

Climate-ready planning laws for NSW

Rocky Hill and beyond



Environmental Defenders Office NSW

We recognise the traditional owners and custodians of the land, seas and rivers of Australia. We pay our respects to Aboriginal and Torres Strait Islander elders past and present and aspire to learn from traditional knowledge and customs so that together we can protect our environment and cultural heritage through law.

Environmental Defenders Office NSW

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Foreword

When the NSW Land and Environment Court handed down its recent decision to refuse the Rocky Hill coal mine in the Gloucester Valley in NSW, reverberations were felt across the community, resource sector and legal field, here in Australia and on the international stage.

Although the Court held that the project should be refused due to its significant and unacceptable planning, visual and social impacts, it was the Court's consideration of the greenhouse gas emissions of the proposal, and the impacts of those emissions on the climate system, environment and people, that has everyone talking.

The Rocky Hill case comes in the wake of the international agreement made in Paris in 2015 'to keep the increase in global average temperature to well below 2 °C above pre-industrial levels; and to limit the increase to 1.5 °C'. The Court heard expert evidence that a 'carbon budget' (that caps the amount of global emissions that can be released in order to maintain warming below a certain temperature) must be adhered to if this objective is to be reached.

While some people wondered how refusing a single coal mine in the Gloucester Valley can help in the long term fight against climate change, the Chief Judge summed it up when he said "the global problem of climate change needs to be addressed by multiple local actions to mitigate emissions".

The case did not call into question the legitimacy of climate change. The fact that anthropogenic climate change is occurring was not in dispute. The proponent did not dispute the fact that their project would produce greenhouse gas emissions. The main points of contention centred on whether the coal mine was able to proceed on its merits, looking at the 'carbon budget' and the need to limit global warming to 1.5°C post-industrial levels.

The Court found that the greenhouse gas emissions of the project and their likely contribution to adverse impacts on the climate system, environment and people were a reason for refusal. This outcome should not be controversial because decision makers are tasked with assessing the impacts of development proposals on the natural environment and on our communities, who are already living with the impacts of climate change. The science is clear that limiting the effects of climate change is necessary to achieve sustainable development and intergenerational equity, and is in the public interest, all of which are considerations that the *Environmental & Planning Assessment Act* requires to be taken into account when determining development applications.

Climate science makes the urgency of the task clear. In this context, it is important that decision makers have strong guidance on how to incorporate considerations of climate change into decisions. However, there are no specific climate change laws in NSW. Current planning laws lack the specificity needed to ensure we are reducing greenhouse gas emissions in order to limit warming to 1.5°C, and to effectively protect the environment and communities already at risk from the impacts of climate change.

This report seeks to overcome these shortcomings. The recommendations made here would establish an overarching state-wide approach to tackling climate change, including setting targets for reducing emissions and implementing climate adaptation measures; and update the NSW planning system to ensure that there are clear obligations on decisions makers to meet emission reduction targets and plan for climate adaptation and resilience. This is essential if we have any hope of meeting the commitment made in Paris to limit the increase in global temperature to 1.5 °C, and ensuring a safe future for the next generations. I welcome the report and encourage a wide readership.

Robert White
Barrister Counsel for Groundswell Gloucester in the Rocky Hill case

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Our proposal for climate-ready planning laws for NSW

Minister for Climate Change

Climate Change Division in Department of Premier and Cabinet

New NSW Climate Change Act

Key features:

- Object to limit warming to 1.5 degrees Celsius
- Emissions Reduction Target and Renewable Energy Target
- Independent statutory Climate Change Advisory Council
- Clear duties to exercise powers consistent with targets
- Climate risk assessment
- Requirements to make adaptation plans
- Monitoring against statewide indicators

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Integrating climate change into the NSW planning system



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Aims and objectives

- New objects relating to climate mitigation and adaptation
- Duty on decision makers to apply the objects



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Development decisions

- Climate change is an explicit mandatory consideration
- Duty to refuse unacceptable impacts
- Effective consent conditions for mitigation and adaptation



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Strategic Planning

- New Climate Change SEPP
- Mandatory climate change requirements for plan makers
- New guidance materials and best-practice principles



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Other laws and approvals

- Review and update Mining Act
- Add greenhouse gases to pollution laws
- Review other legislation for climate-readiness



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Environmental assessment

- Climate impact assessment pathways
- Climate Impact Statements
- Accredited and independently appointed consultants



60

Compliance and Enforcement

- Mandatory greenhouse gas monitoring and reporting
- Adaptive management and continuous improvement
- Merit appeal rights

Executive Summary

Australia's climate has warmed by just over one degree Celsius (°C) since 1910 and average temperatures are projected to rise further. Impacts that are the result of a changing climate are already occurring. These include the warming and acidification of oceans, sea level rise, changes in rainfall patterns, and an increase in extreme weather events including fires, flooding and drought. And the impacts of climate change are not just environmental; there will be significant implications across all sectors, including health, the economy and national security.

In light of the unequivocal scientific evidence of the impacts of anthropogenic climate change, the international community agreed in late 2015 to keep the increase in global average temperature to well below 2°C above pre-industrial levels, and to pursue efforts to limit the increase to 1.5°C.

Despite this, the legal and governance frameworks needed to reduce emissions, limit warming and adapt to 'locked-in' climate change are still emerging. The recent NSW Land and Environment Court decision in the Rocky Hill case demonstrates that climate change must be in the minds of decision makers when assessing the impacts of greenhouse gas emissions on the climate, environment and people, and that decision makers are obligated to make decisions having regard to the need to limit global warming to 1.5°C above pre-industrial levels. It emphasises that *"the global problem of climate change needs to be addressed by multiple local actions to mitigate emissions by sources and remove GHGs by sinks"*.

This report identifies two major legal barriers to NSW taking effective action to combat climate change. The first is a lack of an effective, whole-of-government legal and governance framework in NSW for responding to climate change. The second is the failure of the NSW planning system (encompassing strategic land-use planning, environmental impact assessment and development assessment) to adequately incorporate climate change considerations into planning and development decisions.

Overcoming these two barriers with clear requirements for decision makers will provide certainty to investors, industry, proponents and the community, who are already living with the impacts of climate change.

This report recommends that NSW needs overarching climate legislation - a new **Climate Change Act** that: sets specific targets for reducing greenhouse gas emissions and increasing renewable energy; imposes duties on decision makers to reduce greenhouse gas emissions and make decisions consistent with limiting the increase in global warming to no more than 1.5°C, and puts in place processes (such as climate adaptation plans) for building resilience to the impacts of climate change.

The report makes specific **recommendations for planning law reform** including to: better integrate climate change considerations into planning decisions; strengthen strategic land-use planning; require Climate Impact Statements for major projects; and provide guidance for decision makers on how to assess whether a project will have unacceptable climate impacts.

The recommendations in this report demonstrate how we can make NSW planning laws climate ready, and ensure that today's communities, planners, developers and decision makers have the guidance needed and duty to reduce emissions and limit warming to 1.5°C, manage climate risks and protect assets, lives and livelihoods, and plan for a rapid and just transition away from fossil fuel production and use consistent with the latest IPCC advice. The future of our cities and towns depends upon it, as do the unique landscapes and ecosystems that support life as we know it.

Climate change must be in the minds of decision makers when assessing the impacts of emissions on the climate, environment and people.

Recommendations

This report makes **20 recommendations**.

Recommendation 1

Establish a Climate Change Act

Implement a whole-of-government approach to climate change by enacting new climate change laws in NSW that deal with both climate change mitigation and adaptation in a clear and coordinated way. A new overarching **Climate Change Act** would include:

- **Objects:** set a clear overarching objective to reduce greenhouse gas emissions and make decisions consistent with limiting the increase in global warming to no more than 1.5°C above pre-industrial levels. The objects should also refer to planning for a rapid and just transition away from fossil fuel production and use consistent with IPCC advice, and establishing a whole-of-government approach to addressing climate change impacts;
- **Targets:** impose duties on Government Ministers to set periodic and long-term emissions reduction targets and carbon budgets and a legislated renewable energy target for NSW electricity use, based on expert advice consistent with internationally agreed climate goals, best available science, and the principles of ecologically sustainable development;
- **Independent expert advice:** formalise a skills-based independent statutory Climate Change Advisory Council to advise the Government and the Parliament based on the best available science for climate mitigation, and assess and report on progress in relation to meeting targets and implementing adaptation plans, and require decision makers to act consistently with this advice;
- **Duties:** create a duty on Ministers and relevant decision makers to make decisions consistent with relevant climate change legislative objects and targets when exercising prescribed functions, particularly in relation to planning functions;
- **Risk assessment:** adopt a high-level process for statewide climate risk assessments, and require specific policies and initiatives for sectors identified at high risk from climate change impacts (e.g. housing, infrastructure, agriculture, energy, insurance);
- **Adaptation Plans:** require a statewide Adaptation Plan to be made, published, and periodically reviewed by the Minister on advice from the Climate Change Advisory Council. Sectoral and regional adaptation plans should also be made consistent with the statewide adaptation plan;
- **Monitoring progress:** Develop statewide indicators, including for emissions reduction in line with set targets, adaptation planning and climate readiness of legislation; and regularly report against those indicators;
- **Governance:** Allocate Ministerial responsibility specifically for climate change, and create a Climate Change Division in the Department of Premier and Cabinet that administers an overarching Climate Change Act (assisted by advice from the independent Climate Change Advisory Council) and supports interagency collaboration on emissions reduction and adaptation.





Recommendation 2

New Planning Act Object

Insert a **new object in the Planning Act to reduce greenhouse gas emissions** and limit the increase in global warming to no more than 1.5 degrees Celsius above pre-industrial levels; plan for a rapid and just transition away from fossil fuel production and use consistent with the latest IPCC recommendations; identify current and emerging risks from unavoidable climate change; and plan effectively for adaptation – in accordance with relevant climate change laws, policies, targets and best available science. This new objective would be operationalised by inserting a general duty in the Planning Act for planning authorities and decision makers, when exercising functions under the Act, to make decisions consistent with the objects of the Act; and by adding specific provisions addressing climate change mitigation and adaptation at all key decision points in the planning system.

Recommendation 3

State Environmental Planning Policy - Climate Change

Develop an overarching Climate Change SEPP to improve integration of climate mitigation, transition and adaptation targets and measures within the planning system. Review and update all existing State Environmental Planning Policies to ensure they meet the revised objects of the Planning Act, contribute to reducing greenhouse gas emissions in line with legislative targets, plan for a rapid and just transition away from fossil fuel production and use, and address climate change impacts and risks, including through relevant climate adaptation measures.

Recommendation 4

Mandatory consideration for plan making

Require all planning authorities to address climate change considerations when preparing and making strategic plans (SEPPs, regional plans, district plans, local strategic planning statements and LEPs). This includes a requirement that strategic plans address climate change impacts and risks and the necessary transition away from fossil fuel production, and contribute to reducing and monitoring greenhouse gas emissions across sectors - in accordance with relevant targets, best available science and up-to-date advice from a statutory Climate Change Advisory Council. Strategic plans must also adopt appropriate climate adaptation responses, including for example, planned retreat in relation to natural disaster risk, green infrastructure planning to combat urban heat island effects, and biodiversity corridors for species migration.

Plan effectively for adaptation – in accordance with relevant climate change laws, policies, targets and best available science.

Recommendation 5

Guidance for plan making

Provide additional guidance, funding and support to planning authorities preparing strategic plans, including by:

- establishing principles of best practice adaptation to guide planning authorities and decision makers;
- providing the NSW Climate Change Advisory Council with specific statutory functions and adequate funding to advise NSW planning authorities on (among other things):
 - up-to-date climate change projections,
 - state and regional-level climate risks,
 - best practice adaptation measures, and
 - the adequacy of draft adaptation plans;
- developing specific Ministerial Directions on climate risk assessment and adaptation to assist councils with planning functions;
- including climate change in Local Strategic Planning Statement guidance;
- increasing guidance on, and scrutiny of, planning proposals in relation to climate change responses, including providing access to and advice on the best available science and assessing comparative performance to ensure continuous improvement;
- increasing guidance on transitioning away from fossil fuel production and use consistent with the latest IPCC recommendations; and
- requiring the pursuit of other regional development goals to be achieved consistently with emissions reduction and climate adaptation responses.

Recommendation 6

Establish climate impact assessment pathways

Standardise and scale climate change impact assessment requirements and processes for different development pathways. Specifically:

- Low-impact development - for low-impact development, establish a standardised assessment process for determining whether the proposed development minimises the cumulative lifetime greenhouse gas emissions from the development site and adopts best practice adaptation measures.
- High-impact development - for high-impact development (including all major projects - State significant development and State significant infrastructure projects, and designated development including development from high-emitting sectors or other development proposals at risk from climate change impacts), require consistent and independent assessment of the likely greenhouse gas emissions via a **Climate Impact Statement**.
- Establish clear EIA requirements for modification applications, including a requirement to assess the likely impacts of the modification in the context of existing impacts and operations, including cumulative impacts. A modification resulting in an increase in greenhouse gas emissions cannot be considered to be 'minimal environmental impact.'



Recommendation 7

Climate Impact Statements for major projects

In terms of **assessing emissions**, a **Climate Impact Statement** would:

- demonstrate how a project will avoid, minimise and offset emissions and achieve carbon neutrality;
- require the use of standard methods to estimate direct 'scope 1' emissions (such as fugitive methane from a coalmine), 'scope 2' emissions (such as electricity use), and up and downstream 'scope 3' emissions;
- prescribe a method to calculate the full social costs of greenhouse gas emissions (including environmental and public health costs over time);
- estimate a range of emissions, the degree of any uncertainty, and the reasons for such uncertainty.

In terms of **climate adaptation**, a **Climate Impact Statement** would:

- identify the risks and potential impacts of a changing climate on the proposal and locality over the project's lifecycle;
- be required to refer to best available science (such as AdaptNSW projections), official adaptation plans, guidelines and best practice (to be developed for the relevant sector, region or development category);
- outline proposed measures to ensure the project is 'climate change ready' in relation to best available projections over the design lifecycle, and demonstrate how the project meets key resilience parameters; and
- set out a schedule for periodic reviews for adaptive management purposes to ensure best practice is maintained over the life of the project.

Recommendation 8

Greenhouse gas assessment guidelines

Publish assessment guidelines to ensure consistent, robust assessment is based on best available science. Guidelines should advise on how to assess direct and indirect greenhouse gas emissions, apply an 'avoid, mitigate and offset' hierarchy for reducing emissions, achieve best-practice carbon offsetting, and advise on best practice adaptation principles.

Recommendation 9

Accreditation of consultants

Require mandatory accreditation of environmental consultants who prepare EIA reports and Climate Impact Statements, and independent appointment of those accredited consultants.

Assess direct and indirect greenhouse gas emissions and their impacts, including cumulative impacts and downstream emissions.

Recommendation 10

Impose a duty to refuse projects with unacceptable climate impacts and risks

Impose a duty for decision makers to refuse proposals with unacceptable climate change impacts. This includes provisions to:

- Strengthen decision-making requirements for development approvals and conditions, with the mandate of staying within the global carbon budget and achieving national and state targets. In particular, establish new duties to:
 - assess direct and indirect greenhouse gas emissions and their impacts, including cumulative impacts and downstream emissions;
 - demonstrably consider state, national and global emissions trajectories and act in accordance with short and long-term reduction targets and the need to stay within the global carbon budget;
 - refuse projects with unacceptable impacts from greenhouse gas emissions, including high-impact development (as defined by the regulation) that is not 'carbon neutral' (including in relation to all downstream emissions);
 - impose specific conditions on development consents and mining titles to minimise emissions, meet certain standards if the project is approved, and to fully offset emissions that cannot be minimised or avoided; and
 - apply clear guidelines, rules and standards to minimise and offset emissions.
- Require decision makers to assess and respond to climate change impacts, including new duties to:
 - impose conditions to ameliorate the identified impacts of climate change;
 - refuse applications with unacceptable climate risks - this could include where climate change poses a realistic threat to the lives or safety of present or future residents, or would impose prohibitive public costs by way of emergency management, infrastructure repair or future adaptation costs, or would increase threats to biodiversity; and
 - apply best practice guidelines for climate change adaptation.

Recommendation 11

Properly assess the impact of project modifications

Require the consent authority to **consider the impacts of proposed project modification in the context of existing impacts and operations, including cumulative impacts.** A modification resulting in an increase in greenhouse gas emissions cannot be considered to have 'minimal environmental impact.'



Recommendation 12

Conditions of consent

Develop standard conditions of consent aimed at reducing emissions and ameliorating impacts of climate change. Consider introducing time-limited or threshold-bound development consents and conditions. This also involves amending NSW planning laws to clarify that development consent conditions can be updated to require continuously improved standards, whether or not a modification has been requested.

Recommendation 13

Building sustainability standards

Improve NSW building sustainability standards to:

- ensure BASIX standards account for climate change projections for the design lifecycle of buildings (for example, improve thermal comfort standards);
- expand BASIX to include new climate-ready benchmarks (beyond energy, water efficiency and thermal comfort), including by:
 - drawing on standards set by voluntary programs and industry targets;
 - leading and developing national standards for other sustainability measures such as lifecycle emissions and waste levels; and,
 - developing standards to facilitate passive design and water sensitive urban design to improve climate resilience and efficiency.
- expand BASIX-style minimum requirements to non-residential buildings (including commercial and industrial buildings), drawing on the National Australian Built Environment Rating System;
- expand BASIX-style minimum requirements to including retro-fitting; and,
- support innovation and continuous improvement by introducing regular mandatory reviews and updates to BASIX and other standards every 4-5 years.

Recommendation 14

Amend the Mining Act

Review and update the *Mining Act 1992* (including provisions relating to the granting of exploration or mining titles for coal), and relevant strategic release policies, taking into consideration likely emissions in the context of drawing down a state or national carbon budget.

Recommendation 15

Introduce polluter pays requirements

Add greenhouse gases as pollutants in NSW pollution control laws to recognise their contribution to environmental degradation and encourage behavioural change. In the absence of a carbon price, this should include load-based licensing fees for greenhouse gas emissions, consistent with the polluter pays principle.

Add greenhouse gases as pollutants in NSW pollution control laws to recognise their contribution to environmental degradation and encourage behavioural change.

Recommendation 16

Establish emissions standards

Establish emissions standards and continuous improvement requirements for NSW power stations, based on nationally consistent standards. Standards and requirements would be enforceable conditions on Environment Protection Licences.

Recommendation 17

Ensure all relevant legislation is climate ready

Review all relevant legislation with a view to incorporating clear requirements for climate change mitigation and adaptation that integrate with requirements under the NSW planning system and any stand-alone climate legislation. This could be undertaken by the new Climate Change Division of Premier & Cabinet on advice from the new Climate Change Advisory Council.

Recommendation 18

Greenhouse Gas monitoring and auditing

Establish a comprehensive greenhouse gas monitoring and auditing register to report on individual high-impact facilities in NSW. This would draw on existing and new data (including data under the National Greenhouse and Energy Reporting Scheme (NGERS)), to track and report on approved and actual emissions.

Recommendation 19

Continuous improvement

Increase funding for climate adaptation planning, monitoring and reporting, auditing of compliance with conditions of consent, and commit to a regulatory culture of continuous learning and improvement.

Recommendation 20

Accountability

Strengthen merit appeal rights for third party objectors, by removing restrictions on merit appeals following public hearings of the Independent Planning Commission and expanding the range of the projects subject to merits review in line with recommendations of the Independent Commission Against Corruption.



Introduction

NSW, like all jurisdictions across the globe, faces the very real threat of climate change and the challenge of how to manage its impacts.

Australia's climate has warmed by just over one degree since 1910 and the best available science tells us that average temperatures are projected to rise further.¹ Australia is already experiencing the impacts of climate change, which include the warming and acidification of oceans, sea level rise, decreased rainfall in southern parts of the country and increased rainfall in the north, and the long-term increase in extreme fire weather. Extreme heat days, longer dry spells, and harsher fire weather will increasingly become the norm, although the severity of impacts will be less if emissions can be reduced.²

Predicted impacts for NSW include:³

- up to 10 additional days above 40 degrees each year in northern NSW by 2030, rising to 33 additional days by 2070;
- increased crop failure, human and animal deaths;
- longer and more intense bushfire seasons;
- accelerated biodiversity loss; and
- increased irreversible soil erosion, affecting food security and water quality.

The Intergovernmental Panel on Climate Change (IPCC) (2014) is highly confident that:

*Without additional mitigation efforts beyond those in place today, and even with adaptation, warming by the end of the 21st century will lead to high to very high risk of severe, widespread, and irreversible impacts globally...*⁴

In light of the unequivocal scientific evidence of the impacts of anthropogenic climate change, the

¹ See Commonwealth Scientific and Industrial Research Organisation (CSIRO), *Climate change in Australia - Projections for Australia's NRM regions*, <https://www.climatechangeinaustralia.gov.au/en/climate-projections/future-climate/regional-climate-change-explorer/clusters/>; see also NSW Office of Environment and Heritage (OEH), *AdaptNSW*, <https://climatechange.environment.nsw.gov.au/>.

² The impacts of a warming climate on Australia are set out in more details in Bureau of Meteorology and CSIRO, *State of the Climate 2018 (2018)*, www.bom.gov.au/state-of-the-climate.

³ See for example NSW Office of Environment and Heritage, *Impacts of Climate Change AdaptNSW*: <http://climatechange.environment.nsw.gov.au/impacts-of-climate-change>; see also CSIRO, *New climate change projections for Australia (27 January 2015)*, <http://www.csiro.au/en/News/News-releases/2015/New-climate-change-projections-for-Australia>.

⁴ Intergovernmental Panel on Climate Change (IPCC) *Climate Change 2014: Synthesis Report*. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)] (2014) p 17, <http://www.ipcc.ch/report/ar5/syrl>.

international community agreed in late 2015 to keep the increase in global average temperature to well below 2°C above pre-industrial levels; and to pursue efforts to limit the increase to 1.5 °C.⁵ The Paris Agreement provides clear impetus for strong action and targets on climate change across government, business and community sectors. The 2018 Special Report of the IPCC makes it clear that the consequences of warming beyond 1.5°C are dire and must be avoided and indicates that current actions are not enough to limit warming by 1.5°C.⁶

Failing to limit global warming to 1.5 °C will have catastrophic impacts including greater levels of sea-level rise and coastal inundation, extreme heatwaves, severe droughts, the death of coral reefs, and mass extinctions.⁷ And the impacts of climate change are not just environmental; there will be significant implications across all sectors, including health, the economy and national security.⁸

Despite the urgency, the legal and governance frameworks needed to achieve the global commitment to reduce greenhouse gas emissions and limit global warming are mostly absent.

NSW is no exception. Our laws fall far short of what is needed, with many of our important environment and planning laws remaining silent when it comes to climate change.

The recent NSW Land and Environment Court decision in the Rocky Hill case⁹ (**Box 1**) demonstrates that climate change must be in the minds of decision makers when assessing the impacts of greenhouse gas emissions on the climate, environment and people.

5 In December 2015, over 190 nations affirmed a goal to reduce greenhouse gas emissions in order to limit average global warming to well below 2°C above pre-industrial levels and to pursue efforts to limit warming to 1.5°C. United Nations Framework Convention on Climate Change Conference of the Parties 21, *Adoption of the Paris Agreement*, 'Annex - Paris Agreement', Article 2 (FCCC/CP/2015/L.9/Rev.1). The Paris Agreement builds on past international commitments in Cancun, Lima and elsewhere under the 1992 UN Framework Convention on Climate Change.

6 Intergovernmental Panel on Climate Change, *Special Report Global Warming of 1.5°C*, An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, (2018), <https://www.ipcc.ch/sr15/>.

7 *Ibid.*

8 For example, the World Health Organisation (WHO) advises that Climate change affects the social and environmental determinants of health – clean air, safe drinking water, sufficient food and secure shelter, and that between 2030 and 2050, climate change is expected to cause approximately 250 000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress, see <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>. In 2017, the Australian Senate Foreign Affairs, Defence and Trade References committee recognised climate change as a current and existential national security risk, see https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Foreign_Affairs_Defence_and_Trade/Nationalsecurity/Final_Report. The Reserve Bank of Australia has recently announced that banks, business and investors must think about the economic impacts of climate change, see <https://www.abc.net.au/news/2019-03-12/reserve-bank-warns-of-impact-of-climate-change-on-the-economy/10893792>.

9 *Gloucester Resources Limited v Minister for Planning [2019] NSWLEC 7*.

Box 1

Rocky Hill - Considering the impacts of greenhouse gas emissions on the climate, people and the environment

The NSW Land and Environment Court recently examined how climate impacts should be considered in the context of the international agreement to pursue efforts to limit the increase in global warming to no more than 1.5°C above pre-industrial levels and the environmental impacts arising from failing to meet that target.

The Court considered evidence about the potential impacts of greenhouse gas emissions (GHG) from a proposed new coal mine in the Gloucester Valley in NSW, as well as expert advice on the limited 'carbon budget' that must be adhered to if the globally agreed limit is to be achieved.

The Court recognised that *"the global problem of climate change needs to be addressed by multiple local actions to mitigate emissions by sources and remove GHGs by sinks."*

Ultimately the Court found that, in addition to significant and unacceptable planning, visual and social impacts, the impacts of the GHG emissions of the project and their likely contribution to adverse impacts on the climate system, environment and people added a further reason for refusal of the Project.¹⁰

In summing up his judgment, Chief Judge Preston said:

"In short, an open cut coal mine in this part of the Gloucester valley would be in the wrong place at the wrong time. Wrong place because an open cut coal mine in this scenic and cultural landscape, proximate to many people's homes and farms, will cause significant planning, amenity, visual and social impacts. Wrong time because the greenhouse gas emissions (GHG) of the coal mine and its product will increase global total concentrations of GHGs at a time when what is now urgently needed, in order to meet generally agreed climate targets, is a rapid and deep decrease in GHG emissions. These dire consequences should be avoided. The Project should be refused."¹¹

10 *Ibid.*, at [556].

11 *Ibid.*, at [699].

As a review of the merits of one particular project the Rocky Hill decision does not establish a legal precedent that is binding on future decision makers, but it is likely to be highly influential.

That greenhouse gas emissions were given limited attention in earlier assessments of the Rocky Hill Project demonstrates that we need strong laws that create clear obligations on decision makers to make decisions consistent with keeping the increase in global average temperature to within 1.5°C above pre-industrial levels. Decision makers must also ensure there are measures in place to adapt to an already warming climate. This will provide certainty to investors, proponents and the community, who are already living with the impacts of climate change.

This paper examines the need for an overarching legal and governance framework in NSW for responding to climate change, and the role the NSW planning system can play in reducing our contribution to greenhouse gas emissions (mitigation), and planning to live with the impacts of climate change that we are already experiencing and are projected for the future (adaptation).¹²

Climate change mitigation and adaptation go hand in hand. Reducing greenhouse gas emissions from NSW and Australian sources is urgently needed to keep climate change within manageable levels. The impacts of emissions already locked in will continue to have impacts that our society, economy and ecology must adapt to.

Climate change is not an environmental issue for future generations. It is a multi-faceted policy challenge with social, economic and environmental dimensions that are relevant today. It affects public and private assets and decision-making. And it requires good decisions now, to avoid severe impacts and mounting costs later. Clear, climate-ready laws are needed now.

In our 2016 report ***Planning for climate change: How the NSW planning system can better tackle greenhouse gas emissions***, we made fourteen recommendations for reforming the NSW planning system to reduce greenhouse gas emissions in accordance with international climate goals.¹³ Since

12 Adaptation measures could include, for example, restricting development and infrastructure in areas predicted to be greatly impacted from climate change such as sea-level rise and coastal inundation, protecting wildlife corridors that will be needed for climate migration of native wildlife, and maintaining and increasing green space and tree canopy in urban areas to reduce the heat island effect.

13 EDO NSW, *Planning for climate change: how the NSW planning system can better tackle greenhouse gas emissions* (July 2016), https://www.edonsw.org.au/planning_for_climate_change.

then, we have continued to monitor law and policy developments in Australia and overseas.

This new report updates our previous work to reflect the latest science and the current state of planning law, and expands the scope of our analysis by including recommendations for incorporating climate change adaptation considerations into NSW laws.

We have identified two major legal barriers to NSW taking effective action to combat climate change and recommended responses to each of these barriers:

▪ **Lack of an overarching legal and governance framework for responding to climate change**

First there is no overarching legal framework creating obligations for reducing greenhouse gas emissions, or implementing adaptation measures. We critique NSW by comparing its climate change legislation and policies with Australian and overseas jurisdictions, highlighting the role of climate change legislation in setting state-wide targets for reducing emissions, and creating obligations to implement adaptation measures.

▪ **Failure to integrate climate change considerations into the NSW planning system**

The second barrier is the failure of the NSW planning system to effectively incorporate climate change considerations into planning and development decisions. We examine the NSW planning system and explore options for better integrating climate change considerations into planning decisions, including strategic land-use planning, environmental impact assessment and development assessment. A effective climate-ready NSW planning system is critical as most NSW greenhouse gas emissions are authorised by planning and development approvals, and a range of climate change adaptation measures can implemented through effective strategic planning.

Deeply curbing emissions as far as possible now will reduce the severity of climate change impacts in future, and give us the policy space we need to adapt. NSW must ensure that it has legal frameworks in place to address the urgent need to reduce greenhouse gas emissions and adapt to the impacts of climate change that communities across NSW are already experiencing.



Part A

Legal and governance frameworks for taking action on climate change

Global climate change requires action at all levels. In Australia, the Australian Government is responsible for meeting our international obligations.¹⁴ State governments and local councils have a key role to play in implementing the legal and governance frameworks that drive decision making to manage greenhouse gas emissions and adapt to climate change impacts threatening local communities and environments.

Part A of this report examines the legal and governance framework for taking action on climate change in NSW. It compares climate change legislation and policies in Australian jurisdictions and overseas, and highlights the importance of overarching climate change legislation for setting state-wide targets for reducing emissions, and creating obligations to implement adaptation measures.

The current approach

Despite the release of a *NSW Climate Change Policy Framework (Framework)* in 2016¹⁵ (**Box 2**), NSW – historically a leader in planning and environmental matters – is currently lagging on climate change action. In particular:

- None of NSW's eighteen *State Priorities* or twelve *Premier's Priorities* focus on taking action on climate change.¹⁶
- There is no Ministerial portfolio directly responsible for climate change. The NSW Minister for the Environment and Office of Environment and Heritage

¹⁴ For further information, see, <http://www.environment.gov.au/climate-change/government>.

¹⁵ NSW Office of Environment and Heritage, *NSW Climate Change Policy Framework (2016)*, <https://www.environment.nsw.gov.au/topics/climate-change/policy-framework>.

¹⁶ See <https://www.nsw.gov.au/improving-nsw/premiers-priorities/>.

are responsible for implementing the Framework. In contrast, Victoria, the Northern Territory and ACT have appointed Ministers responsible for climate change.¹⁷

- While the Framework contains broad overarching objectives and policy directions, including to achieve net-zero emissions by 2050 and make NSW more resilient to a changing climate, there are no legal mechanisms in place to ensure NSW realises these objectives or to enforce the framework. For example:
 - Unlike other Australian jurisdictions, including Victoria, Tasmania, South Australia, and the ACT (see **Table 1**), and overseas jurisdictions such as the United Kingdom, the Philippines¹⁸ and Mexico,¹⁹ there is no overarching climate change legislation that sets legal targets and responsibilities for reducing greenhouse gas emissions.
 - Similarly, there is no overarching legal framework for making NSW more resilient to climate change. While many jurisdictions, NSW included, continue to develop ad hoc approaches to climate change adaptation, including incorporating hazard management into strategic planning, or developing mandatory sustainability building requirements; some jurisdictions such as Victoria, the United Kingdom, and Japan²⁰ have created specific obligations on decision makers to prepare adaptation plans or duties to consider climate change mitigation and adaptation in decision making.

17 There is currently a Victorian Minister for Energy, Environment and Climate Change, a Northern Territory Minister for Climate Change, and an ACT Minister for Climate Change and Sustainability.

18 See *Climate Change Act of 2009* (Philippines), https://www.lawphil.net/statutes/repacts/ra2009/ra_9729_2009.html.

19 See <https://www.gob.mx/inecc/documentos/ley-general-de-cambio-climatico-junio-2012>. For English analysis of Mexico's General Law on Climate Change, see the work of the Grantham Research Institute on Climate Change and the Environment <http://www.lse.ac.uk/GranthamInstitute/law/general-law-on-climate-change/>.

20 Japan has passed a new Climate Change Adaptation Act which was due to commence in December 2018, see for example, <http://www.lse.ac.uk/GranthamInstitute/law/climate-change-adaptation-act/> and <https://www.straitstimes.com/asia/east-asia/japans-cabinet-approves-climate-change-plan>.

Box 2

NSW Climate Change Policy Framework 2016²¹

The NSW Climate Change Policy Framework 2016 (**the Framework**) is a high-level State Government policy that was released in November 2016. The Framework has no statutory basis – it is not linked to or underpinned by any Act of Parliament.

The Framework aims to: *'Maximise the economic, social and environmental wellbeing of NSW in the context of a changing climate and current and emerging international and national policy settings and actions to address climate change.'*

It suggests the NSW Government has dual roles related to *emissions savings and impacts and adaptation*, and identifies two aspirational long-term objectives on mitigation and adaptation:

- to **'Achieve net-zero emissions by 2050'**, and
- that **'NSW is more resilient to a changing climate'**.

The Framework sets out broad, high-level action that the NSW Government will undertake in the areas of policy, operations and advocacy, namely:

- The NSW Government will set policy to achieve emissions savings, consistent with Commonwealth action, and to enable effective adaptation to climate change.
- The NSW Government is a major purchaser in the NSW economy through delivering government services and managing government assets. The government will lead by example and drive market change.
- The NSW Government will advocate for climate policy action at national and international levels.

The Framework also includes a series of policy directives to guide this work, namely to:

- Create a certain investment environment by working with the Commonwealth to manage transition.
- Boost energy productivity, put downward pressure on household and business energy bills.
- Capture co-benefits and manage unintended impacts of external policies.
- Take advantage of opportunities to grow new industries in NSW.
- Reduce risks and damage to public and private assets in NSW arising from climate change.
- Reduce climate change impacts on health and wellbeing.
- Manage impacts on natural resources, ecosystems and communities.

Overall, despite the aspirations and high-level references in the Framework, its directions are tentative, non-enforceable, and there is little, if any, direct link to the planning system or other relevant legislation.

21 See <https://www.environment.nsw.gov.au/topics/climate-change/policy-framework>.

In contrast to this aspirational policy, other jurisdictions have clear laws.

The **Victorian Climate Change Act 2017** provides a comprehensive legal framework for dealing with both climate change mitigation and adaptation. It replaces the earlier *Climate Change Act 2010* (Vic). It includes new provisions, not in the 2010 Act, creating obligations to prepare adaptation plans. In summary, the Act:

- Requires the Premier and relevant Minister to set long-term greenhouse gas emissions reduction targets and interim targets.
- Creates a duty on certain decision makers to have regard to climate change when exercising prescribed functions under various legislation including the *Catchment and Land Protection Act 1994*, *Marine and Coastal Act 2018*, *Environment Protection Act 1970*, *Flora and Fauna Guarantee Act 1988*, *Public Health and Wellbeing Act 2008* and *Water Act 1989*.
- Provides that the Government of Victoria will endeavour to ensure that any decision made by the Government and any policy, program or process developed or implemented by the Government appropriately takes account of climate change by having regard to the policy objectives and the guiding principles that are set out in the Act or made by the Minister.
- Requires the Minister to prepare a detailed climate change strategy on or before 31 October 2020, that includes (a) a statement of priorities, (b) an adaptation component, and (c) an emissions reduction component.
- Requires the Minister to prepare detailed adaptation action plans by 31 October 2021, in respect of the following areas: built environment; education and training; health and human services; natural environment; primary production; transport; and the water cycle.
- Requires the Minister to make whole-of-government pledges describing actions to be undertaken to reduce greenhouse gas emissions.
- Requires the Minister to prepare a report on the science and data relevant to climate change in the State.
- Establishes a system for the creation and transfer of forest carbon rights.
- Establishes a system for making Crown land available for carbon sequestration.

The **United Kingdom's Climate Change Act 2008** creates a broad legal framework setting out specific targets and duties for taking action on climate change:

- Part 1 deals with carbon targets and budgeting, and creates a duty on the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 80% lower than the 1990 baseline.
- Part 2 established a Committee on Climate Change to advise the Secretary of State on the carbon target.
- Part 3 provides the relevant national authority with powers to make provisions for trading schemes relating to greenhouse gas emissions.
- Part 4 creates obligations on the Secretary of State to prepare climate reports and a programme for adaption to climate change.
- Part 5 deals with other matters, including waste reduction schemes.

The following table compares the progress of Australian jurisdictions in legislating to address climate change, including by establishing emissions reduction and renewable energy targets.

[In NSW] there is no overarching climate change legislation that sets legal targets and responsibilities for reducing greenhouse gas emissions.

Table 1: Summary of state and federal climate mitigation laws and targets

State	Key legislation	Emissions reduction targets	Renewable energy targets
VIC	<i>Climate Change Act 2017</i> <i>Renewable Energy (Jobs and Investment) Act 2017</i>	Zero net greenhouse gas emissions by 2050. ²² Legislative obligation to set interim greenhouse gas emissions targets (at future dates) using 2005 baseline. ²³ Legislative obligation for decision makers to consider the potential contribution to the State's greenhouse gas emissions when making decisions under certain legislation. ²⁴	25% renewable energy by 2020, and 40% renewable energy by 2025. ²⁵
TAS	<i>Climate Change (State Action) Act 2008</i>	60% reduction in emissions by 2050 (1990 baseline). ²⁶	100% renewable energy by 2022 (policy). ²⁷
ACT	<i>Climate Change and Greenhouse Gas Reduction Act 2010</i>	Zero net greenhouse gas emissions by 2045 ²⁸ with interim targets: 40% reduction in emissions by 2020 (1990 baseline) ²⁹ . Peaking per capita emissions by 2013. ³⁰	100% of electricity generated from renewables by 2020. ³¹
SA	<i>Climate Change and Greenhouse Emissions Reduction Act 2007</i>	60% reduction in emissions by 2050 (1990 baseline). ³²	20% of electricity generated and consumed in the State by 31 December 2014 to be renewable. ³³
CTH	<i>Renewable Energy (Electricity) Act 2000</i>	5% reduction in emissions by 2020 (2000 baseline) (Kyoto Protocol, policy target). ³⁴ 26-28% reduction in emissions by 2030 (2005 baseline) (Paris Agreement, policy target). ³⁵	33,000 GWh renewable energy by 2020. ³⁶
QLD	No climate law	Net zero greenhouse gas emissions by 2050 (policy). ³⁷	50% renewable energy by 2030 (policy). ³⁸
NSW	No climate law	Net zero emissions by 2050 (policy). ³⁹	No targets
NT	No climate law	No targets	50% renewable energy by 2030 (policy). ⁴⁰
WA	No climate law	No targets ⁴¹	No targets

²² *Climate Change Act 2017* (Vic), section 6.

²³ *Climate Change Act 2017* (Vic), section 10.

²⁴ Under section 17 of the *Climate Change Act 2017* (Vic) decision makers must consider the potential contribution to the State's greenhouse gas emission when making decisions under certain legislation including the *Catchment and Land Protection Act 1994*, *Marine and Coastal Act 2018*, *Environment Protection Act 1970*, *Flora and Fauna Guarantee Act 1988*, *Public Health and Wellbeing Act 2008* and *Water Act 1989*.

²⁵ *Renewable Energy (Jobs and Investment) Act 2017* (Vic), section 7.

²⁶ *Climate Change (State Action) Act 2008* (Tas), section 5.

²⁷ See: http://www.premier.tas.gov.au/releases/tasmania_signs_up_to_national_energy_guarantee_and_Tasmania-First_Energy_Policy, available at: <https://www.tas.liberal.org.au/sites/default/files/Tasmanian%20First%20Energy.pdf>.

²⁸ *Climate Change and Greenhouse Gas Reduction Act 2010* (ACT), section 6.

²⁹ *Climate Change and Greenhouse Gas Reduction Act 2010* (ACT), section 7.

³⁰ *Climate Change and Greenhouse Gas Reduction Act 2010* (ACT), section 8.

³¹ Under section 9 of the *Climate Change and Greenhouse Gas Reduction Act 2010* (ACT), the Minister is required to determine targets for the use or generation of renewable energy in the ACT. In 2016, the Minister made a determination to increase the Renewable Energy Target to 100% by the year 2020 –see <https://www.legislation.act.gov.au/di/2016-38/>.

³² *Climate Change and Greenhouse Emissions Reduction Act 2007* (SA), section 5(1).

³³ *Change and Greenhouse Emissions Reduction Act 2007* (SA), section 5(2). SA currently generates over 40% of its electricity from renewable sources.

³⁴ Australian Government, Department of Energy and Environment, *Australia's 2030 climate change targets*, <http://www.environment.gov.au/climate-change/publications/factsheet-australias-2030-climate-change-target>.

³⁵ Australian Government, Department of Energy and Environment, *Australia's 2030 climate change targets*, <http://www.environment.gov.au/climate-change/publications/factsheet-australias-2030-climate-change-target>.

³⁶ *Renewable Energy (Electricity) Act 2000*, section 40; see also Australian Government, Department of Energy and Environment, *The Renewable Energy Target (RET) Scheme*, <http://www.environment.gov.au/climate-change/government/renewable-energy-target-scheme>.

³⁷ Queensland Department of Environment and Heritage Protection, *Pathways to a clean growth economy – Queensland Climate Transition Strategy*, https://www.qld.gov.au/_data/assets/pdf_file/0026/67283/qld-climate-transition-strategy.pdf.

³⁸ Queensland Department of Environment and Heritage Protection, *Pathways to a clean growth economy – Queensland Climate Transition Strategy*, https://www.qld.gov.au/_data/assets/pdf_file/0026/67283/qld-climate-transition-strategy.pdf.

³⁹ NSW Office of Environment and Heritage, *NSW Climate Change Policy Framework* (2016), <https://www.environment.nsw.gov.au/topics/climate-change/policy-framework>.

⁴⁰ Northern Territory Government, *Roadmap to Renewables*, <https://roadmaptorenewables.nt.gov.au/>.

⁴¹ The Western Australia Environmental Protection Authority recently released *Technical Guidance – Mitigating Greenhouse Gas Emissions* (March 2019), aimed at guiding new or expanding operations on how to reduce emissions. The Guidance makes reference to the Paris Agreement to keep the increase in global average temperature to well below 2 °C above pre-industrial levels; and to limit the increase to 1.5 °C, see: http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/20180306%20EPA%20TG%20Mitigating%20Greenhouse%20Gas%20Emissions%20-%20204.pdf. However, under pressure from the WA Premier and industry, the WA EPA has withdrawn the guidelines and will undertake further consultation.

The way forward

NSW must heed the advice of scientific experts and take urgent action to reduce greenhouse gas emissions and put in place measures to adapt to the impacts of climate change.

It is not enough to make high-level policy commitments. Real action requires legal and institutional support, with requirements to act consistently with expert advice, particularly when long-term objectives need to persist through potential changes of government and policy directives.

NSW needs an overarching State plan with a vision for a rapid and just transition to a low-carbon economy in NSW, and commitments to reduce emissions and build resilient communities able to adapt to the impacts of climate change. This vision must be supported by a robust and enforceable legal framework at every level of decision making that creates clear responsibilities for achieving and reporting against this vision.

Below we make a number of broad recommendations for a legal framework for climate change in NSW. In Part B, we examine in more detail how to integrate climate change considerations into the NSW planning system.

Recommendation 1

Establish a Climate Change Act

Implement a whole-of-government approach to climate change by enacting new climate change laws in NSW that deal with both climate change mitigation and adaptation in a clear and coordinated way. A new overarching Climate Change Act would include:

- **Objects:** set a clear overarching objective to reduce greenhouse gas emissions and make decisions consistent with limiting the increase in global warming to no more than 1.5 degrees Celsius above pre-industrial levels. The objects should also refer to planning for a rapid and just transition away from fossil fuel production and use consistent with IPCC advice, and establishing a whole-of-government approach to addressing climate change impacts;
- **Targets:** impose duties on Government Ministers to set periodic and long-term emissions reduction

targets and carbon budgets and a legislated renewable energy target for NSW electricity use, based on expert advice consistent with internationally agreed climate goals, best available science, and the principles of ecologically sustainable development;

- **Independent expert advice:** formalise a skills-based independent statutory *Climate Change Advisory Council* to advise the Government and the Parliament based on the best available science for climate mitigation, and assess and report on progress in relation to meeting targets and implementing adaptation plans; and require decision makers to act consistently with this advice;
- **Duties:** create a duty on Ministers and relevant decision makers to make decisions consistent with relevant climate change legislative objects and targets when exercising prescribed functions, particularly in relation to planning functions;
- **Risk assessment:** adopt a high-level process for statewide climate risk assessments, and require specific policies and initiatives for sectors identified at high risk from climate change impacts (e.g. housing, infrastructure, agriculture, energy, insurance);
- **Adaptation Plans:** require a statewide Adaptation Plan to be made, published, and periodically reviewed by the Minister on advice from the Climate Change Advisory Council. Sectoral and regional adaptation plans could also be made consistent with the statewide Adaptation Plan;
- **Monitoring progress:** Develop statewide indicators, including for emissions reduction in line with set targets, adaptation planning and climate readiness of legislation; and regularly report against those indicators;
- **Governance:** Allocate Ministerial responsibility specifically for climate change, and create a Climate Change Division in the Department of Premier and Cabinet that administers an overarching Climate Change Act (assisted by advice from the independent Climate Change Advisory Council) and supports interagency collaboration on emissions reduction and adaptation.

Part B

Analysis of the NSW Planning Act

Part B of this report examines the NSW planning system and options for better integrating climate change considerations into planning decisions, including strategic land-use planning, environmental impact assessment and development assessment. It looks at six key stages of the planning system that are relevant to greenhouse gas emissions reduction and climate change adaptation – namely:

1. *Aims and objectives*
2. *Strategic planning*
3. *Environmental impact assessment*
4. *Development decisions*
5. *Other relevant laws and approvals*
6. *Compliance and enforcement*

Within each of these key stages, the paper considers how climate change considerations are currently dealt with and how planning laws can be improved to help reduce emissions and facilitate adaptation to climate change.

Decisions we make now on planning and development will affect our capacity to reduce greenhouse gas emissions, prepare for unexpected climate events, and will impact on our ability to live safe, comfortable, productive and fulfilling lives in the decades to come.

Urgently curbing emissions and implementing adaptation planning and climate risk measures today also means fewer costs to bear from future emergencies and disasters. Other pathways – ranging from inaction to ad hoc decisions to poorly-planned ‘maladaptation’ – are likely to exacerbate the impacts, risks and costs to NSW communities, the economy and the environment.

The *Environmental Planning and Assessment Act 1979* (NSW) (the **Planning Act**) is the apex of the NSW planning system. It deals with both large-scale strategic land-use planning and site-scale development

assessment, and sets out provisions encompassing strategic and site-level environmental impact assessment (**EIA**), public participation, and criteria for decision-making. The Planning Act is supported by a series of regulations, Ministerial Directions and planning instruments (e.g. State Environmental Planning Policies, Regional Plans, District Plans and Local Environmental Plans).

Currently, the Planning Act contains no explicit reference to climate change, or specific provisions for mitigating greenhouse gas emissions or implementing adaptation measures. A significant planning reform Bill was passed in 2017, including an update to the Planning Act’s high-level objectives, but despite submissions arguing for change, the changes did not address the need for climate change readiness.⁴²

Another feature of the planning system is the complex range of decision makers at state, regional and local levels.⁴³ The lack of legislative obligations, clear duties and responsibilities or guidance in relation to climate change means that decision makers are in the dark about how best to consider likely climate change impacts, what project approval conditions relating to climate change are reasonable, and how adaptation considerations and climate risks should affect the exercise of powers and discretion.

⁴² *Environmental Planning and Assessment Amendment Bill 2017*, available at: <https://www.parliament.nsw.gov.au/bills/Pages/bill-details.aspx?pk=3456>. See also EDO NSW, *Submission on the draft Environmental Planning and Assessment Amendment Bill 2017* – https://www.edonsw.org.au/environmental_planning_and_assessment_amendment_bill_2017; and EDO NSW *Submission on the Review of the Environmental Planning and Assessment Regulation 2000 - Issues Paper* (Nov 2017), available at <https://bit.ly/2IPSh7m>.

⁴³ Decision makers under the planning system include:

- the Planning Minister, Secretary of the Planning Department and delegates;
- local and regional strategic plan-makers including Department of Planning staff, Greater Sydney Commission and local council staff;
- development decision makers including the Independent Planning Commission, local or regional planning panels (IHAPs), local councils and agencies under Part 5 of the Planning Act;
- private certifying authorities who oversee ‘complying development’ (that does not require development consent but must be done in accordance with codes and detailed standards); and
- regulators including the Planning Department and local councils who may be responsible for compliance and enforcement of consent conditions.

The Planning Act does attempt to deal with some natural hazards, such as bushfire risks, coastal erosion, inundation and sea level rise, and there is significant interaction between the Planning Act and other laws that deal with those hazards (see below and section 5 of this report). The risks associated with these natural hazards are likely to increase due to a changing climate.⁴⁴ The planning system will continue to have an important role in managing those hazards and the increased risks that will come from a warming climate.

The need to consider climate change mitigation and adaptation should permeate each key stage of the planning process, as well as the relevant laws and approvals. This is consistent with an orderly planning system that benefits present and future generations in NSW. Yet this is not reflected in the current system’s provisions, institutions or decision-making processes. This report seeks to address that gap.

⁴⁴ *State of the Climate 2018* (2018): www.bom.gov.au/state-of-the-climate.

Decisions we make now on planning and development will affect our capacity to reduce greenhouse gas emissions, prepare for unexpected climate events, and will impact on our ability to live safe, comfortable, productive and fulfilling lives in the decades to come.

1 Aims and objectives

The current approach

The objects or purpose of an Act set out its aims and guide how the Act applies. As noted above, the Planning Act contains no explicit reference to climate change or the need to reduce greenhouse gas emissions or plan effectively for climate change adaptation, either in its objects or its operational provisions.

In the absence of an explicit object to this effect, climate change and greenhouse gas emissions have been dealt with in a more circuitous way.

At the development consent stage, decision makers are required to consider the environmental, social and economic impacts of a development proposal and to consider the public interest.⁴⁵ The public interest, in turn, is informed by the objects of the Planning Act, which include 'the protection of the environment' and 'facilitating ecologically sustainable development' (ESD). The Courts have interpreted that the public interest requires at least the high-level consideration of ESD and its principles.⁴⁶ This has included consideration of a project's impacts on climate change, and vice versa.⁴⁷

Similarly, climate change mitigation and adaptation has been considered relevant to strategic plans and planning instruments 'having regard to economic, social and environmental matters'.

The way forward

A preferable approach would be for the objects of the Planning Act to be explicit about the planning system's role

⁴⁵ *Environmental Planning & Assessment Act 1979* (NSW) (EP&A Act), s 4.15.

⁴⁶ In NSW planning, pollution and environmental laws, ESD calls for the integration of environmental, social and economic considerations in decisions, based on the principles of ESD. These derive from the *Protection of the Environment Administration Act 1991* (NSW), s 6, and include:

- the precautionary principle (i.e. that scientific uncertainty should not delay action to avert serious harm);
- conservation of biodiversity and ecological integrity as a fundamental consideration;
- intergenerational equity (and intra-generational equity); and
- full valuation of environmental costs and benefits (including the polluter pays principle).

⁴⁷ See for example *Walker v Minister for Planning* (2007) 157 LGERA 124; [2007] NSWLEC 741; *Minister for Planning v Walker* (2008) 161 LGERA 423; [2008] NSWCA 224; *Aldous v Greater Taree City Council* (2009) 167 LGERA 13; [2009] NSWLEC 17; *Gloucester Resources Limited v Minister for Planning* [2019] NSWLEC 7 (Rocky Hill case).

1
Aims and objectives

2
Strategic planning

3
Environmental assessment

4
Development decisions

5
Other laws and approvals

6
Compliance and enforcement

in reducing emissions and protecting NSW against climate change impacts. The objects of the Planning Act should also be consistent with - and give effect to - objectives, targets and responsibilities set out in overarching climate change legislation or policies (see Part A).

Planning law in Queensland goes some way towards this. For example, the overall purpose of the *Planning Act 2016* (Qld) is 'to establish an efficient, effective, transparent, integrated, coordinated, and accountable system of land-use planning..., development assessment and related matters that facilitates the achievement of ecological sustainability'.⁴⁸ The Act provides further explanation of what constitutes ecological sustainability, including "maintaining the cultural, economic, physical and social wellbeing of people and communities", which involves "accounting for potential adverse impacts of development on climate change, and seeking to address the impacts through sustainable development (sustainable settlement patterns or sustainable urban design, for example)".⁴⁹

In South Australia, the *Planning, Development and Infrastructure Act 2016* sets out 'principles of good planning' which should be regarded when seeking to further the objects of the Act.⁵⁰ One of the 'sustainability principles' provides that "particular effort should be focussed on achieving energy efficient urban environments that address the implications of climate change."⁵¹ The South Australian Act also requires the Minister to prepare a state planning policy specifically on climate change that specifies policies and principles that are to be applied with respect to minimising adverse effects of decisions made under the Act on the climate and promoting development that is resilient to climate change.⁵²

Climate change objects of the NSW Planning Act should also be clearly prioritised and operationalised in decision-making, for example, with specific requirements for decisions makers to exercise their functions consistent

⁴⁸ *Planning Act 2016* (Qld), section 3.

⁴⁹ *Planning Act 2016* (Qld), section 3(3)(c).

⁵⁰ *Planning, Development and Infrastructure Act 2016* (SA), section 14.

⁵¹ *Planning, Development and Infrastructure Act 2016* (SA), section 14(e)(ii).

⁵² *Planning, Development and Infrastructure Act 2016* (SA), section 62.

with the objects of the Act. Otherwise the objects could be rendered meaningless.⁵³ We note that a private member's Bill was introduced in the previous session of Parliament that proposed to insert an overarching obligation on decision makers exercising functions under the Planning Act to consider the impacts of climate change.⁵⁴ Alternatively, the Victorian *Climate Change Act 2017* provides a model for ensuring climate change matters addressed in the Act are considered by decision makers exercising functions under other environmental legislation.⁵⁵ Climate change should also be explicitly identified as a matter for consideration in key planning decisions throughout the Planning Act, consistent with a clear object.

Recommendation 2

New Planning Act Object

Insert a new object in the Planning Act to reduce greenhouse gas emissions and limit the increase in global warming to no more than 1.5 degrees Celsius above pre-industrial levels; plan for a rapid and just transition away from fossil fuel production and use consistent with the latest IPCC recommendations; identify current and emerging risks from unavoidable climate change; and plan effectively for adaptation – in accordance with relevant climate change laws, policies, targets and best available science. This new objective would be operationalised by inserting a general duty in the Planning Act for planning authorities and decision makers, when exercising functions under the Planning Act, to make decisions consistent with the objects of the Act; and by adding specific provisions addressing climate change mitigation and adaptation at all key decision points in the planning system.

⁵³ For example, in the case *Minister for Planning v Walker* held Hodgson J in held that 'good decision-making would involve the Minister considering whether any of the objects of the EPA Act was relevant to the decision, and taking into account those that were considered relevant; but that a failure by the Minister to consider whether (say) "provision and maintenance of affordable housing" was relevant to a particular decision, or an incorrect decision that this object was not relevant, would not without more make a decision void', [2008] NSWCA 224 (24 September 2008) at 53 and 55.

⁵⁴ *Environmental Planning and Assessment Amendment (Addressing Climate Change) Bill 2017*, <https://www.parliament.nsw.gov.au/bills/Pages/bill-details.aspx?pk=3427>.

⁵⁵ *Climate Change Act 2017* (Vic), section 17.



2 Strategic planning

Strategic planning refers to the upfront, high-level assessment of present and potential future land-use, taking into account the impacts of past development. The process helps communities and decision makers set priorities for the conservation, development and wise use of land and natural resources, such as water, minerals, forests and energy. It is a way of managing land-use and natural resources, and ensuring that smaller development decisions accord with longer-term social, economic and environmental needs, and adjust to changing conditions.

Good strategic planning draws on the best available science, local and regional community aspirations, and is guided by the principles of ecologically sustainable development (ESD) to ensure that future development integrates social, economic and environmental considerations, and genuinely considers the wellbeing and opportunities of present and future generations. It should also explicitly require strategic plans to use best-available science and best-practice methods to reduce greenhouse gas emissions in line with legislative targets, and plan for the direct and indirect impacts of climate change, including planning for climate adaptation and resilience appropriate to the local context.⁵⁶

The current approach

Part 3 of the Planning Act establishes the legal framework for strategic planning in NSW, including the making of strategic plans (regional plans, district plans and Local Strategic Planning Statements), environmental planning instruments (State Environmental Planning Policies and Local Environmental Plans) and Development Control Plans. The framework intends for there to be a 'line-of-sight' between local, regional and state planning

⁵⁶ For example, the Australian Government's *National Climate Resilience and Adaptation Strategy* (2015) sets out a number of guiding principles including shared responsibility, evidence-based risk management approach, factor climate risk into decisions, collaborative, values-based choices, assist the vulnerable and revisit decisions and outcomes over time, see <http://www.environment.gov.au/climate-change/adaptation/publications/national-climate-resilience-and-adaptation-strategy>; see also climate change adaptation principles of the Great Barrier Reef Marine Park Authority, available at <http://eiblibrary.gbrmpa.gov.au/jspui/handle/11017/201/>. International examples of adaptation principles include Global Legislators Organisation for a Balanced Environment (GLOBE) International, *Guiding Principles for Climate Change Adaptation*, available at <https://globelegislators.org/the-legislative-principles-on-adaptation/>; see also the United Nations Development Program Toolkit for Designing Climate Change Adaptation Initiatives, available at <https://www.adaptation-undp.org/resources/training-tools/designing-climate-change-adaptation-initiatives-toolkit-practitioners>.



instruments. Additionally, councils must follow directions issued by the Planning Minister when they prepare a planning proposal for a new or updated LEP.⁵⁷

Over the past decade, strategic planning has been widely identified as an important area for improvement in NSW planning laws. This is certainly true for understanding climate risks and adapting to unavoidable climate change.⁵⁸

The NSW planning system review of 2011-2013 Independent Planning Review Panel recommended that any new Act should set out clear objects for strategic planning, including to:

*Consider the scientifically anticipated impact of climate change within the footprint of the strategic planning study area and the broad measures required to mitigate its impact.*⁵⁹

The Independent Panel also recommended that local plans:

*Provide controls for any anticipated specific impacts of climate change within local government areas.*⁶⁰

Despite recent waves of legislative reform, the Planning Act still has no explicit requirement to consider climate change in the NSW strategic planning framework – either to reduce greenhouse gas emissions, or to identify, respond to or prepare for likely climate change impacts on people, settlements, infrastructure or the environment. Initial steps to deal with adaptation, resilience and green infrastructure in recent strategic plans and policies are notable, but limited.⁶¹

What is missing at the strategic level is a clear and compelling link between the best available science on

likely climate change impacts (for example, projections from AdaptNSW, advice of OEH or the Climate Advisory Council) and the planning system – such as an upfront requirement to identify regional or local risks and address climate impacts. Local plan-makers and authorities should not be left to identify best available science on an *ad hoc* basis themselves. Rather they should be supported by clear institutional and policy linkages, such as a statutory Climate Change Advisory Council and adaptation planning guidelines at the relevant scale (whether national, state, regional or local). The UK's *Climate Change Act 2008* provides a successful model for this approach, combining an independent expert committee, periodic climate risk assessments, mandatory duties on the Government to respond to those risks, and follow-up reporting.⁶² Most recently, the UK Government has published a revised National Adaptation Plan for 2018- 2023.⁶³

Given the importance of strategic planning to climate adaptation, this section considers in more detail:

- **State Environmental Planning Policies (SEPPs)**
- **Regional and District Plans**
 - **Greater Sydney Region Plan**
 - **District plans for the Greater Sydney region**
 - **Other NSW regional plans**
- **Local Environmental Plans and Development Control Plans**
- **Ministerial Planning Directions**
- **Strategic planning for resource and infrastructure projects**

⁵⁷ See Division 9.1 of the *Environmental Planning and Assessment Act 1979*.

⁵⁸ When EDO lawyers assessed the climate-readiness of NSW planning laws eight years ago, they evaluated the then Sydney Metropolitan Plan and seven other regional plans and concluded that: 'Neither the regional strategies nor the metropolitan strategy directly address climate change issues... the strategies are largely silent on how to facilitate mitigation and adaptation action.' R. Ghanem and K. Ruddock, 'Are New South Wales' planning laws climate-change ready?' (2011) 28 EPLJ 17, 19.

⁵⁹ Tim Moore and Ron Dyer, *The Way Ahead for Planning in NSW, Recommendations of the NSW Planning System Review, Volume 1 – Major Issues*, May 2012, <https://www.planning.nsw.gov.au/-/media/Files/DPE/Reports/the-way-ahead-for-planning-in-nsw-recommendations-of-the-nsw-planning-system-review-vol-1-2012-05.pdf>. Recommendation 8.

⁶⁰ *Ibid*, Recommendation 19.

⁶¹ See for example, NSW Government Architect, *Greener Places* (green infrastructure policy); and the NSW Government's '5 million trees' for Western Sydney policy.

⁶² See Part 4, *Climate Change Act 2008* (UK).

⁶³ See UK Department of Environment, Food and Rural Affairs, *The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting*, July 2018. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/727252/national-adaptation-programme-2018.pdf.

State Environmental Planning Policies

State Environmental Planning Policies (**SEPPs**) are powerful state government planning instruments made by the Governor on behalf of the Executive, on the recommendation of the Minister for Planning.⁶⁴ They can apply to all or part of NSW, may be made for the purposes of achieving any of the objects of the Planning Act, they may regulate or support state or regional environmental planning goals, and can override or replace local development controls and zoning in LEPs.

There are many SEPPs dealing with development including: infrastructure, mining and extractive industries, residential, energy and water standards and environmental protection (such as for koala habitat, coastal rainforests and wetlands).⁶⁵

The *State Environmental Planning Policy (Building and Sustainability Index) 2004 (BASIX)* and the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP)* are two SEPPs that do refer to greenhouse gas emissions, but only do so in limited ways. These SEPPs are discussed later in sections 4 and 5 of this report.

Some disparate SEPPs currently approach climate change adaptation, at least indirectly, through 'natural hazard' planning. As climate adaptation is essentially a risk management process, SEPPs may exclude hazardous or sensitive areas from streamlined planning and approval processes. For example:

- *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004*, which facilitates housing for seniors and disabled people does not apply to natural hazard land and high flooding hazard land.⁶⁶ Siting of such development is one important aspect of special purpose housing.
- *State Environmental Planning Policy (Infrastructure) 2007* – often controversial in the way it fast-tracks approvals with limited if any public consultation

or transparency – does also exclude certain infrastructure from being 'fast-tracked' (e.g. as exempt and complying infrastructure) if it is in an environmentally sensitive area.⁶⁷ However, despite a recent review of the Infrastructure SEPP, and the recent adoption of a Critical Infrastructure Resilience Strategy, the Infrastructure SEPP contains no upfront risk assessment requirement for climate adaptation. The same gap exists in virtually all other SEPPs.

- *State Environmental Planning Policy (Coastal Management) 2016* is the most comprehensive SEPP when it comes to climate change adaptation, as it identifies coastal vulnerability areas and aims to mitigate current and future risk from coastal hazards by taking into account the effects of coastal processes and climate change⁶⁸ (see further discussion of the Coastal SEPP in section 5 below).

While disparate SEPPs could be used to assess, limit or regulate greenhouse gas emissions through planning and development approvals, it would be more effective to have a comprehensive 'Climate Change SEPP' that integrates climate change mitigation or adaptation considerations into decision-making under the Planning Act as has been done in other jurisdictions.⁶⁹

In addition to a Climate Change SEPP, all relevant SEPPs should be reviewed to identify risks, processes and solutions for climate mitigation and adaptation to ensure they are fit for purpose for a climate impacted future. Key SEPPs should be comprehensively reviewed for climate readiness and to identify risks, processes and solutions for climate mitigation and adaptation. In particular, a review should identify the major risks that could be avoided and minimised through amendments to SEPPs for infrastructure, disability and seniors living, housing and other codes (including new greenfield and medium density housing codes), and mining and extraction (e.g. environmental risks from flooding). Solutions may include preliminary assessments, minimal impact guidelines, additional exclusions, protection of wildlife corridors and climate refugia as 'environmentally

sensitive areas', new building standards, boosted compliance and audit programs, and ongoing training of planning professionals, local council staff and private certifying authorities in climate risks and responses. Relevant SEPPs should be amended and updated accordingly.

Regional and district plans

Division 3.1 of the Planning Act sets out the process for drafting regional strategic plans and district strategic plans, and Local Strategic Planning Statements. There are no explicit requirements for plans to address climate change.⁷⁰

The Planning Act is also silent on whether the requirement for authorities to have regard to 'other relevant government policies and plans in force'⁷¹ includes climate change plans (e.g. NSW Climate Change Policy Framework), programs (e.g. AdaptNSW) or institutions like the NSW Climate Change Council.⁷² The omission does not *prevent* regional or local plan-makers proactively planning for climate adaptation, including by 'having regard to economic, social and environmental matters', as draft strategic plans require.⁷³ It would be clearer to explicitly require this.

A brief evaluation of the approach to climate mitigation and adaptation in a range of strategic plans follows.

I. Greater Sydney Region Plan

The Greater Sydney Region Plan includes forty key objectives and a series of strategies, actions and targets.

⁷⁰ Section 3.3 of the *Environmental Planning and Assessment Act 1979* provides that draft regional strategic plans must include or identify certain matters, including:

- 'the basis for strategic planning in the region having regard to economic, social and environmental matters' (emphasis added);
- 'a vision statement and objectives';
- 'strategies and actions for achieving those objectives'; and
- how the planning authority will monitor and report on implementation.

Section 3.4 of the *Environmental Planning and Assessment Act 1979* provides that draft district strategic plans must include or identify:

- 'the basis for strategic planning in the region having regard to economic, social and environmental matters' (emphasis added);
- the planning priorities for the district that are consistent with the objectives, strategies and actions specified in the relevant regional strategic plan;
- actions required for achieving those planning priorities;
- the basis on which the relevant strategic planning authority is to monitor and report on the implementation of those actions;
- areas of State, regional or district significance, including priority growth areas; and
- such other matters as the relevant strategic planning authority considers relevant to planning for the district.

⁷¹ The language of 'other relevant government policies and plans in force...' is similar to that in the 2007 Mining SEPP, which was unsuccessfully tested by EDO NSW on behalf of Wollar Progress Association in the *Wipinjong* coal mine extension case. However, that case dealt with the relevance of State climate policies and goals to development assessment under Part 4 of the Planning Act, rather than strategic planning under Part 3 of the Act. This case highlights the need for clear requirements to apply policies and plans.

⁷² See NSW Office of Environment and Heritage, Climate Change Council, at: <https://climatechange.environment.nsw.gov.au/About-climate-change-in-NSW/NSW-Government-action-on-climate-change/Climate-Change-Council>.

⁷³ See EP&A Act sections 3.3(2)(a) and 3.4(3)(a).

It would be more effective to have a comprehensive 'Climate Change SEPP' that integrates climate change mitigation or adaptation considerations into decision-making under the Planning Act.

Notable objectives include:

- Objective 33: A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change;
- Objective 36: People and places adapt to climate change and future shocks and stresses;
- Objective 37: Exposure to natural and urban hazards is reduced; and
- Objective 38: Heatwaves and extreme heat are managed.

A number of high-level strategies underpin these objectives, for example:

- Strategy 33.1: Support initiatives that contribute to the aspirational objective of achieving net-zero emissions by 2050 especially through the establishment of low-carbon precincts in Planned Precincts, Growth Areas and Collaboration Areas;
- Strategy 36.1: Support initiatives that respond to the impacts of climate change;
- Strategy 37.1: Avoid hazard-exposed areas when locating new urban development, and 'consider options to limit' intensified development in existing areas at risk;
- Strategy 37.2: Manage significant flood risks in the Hawkesbury-Nepean Valley; and
- Strategy 38.1: Mitigate the urban heat island effect and reduce vulnerability to extreme heat.

However, the Greater Sydney Region Plan only lists three relevant 'potential indicators' to measure progress on

⁶⁴ EP&A Act 1979, Division 3.3 Environmental planning instruments – SEPPs (ss. 3.29-3.30).

⁶⁵ For example *State Environmental Planning Policy (State and Regional Development) 2011*; *State Environmental Planning Policy (Infrastructure) 2007*; *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*; *State Environmental Planning Policy (Building and Sustainability Index) 2004*; *State Environmental Planning Policy No 44 - Koala Habitat Protection*; *State Environmental Planning Policy (Coastal Management) 2016*. See New South Wales Government, NSW Legislation for a full list of SEPPs: <https://www.legislation.nsw.gov.au/#/browse/inForce/EPIS/S>.

⁶⁶ See *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004*, clause 4 and Schedule 1 (environmentally sensitive land). However, this does not prevent development on land identified in the coastal zone (clause 4(7)).

⁶⁷ See for example, *State Environmental Planning Policy (Infrastructure) 2007*, clause 116A, clause 130(2)(d) and Schedule 3A.

⁶⁸ See *State Environmental Planning Policy (Coastal Management) 2016* and section 7 of the *Coastal Management Act 2016*.

⁶⁹ See *Planning, Development and Infrastructure Act 2016* (SA), section 62. State Planning Policies, including the Climate Change Policy, were approved on 31 January 2019. The Climate Change Policy has an overarching objective to "provide for development that is climate ready so that our economy, communities and environment will be resilient to climate change impacts". It then sets out eleven policies to achieve that objective including policies to reduce greenhouse gas emissions and encourage development that does not increase our vulnerability to, or exacerbate the impacts of climate change, see https://www.saplanningportal.sa.gov.au/_data/assets/pdf_file/0009/528507/State_Planning_Policies.pdf.

these objectives and actions:

- Reduced transport related greenhouse gas emissions;
- Reduced energy use; and
- Number of councils with standardised statewide natural hazard information.

The potential indicators identified in the plan are weak and inadequate to measure the full range of emissions related impacts and adaptation preparedness. The Greater Sydney Commission should include further, more ambitious environmental targets and measures to underpin the Greater Sydney Region Plan's Sustainability themes of landscape, efficiency and resilience. This should include SMART indicators, both qualitative and quantitative,⁷⁴ that make the environment visible in decision-making and aim to achieve ESD.⁷⁵ Further examples of useful metrics can be found in the Environmental Panel Advisory Paper prepared for the Greater Sydney Commission.⁷⁶

II. District plans

The district plans for the five regions of Sydney are required to 'give effect to' the Greater Sydney Region Plan. Each of the district plans is based on the same framework for considering future impacts, taking very similar approaches to reducing carbon emissions, managing risk and planning for resilience. Slight variations in focus are present in adaptation efforts where, for example, coastal issues, flooding or urban heat are of greater significance for different districts.

With respect to reducing carbon emissions and managing energy, water and waste efficiently, all plans contain the following relevant actions:

- Support initiatives that contribute to the aspirational objective of achieving net-zero emissions by 2050, especially through the establishment of low-carbon precincts in Planned Precincts, Collaboration Areas and Urban Transformation projects (and where

relevant in Growth Areas and State Significant Precincts);

- Support precinct-based initiatives to increase renewable energy generation, and energy and water efficiency, especially in Planned Precincts, Collaboration Areas and Urban Transformation projects (and where relevant in Growth Areas and State Significant Precincts); and
- Encourage the preparation of low-carbon, high efficiency strategies to reduce emissions, optimise the use of water, reduce waste and optimise car parking provision where an increase in floor area greater than 100,000 square metres is proposed in any contiguous area of 10 or more hectares.

With respect to adapting to the impacts of urban and natural hazards and climate change each district has identified actions that:

- Support initiatives that respond to the impacts of climate change;
- Avoid locating new urban development in areas exposed to natural and urban hazards and consider options to limit the intensification of development in existing urban areas most exposed to hazards; and
- Mitigate the urban heat island effect and reduce vulnerability to extreme heat.

The Western City District and Central City District Plans also include:

- Respond to the direction for managing flood risk in the Hawkesbury-Nepean Valley as set out in *Resilient Valley, Resilient Communities – Hawkesbury-Nepean Valley Flood Risk Management Strategy*.

The Central City District Plan also includes:

- Consider strategies and measures to manage flash flooding and safe evacuation when planning for growth in the Parramatta CBD.

The same indicators that are used in the Greater Sydney Region Plan are adopted in the District Plans.

Another potential weakness relates to the enforceability of legal requirements under Part 3 of the Planning Act.

The only requirement of the Planning Act that appears to bind a strategic plan 'is the requirement to publicly exhibit the draft plan or statement.'⁷⁷ This clause clearly seeks to

⁷⁷ EP&A Act section 3.11(3).

In an environment where water will become increasingly scarce, planning to integrate water efficiency, treatment and re-use should be embedded in regional development plans.

constrain attempts to challenge a plan's validity including to ensure that a district plan will actually 'give effect to' a regional plan, or indeed any specific adaptation objectives.

III. Other regional plans for wider NSW

A renewed and welcome emphasis on strategic planning has seen nine new regional plans adopted outside of the Greater Sydney region.⁷⁸

It is encouraging that many regional plans include high-level references to climate adaptation, and actions in areas such as water security and water sensitive design,⁷⁹ habitat connectivity and corridors,⁸⁰ and updated bush fire and flood policies or mapping.⁸¹ In some regional plans these actions are framed around climate change, natural hazards or both.⁸² Some regional plans appear to have a more holistic focus on climate adaptation than others.⁸³

The plans however have been criticised for lack of specific and measurable objectives, failure to effectively integrate biodiversity conservation and natural resource management considerations, and inability to be legally enforced.

Broad references to climate change mitigation and adaptation in regional and district strategic plans are a

⁷⁸ Regional Plans are in place for the following regions: Central Coast, Central West and Orana, Far West, Hunter, Illawarra-Shoalhaven, New England North West, North Coast, Riverina-Murray and South East and Tablelands. See Department of Planning and Environment, <https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans>.

⁷⁹ See e.g. Central Coast Region Plan, p 39; Hunter Region Plan, pp 24, 30, 39; Illawarra-Shoalhaven Region Plan, p 44; Far West Region Plan p 64; Riverina-Murray Region Plan, p 32; Central West and Orana Region Plan, p 39.

⁸⁰ See e.g. Central Coast Region Plan, p 39, Hunter Region Plan, pp 23, 38; South East and Tablelands Region Plan, p 37.

⁸¹ See e.g. Hunter Region Plan, pp 43; Illawarra-Shoalhaven Region Plan, p 53; South East and Tablelands Region Plan, p 37.

⁸² For both, see e.g. Central Coast Region Plan, p 39; Illawarra-Shoalhaven Region Plan, p 53; North Coast Region Plan, p 19.

⁸³ See e.g.; North Coast Region Plan, p 19; New England North West Region Plan, p 39; South East and Tablelands Region Plan, p 39; Central West and Orana Region Plan p 43.

starting point. The real challenge is to ensure that these high-level aims translate and crystallise in day-to-day planning, zoning, development decisions and conditions, whether for precinct-scale planning, public infrastructure or private development. For example, there is still some disconnect between the widespread references to climate adaptation in regional plans, and the reported level of operational action in local councils⁸⁴ (see **Box 6**).

The process also fails to prioritise proactive measures to prepare for the impacts of climate change. For example, in an environment where water will become increasingly scarce, planning to integrate water efficiency, treatment and re-use should be embedded in regional development plans.

Barriers to the practical implementation of regional adaptation actions in the planning system are likely to include:

- diffuse responsibilities for the achievement of regional plan objectives;
- discretionary interpretation of competing aims, strategies and provisions in regional plans (e.g. housing, infrastructure, employment or agribusiness goals with measurable targets are more likely to be prioritised);
- no explicit requirement to pursue other regional goals consistently with emissions reduction and climate adaptation responses;
- limited scrutiny of local planning proposals by the Planning Department or the Greater Sydney Commission (i.e. planning proposals that omit adaptation actions are unlikely to be returned for amendment);
- lack of public accountability for the content of strategic plans, particularly restrictions on challenges to the validity of regional or district plans; and
- lack of ongoing funding allocations to specifically address climate risks.

Clearer responsibilities, accountability of decision makers, sustained resourcing, and effective public oversight of adaptation actions will be critical factors for success.

⁸⁴ For example, the *NSW Local Government Climate Change Adaptation Survey 2018* (Local Government Association of NSW) suggests that around three quarters of respondent councils refer to adaptation in community strategic plans, but around two-thirds of respondent councils reported adaptation activities at operational levels. It may be reasonable to assume lower levels of adaptation action from local councils that did not respond to the survey, <https://climatechange.environment.nsw.gov.au/Adapting-to-climate-change/Local-government>.

Local Environmental Plans (LEPs) and Development Control Plans (DCPs)

In order to ensure 'line-of-sight' between regional strategic plans and district plans, there are new requirements for local councils to prepare and make a Local Strategic Planning Statement (LSPS) that is consistent with any strategic plan applying to the area⁸⁵ and for LEPs to give effect to the LSPS of the council.⁸⁶

Division 3.2 of the Planning Act outlines requirements for making environmental planning instruments (SEPPs and LEPs) and division 3.4 outlines the specific process for making LEPs. However, there are no requirements to address climate change considerations and to apply performance standards that will direct and measure an area's ability to adapt to future climate change, such as through achieving suburb-scale thermal comfort measures or water efficiency and re-use.

Most local government areas in NSW have adopted a 'standard instrument' format for their LEPs, based on the *Standard Instrument – Principal Local Environmental Plan (Standard Instrument)*.⁸⁷ The Standard Instrument does not contain any provisions dealing specifically with climate change mitigation or adaptation (although it does contain provisions about bushfire hazard reduction).⁸⁸ In addition to the Standard Instrument, there are some 'model local clauses' that address common topics raised by councils.⁸⁹ Model clause 6.5 which relates to the foreshore building line provides that development consent must not be granted ... unless the consent authority is satisfied that 'sea level rise or change of flooding patterns as a result of climate change have been considered'.⁹⁰

In the absence of comprehensive standard provisions dealing with climate change, a number of councils have chosen to include discretionary provisions relating to climate change in their LEPs.

For example, one of the aims of the Ku-ring-gai LEP

Only a handful of LEPs outside Greater Sydney refer to adaptation, and very few in non-coastal areas, even though those areas have long grappled with ... drought, flood and bushfire; and increasingly, climate-related risks of extreme heat, variable rainfall and water scarcity.

2015 is 'to facilitate adaptation to climate change' – an aim that can be taken into account in development decisions.⁹¹ One of the aims of the Gloucester LEP is 'to embrace and promote the principles of ecologically sustainable development, conservation of biological diversity and sustainable water management, and to recognise the cumulative impacts of climate change'.⁹² The Kiama LEP aims to 'provide planning controls for the Kiama area to achieve ecologically sustainable development principles while recognising the economic, environmental and social impacts and risks associated with climate change',⁹³ and Tweed LEP aims to 'promote development that is consistent with the principles of ecologically sustainable development and to implement appropriate action on climate change'.⁹⁴ The Warringah LEP includes an aim to 'encourage development that demonstrates efficient and sustainable use of energy and resources',⁹⁵ and also includes a clause relating to flood planning 'to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change'.⁹⁶

This has been an organic process by proactive councils, but it does not necessarily reflect the degree of risk and adaptation opportunities in different areas in NSW.

Only a handful of LEPs outside of Greater Sydney refer to adaptation, and very few in non-coastal areas, even though those areas and communities have long grappled with the terrible effects of drought, flood and bushfire; and increasingly, climate-related risks of extreme heat, variable rainfall and water scarcity. As part of this process there is an opportunity to update to the LEP Standard Instrument to include specific provisions relating to climate change mitigation and adaptation.

Similar discrepancies arise with Development Control Plans (DCPs). DCPs are prepared by councils to provide more detailed planning and design guidance to support the planning controls in the LEP.⁹⁷ Unlike LEPs and SEPPs, DCPs are not environmental planning instruments and are not legally binding. However, a consent authority must take a DCP into account when considering a development application. LEPs and SEPPs take priority over a DCP. Some councils incorporate climate change considerations into their DCPs, including in relation to floodplain risk management,⁹⁸ but this is done on an ad hoc basis. The Department of Planning and Environment plans to develop a standard format DCP with model provisions.⁹⁹ This might help consistency, but it would be clearer and more effective to have relevant provisions relating to climate change mitigation and adaptation in LEPs.

Finally in relation to local councils, we note that the Productivity Commission identified insufficient user-relevant guidance and information from state and territory governments on how to incorporate climate change into land-use planning as a barrier to climate change adaptation. A compounding issue identified was that local governments can have insufficient financial and human resources to undertake this role.¹⁰⁰ The NSW Climate Change Advisory Council could be given additional responsibilities to provide advice on up-to-date climate change projections,¹⁰¹ state, regional and local level climate risks and best-practice adaptation measures to assist local councils.

Ministerial Policy Directions for Plan Making

Local councils must follow any directions issued by the Planning Minister when they prepare a planning proposal for a new or updated LEP.¹⁰² Current ministerial directions relate to employment and resources; environment and heritage; housing, infrastructure and urban development; hazard and risk; regional planning and local plan making.¹⁰³

No ministerial direction refers to climate change mitigation, adaptation or resilience. The only references are indirect.

For example, Planning Direction 2.2, which relates to coastal management, requires a planning authority to 'include provisions [in a planning proposal] that give effect to and are consistent with' the objects of the *Coastal Management Act 2016*, and relevant coastal management areas, and associated guidelines.¹⁰⁴ Notably, the aims of that Act include: '(f) to mitigate current and future risks from coastal hazards, taking into account the effects of climate change.' It is noted however that there is scope to depart from the direction, provided the inconsistent provisions are 'justified by a study or strategy... which gives consideration to the objective of this direction' (emphasis added); or reflect the relevant Regional Strategy or District Plan.¹⁰⁵ In other words, the requirements of the direction can be waived on the basis of a document (prepared by the proponent agency or developer) which merely *considers* – and need not be consistent with – the aim of the planning direction.

Other relevant directions relate to flood prone land (Local Planning Direction 4.3) and planning for bushfire protection (Local Planning Direction 4.4). These generally require plan-makers and planning proposals to avoid areas at risk of hazards, consult with agencies such as the Rural Fire Service and introduce appropriate development controls. However, there is no explicit reference to embedding climate change risk analysis or adaptation and resilience responses.

85 EP&A Act, section 3.9.

86 EP&A Act, section 3.33.

87 *Standard Instrument – Principal Local Environmental Plan*, <https://legislation.nsw.gov.au/#/view/EPI/2006/155a>

88 *Ibid*, clause 5.1.1.

89 See information about 'model clauses' from the Department of Planning and Environment, <https://www.planning.nsw.gov.au/Plans-for-your-area/Local-Planning-and-Zoning/Resources>.

90 See Model Clause 6.5 – Foreshore Building Line, 6.5(3)(h), <https://www.planning.nsw.gov.au/-/media/Files/DPE/Other/model-local-clauses-for-standard-instrument-leps-6-5-foreshore-building-line.pdf>.

91 *Ku-ring-gai Local Environmental Plan 2015*, cl 1.2 (2)(d).

92 *Gloucester Local Environmental Plan 2010*, clause 1.2(2)(d). This was a relevant consideration in the Rocky Hill case.

93 *Kiama Local Environmental Plan 2011*, clause 1.2(2)(a).

94 *Tweed Local Environmental Plan 2014*, clause 1.2(2)(d).

95 *Warringah Local Environmental Plan 2011*, cl 1.2 (f)(ii).

96 *Warringah Local Environmental Plan 2011*, cl 6.3(1)(b).

97 See EP&A Act, Division 3.6.

98 See, for example, Section A3 of the *Tweed Development Control Plan 2008*, <https://www.tweed.nsw.gov.au/PlanningPolicies>.

99 See Department of Planning and Environment, <https://www.planning.nsw.gov.au/Policy-and-Legislation/Environmental-Planning-and-Assessment-Act-updated/Guide-to-the-updated-Environmental-Planning-and-Assessment-Act-1979/Part-4-Development-controls-and-approvals>.

100 Productivity Commission 2012, *Barriers to Effective Climate Change Adaptation*, Report No. 59, Final Inquiry Report, Canberra, <https://www.pc.gov.au/inquiries/completed/climate-change-adaptation/report/climate-change-adaptation.pdf>.

101 For example, via AdaptNSW and NARCLIM.

102 See EP&A Act, sections 3.8 and 3.33.

103 A full list of Local Planning Directions (as at February 2019) is available at https://www.planning.nsw.gov.au/Plans-for-your-area/Local-Planning-and-Zoning/Policy-Directions-for-Plan-Making?acc_section=local_planning_directions|current_and_previously_issued_section_117_2_directions

See specifically ministerial directions on *Environment and heritage* (Environment Protection Zones (2.1, 2016) and Coastal Management (2.2, 2018)); *Housing, infrastructure and urban development* (Regional Plan implementation (5.10, 2016)) *Hazard and risk* (flood prone land (4.3, 2009) and planning for bushfire protection (4.4, 2009)).

104 NSW Department of Planning and Environment, *Local planning directions*, 'Coastal Management' (2.2), issued April 2018. The Coastal Management Act's objects include, for example, '(f) to mitigate current and future risks from coastal hazards, taking into account the effects of climate change.'

105 Prepared under Division 3.1 of the EP&A Act 1979. See planning direction 2.2(7).



Overall, there is a clear need for more explicit and consistent directions to all plan-makers to identify climate change emissions and risks, and adopt adequate mitigation and adaptation measures.

Strategic planning for resource and infrastructure projects

The lack of strategic planning and emissions reduction targets has meant that sectors with significant greenhouse gas impacts – such as mining, energy and transport – have expanded on an ad hoc, project-by-project basis. At present, over eighty percent of NSW emissions come from extracting, processing and burning fossil fuels.¹⁰⁶ However, there remains no coordinated Government plan to manage emissions-intensive sectors. As noted in the EDO NSW submission to the draft *Strategic Release Framework* (2015), the absence of a strategic framework to consider and reduce NSW greenhouse gas emissions from the energy sector is a critical policy gap that needs to be filled, particularly as no other part of the NSW planning or licensing framework performs this strategic climate risk assessment.¹⁰⁷ (This issue is discussed further in section 5 of this report).

¹⁰⁶ See Office of Environment and Heritage <https://climatechange.environment.nsw.gov.au/About-climate-change-in-NSW/NSW-emissions>.

¹⁰⁷ EDO NSW *Submission on Strategic Release Framework and PRIA Guidelines*, November 2015, available at https://www.edonsw.org.au/identification_and_release_of_new_areas_for_coal_and_gas_exploration.

The way forward

Strategic planning in NSW needs to deal more effectively with greenhouse gas emissions reduction, planning for a just transition away from fossil fuel production and use consistent with the latest IPCC projections, and climate change adaptation. There must be clear requirements for planning authorities to consider climate change when developing strategic plans (SEPPs, regional and district plans and LEPs). Plans must contribute to reducing greenhouse gas emissions across sectors, in accordance with state and national targets, global goals and the best available science. Adaptation responses are also needed to deal with the impacts of climate change, including increased natural disaster risk, urban heat island effects and changing ecosystems.

Plan-makers should have a duty to respond to key climate risks and demonstrate how they have done so. The existing limits on the liability of local government¹⁰⁸ do not preclude establishing this duty, and it should be supported by accountability measures such as comparative monitoring and reporting. Also, failure to consider or respond to climate risks should *not* be a matter that is beyond legal challenge, via privative clauses that validate a flawed plan.

¹⁰⁸ See *Local Government Act 1993* (NSW), section 733.

Recommendation 3

State Environmental Planning Policy for Climate Change

Develop an overarching Climate Change SEPP to improve integration of climate mitigation and adaptation targets and measures within the planning system. Review and update all existing State Environmental Planning Policies to ensure they meet the revised objects of the Planning Act, contribute to reducing greenhouse gas emissions in line with legislative targets, and address climate change impacts and risks, including through relevant climate adaptation measures.

Recommendation 4

Mandatory consideration for plan making

Require all planning authorities to address climate change considerations when preparing and making strategic plans (SEPPs, regional plans, district plans, local strategic planning statements and LEPs). This includes a requirement that strategic plans address climate change impacts and risks and the necessary transition away from fossil fuel production, and contribute to reducing and monitoring greenhouse gas emissions across sectors - in accordance with relevant targets, best available science and up-to-date advice from a statutory Climate Change Advisory Council. Strategic plans must also adopt appropriate climate adaptation responses, including for example, planned retreat in relation to natural disaster risk, green infrastructure planning to combat urban heat island effects, and biodiversity corridors for species migration.

Recommendation 5

Guidance for plan making

Provide additional guidance, funding and support to planning authorities preparing strategic plans, including by:

- establishing principles of best practice adaptation to guide planning authorities and decision makers;
- providing the NSW Climate Change Advisory Council with specific statutory functions and adequate funding to advise NSW planning authorities on (among other things):
 - up-to-date climate change projections,
 - state and regional-level climate risks,
 - best practice adaptation measures, and
 - the adequacy of draft adaptation plans;
- developing specific Ministerial Directions on climate risk assessment and adaptation to assist councils with planning functions;
- including climate change in Local Strategic Planning Statement guidance;
- increasing guidance on, and scrutiny of, planning proposals in relation to climate change responses, including providing access to and advice on the best available science and assessing comparative performance to ensure continuous improvement;
- increasing guidance on transitioning away from fossil fuel production and use consistent with the latest IPCC recommendations; and
- requiring the pursuit of other regional development goals to be achieved consistently with emissions reduction and climate adaptation responses.

The absence of a strategic framework to consider and reduce NSW greenhouse gas emissions from the energy sector is a critical policy gap that needs to be filled.

3 Environmental impact assessment

In this section we look at the requirements for environmental impact assessment of proposed projects and developments, including what information must be included in an environmental impact assessment report. In the following section (section 4), we look more closely at what matters a decision maker must take into consideration when determining whether or not to approve a project application.

Environmental impact assessment (**EIA**) is the process of assessing the likely *environmental social and economic impacts* of a proposal, to inform decision makers as to whether a project should proceed or not. EIA relies on comprehensive and accurate information on the potential environmental, social and economic impacts of individual development proposals.

EIA can be an important stage for considering both the greenhouse gas emissions of projects, including modifications, and the potential risks and impacts to the development from unavoidable climate change throughout the project's lifecycle, and the need to prepare and adapt. Depending on the type and scale of the proposal – whether a house, a new hospital, town centre or coal mine – the project lifecycle may span a decade or two, or 50 to 100 years.

EIA can be an important stage for considering both the greenhouse gas emissions of projects ... and the potential risks and impacts from unavoidable climate change throughout the project's lifecycle.



The current approach

NSW planning laws set out different pathways for environmental impact assessment that broadly reflect the scale of development impacts (see **Table 2**).

Table 2: Environmental Impact Assessment requirements for different development pathways

Development pathway	Environmental Impact Assessment	Comment
Exempt and Complying development	No environmental impact assessment required	An increasing number of development proposals, purportedly of 'minor impact', can be carried out under exempt and complying development codes. ¹⁰⁹ There are no environmental impact assessment requirements, although in many instances code-based development is not permitted on environmentally sensitive land, or where there are additional requirements with respect to undertaking code-based development on bushfire prone land or flood-prone land.
Standard 'Part 4' development	Statement of Environmental Effects (SEE)	Regular, private development proposals must be accompanied by a Statement of Environmental Effects (SEE). ¹¹⁰
Designated development	Environmental Impact Statement (EIS)	High-impact proposals, including State Significant Infrastructure, require the proponent to prepare a full Environmental Impact Statement (EIS) ¹¹¹ that complies with Secretary's Environmental Assessment Requirements (SEARs) prescribed under the Planning Regulation. ¹¹²
State significant development	Environmental Impact Assessment (EIS)	
State significant infrastructure	Environmental Impact Assessment (EIS)	
Activity carried out by a public authority ('Part 5')	Review of Environmental Factors (REF)	There are no explicit EIA requirements for projects carried out by public authorities but it is common practice to prepare a review of environmental factors (REF) that address matters which must be considered by the determining authority under clause 228 of the EPA Regulation.

¹⁰⁹ See generally State Environmental Planning Policy (Exempts and Complying Development Codes) 2008.

¹¹⁰ EP&A Regulation, Schedule 1, Clause 2(1)(c).

¹¹¹ EP&A Act, section 4.12(6).

¹¹² EP&A Regulation, Schedule 2, Part 2.

Additional assessment requirements apply to projects that have impacts on threatened species,¹¹³ or that require approval or concurrence under other environmental legislation.¹¹⁴ More limited assessment requirements may apply where already approved projects are being modified.

Failings of the current approach

Assessments under the Planning Act fail to set clear obligations for greenhouse gas emissions and climate change impacts as part of the EIA process. That is, there are no explicit requirements to include climate change as part of environmental impact assessment for any of the assessment pathways established under the Planning Act (although an REF will include, where relevant, an assessment of the impact of coastal processes and coastal hazards including those under projected climate change conditions).¹¹⁵ However, because climate change impacts are considered by decision makers when determining development or activity proposals, climate change impacts are often included as part of environmental impact assessment. Specifically, we observe that:

- There is no standard legal provision or policy statement on how the impacts of greenhouse gas emissions are to be assessed for particular sectors or project types for different development pathways.¹¹⁶ The Government has taken some steps to provide guidance for the mining sector however, for other sectors, expectations remain unclear. For example, in 2015 the NSW Government released *Indicative Secretary's Environmental Assessment Requirements for state significant mining proposals* that require the EIS to comprehensively forecast and assess the greenhouse gas emissions, including downstream or scope 3 emissions, such as from burning exported coal.¹¹⁷ Also, economic assessment guidelines expect mining and coal seam gas (CSG) companies to address the costs of greenhouse gas

emissions, 'including quantification where feasible'.¹¹⁸ Recent work done as part of the Environmental Impact Assessment Improvement Project¹¹⁹ provided an opportunity to further embed climate change assessment requirements but has fallen short of providing clear guidance on assessing climate change impacts.¹²⁰

- It is widely recognised that cumulative impact assessment is a key inadequacy of EIA in the NSW planning system.¹²¹ Greenhouse gas emissions are the quintessential example of cumulative impacts because they incrementally add up to a shared and dangerous problem. As a result, local or state planning policies tend to dismiss greenhouse gas emissions as a 'global issue', and individual assessments dismiss the significance of a local project's emissions as negligible in the context of global or national emissions.
- For most development proposals, the Planning Act contains no explicit requirement to assess the increasing risks and impacts of climate change on the proposal or the locality, particularly with reference to climate projections of increased temperature, sea level rise, variable rainfall or future bushfire risks. For example, there is no standard process to assess public health impacts of climate change, such as increased heat stress and water scarcity. Health impact assessment is an emerging field,¹²² and is linked to climate change because of increased extreme heat, water scarcity, disease patterns and reduced mobility, particularly for vulnerable people. This reflects the intent in the NSW Climate Change Policy Framework to 'reduce climate change impacts on health and wellbeing'.¹²³ Also, in 2012 the NSW Government removed standard statewide projections for sea level rise, leaving it to local government

¹¹⁸ NSW Government, *Guidelines for the economic assessment of mining and coal seam gas proposals* (December 2015) Integrated Mining Policy pp 15-16. See: <http://www.planning.nsw.gov.au/Policy-and-Legislation/Mining-and-Resources/Integrated-Mining-Policy>.

¹¹⁹ In 2016, the NSW Department of Planning and Environment began the process of reviewing Environmental Impact Assessment (EIA) for State significant projects in NSW to identify areas for improvement. The project has not yet been finalised (as at February 2019) see <https://www.planning.nsw.gov.au/Policy-and-Legislation/Under-review-and-new-Policy-and-Legislation/Environmental-Impact-Assessment-Improvement-Project>.

¹²⁰ See *EDO NSW Submission on Environmental Impact Assessment (EIA) Improvement Project – Draft EIA Guidelines*, September 2017, available at https://www.edonsw.org.au/eia_improvement_project.

¹²¹ For example, the term *cumulative* is not used in the EP&A Act and appears only three times in the *Environmental Planning and Assessment Regulation 2000* (NSW) (cl 228 and Schedule 3 – Designated development).

¹²² See, for example, Patrick Harris and Francesca Viliani, *Strategic health assessment for large scale industry development activities: An introduction*, Environmental Impact Assessment Review 68 (2018) 59–65

¹²³ The NSW Climate Change Policy Framework states that 'The government will also identify ways to support communities that are more vulnerable to the health impacts of climate change.'

discretion as to what standards or projections are adopted across coastal areas.¹²⁴ In contrast, in South Australia, environmental impact statements are required to include a statement of 'the expected effects of the development on the climate and any proposed measures designed to mitigate or address those effects'.¹²⁵

- The Planning Act does not require developers to build-in reasonable adaptation and resilience measures to deal with these risks. In some areas, related laws such as the *Coastal Management Act 2016* and *Coastal SEPP* are starting to address this. But under the Planning Act – which is responsible for building and zoning processes, impact assessment and development controls – there is no standard legal provision or policy statement on how to address adaptation or build resilience. There is no planned retreat policy. This leaves significant gaps, discretion and inconsistent approaches to adaptation at the local level, with limited recognition or incentives for best practice.
- Where development controls or standards do exist – such as for bushfire, flooding, home building sustainability or coastal zone development – there is no requirement to review impacts or continually update standards in response to regional climate projections or best available science. For example, home construction standards for thermal comfort were established under BASIX in 2006. However, there is no requirement to periodically review these standards, no requirement to consider temperature projections for the lifecycle of the home, and no minimum thermal comfort standards for industrial, commercial or other buildings – where the working population, as well as customers, students or patients spend their days.
- In the case of modification applications (that is, an application to modify an existing development consent), requirements will vary depending on whether a proposed modification has 'minimal environmental impact'.¹²⁶ This in itself is problematic as the question of whether a modification will have 'minimal environmental impact' is at the discretion of the consent authority, and there is little guidance as

¹²⁴ The former NSW sea level rise policy was scrapped in 2012, and this must now be done within the framework of the *Coastal Management Act 2016* and *State Environmental Planning Policy (Coastal Management) 2018*.

¹²⁵ *Planning, Development and Infrastructure Act 2016* (SA), section 113.

¹²⁶ EP&A Act, section 4.55

to how this decision should be formed. Additionally, the requirement to prepare an environmental impact statement does not extend to modification applications, although modifications applications are required to include a description of the expected impacts of the modification.¹²⁷

- Finally, the EIA process is geared towards assessment of new development proposals (be they a home, residential estate, recycling facility, coastal resort or rail corridor extension). As such, the EIA process does not consider the increasing risks and impacts from extreme heat, bushfire, flooding or coastal erosion on *existing* homes, buildings, infrastructure or surrounding landscapes – nor the need to increase community and environmental resilience to these threats. There are no retrofitting requirements for buildings, for example. Nor is there a significant assistance or compliance and audit program for existing homes, businesses or infrastructure to assess vulnerability to climate risks such as bushfire, flooding or extreme heat.

The way forward

Climate change is a key issue that should be addressed during environmental impact assessment, particularly for major projects. Amendments to the Planning Act should require high-emitting sectors, major project applications, modifications and development proposals at risk from climate change impacts to include a *Climate Impact Statement* that addresses both climate change mitigation and adaptation. The cumulative impacts of project modification proposals must be more fully considered. To ensure accountability and transparency, these assessments must be conducted by truly independent experts. This would require establishing a process for the accreditation and independent appointment of consultants undertaking EIA.¹²⁸

¹²⁷ See EP&A Regulation, clauses 115(1)(f) - this often takes the form of a detailed environmental assessment.

¹²⁸ See EDO NSW discussion on the need for accreditation and independent appointment of environmental consultant in *EDO NSW Submission on A New Planning System for New South Wales – White Paper*, June 2013, available at https://www.edonsw.org.au/planning_reforms.

Recommendation 6

Establish climate impact assessment pathways

Standardise and scale climate change impact assessment requirements and processes for different development pathways. Specifically:

- Low-impact development - for low-impact development, establish a standardised assessment process for determining whether the proposed development minimises the cumulative lifetime greenhouse gas emissions from the development site and adopts best practice adaptation measures.
- High-impact development - for high-impact development (including all major projects - State significant development and State significant infrastructure projects, and designated development including development from high-emitting sectors or other development proposals at risk from climate change impacts), require consistent and independent assessment of the likely greenhouse gas emissions via a **Climate Impact Statement**.
- Establish clear EIA requirements for modification applications, including a requirement to assess the likely impacts of the modification in the context of existing impacts and operations, including cumulative impacts. A modification resulting in an increase in greenhouse gas emissions cannot have considered to be 'minimal environmental impact.'

Recommendation 7

Climate Impact Statements for major projects

In terms of **assessing emissions**, a **Climate Impact Statement** would:

- demonstrate how a project will avoid, minimise and offset emissions and achieve carbon neutrality;
- require the use of standard methods to estimate direct 'scope 1' emissions (such as fugitive methane from a coalmine), 'scope 2' emissions (such as electricity use), and up and downstream 'scope 3' emissions;
- prescribe a method to calculate the full social costs of greenhouse gas emissions (including environmental and public health costs over time); and

- estimate a range of emissions, the degree of any uncertainty, and the reasons for such uncertainty.

In terms of **climate adaptation**, a **Climate Impact Statement** would:

- identify the risks and potential impacts of a changing climate on the proposal and locality over the project's lifecycle;
- be required to refer to best available science (such as AdaptNSW projections), official adaptation plans, guidelines and best practice (to be developed for the relevant sector, region or development category);
- outline proposed measures to ensure the project is 'climate change ready' in relation to best available projections over the design lifecycle, and demonstrate how the project meets key resilience parameters; and
- set out a schedule for periodic reviews for adaptive management purposes to ensure best practice is maintained over the life of the project.

Recommendation 8

Greenhouse gas assessment guidelines

Publish assessment guidelines to ensure consistent, robust assessment is based on best available science. Guidelines should advise on how to assess direct and indirect greenhouse gas emissions, apply an 'avoid, mitigate and offset' hierarchy for reducing emissions, achieve best-practice carbon offsetting, and advise on best practice adaptation principles.

Recommendation 9

Accreditation of consultants

Require mandatory accreditation of environmental consultants who prepare EIA reports, and Climate Impact Statements and independent appointment of those accredited consultants.



4 Development decisions



This section examines the limitations of how current decision making processes take into account any significant climate change impacts, including greenhouse gas emissions or future climate change impacts (e.g. increased flooding or bushfire risk, sea level rise, coastal erosion, species migration). It looks specifically at:

- a. Mandatory matters for consideration; and
- b. The role of consent conditions in responding to climate change impacts.

The current approach

For each of the different development pathways, the Planning Act sets out matters that must be considered by the decision maker when deciding whether to approve or refuse a project application – see **Table 3**.

Most forms of new development and land-use activities are determined under **Part 4** of the Planning Act.¹²⁹ Part 4 includes a list of matters the decision maker must consider, including the impacts of the proposal.¹³⁰ There is no explicit requirement in Part 4 of the Planning Act for decision makers to consider climate change impacts although climate change has been determined to be a mandatory relevant consideration through the judicial system.

The *public interest* has been found to include consideration of the Planning Act's objects, at least at a high level. These objects include 'to facilitate ecologically sustainable development' (**ESD**), which in turn requires 'integrating relevant economic, environmental and social considerations in decision-making about environmental

Table 3. Mandatory matters for consideration for planning decisions

Development stream	Matters for consideration
Complying development	Under section 4.28 of the Planning Act, a council or accredited certifier must consider the following matters in determining an application for a complying development certificate: <ol style="list-style-type: none"> a. whether or not the proposed development is complying development, and b. whether or not the proposed development complies with the relevant development standards, and c. if the proposed development is complying development because of the provisions of a local environmental plan, or a local environmental plan in relation to which the council has made a development control plan, that specifies standards and conditions for the complying development, whether or not the proposed development complies with those standards and conditions.
Standard 'Part 4' development	Under section 4.15 of the Planning Act, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application: <ol style="list-style-type: none"> a. the provisions of: <ol style="list-style-type: none"> (i) any environmental planning instrument, and (ii) any proposed instrument that is or has been the subject of public consultation under the Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and (iii) any development control plan, and (iv) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and (v) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), that apply to the land to which the development application relates,
Designated development	
State significant development	<ol style="list-style-type: none"> b. the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality, c. the suitability of the site for the development, d. any submissions made in accordance with the Act or the regulations, e. the public interest.
Modification applications	Section 4.55(3) of the Planning Act provides that in determining an application for modification of a consent under this section, the consent authority must take into consideration such of the matters referred to in section 4.15 (1) as are of relevance to the development the subject of the application. The consent authority must also take into consideration the reasons given by the consent authority for the grant of the consent that is sought to be modified.
State significant infrastructure	Under section 5.19 of the Planning Act, the Minister, when deciding whether or not to approve the carrying out of State significant infrastructure, is to consider: <ol style="list-style-type: none"> a. the Planning Secretary's report on the infrastructure and the reports, advice and recommendations contained in the report, and b. any advice provided by the Minister having portfolio responsibility for the proponent, and c. any findings or recommendations of the Independent Planning Commission following a review in respect of the State significant infrastructure.
Activity carried out by a public authority ('Part 5')	Under clause 228(2) of the Planning Regulation the following factors are to be taken into account when consideration is being given to the likely impact of an activity on the environment: <ul style="list-style-type: none"> ▪ any environmental impact on a community, ▪ any transformation of a locality, ▪ any environmental impact on the ecosystems of the locality, ▪ any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality, ▪ any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations, ▪ any impact on the habitat of protected animals (within the meaning of the <i>Biodiversity Conservation Act 2016</i>), ▪ any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air, ▪ any long-term effects on the environment, ▪ any degradation of the quality of the environment, ▪ any risk to the safety of the environment, ▪ any reduction in the range of beneficial uses of the environment, ▪ any pollution of the environment, ▪ any environmental problems associated with the disposal of waste, ▪ any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply, ▪ any cumulative environmental effect with other existing or likely future activities, ▪ any impact on coastal processes and coastal hazards, including those under projected climate change conditions.

¹²⁹ The main steps are set out in sections 4.12-4.18 and associated regulations under the *Environmental Planning and Assessment Regulations 2000 (Planning Regulations)*. Exceptions include exempt and complying development (under the Codes SEPP), some public infrastructure (large and small) and other activities assessed under Part 5 of the Act.

¹³⁰ These considerations are outlined in section 4.15 of the Act (*Evaluation*) (formerly s. 79C).

planning and assessment'.¹³¹ This includes climate change considerations.¹³²

Interestingly, the only explicit requirement to consider climate change assessment under the Planning Act is for certain government, utility and other 'Part 5 activities' such as local council works, electricity infrastructure and road upgrades.¹³³ The Regulations set out the factors that must be taken into account when assessing the likely environmental impacts of such activities. These include (amongst other things¹³⁴):

(p) any impact on coastal processes and coastal hazards, including those under projected climate change conditions.

The mandatory direction that authorities must consider climate change projections affecting local coastal infrastructure is a welcome but all too rare requirement.

Aside from coastal hazards, there are no further guidelines under **Part 5** which deal with climate change impacts generally, or the need for adaptation of local infrastructure.¹³⁵ This is significant given:

- the range of Part 5 activities (particularly in light of recent amendments to the *State Environmental Planning Policy (Infrastructure) 2007* that expanded the range of activities that would fall under Part 5).
- the range of climate change impacts beyond 'coastal processes and coastal hazards', and
- the growing need for local infrastructure adaptation planning and resilience in coastal and inland settlements across NSW – including to cope with extreme heat, bushfire, drought and flood conditions.

It is a curious omission that no such similar legislated requirement applies to major public infrastructure projects under Part 5 (or private projects under Part 4).

In fact the only matters that must be considered by the Minister in determining an application for **State Significant Infrastructure (SSI)** are:¹³⁶

- the Planning Secretary's report on the infrastructure and the reports, advice and recommendations contained in the report;
- any advice provided by the Minister having portfolio responsibility for the proponent; and
- any findings or recommendations of the Independent Planning Commission following a review in respect of the SSI.

Outside of specifically devised standards (such as for bushfire), there is no requirement to *refuse* unacceptable climate risks, either due to significant greenhouse gas emissions, because they threaten the lives or safety of future residents, would impose prohibitive public costs by way of emergency management, reparation or future adaptation, or would exceed national or state carbon budgets.

As noted above, some planning instruments do specify climate change related matters that must be considered by decision makers, such as the Mining SEPP – see **Box 3**.

On a smaller scale, the climate change impacts of new residential buildings and some office buildings are partly addressed through energy efficiency standards that must be met. For example, the NSW Building Sustainability Index (**BASIX**) imposes standards for energy and water efficiency, and thermal comfort, for all new residential buildings in NSW, including detached and semi-detached dwellings and apartment blocks, additions and alterations of \$50,000 or more, or swimming pools with a capacity of 40,000 litres or more (see **Box 4**). Improving on BASIX is particularly important for smaller-scale urban development which drive cumulative impacts. National Australian Built Environment Rating System (**NABERS**) is used to measure the efficiency of commercial office buildings (including energy efficiency, carbon emissions, water and waste consumption). NABERS does not set mandatory standards for buildings, but NABERS ratings must be disclosed for office buildings of 1000 square metres or more, at the point of sale or lease.¹³⁷

¹³⁶ EPA Act, section 5.19(2).

¹³⁷ See <https://www.nabers.gov.au/>.

Box 3 Approvals under the Mining SEPP

For resource extraction proposals, the Mining SEPP further informs decision making. This is a powerful planning instrument which in part determines where mining can take place in NSW.

The Mining SEPP does require decision makers to consider greenhouse gas emissions from a project in two ways:

- The first is a duty to consider the need for conditions to minimise greenhouse gas emissions. Notably, it is not a duty to *impose* those conditions.
- The second requirement is to consider an assessment of the project's greenhouse gas emissions (including scope 3 emissions). It is not clear *how* the decision maker is to evaluate those emissions or weigh them against other factors. It is also unclear exactly what 'State or national policies, programs or guidelines' the decision maker must have regard to, given that a central problem identified in this paper is the lack of such policies.

In the absence of clearer duties, current terms used in the Mining SEPP and some project conditions, such as minimise emissions 'to the greatest extent practicable', remain ambiguous. This affects the quality of decisions, approval conditions and enforceability. These limitations have broad implications as the Mining SEPP is heavily geared towards facilitating resource extraction so permits exploration and mining in certain areas and explicitly overrides other local development controls (see e.g. clauses 5-8).

Similarly there is no guidance on what would constitute an unacceptable greenhouse gas impact that should lead to the refusal of a proposal.

Box 4 BASIX (Building Sustainability Index)

The *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004*¹³⁸ (**BASIX SEPP**) is the primary mechanism for setting building sustainability standards in NSW.

¹³⁸ See <https://www.legislation.nsw.gov.au/#/view/EPI/2004/396>.

Targets are expressed as a percentage saving against an established benchmark.¹³⁹ Targets vary across parts of the State, as set out in an energy target map and water target map.¹⁴⁰ For coastal areas (the most populated areas) targets are generally 40% reduction in potable water consumption and 50% reduction in greenhouse gas emissions. In 2013 it was estimated that BASIX had saved two million tons of greenhouse gas emissions.¹⁴¹

BASIX also sets standards for the thermal performance and comfort of the dwelling, expressed as the annual amount of energy required to heat and cool the dwelling (MJ/m²/year).

Establishing building sustainability standards is important because:

- higher efficiency standards can create significant co-benefits including consumer savings;
- half of NSW greenhouse gas emissions are from stationary energy (e.g. electricity);¹⁴² and
- a quarter of NSW emissions are from electricity use in housing.¹⁴³

Although the SEPP was introduced in 2006, there has only been one major review of the standards in the SEPP, which occurred in 2017, when targets were increased generally between 5% and 15% for water and energy, and 'one-star' for thermal comfort. It is important that BASIX standards are reviewed regularly to ensure they are in line with broader emissions reduction targets and improvements in technology, materials and building design.

¹³¹ EP&A Act 1979 (NSW), section. 1.3(b). ESD principles are defined by reference to long-standing provisions in NSW pollution laws. See section 6(2) of the *Protection of the Environment Administration Act 1991* (NSW). The principles of ESD include [to paraphrase]:

- the precautionary principle – e.g. lack of full scientific certainty should not be used as a justification to avoid or delay measures to protect against serious or irreversible harm to the environment
- intergenerational equity – e.g. the present generation should maintain or improve the environment for future generations;
- biodiversity and ecological integrity – e.g. these should be fundamental considerations in decision-making;
- environmental valuation – e.g. that the full environmental costs and benefits of an action should be considered; this principle also incorporates the *polluter pays principle* (those responsible for environmental damage are responsible for its costs).

¹³² See for example, *Gray v Minister for Planning* (2006) 152 LGERA 258; *Taralga Landscape Guardians Inc v Minister for Planning and RES Southern Cross Pty Ltd* (2007) 161 LGERA 1; *Aldous v Greater Taree City Council* (2009) 167 LGERA; *Hunter Environment Lobby Inc v Minister for Planning* [2011] NSWLEC 221; and *Gloucester Resources Ltd v Minister for Planning* [2019] NSWLEC 7.

¹³³ So-called 'Part 5 activities' are assessed and approved under Part 5 of the Planning Act. Part 5 activities do not require development consent, but the Planning Act includes a 'safety net' that requires their environmental impacts to be assessed (s. 5.5) – often by the authority that will carry them out, such as local councils, utility providers or roads and maritime authorities (see further EP&A Act 1979, Division 5.1).

¹³⁴ EP&A Regulation 2000, clause 228(2), inserted into the EPA Regulation by the *Coastal Protection and Other Legislation Amendment Act 2010*.

¹³⁵ In addition to the list of factors set out in the regulations, 'specific guidelines' can be made to include additional assessment considerations for particular Part 5 activities. EP&A Regulation clause 228(1)(a).

¹³⁹ Benchmarks are determined based on NSW consumption data collected from energy suppliers by the NSW Office of Environment and Heritage (formerly Department of Energy, Utilities and Sustainability).

Current benchmarks are:

Water – based on potable water consumption, and is equal to 90,340 litres of water per person per year.

Energy- expressed in terms of residential greenhouse gas emissions, and is equal to 3,292 kg of CO₂ per person per year.

See <https://www.basix.nsw.gov.au/iframe/about-basix/basix-assessment/basix-targets.html?id=96>.

¹⁴⁰ See <https://www.basix.nsw.gov.au/iframe/about-basix/basix-assessment/basix-targets.html>.

¹⁴¹ NSW Government Department of Planning and Infrastructure, *BASIX Target Review: FAQs* (December 2013): https://www.basix.nsw.gov.au/iframe/images/4050pdfs/BASIX-Target-Review-GeneralOA_extension.pdf. While these savings are not insignificant, they remain a very small fraction of NSW emissions (less than half of 1% of annual emissions from stationary energy). In 2013, EDO NSW estimated savings from BASIX at around 0.35% of the State's annual stationary energy emissions. Comparisons in 2009 estimated BASIX savings of 0.04% of annual NSW emissions. See Amelia Thorpe and Kristy Graham, 'Green buildings – are codes, standards and targets sufficient drivers of sustainability in NSW?' (2009) *Environment and Planning Law Journal* 486, 488.

¹⁴² See NSW Office of Environment and Heritage, *NSW emissions AdaptNSW*, <http://climatechange.environment.nsw.gov.au/About-climate-change-in-NSW/NSW-emissions> (accessed March 2016).

¹⁴³ NSW Environment Protection Authority *State of the Environment 2015* (2015), p 39, <http://www.epa.nsw.gov.au/soe/soe2015/index.htm>.



In deciding whether to approve or refuse a development, the decision maker must evaluate the EIA, the planning instruments that apply to the land (such as SEPPs and LEPs, as well as DCPs); the likely environmental, social and economic impacts of the development; submissions from agencies and the community, and the public interest. If deciding to approve a development, the decision maker may choose to impose conditions designed to address any residual impacts of the project.

The role of consent conditions in responding to climate change impacts

To date there has been a lack of effective consent conditions dealing with greenhouse gas emissions or climate change impacts. For example, high-level conditions placed on recent projects with significant greenhouse gas emissions include that '(t)he Applicant shall (a) implement all reasonable and feasible measures to minimise the... release of greenhouse gas emissions from the development...'.¹⁴⁴ The qualified nature of this requirement highlights the broad discretion left open to the proponent and the Planning Department. This approach falls strikingly short of a requirement to avoid, minimise and offset all greenhouse gas emissions – a proposition partly advanced by the community before the Court in the *Ulan* case of 2011-12.¹⁴⁵

¹⁴⁴ See for example NSW Government Department of Planning and Environment, *Warkworth Continuation Project (SSD-6464) – Development Consent under Section 89E of the Environmental Planning and Assessment Act 1979*, 26 November 2015, Schedule 1.

¹⁴⁵ *Hunter Environment Lobby Inc v Minister for Planning* [2011] NSWLEC 221 (24 November 2011); *Hunter Environment Lobby Inc v Minister for Planning* [2012] NSWLEC 40 (13 March 2012).

In terms of imposing effective conditions of consent, we note a number of barriers:

- First, there is no mandatory requirement on decision makers to prioritise or respond to climate change impacts by *imposing conditions* to ameliorate those impacts.
- Second, there remains wide discretion for decision makers as to how to respond to information on the likely impacts of climate change on proposed development, and what conditions should be imposed to reduce greenhouse gas emissions and protect assets and the people who inhabit or rely on them from the impacts of climate change.
- Finally, planning and development decision makers are not experts in emissions reduction or climate adaptation, and are not generally required by law or policy to consult people who are. One arguable exception is the consultation required for development on bush fire prone land.¹⁴⁶ Another is consultation required under the *Coastal Management Act 2016*.¹⁴⁷

A fundamental accountability mechanism for any development approval regime is the legitimate involvement of third parties. The need for merits review is discussed below in section 6.

¹⁴⁶ See *EP&A Act 1979* (NSW), s. 4.14 (*Consultation and development consent—certain bush fire prone land*).

¹⁴⁷ Section 16 of the *Coastal Management Act 2016* and the *Coastal Management Manual* (<https://www.environment.nsw.gov.au/topics/water/coasts/coastal-management/manual>) requires local councils to consult relevant authorities on its draft coastal management program, including the Office of Environment and Heritage and NSW Coastal Council (via the Minister).

The way forward

Duty to refuse projects that have unacceptable climate risks

In light of the approach taken in Rocky Hill, where the Chief Judge considered the impacts of approving a project with significant greenhouse gas emissions on the 'carbon budget' and requirements to limit global warming to 1.5°C, the Planning Act should include a specific duty to **refuse** projects that have unacceptable climate risks. This could include where climate change poses a likely threat to the lives or safety of present or future residents, would impose prohibitive public costs by way of emergency management, infrastructure repair or future adaptation costs and would increase threats to biodiversity. A precautionary approach should apply where there is a lack of full scientific certainty as to the scale or nature of the threat, so that the proponent must demonstrate to the decision maker that a serious or irreversible threat is negligible.

One way to achieve this is to set a 'carbon neutral' test for high-impact proposals (based on the Climate Impact Statement requirements). Projects must be able to demonstrate that they can avoid, minimise and offset greenhouse gas emissions and achieve 'carbon neutrality' (that is, there are no net emissions from the project). Any use of 'carbon offsetting' must be strictly regulated via a robust, science-based scheme, developed with advice from a statutory Climate Change Advisory Council and that meets best practice, considering differences between the geological and active carbon cycle.¹⁴⁸ Inadequately regulated offset schemes could significantly undermine achievement of emissions reduction targets and therefore must be strictly limited.¹⁴⁹

The concept of 'carbon neutral' or 'low carbon' development is not new, particularly in relation to urban building design,¹⁵⁰ and if made mandatory could potentially be implemented via existing schemes like BASIX and NABERS. Similar obligations should be imposed on other sectors including resources, agriculture

¹⁴⁸ <https://www.climatecouncil.org.au/resources/land-carbon-report/>

¹⁴⁹ For example, EDO Australia has previously raised concerns with the carbon farming initiatives and how they generate carbon offset credits. EDO submissions are available at https://www.edonsw.org.au/climate_change_energy_policy.

¹⁵⁰ See, for example, information from the Australian Government "Your Home" initiative which provides advice on sustainable housing, including carbon zero and carbon positive housing, available at <http://www.yourhome.gov.au/housing/carbon-zero-carbon-positive>; see also the Zero Net Carbon Homes initiative in Victoria, at <https://www.sustainability.vic.gov.au/About-Us/What-we-do/Campaigns/Zero-Net-Carbon-Homes-Program>.

Any use of 'carbon offsetting' must be strictly regulated via a robust, science-based scheme.

and infrastructure. Some of these industries are already looking at ways to become carbon neutral.¹⁵¹

With respect to modification applications, the consent authority must be required to consider not only the reasons given for the grant of the original consent that is sought to be modified but also impacts of the modification in the context of existing impacts and operations, including cumulative impacts. The public should be encouraged to raise matters relating to the impacts of the existing operations, or concerns about compliance, that could have a bearing on the proposed project expansion. This may include imposing more stringent approval conditions to minimise those impacts more effectively.

In terms of climate change adaptation, the Planning Act should require decision makers to assess and respond to climate change impacts during the lifecycle of the development, by imposing conditions to ameliorate those impacts. This would be supported by requirements to publish Climate Impact Statements alongside development applications. Consideration should be given to introducing time limited development consents of up to 90 years are to be permitted for areas subject to projected sea level rise as a consequence of climate change.¹⁵²

¹⁵¹ For example, in 2017 a CSIRO paper initiated by Meat and Livestock Australia reported that the Australian red meat industry could be carbon neutral by 2030, see <https://research.csiro.au/foodglobalsecurity/australian-red-meat-sector-commits-carbon-neutrality-2030/>.

¹⁵² Recommendation 109 of the Independent Planning System Review Panel provides that time limited development consents of up to 90 years are to be permitted for areas subject to projected sea level rise as a consequence of climate change. See Tim Moore and Ron Dyer, *op cit*.

Role of consent conditions in responding to climate change impacts

The NSW Government should issue formal decision-making guidelines about best practice climate change adaptation and development consent conditions. Guidelines may target a particular sector or development category including major projects. The Guidelines should be informed by the independent statutory Climate Change Advisory Council, in consultation with other experts and with the community. Guidelines should be part of a mandatory consideration in planning and development decisions.

As noted earlier, NSW needs a legislative process to develop statewide climate change plans, explicitly linked to the planning system, and a statutory expert body to advise on best practice adaptation measures and improved development consent conditions. Planning and development decision makers could be required by law to consult experts in climate adaptation in a wider range of circumstances,¹⁵³ particularly where it is not sufficient to apply a state or regional adaptation plan or formal planning guidelines.

¹⁵³ For example, EP&A Act sections 4.13 (consultation and concurrence), 4.14 (bush fire prone land).

Impose a duty for decision makers to refuse proposals with unacceptable climate change impacts.

Recommendation 10

Impose a duty to refuse projects with unacceptable climate impacts and risks

Impose a duty for decision makers to refuse proposals with unacceptable climate change impacts. This includes provisions to:

- Strengthen decision-making requirements for development approvals and conditions, with the mandate of staying within the global carbon budget and achieving national and state targets. In particular, establish new duties to:
 - assess direct and indirect greenhouse gas emissions and their impacts, including cumulative impacts;
 - demonstrably consider state and national emissions trajectories and act in accordance with short and long-term reduction targets;
 - refuse projects with unacceptable impacts from greenhouse gas emissions, including high-impact development (as defined by the regulation) that is not 'carbon neutral' (including in relation to all downstream emissions);
 - impose specific conditions on development consents and mining titles to minimise emissions, meet certain standards if the project is approved, and to offset emissions that cannot be minimised or avoided; and
 - apply clear guidelines, rules and standards to minimise and offset emissions.
- Require decision makers to assess and respond to climate change impacts, including new duties to:
 - impose conditions to ameliorate identified impacts of climate change;
 - refuse applications with unacceptable climate risks - this could include where climate change poses a realistic threat to the lives or safety of present or future residents, or would impose prohibitive public costs by way of emergency management, infrastructure repair or future adaptation costs or would increase threats to biodiversity; and
 - apply best practice guidelines for climate change adaptation.



Recommendation 11

Properly assess the impact of project modifications

Require the consent authority to **consider the impacts of the modification in the context of existing impacts and operations, including cumulative impacts.** A modification resulting in an increase in greenhouse gas emissions cannot be considered to have 'minimal environmental impact.'

Recommendation 12

Conditions of consent

Develop standard conditions of consent aimed at reducing emissions and ameliorating impacts of climate change. Consider introducing time-limited or threshold-bound development consents and conditions. This also involves amending NSW planning laws to clarify that development consent conditions can be updated to require continuously improved standards, whether or not a modification has been requested.

Recommendation 13

Building sustainability standards

Improve NSW building sustainability standards to:

- ensure BASIX standards account for climate change projections for the design lifecycle of buildings (for example, improve thermal comfort standards);
- expand BASIX to include new climate-ready benchmarks (beyond energy, water efficiency and thermal comfort), including by:
 - drawing on standards set by voluntary programs and industry targets,
 - leading and developing national standards for other sustainability measures such as lifecycle emissions and waste levels, and
 - developing standards to facilitate passive design and water sensitive urban design to improve climate resilience and efficiency.
- expand BASIX-style minimum requirements to non-residential buildings (including commercial and industrial buildings), drawing on the National Australian Built Environment Rating System; and
- expand BASIX-style minimum requirements to including retro-fitting;
- support innovation and continuous improvement by introducing regular mandatory reviews and updates to BASIX and other standards every 4-5 years.

5 Other laws and approvals

The increasing frequency of extreme weather events is already having impacts in NSW, including flooding, coastal inundation and erosion, extreme temperatures, bushfire and extended drought. The planning system interacts with other laws that are highly relevant to addressing these particular impacts of climate change – both in relation to emissions reductions (such as mining law) and to adaptation and building resilience. Relevant laws include those relating to biodiversity conservation and natural resource management, pollution and waste, mining and extractive industries, water management, bushfire protection, marine protection and coastal management.

In this section we briefly consider how interaction between other relevant laws and the planning system can assist in both regulating and reducing greenhouse gas emissions and facilitating adaption to climate change impacts. Laws on infrastructure bodies, electricity and other specific sectors, public health, water management, transport, as well as disaster preparedness and emergency response are out of scope of this report.

The increasing frequency of extreme weather events is already having impacts in NSW, including flooding, coastal inundation and erosion, extreme temperatures, bushfire and extended drought.

1 Aims and objectives

2 Strategic planning

3 Environmental assessment

4 Development decisions

5 Other laws and approvals

6 Compliance and enforcement

The current approach

Environment Protection Licences and Mining Titles

Environment Protection Licences

NSW pollution laws interact with the planning system to regulate industrial discharges of pollutants and waste into the air, water and land. Significant polluters must obtain an Environment Protection Licence (EPL), which may limit pollution, and may require maintenance, monitoring and reporting. Some pollutants are subject to Load-Based Licensing, a 'polluter pays' fee-based on how much pollution is emitted.

There is scope for these authorisations to limit greenhouse gas emissions or require offsets.¹⁵⁴

However, the NSW pollution licensing system does not generally limit greenhouse gas emissions, or charge load-based licence fees on carbon dioxide and methane emissions. This is despite that fact that fugitive emissions from coal mining, oil and gas infrastructure account for approximately 11% of NSW greenhouse gas emissions.¹⁵⁵

There are also no mandatory greenhouse efficiency standards for power stations in NSW. We also note the current limitation that EPLs must be consistent with the consent for SSD and SSI.¹⁵⁶

Pollution laws in Australia are generally state-based without national coordination. In contrast, the *Clean Air Act* (US) enables the US Environmental Protection Agency (US EPA) to set emission standards for air

¹⁵⁴ EPLs already play an important role in regulating air pollution in NSW. These licences and other requirements regulate air pollution from major projects. Key regulatory requirements relating to air pollution from major projects include:

- pre-approval EIA requirements – such as ambient air quality assessment;
- conditions on development consents and EPLs (such as limits on emissions of volatile organic compounds);
- other binding requirements and offence provisions in NSW pollution laws (*Protection of the Environment Operations Act 1997 (NSW)*); and
- the National Environment Protection Measure on Ambient Air Quality Guidelines.

¹⁵⁵ See NSW Government Office of Environment and Heritage, *NSW emissions AdaptNSW*, <http://climatechange.environment.nsw.gov.au/About-climate-change-in-NSW/NSW-emissions>.

¹⁵⁶ For State Significant Development projects, the EPA has no discretion to refuse an EPL – it must be issued consistently with the development consent and conditions, EP&A Act, sections 89J and 89K.

pollutants from new and existing sources.¹⁵⁷ In 2015 the United States imposed national emissions standards via the US EPA's Clean Power Plan. Under that Plan US states are required to ensure that either the combined or individual carbon emissions from their power plants reach the interim performance rates between 2022-2029, and the final performance rates by 2030.¹⁵⁸

In other jurisdictions, principles like 'continuous improvement' and 'best available technology' are used to keep environmental standards up to date.¹⁵⁹ A similar approach could be adopted in NSW by imposing greenhouse gas emissions limits and load-based licensing fees on EPLs. Likewise, EPLs or development consent conditions could be modified to impose requirements for emissions avoidance, minimisation or offsets; and for monitoring, auditing and reporting.

There are various ways to put this into practice:

- via *pollution licence reviews*, which the EPA conducts at least every five years (or as a standard requirement when licensees seek to modify their licence);
- via *development modifications*, as a standard requirement when existing operators apply to the Department of Planning to modify their development consents (as when mining companies seek to expand operations);
- via *legislative amendments* to the Planning Act:
 - to *explicitly permit* the Department of Planning to *update consent conditions* and require 'continuous improvement' of environmental standards; and/or
 - to *explicitly require* decision makers to *impose conditions* for greenhouse gas emissions standards, limits and offsets when granting or modifying consents.

¹⁵⁷ *Clean Air Act* (US), section 111.

¹⁵⁸ See for example, <https://archive.epa.gov/epa/cleanpowerplan/fact-sheet-clean-power-plan-and-role-states.html>. It is noted that the Trump administration has plans to repeal the Clean Power Plan. See for example, <https://www.epa.gov/stationary-sources-air-pollution/electric-utility-generating-units-repealing-clean-power-plan-0>.

¹⁵⁹ See EDO NSW, *Clearing the Air: Opportunities for improved regulation of pollution in NSW* (2012). http://www.edonsw.org.au/clearing_the_air_opportunities_for_improved_regulation_of_pollution_in_new_south_wales; See also EDOs of Australia, *Submission to the National Clean Air Agreement*, 17 April 2015, http://www.edonsw.org.au/anedo_submission_to_the_national_clean_air_agreement.

Mining and exploration titles

In recent years, the need to consider the extractive resources sector in a way that reduces land-use conflicts has led to various strategic planning frameworks being developed for the sector, or for various regions.¹⁶⁰ Yet none of these frameworks deal with reducing greenhouse gas emissions. Neither the frameworks, nor the studies and reports that underpin them, properly acknowledge climate change and emissions reduction as key challenges that need to be dealt with by government, industry and the community, despite the strategic planning process being an opportunity to consider and potentially manage the cumulative impacts of emissions.

For example, in the *Strategic Release Framework* (2015) for opening new areas to coal and gas exploration, greenhouse gas emissions and climate risks are excluded from 'triple bottom line' considerations. The reason given for excluding these matters from assessments of new coal licence areas was that these are not local issues relevant to 'preliminary regional impact assessment'.¹⁶¹ This approach fails to recognise the fact that the impacts of climate change will be felt both locally and globally in all sectors of society.

The release of new resource areas for the coal sector, or the granting of coal exploration or mining titles, must be done having clear regard to greenhouse gas emissions, including the cumulative impacts of greenhouse gas emissions in the context of limiting the increase in global warming to no more than 1.5°C above pre-industrial levels. Indeed, a proper strategic assessment of the impacts of releasing new coal resource areas or granting new exploration or mining licences may lead to the conclusion that no new coal reserves should be mined. This would be consistent with expert scientific advice that 'it is likely that over 90% of Australian coal reserves

The absence of clear guidance on GHG limits or emissions reduction targets in resource and related legislation highlights the need for a new approach.

*are unburnable under even the most generous carbon budget,*¹⁶² in which an overarching prohibition on (or duty to refuse) new coal projects may be the appropriate way forward.¹⁶³

Once an area is opened for tender, a company must obtain a licence or 'mining title' to explore or mine in the area. Mining titles are granted by the NSW Resources Minister under the *Mining Act 1992 (Mining Act)* for coal and other minerals, or the *Petroleum (Onshore) Act 1991 (Petroleum Act)* for CSG and other petroleum.

Ministerial discretion remains broad for issuing mining titles. In particular, the current terms are very general, and are limited to taking into account 'the environment in or on the land over which the authorisation is sought'.¹⁶⁴ There is no requirement to consider the potential impact of greenhouse gas emissions before issuing an exploration or mining title.

The objects of both Acts aim to 'encourage and facilitate' resource development – with a heavily qualified reference to 'having regard to the need to encourage ecologically sustainable development'. The objects also aim to

¹⁶⁰ These frameworks include:

- *Strategic Regional Land Use Policy* (2012) – A Government policy dealing with land and water use conflicts between agriculture and coal seam gas (CSG). These Plans are only in place in the Upper Hunter and New England/North West.
- *Strategic Statement on NSW Coal* (2014) – A Government policy statement which 'aims to realise... economic value while protecting our environment and the health of our communities.'
- *NSW Gas Plan* (2014) – A Government plan to 'pause and reset' CSG regulation.
- *Strategic Release Framework* (2015) – A Government framework for opening new areas for coal and CSG exploration. The Framework is part of the NSW Gas Plan and the Government's response to various reports, including ICAC's report into corruption in coal mining licensing (2013); the Chief Scientist & Engineer's report into Coal Seam Gas regulation (2014); and the NSW Coal Exploration Steering Group recommendations (2015).
- *Minerals Industry Action Plan* (2015) – An industry plan commissioned by Government to support mining in NSW.

¹⁶¹ NSW Government Coal Exploration Steering Group, *Improving NSW's Process to Allocate Coal Exploration Licences* (2014), p 3 stated that 'the [strategic preliminary issues] assessment will not consider non-local issues such as the management of greenhouse gas emissions'.

¹⁶² Steffen, Will *Unburnable Carbon: why we need to leave fossil fuels in the ground* (Climate Council of Australia), 2015, p 2, <http://www.climatecouncil.org.au/uploads/a904b54ce67740c4b4ee2753134154b0.pdf>.

¹⁶³ It is noted that Private Member's Bill was introduced by the NSW Greens in 2016 seeking amendments to the *Mining Act 1992* to prohibit the granting of new authorisations to prospect for or mine coal, see <https://www.parliament.nsw.gov.au/bills/Pages/bill-details.aspx?pk=2962>.

¹⁶⁴ See *Mining Act 1992* (NSW), section 3A; *Petroleum (Onshore) Act 1991* (NSW), section 2A, and see Schedule 1B.

'ensure [mineral/ petroleum] resources are identified and developed in ways that minimise impacts on the environment'.¹⁶⁵

However, there is no legislative object to limit greenhouse gas emissions or protect the climate. The absence of clear guidance on greenhouse gas limits or emissions reduction targets in the substantive law – in resource and related legislation – highlights the need for a new approach. We note that it has been suggested that prohibitions could be put into mining legislation.¹⁶⁶

In addition, NSW resources law should include an object to develop resources only in a manner that is compatible with minimising greenhouse gas emissions (including fugitive and exported or scope 3 emissions), and reducing NSW's cumulative contribution to climate change. For example, as noted, NSW should not release new areas for extraction that will significantly increase emissions, given international agreements to limit warming to 1.5°C.

In concert with planning laws, applications for exploration and mining titles (and renewals) should also be required to address likely greenhouse gas emissions that a project will emit. Licensing considerations and lease conditions would be coordinated with EIA (where required), climate impact statements and development approval considerations, to make decisions on the best and most up-to-date information, and to avoid unacceptable impacts early in the process.¹⁶⁷ However there is an overarching issue of fairness that the current system ignores – it is not appropriate to issue exploration licences if there is no carbon budget to support eventual mining or production. This fact should be addressed at the early strategic planning stage, otherwise it is a waste of time, money, resources and can be harmful to landholders too.

¹⁶⁵ See *Mining Act 1992* (NSW), section 3A; *Petroleum (Onshore) Act 1991* (NSW), section 2A.

¹⁶⁶ See *Mining Amendment (Climate Protection - No New Coal Mines) Bill 2016*, *op cit*.

¹⁶⁷ Licensing considerations would be coordinated with EIA and development approval considerations, to avoid unacceptable impacts early and make decisions on the best and most up-to-date information. However we note that there is no EIA for some exploration – only an REF is required, exempt development.

Other environmental and natural hazard legislation – Four case studies

In addition to the Planning Act, there is a range of legislation in NSW aimed at protecting the environment and responding to natural hazards. Most of these interact in some way with the NSW planning system. We briefly note how four of these laws can assist in mitigating climate change impacts and facilitating climate change adaptation.

Coastal Management Act 2016

The *Coastal Management Act 2016* (NSW) creates a strategic framework and objectives for managing coastal issues in NSW.¹⁶⁸ Its focus is on ecologically sustainable development that protects sensitive coastal environments, maintains public access to foreshores, supports marine law and heritage objectives, and 'strategically manages risks from coastal hazards.'

This Act divides the coastal zone into four coastal management areas, which may overlap. These include mapped sensitive coastal wetlands and littoral rainforest; areas with natural coastal features like rock platforms and lagoons; land adjacent to coastal waters; and the 'coastal vulnerability area' - areas affected by coastal hazards such as coastal erosion and tidal inundation.

The objectives for each management area are given effect via 'coastal management programs' and LEPs, informed by a new planning policy, the *SEPP (Coastal Management) 2018 (Coastal SEPP)*.

The most stringent development controls apply to the *coastal vulnerability area*. The Act sets out management objectives for this area, including (among others):

- (a) to ensure public safety and prevent risks to human life,
- (b) to mitigate current and future risk from coastal hazards by taking into account the effects of coastal processes and climate change, ...
- (e) to encourage land-use that reduces exposure to risks from coastal hazards, including through siting, design, construction and operational decisions,
- (f) to adopt coastal management strategies that

¹⁶⁸ See <https://www.planning.nsw.gov.au/Policy-and-Legislation/Coastal-management>.

reduce exposure to coastal hazards [including] by restoring or enhancing natural defences... [and other methods to avoid adverse impacts and ecological degradation or disruption].

The Coastal SEPP sets detailed controls for the coastal vulnerability area. In effect these controls require the decision maker to be satisfied that:

- the development is designed and engineered to 'withstand current and projected coastal hazards for the design life of the building or works';
- is unlikely to have detrimental impacts on other assets, public access, coastal processes and the natural environment; and
- appropriate measures are in place to respond and anticipate coastal processes and current and future hazards affecting the development.¹⁶⁹

While this new coastal framework holds promise, its effectiveness remains to be seen: *no* Coastal Vulnerability Area Map was adopted when the Coastal SEPP commenced in June 2018, 'and therefore no coastal vulnerability area has been identified.'¹⁷⁰ Nevertheless, these provisions are a good example of what adaptation could look like in legal terms. Welcome elements of this approach include:

- reference to engineering adequacy to withstand 'current and projected' hazards throughout the 'design life' of development;
- taking into account risks (including maladaptation) to adjacent land and public access; and
- requiring hazard management and response processes to be built-in upfront.

The NSW Government must urgently release the Coastal Vulnerability Area Map to identify vulnerable areas in support of the Coastal SEPP. This should be accompanied by advice from the independent Climate Change Advisory Council, and ongoing funding for community collaboration, education and planning for affected areas, as well as support for local councils preparing coastal management programs.

However, it is also important to note that many of the responsibilities (including costs and liabilities)

The extent to which planning for bushfire protection incorporates climate projections and design lifecycles ... should be considered as part of a review of the Planning for Bushfire Guidelines.

for implementing climate change adaptation fall on private property owners at the development application stage, therefore the onus of doing coastal zone adaptive management is often on private landholders in vulnerability zones that are already at threat and often maladapted. This may still have ad hoc results – for example in relation to protection works – in contrast to broader strategic policies such as planned retreat. There is a need for clear policy, guidance and standards to be set at the state level, to guide local implementation and ensure individual measures are best practice.

Rural Fires Act 1997 and Planning for Bushfire Protection 2016

There are established linkages between the planning system and the *Rural Fires Act 1997* (NSW).¹⁷¹ For example, subdivision and development in mapped bush fire prone lands must apply the *Planning for Bushfire Protection (2006)* policy and related building standards.¹⁷² These could be strengthened for improved adaptation management.

The extent to which planning for bushfire protection incorporates climate projections and design lifecycles is unclear but is something that should be considered as part of a review of the Planning for Bushfire

Guidelines.¹⁷³ It is also critical that local councils and the Rural Fire Service have sufficient capacity and capability to continually update mapping and responsiveness to reflect the best available science and technology.

The perceived tensions between conservation, asset protection and disaster preparedness can also present risks of 'maladaptation.' For example, the rushed implementation of the 10/50 Bushfire Code led to widespread reports of suburban trees being felled to enhance views, rather than protect from threats – at a time when the cooling effects of street trees are being recognised, and the Government is embarking on a program to plant 5 million trees in Western Sydney. Science based decision making considering climate change implications may have allowed these issues to be averted.

There is a clear role for climate change projections and best available techniques in the development and update of *Planning for Bushfire Protection* and equivalent Australian standards, national construction and building codes. New or revised bush fire codes, policies and construction standards should be reviewed by the independent Climate Change Advisory Council or its nominee and the Council should be able to recommend new codes or amendments if required.

Biodiversity Conservation Act 2016

The overall purpose of the NSW *Biodiversity Conservation Act 2016* (BC Act) is:

*...to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development...*¹⁷⁴

Importantly, the BC Act contains a series of other objects that support climate change adaptation.¹⁷⁵ These aims and objects are welcome and important. However it is not yet clear how they are given effect in practice, or

¹⁷³ The *Planning for Bushfire Protection* guidelines were recently reviewed and an updated *Planning for Bushfire Protection 2018* is currently being transitioned into use, and expected to be operational by mid-2019. However it is unclear to what extent climate change impacts have been considered as part of the review, if at all. See further <https://www.rfs.nsw.gov.au/plan-and-prepare/building-in-a-bush-fire-area/planning-for-bush-fire-protection>.

¹⁷⁴ *Biodiversity Conservation Act 2016* (NSW), section 1.3.

¹⁷⁵ See further *Biodiversity Conservation Act 2016* (NSW), section 1.3. Namely:

- (b) to maintain the diversity and quality of ecosystems and enhance their capacity to adapt to change and provide for the needs of future generations, and
- (c) to improve, share and use knowledge, including local and traditional Aboriginal ecological knowledge, about biodiversity conservation, and
- (d) to support biodiversity conservation in the context of a changing climate.

how this Act will improve on previous laws¹⁷⁶ and past development decisions in dealing with climate change. We give four examples.

First, *Anthropogenic Climate Change* has been listed as a key threatening process since 2000.¹⁷⁷ It is arguably the most pervasive threat to NSW endangered species, yet there is no Threat Abatement Plan for climate change in NSW. The BC Act should be amended to require the Biodiversity Conservation Program (NSW threatened species strategy) to require the implementation of a Threat Abatement Plan for this key threatening process within a set timeframe. Actions could include, for example, a major assessment and improvement of wildlife corridor protection across tenures and throughout public and private land. Ongoing funding should be committed to ensure the Threat Abatement Plan is rapidly developed, consulted on and implemented.

Second, the BC Act states that the Biodiversity Conservation Program, *may* – but not *must* – address key threatening processes such as climate change.¹⁷⁸ The Government's high-level *Key threatening processes strategy* (2018) contains no substantive reference to climate change or adaptation – other than to note it is a key threat.¹⁷⁹ EDO NSW has been calling for biodiversity laws to integrate climate change adaptation by protecting wildlife corridors and other measures such as establishing climate refugia for the past decade (**Box 5**). Despite widespread recognition of the need to help native species adapt to climate change – and for animals to flee in times of peril or progressively migrate or expand their range as the climate and environment change – there is limited funding for wildlife corridors and connectivity, with stop-start grant funding rather than ongoing long-term Commonwealth and state commitments.¹⁸⁰

Third, the BC Act is predicated on the increased use of 'biodiversity offsets' that claim to compensate for biodiversity loss by improving protection and conservation of other lands. However, there is no climate change 'risk premium' in the cost and calculation of

¹⁶⁹ State Environmental Planning Policy (Coastal Management) 2018, clause 12 (*Development on land within the coastal vulnerability area*), <https://www.legislation.nsw.gov.au/#/view/EPI/2018/106/part2/div2/cl12>

¹⁷⁰ See: Note to Coastal SEPP Division 2 clause 12.

¹⁷¹ For example, see EP&A Act section 10.3, and the *Rural Fires Act 1997* requirements for Commissioner to make codes.

¹⁷² This policy is in transition to an updated version in 2018-2019. *Planning for Bushfire Protection* was reviewed in 2018 and a revised version of the guidelines is expected to become operational in mid-2019, see <https://www.rfs.nsw.gov.au/plan-and-prepare/building-in-a-bush-fire-area/planning-for-bush-fire-protection>.

biodiversity offsets in the Act, as has been the case in national carbon offsets legislation. This lack of 'insurance' is particularly risky for a program designed to protect biodiversity *in-perpetuity*. For example, if the calculated management costs for an offset site underestimate what is actually required to maintain and improve biodiversity in 50 years' time, because climate change exacerbates invasive species impacts, or if extreme heat or wildfires affect the viability of offset sites, the risks and losses will be borne by the native species and ecosystems themselves, rather than a built-in contingency that anticipates those risks and costs. A climate change risk premium should be included in the cost and calculation of 'biodiversity offsets', as has occurred in national carbon offsets legislation.

Fourth, there is no requirement in the BC Act or its companion, the *National Parks and Wildlife Act 1974 (NP&W Act)*, to improve the resilience of the national parks and reserves system to climate shocks. This duty would clearly align with the objects of the BC Act, although there is no equivalent reference in the NP&W Act.¹⁸¹ Imposing such an obligation would ensure proper risk assessments and adequate funding are provided to safeguard the national parks estate for future generations, improve connectivity through wildlife corridors and climate refugia, and enable co-benefits from increased carbon storage. There should be a requirement for the Environment Minister or the Biodiversity Conservation Trust to identify priority 'climate refugia' for threatened species and ecological communities, to be declared as 'Areas of Outstanding Biodiversity Value' within 12 months (and negotiate contracts for purchase or conservation covenants on those lands). The objects of the NP&W Act should also be amended to impose a duty to improve the resilience of the national parks and reserves system to climate shocks. This should extend to operative provisions and funding, so that Plans of Management address and implement climate adaptation actions.

¹⁸¹ The 1974 Act has been amended over time, and its objects 'are to be achieved by applying [ESD] principles...' (s. 2A(2)); but it does not refer to climate change adaptation or resilience.

Box 5

Previous EDO assessment of biodiversity laws and climate change in NSW

In 2009, EDO NSW assessed NSW biodiversity laws for climate-readiness in conjunction with a range of ecological and other experts. We concluded that there was much room for improvement.¹⁸² Our report made a number of key recommendations, including:

- updating legislative objectives to reflect the realities of climate change;
- strengthening the National Reserve System framework to combat the impacts of climate change on protected areas;
- removing barriers to the effective implementation of adaptive management frameworks in protected area management;
- ensuring that threatened species listings accounted for species vulnerable to climate change;
- strengthening recovery plans and threat abatement plans, with a focus on recovery planning;
- ensuring that strategic biodiversity assessment included an assessment of climate change impacts;
- building corridors, connectivity and resilience; and
- tightening land clearing rules to protect areas important for biodiversity under climate change.

A decade on, we see limited and hard-won progress by way of formal recognition of climate change in the objectives of biodiversity legislation, and slow progress in addressing key challenges by detailed plans, dedicated funding or operational provisions in biodiversity, national parks or planning laws. At the same time in NSW, native vegetation laws have also been weakened allowing increased self-assessed code-based clearing, with no climate change assessment of the increased land clearing.

Local Government Act 1993

This longstanding Act establishes the role, functions and powers of local councils across NSW. After a 2016 review and overhaul, the *Local Government Act 1993 (LG Act)* includes a set of new purposes and principles for local governance and stewardship, with a renewed focus on 'current and future local community needs,'

¹⁸² EDO NSW, *Climate change and the legal framework for biodiversity protection in NSW (2009)*, available at: http://www.edonsw.org.au/climate_change_and_the_legal_framework_for_biodiversity_protection_in_nsw_a_legal_and_scientific_analysis.

'social justice principles,' 'the long term and cumulative effects of actions on future generations,' community participation, and consideration of ESD principles.¹⁸³ While the LG Act's guiding principles concern financial sustainability as much (or more than) ecological sustainability, the renewed principles are encouraging.

There is, however, no explicit reference to climate change risks, adaptation or resilience – except for an existing clause which limits council liability for things done or not done 'in good faith', in relation to flood, bush fire and coastal hazards.¹⁸⁴ For example, this specifically absolves councils of liability for: 'the failure to upgrade flood mitigation works or coastal protection works in response to projected or actual impacts of climate change,' or 'the provision of information in relation to climate change or sea level rise.' The lack of clear requirements has led to varied understanding and inconsistent application of adaptation measures across the state (**Box 6**).

We do not suggest here that local councils should bear the full brunt of liability for such risks. Nevertheless, the fact that this is the *only* explicit reference to climate change in NSW local government law is a significant omission that should be addressed.

This could be done by embedding explicit references to climate change or adaptation and resilience into the LG Act and associated key decision making processes. For example, the Plan of Management process for public land managed by local councils. Public lands are subject to a range of evolving climate risks including bush fire, coastal erosion and storm surges, as well as providing opportunities for habitat connectivity and 'climate refugia' that allow wildlife to shift, adapt and flee in emergencies. There is no requirement that plans of management take climate change or adaptation into account. However, this will become increasingly important for areas managed under the Local Government Act and *Crown Lands Management Act 2016*.

One example of an alternative approach is outlined in the Private Member's Bill, *Local Government Amendment (Climate Change) Bill 2017*.¹⁸⁵ Among other things, the Bill would require councils to align with emissions

¹⁸³ See *Local Government Act 1993* (NSW), Chapter 3 (Principles for local government). See also, *Local Government Amendment (Governance and Planning) Act 2016*. See further, Office of Local Government, <https://www.olg.nsw.gov.au/strengthening-local-government/local-government-reform>.

¹⁸⁴ See *Local Government Act 1993*, section 733.

¹⁸⁵ See the *Local Government Amendment (Climate Change) Bill 2017*, introduced by Greens MLC, David Shoebridge, <https://www.parliament.nsw.gov.au/bills/Pages/bill-details.aspx?pk=3428>; this is one of two cognate Bills for the Local Government and Planning Acts, *op cit*.

reduction and climate adaptation goals 'for people, communities and ecosystems'; to prepare and implement 5-year climate change action plans; and support environmental upgrade agreements to reduce hazards.

Box 6

NSW Local Government Association Survey on Climate Adaptation

In late 2018 Local Government NSW (LGNSW) and the NSW Office of Environment and Heritage surveyed NSW local governments as part of ongoing research on the resilience of local governments to climate change.¹⁸⁶ The final report addresses various aspects of local government preparedness for, and understanding of, climate change implications, including both proactive/preventative measures (such as adaptation plans) and reactive responses to impacts.¹⁸⁷

The survey results show that whilst awareness of climate change impacts is increasing and previous barriers to information are more manageable now, the greatest barriers to increasing climate resilience are policy changes and inconsistent government approaches. In addition, whilst adaptive capacity is growing the report suggests that progress needs to be made in the following areas:

- fostering political leadership and organisational support (especially support from Councillors, Mayors and General Managers);
- access to external funding streams;
- applying localised climate change information, knowledge and tools (e.g. through incorporation into land-use planning); and
- coordination of adaptation efforts (at state and regional scales).

Storms and flooding were identified as the most common impacts in council areas whilst councils considered that heat and drought have the most extreme impacts. Significantly, information gaps were identified in relation to planning for storms – this is particularly concerning given the high frequency of storms and the extent of impacts identified by councils.

¹⁸⁶ The survey collected a total of 180 responses (covering 66 per cent of NSW councils) – See https://www.ignsw.org.au/files/imce-uploads/122/adaptation_survey_LGNSW.pdf.

¹⁸⁷ See <https://climatechange.environment.nsw.gov.au/-/media/NARCLim/Files/Section-4-PDFs/NSW-Local-Government-Adaptation-Survey---2018.pdf?la=en&hash=7E5960E55A8F22064C450464656FAFB52DAD25B0>.

Other relevant laws and policies

There are a range of sector-specific laws and policies that have not been investigated in detail in this report but that deserve further scrutiny in relation to climate change readiness. This reflects the fact that climate adaptation is a broad and cross-cutting public policy issue, but one where policy is emerging only relatively recently.

These additional laws and policies include, for example:

- *Local Land Services Act 2013* - This Act regulates agriculture/rural land-clearing, but does not require any climate impact assessment of vegetation clearing. The new Climate Change Advisory Council should establish a rural and agricultural adaptation advisory subcommittee. Strategic planning activities, native vegetation clearing codes and approvals under the LLS Act should be subject to this subcommittee's oversight, by way of monitoring, evaluation, reporting and recommendation for improvement. LLS are also well placed to assist landholders to understand the likely impacts arising from climate change and adapt their rural enterprises to prepare for those changes.
- *Infrastructure NSW Act 2011* - This Act contains no reference to climate change, although the recent long-term *Critical Infrastructure Resilience Strategy 2018* refers to resilience.
- *Forestry Act 2012* - This Act has no requirement to assess emissions or act on climate change risks, and lacks recognition of the potential co-benefits of conservation and carbon storage.
- *Crown Lands Management Act 2016* - there is no duty to assess climate risks or manage public lands in adaptive ways, and 2016 reforms to Crown Land laws may in fact make it easier to sell or develop vegetated land.
- *Biosecurity legislation* - invasive species may increase under climate scenarios.
- *Electricity legislation* - Energy law, policy and rules are obviously of key importance to any discussion of emissions reduction and various Governments have flagged energy market reform, however, Australia remains lacking in national leadership on coherent and effective energy reform and emissions reduction.
- *Transport legislation* - Emissions from the transport sector are significant and transport planning should be better linked to strategic planning and emissions reduction targets.

There is a need for a whole-of-government approach to tackle emissions reduction and ensure a coordinated approach to adaptation.

- *Emergency Services legislation* - this does involve some requirements for forward planning in terms of how to prepare for and deal with climate events such as flood and fires, and includes Ministerial powers to declare areas of emergency, but is largely reactive.

Like the planning system, these laws and policies will have a significant bearing on the readiness of NSW to respond to current and emerging threats and risks from a climate changed world. These risks are inter-related. For example, risks to the forestry estate from bush fire will have implications for natural resource management in state forests, as well as national parks and Crown reserves. An independent review of Regional Forest Agreements (RFAs) recommended that future RFAs fully consider the risks associated with climate change, and agencies plan, monitor and report on changes made to forest management practice to adapt to the changing environment.¹⁸⁸ Whether and how governments respond will have flow-on effects for the resilience of local communities - economically, socially, environmentally and individually.

It is clear from this (non-exhaustive) list of other relevant laws, that there is a need for a whole-of-government approach to tackle emissions reduction and ensure a coordinated approach to adaptation. This should be coordinated by a clear department or Division of Premier & Cabinet that administers an overarching Climate Change Act, assisted by advice from an independent Climate Change Advisory Council.

¹⁸⁸ Ewan Waller, *Independent review of the report on progress with the implementation of the New South Wales Regional Forest Agreements for the second and third five-yearly reviews 2004 - 2014*, April 2018, p 20, available at <http://www.agriculture.gov.au/SiteCollectionDocuments/forestry/rfa/independent-review-nsw-rfa-5-yearly-review-2004-14.pdf>.

The way forward

Recommendation 14

Amend the Mining Act

Review and update the *Mining Act 1992* (including provisions relating to the granting of exploration or mining titles for coal and coal seam gas), and relevant strategic release policies, taking into consideration likely emissions in the context of drawing down a state or national carbon budget.

Recommendation 15

Introduce polluter pays requirements

Add greenhouse gases as pollutants in NSW

pollution control laws, to recognise their contribution to environmental degradation and encourage behavioural change. In the absence of a carbon price, this should include load-based licensing fees for greenhouse gas emissions, consistent with the polluter pays principle.

Recommendation 16

Establish emissions standards

Establish emissions standards and continuous improvement requirements for NSW power stations, based on nationally consistent standards. Standards and requirements would be enforceable conditions on Environment Protection Licences.

Recommendation 17

Ensure all relevant legislation is climate ready

Review all relevant legislation, with a view to incorporating clear requirements for climate change mitigation and adaptation, that integrate with requirements under the NSW planning system and any stand-alone climate legislation. This could be undertaken by the new Climate Change Division of Premier & Cabinet on advice from the new Climate Change Advisory Council.



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6 Compliance & enforcement

The current approach

While there have been reforms to penalties and compliance requirements in recent years,¹⁸⁹ in general, there remains a concern that NSW does not effectively monitor and enforce development approvals and conditions of consent and other licence conditions. Key concerns include non-compliance with development consent conditions; a non-enforcement ‘culture’; confusion as to the agency responsible for enforcement; and lack of resources to enforce compliance. These long recognised problems are enhanced by limited resources (in terms of money, staff, skills); problems of limited or ineffective powers; and limited or ineffective penalties being administered.¹⁹⁰

Compliance with approval conditions is critical for both climate mitigation and adaptation.

There are currently few legislated targets or meaningful conditions of consent that drive enforcement of conditions related to climate change. A best practice system for accountability and quality assurance in relation to climate change mitigation would build-in requirements to monitor, report on, and improve emission levels from high-emitting development and quantify all cumulative emissions – including via planning authorities, regulators, independent auditors and public reporting.

A mandatory greenhouse gas monitoring, reporting and auditing register should also be established for individual facilities with significant carbon footprints in NSW (with costs recovered by industry levy). This could monitor and publicly report on facility-level emissions, limits and compliance with development approvals, for operations above a certain pollution threshold. It would draw on and supplement – not duplicate – data published by the National Greenhouse and Energy Reporting Scheme (NGERS).

¹⁸⁹ See, for example, the *Environmental Planning and Assessment Amendment Act 2014*, which increased maximum penalties for planning breaches and increased investigation powers for local councils.

¹⁹⁰ Nature Conservation Council of NSW, Total Environment Centre and EDO NSW, *Planning for Ecologically Sustainable Development - Opportunities for Improved Environmental Outcomes and Enhanced Community Involvement in the Planning System*, March 2012, pp28-29, http://d3n8a8pro7vnm.cloudfront.net/edonsw/pages/198/attachments/original/1380534990/120314ncc_edo_tec_joint_sub_planning_system_review_issues.pdf?1380534990.



Monitoring and compliance in relation to large scale emissions conditions is vital, but compliance and enforcement of conditions for small private properties is also necessary as part of a broader approach to climate change adaptation across the landscape. The NSW Government should develop statewide indicators for monitoring climate readiness and adaptation (of relevant laws, plans, processes, and developments), preferably in collaboration with other Australian jurisdictions. Embedding these indicators, in conjunction with statewide adaptation plans and regular reporting, will support a regulatory culture of continuous improvement.

With respect to climate change adaptation, there is a need for enforcement a new generation of climate adaptation management conditions, for example clarifying responsibility and liability for ongoing maintenance of coastal protection works to cope with extreme weather events in the future.

Additionally, the Planning Department, Office of Local Government and local councils should increase funding allocations for climate adaptation planning, monitoring and reporting. Funding should acknowledge the low resources of some local councils dealing with increased hazards, and maximize shared resources and capacity building programs.

A fundamental accountability mechanism for any development approval regime is the legitimate involvement of third parties. Currently, there is a structural imbalance in appeal rights in NSW. In almost all cases, developers have a right to appeal a refusal or conditional approval ‘on the merits’ to the NSW Land and Environment Court. This creates a disincentive for local councils and others to either refuse development on climate change grounds, or to incrementally expand adaptation considerations and conditions. By contrast, community objectors – who may wish to challenge an approval on the grounds of unacceptable climate change impacts – have merit appeal rights only in an extremely narrow range of circumstances. Best practice planning laws contain open standing for anyone to bring an action, however, the NSW planning laws strictly limit where the community may seek review of the merits of a decision.

The ability of community members (third parties) to appeal significant planning decisions ‘on the merits’ is an essential part of the planning system and promotes community confidence in planning and development assessment procedures. In fact, the Independent Commission Against Corruption (ICAC) has proposed expanding third party merit appeals to a range of significant and controversial private sector projects. In particular if the project:¹⁹¹

- is significant and controversial;
- represents a significant departure from existing development standards; or
- is the subject of a voluntary planning agreement.

The Rocky Hill case was one of the rare opportunities that a community group – in this case Groundswell Gloucester – could join a proceeding (where the proponent was appealing a refusal) and argue the merits of the proposed mine. The ability to examine the merits of the decision including the social and climate impacts (as opposed to being limited to challenging only the process – judicial review) made Rocky Hill a landmark climate case, and demonstrated the greatly increased level of scrutiny independent judicial analysis of merits can add to the planning process.

¹⁹¹ ICAC, *Anti-corruption safeguards in the New South Wales planning system*, 2012.

There are currently few legislated targets or meaningful conditions of consent that drive enforcement of conditions related to climate change.



The way forward

Recommendation 18

Greenhouse gas monitoring and auditing

Establish a comprehensive greenhouse gas monitoring and auditing register to report on individual high-impact facilities in NSW. This would draw on existing and new data (including data under the National Greenhouse and Energy Reporting Scheme (NGERS)), to track and report on approved and actual emissions.

Recommendation 19

Continuous improvement

Increase funding for climate adaptation planning, monitoring and reporting, auditing of compliance with conditions of consent, and commit to a regulatory culture of continuous learning and improvement of resilience.

Recommendation 20

Accountability

Strengthen merit appeal rights for third party objectors, by removing restrictions on merit appeals following public hearings of the Independent Planning Commission and expanding the range of the projects subject to merits review in line with recommendations of the Independent Commission Against Corruption.

Conclusion

Climate change impacts, such as more extreme weather events, elevated bushfire risks and rising sea levels, are already being felt across NSW and the globe. Despite this, NSW climate and planning laws fall far short of what is required to limit global warming to well below 2°C above pre-industrial levels, and to adapt to 'locked-in' climate change.

Unlike other jurisdictions, NSW has no overarching legal climate change framework. There is no legislative requirement to reduce greenhouse gas emissions or put in place measures to adapt to climate change impacts. As a result, planning and development decisions are being made without any clear directive of how climate change risks should be considered and addressed.

While some NSW agencies, local councils and communities are taking action to understand and adapt to climate change, the NSW planning system is not adequately supporting them, and does not provide direction or minimum standards to prepare and protect lives, community assets and the ecosystems on which we depend.

NSW needs a mandatory and coordinated approach to tackling climate change and effective solutions are required at the state level by way of legal duties, institutional support and clear guidance on technical strategic planning and environmental assessment.

Overall, we consider a climate-ready planning system would:

- be guided by overarching climate legislation – a **Climate Change Act** - including long-term goals and interim actions and targets;
- include climate change readiness (both mitigation and adaptation) as a standalone **object** of the Planning Act;
- facilitate greenhouse gas emissions reduction in line with clear **targets**;
- require **Climate Impact Statements** as part of EIA for relevant projects;
- give effect to **adaptation planning** at key decision points such as strategic planning, environmental impact assessment, development decisions, and in related laws;

- impose **statutory duties** on the government (ministers and agencies) to ensure climate risks are identified and responded to effectively – this would involve a duty to refuse unacceptable impacts;
- draw on expert advice from an independent **Climate Change Advisory Council** about policy options and pathways to emissions reduction and adaptation;
- support decision makers with **clear obligations**, new tools and guidance, and ongoing funding streams to translate scientific information and policy into plans and actions;
- establish consistent **minimum standards** and planning benchmarks for climate-readiness, and remove barriers to adaptation actions;
- reduce **public and private exposure to risk** through well-planned settlements and fit-for-purpose buildings, taking into account their design lifecycles; and
- share **information and collaborate with people** to find local and regional solutions for resilient communities, landscapes and ecosystems, and for the wise use of natural resources like land, water, forests, minerals and energy (ensuring other laws are also climate ready).

Today's communities, planners, developers and decision makers need legislative reform, direction and guidance to reduce emissions, manage climate risks and protect assets, lives and livelihoods. The future of our cities and towns depends upon it. As do the unique landscapes and ecosystems that support life as we know it.

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