Submitter No.	Submission	City Response
1.	The NRPG appreciates the opportunity to comment on this draft Strategy, and welcomes and supports the need to increase the urban canopy cover, particularly in light of the changing climate. Comments therefore address our points of concern and provide constructive suggestions.	Noted.
	Page 8. Vision. The City's Vision is strongly supported and the significant work of the Kalamunda Environment and Sustainability Advisory Committee (KESAC) and its Urban Forest Working Group, are acknowledged and applauded.	Noted.
	Page 10. Strategy and Scope. Achieving a balance between the pressures of growth and development and preservation of the natural Environment will become increasingly important, given the pressures of a changing climate, and the dire situation documented in the federal "State of the Environment Report 2021".	A target of 30% canopy cover is representative of best practice examples both nationally and internationally. An increased planting effort is required for the City to achieve this target, with estimated planting numbers being over 80 000 trees, over the 20 year period. A 50% target is not considered realistic when balancing other objectives such as development and housing
	The proposed target of 30% canopy cover, given it represents an increase of only 0.5% per year, seems far too low, and means that approximately 70% of the land area will still remain fully exposed to the full intensity of the sun. The area will still remain significantly	demand, noting that the strategy excludes areas of high canopy cover such as State Forest and Regional Parks.

hotter than the original fully-vegetated coverage befo clearing.	re land
A major reason for this Strategy is to improve resilien increasing temperatures, but how can the proposed t this? In order to have a significant benefit, perhaps th should be increased significantly, possibly to at least 5	arget achieve e 30% target
Page 11. Monitoring and Reporting.These actions will be essential if the Strategy is to hav effect. Given the rapidly changing climatic conditions of Australia, chiefly the drying and warming trends), these clear indications of any need for adjustments.The updating of the urban canopy data by DPLH is we should be stated the data "WILL" be analysed and that	for Western e will give Icome but it t commitment
clearly made. Annual reporting is welcome, as is the for review.	bur-yearly
Page 14. 1.3 Purpose of the Urban Forest Strategy. The 30% "long term aspirational target" canopy cover, earlier, is a relatively unambitious one. We would exp much greater than 30% as a minimum target, with ard an "aspirational" target (a format used for example, in Development Plans). Correspondingly, the proposed 8 medium sized trees, equating to 4,250 trees per year, inadequate and needs to be significantly increased if the intent of reducing the heat island effect, particula forecast increasing temperatures.	ect to seenationally and internationally. An increased planting effort is required for the City to achieve this target, with estimated planting numbers being over 80 000 trees, over the 20 year period.35,000over the 20 year period.seemsA 50% target is not considered realistic when balancing

Page 15. 1.4 Strategic Context. Building on encouraging initiatives such as the Local Planning Schemes, Policies and Strategies, planned increases in the canopy must be integrated early in the planning process if the UFS is to succeed.	The City is in the process of preparing a new Local Planning Scheme which provides for tree retention. The City's existing Local Planning Policy 33- Tree Retention (adopted by Council in December 2022) provides for tree retention, removal and replacement on private land.
Page 18. 1.5 Urban Forest Planning. Table 1. While the use of endemic native species is encouraged as a means of preserving and improving biodiversity, NRPG acknowledges there are instances where their use may not be as beneficial overall. Deciduous (non-invasive) trees in situations which provide both shade in summer months and which allow solar access in winter should be considered. For example, with the increasing use of solar electricity and hot water, the planting of non-deciduous and/or tall trees on the eastern, northern and western aspects of a property may not be desireable. One the other hand, having deciduous trees on these aspects, has double the benefits of non-deciduous types of vegetation. Careful orientation of buildings, together with selective deciduous and suitable-height trees enables passive solar heating, solar PV generation and solar water heating to be maximised.	Noted. Appendix 4 of the UFS includes consideration of the function of both native and non-native trees. 'While the selection of tree species should prioritise endemic species where appropriate, native species tend to have leaves that point downwards particularly in warmer locations to minimise heat impacts in comparison to some exotic species that have leaves aligned horizontally to capture as much light as possible. Consideration should be given to selecting a tree species with a canopy structure that is appropriate to the context of its specific planting site. For example, in outdoor eating areas a deciduous tree may be preferred over a native eucalypt as it will provide good shade cover in summer and allow sunlight through in winter when it is dormant.'
Although trees are the focus of this Strategy, recognition of the important role played by understorey, in providing valuable habitat and improving the resilience of our wildlife, should be noted and strived for also.	This comment is addressed in Section 1.2 of the UFS which reads; 'While understory vegetation is critically important, urban forest strategies generally focus on the tree canopy. Tree canopy cover is one of the most important measures for shading, cooling, and

	neighbourhood amenity and is the focus of the UFS. The City's Local Biodiversity Strategy (in Draft) considers native vegetation, including understorey vegetation.'.
 Page 20. 2 Benefits of an Urban Forest. It is encouraging to note emphasis is now placed on the benefits to health and mental wellbeing, neglected or forgotten in the past. While Appendix 1 details the benefits of tree canopy cover, it may be useful and convenient to the reader to illustrate graphically the impacts of tee cover by including heat-map image examples here, in the body of the document, along with a summary of the benefits, ie. areas with only 5-10% cover are 8-10 deg. hotter than those with 40% cover (draft UFS 2020). That emphasis can also state the role of canopy in the reduction of electricity costs through reduced air conditioning loads required. 	Detailed information has been moved to the appendix to keep the report succinct and reader-friendly. This was based on feedback from the Kalamunda Environment and Sustainability Advisory Committee.
Page 21. Plate 2: Urban Forest Benefits (City of Bendigo 2021). Considering the possibility of Kalamunda experiencing higher average temperatures than Bendigo and more days above 38 degrees, close examination of those data may lead to recognition of the need for a more ambitious coverage target for Kalamunda.	A target of 30% canopy cover is representative of best practice examples both nationally and internationally.
Page 24. 4 The City's Urban Forest. 1. The Swan Coastal Plain. It is encouraging to note the apparent high priority to be given to increasing canopy in this area. In addition to the benefits to the immediate neighbourhood, the flow-on benefits of such canopy increases will be felt by residents of the Escarpment. Currently, the cooling afternoon coastal winds from the south west (the Fremantle	Noted.

Doctor), pass over the heat sink that is now Perth Airport and many similar 'heat-retaining' industrial areas on the coastal plain. The end result is a significant reduction in the cooling effect of the 'Doctor'.	
Page 36. 4.2.1 Year 2020 Urban Canopy Cover. Given that 2020 is to be the baseline from which results will be assessed, having urban canopy cover "estimated" to be 32% should be treated with caution when assessing progress.	The use of the word "estimated" acknowledges the limitations with the accuracy of State government urban forest data. The data is however, considered fit for purpose to provide an overview of canopy cover. The City will investigate ways to increase data accuracy of both the baseline year data and future data, for the purpose of ongoing monitoring.
Page 41. 4.4 Year 2020 Urban Canopy Cover. With Pickering Brook one of the areas with canopy cover below 30%, consideration should be given to allocating this area a high priority under the UFS. The 2015 Pickering Brook Townsite Expansion proposal to rezone from 'Rural' to 'Urban' under the Metropolitan Region Scheme (MRS), if still in place, should emphasise the need for a high priority. Table 3 Page 26, suggests this has been acknowledged, with the "Grow" priority rating.	Noted. Implementation of urban forest actions will be prioritised by the working group, based on areas of lowest canopy cover, first. The UFS states "Table 3 shows the priority for each suburb with 2020 canopy cover less than 30% is to grow the urban forest. These areas will be prioritised for planting during the implementation of the "Action Plan".".
Page 50. 5.1.1 Challenges. Strategic Urban Infill proposals pose perhaps the greatest threat to this UFS. A sustainable balance between development demands and maintaining natural environmental values, will prove increasingly difficult to achieve. Such a balance will demand the City allocates an appropriate value to the environment and that staff and Councillors give their full support to ensuring this strategy succeeds.	Noted.

Page 51. Opportunities. The adoption of LPP 33 by the City, was welcomed by NRPG with its higher-than-State tree planting requirements for new developments. The benefits of continuing the 10% public open space requirement, must be fully utilized by the City in implementation of this Strategy.	Noted.
Page 55. 5.3.2 Industrial Development Opportunities (cont'd). Plantings for shade in carparks is certainly one area where the Strategy will bring benefits to the residents. Apart from the aesthetic improvement, any shade-generating plantings should be encouraged.	Noted.
The target of 10% canopy cover for new industrial developments is a step in the right direction, as it can only improve the living environment of nearby residents (see earlier comment on Page 24), as well as the workers who park cars and work there. Despite the restraints noted on "green retro fitting" existing industrial sites, every effort should be made to encourage the cooperation of site owners/operators, citing the benefits as incentives.	
Page 57. 5.5.2 Parks, Opportunities. As noted earlier, the Swan Coastal Plain, with its development and infill projects requires positive action, if its coverage deficit is to be adequately addressed. The recognition of the opportunities presented is welcome but, NRPG would prefer to see that retrofitting plantings to increase shaded areas WILL be given a high priority, in lieu of "should".	This change has been actioned. It is noted that Section 5 of the UFS states: "The Action Plan (Section 6) includes an action to prioritise planting of trees in road verges and parks in areas with the lowest canopy cover, where constraints permit (such as the location of services and presence of powerlines)."

	Action 2.10 has been updated to clarify that prioritisation should be based on areas of lowest canopy cover.
Page 58. Opportunities. (cont'd). The need to increase canopy in new developments should be factored in to plans at the earliest stage. The District Structure Plan should contain a section on the Urban Forest Strategy in the 'Local Planning Context' section. The Local Structure Plan should also provide an opportunity to implement the strategy. This will avoid or remove many of the perceived "constraints" mentioned.	Noted. The City currently require applicants to demonstrate how canopy cover targets of LPP 33 are proposed to be achieved. These targets are consistent with the UFS.
Page 60. 5.9.2 Bushfire, Opportunities. Point 3. While supporting the statement at 3, acknowledging the need for ecologically sustainable bushfire management and best practice, NRPG would emphasise the importance of new scientific evidence calling into question long held beliefs relating to prescribed burning regimes.	Noted. This information has been passed on to the City's team who are coordinating the implementation of the relevant action of the City's Local Environment Strategy. This action is to <i>"determine ecological fire</i> <i>requirements and develop fire and biodiversity procedures</i> <i>for the management of City reserves".</i>
The data shows that burning bushland more frequently than 25-30 years creates a greater fire hazard than long-unburned bushland. After fires, the rapid regrowth creates large amounts of elevated fuels, which are much more flammable than low understorey and leaf litter fuels, (found after long unburned periods of 25yrs plus). Ref. "Self-thinning forest understoreys reduce wildfire risk, even in a warming climate", Zylstra, P. J.; Bradshaw, S. D.; Lindenmayer, D. B. Environmental Research Letters (2022), https://doi.org/10.1088/1748-9326/ac5c10	

Page 61. 6 Action Plan. As commented at Page 14. 1.3 NRPG would prefer to see an aspirational target significantly higher than 30%. Given the acknowledged benefits stated in this strategy and ignoring 'international best practice' as dubious at least, why is this figure the best the City can aspire to?	As above, a target of 30% canopy cover is representative of best practice examples both nationally and internationally. An increased planting effort and associated resources are required for the City to achieve this target, with estimated planting numbers being over 80 000 trees, over the 20 year period.
	Noting that UFS only covers built-up areas and rural areas within the City, a 50% target is not considered realistic when balancing other objectives such as development, housing demand and agriculture. For example, industrial areas across the Perth Metropolitan region are currently achieving 0-5% canopy cover, the proposed 10% target for industrial areas is a considerable improvement on current practice.
Page 62. Table 4. Urban Forest Goals, Objectives and Actions. 1.2 In order for City staff to provide these "dedicated responsibilities" the City must ensure budgeting provides for adequate resources to be made available, in order to carry out this strategy successfully. The current staff shortages must be addressed as soon as possible.	Noted. Resource requirements will be determined by the working group when developing each annual action plan, as per Section 7 of the UFS.
Page 63. Table 4 (cont'd) 1.8 5) In addition to incentives to promote retention of trees on new developments, this action should include similar incentives for initiatives designed to retain, create, or reinstate wildlife corridors, in	Wildlife corridors, wetlands and waterways are addressed by the City's Draft Local Biodiversity Strategy. The LBS includes an action to develop a Local

line with the City's Wildlife Corridor Strategy. Increased setbacks from creek lines and wetlands should also receive similar incentives.	 Planning Policy (LPP) for Biodiversity which will include provisions for wildlife corridors. Setbacks and management of wetlands and waterways are addressed by the City's Draft LPP 34- Wetlands and Waterways. The LPP outlines the City's expectations regarding wetlands and waterways in accordance with State government expectations, however, this is not incentives based.
 Page 65. Table 4 (cont'd) Objectives. With a minimum of 20% canopy cover, a higher 'aspirational' target should be stated. Diversity of trees should include consideration of non-native deciduous trees where appropriate, to enable passive solar heating 	It has been assumed that this comment relates to the objective to: "plant enough trees by 2030 to achieve a minimum of 20% canopy cover at maturity in roads across the City". This objective requires a 137 273m ² increase in canopy
(direct and hot water) and solar PV electricity generation solutions.	cover in seven years. This equates to over 3 600 trees to be planted in road verges during this timeframe (assuming 38m ² at maturity).
Strategy. Action 2.1 Some details of the proposed makeup of the 'multidisciplinary team' should be given here.	Greater detail on the working group is provided in Section 7.
Page 66. Action 2.5 Having a clear indication that this action on the Swan Coastal Plain is a priority action is welcomed by NRPG, in line with earlier comments.	Noted.

Page 67. Action 2.1.4	Noted.
See earlier comments at Table 4 1.8.5	
Page 68. Action 2.2.3	Noted.
Comments as above.	
Page 69. Objectives. Dot point 1.	Noted. As above, resource requirements will be
This will require the City to ensure it establishes and maintains the	determined by the working group when developing
staff needed to provide such support. Current staffing levels are seriously deficient for maintaining this support.	each annual action plan, as per Section 7 of the UFS.
Page 70. Action 3.5	Noted.
See above comment.	
Page 72. 7.2 Monitoring and Reporting. The MEP will be a vital part of the strategy and will provide essential information on progress. It is unclear whether the 'internal working group' is the same body as the 'multidisciplinary team' at Table 4 Strategy, above. Clarification may be appropriate, with further details of the team given.	The 'multidisciplinary team' referenced at Table 4 is the same as the working group outlined in Section 7. Further details have been included in Section 7 regarding the working group, the involvement of the Kalamunda Environment and Sustainability Committee and reporting.
Updating residents on the strategy via an 'Urban Forest landing page on the City's website' is a sound idea. Those updates are assumed to include brief details of status and annual progress. Given the need to educate and encourage residents to support the canopy increase strategy, the website and annual rates notices can be an valuable tool in these efforts.	
Page 73. 7.3 Resourcing.	Noted.

	The requirement for additional funding and resourcing has already been commented on earlier.	
	CONCLUSION.	Noted.
	Recent planning initiatives adopted by the City are welcome. Full implementation of Local Planning Policy 33 (LPS 33) and the draft LPS 4 (in development), will be critical to the success of this current Strategy.	
	NRPG considers this draft Strategy to be a significant step in the City's actions to combat the changing climate and its effects, provide environmental benefits and improve amenity of all in the City of Kalamunda.	
2.	The UBC is the peak WA community organisation for urban bushland recognition and protection. UBC is an incorporated, not for profit organisation registered as a charity. https://www.bushlandperth.org.au/. We are a voluntary community association an active membership of 88 volunteer groups (each with their own local membership from 10-165 individuals) and an additional 100 individual 'supporter' members – all with a common interest in conservation and protection of areas of urban bushland in WA.	Noted.
	UBC advocates to all levels of Government for natural areas protection. We do this with limited resources through the amazing efforts of our 'Friends Groups' and their many volunteers – from all	

walks of life 'working' to improve and maintain the health of patches of neighbourhood nature.	
The UBC supports and strongly commends to you the comprehensive submission made by the Nature Reserves Preservation Group Inc. (NRPG), which proudly is also one of our member groups. As you are aware, NRPG has contributed significant knowledge, expertise, time, hands-n care and voluntary dedication as local community members to the City of Kalamunda.	Noted.
 Congratulations City of Kalamunda for preparing an Urban Forest Strategy (UFS) that will complement other environmental and sustainability initiatives that you have initiated and progressed including: Kalamunda Environmental Advisory Committee Local Environment Strategy Local Biodiversity Strategy Environmental Guidelines for City Developments. 	Noted.
 The UFS will make a significant contribution to many aspects including for: Providing critical ecological linkages via areas of natural bushland, home gardens, local parks, commercial/educational/ community/industrial properties, verges and transport corridors Reducing heat island effect Mitigating climate change Providing much forgotten oxygen for fauna and us humans 	

 Enhancing the amazing bushland and tree aestheti City of Kalamunda suburbs are renowned for Maintaining/providing aspects of privacy and aesth for neighbours (commercial/educational/residential) as well as for property owner/leasee themselves Contributing to the physical and mental wellbeing or residents, ratepayers, workers and visitors who util environment Supporting our iconic endangered Black Cockatoos 	etics both the of se your
 providing foraging, resting, roosting &/or nesting has providing foraging, resting, roosting &/or nesting has the ubbc also stresses the importance of: Needing to protect and maintain at least 30% of placed in communities – not the 10% or 20% as indicated in UFS. 	The UFS addressing the protection and enhancement of the City's trees. The UFS does not deal with plant
 Needing to have 30% of site planted Including indu business, educational and domestic properties - no or 20% as indicated in the Draft UFS. 	
 Use of local native species – obviously in the natura bushland areas, but also for street, transport corric private properties and parklands 	

Not supporting prescribed burning	Prescribed burning is undertaken to mitigate bushfire risk. The City are undertaking an assessment of ecological fire requirements and preparing fire and biodiversity procedures for the management of City Reserves, through the implementation of the <i>City's</i> <i>Kalamunda Clean and Green Local Environment Strategy</i> .
 Ensuring we continue to have a net gain in native vegetation including by not supporting offsets 	Offsets can contribute to a net gain in long term tree cover where replacement planting is proposed. Offsets are key to the City balancing conflicting outcomes between development and growing our canopy cover. For example, Local planning Policy 33- Tree Retention allows for replacement trees at a 2:1 ratio where unavoidable tree removal occurs.
 Maintaining or increasing the physical and fiscal support provided for volunteer groups within the City for urban forest initiatives. 	Noted.
 Increasing engagement of private landholders and developers in supporting urban forest initiatives 	Noted. Engagement is a key goal of the UFS.
 Increasing available funding to facilitate protection and enhancement of the City's urban forest 	Noted. Investigating resourcing opportunities is a key goal of the UFS.
 Being cautious of carbon offset proposals, ensuring they can deliver on their promise in the long term. 	Noted.

	Continually improving urban forest practices and outcomes.	Noted. The UFS monitoring, reporting and review process provides for continual improvement of urban forest practices and outcomes.
	The Urban Bushland Council also congratulates you on your ongoing active engagement with not only your local community, but beyond.	Noted.
	The Urban Bushland Council supports the development of an Urban Forest Strategy that complements the City of Kalamunda's strategies and the wider communities increasing concerns and expectations about the need to actively manage our natural areas for conservation whilst ensuring transport corridors, industrial areas, private gardens and commercial ventures are all actively contributing to the extent and health of our urban forests and ecological linkages.	Noted.
3.	The City of Kalamunda's draft Urban Forest Strategy is a positive step towards addressing the inadequate tree canopy cover in the City which follows a recent report that the City has one of the largest reductions in tree canopy cover of all local government authorities in Australia over the past 4 years (Royal Melbourne Institute of Technology, 2020, Where will all the trees be).	Noted. With regard to the 4% loss of green cover across the City, outlined in the report published by Greener Spaces Better Places 2020, the report specifically acknowledges the significant effect of bushfire in reducing green cover.
		A review of State government spatial data including records of fire events (prescribed burns and bushfire) which were captured on departmental-managed land, and where available non-department managed land shows that over 5,300 ha or 16.4% of the City's total

	land area was affected by bushfire between 2016 and 2020 (period of the RMIT study). This data shows the significant effect of bushfire on green cover loss.
Although the draft does not explicitly acknowledge the responsibility of past local governments for this issue, it is hoped that future councils will learn from past mistakes. Specifically, it is important that future councillors do not overtly support private developers seeking to maximize profits at the expense of the significant environmental values of rural areas. The earlier released draft Biodiversity Strategy makes it clear that only by protecting the remaining rural areas in the city from intensified development pressures can the rapid loss of tree canopy and biodiversity be halted or slowed.	Noted. The City's <i>Local Planning Policy 33- Tree Retention</i> provides for the retention and replacement of trees on private land, as well as canopy cover targets for new development in different zonings (e.g. urban, commercial, industrial).
The City should not prioritize higher rates over the protection of these areas from environmental damage. It is essential to strike a balance between economic development and environmental protection. It is interesting to note that in July 2018, the City forwarded a submission to the state government's Green paper to reform the WA planning system asserting that when considering development proposals, councillors would always prioritise environmental sustainability and social benefit over the short-term economic benefit for a few. Even a cursory analysis of the proposed draft Urban Forest strategy reveals nothing could be further from the truth. If the adoption of this draft Urban Forest Strategy results in the City preserving and enhancing what little remains of its current tree canopy and natural areas for the benefit of future generations to enjoy, then it will have served its purpose.	Noted.

areas are often subject to a variety of environmental stresses, such
as pollution, compacted soil, and limited space to grow their roots.
These stresses can weaken trees and make them more susceptible
to disease and pest infestations. Under-storey planting can help to
mitigate these stresses by improving soil quality, reducing soil
compaction, and providing shade and moisture to the trees' roots.
Moreover, under-storey planting can also provide aesthetic and
recreational benefits to urban communities. By creating a diverse
range of plant species and habitats, under-storey planting can help
to enhance the visual appeal of the urban landscape and provide
opportunities for outdoor recreation and education. Furthermore,
the increased greenery and biodiversity can contribute to improved
air quality and reduced urban heat island effects, resulting in a
more liveable and sustainable urban environment.
Overall, under-storey planting is an important strategy for
promoting biodiversity, tree health, and overall ecological resilience
in urban areas. By incorporating this approach into an Urban Forest
Strategy, communities can create more vibrant and sustainable
green spaces that benefit both people and the environment.
Considering the significant benefits that understorey and leaf litter
provide in establishing an ecologically sustainable green
environment, there should be a recognized mechanism for
homeowners to be exempted from clearing these naturally
occurring areas on their privately owned land, provided that they
have alternative fire mitigation measures in place. For instance,
homeowners who have a fire-fighting unit, fire hoses, or other

appropriate fire mitigation measures in place should be eligible for such an exemption.	
It is gratifying to observe that there is a commitment to incorporate permanent measures to enhance the City's tree canopy in the redrafting of the legally binding Local Planning Scheme. The draft strategy data revealing the inadequate tree canopy cover in the City's industrial areas serves to highlight the need for statutory controls to strike a balance between environmental conservation and development. Mandating a public open space requirement in all new industrial developments within the City will not only create a healthier work environment for employees but also enhance the area's aesthetic appeal.	The City will investigate the inclusion of provisions for public open space (POS) in industrial developments as part of the review of the POS strategy and the new Local Planning Strategy, as encouraged through the State Draft Operational Policy 2.3 – Planning for Public Open Space.
In conclusion, the City of Kalamunda's draft Urban Forest Strategy is a promising initiative towards improving the tree canopy cover and preserving the natural environment. However, it is crucial that future councils learn from past mistakes and prioritize environmental protection over economic development. The inclusion of under-storey planting and leaf litter exemption for homeowners with fire mitigation measures in place can further contribute to promoting biodiversity and sustainable green spaces. The commitment to incorporating permanent measures to enhance the City's tree canopy in the Local Planning Scheme is a positive step forward, and mandating public open space in new industrial developments can benefit the employees' health and the area's aesthetic appeal. By achieving a balance between economic development and environmental protection, particularly in terms of	Noted. Specific comments addressed above.

prot	otecting the remaining rural zoned areas of the City, the City can
ens	sure that its current natural areas and tree canopy cover are
pres	eserved for future generations to enjoy.