+Submissions on the draft Greener Places Design Guide **close on Friday 28 August 2020**.

For each component of the Draft Greener Places Design Guide, general feedback is sought on whether it:

- Is helpful and easy to understand
- Reflects contemporary understanding and practices on the given subject or issue
- Has an appropriate level of information
- Requires additional information to provide clarification or remove ambiguity

Name	Michael Rosettenstein	
Organisation	Pennant Hills District Civic Trust	
	DRAFT GREENER PLACES DESIGN GUIDE	**SPECIFIC COMMENT OR SUGGESTION**
Page or section no	**Section title**	
	Who should use this guide	
	Where can this information be applied	
1.0	**OPEN SPACE FOR RECREATION**	
1.1	What is open space for recreation	The document lists open spaces as (e.g.) "natural areas and linkages, foreshore areas, informal parkland, sports grounds and courts, children's playgrounds, historical sites, formal gardens, and linear walking, cycling, and equestrian tracks.". The one type missing, is school grounds.

Many schools have large green fields used for sports / PE, but these are often barricaded off with spiked fences, and not accessible to the residents of the local area. Several teenagers have been impaled in gory (one upside down for several hours) suffering lifetime injuries. Manage the risks of being "open", and stop squandering these highly valuable public assets. |
| 1.2 | Planning for recreation opportunities | The draft document refers to "[…] planning that relies on a spatial standard such as 2.8ha / 1000 people is only effective with high levels of quality control and often works against opportunities for multiple use and innovative solutions." Many urban areas have nowhere near the 2.8ha/1000 people. A Geographic Information System (GIS) with a map clearly showing this density in a red/green (for below or above the standard) would possibly help |

		identify the need to create or open up more open green space, or support rejection of removal of existing open green space for development projects. With the existing planning data and GIS systems available, this should be easy to implement.
1.3	Strategies for providing open space for recreation	There are simply not the suitable sites available to realise this vision without using Education Department sites (e.g. Schools green/sports fields, ovals, etc.) Abroad (e.g. Switzerland, Netherlands, Germany, and other countries) the Council is responsible for both Community Leisure and School Assets, including sports fields. It would never occur to them to separate the usage – the taxes are local, and the taxpayers would revolt at the inefficiency. As they should be doing in AUS. Even in the Bronx in New York City or in South Chicago, the tax paying general public can use the schools' concrete basketball courts outside normal school hours. In contrast, in NSW these areas have been aggressively fenced off in recent years in the name of security and vandalism prevention. This perspective does not stand up to scrutiny. Principals and Teachers often don't like sharing as there can be some inconvenience, but by analogy, in the same way, a Factory Manager has a target to manufacture. Capital and Usage decisions about the site asset are answerable to the Shareholders, I.e. the tax-paying residents. Great examples exist of School/Community sharing. Just two are Greenway Park used by Cherrybrook Tech School, or Moore Park used also by UTS and Sydney Boys' High. We believe this is the Gold Standard on mixed use for both education and leisure. Joint Council and State interest should lead to better quality facilities (e.g. floodlights, toilet blocks, and even electric BBQs), and shared ongoing maintenance cost such as cleaning, greenkeeping, pest control, etc. It will be crucial to start early and transparent engagement with community groups, all involved levels of government, local or regional NGOs, and even business partnerships and educational organisations to make these strategies successful.

1.4	Criteria and Performance indicators	The document will gain in strength and value if, apart from the listed Key Performance Indicators, clear links to the Greater Sydney Commission criteria of Sustainability, Liveability, Productivity and Infrastructure are used to evaluate or rate the open green spaces within e.g. a Council's LGA or within the State of NSW as a whole. Including ways to perform effective and insightful usage data statistics in the analysis/evaluation will be crucial.
	Accessibility and connectivity	A key enabler for good mixed use of green spaces is accessibility by foot or bicycle, and integrated access for people with disabilities.

In our local area, Pennant Hills Park is a great resource, and even highlighted for further focus. But it's easily a 20 minutes' walk from even central parts of the suburb, so younger residents such as schoolkids and teenagers are not going spontaneously for a social game of ball.

For this, one has to move to joint use of facilities – and practically the State Department of Education with sports fields and ovals. If we are to be serious about this vision, today's dysfunctional silos will have to be broken down and Education Department will need to open up and co-operate.

This should not be "controlled" .i.e. only for certain hours with an approved key – they will need to be open all the time outside normal school hours. Yes - there can be some booking and fees for clubs. If investment has to be made to protect school buildings with fences or CCTV then so be it. This is "small change" compared to the land assets worth tens of millions of dollars lying idle most of the time.

If we only fear what we might lose (by vandalism), rather than what the whole community can gain, we are all the poorer for it. In the case of Pennant Hills High, it was a huge asset to the community until one day it was blocked off with a spiked fence.   Galling was that the Community raised the money and planted the grass in the day, never imagining one day to be excluded.

Opening up these assets for general leisure use will enable the 'Win Win' on Public Assets and Funds, plus improved liveability. Further long-term side effects may even be a |

			reduction in health system costs. Before it was closed it truly functioned as a place where neighbours and the community met daily and informally - with the associate psychological wellbeing. Provided there is fair cost recovery, Private school facilities including Swimming Pools would be logical and "public spirited" to open up over weekends and school holiday periods. Such "win win" arrangements are nothing that hasn't been achieved successfully in other Countries, and Australian private schools are unusual by international standards in the scale of the public funding in their revenue. Relating accessibility, in terms of space as well as in terms of the needs of residents, to State wide accessibility, equity and inclusion programs, or Federal programs such as NDIS, will likely provide additional insights where improvement is needed.
	Distribution		Development of open space for recreation must be targeted to key geographical nodes, in Sydney and beyond in regional and rural areas, such all areas are within no more than 30 minutes travel time. If not, they will be at risk of under use, simply for the reason of an insufficient cost/benefit ratio to the residents.
	Size and shape		Implementation of local space for recreation, both in terms of size, shape and type, will of course depend on the local topography, the local transport environment (accessibility: public transport hubs, parking, cycle ways, pedestrian links), and the built environment (residential, mixed, industrial).
	Quality		There are many ways to ensure quality when building or improving local recreation spaces, but by far the most important one is sustainability – a sustainable park or open green space will by far be easiest to maintain over a long period of time, and residents will be able to enjoy it at by far the lowest cost.
	Diversity		NSW is in a great position to have a wide diversity of green spaces available for residents to enjoy – these should include National Parks and State Forests, small, medium and large city parks, but also open and green meeting places, MTB cycle parks and single trails, running tracks, equestrian trails. Recently, due to the COVID-19 pandemic outbreak, a large number of pop-up cycle paths have – literally – popped up, and have proven to be a

		huge benefit to the population, both in terms of physical and mental health. Many councils are in the process of converting disused railway corridors into long distance walking trails and cycle path connections. Now is the time to learn from this experience and project it into the future.
1.5	Understanding Recreation types	Very much support the vision mentioned in the Paper. Comparing to model neighbourhoods worldwide – and having lived in some of them, NSW is often missing Youth Recreation Space for adolescents. Additional outdoor table-tennis tables are a very low-maintenance and effective start. The alternative is often the Mall which requires money. Open access to school tennis and basketball courts should already be available which would contribute very greatly – adolescent needs are very oriented towards sport.
1.6	Planning for different urban setting	Over the past two decades, development in NSW has been chaotic. Years with very little development have been succeeded by years with mandatory housing targets, which heavily focussed on the main metropolitan centres such as South-western Sydney and Parramatta, Rhodes and Olympic Park, and further away such as Orange and Bathurst. Recent development is driven by major developments such as the North-West Rail between Epping and Rouse Hill, or the Western Sydney Aeropolis at Badgery's Creek. Most other suburbs in NSW have only seen minor growth, mostly driven by subdivisions of quarter acre blocks into smaller lots, allowing for an effective doubling of the number of houses in R2 low density residential zones. When planning for different urban settings, it is necessary to realize, within an LGA, the different types that have dominated the past (and therefor defined the past needs for recreation areas), the current situation, and what is scheduled for arrival in the short and medium term future. The current government pushed development boom, with mandatory minimum housing targets, fails in that in most cases the required infrastructure to service these new homes (such as schools, shops, service provides, a library, a Post Office, hospital beds, etc.) is severely lacking, and green spaces such as parks, running or cycling tracks, etc. are missing altogether.

		Akin to minimum housing targets (driven by anticipated population growth), the government needs to provide minimum infrastructure targets, as well as minimum green open space targets as well, congruent with a sufficient ratio of e.g. 3.0ha/1000 people. As local Councils will not be able to fund this by themselves, either the State Government would need to provide support funding for this, or a "green open space levy" would need to be raised from each and every developer, in addition to the current infrastructure developer contributions.
	Typical urban settings	Most typical urban settings have a mix of unlocked (public, e.g. parks, bushland) and locked (private, e.g. school grounds) green open space available. A quick win without any major public investment is to unlock the private space for public use, e.g. release school grounds back into community use (outside normal school opening hours, obviously).
	Brownfield site and redevelopment areas	Local government LEPs can include more mandatory green open space requirements than what is currently done. Apart from building setbacks, publicly accessible gardens, pocket parks, playgrounds for small children, cricket nets, basketball boards or netball rings, etc. are easy to implement and come at virtually no cost to a developer, except a reduction in overall available floor space for the site. In addition, mandatory offsetting of removed canopy for development sites, either in the immediate vicinity or near existing local recreation locations can assist in achieving an improved green space and total local canopy level: e.g. for each removed tree, two new ones (of minimum 15 years of age) would need to be replanted within 2 years. A monitoring and penalty system (small carrot and big stick principle) would help to ensure this will succeed.
	General capacity measures	In order to stimulate liveability and sustainability in the local residential areas, much can be done to improve options for human powered mobility, I.e. wheel chairs, bicycles, and walking – a quick win and cheap solution is to discourage motor vehicle use, using speed limits, traffic control operatives such as one-way streets with mixed use / cycle paths on the other half, speed humps, small roundabouts, slaloms, etc. Whilst at the same time ensuring there are continuous connections between various residential centres of gravity and the local shopping centre. Providing sufficient secure bicycle parking options at either end of the journey will assist as well.
	Greenfield areas	For large greenfield developments (e.g. Mt Gilead Estate and similar), there will be a lot of benefit in ensuring the total hard surface area (this includes rooftops, driveways, private concrete patches, roads, and other sealed surfaces) does not exceed minimum numbers,

			e.g. 30% of the total area, thus ensuring proper soaking of rainwater back into underground aquifers. This, combined with mandatory minimum planting requirements (e.g. 1 tree per person) and minimum requirements on available public green spaces such as parks, bushland, wetlands, etc. (e.g. 3 ha/1000 people) will contribute to drastically improve liveability and sustainability, and therefore likely also productivity, compared to concrete jungle cities such as Chatswood or Parramatta.
1.7		Fit for purpose	Local public green space will need to be fit for purpose – depending on the average social economic distribution of residents, age group (children, primary schoolers, youths, young adults, working people, retirees), levels of indigenous people, etc., requirements will differ. As such, some areas will prefer to use bicycles, others will prefer to walk their prams, or go for a jog, whereas yet other groups would prefer to come together to kick ball, play footy, netball, cricket, etc. As such, demands/needs can be very different in neighbouring suburbs, and as such careful planning and a diversity in ideas, solutions and implementations is needed.
2.0	**URBAN TREE CANOPY**		
2.1	What is urban tree canopy		
2.2	Improving the approach		
2.3	Strategies		Hornsby Shire is losing around 15'000 trees per annum, approx. 1/3 due to development, 1/3 due to natural loss (wind, rain and erosion, and bushfires) and 1/3 due to the 10/50 land clearing rule. The urbanised areas of our Shire has 36% canopy cover. If the loss trend continues we'd have no canopy left in 30 years. Hornsby Council has started counteracting this by successfully implementing a 25'000 trees by 2020 program, effectively planting approx. 5'000 new trees per annum. Young (1-2 year old) saplings are provided to residents' streets upon request and free of charge and planted. Residents support this program by watering and keeping the saplings alive during dry periods throughout the year. We strongly recommend enabling and supporting such a program in all Councils within the State, offsetting the huge amount of canopy loss due to land clearing permits, and therefore providing residents with cooler microclimates within their local areas, thus improving sustainability, liveability and – indirectly – productivity.

		It will be beneficial to attempt to unite as many local community groups together, through a thorough and inclusive consultation process, to ensure that any proposed solution will not be coming out of isolation.
2.4	What is the optimal canopy cover level	With the Australian extremely high levels of UV radiation throughout most of the year, Climate Change affecting our local area through rising daytime and night time temperatures and ever more extreme weather patterns, maximising the canopy level whenever and wherever possible would be beneficial to the liveability and sustainability of our residential areas. Canopy regulates humidity, provides shade and coolness, and reduces exposure of people to UV radiation, thus leading to lower levels of skin cancer.
2.5	Indicative targets	As a first step, for every council, a net-zero policy in terms of canopy loss should be made the standard; this should include the overall loss of trees and shrubs due to natural loss such as storms and bushfires. Net-zero in this context means a net-zero loss of tree canopy per year, or the equivalent of growing and replanting a number of trees equal to or exceeding the annual loss within each Council's LGA.
2.6	Recommendations for urban tree canopy	The Paper's Goal describe very nicely what is needed in principle. But taking Hornsby Shire as an example, hard data shows that some years, several percent of the canopy is reducing, and it's on Private Land, which no amount of planting on the street/nature strip is going to solve 1) There needs to be a serious budget by area to look in detail at what Green Wildlife Corridors are needed, and what kind of trees etc. need to be maintained to serve the local wildlife, connecting larger green areas such as National Parks with migratory routes. With the best will, no-one is going to plant a massive gum tree next to their house, so the reduction of canopy of this kind of tree is a "fait accompli", so what shall we plan instead? If you want to preserve endangered populations of marsupials, cockatoos, owls, etc., one needs to do more than guess what kind of canopy will provide a critical mass. This has to include more detailed and ambitious targets also for privately owned residential land. 2) One has to question 10:50 as being too blunt and destructive, and why not empower the RFS to make the judgements. Over the past few years, too many home owners have

		taken advantage of the 10:50 rule to clear their block from any and all growth, although many of them are not at all within serious risk of bushfires. 3) There needs to be real enforcement or the LEP will be observed in the breach. I believe e.g. California has come a long way with aerial mapping combined with AI to spot significant changes that may be illegal. 4) The evolution of LEP and DCP in the last 15 years has favoured ever-larger houses, as residents believe that maximises their investment, and Construction Firms get bigger dollar building contracts. There is hard data to show this trend, and Aussie house size is amongst the world's largest, and this has been at the inexorable expense of the Aussie backyard. This needs to be reconsidered, with more consideration of variation by locality according to local character and environment. Should all the neighbourhoods have to adapt to the "one size fits all" designs at Homeworld? Encouraging building smaller (but not mini) houses, turning the current trend of bloated homes around into more compact and energy efficient homes makes a lot of sense, and generates financial savings, which in turn can be used to spend on more a stringent BASIX; far from being "red tape" it contributes massively to amenity for the occupants. Look at mandating more Solar (and with time also storage batteries), far greater rain retention and grey water systems, decent insulation and ventilation, double glazing, and more reflective roofs. 5) Can we get some sincere interest from the Building industry in a new generation of home designs, with ongoing interest in evolution along with the themes in this paper. It speaks volumes that the Homebuilders receive zero mention in even such a comprehensive paper. There are low expectations, which the Industry should look at, not defensively, but as a huge opportunity and as the only way forward.
	Protect, maintain and enhance the existing urban canopy	Maintaining existing canopy will require proper LGA vegetation mapping. NSW Government is looking at new ways to implement this, and our local Council is supportive of a new approach to do this. There are a number of different options on how to do this,

		and one needs to carefully address this in order to create outputs that are beneficial in terms of enhancing the existing canopy levels.
	Create an interconnected urban tree canopy across NSW	Large amounts of tree canopy have recently been removed under agricultural land clearing permits. Although perhaps beneficial to the individual cotton or grain farmer, the benefits to the community at large are doubtful. Further west in NSW, huge amounts of land have been cleared of all trees yet have not been put to effective agricultural use at all, after several years. As a result, extensive connectivity between National Parks and State forests has been eliminated, and cannot easily be restored.
	Build knowledge and awareness of urban tree canopy across State and local government and the community	Merging existing vegetation mapping databases, and detailing these where needed, may be a useful path to obtain a detailed status update on average canopy levels in each LGA and in each suburb. Combining this information with GIS information about residential density and perhaps even distribution per age group, will allow better planning on where which type of local green space is missing and needs to be created. Institutions such as CSIRO or the National Botanic Gardens (https://www.anbg.gov.au/index.html) may be able to support this work.
	BUSHLAND AND WATERWAYS	
3.1	What do we mean by urban habitat	
3.2	Planning for connectivity	Apart from referring to green space policy for Singapore, this section does not actually say anything (yet). It would be good to extract and reproduce the relevant material from this Singapore policy. Alternatively, there is a lot of material about Urban Open Green Spaces from the World Health Organisation, and it discusses the benefits of connectivity infrastructure such as Green Trails, see e.g. this link: https://www.euro.who.int/en/health-topics/environment-and-health/urban-health/publications/2017/urban-green-space-interventions-and-health-a-review-of-impacts-and-effectiveness.-full-report-2017
3.3	Introducing strategic urban biodiversity frameworks	Strategic urban biodiversity frameworks (SUBF) could replace existing local government biodiversity strategies, to approach the conservation of urban habitat and biodiversity in a holistic way that directs strategic planning. However, today, with approved planning, preservation or improvement of open green spaces very often gets second priority and is subsequently ignored, in order to meet housing quota or sustain jobs in the construction industry, at virtually no penalty. Minimum criteria of re-creating open green space for

		residents of newly built apartment buildings, meeting minimum ratios of e.g. 3ha/1000 ppl in the immediate vicinity of the development, would be a start.
3.4	Strategies for urban bushland and waterways	We recommend to significantly strengthen the five key strategies to connect, protect, restore, enhance, and create urban habitat as an integral part of how urban areas are planned, constructed, and maintained. Currently, many if not all of these strategies are overruled by the perceived ultimate need for more development, be it for medium density housing, affordable housing, seniors housing, or industrial and commercial real estate. If NSW is going to be serious about the above mentioned five key strategies, it will be of crucial importance to build up a very heavy counterweight against the continued push for more development in the State, and force development to be more concentrated in areas where there is no option to increase available open green space.
3.5	Recommendations for urban bushland and waterways	Re "Connect Nature and People", please contact secretary.phdct@gmail.com for a Proposal re: the "6 Places Bushland's Walk" to the northern side of Pennant Hills, connecting 6 local suburbs to, eventually, the Great North Walk. Regarding better connections to rail e.g. Pennant Hills Station, it is only 1km so don't see the need to invest in making this any easier. Someone who wants to avoid doing that can organise an Uber Taxi. Hornsby Shire Council have a Water Catchment Remediation programme paid with a 5% Rates Surcharge with innovative traps to catch weeds and garbage. There is one at Zig Zag Creek, which is performing very well, retaining a lot of mostly plastic waste which would otherwise eventually end up as microplastics in the Pacific Ocean. We recommend considering to showcase that to educate the Public, especially through Outreach programs in the local public primary and high schools, about the consequences of thoughtless actions.
	Protect and conserve ecological values	We recommend to have the [x] seal of approval under both State and local government for all the listed recommendations. There is no reason why e.g. Recommendation 1.6 "Review planning policies that conflict with the provision of urban habitat and corridors, and devise triggers to switch off incompatible policies, or incorporate provisions to avoid incompatible outcomes in core, transition, and corridor areas" is a State Govt responsibility only – we argue that action must be taken on both sides of government.

	Restore disturbed ecosystems to enhance ecological values	As above, we believe both State and local Govt should have full requirements to enact the required policies and strategies to improve open green spaces. E.g. Recommendation 2.3 "Require plans of management to incorporate the need to protect, restore, enhance, create, and connect ecological habitats and provide opportunities to connect people to nature." should not be purely a local Govt responsibility – especially when it comes to larger corridors, the State Govt needs to act effectively as well.
	Create new ecosystems	At this stage it seems more prudent to put immediate and strong focus on stopping the destruction of existing endangered eco-systems such as the Koala habitats (e.g. Campbelltown, Mt Gilead, or NSW North Coast) through massive redevelopment or land-clearing programs, and protecting the wonderful and typical Australian species that attract huge amounts of international tourists to this country.
	Connect people to nature	One way of doing this is by offering teaching materials and incursions to local primary and high schools, focussing on varied topics such as littering and vandalism, to local flora and fauna.
	Connect urban habitats	Too many very small green areas are being demolished for the profit of private developers, either through subdivisions or estate developments. As a result, the delicate connecting tissue that forms the wildlife corridors between larger green spaces such as National Parks and Reserves is slowly disintegrating and disappearing, leaving roaming animals such as possums and goannas at large. Pro-construction legislation such as Compliant Development Code, and the bypassing of elected local Councils with Independent Planning Panels only aggravates this. In our own LGA, a proposal from residents to create a six-places walk – by sign-posting existing trails, a 10km bushwalking trail, connects Cherrybrook with Hornsby with spurs to the passing suburbs. This allows locals to go for guided walks of varying length, with the option to side-step into a neighbouring suburb to grab a coffee or lunch. On a larger scale, the 65km Great West Walk aims to achieve a similar idea – a quiet and attractive but long-distance walk from Parramatta to the Lapstone Bridge in Emu Plains at the foot of the Blue Mountains. Split in approx. 6 stages, it not only stimulates for extensive walking but also supports the local economies, by offering B&B services to the walkers who stay overnight on a week-long walk.
	Planning considerations for improving urban habitat and connectivity	Too many very small green areas are being demolished for the profit of private developers, either through subdivisions or estate developments. As a result, the delicate connecting tissue that forms the wildlife corridors between larger green spaces such as

		National Parks and Reserves is slowly disintegrating and disappearing, leaving roaming animals such as possums and goannas at large. Pro-construction legislation such as Compliant Development Code, and the bypassing of elected local Councils with independent Planning Panels only aggravates this.