2

Planning

2.1 The delivery of public infrastructure is generally a long-term proposition requiring efficient, consistent and forward looking processes in planning, assessment and decision making. There is a need to ensure that governments at all levels better coordinate their efforts to reduce the administrative and regulatory burden related to infrastructure delivery, including the need for clarity when preserving land corridors for future infrastructure requirements. Deficiencies, particularly with regards to engineering skills are evident, particularly in the planning and procurement phases of infrastructure delivery.

Planning, assessment and delivery of public infrastructure

2.2 Effective planning is vital to the delivery of public infrastructure. Infrastructure delivery requires planning at all stages from initial conceptualisation to decommissioning. The Productivity Commission's report suggested that governments sometimes have difficulty in determining 'what, where and when infrastructure projects should be scoped and constructed'.[1] In this regard, the onus falls on governments to ensure that appropriate bodies exist for infrastructure planning, assessment and delivery.

2.3 There is no national framework for the delivery of public infrastructure, with each jurisdiction taking a different approach to the delivery of significant infrastructure within its remit. At the Commonwealth level, Infrastructure Australia is an independent authority that provides the Australian Government with the information to make decisions on future

1 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 8.

infrastructure needs and how these could be achieved.[2] Responsible to the Minister for Infrastructure and Transport, Infrastructure Australia is charged with providing governments, investors and infrastructure owners with advice on matters including:

- Australia's current and future infrastructure needs;
- mechanisms for financing infrastructure investments; and
- policy, pricing and regulation and their impacts on investment and on the efficiency of the delivery, operation and use of national infrastructure networks.[3]

2.4 The *Infrastructure Australia Amendment Act 2014* has provided Infrastructure Australia with functions including:

- the audit of nationally significant infrastructure;
- the development of Infrastructure Priority Lists and Infrastructure Plans;
- the evaluation of infrastructure proposals;
- the provision of advice on infrastructure matters;
- identifying and managing impediments to investment in nationally significant infrastructure;
- promoting infrastructure investment;
- reviewing proposals to harmonise policy and law connected to the development of, and investment in infrastructure; and
- the review of infrastructure funding programs.[4]

2.5 Perhaps the key elements of these reforms are those recently requested through a *Statement of Expectations for the Board of Infrastructure Australia* by the Minister for Infrastructure and Regional Development:

- delivery by the end of 2014 of an evidence-based audit of Australia's infrastructure base, in collaboration with the states, to be revised every five years;
- delivery by the end of 2014 of a comprehensive audit of northern Australia's infrastructure, in consultation with the Department of Prime Minister and Cabinet that will inform the Australian Government's White Paper on developing northern Australia; and

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2 Infrastructure Australia, (viewed 27 October 2014) <http://www.infrastructureaustralia.gov.au/ >

3 Infrastructure Australia, *About Infrastructure Australia* (viewed 17 February 2014) <http://www.infrastructureaustralia.gov.au/about/>.

4 Section 5, *Infrastructure Australia Amendment Act 2014*.

- delivery by April 2015 of a fifteen-year rolling infrastructure plan that should:
  - take into account the outcomes from the audits and where appropriate the lists and evaluations developed and undertaken by IA;
  - clearly specify infrastructure priorities at national and state levels for the period covered by the Plan;
  - identify short and long term productivity gains and any complementary requirements needed to maximise productivity gains;
  - articulate a time frame in which the priorities need to be developed, commencing with those of highest productivity value;
  - be developed in close consultation with state and territory governments;
  - consider when identifying the future infrastructure need, relevant infrastructure characteristics required to service that need;
  - include clear roles and responsibilities of the states and territories in collaboration with the Commonwealth, in terms of their involvement with the identification of infrastructure needs;
  - only recommend specific infrastructure projects where an evaluation has been undertaken, including a rigorous cost-benefit analysis;
  - encourage and drive private investment and private financial funding models in infrastructure where appropriate;
  - inform the development of the Infrastructure Priority Lists; [and]
  - be updated at least every five years to accommodate changes in Australia's infrastructure needs.[5]

2.6 These policies are seen by contributors to the Committee's inquiry as being vital for long term planning of infrastructure requirements and for building business confidence. They provide the implicit understanding that there will be a continuity of infrastructure projects—a pipeline.[6]

2.7 The NSW Government has adopted a similar approach to that of the Australian Government, with Infrastructure NSW identifying and

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5 The Hon Warren Truss MP, Deputy Prime Minister and Minister for Infrastructure and Regional Development, Statement of Expectations Issued to Infrastructure Australia (viewed 13 November 2014) < http://www.minister.infrastructure.gov.au/wt/releases/2014/November/wt227_2014.aspx >

6 See for example: Mr John Alexander MP, *Committee Hansard*, 16 July 2014, p. 3; Engineers Australia, *Submission 1*, p. 3.

prioritising the delivery of critical infrastructure within that state.[7] Other states and territories achieve planning outcomes via a range of instrumentalities.[8]

2.8 The need for a consistent national approach to planning was highlighted in a number of submissions. Consult Australia suggested that each jurisdiction institute independent agencies for the provision of advice about infrastructure planning and delivery. This would allow for the development of clear processes to assess, rank and prioritise projects for delivery, while ensuring the independence both of this advice and decisions regarding the delivery of projects.[9]

2.9 The Australian Constructors Association urged governments to 'develop infrastructure delivery/lead agencies to be responsible for delivering, or coordinating the delivery of, identified major infrastructure projects'.[10] The Chamber of Minerals and Energy of Western Australia also advocated the establishment of 'a dedicated and centralised economic infrastructure unit' in Western Australia to support government agencies in the delivery of complex infrastructure projects.[11]

2.10 The Productivity Commission noted that 'building a credible and efficient government and institutional framework for project selection is a critical and urgent task for governments':

> Selecting the right projects is the most important aspect of achieving good outcomes for the community, irrespective of the funding and financing mechanisms used. It is at the stage before contract signing that governments have the best opportunity to ensure infrastructure meets the needs of the community efficiently and cost effectively.[12]

2.11 In addition to developing more robust planning systems within jurisdictions, the need to develop greater coordination and harmonisation of planning was identified in the evidence presented to the Committee. The National Growth Areas Alliance (NGAA) noted that:

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7 Infrastructure NSW (viewed 27 October 2014) <http://www.infrastructure.nsw.gov.au/about-insw.aspx>

8 See for example: Northern Territory Government, *Submission 15*; Queensland Government, *Submission 18*; Government of South Australia, *Submission 19*; Victorian Government, *Submission 28*; Tasmanian Government, *Submission 30*.

9 Consult Australia, *Submission 2*, pp. 4–5.

10 Australian Constructors Association, *Submission 16*, p. 5.

11 Chamber of Minerals and Energy of Western Australia, *Submission 3*, p. 5.

12 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 8.

> … what tends to happen at the moment is that state governments have their view of what needs to happen, individual councils have their list of projects, that federal government via Infrastructure Australia or via other departments has lists of projects and what is missing is the spatial overlay. If, for example, the federal government wants to invest in facilities, whether it be Medicare offices, whatever it is, is there a spatial impact analysis of where is the best place to put those resources.[13]

2.12 The NGAA also identified barriers 'around the extent to which local governments can engage with state and federal governments in a whole of place approach'.[14]

2.13 In its submission, the Australian Academy of Technological Sciences and Engineering (ATSE) observed that 'Australia's adversarial political system and three tiers of government make infrastructure planning difficult'. ATSE proposed that 'a formal consultative mechanism' be 'introduced at the earliest possible planning stage that attempts to resolve differences as quickly as possible'.[15] The Urban Development Institute of Australia (UDIA), noted that 'in the past, governments have failed to adequately take in to consideration the impact of infrastructure planning decisions on the plans, goals and objectives of other levels of Government, and other jurisdictions'. The UDIA urged:

> … planning and funding to be coordinated across different levels and functions of government (e.g. land use and transport planning, economic and urban development and environmental assessment) to ensure the most efficient and cost effective infrastructure outcomes.[16]

2.14 A particular issue was the duplication of approvals processes, particularly for environmental approvals. The Property Council of Australia advocated bilateral agreements between the Commonwealth and state and territory governments to overcome duplication between state and federal environment protections, stating that 'there has been no credible evidence presented that this duplication results in environmental benefits'.[17]

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13 Ms Ruth Spielman, National Growth Areas Alliance, *Committee Hansard*, 7 August 2014, p. 3.

14 Ms Ruth Spielman, National Growth Areas Alliance, *Committee Hansard*, 7 August 2014, p. 3.

15 Australian Academy of Technological Sciences and Engineering, *Submission 27*, p. [3].

16 Urban Development Institute of Australia, *Submission 9*, p. [2].

17 Property Council of Australia, *Submission 22*, p. 9.

Harmonisation of regulation was sought in other areas as well, such as emissions legislation and occupational health and safety requirements.[18]

2.15 The Productivity Commission's report made a range of findings and recommendations that would assist governments to develop a more coordinated approach to infrastructure planning and delivery, including those directed at project selection, and improving governance and institutional arrangements. The Commission noted that the implementation of these recommendations would 'benefit from a level of coordination and cooperation between jurisdictions', and that:

> The active support of Australian Government Ministers responsible for various types of infrastructure will also be an important factor in progressing reforms at the state, territory and local government levels.
>
> As a means of achieving this, and while not a prerequisite for any of the reforms proceeding, there would be further benefit in incorporating a subset of them in a national agreement, or a series of formal bilateral agreements between the Australian Government and the relevant State or Territory Government.[19]

2.16 In its submission, the Department of Infrastructure and Regional Development identified work on coordinating infrastructure planning already occurring under the auspices of COAG, including:

- the development of national port and freight initiatives;
- safeguarding the operation of nationally significant airport infrastructure from adjoining development;
- mapping of national freight networks;
- alignment of planning across all modes and levels of planning to optimise opportunities for coordination; and
- prioritising infrastructure projects on a national basis.[20]

2.17 The Australian Government also offers the Major Project Facilitation programme that provides proponents of projects valued at above $50 million in all industries, including infrastructure, with assistance on approval processes, coordination of simultaneous processes across government without duplication, and a single point of contact for the resolution of issues.[21]

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18 Ms Rhianne Jory, Australasian Railway Association, *Committee Hansard*, 18 June 2014, p. 2; Ms Jessica Hall, Department of Infrastructure and Regional Development, *Committee Hansard*, 28 May 2014, p. 6.

19 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 37.

20 Department of Infrastructure and Regional Development, *Submission 11*, p. 4.

21 Department of Infrastructure and Regional Development, *Submission 11*, p. 11.

2.18 The Department highlighted the work of the COAG Transport and Infrastructure Council, noting that in December 2013 the Council was commissioned to examine:

- practical options to accelerate project delivery, including how planning and approval timeframes can be fast-tracked;
- advice on the next major transport reforms, including proposals for heavy vehicle charging and investment reform;
- options to increase private sector investment in infrastructure projects; and
- ways to prioritise projects that improve productivity or unlock economic growth potential including in regional economies.[22]

2.19 The Department also highlighted its own infrastructure coordination work, advising the Committee that it:

> … works closely with state, territory and local governments, and the private sector to ensure that the right projects are selected for delivery at the right time based on robust, evidence-based analysis and using an appropriate model for delivery.[23]

Infrastructure pipeline

2.20 One aspect of infrastructure planning regularly advocated in the evidence presented to the Committee was the desire to create an infrastructure pipeline—a list of projects to which governments were committed and around which the private sector could plan and resource. In its submission, ATSE stated, citing overseas precedents:

> A coherent pipeline of projects is required that allows industry to develop effective delivery plans and better workforce management, particularly in engineering. Defined planning horizons linked to medium-term budgets would support the development of appropriate project pipelines. Like governments in Canada and the United States, governments in Australia need to present 10 year budgets and estimates of their prospective infrastructure outlays. As part of its 2013 budget, the Canadian Government has committed to maintain funding for 10 years to the Building Canada Fund. Infrastructure outlays should be related to a minimum, fixed percentage of Gross Domestic Product or State Product.[24]

22 Department of Infrastructure and Regional Development, *Submission 11*, p. 2.

23 Department of Infrastructure and Regional Development, *Submission 11*, p. 4.

24 Australian Academy of Technological Sciences and Engineering, *Submission 27*, p. [4].

2.21 Consult Australia believed that 'the most important thing is that we work towards the development of a long-term infrastructure plan'. The plan would 'exist across electoral cycles and provide businesses with the certainty that they need to plan and recruit for their businesses to deliver that pipeline'. Consult Australia argued that:

> To have projects change across governments at both a state and a federal level is hugely problematic when you are attempting to recruit the skills and plan a business to deliver those projects and bid for them, and that is the principal concern for our firms. So the longer the infrastructure planning time frames and the more certainty can be attached to that pipeline and the de-politicisation of the pipeline, the better our firms will be able to deliver it.[25]

2.22 The Productivity Commission had a somewhat different view of what constituted an effective pipeline of projects—not so much a fixed schedule of selected and funded infrastructure developments as a range of potential projects which had been subjected to publicly available cost-benefit analysis from which private firms could establish potential opportunities for investment. In the Commission's view:

> … the package of reforms advocated in this report should lead naturally to the disclosure of considerable information, such that public funders and private financiers would have a reasonable indication of the detailed analysis supporting future public infrastructure priorities. This would constitute an effective 'pipeline', with the capacity to naturally update itself.[26]

2.23 The Commission indicated that 'governments could choose to regularly update and publish their list of priority projects'. The Commission noted that 'the Australian Government has asked Infrastructure Australia to publish a 15-year infrastructure audit plan [and as of November 2014, a 15-year infrastructure plan], which will add to the public information on proposals', but observed that this proposal did 'not deliver the pipeline that would be created by comprehensive publication across all governments of cost-benefit analyses on proposed public infrastructure projects'.[27]

2.24 In its submission, Department of Infrastructure and Regional Development noted that 'the 15-year plan will include clearly defined service standards for project delivery', that would 'outline short and long

25 Mr Jonathan Cartledge, Consult Australia, *Committee Hansard*, 7 August 2014, p. 13.

26 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 19.

27 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, pp. 19–20.

term productivity gains and identify any complementary projects required to maximise productivity gains'. The plan would also 'articulate a timeframe in which projects will be brought to market, commencing with those projects of highest productivity value'. The Department also stated that Infrastructure Australia would 'assess all projects across both economic and social infrastructure (excluding Defence projects) seeking Commonwealth funding of over $100 million'.[28]

2.25 It was suggested that the fifteen year timeframe for the infrastructure plan was not adequate, with Consult Australia indicating that a 30-year timeframe should be considered.[29] A longer term view of upcoming infrastructure projects would also allow increased certainty and continuity for businesses engaged in infrastructure planning and delivery.[30]

Committee conclusions

2.26 The Committee believes that independent, rigorous and transparent processes are required in making decisions relating to the planning, assessment and delivery of public infrastructure. Transparent processes, supported by rigorous cost-benefit analysis, would allow for infrastructure to be prioritised independently of political decision-making processes. The onus would then fall on providers to fund, finance and deliver projects based on independently determined priorities. In terms of how planning, assessment and decision making is conducted, the Committee believes that all governments may wish to consider establishing independent agencies to advise on such matters, noting that models such as Infrastructure Australia and Infrastructure NSW already exist.

2.27 The Committee takes the view that a nationally consistent approach to infrastructure planning is important to promote efficiency and cost-effectiveness in the delivery of public infrastructure. It is important that all levels of Government across all jurisdictions work together to harmonise and streamline processes and regulations, and reduce duplication in approvals processes.

2.28 The Committee is of the view that a coordinated approach between governments to ensure consistency in the planning and delivery of

28 Department of Infrastructure and Regional Development, *Submission 11*, p. 3; see also Mr Rory Brennan, Infrastructure Australia, *Committee Hansard*, 4 June 2014, p. 2.

29 Mr Jonathan Cartledge, Consult Australia, *Committee Hansard*, 7 August 2014, p. 8

30 See for example: Mr John Alexander MP, *Committee Hansard*, 16 July 2014, p. 3; Engineers Australia, *Submission 1*, p. 3.

infrastructure is vital, particularly in regard to transport-related infrastructure such as roads, ports and freight. Such an approach will encourage a harmonisation of processes and improved regulatory compliance by stakeholders, particularly private sector entities seeking to engage in infrastructure planning and delivery. In the Committee's view, both the Australian Government and COAG should play a lead role in this regard.

2.29 The Committee notes that the Productivity Commission calls` for greater coordination between jurisdictions, and also for individual jurisdictions to develop agreements with the Commonwealth to harmonise aspects of infrastructure planning and delivery in the absence of unified agreement between governments.

Recommendation 1

2.30 **The Committee recommends that the Australian Government, through COAG, facilitate greater coordination of infrastructure identification and planning between the Commonwealth, State, Territory and local governments, including harmonisation of planning regulations and processes, and reducing regulatory duplication between different levels of government.**

2.31 The Committee supports the concept of an infrastructure pipeline to promote planning certainty and allow the private sector to better align its capabilities and resources with public infrastructure requirements. The development of priority project lists, supported by cost-benefit analysis of projects, will enable the private sector to plan and finance its participation in infrastructure development with greater certainty, thereby maintaining essential capabilities and skills.

2.32 The Committee is pleased to see, and strongly supports, recent changes to the role of Infrastructure Australia to develop an audit of the current stock of critical infrastructure across Australia. In the Committee's view, such an audit is overdue and will be of significant assistance in the assessment of infrastructure requirements. The Committee notes that such an audit will be a major undertaking and require both coordination and collaboration across jurisdictions. While not promoting specific methodologies, the Committee does note that technologies do exist which could be of assistance to the development of this audit.[31]

2.33 The Committee is also pleased to see the development of a fifteen year Infrastructure Plan as a tool to guide future infrastructure planning. The

31 See for example: BCE Surveying, *Submission 24*, p. 4.

Committee believes that further consideration should be given to the Plan's fifteen year timeframe and whether it is adequate given the need to provide a longer-term outlook and support business confidence. The Committee supports comments by the Productivity Commission to include provision for cost-benefit analysis to supplement the Plan. It should be noted that the Committee will consider the issue of cost-benefit analysis as it relates to individual projects later in this report.

Recommendation 2

2.34 **The Committee recommends that the Australian Government continue to facilitate the development of a pipeline of public infrastructure projects, in conjunction with state and territory governments, to ensure long-term continuity of infrastructure investment and better promote the efficient and cost-effective use of resources by all stakeholders.**

Recommendation 3

2.35 **The Committee recommends that the Australian Government consider the adequacy of the fifteen year projection of the Infrastructure Plan to be developed and maintained by Infrastructure Australia taking into account the need for longer term forecasting of infrastructure decisions and the need for business certainty.**

The importance of national and regional strategies

2.36 In developing a collaborative approach to infrastructure delivery, a number of inquiry contributors emphasised the importance of having both national and regional strategies. At present, a range of strategies across both spectrums exist. For example, at a Commonwealth level, COAG has developed the National Ports Strategy which will be part of the broader National Land Freight Strategy that is currently under development.[32] The National Ports Strategy, endorsed by COAG in July 2012 aims to 'improve productivity, promote better long-term planning around ports and bring a greater focus on performance to Australia's waterfronts'.[33]

32 Council of Australian Governments, *Standing Council on Infrastructure and Transport*, (viewed 5 November 2014) Website: < https://www.coag.gov.au/infrastructure_and_transport>

33 Council of Australian Governments, *Standing Council on Infrastructure and Transport*, (viewed 5 November 2014) Website: < https://www.coag.gov.au/infrastructure_and_transport>

2.37 At a state or regional level, evidence to the Committee has suggested that consideration is being given to issues that affect specific geographies. For example the Northern Territory Government has highlighted a recent forum that aimed to develop a Remote and Regional Transport Strategy to improve transport services for communities around the Northern Territory.[34] Another example is Queensland's North Queensland Resources Supply Chain Steering Committee that aims to 'develop a strategy to improve the efficiency and productivity of the supply chain through better coordination of infrastructure stakeholders …'[35]

2.38 In terms of regional strategies, the NGAA suggests that:

> The ideal is for a regional approach where economic catchments or other sensible catchments are identified, that there is a plan that is prepared that has buy-in from all levels, that is strategic and that also identifies the sort of infrastructure that is needed to drive economic growth to also address social issues and environmental issues. There is then a mechanism whereby funding can come forward. In the UK deals model, there is some government funding. There is also private sector funding involved in it.[36]

2.39 The NGAA further advised the Committee that:

> The identification of the infrastructure needs to link with the strategic approach for the area—that is in part local government plans, it is in part state government plans and it is also federal government in terms of some of the big ticket infrastructure.[37]

United Kingdom City Deals

2.40 The Committee received a range of submissions highlighting the United Kingdom's City Deal system of infrastructure provision. The Property Council of Australia's submission to the inquiry describes the City Deals approach as an:

> … innovative strategy for building stronger urban and regional growth via smarter strategic planning, infrastructure investment and local governance …
>
> The core goal of UK City Deals is to direct infrastructure spending to projects that boost productivity, employment and economic growth.[38]

34 Northern Territory Government, *Submission 15*, p. 5.

35 Queensland Government, *Submission 18*, p. 11.

36 Ms Ruth Spielman, National Growth Areas Alliance, *Committee Hansard*, 7 August 2014, p. 2.

37 Ms Ruth Spielman, National Growth Areas Alliance, *Committee Hansard*, 7 August 2014, p. 2.

38 Property Council of Australia, *Submission 22*, p. 14.

2.41 The Property Council suggests that the United Kingdom's model represents:

- a new priority assessment paradigm that focuses on an **economic growth budget for a region** – a "local GDP" premium;
- a **disciplined incentive system** similar to Australia's successful National Competition Policy approach;
- a **long-term infrastructure investment program** specifically designed to boost economic productivity within a coherent urban and regional policy framework;
- a **local governance mechanism that fosters collaboration and accountability** – the mechanism also encourages a joined-up *mutually-reinforcing* package of public policy programs, as opposed to departmental budget silos and ad hoc "announceables"; and,
- total **alignment** between the method for setting infrastructure priorities and the basis for determining success (and incentives).[39]

2.42 The key feature of the United Kingdom's model is that it 'determines an economic growth budget for a designated region', called Gross Value Added (a local GDP). Where a region exceeds its growth budget it receives a fiscal reward—'a share of the windfall tax arising from additional economic growth'. The model 'explicitly targets a package of infrastructure projects that lift a region's economic capacity over a long-term timeframe'.[40]

2.43 The National Growth Areas Alliance believed the United Kingdom's City Deals approach had promise:

> Its features are that it is focused on collaboration across an economic catchment or region; the infrastructure that will drive economic growth and other public policy goals is identified; the focus is on the package of projects across a region, not on individual projects; targets are agreed and, if exceeded, bonuses apply, much like our previous competition policy; and there is national government funding as a base and private sources are leveraged. This gets away from the more parochial vying for individual projects and is able to encompass both big-ticket infrastructure projects and smaller scale projects …[41]

2.44 In its submission, the Bus Industry Confederation highlighted the success of the United Kingdom model in 'better integrating strategic planning

39 Property Council of Australia, *Submission 22*, p. 4.

40 Property Council of Australia, *Submission 22*, p. 14.

41 Ms Ruth Spielman, National Growth Areas Alliance, *Committee Hansard*, 7 August 2014, p. 1.

processes and funding flows';[42] while Consult Australia advocated a similar approach based on the United Kingdom City Deals initiative that would 'propose new financing mechanisms delivered through a better understanding of the value and breadth of productivity benefits that flow, not just from individual projects, but from packages of projects and initiatives'.[43] The Property Council of Australia believed that 'a similar approach to Australia would deliver a much-needed cohesive policy to the way our cities and regions are planned and provided for'.[44]

2.45 The Committee does not intend to provide an analysis of whether the United Kingdom City Deals model would be applicable in the Australian context. It acknowledges, however, that the South East Queensland Council of Mayors in conjunction with both the Queensland Government and Property Council of Australia have commissioned an independent analysis to consider its adaptability within the Queensland Government's infrastructure delivery framework.[45] Whether such arrangements would be constitutionally valid under Australia's federal system of government, is a matter for the Australian, state and territory parliaments and subsequent interpretation by the High Court of Australia of relevant constitutional implications.

Preservation of land corridors for infrastructure

2.46 There is a need for a strategic approach to the acquisition, preservation and planning of land corridors so that they can best be utilised for future infrastructure needs. The complexity of the issue is highlighted by comments in the Productivity Commission's report, which states:

> Delays in identifying and acquiring land to be set aside for future corridors has the potential to significantly increase the cost of the development and ongoing operation of infrastructure, which in turn, may distort project selection decisions. Failure to protect corridors or adequately reserve land can result in development encroaching on preferred routes, selection of sub-optimal routes or expensive alternatives (such as tunnels, which can be eight to ten times more expensive than comparable surface alternatives) …[46]

42 Bus Industry Confederation, *Submission 4*, p. 11.

43 Consult Australia, *Submission 2*, p. 4.

44 Ms Caryn Kakas, Property Council of Australia, *Committee Hansard*, 29 August 2014, p. 9.

45 South East Queensland Council of Mayors, *Submission 17*, p. [3].

46 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 275.

2.47 The need for appropriate identification and reservation of land corridors was supported by a range of inquiry participants. The Australian Constructors Association stated that Governments should act 'to secure parcels or corridors of land to ensure that implementation costs are reduced' as part of a long term planning process. This would also have the benefit of allowing the community 'a clear understanding of the impact of development near areas identified for major projects'.[47] The Australian Logistics Council noted that the failure to protect transport corridors would lead to encroachment and ultimately sub-optimal or expensive alternatives. The Council believed that corridors should not merely be reserved, but that infrastructure plans should identify how these corridors will be funded.[48]

2.48 Several State and Territory jurisdictions indicated planning strategies through which they identified and protected future infrastructure corridors.[49] The problem, according to the NGAA, was that:

> … you might get a state government plan signalling in its documents that certain land is strategically important for future requirements but not always being able to go in a timely manner to the next step of committing, via a public acquisition overlay, to purchasing it down the track and then, following that, actually getting the infrastructure that was envisaged there. That can be decades. Land can be identified but without the next steps necessarily occurring.[50]

2.49 The Department of Infrastructure and Regional Development advised the Committee that there are a number of impediments to land acquisition, including:

- conflict between the 'buy now' and 'buy later' arguments;
- resistance to investing resources to protect long term strategic corridors well in advance of detailed investigations to demonstrate current need and/or refine the locations; and
- difficulties in accurate strategic long term planning predicting growth, including the form that future infrastructure(s) might take, as well as which sectors might use a future corridor.[51]

2.50 The Victorian Government Department of Transport, Planning and Local Infrastructure's submission outlined the process that it uses for the

47 Australian Constructors Association, *Submission 16*, p. 4.

48 Australian Logistics Council, *Submission 6*, p. 6.

49 Northern Territory Government, *Submission 15*, p. 5; Victorian Government, *Submission 28*, p. 5; Australian Academy of Technological Sciences and Engineering, *Submission 27*, p. [4].

50 Ms Ruth Spielman, National Growth Areas Alliance, *Committee Hansard*, 7 August 2014, p. 4.

51 Department of Infrastructure and Regional Development, *Submission 11*, p. 7.

acquisition of land. This includes a statutory mechanism for the acquisition of land which includes the ability to control nearby development that may be in conflict with future planning purposes for which the particular land is reserved.[52] A key point in the submission is that:

> It is important to note that reservation of corridors, especially those for nationally significant infrastructure, can carry long term costs for Government. In many instances, these costs are contingent, and budgeting for uncertain financial requirements for ongoing corridor protection poses a major challenge when framing an annual budget.[53]

2.51 The Committee notes the current Australian Government's commitment to the development of the Melbourne – Brisbane inland railway to serve the east coast freight market.[54] The Committee notes the views of some inquiry participants who have called for further planning to identify and protect appropriate land corridors for a future east coast high speed rail network.[55]

Australia's future freight task

2.52 Australia's geography both domestically and in relative international terms means that the movement of goods is reliant on a well-integrated and adaptable freight network. Estimates have suggested that Australia's freight task (both inbound and outbound) is set to double by the year 2030.[56]

2.53 The Department of Infrastructure and Regional Development's submission to the inquiry highlights the work of the Bureau of Infrastructure, Transport and Regional Economics which is currently mapping Australia's future freight task including likely routes and volume of freight.[57]

2.54 COAG's Standing Council on Transport and Infrastructure oversees the National Land Freight Strategy. The Strategy is 'a partnership between the Commonwealth, State, Territory and local governments and industry to

52 Victorian Government, *Submission 28*, pp. 5–6.

53 Victorian Government, *Submission 28*, p. 6.

54 Department of Infrastructure and Regional Development, *Rail*, (viewed 5 November 2014) <http://investment.infrastructure.gov.au/funding/projects/rail.aspx >.

55 See for example: The Hon Mr Anthony Albanese MP, *Committee Hansard*, 1 October 2014, p. 3; Australasian Railway Association, *Submission 14*, p. 11; The Hon Tim Fischer AC, *Submission 31*.

56 Department of Infrastructure and Regional Development, *Submission 11*, p. 4.

57 Department of Infrastructure and Regional Development, *Submission 11*, p. 8.

deliver a streamlined, integrated and multimodal transport and logistics system, capable of efficiently moving freight throughout Australia'.[58]

2.55 The Strategy's objective:

> … is to improve the efficiency of freight movements across infrastructure networks, minimise the negative impacts associated with such freight movements and influence policy making relevant to the movement of freight. The Strategy's long term outcomes are to ensure:
>
> - an efficient, productive and competitive national land freight system;
> - a sustainable land freight system that responds to growth and change; and
> - that policies affecting land freight are aligned and coherent across governments.[59]

2.56 With respect to future freight requirements, the Department of Infrastructure and Regional Development stated that:

> Reconciling land use planning and interface issues such as noise complaints, traffic congestion, and urban amenity immediately adjacent to freight intensive activities (major intermodal terminals, industrial zones or port precincts) and their adjoining infrastructure corridors has been identified by the freight industry, as being amongst the most significant future challenges in major metropolitan and developing regional centres. Such pressures will only intensify with predicted growth in urban development as well as the freight task, and therefore effectively protecting land for freight and reserving land for future transport corridors in general is essential to protecting economic growth.[60]

2.57 The Australian Logistics Council sees merit in ensuring that freight corridors form an integral part of future land corridor planning. Its submission makes a number of salient points in this regard including that:

- high level planning documents for all governments for transport corridors should identify how preservation of land corridors designated for freight purposes will be funded;
- that there be intergovernmental agreement on planning processes for freight routes;

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58 Council of Australian Governments, Standing Council on Transport and Infrastructure (2012) *National Land Freight Strategy: a place for freight*, p. 1.

59 Council of Australian Governments, Standing Council on Transport and Infrastructure (2012) *National Land Freight Strategy: a place for freight*, p. 1.

60 Department of Infrastructure and Regional Development, *Submission 11*, p. 5.

- that such routes be placed on the National Land Transport Network;
- that key criteria should be developed when identifying key freight routes; and
- that the National Corridor Protection Scheme be expedited.[61]

Committee conclusions

2.58 The Committee notes evidence that stresses the importance of the preservation of land corridors, particularly those dedicated to freight, for future infrastructure needs. When preserving land for future infrastructure use, consideration should be given to factors such as the proposed timeframes; relevant cost-benefit analysis; alternative or cheaper options for infrastructure provision; relevant future maintenance and safety considerations; and wider social and economic implications of the decision to preserve land at a particular time. Governments should also ensure that proposed corridors are included or in line with existing infrastructure plans and strategies such as the National Land Freight Strategy.

Recommendation 4

2.59 **The Committee recommends that the Australian Government via COAG pursue designation of land corridors for the development of significant infrastructure projects on the basis that these are integrated into the infrastructure planning process of relevant jurisdictions and are supplemented by a demonstration of future need.**

Skills and capabilities

2.60 The Productivity Commission noted in its Public Infrastructure report that skill shortages resulted in some cost increases, delays and projects not proceeding.[62] While these skill shortages periodically affected a range of occupations related to infrastructure development, including technical operators and construction professionals, the main focus of the evidence presented to the Committee was skill deficits in public sector procurement and engineering. Procurement skills will be dealt with in Chapter 4, with

61 Australian Logistics Council, *Submission 6*, p. 3.

62 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 34.

the recommendation that special procurement agencies be established in which public sector procurement expertise may be concentrated.

Engineering skills

2.61 One skillset in particular that has been highlighted to the Committee is engineering skills. In its submission, Consult Australia stated:

> Privatisation of public services since the 1990s has led to a loss of public sector engineering expertise, which has had a negative impact on the efficiency of public sector procurement. Importantly, the transfer of training responsibility from the public sector engineering-related agencies to private sector engineering providers has not been fully acknowledged by government, nor allowed for in procurement practices. This has led to an under-development of skills over the past two decades.[63]

2.62 Engineers Australia also emphasised the loss of engineering skills in the public sector, noting that engineering skills within the public sector have been significantly down-sized over time,

> … to the point where the public sector's ability to manage engineering contracts and capacity to adequately assess the engineering competencies of contractors and sub-contractors has been severely compromised.[64]

2.63 The lack of public sector engineering skills and reliance on outsourcing posed risks to the public sector's planning and procurement capabilities because of:

- The inability to manage engineering contracts because contracting staff lacked the necessary technical expertise.
- The inability of contract staff to adequately assess the engineering competencies of contractors and sub-contractors.[65]

2.64 Engineers Australia did not believe the solution to this problem required 'full reversal of the process' of deskilling 'and the restoration of all former structures'. Rather, it argued that 'a combination of internal engineering competence and external resources could meet requirements'. Engineers Australia noted that 'the precise mix depends on the circumstances of individual agencies and the projects under consideration'.[66] A similar observation was made by the Productivity Commission.[67]

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63 Consult Australia, *Submission 2*, pp. 8–9.

64 Engineers Australia, *Submission 1*, p. 1.

65 Engineers Australia, *Submission 1*, p. 6.

66 Engineers Australia, *Submission 1*, p. 6.

67 Mr Peter Harris, Productivity Commission, *Committee Hansard*, 27 August 2014, pp. 4–5.

2.65 One factor in the loss of engineering skill was intermittency, the loss of employment opportunities for engineers during downturns in infrastructure procurement activity. Lack of continuity in employment was a major disincentive for engineers, and had the impact on infrastructure procurement of skilled engineers leaving the sector during downturns in activity then having to be replaced during upturns. Greater continuity of employment was seen as crucial in retaining engineering skills.[68]

2.66 Another problem facing the engineering profession and their employers was consistency of standards. Fully competent engineers within Engineers Australia were recognised with chartered status, but there was no mechanism to verify that there are comparable standards prevailing among non-members. Engineers Australia favoured a national registration system for engineers,[69] 'administered by States and Territories, with registration criteria equivalent to Engineers Australia's stage 2 competencies'. Engineers Australia believes that such a system is necessary to:

- Establish a nationally consistent register of engineers who have demonstrated full competence against internationally benchmarked standards, who practice in line with, and are committed to a code of ethics and who actively maintain currency with engineering technologies and practices.
- Reduce red tape; a consistent national registration scheme would replace fourteen inconsistent, partial registration schemes applying across States and Territories.
- End restrictions in these existing schemes on mobility of engineers and the bureaucratic and financial barriers to engineers wishing to practice in more than one jurisdiction.
- Fully assess the competence of migrant engineers who between 2006 and 2011 accounted for 71% of the increase in the supply of engineers.
- Enable effective action to be taken against engineers who practice negligently or unethically as is the case in medicine and law.
- Provide the framework for assessing the numbers of fully competent engineers in Australia, enabling more effective engineering work force planning and policy making.[70]

68 Engineers Australia, *Submission 1*, pp. 8–9; Mr Andre Kaspura, Engineers Australia, *Committee Hansard*, 25 June 2014, p. 2.

69 Engineers Australia, *Submission 1*, p. 2.

70 Engineers Australia, *Submission 1*, pp. 7–8.

Committee conclusions

2.67 The Committee believes that maintaining strong planning and procurement skills within the public sector is critical to the effective and efficient provision of public infrastructure within Australia. The Committee acknowledges, however, that a balance must be struck between retaining skills in-house and procuring them from consultants in the private sector. A mixture of both is the optimum for retaining knowledge and skill while promoting innovation.

2.68 The need to attract and retain engineers skilled in the planning and operation of public infrastructure has been highlighted in the evidence presented to the Committee. Longer term planning horizons will assist in the retention of skilled engineers, as will opportunities to work within the public sector. Along these lines, the Committee notes the recommendations of the 2012 Senate Education, Employment and Workplace Relations References Committee report on the shortage of engineering and related employment skills. This report made a number of recommendations for promoting engineering employment, including creating senior technical engineering roles with the Australian Public Service; requiring advice from persons with specialist technical knowledge in the procurement of engineering infrastructure; and the development of a national registration scheme for engineers.[71]

2.69 The Committee believes that the development of a national registration scheme for technical operators, construction professionals and engineers should be a priority.

Recommendation 5

2.70 **The Committee recommends that the Australian Government, through COAG, pursue a national system for the registration of infrastructure-related professions including those in the construction and engineering sectors so as to provide recognition of qualifications across Australia to better promote the efficient and cost-effective development of infrastructure.**

71 Senate Education, Employment and Workplace Relations References Committee, *The Shortage of Engineering and Related Employment Skills*, Parliament of Australia, July 2012, pp. vii–viii.