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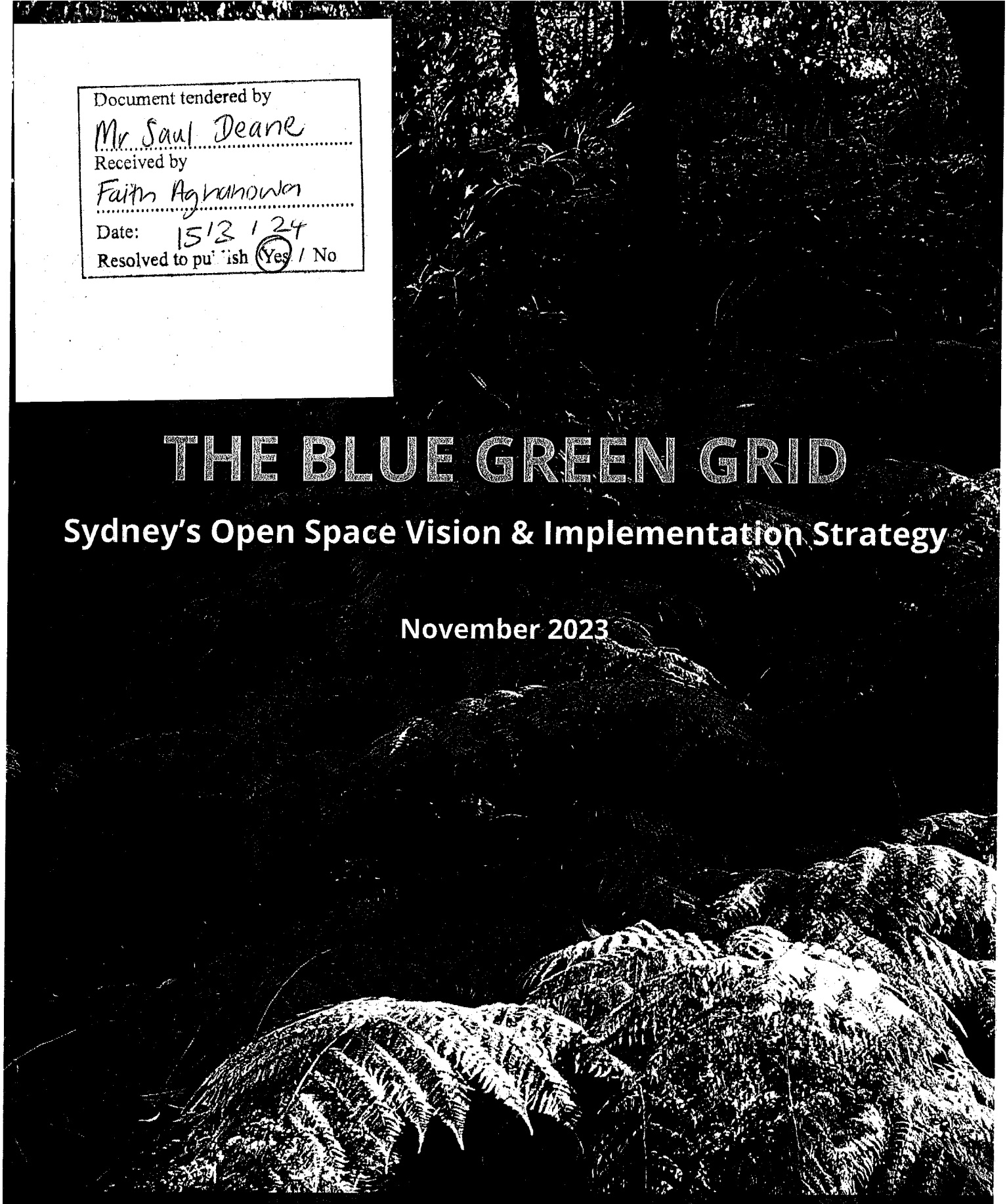
THE BLUE GREEN GRID

Sydney's Open Space Vision & Implementation Strategy

November 2023



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Total Environment Centre acknowledges the Traditional Custodians of this land and sea county, and pay our respects to their Elders past and present.

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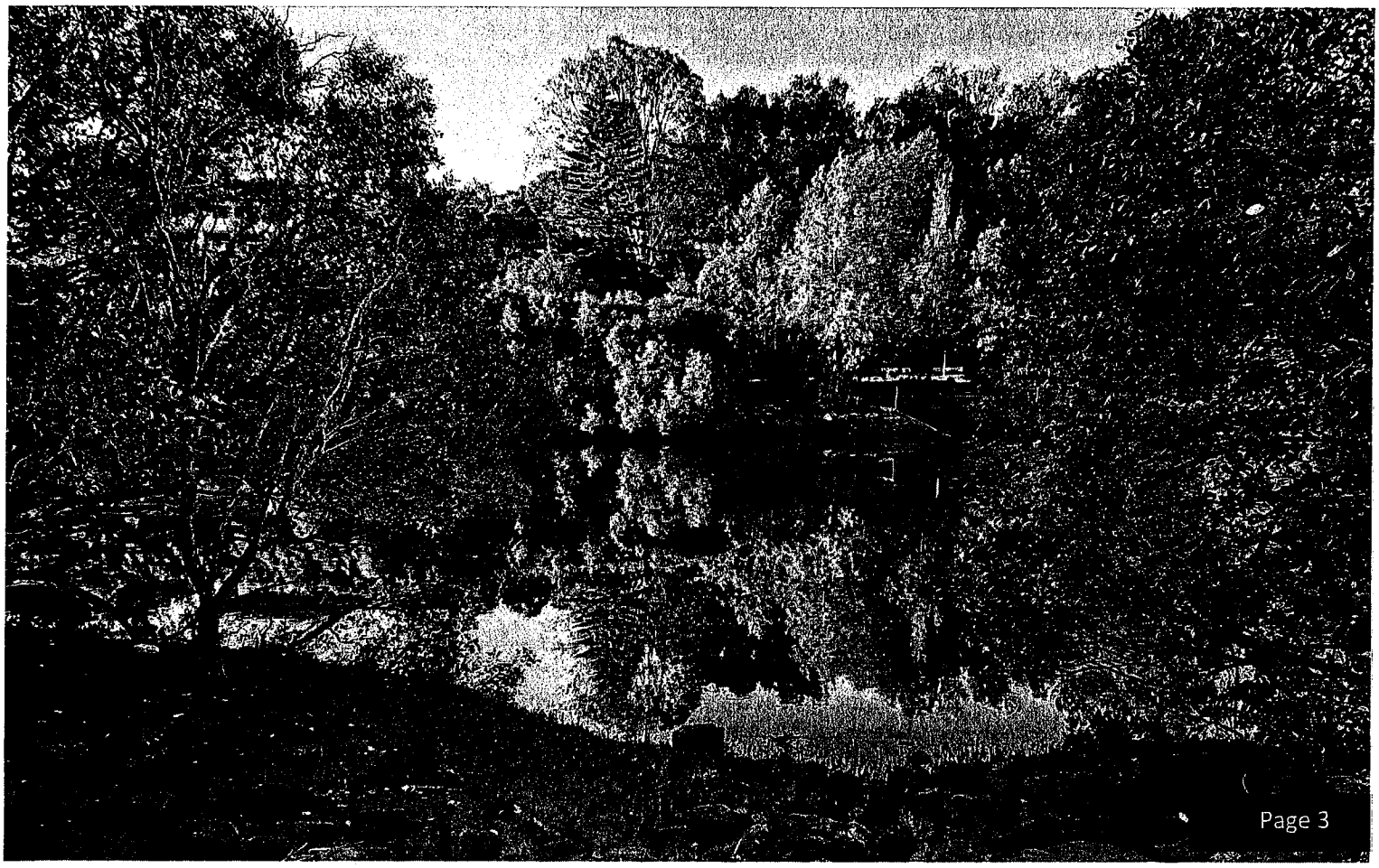

1. Blue Green Grid Attributes

1. **Width:** wide enough to be sustainably useful for recreation and wildlife. Numerical figures are required, for example, city foreshore 30m, or at the city's edge 400m Koala habitat corridors.
2. **Line:** connects with other lines/paths as a web across the city.
3. **Green:** they must be characterised by either their Green, Open and/or Bushland character. At a minimum, they must have access to deep soil and sky above.The following are poor substitutes and are not included - green roofs, green walls, outdoor structures.

2. Blue Green Grid Locations

The challenge is to provide an interconnected landscape. The qualities of this Blue Green Grid changes in requirements as it moves from rural to peri-urban to urban. For example, Sydney's Koala Green Belt is defined by the Hawkesbury-Nepean Rivers and the Georges Rivers at the peri-urban boundary. The Blue Green Grid location types are:

1. **Urban:** open and green space (recreation not exclusively bushland) which is publicly owned. A subset is the tree canopy on private land.
2. **Peri-Urban:** primarily bushland with public access, zoned conservation and publicly owned, typified by the Koala corridors.
3. **Rural:** includes bushland with little to no public access but which should be zoned conservation and subject to land clearing controls.

3. Blue Green Grid Spatial Framework

A Blue Green Grid can most effectively be implemented if tied to a linking spatial framework[2]. It can then connect existing and proposed large green spaces and use those lines as a reference for setbacks. This replicates the successful uptake of the Water Management Act's Vegetated Riparian Zone along creeks and rivers on Sydney's periphery and beyond. Spatial line networks we have identified in the landscape in order of ecological importance are: **Watershed, Transport and Property Lines.**

Our vision includes a Sydney Koala - Whale Circuit. Sydney's unique morphology circumnavigated by its two largest rivers - the Hawkesbury-Nepean River (Deerubbin) and the Georges River (Toggerai) linked to **Sydney's Whale Walk** along Sydney Harbour and coast, The combination of the two will create the world's first city circumnavigation walk.[3]

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[2] Bennett, Andrew (2003) Linkages in the Landscape The Role of Corridors and Connectivity in Wildlife Conservation International Union for Conservation of Nature

[3] An example of the approach is the **The Great Kai'Mia Way**. A vision of over 200 kilometres of pathways around Botany Bay, Georges River and the Woronora River. About 75% of the track already existed as fire trails, cycleways, and service roads for various utilities into one spectacular trail.

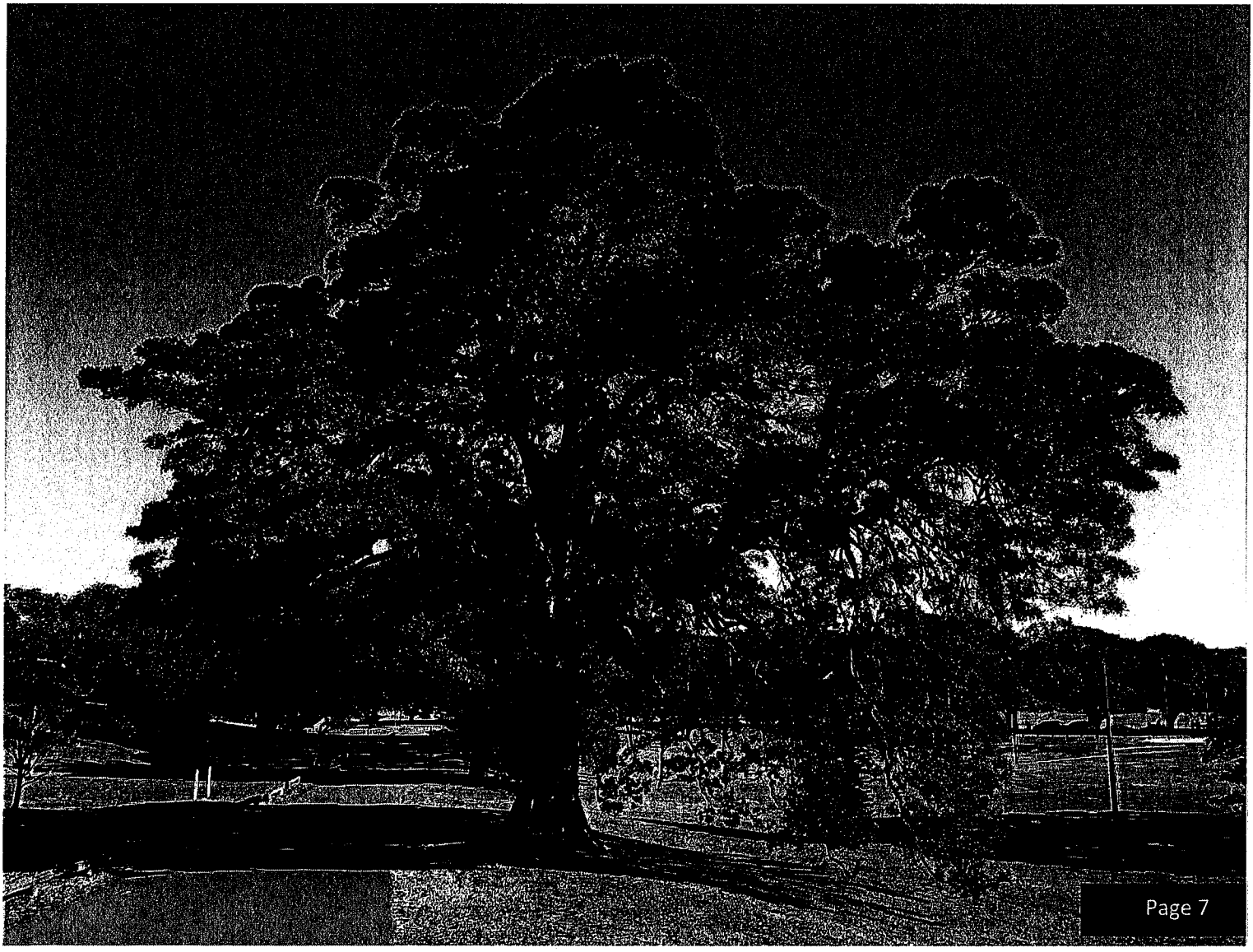
The Blue Green Grid is most effective in public ownership. The ownership/management within the peri-urban and urban scape should be coordinated between WaterNSW, Planning and councils. The Blue Green Grid needs authoritative collaboration, agreed management and multiple purposes for wildlife, foreshore protection and recreation.

The riparian sites under the Water Management Act 2000 are administered by the Department of Planning which requires a Vegetated Riparian Zone (VRZ) setback. A *controlled activity approval* must be obtained if you impinge on riparian zones. The New South Wales government in mid-2012 allowed a 50% intrusion into the VRZ if offset elsewhere in the riparian protection zone. This needs to be removed.

Urban Riparian: The importance of urban creeks and rivers should be elevated so riparian zones can be clawed back in new developments. New buildings must comply; and legacy buildings, when rebuilt, need a strong justification hurdle as to why they should continue to be allowed to intrude, with development excluded from the zone.

Urban Harbour: The Water Management Act's setback currently specifically excludes the Harbour's edge. However, at least all developments over a certain size and width should meet the Act's requirements, or the historical Thomas-Mitchell 100ft public reservation benchmark. This should merge with sea level rise policies.

Peri-Urban & Rural: Within the Koala Belt the creation of corridors based on a multiple of 3 times the Water Management Act's riparian setbacks, would allow for recreational and wildlife connections on the outskirts of Sydney. This would take them to the size of Smiths Creek that have been wide enough to accommodate Koalas within Campbelltown.



3.2 Transport - Vegetated Road Reserves

Roads are one of the most destructive elements in the habitat fragmentation process, and roads authorities should have an obligation to rectify the impacts as far as possible and avoid more damage. Unused road reserves often protect high-value remnant habitats which can be well-placed to improve habitat connectivity[5].

The Blue Green Grid/transport overlap here is **Active Transport** and with faunal links using effective wildlife crossings. These green-active corridors need to be embedded within agency goals so that they become auxiliary benefits to providing rail and road links.

Green road reserves would provide space for active transport links, runoff control, wildlife corridor and crossing opportunities[6].

3.3 Private Property - protecting vegetation

Private property has an important role to play in providing setbacks and ensuring retention of the tree canopy. Recent regulation changes to council tree preservation rules and the ***Rural Boundary Clearing Code*** (as applied in the Sydney Basin) have made tree removal easier. This trend needs to be reversed.

4. Blue Green Grid Implementation Tools

The Blue Green Grid needs a heavy lifting framework.

There have been previous attempts but they have not been sufficiently robust. For example, the State Government Architect's Sydney Green Grid's focus was to connect town centres, public transport hubs, and major residential areas, with four grids within the green one - Recreation, Ecological, Hydrological, and Agriculture. It aimed to:

- Provide an understanding of open space types and distribution within each district
- Establish a vision: identifying opportunities, linkages and key open space projects
- Support through the preparation of the District Growth and Infrastructure Plans
- Support local government to achieve the initiatives and open space strategies
- Promote state and local government partnerships to achieve them.

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[5] Viles R.L & Rosier D.J.(2001) *How to use roads in the creation of greenways: Case studies in three New Zealand landscapes* *Landscape and Urban Planning*, 55 (1) , pp. 15-27.

[6] Black, John (UNSW), Tara, Kam (UNSW), & Pakzad, Parisa (2016). *Mainstreaming Green Infrastructure Elements into the Design of Public Road Reserves*. International Journal of Environmental Protection 6(1), 1-15.

The **Penrith Green Grid** strategy is an instructive mapping and support approach for localised Blue Green Grid strategies. It should be applied across the city, council by council, over the next three years. Key components are:

- Establish a cross-council working group.
- Provide essential services for people, in Blue Green Grid strategy.
- Base on Blue Green Grid and WSUD integration
- Value Green Infrastructure as an asset,
  > Direct benefits (e.g. jobs created, tourism spend)
  > Indirect benefits (e.g. economic activity to supply chain industries)
  > Cost reduction (e.g. lower disaster recovery and health system costs)
  > Risk management (e.g. reduced insurance premiums for homes and businesses)
- Tree inventory integrated with Council's Asset Management System
- Multiple state funding sources: Metropolitan Greenspace Program, Special infrastructure contributions, State Voluntary Planning Agreements (SVPA), Housing Acceleration Fund, Local Infrastructure Growth Scheme, Precinct support scheme, General revenue green infrastructure from NSW Health and Transport for NSW, Sydney Water – community grants, Walking and Cycling Grants, Future Transport Strategy 2056, Greening Our City grant, Streets as Shared Places for People, Your High Street Guideline, Tench Reserve: Parks for People (Strategic Open Space Program)

4.2 Housing SEPP

The SEPP is aimed at encouraging private housing developments. It has a number of principles that invite a Blue Green Grid (clause 3, Principles):

(c) ensuring new housing development provides residents with a reasonable level of **amenity**,
(d) promoting the planning and delivery of housing in locations where it will make **good use of existing and planned infrastructure** and services,
(e) **minimising adverse climate and environmental impacts** of new housing development,
(f) reinforcing the importance of designing housing in a way that reflects and **enhances its locality**,

We recommend a new principle such as: *"to design, establish and protect a Blue Green Grid of interconnected open and waterway spaces and tree canopy across local, council and regional areas".*

It could ensure estate master plans and lot developments meet minimum greenspace standards, including deep soil, setbacks and protective zoning (as proposed in the Design and Place SEPP).

4.3 Blue Green Grid SEPP

An alternative or supplement to entrenching the Blue Green Grid into existing and future city design is a specific SEPP. Key elements of the Design and Places SEPP could be used as the foundation of a Blue Green Grid SEPP with objectives for green space preservation, expansion and connection as integral to planning and ongoing urban improvement strategies. In addition, it could require full assessment of the impact (eg, shadowing, loss of hydrological connection) of adjoining development and formal consultation with green space managers.
The Greater Sydney Parklands Trust Act contains useful language in its objects which could be applied more widely.

There would be access to the ***Housing and Productivity Contribution*** scheme, the purpose of which is *'to make sure people are living in well-connected communities with access to roads, parks, schools and hospitals'.*

Creation of a **BlueGreen Grid Commissioner** would also help to stop the loss of public greenspace, expand and connect them. An independent voice outside of NSW Planning is essential.

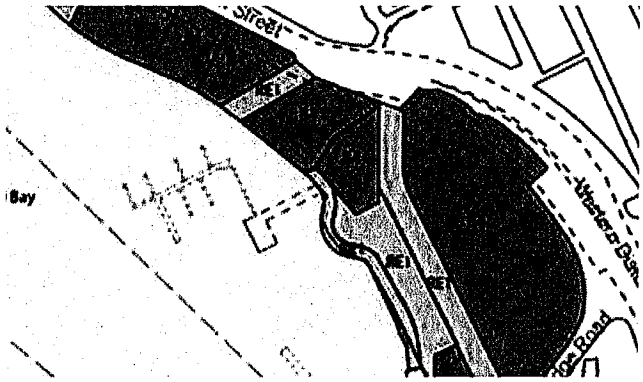
5.2 Public land disposal

If public lands are to be sold, it must be done and seen to be done at arms length. Therefore all public land should firstly be offered at no cost for green space purposes and if not required following a public review and independent assessment, be auctioned if it is to be sold. No unsolicited proposals can apply to (potential) green space.

5.3 Private land rezoning - windfall tax

Within the Sydney Basin, if private land is to change from an open space zoning such as rural to a built one such as residential, a windfall profit tax must be applied to the uplift in value that is generated by the rezoning.

Cautionary Tale: Blackwattle Bay ***Public Foreshore open space is being rezoned and sold off.*** All of this area is public foreshore except the four top properties, yet it could be rezoned for residential towers. The first priority should be ensuring the foreshore is a greenspace and at least a minimum of the 100ft foreshore reserve put in place, and then public open space requirements assessed, before any talk of selling takes place.



5.4 Inventory: open space and tree canopy within the Sydney Basin

The Government Architect should be resourced to undertake an ongoing catalogue all parks and green spaces within Sydney. This information needs to be made publicly available digitally. The quality of those spaces is to be measured via connectivity, tree, understory and grass cover and species diversity to create a dashboard to assess the importance and ongoing management of the city's open space.

Recently a new, useful dataset for Sydney shows canopy cover, vegetation health and land surface temperatures (among other information). NSW Government agencies and Greater Sydney councils have access to the dataset through a new Green Infrastructure User Interface hosted by ArborCarbon.

5.5 Provide a value to the trees, greenspaces and links

To date, little value has been placed on the green landscape in cost-benefit analysis. This emboldens park shaving - the slow but cumulative loss of parkland to other functions.

Credible tools need to be integrated into decision making. Some tools include: City of Melbourne Tree Policy, Urban Tree Valuation - Treenet and Tree Appraisal and the Value of Trees. Most recently the Department of Planning and Environment issued a framework, as a companion to the official Treasury CBA guide.