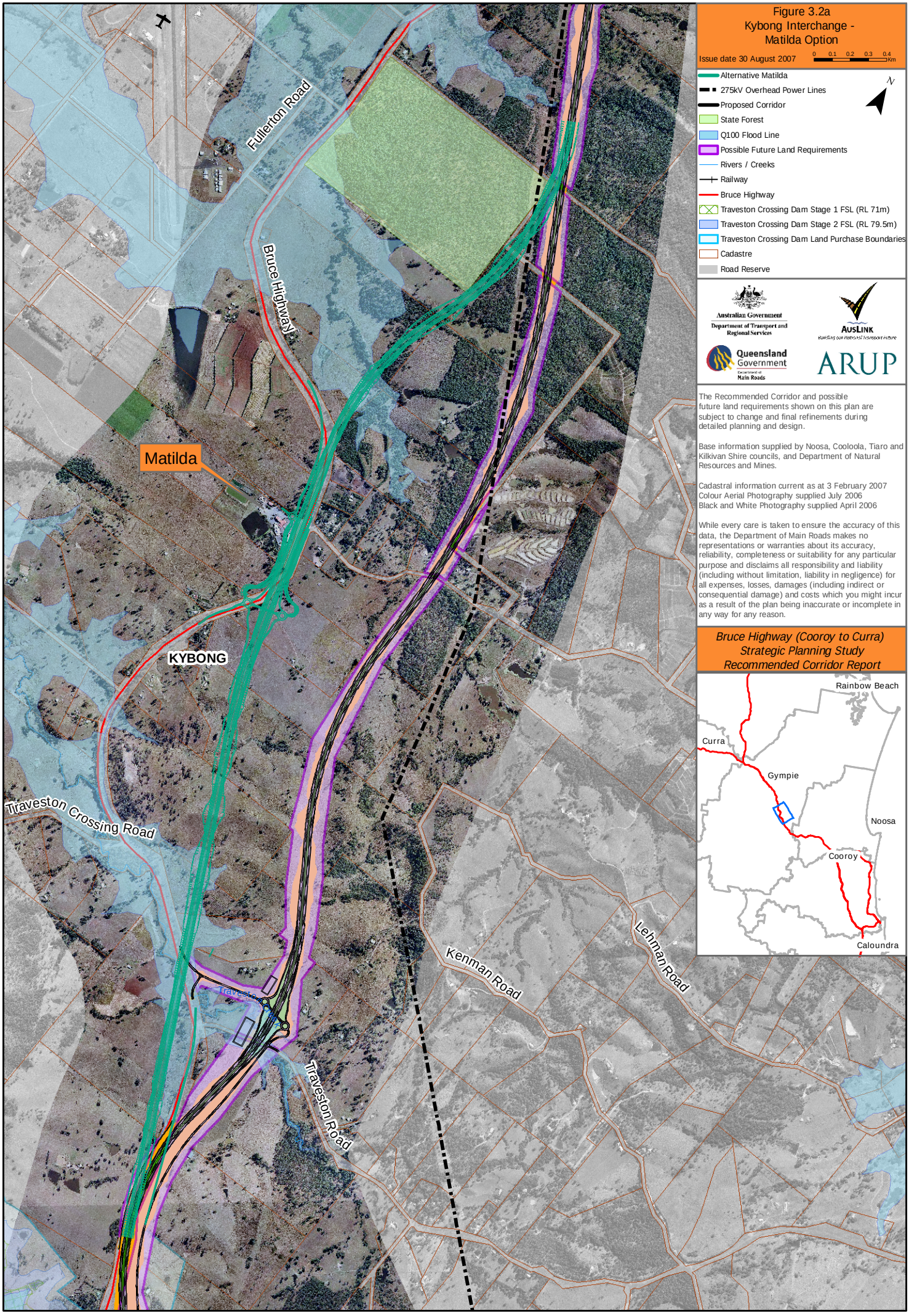

Figure 3.2a
Kybong Interchange -
Matilda Option

Issue date 30 August 2007

0 0.1 0.2 0.3 0.4 Km

- Alternative Matilda
- 275kV Overhead Power Lines
- Proposed Corridor
- State Forest
- Q100 Flood Line
- Possible Future Land Requirements
- Rivers / Creeks
- Railway
- Bruce Highway
- Traveston Crossing Dam Stage 1 FSL (RL 71m)
- Traveston Crossing Dam Stage 2 FSL (RL 79.5m)
- Traveston Crossing Dam Land Purchase Boundaries
- Cadastre
- Road Reserve

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The Recommended Corridor and possible future land requirements shown on this plan are subject to change and final refinements during detailed planning and design.

Base information supplied by Noosa, Cooloola, Tiaro and Kilkivan Shire councils, and Department of Natural Resources and Mines.

Cadastral information current as at 3 February 2007
Colour Aerial Photography supplied July 2006
Black and White Photography supplied April 2006

While every care is taken to ensure the accuracy of this data, the Department of Main Roads makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the plan being inaccurate or incomplete in any way for any reason.

Bruce Highway (Cooroy to Curra)
Strategic Planning Study
Recommended Corridor Report

3.3 South Gympie Industrial Access

The proposed interchange immediately to the south of Gympie provides high speed ramps to serve motorists heading to or from the south on the new corridor. The north facing ramps were not included in the proposed highway upgrade due to predicted low traffic volumes not warranting the cost of the associated infrastructure. It was envisaged that these would be reassessed at the time the detailed project development was undertaken. A key issue will be the industrial estate expansion and other future land use changes in the surrounding area.

Submissions were received, including from Cooloola Shire Council, requesting that the interchange have all movements and thus cater for motorists heading north, or coming from the north on the new corridor.

The study team investigated numerous possible ramp configurations including additional ramps to the proposed Woondum interchange and north facing ramps at Keefton Road. However these options were excessively costly due to significant bridging requirements to maintain priority for the high volume movements on the Woondum interchange and to span the flood extents of Deep Creek.

Figure 3.3a shows the preferred location of additional ramps to provide access for the south Gympie industrial estate.

Motorists with origins north of Gympie wanting to access the industrial estate (or areas immediately south of Gympie) will exit the new corridor adjacent to the existing gold mine tailings dams. The ramp will intersect with Flood Road in the form of a roundabout and link to Penny Road which provides direct access to the industrial areas and the existing Bruce Highway via Hall Road.

The ramp that provides for motorists from southern Gympie and the industrial area wanting to travel north, involves a roundabout at the intersection of Penny Road and Noosa Road. Another leg is introduced to the roundabout to create the northbound on ramp to the new corridor.

3.3.1 Recommendation

It is recommended that the highway corridor incorporates additional north facing ramps for the industrial areas south of Gympie. These ramps include a northbound on ramp to the new corridor from the Penny Road/ Noosa Road intersection and a southbound off ramp from the new corridor to Flood Road.