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AUSTRALIAN INSTITUTE OF LANDSCAPE ARCHITECTS (AILA) SUBMISSION IN SUPPORT OF The Climate Change Preparedness Action Plan by Heritage NSW

Link : https://www.haveyoursay.nsw.gov.au/heritage-places-climate-change-impacts?tool=survey_tool&tool_id=survey-preparing-heritage-places-for-climate-change-impacts11#tool_tab

PREFACE

AILA pays respect to the traditional owners of all the land to which this Action Plan relates.

The Australian Institute of Landscape Architects (AILA) is the peak national body for Landscape Architecture. The Australian Institute of Landscape Architects (AILA) leads a dynamic and respected profession: **creating great places to support healthy communities and a sustainable planet.**

A central purpose of the AILA (NSW) Landscape Heritage Committee is to inform, inspire and enrich the culture of the discipline of Landscape Architecture in Australia and particularly the identification and understanding of both natural and cultural landscapes in NSW together with the role of such knowledge in the processes of planning and design.

STATEMENT

AILA supports the HeritageNSW 'Climate Change Preparedness Action Plan', survey, principles and case studies as they align with our commitments. These include: to enable Landscape architects to contribute positively to a regenerative environment, to champion the understanding and management of heritage landscapes of NSW as natural and cultural concepts with physical, social and spiritual significance and to recognise the excellence of Landscape Architects working to conserve heritage landscapes.



BACKGROUND

Notification was received on 22 February inviting comment on a

'Climate Change Preparedness Action Plan' to help address the impacts of climate change on heritage places in NSW, prepared by Heritage NSW. The objectives of the Plan sought to;

- Identify of practical responses to the challenges posed to heritage in NSW by climate change, and ways to include climate change issues in existing heritage practice and administration.
- The draft action plan outlines practical actions for each of the draft Climate Change Principles adopted by the Heritage Council of NSW.
- feedback on
 - the draft Climate Change Principles and
 - key draft actions

invited from stakeholders such as;

- government agencies,
- local councils,
- Local Aboriginal Land Councils,
- Aboriginal communities,
- heritage owners,
- consultants and
- the general public.

The invitation included a request to share with our networks with the incentive that response may influence the approach to climate change and heritage in New South Wales.

The AILA Landscape Heritage Group have discussed how best to offer help to improve the action plan at the following meetings:

- AILA NSW Chapter meeting held on 8th March 2023,
- The NSW Advocacy meeting 13th March 2023 and
- the AILA Landscape Heritage Group meeting held on 14th March 2023.



The feedback is intended to inform the final action plan to help shape how heritage places in NSW are prepared for the impacts of climate change. We thank the Heritage Office for granting an extension to comment until 24th March 2023.

The timing for this request, even with the extension, unfortunately did not allow adequate period of discussion and collaborative official response from AILA. Compounding this, there was insufficient time to absorb the findings of the Synthesis Report released by the United Nations International Panel on Climate Change (IPCC) after 18th March, 2023. Statement A.1 from the AR6 Synthesis Report: **Observed warming and its causes** (high confidence) pinpoints as ongoing contributing factors, *'the unsustainable land use and land-use change.. across regions, between and within countries and among individuals'* (AR6:A.1). We are at a critical moment where the climate experiences of future generations depend on decisions made now and in the near term (IPCC AR6 synthesis Report, Figure SPM.1).

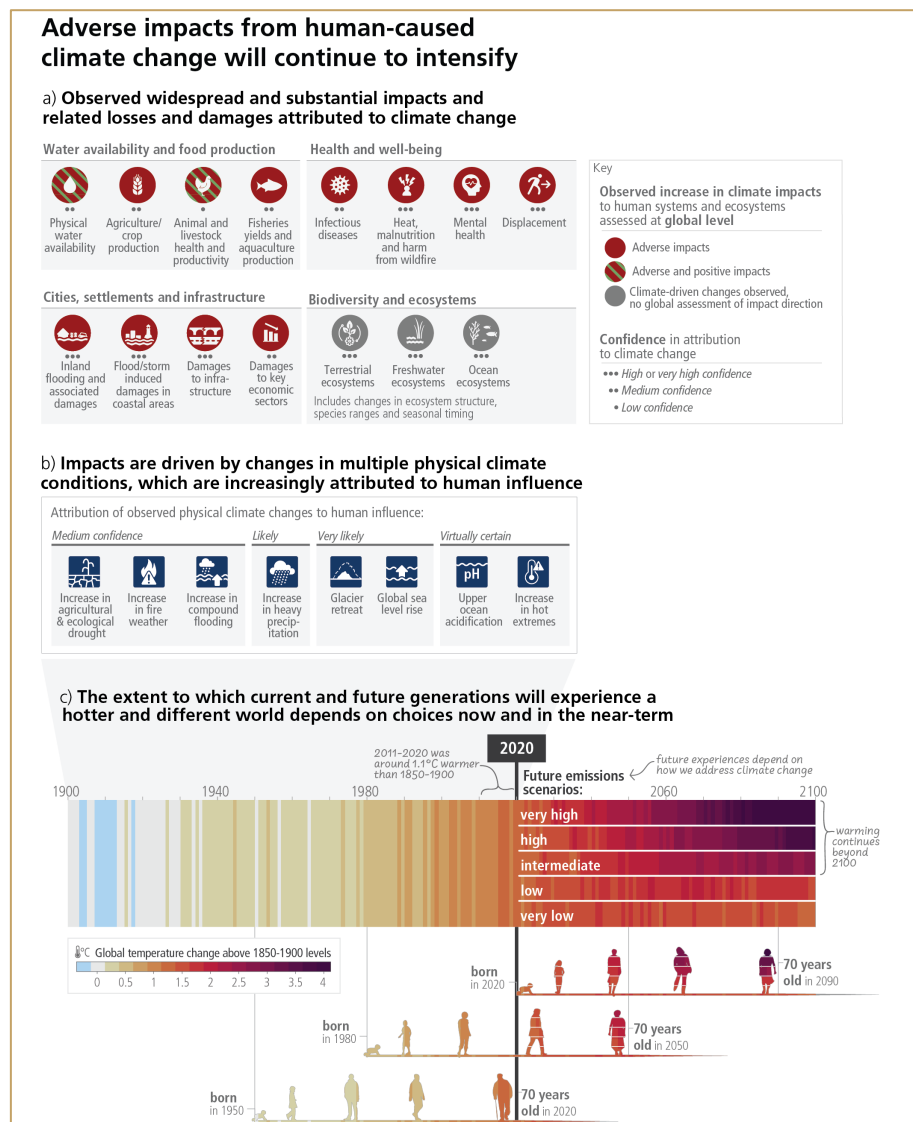


Figure SPM.1 <https://www.ipcc.ch/report/ar6/syr/figure>



During the period of comment, however, we noted the relevance of heritage conservation to climate change was discussed at the National Trust (NSW) (NT-NSW) NSW Election Forum held 8 March 2023. Speaker, Paul Knight, former Chief Executive of the Illawarra LALC, spoke about the cumulative impact of development on *landscapes* of Aboriginal Heritage significance, which is a contributing factor to the harmful effects climate change. Ninotschka Titchkosky, Commissioner for the Future of Sydney, highlighted the fact that construction industry contributes 40 percent of the emissions of NSW and argued for reuse of heritage buildings and rezoning for better preservation of built heritage in cities.

AILA is concerned about the rate of loss of mature canopy that will take decades to replace. Cameron Holley pointed out that there are 70 pieces of legislation relevant to heritage in NSW, many of which could help to reduce emissions. A new challenge is scale of land required for renewable energy production – 1000 times the area of conventional energy generation. Biodiversity offsets are failing to achieve their purpose by justifying removal of existing trees and vegetated landscapes. Carbon offsets are similarly problematic if land already reserved is being traded in this way. The National Trust NSW Forum highlighted the need for more holistic thinking, landscape systems approaches to land use planning and decision making. The failure of the Draft Design and Place SEPP is yet another lost opportunity to redress the carbon crisis in NSW. Heritage NSW climate Change Preparedness Principles, as presented, are:

1. Taking a values-based approach: understanding the values of the place or object
2. Engaging communities
3. Evidence-based decision making
4. Assessing risks and resilience
5. Responsive strategies
6. Integrating management approaches

Case studies:

[Everglades historic garden - case study\(External link\)](#) (PDF format)

[The Rocks historic precinct - case study\(External link\)](#) (PDF format)

[Barlings Beach - case study\(External link\)](#) (PDF format)

[Kunderang East Pastoral Station - case study\(External link\)](#)(PDF format)

[Mount Drysdale \(Billagoe\) cultural landscape - case study\(External link\)](#) (PDF format)



RECOMMENDATIONS

It is noted that peak organisations are not included on the list of stakeholders. However, as detailed above, the invitation to comment on the Plan was introduced at three AILA meetings and it was decided on 13th March to broadcast the invitation to all AILA members through the interactive website communication platform, Memberscape© Forum. It is hoped that interested members were inspired by the words of encouragement that accompanied the announcement on the Forum. In addition to this, the invitation was extended to the **AILA Connection to Country Committee**. AILA has developed a suite of materials to assist Landscape Architects and their clients in reducing emissions, **AILA Climate Positive Design**. We recommend Heritage NSW reference this ground-breaking work in your implementation of the policy, along with the Heritage NSW CCPAP Principles and Case Studies, by providing links where appropriate.

In relation to the principles, we commend the focus on reassessing heritage values over time, inclusion of intangible heritage and gaining a deeper understanding of how values are reflected in the fabric of a place (Principle 1). In response to this, it is imperative that in order to strengthen protection of existing Climate Positive landscapes. **NSW Heritage is encouraged to build on the work achieved in 2018 by the AILA Landscape Heritage Report** towards an overarching and nuanced approach to landscape heritage identification and assessment and nomination for the State Heritage Register, which began with the Sydney Basin. **Further study is needed to look to the rest of NSW in this proactive way, with a deep understanding landscape heritage.**

Regarding Principle 2, communities should be able to access not only climate change risk assessment results but also **be incentivised for climate change resilience afforded by conserving historic constructions and critically, vegetation, including water bodies and mature canopies.**

Principle 3 is commendable, as AILA Landscape Heritage Group is aware that issues are occurring where climate resilience efforts are overriding proper investigation of significance of landscape heritage. **The capacity of heritage landscape design to endure increasing intensity and frequency of flooding is worthy of further study.**

This accords with Principle 4, 'Assessing risk and resilience' and again **further study is needed to comprehend the impacts on and resilience of landscape design and the role and changing nature of landscape management and maintenance in resilience.**

Principle 5: 'Responsive strategies' highlights the demand for qualified knowledgeable, experienced expertise in advising on nature based solutions. Schemes to rapidly install canopy for climate targets require **professional advice from qualified Landscape Architects** where 'nature-based solutions.. to flooding, storms and sea-level rise' are **considered through a landscape systems design approach that takes into account the complexity of the site conditions historically and into the future.** This is now mandated by ICOMOS and must be reflected in all NSW Heritage communications.



Embodied energy and adaptive reuse accounting is vital, as mentioned in Principle 6. **Another key metric that will bolster the argument to conserve heritage landscapes is the Urban Heat Island Effect.** AILA has release the **Standards Australia & AILA Urban Green Infrastructure Handbook** which addresses the technical aspects of advocating for consistent evidence based retention of existing landscape and 'urban greening' as a form of climate change adaptation and mitigation.

The principles align with good design practice and climate mitigation. There is alignment with AILA pillars, Climate Positive Design, Connection to Country and Gender Equity. Case studies that exemplify climate risk aversion and improved resilience based on Landscape Architectural expertise, could be added to the list in the near future, after adequate time for consultation. Additional case studies that demonstrates Connection to Country, champion inclusion, and have positive effects that are measurable by Climate Positive Design assessment tools will be recommended to Heritage NSW for consideration.

CONCLUSION

Thank you for the opportunity to engage in the Heritage NSW Climate Change Preparedness Action Plan survey, and comment on the principles and case studies. We trust you have received comments from many practicing Landscape Architects and academics and we welcome further discussion, particularly in relation to pre-identification of landscape heritage in New South Wales at risk of climate change impacts and also as critical safeguards of global capacity for reducing the harmful effects of climate change. We look forward to promoting and implementing the final Plan.

Sincerely yours,

Tanya Wood
AILA NSW President

SUBMISSION TEAM

This submission has been prepared by a working group of AILA NSW members.

- Link to UGIH: <https://www.aila.org.au/Web/News/Articles/National/UGI-20230224.aspx>
- Link to AILA Landscape Heritage Report: https://aila.org.au/common/Uploaded%20files/_AILA/Resource%20library/Landscape%20Heritage%20Report%20Volume%201-2.pdf
- Link to AILA Climate Positive Design: <https://www.aila.org.au/Web/Web/Values/Climate-Positive-Design.aspx>



APPENDIX 1: Comments on individual Actions

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Dear Ashley,

Please find here the table of comments by the Australian Institute of Landscape Architects relating to the individual Actions:

Number	Principle to which the Action relates	Action	Priority 3 - as presented	AILA Comment
a	Principle 2 Engaging communities	Investigate options for salvaging Aboriginal heritage at high risk of harm from the impacts of climate change in partnership with Aboriginal community stakeholders.	Medium HIGH	Add another action for combatting the cumulative destruction of cultural landscapes
b	2	Establish a future grant funding stream to support emergency works to heritage places in response to extreme weather events related to climate change.	High	Require engagement of Landscape Architectural advice to ensure 'nature-based solutions' that respond tpo complex site conditions and landscape systems
c	2	Establish a future grant funding stream to support works and projects that help heritage places prepare for the impacts of climate change.	High	AILA supports this action
d	2	Encourage a whole of place or landscape approach to manage the impacts of climate change on heritage places by engaging community stakeholders.	Low HIGH	How will you achieve this? AILA can provide assistance in communicating this approach
e	2	Explore opportunities for partnership with local government to <u>provide assistance to?</u> local heritage item owners on climate change preparedness.	Medium HIGH	AILA recommend <ul style="list-style-type: none"> - contacting the Landscape Designers in Local Government Forum and work with AILA to advocate for bundling or undergrounding of wires to conserve existing street tree canopies.



f	2	Promote the Australian Garden History Society's climate resources including the international Climate Change Alliance of Botanic Gardens' <i>Landscape Succession Toolkit</i> for garden owners and those working to preserve NSW cultural landscapes.	Medium HIGH	<ul style="list-style-type: none"> - Promote AILAs Climate Positive Design documents and tools and - encourage engagement of Landscape Architectural services and expertise on landscape heritage. - Prioritise use of the Landscape succession toolkit for heritage gardens at high risk from temperature and rainfall driven bioclimatic changes.
g	3 Evidence-based decision making	Update the Statement of Heritage Impact statement guidelines and checklists to assist authors of heritage management documents to specifically address the impacts of climate change on heritage values and significant fabric.	High	<p>AILA supports this action with a recommendation to</p> <ul style="list-style-type: none"> - engage a committee of experts such as the AILA Landscape Heritage Group to review the proposed changes
h	3	Update the State Heritage Inventory database to enable links to recent reports, heritage impact assessments and other useful material prepared by owners, managers, and consultants to inform the management of the impacts of climate change on heritage places.	Medium HIGH	AILA strongly supports this Action
i	3	Explore updating the Minimum Standards of Maintenance and Repair to include climate change mitigation and adaptation.	Medium	AILA supports this Action
j	3	Invest in, encourage and promote research into the impacts of climate change on heritage places in partnership with relevant scientists and technical experts.	Medium	<p>Work with AILA to integrate Landscape Heritage principles, expertise, case studies into existing educational programs such as</p> <ul style="list-style-type: none"> - Adapt NSW, - Landscape Architecture Programs at Universities and - TAFE. <p>AILA contacts may be able to assist here.</p>



k	4 Assessing risks and resilience	Develop a pilot study and/or encourage and promote research into the impacts of climate change on traditional sea resources in partnership with the Aboriginal community.	Medium	<p>AILA supports this Action.</p> <p>A separate Action is needed to</p> <ul style="list-style-type: none"> - promote and support self-determined aboriginal-led research into the application of cultural burning to mitigate mega fire events and - facilitate broader community understanding and access to ways to promote and support caring for Country. <p>(include specialists within existing Federal State Government departments as a result of the Commission of Inquiry into 2019/20 Bushfires/ Inquiry into Disaster Prevention)</p> <p>AILA Connection to Country Committee may be able to offer valuable links and resources.</p> <p>Contacts: Prof. Vanessa Cavanough, Den Barber.</p>
l	4	Explore the feasibility of preparing a climate vulnerability index for heritage places.	Medium	<p>Work with and reference experts on measuring benefits of existing trees such as Dr Sebastian Pfautsch, co author of Urban Green Infrastructure Handbook (Standards Australia – AILA)</p>
m	4	Encourage owners/managers of heritage places to develop climate change adaptation plans for SHR items.	Medium	<p>Work with AILA to develop a prototype that</p> <ul style="list-style-type: none"> - appropriately and accurately identifies risk and resilience - is user friendly and suitable for identifying assessing cultural landscape heritage and - helps to distil complex landscape systems into an easy to understand form.
n	4	Encourage the inclusion of climate risk assessments in conservation management plans for SHR items.	Medium HIGH	<p>Considering the case for cool burning to prevent megafire, or mitigating flooding with nature based solutions, this should be prioritised as High priority.</p>
o	4	Promote the benefits of regular reviews of asset maintenance plans to ensure they are meeting emerging climate trends.		<p>The emphasis should be on 'adaptable preparation' as opposed to 'specific plans'. The danger is that if rain does fall, contrary to expectations, the reasons to act are no less, simply redirected. Again professional advice is recommended as opposed to self assessment as Landscape Architects and Horticulturists are finding with dying trees after extended dry then extended wet. For example, this may require mechanical treatment of soil by a range of innovative techniques tested by scientific evidence or</p>



				<p>simply waiting long enough for a tree to naturally recover prior to removal (e.g. Kurrajongs that decorticate at unpredictable times)</p>
p	4	<p>Develop a guide for heritage place managers/owners to self- assess and manage climate change risk. This guide should include advice on the use of satellite and aerial imagery (including drone photography) to document change over time.</p>		<p>As above – self-assessment is not advisable for landscape heritage, with many contributing factors and complexity of considerations. Drone imagery has its limits as the geology, slope, soil moisture, fuel load, shrub, groundcover and mulch layer is not adequately assessed.</p>
q	5 Responsive strategies	<p>Establish an annual forum where managers, owners and heritage advisors can share observations and ideas about the impacts of climate change on heritage places and discuss successful strategies to minimise or prepare for such impacts.</p>		<p>The findings of the 2013 Tree Forum and subsequent similar events highlighted the need for information exchange between Landscape Architects, heritage experts and owners to register hardiness and success or otherwise over time in different locations and conditions. Explore funding streams to review and update the “Street Trees of New South Wales” survey conducted in the 1990s by Craig Burton and Helen Armstrong. This could have areas of focus relevant to changing climate : mitigation (Urban Heat Island Effect mitigation measurement and analysis) and adaptation (survival success rates and interpretation of results by expert scientists to include all contributing factors- root system conditions, water availability, exposure to pollutants as well as temperature and rainfall change).</p>
r	5	<p>Prepare new and updated technical notes for owners and managers on responding to the impacts of climate change, for example:</p> <ul style="list-style-type: none"> • assessing the adequacy of roof drainage and stormwater systems against current and future rainfall intensities • dealing with changes in ground moisture • simple measures for making heritage buildings more energy efficient without adversely impacting heritage values or significant fabric, and the importance of regular maintenance. 		<p>Refer to the AILA Urban Green Infrastructure Handbook for best practice, nation- wide consistency. While these technical notes are useful to owners, additional outward facing technical notes aimed at incentivising decision makers to conserve existing fabric. Based on scientific measurement, these technical notes could demonstrate the embodied energy, energy efficiency of historic fabric, techniques and particularly landscape elements such as deciduous trees and vine clad pergolas on north elevations, carparking areas and pedestrian links.</p>



s	5	Explore opportunities to develop heritage policy on the issues arising from energy conservation and net zero initiatives that may have potential adverse impacts on heritage places e.g. rooftop solar and heat pump technology.		Heritage NSW must work with other government departments (DPE) (DPI) to prevent poor heritage and environmental outcomes. Vast solar farms that rise up hillsides and incrementally destroy broad landscape views with high cultural significance and the absence of wildlife corridors are concerning e.g.: Wellington, NSW. The Urban Heat Island Effect of these developments must be monitored and sensitively designed out. View analysis by landscape heritage experts must be a prerequisite for future approvals.
t	5	Explore opportunities to record built heritage using virtual models or 'digital twins' to assist with the rebuilding of heritage items in fire and flood prone areas.	Low	AILA supports this action and its priority rating as low. The higher priority must go to maintaining and safeguarding the integrity of existing landscape heritage.
u	6 Integrating management approaches	Provide guidance to heritage place owners and managers on integrating climate change related risks into existing risk management processes e.g. fire management plans.	Medium	AILA supports requiring expert Landscape Architectural input on this guidance.
v	6	Include assessment of climate change risks in <i>Heritage Act 1977</i> applications.	Medium	How will this assessment be regulated / accredited? AILA may be able to provide input and guidance.
w	6	Prepare and promote case studies that highlight the potential approaches that can be taken to minimise current and future impacts of climate change on heritage places.		Additional case studies that demonstrate Connection to Country, champion inclusion, and have positive effects that are measurable by Climate Positive Design assessment tools will be recommended to Heritage NSW by AILA NSW for consideration.
x	6	Explore opportunities for owners/managers/consultants to easily add and access climate change information about heritage places into State Heritage Inventory database including: <ul style="list-style-type: none"> recent impacts of climate change an assessment of climate risks and resilience, and <ul style="list-style-type: none"> future management actions to address the impacts of climate change. 		HeritageNSW are encouraged to consult AILA Landscape Heritage Group to contribute to the early development of user-friendly forms for adding and assessing climate change information that applies to landscape heritage. This could be extended to a specific study on heritage streetscapes in conservation areas and be prepared by highly qualified expert Landscape Architects supported by Heritage NSW (refer comments on Action Q, above)



y	6	Amend the requirements for Section 60 applications to require information about the statement of significance, current condition and management actions in relation to the impacts of climate change.	Low	AILA supports this action and recommends the action also require engagement of a Landscape Architect qualified, knowledgeable and experienced in landscape heritage for accurate and reliable information.
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Sincerely yours,

Tanya Wood
AILA NSW President

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- Link to AILA Climate Positive Design: <https://www.aila.org.au/Web/Web/Values/Climate-Positive-Design.aspx>