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Resolving the Australian Local Infrastructure Crisis through a Federal Infrastructure Asset Fund

Brian Dollery*, Joel Byrnes* and Lin Crase**

**School of Economics, UNE & **School of Business, La Trobe*

Abstract: The worsening crisis in Australian local infrastructure planning, maintenance and renewal has finally captured the attention of public policy makers. While uncertainty still surrounds the magnitude of the crisis, several recent public inquiries have investigated the problem and advanced recommendations for its remediation. Despite the undoubted severity of the problem, to date the academic literature has largely ignored the Australian local infrastructure crisis. This paper represents an exploratory attempt to remedy this neglect by considering the dimensions of the problem as well as various suggestions aimed at rectifying the situation. The paper also seeks to add to the discussion by proposing a tentative solution in the form of a Commonwealth Infrastructure Asset Fund that could operate in a fashion analogous to the current Roads to Recovery Program.

Keywords: Australian local government; local infrastructure; finance.

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Centre for Local Government, School of Economics, University of New England, Armidale NSW 2351. Phone: + 61 2 6773 2500, Fax: + 61 2 6773 3596. Email: bdollery@une.edu.au

Introduction

Widespread recognition of a crisis in local infrastructure has shifted the debate in Australian local government away from its recent emphasis on structural reform to the thorny question of financial sustainability. While the problem of financial sustainability in Australian local government has several different dimensions, including difficulties in satisfactorily defining financial sustainability, infrastructure accounting and management practices, inadequate sources of revenue, inexorably increasing costs and a continued reluctance on the part of local councils to use prudent borrowing, attention has now focused squarely on the local infrastructure management and renewal.

The existence of a crisis in the asset base controlled by Australian local councils is not in doubt. Indeed, several recent public inquiries into the problem in various jurisdictions have all reached remarkably similar conclusions. For instance, a report prepared by the Victorian Auditor-General in 2002 determined that, over the past five years, local infrastructure renewal expenditure had been deficient by between \$1.4 billion and \$2.75 billion (Hawker Report 2003, 60). The South Australian Financial Sustainability Review Board's (2005, 9) *Rising to the Challenge* Report concluded that, over the past ten years, 'negative net outlays have accumulated into an infrastructure renewal/replacement backlog that is estimated to be in excess of \$300 million'. In a similar vein, the Independent Inquiry into the Financial Sustainability of NSW Local Government's (2006, 13) produced a comprehensive Final Report entitled *Are Councils Sustainable* which noted that 'overall under-spending on infrastructure renewal has been of the order of \$400-600 million per annum'. Moreover, not only 'would it cost over \$6.3 billion to restore these assets to a satisfactory condition', but also 'a further \$14.6 billion is needed to replace existing assets over the next 15 years', without taking into consideration the 'new asset needs for a growing and shifting population'.

Both the ongoing Queensland Local Government Association (LGAQ) (2006) *Size, Shape and Sustainability* (SSS) project and the current Western Australian Local Government Association (WALGA) (2006) *Systemic Sustainability Study: In Your Hands - Shaping the Future of Local Government in Western Australia* Inquiry are likely to reach analogous conclusions for their respective state systems. Finally, the *Local Government National Report, 2004-05*, prepared by the Local Government Section of the Department of Transport and Regional Services (DOTARS) (2006b, 80, Table 4.2), has observed that on local roads alone its 'estimated annual road renewal shortfall' represented \$303 million across Australian local government.

Various solutions have been advanced to ameliorate the Australian local government infrastructure crisis. For example, the South Australian Financial Sustainability Review Board's (2005) has focused on the urgent need for improved financial governance in all aspects of local council operations, including asset management. By contrast, the Independent Inquiry into the Financial Sustainability of NSW Local Government (2006) has called for the adoption of total asset management systems by councils; increased monitoring by the Department of Local Government and the Commonwealth government; greater funding through increased grants, efficiency savings, and higher rates, fees and charges; cash funding of asset depreciation; a shift in responsibility for regional roads in rural shires to the state government; and more borrowing by councils to finance infrastructure. To some extent, these conclusions echoed the recommendations of the earlier Commonwealth House of Representatives Standing Committee on Economics, Finance and Public Administration ['Hawker Report'] (2003) entitled *Rates and Taxes: A Fair Share for Responsible Local Government*, except it added the notion of tying all Commonwealth grant to local government to infrastructure for a specified period of four years. Finally, Beresford-Wyllie, Watts and Thurairaja (2006) have argued for greater use of Public Private Partnerships (PPPs) to alleviate infrastructure funding constraints.

Despite the undeniable significance of the local government infrastructure crisis, and the concomitant need for debate on the genesis and evolution of the problem, the economic and social dimensions of the problem, and the nature of optimal public policy formulation, these questions have been largely ignored in the academic literature on Australian local government, with some notable exceptions (Beresford-Wylie, Watts and Thurairaja 2006; Dollery and Crase 2006; and Dollery, Crase and Byrnes 2006). There is thus an urgent need to remedy this unfortunate neglect. The present paper seeks to remedy this oversight by providing an initial exploratory assessment of the nature of the problem, an evaluation of the various policy proposals aimed at rectifying the situation, as well as advancing a partial solution in the form of a Commonwealth Infrastructure Asset Fund that could operate in a fashion analogous to the current *Roads to Recovery* Program.

The paper itself is divided into six main parts. Section 2 provides a tentative synoptic review of the dimensions of the problem and some of the difficulties involved in its resolution. Section 3 considers various policy proposals that have been put forward to deal with the problem. Section 4 sets out a new approach in the form of Commonwealth Infrastructure Asset Fund. Section 5 explores the operational aspects of a Federal Infrastructure Asset Fund. The paper ends with some concluding remarks in section 6.

Australian Local Government Infrastructure

Local government infrastructure covers a wide variety of asset types. The Local Government National Report, 2004-05 (DOTARS) (2006b, 77) offers the following description of the infrastructure responsibilities of local councils in Australia: 'Local government plans, develops and maintains key infrastructure for its communities', which includes 'local roads, bridges, footpaths, regional aerodromes, water and sewerage (in Queensland, regional New South Wales and Tasmania), stormwater drainage, waste disposal, public buildings, parks, recreational and cultural facilities'. Local government 'also has planning responsibilities that affect provision of infrastructure, whether by government

or by business' that encompass 'town planning land rezoning, subdivision approval, development assessment and building regulation'.

While this description provides a reasonably accurate view of Australian local government infrastructure responsibilities in aggregate, it nonetheless serves to obscure some important aspects of the composition of infrastructure and infrastructure governance that are significant at a more disaggregated level. For instance, the Independent Inquiry into the Financial Sustainability of NSW Local Government (2006, 114) has stressed that 'each council has a different combination of infrastructure and infrastructure financing pressures'. More specifically, Roorda (2006) has identified several substantial differences between various types of council. The spatial size of a particular local government area can have a crucial bearing on its infrastructure responsibilities, with rural councils typically burdened with relatively large road networks, the need to provide multiple facilities across large shires with a scattered population density, and difficulties in acquiring the requisite technical expertise to manage infrastructure adequately. A related problem resides in the withdrawal of state and Commonwealth services in some lightly populated and isolated shires, where some local councils have been obliged to offer human services, such as aged care facilities and child care centres, which may be infrastructure intensive. Similarly, the geographical and environmental circumstances of individual councils can have a decisive impact on their infrastructure requirements, as perhaps exemplified by the provision and maintenance of marine infrastructure in coastal council jurisdictions.

Secondly, while the identification of local infrastructure responsibilities thus presents some difficulties, these difficulties are nevertheless dwarfed by the problems inherent in determining the value of local government infrastructure in Australia. The *Local Government National Report, 2004-05* (DOTARS) (2006b, 77) has attempted to provide at least some measure of the value of the asset base controlled by Australian municipalities. It has estimated that total local government assets could be valued at \$170 billion at 2003/04 prices

net of depreciation, chiefly comprised of \$50 billion in land, \$12 billion in buildings, and \$103 billion in 'other construction infrastructure', including roads worth around \$80 billion. The main source of these estimates seems to reside in data collected by the Australian Bureau of Statistics.

However, gross estimates of this kind gloss over numerous conceptual and empirical problems associated with the calculation of the value of local government infrastructure. At least five distinct types of infrastructure expenditure can be identified, although in practice it is often difficult to differentiate between classes of expenditure in local government accounting systems. In the first place, a new infrastructure asset can be created where none existed before, such as a new sports facility. Secondly, current assets require annual routine maintenance to prevent undue degradation. Thirdly, where current maintenance has been inadequate or insufficient, 'backlog maintenance' expenditure is required to reverse any unnecessary deterioration that has occurred as a consequence. By contrast, 'asset renewal' expenditure consists of funds that aim to reinstate an asset to its original state or replace an asset when its economic life is exhausted. Finally, 'asset enhancement' occurs when an existing asset is boosted beyond its original intended service capacity.

These and other complexities in asset expenditure require sophisticated asset accounting and management systems that are taxing for all public and private organizations, including local councils. Thus, every local municipality should have in place a 'total asset management system' capable of accommodating all aspects of asset governance and expenditure across the entire life of the asset, not least asset finance, asset acquisition, asset registration, asset accounting, asset operations, asset maintenance, asset renewal, asset enhancement, and asset disposal.

From a global perspective, these complications are made worse by the fact that different local government jurisdictions across Australia do not apply uniform regulations and guidance to councils, and within each jurisdiction, not

only is oversight of council performance patchy, but the degree of council compliance varies considerably. Some of these problems can be illustrated with reference to the findings of the Independent Inquiry into the Financial Sustainability of NSW Local Government (2006). For example, in New South Wales local councils are obliged to meet two sets of asset reporting requirements - Section 428(d) of the Local Government Act (NSW) 1993, Special Schedule 7 'Condition of Public Works' and AAS27 - Accounting Standards for Government. They are also offered some assistance in asset reporting and management by means of the *Local Government Asset Accounting Guide* provided by the NSW Department of Local Government. The Department is responsible for monitoring compliance with the two legally binding asset reporting requirements. However, councils do not have to adhere to any of the widely recognized generic asset management processes, such as the *International Infrastructure Management Manual*, or even the NSW Government's own *Total Asset Management* system that applies to all state agencies.

After extensive deliberations into the actual level of asset management and reporting in NSW, the Independent Inquiry (2006, 126) found that 'the quality of infrastructure reports is generally poor, and auditing by the Department of Local Government is minimal'. It concluded that 'local councils are not required to regularly estimate the fair value of their physical assets (e.g. replacement value of roads)' and 'nor do councils use consistent depreciation rates for estimating the annual consumption of their assets'. In addition, 'most councils do not have asset management systems or formally adopted service levels to monitor and assess their infrastructure position'. Consequently, council accounts 'significantly understate the true magnitude of their infrastructure problem' (Independent Inquiry, 135).

The NSW Independent Inquiry (2006) is not alone in its bleak assessment of asset management by councils. Similar investigations into other Australian state jurisdictions have reached equally dismal conclusions. For instance, in its Interim Report *Systemic Sustainability Study: In Your Hands - Shaping the*

Future of Local Government in Western Australia, the ongoing Western Australian Local Government Association (WALGA) (2006, 25) Inquiry concluded that ‘in aggregate, in 2004/05, the annual capital expenditure of WA councils on the renewal or replacement of their existing non-financial assets fell \$110 million short of the amount necessary to ensure that the service capacity of these assets remained unchanged, representing a massive operating deficit’. Moreover, it noted that in Western Australia ‘the infrastructure backlog is estimated to be close to \$1.75 billion’. From the perspective of asset management and reporting, the situation is comparable to NSW. However, ‘unlike NSW and SA, there are minimal accounting requirements for councils to group assets into uniform classes’ in WA. In addition, ‘there is no equivalent in WA to the guidance provided by the NSW Department of Local Government on asset classifications’ (WALGA, 30). Furthermore, WA councils are not obliged to use consistent depreciation rates for given types of asset and the range of ‘useful life’ estimates for identical assets show wide variation. As a result, ‘this reduces both the consistency and comparability in the asset data reported by WA councils’.

The South Australian Financial Sustainability Review Board’s (FSRB) (2005) report titled *Rising to the Challenge* expressed many similar concerns with its NSW and WA counterparts. Asset management and reporting were found to be deficient in many respects. For example, Volume 2 of the Report demonstrated substantial differences in the asset lives used to depreciate the same non-financial assets in different councils. The Report concluded that ‘regrettably, these possibilities cast a cloud over the analysis of council finances based upon reported depreciation’ and thus ‘standardizing depreciation (and asset valuation) policies, and ensuring their correct implementation, must be a high priority for local government in South Australia’ (FRSB 2005, Volume 2, 23).

Finally, we should consider where the infrastructure crisis is most severe. Put differently, is it possible to identify specific categories of local government that are the most acutely afflicted by the local infrastructure crisis? Not

surprisingly, in general, available empirical evidence on this question is strongly suggestive that small rural shires with large spatial jurisdictions suffer the most not only in terms of infrastructure renewal and replacement backlogs, but also from asset management and reporting deficiencies. For instance, in his research report commissioned by the Independent Inquiry into the Financial Sustainability of NSW Local Government, Roorda (2006, 18) observed that 'councils in areas of static or declining population are experiencing the end of the asset lifecycle' and this type of local government is predominantly situated in non-metropolitan rural parts of Australia where 'the rural boom is over and councils are left with declining infrastructure without an adequate revenue base or a national policy framework for determining the way forward'. Similar sentiments are expressed in the current Queensland Local Government Association (LGAQ) (2006) *Size, Shape and Sustainability* (SSS) project, the ongoing Western Australian Local Government Association (WALGA) (2006) *Systemic Sustainability Study: In Your Hands* Inquiry and other significant documents. Anecdotal evidence on the issue also abounds; for example, delegate after delegate from country councils at both the 2006 NSW Local Government Managers Australian Annual Conference in Port Macquarie on 15 September and at the *Local Government Financial Sustainability Summit* of the Municipal Association of Victoria held in Melbourne on 12 September 2006 stressed that small rural shires could never hope to remove local infrastructure backlogs given their present resources. However, it must be stressed that this general relationship between rural councils and infrastructure decline does not enjoy unanimity. For example, the South Australian Financial Sustainability Review Board's (2005, Volume 2, 2) noted that 'differences in council size (and whether a council was formed by amalgamation or not) and location (urban/rural) seem to play a relatively minor role in explaining the incidence of operating deficits and substantial infrastructure renewal/replacement backlogs'.

What conclusions can be drawn from this brief assessment of Australian local government infrastructure? At least three tentative lessons emerge. In the first place, it seems that while the local infrastructure crisis impinges on all local

councils, the nature of problem differs by type of council, since the infrastructure needs of particular councils and their ability to meet these needs varies widely across all Australian local government jurisdictions. Secondly, asset measurement and reporting in most local authorities is so bad as to render efforts to accurately measure the extent of the local infrastructure crisis almost impossible. This is compounded by the fact that not only are the conceptual and empirical difficulties in local asset assessment intrinsically difficult to overcome, but many municipalities simply lack the requisite technical skills to cope with these difficulties. Finally, the weight of opinion in the local government sector suggests that small rural shires are the most heavily afflicted by the asset crisis and, without substantial assistance, will not be able to resolve the problems.

Proposed Solutions to the Problem

Various solutions to the Australian local infrastructure crisis have been proposed. This section provides a synoptic reviews of the four most important policy proposals: The Commonwealth Hawker Report (2003); South Australian Financial Sustainability Review Board (2005); the Independent Inquiry into the Financial Sustainability of NSW Local Government (2006); and Beresford-Wylie, Watts and Thurairaja (2006). At the time of writing, neither the Queensland Local Government Association (LGAQ) (2006) Size, Shape and Sustainability (SSS) project nor the Western Australian Local Government Association (WALGA) (2006) Systemic Sustainability Study: In Your Hands - Shaping the Future of Local Government in Western Australia Inquiry have presented their final recommendations. Accordingly, these latter inquiries are omitted from the analysis.

The Hawker Report (2003) *Rates and Taxes: A Fair Share for Responsible Local Government* made two formal recommendations for dealing with local infrastructure. Recommendation 9 proposed that 'local government bodies be required to audit the state of their infrastructure' employing 'a nationally

accepted methodology' and 'provide status reports to the Commonwealth Grants Commission' to be used as a criterion for Financial Assistance Grants (FAGS) (The Hawker Report, 62). Recommendation 10 held that federal Special Purpose Payments (SPPs) to local government 'should be conditional on states not reducing their effort' (The Hawker Report, 66). In addition, the Hawker Report endorsed five methods of funding the 'infrastructure shortfall': Tie increased federal funding to infrastructure for a fixed period; local government must raise more revenue itself; private sector 'involvement and investment' should be raised; 20 per cent of 'fuel taxes and public transport initiatives to continue the R2R program'; and the adoption of a 'whole of government approach to infrastructure funding' (The Hawker Report, 67).

In contrast to the very broad and rather unfocused proposals of the Hawker Report, South Australian Financial Sustainability Review Board (2005) concentrated on the question of financial governance as the key to tackling both the infrastructure problems in SA local government as well as the larger issue of financial sustainability. The Review Board advanced several recommendations that deal specifically with the local infrastructure problem. In particular, the Board (2005, 15) suggested that the South Australian Local Government Act 1999 be amended to incorporate a 'standard definition of "financial sustainability"' focused on the 'long-term financial performance' of local authorities. In addition, the local government sector should adopt 'a standard set of key financial indicators' that include a measure of the annual 'net outlays on the renewal or replacement of existing assets' as well as an indicator of 'net borrowing/lending' that encompasses both operating and capital expenditure. Furthermore, the Board (2005, 16) provided a formal definition of capital expenditure sustainability:

A council's annual *capital financial performance* is sustainable if capital expenditure on the renewal or replacement of existing assets on average approximates the level of a council's annual depreciation expense, because any shortfall of such capital expenditure against annual depreciation expense would involve future ratepayers being left

with an excessive burden when it comes to replacing or renewing the council's non-financial assets (original emphasis).

The Board also recommended that councils valued their non-financial assets annually by means of an appropriate cost index and more comprehensively at five yearly intervals by considering 'actual changes in market values'. Moreover, in its annual report, a council should distinguish between the renewal or replacement of existing assets and the acquisition of new assets or the upgrading of existing assets. It should also provide an annual estimate of its infrastructure backlog and publish this as a note to its annual financial statements. The Board called for the development and application of a set of 'best practice' principles to financial reporting in SA local government. Finally, at a more substantive level, the Review Board (2005, 19) recommended that 'councils make prudent use of borrowing to finance the acquisition of new infrastructure assets and the upgrading of existing assets and, where considered appropriate, to fund the elimination of any major backlog in the renewal or replacement of existing assets'.

Many of the recommendations of the Independent Inquiry into the Financial Sustainability of NSW Local Government (2006) echo those of the Hawker Report (2003), although in a much more thorough and systematic manner. In total, the Independent Inquiry submitted 49 recommendations, four of which were specifically directed at local government infrastructure. Recommendation 6 called for the state government to provide incentives to encourage all councils to adopt a total asset management system within three years. Recommendation 7 observed that, to 'overcome the infrastructure crisis', council funding should be increased by around \$900 million per annum by means of increased intergovernmental grants (\$200 million), cost savings by councils (\$200 million), and higher rates, fees and charges (\$500 million). However, the Independent Inquiry (2006, p.302) argued that, with the infrastructure backlog gap estimated at \$6.3 billion and the annual renewals gap estimated at \$0.5 billion per annum, the local government sector should borrow an additional \$5.3 billion (with an associated \$400 million in annual

debt charges). Recommendation 8 called for each municipality 'to fully cash-fund its depreciation within three to five years and dedicate such funds exclusively for asset renewals'. Finally, Recommendation 9 stipulated that 'the NSW state government assume responsibility for all regional roads in rural shires since councils do not have the financial capacity and asset management systems to maintain and renew them' (Independent Inquiry, 303).

In contrast to the Hawker Report (2003), the SA Review Board (2005) and the NSW Independent Inquiry (2006), the article by Beresford-Wylie, Watts and Thurairaja (2006) does not purport to provide a comprehensive solution to the local infrastructure crisis. Rather it considers the narrower question of how to enlist the assistance of the private sector. Beresford-Wylie, Watts and Thurairaja (2006, 6) begin their analysis on the assumption that 'there is still a gap between the public's expectations about the quality of and variety of local government assets available and local government's capacity to meet these expectations' and the hypothesis that 'Australian and state government grants are unlikely to increase in the short to medium terms'. Accordingly, 'local government may look towards alternative sources of funding such as leveraging private sector funds to finance more of its infrastructure'. They then provide a detailed synopsis of the various types of Public Private Partnerships (PPPs) suitable for securing this objective. On the basis of a recent survey of 132 local councils, they argue that around 40 per cent of all municipalities had used PPPs to finance activity other than 'service and management' contracts, with minimal differences between metropolitan and other kinds of local government. The three most important infrastructural assets funded were (in order): Recreation facilities; road/transport; and cultural, civic and/or library facilities. The outcomes of about 70 per cent of these arrangements were 'equal to expectations', with around 20 per cent falling 'below expectations'. Two chief difficulties were encountered with PPPs: 'The definition of contracts'; and a 'perceived lack of private sector interest' (Beresford-Wylie, Watts and Thurairaja, 10).

Despite these and other problems inhibiting the use of PPPs by local government, including legal difficulties, lack of adequate capacity on the part of councils, insufficient projects suitable for private sector involvement, tax disincentives, risk aversion, and 'access to low cost or subsidized finance' (p.12), Beresford-Wylie, Watts and Thurairaja (2006, 14) contend that 'as jurisdictions in Australia gain more experience with PPPs, adhere to PPP guidelines and share information, there is potential to improve local government capacity to enter into more complex PPPs'. However, a major shortcoming of their analysis is that nowhere do they address the thorny problem of how local authorities can finance PPPs. In many respects, this represents the kernel of the problem.

What general conclusions can be derived from this brief assessment of the four leading documents dealing with the alleviation of the local infrastructure crisis in Australia? In the first place, they are in complete agreement on the fact that local infrastructure renewal, maintenance and investment are unsustainable on present trends and decisive action is thus warranted. Secondly, apart from the narrowly focused approach of Beresford-Wylie, Watts and Thurairaja (2006), the three major reports all agree that asset management and reporting leave a great deal to be desired and that substantial reform in this area is necessary. Finally, the Hawker Report and the NSW Independent Inquiry are unanimous that additional sources of funding must be found, both within and without the local government sector, if disaster is to be averted.

However, both documents call for concerted action across several fronts, including increasing revenue flows to local government through higher rates, fees and charges, reducing local government costs through enhanced operational efficiency, larger grants from other tiers of government, and the reconfiguration of local government responsibilities relative to federal and state governments. Moreover, in common with the SA Review Board (2005), they assert that borrowing will have to form a significant part of an overall solution, without satisfactorily explaining how deficit financing will avert rather

than simply postpone financial crisis by inadequately demonstrating how local government can pay for debt servicing. Finally, they ignore the fact – demonstrated by the IRIS Research (2006) opinion polling commissioned by the NSW Independent Inquiry (2006) – that the Australian public is ill at ease with borrowing by local councils.

A Federal Infrastructure Asset Fund

Given the shortcomings of existing policy proposals aimed at alleviating the Australian local infrastructure crisis, it is thus worth exploring other possibilities. An obvious candidate resides in a federal government infrastructure assets fund that operates in a manner analogous to the current *Roads to Recovery* (R2R) funding program. The R2R program deals with road infrastructure which is not intrinsically different from other types of local government infrastructure.

In the Australian local government community, virtually universal agreement exists that the financial plight of many local councils would have been substantially worse had it not been for the Commonwealth government's R2R funding initiative. The R2R funding program represented a response to the widespread perception that the redemption of the declining local road network lay far beyond the financial capacity of local government. In 2000, the Commonwealth government announced that it would inject \$1.2 billion into local road renewal, about 70 per cent (or \$850million) of which was to be spent in rural and regional Australia (DOTARS, 2003, 1). While the R2R program was initially destined to run until June 2005, following a review of Commonwealth transport infrastructure financing, R2R was extended under the banner of AusLink and will now continue till at least 2009. In total, the program would have outlaid about \$2.55 billion in local road funding between 2001 and 2009 (DOTARS, 2006a, 7). In contrast to established practice in Australian federalism, the R2R distribution mechanism by-passes

state and territory governments completely, thus representing a direct grant from the Commonwealth government to local councils.

A Commonwealth asset fund to address other infrastructure needs in local government appears appropriate for at least four reasons. In the first place, recent experience suggests that state and territory governments seem unable or unwillingly to provide the massive quantum of funds required by the infrastructure crisis. This observation is reinforced by the fact that additional GST funding to these second-tier governments has failed to boost their grants to local councils through the various state grant commissions. Moreover, empirical evidence adduced by both the South Australian Financial Sustainability Review Board (2005) and the NSW Independent Inquiry (2006) seems to indicate that not only are the states and territories reluctant to increase monies paid through their local government grants commissions, but that the value of current grant payments has been falling in real terms for some time. This can be attributed to persistent cost shifting and other imposts by state governments. For instance, the NSW Independent Inquiry (2006, 18) observed while that the computation of the real value of grants from the NSW state government to local councils is complicated by the fact that data on grants is not published, information the Inquiry had obtained from the NSW Treasury indicated that grants had grown at an annual growth rate of 4.6 per cent over the period 1996/97 to 2003/04. However, over the same time period, the state government imposed numerous additional costs on local councils, especially in the area of environmental regulation. Although net effect of these additional costs on the value of state government grants is not known, and would be impossible to calculate in practice, it seems reasonable to infer that they would have reduced the real value below most accurate cost indexes for local government, such as Average Weekly Earnings (AWE).

Secondly, in contrast to almost all state and territory administrations, the Australian federal government has enjoyed substantial budget surpluses for some time. Unlike the states, it thus has the fiscal capacity necessary to provide the very large sums of money required to finance the reconstruction of

local infrastructure. Even if state governments were to overcome their present reluctance to increase funding to local councils, under current financial circumstances few states have the necessary resources to provide sufficient funding.

Thirdly, since payments can be made through a federal infrastructure fund directly to municipal authorities, they can thus bypass individual state grants commission's, each of which has developed different funding criteria, and therefore be calculated on the basis of uniform national guidelines. This can assist in reducing the current severe shortcomings in municipal asset reporting and management regimes by making funding contingent on the implementation of satisfactory asset and relatively uniform accounting procedures – a key recommendation of the Hawker Report (2003), the South Australian Financial Sustainability Review Board (2005) and the NSW Independent Inquiry (2006). A universally recognized asset management system - such as the International Infrastructure Management Manual (IIMM) – could thus readily be made obligatory for all recipient councils. Not only would an approach along these lines ensure an effective national local infrastructure asset accounting and management system, thereby improving asset management by all councils involved, but it would also generate consistent and comparable data on the state of Australian local infrastructure that would be of invaluable assistance to policy makers.

Finally, funding of this kind can be justified in terms of the standard theory of fiscal federalism on both equity and efficiency grounds given the inter-jurisdictional externalities that flow from sound local government asset infrastructure (see, for example, Oates 1972 and Dollery and Wallis 2001). The efficiency arguments underpinning this proposition rest on the health and other economic and social external benefits that derive from well-functioning local government service provision. In a highly mobile society, such as contemporary Australia, citizens frequently travel through numerous local government jurisdictions for both employment and recreational reasons and enjoy the facilities provided by local councils to which they make no financial

contribution. Significant inter-jurisdictional externalities are thereby created. In the theory of fiscal federalism, this gives rise to the standard policy prescription that higher tiers of government should ‘internalize’ these externalities through inter-governmental transfers proportionate to the value of the externalities concerned. In a federal system of government, the fiscal federalist model requires state governments to handle most transfers because most externalities occur within state boundaries. However, if a sufficient quantity of the required transfers is not forthcoming, then a ‘second-best’ policy prescription would enlist federal government finance to internalize these externalities.

The most relevant equity arguments invoke the widely accepted presumption that all Australian should enjoy adequate minimum standards of vital local services. This argument is already recognized by all state and territory local government grants commissions in their funding formulae which contain various disability factors that are designed to provide councils with the fiscal capacity to provide minimum standards of local service provision to their constituents. It is thus entirely uncontroversial to extend this principle to federal funding of essential local infrastructure apart from roads that are already catered for under the R2R program.

While this quadrilateral set of arguments can form the foundation for a federal government infrastructure assets fund, attention must also be paid to other aspects of the proposed fund, including the mechanics of its operations and its basic aims. We have argued that the primary objective of a federal infrastructure fund is to address the worsening infrastructure crisis by providing funding not otherwise available for this purpose. But this broad objective covers several more precise subsidiary dimensions of the question. Firstly, as we have argued earlier, anecdotal evidence abounds at local government conferences and elsewhere, which has been reinforced by the deliberations of the NSW Independent Inquiry (2006), that rural shires are particularly badly afflicted. Indeed, it appears that even if all prescribed measures were adopted to account, manage and report local infrastructure to

the highest standard, many of these small poorly resourced councils would still never be able to 'wipe out' their accrued infrastructure backlog. If this proposition is accepted, then a primary purpose of the infrastructure fund would be to place these councils in a position where they can undertake the necessary capital expenditure to remove maintenance and renewal backlogs by some agreed date. In other words, the federal asset fund would specifically target those rural shires that would otherwise be unable to rid themselves of their infrastructure backlogs.

This subsidiary aim of the fund has important implications for its operations. For instance, it could be argued that many, or at least some, of these councils many have developed infrastructure maintenance and renewal backlogs through their own inadequacies, such as limiting the growth of rates and fees and charges to placate their political constituencies. In this sense, a severe infrastructure backlog may thus represent a proxy for incompetence or even willful neglect in infrastructure management in the past by the councils in question. Accordingly, selecting these local authorities for favoured treatment by an asset fund simply rewards past mismanagement and thereby may encouragement similar behaviour by other municipalities in future. By the same token, historically well-run councils, with an adequate infrastructure base, would be disadvantaged for their past diligence. Put differently, providing councils with the worst local infrastructure the greatest financial subsidies represents a perverse incentive to future prudence. Nevertheless, the magnitude of any potential perverse effect needs to be considered against the possibly catastrophic consequences of inaction.

Some *a priori* observations can be made about the design of the architecture required for a system of inter-governmental transfers aimed at meeting a specific need since the proposed infrastructure asset fund seeks to address the current local infrastructure backlog and not all future local infrastructure investment. Dollery, Crase and Johnson (2006, 108) have identified six features of a needs-based grant system design. Firstly, the need in question must be common to all types of municipalities, although obviously the intensity

of the need may differ between different councils. Since all local authorities in Australia provide infrastructure, this criterion is readily met in practice. Secondly, needs must be capable of 'objective quantification' and the measurement process involved should not be too costly. As we have seen, this is highly problematic in the Australian local infrastructure milieu given limited knowledge and great uncertainty. In the third place, 'the relationship between a given indicator and the need being met by varying levels of expenditure must be verifiable'. Difficulties involved in asset assessment mean that no single indicator is likely to suffice in this regard, again implying that the third criterion is also hard to meet. Fourthly, neither local governments nor the grant-dispensing government should be able to 'manipulate an indicator'. Since more than a single indicator will be required, and high levels of uncertainty surround the efficacy of indicators anyway, 'manipulation' remains as a concern. Fifthly, any indicator employed must not be 'susceptible to large cyclical fluctuations'. This stipulation is less problematical since infrastructure backlogs do not typically change rapidly and are only prone to the business cycle insofar as costs may change with general price movements. Finally, 'each indicator will be independent', with 'only limited covariance between indicators'; a concern that cannot be ruled out in local infrastructure. In sum, difficulties inevitably involved in determining the infrastructure backlog needs of specific councils will mean that few of these 'ideal' attributes will be fully met.

Perhaps another point worth noting is the benefits of an architecture based on relatively clear and transparent processes. If funding is tied to real infrastructure deficiencies that are identified via a robust and consistent accounting approach, then this limits the scope for rent seeking.

An additional important consideration resides in the type of grant that should be employed. Bailey (1999, 181) has provided a useful schematic system for classifying local government grants by distinguishing inter alia between specific or earmarked grants for designated purposes and general or unconditional grants for a broad range of service provision. Since the purpose

of an assets fund is to remove infrastructure backlogs, specific grants will form its primary delivery instrument. Specific grants can be either lump-sum or matching grants, which have different efficiency characteristics. Because rural shires constitute the worst-case beneficiaries, grants will have to be lump-sum. Finally, since the fund aims to remove the infrastructure backlog, and not fund new infrastructure *ad infinitum*, grants must be close-ended rather than open-ended.

Finally, we need to consider the administrative costs associated with the infrastructure fund. Is it plausible to argue that this approach would also consume less public resources through administration than transferring funding by means of state government exchequers? This question can only be answered empirically and unfortunately no effort has thus far been expended at comparing the administration costs for R2R versus the traditional route via the states? Further work will have to address this issue empirically.

Operational Aspects of a Federal Infrastructure Asset Fund

From an operational perspective, a major advantage available to the R2R program was the extant database of roads throughout the nation. It was from this information source that decisions regarding the distribution of funds were made. In contrast, the recent inquiries into the financial sustainability of local government have drawn attention to the fact that a central, consistent and accurate database of local government owned or controlled infrastructure does not exist. As a result, it has been difficult to define the parameters of the infrastructure crisis. This presents a considerable challenge for the operation of an infrastructure fund. However, similar informational deficiencies may have hampered the operation of the Australian Government Water Fund (AGWF), a fiscal program designed to improve the state of the nation's water resources, were it not for the innovative approach taken in the implementation of that program.

In the case of the AGWF, rather than taking an all-encompassing stock take of necessary actions to ameliorate the deficiencies in the management of water in Australia, the responsible government department (the National Water Commission (NWC)) calls for proposals from interested groups, ranging from the local community to the Federal government. Once submissions are collated the NWC ranks the projects on merit against a set of criteria. Those projects with relatively more merit are given greater priority than those of a lesser ranking.

We contend that a similar arrangement could be applied to the infrastructure problem currently encompassing local government in Australia. Councils would be invited to 'make a case' for specific, well-defined infrastructure renewal projects. The structure of applications would be similar to those required under the AGWF, in which applicants are required to provide an evidence-based argument for the project, against a set of criteria.

In the case of the proposed Federal Infrastructure Asset Fund, appropriate criteria may include matters such as the benefit region of the asset and the extent to which the asset is likely to serve the community in question over the life of the asset. Although this may be relatively burdensome in terms of administration for applicant councils, the process appears to have worked reasonably well in the AGWF context. The exercise may also serve to crystallize the exact nature of the renewal task in the minds of applicants, leading to applications of relatively high quality. Since moral hazard is a generic concern when grants are being distributed from higher to smaller levels of government, the fund may make as a requirement the partial funding of a renewal project by the recipient council.

Given that we propose the fund should be financed by the Federal Government, it would seem sensible that administration of the fund rest with this level of government, analogous to the arrangements in place to distribute funding under the R2R program. Indeed, it would seem sensible that the Department of Transport and Regional Services, the Australian Federal

government department through which R2R funds are funneled, should administer the proposed Federal Infrastructure Asset Fund. This is particularly so since the National Office of Local Government is also located within this department. Furthermore, the relative independence of the Office throughout the infrastructure renewal debate may make it well placed to determine the necessary quantum of funding required to clear the infrastructure renewal backlog evident in Australian local government.

Concluding Remarks

The local infrastructure crisis in Australia has been almost completely ignored in the academic literature on local government despite the enormity of the problem. Accordingly, this paper has sought to remedy this unfortunate neglect by providing an exploratory analysis of the problem, assessing the main policy proposals that have been advanced, and presenting a preliminary case for a federal local infrastructure fund.

The main aims of the proposed assets fund are twofold: To provide sufficient funds over a predetermined time horizon to enable recipient councils to make good their infrastructure backlogs; and to use the associated grants system to oblige all Australian local councils to put in place an adequate nationally uniform asset accounting and management system to prevent the re-occurrence of a future local infrastructure backlog.

The process itself is envisaged as employing a system of federal specific, lump-sum close-ended grants, roughly analogous to the R2R program, which considers local infrastructure backlog need (rather than previous infrastructure management performance) and provides just sufficient finance for councils to overcome backlogs. In order to become eligible for funding, local councils must (a) demonstrate an infrastructure backlog; and (b) adopt an agreed asset management system.

It must be stressed that the exposition of the proposed federal local infrastructure fund represents an initial attempt at sketching both the need for such a fund and its operation. While more detailed work is required, particularly on the mechanics of the fund and the selection of beneficiary councils, we submit that the case for such a fund remains strong.

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