

Climate change – it's getting hot in here

Some current action in Queensland to address climate risk and what more could be done

Jo Bragg, CEO and Solicitor, Environmental Defenders Office (Qld)

Revel Pointon, Law Reform Solicitor, Environmental Defenders Office (Qld)

1. Outline of the climate challenge

Queensland is a hot place, but we are predicted to get even hotter with the impacts of greenhouse gases on our climate. We are already experiencing the hottest periods on record consistently each year, with 2017 the hottest year on record for Queensland and providing our warmest ever winter.¹ Coming off the back of Cyclone Debbie remediation efforts and with over half of the state currently 'drought declared', and the bleaching of the World Heritage Great Barrier Reef, it's hard to imagine things getting worse in our state. However, our state is expected to experience increasingly severe weather events, sea level rise and drought, impacting our key agricultural and tourism industries as well as our coastal lifestyles and infrastructure.²

It is clear that urgent strong action across the globe to reduce greenhouse gas emissions is needed to minimise the extent and impacts of climate change. "Mitigation" means actions to reduce greenhouse gas emissions. Happily, Queensland is well-placed to take mitigation action, particularly with the power to harness solar energy across the state, to control excessive vegetation clearing and to stop thermal fossil fuel extraction.

However, even if we succeeded in reaching zero emissions today it is already too late to avoid the impacts of climate change, such as extensive Reef bleaching events and sea level rise, altogether.³ "Adaptation", means adjustments in response to climatic stimuli which moderate harm or exploit beneficial opportunities. So while adaptation is unlikely to help the Reef, strategic adaptation is also needed in Queensland across government, industry and the community to moderate some other adverse impacts.

This paper will consider some current Queensland government policies and actions relating to climate change and then review some actions and potential actions by State and local governments with respect to planning and development.

¹Australian Government Bureau of Meteorology, *Annual Climate Summary for Queensland* (9 January 2018) <<http://www.bom.gov.au/climate/current/annual/qld/summary.shtml>>.

²Commonwealth of Australia, *The Critical Decade: Queensland climate impacts and opportunities* (2012).

³Richard Rood, 'If we stopped emitting greenhouse gasses right now, would we stop climate change?', *The Conversation*, 8 July 2017 <<https://theconversation.com/if-we-stopped-emitting-greenhouse-gases-right-now-would-we-stop-climate-change-78882>>.

2. Current climate action by Queensland Government

Key Queensland Strategies

The current Queensland Government has to their credit developed policies and taken action to help Queensland both mitigate and adapt to the climate change risks we face as a state. The Queensland Climate Change Response currently consists of two key strategies:

- Queensland Climate Transition Strategy ⁴ which provides an outline of how Queensland might transition to a zero net emissions future by 2050 with interim emissions reduction target of at least 30% below 2005 levels by 2030; and the
- Queensland Climate Adaptation Strategy ⁵ which provides a proposal for steps we can take to adapt to current and future risks and impacts of a changing climate.

Significant detail has been put into both mitigation and adaptation measures, including supporting renewable energy development in the state, implementing stronger tree clearing laws to reduce carbon release from clearing and assisting local governments to better map and adapt to sea level rise risks.⁶ The Queensland Government in 2017 signed the international 'Under2MOU' along with a coalition of other subnational governments who are committed to acting on climate change.⁷

Adaptation actions are improving. Local governments are required under the State Planning Policy to consider natural hazards, including coastal erosion prone areas and storm tide hazards, in the preparation of planning instruments.⁸ The coastal hazard area mapping has been updated to reflect projected impacts of climate change to 2100.⁹

Need for clearer targets and accountability - a Climate Bill?

The two key climate strategies include a clear target on renewable energy generation – to generate 50% of Queensland's energy from renewable sources by 2030.¹⁰ The State Government has taken actions towards implementing this target. The strategies set out by the Queensland Government include developing a comprehensive monitoring, evaluation and review framework with goals over 1-2, 3-5 and 5 plus years.¹¹ However, for now the strategies overall lack clear targets, performance

⁴Queensland Government, *Pathways to a clean growth economy: Queensland Climate Transition Strategy* (2017).

⁵Queensland Government, *Pathways to a climate resilient Queensland: Queensland Climate Adaption Strategy 2017-2030* (2017).

⁶Queensland Government, *Queensland climate change response* (15 September 2017) <<https://www.qld.gov.au/environment/climate/response>>.

⁷Queensland Government, *Queensland signs global climate change agreement* (14 July 2017) <<https://www.qld.gov.au/environment/climate/response/global-agreement>>.

⁸ Queensland Government, *State Planning Policy* (July 2017) <https://dilgpprd.blob.core.windows.net/general/spp-july-2017.pdf>.

⁹ Queensland Government, Coastal hazard area maps (undated) <https://www.ehp.qld.gov.au/coastalplan/coastalhazards.html>.

¹⁰Queensland Government, *Pathways to a clean growth economy: Queensland Climate Transition Strategy* (2017) 2.

¹¹ Queensland Government, *Pathways to a climate resilient Queensland: Queensland Climate Adaptation Strategy 2017-2030* (2017) 31 <https://www.qld.gov.au/environment/assets/documents/climate/qld-climate-adaptation-strategy.pdf>

indicators, sufficient mechanisms for accountability and mandatory enforceable duties on decision-makers. These are needed for each relevant sector, as proposed, with identification of who is responsible to ensure that sector reaches their target. Otherwise, many of those climate change strategies might remain an unrealised wish list for Queensland's future. In 2017 EDO Qld proposed for discussion a Climate Change and Renewable Energy Bill¹² based on Victorian and ACT legislation,¹³ that if passed and implemented, would address some of those essential details.

Need to address fossil fuel exploitation

The most glaring weakness in the strategies however is the elephant in the room- failure to address fossil fuel extraction in Queensland and resulting greenhouse gas emissions when the exported fuel is burnt. The Queensland Government is effectively hastening dangerous climate change by noisily promoting and approving expanded mining and export of fossil fuels and even exploration for more coal reserves across our state.¹⁴ Significant proposed exploitation of Australia's Galilee Basin coal deposits in central Queensland is incompatible with effective action on climate change¹⁵ and is incongruous with any government policy attempting to address and mitigate climate change impacts. The Climate Council of Australia concluded that over 90% of Australia's remaining coal reserves must be left in the ground, unburned if we are to have any hope of meeting the Paris Commitment of 2 or 1.5 degrees Celsius.¹⁶

3. Current climate action by state and local government in planning and development.

Slashing own emissions and energy efficiency

State and local governments are key decision makers with the power and responsibility to ensure we are taking strong action to address mitigation and adaptation actions needed.¹⁷

Cutting greenhouse gas emissions from "own operations" is an acknowledged priority for the Queensland Government in its key strategies - and this is also true for councils. At least 70 Australian councils, representing around 3 million Australians, have already committed to the Cities Power Partnership, a Climate Council initiative to encourage Councils to slash emissions at a local level.¹⁸ Many of the case examples quoted for members are of energy efficiency initiatives or renewable energy initiatives, such as the Sunshine Coast Council's 15MW solar farm.

¹²Environmental Defenders Office Qld, *Queensland deserves a bright, clean future* (24 November 2017) <https://www.edoqld.org.au/qld_bright_clean_future>.

¹³*Climate Change Act 2017* (Vic); *Climate Change and Greenhouse Gas Reduction Act 2010* (ACT).

¹⁴Minister for Natural Resources, Mines and Energy (Qld), 'Explorers seek next-gen Bowen Basin coal' (Media Release, 22 March 2018) <<http://statements.qld.gov.au/Statement/2018/3/22/explorers-seek-nextgen-bowen-basin-coal>>; Minister for State Development and Minister for Natural Resources and Mines (Qld), 'Qld coal land opens up for explorers' (Media Release, 28 April 2017) <<http://statements.qld.gov.au/Statement/2017/4/28/qld-coal-land-opens-up-for-explorers>>.

¹⁵Climate Council of Australia, *Unburnable Carbon: why we need to leave fossil fuels in the ground* (2015) <<http://www.climatecouncil.org.au/unburnable-carbon-why-we-need-to-leave-fossil-fuels-in-the-ground>>.

¹⁶Climate Council of Australia, *Unburnable Carbon: why we need to leave fossil fuels in the ground* (2015) <<http://www.climatecouncil.org.au/unburnable-carbon-why-we-need-to-leave-fossil-fuels-in-the-ground>>.

¹⁷Sustainia, C40 Cities and Realdania, *Cities 100: 100 solutions for climate action in cities* (2016) 6 <https://www.climaterealityproject.org/sites/clinaterealityproject.org/files/CITIES100_2016.pdf>.

¹⁸Cities Power Partnership <<http://citiespowerpartnership.org.au/>>.

Waste major source of emissions

What are the priorities in reducing emissions for local government? Logan City Council nominates the Browns Plain Landfill as its single largest source of emissions.¹⁹ Sunshine Coast Council identifies that nearly 80% of emissions comes from landfilling of community waste.²⁰ The Sunshine Coast Council planning scheme includes detailed provisions on Waste Management and Recycling.²¹ There is a recycling crisis in the wake of China's refusal to accept our waste and the Queensland State government has proposed a waste levy. So there are multiple strong incentives on local governments to cut waste to landfill so as to cut costs as well as carbon.

Planning instruments – Shaping SEQ and State Planning Policy

It is encouraging that in the Queensland Climate Transition Strategy states:

“Building on its commitment to improve the emissions performance of buildings, the Government will ensure that changes to land use and built form—at the state, regional and local level—reduce energy emissions, promote energy efficiency, support renewable technologies and protect natural assets which act as carbon sinks.”²²

What powers does the Queensland government and Minister for Planning have under the *Planning Act 2017* (Qld)? The answer is all the power needed to take a very strong approach to compel mitigation or adaptation to climate change by local government and thus shape development, if it chooses to do so. The purpose of the Act makes specific reference to climate change and there are ample powers under various planning and decision tools in that Act.²³

It is therefore disappointing that the provisions of the State Planning Policy, for example, include detailed provisions on natural hazards, risk and resilience,²⁴ yet the overall approach expressed in the ePlanning Portal is that “The state government does not mandate how councils address the state interests, because no two councils are the same, but it assists councils through guidelines.”²⁵

Sea level rise predictions and Moreton Bay Regional Council is an illustration of exercise of State Government planning powers relating to a climate issues. In 2014 Planning Minister Seeney directed Moreton Bay Regional Council to amend its draft planning scheme *to remove* any assumptions about a theoretical projected sea level rise due to climate change. This was a highly publicised controversial direction, as sea level rise is a major climate change issue for all coastal areas and councils need to plan ahead. Then in 2015 the then new Planning Minister Trad revoked the direction - showing how power can be exercised strongly on a climate related issue.²⁶ Those powers

¹⁹Logan City Council (Qld), *Carbon Reduction Strategy and Action Plan* (2018) 8

<http://www.logan.qld.gov.au/_data/assets/pdf_file/0010/449668/Carbon-Reduction-Strategy-and-Action-Plan.pdf>.

²⁰Sunshine Coast Council (Qld), *Environment and Liveability Strategy: Part A: Strategic Directions* (2017) 13.

²¹Sunshine Coast Council (Qld), *Sunshine Coast Planning Scheme* (2014) 3.6.1(i), 3.6.8.

²² Queensland Government, *Pathways to a clean growth economy: Queensland Climate Transition Strategy* (2017) 21

²³ *Planning Act 2017* (Qld) s3 Purpose, and s4 System for achieving ecological sustainability

²⁴ <https://dilgpprd.blob.core.windows.net/general/spp-july-2017.pdf> 51 Natural Hazards and Resilience

²⁵ Queensland Government, accessed 10/5/18, Fast Facts about the State Planning Policy

<https://planning.dsdmip.qld.gov.au/planning/better-planning/state-planning>

²⁶ <https://www.dilgp.qld.gov.au/planning/ministerial-direction/lp/reference-number-4-and-7.html>

were exercised under the now repealed *Sustainable Planning Act 2009* (Qld) but in key respects the *Planning Act 2017* (Qld) is very similar.

The recently finalised South East Queensland Regional Plan 2017, *ShapingSEQ*, also provides a list of strategies for addressing climate change that are to be adopted, including:

1. *'Reduce greenhouse gas emissions by adopting patterns of urban development that reduce the need and distance to travel and that encourages the use of active and public transport.*
2. *Incorporate affordable renewable energy, low emissions technology and energy efficiency measures into the planning and development of communities, buildings and transport systems.*
3. *Support local strategies that contribute to the region's transition to a low carbon future and that implement effective climate change adaptation measures.*
4. *Enhance the resilience and capacity of natural assets to adapt to climate change and buffer people, infrastructure and biodiversity from the impact of extreme events.*
5. *Use disaster risk management planning, adaptation strategies and avoidance of exposure to high-risk areas to minimise SEQ's vulnerability to climate change impacts.'*²⁷

The Plan makes important note of more specific climate related actions, such as the need for:

- the future urban footprint to exclude areas 'with an unacceptable risk from natural hazards, including predicted climate change impacts';²⁸
- climate refugia and adaptation zones to be mapped and protected by local governments as 'regional biodiversity values';²⁹
- various areas of the region to consider the need to explore 'alternative rural futures' ... 'to diversify and increase the productivity of rural activities, and strengthen resilience to market cycles and climate change'; and
- investigation and implementation of principles for a water sensitive region.³⁰

The *ShapingSEQ* is recent, from 2017, so one question for the future is, how effectively and quickly will SEQ Qld councils adopt those strategies and undertake those actions? And what sort of accountability is there at a regional level for achievement of the strategies?

Chapter 5 *ShapingSEQ* is entitled "Measuring Our Success" and includes, amongst other things, various "measures" with for each a baseline, trend and preferred future set out. There is no preferred future for reduction of greenhouse gas emissions and climate change is not mentioned. So *ShapingSEQ* does not require measurement of whether greenhouse gas emissions are rising or falling in SEQ. Some of the measurement towards preferred futures however might well indirectly cast a light on success in adapting to climate impacts. For example one preferred future is that water/waterways quality increases.³¹ Another is that Community Greenspace for recreation

²⁷Queensland Government, *ShapingSEQ: South East Queensland Regional Plan 2017* (2017) 83 <<https://dilgpprd.blob.core.windows.net/general/shapingseq.pdf>>.

²⁸Ibid 101.

²⁹Ibid 89.

³⁰Ibid 161.

³¹Ibid 170.

increases. However, overall the measures and preferred futures are so general and broad brush that they are not likely to give a clear picture on various casual matters like climate impacts.³²

Planning Schemes - Logan and Sunshine Coast

Logan City Council is a member of the earlier mentioned City Powers Partnership. Their website states that their aim is to be “Certified Carbon Neutral by 2022 with all sources of carbon minimised, innovative renewable energy technology enhanced and the remaining carbon emissions offset.” So we examined their 2015 planning scheme to see what climate change mitigation or adaption measures were included. The main identifiable provisions in the Strategic Framework were, with respect to climate change

“Natural Hazards:

“3.2.9 People and premises are protected from and are resilient to the potential risks associated with natural hazards. Greenhouse gas emissions and the community’s reliance on greenhouse gas emitting energy sources, are reduced.”

Sunshine Coast Council is also a member of the earlier mentioned City Powers Partnership. Their target is that “Sunshine Coast Council is a zero emissions organisation and community low carbon by 2041.” On examination of their planning scheme for the inclusion of climate change mitigation or adaption measures, there were some detailed provisions on waste management and recycling. Further, some identifiable provisions in the Strategic Outcomes with respect to climate change and renewables include:

“Infrastructure and Services

“3.6.1(g) The Sunshine Coast has reduced its reliance on non-renewable energy sources with the development of viable, low emissions local energy generation through renewable sources such as solar farms and

“3.6.6.1(e) Development for renewable energy projects is encouraged where appropriately located and sensitively designed to protect agricultural land and regional landscapes values and avoid adverse amenity impacts.”

4. What does stronger climate action need to look like?

Clear binding targets and accountability - and more staff

For all sectors and across all strategies and planning documents we need clear binding targets with respect to mitigation and adaptation, performance indicators, meaningful reporting and duties on decision-makers to make decisions that assist in achieving those targets. In the two key Queensland climate strategies the government has proposed to develop further plans, including sector specific

³²The *Planning Regulation 2017* (Qld) includes provisions directing decision-makers pertaining to the SEQ Regional Plan. See Division 6, section 41A about deciding if a development needs to be outside the urban footprint, or section 41B if there is an overriding need in the public interest for a development.

adaptation plans, evaluation and monitoring. We proposed a Climate Bill, discussed earlier³³, which can assist to deliver that in part.

Administratively, there is a small Climate Change Policy Unit within Queensland Department of Environment and Science³⁴ which needs major, urgent expansion of staffing levels so as to be able to effectively drive reform.

Mandatory climate smart buildings

We need building codes that require climate smart buildings, making the Green Star standards by the Green Building Council of Australia³⁵ mandatory, not voluntary. These standards must implement both energy efficiency mechanisms and require the use of low emission building products and retrofitting where possible.

Adopting ways to cool our cities

National research and innovation hub, Low Carbon Living CRC,³⁶ has investigated various urban cooling strategies and provided a guide to assist cities.³⁷ Their research provides that the best solutions for reducing urban heat impacts in Brisbane particularly, with its high humidity, high precipitation and high solar radiation intensity in summer, include:

- increased tree canopy and shading, especially in higher density urban locations;
- high emittance paving to radiate away the urban heat;
- permeable paving a good option for urban cooling while addressing storm water management and flood prevention;
- high albedo paving as an urban cooling strategy where pedestrian and car traffic is low, to prevent glare.³⁸

Urban green infrastructure increases vegetation in our built environments to provide economic, social and environmental benefits. Benefits are not just cooling our urban environments, but can also include erosion control, cleaner air and water, more recreational space for more active communities and more localised food production.³⁹

³³Environmental Defenders Office Qld, *Queensland deserves a bright, clean future* (24 November 2017) <https://www.edoqld.org.au/qld_bright_clean_future>.

³⁴ Estimated 15-20 total staff as at 10/5/2018

³⁵Green Building Council of Australia, *Green Star*, <<https://new.gbca.org.au/green-star/>>.

³⁶Low Carbon Living CRC, *National research & innovation hub for the built environment*, <<http://www.lowcarbonlivingcrc.com.au>>.

³⁷Low Carbon Living CRC, *Guide to urban cooling strategies* (2017) <http://www.lowcarbonlivingcrc.com.au/sites/all/files/publications_file_attachments/crc_lcl_urban_cooling_guide_2017_web.pdf>.

³⁸Ibid 40.

³⁹CSIRO, *Green infrastructure* (2018) <<https://www.csiro.au/en/Research/LWF/Areas/Resilient-cities-21C/Green-infrastructure>>.

Beneficial measures such as these, relevant to each Queensland region, could be better reflected in our planning instruments to mandate their use.

Clear protection of climate refugia

Areas being mapped and protected for climate refugia for other species must be sufficiently protected with strong, consistent mapping that truly protects these areas from development. Ideally this mapping would be produced through a central state agency to best consolidate overarching cumulative impacts of climate change on species movement.

Need to stop fossil fuel exploitation

Further, if Queensland is truly willing to do its share to reduce the risks of dangerous climate change impacts, the Queensland Government needs to stop approving and supporting expansion of fossil fuel extraction. Queensland Government support of an expanded renewable energy sector is excellent but the greenhouse gas savings of a move to renewables are very small compared to the massive emissions from expanding Queensland fossil fuel extraction. It does not matter if the coal is burnt overseas, it contributes to greenhouse gas emissions in our shared global atmosphere as surely as if it is burnt in Queensland. The Queensland Government cannot just support the renewable energy sector and consider its responsibility met.

Good action to address adaptation and mitigation of climate change impacts are being undertaken, but if we are taking climate change seriously much more needs to be done and much more quickly. The challenge is significant, but there are exciting opportunities for Queensland in responding to climate change and ensuring our communities and industry sectors are sustainable into the future.