Submission No 79

INQUIRY INTO PLANNING SYSTEM AND THE IMPACTS OF CLIMATE CHANGE ON THE ENVIRONMENT AND COMMUNITIES

Organisation: Southcoast Health & Sustainability Alliance

Date Received: 3 November 2023

Dear Members of the NSW Legislative Council Portfolio Committee No. 7 (Planning and Environment),

Inquiry into the planning system and the impacts of climate change on the environment and communities

Please find attached the Southcoast Health & Sustainability Alliance (SHASA) submission to the NSW Parliament's *Inquiry into the planning system and the impacts of climate change on the environment and communities*.

SHASA is an incorporated community group formed in 2015 to undertake projects to help achieve a zero carbon Eurobodalla. SHASA now has over 500 members, and focuses on implementing practical solutions to build community leadership, resilience and capability to deal with climate change and its many impacts, including drought, flood, and bushfire.

The SHASA submission is composed of 2 sections, focussing on Terms of Reference (ToR) *(a)* and *(c)*

a) *"Developments approved or proposed which are becoming more exposed to natural disasters as a result of climate change";* and

c) "*Short, medium and long term planning reforms that may be necessary to ensure that communities are able to mitigate and adapt to conditions caused by changing environmental and climatic conditions, as well as the community's expectation and need for homes, schools, hospitals and infrastructure*".

The section dealing with ToR (*a)* is informed by the Eurobodalla community's experience during the course of the Eurobodalla Rural Lands Planning Proposal (formalised as Amendment 11 to the Eurobodalla LEP), while the ToR *(c)* content is derived from appendices in the current Eurobodalla Climate Action Plan, approved by Eurobodalla Shire Council in August 2022.

Yours Sincerely,

Kathryn Maxwell

President

SHASA

Note : SHASA representatives are available to appear before the Committee to expand upon the information provided in this submission.

SHASA Submission : NSW Legislative Council Portfolio Committee No. 7 (Planning and Environment) Inquiry into the Planning System and the Impacts of Climate Change on the Environment and Communities

Part 1 - ToR (a) - *Developments approved or proposed which are becoming more exposed to natural disasters as a result of climate change.*

Introduction

The Eurobodalla Rural Lands Planning Proposal (ERLPP) was a recent major planning amendment to the Eurobodalla Local Environmental Plan which affected more than 90,000 hectares (over 25% of the shire) subject to increasing climate change induced natural disasters arising from bushfires, flooding and drought. It was formally approved by then Planning Minister Stokes on 11th October, 2019 as the Black Summer bushfires ate their way down the east coast of Australia. Much of the area rezoned by the ERLPP was directly impacted by these 2019-2020 bushfires.

With the insights and experience gained from the catastrophic Black Summer bushfires, it is incomprehensible that a major planning proposal such as the *ERLPP* could have proceeded to completion without a detailed and systematic strategic consideration of bushfire risks in such a fire-prone area as the Eurobodalla, yet this is precisely what occurred. Consideration of bushfire risks was ignored at this strategic planning stage, and instead shifted to the DA approval stage, by which time it is too late to rectify errors or omissions made during the strategic planning stage. This is a fundamentally flawed approach which will create intractable problems into the future.

The November 2019 version of *Planning for Bushfire Protection* (PfBP- the NSW "bible" for bushfire protection) identifies the inherent lack of strategic content in the *ERLPP* in just one sentence on page 19 - *"The most important objective for strategic planning is to identify whether new development is appropriate subject to the identified bush fire risk on a landscape scale."* This is the precise objective that the ERLPP studiously avoided, because it didn't want to know the answer. Despite repeated requests from the NSW Rural Fire Service for a Strategic Bushfire Assessment to be carried out as part of the ERLPP, nothing was done.

This strategic bushfire planning deficiency within the *ERLPP* is truly unconscionable. Not only has it totally sidestepped the *PfBP* requirements for a strategic level analysis to be carried out prior to rezoning, the *ERLPP* then compounded this omission by proposing new "open zoning" tables in bushfire-prone land, which allow practically any uses to be approved, including some expressly prohibited in all 3 editions of *PfBP* (such as service stations and power generation), as well as Special Fire Protection Purpose (SFPP) developments, which are the most vulnerable category, requiring extreme protection measures that exact a heavy toll on the environment. It is clear that, within the *ERLPP,* bushfire protection planning has been made totally subservient to maximization of development, which will inevitably result in foreseeable tragedies and enormous public liability issues.

The ERLPP changes were vigorously contested by both community groups and NSW government agencies, but their clearly articulated concerns were ignored. The current inquiry presents a timely opportunity to review Amendment 11 to the Eurobodalla LEP, with the urgency for such review underscored by the ongoing series of natural disasters including bushfires and recurrent flooding in both urban and regional areas of NSW.

SHASA therefore is submitting the Issues Paper prepared by the Eurobodalla Nature Coast Alliance regarding the Rural Lands Planning Proposal for the information and consideration of Committee members. For the sake of brevity, the SHASA submission has not included all the attachments listed in the ERLPP Issues Paper, but SHASA can supply any supporting attachments or documentation of interest to committee members on request.

Extent of changes

- Over 25% or >90,000ha of the Eurobodalla Shire was affected by the ERLPP which will dramatically increase the extent of land zoned rural across the Shire, as well as the number of land uses permitted on these rural lands through the use of open land use tables (e.g. land zoned RU1 will have a 60% increase in land uses and RU4 land will have a 142% increase).

- Over 38,000ha of land previously proposed as E3 Environmental Management in the draft Eurobodalla LEP, and subsequently zoned Deferred Matter under the Eurobodalla LEP (ELEP) 2012, will be zoned RU1 or RU4 which is equivalent to a 250% and 212% increase respectively in the uses permitted on these sensitive lands.

- 7,000ha of sensitive coastal land and riparian zones that were zoned 7(a), 7(f1) and 7(f2) for environmental protection in the Rural LEP 1987 will be rezoned to RU1 and RU4, with only small areas protected in E2 and E4 zones.

- Grazing of livestock will become exempt development on E2 lands which do not fall under the Coastal SEPP, contrary to long-standing agency advice and riparian rehabilitation efforts, and extensive agriculture will become permissible without consent on E4 land.

- Open land use tables will similarly be applied to business and recreation zones further increasing the amount and characteristics of development across the Eurobodalla.

- The ERLPP will also enable more subdivision that will add 247 new dwellings (or as many as 494 dwellings with new dual occupancy provisions) to the existing housing stock. These new dual occupancy provisions would also permit a doubling in existing dwellings to 1,380, which in total equates to over 1,800 new dwellings (137% increase) spread across the landscape including steep forested areas that have a high bushfire risk.

- Council's desire to encourage and facilitate a range of activities across the rural landscape will inevitably lead to further impacts from vegetation clearing for dwellings, APZs, fences, power lines, roads and other infrastructure required to accommodate the expanded range of land uses.

- Although the ERLPP purports to relate solely to rural lands, as per its title, it is far broader because of the 26 planning changes it proposes, only 14 relate to rural land, while the remainder make changes to a suite of other zones across the Eurobodalla; alter the classification of some Council lands from community to operational; and respond to specific landowner requests or development enquiries.

Key impacts

- The impacts of these dramatic changes in land use were of great concern to the State government agencies (***Attachment 1)*** and a huge number of residents who either made submissions on the draft ERLPP (1,100) or who subsequently sent letters to their local member Andrew Constance (2,000) and/or the Planning Minister Anthony Roberts (1,400) to express their dismay at the proposed changes. The Tuross Heads Progress Association presented a petition signed by 520 residents to Council opposing both the process and changes proposed in the ERLPP and followed this up with a letter to the Planning Minister (***Attachment 2***)

- Rural Fire Service (RFS) is concerned that the changes will expose more people to bushfire risk and are not consistent with their primary objective to protect life, property and the environment.

- DPI Fisheries is concerned with the impacts of runoff and pollution from increased development on the oyster industry and the healthy estuaries essential for commercial and recreational fishing.

- DPI Agriculture is concerned that: (a) the additional land uses are not consistent with the existing primary production industry; (b) prime agricultural land will be alienated or fragmented; and (c) many of the Deferred Matter lands are not suitable as RU1 and RU4 zones.

- DPI Water is concerned about the greater demand on water resources that will inevitably be associated with increased development and believes that adequate water supplies are lacking.

- Local Land Services is concerned about the impacts on productive agricultural land and the environmental assets of the Shire and considers that additional development will negate the millions of taxpayer dollars already invested in restoring wetland and riparian systems on E2 lands.

- OEH limited their objections to those areas with complete vegetation cover, known threatened species habitat and endangered ecological communities. Despite this restriction, OEH has major concerns that the increase in permissible activities will significantly impact forests and wetlands and destroy large areas of habitat for threatened species and endangered ecological communities.

- Oyster industry (Eurobodalla's second largest industry) representatives presented a Statement of Concern to the Planning Minister in October 2018 expressing grave concerns about the threat that the ERLPP poses to oyster farming in the Eurobodalla because Council ignored the significant concerns raised by Government expert bodies who guide the industry (***Attachment 3)***.

- Community concerns largely reflected those of the agencies, as well as the potential loss of the unique "Nature Coast" attraction so important to the Eurobodalla's largest industry – tourism.

Concerns with the ERLPP process

- The consultation process for the ERLPP was weighted in favour of rural landowners because there were only 5 opportunities across the Eurobodalla to consult with the broader community on the draft Rural Lands Strategy (RLS), and 2 of these were drop-ins at community markets - any workshops held were exclusively for rural landholders and there was no formal community consultation on the draft ERLPP before it went on public exhibition. In addition, community members who made substantial submissions on the draft ERLPP were only invited to address Council after Councillors had already voted to approve it.

- The local Aboriginal community have strong links to Eurobodalla's coastal landscapes but they were not formally consulted about the impacts on, or conservation of, their heritage in relation to either the RLS or the ERLPP.

- In preparing the ERLPP, Council dismissed the significant concerns of six NSW agencies both on the draft RLS (2015) and the draft ERLPP (2018), as well as some of their own planning consultant's recommendations in the *Eurobodalla Shire Council's Rural Lands Strategy* (2016).

- Changes to permissible uses in the E2 zone as well as the removal of all E3 zones and the Terrestrial Biodiversity Map from the ELEP 2012 did not follow the requisite processes outlined in the *Northern Councils E-zone Review Final Recommendations* (2015) and are inconsistent with Ministerial Direction 2.5 under s117(2) of the EPA Act because the changes are not of 'minor significance' (***Attachment 4***).

- The ERLPP does not adequately address Ministerial Direction 1.5 Rural Lands which requires Council to consider and justify changes to rural land planning controls against the principles of the Rural SEPP including the identification and protection of natural resources having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land.

- In preparing the ERLPP, Council disregarded Directions 7, 8, 14, 15, 17, 18 and 28 in the *Southeast and Tablelands Regional Plan 2036* (2017) by *a)* risking the viability of the oyster industry and the integrity of prime agricultural land by increasing land available for sub-division as well as opening up riparian lands and steep forested slopes to further development; *b)* failing to adequately protect important environmental assets and enhance biodiversity connections through inappropriate zonings and the removal of overlays from the LEP; *c)* ignoring climate change by opening up land to further subdivision and development which places a greater burden on water resources and puts landholders at risk during extreme weather events; and *d)* not properly considering the location of rural residential development in relation to bushfire risk, vegetation clearance and access to infrastructure and/or services (***Attachment 5***).

- Lands zoned E3 in the draft ELEP, and subsequently Deferred Matter in the ELEP 2012, were identified in the South Coast Regional Strategy and associated South Coast Sensitive Urban Lands Review (2007), Council's own 2006 Strategic Planning Unit report, as well as the South Coast Regional Conservation Plan (2010), as being areas that required an environmental zoning in order to protect and preserve their significant values, consequently a rural zoning is inappropriate for these lands.

- The ERLPP is not consistent with the NSW Oyster Industry Sustainable Aquaculture Strategy 2016 water quality protection objectives for oyster aquaculture areas, particularly for Priority Oyster Aquaculture Areas such as those in the Eurobodalla.

Concerns with Council's capacity to implement the ERLPP

- The ERLPP relies on the DA merit assessment process to protect biodiversity on environmentally sensitive lands which were originally designated as E3 in the draft ELEP, but Council has a poor record in relation to this process as a recent development consent at Mossy Point demonstrates (***Attachment 6***). The ERLLP will substantially increase the number of DAs coming before Council.

- The ERLPP relies on a '*flexible and co-operative'* approach by landholders to protect biodiversity and native vegetation in sensitive areas, however Council has a poor record in following up non-compliance by landholders who do not co-operate, as recent unauthorised clearing on Council's own land immediately adjacent to a Coastal SEPP wetland at Long Beach demonstrates (***Attachment 7***).

Probity issues

- The community members and councillors on the Steering Committee who oversaw the development of the *Eurobodalla Rural Lands Strategy* (2016) were all large rural landowners in the Eurobodalla and they and their immediate families served to benefit materially from the recommendations in this Strategy, which were subsequently adopted in full in the ERLPP, in particular the rezoning of Deferred Matter lands and open land use tables for RU1 and RU4 lands. Only 1 community member could have been considered independent and he quit the Steering Committee early on in the process when other members of the Committee forced the removal of any references in the Strategy to stewardship of the land (***Attachment 8***).

Precedent

- The proposed ERLPP sets a very poor planning precedent for other Council areas across NSW in terms of both the process (e.g. lack of genuine community consultation and dismissal of expert State agency advice) and the outcomes for agricultural land and environmental assets.

Nature Coast Alliance recommended changes

Adoption of the following recommendations would largely address the concerns raised by the state agencies and the Eurobodalla community:

1. **Retain the existing permissible use tables for rural zones as per the ELEP** because these are already very broad and opening them further is not only inconsistent with rural production activities but will lead to future land use conflict.

2. Review the proposed rural zonings applied to land identified as Deferred Matter in the ELEP 2012 and **reinstate E3 zones** for land that has important biodiversity values/native vegetation.

3. **Take E2 off the list of zones in the Schedule to the ERLPP where grazing of livestock is exempt development** and **remove extensive agriculture as permissible without consent on E4 land**. **Boatsheds should be prohibited in E2 zones** as per ELEP 2012.

4. **Retain the Terrestrial Biodiversity Map, and associated Clause 6.6, in the LEP** so that any constraints to clearing and development are accessible and transparent to landholders, especially new residents purchasing property in the Eurobodalla.

5. **Reinstate Clauses 4.1E and 4.2A from the ELEP 2012** so that the proposed minimum averaging provisions relating to RU4 are removed and the sunset clause relating to existing dwelling entitlements, as well as the sealed road provisions, are restored**.**

6. **Restore previous Minimum Lot Sizes to all rural** lands including the 1000ha Minimum Lot Size that was removed from RU1 lands.

7. **Non-rural strategy matters in the ERLPP should be dealt with in a separate planning proposal.**

Part 2 ToR (c) - *Short, medium and long term planning reforms that may be necessary to ensure that communities are able to mitigate and adapt to conditions caused by changing environmental and climatic conditions, as well as the community's expectation and need for homes, schools, hospitals and infrastructure*

1. Introduction

Decisions on building design and land development for residential and commercial subdivision will have impacts for more than fifty years[1] in the case of individual houses, and hundreds of years in the case of subdivisions. These decisions have probably the longest lifetime impacting the community of any decisions taken by local government and by individuals in the community.

It is therefore critical that the decisions taken today set us up to ensure the housing stock of the future, and our villages, towns and suburbs, are designed to:

- improve our climate resilience, including our ability to cope with a hotter climate and more extreme weather events; and
- lower our carbon footprint, particularly by reducing household and building energy-related greenhouse gas (GHG) emissions and emissions from related sectors like transport.

Lifting the energy and climate performance of our built environment offers a range of benefits for households and our community.

- The built environment is responsible for almost a quarter of Australia's national climate emissions, and therefore provides a significant opportunity to reduce our carbon footprint. Setting energy standards for new buildings could deliver at least 78 million tonnes of cumulative emissions savings nationally and play an important role in reducing emissions locally.[2]
- Homes with better climate and energy performance are healthier and more resilient. There were reportedly 36,000 deaths in Australia associated with the heat between 2006 and 2017, and heat waves are predicted to get worse. Cold homes are also a problem in Australia contributing to twice as many deaths here than in Sweden where it gets much colder but homes are built for greater climate resilience.
- Better energy performance means lower energy bills. For example, the Australian Building Codes Board found that households would save up to $576 per year if stronger requirements were applied under the National Construction Code.[3]

Now is a crucial time to improve the NSW planning system to ensure better quality, more energy efficient and climate-resilient developments are mandated. In Eurobodalla Shire, many houses are decades old and likely to come up for renovation or replacement in the coming decade. Eurobodalla is also witnessing significant growth in new housing stock. How these developments proceed, and how they incorporate sustainability principles, will have long-lasting consequences for future residents of the shire.

2. Key principles

There are some key principles that should be central to the way the NSW planning system treats new developments. These include the following:

- The NSW planning system, and NSW Government particularly, should support Local Councils in their efforts to strengthen requirements for new buildings, and to improve the quality of existing buildings from the perspective of climate resilience and carbon emissions.

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[1] "On average, the generally expected and acceptable lifespan of a home should last at least 60 years" (Source: https://propertyregistry.com.au/how-long-will-a-new-house-last/)

[2] Buildings | solutions project | Climateworks Centre

[3] *Building Ministers' Meeting Communiqué March 2022.* https://www.industry.gov.au/news/building-ministers-meeting-communique-march-2022

- The NSW planning system should not constrain Local Councils in prescribing better sustainability and resilience standards for new buildings or developments (e.g. energy and water efficiency, liveability under heat stress).

- The cost-benefit assessment of proposed housing standards, and of standards that relate to new developments, should be assessed as whole-of-life costs and benefits, and must consider the liveability and costs from the perspective of future residents. The calculation and weighting of costs should not emphasise short run development costs at the expense of depreciated future costs, or the energy efficiency savings that accrue over time for households, because this favours the financial interests of today's professional land developers over future residents who will bear not only higher financial costs but also physical and other risks associated with climate change.

3. Building design

The report *Senate inquiry into impacts of climate change on housing* (Commonwealth of Australia 2018) highlights various pathways through which built infrastructure may be affected by climate change, including flooding and inundation, increased bushfire frequency and intensity, and heat.

Acute heat is a crucial issue in the face of climate change. "*In Australia, heat events have killed more people than any other natural hazard experienced over the past 200 years*" (Commonwealth of Australia 2018). People are most often indoors during heatwave periods, hence health outcomes are significantly influenced by the design of buildings, particularly with respect to their performance under acute heat conditions is (Commonwealth of Australia 2018). Building design affects energy use (and hence whole-of-life energy costs) for heating and cooling, and affects thermal comfort levels for residents during temperature extremes.

The Centre for Sustainable Infrastructure at Swinburne University of Technology notes an increasing dependence on air-conditioning to reduce the impact of heat stress[4], and this can overload the power grid and create power outages – which happened during 2009 and 2014 heatwaves in Melbourne and Adelaide – at which point the occupants of houses that depend on air conditioning to cope with heat are significantly more vulnerable than those in houses which do not depend on air conditioning. They argue that buildings need to be designed to be thermally comfortable without air conditioning during a heatwave (Commonwealth of Australia 2018).

Those most at risk from heat stress include the elderly, disabled and the young. Additionally, some households are particularly vulnerable to heat stress because they are more likely to live in housing with poor insulation for heating and cooling such as low-income, renters and residents in public housing (Commonwealth of Australia 2018).

The Commonwealth Inquiry's report notes plainly that, based on evidence received, **Australian buildings are generally not well suited to the existing climate, let alone a future further affected by climate change**. Heat stress in existing housing stock is flagged as a particular concern. In its submission to the Inquiry, the National Climate Change Adaptation Research Facility (NCCARF) notes "*In many parts of Australia, housing is poorly adapted to the current climate, and this is particularly the case for many modern developments, where lack of insulation and passive design elements mean that auxiliary heating or cooling, which accounts for about 40% (or much more in some climates) of energy use in the average Australian home, are the only way to maintain a comfortable environment for much of the year*" (Commonwealth 2018, Submission 28).

2.1 New buildings

Once a house is built, there are only limited ways of improving performance, so decisions made at the initial design and construction stage have a long impact. The National Climate Change Adaptation Research Facility (NCCARF) identifies that financial capacity and cost constraints, knowledge and understanding of risks, insurance issues and/or government restrictions will affect whether some private house owners take action to respond to climate-related risks through building alterations or at initial design stage. The Commonwealth Inquiry notes that the uptake of voluntary schemes intended to improve housing standards, such as the Green Building Council Australia's Green Star rating scheme, is not occurring as rapidly as is

[4] By March 2014, 74% of dwellings in Australia had coolers, up from 59% in 2005.

required (Commonwealth of Australia 2018).

The Commonwealth Inquiry highlights that State and Local governments need to play a central role by ensuring land-use planning policies that guide better development outcomes in the face of climate change risks are adopted and implemented.

Today's building design standards need to be significantly improved.

In Eurobodalla, the standard of buildings today is highly diverse. Many homes have been built in the past with relatively poor consideration of passive heating/cooling principles or thermal comfort, and even the majority of houses being built today may fare poorly from a climate resilience perspective.

New builds are required to be designed and constructed to meet minimum performance standards – for water and energy use and average thermal comfort – which are prescribed by the NSW Government's BASIX tool. However, studies indicate that most building designs which today pass the BASIX standards will fail those same standards under projected climate change scenarios for our region (WSP 2021).

A survey of some Councils as part of the *Future Proofing Residential Development to Climate Change project* (WSP 2021) identified the following deficiencies in current standards and tools used for modelling thermal performance of buildings:

- BASIX standards are outdated and not stringent enough – today's BASIX-compliant buildings fail under projections of our future climate.

- Climate data used in models like the *Nationwide House Energy Rating Scheme* (NatHERS) – which are used to model the thermal performance of buildings in order to meet BASIX standards – is not representative of current, let alone future, climate (Commonwealth of Australia 2018). Although the climate files in NatHERS were updated in 2022 to incorporate historical data from 1990 to 2015, most of the hottest years on record have all occurred since 2015 – the warmest was 2019 – and thus are not accounted for in the current tool.

- The thermal performance metric in BASIX, and the National Construction Code, balances winter and summer conditions (i.e. use an average performance measure over the year) but does not look at performance in acute heat conditions. Climate change will drive supercharged summers and fading winters, so **metrics that address extreme heat are needed** (Commonwealth of Australia 2018).

- NatHERS is driving greater reliance in modern homes on mechanical cooling to cope with heat, which is in fact creating new homes with lower intrinsic heat resistance than older homes. Increasing people's dependence on air conditioning becomes hazardous without AC during heatwaves, as can happen during grid failure. Unless building assessment tools like NatHERS are modified, they risk adversely impacting on human health by making occupants more vulnerable during heatwaves (Commonwealth of Australia 2018; Hatvani-Kovacs et al. 2018).

- There is a lack of industry support or compliance to ensure that buildings are being built and construction certified to the performance levels implied by the design specifications that pass BASIX.

Various other reasons may contribute to buildings performing poorly from a sustainable design perspective:

- Lack of awareness among designers or their clients about the costs and benefits of sustainable buildings.

- A 'business as usual' approach where no consideration of future impacts is undertaken.

- Lack of economic assessment or costing models using whole-of-life costs, when assessing the merits of housing design proposals.

- Different incentives between developers/home builders and future occupants (Environment Australia 2013; Bird and Hernández 2012; MacAskill et al. 2021). This occurs for example where houses are designed by initial owners who do not intend to live in the house longer-term, but rather to either rent

or on-sell the house once it is constructed – which is an increasing trend. The initial owner has a financial incentive to keep construction costs as low as possible, and no interest in long-term or whole-of-life costs. Hence, the incentives for land developers and builders do not align with long term energy savings, or liveability of buildings, and a set of climate-related risks may be passed on to future residents. These range from energy inefficiency (which correlates often with comfort and liveability of housing as well as operational costs) to, in extreme cases, potential un-inhabitability or un-insurability. This may create financial costs and climate-related risks to future homeowners/residents, and indirectly to Council and the community too, since higher energy and water demands create flow-on costs for the provision of local infrastructure to meet demands.

- At present, there are no requirements for a building designer to be certified as such or to demonstrate relevant formal training.

Many respondents to the Commonwealth Inquiry argued the need for stronger and/or additional minimum building requirements to ensure inhabitants of the NSW housing stock are resilient to the impacts of climate change and especially to heat. "*Better use and integration of building codes with other mechanisms could allow for significant reduction in heatwave risks, and support adaptation to a changing climate*" (March et al. 2021).

The integration of heat stress resistance into the NCC/NatHERS is needed, and NSW should advocate for and support this.

Elements of the solution space are relatively well mapped out. Building design to reduce heat stress can be achieved by looking at "*orientation, shading, provision of appropriately sized eaves, light colours, reflective roofing, inclusion of a cool refuge, (and) complimentary landscaping*" (Commonwealth 2018, Submission 28); however, none of these are formalised in the *National Construction Code* (NCC). Despite being updated in 2022, the NCC still does not address heatwaves or the role of dwellings and other buildings in reducing heatwave health risks (March et al. 2021). The integration of heat stress resistance into the NCC/NatHERS is needed (Hatvani-Kovacs et al. 2018). Further, occupancy certificates required for single residential properties should confirm that the Energy Rating prepared at the start of the project has actually been achieved once the build is completed (Commonwealth of Australia 2018) – which is not standard practice today.

From an equity perspective, strengthening the National Construction Code and tools like BASIX are necessary to ensure residents can live and work in safer, more resilient and more sustainable buildings. Recent research on the costs and benefits of proposed changes to the NCC in 2021 (i.e. increasing from 6 to 7 stars for thermal performance and a stronger energy budget) concluded the up-front costs of these changes be repaid on average over 6-8 years, households will be saving money from day one (comparing energy savings per month with any increased mortgage repayment costs to cover additional up-front construction costs) and the proposed changes will deliver a net present value of between $9,500 to $13,500 (over 20 years with 2% discount rate) (Renew 2021). In other words, such changes make strong economic sense for household and for the local economy.

2.2 Existing buildings

The NSW Government, along with the Australian Government, should provide ongoing public funding to help existing home owners upgrade elements of their homes that significantly reduce GHG emissions, or can improve a house's liveability during extreme heat without air conditioning systems.

The thermal performance of existing buildings is also a critical issue, though this is more difficult to address than for new buildings. A key strategy is retrofitting low efficiency dwellings so that internal temperatures are kept within safe ranges during extreme heat events.

It is helpful to see that the NatHERS rating scheme is being expanded to include existing dwellings. However, as indicated already, once a home is built there is often only limited scope for owners to dramatically improve its performance or liveability under extreme weather conditions – hence the imperative to dramatically improve standards for new buildings.

For some residents, such as lower income households, financial assistance is needed to ensure they can

take advantage of energy savings measures, participate in the transition to cleaner energy, and improve the liveability of homes during extreme weather events.

For renters, which include many low-income households, there is a strong case for mandatory energy efficiency standards to ensure rental properties are safe for tenants. This should include free energy audits on private rental properties built before 5-star ratings were introduced. Organisations including the Australian Council on Social Services (ACOSS) recommend that the Federal Government provide up to $5,000 for energy efficiency and/or solar installation for qualifying poor performing rental properties targeted at low-income renters.[5] The Energy National Cabinet Reform Committee is currently working on a framework to implement mandatory energy efficiency standards for rental properties, and we encourage advocacy for strong standards and government support, particularly for low-income households.

3. Subdivision design

Many of the challenges described for buildings are mirrored in the issue of subdivision design, and decisions on subdivision development have even longer lifetimes than those for buildings. It is crucial that the impacts of climate change over the entire life of a new subdivision are integrated into its design and approval. The sustainability and resilience of our communities, and our natural ecosystems, will be directly influenced by initial subdivision design.

> "*Well-designed built environments make sound economic sense. They contribute to our health and wellbeing and to successful and thriving places. They respond to the needs and aspirations of people and communities; are made up of attractive buildings and spaces we visit often and feel comfortable in; include quality open spaces, facilities and streets we can easily access and relax in; support good growth and productivity; enhance our comfort through green infrastructure; provide a diversity and mix of neighbourhoods; increase our ability to walk and cycle to local services; and adopt sustainable and resilient practices to minimise our impact on the environment and sustain it for future generations*" (DPIE 2021).

Various guidance exists on the issues that need to be addressed (see for example OEH 2016; Norman, Newman, and Steffen 2021).

The NSW government should work with Local Councils across NSW to develop sustainable subdivision guidelines and standards, as an urgent priority.

The Victorian model offers a potential way forward. In Victoria, the Council Alliance for a Sustainable Built Environment in partnership with sixteen local governments has developed the *Sustainable Subdivisions Framework* (CASBE 2019a). The framework "*seeks to mitigate the impacts of a fundamentally changing climate to create subdivisions that can adapt to the changing climate… (it) has been developed with a focus on environmental sustainability outcomes, which have social and economic benefits, for example the way green infrastructure can provide improved amenity or recreation value*". It integrates guidance on seven categories that together create more sustainable subdivisions: Site Layout and Liveability; Streets and Public Realm; Energy; Ecology; Integrated Water Management (IWM); Urban Heat; Circular Economy (Materials and Waste).

As an example, the Framework's *energy conservation* objectives include the provision of lots with areas and dimensions that ensure dwellings can be sited for best solar access, and ensuring streetlights and other public infrastructure requiring energy supply (pumps etc.) are of the highest efficiency standard available and integrate smart technology where appropriate. *Renewable energy* objectives include orienting lots to encourage roof lines capable of supporting solar PV, maximising the provision of renewable energy to the subdivision, and promotion of battery storage uptake at either the subdivision or lot scale. Lot orientation is an important factor.

The NSW government should include more specific guidance on how consideration of climate change should be integrated into the formulation of Council-level policies and plans, including Local Environment Plans (LEPs).

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[5] Brief-Proposal-and-implementaion-plan-for-National-Low-income-Energy-Productivity-Program-September-2021.pdf (acoss.org.au)

While Council's own planning instruments are important to guiding the character of new development, much of the urban planning space is regulated, or constrained, by the NSW Government. The *Environment Planning and Assessment Act 1979* sets out the objectives and the framework for decision making associated with the built environment across NSW, which are then to be translated and implemented at the local level by Councils' local planning instruments (Local Strategic Planning Statement, Local Environment Plan, Development Control Plans, codes, etc). Where there are standards in place at the NSW Government level, local Councils are prevented from requiring higher standards – even if, as now, the NSW standards are insufficiently protective of the climate itself or of future residents under a changing climate.

The NSW Audit Office notes that the NSW Planning Department's 2018 *Guide to preparing Local Environmental Plans (LEPs)* for councils does not mention climate change, and their review of 143 council LEPs (in March 2020) found that all make a reference to climate change but only in relation to flood planning (NSW Audit Office 2021). The NSW government's 2023 updated *Local Environmental Plan Making Guideline* now mentions climate change twice, in general terms, but provides no helpful guidance on the ways in which climate change should be considered by, or integrated into, LEPs. Given the significance of this issue, and the generally low levels of awareness among the development industry about how consideration of climate change *should* influence the character of new developments, this should be specifically addressed.

4. Summary of recommendations

The NSW Government should:

- Upgrade NSW existing requirements for sustainability measures in new buildings, including strengthening existing *BASIX standards* and introducing a measure that assesses new builds under extreme heat scenarios. State and National standards and assessment tools should assess new proposals' building performance without the use of air conditioning as a measure to mitigate extreme heat effects, since otherwise we are locking in development that is dependent on electrified air conditioning to maintain safe, comfortable homes.

- Advocate to the Australian Government and relevant national bodies to improve the *National Construction Code* so as to integrate new standards related to acute heat risks (i.e. extreme heat events).

- Work together with NSW Councils to prepare Sustainability guidelines for new subdivisions. These should support Councils to ensure new development areas are better designed from a sustainability and climate resilience perspective.

- Add more specific guidance on how consideration of climate change should influence the preparation of Local Environment Plans into the NSW Government's *Local Environmental Plan Making Guideline (2023).*

Furthermore, the NSW Government should:

- Build the human capacity in Councils, especially in regional areas facing significant growth, to better promote sustainable development through the planning process. This should include advocating for programs to develop greater sustainable development expertise through the National Cabinet Planning Reform Blueprint, which includes a goal of "Adequately resourcing built environmental professionals, including planners, in local government."[6]

- Continue and expand programs for improving energy efficiency, climate resilience and other sustainability parameters in older housing stocks.

- Provide greater financial and technical support to Local Councils and community organisations for the design and implementation of programs for plantings and/or artificial shading of strategic urban streetscapes, carparks and playgrounds.

[6] Meeting of National Cabinet - Working together to deliver better housing outcomes | Prime Minister of Australia (pm.gov.au)

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