



## Greening our cities: from vision to reality

### Specifying required outcomes is key to unlocking green infrastructure funding

A clear view of the outcomes we want in our urban landscape is key to unlocking funding for green infrastructure. COVID-19 has highlighted, more than ever, the importance of green infrastructure and open space – as for many of us these features of our urban environment have been an important source of refuge during the challenges we've faced over the last year.

Green infrastructure (or blue-green infrastructure) refers to the tree canopy, parks, waterways, vegetation, wetlands and lakes in our cities. It delivers enormous benefits to our community, and it is much more than just pleasant 'greening'. Green infrastructure can make our cities cooler, healthier, more ecologically sustainable and attractive places to live and work.

Given the rate of development in our cities, the pressures on our urban environments and the adjacent natural environments, and the importance of integrating green infrastructure with other forms of infrastructure early in the development process,

there is an urgency to improve the provision of green infrastructure. This requires a step-up in funding.

In a previous bulletin, [Greening our cities: from vision to value](#), we observed that we need to actively embed consideration of green infrastructure into our planning and decision-making processes, and that a key element of this is identifying and accurately valuing the costs and benefits of green infrastructure.

This bulletin explores why greater clarity about the specific green outcomes (or standards) we need as a community is a key step in securing efficient and sustainable sources of funding for green infrastructure. As much as possible, policy and



funding certainty for green infrastructure needs to be in place ahead of the growth and development that is occurring across major metropolitan areas.

## There's value in green

In high-level strategic plans for cities and urban areas, governments are now recognising urban nature as genuine infrastructure that delivers valuable services to the community and which merits policy and planning priority. They recognise that the natural green (and blue) assets of a city can deliver real public benefits, including mitigating the urban heat island effect, protecting and restoring ecological health, promoting active lifestyles, and providing beautiful places to live, work and play.

A clear government policy vision for green infrastructure is a good (and necessary) start. To transfer this vision into reality, however, requires:

- clarity around the specific green outcomes or standards we as a community require
- the integration of these required outcomes into planning instruments and, where applicable, other legislative and regulatory requirements
- a step-up in funding of green infrastructure, to ensure required outcomes can be delivered and funded over time.

The clock is ticking. With climate change, higher levels of population and development, and increasing urban encroachment on the natural environment, there is an urgent need to improve the supply of green infrastructure in many cities. In particular, it needs to be planned, delivered and truly integrated with development and other forms of infrastructure, rather than being supplied as an afterthought (as often seems to be the case).

Western Sydney, for example, is continuing to undergo significant development via the Western Parkland City initiative. Green infrastructure is critical to ensuring this new region is productive, liveable and sustainable. Failure to adequately plan, integrate, fund and deliver green infrastructure would consign future generations of people living and working in the Western Parkland City to missing out on the

substantial benefits that flow from green infrastructure.

Below we outline some important steps for turning the vision for green, highly liveable urban areas into reality.

### **Providing certainty that there are enduring and sustainable funding frameworks ahead of investment occurring is crucial**

A range of stakeholders including developers, utilities and various levels of government will be involved in planning, funding and delivering critical green investments in our cities.

Providing certainty to these stakeholders ahead of investment and development occurring that there are sustainable frameworks for funding green infrastructure is crucial for ensuring this infrastructure is delivered effectively and efficiently.

Clear and certain funding frameworks can ensure that:

- Efficient signals are sent as to the cost of providing these services ahead of development occurring, creating certainty for developers, landowners and affected communities.
- Investments occur in a way and/or timeframe that gets the best value from existing and new infrastructure (say by preserving corridors, integrating green infrastructure with other forms of infrastructure, or by making higher cost investments today that are more resilient over the longer-term).
- Local governments are in a position to retain and enhance the capabilities required to deliver much of this investment, as well as monitor performance outcomes.
- Funding pathways meet community expectations that impacts are fair, equitable, consistent and create competitive growth areas.

## We need to be more specific in defining required green outcomes

Government policies and city plans often set out general or high-level objectives or targets for amenity and improved environmental outcomes. However, greater clarity is often required about the specific environmental, amenity and other green outcomes we want and need as a community.

Such green outcomes (or standards) should be set after robust analysis of their economic, social and environmental costs and benefits, and the costs and benefits of alternative outcomes.

In Australia, both the NSW and Australian Productivity Commissions have recently recognised that a lack of clarity around required green outcomes can act as a significant impediment to adequate funding of green infrastructure and hence achievement of green outcomes.

Greater clarity around required green outcomes would focus attention on how we as a community achieve these outcomes, including the specific governance, regulatory and funding arrangements that are required. In particular:

- who is responsible for achieving these outcomes
- how these outcomes are best achieved
- who should pay for these outcomes.

### **The Australian Productivity Commission's 2020 Research Paper on *Integrated Water Management – why a good idea seems hard to implement***

The Commission noted that City Plans recognise the importance of green open spaces for community health, well-being and urban cooling, but they often only include high-level 'motherhood statements'.

It cited a lack of clear and precise objectives (and subsequent allocation of responsibility and accountability) for urban amenity and enhanced

environmental outcomes as a key impediment to investment in integrated water cycle management.

It stated that until high-level aspirations are turned into more precise objectives, there is not a strong basis for normal project (and hence funding) assessment processes. These processes typically begin by identifying a specific problem that needs to be solved or objective that needs to be achieved, and then involve identifying and evaluating options to solve this problem or achieve the required objective at least net cost or greatest net benefit.

### **The NSW Productivity Commission's 2020 Review of Infrastructure Contributions in NSW**

The NSW PC found that, in terms of local infrastructure for new development areas, roads and drainage often take precedence over amenity and open space when funding is short. This is because the former are often considered 'essential' to unlock development. The implication being the latter is often considered discretionary.

The NSW PC also found that current open space standards for new development are outdated.

## Integrate specific green outcomes into planning and regulatory instruments

Once required green outcomes have been determined, they should be integrated into relevant policy documents, planning instruments and, where applicable, other legislative and regulatory requirements.

This should assist in putting green infrastructure on an equal footing with traditional or 'grey' infrastructure and help to ensure that green infrastructure is considered upfront and integrated with development and other forms of infrastructure rather than provided as an afterthought.

This upfront consideration of required green outcomes, and hence integration of green



infrastructure with other forms of essential infrastructure (e.g., transport, water) can be particularly important for efficiently achieving amenity and environmental outcomes.

The Australian Productivity Commission has noted that water infrastructure, for instance, can offer opportunities for enhancing urban amenity and environments (in addition to the traditional water and wastewater services that it provides). For example:

- stormwater management assets can provide recreational lakes or wetland habitat
- water easements and natural waterways can become corridors for recreation and habitat
- water systems can provide fit-for-purpose water to support greenery and open space (such as providing recycled wastewater or harvested stormwater to irrigate public open space).

Similarly, the NSW Productivity Commission has observed that more efficient delivery of open space “will be achieved by shifting to performance-based benchmarks and a requirement to consider efficient land needs during the strategic planning process. This could, for example, include the dual use of land around creeks for both drainage and passive open space.”

## Establishing sustainable funding sources for green infrastructure

There are strong economic efficiency and equity reasons for allocating the costs required to achieve green outcomes to those in the community that create the need to incur the expenditure (i.e., ‘impactors’) and/or those that benefit from this expenditure (‘beneficiaries’). In some instances, however, it may not be possible or practical to recover costs from specific groups of impactors or beneficiaries, in which case the broader community (taxpayers or ratepayers) may have to pay.

Clarity about required green outcomes is an important step in determining who is creating the need to achieve, or benefiting from, these outcomes, and therefore in establishing secure and sustainable sources of funding for green infrastructure.

If, for example, specific green outcomes are required to service or accommodate a new development (e.g., in relation to open space, waterways management, etc), which would not be required in the absence of that development, the local council should have a mandate to require developers to fund the capital costs of supplying green infrastructure for the development to achieve these outcomes– along with other essential infrastructure routinely funded or provided by developers for new development.

Similarly, if a water utility whose prices are regulated was required by its operating licence or similar regulatory instrument to meet specific green outcomes (e.g., in terms of stormwater and waterways management), then it should have assurance that it would be able to recover its costs, via its prices to its customers or charges to developers, of delivering servicing solutions that efficiently achieve these green outcomes. Notably, it would not likely have the same level of assurance, and hence funding certainty, if its statutory green objectives/requirements were less well defined.

Where it is appropriate for government to fund green infrastructure (on behalf of the broader community), greater clarity about required green outcomes can:

- provide a stronger impetus for such funding – to ensure the outcomes are achieved
- enhance transparency around the effectiveness and efficiency of such funding, and
- help ensure that such funding is targeted to achieve the specific required outcomes, so that the taxpayer gets the ‘biggest green bang for his or her buck’.





Greater clarity about required green outcomes can also enable us to better assess the adequacy of existing funding mechanisms in meeting the scale and pace of development and investment required.

## Where to from here?

Providing greater clarity about required green outcomes (or standards) can be challenging. However, it is important for improving governance, regulatory and funding arrangements for green infrastructure, and necessary if these green outcomes are to be achieved.

Along with best-practice regulatory design principles, valuation of the full costs and benefits to society of the environment and amenity outcomes related to green infrastructure can play an important role in both setting these outcomes and in assessing the range of options available to achieve them. As we discussed in a previous bulletin, there are a range of techniques that can be employed to undertake such valuation.

## Contact Us

Frontier Economics has been providing independent advice to businesses, regulators and governments for over 20 years. From offices in Australia and Singapore, our team has a diverse range of skills and experiences to support the needs of our clients.

To speak with one of our economists about this bulletin or urban economics, please contact:



[Matthew Edgerton](#)

T: +61 2 8224 9704

E: [matthew.edgerton@frontier-economics.com.au](mailto:matthew.edgerton@frontier-economics.com.au)



[Rosemary Jones](#)

T: +61 2 8224 9713

E: [rosemary.jones@frontier-economics.com.au](mailto:rosemary.jones@frontier-economics.com.au)