Urgent demand for infrastructure in Queensland

The recently released Engineers Australia Infrastructure report card for Queensland identifies a number of areas of infrastructure deficiency in the state. Partner Alan Millhouse and Articled Clerk Kylie Weston-Scheuber look at the report in conjunction with the government’s Draft South East Queensland Regional Plan.

Queensland infrastructure rated


Some of these deficiencies are addressed in the Draft South East Queensland Regional Plan, which has been released for public consultation. Together, these two publications provide an indication of the key areas for infrastructure growth and development in Queensland over the next two decades.

The EA Report found that although Queensland infrastructure is generally in a better state than the average for Australia generally, this should not be a cause for complacency, especially given Queensland’s high population growth forecasts. The highest performing areas were in water supply, telecommunications, airports and ports, which all achieved a B- rating or higher. However, the transport, rail and gas sectors were only rated as adequate and the electricity sector performed poorly, achieving a rating below that of the New South Wales electricity sector and the rating for Australian electricity infrastructure generally.
Ratings criteria

Ratings were given on the following basis:

- A (Very good) – Infrastructure is fit for its current and anticipated purpose in terms of infrastructure condition, committed investment, regulatory appropriateness and compliance and planning processes.
- B (Good) – Minor changes required in one or more of the above areas to enable infrastructure to be fit for its current and anticipated purpose.
- C (Adequate) – Major changes required in one or more of the above areas to enable infrastructure to be fit for its current and anticipated purpose.
- D (Poor) – Critical changes required in one or more of the above areas to enable infrastructure to be fit for its current and anticipated purpose.
- E (Inadequate) – Inadequate for current and future needs.

The SE Queensland Regional Plan

The Queensland Office of Urban Management released its Draft SE Queensland Regional Plan (Draft Plan) for public consultation in October 2004. The Draft Plan is intended to provide a framework for growth and development in the region to 2026.

Partnerships between industry and state and local governments will be strengthened to manage regional freight corridors and improve freight efficiency.

Once finalised, the Draft Plan will take precedence over all other planning instruments and all development in the region will need to comply with it. It will be formally reviewed every five years. The Draft Plan addresses some of the deficiencies identified in the EA Report. The areas of infrastructure addressed in the two documents are discussed below.

Transport

Roads

Urban and rural roads were rated separately in the EA Report on the basis of asset condition, asset availability and reliability, asset management, sustainability and security. Overall, urban roads received a C rating and rural roads a C+ rating. For state roads particularly, the EA Report found that although the condition of the roads is adequate, serious issues exist in terms of capacity and reliability in urban areas. There are also environmental impacts of state roads in urban areas and safety problems in rural areas that need to be addressed.

Rail

The Queensland Rail Network received a rating of C+. Despite recent rail reform and increased investment, the EA Report found that plans have not been made for capacity and reliability improvements because of the continuing uncertainty over the future funding of the National Rail Network. Funding to the road network significantly exceeds funding to the rail sector, resulting in penalisation of the rail sector in attempts to compete against road freight transport.

Aviation

The EA Report rated aviation infrastructure at a B level. The condition of assets at airports was found to be generally good. Regional airports rated lower than major airports partly due to slow implementation of security measures.

Ports

Port infrastructure varied between acceptable and very good levels, receiving an overall rating of B-. Major ports generally performed marginally better than minor ports. Asset condition, availability and reliability were found to be generally good. However, the EA Report identified a lack of committed funding for ports and an absence of a committed approach to security and risk management.

How the Draft Plan addresses these issues

The Draft Plan addresses some of the concerns raised in the EA Report regarding Queensland’s transport infrastructure. The Draft Plan targets public transport infrastructure and services for increased investment, with a focus on the provision of an effective, integrated transport network linking roads, railways, ports and airports. Partnerships between industry and state and local governments will be strengthened to manage regional freight corridors and improve freight efficiency.
These measures, in combination with the provision of new road infrastructure and improvements to existing roads, should address some of the concerns raised in the EA Report with regard to capacity of existing road networks and the effect of road congestion on the environment.

The Greater Ipswich area, extending generally from Wacol through Ipswich City to Amberley (the Western Corridor) is an area that has been targeted for development. In particular, the Draft Plan discusses the possibility of a multi-user infrastructure corridor allowing for road, rail and other infrastructure connections between the new industrial areas south of Ipswich and industrial areas at Yatala, picking up the interstate rail line and the Pacific Motorway. Rail crossing capacity on the Brisbane River in the inner city is also flagged as a significant issue.

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The Draft Plan also identifies major elements of the national and inter-regional transport systems that are likely to require development. These include a second range crossing for Toowoomba and upgrade of the Gowrie to Grandchester rail line to enhance access to major freight links between west Ipswich and Toowoomba. Developments planned for the coastal regions include increased public transport links and continued upgrade of the north coast rail line on the Sunshine Coast, and on the Gold Coast, enhancement and extension of existing road networks and an extension and upgrade of the Brisbane to Gold Coast rail link.

**Services**

**Water – potable, waste-water and irrigation**

Water infrastructure services achieved generally solid ratings in the EA Report. Urban water treatment and urban waste-water treatment both received a B rating, while urban water reticulation rated a B- because of concern over the current low levels of asset renewal investment. Minor changes are required in relation to irrigation infrastructure, including improvement of water resource planning processes, on-farm water use methods and rural water use efficiency generally. The condition of irrigation infrastructure in Queensland however, is better than in the majority of states. Urban waste-water reticulation achieved the lowest rating (C-) because of the relatively poor understanding of asset condition, limited investigation of inflow and infiltration in existing systems and the significant number of overflows occurring during wet periods.

The EA Report indicates that due to drought and reductions in the amount of water available from major water sources across the state, new sites for water harvesting infrastructure must be identified and secured. The EA Report indicates that integrated urban water management (IUWM), which involves taking a holistic view of the water cycle in order to provide increased water efficiency, will be an important strategy for developing water infrastructure. An IUWM is planned for the SE Queensland region, along with progressive capacity upgrades to existing waste-water treatment plants.

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Key strategies contained in the Draft Plan for water infrastructure include acceleration of the completion of the South East Queensland regional water supply strategy (this identifies issues and solutions for water supply and management and is due to be completed by 2006), protection of drinking water catchments from inappropriate use and identification and protection of future sites for bulk water infrastructure, including surface water storages, desalination and water recycling.

**Stormwater**

Stormwater infrastructure received a B rating, with Queensland performing slightly better than other states due to more attention being paid to stormwater management in Queensland than in other states. Although stormwater infrastructure was rated
generally as good or adequate for asset management, investment, planning processes and sustainability, the EA Report flagged as a major concern the fact that many councils have either no stormwater quality infrastructure or little understanding of their stormwater quality assets.

Electricity supply
Given the recent furore over the condition of Queensland’s electricity industry, it is not surprising that it received the lowest rating of all sectors (D+). Although the generation and transmission sectors performed well (B+ and B respectively) the distribution sector rated poorly, with the EA Report indicating that the capacity and reliability of the sector are a cause for serious concern. The EA Report attributed the failings to shortcomings of Ergon Energy and Energex, the two government-owned corporations responsible for electricity distribution in Queensland. In particular, poor performance in the distribution sector was caused largely by problems with management practices over an extended period and not quickly coming to terms with the state of inherited network assets. It recommended major capital expenditure, together with increased maintenance expenditure, to bring both networks up to an acceptable standard.

The Report found that although Queensland infrastructure is generally in a better state than the average for Australia generally, this should not be a cause for complacency, especially given Queensland’s high population growth forecasts.

Key regional energy infrastructure identified in the Draft Plan for development includes additional electricity distribution infrastructure to support urban consolidation throughout the region and additional electricity transmission lines to the west of Brisbane.

Gas
Gas infrastructure was considered adequate with an overall rating of C, consistent with the national rating for the industry. There is still an identified need for further gas infrastructure in Queensland, with existing gas fields expected to be depleted within the next 20 years. The EA Report found that although it is likely that the depleted fields will be replaced with new fields, existing networks will not be able to keep pace with the expected growth in consumption.

The Draft Plan identifies gas as a viable alternative energy source and indicates that the use of gas as a major secondary energy source for new developments should be encouraged. The provision of additional gas distribution infrastructure is forecast in the Draft Plan.

Telecommunications
Telecommunications infrastructure rated highly (overall B) with telephony and mobile telecommunications services rating particularly well. The EA Report found that significant improvement is required for data services in order to enhance the economic gains that those services have the potential to generate.

The major telecommunications strategy of the Draft Plan is the expedited deployment of high-speed broadband telecommunications. The state government has committed to a telecommunications planning project which will give consideration to preparing a new statutory planning regime for a uniform approach to telecommunications infrastructure and policy guidelines to ensure consistency in dealing with infrastructure providers seeking access to government assets, rights of way and easements.

Overall recommendations of the EA Report
The EA Report contains a number of general recommendations for ensuring that Queensland’s infrastructure meets current and future demands, which can be summarised as follows:

- an infrastructure advisory council should be established to advise government on infrastructure needs and options;
- planning and provision of infrastructure should be based on integrated land-use planning and greater emphasis should be placed on considering sustainability issues and cost-reflective pricing;
- the federal government should contribute to the funding and planning of urban infrastructure;
- the threat of malicious attack should be incorporated into infrastructure risk management strategies;
• funding for infrastructure should be increased to provide for new infrastructure to cope with Queensland’s rapid population growth;
• infrastructure policy, regulation and taxation should be reformed to maximise effectiveness of planning and encourage greater infrastructure investment; and
• government management and advisory boards should have a more balanced membership, covering technical, governance and community expertise and representation.

The Draft Plan acknowledges that rapid population growth and low-density urban development have created difficulties in providing infrastructure to suit the population’s needs. One of the strategies of the Draft Plan is to identify sites for community services and to establish infrastructure and service needs in growth areas in advance of development. The Western Corridor is identified as a future growth area with infrastructure and services to be targeted in this area.

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An annual SE Queensland infrastructure plan and program is planned to coordinate and prioritise infrastructure delivery. It will be released in mid-2005 and will identify key infrastructure requirements, implementation strategies, responsible agencies and delivery timeframes.

The EA Report notes that the Queensland Government has so far made limited use of private sector funding for infrastructure, in particular public private partnerships. The Draft Plan indicates that the government will explore all available options to fund future infrastructure, including the use of public private partnerships.

Conclusion

The EA Report identifies roads, water supply, electricity and gas as key areas requiring infrastructure development and expansion in Queensland. Key players in these industries should review the Draft Plan because the finalised Plan will provide the framework for infrastructure development to 2026. The Draft Plan is open for public consultation until 28 February 2005. Copies can be obtained from the Office of Urban Management or at www.oum.qld.gov.au.

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