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VICTORIA REGISTRY - FEDERAL COURT OF AUSTRALIA



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IN THE FEDERAL COURT OF AUSTRALIA

DISTRICT REGISTRY: VICTORIA

DIVISION: GENERAL

Pabai Pabai and Guy Paul Kabai

and

Commonwealth of Australia

Applicants

Respondent

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PART 1. INTRODUCTION AND BACKGROUND

A. INTRODUCTION

It is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred.¹

- 1 According to the Intergovernmental Panel on Climate Change (IPCC) Synthesis Report of its sixth assessment report (AR6) published in March 2023, the world is on track for catastrophic climate changes by the end of the century, representing a real and catastrophic threat to human well-being and planetary health.²
- 2 With alarming regularity, politicians warn:

The world is reaching the tipping point beyond which climate change may become irreversible. If this happens, we risk denying present and future generations the right to a healthy and sustainable planet – the whole of humanity stands to lose.³

By polluting the oceans, not mitigating CO_2 emissions and destroying our biodiversity, we are killing our planet. Let us face it, there is no planet B.⁴

The effects of climate change are real and must be acted on.⁵

Climate change is the single greatest threat to a sustainable future but, at the same time, addressing the climate challenge presents a golden opportunity to promote prosperity, security and a brighter future for all.⁶

3 In Australia, the risks posed by climate change are well known and understood. For example, the Commonwealth, in response to the AR6 Synthesis Report, said on 21 March 2023:

¹ APP.0001.0007.0112IPCC, AR6 Summary for Policymakers, 3, [_0020].

² EVI.2002.0004.2977 IPCC, 2023, AR6 Synthesis Report Summary for Policymakers, 24 [.3016].

³ Kofi Annan, Former Secretary-General of the United Nations, The Guardian, 2015, 'We must challenge climatechange sceptics who deny the facts', accessible at: <u>https://www.theguardian.com/environment/2015/may/03/kofiannan-interview-climate-change-paris-summit-sceptics</u>.

Emmanuel Macron, President of France, Climate Action, 2018, 'Macron tells Trump and US Congress: "There is no Planet B", accessible at: <u>https://www.climateaction.org/news/macron-tells-trump-and-us-congress-there-is-noplanet-</u>

<u>b#:~:text=In%20a%20rare%20opportunity%20to%20speak%20directly%20to,are%20killing%20our%20planet.%20</u> Let%20us%20face%20it.

⁵ Joe Biden, (then) Vice President of the United States of America, 31 May 2014, University of Delaware Commencement Address, accessible at: <u>https://obamawhitehouse.archives.gov/the-press-office/2014/05/31/commencement-address-vice-president-joe-biden</u>.

⁶ Ban Ki-Moon, Former Secretary-General of the United Nations, 11 April 2014, Remarks at Climate Leaders Summit, accessible at <u>https://www.un.org/sg/en/content/sg/statement/2014-04-11/secretary-generals-remarks-climate-leaders-summit</u>.

The latest intergovernmental Panel on Climate Change (IPCC) report released last night confirms what we already know.

There is a rapidly closing window for transformative climate action both here and around the world.

This latest IPCC report shows global warming has increased at an unprecedented rate over the past decade, resulting in more frequent and severe droughts and cyclones. By the 2030s, every region in the world is expected to face increasing risks from climate change.

And we know Australians will experience increasing and increasingly devastating climate events, just has we have seen in recent years.

...

This report makes it clear – this decade is the critical decade for action.⁷

4 Each of Minister Bowen and Assistant Minister McAllister went on to say:

Ten years of denial and delay has increased the threat of climate change to our health, environment, economy and national security.⁸

And:

Australians deserve protection from climate impacts.9

5 Further, as the Minister for Climate Change and Energy, Chris Bowen said in his address to the National Press Club on 29 June 2022:

We cannot forget that we have Australian citizens in the Torres Strait who are living with the impacts of climate change right now. We can't forget it and under this Government, we won't forget it.¹⁰

6 The risk posed by climate change to Australians, and more specifically, Torres Strait Islanders, has been repeatedly acknowledged by the Commonwealth. Most recently, in the First Annual Statement on Climate Change,¹¹ it was acknowledged:

Our beautiful land has always been subject to devastating natural disasters, but those disasters are increasingly devastating, increasingly frequent and increasingly unnatural.

Australia is highly vulnerable to the impacts of climate change, including bushfires and floods, so the stakes are extremely high. Not acting would be an unforgivable act of intergenerational negligence...¹²

⁷ APP.0001.0003.0044, Joint Media Release: IPCC report highlights urgent need for ambitious action.

⁸ APP.0001.0003.0044, Joint Media Release: IPCC report highlights urgent need for ambitious action.

⁹ APP.0001.0003.0044, Joint Media Release: IPCC report highlights urgent need for ambitious action.

¹⁰ APP.0001.0003.0033 Transcript of address to the National Press Club by the Minister for Climate Change and Energy, 1.

¹¹ APP.0001.0003.0043 Commonwealth Government Annual Climate Change Statement 2022.

¹² APP.0001.0003.0043 Commonwealth Government Annual Climate Change Statement 2022, 3.

And:

First Nations people are disproportionately affected by climate change because of their relationship to the environment and to Country. Climate impacts can threaten cultural knowledge, heritage and traditional practices, and potentially further displace First Nations people from their homes and affect their ability to access Country.

Climate change impacts such as sea level rises experienced in island communities and increases in temperature experienced in desert communities could leave First Nations people with no choice but to migrate from some ancestral homelands to urban settings or other locations. The consequences for First Nations people facing this possibility, risking further dispossession and a loss of access to traditional lands, waters, and natural resources, can only be described as catastrophic. The loss of ancestral, spiritual, totemic and language connections to lands and associated areas has major implications for the human rights of affected peoples as well as their physical and mental wellbeing. Extreme events are also contributing to the damage of First Nations places and cultural sites.¹³

And further:

Torres Strait Islanders are dealing with the acute impacts of climate change right now. Communities are experiencing sea level rises at approximately three times the rate of the global average, resulting in more frequent and severe inundation flowing events and accelerate coastal erosion. Higher temperatures and storm events create other challenges for community health, infrastructure, and services. Hotter and more frequent marine heatwaves are threatening locally and nationally significant fisheries, as well as culturally important species and ecosystems such as dugongs, turtles, coral reefs and seagrasses.¹⁴

7 On 1 December 2022 the Minister for Climate Change and Energy the Hon Chris Bowen

MP, made a public statement in the following terms:

In acknowledging country, I also acknowledge a fundamental truth: that our First Nations people, who enjoy such a rich and meaningful connection to their Country, have much to lose from unchecked climate change.

From the visible and tangible: from the rising sea levels and natural disasters impacting on the people of the Torres Strait to the increasing temperatures in already hot remote communities.¹⁵

8 However, despite knowing of the extreme and serious risks posed by climate change to the peoples of the Torres Strait Islands for decades,¹⁶ the Commonwealth has ignored –

¹³ APP.0001.0003.0043 Commonwealth Government Annual Climate Change Statement 2022, 20.

¹⁴ APP.0001.0003.0043 Commonwealth Government Annual Climate Change Statement 2022, 21.

¹⁵ CRT.2000.0007.0001 Statement of Agreed Facts, [2].

¹⁶ See APP.0001.0019.0007, Climate Change Risks to Australia's Coasts, Department of Climate Change (2009);APP.0001.0007.0053, Observed and Future Climates of the Torres Strait Region, CSIRO (2010); DCC.2001.0001.2640, Understanding Climate Change Driven Coastal Erosion and Inundation Impacts on Torres Strait Communities, KE Parnell (2010); NIA.2009.0036.8142, Torres Strait Sea Wall Issue, 1; TRN.0015.1271 16

and continues to ignore – the dire and existential threat posed to those people, its own citizens.

- 9 In doing so, the Commonwealth has failed in its first duty that is the duty to protect its citizens from imminent harm.
- 10 For thousands of years, the peoples of the Torres Strait nations have lived in the area that is known as *Zenadth Kes* (or the Torres Strait Islands). Throughout that time, they have practiced and observed *Ailan Kastom* the body of customs, traditions, observances and beliefs of the people of *Zenadth Kes*.
- 11 *Ailan Kastom* creates a unique spiritual and physical connection with *Zenadth Kes* and its surrounding waters and reefs (including the many rare or unique species). It includes, amongst other things, connection to the marine and land environment as part of cultural ceremony; the use of plants and animals for food, medicine and cultural ceremony; burial and mourning rituals; visiting or caring for sacred sites (including those on uninhabited islands); dugong, turtle and other marine species hunting and fishing. This connection is unique – it is the essence of what it means to be a Torres Strait Islander.
- 12 *Ailan Kastom* celebrates those practices that have kept Torres Strait Islanders safe from external threats and sustained them for generations. Much of the Torres Strait is low lying. While accustomed to high tides and monsoonal inundation events, in recent years the risks have escalated.
- 13 The global scientific consensus conservatively establishes that the consequences of even small increases in temperature on freshwater resources, the health of reefs systems and coastal wetlands and other island ecosystems will surpass the ability of those ecosystems to adapt. It establishes that every tonne of greenhouse gas (GHG) emissions matters to the accumulation of GHGs in the atmosphere and that every fraction of a degree of warming is significant.¹⁷
- 14 In this case, the Applicants allege that the Commonwealth owes them a duty of care by reason of the Commonwealth's control and assumption of the risk, Torres Strait

November 2023, Professor Pitman, T1318.37-44, T1319.13-23; TRN.0018.1455 22 November 2023, Kelly Pearce, T1475:30-35.

¹⁷ See below at [37].

Islanders' vulnerability and the overwhelming nature of the threat posed to them, and the special relationship between the Commonwealth and the peoples of these islands.

- 15 The evidence demonstrates that the Commonwealth has known and ignored the harm its actions have caused to Torres Strait Islanders and the existential threat its actions continue to pose to them. The evidence of Kelly Pearce and the Commonwealth's IPCC Taskforce underscore the Commonwealth's choice to ignore the **best available science** on climate change its impacts on Torres Strait Islanders. The Commonwealth has and continues to ignore the dire and existential threat to the lives of its own citizens. Its failure to act is a failure of the fundamental duty of a government to protect its citizens and First Peoples from harm.
- 16 It is a failure to protect fundamental human rights including the right to life and the right to self-determination. At its most basic, it is an abrogation of the social contract.
- 17 Unless urgent and serious action is taken by the Commonwealth in relation to climate change, it is highly likely that, by mid century that is less than 26 years from now, in the lives of these Applicants and their children many Torres Strait Islanders will be forced to leave their homelands, because large parts of it will be uninhabitable. Having to leave, will inevitably mean the severing of connection to country, and thus the destruction of *Ailan Kastom*. The destruction of thousands of years of tradition and connection belonging to the oldest living culture in the world; the destruction of self and identity for Torres Strait Islanders.
- 18 The need for urgent and serious action to be taken by the Commonwealth in relation to climate change cannot be overstated for these people. Because many low-lying islands, are barely metres above sea level¹⁸ these places, and the entire area of *Zenadth Kes*, are particularly vulnerable to the effects of climate change.

¹⁸ See for example APP.0001.0003.0046 Boigu Land and Sea Profile (generally less than 1m above local sea level, and the highest point approximately 3m); APP.0001.0003.0047 Saibai Land and Sea Profile (generally less than 1m above local sea level, and the highest point is approximately 5m); APP.0001.0003.0048 Badu Land and Sea Profile; APP.0001.0003.0049 Warraber Land and Sea Profile (generally just a few metres above sea level, with the highest point approximately 6m) and APP.0001.0003.0050 Poruma Land and Sea Profile (generally between 5-7m above sea level, with the highest point approximately 12m).

B. THE CLIMATE SCIENCE

- 19 The Court has received and heard extensive expert evidence regarding the physical science of climate change and its impacts in the Torres Strait Islands. The Applicants called the following expert witnesses:
 - 19.1 Professor David Karoly, an expert on the causes of climate change and its impacts;
 - 19.2 Professor Terry Hughes, an expert on climate change impacts to marine life;
 - 19.3 Emeritus Professor John Church, an expert on the role of the ocean in climate and sea level rise;
 - 19.4 Associate Professor Linda Selvey, an expert on the health impacts of climate change;
 - 19.5 Mr Stuart Bettington, an expert in coastal and maritime engineering with extensive experience in the Torres Strait;
 - 19.6 Professor Malte Meinshausen, an expert in carbon budgets and warming scenarios.
- 20 The Commonwealth called the experts Professor Andrew Pitman, Dr Pep Canadell, Dr Matthew Barnes and Dr Bruce Harper.
- 21 The Applicants also rely upon the consensus sources of best available science, including the Intergovernmental Panel on Climate Change (IPCC), United Nations Environment Programme (UNEP), World Meteorological Organisation (WMO), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australian Bureau of Meteorology (BOM) and Australian Climate Change Authority (CCA).
- 22 As explained further below, the best available science and expert evidence demonstrates that throughout the relevant period (from 2014) it has been well-established that:
 - 22.1 human activities have warmed the atmosphere, ocean and land and caused associated climate impacts;
 - 22.2 in order to avoid the worst climate impacts, rapid and substantial reductions in GHG emissions are required;

- 22.3 the relationship between anthropogenic GHG emissions and global warming is near-linear;
- 22.4 every tonne of GHG emissions increases global warming;
- 22.5 anthropogenic GHG emissions cause, globally and in the Torres Strait:
 - (a) temperature increase;
 - (b) ocean temperature increase;
 - (c) ocean acidification;
 - (d) sea level rise and coastal inundation;
 - (e) increased frequency, size and intensity of extreme weather events;
 - (f) changed precipitation patterns;
 - (g) increased health issues;
 - (h) harm and destruction to ecosystems and non-human species;
- 22.6 certain levels of global GHG emissions will result in reaching **tipping points** causing substantial, abrupt and sometimes irreversible changes;
- 22.7 global carbon budgets and remaining cumulative GHG emissions for global temperature increases can be calculated;
- 22.8 methodologies exist for the allocation of global carbon budgets between nations;
- 22.9 Australia's emissions reduction targets are incompatible with preventing catastrophic impacts of climate change in the Torres Strait.
- 23 The evidence of the impacts of climate change is so overwhelming that in the recent approval hearing of the settlement of *O'Donnell v Commonwealth of Australia* Murphy J took "judicial notice" of:

the fact that the consensus position of leading climate scientists around the world is that global warming and climate change brings risks of more frequent and more intense bushfires, storm surges, coastal flooding, inland flooding, cyclones, droughts and other extreme weather events. $^{19}\,$

Overview of the physical science of climate change

- Even before the establishment of the IPCC in 1988, scientists have been warning about the risks of climate change, and the need to reduce GHG emissions. The United Nations Framework Convention on Climate Change (**UNFCCC**), to combat "dangerous human interference with the climate system" was signed in 1992. Since at least 2001, the accumulation of evidence of anthropogenic climate change has been clear.²⁰ As stated by the IPCC in its Fifth Assessment Report *Climate Change 2013: The Physical Science Basis*, it is unequivocal that the climate warming, that human influence on the climate is clear, and that limiting climate change will require substantial and sustained reductions of GHG emissions.²¹ These observations were reiterated by the IPCC in its sixth assessment report released in 2021.²²
- In his expert report dated 25 May 2023²³ and oral evidence,²⁴ Professor Karoly gave largely uncontested evidence about the physical science of climate change, drawing upon sources of best available science including the work of the IPCC.²⁵ The Commonwealth did not ask Professor Pitman, whose expertise to some degree overlapped with that of Professor Karoly, to address most of the matters Professor Karoly discussed in his expert report.²⁶ The Court should therefore readily accept Professor Karoly's evidence as largely uncontroversial.

The greenhouse effect

26 The temperature of the Earth's system is determined by the balance between incoming solar radiation and the loss of radiation from the Earth's surface and atmosphere into space. The loss of radiation into space is dependent upon the concentration of GHGs in the atmosphere.²⁷ Those GHGs absorb infrared radiation emitted from the Earth's surface

¹⁹ APP.0001.0020.0200 *O'Donnell v Commonwealth of Australia* [2023] FCA 1227 at [40].

²⁰ TRN.0015.1271 16 November 2023, Professor Pitman, T1319.13-23.

²¹ EVI.2001.0006.0473 IPCC, Climate Change 2013: The Physical Science Basis – Summary for Policymakers [.0488], [.0499], [.0500].

²² EVI.2001.0003.0321 IPCC, Climate Change 2021: The Physical Science Basis – Summary for Policymakers [.0328], [.0338].

²³ APP.0001.0003.0093 Exhibit A40, Karoly Report; see also APP.0001.0015.0005 Exhibit A41, Karoly Supplementary Report.

²⁴ TRN.0009.0844 8 November 2023, Professor Karoly; TRN.0010.0920 9 November 2023, Professor Karoly.

²⁵ APP.0001.0003.0093 Exhibit A40, Karoly Report [8].

²⁶ TRN.0015.1271 16 November 2023, Professor Pitman, T1317.39-1318.4.

²⁷ TRN.0009.0844 8 November 2023, Professor Karoly, T868.18-869.14.

and lower atmospheric levels, and have the net effect of reducing the outgoing radiation emitted into space. This process is known as the **greenhouse effect**. The greenhouse effect leads to a hotter temperature at the Earth's surface and in the lower atmosphere than would otherwise occur if the GHGs did not exist in the atmosphere.²⁸

27 If the concentration of GHGs in the atmosphere increases, then the magnitude of the greenhouse effect increases.²⁹ Increased atmospheric concentrations of GHGs create an imbalance between incoming solar radiation energy and outgoing radiation, which is known as **radiative forcing**.³⁰ Thus, an increase in atmospheric GHG concentrations contributes to an instantaneous radiative forcing that causes an increase in global temperature.³¹

Major GHGs and their global warming potential

- 28 The major GHGs in the atmosphere are water vapour, carbon dioxide (CO₂), nitrous oxide and methane.³² The potential of these GHGs to contribute to global warming is dependent on their capacity to induce radiative forcing during their atmospheric lifetimes. Global warming potential (**GWP**) is the most common index used to measure radiative forcing. It represents the radiative forcing induced by the emission of unit mass of any GHG, accumulated over 100 years, relative to CO₂ (**GWP-100**).³³
- 29 Any unit of water vapour is removed from the atmosphere within about one week by precipitation. Its GWP-100 is zero and therefore it does not contribute to global warming.³⁴
- 30 In contrast, CO_2 is a very long-lived GHG. It has multiple atmospheric lifetimes associated with many processes in the carbon cycle in the Earth system affecting atmospheric CO_2 concentrations. As a result, 15 to 40% of an emitted CO_2 pulse from human activities will cause an increase of atmospheric concentrations for longer than one thousand years.³⁵ Its GWP-100 is 1 because it is the reference gas in the index.³⁶

²⁸ APP.0001.0003.0093 Exhibit A40, Karoly Report [13].

APP.0001.0003.0093 Exhibit A40, Karoly Report [13].
APP.0001.0003.0093 Exhibit A40, Karoly Report [14].

³⁰ APP.0001.0003.0093 Exhibit A40, Karoly Report [14].

³¹ APP.0001.0003.0093 Exhibit A40, Karoly Report [14]. ³² APP.0001.0003 CO03 Exhibit A40, Karoly Report [15].

³² APP.0001.0003.0093 Exhibit A40, Karoly Report [15].

³³ APP.0001.0003.0093 Exhibit A40, Karoly Report [15].

³⁴ APP.0001.0003.0093 Exhibit A40, Karoly Report [15].

³⁵ APP.0001.0003.0093 Exhibit A40, Karoly Report [15]. ³⁶ APP 0001 0003 0093 Exhibit A40, Karoly Report [15].

³⁶ APP.0001.0003.0093 Exhibit A40, Karoly Report [15].

- 31 Nitrous oxide and methane are also long-lived GHGs. Nitrous oxide has an atmospheric lifetime in excess of 100 years, whereas methane has a shorter atmospheric lifetime of about 12 years, but is an extremely efficient GHG.³⁷ Nitrous oxide and methane have GWP-100s of 273 and 30 respectively.³⁸
- 32 The foregoing, coupled with the fact that each of these GHGs has had substantial anthropogenic emissions in the last 100 years, means that CO₂, nitrous oxide and methane are the most significant GHGs in terms of their contributions to global warming.³⁹

The observed consequence of anthropogenic GHG emissions since 1850-1900

- 33 CO₂, nitrous oxide and methane each have natural sources of emissions, and natural sinks or loss processes that remove them from the atmosphere.⁴⁰ For example, the decomposition of vegetation on land and loss of dissolved CO₂ from oceans are the largest natural causes of emissions into the atmosphere.⁴¹ Similarly, CO₂ is removed from the atmosphere during photosynthesis.⁴²
- 34 Global atmospheric GHG concentrations are determined by the balance between the combined natural and anthropogenic GHG emissions and their sinks. Prior to the industrial revolution, the variations of the global GHG concentrations in the atmosphere were quite small due to the long-term balance between natural emissions and natural sinks for each of the major GHGs. Since the industrial revolution, there have been large increases in the global atmospheric concentrations of these GHGs due to additional anthropogenic GHG emissions.⁴³ This dramatic increase in global atmospheric GHG concentrations is illustrated in Figure 2 of Professor Karoly's report, which is reproduced below. In 2019, atmospheric CO₂ concentrations were higher than at any time in at least 2 million years, and concentrations of nitrous oxide and methane were higher than at any time in at least 800,000 years.⁴⁴

³⁷ APP.0001.0003.0093 Exhibit A40, Karoly Report [15].

³⁸ APP.0001.0003.0093 Exhibit A40, Karoly Report [15].

³⁹ APP.0001.0003.0093 Exhibit A40, Karoly Report [17], [21].

⁴⁰ APP.0001.0003.0093 Exhibit A40, Karoly Report [19]-[20].

⁴¹ APP.0001.0003.0093 Exhibit A40, Karoly Report [19].

⁴² APP.0001.0003.0093 Exhibit A40, Karoly Report [19].

⁴³ APP.0001.0003.0093 Exhibit A40, Karoly Report [22]; TRN.0009.0844 8 November 2023, Professor Karoly, T872.20-27.

⁴⁴ APP.0001.0007.0112 IPCC, Climate Change 2021: The Physical Science Basis – Summary for Policymakers [.0024].



Fig. 2: Concentrations of the major greenhouse gases (CO₂, methane and nitrous oxide) in the atmosphere over the past 2000 years. Reproduced from State of the Climate 2022.⁴

35 Figure 3 of Professor Karoly's report, reproduced below, demonstrates changes in global surface temperatures over the last two thousand years. This figure shows small amplitude decadal variations, no trend over the first millennium, then a slight cooling over the second millennium until about 1900, followed by a marked warming trend. Professor Karoly's evidence is that this warming trend since 1900 aligns with the dramatic increase in global major GHG concentrations illustrated in Figure 2, which depicts relatively stable concentrations until 1800 then rapidly growing concentrations.⁴⁵

⁴⁵ APP.0001.0003.0093 Exhibit A40, Karoly Report [23].

(a) Change in global surface temperature (decadal average) as reconstructed (1–2000) and observed (1850–2020)



Fig. 3: "Changes in global surface temperature reconstructed from paleoclimate archives (solid grey line, years 1–2000) and from direct observations (solid black line, 1850–2020), both relative to 1850–1900 and decadally averaged." ... "The grey shading with white diagonal lines shows the very likely ranges for the temperature reconstructions." Reproduced from Figure SPM.1, Summary for Policymakers, IPCC Sixth Assessment Report 'Climate Change 2021: The Physical Science Basis'. ⁵

36 Together, Figures 2 and 3 of Professor Karoly's report demonstrate the operation of an enhanced greenhouse effect from 1850-1900 until the present. Anthropogenic GHG emissions have increased dramatically since the commencement of the industrial revolution, contributing to increased concentrations of these gases in the atmosphere. These increased concentrations have caused instantaneous radiative forcing, leading to an accumulation of excess energy that has warmed the Earth's oceans, land surface and lower atmosphere.⁴⁶

⁴⁶ APP.0001.0003.0093 Exhibit A40, Karoly Report [14].

Near-linearity in the relationship between anthropogenic GHG emissions and global temperature increase

- 37 Professor Karoly's evidence, echoed by Professor Pitman⁴⁷ and Dr Canadell,⁴⁸ is that every tonne of GHG emissions adds to global warming. Professor Karoly's reasoning can be summarised as follows:
 - 37.1 First, the increase in global average concentration of CO₂ in the atmosphere since the industrial revolution is directly linearly related to the cumulative emissions of CO₂ from human activities, being the sum of anthropogenic emissions since about 1850. This is due to long atmospheric lifetime of CO₂ outlined in paragraph 30.⁴⁹
 - 37.2 Second, the increase in the global CO_2 -equivalent concentration (CO_2 -e)⁵⁰ since the industrial revolution is also linearly related to cumulative anthropogenic emissions of all long-lived GHGs.⁵¹
 - 37.3 Third, the multi-decadal increase of global temperature at any time since 1850 is near-linearly related to cumulative anthropogenic emissions of CO₂ since 1850. This coheres with observed records from 1850 to the present and climate model simulations in the future to 2050.⁵²
 - 37.4 Fourth, given (i) the increase in GHG concentration due to anthropogenic emissions contributes to instantaneous radiative forcing and increased global temperature and (ii) the increase in global CO₂ concentration since the industrial revolution is linearly related to cumulative anthropogenic emissions of CO₂, it is clear that there is a near-linear relationship between cumulative emissions of CO₂ from human activities and increase in global temperature.⁵³

⁴⁷ TRN.0015.1271 16 November 2023, Professor Pitman, T1329.30-36.

⁴⁸ TRN.0017.1379 21 November 2023, Dr Canadell, T1391.28-34.

⁴⁹ APP.0001.0003.0093 Exhibit A40, Karoly Report [25].

⁵⁰ CO2-e is the concentration of CO₂ that would give the same radiative forcing as the combined mixture of GHGs: APP.0001.0003.0093 Exhibit A40, Karoly Report [24]; TRN.0009.0844 8 November 2023, Professor Karoly, T873.27-36.

⁵¹ APP.0001.0003.0093 Exhibit A40, Karoly Report [25].

⁵² APP.0001.0003.0093 Exhibit A40, Karoly Report [26].

⁵³ APP.0001.0003.0093 Exhibit A40, Karoly Report [26].

- 37.5 Fifth, a similar near-linear relationship, but with a different slope, exists between the increase of global temperature since the industrial revolution and cumulative emissions of CO₂-equivalent gases (i.e. non-CO₂ GHGs).⁵⁴
- 38 The combined effect of these separate linear and near-linear relationships is illustrated in Figure 4 of Professor Karoly's report, set out below.



Every tonne of CO₂ emissions adds to global warming

Fig. 4: "Near-linear relationship between cumulative CO₂ emissions and the increase in global surface temperature.

<u>Top panel</u>: Historical data (thin black line) shows observed global surface temperature increase in °C since 1850–1900 as a function of historical cumulative carbon dioxide (CO₂) emissions in $GtCO_2$ from 1850 to 2019. Coloured areas show the assessed very likely range of global surface temperature projections, and thick coloured central lines show the median estimate as a function of cumulative CO₂ emissions from 2020 until year 2050 for the set of illustrative scenarios (SSP1-1.9, SSP1-2.6, SSP2-4.5, SSP3-7.0, and SSP5-8.5.)

<u>Bottom panel</u>: Historical and projected cumulative CO₂ emissions in G CO₂ for the respective scenarios."

Reproduced from Figure SPM.10, Summary for Policymakers, IPCC Sixth Assessment Report 'Climate change 2021: The Physical Science Basis'.⁵

⁵⁴ APP.0001.0003.0093 Exhibit A40, Karoly Report [27].

39 Similarly, one can observe the relationships identified by Professor Karoly from a surface-level analysis of historical increases in anthropogenic GHG emissions, GHG concentrations and global temperatures from 1850-1900 to the present.⁵⁵ Each of the last four decades has been warmer than any previous decade since 1850. The world is warming faster than at any time in at least the last two thousand years.⁵⁶ The 2023 UNEP Emissions Gap Report states that:

The world is witnessing a disturbing acceleration in the number, speed and scale of broken climate records. At the time of writing, 86 days have been recorded with temperatures exceeding 1.5° C above pre-industrial levels this year. Not only was September the hottest month ever, it also exceeded the previous record by an unprecedented 0.5° C, with global average temperatures at 1.8° C above pre-industrial levels. These records were accompanied by devastating extreme events, which the Intergovernmental Panel on Climate Change (IPCC) has warned us are merely a meek beginning. While the records do not imply that the world has exceeded the 1.5° C temperature limit specified in the Paris Agreement, which refers to global warming levels based on multi-decadal averages, they signal that we are getting closer.⁵⁷

Implications of net zero emissions for global temperature increase

- 40 The direct result of the near-linear relationship between cumulative CO₂ emissions since 1850 and increases in global temperature is that to stabilise global temperature at any level, global net zero emissions of CO₂ from human activities must be achieved.⁵⁸ This is because, at the point of net zero, the amount of CO₂ human activity is putting into the atmosphere equals the amount of CO₂ human activity is removing from the atmosphere.⁵⁹
- 41 However, human-induced global warming is caused not only by CO₂ emissions but also the contribution from other GHGs. Therefore, to halt total human-induced warming, emissions of other GHGs, particularly methane, also need to be reduced.⁶⁰

Representative Concentration Pathways and Shared Socioeconomic Pathways

42 Climate scientists have undertaken climate model simulations to make projections of future global surface temperature change relative to emissions scenarios. The relevance of these scenarios is that they show the relationship between not only the amount of GHG emission reductions and global warming, but the timing of those reductions. As such,

⁵⁵ APP.0001.0003.0093 Exhibit A40, Karoly Report [30]-[35].

⁵⁶ APP.0001.0007.0044 IPCC, Climate Change 2021: Summary for All, 4; APP.0001.0007.0112IPCC, Climate Change 2021: The Physical Science Basis – Summary for Policymakers, [.0021]-[.0022].

⁵⁷ APP.0001.0019.0006 UNEP Emission Gap Report 2023, 15.

⁵⁸ APP.0001.0003.0093 Exhibit A40, Karoly Report [28].

⁵⁹ EVI.2001.0005.0001 IPCC, Climate Change 2022: Mitigation of Climate Change [.0099].

⁶⁰ EVI.2001.0005.0001 IPCC, Climate Change 2022: Mitigation of Climate Change [.0099].

these scenarios can be used to project global temperature increase at certain points in time. Those emissions scenarios are known as the Representative Concentration Pathways (**RCPs**) (assessed in the IPCC's Fifth Assessment Report) and the updated Shared Socioeconomic Pathways (**SSPs**) (assessed in the IPCC's Sixth Assessment Report).⁶¹

43 The projected global temperature changes in various scenarios are shown in Figure 10 and Table 2 of Professor Karoly's report.



Fig.10: Comparison of global temperature changes simulated by a simple global model for the SSP and RCP scenarios. Time series with 5–95% ranges and medians of global temperature projections relative to 1850–1900 for the RCP and SSP scenarios from MAGICC 7.5 simple global Earth System Model. MAGICC7.5 was run in the recommended setup used in IPCC AR6 Working Group 3. Reproduced from Figure 4.35(b), IPCC Sixth Assessment Report 'Climate change 2021: The Physical Science Basis'.¹⁹

⁶¹ APP.0001.0003.0093 Exhibit A40, Karoly Report [78]-[79].

	Near term, 2021–2040		Mid-term, 2041–2060		Long term, 2081–2100	
Scenario	Best estimate (°C)	<i>Very likely</i> range (°C)	Best estimate (°C)	<i>Very likely</i> range (°C)	Best estimate (°C)	<i>Very likely</i> range (°C)
SSP1-1.9	1.5	1.2 to 1.7	1.6	1.2 to 2.0	1.4	1.0 to 1.8
SSP1-2.6	1.5	1.2 to 1.8	1.7	1.3 to 2.2	1.8	1.3 to 2.4
SSP2-4.5	1.5	1.2 to 1.8	2.0	1.6 to 2.5	2.7	2.1 to 3.5
SSP3-7.0	1.5	1.2 to 1.8	2.1	1.7 to 2.6	3.6	2.8 to 4.6
SSP5-8.5	1.6	1.3 to 1.9	2.4	1.9 to 3.0	4.4	3.3 to 5.7

Table 2: Changes in global temperature for selected 20-year periods and five SSP scenarios. Temperature differences relative to the 1850–1900 Baseline are reported as the best estimate and 5-95% range. Reproduced from Table SPM.1, Summary for Policymakers, IPCC Sixth Assessment Report 'Climate change 2021: The Physical Science Basis'.⁵

The only emission scenario that simulates a world in which global temperatures are about 1.5°C warmer than preindustrial times by the end of this century is SSP1-1.9. Under this scenario, global warming will peak around the middle of the century, with a temporary overshoot of 1.5°C by no more than 0.1°C, before temperatures slowly decline as net global emissions fall below zero between 2050 and 2100.⁶² This underscores the necessity of cutting emissions immediately in order to hold global temperature increase to 1.5°C.

Impacts of climate change

- 45 The Commonwealth has admitted that an increase in global mean temperature causes a number of climate impacts. These include increases in global average ocean surface temperature, the melting of ice on land and sea and permafrost, changing precipitation patterns, sea level rise and inundation of coastal lands, increases in the frequency and intensity of extreme weather events, harm and destruction of ecosystems and non-human species, and various health-related impacts.⁶³
- 46 The expert evidence presents a stark picture of the impacts of the increase in global temperature observed from 1850-1900 to the present, both globally and in the Torres Strait region, as well as catastrophic future impacts absent immediate and steep cuts to GHG emissions.

⁶² APP.0001.0003.0093 Exhibit A40, Karoly Report [84].

⁶³ APP.0001.0015.0003 3FASOC [10]; CRT.2000.0003.0001 Defence [10].

Global impacts

- 47 The expert evidence establishes that anthropogenic emissions of GHGs has caused the following impacts of climate change globally:
 - 47.1 **Temperature increase:** The Commonwealth admits that from 1850-1900 to the most recent decade 2011-2020, global mean near-surface air temperature increased by approximately 1.09°C.⁶⁴ Professor Karoly's opinions as to the causal relationship between anthropogenic GHG emissions and this observed temperature increase are outlined in paragraphs [26]-[39] above.
 - 47.2 **Ocean acidification**: The Commonwealth admits that ocean acidification in the period 1850-1900 to the present is an impact of climate change.⁶⁵ The acidity of ocean waters is determined by the dissolution of CO₂ from the atmosphere in the upper layers of the ocean. Increased atmospheric concentrations of CO₂ caused by anthropogenic emissions, thus, cause acidification of ocean waters. This relationship, although nearly linear, varies geographically because of ocean current systems and the mixing of surface waters with deeper ocean waters.⁶⁶ In 2015, the IPCC found with high confidence in its Fifth Assessment Report that the pH of ocean surface water had decreased by 0.1, corresponding to a 26% increase in acidity.⁶⁷
 - 47.3 Ocean temperature increase: The Commonwealth admits increased ocean temperatures in the period 1850-1900 to the present are an impact of climate change.⁶⁸ Professor Karoly's evidence is that ocean temperatures increased by 0.88 [0.68 to 1.01]°C in the period 1850-1900 to 2011-2020.⁶⁹
 - 47.4 **Changes in precipitation patterns**: The Commonwealth admits that changing precipitation patterns in the period 1850-1900 to the present is an impact of climate change.⁷⁰ Increases in global temperature lead to near-linear increases in global

⁶⁴ APP.0001.0015.0003 3FASOC [8]; CRT.2000.0003.0001 Defence [8(a)].

⁶⁵ APP.0001.0015.0003 3FASOC [25(a)]; CRT.2000.0003.0001 Defence [25(a)].

⁶⁶ APP.0001.0003.0093 Exhibit A40, Karoly Report [43].

⁶⁷ APP.0001.0007.0115 IPCC, Climate Change 2014: Synthesis Report – Contribution of Working Groups I, II and II to the Fifth Assessment Report [.0019].

⁶⁸ CRT.2000.0003.0001 Defence [8(a)].

⁶⁹ The values inside the square brackets represent the very likely or 5% to 95% likelihood range: see APP.0001.0003.0093 Exhibit A40, Karoly Report [35].

⁷⁰ APP.0001.0015.0003 3FASOC [25(c)]; CRT.2000.0003.0001 Defence [25(c)].

average humidity in the lower atmosphere.⁷¹ This increase in humidity and, by extension, total water content in the global atmosphere affects precipitation patterns.⁷² In general, there are increases in precipitation in the tropics and decreases in the sub-tropics.⁷³ Moreover, the likelihood of extreme hourly and daily rainfall amounts has increased in many regions around the world due to increases in global temperature and humidity.⁷⁴

- 47.5 Sea level rise and inundation of coastal lands: The Commonwealth admits that rising sea levels and inundation of coastal areas in the period 1850-1900 to the present is an impact of climate change.⁷⁵ Professor Church's evidence demonstrates the extent to which these impacts have manifested in the present day:
 - (a) Global mean sea level has increased by approximately 0.21 m (0.16 to 0.26 m) in the period 1900 to 2020.⁷⁶
 - (b) Observed sea level change is clearly a result of increases in global temperatures.⁷⁷ The two largest contributors to sea level rise since 1900 are ocean thermal expansion and the loss of mass from glaciers,⁷⁸ both of which are caused by higher temperatures.⁷⁹
 - (c) The frequency of extreme sea level events (such as a 1 in 100 year event) in particular locations can increase rapidly with a rise in mean sea level. Although the increase in frequency of such events varies globally and is dependent on local conditions, Professor Church opines that at a number of locations around Australia, a 0.1 m rise in sea level can result in an increase in frequency of extreme events by a range of 1.8 to 5.8.⁸⁰

⁷¹ APP.0001.0003.0093 Exhibit A40, Karoly Report [52]-[53].

⁷² APP.0001.0003.0093 Exhibit A40, Karoly Report [54].

⁷³ APP.0001.0003.0093 Exhibit A40, Karoly Report [54].

⁷⁴ APP.0001.0003.0093 Exhibit A40, Karoly Report [56].

⁷⁵ APP.0001.0015.0003 3FASOC [25(d)]; CRT.2000.0003.0001 Defence [25(d)].

⁷⁶ APP.0001.0009.0002 Exhibit A53, Church Report [49].

⁷⁷ APP.0001.0009.0002 Exhibit A53, Church Report [59].

Ocean water expands as it warms and as a result sea level rises: APP.0001.0009.0002 Exhibit A53, Church Report [57].
APP 0001 0000 0002 Exhibit A52, Church Percent [50]

⁷⁹ APP.0001.0009.0002 Exhibit A53, Church Report [59].

⁸⁰ APP.0001.0009.0002 Exhibit A53, Church Report [40].

- (d) Increases in global temperature result in more energy in the atmosphere, more intense climate variability, changes in windspeed and direction and, thus, changes in sea level extremes.⁸¹
- 47.6 Extreme weather events: The Commonwealth admits that increased frequency, size and intensity of extreme weather events such as heatwaves, droughts, bushfires, tropical cyclones, severe storms and flooding in the period 1850-1900 to the present are impacts of climate change.⁸² Professor Karoly's evidence is that there is an approximately linear relationship between increases in global temperature and the frequency and intensity of extreme temperatures, heatwaves, weather conditions conducive to bushfires, extreme daily rainfall, drought and coastal storm surges.⁸³
- 47.7 **Harm and destruction to ecosystems and non-human species**: The Commonwealth admits that harm to and destruction of ecosystems and non-human species has occurred in the period 1850-1900 to the present as a result of climate change.⁸⁴ Expert and documentary evidence demonstrates that:
 - (a) Human-induced climate change associated with increases in global temperature since 1850-1900 has caused widespread adverse impacts to terrestrial ecosystems. This relationship is approximately linear but its strength varies between different regions.⁸⁵
 - (b) Mass coral bleaching occurs due to anthropogenic heating and associated longer and more extreme marine heatwaves. At the current level of global temperature increase, coral reefs have experienced three pan-tropical episodes of bleaching in the last three decades.⁸⁶
 - (c) Climate change has altered marine, terrestrial and fresh-water ecosystems and caused local species losses, increases in disease and mass mortality events of

⁸¹ APP.0001.0009.0002 Exhibit A53, Church Report [42].

⁸² APP.0001.0015.0003 3FASOC [25(e)]; CRT.2000.0003.0001 Defence [25(e)].

⁸³ APP.0001.0003.0093 Exhibit A40, Karoly Report [57].

⁸⁴ APP.0001.0015.0003 3FASOC [25(f)]; CRT.2000.0003.0001 Defence [25(f)].

⁸⁵ APP.0001.0003.0093 Exhibit A40, Karoly Report [62].

⁸⁶ APP.0001.0003.0095 Exhibit A43, Hughes Report [31].

plants and animals. This has resulted in extinctions, ecosystem restructuring and increases in areas burned by wildfire.⁸⁷

48 The impacts of global warming increase with incremental increases in global temperature. For example, see Figure 6 of Professor Karoly's report, taken from the IPCC's Summary for All:



Fig. 6: Changes in some extreme weather events for increases in global temperature. Changes are relative to the 1850-1900 Baseline for selected weather extremes. Reproduced from Graphic E, IPCC Climate Change 2021: Summary for All.

Impacts in the Torres Strait

49 The Applicants' expert, documentary and fact evidence establishes that the climate change impacts observed globally have occurred and are continuing to occur in the Torres Strait. As is clear from the evidence of the Applicants' fact witnesses below, these impacts pose a significant risk to Torres Strait Islanders' property, well-being and ability to practice *Ailan Kastom*. Further, and most critically, some of these impacts pose an existential risk to the habitability of the Torres Strait Islands. This is occurring in a

⁸⁷ APP.0001.0007.0118 IPCC, Climate Change 2022: Impacts, Adaptation and Vulnerability, 45.

context where Torres Strait Islanders: (i) have contributed little to the underlying causes of climate change; and (ii) are particularly vulnerable to these impacts. Climate change is having a severe, disproportionate impact in the Torres Strait compared to other regions.

- 50 In his report, Professor Pitman asserts that there is a diversity of views in the scientific community about the value of regional climate models in enabling the projection and attribution of observed regional and local impacts to climate change, with some arguing that the models are infected by systemic biases that have not previously been evaluated for the Torres Strait region.⁸⁸ The Applicants submit that Professor Pitman's opinion on the ability to project and attribute regional climate change impacts should not be accepted for the following reasons:
 - 50.1 Professor Karoly disagrees with Professor Pitman's assessment of regional climate models. Professor Karoly has evaluated regional climate model projections and simulations for the period 1950 to 2015 both for Australia and Horn Island. Professor Karoly acknowledges that there are uncertainties in these models but opines that they are sufficiently certain to draw the conclusions he does in his report because:
 - (a) When the models are used to simulate changes in the region between 1950 to the present, the results are consistent with changes actually observed in that period; and
 - (b) When the models are used to simulate changes in the future, the results are consistent with amplified climate changes consistent with global average temperature increase associated with particular levels of cumulative GHG emissions.⁸⁹
 - 50.2 Further, during cross-examination, Professor Pitman conceded that:
 - (a) the IPCC's sixth assessment report found, with a high degree of confidence, that regional temperature increase in northern Australia can be attributed to anthropogenic global heating;⁹⁰ and

⁸⁸ EXP.2000.0001.0286 Exhibit R10, Pitman Report [15].

⁸⁹ TRN.0009.0844 8 November 2023, Professor Karoly, T892.4-39.

⁹⁰ TRN.0015.1271 16 November 2023, Professor Pitman, T1332.26-40.

- (b) he did not have the requisite knowledge to opine regarding the attribution of changes in the Torres Strait to climate change including species extinction and observed sea level rise.⁹¹ Specifically, Professor Pitman stated that impacts such as sea level rise and coral bleaching in the Torres Strait are "outside [his] expertise."⁹² In contrast, Professor Hughes opined about the direct and specific connection between different degrees of global warming and coral losses and species impacts (see [75]-[77] below).
- 50.3 In addition, the IPCC in its sixth assessment report affirms the value of "regional climate modelling initiatives such as the Coordinated Regional Climate Downscaling Experiment" in complementing global models particularly for complex topography zones, coastal areas and small islands.⁹³
- 51 In addition to offering opinions specific to the Torres Strait, the Applicants' expert evidence regarding the global and regional impacts of climate change is that such impacts manifest similarly or more severely in the Torres Strait as they have in other places around the world. For example, Professor Karoly opines that the warming trend observed in northern Australia is indicative of a similar trend in the Torres Strait.⁹⁴ Similarly, Professor Selvey concludes from her review of academic literature establishing the direct connection between increases in death and illness and heat extremes that such increases have likely already occurred in the Torres Strait.⁹⁵

Sea level rise

- 52 While the Commonwealth admits that the Torres Strait Islands have been affected by sea level rise,⁹⁶ the evidence of Professor Karoly and Professor Church illustrates the severity of this impact for Torres Strait Islanders.
- 53 Professor Church's evidence is that sea levels are rising along all parts of the Australian coastline at an average rate consistent with global mean trends. Specifically, and accounting for natural climate variability, the average trends of sea level rise relative to land around the Australian coastline are 2.1 +/- 0.2 mm yr⁻¹ and 3.1 +/- 0.6 mm yr⁻¹ in the

⁹¹ TRN.0015.1271 16 November 2023, Professor Pitman, T1333.24-27.

⁹² TRN.0015.1271 16 November 2023, Professor Pitman, T1334.34-36.

⁹³ APP.0001.0007.0112, IPCC, Climate Change 2021: Physical Science of Climate Change [.0064].

⁹⁴ See discussion at [68].

⁹⁵ See discussion at [78].

⁹⁶ APP.0001.0015.0003 3FASOC [57(c)]; CRT.2000.0003.0001 Defence [57(a)].

periods 1966 to 2009 and 1993 to 2009 respectively.⁹⁷ Professor Church also opines that the rate of Australian sea level rise is accelerating, with current average rates approach 1 mm yr⁻¹ higher than those calculated in studies from 2014.⁹⁸

- 54 Professor Church notes that, over the last three decades, sea level rise in northern Australia has been larger than southern Australia and the global average at approximately 4 to 6 mm yr⁻¹. Similarly, short records indicate rates of relative sea level rise at Booby and Goods Islands in the Torres Strait of 3.7 +/- 3.8 (1990-2018) and 4.2 +/- 4.1 (1988-2022) mm yr^{-1.99}
- 55 Professor Karoly's evidence reinforces Professor Church's opinions, asserting that sea levels are rising by statistically significantly amounts in the Torres Strait.¹⁰⁰ Professor Karoly relies on the Torres Strait Regional Authority's 2021 *Torres Strait State of the Environment Report Card*, which states that sea level rise has been increasing at about twice the global rate (6 to 8 mm per year in the past decade) in the Torres Strait.¹⁰¹

Extreme sea level events and inundation of coastal areas

- 56 The evidence of Professor Church and Mr Bettington establishes that Torres Strait Islanders are experiencing more severe flooding events in their communities at more frequent intervals as a result of sea level rise observed in the region.
- 57 Professor Church gives evidence that the height of extreme events in the Torres Strait is directly related to local mean sea level. In support of this opinion, Professor Church describes a study prepared by Systems Engineering Australia in 2011 from which he concludes that the average depth of flooding in the Torres Strait increased 0.12 m from 1993 to 2023 and 0.25 m from 1900 to 2023.¹⁰²
- 58 Professor Church refers to two studies in support of his opinion that there has been an increase in the frequency of extreme sea level events of a given height in the Torres Strait. First, on the basis of the Systems Engineering Australia study, Professor Church

⁹⁷ APP.0001.0009.0002 Exhibit A53, Church Report [53]. Note that this figure accounts for natural sea level variability.

⁹⁸ APP.0001.0009.0002 Exhibit A53, Church Report [55].

APP.0001.0009.0002 Exhibit A53, Church Report [54]. Note that Professor Church considers that these figures reflect significant natural variability and should not be relied upon as an indicator of a longer-term trend.
APP.0001.0002 Exhibit A40, Kerney, Bernet [77]

¹⁰⁰ APP.0001.0003.0093 Exhibit A40, Karoly Report [77].

¹⁰¹ APP.0001.0007.0158 TSRA, Torres Strait State of the Environment Report Card 2021 [.0009].

¹⁰² APP.0001.0009.0002 Exhibit A53, Church Report [67].

determines that the frequency of such events increases (on average) by a multiplication factor of 5.2 for every 0.1 m of sea level rise. Second, a study by Woodworth et al. in 2021 estimated an average multiplication factor of 2.1 for every 0.1 m of sea level rise. Adopting the more conservative estimates of Woodworth et al., Professor Church concludes that there was at least a doubling in the frequency of extreme sea level events of a given height between 1993 and 2023 in the Torres Strait and an increase by a multiple of 6.4 for 1900 to 2023.¹⁰³

⁵⁹ Mr Bettington was briefed with Professor Church's conservative estimate that sea levels rose by 21 cm between 1900 and 2023 in the Torres Strait in line with the global average.¹⁰⁴ Mr Bettington applied this assumption to his calculation of extreme water levels relative to land height in the Torres Strait to determine the increase in the magnitude of such extremes in the period 1900 to 2023.¹⁰⁵ Mr Bettington's conclusions are set out in Tables 7 and 8 of his supplementary report filed on 10 November 2023.¹⁰⁶ By way of illustration, Mr Bettington concludes that, from 1900 to 2023, a 1 in 100 year inundation event on Boigu increased from 3.58 m Australian Height Datum (AHD) to 3.79 m AHD.¹⁰⁷

Average recurrence interval (ARI years)	Boigu Storm tide (m AHD)	Saibai Storm tide (m AHD)	Poruma Storm tide (m AHD)	Warraber Storm tide (m AHD)
HAT	2.95	2.61	2.46	2.53
10 years	3.15	2.69	2.66	2.83
25 years	3.31	2.84	2.80	3.01
50 years	3.45	2.97	2.94	3.15
100 years	3.58	3.11	3.05	3.27
500 years	3.88	3.40	3.29	3.52

Table 7 Baseline (1900) Extreme Water Levels Relative to AHD

¹⁰³ APP.0001.0009.0002 Exhibit A53, Church Report [68].

¹⁰⁴ APP.0001.0009.0002 Exhibit A53, Church Report [49].

¹⁰⁵ APP.0001.0009.0003 Exhibit A48, Bettington Report [.0014]-[.0022].

¹⁰⁶ APP.0001.0015.0011 Exhibit A49, Supplementary Bettington Report, Tables 7 and 8.

Table 8 Current (2023) Extreme Water Levels Relative to AHD

Average recurrence interval (ARI years)	Boigu Storm tide (m AHD)	Saibai Storm tide (m AHD)	Poruma Storm tide (m AHD)	Warraber Storm tide (m AHD)
HAT	3.16	2.82	2.67	2.74
10 years	3.36	2.90	2.87	3.04
25 years	3.52	3.05	3.01	3.22
50 years	3.66	3.18	3.15	3.36
100 years	3.79	3.32	3.26	3.48
500 years	4.09	3.61	3.50	3.73

60 Critically, Mr Bettington's evidence demonstrates that there was a significant increase in the frequency of extreme flooding in the Torres Strait between 1900 and 2023. This is most clearly shown by Mr Bettington's estimate of the height water levels must reach on Boigu, Saibai, Poruma and Warraber to flood half of the township on each island (a **Township Inundation Event**), as well as the frequency of exceedance of this level in 1900 and 2023.¹⁰⁸

Table 9 Township Inundation Event Water Levels Relative to AHD with Baseline and Current Frequency of Exceedance						
	Boigu	Saibai	Poruma	Warraber		
~50% of township flooded (m AHD)	3.4	2.8	3.6	3.5		
Baseline Frequency (years)	35	25	>500	500		
Current Frequency (years)	12	5	>500	100		

- 61 Applying the conclusions in Table 9 above, Mr Bettington opines that the frequency of these Township Inundation Events is almost three times as likely in any one year on Boigu and five times as likely on Saibai and Warraber in 2023 compared to 1900.
- 62 Mr Bettington maps the severity of flooding caused by these Township Inundation Events on Boigu, Saibai, Poruma and Warraber in his contribution to the supplementary report of the conference of experts dated 3 November 2023.¹⁰⁹ By reference to the maps of Boigu and Saibai set out below:
 - 62.1 On Boigu, a Township Inundation Event would result in flooding of up to 0.5m in depth in almost all parts of the community (indicated by the dark blue shading). In the southern parts of the community, depths could reach as much as 1m (indicated by teal shading). A similar observation can be made in respect of culturally significant sites such as the cemetery on the western end of the northern coastline.
 - 62.2 On Saibai, most parts of the community are subject to flood waters of up to 0.5m in depth during a Township Inundation Event, rising to 1m near the cemetery (to the west of the township).

¹⁰⁸ APP.0001.0015.0011 Exhibit A49, Supplementary Bettington Report, Table 9.

¹⁰⁹ APP.0001.0015.0011 Exhibit A49, Supplementary Bettington Report [.0005], [.0018], [.0031], [.0044].



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- 65 These examples from Mr Bettington's evidence emphasise the rapidly increasing risk posed by coastal flooding to the habitability of communities in the Torres Strait. In present day Boigu and Saibai, a significant inundation event that causes up to 0.5m of flooding in almost all parts of the community has an annual likelihood of occurrence of over 8% and 20% respectively.
- 66 The foregoing summary of Professor Church and Professor Bettington's evidence can be condensed into the following propositions:
 - 66.1 <u>First</u>, sea levels have risen in the Torres Strait region by a conservative estimate of21 cm from preindustrial times until the present day as a direct result of anthropogenic warming.
 - 66.2 <u>Second</u>, this observed sea level rise has contributed to an increase in the frequency and severity of flooding events experienced by communities in the Torres Strait.
 - 66.3 <u>Third</u>, for Boigu and Saibai, the frequency of inundation events with significant consequences for local communities has increased considerably since 1900, thereby reducing the habitability of these islands.¹¹⁰

Temperature increase and extreme heat

- 67 The Commonwealth admits that the Torres Strait has been affected by warmer days as a result of climate change.¹¹¹
- 68 Average land temperatures across Australia have increased by 1.47 +/- 0.24°C since high quality national records began in 1910.¹¹² Professor Karoly's evidence is that this warming, particularly in northern Australia, is generally indicative of a similar trend in the Torres Strait region.¹¹³
- 69 Professor Karoly refers to his analysis of high-quality temperature observations for Horn Island from the ACORN-SAT dataset of the Bureau of Meteorology to demonstrate an upward trend in temperatures in the Torres Strait region. According to the dataset, the average maximum temperature in the Torres Strait increased by 0.80°C from 1951-60 to

¹¹⁰ APP.0001.0009.0003 Exhibit A48, Bettington Report [.0024].

¹¹¹ APP.0001.0015.0003 3FASOC [57(a)]; CRT.2000.0003.0001 Defence [57(b)].

¹¹² APP.0001.0003.0093 Exhibit A40, Karoly Report [65(a)].

¹¹³ APP.0001.0003.0093 Exhibit A40, Karoly Report [69].

the most recent decade 2011-2020.¹¹⁴ Further, the number of days with a maximum temperature greater than 30°C at Horn Island increased statistically significantly from 154 days per year in 1951-60 to 231 days per year in 2011-2020. The number of days with a maximum temperature greater than 34°C also increased significantly from 0.7 days per year in 1951-1960 to 2.5 days per year in 2011-2020.¹¹⁵

Ocean temperature increase

- 70 The Commonwealth admits that the Torres Strait Islands has been affected by increases in ocean temperature.¹¹⁶
- 71 Professor Hughes' evidence is that there is a clear warming trend in sea surface temperatures on the Great Barrier Reef over the past 120 years.¹¹⁷ This is represented in Figure 6 of Professor Hughes' report, which is set out below. The blue bars indicate years where anomalous sea surface temperatures in December were lower than the 1961-1990 reference period, whereas red bars represent warmer, positive anomalies. The preponderance of red bars from 1970 onwards indicates a warming trend.

¹¹⁴ APP.0001.0003.0093 Exhibit A40, Karoly Report [70].

¹¹⁵ APP.0001.0003.0093 Exhibit A40, Karoly Report [70].

¹¹⁶ APP.0001.0015.0003 3FASOC [57(b)]; CRT.2000.0003.0001 Defence [57(b)].

¹¹⁷ See APP.0001.0003.0095 Exhibit A43, Hughes Report [35]. While the Torres Strait is formally considered by the Commonwealth to be outside of the Great Barrier Reef Region, Torres Strait is ecologically and geologically inseparable from the rest of the Great Barrier Reef: APP.0001.0003.0095 Exhibit A43, Hughes Report Figure 1. On this basis, the warming of the Great Barrier Reef implies a warming of oceans in the Torres Strait region.


Figure 6. Sea surface temperature anomalies on the Great Barrier Reef in December, 1900-2021. Blue bars indicate years where temperatures were lower than the 1961-1990 reference period. Red bars indicate warmer, positive anomalies. (Australian Bureau of Meteorology, 2022).

Further, both Professor Karoly and Professor Hughes give evidence that the extensive coral bleaching that has occurred in the Torres Strait over the last two decades was caused by ocean warming and marine heatwaves.¹¹⁸ This aligns with the findings of Suppiah et al. in a 2010 report prepared for the CSIRO, which found that the average annual sea surface temperature in the Torres Strait region rose by about 0.16°C to 0.18°C per decade from 1950 to 2010.¹¹⁹

Erosion

73 Mr Bettington gives evidence that sea level rise in the Torres Strait exacerbates erosion issues for coral cay and rock islands such as Poruma, Warraber and Badu. The shape of sand formations on these islands are controlled by reef top waves and currents, which drive morphological processes. The reef edge absorbs some of the energy caused by waves and currents. However, sea level rise increases the depth of the water over the reef edge, reef top absorbs less of this energy. This in turn alters the morphological processes on these islands, causing imbalances in sand transport and, by extension, erosion.¹²⁰

¹¹⁸ APP.0001.0003.0093 Exhibit A40, Karoly Report [72]; APP.0001.0003.0095 Exhibit A43, Hughes Report [97].

¹¹⁹ APP.0001.0007.0053 Suppiah et al. 2010 Observed and Future Climates of the Torres Strait Region [.0006].

¹²⁰ APP.0001.0009.0003 Exhibit A48, Bettington Report [.0045].

74 Mr Bettington states that this imbalance is evident on Poruma, where transport rates during the dominant south-easterly season exceed the wet season north-westerly conditions.¹²¹

Harm and destruction of ecosystems and non-human species

- 75 Professor Hughes gives evidence that sea level rise and increased ocean temperatures are already damaging nearshore ecosystem habitats in the Torres Strait, including mangroves, mudflats and beaches, coastal wetlands and seagrasses and intertidal coral reefs.¹²²
- 76 Specifically, Professor Hughes states that:
 - 76.1 Sea level rise and storm surges have caused significant damage to mangrove habitats and freshwater swamps, including creating new hypersaline wetlands on Boigu and Saibai.¹²³
 - 76.2 The 2020 and 2021 Torres Strait Seagrass Report Cards found significant declines in seagrass conditions near Mabuiag Island.¹²⁴ While the causes of specific die-offs are poorly understood due to inconsistent monitoring, Professor Hughes stated in his oral testimony that, in general, "those causes are increasingly linked to climate change."¹²⁵
 - 76.3 Aerial surveys conducted by the Torres Strait Regional Authority in 2016 documented a pronounced increase in the intensity of coral bleaching in the Torres Strait. For the top quartile of reefs most severely affected by the 2016 bleaching event, the mortality rate ranged from 84-99%. As a result, the Torres Strait Regional Authority described the condition of coral reefs in the region to be "of significant concern."¹²⁶
 - 76.4 Subsequently, mass coral bleaching has re-occurred in the Torres Strait in 2017,
 2020 and 2022 due to high ocean temperatures.¹²⁷ Professor Hughes describes how

¹²¹ APP.0001.0009.0003 Exhibit A48, Bettington Report Figure 37.

¹²² APP.0001.0003.0095 Exhibit A43, Hughes Report [78].

¹²³ APP.0001.0003.0095 Exhibit A43, Hughes Report [92].

¹²⁴ APP.0001.0003.0095 Exhibit A43, Hughes Report [94].

¹²⁵ TRN.0010.0920 9 November 2023, Professor Hughes, T987.20-23.

¹²⁶ APP.0001.0003.0095 Exhibit A43, Hughes Report [96].

¹²⁷ APP.0001.0003.0095 Exhibit A43, Hughes Report [97].

the re-occurrence of these bleaching events substantially impacts reef composition; heat-sensitive species died off and were replaced by heat-resistant corals, which has substantially affected numerous ecological functions and reef-building processes.¹²⁸

- 77 Professor Hughes also gives evidence that climate change is significantly affecting marine and terrestrial species living in and near the Torres Strait:
 - 77.1 The Bramble Cay melomys was declared extinct in 2015. More than 90% of the vegetation on Bramble Cay was destroyed by sea water inundation due to storm surges and rising sea levels.¹²⁹
 - 77.2 Seagrass diebacks have resulted in significant local mortality and loss of physiological condition of dugong and turtles in the Torres Strait. ¹³⁰
 - 77.3 As nesting temperatures determine the gender of turtles and crocodiles, rising terrestrial and ocean temperatures have caused an increased feminine bias. 99.1% of juvenile turtles hatched in the far northern Great Barrier Reef and in the Torres Strait are female.¹³¹

Heat induced mortality and morbidity

Professor Selvey opines that increased warmer temperatures in the Torres Strait have likely already impacted the health of Torres Strait Islanders living in the region. Although no studies specific to the Torres Strait or small islands have been conducted, it is well understood in medical literature that there is an association between heat exposure and increased morbidity (illness) and mortality (death).¹³² High temperatures directly impact health by causing heat exhaustion and heat stroke. In addition, exposure to heat can exacerbate existing cardiovascular, respiratory and renal conditions to cause death or illness.¹³³ Based on this well-established association and the higher rates of co-

¹²⁸ APP.0001.0003.0095 Exhibit A43, Hughes Report [111]-[120].

¹²⁹ APP.0001.0003.0095 Exhibit A43, Hughes Report [88].

¹³⁰ APP.0001.0003.0095 Exhibit A43, Hughes Report [80].

¹³¹ APP.0001.0003.0095 Exhibit A43, Hughes Report [84]-[87].

¹³² APP.0001.0003.0094 Exhibit A44, Selvey Report [42].

¹³³ APP.0001.0003.0094 Exhibit A44, Selvey Report [44].

morbidities in the Torres Strait region,¹³⁴ Professor Selvey concludes that increased temperatures are already inducing death and illness in the Torres Strait.¹³⁵

- 79 A key factor in Professor Selvey's conclusion is the vulnerability of populations that live in hot and humid conditions. While tropical areas near the ocean such as the Torres Strait tend to have fewer heat extremes, the impact of humidity and warmer nights means those who live in those regions have reduced margin for physiological adaptation to higher temperatures.¹³⁶ This aligns with the findings of Suppiah et al. in their 2010 study on the impacts of climate change in the Torres Strait.¹³⁷ Suppiah et al. state that the average annual 'apparent temperature', or how temperatures feel, in the Torres Strait was almost 12°C higher than the annual air temperature partly due to humidity. As such, current temperatures in the Torres Strait are conducive to health impacts such as fatigue and heat stress, particular for the sick and elderly.
- 80 Professor Selvey also refers to a study which found that mortality on hot and extremely hot days was higher in areas of Australia where populations were in the lowest socioeconomic stratum.¹³⁸ Professor Selvey opines that this conclusion is relevant in the Torres Strait given the region's socioeconomic classification.¹³⁹

The climate science is consistent with Torres Strait Islanders' observations

81 The scientific findings on climate change above are reflected in the lived experiences of climate change shared by Torres Strait Islander witnesses.

¹³⁴ APP.0001.0003.0094 Exhibit A44, Selvey Report [9]-[21].

¹³⁵ APP.0001.0003.0094 Exhibit A44, Selvey Report [42], [54] and [78].

¹³⁶ APP.0001.0003.0094 Exhibit A44, Selvey Report [42].

¹³⁷ APP.0001.0007.0053 Suppiah et al. 2010 Observed and Future Climates of the Torres Strait Region [.0007].

¹³⁸ APP.0001.0003.0094 Exhibit A44, Selvey Report [46].

¹³⁹ APP.0001.0003.0094 Exhibit A44, Selvey Report [46].

82 Torres Strait Islander witnesses testified to the significant changes that they have seen on their islands, including increased heat¹⁴⁰, increased ocean temperatures¹⁴¹, sea level rise and erosion¹⁴², extreme sea level events¹⁴³, and harm to ecosystems and animals¹⁴⁴.

Avoiding the most serious impacts of climate change in the Torres Strait requires holding global temperature increase to $1.5^{\circ}C$

- 83 It is well understood that the continued emission of GHGs will cause further warming and longer lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts around the world.¹⁴⁵ Every additional increment of temperature increase accelerates changes to climate and weather extremes.
- 84 There is a marked difference in projected climate impacts if global temperature increase is limited to 1.5°C, compared to 2°C, 3°C or 4°C, above preindustrial times. As stated by the IPCC in its Special Report on 1.5°C, "climate-related risks for natural and human systems are higher for global warming of 1.5°C than at present but lower than at 2°C."¹⁴⁶ This finding was reiterated in the IPCC's sixth assessment report, which states that "nearterm actions that limit global warming to close to 1.5°C would substantially reduce projected losses and damages related to climate change in human systems and ecosystems compared to higher warming levels."¹⁴⁷
- 85 The expert evidence makes clear that the risk of avoiding the most severe, existential impacts of climate change requires limiting global temperature increase to 1.5°C or as

¹⁴⁰ APP.0001.0009.0010 Affidavit of Aunty Jen [48].

¹⁴¹ APP.0001.0009.0012 Affidavit of Uncle Peo [45]; APP.0001.0012.0005 8 June 2023, Uncle Peo, T251:36-252:27; APP.0001.0009.0006 Affidavit of Uncle Boggo [48]; APP.0001.0012.0008 15 June 2023, Uncle Boggo, T656:1-40.

APP.0001.0012.0004 Affidavit of Uncle Pabai [81]-[82], [128-141], [147]-[159]; APP.0001.0009.0006 Affidavit of Uncle Boggo [71-81], [94]-[103]; APP.0001.0012.0009 16 June 2023, Uncle Frank, T795:4-38;
 APP.0001.0012.0003 12 June 2023, Uncle Herbert, T549:15-550:12; APP.0001.0012.0006 13 June 2023, Aunty Jen, T636:23-33; APP.0001.0012.0007 6 June 2023, Uncle Fred, T106:8-37; APP.0001.0009.0011 Affidavit of Uncle

Gerald [17]-[20]; APP.0001.0012.0008 15 June 2023, Uncle Gerald, T728:13-45.
 APP.0001.0012.0004 Affidavit of Uncle Pabai [87], [131]-[133], [169], [170], [180]; APP.0001.0009.0005 Affidavit of Uncle Paul [131]-[133], [140]-[142]; APP.0001.0012.0008 15 June 2023, Uncle Boggo, T667:47-668:23; APP.0001.0009.0013 Affidavit of Uncle Laurie [85]-[96]; APP.0001.0009.0011 Affidavit of Uncle Gerald [33], [40]; APP.0001.0012.0003 12 June 2023, Uncle Herbert, T541:34-40; APP.0001.0009.0007 Affidavit of Uncle Herbert [31]-[32].

¹⁴⁴ APP.0001.0009.0006 Affidavit of Uncle Boggo [49]-[58]; APP.0001.0012.0003 12 June 2023, Uncle Paul, T465:15-37; APP.0001.0012.0005 8 June 2023, Uncle Laurie, T202:1-41.

¹⁴⁵ APP.0001.0007.0115 IPCC, Climate Change 2014: Synthesis Report – Contribution of Working Groups I, II and II to the Fifth Assessment Report [.0007].

¹⁴⁶ APP.0001.0007.0116 IPCC, *Global Warming of 1.5°C* [.0019].

¹⁴⁷ APP.0001.0007.0112 IPCC, Climate Change 2021: The Physical Science Basis – Summary for Policymakers [.0031].

close to 1.5°C as possible.¹⁴⁸ This is especially true in the low-lying Torres Strait region, where the habitability of many communities is dependent on minimising global warming both immediately and as much as possible. This is discussed further below in respect of the best available science at [322]. Therefore, limiting global temperature increase to 1.5°C is the **global temperature limit**.

Sea level rise

- 86 Future sea level rise and consequential inundation of coastal areas poses an existential threat to Torres Strait Islanders living in the Torres Strait. The low-lying nature of these islands renders them susceptible to even marginal increases in sea level rise. In this context, minimising global temperature increase is the only option that will avoid the harm associated with relocating Torres Strait Islanders from their homes.
- 87 Professor Karoly and Professor Church both affirm the IPCC's projections of global sea level rise in its sixth assessment report.¹⁴⁹ Professor Church sets out these projections relative to 1900 in Table 3 of his report.¹⁵⁰

	SSP1-1.9	SSP1-2.6	SSP2-4.5	SSP3-7.0	SSP5-8.5	SSP5-8.5 Low confidence
Global mean rise - 2050 relative to 1900 (m)	0.34 (0.31- 0.39)	0.35 (0.32- 0.41)	0.36 (0.33- 0.42)	0.38 (0.34- 0.43)	0.39 (0.36- 0.45)	0.40 (0.36- 0.56)
Global mean rise - 2100 relative to 1900 (m)	0.54 (0.44- 0.71)	0.60 (0.48- 0.78)	0.72 (0.60- 0.92)	0.84 (0.71- 1.06)	0.93 (0.79- 1.17)	1.04 (0.79- 1.76)

Table 3: IPCC **AR6** projections of global mean sea level (Fox-Kemper et al. 2021) in 2050 and 2100 <u>compared to 1900</u>. The numbers in each box are the central estimate of sea-level rise, with the likely range (17-83%) given in brackets. The AR6 noted the potential of an additional low confidence contribution from possible but uncertain instabilities of the Antarctic ice sheet for the high emission scenarios. Changes relative to 1900 are estimated by adding the observed global mean rise of 0.16 m to the projections (Table 2) relative to 1995-2014.

¹⁴⁸ APP.0001.0007.0112 IPCC, Climate Change 2021: The Physical Science Basis – Summary for Policymakers [.0031].

¹⁴⁹ APP.0001.0003.0093 Exhibit A40, Karoly Report [105]; APP.0001.0009.0002 Exhibit A53, Church Report [76]-[77].

¹⁵⁰ SSP1-1.9, SSP1-2.6 and SSP2-4.5 are warming scenarios that accord with global temperature increase of 1.5°C, 2°C and 3°C above preindustrial times respectively.

88 In addition, Professor Church and Professor Karoly agree that sea levels are projected to rise in the Torres Strait in accordance with total global temperature increase.¹⁵¹ Professor Church provides specific regional sea level rise projections in Table 5 of his report.

	SSP1-1.9	SSP1-2.6	SSP2-4.5	SSP3-7.0	SSP5_8.5
2050 relative	0.34 (0.30-	0.36 (0.31-	0.37 (0.32-	0.38 (0.34-	0.40 (0.34-
1900	0.41)	0.43)	0.45)	0.45)	0.48)
Woodworth Multiplication factors	12 (4-42)	14 (4-52)	16 (4-58)	17 (5-65)	19 (5-81)
SSA Multiplication factors	272 (15- 4,040)	378 (17- 6580)	446 (18-8410)	526 (20- >10,000)	731 (23- >10,000)
2100 relative	0.56 (0.42-	0.62 (0.46-	0.74 (0.57-	0.87 (0.69-	0.96 (0.76-
to 1900	0.76)	0.83)	0.99)	1.14)	1.27)
Woodworth Multiplication factors	64 (10-470)	99 (12-908)	242 (20- 3,390)	636 (34- 14,200)	1,240 (49- >10,000)
SSA	>10,000	>10,000	>10,000 (342-	>10,000	>10,000
Multiplication	(83-	(133-	>10,000)	(953-	(1,940-
factors	>10,000)	>10,000)	1000 NO. 100 NO. 10	>10,000)	>10,000)

Table 5: Projections of mean sea level for Torres Strait relative to 1900 based on the AR6 results but with the estimate of local vertical land motion using the same GIA estimates as used in the AR5. The numbers in each box are the central estimate of sea-level rise, with the likely range (17-83%) given in brackets. Changes relative to 1900 are estimated by adding the observed global mean rise (in the absence of estimate of regional changes) from 1900 to the reference period by 0.16 m to the projections relative to 1995-2014 (Table 4). The multiplication factor is the factor by which the return period of extreme sea level events at a given height is divided by for a given sea level rise. For example, if the factor is 4, a return period of 100 years becomes 25 years. The factor is calculated here for the mean sea level rise for each scenario and the range of multiplication factors across the islands used in the studies of Woodworth et al. (2021) and Systems Engineering Australia (SSA, 2011).

Applying the figures in Table 5, Professor Church estimates that sea levels will rise by 34 cm in the Torres Strait region in the period 1900 to 2050 if humanity follows the IPCC's emissions pathway to limit warming to 1.5°C (that is, SSP1-1.9), as opposed to 36 cm at 2°C (SSP1-2.6) and 37 cm at 3°C (SSP1-4.5). Given Professor Church's

¹⁵¹ APP.0001.0003.0093 Exhibit A40, Karoly Report [Figure 13]; APP.0001.0009.0002 Exhibit A53, Church Report [89]-[92].

conservative view that sea levels rose by 21 cm in the period 1900 to 2023, this implies a further 13 cm of rise as a best-case scenario in the next 26 years. By 2100, sea level rise in different warming scenarios is especially pronounced. Professor Church estimates that sea levels in the Torres Strait will rise 56 cm relative to 1900 with 1.5°C of warming, 6 cm more at 2°C and 18 cm more at 3°C.

- ⁹⁰ The foregoing also demonstrates that, after 2050, projected sea level rise globally and in the Torres Strait is strongly dependent on near-term emission scenarios.¹⁵² On the 1.5°C trajectory, the rate of rise per year is 4.3 mm compared to 5.3 mm for 2°C and 7.7 mm for 3°C.¹⁵³ Critically, the rate of rise peaks before 2100 in lower emissions scenarios whereas, in higher emissions scenarios, the rate is still increasing at the end of the century, implying rapidly rising sea levels over subsequent decades and centuries.¹⁵⁴ The actions taken now to reduce emissions will have a dramatic effect on the sea level rise observed in the region and, as such, the habitability of island communities.
- 91 Professor Church explains that projections of the amount of sea level rise before 2050 are weakly dependent on GHG emissions from the present day until 2050.¹⁵⁵ This is because of a time lag between the emission of a unit of GHG and the consequential rise in sea level caused by that emission. There are two relevant observations that flow from this which are elaborated in the section of the submissions below from [92] onward:
 - 91.1 First, the effect of the Commonwealth's failure to reduce its emissions in the past is unavoidable. There is a baseline amount of projected sea level rise that is inevitable by 2050 and this is, in part, result of the emission of GHGs in Australia.
 - 91.2 Second, for low-lying communities in the Torres Strait, the short-term habitability of certain areas will depend on marginal differences in sea level rise between warming scenarios. For this reason, the reduction of emissions in the near term will be critical to maintaining liveable conditions.

¹⁵² APP.0001.0009.0002 Exhibit A53, Church Report [73] and [84]-[86].

¹⁵³ APP.0001.0009.0002 Exhibit A53, Church Report, Table 2.

¹⁵⁴ APP.0001.0009.0002 Exhibit A53, Church Report [73].

¹⁵⁵ APP.0001.0009.0002 Exhibit A53, Church Report [84].

Extreme sea level events and inundation of coastal areas

- 92 Professor Church's evidence is that there will be a rapid increase in the number of coastal locations globally where what are currently once every hundred years extreme sea level events will occur *at least once per year*. He repeats the IPCC's finding in its sixth assessment report that extreme sea level events that currently occur only once per century will occur annually or more frequently at approximately 19-31% of tide gauges by 2050 and at about 60% (at 2°C of global warming) to 82% (at 4.4°C of global warming) of tide gauges by 2100, and that the tropics appear more sensitive than the Northern high latitudes. ¹⁵⁶ Professor Church opines that regional sea level rise will be the main cause of this substantial increase in frequency.¹⁵⁷ This projection emphasises the magnitude of the harm associated with sea level rise and continued GHG emissions at the global level; according to Professor Church, in 26 years, at least one fifth coastal locations will be exposed on annual basis to sea level events that, currently, only have a one per cent chance of occurring in any given year.
- 93 In addition, Professor Church states that the intensity (or height) of 1 in 100 year extreme events will increase with rises in local mean sea level.¹⁵⁸
- 94 Critically, Professor Church projects that there will be a rapid increase in the frequency of extreme sea level events of a given height in the Torres Strait as mean levels rise. This is demonstrated by Mr Bettington in his contribution to the report of the conference of experts dated 3 November 2023, the Supplementary Joint Expert Report and in the Bettington Supplementary Report.

Inundation events in 2050

95 Mr Bettington sets out his projection of the frequency with which communities on Boigu, Saibai, Poruma and Warraber will experience Township Inundation Events in 2050 if emissions continue in line with the IPCC's trajectories for 1.5°C, 2°C and 3°C of global warming.¹⁵⁹

¹⁵⁶ APP.0001.0009.0002 Exhibit A53, Church Report [94].

¹⁵⁷ APP.0001.0009.0002 Exhibit A53, Church Report [93].

¹⁵⁸ APP.0001.0009.0002 Exhibit A53, Church Report [96].

¹⁵⁹ APP.0001.0015.0011 Exhibit A49, Supplementary Bettington Report, Table 14.

	Boigu	Saibai	Poruma	Warraber
~50% of township flooded (m AHD)	3.4	2.8	3.6	3.5
SSP1-1.9 2050 Frequency (years)	7	3	250	60
SSP1-2.6 2050 Frequency (years)	5	2.5	200	50
SSP3-7.0 2050 Frequency (years)	4	2	150	40

Table 14 Township Inundation Event Water Levels Relative to AHD with 2050 Frequency of Exceedance

96 Mr Bettington's evidence highlights the near-term necessity for Torres Strait Islanders that global temperature increase be limited as much as possible. A Township Inundation Event is an event that would flood approximately half of any community. If the frequency of this inundation reaches a point of unsustainability, it can render these communities uninhabitable. By way of illustration, Mr Bettington projects that, in 2050, the annual probability of a Township Inundation Event occurring on Boigu increases from approximately 14% under the 1.5°C warming scenario to 20% under 2°C and 25% for 3°C.¹⁶⁰ Similarly, the probability of an equivalent event occurring on Saibai in a given year increases from 33% under the 1.5°C to 40% under 2°C and 50% under 3°C.

Flooding events in 2100

- 97 Mr Bettington's evidence demonstrates that the risk posed by coastal flooding in the Torres Strait increases dramatically after 2050 depending on future GHG emissions and associated global warming. Due to the time-lag between emissions and observed sea level rise, near-term reductions that align with the very low emissions trajectory will significantly mitigate the projected impact of flooding events in the Torres Strait.
- 98 Table 18 of the Supplementary Bettington Report reflects Mr Bettington's opinion as to the frequency with which the communities on Boigu, Saibai, Poruma and Warraber will experience Township Inundation Events in 2100 if emissions continue in line with the trajectories for 1.5°C, 2°C and 3°C of global warming.¹⁶¹ Specifically:
 - 98.1 In 2100, the annual likelihood of such an event occurring on Boigu is 50% on the 1.5°C trajectory compared to 66.7% for 2°C and 200% (twice per year) for 3°C.

¹⁶⁰ Mr Bettington defines a 'Township Inundation Event' as an event that would flood approximately half of any community: APP.0001.0009.0003 Exhibit A48, Bettington Report [.0023].

¹⁶¹ APP.0001.0015.0011 Exhibit A49, Supplementary Bettington Report, Table 18.

- 98.2 In 2100, the annual likelihood of such an event occurring on Saibai is 100% on the 1.5°C trajectory compared to 142.9% for 2°C and 500% (five times per year) for 3°C.
- 98.3 In 2100, the annual likelihood of such an event occurring on Poruma is 1% on the 1.5°C trajectory compared to 1.4% for 2°C and 5% for 3°C.
- 98.4 In 2100, the annual likelihood of such an event occurring on Warraber is 6.7% on the 1.5°C trajectory compared to 9.1% for 2°C and 33.3% for 3°C.

Table 18 Township Inundation Event Water Levels Relative to AHD with 2100 Frequency of Exceedance					
	Boigu	Saibai	Poruma	Warraber	
~50% of township flooded (m AHD)	3.4	2.8	3.6	3.5	
SSP1-1.9 2100 Frequency (years)	2	1	100	15	
SSP1-2.6 2100 Frequency (years)	1.5	0.7	70	11	
SSP3-7.0 2100 Frequency (years)	0.5	0.2	20	3	

- 99 Mr Bettington's evidence illustrates that, after 2050, communities in the Torres Strait that are not currently subject to frequent inundation (such as Poruma and Warraber) may start to experience more frequent severe flooding events.
- 100 The combined effect of Professor Church and Mr Bettington's evidence can be summarised as follows:
 - 100.1 As global GHG emissions continue, there will be a rapid increase in the frequency of extreme sea level events of a given height in the Torres Strait as mean levels rise. For similar reasons, the intensity of these events will also increase.
 - 100.2 The effect these future emissions will have on sea level rise and inundation events will increase as time passes. This is because of the lag between the emission of GHGs and the consequential rise in sea level. This is true globally and in the Torres Strait. The corollary of this is that:
 - (a) The emission of GHGs in Australia in the past has contributed to the projected increase in sea level and the frequency and intensity of inundation events globally and in the Torres Strait. Some level of increased impact is unavoidable.

- (b) Given that many islands in the Torres Strait are low-lying and vulnerable to marginal increases in sea level rise, the minimisation of future emissions could make a significant difference to the liveability of these communities by 2050.
- 100.3 The severity of sea level rise and associated inundation events in the period 2050 onwards is strongly dependent on the emissions reduction trajectories humanity adopts in the near-term. This is true for Boigu and Saibai (both of which already suffer a significant degree of inundation) as well as islands that are not currently exposed to a significant degree of inundation (for example, Poruma and Warraber). This is emphasised by evidence of the pronounced difference in the frequency of extreme sea level events across the Torres Strait at 1.5°C of global warming as opposed to 2°C or 3°C. By extension, emissions reduction efforts adopted now can have a substantial effect on the longer-term habitability of the region.

Temperature increase and intensification of heat extremes

- 101 Professor Karoly's evidence regarding the increase in global temperatures attached to specific emissions trajectories is set out in paragraphs [42]-[44]. Professor Karoly's view that it is possible to stabilise global temperature increase at or below 1.5°C above preindustrial times if humanity follows the IPCC's very low emissions scenario.¹⁶² However, Professor Karoly gives evidence that if GHG emissions are reduced in accordance with current global commitments, temperatures are projected to increase by 2.8°C above preindustrial levels.¹⁶³
- 102 Professor Karoly's evidence also extends to projections of temperature increase and intensification of heat extremes in Australia and the Torres Strait:
 - 102.1 If global temperature increase is limited to 1.5°C, Australian average temperature is projected to be approximately 2.1°C above preindustrial levels. If global temperatures increase to 2°C, Australia's average temperature is expected to rise to 2.7°C.¹⁶⁴

¹⁶² TRN.0010.0920 9 November 2023, Prof Karoly, T956.42-T957.18.

¹⁶³ APP.0001.0003.0093 Exhibit A40, Karoly Report [93].

¹⁶⁴ APP.0001.0003.0093 Exhibit A40, Karoly Report [108].

- 102.2 Mean average temperature change in the Torres Strait region *relative to 1986-2005* is projected to be 0.7°C higher for global warming of 1.5°C. Regional temperature increase is expected to reach 1.3°C for global warming of 2°C and 2.0°C for global warming of 3°C.¹⁶⁵
- 102.3 The mean annual change in heatwave duration in the Torres Strait region *relative to 1986-2005* is projected to increase by 2.5 days per year for global warming of 1.5°C; 9 days per year for 2°C; and 55 days for 3°C.¹⁶⁶

Ocean temperature increase

- 103 Professor Karoly's evidence is that increases in global average ocean temperature will follow the projected increases in global average temperatures set out in paragraph [47.3] above. However, the scale of this increase is likely to be approximately 1.4 to 1.7 times smaller.¹⁶⁷ The IPCC's sixth assessment report states that the future global mean ocean temperature increase projected by models for the period 1995–2014 to 2081–2100 is 0.86°C at 2°C of global warming and 1.51°C at 3°C.¹⁶⁸
- 104 Professor Karoly also concludes that ocean temperatures and the frequency of marine heatwaves will increase in Australia and the Cape York region, including the Torres Strait, as global temperatures rise.¹⁶⁹

Ocean acidification

- 105 Professor Karoly states in his report that ocean acidification will increase in direct response to increases in atmospheric CO₂ concentrations. For global warming of 1.5°C, ocean acidity will be approximately 20% higher than current levels, 30% higher for global warming of 2°C and 50% higher for global warming of 3°C at the end of the century.¹⁷⁰
- 106 Similarly, Professor Karoly projects that ocean acidification will increase in Australia and the Torres Strait as global temperatures rise.¹⁷¹ The IPCC estimates in its Fifth

¹⁶⁵ APP.0001.0003.0093 Exhibit A40, Karoly Report [114].

¹⁶⁶ APP.0001.0003.0093 Exhibit A40, Karoly Report [115].

¹⁶⁷ APP.0001.0003.0093 Exhibit A40, Karoly Report [98].

APP.0001.0007.0118 IPCC, Climate Change 2022: Impacts, Adaptation and Vulnerability – Contribution of Working Group II to the Sixth Assessment Report of the IPCC [.0404].

¹⁶⁹ APP.0001.0003.0093 Exhibit A40, Karoly Report, Figures 12, 13.

¹⁷⁰ APP.0001.0003.0093 Exhibit A40, Karoly Report [99].

¹⁷¹ APP.0001.0003.0093 Exhibit A40, Karoly Report, Figures 12, 13.

Assessment Report that pH levels in Australian oceans will drop by range of approximately 0.1 to 0.3 for global heating of 2°C to 4.3°C by the end of the century.¹⁷² Professor Hughes' evidence is that, in 2°C warming scenario, long term ocean acidification will substantially impede reef-building processes in the Torres Strait.¹⁷³

Changes in precipitation patterns

107 Professor Karoly's evidence is that continued global warming is projected to further intensify the global water cycle including its variability, global monsoon precipitation and the severity of wet and dry events..¹⁷⁴ Professor Karoly affirms the IPCC's projection in its sixth assessment report that the wettest day in any region will occur 1.5 times more frequently at 1.5°C of global warming as opposed to 1.7 and 2.7 times for global warming of 2°C and 4°C.

Erosion

- 108 Mr Bettington opines that the erosion issues already observed on coral cays and rock islands will increase in line with sea level rise in the Torres Strait. The imbalanced sediment transport regime on Poruma described in paragraphs [73]-[74] will become approximately 50% more intense by 2050 and 100% more intense by 2100. Mr Bettington estimates that this will cause an excess sediment transport towards the northwest of the island in order of 2500 m³ per year in 2050 and 5000 m³ per year in 2100, exacerbating existing erosion issues. Mr Bettington estimates that similar processes will affect Warraber.¹⁷⁵
- 109 Mr Bettington gives further evidence that harm and destruction to mangroves and wetlands on the mud islands (including Boigu and Saibai) will result in significant erosion.¹⁷⁶ On both Boigu and Saibai, mangrove forests moderate tidal movements into wetland areas, reducing peak water levels compared to the coast and sheltering foreshores from seasonal waves.¹⁷⁷ As sea levels rise, the tidal regime will change and impact the processes by which mangroves colonise, causing die-back.¹⁷⁸ The reduction in mangrove

APP.0001.0007.0118 IPCC, Climate Change 2022: Impacts, Adaptation and Vulnerability – Contribution of Working Group II to the Sixth Assessment Report of the IPCC [.1604].

¹⁷³ APP.0001.0003.0095 Exhibit A43, Hughes Report [133].

¹⁷⁴ APP.0001.0003.0093 Exhibit A40, Karoly Report [103].

¹⁷⁵ APP.0001.0009.0003 Exhibit A48, Bettington Report [.0057], [.0065].

¹⁷⁶ APP.0001.0009.0003 Exhibit A48, Bettington Report [.0057], [.0066].

¹⁷⁷ APP.0001.0009.0003 Exhibit A48, Bettington Report [.0050].

¹⁷⁸ APP.0001.0009.0003 Exhibit A48, Bettington Report [.0051].

extent will expose the foreshore to erosion.¹⁷⁹ Given changes to the tidal regime are dependent on the extent of sea level rise, limiting global temperature increase to 1.5°C will minimise damage to mangroves and related erosion of the foreshore.

Groundwater contamination

- 110 Mr Bettington gives evidence that saltwater intrusion is a persistent issue in the Torres Strait. Although fresh groundwater is no longer the primary source of water for most communities, contamination of these water sources poses a risk to vegetation and crops that draws on this freshwater during the dry season. As sea levels rise, groundwater contamination events will increase in frequency and intensity. This will cause die-backs in some terrestrial vegetation, with salt-tolerant species becoming dominant and inhabitants unable to grow traditional crops in impacted garden areas.¹⁸⁰
- 111 Mr Bettington gives evidence that mud island communities (Boigu and Saibai) will be severely impacted by groundwater contamination by 2050 and projects that large parts of both islands will not be able to sustain terrestrial trees if sea levels continue to rise.¹⁸¹

Harm and destruction of ecosystems and non-human species

- 112 The expert evidence projects that the following impacts of climate change will manifest for ecosystems and non-human species in the future:
 - 112.1 Coral reefs: Professor Hughes' evidence is that restricting overall global warming to 1.5°C will prevent the total loss of coral reefs globally and in the Torres Strait, however, the consequences of 1.5°C of heating are severe. This level of heating will permanently alter original species composition, limit the capacity of coral reefs to recover from successive bleaching events and cause an overall decline of 70-90% coral cover by 2050. However, 2°C of warming will cause a total loss of all coral reefs.¹⁸² At 2°C spatial refuges areas of reef that remain unbleached at 1.5°C will disappear entirely, which are necessary to re-seed nearby damaged reefs in future decades.¹⁸³ The difference between 1.5°C and 2°C is the survival of coral reefs in the Torres Strait and beyond.

¹⁷⁹ APP.0001.0009.0003 Exhibit A48, Bettington Report [.0051].

¹⁸⁰ APP.0001.0009.0003 Exhibit A48, Bettington Report [.0048]-[.0049].

¹⁸¹ APP.0001.0009.0003 Exhibit A48, Bettington Report [.0058].

¹⁸² APP.0001.0003.0095 Exhibit A43, Hughes Report [121]-[122].

¹⁸³ APP.0001.0003.0095 Exhibit A43, Hughes Report [131].

- 112.2 Reduction in mangrove extent: Mr Bettington projects that sea level rise will severely impact mangrove extent on the mud islands (Boigu and Saibai) by 2050.¹⁸⁴ Given sea level rise is directly related to global temperature increase, this impact will be minimised at 1.5°C of global heating.
- 112.3 **Reduction in terrestrial vegetation**: Mr Bettington projects that the saltwater contamination of groundwater supplies in the Torres Strait will increase as sea levels rise, in turn causing declines in terrestrial vegetation.¹⁸⁵ Given sea level rise is directly related to global temperature increase, this impact will be minimised at 1.5°C of global heating.
- 112.4 **Seagrass decline**: Professor Hughes gives evidence that temperature extremes are causing elevated rates of disease in seagrasses.¹⁸⁶ Given that average ocean temperature and the frequency and intensity of heatwaves correlates with global temperature increase more generally, seagrass decline will be minimised if temperature increase is limited to 1.5°C.
- 112.5 **Abundance of dugongs and turtles**: Professor Hughes gives evidence that the Torres Strait populations of dugongs and turtles are dependent on the availability of seagrass for their diet and habitat.¹⁸⁷ Given the foregoing in the above paragraph, reductions in population numbers of these species can be avoided if temperature increase is minimised.
- 112.6 Feminisation of turtle and crocodile hatchlings: Professor Hughes' evidence is that the sex ratio of turtles and crocodiles is temperature dependent and, as a result, anthropogenically induced ocean temperature increase is a significant threat to survival.¹⁸⁸ Reductions in population numbers of these species can be limited if temperature increase is minimised.

¹⁸⁴ See discussion at paragraph [109].

¹⁸⁵ APP.0001.0003.0095 Exhibit A43, Hughes Report [123].

¹⁸⁶ APP.0001.0003.0095 Exhibit A43, Hughes Report [112].

¹⁸⁷ APP.0001.0003.0095 Exhibit A43, Hughes Report [80].

¹⁸⁸ APP.0001.0003.0095 Exhibit A43, Hughes Report [84]-[86].

Impacts to human health in the Torres Strait

- 113 Professor Selvey projects that a number of risks to the health of Torres Strait Islanders living in the Torres Strait will increase in line with global heating. Impacts of the following can be minimised if global warming is limited to 1.5°C:
 - 113.1 Heat-induced mortality and morbidity;
 - 113.2 Contamination of fresh water supplies;¹⁸⁹
 - 113.3 Increasing unavailability of traditional foods;¹⁹⁰
 - 113.4 Illnesses and infectious diseases.¹⁹¹

Tipping points

- 114 Tipping points, in climate science, are critical thresholds which, if exceeded, cause substantial, abrupt and sometimes irreversible changes. Over the relatively stable climate of the last two thousand years, the probability of exceeding a tipping point was very low. However, the risk of exceeding a tipping point has increased greatly with higher levels of global warming and related changes in the climate system.¹⁹²
- 115 In Figure 17 of his report, Professor Karoly identifies a number of tipping points, which at different warming levels, are likely to exceed critical thresholds. Professor Karoly observes that the risk of exceeding any of the tipping points in Figure 17 is much lower in a world where global temperatures are less than 1.5°C warmer than preindustrial levels.¹⁹³

¹⁸⁹ APP.0001.0007.0118 IPCC, Climate Change 2022: Impacts, Adaptation and Vulnerability [.0058].

¹⁹⁰ APP.0001.0007.0118 IPCC, Climate Change 2022: Impacts, Adaptation and Vulnerability [.0058].

¹⁹¹ APP.0001.0003.0094 Exhibit A44, Selvey Report [92]-[93]; APP.0001.0007.0118 IPCC, *Climate Change 2022: Impacts, Adaptation and Vulnerability* [.1981].

¹⁹² APP.0001.0003.0093 Exhibit A40, Karoly Report [119]-[120].

¹⁹³ APP.0001.0003.0093 Exhibit A40, Karoly Report [125].



*Fig. 17: Global warming thresholds for a range of climate tipping elements. The locations of climate tipping elements in the cryosphere (blue), biosphere (green), and ocean/atmosphere (orange), and global warming levels at which their tipping points will likely be triggered. Reproduced from Armstrong McKay, D.L., et al. (2022).*¹⁶

- 116 The expert evidence focuses on three critical tipping points that, if triggered, would threaten the habitability of the Torres Strait Islands:
 - 116.1 **Collapse of the Greenland ice sheet**: The Greenland ice sheet gains mass from snowfall and loses mass from ablation and the flow of ice into the ocean. If ablation increases more rapidly than snowfall due to increasing global temperatures, there could be a warming threshold above which the ice sheet will rapidly decay and contribute up to 7.4 m of sea level rise over centuries to millennia. In the IPCC's Fifth Assessment Report, this threshold was estimated to be within the range of 1°C to 4°C of global warming, meaning that we may have already crossed this threshold or are rapidly approaching it. For high emissions scenarios, the threshold would very likely be exceeded before 2100.¹⁹⁴
 - 116.2 Collapse of the Antarctic ice sheet: The Antarctic ice sheet, with a sea level equivalent of 58 m, gains mass from snowfall and loses mass by the flow of ice

¹⁹⁴ APP.0001.0009.0002 Exhibit A53, Church Report [100].

into the ocean. There are a number of ways in which this tipping point, if exceeded, could cause significant and long-term sea level rise:

- (a) If the ice shelves collapse, the glaciers may flow more rapidly into the ocean, which has previously been observed on the Antarctic Peninsula when warmer surface air temperatures and ocean temperatures resulted in a rapid collapse of the Larsen B ice shelf followed by an increase flow of glaciers into the ocean^{.195}
- (b) Warm ocean waters can penetrate below the ice shelves, melting the ice near the grounding line and allowing glaciers to flow more rapidly into the ocean. If the bedrock slopes downward and away from the ocean, an initial retreat of the grounding line may result in a more rapid in a more rapid flow of ice into the ocean and further retreat of the grounding line (otherwise known as Marine Ice Sheet Instability). This process may be underway in parts of the West Antarctic Ice Sheet.¹⁹⁶

Professor Church concludes that, while sea levels will inevitably rise for centuries, the amount of rise is strongly dependent on future emissions of GHGs before 2100. For example, the IPCC projects in its sixth assessment report that, by 2300, sea levels will rise by 0.5 m to 3 m for 2°C of warming but 2 m to 7 m for 4.3°C for warming. Professor Church's opinion is that these significant differences demonstrate the long-term benefits of reducing GHG emissions as much as possible in the near-term.¹⁹⁷

- 116.3 **Rapid permafrost melt**: Professor Karoly identifies major increases in GHG emissions from permafrost melt as a tipping point that, if triggered, would greatly increase the impacts of climate change in the Torres Strait.¹⁹⁸
 - (a) Permafrost is frozen ground (soil, ice and organic material) that remains below 0°C for more than two years. Near-surface permafrost (within 3 or 4 m of the land surface) responds more rapidly to warming than deeper permafrost. The thawing of near-surface permafrost leads to aerobic and

¹⁹⁵ APP.0001.0009.0002 Exhibit A53, Church Report [100].

¹⁹⁶ APP.0001.0009.0002 Exhibit A53, Church Report [101].

¹⁹⁷ APP.0001.0009.0002 Exhibit A53, Church Report [103]-[106].

¹⁹⁸ APP.0001.0003.0093 Exhibit A40, Karoly Report [26].

anaerobic decomposition of the frozen organic material, releasing CO₂ and methane in the atmosphere.¹⁹⁹ In this sense, there is a non-linear feedback relationship between permafrost, GHG emissions and global temperature increase. The thawing of permafrost due to global warming releases GHGs into the atmosphere that, as a result, contribute to additional global warming.²⁰⁰

- (b) The IPCC projects that, by 2100, near-surface permafrost area will decrease by 2 66% at 2°C of global warming and 30 99% for 4.3°C. This is projected to release up to as much as 240 Gt of CO₂ and methane into the atmosphere which would increase and hasten global warming and its impacts.²⁰¹
- 117 The risk of reaching any of these tipping points increases with every increment of global warming.²⁰² Reaching any of these tipping points would be catastrophic for the Torres Strait. Dr Canadell agreed that the low-lying islands of the Torres Strait are particularly vulnerable to sea level rise from loss of the world's glaciers and ice sheets.²⁰³ Rapid reductions in GHG emissions are essential to avoid these long-term impacts.

CO₂ budgets and remaining cumulative GHG emissions

118 Due to the causal relationship between emissions, atmospheric concentrations and global heating, climate scientists are able to determine the remaining cumulative CO₂ and GHG emissions available to limit global temperature increase to a certain level (for example, 1.5°C, 2°C or 3°C above preindustrial times).

CO2 budgets

119 A CO₂ budget is the maximum amount of CO₂ that can be emitted while keeping global mean temperature rise below a given threshold.²⁰⁴ As each ton of emitted CO₂ causes the same amount of warming from the point of its emission for thousands of years into the future, the total warming humans cause via anthropogenic CO₂ emissions only depends on the total amount of CO₂ emissions and not when or where those CO₂ emissions occur.

¹⁹⁹ APP.0001.0003.0093 Exhibit A40, Karoly Report [48].

²⁰⁰ APP.0001.0003.0093 Exhibit A40, Karoly Report [50].

²⁰¹ APP.0001.0004.0013 IPCC, IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [.0063].

²⁰² APP.0001.0003.0093 Exhibit A40, Karoly Report [125].

²⁰³ TRN.0017.1379 21 November 2023, Dr Canadell, T1390:20-28.

²⁰⁴ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [16].

In short, to halt global warming below a certain temperature limit, there is a maximum amount of CO₂ humans can collectively emit.²⁰⁵

- 120 The IPCC has used CO₂ budgets since its Fifth Assessment Report (AR5), published over 2013 and 2014. By way of demonstrating the concept above, the IPCC calculated that the CO₂ budget remaining from 2020 to limit global warming to 1.5°C was 500 GtCO₂ in its Sixth Assessment Report. Since the start of 2020, humans have already emitted approximately 135 GtCO₂. Therefore, the remaining CO₂ budget to hold global warming to 1.5°C is approximately 365 GtCO₂.²⁰⁶
- 121 There is a degree of scientific uncertainty as to the precise quantification of CO₂ budgets. To account of this uncertainty, CO₂ budgets are calculated by reference to a likelihood of keeping temperatures below a certain level. For example, the IPCC budget for 1.5°C has a 50% chance of keeping warming below 1.5°C. If humanity emits the full budget, there is a 50% chance (based on current scientific knowledge) that global-mean temperatures will stay below 1.5°C. This probability increases or decreases depending on whether humanity keeps to or exceeds the budget.²⁰⁷

Remaining cumulative GHG emissions

- 122 As reductions in *all* GHG emissions, rather than CO₂ alone, are necessary to limit global temperature increase, it is necessary to calculate the quantum of GHGs that can be emitted consistent with CO₂ budgets and warming limits.²⁰⁸
- 123 In performing this conversion, the differences between the atmospheric lifetime of CO₂ relative to other GHGs are significant.²⁰⁹ For example, methane has a lifetime of approximately 12 years whereas CO₂ lasts for thousands of years.²¹⁰ The consequence of a short life span is that, to determine the amount of heating caused by a unit of methane, it is necessary to consider *when* the unit was emitted. Emitting a certain amount of methane at once has a much larger effect in terms of peak warming than emitting the same amount gradually over a long period.²¹¹

²⁰⁵ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [15].

²⁰⁶ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [18].

²⁰⁷ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [20].

²⁰⁸ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [26].

²⁰⁹ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [29].

²¹⁰ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [30]-[31]. ²¹¹ APP.0001.0009.0001 Exhibit A45 Meinshausen Penort [30] [31]

²¹¹ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [30]-[31].

124 The conversion is simplified by the fact that there is a linear relationship between CO₂ emissions and cumulative GHG emissions in scenarios that model the worldwide transition to net zero.²¹² Therefore, one can calculate the cumulative GHG emissions that can be emitted in a period of time if one knows the remaining CO₂ emissions that can be emitted before a temperature threshold is exceeded.²¹³

Remaining cumulative GHG emissions until 2050 to limit global warming to 1.5°C

- 125 In his expert report, Professor Meinshausen calculates the remaining cumulative GHG emissions that can be emitted globally until 2050 consistent with a CO₂ budget that limits global warming to 1.5°C:²¹⁴
 - 125.1 From 2014, the best-estimate of remaining cumulative emissions was 823 GtCO₂-e.²¹⁵
 - 125.2 From 2022, the best-estimate was 446 GtCO₂-e.²¹⁶

Domestic emissions targets consistent with the global CO2 budget to limit warming to 1.5°C

- 126 Professor Meinshausen's evidence is that, while there is no consensus on how the remaining pool of cumulative GHG emissions to limit global warming to 1.5°C ought to be allocated between nations, there are broad methodologies for doing so.²¹⁷ These methodologies are discussed extensively in the IPCC's Fifth Assessment Report.²¹⁸ Professor Meinshausen states that the three key considerations in the academic literature guiding the development of these methodologies are equity, responsibility and capability:
 - 126.1 Equity: Whether each person on earth should be entitled to utilise the same proportion of the remaining cumulative GHG emissions.
 - 126.2 **Responsibility**: Whether allocations of remaining cumulative GHG emissions should account for disproportionate emissions by certain countries in the past.

²¹² APP.0001.0009.0001 Exhibit A45, Meinshausen Report [33].

²¹³ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [34].

²¹⁴ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [38]-[47].

²¹⁵ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [45].

²¹⁶ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [47].

²¹⁷ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [51]-[53].

APP.0001.0004.0007 IPCC, Climate Change 2014: Mitigation of Climate Change [.0473].

- 126.3 **Capability**: Whether allocation should take into account wealthier countries' increased capacity reduce their emissions.²¹⁹
- 127 On the basis of his review of academic literature on this topic, Professor Meinshausen identifies three broad categories into which accepted allocation methodologies can be sorted:
 - 127.1 Equal per capita: Methodologies that are premised on the principle that every person on earth should be allocated approximately the same amount of the remaining GHGs irrespective of present-day conditions, historical emissions or capability. As such, these methodologies are calculated on an equal per capita basis.²²⁰
 - 127.2 **Historical responsibility**: Methodologies that allocate greater shares of remaining GHG emissions to those nations that have either emitted less in the past and/or have less ability to facilitate a transition to net-zero in their domestic economies.²²¹
 - 127.3 **Grandfathering**: Methodologies that allocate a greater share of remaining emissions to nations that have high emissions in the present day. These approaches give historical polluters more emissions so that their transition to net zero is smoother. However, grandfathering approaches do not incorporate principles of equity or fairness required under Article 2(1)(a) of the Paris Agreement.²²²
- 128 Figure 3 from Professor Meinshausen's report provides a graphic representation of the methodologies:

²¹⁹ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [52]; APP.0001.0006.0017 Paris Agreement, 3.

²²⁰ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [55].

²²¹ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [53].

²²² APP.0001.0009.0001 Exhibit A45, Meinshausen Report [54].

Three broad kinds of emissions allocations

Imagine we pick two countries with equal populations but who have very different emissions today. Let's say that one country emits roughly 7.5 times what the other country does on a per capita basis today (roughly the ratio between Australia and Niger's emissions, picked as a purely illustrative example to get the right order of magnitude).

The figures below illustrates the implications of different methods for allocating emissions to countries.



Figure 3 Three broad methods for allocating remaining cumulative emissions to countries. This figure illustrates the broad themes for the methodologies presented in this report, but is not an exact quantification of them. The pathways are illustrative on the basis of countries choosing to follow a straight-line path to net zero. This may not always be the case in the real world, for example a country with a straight-line net zero year of 2100 may instead choose to initially increase its emissions before reaching net zero earlier (e.g. 2080). Such a pathway could have the same cumulative emissions hence climate impact but be more in line with other policies/domestic context.²²³

129 The Commonwealth did not cross-examine Professor Meinshausen on his evidence that these approaches represent the categories of national GHG emissions allocation

²²³ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [57].

methodologies accepted in the scientific community. Nor did the Commonwealth lead any evidence on GHG emissions allocation methodologies. Therefore, Professor Meinshausen's testimony on the matter should be accepted.

Application of methodologies for determining Australia's share of the global carbon budget

- 130 Professor Meinshausen's evidence does not propose a specific approach to calculating a national allocation of remaining cumulative GHG emissions consistent with a CO₂ budget that limits warming to 1.5°C that the Commonwealth ought to have adopted in order to set its emissions reduction targets. Rather, Professor Meinshausen opines that there are accepted methodologies to determine such an allocation, and that the targets adopted by the Commonwealth in both the past and present are not consistent with any of these methodologies. To illustrate this, Professor Meinshausen calculates Australia's allocations using the following methodologies:
 - 130.1 The Climate Change Authority Methodology: In 2014, the Climate Change Authority, an independent statutory body established under the Climate Change Authority Act 2011 (APP.0001.0021.0009) to provide expert advice to the Australian Government, completed a review of Australia's completed a review of Australia's GHG emissions reduction goals in advance of COP 21 in Paris. The Climate Change Authority advised the Commonwealth that its share of remaining cumulative GHG emissions consistent with a CO₂ budget that limits warming to 2°C was 0.97% (translating to an emissions reduction target of 40-60% of 2005 levels by 2030).²²⁴

The Climate Change Authority's proposed allocation is a form of grandfathering giving developed countries a larger share of cumulative emissions per capita in the future.²²⁵ Therefore, Professor Meinshausen's explains that grandfathering approaches are not based on principles of equity, as developed countries end up with a disproportionate allocation of remaining cumulative GHG emissions (0.97%) relative to their population (0.33%, as set out below) or historical responsibility.

²²⁴ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [59]-[60], [69].

²²⁵ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [61].

Application of the Climate Change Authority's grandfathering approach is the most generous of accepted methodologies for Australia.

- 130.2 Australia's share on an equal per capita methodology: This approach gives Australia an allocation of 0.33% of remaining cumulative GHG emissions. Professor Meinshausen calculates this allocation based on Australia's share of the global population, assuming that each person on Earth is entitled to the same share of remaining cumulative emissions.²²⁶
- 130.3 Australia's share on a historical responsibility methodology: Under this methodology, Professor Meinshausen opines that Australia should be allocated a share that is significantly less than on a per capita basis. This is based on Australia's high historical emissions and capacity to transition to net zero relative to developing countries. Professor Meinshausen does not, however, calculate a precise allocation for Australia using this methodology because, even under the more lenient equal per capita approach, Australia would have already exhausted its allocation of remaining cumulative GHG emissions consistent with limiting global warming to 1.5°C at all relevant junctures.²²⁷

Compatibility of the Commonwealth's initial 2030 target with a 1.5°C global budget

- 131 On the basis of the foregoing, Professor Meinshausen calculated that, as at 2014, the Commonwealth's initial target to reduce Australia's GHG emissions by 26-28% of 2005 levels by 2030 was inconsistent with any accepted methodology for determining Australia's share of the remaining cumulative GHG emissions aligned with a CO₂ budget to limit global warming to 1.5°C and thus inconsistent with the best available science:²²⁸
 - 131.1 Under the Climate Change Authority's generous grandfathering methodology, Australia would have been allocated 7.98 GtCO_{2-eq} of remaining cumulative GHG emissions consistent with a CO₂ budget to limit global warming to 1.5°C in 2014.²²⁹ This would have aligned, on a straight line trajectory, with a 2030 emissions reduction target of 62% below 2005 levels and net zero by 2043.²³⁰ The

²²⁶ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [63]-[64].

²²⁷ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [65]-[66].

²²⁸ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [73].

²²⁹ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [68(a)].

²³⁰ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [69(a)].

initial 2030 target set by the Commonwealth would have exhausted Australia's entire budget by 2030.²³¹

- 131.2 Under the equal per capita methodology, Australia would have been allocated 2.72 GtCO_{2-eq} of remaining cumulative GHG emissions consistent with a CO₂ budget to limit global warming to 1.5°C in 2014.²³² This would have required, on a straight line trajectory, for Australia to reach net zero emissions by 2024.²³³ The initial 2030 target would have seen Australia emit roughly three times more than its allocation by 2030.²³⁴
- 131.3 Under a historical responsibility approach, Australia's allocation would be even less than under an equal per capita approach. As such, the initial 2030 target would have seen Australia emit far more than three times its allocation by 2030.²³⁵
- 132 Accordingly, the initial 2030 target set by the Commonwealth in 2014 was, on any accepted methodology, inconsistent with limiting global temperature increase to 1.5°C. Under all methodologies assessed by Professor Meinshausen, Australia's allocation would have been exhausted by 2030 or earlier.

Compatibility of the updated 2030 target potential national allocations

- 133 In 2022, the Commonwealth updated its 2030 emissions reduction target, committing to reduce Australia's GHG emissions by 43% of 2005 levels by 2030. Professor Meinhausen finds that:
 - 133.1 Using the Climate Change Authority's grandfathering methodology, Australia's allocation of remaining cumulative emissions consistent with a CO₂ budget to limit warming to 1.5°C would have been 3.94 GtCO_{2-eq} in 2022.²³⁶ This would have aligned, on a straight line trajectory (which is more favourable to Australia than the current trajectory), with a 2030 emissions reduction target of 63% below 2005 levels and net zero by 2040.²³⁷ However, Professor Meinshausen's evidence indicates that the updated 43% 2030 target would yield cumulative emissions of

²³¹ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [73(a)].

²³² APP.0001.0009.0001 Exhibit A45, Meinshausen Report [68(b)].

²³³ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [69(b)].

 ²³⁴ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [73(b)].
 ²³⁵ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [73(c)].

APP.0001.0009.0001 Exhibit A45, Meinshausen Report [75(c)].
 APP.0001.0009.0001 Exhibit A45, Meinshausen Report [70(a)].

²³⁷ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [71(a)].

3.57 GtCO_{2-eq} between 2022 and 2030, leaving Australia with just 0.37 GtCO_{2-eq} to emit after 2030.²³⁸ In this sense, the updated 2030 target may be, in a purely theoretically sense, called consistent with an accepted emissions methodology. However, it would create a scenario in which Australia would be required to reach net zero emissions by 2033 to keep within its allocation which, according to Professor Meinshausen, is not possible.²³⁹

To demonstrate this practical impossibility, Professor Meinshausen offers the analogy of watching a car racing at 100 kilometres per hour towards the edge of a cliff. If you were pause the video with the car 10 metres from the edge of the cliff, there is, of course, a theoretical possibility that the car halts its momentum entirely and avoids catastrophe. However, as Professor Meinshausen puts it:

But the speed at which it goes, as soon as you start the movie again, there's no feasible pathway with which the car could stop before the cliff. And that is similar to the 43 per cent target. Yes, [Australia] has not completely reached the budget ... [but] we can say the target in 2030 is inconsistent because it sets us on a path that does not allow us to stay within the budget because we would cross it then a few years later.²⁴⁰

- 133.2 Using the equal per capita methodology, Australia's allocation would be *negative*1.32 GtCO_{2-eq} in 2022.²⁴¹ The updated 2030 target is not consistent with this allocation, as Australia already exhausted its allocation in 2022.²⁴²
- 133.3 Using a historical responsibility methodology, Australia's allocation would be *less than negative* 1.32 GtCO_{2-eq} in 2022.²⁴³ Consequently, Australia would have exhausted its allocation well before 2022. Thus, Professor Meinshausen concludes that the updated 2030 target is obviously not consistent with this methodology.
- 134 Accordingly, Professor Meinshausen's evidence is that it is practically impossible for the Commonwealth's updated 2030 emissions reduction target of 43% below 2005 levels to be consistent with even the most generous national allocation of remaining cumulative GHGs consistent with limiting warming to 1.5°C calculated on an accepted methodology.

²³⁸ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [74(a)].

²³⁹ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [74(a)].

²⁴⁰ TRN.0013.1118 14 November, Professor Meinshausen, T1147:1-17.

²⁴¹ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [70(b)].

²⁴² APP.0001.0009.0001 Exhibit A45, Meinshausen Report [70(b)].

²⁴³ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [70(c)].

C. SUMMARY OF HARM TO TORRES STRAIT ISLANDERS

135 The Commonwealth's failure to meet its duties of care in relation to climate change impacts on Torres Strait Islanders has and will continue to harm the Applicants and Group Members. At paragraph [86] of their pleading, the Applicants set out heads of damage reflecting the harm Group Members have suffered from the Respondent's breaches of the duties of care. The threat of this harm continuing is what the Applicants submit warrants declaratory relief and an injunction to prevent the Commonwealth's ongoing breaches from causing further damage. Set out below is a non-exhaustive summary of the evidence of this harm.

Loss of fulfilment of Ailan Kastom

- 136 The Applicants and Group Members testified to the central nature of *Ailan Kastom* in their lives, its connection to the land and sea, the ways in which it has already been impacted by climate change, and the devastation its loss would cause them.
- 137 Explaining Ailan Kastom, Uncle Pabai said, "My identity is connected to Boigu. I always say that I am a Boigu man, Boiguligal. It is very important to me."²⁴⁴ His brother, Uncle Fred, echoed this connection, "I belongs to this island. And this is my identity."²⁴⁵ "The culture is my everything, every day. It's my survival kit."²⁴⁶ Speaking to the all-encompassing nature of Ailan Kastom, Uncle Paul said, "It means everything about our way of life."²⁴⁷ Uncle Laurie agreed, describing his culture as "not just a word, it's a way of life, it's our identity."²⁴⁸
- 138 Ailan Kastom is rooted in storytelling and oral traditions. As Uncle Herbert said:

The richness of my culture is clear when you analyse our language. Language is a spirit. *Saibailgau* language is *Saibailgau* spirit. We are the body, soul and spirit of Saibai. The details of my culture are depicted in songs. I call language the soul of Saibai; all of these things are locked in the language.²⁴⁹

139 Uncle Pabai gave similar evidence:

²⁴⁴ APP.0001.0009.0008 Affidavit of Uncle Pabai [194].

²⁴⁵ APP.0001.0012.0007 6 June 2023, Uncle Fred, T140:4-5.

²⁴⁶ APP.0001.0012.0004 5 June 2023, Uncle Fred, T91:35-36.

²⁴⁷ APP.0001.0009.0005 Affidavit of Uncle Paul [153].

APP.0001.0009.0013 Affidavit of Uncle Laurie [98].
 APP.0001.0009.0007 Affidavit of Uncle Harbert [52]

²⁴⁹ APP.0001.0009.0007 Affidavit of Uncle Herbert [52].

Boigu culture is very connected to the land, to our country. All of our stories are connected to specific places on the land. They tell the story of my people. I and my people are tied to the land. Separation from the land breaks us from that culture and identity.²⁵⁰

As identified by the Torres Strait Regional Authority, 'The interconnection between *Ailan Kastom* and healthy land and sea are integral to spiritual and cultural identity.'²⁵¹
 But this place-based relationship also extends beyond the physical realm. The reverence held for ancestral spirits is clear from the witnesses' evidence:

The ancestors give birth to our land. The ancestors are very important for us. Their knowledge, understanding passed on from generation to generation. ... They giving us who we are today to identify ourself. They are the people, most important people for us.²⁵²

My ancestors are laid to rest here on Boigu. Talking to my ancestors is a big part of my culture.²⁵³

They are the authority. We've got that respect. It's about the kinship, the links that we have when we visiting. 254

141 For Torres Strait Islanders therefore, whether living in the Torres Strait or elsewhere, harm to the physical environment on Country is harm to the spiritual relationship of *Ailan Kastom*. For example, loss of the sacred island of Warul Kawa, off the Western coast of Boigu, would mean for Uncle Pabai:

... [losing] our spiritual connection to the ancestors. We wouldn't be able to do our spiritual business anymore. It would be like losing our version of heaven. It would be like killing all the people in the community and their spiritual ancestors.²⁵⁵

142 The threat of continued harm is thus very real for Group Members. The feared consequences of losing or leaving their homelands involve a loss of identity,²⁵⁶ having nothing left.²⁵⁷ As Uncle Gerald said in his testimony in Cairns, "if we gonna lose this, we will lose bigger things. We will lose our identity and we gonna lose our kinship."²⁵⁸

²⁵⁰ APP.0001.0009.0008 Affidavit of Uncle Pabai [15]; APP.0001.0012.0004 5 June 2023, Uncle Pabai, T42:1-7; APP.0001.0009.0005 Affidavit of Uncle Paul [153]; APP.0001.0012.0004 5 June 2023, Uncle Fred, T91:40-45.

²⁵¹ APP.0001.0004.0016 TSRA, *Climate Change Strategy 2014-2018* [_0022].

²⁵² APP.0001.0012.0004 5 June 2023, Uncle Pabai, T60:1-14.

²⁵³ APP.0001.0009.0008 Affidavit of Uncle Pabai [194].

²⁵⁴ APP.0001.0012.0006 13 June 2023, Aunty Jen, T569:26-30.

APP.0001.0009.0008 Affidavit of Uncle Pabai [191]. See also APP.0001.0009.0008 Affidavit of Uncle Pabai [192],
 APP.0001.0009.0004 Affidavit of Uncle Fred [51] and below at [287]-[293].

APP.0001.0009.0011 Affidavit of Uncle Gerald [54]; APP.0001.0009.0008 Affidavit of Uncle Pabai [200] (see also APP.0001.0012.0004 5 June 2023, Uncle Pabai, T60:37-39); APP.0001.0012.0003 12 June 2023, Uncle Paul, T476:24-36 (see also T468:23-26, and APP.0001.0009.0005 Affidavit of Uncle Paul [107]).

APP.0001.0009.0008 Affidavit of Uncle Pabai [200] (see also APP.0001.0012.0004 5 June 2023, Uncle Pabai, T60:37-39); APP.0001.0012.0003 12 June 2023, Uncle Paul, T476:24-36; APP.0001.0012.0004 5 June 2023, Uncle Fred, T93:11-16 (see also APP.0001.0012.0007 6 June 2023, Uncle Fred, T110:27-37).

²⁵⁸ APP.0001.0012.0008 15 June 2023, Uncle Gerald, T768:41-43.

143 The evidence demonstrates how the physical impacts of climate change have harmed, and will continue to harm, every aspect of *Ailan Kastom*.

Teaching Ailan Kastom

144 Uncle Laurie gave evidence of the importance of cultural education:

Culture was given to us as a gift, as a gift to pass on. It wasn't a gift that we take to the grave with us. That's – culture, I mean, like, language, cultural practice, law protocol. So culture given to us is a gift from our ancestors, our fathers, our uncles. They gave it to us so that we could preserve it and pass it on, so that the generations to come will have the same knowledge that we have. If we're not doing that, then – if I am not doing that, then I am disobeying why culture is there for the first place.²⁵⁹

The best place to have been taught culture in detail is home. And the detail is important because we have to pass the cultural details on. The teachings of the details are important because you lose one little description, that's a puzzle missing from a puzzle. There's now a space there. So that's why it's important to have every puzzle in the right place, and that can only happen on country.²⁶⁰

145 Many witnesses gave evidence of customary teacher roles being compromised when traditional knowledge is undermined by climate change. Uncle Laurie said:

If hunting is too easy, then I don't need to learn from my Uncle anymore. Not being able to teach the microscopic detail of our traditions breaks the fabric of responsibilities within culture. It stuffs up the role of the Uncles — it breaks the very fragment of why our culture exists, of how we are. We don't have titles like lawyer, this is our education. It removes our cultural education when you remove the responsibility of the educator.²⁶¹

We can't preserve our culture if our seasons are out of whack – how do you teach it? You cannot say, 'at this time this is supposed to happen'. How do you teach a 'supposed to'? You cannot teach a 'maybe'. The kids think, 'well I'm not going to learn anything, it's a maybe, whether the season comes when it should.' It means we lose the importance of an Uncle status.²⁶²

When this cultural education system has been undermined and threatened by climate change, we lose our power as teachers. I can see that in the future, when kids think about culture it will be just like an echo, not important. They will think 'Oh yeah, culture' but they won't really know culture.²⁶³

Practices and beliefs makes a cultural people. If our practices are disappearing, our beliefs become fake — we as a people, what kind of culture would we have? It's like the effect of

²⁵⁹ APP.0001.0012.0005 8 June 2023, Uncle Laurie, T205:6-14.

²⁶⁰ APP.0001.0012.0005 8 June 2023, Uncle Laurie, T192:03-19. See also APP.0001.0012.0005 8 June 2023, Uncle Laurie T208:15-24; Affidavit of Uncle Boggo [131].

²⁶¹ APP.0001.0009.0013 Affidavit of Uncle Laurie [46].

²⁶² APP.0001.0009.0013 Affidavit of Uncle Laurie [97].

APP.0001.0009.0013 Affidavit of Uncle Laurie [98].

deleting culture... If we don't have culture anymore, how can we call ourselves First Nations people? It's scary.²⁶⁴

146 Uncle Paul,²⁶⁵ Uncle Pabai,²⁶⁶ Uncle Boggo²⁶⁷, Uncle Gerald²⁶⁸ and Uncle Fred²⁶⁹ also gave accounts of the impact climate change has had on teaching *Ailan Kastom*. Aunty Jen said:

We are trying to teach our children about this culture, but they are noticing inconsistencies between the teachings and the environment. Traditional knowledge is being questioned by the young people, which has had an impact on the authority of older people.²⁷⁰

147 She also observed that climate change was impacting the ability to gather and pass on knowledge outdoors:

It is also noticeably hotter than it used to be. It stops people from being outside. We are more outdoor people, growing up we were always outside. It is in our culture for the men to sit together outside and talk about men's business and for the women to sit together outside and talk about women's business, and tend to the little ones. The women would teach cultural practices to the little ones. We are a practical people and our culture is to do our practices together outside. We only go inside when it is time to go to sleep. Now, because it is hotter, we can't be outside together as much. We can't do our cultural practices and our teaching as much.²⁷¹

Gravesites and ancestral connections

148 Torres Strait Islanders spoke of their strong connection to their ancestors and the importance of gravesites – as well as the impacts already being experienced and fears of what is to come.

²⁶⁴ APP.0001.0009.0013 Affidavit of Uncle Laurie [47].

²⁶⁵ Affidavit of Uncle Paul at [113] Because the seasons no longer match up to what the stars are telling me, I cannot tell what is happening. I also cannot pass on this part of our culture to my children, or grandchildren, so they do not know what to do. This means that our culture is dying because we can't pass it down to our children and grandchildren.

APP.0001.0009.0008 Affidavit of Uncle Pabai [118] The elders would also teach us how to read the constellations, so that we could learn about the seasons and when was a good time to plant, when was a good time to harvest. This point of time is very hard to teach our young generation because of the climate change already affecting those areas. That's very hard for us. How can we teach our young generation about all the constellations and our very own experience. When climate change is doing all this, it's very hard for us.

APP.0001.0009.0006 Affidavit of Uncle Boggo [42] It also means that I cannot teach my kids and grandkids about gardening, because it's all different now. This is a really big loss, as gardening is a very important way of life on Warraber. This means that my kids and grandkids don't understand traditional knowledge about gardening. I think that the knowledge has stopped with my generation. This is a very important part of Warraber culture that is being lost. This makes me very sad.

²⁶⁸ APP.0001.0009.0011 Affidavit of Uncle Gerald [16].

APP.0001.0012.0004 5 June 2023, Uncle Fred, T95:45-T96:6 FRED PABAI: ... if I cannot pass down my knowledge and skill there won't be any tomorrow for the future of our young youth and young generation. MS BARRETT: And how does that make you feel? FRED PABAI: That would make me very sad because I am responsible. I am gonna be very sad as an elder to not pass my knowledge, wisdom and experience to the younger generation. Or in other words, we might lose that culture if we don't teach them.

²⁷⁰ APP.0001.0009.0010 Affidavit of Aunty Jen [56].

²⁷¹ APP.0001.0009.0010 Affidavit of Aunty Jen [48].

- 149 Uncle Paul spoke in strong terms of the significance of the Saibai cemetery and the effects of inundation²⁷² (reflected in what the Court saw on a view²⁷³), including the inability of families to know exactly where someone was buried due to shifting markers.²⁷⁴ He explained that "The thought of losing or moving the graves is terrible… Losing the graves is even worse. Where would our ancestors be? How could we talk to them?"²⁷⁵
- 150 Uncle Pabai said of harm to the cemetery in Boigu (reflected in what the Court saw on a view²⁷⁶):

Flooding and erosion of the cemetery causes a lot of sadness in the community. If we do not know where our ancestors are, we cannot talk to them properly. We are worried that our ancestors won't be safe to rest in the future.²⁷⁷

One of the saddest things for me is that the old people, who are asleep now, are being made weak by the erosion. That's why we hold on to them. ... I always say esso (thank you) because I'm walking forward and need them to show me things.²⁷⁸

151 Uncle Pabai and Uncle Gerald also talked about difficulties burying community members due to the rising water tables filling graves prior to burials.²⁷⁹

Traditional foods and gardening

152 Among others, Uncle Pabai,²⁸⁰ Uncle Laurie²⁸¹ and Uncle Herbert²⁸² testified to the importance of being able to grow traditional crops as part of practising and teaching culture. Uncle Boggo testified:

There is a lot of connection between gardening, harvesting and what season is coming. Food is part of our culture and tradition, and how we survive during different times of the year. For example, at Easter, you always harvest and then take the food to the church to feed the whole community. Not having the right foods for the right time of year doesn't allow us to practice culture the way we used to.²⁸³

²⁷² APP.0001.0009.0005 Affidavit of Uncle Paul [74]–[100], [132].

 ²⁷³ See APP.0001.0010.0001 record of views, photographs 62, 63 and 65 in particular. See also APP.0001.0012.0006 13 June 2023, Uncle Paul, T576.19 – 20.

²⁷⁴ APP.0001.0012.0003 12 June 2023, Uncle Paul, T466.16 – 47.

²⁷⁵ APP.0001.0009.0005 Affidavit of Uncle Paul [97]-[98].

²⁷⁶ APP.0001.0010.0001 Record of views, photos 10-15.

²⁷⁷ APP.0001.0009.0008 Affidavit of Uncle Pabai [88].

APP.0001.0009.0007 Affidavit of Uncle Herbert [53].

²⁷⁹ APP.0001.0012.0004 5 June 2023, Uncle Pabai, T61.8-43; APP.0001.0012.0008 15 June 2023, Uncle Gerald, T728.13-45.

²⁸⁰ APP.0001.0012.0004 5 June 2023, Uncle Pabai, T84.3 – 13.

²⁸¹ APP.0001.0009.0013 Affidavit of Uncle Laurie [54]-[56].

²⁸² APP.0001.0009.0007 Affidavit of Uncle Herbert [20]-[21], [33]-[37].

²⁸³ APP.0001.0009.0006 Affidavit of Uncle Boggo [43].

153 Many witnesses noted the increasing difficulty growing traditional foods due to erosion and soil salination.²⁸⁴ Uncle Pabai explained:

As a child, my family and I would spend hours in the family gardens each week. The gardens were a very big part of island life when I was growing up. Now, like my own garden at home, the soil is too salty to grow anything.²⁸⁵

- 154 Uncle Pabai explained how the Boigu community sought to address this problem by moving the gardens. He participated in soil testing in around 2013-2015, but said the results were that the soil was too salty.²⁸⁶
- 155 The Court heard evidence of the connection between the stars and the seasons, and harvesting and hunting practices.²⁸⁷ The changing nature of seasonal patterns has impacted Torres Strait Islanders' ability to grow and eat foods in accordance with *Ailan Kastom*:

When I was a child, I knew that when the stars of the Taigai constellation (located on the south side of the island) faced upwards, it was dry season. Taigai is a person with a spear. When his spear goes down to the west, that's when you know it's going to rain – the monsoon season is coming.

That's all changed now. When the spear tips over now it is not monsoon season anymore. The seasons have all changed. It rains when it should be dry, and it's dry when it should rain. The monsoon season is sometimes early, and sometimes late – it's unpredictable. I started noticing this around 30 years ago, because I remember when I was in my 20s the elders told me the season patterns were changing. This has become more obvious in the last 5-10 years.

My elders also taught me to garden by following the stars and constellations. I was taught to use the stars as a guide for planting and harvesting. For example, before the Taigai spear turns downward, the stars of the Baidham constellation (located on the north side of the island) point upwards, which used to mean it was a good time to plant. Baidham is a Shark. When his nose points down towards the horizon, that means rain. ...

A few months ago, I tried to plant cassava in my home garden, using the stars to tell me when was a good time to plant and when the tides were unlikely to be high. However, the tides came in despite what the stars said, and my garden was wrecked. The soil is too salty to grow much in it.²⁸⁸

²⁸⁴ APP.0001.0012.0004 5 June 2023, Uncle Pabai, T43.41 – 44.9, T79.9 – 13; APP.0001.0009.0007 Affidavit of Uncle Herbert [33]; APP.0001.0009.0005 Affidavit of Uncle Paul [50]. See also APP.0001.0012.0003 12 June 2023, Uncle Paul, T464.19 – 23, T474.5 – 14; APP.0001.0012.0006 13 June 2023, Uncle Paul, T632.18 – 19; APP.0001.0009.0006 Affidavit of Uncle Boggo [102]-[103].

²⁸⁵ APP.0001.0009.0008 Affidavit of Uncle Pabai [120].

²⁸⁶ APP.0001.0009.0008 Affidavit of Uncle Pabai [121]; SUB.0001.0003.3029, SUB.0001.0003.3037 and SUB.0001.0003.3038.

²⁸⁷ APP.0001.0009.0008 Affidavit of Uncle Pabai [108].

²⁸⁸ APP.0001.0009.0008 Affidavit of Uncle Pabai [109]-[113].

156 On the impacts to Torres Strait Islanders of not being able to grow and eat traditional fruit and vegetables, Uncle Frank observed:²⁸⁹

This means that people now buy food from the IBIS, which is not as healthy, and I see people having more problems with high blood pressure and other health problems.

It also means that we have lost that culture and connection that we used to have with gardening and traditional ways. When we lose the sand and the coconut trees, they are not coming back.²⁹⁰

Camping and community gathering

- 157 Torres Strait Islanders gave evidence of the ways in which climate change has interfered with traditional camping and community gathering:
 - 157.1 Uncle Paul described the parts of *Ailan Kastom* that he can no longer practice anymore, including canoeing across Saibai through trenches²⁹¹ (a remnant example of which was seen on a view);²⁹²
 - 157.2 Uncle Herbert described the inability to access his clan campsite at Surum, which he used to visit year round, for more than a "tiny bit of the year";²⁹³
 - 157.3 Uncle Pabai explained that erosion now prevents him from camping at the southern beaches of Boigu (reflected in what the Court saw on a view²⁹⁴), where his family has traditional connections;²⁹⁵
 - 157.4 Both Uncle Laurie and Uncle Peo identified substantial erosion on their traditional lands on Badu taking trees and threatening their houses (reflected in what the Court saw on a view²⁹⁶).²⁹⁷

²⁸⁹ The Applicants note the Court's ruling that this evidence is admitted as that of the witness' observations.

²⁹⁰ APP.0001.0009.0009 Affidavit of Uncle Frank [47]-[48].

²⁹¹ APP.0001.0009.0005 Affidavit of Uncle Paul [43].

²⁹² See APP.0001.0010.0001 record of views, photograph 77. See also APP.0001.0012.0006 13 June 2023, Uncle Paul, T588.11 – 24.

²⁹³ APP.0001.0009.0007 Affidavit of Uncle Herbert [19].

²⁹⁴ APP.0001.0010.0001 Record of views, photos 16-21.

APP.0001.0009.0008 Affidavit of Uncle Pabai [128]-[141]; APP.0001.0012.0004 5 June 2023, Uncle Pabai, T46.6 –
 47.21.

²⁹⁶ APP.0001.0010.0001 Record of views, photos 38-47.

²⁹⁷ APP.0001.0009.0012 Affidavit of Uncle Peo [121]-[130]; APP.0001.0012.0005 8 June 2023, Uncle Laurie, T214.5-23.

Ceremony and sacred sites

- 158 *Ailan Kastom* involves a deep connection between practice of culture and location. Climate change continues to erode that connection.
- 159 Uncle Paul described aspects of *Ailan Kastom* that he can no longer practice, including visiting sacred sites connected to coming-of-age ceremonies and places for men's and women's business.²⁹⁸
- 160 Other cultural practices previously enjoyed by Uncle Pabai that have been affected include crabbing and the ability to conduct the dugong ceremony on the beach in front of town.²⁹⁹ At a more abstract level, Uncle Pabai describes the way rising sea levels are making it impossible for him to fulfil his obligation as a Boigu man to protect cultural sites.³⁰⁰ He explained:

I have taken part in ceremonies here – ceremonies which my people have been doing for 65,000 years. As a Boigu man, I have responsibilities to protect cultural sites that are sacred to my peoples. However, the rising sea makes it impossible to do that. I am very worried that this will mean those sites disappear forever. If Boigu, or our cultural sites were lost, it would be devastating. It is very difficult for me to explain this in words. It makes me very sad.³⁰¹

- 161 Numerous Torres Strait Islander witnesses referred to the loss or alteration of sacred sites and its impact,³⁰² and the loss of ability to practice culture due to the impacts of climate change.³⁰³
- 162 Uncle Pabai explained how the rising seawater and encroaching mangroves have affected the Boigu cemetery, and the sadness and worry that causes because of the significance of the cemetery as a place for ceremony and talking to ancestors.³⁰⁴

²⁹⁸ APP.0001.0012.0003 12 June 2023, Uncle Paul, T460.19 – 30; APP.0001.0009.0005 Affidavit of Uncle Paul [102]-[107].

²⁹⁹ APP.0001.0009.0008 Affidavit of Uncle Pabai [142]–[159].

³⁰⁰ APP.0001.0009.0008 Affidavit of Uncle Pabai [198].

³⁰¹ APP.0001.0009.0008 Affidavit of Uncle Pabai [197]-[199].

APP.0001.0009.0008 Affidavit of Uncle Paul [105]-[107]; APP.0001.0009.0008 Affidavit of Uncle Pabai [113], [121]; APP.0001.0009.0007 Affidavit of Uncle Herbert [33]; APP.0001.0012.0003 12 June 2023, Uncle Paul, T468:23, T477:29 (cultural connection to Saibai); T491-492 (cultural ceremonies); T465-468 (and [doc ID], 13 June 2023, T569:11) (cemetery importance/ancestors); T463:4, 465, 470-471, 490; APP.0001.0012.0004 5 June 2023, Uncle Fred Oral, 94, APP.0001.0012.0007 6 June 2023, Uncle Fred, 102:43; 103, T108-110 (culturally significant sites/ceremonies); APP.0001.0012.0004 5 June, Uncle Fred, T96:11 (red sand bank).

³⁰³ APP.0001.0009.0013 Affidavit of Uncle Laurie [43]; APP.0001.0009.0006 Affidavit of Bala Boggo [43].

³⁰⁴ APP.0001.0009.0008 Affidavit of Uncle Pabai [79]–[101]. See also APP.0001.0012.0004 5 June 2023, Uncle Pabai, T60.1 – 62.28.
163 Another significant effect of climate change on *Ailan Kastom* is the erosion of the red sandbank and Warul Kawa, places of great significance to Uncle Pabai and others.³⁰⁵ This has caused worry that the ancestors will turn their backs on the people of Boigu.³⁰⁶ Uncle Herbert described Warul Kawa as "the worst eroded island in the Torres Strait."³⁰⁷

Seasons and hunting

- 164 A number of Torres Strait Islanders testified to the loss of *Ailan Kastom* associated with the changing of weather and climate patterns and the alteration of the seasons³⁰⁸ and the loss of culturally important biodiversity.³⁰⁹
- 165 Uncle Herbert described the importance of being able to rely on the consistency of the seasons as taught from generations before, and how increased changes to the seasons impacts hunting and gardening.³¹⁰ He said:

the seasonal calendar is from before time, before people, the Saibai, the Saibai has been keeping intellectual, the knowledge mainly about TEK, traditional ecological knowledge as I mentioned the stars mainly, the winds. So it's based on that. And what I've noticed is with my bearing there, the things are out of place. The winds come different time, there's more rain.³¹¹

166 Uncle Laurie compared how,

we would teach our children to prepare for the turtle mating season and make plans to collect the eggs for special meals. But when the trees and other signs are confused, we can't teach and pass on our culture in the way that these steps are read and should happen. It should happen in a few weeks, now it's all over the place and taking longer.³¹²

167 Uncle Paul similarly described the parts of *Ailan Kastom* that he can no longer practice anymore, including fishing for barramundi and crabs in the swamps,³¹³ and dugong in the seagrass beds.³¹⁴

³⁰⁷ APP.0001.0009.0007 Affidavit of Uncle Herbert [22].

³⁰⁵ APP.0001.0009.0008 Affidavit of Uncle Pabai [184]–[193]. See also APP.0001.0012.0004 5 June 2023, Uncle Pabai, T62.35 – 63.28.

³⁰⁶ APP.0001.0009.0008 Affidavit of Uncle Pabai [104]–[106].

APP.0001.0009.0010 Affidavit of Aunty Jen [56]-[60]; APP.0001.0009.0005 Affidavit of Uncle Paul [113];
APP.0001.0009.0013 Affidavit of Uncle Laurie [32]; APP.0001.0009.0006 Affidavit of Bala Boggo [42], [43];
APP.0001.0012.0003 12 June 2023, Uncle Herbert, 527-528 (seasonal calendar/constellations);
APP.0001.0009.0009 Affidavit of Uncle Frank [46], [48]; APP.0001.0009.0004 Affidavit of Uncle Fred [43].

³⁰⁹ APP.0001.0012.0004 5 June 2023, Uncle Pabai (Oral), P-59-63; 73-77; APP.0001.0009.0013 Affidavit of Uncle Laurie [34], [46]-[47].

³¹⁰ APP.0001.0009.0007 Affidavit of Uncle Herbert [46]-[49].

³¹¹ APP.0001.0012.0003 12 June 2023, Uncle Herbert, T528:24-28.

³¹² APP.0001.0009.0013 Affidavit of Uncle Laurie [32].

³¹³ APP.0001.0009.0005 Affidavit of Uncle Paul [67].

³¹⁴ APP.0001.0009.0005 Affidavit of Uncle Paul [114]–[122].

Property damage

- 168 In the Torres Strait, the impacts of climate change have already caused damage to houses,³¹⁵ vehicles,³¹⁶ and possessions such as tools³¹⁷ and appliances.³¹⁸ Salt water inundations has also led to widespread over-salinity in soils in the Torres Strait, which has caused damage to gardens and prevented Group Members from being able to grow food.³¹⁹
- 169 In respect of Uncle Pabai in particular, the evidence establishes one inundation flooded the downstairs toilet and laundry of his house, as well as rusting the poles on which the house sits and washing away the backfilled soil in the yard.³²⁰ The increasing observed salinity of his yard has 'wrecked' his home garden bed, limiting the crops he can grow there.³²¹ His family garden bed has been similarly damaged.³²² His campsite on the south of the island has also been eroded,³²³ and his structure there is now much closer to the water than it was before, with sand eroded at the base (reflected in what the Court saw on a view).³²⁴
- 170 Uncle Paul's property has also been affected by inundations, with his laundry flooded on at least two occasions, and his appliances (tools and washing machine) damaged.³²⁵ Uncle Peo's fishing business has lost tonnes of crayfish due to the warming of the waters in the Torres Strait.³²⁶ Uncle Herbert stated that:

Every month the big tide comes in. They are getting bigger and more frequent. It wasn't like that before. The frequency makes me sad. This is a real fear for me. It is a burden for me to know this is happening... My house has been flooded during the monsoon. The last time was in February and March 2021. It damaged by car, my motorbike, and my tools. It sickened the banana trees and the leaves turned yellow for months afterwards.³²⁷

³¹⁵ APP.0001.0009.0008 Affidavit of Uncle Pabai [170].

³¹⁶ APP.0001.0009.0007 Affidavit of Uncle Herbert [32].

³¹⁷ APP.0001.0009.0007 Affidavit of Uncle Herbert [32]; APP.0001.0009.0005 Affidavit of Uncle Paul [131].

³¹⁸ APP.0001.0009.0005 Affidavit of Uncle Paul [131], [140].

³¹⁹ APP.0001.0009.0008 Affidavit of Uncle Pabai [113], [121]; APP.0001.0009.0007 Affidavit of Uncle Herbert [33].

³²⁰ APP.0001.0009.0008 Affidavit of Uncle Pabai [170].

³²¹ APP.0001.0009.0008 Affidavit of Uncle Pabai [113].

³²² APP.0001.0009.0008 Affidavit of Uncle Pabai [120].

³²³ APP.0001.0009.0008 Affidavit of Uncle Pabai [130]–[141].

³²⁴ APP.0001.0012.0004 5 June 2023, Uncle Pabai, T49.4 – 13; APP.0001.0009.0008 Affidavit of Uncle Pabai [130]-[134]; APP.0001.0010.0001 Record of views, photo 16.

³²⁵ APP.0001.0009.0005 Affidavit of Uncle Paul [131], [140], [180].

³²⁶ APP.0001.0009.0012 Affidavit of Uncle Peo [45].

³²⁷ APP.0001.0009.0007 Affidavit of Uncle Herbert [31]-[32].

D. APPLICABLE LAW

- 171 The Civil Liability Act 2003 (Qld) (CLA) applies to this case.³²⁸ The law of the tort is the lex loci delicti.³²⁹ Here, that is Queensland. In this case, the cause of action arises "in substance" in the Torres Strait Islands, where the loss has occurred and will occur. That is where the Commonwealth's negligence "assumes significance".³³⁰
- 172 The CLA contains provisions relevant to the breach of duty and causation stages of the negligence enquiry. It does not address the duty of care stage. The CLA does not codify the common law but its provisions must be applied in all cases in which they are applicable.³³¹ Further, Division 1 of Part 3 of the CLA, which contains provisions relating to the liability of public and other authorities, is inapplicable. Those provisions do not apply in this proceeding because the Commonwealth does not fall into any of the definitions of "public or other authority" in s 34. In particular, "the Crown (within the meaning of the *Crown Proceedings Act 1980*)" in paragraph (a) of the definition refers only to the Crown in the right of the State of Queensland.³³²
- 173 In relation to breach of duty, s 9 provides:
 - (1) A person does not breach a duty to take precautions against a risk of harm unless—
 - (a) the risk was foreseeable (that is, it is a risk of which the person knew or ought reasonably to have known); and
 - (b) the risk was not insignificant; and
 - (c) in the circumstances, a reasonable person in the position of the person would have taken the precautions.
 - (2) In deciding whether a reasonable person would have taken precautions against a risk of harm, the court is to consider the following (among other relevant things)—
 - (a) the probability that the harm would occur if care were not taken;
 - (b) the likely seriousness of the harm;

³²⁸ See APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [526] (Beach J); APP.0001.0021.0006 *Civil Liability Act 2003* (Qld) (*'CLA'*).

³²⁹ APP.0001.0020.0077 John Pfeiffer Pty Ltd v Rogerson (2000) 203 CLR 503.

APP.0001.0020.0007 Amaca v Frost (2006) 67 NSWLR 635, 640 [15], [18] (Spigelman CJ), quoting
APP.0001.0020.0045 Distillers Co (Biochemicals) Ltd v Thompson [1971] AC 458, 468; APP.0001.0020.0181 Voth
v Manildra Flour Mills Pty Ltd (1990) 171 CLR 538, 567.

³³¹ APP.0001.0020.0094 *Meandarra Aerial Spraying Pty Ltd v GEJ & MA Geldard Pty Ltd* [2012] QCA 315; [2013] 1 Qd R 319, [23].

APP.0001.0021.0012 Crown Proceedings Act 1980 (Qld) s 8 (definition of "Crown").

- (c) the burden of taking precautions to avoid the risk of harm;
- (d) the social utility of the activity that creates the risk of harm.
- 174 In relation to causation, s 11 relevantly provides:
 - (1) A decision that a breach of duty caused particular harm comprises the following elements—
 - (a) the breach of duty was a necessary condition of the occurrence of the harm (*factual causation*);
 - (b) it is appropriate for the scope of the liability of the person in breach to extend to the harm so caused (*scope of liability*).
 - (2) In deciding in an exceptional case, in accordance with established principles, whether a breach of duty—being a breach of duty that is established but which can not be established as satisfying subsection (1)(a)—should be accepted as satisfying subsection (1)(a), the court is to consider (among other relevant things) whether or not and why responsibility for the harm should be imposed on the party in breach.

...

(4) For the purpose of deciding the scope of liability, the court is to consider (among other relevant things) whether or not and why responsibility for the harm should be imposed on the party who was in breach of the duty.

PART 2. THE PRIMARY DUTY

E. THE DUTIES OF CARE

- 175 The Applicants' case is that the Commonwealth owes two duties of care to Torres Strait Islanders:
 - 175.1 a duty to take reasonable steps to protect Torres Strait Islanders, their traditional way of life and the marine environment in and around the Protected Zone (including the Torres Strait Islands) from the impacts of climate change (**Primary Duty**);³³³ and
 - 175.2 a duty to take reasonable care to avoid causing property damage, loss of fulfilment of *Ailan Kastom* and/or injury, disease or death arising from a failure to adequately implement adaptation measures to prevent or minimise the impacts of climate change (**Alternative Duty**), ³³⁴ which is addressed below in Part 3.³³⁵
- 176 Each of these duties is novel in the sense that it has not been recognised by a Court of this country, although analagous duties have been accepted by courts of other countries (see below).
- 177 In determining the existence, scope and content of a novel duty of care, 'the proper approach is to undertake a close analysis of the facts bearing on the relationship between the plaintiff and the putative tortfeasor by references to the "salient features" or factors affecting the appropriateness of imputing a legal duty to take reasonable care to avoid harm or injury'.³³⁶ Those salient features include:³³⁷

177.1 the foreseeability of the harm;

³³³ APP.0001.0015.0003 3FASOC [81].

³³⁴ APP.0001.0015.0003 3FASOC [81A].

For convenience and clarity, the mitigation and adaptation duties are addressed separately in these submissions. However, both the mitigation and adaptation duties rely upon, to the extent relevant, the submissions made in both sections.

³³⁶ APP.0001.0020.0029 Caltex Refineries (Qld) Pty Ltd v Stavar [2009] NSWCA 258; (2009) 75 NSWLR 649, [102] (Allsop CJ, Simpson J agreeing).

³³⁷ APP.0001.0020.0029 Caltex Refineries (Qld) Pty Ltd v Stavar [2009] NSWCA 258; (2009) 75 NSWLR 649, [103] (Allsop P, Simpson J agreeing).

- 177.2 the degree and nature of control able to be exercised by the defendant to avoid harm;
- 177.3 the degree of vulnerability of the plaintiff to harm from the defendant's conduct;
- 177.4 the degree of reliance by the plaintiff upon the defendant;
- 177.5 the assumption of responsibility by the defendant;
- 177.6 the existence of a category of relationship between the defendant and the plaintiff;
- 177.7 knowledge by the defendant that the conduct will cause harm to the plaintiff;
- 177.8 any potential indeterminacy of liability; and

177.9 the existence of conflicting duties arising from other principles of law or statute.

178 However, the 'proximity factors'³³⁸ or salient features 'should not ... be treated as a shopping list, all the items of which must have application in a particular case'.³³⁹ While '[t]axonomy and definition play their part',³⁴⁰ the salient features analysis is nothing more (or less) than a 'conceptual' or 'analytical tool'³⁴¹ to 'assist'³⁴² in the development of the common law by a process of analogical³⁴³ reasoning. It is not "compulsory" for the Court "to make findings about all of the [salient] features" in determining whether a novel duty of care exists. ³⁴⁴ The salient features approach is thus an example of 'the policy of developing novel cases incrementally by reference to analogous cases'.³⁴⁵ The

APP.0001.0020.0131 Pyrenees Shire Council (previously known as the President, Councillors & Ratepayers of the Shire of Ripon) v Day [1998] HCA 3; (1998) 192 CLR 330, [230] (Kirby J).

APP.0001.0020.0029 Caltex Refineries (Qld) Pty Ltd v Stavar [2009] NSWCA 258; (2009) 75 NSWLR 649, [172] (Basten JA, Simpson J agreeing). See also APP.0001.0020.0036 Crimmins (as executrix of estate of Crimmins dec'd) v Stevedoring Industry Finance Committee [1999] HCA 59; (1999) 200 CLR 1, [77] (McHugh J, Gleeson CJ agreeing at [3]).

³⁴⁰ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [206] (Allsop CJ).

³⁴¹ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [211] (Allsop CJ), [362] (Beach J).

³⁴² APP.0001.0020.0029 *Caltex Refineries (Qld) Pty Ltd v Stavar* [2009] NSWCA 258; (2009) 75 NSWLR 649, [102] (Allsop CJ, Simpson J agreeing).

³⁴³ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [783] (Wheelahan J).

³⁴⁴ APP.0001.0020.0029 Caltex Refineries (Qld) Pty Ltd v Stavar (2009) 75 NSWLR 649 at 676[104] per Allsop P

APP.0001.0020.0036 Crimmins (as executrix of estate of Crimmins dec'd) v Stevedoring Industry Finance Committee [1999] HCA 59; (1999) 200 CLR 1, [73] (McHugh J, Gleeson CJ agreeing at [3]). See also
APP.0001.0020.0025 Brodie v Singleton Shire Council [2001] HCA 29; (2001) 206 CLR 512, [316] (Hayne J);
APP.0001.0020.0072 Home Office v Dorset Yacht Co Ltd [1970] AC 1004, 1058 (Lord Diplock).

words in past cases should not be allowed to become 'tyrants over the facts of another case'.³⁴⁶

179 Ultimately, what is required is consideration of the 'totality'³⁴⁷ of the relationship between the Commonwealth and Torres Strait Islanders, 'by reference to the legal conception of neighbourhood'.³⁴⁸ This is a 'fact rich and fact intensive' inquiry.³⁴⁹ Thus, before proceeding to the salient features analysis, it is useful to address the (long recognised) special relationship between the Commonwealth and Torres Strait Islanders, and to draw some high level analogies between the presently alleged duty and those found to exist in the past (in Australia and abroad). This is what Beach J in *Minister for the Environment (Cth) v* **Sharma**³⁵⁰ called the 'frame of reference' or 'broader questions' concerning the 'closeness and directness' of the relationship that may be subjected to a duty of care.³⁵¹

Torres Strait Islanders' special relationship to the Commonwealth

180 In assessing a novel duty of care '[o]ne must begin with the relationship' before one turns to the individual salient features.³⁵² The reason for that is that piecemeal analysis of salient features risks losing sight of the broader context. As Allsop CJ explained in *Sharma*:

Without such a commencement, an approach to the inquiry by reference to many diverse features within the salient features risks fragmentation and confusion by individual particular analysis of features, almost in the abstract and divorced from context, without a proper understanding of the possible interrelations between the various features attending the relationship and the legal system as a whole.³⁵³

181 Focus on the relationship also assists orienting the inquiry according to 'the core concern of the law of negligence', which is to identify 'the nature of relationships falling within

³⁴⁶ APP.0001.0020.0081 *King v Philcox* [2015] HCA 19; (2015) 255 CLR 304, [30] (French CJ, Kiefel and Gageler JJ) quoting APP.0001.0020.0104 *Mount Isa Mines Ltd v Pusey* (1970) 125 CLR 383, 400 (Windeyer J).

³⁴⁷ APP.0001.0020.0065 *Graham Barclay Oysters Pty Ltd v Ryan* [2002] HCA 54; (2002) 211 CLR 540, [145] (Gummow and Hayne JJ).

³⁴⁸ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [211] (Allsop CJ).

³⁴⁹ APP.0001.0020.0180 Victorian Taxi Families Inc and Redfield Court Holdings Pty Ltd v Commercial Passenger Vehicle Commission [2020] VSC 762; 61 VR 383, [142] (Cavanough J).

³⁵⁰ [2022] FCAFC 35; (2022) 400 ALR 203.

³⁵¹ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [362] (Beach J).

³⁵² APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [212] (Allsop CJ).

³⁵³ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [211] (Allsop CJ).

the concept of neighbourhood'.³⁵⁴ This requires examination of 'existing relationships, situated within their broader social and legal context'.³⁵⁵ Relationships between the State and specific groups of Indigenous peoples has always been a unique one that is capable of generating neighbourly obligations.

- 182 After colonisation, the special relationship of the coloniser to the Indigenous people of this country was recognised in various ways. Indeed, and consistently with old common law concepts,³⁵⁶ some colonies recognised the protective obligation at the very moment of their founding. For example, when the province of South Australia came into existence on 28 December 1836, Governor Hindmarsh thought it his 'duty' to proclaim to the public that he would offer 'protection to the Native Population'.³⁵⁷ In 1837 the Secretary of State for War and the Colonies instructed the Governor of New South Wales that 'all the natives inhabiting those Territories' must not be denied 'that *protection* to which they derive the highest possible claim from the Sovereignty which has been assumed over the whole of their Ancient Possessions'.³⁵⁸ Also in 1837, the Parliamentary Select Committee on Aborigines in Great Britain reported that: '[t]he protection of Aborigines should be considered as a duty peculiarly belonging and appropriate to the executive government, as administered either in this country or by the governors of the respective colonies'.³⁵⁹ The colonial courts also affirmed their jurisdiction over crimes committed by Indigenous people against other Indigenous people because this jurisdiction was considered necessary to provide 'sanctuary to them'.³⁶⁰
- 183 Subsequent legislative enactments such as the Aboriginals Protection and Restriction of the Sale of Opium Act 1897 (Qld),³⁶¹ while now properly viewed as paternalistic,³⁶² have

³⁵⁴ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [213] (Allsop CJ).

³⁵⁵ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [211] (Allsop CJ).

³⁵⁶ APP.0001.0020.0031 Case of Tanistry (1608) Davis 28 [80 ER 516], 4th ed Dublin (1762) English translation 78 at 110–1. This case concerned the conquest of Ireland, and the consequences of a monarch receiving 'any of the natives or ancient inhabitants into his protection'.

³⁵⁷ Quoted in APP.0001.0020.0170 *Trevorrow v South Australia* (No 5) [2007] SASC 285; (2007) 98 SASR 136, [335] (Gray J).

³⁵⁸ APP.0001.0011.0003 'Lord Glenelg to Sir Richard Bourke' (1837) in HRA (1923), ser 1, vol 19, 47, 48 (emphasis added).

³⁵⁹ APP.0001.0011.0002 Great Britain, House of Commons, Report of the Parliamentary Select Committee on Aboriginal Tribes, (British Settlements) (1837) p 117 (emphasis added).

³⁶⁰ APP.0001.0020.0135 *R v Murrell* (1836) 1 Legge 72, 73 (Burton J, emphasis added).

³⁶¹ APP.0001.0021.0004 *Aboriginals Protection and Restriction of the Sale of Opium Act 1897* (Qld). See also APP.0001.0021.0001 *Aboriginal Protection Act 1869* (Vic); APP.0001.0021.0003 *Aboriginals Ordinance 1918* (NT).

³⁶² APP.0001.0022.0001 Alan Lester and Fae Dussart, 'Trajectories of Protection: Protectorates of Aborigines in Early 19th Century Australia and Aotearoa New Zealand' (2008) 64(3) *New Zealand Geographer* 205.

been described as 'reasonably capable of being seen by the legislature at the time as a rational and relevant means of *protecting* Aboriginal people'.³⁶³

- Brennan J in *Mabo v Queensland (No 2)* suggested that the nature of the relationship between the Commonwealth and the first inhabitants of Australia might give rise to a 'fiduciary duty on the Crown to exercise its discretionary power' in relation to land tenure so as to compensate for any surrender of native title.³⁶⁴ Brennan J subsequently developed the contention in *Wik Peoples v Queensland*, in which he acknowledged Canadian and American case law recognising 'a fiduciary duty to protect the lands'.³⁶⁵ The *Native Title Act 1993* (Cth) was enacted in part to 'protect'.³⁶⁶ the native title rights and interests that had only recently been appreciated to arise from the special connection of Indigenous persons to the lands and waters of Australia. Before that enactment, it was the common law that effected the 'protection of native title'.³⁶⁷ Relatedly, albeit in a broader sense, 'the common law must be taken always to have comprehended *the unique obligation of protection* owed by the Crown to [Aboriginal] societies and to each member in his or her capacity as such'.³⁶⁸
- 185 It was historical facts like those just outlined that led Nettle J in *Love v Commonwealth* to recognise 'the unique obligation of permanent protection' owed by the Crown in right of Australia to Indigenous peoples.³⁶⁹ The foundational source of that protective obligation, Nettle J explained, 'is the undoubted historical connection between Aboriginal societies and the territory of Australia which they occupied at the time of the Crown's acquisition of sovereignty'.³⁷⁰ If native title was, as Gordon J explained in *Love*, 'one legal consequence flowing from common law recognition of the connection between Aboriginal Australians and the land and waters that now make up Australia',³⁷¹ a further consequence is that the common law might more readily discern a relationship of

APP.0001.0020.0083 Kruger v Commonwealth [1997] HCA 27; (1997) 190 CLR 1, 97 (Toohey J, emphasis added).
APP.0001.0020.0090 Mabo v Queensland (No 2) [1992] HCA 23; (1992) 175 CLR 1, 60 (Brennan J, Mason CJ and McHugh JJ agreeing). As to fiduciary relationships see further Kirsty Gover, 'The Honour of the Crowns: State-Indigenous Fiduciary Relationships and Australian Exceptionalism' (2016) 38(3) Sydney Law Review 339.

³⁶⁵ APP.0001.0020.0188 *Wik Peoples v Queensland* [1996] HCA 40; (1996) 187 CLR 1, 96–7 (Brennan CJ).

³⁶⁶ APP.0001.0021.0016 *Native Title Act* 1993 (Cth) s 3(a).

 ³⁶⁷ APP.0001.0020.0095 Members of the Yorta Yorta Aboriginal Community v Victoria [2002] HCA 58; (2002) 214
CLR 422, [110] (Gaudron and Kirby JJ). See also APP.0001.0020.0090 Mabo v Queensland (No 2) [1992] HCA 23; (1992) 175 CLR 1, 83–6 (Deane and Gaudron JJ).

³⁶⁸ APP.0001.0020.0089 Love v Commonwealth [2020] HCA 3; (2020) 270 CLR 152, [272] (Nettle J, emphasis added).

 ³⁶⁹ APP.0001.0020.0089 Love v Commonwealth [2020] HCA 3; (2020) 270 CLR 152, [274] (Nettle J), see also [252], [278] (Nettle J).
³⁷⁰ APP.0001.0020.0089 Love v Commonwealth [2020] HCA 2; (2020) 270 CLR 152, [274] (Nettle J).

³⁷⁰ APP.0001.0020.0089 *Love v Commonwealth* [2020] HCA 3; (2020) 270 CLR 152, [276] (Nettle J).

³⁷¹ APP.0001.0020.0089 Love v Commonwealth [2020] HCA 3; (2020) 270 CLR 152, [364] (Gordon J).

neighbourly obligation between the Commonwealth and a particular group of Indigenous people whose connection to Australian land and waters is in danger of being severed.

- 186 Against that background, it pays to consider the Commonwealth's relations with Torres Strait Islanders in particular. *Mabo (No 2)*, it will be recalled, was a case concerning the Meriam people of the Torres Strait, but the High Court's decision did not come from nowhere. The foundation was laid by Moynihan J's findings at first instance, including a finding that one of the purposes of the annexation of the Torres Strait was 'the protection of the native inhabitants of the islands'.³⁷²
- 187 Nor has it only been through common law and statute that the Commonwealth's protective responsibilities towards Torres Strait Islanders have been expressed; they have also manifested in agreements reached at international law. In 1978, the Commonwealth entered into the Torres Strait Treaty with Papua New Guinea for the protection of the Torres Strait Islands.³⁷³ As the Preamble to the treaty made clear, it was entered into in recognition of 'the importance of *protecting* the traditional way of life and livelihood of Australians who are Torres Strait Islanders and of Papua New Guineans who live in the coastal area of Papua New Guinea in and adjacent to the Torres Strait'. Indeed, the twin purposes of the Torres Strait Treaty are widely acknowledged to have been protection of the Islanders' traditional way of life and protection of the environment.³⁷⁴ The protective purpose was expressly centred during treaty negotiations, in which it was resolved that 'A zone would be established in the Torres Strait to protect the traditional way of life and livelihood of the Torres Strait Islanders'.³⁷⁵ The Commonwealth's entry into the Torres Strait Treaty thus confirms the Commonwealth's own acknowledgment of its special obligation to protect Torres Strait Islanders' lands, waters and culture.³⁷⁶ The Applicants thus rely primarily on the historical *fact* of the Treaty as part of the relationship to which the common law analysis must be applied, rather than seeking to use it as a source of

³⁷² Moynihan J, quoted in APP.0001.0020.0089 *Mabo v Queensland (No 2)* [1992] HCA 23; (1992) 175 CLR 1, 21 (Brennan J, Mason CJ and McHugh JJ agreeing).

³⁷³ See APP.0001.0003.0022 Treaty between Australia and the Independent State of Papua New Guinea Concerning Sovereignty and Maritime Boundaries in the Area Between Two Countries, Including the Area Known as Torres Strait, and Related Matters entered on 18 December 1978, in force from 15 February 1985 (Australian Treaty Series 1985 No 4).

APP.0001.0022.0019 S B Kaye, 'Jurisdictional patchwork: law of the sea and native title issues in the Torres Strait' (2001) 2(2) *Melbourne Journal of International Law* 381, 392.

³⁷⁵ APP.0001.0022.0021 'Torres Strait: Joint Statement by the Foreign Ministers of Australia and Papua New Guinea' (1976) *Australian Foreign Affairs Record* 336.

³⁷⁶ See further APP.0001.0022.0008 H Burmester, 'The Torres Strait Treaty: Ocean Boundary Delimitation by Agreement', (1982) 76 *American Journal of International* Law 321, 322.

international law informing the content of the common law (although that too would be permissible³⁷⁷).

- 188 The relationship of obligation and protection recognised in the Torres Strait Treaty was later reinforced, at a national level, by Australia's endorsement of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).³⁷⁸ UNDRIP recognises Indigenous peoples' 'distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources'³⁷⁹ and requires that 'States shall give ... *protection* to these lands, territories and resources'.³⁸⁰ It also imposes obligations on members states to protect against the deprivation of culture, dispossession of land and population transfer.³⁸¹ Finally, it recognises a right to redress, including compensation, for the damage of traditionally owned lands, territories and resources.³⁸²
- 189 The Treaty obligation is also complemented by the International Covenant on Civil and Political Rights (ICCPR).³⁸³
- 190 The above discussion demonstrates that, in a fundamental sense, the foundation of the alleged duties is not novel. It is rooted in the law's long recognition of the special relationship between Indigenous people (and, more importantly, local groups of Indigenous peoples) and the Crown. Unlike in *Sharma*, the longstanding connection between the Commonwealth and Torres Strait Islanders properly fits the category of a 'special protective relationship' recognised by law.³⁸⁴

Analogous duties

191 Courts have long recognised duties – on the part of both private actors and public authorities – to protect against, or at least not contribute to, foreseeable harms caused by natural disasters and other significant events. In other contexts, courts have recognised

³⁷⁷ APP.0001.0020.0090 *Mabo v Queensland (No 2)* [1992] HCA 23; (1992) 175 CLR 1, 42 (Brennan J, Mason CJ and McHugh JJ agreeing): 'international law is a legitimate and important influence on the development of the common law'.

The UNDRIP was adopted by the UN on 13 September 2007, despite Australia initially voting against its adoption. Subsequently, on 3 April 2009, the Australian Government announced its support for the UNDRIP.

³⁷⁹ UNDRIP art 25.

³⁸⁰ UNDRIP art 26(3), see also art 29(1).

³⁸¹ UNDRIP arts 8 and 10.

³⁸² UNDRIP art 28(1).

³⁸³ See further discussion on the ICCPR below at [611]-[612].

³⁸⁴ Cf APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [677] (Beach J).

duties owed by public authorities notwithstanding that those duties may be owed in the field of policy considerations.

- 192 A number of cases have recognised duties in negligence³⁸⁵ to protect against flooding from rivers, streams and dams.
- 193 In *Rodriguez & Sons Pty Ltd v Queensland Bulk Water Supply Authority t/a Seqwater* (*No 22*),³⁸⁶ the Supreme Court of New South Wales recognised a duty of care owed by dam operators and their employees to prevent harms resulting from large scale flooding affecting the greater Brisbane and Ipswich area. At the threshold level of foreseeability for the duty inquiry, the court found that the risk of harm arising from extremely high levels of rainfall was foreseeable.³⁸⁷ The salient features of control and vulnerability were particularly important to the recognition of the duty of care.³⁸⁸ That the duty was owed to a large number of people, some of whom would be difficult to identify, did not engage the indeterminacy consideration.³⁸⁹ Importantly for present purposes, that the defendants were exercising functions of a public nature did not prevent the recognition of a duty in negligence.³⁹⁰
- 194 In *Vernon Knights Associates v Cornwall Council*,³⁹¹ the Court of Appeal of England and Wales affirmed the trial judge's recognition of a duty of care owed by a local council in

³⁸⁵ The cases discussed in the text are limited to negligence, however the common law's willingness to attribute liability for changes to the natural environment (such as by pollution to air or water) is also evident in the law of nuisance. See, eg, *Dalby v Berch* (1330) YB Trin 4 Edw III, fo 36, pl 26, as cited in APP.0001.0020.0149 *Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for Environment* [2021] FCA 560; (2021) 391 ALR 1; [119]; APP.0001.0020.0138 *Re Aldred's Case* (1610) 77 ER 816; APP.0001.0020.0014 *Attorney-General v Council of Borough of Birmingham* (1858) 70 ER 220; APP.0001.0020.0018 *Bamford v Turnley* (1862) 122 ER 27; APP.0001.0020.0037 *Crossley and Sons, Ltd v Lightowler* [1867] LR 2 Ch App 478, 483 (Lord Chelmsford LC). The convergence of liability in negligence and nuisance is now well recognised: APP.0001.0020.0085 *Leakey v National Trust for Places of Historic Interest or Natural Beauty* [1980] 1 Q.B. 485, 514G–H (Megaw LJ, Shaw and Cumming-Bruce LJJ agreeing); APP.0001.0020.0178 *Vernon Knights Associates v Cornwall Council* [2011] UKHL 55; [2002] 1 AC 321, [31]; APP.0001.0020.0178 *Vernon Knights Associates v Cornwall Council* [2014] Env L R 6, [48] (Jackson LJ, Dyson MR and Burnton J agreeing). See also APP.0001.0020.0067 *Hargrave v Goldman* [1963] HCA 56; (1963) 110 CLR 40, 61–2 (Windeyer J).

APP.0001.0020.0143 Rodriguez & Sons Pty Ltd v Queensland Bulk Water Supply Authority t/as Seqwater (No 22)
[2019] NSWSC 1657, overturned on appeal (but not on duty) in APP.0001.0020.0132 Queensland Bulk Water Supply Authority t/as Seqwater v Rodriguez and Sons Pty Ltd [2021] NSWCA 206; (2021) 393 ALR 162.

³⁸⁷ APP.0001.0020.0143 *Rodriguez & Sons Pty Ltd v Queensland Bulk Water Supply Authority t/as Seqwater (No 22)* [2019] NSWSC 1657 chp 11 [43] (Beech-Jones J).

³⁸⁸ APP.0001.0020.0143 *Rodriguez & Sons Pty Ltd v Queensland Bulk Water Supply Authority t/as Seqwater (No 22)* [2019] NSWSC 1657, [86] (Beech-Jones J).

³⁸⁹ APP.0001.0020.0143 Rodriguez & Sons Pty Ltd v Queensland Bulk Water Supply Authority t/as Seqwater (No 22) [2019] NSWSC 1657, [86], chp 11 [55]–[59] (Beech-Jones J) distinguishing APP.0001.0020.0053 Electro-Optic Systems Pty Ltd v State of New South Wales [2014] ACTCA 45; (2014) 10 ACTLR 1, [353] (Jagot J).

³⁹⁰ APP.0001.0020.0143 *Rodriguez & Sons Pty Ltd v Queensland Bulk Water Supply Authority t/as Seqwater (No 22)* [2019] NSWSC 1657, [86], chp 11 [65]–[70] (Beech-Jones J).

³⁹¹ APP.0001.0020.0178 Vernon Knights Associates v Cornwall Council [2014] Env. L. R. 6.

relation to a known flood risk to a holiday village. The council had taken precautions against that risk, including by the installation of drains, gullies and a catchpit, but those precautions were insufficient to prevent two particular instances of flooding. The court recognised that duty while also recognising the need to account for the 'competing demands' on a public authority's resources and the 'public purposes' for which those resources are held.³⁹² The court considered that these competing demands and public purposes could be accounted for in the assessment of what was 'fair, just and reasonable' for the council to have done in response to the known risk.³⁹³ On the particular facts of the case, and making 'due allowance for the pressures on local authorities', the court found that the standard of care had not been met.³⁹⁴

- 195 In *High Country Outfitters Inc v Pitt Meadows (City)*,³⁹⁵ the Provincial Court of British Columbia accepted the existence of a duty of care owed by a city authority to protect properties that were vulnerable to flooding. The plaintiff's property was situated on a flood plain that would not have been inhabitable but for a network of dikes protecting against periodic rising of the surrounding rivers.³⁹⁶ The local authority did not deny that 'it stood in a position of legal proximity' to the plaintiff by reason of having previously conducted improvements on the dike system.³⁹⁷ Ultimately, however, the claims in negligence failed on causation.³⁹⁸
- 196 Other cases have recognised duties to protect against the harms from other significant natural events, such as fires and landslides.
- 197 In *Electro Optic Systems Pty Ltd v State of New South Wales; West v State of New South Wales*,³⁹⁹ the Supreme Court of the Australian Capital Territory recognised in obiter that 'the Territory owed a duty of care at common law to take reasonable steps to protect

³⁹² APP.0001.0020.0178 Vernon Knights Associates v Cornwall Council [2014] Env. L. R. 6, [49(iii)] (Jackson LJ, Dyson MR and Burnton J agreeing).

³⁹³ APP.0001.0020.0178 Vernon Knights Associates v Cornwall Council [2014] Env. L. R. 6, [49(iii)] (Jackson LJ, Dyson MR and Burnton J agreeing).

³⁹⁴ APP.0001.0020.0178 Vernon Knights Associates v Cornwall Council [2014] Env. L. R. 6, [59], see also [63] (Jackson LJ, Dyson MR and Burnton J agreeing).

APP.0001.0020.0069 High Country Outfitters Inc v Pitt Meadows (City) [2012] BCJ No 1859.

³⁹⁶ APP.0001.0020.0069 *High Country Outfitters Inc v Pitt Meadows (City)* [2012] BCJ No 1859, [2], [4] (Thomas S Woods Prov J).

³⁹⁷ APP.0001.0020.0069 *High Country Outfitters Inc v Pitt Meadows (City)* [2012] BCJ No 1859, [20] (Thomas S Woods Prov J).

³⁹⁸ APP.0001.0020.0069 *High Country Outfitters Inc v Pitt Meadows (City)* [2012] BCJ No 1859, [94] (Thomas S Woods Prov J).

³⁹⁹ APP.0001.0020.0054 Electro Optic Systems Pty Ltd v State of New South Wales; West v State of New South Wales [2012] ACTSC 184 upheld on appeal in APP.0001.0020.0053 Electro Optic Systems Pty Ltd v State of New South Wales; West v State of New South Wales [2014] ACTCA 45; (2014) 10 ACTLR 1.

persons and property in the Territory from loss or damage by fire.⁴⁰⁰ It was recognised that the Territory had 'established dedicated rural and metropolitan fire services' in fulfilment of that duty.⁴⁰¹ On appeal, the Court of Appeal observed (in the context of a statutory obligation to take 'all possible steps' to suppress or control a fire) that a duty would generally not demand the taking of a step that would expend 'resources which could more effectively be deployed elsewhere'.⁴⁰²

- In Smaill v Buller District Council,⁴⁰³ the High Court of New Zealand held that a local council owed a duty of care to protect people and property associated with rockslides. It was recognised that this entailed the recognition of a duty 'in a new factual situation'.⁴⁰⁴ However, in light of the 'proximity and reliance' of the property owners to, and on, the council, the court held that '[i]t is an appropriate incremental step to extend liability' to the facts of the case.⁴⁰⁵ The duty having been recognised, the council was found to be negligent by reason of their failure to take 'decisive action'⁴⁰⁶ or to provide 'an adequate and timely response' to the known risk of geological instability.⁴⁰⁷
- 199 In *La Sucrerie Casselman Inc v Cambridge (Township)*,⁴⁰⁸ the Ontario Superior Court of Justice recognised a duty of care on the part of a municipality to protect against the known but 'slight' risk of landslides, because 'the result could be so catastrophic that the risk is unacceptable, absent appropriate remedial work being carried out'.⁴⁰⁹ The court considered that there was a 'sufficiently close relationship' between the municipality and the landowner to justify the recognition of such a duty.⁴¹⁰ The court rejected the idea that there were 'any [policy] considerations which ought to negative or limit the scope of the duty'.⁴¹¹ The factual context of the claim was that landslides had occurred in the area for centuries, and had in recent decades been the subject of extensive studies.⁴¹²

⁴⁰⁰ APP.0001.0020.0054 *Electro Optic Systems Pty Ltd v State of New South Wales; West v State of New South Wales* [2012] ACTSC 184, [381] (Higgins CJ).

⁴⁰¹ APP.0001.0020.0054 *Electro Optic Systems Pty Ltd v State of New South Wales; West v State of New South Wales* [2012] ACTSC 184, [381] (Higgins CJ).

⁴⁰² APP.0001.0020.0053 *Electro Optic Systems Pty Ltd v State of New South Wales; West v State of New South Wales* [2014] ACTCA 45; (2014) 10 ACTLR 1, [335] (Jagot J, Murrell CJ agreeing).

⁴⁰³ APP.0001.0020.0151 Smaill v Buller District Council [1998] 1 NZLR 190.

⁴⁰⁴ APP.0001.0020.0151 *Smaill v Buller District Council* [1998] 1 NZLR 190, 213 (Panckhurst J).

⁴⁰⁵ APP.0001.0020.0151 *Smaill v Buller District Council* [1998] 1 NZLR 190, 213 (Panckhurst J).

⁴⁰⁶ APP.0001.0020.0151 *Smaill v Buller District Council* [1998] 1 NZLR 190, 215 (Panckhurst J).

 ⁴⁰⁷ APP.0001.0020.0151 Smaill v Buller District Council [1998] 1 NZLR 190, 209 (Panckhurst J).
⁴⁰⁸ APP.0001.0020.0084 La Suarania Casadiman Inc. v Cambridge (Township) [2000] OLNO 4650.

⁴⁰⁸ APP.0001.0020.0084 La Sucrerie Casselman Inc v Cambridge (Township) [2000] OJ No 4650.

 ⁴⁰⁹ APP.0001.0020.0084 La Sucrerie Casselman Inc v Cambridge (Township) [2000] OJ No 4650, [1] (Morin J.
⁴¹⁰ APP.0001.0020.0084 La Sucrerie Casselman Inc v Cambridge (Township) [2000] OJ No 4650, [1] (Morin J.

APP.0001.0020.0084 La Sucrerie Casselman Inc v Cambridge (Township) [2000] OJ No 4650, [131] (Morin J).
APP.0001.0020.0084 La Sucrerie Casselman Inc v Cambridge (Township) [2000] OJ No 4650, [126], see also [131]

⁽Morin J).

⁴¹² APP.0001.0020.0084 La Sucrerie Casselman Inc v Cambridge (Township) [2000] OJ No 4650, [5]–[6] (Morin J).

Nevertheless, the municipality 'ignore[d]' the advice of a conservation authority on this topic,⁴¹³ and were found to be negligent.⁴¹⁴ (The claim ultimately failed on causation.)

European case law

- 200 It is also instructive to look to how courts in civil law jurisdictions have recognised analogous duties on the part of states and private corporations to limit the foreseeable harms from GHG emissions. These cases are approached with an appreciation of the different legal contexts, but remain of utility in circumstances where they are grounded in very similar facts and similar legal concepts to neighbourhood and negligence.
- 201 In *Urgenda Foundation v The State of the Netherlands*,⁴¹⁵ the Dutch courts found that the State had committed a 'tortious act' by failing to take greater steps to reduce its GHG emissions. The case was brought by a non-governmental organisation and 886 Dutch citizens pursuant to Article 6:162 of the *Dutch Civil Code*, which provides:

(1) A person who commits a tortious act (unlawful act) against another person that can be attributed to him, must repair the damage that this other person has suffered as a result thereof.

(2) As a tortious act is regarded a violation of someone else's right (entitlement) and an act or omission in violation of a duty imposed by law or of what according to unwritten law has to be regarded as proper social conduct, always as far as there was no justification for this behaviour.

(3) A tortious act can be attributed to the tortfeasor if it results from his fault or from a cause for which he is accountable by virtue of law or generally accepted principles (common opinion).

202 Drawing upon the concept of 'hazardous negligence'⁴¹⁶, the first instance court ruled in favour of the claimants on the basis that, the State had acted in violation of 'what according to unwritten law has to be regarded as proper social conduct'. This finding was based on the State's failures to implement and align GHG emissions reductions from 1990 to 2020 with best available science, despite knowing for decades of the risks associated with global warming. The Court found that the State 'has acted negligently

⁴¹³ APP.0001.0020.0084 La Sucrerie Casselman Inc v Cambridge (Township) [2000] OJ No 4650, [122] (Morin J).

⁴¹⁴ APP.0001.0020.0084 La Sucrerie Casselman Inc v Cambridge (Township) [2000] OJ No 4650, [125] (Morin J).

⁴¹⁵ APP.0001.0020.0174 Urgenda Foundation v The State of The Netherlands (2015) ECLI:NL:RBDHA:2015:7196 (official translation) (District Court); APP.0001.0020.0114 Netherlands v Urgenda Foundation (2018) Case No 200.178.245/01 (official translation) (Hague Court of Appeal); APP.0001.0020.0157 State of the Netherlands (Ministry of Economic Affairs and Climate Policy) v Stichting Urgenda (2019) ECLI:NL:HR:2019:2007 (official translation) (Supreme Court of the Netherlands, Civil Division).

⁴¹⁶ The doctrine of 'hazardous negligence' (gevaarzetting) requires persons to act with 'due care to society' in response to foreseeable risks: APP.0001.0020.0174 Urgenda Foundation v The State of The Netherlands (2015) ECLI:NL:RBDHA:2015:7196 (official translation) (District Court) [4.54].

and therefore unlawfully towards [the claimants]⁴¹⁷. On appeal to an intermediate appellate court and then the Supreme Court, the conclusion of liability based on negligence was not ruled upon – because liability was independently found under the *European Convention of Human Rights* – nor the subject of adverse comment. Accordingly, the first instance decision in *Urgenda* remains a useful illustration of the way in which concepts of negligence (however geographically varied) can result in the affixing of liability for failures to respond to the risks of climate change.

203 A more recent decision of the Dutch courts, *Milieudefensie v Royal Dutch Shell*,⁴¹⁸ has confirmed that the concept of tortious liability can give rise to liability for GHG emissions. The plaintiffs in that case (various environmental and social justice groups), argued that the defendant company had an obligation – derived from Article 6:162 – 'to contribute to the prevention of dangerous climate change' and in particular:

to ensure that the CO2 emissions attributable to the Shell group (Scope 1 through to 3) will have been reduced at end 2030, relative to 2019 levels, principally by 45% in absolute terms, or net 45% (using the IPCC SR15 report and the IEA's Net Zero emissions by 2050 scenario as a basis), in the alternative by 35% (using the IEA's Below 2 Degree Scenario as a basis), and further in the alternative by 25% (using the IEA's Sustainable Development Scenario as a basis), through the corporate policy of the Shell group.⁴¹⁹

- 204 The court accepted the plaintiff's primary argument, holding that the defendant company had an obligation arising out of the concept of tortious liability in Article 6:162 to reduce its emissions by 2030 by 45% relative to 2019 levels.⁴²⁰
- 205 Similarly, in *VZW Klimaatzaak v Kingdom of Belgium & Others*,⁴²¹ the State of Belgium was found to have breached the civil law obligations regarding 'negligence or imprudence' by failing to reduce GHG emissions. A Belgian non-governmental organisation brought a claim against Beligum and sub-national authorities alleging, relevantly, a breach of articles 1382 and 1383 of the *Belgian Civil Code* on the basis of

⁴¹⁷ APP.0001.0020.0174 Urgenda Foundation v The State of The Netherlands (2015) ECLI:NL:RBDHA:2015:7196 (official translation) (District Court) [4.93].

⁴¹⁸ APP.0001.0020.0097 *Milieudefensie v Royal Dutch Shell* [2021] District Court of the Hague ECLR:NL:RBDHA:2021:5339 (official translation). Note – the decision is currently on appeal.

⁴¹⁹ APP.0001.0020.0097 *Milieudefensie v Royal Dutch Shell* [2021] District Court of the Hague ECLR:NL:RBDHA:2021:5339 (official translation) [3.2].

⁴²⁰ APP.0001.0020.0097 *Milieudefensie v Royal Dutch Shell* [2021] District Court of the Hague ECLR:NL:RBDHA:2021:5339 (official translation) [4.14].

⁴²¹ APP.0001.0020.0176 VZW Klimaatzaak v Kingdom of Belgium & Others [2021] Belgium, Court of First Instance of Brussels (unofficial translation). Upheld in APP.0001.0020.0175 VZW Klimaatzaak v Kingdom of Belgium & others (2023).

the failures to reduce GHG emissions. Those provisions relate to 'negligence or imprudence', and provide:

Article 1382: any act whatever of man which cause damage to another obliges him by whose fault it occurred to make reparation.

Article 1383: each one is liable for the damage which he causes not only by his own act but also by his negligence or imprudence.

- 206 The Court of First Instance of Brussels held that the defendants had breached Article 1382 of the Code.⁴²² In its reasoning, the Court referred to caselaw that negligence constitutes a failure to exercise diligent and reasonable conduct, exemplified by the concept of *bonus pater familias*, i.e. the conduct that would be expected by a 'good father'.⁴²³ The conduct of public authorities was to be 'assessed according to the criterion of how a normally careful and prudent administrative authority would act in the same circumstances'.⁴²⁴ In finding that the defendants had fallen short of that standard, the Court found that the defendants 'were fully aware of the certain risk of dangerous climate change for the country's population' but had consistently delayed meaningful mitigation measures.⁴²⁵ In particular, the defendants had failed to achieve existing climate targets; had not coordinated with other national authorities to deliver suitable climate efforts; and had ignored repeated warnings from the European Union on the risk of missing climate mitigation targets.⁴²⁶ Accordingly, the Court concluded that the defendants had fallen short of the standard of 'prudence and diligence' required of them.⁴²⁷
- 207 The plaintiffs appealed (because, despite the favourable findings, relief had been refused). On appeal, the Court of Appeal in Brussels endorsed these conclusions, explaining at the outset of its reasoning on this issue: 'there is no doubt that the formulation of climate policy is the prerogative of the legislature, which has wide discretionary powers in this area ... however, the court does not violate the principle of

⁴²² APP.0001.0020.0176 *VZW Klimaatzaak v Kingdom of Belgium & Others* [2021] Belgium, Court of First Instance of Brussels (unofficial translation), 83.

⁴²³ APP.0001.0020.0176 VZW Klimaatzaak v Kingdom of Belgium & Others [2021] Belgium, Court of First Instance of Brussels (unofficial translation), 58.

APP.0001.0020.0176 VZW Klimaatzaak v Kingdom of Belgium & Others [2021] Belgium, Court of First Instance of Brussels (unofficial translation), 58.
APB 0001.0020.0176 VZW Klimaatzaak v Kingdom of Pelgium & Others [2021] Belgium, Court of First Instance of

⁴²⁵ APP.0001.0020.0176 VZW Klimaatzaak v Kingdom of Belgium & Others [2021] Belgium, Court of First Instance of Brussels (unofficial translation), 79.

⁴²⁶ APP.0001.0020.0176 *VZW Klimaatzaak v Kingdom of Belgium & Others* [2021] Belgium, Court of First Instance of Brussels (unofficial translation), 79.

⁴²⁷ APP.0001.0020.0176 VZW Klimaatzaak v Kingdom of Belgium & Others [2021] Belgium, Court of First Instance of Brussels (unofficial translation), 83.

the separation of powers if it confines itself to \dots determining, on the basis of data on which there is scientific and political consensus, the minimum requirements'.⁴²⁸

- 208 In Notre Affaire à Tous v France,⁴²⁹ the Administrative Court of Paris held the State liable in (statutory) tort for ecological damage for taking insufficient measures to reduce GHG emissions. Four non-profit organisations brought proceedings against the State alleging, relevantly, the tort of ecological damage under Articles 1246 and 1247 of the *French Civil Code* on the basis of the claimed inadequacy of emissions targets and the State's failures to reach even its own targets. The Court found that the evidence established that climate change was aggravating 'coastal erosion', increasing 'the risk of submersion', increasing the incidence of 'extreme climatic phenomena' and creating conditions for the increased transmission of illnesses; as such, the Court found that ecological damage had been established.⁴³⁰ With respect to carbon budgets, the Court held that the State had 'failed to carry out the actions that it had itself recognised as likely to reduce greenhouse gas emissions'.⁴³¹ While the statutory provisions at issue in that case mean the question of liability is removed from the Australian context, the Court's analysis demonstrates the ways in which precise assessment of particular state actions and policies can lead to the law affixing liability for the effects of climate change.
- 209 Having framed the nature of the relationship in general terms, and seen its amenability to being described in the language of neighbourhood, it is now convenient to confirm that descriptor by a salient features analysis.

F. SALIENT FEATURES ANALYSIS

- 210 The Mitigation Duty is supported by a consideration of the salient features of the relationship between the Commonwealth and Torres Strait Islanders.
- 211 This section will address in turn the various salient features relevant to considering the relationship between the Commonwealth and Torres Strait Islanders.

⁴²⁸ APP.0001.0020.0175 *VZW Klimaatzaak v Kingdom of Belgium & Others* [2023] Belgium, Court of Appeal of Brussels (unofficial translation), 118.

⁴²⁹ APP.0001.0020.0118 *Notre Affaire à Tous and Others v France (2nd Decision)* [2021] No 1904967 1904968 1904972 19049764-1 Unoff Transl (Administrative Court of Paris).

⁴³⁰ APP.0001.0020.0118 *Notre Affaire à Tous and Others v France (2nd Decision)* [2021] No 1904967 1904968 1904972 19049764-1 Unoff Transl (Administrative Court of Paris), 28.

⁴³¹ APP.0001.0020.0118 *Notre Affaire à Tous and Others v France (2nd Decision)* [2021] No 1904967 1904968 1904972 19049764-1 Unoff Transl (Administrative Court of Paris), 33.

Foreseeability

- 212 In the salient features analysis, consideration of foreseeability asks whether it is reasonably foreseeable that the negligent act or omission would or may cause or materially contribute to the harm.⁴³² This is not the same as a test for causation.⁴³³ The foreseeability inquiry occurs at a 'higher level of abstraction'.⁴³⁴ Accordingly, all that must be present at the level of duty is that 'it is reasonably foreseeable *as a possibility* that careless conduct *of any kind* on the part of the defendant may result in damage *of some kind*' to the plaintiff'.⁴³⁵ This is an 'undemanding' test.⁴³⁶ To be foreseeable, the damage need only 'be real and not fanciful'.⁴³⁷ As Beach J explained in *Sharma*, at the level of duty, 'it is no barrier to the existence of a duty of care that the probability of injury occurring is remote.'⁴³⁸ To adopt the approach of Allsop CJ in *Sharma*, foreseeability at the duty stage is satisfied if there is a real and not fanciful possibility that the Commonwealth's careless conduct may cause or materially contribute to harm to the Torres Strait Islanders.⁴³⁹
- 213 There is plentiful evidence in this proceeding to meet the test for reasonable foreseeability. As set out above at [38], there has been a substantial increase in global GHG emissions in the last 150 years as a result of human activities.⁴⁴⁰ There is a near-linear relationship between increases in global temperature and cumulative anthropogenic GHG emissions.⁴⁴¹ Global mean near-surface air temperatures have increased by 1.09°C above the 1850-1900 baseline period.⁴⁴² That increase in global mean temperature has already resulted in various impacts at a global level, but

 ⁴³² APP.0001.0020.0191 Wyong Shire Council v Shirt (1980) 146 CLR 40, 44 (Mason J); APP.0001.0020.0036
Crimmins (as executrix of estate of Crimmins dec'd) v Stevedoring Industry Finance Committee [1999] HCA 59; (1999) 200 CLR 1, [72] (McHugh J, Gleeson CJ agreeing at [3]).

⁴³³ APP.0001.0020.0032 *Chapman v Hearse* [1961] HCA 46; (1961) 106 CLR 112, 122 (the Court).

 ⁴³⁴ APP.0001.0020.0101 Minister for the Environment (Cth) v Sharma [2022] FCAFC 35; (2022) 291 FCR 311, [303]
(Allsop CJ) citing APP.0001.0020.0191 Wyong Shire Council v Shirt (1980) 146 CLR 40, 47 (Mason J);
APP.0001.0020.0177 Vairy v Wyong Shire Council [2005] HCA 62; (2005) 223 CLR 422, [72] (Gummow J).

 ⁴³⁵ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [417] (Beach J, emphasis added).

 ⁴³⁶ APP.0001.0020.0164 Tame v State of New South Wales; Annetts v Australian Stations Pty Ltd [2002] HCA 35;
(2002) 211 CLR 317, [96] (McHugh J).

 ⁴³⁷ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [329] (Allsop CJ). See also APP.0001.0020.0191 *Wyong Shire Council v Shirt* (1980) 146 CLR 40, 46 (Mason J): 'not farfetched or fanciful'.

 ⁴³⁸ APP.0001.0020.0101*Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [425] (Beach J), citing APP.0001.0020.0167 *The Wagon Mound (No 2) Overseas Tankship (UK) Ltd v The Miller Steamship Co Pty Ltd* [1966] 1 NSWR 411; [1967] AC 617, 642 (Lord Reid).

⁴³⁹ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [329] (Allsop CJ).

⁴⁴⁰ Admitted in CRT.2000.0003.0001 Defence [24(a)].

⁴⁴¹ APP.0001.0003.0093 Exhibit A40, Karoly Report [27].

⁴⁴² See also CRT.2000.0003.0001 Defence [8].

particularly in the Torres Strait Islands. Those impacts — including increasing surface and ocean temperatures, sea level rise and extreme sea level events — will be exacerbated with further increases in global temperature. Such impacts plainly pose a risk of harm to Torres Strait Islanders' personal wellbeing, their environment and property, and their traditional way of life. The Commonwealth also published or commissioned several studies which addressed the significant threat that climate change posed to the Torres Strait Islands.⁴⁴³

214 In those circumstances, there is a real and not fanciful possibility that a failure by the Commonwealth to take reasonable steps to protect Torres Strait Islanders from the impacts of climate change may cause or materially contribute to harming them. Reasonable foreseeability is therefore established. That conclusion is consistent with the judgments of Allsop CJ and Beach J in *Sharma*.⁴⁴⁴

Vulnerability and degree of harm

215 In the salient features analysis, 'vulnerability' is used in the sense that 'as a practical matter, the plaintiff has no or little capacity to protect himself or herself'⁴⁴⁵ as well as a want of reasonable care of the Commonwealth.⁴⁴⁶ That inability to protect themselves can arise from "ignorance or social, political or economic constraints".⁴⁴⁷ A person will be vulnerable to harm that may be protected against by a putative tortfeasor if they are *specially vulnerable*.⁴⁴⁸ The question of vulnerability looks to the particular harm, for example, personal injury.⁴⁴⁹

APP.0001.0019.0007, Climate Change Risks to Australia's Coasts, Department of Climate Change (2009); APP.0001.0007.0053, Observed and Future Climates of the Torres Strait Region, CSIRO (2010); DCC.2001.0001.2640, Understanding Climate Change Driven Coastal Erosion and Inundation Impacts on Torres Strait Communities, KE Parnell (2010); NIA.2009.0036.8142, Torres Strait Sea Wall Issue, 1.

⁴⁴⁴ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [332] (Allsop CJ), [423] (Beach J).

⁴⁴⁵ APP.0001.0020.0036 Crimmins (as executrix of estate of Crimmins dec'd) v Stevedoring Industry Finance Committee [1999] HCA 59; (1999) 200 CLR 1, [100] (McHugh J, Gleeson CJ agreeing at [3]).

⁴⁴⁶ APP.0001.0020.0189 Woolcock Street Investments Pty Ltd v CDG Pty Ltd (2004) 216 CLR 515 at 530[23]

⁴⁴⁷ APP.0001.0020.0189 Woolcock Street Investments Pty Ltd v CDG Pty Ltd (2004) 216 CLR 515 at 549[80]

⁴⁴⁸ APP.0001.0020.0027 Burnie Port Authority v General Jones Pty Ltd (1994) 179 CLR 520, 551 (Mason CJ, Deane, Dawson, Toohey and Gaudron JJ); APP.0001.0020.0036 Crimmins (as executrix of estate of Crimmins dec'd) v Stevedoring Industry Finance Committee [1999] HCA 59; (1999) 200 CLR 1, [91], [108] (McHugh J, Gleeson CJ agreeing at [3]).

⁴⁴⁹ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [671] (Beach J).

- 216 Here, Torres Strait Islanders are in a uniquely vulnerable position within Australia in terms of the harm they have experienced, and will continue to experience, from climate change. That unique vulnerability may be measured on two axes.
- 217 *First*, Torres Strait Islanders are vulnerable because of their especially high *exposure* to the associated impacts of sea level rise by reason of their living on low-lying tropical islands. The Commonwealth has accepted as much, pleading that:
 - 217.1 'small and low-lying islands are vulnerable to several impacts of climate change, such as sea level rise, storm surges, tropical cyclones, increasing air and surface temperatures and changing rainfall patterns';⁴⁵⁰
 - 217.2 'there is high confidence that small islands are projected to be at risk and very sensitive to coastal climate change and other stressors such as oceanic warming, sea level rise, tropical cyclones and mass coral bleaching and mortality';⁴⁵¹
 - 217.3 'some Indigenous peoples, including some Indigenous peoples in Australia, are more vulnerable to the impacts of climate change than other peoples, by reason of (inter alia) their place of residence, occupation, connection to the land and environment and/or social and economic disadvantage'.⁴⁵²
- 218 Second, Torres Strait Islanders are vulnerable because of the especially damaging *consequences* of sea level rise (and other effects of climate change) for them, in particular, because of the damage sea level rise causes to their connection to the land and sea, their ability to practice *Ailan Kastom*. This second axis of special vulnerability reflects the 'distinctive',⁴⁵³ 'unique',⁴⁵⁴ 'sui generis',⁴⁵⁵ 'spiritual',⁴⁵⁶ 'cultural',⁴⁵⁷

⁴⁵⁰ CRT.2000.0003.0001 Defence [28(a)].

⁴⁵¹ CRT.2000.0003.0001 Defence [59(b)].

⁴⁵² CRT.2000.0003.0001 Defence [29(b)].

⁴⁵³ APP.0001.0020.0089 Love v Commonwealth [2020] HCA 3; (2020) 270 CLR 152, [73] (Bell J).

 ⁴⁵⁴ APP.0001.0020.0117 Northern Territory v Griffiths [2019] HCA 7; (2019) 269 CLR 1, [23] (Kiefel CJ, Bell, Keane, Nettle and Gordon JJ); APP.0001.0020.0089 Love v Commonwealth [2020] HCA 3; (2020) 270 CLR 152, [71] (Bell J). See also the preamble to the APP.0001.0021.0016 Native Title Act 1993 (Cth) referring to native title's 'unique character'.

⁴⁵⁵ APP.0001.0020.0185 Western Australia v Ward [2002] HCA 28; (2002) 213 CLR 1, [578] (Kirby J); APP.0001.0020.0089 Love v Commonwealth [2020] HCA 3; (2020) 270 CLR 152, [74] (Bell J).

 ⁴⁵⁶ APP.0001.0020.0185 Western Australia v Ward [2002] HCA 28; (2002) 213 CLR 1, [14] (Gleeson CJ, Gaudron, Gummow and Hayne JJ); APP.0001.0020.0117 Northern Territory v Griffiths [2019] HCA 7; (2019) 269 CLR 1, [23], [199] (Kiefel CJ, Bell, Keane, Nettle and Gordon JJ).

⁴⁵⁷ APP.0001.0020.0117 *Northern Territory v Griffiths* [2019] HCA 7; (2019) 269 CLR 1, [23] (Kiefel CJ, Bell, Keane, Nettle and Gordon JJ).

'metaphysical'⁴⁵⁸ and/or 'religious'⁴⁵⁹ relationship that has long been recognised by the Courts between Indigenous Australians and the land and sea (which the Commonwealth appears to accept⁴⁶⁰).⁴⁶¹ The Commonwealth apparently accepts some aspect of this second axis of vulnerability in its admission 'that some instances of exercise by Torres Strait Islanders of rights and interests possessed under traditional laws and customs is vulnerable to the current and projected impacts of climate change'.⁴⁶²

- 219 The vulnerability of Torres Strait Islanders to the impacts of climate change is evident from the climate science regarding the impacts of climate change in the Torres Strait canvassed in Part B. The IPCC has authoritatively made observations about that vulnerability:
 - 219.1 In 2007, the Working Group II contribution to the IPCC's Fourth Assessment Report linked existing social disadvantage in Australian remote Indigenous communities with reduced coping ability and adaptive capacity. Noting the connection between the health of Country and community cultural, mental and physical wellbeing, it acknowledged that "direct biophysical impacts, such as increases in temperature, rainfall extremes or sea-level rise, are likely to have significant indirect impacts on the social and cultural cohesion of these communities."⁴⁶³ It also considered the "especially vulnerable" position of small islands to the effects of climate change, sea-level rise, and extreme events (very high confidence).⁴⁶⁴
 - 219.2 In 2014, the Working Group II contribution to the IPCC's Fifth Assessment Report identified that Indigenous peoples82 in Australia have higher than average exposure to climate change and face particular constraints to adaptation. The IPCC observed with high confidence that Torres Strait communities are vulnerable even to small sea level rises.⁴⁶⁵

⁴⁵⁸ APP.0001.0020.0117 *Northern Territory v Griffiths* [2019] HCA 7; (2019) 269 CLR 1, [199] (Kiefel CJ, Bell, Keane, Nettle and Gordon JJ).

 ⁴⁵⁹ APP.0001.0020.0098 *Milirrpum v Nabalco Pty Ltd* (1972) 17 FLR 141, 167 (Blackburn J); APP.0001.0020.0185
Western Australia v Ward [2002] HCA 28; (2002) 213 CLR 1, [14] (Gleeson CJ, Gaudron, Gummow and Hayne JJ).
⁴⁶⁰ CRT.2000.0003.0001 Defence [54(f)].

⁴⁶¹ See also above at [180]-[190].

⁴⁶² CRT.2000.0003.0001 Defence [62B(a)].

⁴⁶³ APP.0001.0019.0010 Working Group II contribution to the IPCC Fourth Assessment Report, 522 [0532], 11.4.8.

APP.0001.0019.0010 Working Group II contribution to the IPCC Fourth Assessment Report, 689 [0699].

⁴⁶⁵ IPCC AR5 WGII, Climate Change 2014: Impacts, Adaptation, and Vulnerability – Part B: Regional Aspects (APP.0001.0004.0006) at 1375 [_0250].

- 219.3 In 2018, the *Special Report on the Impacts of Global Warming of* **1.5** °C stated, with high confidence, that small islands are projected to experience multiple interrelated risks at 1.5°C of global warming that will increase with warming of 2°C and higher levels.⁴⁶⁶ The IPCC observed that global warming of 1.5°C is expected to prove challenging for small island developing states that are already experiencing impacts associated with climate change, and that at 1.5°C, compounding impacts from interactions between climate drivers may contribute to the loss of, or change in, critical natural and human systems. There are a number of reduced risks at 1.5°C versus 2°C.⁴⁶⁷
- 219.4 In 2019, the *Special Report on the Ocean and Cryosphere in a Changing Climate* observed that coastal communities are exposed to multiple climate-related hazards.⁴⁶⁸ In the absence of more ambitious adaptation efforts, increased mean and extreme sea level alongside ocean warming and acidification are projected (with high confidence) to exacerbate risks for human communities in low-lying coastal areas.⁴⁶⁹
- 219.5 In 2022, the Working Group II contribution to the IPCC's Sixth Assessment Report noted "pervasive, complex and compounding" climate-related impacts on Torres Strait Islander Peoples.⁴⁷⁰ The impacts upon Torres Strait Islanders recorded by the IPCC include: climate-driven loss of customary lands, which is predicted to intensify;⁴⁷¹ impacts on cultural sites, traditions and lifestyles of Torres Strait Islander Peoples as a result of sea level rise superimposed upon high tides and storm surges in low-lying coastal and estuarine locations;⁴⁷² increasing flood risk and water insecurity with health and well-being impacts;⁴⁷³ and the exacerbation of social, economic and health inequalities faced by Torres Strait Islander Peoples.⁴⁷⁴

⁴⁶⁶ APP.0001.0007.0116 at 39, 181 [_0053], [_0195].

⁴⁶⁷ APP.0001.0007.0116 at 234 [_0248]. ⁴⁶⁸ APP 0001 0004 0013 at 16 [_0025]

⁴⁶⁸ APP.0001.0004.0013 at 16 [_0025].

⁴⁶⁹ APP.0001.0004.0013 at 27 [_0036]. ⁴⁷⁰ APP.0001.0007.0118 at 1620 [_164

⁴⁷⁰ APP.0001.0007.0118 at 1629 [_1640].

⁴⁷¹ APP.0001.0007.0118 at 1630 [1641].

⁴⁷² APP.0001.0007.0118 at 1583 [1594].

⁴⁷³ APP.0001.0007.0118 at 1621 [_1632].

⁴⁷⁴ APP.0001.0007.0118 at 1629 [1640].

- 220 The vulnerability of Torres Strait Islanders to the impacts of climate change is also recorded in documents focusing on climate change at the regional level, for example:
 - 220.1 The *Annual Climate Change Statement 2022*⁴⁷⁵ published by the Department of Climate Change, Energy, the Environment and Water records that:

First Nations people are disproportionately affected by climate change because of their relationship to the environment and to Country. Climate impacts can threaten cultural knowledge, heritage and traditional practices, and potentially further displace First Nations people from their homes and affect their ability to access County. Climate change impacts such as sea level rises experienced in island communities ... could leave First Nations people with no choice but to migrate from some ancestral homelands ... The consequences for First Nations people facing this possibility, risking further dispossession and a loss of access to traditional lands, waters, and natural resources, can only be described as catastrophic. The loss of ancestral, spiritual, totemic and language connections to lands and associated areas has major implications for the human rights of affected peoples as well as their physical and mental wellbeing. Extreme events are also contributing to the damage of First Nations places and cultural sites.

- 220.2 The Torres Strait Regional Authority's 2021 *State of the Environment Report Card* observed that the low-lying island communities across the Torres Strait are particularly vulnerable to rising sea levels and may become Australia's first climate refugees if strong and urgent action to reduce greenhouse gas emissions does not occur.⁴⁷⁶
- 221 Further, the evidence demonstrates numerous instances of inundation in the Torres Strait Islands. See, for example, [562] and [564] below.
- 222 Torres Strait Islanders therefore stand apart from the general population in respect of the threat posed by climate change. By way of illustration, a non-Indigenous person living in an elevated suburb of Sydney would not only face a lower risk of their home (and other significant places) being physically damaged by sea level rise, but, in the event that sea levels did rise so high as to flood the home, they would also face a more limited harm (i.e. a loss of amenity, rather than a loss of an ancient⁴⁷⁷ connection to land and sea, and an ability to practice an immemorial culture inextricably linked to identity).

⁴⁷⁵ APP.0001.0003.0043 at 20 [_0021].

⁴⁷⁶ APP.0001.0007.0158 at 4 [_0003].

 ⁴⁷⁷ Australian courts have long recognised the Indigenous connection to land as going back at least 40,000 years and probably much longer: APP.0001.0020.0061 *Gerhardy v Brown* [1985] HCA 11; (1985) 159 CLR 70, 149 (Deane J); APP.0001.0020.0089 *Love v Commonwealth* [2020] HCA 3; (2020) 270 CLR 152, [242] (Nettle J), [336] (Gordon J).

- 223 As the climate science makes clear, the threat posed to Torres Strait Islanders by climate change is catastrophic in scale.⁴⁷⁸ That existential threat is inherently of 'such magnitude or complexity that individuals cannot take adequate steps for their own protection'.⁴⁷⁹ Additionally, as recorded by the IPCC, existing inequalities faced by Torres Strait Islanders mean that they face particular constraints to adaptation. Torres Strait Islanders are therefore especially vulnerable, in the sense of not being able to adequately safeguard themselves from the harm that will eventuate from climate change.⁴⁸⁰
- 224 Unlike in *Sharma*, Torres Strait Islanders cannot be said to be "in the same position as everyone in the world" who will have to face the consequences of climate change.⁴⁸¹ Their special⁴⁸² vulnerability to climate change militates in favour of the finding of a duty of care.

Control and knowledge

- 225 'Control' in the salient features analysis means control over the harm that has been experienced or is feared.⁴⁸³ Relevant control is not limited to 'any *legal* control', it also includes 'control in any *practical* sense'.⁴⁸⁴ In the practical sense, control can engage questions of knowledge because special knowledge of a risk may give a tortfeasor a greater ability to control it than other persons without such special knowledge.⁴⁸⁵
- 226 Control is necessarily a question of 'degree'⁴⁸⁶, and the authorities generally look for 'a significant and special measure of control'.⁴⁸⁷ However, 'control need not be

⁴⁷⁸ See above at Part B, [49]-[80].

 ⁴⁷⁹ APP.0001.0020.0162 Sutherland Shire Council v Heyman [1985] HCA 41; (1985) 157 CLR 424, 464 (Mason J). See also [573]-[581] below.

APP.0001.0020.0036 Crimmins (as executrix of estate of Crimmins dec'd) v Stevedoring Industry Finance Committee [1999] HCA 59; (1999) 200 CLR 1, [93(3)] (McHugh J, Gleeson CJ agreeing at [3]). See also
APP.0001.0020.0193 Yuen Kun Yeu v Attorney-General (Hong Kong) [1988] 1 AC 175, 195; APP.0001.0020.0055 Esanda Finance Corporation Ltd v Peat Marwick Hungerfords (1997) 188 CLR 241, 284–5.

⁴⁸² As opposed to the 'generalised sense of vulnerability' referred to by Beach J in APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [671].

⁴⁸³ APP.0001.0020.0154 Smith v Lears (1945) 70 CLR 256; APP.0001.0020.0072 Home Office v Dorset Yacht Co Ltd [1970] AC 1004.

 ⁴⁸⁴ APP.0001.0020.0005 Agar v Hyde [2000] HCA 41; (2000) 201 CLR 552, [81] (Gaudron, McHugh, Gummow and Hayne JJ, emphasis in original). See also APP.0001.0020.0065 Graham Barclay Oysters Pty Ltd v Ryan [2002] HCA 54; (2002) 211 CLR 540, [150] (Gummow and Hayne JJ).

 ⁴⁸⁵ See and compare APP.0001.0020.0131 *Pyrenees Shire Council v Day* [1998] HCA 3; (1998) 192 CLR 330, [168] (Gummow J).

 ⁴⁸⁶ APP.0001.0020.0065 Graham Barclay Oysters Pty Ltd v Ryan [2002] HCA 54; (2002) 211 CLR 540, [149]
(Gummow and Hayne JJ); APP.0001.0020.0161 Stuart v Kirkland-Veenstra [2009] HCA 15 (2009) 237 CLR 215, [113] (Gummow, Hayne and Heydon JJ).

 ⁴⁸⁷ APP.0001.0020.0065 Graham Barclay Oysters Pty Ltd v Ryan [2002] HCA 54; (2002) 211 CLR 540, [154]
(Gummow and Hayne JJ). See also APP.0001.0020.0025 Brodie v Singleton Shire Council [2001] HCA 29; (2001)
206 CLR 512, [102] (Gaudron, McHugh and Gummow JJ).

exclusive'.⁴⁸⁸ That follows from recognition of the fact that very few events for which liability is sought to be attributed will have a single causal origin. Thus, it would be rare for a putative tortfeasor to have complete control over a risk. The appropriate inquiry is thus to look at the degree of control a tortfeasor has over the risk.

227 Further, where other actors also have some control over a risk it can be helpful to ask whether the putative tortfeasor could have contemplated the cooperation or joint action of other actors.⁴⁸⁹ In a sense, this is simply a means of inquiring into the degree of *practical* control exercised by the putative tortfeasor. That inquiry may be assisted by identification of the number of 'intervening levels of decision-making' between the act or omission of the putative tortfeasor and the manifestation of the risk.⁴⁹⁰ However, that inquiry should acknowledge that 'to have in a hypothesised causal chain numerous actors each of which control only a very small part of the risk referable to their particular conduct, does not entail that none of them owe any duty for the foreseeable consequences of their conduct because no one actor controls the risk.⁴⁹¹ From the above propositions it follows that 'a duty may be imposed on a public authority even if a private entity has more control than such an authority.⁴⁹²

The Commonwealth's knowledge

228 It is clear from the biennial *State of the Climate Reports* authored by CSIRO and Bureau of Meteorology — Commonwealth agencies — that the Commonwealth was aware of likely climate impacts to Australia absent a reduction in GHG emissions. For example, the 2010⁴⁹³ and 2012⁴⁹⁴ reports each referred to significant increases in average Australian temperatures should global GHG emissions continue to grow at rates

⁴⁸⁸ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [660] (Beach J).

⁴⁸⁹ See and compare APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [641] (Beach J).

APP.0001.0020.0005 Agar v Hyde [2000] HCA 41; (2000) 201 CLR 552, [81] (Gaudron, McHugh, Gummow and Hayne JJ) cf.
APP.0001.0020.0101 Minister for the Environment (Cth) v Sharma [2022] ECAEC 35; (2022) 201 ECP 311 [641]

 ⁴⁹¹ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [641] (Beach J).
⁴⁹² APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 25; (2022) 201 FCR 311, [641]

 ⁴⁹² APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [660] (Beach J).
⁴⁹³ APP.0001.0002.0004 et 5 [, 0005]

⁴⁹³ APP.0001.0003.0004 at 5 [_0005].

⁴⁹⁴ APP.0001.0003.0005 at 10 [_0009].

consistent with past trends, and the 2014,⁴⁹⁵ 2016⁴⁹⁶ and 2018⁴⁹⁷ reports projected ongoing sea level rise around Australia in the coming decades.

- 229 Further, it is evident that during the relevant period, the Commonwealth had knowledge of the impacts of climate change for the Torres Strait Islands and of the Torres Strait Islanders' vulnerability to harm from those impacts. By its pleadings, the Commonwealth admits that it knew the contents of documents including the IPCC Fifth Assessment Report, the IPCC Special Report on the Ocean, the IPCC Special Report on 1.5 °C and the IPCC Sixth Assessment Report at least on or around the date of their publication.⁴⁹⁸ There is no reason to suggest the Respondent – a State party to the UNFCCC – was not similarly aware of previous IPCC reports at the time of their publication (although they are not explicitly listed in the 3FASOC). The Fifth Assessment Report, dating from 2013-2014, reiterated the unequivocal understanding that human influence is warming the climate system and that limiting climate change will require substantial and sustained reductions of GHG emissions. And as set out above at paragraph 219, each of the IPCC reports expressly addressed the particular vulnerability of the Torres Strait Islands and/or small low-lying islands to the impacts of climate change, should such reductions to GHG emissions not be made. Further, the Commonwealth itself published or commissioned research into the impacts of climate change in the Torres Strait prior to 2014.⁴⁹⁹ It funded the TSRA, which has published extensively on the impacts of climate change in the Torres Strait.⁵⁰⁰ In addition, the TSRA made submissions to the Commonwealth Parliament in 2008 and 2010 regarding climate change impacts in the Torres Strait.⁵⁰¹
- 230 Further, TSIRC's application for funding for Stage 1 Seawalls, lodged in 2012, discussed the risks of inundation in the Torres Strait. The Commonwealth reviewed and commented on that application. See below at [589]-[594].

⁴⁹⁵ APP.0001.0003.0006 at 14 [_0013].

⁴⁹⁶ APP.0001.0003.0017 at 21 [_0020].

⁴⁹⁷ APP.0001.0003.0008 at 2, 21 [_0001, _0020].

⁴⁹⁸ CRT.2000.0003.0001 Defence [77(b)(iii), (vi), (vii), (xi)].

 ⁴⁹⁹ APP.0001.0019.0007 Department of Climate Change, Climate Change Risks to Australia's Coasts, (2009);
APP.0001.0007.0053 CSIRO, Observed and Future Climates of the Torres Strait Region, (2010);
DCC.2001.0001.2640 KE Parnell, Understanding Climate Change Driven Coastal Erosion and Inundation Impacts on Torres Strait Communities, (2010); NIA.2009.0036.8142, 1.

⁵⁰⁰ See below at [601].

⁵⁰¹ See below at [602].

- 231 The Commonwealth's knowledge of the special vulnerability of Torres Strait Islanders is also evident from various Commonwealth documents. For example:
 - 231.1 A 2009 report produced by the Department of Climate Change and Energy Efficiency, titled *Risks from Climate Change to Indigenous Communities in the Tropical North of Australia*, contained a detailed study of Saibai Island and noted the Saibai people's concerns about the environmental and cultural impacts of climate change.⁵⁰²
 - 231.2 An issues paper developed by the National Adaptation Strategies Team, dated November 2013, states that '[w]hat is known is that climate change is projected to ... [i]ncrease coastal vulnerability due to sea level rise, storm surges and cyclones';⁵⁰³ and identifies Aboriginal and Torres Strait Islander people as being disproportionately impacted by climate change⁵⁰⁴ including by reason of limited income, lack of access to adequate health and housing facilities, limited accessibility, and cultural attachment to places.⁵⁰⁵
 - 231.3 The Australian Government's 2015 *National Climate Resilience and Adaptation Strategy* stated that Torres Strait communities 'are now recognised to be at the frontline of climate change impacts due to their remoteness, often low topography and limited capacity to respond to the social, financial and ecological stresses that climate variability brings'.⁵⁰⁶
 - 231.4 The 2020⁵⁰⁷ and 2022⁵⁰⁸ *State of the Climate Reports* expressly referred to the increasing risk of inundation and damage to coastal infrastructure and communities from sea level rises around Australia.
- 232 Importantly, the Commonwealth has also known of the need for greater global action on GHG emissions reductions to mitigate the worst impacts of climate change, and Australia's necessary role in that global action. The Working Group III contribution to the Fifth Assessment Report stated emphatically in 2014 that climate change is a case of

⁵⁰² APP.0001.0007.0155 at 120-126 [_0126-0132]. ⁵⁰³ DCC 2001.0002.3436 at 2.3 [_3437.3428]

⁵⁰³ DCC.2001.0003.3436 at 2-3 [_3437-3438].

⁵⁰⁴ DCC.2001.0003.3436 at 7 [_3442].

⁵⁰⁵ DCC.2001.0003.3436 at 6 [3441].

⁵⁰⁶ APP.0001.0007.0149 at 32 [_0031].

⁵⁰⁷ APP.0001.0003.0009 at 1 [0000].

⁵⁰⁸ APP.0001.0003.0010 at 1 [0000].

a tragedy of the commons, mitigation of climate change 'is a public good', and '[e]ffective climate change mitigation will not be achieved if each agent (individual, institution or country) acts independently in its own selfish interest'.⁵⁰⁹ The *Special Report on 1.5* $^{\circ}$ C, a comprehensive assessment by the IPCC of the remaining carbon budget to limit temperature rise to 1.5°C, observed that 1.5°C-consistent pathways required 'a rapid phase out of CO₂ emissions and deep emissions reductions in other GHGs and climate forcers'.⁵¹⁰

- 233 The annual UNEP *Emissions Gap* reports have, since 2010, documented the difference between where GHG emissions are predicted to be in 2030 and where they need to be to avoid the worst impacts of climate change.⁵¹¹ The 2014 *Emissions Gap* report made it clear that additional emissions reductions were required to stay within 2°C global warming,⁵¹² and "immediate and stringent" reductions to stay within 1.5°C warming.⁵¹³ This theme has been repeated in each subsequent *Emissions Gap* report. The 2021 *Emissions Gap* report noted that new or updated NDCs and announced pledges, including Australia's Re-affirmed 2030⁵¹⁴ and 2050 Targets,⁵¹⁵ have only limited impact on global emissions and the 2030 emissions gap, reducing projected emissions by 7.5 per cent, whereas 30 per cent is needed to limit warming to 2°C and 55 per cent is needed for 1.5°C.⁵¹⁶
- 234 The Climate Change Authority's February 2014 report, *Reducing Australia's Greenhouse Gas Emissions Targets and Progress Review*, made a number of observations of which the Commonwealth was aware:⁵¹⁷
 - 234.1 action by all countries is needed to meet the global emissions budget and avoid the worst impacts of climate change;⁵¹⁸

⁵⁰⁹ APP.0001.0004.0007 at 211.

⁵¹⁰ APP.0001.0007.0116 at 112 [0126].

⁵¹¹ CRT.2000.0003.0001 Defence [17(b)]. The Commonwealth admits that it knew of the contents of the 2020 UNEP *Emissions Gap* report from at least on or around the date of its publication: CRT.2000.0003.0001 Defence [77(b)(viii)]. Presumably, the same applies to the *Emissions Gap* reports published in other years.

⁵¹² APP.0001.0007.0169 at 19 [_0046].

⁵¹³ APP.0001.0007.0169 at 18 [_0045].

⁵¹⁴ Exhibit R14.9 (EVI.2001.0001.0980), Australia's Nationally Determined Contribution Communication 2020 (Tab 9 to First Affidavit of Julia Gardiner).

Exhibit R14.11 (EVI.2001.0001.0248), Australia's Nationally Determined Contribution Communication 2021 (Tab 11 to First Affidavit of Julia Gardiner).
App. 0001.0004.0012 et 15 [, 0044].

⁵¹⁶ APP.0001.0004.0012 at 15 [_0044].

⁵¹⁷ CRT.2000.0003.0001 Defence [77(b)(ii)].

⁵¹⁸ APP.0001.0004.0015 at 54 [_0053].

- 234.2 it is clear that countries are generally taking their emissions targets seriously and implementing policies to meet them;⁵¹⁹
- 234.3 while there is a clear trend to increased climate action, more needs to be done to limit warming to below 2 degrees;⁵²⁰
- 234.4 Australia is a high-emitting, highly developed country with strong capacity to address climate change;⁵²¹
- 234.5 countries do not make decisions about climate targets and policies in a vacuum, and Australia "is a small but important part of the global picture on climate change". If an emissions-intensive country like Australia sets and achieves an ambitious target, "it is likely to have a disproportionate effect spurring action from others." Conversely, other countries could use weak Australian action as a reason to delay stronger climate measures;⁵²²
- 234.6 based upon a global GHG emissions budget that would give a two thirds chance of keeping global warming below 2°C above baseline, the recommended emissions reduction goals for 2030 was a trajectory range of 40 to 60 per cent below 2000 levels.⁵²³
- 235 The Commonwealth's combined knowledge about climate science, the vulnerability of the Torres Strait Islands to the impacts of climate change, and of what would need to be done to combat the worst impacts of climate change, means it well understood (and continues to understand) the necessity of taking steps to mitigate the impacts of climate change for Torres Strait Islanders. It is against that background that the Commonwealth's control of the risk of harm to Torres Strait Islanders from climate change impacts needs to be considered. When asked the specific risks to coastal communities and low lying islands in Australia, including the Torres Strait, from climate change, Kelly Pearce, head of the Commonwealth's UNFCCC Taskforce, testified "[w]e were aware of those risks."⁵²⁴

⁵¹⁹ APP.0001.0004.0015 at 58 [_0057].

⁵²⁰ APP.0001.0004.0015 at 63 [_0062].

⁵²¹ APP.0001.0004.0015 at 54 [_0053].

⁵²² APP.0001.0004.0015 at 54, 73 [_0053, _0072].

⁵²³ APP.0001.0004.0015 at 125-126 [_0124 to _0125].

⁵²⁴ TRN.0018.1455 22 November 2023, Kelly Pearce, T1475:30-35.

The Commonwealth's control

- 236 The Commonwealth has admitted that it has the power or ability to set national GHG emissions targets or budgets.⁵²⁵ This power to set targets is significant in three key respects.
- 237 First, the setting of the targets influences the amount of GHG emissions in Australia. The Commonwealth is required to pursue domestic mitigation measures with the aim of achieving the targets.⁵²⁶ The setting of the targets informs the exercise of a panoply of statutory and regulatory powers conferred upon Commonwealth agencies or Ministers by which the Commonwealth can control emissions from activities undertaken in Australia.⁵²⁷ With the enshrining of the targets in legislation by the *Climate Change Act 2022* (Cth), this relationship between the targets and other regulatory regimes can partly be seen by the amendments made by the *Climate Change (Consequential Amendments) Act 2022* (Cth) (APP.0001.0021.0007), which includes the targets into the objectives and functions of a number of federal agencies such as the Clean Energy Finance Corporation, Infrastructure Australia, Export Finance Australia, and the Australian Renewable Energy Agency. Further, the Commonwealth has direct control over reducing its own emissions from government departments and agencies.⁵²⁸
- 238 Second, the Commonwealth admits that Australia's share of total annual global GHG emissions for 2014-2019 was approximately 1.2-1.3 per cent, while constituting approximately 0.33 per cent of the global population.⁵²⁹ Bearing in mind that increase in global temperature is almost linearly related to cumulative GHG emissions, and that every ton of GHG emissions leads to an increase in global mean surface temperature, Australia's GHG emissions are a contributor to climate change in absolute terms, and Australia is accurately described as a high-emitting⁵³⁰ country in per capita terms. As the Commonwealth's current Minister for Climate Change and Energy stated:

... our domestic decarbonisation is really, really important. I reject the argument that we're only 1% of emissions so what we do domestically doesn't count. We were 1% of the troops

⁵²⁵ CRT.2000.0003.0001 Defence [76(b)].

⁵²⁶ CRT.2000.0003.0001 Defence [38(a)].

⁵²⁷ See particulars to APP.0001.0015.0003 3FASOC [76(c)]; CRT.2000.0003.0001 Defence [76(d)].

In 2021, for example, the Australian government stated that it generated approximately 2 million tons of carbon dioxide equivalent each year: APP.0001.0007.0133 at 1.
CBT 2000.0002.0001 Defense [71(a)(ii) (b)]

⁵²⁹ CRT.2000.0003.0001 Defence [71(a)(ii), (b)].

⁵³⁰ See above at [234.5]. See also CRT.2000.0003.0001 Defence [71(a)(i)].

in World War II as well - what we did counted. We are a big emitter in absolute terms. We are in the top 20. So what we do counts.⁵³¹

Any attempt to downplay Australia's contribution to global warming fails to grapple with the climate science that it has been the sum of *all* emission sources that is responsible for the increase in global temperature from the baseline to date.⁵³² Correspondingly, *all* future emission sources are responsible for further increase in global temperature.

- 239 Third, Australia's international commitment to emissions targets has the effect of influencing (both positively and negatively) the ambition with which other countries set their targets, as explained in detail in the CCA's February 2014 report.⁵³³ In evidence, Kelly Pearce agreed with those statements from the CCA report.⁵³⁴ Thus, Australia's GHG emissions targets are significant to global efforts to reduce GHG emissions.
- 240 Taking these three features together, it is plain that the Commonwealth had extensive control over the level of GHG emissions in Australia. It therefore plainly had control over the risk of harm flowing from the setting of Australia's GHG emissions target at a level that did not accord with the best available science.
- 241 It may be argued, relying upon Allsop CJ in *Sharma*, that the involvement of other global actors in combating climate change dilutes the concept of the Commonwealth having relevant control.⁵³⁵ But such an argument does not take account of the fact that it is the Commonwealth's setting of the GHG emissions targets that permits and therefore facilitates emissions at a particular level, igniting the causal chain.⁵³⁶ In that situation, as Beach J stated in *Sharma*, the fact that there are "numerous actors each of which controls only a small part of the risk referable to their particular conduct does not entail that none of them owe any duty for the foreseeable (and known) consequences of their conduct because no one actor controls the risk."⁵³⁷ And it is also important to bear in mind the evidence of Australia's influence on other countries' behaviour in respect of GHG emissions targets.⁵³⁸ That fact underscores the inextricable link between Australian

⁵³¹ APP.0001.0013.0021 Interview with Chris Bowen – Australian Politics Podcast (The Guardian 23 Sept 2023) at 40:35.

⁵³² EXP.2000.0001.0196 Expert report of Dr Josep Canadell dated 6 October 2023 at 10 [.0206].

⁵³³ See above at [234].

⁵³⁴ TRN.0018.1455 22 November 2023, Kelly Pearce, T1512.5-1513.35.

⁵³⁵ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [334]-[335].

⁵³⁶ See APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [640], [658] (Beach J).

⁵³⁷ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [640].

⁵³⁸ See above at [234.5], [239].

action and global action on climate change, and makes it even less persuasive for the Commonwealth to deny control on the basis of others' actions.

242 Further, the Commonwealth has demonstrated control over the risk of harm through the funding of seawalls as discussed in relation to the Alternative Duty of Care below at [636]-[646].

Reliance and assumption of responsibility

- 243 The fact that a public authority 'knows or ought to know that a member of the public relies on it to exercise its power to protect his or her interests' will militate in favour of a duty of care.⁵³⁹ A public authority may place itself in such a position as to create a self-imposed duty of care, such as where the public authority has a practice or has engaged in past conduct upon which other persons come to rely.⁵⁴⁰
- 244 Reliance "is not always an essential requirement...in a negligence case. The primary significance of reliance is in cases of alleged negligent provision of advice or information where reliance aids the formulation of a duty of care and detrimental reliance enters into the question of causation of loss." ⁵⁴¹ Reliance means specific rather than general reliance.⁵⁴² It may also be qualified by the limitation that "reliance" must be "reasonable"⁵⁴³.
- 245 The evidence demonstrates that Torres Strait Islanders rely upon the Commonwealth to protect them from the impacts of climate change, and that the Commonwealth has knowledge of this. That reliance goes well beyond the plaintiffs' "expectation of good government" in *Sharma* which Allsop CJ found insufficient because it was "no different to all other Australians".⁵⁴⁴ Torres Strait Islanders' reliance is manifested in several ways.
- 246 *First*, Torres Strait Islanders' reliance upon the Commonwealth is reflected in the Torres Strait Treaty. By entering into the Treaty, the Commonwealth assumed responsibility

 ⁵³⁹ APP.0001.0020.0065 Graham Barclay Oysters Pty Ltd v Ryan [2002] HCA 54; (2002) 211 CLR 540, [81] (McHugh J). See also APP.0001.0020.0131 Pyrenees Shire Council v Day [1998] HCA 3; (1998) 192 CLR 330, [102] (McHugh J).

⁵⁴⁰ APP.0001.0020.0162 Sutherland Shire Council v Heyman [1985] HCA 41; (1985) 157 CLR 424, 461 (Mason J), 486 (Brennan J).

⁵⁴¹ APP.0001.0020.0131 Pyrenees Shire Council v Day (1998) 192 CLR 330 at 385[158]

⁵⁴² APP.0001.0020.0131 Pyrenees Shire Council v Day (1998) 192 CLR 330 at 385[157]

⁵⁴³ APP.0001.0020.0165 *Tepko Pty Ltd v Water Board* (2001) 206 CLR 1 at 23[76]: "Reliance" as the test for the

existence of a relationship that will call a duty of care into existence is not actual reliance, but reasonable reliance."
⁵⁴⁴ Cf APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311,

^{[340] (}Allsop CJ).

toward Torres Strait Islanders to protect their traditional way of life, their livelihood, and the marine environment and indigenous fauna and flora in the vicinity of the Torres Strait Islands.⁵⁴⁵

- 247 Second, as set out above,⁵⁴⁶ the Commonwealth has at all relevant times known about the vulnerability of Torres Strait Islanders to the impacts of climate change and their limited ability to mitigate those impacts. It follows that the Commonwealth has known that Torres Strait Islanders are particularly reliant upon the Commonwealth exercising its powers to mitigate the impacts of climate change. So much was acknowledged by the Minister for Climate Change and Energy in his address to the National Press Club, when he said: 'We cannot forget that we have Australian citizens in the Torres Strait who are living with the impacts of climate change right now. We can't forget it and under this Government, we won't forget it.'⁵⁴⁷
- 248 *Third*, the Commonwealth has admitted that it has taken or funded a number of actions in order to mitigate the impacts of and projected impacts of climate change in the Torres Strait Islands.⁵⁴⁸ Those actions include funding climate change adaptation,⁵⁴⁹ research,⁵⁵⁰ and tidal gauge monitoring in the Torres Strait,⁵⁵¹ and developing climate change management plans.⁵⁵² Through the Council of Australian Governments, the Commonwealth and the State governments agreed on a range of matters relevant to climate change adaptation that evidence the Commonwealth's assumption of responsibility.⁵⁵³ The Commonwealth provides funding to the TSRA,⁵⁵⁴ which undertakes extensive activities relating to mitigating and adapting to climate change.⁵⁵⁵

⁵⁴⁵ APP.0001.0003.0022 Torres Strait Treaty, Preamble and arts 10(3), 13(1)-(2). See further discussion of the Torres Strait Treaty above at [187 and below at [605]-[609].

⁵⁴⁶ See above [229], [231]. 547 APP 0001 0003 0033 at

⁵⁴⁷ APP.0001.0003.0033 at 1. ⁵⁴⁸ CPT 2000 0003 0001 Defer

⁵⁴⁸ CRT.2000.0003.0001 Defence [73(a)].

⁵⁴⁹ See also [614]-[617]below, on which the Applicants also rely for the establishment of the Primary Duty.

⁵⁵⁰ Commonwealth Government Annual Climate Change Statement 2022 APP.0001.0003.0043 at [_0022] regarding the funding commitment of \$15.9 million over four years to establish the Torres Strait Climate Centre of Excellence. See also below at [618], the Commonwealth funded James Cook University to research the risks of climate change in the Torres Strait.

⁵⁵¹ NIA.2009.0036.8142 at 5 [_8146]. See below at [619].

⁵⁵² APP.0001.0007.0149 at 32 [_0031]. See below at [625].

⁵⁵³ See EVI.2001.0006.2001 and below at [622].

⁵⁵⁴ CRT.2000.0007.0001 Statement of Agreed Facts, [8]; WIT.2000.0001.0046, Affidavit of Shay Simpson dated 15 May 2023, [12]-[14].

See, eg, Climate Change Strategy 2014-2018 (APP.0001.0004.0016); A Coastal Vulnerability Assessment Methodology for Torres Strait Communities – Pilot Study (APP.0001.0007.0171); Torres Strait Regional Adaptation and Resilience Plan (APP.0001.0007.0172); The Effects of Climate Change on Sea Grass in the Torres Strait 2011-2014 (APP.0001.0007.0164).

The taking of such action confirms the Commonwealth's knowledge of Torres Strait Islanders' reliance.

Determinacy

- 249 It will be a matter counting against the recognition of a duty of care if the potential liability of the tortfeasor would be indeterminate. Such indeterminacy can arise because the *nature* of the harm cannot be ascertained or because the *number* of the persons who may be harmed cannot be ascertained.⁵⁵⁶ However, it does not matter if the particular members of a class of persons who may be owed a duty cannot be identified prospectively.⁵⁵⁷ Nor does the volume of group members matter for purposes of determinacy.⁵⁵⁸
- 250 Here, the nature of the harm and the number of persons can be ascertained. The *nature* of the harm is a fact-specific question that can be determined from the evidence, which has been summarised at Part C. It does not matter for this inquiry that the nature of some of the harms is difficult to quantify; the courts have developed means of assessing cultural and spiritual harms resulting from loss of connection to Country and ability to practice culture, as well as property damage and personal injury (see 'Remedies' below).⁵⁵⁹
- 251 The *number* of persons is limited to "persons who at any time during the period from 1985 the date this pleading is filed, are Torres Strait Islander (whether by descent or by customary adoption)".⁵⁶⁰ According to the 2021 Census, 82,054 people living in Australia identified as Torres Strait Islander or Aboriginal and Torres Strait Islander.⁵⁶¹ For particular kinds of harm, the number of persons would be further limited: for example, in relation to property damage or personal injury, the class would only include persons of Torres Strait Islander descent living or with property in the Torres Strait Islands.

⁵⁵⁶ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [342] (Allsop CJ).

 ⁵⁵⁷ See, eg, APP.0001.0020.0062 Ghantous v Hawkesbury City Council [1999] NSWCA 51; (1999) 102 LGERA 399;
APP.0001.0020.0029 Caltex Refineries (Qld) Pty Ltd v Stavar [2009] NSWCA 258; (2009) 75 NSWLR 649.
⁵⁵⁸ APP.0001.0020.0123 Parma v Angard Pty Ltd [1000] HCA 26; 108 CLP 180, [106, 100] (MacHurgh D)

⁵⁵⁸ APP.0001.0020.0123 Perre v Apand Pty Ltd [1999] HCA 36; 198 CLR 180, [106-109] (McHugh J).

⁵⁵⁹ See generally APP.0001.0020.0117 *Northern Territory v Griffiths* [2019] HCA 7; (2019) 269 CLR 1.

⁵⁶⁰ APP.0001.0015.0003 3FASOC [1].

APP.0001.0007.0117 Australian Bureau of Statistics, Estimates of Aboriginal and Torres Strait Islander Australians,
31 August 2023.

- 252 The present case thus does not suffer the problem of indeterminacy that was fatal, at least in Beach J's analysis, to the claim in *Sharma*.⁵⁶² There, indeterminacy was said to arise 'because of the lack of ascertainability of the relevant class',⁵⁶³ which class – when extended beyond 'the pleader's construct' – notionally included 'those at risk of suffering personal injury from [warmer] ... temperatures or their consequences who are not able to protect themselves.'⁵⁶⁴ The concern was expressed by Wheelahan J that the duty would extend to 'much of the Australian population at the time of the claimed events that are alleged to give rise to likely injury'.⁵⁶⁵
- 253 Here, the nature of the harm and the vulnerability focuses the class much more narrowly. There is a relatively small number of persons in Australia with the same unique connection to land and sea as the Applicants and who have experienced, and are experiencing, the erosion of that connection from the effects of climate change. And in respect of property damage and personal injury, the class of persons is also limited geographically. Thus, it is no 'pleader's construct'⁵⁶⁶ to frame the relevant class as Torres Strait Islanders and, once framed at that appropriate level of specificity, no issues of indeterminacy arise.

Coherence

- 254 For a court to recognise a duty in tort, it 'must "fit" within the body of accepted rules and principles'⁵⁶⁷ or with the 'basic values which the corpus of the law promotes or protects'.⁵⁶⁸
- 255 Here, the posited duty accords with legal principles describing the special relationship between the Commonwealth and Torres Strait Islander peoples (see above at [180]-[190]). Further, there is no disconformity with any statutory scheme as was decisive in

⁵⁶² See also APP.0001.0020.0123 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [342] (Allsop CJ), [842] (Wheelahan J).

⁵⁶³ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [704] (Beach J).

⁵⁶⁴ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [704] (Beach J).

⁵⁶⁵ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [842] (Beach J).

⁵⁶⁶ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [704] (Beach J).

⁵⁶⁷ APP.0001.0020.0024 Breen v Williams (1996) 186 CLR 71, 115 (Gaudron and McHugh JJ).

⁵⁶⁸ APP.0001.0020.0164 *Tame v State of New South Wales; Annetts v Australian Stations Pty Ltd* [2002] HCA 35; (2002) 211 CLR 317, [228] (Gummow and Kirby JJ).
Sharma.⁵⁶⁹ That is particularly significant in circumstances where, unlike in Sharma, the salient features of vulnerability, control and reliance each point towards the existence of a duty of care.

- 256 The Respondent suggested in its oral opening that the duties posited by the Applicants raise issues of coherence with 'administrative law principles', ⁵⁷⁰ and in particular those principles by which courts reviewing executive action decline to review that action on the basis of standards that are not justiciable. The Applicants will respond in more detail to this suggestion in reply if and when it is more clearly articulated. For present purposes it is sufficient to make two points.
- 257 First, there are deep structural connections embedded in the Constitution of Australia Act 1901 (APP.0001.0021.0010) – between the circumstances in which government action will, and will not be, subjected to judicial scrutiny in the law of tort and judicial review. Both modes of government liability are sourced at the Commonwealth level in s 75 of the *Constitution*, in paragraph (iii) and (v) respectively.⁵⁷¹ Just as s 75(v) 'secures a basic element of the rule of law',⁵⁷² so too does s 75(iii) serve an important accountability function. As has been explained by Gageler J:

The inclusion of s 75(iii) in the *Constitution* involved a rejection of any notion, which might otherwise have been drawn from the common law principle then still prevailing in England that the monarch could 'do no wrong', that the Executive Government of the Commonwealth was to enjoy immunity from suit for its own actions or for the actions of its officers or agents. The inclusion of s 75(iii) had the consequence of exposing the Commonwealth from its inception to common law liability, in contract and in tort, for its own actions and for actions of officers and agents of the Executive Government acting within the scope of their de facto authority.⁵⁷³

258 The point was considered even more directly in *Brodie v Singleton Shire Council*, where Gaudron, McHugh and Gummow JJ said (with Kirby J agreeing):

⁵⁶⁹ APP.0001.0020.0101 Minister for the Environment (Cth) v Sharma [2022] FCAFC 35; (2022) 291 FCR 311, [7], [267], [272] (Allsop CJ), [757], [854], [856], [867], [868] (Wheelahan J) cf. [609] (Beach J). 570

APP.0001.0012.0004 5 June 2023, Respondent's oral opening, T28:35-44.

⁵⁷¹ The two provisions both operate to subject the Executive to the jurisdiction of (in the first instance) the High Court: APP.0001.0020.0042 Davis v Minister for Immigration, Citizenship, Migrant Services and Multicultural Affairs [2023] HCA 10; (2023) 97 ALJR 214, [85] (Kiefel CJ, Gageler and Gleeson JJ).

⁵⁷² APP.0001.0020.0125 Plaintiff S157/2002 v Commonwealth [2003] HCA 2; (2003) 211 CLR 476, [5] (Gleeson CJ). See also APP.0001.0020.0152 Smethurst v Commissioner of the Australian Federal Police [2020] HCA 14; (2020) 272 CLR 177, [111] (Gageler J). See also APP.0001.0022.0013 L Crawford, 'Why These Three?: The Significance of the Selection of Remedies in Section 75(v) of the Australian Constitution' (2014) 42(2) Federal Law Review 253, 269-70.

⁵⁷³ APP.0001.0020.0124 Plaintiff M68/2015 v Minister for Immigration and Border Protection [2016] HCA 1; (2016) 257 CLR 42, [125] (Gageler J, emphasis added), see also [124] and the authorities cited therein.

... citizens, corporations, governments and public authorities generally are obliged to order their affairs so as to meet the requirements of the rule of law in Australian civil society. Thus, it is no answer to a claim in tort against the Commonwealth under s 75(iii) of the *Constitution* that its wrongful acts or omissions were the product of a 'policy decision' taken by the Executive Government; still less that the action is 'non-justiciable' because a verdict against the Commonwealth will be adverse to that 'policy decision'...⁵⁷⁴

- 259 So understood, there is no incoherence of the sort asserted by the Respondent. The common law development of the law of negligence can and should proceed consistently with the same principles that animate the judicial approach to questions of 'justiciability' in the administrative law context.⁵⁷⁵
- 260 Second, non-justiciability is now rarely conceived of as a categorical constraint on the availability of judicial review.⁵⁷⁶ There are very few executive powers that are inherently non-justiciable.⁵⁷⁷ Rather, the political character of a decision (derived, for example, from the fact the power was reposed in a Minister) may affect 'the width and depth of the judicial review that the Court can undertake'.⁵⁷⁸ It has been observed that the courts are taking a more substantive approach to justiciability, whereby justiciability concerns are merged with the consideration of grounds of review, or with consideration of the limits of power.⁵⁷⁹ This is entirely consistent with the accommodation of notions of justiciability at the stage of breach. Further, courts in the administrative law context have recognised that the mere fact that an administrative decision is itself complex and polycentric is no indication that a reviewing court will be required to resolve complex and polycentric matters beyond its procedural capabilities.⁵⁸⁰

Justiciability

261 As to justiciability as a separate salient feature, it has been said that '[t]here will be no duty of care to which a government is subject if, in a given case, there is no criterion by

⁵⁷⁴ APP.0001.0020.0025 *Brodie v Singleton Shire Council* [2001] HCA 29; (2001) 206 CLR 512, [106] (Gaudron, McHugh and Gummow JJ, Kirby J agreeing, emphasis added).

⁵⁷⁵ See further on justiciability in the constitutional context: APP.0001.0022.0009 James Stellios, *The Federal Judicature: Chapter III of the Constitution* (2020) [3.53].

⁵⁷⁶ APP.0001.0022.0014 M Leeming, 'Judicial Review of Vice-Regal Decisions: *South Australia v O'Shea*, its Precursors and its Progeny' (2015) 36 *Adelaide Law Review* 1, 15.

 ⁵⁷⁷ Exceptions include committing armed forces to war (APP.0001.0020.0137 *R v Toohey* (1981) 151 CLR 170, 219-220 (Mason J)) and the entry of treaties (APP.0001.0020.0082 *Koowarta v Bjelke-Petersen* (1982) 153 CLR 168, 213 (Stephen J), 237-238 (Murphy J)).

APP.0001.0020.0041 Davis v Minister for Immigration, Citizenship, Migrant Services and Multicultural Affairs [2021] FCAFC 213; (2021) 288 FCR 23, [29] (Kenny J).

⁵⁷⁹ APP.0001.0022.0003 A Sapienza, 'Judicial Review of Non-Statutory Executive Action: Australia and the United Kingdom United?' (2018) 43(2) *University of Western Australia Law Review* 67, 97.

⁵⁸⁰ APP.0001.0020.0100 Minister for Arts, Heritage & Environment v Peko-Wallsend Ltd (1987) 15 FCR 274, 304 (Wilcox J).

reference to which a court can determine the reasonableness of its conduct.⁵⁸¹ That is because a matter will not be 'justiciable' if it is not 'capable of judicial determination'.⁵⁸² Put differently, the question is whether the duty is 'a legitimate subject for curial decision ... [where] legitimacy involves questions of practicality and appropriateness'.⁵⁸³

- 262 Questions of justiciability in the duty inquiry often raise the issue of the policy/operational distinction (see further discussion below at [356-358]). Just as often, however, it is recognised that that distinction must be approached with caution.⁵⁸⁴ Similarly, labelling something 'core' or 'high level' policy is conclusory, and is of little assistance.⁵⁸⁵ As Beach J reasoned in *Sharma* in the context of a decision governed by statute, 'policy is no answer to denying the duty unless the Act itself makes such policy questions so fundamental to the exercise of statutory power that such a conclusion is compelling'.⁵⁸⁶ In the context of decisions not governed exclusively by statute, there is even less basis for asserting that policy should be an answer to denying the duty.
- 263 Even accepting that courts will be reluctant to rule on matters of 'policy', properly understood, that reluctance is in this case most properly dealt with at the points of assessing the standard of the duty of care and breach, rather than in the denying a duty at the outset. This is so for several reasons.
- 264 *First*, in the assessment of the standard and at the breach stage, questions of government resource allocation (see the discussion below at [303]) and competing policy imperatives can be 'balanced out'⁵⁸⁷ such that 'the standard of care which is owed to a plaintiff by a

⁵⁸¹ APP.0001.0020.0065 *Graham Barclay Oysters Pty Ltd v Ryan* [2002] HCA 54; (2002) 211 CLR 540, [15] (Gleeson CJ).

⁵⁸² APP.0001.0020.0028 *CGU Insurance Ltd v Blakeley* [2016] HCA 2; 259 CLR 339, [26] (French CJ, Kiefel, Bell and Keane JJ, citations omitted).

⁵⁸³ APP.0001.0020.0065 Graham Barclay Oysters Pty Ltd v Ryan [2002] HCA 54; (2002) 211 CLR 540, [15] (Gleeson CJ).

<sup>APP.0001.0020.0140 Roads and Traffic Authority (NSW) v Refrigerated Roadways Pty Ltd [2009] NSWCA 263;
(2009) 77 NSWLR 360. See also APP.0001.0020.0010 Anns v London Borough of Merton [1978] AC 728, 754
(Lord Wilberforce); APP.0001.0020.0145 Rowling v Takaro Properties Ltd [1988] AC 473, 501 (Lord Keith of Kinkel); APP.0001.0020.0159 Stovin v Wise [1996] UKHL 15; [1996] AC 923, 951 (Lord Hoffmann);
APP.0001.0020.0131 Pyrenees Shire Council v Day [1998] HCA 3; (1998) 192 CLR 330, [68] (Toohey J), [181]–[182] (Gummow J); APP.0001.0020.0205 Romeo v Conservation Commission of the Northern Territory [1992] HCA 5; (1992) 192 CLR 431, [166] (Hayne J); APP.0001.0020.0036 Crimmins (as executrix of estate of Crimmins dec'd) v Stevedoring Industry Finance Committee [1999] HCA 59; (1999) 200 CLR 1, [84]–[90], [131] (McHugh J, Gleeson CJ agreeing at [3]).</sup>

⁵⁸⁵ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [615] (Beach J).

⁵⁸⁶ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [633] (Beach J).

 ⁵⁸⁷ APP.0001.0020.0131 Pyrenees Shire Council v Day [1998] HCA 3; (1998) 192 CLR 330, [183] (Gummow J) quoting APP.0001.0020.0191 Wyong Shire Council v Shirt (1980) 146 CLR 40, 47–8 (Mason J) and later referring to APP.0001.0020.0078 Just v British Columbia [1989] 2 SCR 1228, 1243–4 (Cory J). See also McHugh J in

government agency may be less than that which would be owed by a private party.⁵⁸⁸ The standard of care and breach analyses thus provide an appropriate means by which to give effect to the principles of judicial restraint cautioning against entering into the sphere of political decisions.

- *Second*, to refuse to recognise a duty because some breaches might entail policy considerations is to put the cart before the horse: it is to assume that any decision to act (or not act) raises policy concerns before an analysis is undertaken, by reference to the evidence, as to what matters would in fact be relevant to such a decision. In this case, a number of the steps in the pleaded breach of the Primary Duty by the Commonwealth⁵⁸⁹ do not ostensibly raise any policy issues at all. Rather, they are matters that can be assessed against the extensive evidence received in this proceeding. This emphasises the danger of attempting to determine justiciability issues in the abstract, before reaching the level of analysis afforded by the standard of care and breach stage.
- *Third*, it must steadily be borne in mind that a conclusion of non-justiciability at the duty stage is a grant of immunity. Its effect is to prevent any consideration of the governmental conduct in question, resulting in a dangerous limit on executive accountability. Its application at the duty stage is a particularly blunt instrument where, as is the case here, there exist compelling salient features in favour of the existence of the duty.
- 267 *Fourth*, as set out above, a consideration of justiciability at the breach stage is consistent with the approach to justiciability in administrative law.
- 268 In light of the above, it is respectfully submitted that Beach J's analysis in *Sharma* is to be preferred, namely, that 'policy questions ... can adequately be dealt with at the breach stage.'⁵⁹⁰ Beach J's analysis accords with what was said by Gleeson CJ in *Crimmins*, where the Chief Justice observed:

Acceptance that a statutory authority, in the discharge of its functions, owed a duty of care to a person, or class of persons, is only the first step in an evaluation of the authority's conduct for the purpose of determining tortious liability. ... recognition of the existence of a duty is consistent with the need, when dealing with the questions of breach, to take

APP.0001.0020.0131 *Pyrenees* at [109]. See also APP.0001.0020.0025 *Brodie v Singleton Shire Council* [2001] HCA 29; (2001) 206 CLR 512, [104] and [151] (Gaudron, McHugh and Gummow JJ).

⁵⁸⁸ APP.0001.0020.0131 *Pyrenees Shire Council v Day* [1998] HCA 3; (1998) 192 CLR 330, [183] (Gummow J).

⁵⁸⁹ See APP.0001.0015.0003 3FASOC [82].

⁵⁹⁰ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [633] (Beach J).

account of complex considerations, perhaps including matters of policy, resources and industrial relations.⁵⁹¹

- 269 To similar effect, with reference to authority and scholarship,⁵⁹² McHugh J in *Crimmins* suggested that it is 'preferable to accommodate the distinction [between policy and operational matters] at the breach stage rather than the duty stage'.⁵⁹³
- 270 In any event, for the reasons set out below, in this case, unlike in *Sharma*, there is a 'set of facts posed by a concrete problem' which engage the neighbour principle so as to make the duty 'properly amenable to judicial determination by reference to a legal standard'.⁵⁹⁴ Justiciability therefore does not pose an obstacle to the imposition of a duty, a finding of breach, and the ultimate imposition of liability upon the Commonwealth.

Conclusion as to the Primary Duty

271 For all of the above reasons, the Commonwealth bore, and continues to bear, a relevantly neighbourly duty to Torres Strait Islanders to protect them from harm from climate change. Put differently, the Commonwealth had, and has, to keep Torres Strait Islanders 'in contemplation' when acting (or failing to act) in response to the risks posed by climate change.⁵⁹⁵

G. STANDARD OF CARE AND BREACH

272 Both the common law and s 9 of the CLA require consideration of breach to proceed on the basis of determining (1) whether a risk was foreseeable, and if so, (2) applying the 'negligence calculus' to identify the appropriate standard of care. The CLA has an additional consideration set out in s 9(1)(b), which is to determine whether the risk was 'not insignificant'.

⁵⁹¹ APP.0001.0020.0036 Crimmins (as executrix of estate of Crimmins dec'd) v Stevedoring Industry Finance Committee [1999] HCA 59; (1999) 200 CLR 1, [5] (Gleeson CJ, emphasis added).

 ⁵⁹² APP.0001.0020.0078 Just v British Columbia [1989] 2 SCR 1228, 1244; APP.0001.0020.0192 X (Minors) v
 Bedforshire County Council [1995] 2 AC 633, 737; APP.0001.0022.0018 Todd, 'Liability in Tort of Public Bodies' in Mullany and Linden (eds), Torts Tomorrow – A Tribute to John Fleming (1998) 36, 46–7.

⁵⁹³ APP.0001.0020.0036 Crimmins (as executrix of estate of Crimmins dec'd) v Stevedoring Industry Finance Committee [1999] HCA 59; (1999) 200 CLR 1, [87] (McHugh J, Gleeson CJ agreeing at [3]).

⁵⁹⁴ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [261] (Allsop CJ).

⁵⁹⁵ APP.0001.0020.0164 *Tame v State of New South Wales; Annetts v Australian Stations Pty Ltd* [2002] HCA 35; (2002) 211 CLR 317, [9] (Gleeson CJ).

Foreseeability

- 273 The test for foreseeability at the breach stage is narrower than that at the duty stage.⁵⁹⁶ As discussed at [213]-[214], that initial test is established on the available evidence: it was reasonably foreseeable as a possibility that *careless conduct of any kind* on the part of the Commonwealth may result in damage of some kind to Torres Strait Islanders.⁵⁹⁷
- 274 The test for foreseeability at breach is nonetheless undemanding under the common law,⁵⁹⁸ in the sense that it simply requires the risk of harm not to be far-fetched or fanciful.⁵⁹⁹ The question at the breach stage is whether it was reasonably foreseeable as a possibility that *the kind of carelessness that the Commonwealth is charged with* may result in damage of some kind to Torres Strait Islanders.⁶⁰⁰ Similarly, in assessing breach, the CLA defines a foreseeable risk as one which the respondent 'knew or ought reasonably to have known'.⁶⁰¹
- 275 The kind of carelessness alleged against the Commonwealth is a failure to protect Torres Strait Islanders from the impacts of climate change through GHG mitigation efforts. Armed with the knowledge set out at [213]-[214] it was reasonably foreseeable that the Commonwealth's acts or omissions in this regard may cause or materially contribute to the impacts of climate change that harm Torres Strait Islanders. With the test for foreseeability satisfied, consideration therefore turns to identifying the standard of care – that is, the response of a reasonable person in the Commonwealth's position to avoid the realisation of that risk.

⁵⁹⁶ APP.0001.0020.0101 *Minister for the Environment v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [417] (Beach J).

⁵⁹⁷ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 291 FCR 311, [417] (Beach J, emphasis added).

⁵⁹⁸ APP.0001.0020.0164 Tame v State of New South Wales; Annetts v Australian Stations Pty Ltd [2002] HCA 35; (2002) 211 CLR 317, [96] (McHugh J); APP.0001.0020.0101 Minister for the Environment v Sharma [2022] FCAFC 35; (2022) 400 ALR 203, [419] (Beach J).

⁵⁹⁹ APP.0001.0020.0191 Wyong Shire Council v Shirt [1980] HCA 12; (1980) 146 CLR 40, 47 (Mason J).

⁶⁰⁰ APP.0001.0020.0101 *Minister for the Environment v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [417] (Beach J).

⁶⁰¹ APP.0001.0021.0006 CLA s 9(1)(a).

Standard of care

Factors in assessing the reasonable response

276 In *Wyong Shire Council v Shirt*, Mason J referred to the way in which a tribunal of fact might determine what a reasonable person would do by way of response to a foreseeable risk:⁶⁰²

The perception of the reasonable person's response calls for a consideration of the **magnitude** of the risk and the **degree of the probability** of its occurrence, along with the **expense, difficulty and inconvenience** of taking alleviating action and any other **conflicting responsibilities** which the defendant may have. It is only when these matters are balanced out that the tribunal of fact can confidently assert what is the standard of response to be ascribed to the reasonable man placed in the defendant's position.

[Emphasis added]

- 277 The CLA similarly provides that a person does not breach a duty to take precautions against a risk of harm unless 'in the circumstances, a reasonable person in the position of the person would have taken the precautions'.⁶⁰³ In deciding whether a reasonable person would have taken precautions against a risk of harm, s 9(2) requires a court to consider (among other relevant things):
 - a) the **probability** that the harm would occur if care were not taken;
 - b) the likely **seriousness** of the harm;
 - c) the **burden of taking precautions** to avoid the risk of harm;
 - d) the **social utility** of the activity that creates the risk of harm.

[Emphasis added]

278 The above factors provide a framework for deciding what precautions the reasonable person – in this case, the Commonwealth – would reasonably have taken to avoid the foreseeable risk of harm. The judicial task requires a 'contextual and balanced assessment of the reasonable response to a foreseeable risk'.⁶⁰⁴ While the factors identified in the calculus and in s 9(2) of the CLA should not be applied in a mechanistic fashion,⁶⁰⁵ the courts have observed that the standard of care called for is higher with:

⁶⁰² APP.0001.0020.0191 Wyong Shire Council v Shirt [1980] HCA 12; (1980) 146 CLR 40, 47–8 (Mason J).

⁶⁰³ Section 9(1)(b)-(c).

⁶⁰⁴ APP.0001.0020.0139 *Roads and Traffic Authority (NSW) v Dederer* [2007] HCA 42; (2007) 234 CLR 330, [69] (Gummow J).

⁶⁰⁵ APP.0001.0020.0107 Mulligan v Coffs Harbour City Council [2005] HCA 63; (2005) 223 CLR 486, (Mulligan) [2] (Gleeson CJ and Kirby J).

278.1 a higher probability of the risk of harm eventuating;⁶⁰⁶

278.2 a higher magnitude of the risk of harm;⁶⁰⁷

278.3 a lower burden of taking precautions against the risk of harm;⁶⁰⁸ and

278.4 a lower social utility of the activity creating the risk.⁶⁰⁹

Probability of harm

- 279 As part of the 'negligence calculus', in considering the probability of harm if care were not taken against a risk as required both under the common law and s 9(2)(a) of the CLA, it is useful to first ask whether the risk is 'not insignificant' as required by s 9(1)(b) of the CLA. That is so because the answer to the latter will necessarily inform the weight to be given to the former in the calculus.
- 280 The Queensland Courts have interpreted the CLA meaning of 'not insignificant' as "a risk that is of a higher probability than is indicated by the phrase 'not far-fetched or fanciful', but not so high as might be indicated by a phrase such as 'a substantial risk'".⁶¹⁰

A not insignificant risk

- 281 The evidence from at least 2014 shows that harm would come to Torres Strait Islanders in the absence of a collective global response to climate change, of which Australia is part.
- 282 The harm alleged in this proceeding is from climate change impacts. The probability of those impacts (and the accompanying harm) is rigorously evaluated in reports of the IPCC, which has a thorough process for determining the degree of confidence in (qualitative degree of agreement), and probability of (quantitative degree of certainty),

⁶⁰⁶ APP.0001.0020.0163 Swinton v The China Mutual Steam Navigation Co Ltd [1951] HCA 54; (1951) 83 CLR 553, 566–7.

⁶⁰⁷ APP.0001.0020.0096 Mercer v Commissioner for Road Transport and Tranways (NSW) [1936] HCA 71; (1936) 56 CLR 580, 601 (Dixon J).

⁶⁰⁸ See, for example, the inverse proposition at APP.0001.0020.0065 *Graham Barclay Oysters Pty Ltd v Ryan* (2002) 211 CLR 540; 194 ALR 337; [2002] HCA 54, [201].

⁶⁰⁹ See, for example, the inverse proposition at APP.0001.0020.0202 *Roman Catholic Church Trustees for the Diocese* of *Canberra and Goulburn v Hadba* (2005) 221 CLR 161; 216 ALR 415; [2005] HCA 31, at [25].

⁶¹⁰ APP.0001.0020.0127 *Pollard v Trude* [2008] QSC 119 [39].

its findings.⁶¹¹ The below terms reflect the corresponding degree of probability in an outcome:⁶¹²

Term	Likelihood of the outcome
Virtually certain	99 – 100% probability
Very likely	90 – 100% probability
Likely	66 – 100% probability
About as likely as not	33 – 66% probability
Unlikely	0 – 33% probability
Very unlikely	0 – 10% probability
Extremely unlikely	0 – 5% probability

- 283 The Applicants submit that, for the purposes of satisfying s 9(1)(b) of the CLA, IPCC assessments of 'about as likely as not' and upward easily meet the test of 'not insignificant'. A minimum one third chance is clearly beyond the common law test of 'far-fetched or fanciful'.
- 284 The probability of the risks of harm to Torres Strait Islanders absent care taken by the Commonwealth were, and continue to, easily clear the bar of 'not insignificant', as summarised below.
 - 284.1 From at least **2007**, it was known that Australia was *very likely* to warm this century, with increased frequency of extreme high daily temperatures and decreased frequency of cold extremes.⁶¹³ Similarly, the Pacific Ocean was *very likely* to warm during the century,⁶¹⁴ and *likely* to continue to rise around small islands.⁶¹⁵ In relation to small islands in particular, it was deemed *very likely* that climate change would adversely affect subsistence and seriously compromise water resources, and *likely* heavily impact coral reefs, fisheries and marine-based

⁶¹² APP.0001.0003.0093 Karoly Report, [11(b)], based on Mastrandrea et al, Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties (2010), accessible at: <u>https://www.ipcc.ch/site/assets/uploads/2017/08/AR5_Uncertainty_Guidance_Note.pdf</u>. Note, while this document is directed to AR5 Lead Authors, it can be found at <u>https://www.ipcc.ch/working-group/wg1/</u> under 'Resources related to the preparation of the Working Group I contribution to the Sixth Assessment Report'. For AR4, see IPCC, *Guidance Notes for Lead Authors of the IPCC Fourth Assessment Report on Addressing Uncertainties* (2005), p 4, accessible at: <u>https://archive.ipcc.ch/pdf/supporting-material/uncertainty-guidance-note_ar4.pdf</u>.

⁶¹¹ APP.0001.0007.0112 IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the IPCC, Summary for Policymakers, 4 [_0020].

⁶¹³ APP.0001.0019.0011 IPCC, 2007: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC, Ch 11, 896 [_0906], 11.7.

⁶¹⁴ APP.0001.0019.0011 IPCC, 2007: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC, Ch 11, 909 [_0919], 11.9.

⁶¹⁵ APP.0001.0019.0011 IPCC, 2007: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC, Ch 11, 909 [_0919], 11.9.

resources (high confidence).⁶¹⁶ Further, risks associated with tipping points were considered 'moderate' between 0-1°C global temperature increase, increasing at a steepening rate between 1-2°C and high above 3°C.⁶¹⁷

- 284.2 From **2014**, it was *virtually certain* that global mean sea level rise was accelerating,⁶¹⁸ and associated high-water-level events were medium to high risk for small islands between 2030 and 2040.⁶¹⁹ It was *very likely* that regional sea level rise in Australasia would exceed historical rates.⁶²⁰ Global mean sea level would *likely* rise by 0.53-0.97m by 2100 (relative to 1986–2005) under a high emissions scenario,⁶²¹ and 0.28-0.6m with stringent mitigation⁶²² (medium confidence).⁶²³ Risks of extreme weather events including coastal flooding and heatwaves were known to be high with global temperature increase of approximately 1.6°C.⁶²⁴ There was a 'medium' to 'high' risk of increased morbidity and mortality from heatwaves in Australia at global temperature increase of 2°C.⁶²⁵ The near term risks to coral reef systems in Australasia were 'medium' to 'high' between 2030-2040, and 'very high' at a global temperature increase of 2°C.⁶²⁶
- 284.3 From at least **2018**, it was acknowledged that global temperature increase was likely to reach 1.5°C between 2030 and 2052 if continued at the current rate.⁶²⁷

⁶¹⁶ APP.0001.0019.0010 IPCC, 2007: Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the IPCC, Ch 16 689 [0699].

⁶¹⁷ APP.0001.0019.0008 IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the IPCC, 72 [_0079], (Box 2.4).

 ⁶¹⁸ APP.0001.0004.0006 IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the IPCC, Ch 29, 1616 [_0491].
 ⁶¹⁹ APP 0001.0004.0006 IPCC, 2014: Climate Change 2014: Impacts. Adaptation, and Vulnerability. Part B: Passional Aspects. Contribution of Voltage Change 2014: Impacts. Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the IPCC, Ch 29, 1616 [_0491].

⁶¹⁹ APP.0001.0004.0006 IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the IPCC, Ch 29, 1635 [_0510], Table 29-4.

APP.0001.0004.0006 IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the IPCC, Ch 25, 1374 [_0249].
 PCR8.5 (See above at [42] [44]).

⁶²¹ RCP8.5 (See above at [42]-[44]). ⁶²² RCP2.6 (See above at [42]-[44])

⁶²² RCP2.6 (See above at [42]-[44]).

⁶²³ APP.0001.0004.0006, IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the IPCC, Ch 25, 1384 [_0259].

⁶²⁴ APP.0001.0004.0005 IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the IPCC, Summary for Policymakers, 12 [_0029], Box SPM.1.

⁶²⁵ APP.0001.0004.0006 IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the IPCC, Ch 25, 1411 [_0286], Table 25-8.

⁶²⁶ APP.0001.0004.0006, Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the IPCC, Ch 25, 1411 [_0286], Table 25-8; see also Ch 29, 1635 [_0510], Table 29-4.

⁶²⁷ APP.0001.0007.0116 IPCC, 2018: 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

Even at 1.5°C of global warming, the compounding impacts of changes in rainfall, temperature, tropical cyclones and sea level were *likely* to be significant across multiple natural and human systems.⁶²⁸

- 284.4 By **2021**, it was *more likely than not* that a global temperature increase of 1.5°C would be exceeded under the low GHG emissions scenario (SSP1-2.6) and reached under the very low GHG emissions scenario (SSP1-1.9).⁶²⁹ It was *very likely* that every additional 0.5°C of warming causes clearly discernible increases in the intensity and frequency of hot extremes, including heatwaves.⁶³⁰ It was *virtually certain* that changes in the intensity of temperature extremes in Australasia would be at least double at 2°C, compared to 1.5°C, and the number of hot days and nights and the length, frequency, and/or intensity of warm spells or heatwaves would increase over most land areas.⁶³¹ Global mean sea level would *likely* rise 0.28-0.55 meters by 2100 (relative to 1995-2014) if global temperature increase stabilised at 1.4°C by 2100; 0.32-0.62 meters at 1.8°C; and 0.44-0.76 at 2.7°C.⁶³² Ocean acidification was *virtually certain* to increase during the century. It was *virtually certain* the Greenland Ice Sheet would continue to experience ice loss and *likely* for the Antarctic Ice Sheet.⁶³³
- 285 The above probabilities, coupled with the risk of tipping points as discussed above at [114],⁶³⁴ and the vulnerability described above from [215], lead to the conclusion that at

strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, Summary for Policymakers, 4 [_0018].

APP.0001.0007.0116 IPCC, 2018: 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, Summary for Policymakers, Ch 3, 260 [0274].

⁶²⁹ APP.0001.0007.0112 IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the IPCC, Summary for Policymakers, 15 [_0031], B.1.3.

⁶³⁰ APP.0001.0007.0112 IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the IPCC, Summary for Policymakers, 15 [_0031], B.2.2.

 ⁶³¹ APP.0001.0007.0112 IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the IPCC, Ch 11, 1518 [1534]. See particulars to APP.0001.0015.0003 3FASOC [27].

⁶³² APP.0001.0007.0118 IPCC, 2022: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the IPCC, Ch 3, 393 [_0404] 3.2.2.2. See particulars to APP.0001.0015.0003 3FASOC [26A], [27], and CRT.2000.0003.0001 Defence [26A(a)].

⁶³³ APP.0001.0007.0112 IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the IPCC, Summary for Policymakers, 21 [_0037].

⁶³⁴ The Applicants note that any uncertainties in respect of the risk of tipping points should be treated conservatively, consistently with Art 3 of the UNFCCC regarding the Precautionary Principle, as adopted in Australian environmental legislation (see, for example, s 4(1) of the APP.0001.0021.0017 *Protection of the Environment Administration Act 1991* (NSW)) and jurisprudence (see, for example, APP.0001.0020.0199 *Hornsby v Telstra* [2006] NSWLEC 133 from 125 (Preston CJ)).

all material times, absent care taken by the Commonwealth, the risk of harm to Torres Strait Islanders from climate change was:

285.1 For the purpose of s 9(1)(b) of the CLA: not insignificant.

285.2 For the purpose of considering probability of risk under s 9(2)(a) of the CLA (in assessing what a reasonable person would have done under s 9(1)(c)): extremely high. The examples set out above illustrate a probability of climate impacts causing harm to Torres Strait Islanders at a minimum of 66 per cent, and in most instances beyond 90 or 99 per cent. This weighs in favour of a higher standard of care.

Seriousness of harm

286 The 'seriousness'⁶³⁵ or 'magnitude'⁶³⁶ (that is, the gravity, frequency and imminence)⁶³⁷ of the risk of harm is material in framing the standard of care. The Applicants submit that the seriousness of the risk in question in this proceeding demands a higher standard of care.

Gravity of harm

- 287 Climate change poses an existential risk to Torres Strait Islanders. The Applicants submit that, for the purposes of assessing a reasonable response to the risk,⁶³⁸ the likely seriousness of the harm⁶³⁹ is catastrophic.
- 288 The risk of harm to Torres Strait Islanders from the impacts of climate change includes loss of fulfilment of *Ailan Kastom*, property damage, personal injury and death. The physical manifestations of climate change impacts are set out both above and at earlier from [49]-[82]. The harm caused by these impacts is extremely serious. Property damage and personal injury alone can easily be characterised as severe, but for Torres Strait Islanders, they pale in comparison to the risk of losing *Ailan Kastom* a culture spanning 65,000 years.

⁶³⁵ APP.0001.0021.0006 CLA s 9(2)(b).

⁶³⁶ APP.0001.0020.0191 *Shirt*, 47 (Mason J).

⁶³⁷ APP.0001.0020.0096 Mercer v Commissioner for Road Transport and Tramways (NSW) [1936] HCA 71; (1936) 56 CLR 580, 601 (Dixon J).

⁶³⁸ APP.0001.0021.0006 CLA s 9(1)(c).

⁶³⁹ Per APP.0001.0021.0006 CLA s 9(2)(b) and the common law test: APP.0001.0020.0191 Shirt, 47-8 (Mason J).

- 289 If the IPCC's *Working Group 1 Contribution to the Sixth Assessment Report* is a 'code red for humanity'⁶⁴⁰ the alert for the Torres Strait is off the scale. At risk is a connection to the environment so unique and ancient such that it is incomprehensible to non-Torres Strait Islanders. It is against that background that the Applicants' representatives attempt to set out the magnitude of the risk of harm at stake in these proceedings.
- 290 In their own words, the Torres Strait Islander witnesses have described the possibility of losing or leaving their homelands as unimaginable:

... it would be devastating. It is very difficult for me to explain this in words.⁶⁴¹

I will be nothing. I will have nothing behind my back. I will not be able to say I am a Boigu man anymore. How will I be able to say where I come from? I will become nobody. I will have no identity.⁶⁴²

Without Saibai, I do not know who I would be.⁶⁴³ [M]aybe one day if Saibai gone ... we'll have no identity. What I mean identity, will Saibai be lost. So we'll be, we'll be – will Saibai be lost. ... We lost our, we lost our culture. We lost, we lost everything.⁶⁴⁴

If we had to leave, we could not take the language and culture with us. Language and culture are tied to the land. Our culture is strong. It would be like a woman remembering a song and having goosebumps because she thinks of her husband who has passed.⁶⁴⁵

This is Saibai, it's so dear to me. It means eternity to me and to see Surum being eroded like that. You've got to be a Saibaian to know that, how difficult it is.⁶⁴⁶

For me, the thought of relocating away from Badu would mean I would have to leave my ancestors, my dad's grave and my grandmother's. I grew up here, so all my cultural values would just go to sleep. It wouldn't be the same living anywhere else. I would lose my identity if I had to go into mainstream culture. Generation to generation we would just wash out.⁶⁴⁷

⁶⁴⁰ United Nations Secretary-General's statement on the IPCC Working Group 1 Report on the Physical Science Basis of the Sixth Assessment, 9 August 2021, accessible at: <u>https://www.un.org/sg/en/content/sg/statement/2021-08-09/secretary-generals-statement-the-ipcc-working-group-1-report-the-physical-science-basis-of-the-sixth-assessment?_gl=1%2A1ap5180%2A_ga%2AMTY2ODU0NzU1LjE3MDAyNzI0MjI.%2A_ga_S5EKZKSB78%2A MTcwNzk3ODEwMC4xLjEuMTcwNzk3ODEwMy41Ny4wLjA.%2A_ga_TK9BQL5X7Z%2AMTcwNzk3ODEw MS4xLjAuMTcwNzk3ODEwMS4wLjAuMA.</u>

 ⁶⁴¹ APP.0001.0009.0008 Affidavit of Uncle Pabai [199]; see also APP.0001.0009.0005 Affidavit of Uncle Paul [161].
 ⁶⁴² APP.0001.0009.0008 Affidavit of Uncle Pabai [200]. See also APP.0001.0012.0004 5 June 2023, Uncle Pabai,

T60:37-39.

⁶⁴³ APP.0001.0009.0005 Affidavit of Uncle Paul [162].

⁶⁴⁴ APP.0001.0012.0003 12 June 2023, Uncle Paul, T476:24-36. See also T468:23-26; APP.0001.0009.0005 Affidavit of Uncle Paul [107].

⁶⁴⁵ APP.0001.0009.0007 Affidavit of Uncle Herbert [51].

⁶⁴⁶ APP.0001.0012.0003 12 June 2023, Uncle Herbert, T536:1-5.

⁶⁴⁷ APP.0001.0009.0011 Affidavit of Uncle Gerald [54].

If environment change you lose the evidence. How you gonna teach your kids if there is no evidence. Yes, when we tell the stories but for them to prove there has to be evidence. ... If this island's gone, we've got nothing.⁶⁴⁸

If we don't have culture anymore, how can we call ourselves First Nations people? It's scary.⁶⁴⁹

291 At the heart of the threat to *Ailan Kastom* is the loss of Torres Strait Islanders' connection to their ancestors. The reverence held for ancestral spirits is clear:

[The Ancestors are] giving us who we are today to identify ourself. They are the people, most important people for us.⁶⁵⁰

If we lost Warul Kawa, we would lose our spiritual connection to the ancestors. We wouldn't be able to do our spiritual business anymore. It would be like losing our version of heaven. It would be like killing all the people in the community and their spiritual ancestors. The people on Boigu are very worried to protect Warul Kawa.⁶⁵¹

Flooding and erosion of the cemetery causes a lot of sadness in the community. If we do not know where our ancestors are, we cannot talk to them properly. We are worried that our ancestors won't be safe to rest in the future.⁶⁵²

Culture was given to us as a gift, as a gift to pass on. It wasn't a gift that we take to the grave with us. That's – culture, I mean, like, language, cultural practice, law protocol. So culture given to us is a gift from our ancestors, our fathers, our uncles. They gave it to us so that we could preserve it and pass it on, so that the generations to come will have the same knowledge that we have. If we're not doing that, then – if I am not doing that, then I am disobeying why culture is there for the first place.⁶⁵³

They are the authority. We've got that respect. It's about the kinship, the links that we have when we visiting.⁶⁵⁴

One of the saddest things for me is that the old people, who are asleep now, are being made weak by the erosion. That's why we hold on to them. ... I always say esso (thank you) because I'm walking forward and need them to show me things.⁶⁵⁵

292 Consequently, the threat of harm to the spiritual world is akin to the threat of harm to Torres Strait Islanders:⁶⁵⁶

⁶⁴⁸ APP.0001.0012.0004 5 June 2023, Uncle Fred, T93:11-16, see also APP.0001.0012.0007 6 June 2023, Uncle Fred and Uncle Pabai, T110:27-37.

⁶⁴⁹ APP.0001.0009.0013 Affidavit of Uncle Laurie [47].

⁶⁵⁰ APP.0001.0012.0004 5 June 2023, Uncle Pabai, T60:11-14.

⁶⁵¹ APP.0001.0009.0008 Affidavit of Uncle Pabai [191].

⁶⁵² APP.0001.0009.0008 Affidavit of Uncle Pabai [88].

⁶⁵³ APP.0001.0012.0005 8 June 2023, Uncle Laurie, T205:6-14.

⁶⁵⁴ APP.0001.0012.0006 13 June 2023, Aunty Jen, T569:26-30.

⁶⁵⁵ APP.0001.0009.0007 Affidavit of Uncle Herbert [53].

⁶⁵⁶ As submitted during the November hearings (TRN.0017.1379 21 November 2023, T1420), the fears cited are not adduced to prove a causal connection between climate change and an attack from spirits or daily deaths. They are evidence of the customary beliefs of such consequences, but this does not diminish the weight that should be attributed to these genuinely held fears in assessing the magnitude of the risk of harm to *Ailan Kastom*.

Warul Kawa is ... our spiritual land. If we're going to lose all that, we believe that all the spiritual ancestors will attack us. They will turn back on us.⁶⁵⁷

If the cemetery or the sacred trees were gone, that would bring disaster to Boigu. Our people will die every day. It would be a bad omen. 658

293 It is therefore indisputable that the magnitude of the risk facing Torres Strait Islanders from climate change is genuinely existential, stemming not only from the threat to physically exist on their homelands, but to the very existence of their *Ailan Kastom*.

Frequency of harm

- 294 At all material times, the frequency of climate change impacts and therefore harm to Torres Strait Islanders – from the risk of the Commonwealth not taking care was projected to, and will continue to, increase.
- As above at [47.6], there is an approximately linear relationship between increases in global temperature and the frequency and intensity of extreme temperatures, heatwaves, weather conditions conducive to bushfires, extreme daily rainfall, drought and coastal storm surges.⁶⁵⁹ The Commonwealth admits that climate change is responsible for the increased frequency, size and intensity of extreme weather events since 1850-1900.⁶⁶⁰ It admits a correlation between an increase in global mean temperature and global average ocean surface temperature, the melting of ice on land and sea and permafrost, changing precipitation patterns, sea level rise and inundation of coastal lands, increases in the frequency and intensity of extreme weather events, harm and destruction of ecosystems and non-human species, and various health-related impacts.⁶⁶¹
- 296 The Commonwealth's own agencies have also reported on the increased frequency of harm projected by climate change. For example, in 2018, the BOM and CSIRO's State of the Climate report noted Australia is expected to experience more frequent, extensive, intense and longer-lasting marine heatwaves, suggesting in turn more frequent and severe bleaching events on the Great Barrier Reef, and potentially the loss of many types of coral throughout the tropical reef systems of Australia and globally.⁶⁶² The 2020 report projected for most of the Australian coast, extreme sea levels that had a probability of

⁶⁵⁷ APP.0001.0009.0008 Affidavit of Uncle Pabai [192].

⁶⁵⁸ APP.0001.0009.0004 Affidavit of Uncle Fred [51].

⁶⁵⁹ APP.0001.0003.0093 Exhibit A40, Karoly Report [57].

⁶⁶⁰ APP.0001.0015.0003 3FASOC [25(e)]; Defence [25(e)].

⁶⁶¹ APP.0001.0015.0003 3FASOC [10]; CRT.2000.0003.0001 Defence [10], [11(b)]. See above at [45].

⁶⁶² APP.0001.0003.0008 BOM and CSIRO, *State of the Global Climate 2018* [_0021].

occurring once in a hundred years were now projected to become an annual event by the end of the century with lower emissions, and by mid-century for higher emissions.⁶⁶³

297 The increased frequency of harm to Torres Strait Islanders from the risk in question is supported by the evidence of Professor Church, Mr Bettington and Professor Karoly.⁶⁶⁴ For example, on Boigu and Saibai, the frequency of inundation events with significant consequences for local communities has increased considerably since 1900, thereby reducing the habitability of these islands.⁶⁶⁵ The devastating effects are only projected to increase in frequency into the future.⁶⁶⁶

Imminence of harm

298 Here, the Court has witnessed and heard evidence of rapid damage to the lands and waters of the Torres Strait from climate change, which has harmed and will continue to harm Torres Strait Islanders. As noted by her Honour (then) Justice Mortimer:

'There is no denying the unremitting march of the sea onto the islands of the Torres Strait. The reality for the people of the Torres Strait is that they risk losing their way of life, their homes, their gardens, the resources of the sea on which they have always depended and the graves of their ancestors. ... the reality facing Torres Strait Islanders gives this proceeding some considerable urgency. '⁶⁶⁷

299 The first UNEP Emissions Gap report in 2010⁶⁶⁸ and each annual report since has identified the insufficiency of emissions reductions and consequential global warming. The 2014 report made it clear that additional emissions reductions were required to stay within 2°C global warming,⁶⁶⁹ and "immediate and stringent" reductions to stay within 1.5°C warming.⁶⁷⁰ In 2021 UNEP reported that there was a fifty-fifty chance of the global temperature increase exceeding 1.5°C in the next two decades, and without immediate, rapid and large-scale reductions in GHG emissions, limiting warming to 1.5°C or even 2°C by the end of the century will be beyond reach.⁶⁷¹ The most recent

⁶⁶³ APP.0001.0003.0009 BOM and CSIRO, *State of the Global Climate 2020* [_0021].

⁶⁶⁴ See above at [47.5(c)] (Professor Church on frequency of extreme weather events from sea level rise); [56]-[66] (Professor Church and Mr Bettington on frequency of flooding events from sea level rise).

⁶⁶⁵ See above at [66.2].

⁶⁶⁶ See above at [90]-[92] (Professor Church on future frequency of extreme weather events from sea level rise globally); [96] (Mr Bettington on projected inundation events in the Torres Strait).

⁶⁶⁷ APP.0001.0020.0201 Pabai v Commonwealth of Australia [2022] FCA 836, [28]-[29].

⁶⁶⁸ EVI.2001.0005.3414 UNEP Emissions Gap Report 2010.

⁶⁶⁹ APP.0001.0007.0169 UNEP Emissions Gap Report 2014, 19 [_0046].

⁶⁷⁰ APP.0001.0007.0169 UNEP Emissions Gap Report 2014, 18 [_0045].

⁶⁷¹ APP.0001.0004.0012 UNEP Emissions Gap Report 2021, [.0030].

UNEP Emissions Gap report stated that failure to bring global GHG emissions in 2030 below the levels implied by current NDCs will make it impossible to limit warming to 1.5°C with no or limited overshoot and strongly increase the challenge of limiting warming to 2°C.⁶⁷² The increasing urgency of action called for in these reports highlights the imminence of harm.

- 300 The bi-annual BOM and CSIRO State of the Climate reports have also reported on the imminence of global temperature increase, resulting in harm to Torres Strait Islanders. In 2012, for example, it said Australian average temperatures are projected to rise by 0.6 to 1.5 °C by 2030 when compared with the climate of 1980 to 1999.⁶⁷³
- 301 The evidence referenced in the climate section above at [52]-[81] sets out that the Torres Strait is already experiencing harm from climate and change and the dire consequences of failing to keep global temperature increase to 1.5°C. Harm is not only imminent – it is already being felt.

Burden of taking precautions

- 302 The Court must also consider the burden (that is, the expense, difficulty, and inconvenience), of taking precautions to avoid the risk of harm in assessing the response of a reasonable actor in the position of the respondent.⁶⁷⁴
- 303 Ordinarily, the standard of care imposed upon a defendant is an objective standard to take reasonable care, which does not fluctuate depending upon the subjective attributes of the defendant.⁶⁷⁵ However, it has been recognised that in the case of defendant public authorities, financial constraints and budgetary imperatives may fall for consideration when determining breach of a duty of care.⁶⁷⁶ In this regard, the standard of care applicable to a private individual or corporation differs from that applicable to a public authority.⁶⁷⁷ Nevertheless, the essential lodestar remains reasonableness.

⁶⁷² APP.0001.0019.0006 UNEP Emission Gap Report 2023, 16.

⁶⁷³ APP.0001.0003.0005 BOM and CSIRO, *State of the Global Climate 2012*, [_0010].

⁶⁷⁴ APP.0001.0021.0006 CLA s 9(2)(c); APP.0001.0020.0191 Shirt, 47 (Mason J).

⁶⁷⁵ See, for example, APP.0001.0020.0076 *Imbree v McNeilly* [2008] HCA 40; (2008) 236 CLR 510.

APP.0001.0020.0025 Brodie v Singleton Shire Council [2001] HCA 29; (2001) 206 CLR 512, [104] (Gaudron,
 McHugh and Gummow JJ); APP.0001.0020.0131 Pyrenees Shire Council v Day [1998] HCA 3; (1998) 192 CLR 330, [183] (Gummow J).

⁶⁷⁷ APP.0001.0020.0140 *Roads and Traffic Authority (NSW) v Refrigerated Roadways Pty Ltd* [2009] NSWCA 263; (2009) 77 NSWLR 360, [263]–[265].

- 304 As expanded on further below at [359]-[368], the Applicants accept that the standard of care imposed upon the Commonwealth may ultimately require consideration of competing resource and policy demands.⁶⁷⁸ However, the precautions that the reasonable person in the Commonwealth's position would take in order to mitigate against the severe current and projected impacts of climate change on Torres Strait Islanders do not require such paradigmatic resource allocation or policy decisions as to weigh against the alleged standard of care, or prohibit the Court from adjudicating the Applicants' claim.
- 305 As expanded upon further at [346] below, the Applicants submit that such precautions involve, having regard to the best available science:
 - 305.1 **identification** of climate change impacts in the Torres Strait; the risk, scope and severity of those impacts; a global temperature limit to prevent the most dangerous of those impacts; and a corresponding best available science target; and

305.2 implementation of measures to reduce emissions consistent with that target.

- 306 A person 'in the position of' the Commonwealth is that of a developed international state actor who, at all material times:
 - 306.1 was a member of the UNFCCC, ⁶⁷⁹ UNEP, ⁶⁸⁰ IPCC⁶⁸¹ and WMO;⁶⁸²
 - 306.2 had its own agencies responsible for scientific research⁶⁸³ and weather, climate and water;⁶⁸⁴ and
 - 306.3 received expert advice on climate change policy and mitigation initiatives from an independent statutory body.⁶⁸⁵

The Applicants accept that the Commonwealth writ large, although not a 'public or other authority' as defined in s 34 of the APP.0001.0021.0006 CLA (see [172] above), may nonetheless be subject to the standard of care ascribed to 'public authorities' in the context of considering the burden of taking precautions against a risk of harm.

⁶⁷⁹ APP.0001.0015.0003 3FASOC and CRT.2000.0003.0001 Defence [33].

⁶⁸⁰ See <u>https://www.unep.org/cpr/member-states-directory</u>.

⁶⁸¹ APP.0001.0015.0003 3FASOC and CRT.2000.0003.0001 Defence [13].

⁶⁸² APP.0001.0015.0003 3FASOC and CRT.2000.0003.0001 Defence [16].

⁶⁸³ CSIRO, see APP.0001.0015.0003 3FASOC [18].

⁶⁸⁴ BOM, see APP.0001.0015.0003 3FASOC and CRT.2000.0003.0001 Defence [19].

⁶⁸⁵ CCA, see APP.0001.0015.0003 3FASOC and CRT.2000.0003.0001 Defence [21].

- 307 These circumstances would guarantee the reasonable person in the position of the Commonwealth with ready access to the best available science and other information required to take the precautions listed above:
 - 307.1 The **current and projected impacts of climate change** in the Torres Strait Islands and small and low lying islands are contained in reports of the IPCC, CSIRO and BOM.⁶⁸⁶
 - 307.2 Similarly, the risk, scope and severity of those impacts as discussed at [83]-[113], [281]-[285], and [294]-[301] above is available from the same sources. ⁶⁸⁷
 - 307.3 As the severity of the impacts correlate to global temperature increase, this material also enables one to readily determine a global temperature limit necessary to prevent the most dangerous of these impacts.
 - 307.4 Further, the IPCC, UNEP and CCA contain comprehensive information about global and domestic CO₂ budgets which provides methodologies to identify a **target reflecting the global temperature limit above**.⁶⁸⁸
- 308 It therefore cannot be said that a reasonable state in the position of the Commonwealth would be burdened by taking the above precautions. In respect of the stated precaution to **implement measures to reduce emissions consistent with the target above**:
 - 308.1 As discussed below at [333], the objective of the UNFCCC is to prevent dangerous climate change. The Paris Agreement, established to enhance the implementation and objective of the UNFCCC, requires member states to set emissions reduction targets as part of achieving its objective.
 - 308.2 The setting of GHG emissions reduction targets based on best available science involves no greater expense, difficulty or inconvenience than the setting of targets formulated without reference to the science. This is particularly so in circumstances where a reasonable person in the position of the Commonwealth has access to and knowledge of that science. Accordingly, the 'burden' in respect of setting an

⁶⁸⁶ See, for example APP.0001.0003.0093 Exhibit A40, Karoly Report [64]-[77].

⁶⁸⁷ See, for example APP.0001.0003.0093 Exhibit A40, Karoly Report [64]-[77].

⁶⁸⁸ APP.0001.0009.0001 Exhibit A45, Meinshausen Report.

appropriate target is a neutral factor in assessing the reasonable response to the risk of harm.

308.3 If, contrary to the Applicants' submission, the Court determines that it must consider the burden of implementing a best available science target, then that consideration should include the expense, difficulty and inconvenience of taking inadequate implementation precautions. This would involve consideration of the burdens imposed on the Commonwealth in the event of exceeding the global temperature limit. Failing to achieve the global temperature limit will have fundamental impacts on Torres Strait Islanders' ability to live on their ancestral homelands of 65,000 years, and to continue to practice culture (see above at [236]-[167]). The burden on the Commonwealth's resources of responding to further detrimental impacts of climate change on Torres Strait Islanders (for example, infrastructure damage, displacement and relocation) should therefore be factored into this consideration.

Social utility of activity causing risk

- 309 Section 9(2)(d) of the CLA requires the Court to take into account the social utility of the activity that creates the risk of harm when deciding whether a reasonable person would take precautions against the risk of harm. Ordinarily, a higher social utility of the activity creating the risk will weigh in favour of a lower standard of care.⁶⁸⁹
- 310 The Commonwealth has weighed in on this balancing in its decision to commit to and implement the Paris Agreement. Through its conduct of becoming a signatory to the UNFCCC and Paris Agreement, it has already determined the social utility of mitigating climate change through setting a GHG emissions reduction target according to the terms of those agreements.⁶⁹⁰

⁶⁸⁹ See, for example, APP.0001.0020.0202 *Roman Catholic Church Trustees for the Diocese of Canberra and Goulburn v Hadba* [2005] HCA 31; 2(2005) 21 CLR 161, [25].

⁶⁹⁰ Article 4(2)(a) of the UNFCCC (APP.0001.0003.0016) commits the Commonwealth to "mitigate[e] climate change, by limiting its anthropogenic emissions of greenhouse gases". Article 2(1)(a) of the Paris Agreement commits the Commonwealth to "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change".

Additional considerations: best available science

311 Devising an appropriate response to avoid the risks of climate change requires an understanding of multiple scientific disciplines and technical expertise. The standard of care to which the Commonwealth is to be held should therefore be ascertained with reference to the application of an appropriate quality of scientific expertise. As Brennan and Dawson JJ observed in *Papatonakis v Australian Telecommunications Commission*,⁶⁹¹ a reasonably prudent defendant:

...does not merely rely on his judgment and skill in a situation where technical expertise which he does not possess is required. He should obtain and follow proper technical advice or employ a qualified person to perform repairs requiring expert skill. If he meddles himself, he cannot complain if the standards of care and foreseeability of injury which the law exacts of him are not those of the hypothetical person on a hypothetical Bondi tram or Clapham omnibus but those of the "ordinary skilled (person) exercising and professing to have that special skill."

(citations omitted)

- 312 The Court should therefore factor into its 'calculus' the quality of the scientific knowledge on which the reasonable state in the Commonwealth's position would have formulated a response to the foreseeable risk. The Applicants submit that, the while a range of reasonable responses were and are available to the Commonwealth, the ordinary informed state would utilise the best available science in formulating its response. That the best available science should guide the standard of care is derived logically from:
 - 312.1 The availability to a person in the position of the Commonwealth of:
 - (a) comprehensive, rigorously reviewed, and near-universally approved reports of the IPCC on the most up-to-date peer-reviewed scientific literature on climate change, including assessments of the degree of agreement on critical scientific issues; and
 - (b) the further sources of best available science contained in reports of the WMO, UNEP, CSIRO, BOM and CCA.
 - 312.2 The foundation of the best available science (contained in IPCC reports) in the international consensus on responding to climate change.

⁶⁹¹ APP.0001.0020.0119 [1985] HCA 3; 156 CLR 7, 36 (Deane J).

The best available science

- 313 In 1988, the WMO and the UNEP set up the IPCC, a scientific intergovernmental body open to all members of the United Nations.⁶⁹² The IPCC studies and assesses the most recent scientific, technical, and socio-economic information relevant to the understanding of climate change. The IPCC's work is produced by dedicated working groups in reports drafted by a team of authors from member countries. Reports are peer reviewed by experts, and government representatives from member countries approve line-by-line the Summary for Policymakers that accompanies each report, which distils the main findings of the underlying report.⁶⁹³
- 314 The evidence before the Court is that:

The very best of the 'best available science' in the context of climate change is provided by the comprehensive and lengthy Assessment Reports of the IPCC ... The four volumes of the IPCC Assessment Reports comprise its synthesis report and the reports of its three Working Groups, each of which have different emphases: (1) the Physical Science Basis of Climate Change, (2) Climate Change Impacts, Adaptation and Vulnerability and (3) Mitigation of Climate Change.⁶⁹⁴

- 315 As set out above at [307.1]-[307.3] the best available science from the IPCC, CSIRO and BOM includes information on the current and projected impacts of climate change in the Torres Strait, the risk, scope, severity of these impacts, and the global temperature increase necessary to prevent or minimise the most dangerous of them.
- 316 Further, as set out above at [307.1]-[307.3], the IPCC, UNEP and CCA contain comprehensive information about global and domestic CO₂ budgets, including methodologies to identify a target reflecting the global temperature limit above.
- 317 The Commonwealth knew of the assessment of the extent of scientific consensus in relation to the risks and projected impacts of climate change, including the risks and impacts of climate change for small and low-lying islands, and the assessments of the various emissions pathways published in the following best available science reports:

⁶⁹² CRT.2000.0003.0001 Defence [14].

⁶⁹³ APP.0001.0015.0003 3FASOC [15], CRT.2000.0003.0001 Defence [15]. See also TRN.0010.0920 9 November 2023, Professor Karoly, T956:5-17.

⁶⁹⁴ APP.0001.0003.0093 Professor Karoly report [8].

- 317.1 IPCC Fifth Assessment Report, the IPCC Special Report on the Ocean, the IPCC Special Report on 1.5 °C and the IPCC Sixth Assessment Report;⁶⁹⁵
- 317.2CCA, Reducing Australia's Greenhouse Gas Emissions Targets and Progress Review: Final Report 2014;⁶⁹⁶
- 317.3 UNEP Emissions Gap Report 2020;697 and
- 317.4 WMO State of the Global Climate in 2020.698

on or around the date of their publication. Again, it is assumed the Respondent was similarly aware of previous reports from these sources at the time of their publication.

318 The evidence from the two fact witnesses called by the Commonwealth in relation to the setting of its emissions reduction targets, Kelly Pearce and Julia Gardiner, also made clear that the Commonwealth was aware of the best available science.⁶⁹⁹

<u>Best available science to identify global temperature increase to prevent dangerous impacts</u> <u>of climate change in the Torres Strait</u>

- 319 The Applicants submit that the following best available science informs the standard of care steps at paragraph 82(a)-(c) of their pleading.
- 320 The best available science on the current and projected impacts of climate change in the Torres Strait and their risk, scope and severity was as reported in the 'State of the Climate' reports of Commonwealth agencies BOM and CSIRO (see above at [228]).
- 321 From as early as 2007, it was already well understood that low-lying islands were particularly vulnerable to the impacts of climate change,⁷⁰⁰ and sea level rise was projected to increase around the small islands of the Pacific.⁷⁰¹ In its AR4 WG2 report, the IPCC represented the increasing risks to ecosystems in Figure 4.4, noting an increase

⁶⁹⁵ CRT.2000.0003.0001 Defence [77(b)(iii), (vi), (vii), (xi)]; APP.0001.0004.0013; APP.0001.0007.0116; APP.0001.0007.0112; APP.0001.0007.0118; APP.0001.0007.0113; EVI.2002.0004.2977.

⁶⁹⁶ CRT.2000.0003.0001 Defence [77(b)(ii)]; APP.0001.0004.0015.

⁶⁹⁷ CRT.2000.0003.0001 Defence [77(b)(viii)]; APP.0001.0007.0174.

⁶⁹⁸ CRT.2000.0003.0001 Defence [77(b)(ix)]; APP.0001.0003.0012.

⁶⁹⁹ See TRN.0018.1455 22 November 2023, Kelly Pearce, T1467:30-1468:46; TRN.0016.1342 20 November 2023, Julia Gardiner, T1349:33-1350:4.

⁷⁰⁰ APP.0001.0019.0010 AR4 WG2, Ch 16, 689 [_0699].

⁷⁰¹ APP.0001.0019.0011 AR4 WG1, Ch11, p 909 [0919] 11.9.



of 1.5°C would see all corals reefs bleached and 9-31% of species committed to extinction.⁷⁰²

⁷⁰² APP.0001.0019.0010 AR4 WG2, Ch 4, 240 [_0250], Figure 4.4.

- 322 From at least 2014, the best available science as reported by the IPCC has been that the maximum limit on global temperature increase necessary to avoid the worst impacts of climate change on small and low lying islands is 1.5°C.
 - 322.1 In 2014, the IPCC found in its AR5 reports:
 - (a) There was medium confidence that risks relating to extreme weather events, including coastal flooding and heatwaves, are high at a global temperature increase of approximately 1.85°C. There was high confidence that these risks increase further at higher temperatures.⁷⁰³
 - (b) Even with adaptation measures, warming at 2°C would lead to risks to coastal infrastructure and low-lying ecosystems significantly higher risks than at 1.5°C.⁷⁰⁴
 - (c) Risks to coral reef systems in Australia were "medium" to "high" in the near term at 1.5°C and approaching "very high" at 2°C.⁷⁰⁵
 - (d) The impacts of climate change involving risks to unique and threatened systems and risks associated with extreme weather events – like those in the Torres Strait – were moderate to high at temperatures 1°C to 2°C above preindustrial levels.⁷⁰⁶
 - (e) Risks of tipping points 'increase at a steepening rate under an additional warming of 1 to 2°C and become high above 3°C, due to the potential for large and irreversible sea level rise from ice sheet loss.'⁷⁰⁷
 - 322.2 In 2018, the global temperature limit of 1.5 to avoid the worst impacts of climate change on small and low lying islands was made even clearer by the IPCC's Special Report on 1.5°C, which found:

APP.0001.0004.0005 AR5 WG2 Part A, Summary for Policymakers, 12, Box SPM,1. See also AR5 Synthesis Report, Summary for Policymakers, 2 [_0017], 1.1: 'The globally averaged combined land and ocean surface temperature data as calculated by a linear trend show a warming of 0.85 [0.65 to 1.06] °C 2 over the period 1880 to 2012'.
 APP.0001.0004.0006 AP5 WG2 Part P. Ch 25, 1411 Table 25, 8

APP.0001.0004.0006 AR5 WG2 Part B, Ch 25, 1411, Table 25-8.

⁷⁰⁵ APP.0001.0004.0006 AR5 WG2 Part B, Ch 25, 1411, Table 25-8.

⁷⁰⁶ APP.0001.0007.0115 IPCC, 2014, AR5 Synthesis Report, 19.

⁷⁰⁷ APP.0001.0007.0115 IPCC, 2014, AR5 Synthesis Report, 72, Box 2.4.

- (a) The change in risk when moving from 1.5°C to 2°C was particularly high for small islands,⁷⁰⁸ which are very sensitive to coastal climate change and other stressors such as oceanic warming, sea level rise, (resulting in salinisation, flooding and erosion), cyclones and mass coral bleaching and mortality.⁷⁰⁹
- (b) There was high confidence that 'impacts associated with sea level rise and changes to the salinity of coastal groundwater, increased flooding and damage to infrastructure, are projected to be critically important in vulnerable environments, such as small islands, low-lying coasts and deltas, at global warming of 1.5°C and 2°C'.⁷¹⁰
- (c) Small islands were projected with high confidence to experience 'multiple inter-related risks at 1.5°C of global warming that will increase with warming of 2°C and higher levels', with climate hazards at 1.5°C projected to be lower than at 2°C. There was high confidence of increased long-term risks of coastal flooding and impacts on populations, infrastructures and assets, and risks across marine ecosystems at 1.5°C.⁷¹¹
- (d) 'Even at 1.5°C of global warming, the compounding impacts of changes in rainfall, temperature, tropical cyclones and sea level are likely to be significant across multiple natural and human systems', with potential benefits to small islands from avoided risks at 1.5°C versus 2°C.⁷¹²
- (e) There was medium confidence of higher risks to marine systems and associated livelihoods at 2°C compared to 1.5° C. At 1.5° C, approximately 70–90% of global coral reefs are projected to be at risk of long-term degradation due to coral bleaching, with these values increasing to 99% at 2° C.⁷¹³
- 322.3 The IPCC released its Special Report on the Ocean and Cryosphere in a Changing Climate in 2020. It outlined risks posed by sea level rise and associated impacts, reiterating a 1.5°C global temperature limit for small and low-lying islands. For

⁷⁰⁸ APP.0001.0007.0116 IPCC, 2018: Global Warming of 1.5°C (2018), 246, Table 3.5.

⁷⁰⁹ APP.0001.0007.0116 IPCC, 2018: Global Warming of 1.5°C (2018), 232.

⁷¹⁰ APP.0001.0007.0116 IPCC, 2018: Global Warming of 1.5°C (2018) 181.

⁷¹¹ APP.0001.0007.0116 IPCC, 2018: Global Warming of 1.5°C (2018),181.

⁷¹² APP.0001.0007.0116 IPCC, 2018: Global Warming of 1.5°C (2018), 260.

⁷¹³ APP.0001.0007.0116 IPCC, 2018: Global Warming of 1.5°C (2018), 246, Table 3.5.

example, it found with high confidence that almost all warm-water coral reefs were projected to suffer significant losses of area and local extinctions at 1.5°C. There was high confidence that species composition and diversity of remaining reef communities is projected to differ from present-day reefs.⁷¹⁴

- 322.4 Between August 2021 and March 2023, the IPCC released its AR6 reports, further reinforcing the conclusion that the global temperature limit to avoid the worst impacts of climate change on small and low lying islands was 1.5°C. It found:
 - (a) 'The reduced habitability of small islands is an overarching significant risk caused by a combination of several key risks facing most small islands even under a global temperature scenario of 1.5°C (high confidence). These are loss of marine and coastal biodiversity and ecosystem services; submergence of reef islands; loss of terrestrial biodiversity and ecosystem services; water insecurity; destruction of settlements and infrastructure; degradation of health and well-being; economic decline and livelihood failure); and loss of cultural resources and heritage. Climate-related ocean changes, including those for slow-onset events, and changes in extreme events are projected to cause and/or amplify Keys Risks in most small islands."⁷¹⁵
 - (b) Above 1.5°C of global warming, limited freshwater resources posed potential hard adaptation limits for small islands.⁷¹⁶
 - (c) In terrestrial ecosystems, 3 to 14% of the tens of thousands of species assessed would likely face a very high risk of extinction at 1.5°C. There was high confidence that coral reefs were projected to decline by a further 70–90% at 1.5°C.⁷¹⁷
 - (d) The risk of exceeding critical thresholds (tipping points) is much lower in a world where global temperature increase is less than 1.5°C.⁷¹⁸

APP.0001.0004.0013 IPCC, Special Report on the Ocean and Cryosphere in a Changing Climate, [.0034].

⁷¹⁵ APP.0001.0007.0118 2022, IPCC, AR6, WG2, Ch 15, 2046.

⁷¹⁶ EVI.2002.0004.2977 IPCC, 2023, AR6 Synthesis Report Summary for Policymakers, 19[.3011].

⁷¹⁷ EVI.2002.0004.2977 IPCC, 2023, AR6 Synthesis Report Summary for Policymakers, 71 [.3063].

APP.0001.0007.0112 IPCC, AR6, WG1, Summary for Policymakers, 4.

323 The findings of IPCC were considered by the Belgian Court of Appeal in the recent decision of *VZW Klimaatzaak v Kingdom of Belgium & Others (Klimaatzaak Appeal*),⁷¹⁹ which considered a global temperature increase generally (not low-lying islands specifically). It was noted that "each new IPCC report showed that the situation was worsening more significantly and more rapidly than expected" and that by 2018 at the latest, it was apparent that global warming should be limited to 1.5°C.⁷²⁰

<u>Best available science to identify and implement target consistent with global temperature</u> <u>increase to prevent dangerous impacts of climate change in the Torres Strait</u>

- 324 The Applicants submit that the following best available science informs the standard of care steps at paragraph 82(d) and (f) of their pleading.
- 325 From at least 2014, the best available science on the ability to calculate and distribute CO₂ budgets has been reported by the IPCC (as set out above at [120]) and the CCA.
- 326 In 2014, the CCA released "*Reducing Australia's GHG emissions Targets and Progress Review – Final Report*".⁷²¹ It considered and canvassed different targets, but ultimately recommended setting a target of between 40 and 60 per cent below 2000 levels by 2030 (and a national emissions budget for 2013-2050 of 10,100 MtCO2e).⁷²² The report noted that global GHG emissions need to be reduced substantially in order to keep global temperature increase well below 2°C, and that a significant proportion of the global budget calculated for 2000-2050 had been used already.⁷²³
- 327 The Applicants have put forward further evidence as to various methods by which a national GHG emissions target can be formulated consistent with the global temperature limit: equal per capita, historical responsibility, and grandfathering. Professor Meinshausen notes that grandfathering does not include considerations of equity.⁷²⁴
- 328 A reasonable actor in the Commonwealth's position, having regard to the probability and magnitude of the risks of climate change, would have adopted one of the accepted

⁷¹⁹ APP.0001.0020.0175 VZW Klimaatzaak v Kingdom of Belgium & others (2023),

⁷²⁰ APP.0001.0020.0175 VZW Klimaatzaak v Kingdom of Belgium & others (2023), [203].

APP.0001.0004.0015 Reducing Australia's Greenhouse Gas Emissions — Targets and Progress Review (2014).
 APP.0001.0004.0015 Reducing Australia's Greenhouse Gas Emissions — Targets and Progress Review (2014),

APP.0001.0004.0015 Reducing Australia's Greenhouse Gas Emissions — Targets and Progress Review (2014), [_0011].

⁷²³ APP.0001.0004.0015 Reducing Australia's Greenhouse Gas Emissions — Targets and Progress Review (2014), [_0011].

⁷²⁴ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [57].

methodologies for allocation of remaining cumulative GHG emissions. At an absolute minimum, a reasonable actor in the Commonwealth's position would have used some method for ascertaining a national budget consistent with the global temperature limit and in accordance with the best available science. The evidence of Professor Meinshausen is evidence that this could have been done – and that the CCA provided one such calculation based upon the grandfathering methodology most favourable to Australia.

329 Understood in this way, the standard of care posited by the Applicants does not require the Court to examine matters of 'high policy', such as to constitute an unacceptable intrusion upon executive decision-making. The standard of care retains for the Commonwealth an area within which it might make a choice, based upon public interest and policy considerations, as to how best to identify a national GHG emissions target. What is required — what a reasonable person in the Commonwealth's position would do — is the broader step of identifying a target that reflects the best available science on the global temperature limit.

Best available science as the basis for international consensus in responding to climate change

- 330 The standard of knowledge to be utilised by the reasonable state in formulating its response to the dangers posed by climate change the best available science above is reflected in the international consensus reached by way of the UNFCCC and Paris Agreement.
- 331 The Commonwealth knew of the assessment of the extent of scientific consensus in relation to the risks and projected impacts of climate change, including the risks and impacts of climate change for small and low-lying islands, and the assessments of the various emissions pathways published in the following:

331.1 UNFCCC;⁷²⁵

331.2 UNFCCC Report on the Structured Expert Dialogue on the 2013-2015 Review; 726

⁷²⁵ CRT.2000.0003.0001 Defence [77(b)(i)]; APP.0001.0003.0016.

⁷²⁶ CRT.2000.0003.0001 Defence [77(b)(iv)]; APP.0001.0007.0173.

331.3 Paris Agreement.⁷²⁷

- 332 In circumstances where almost all states in the world including Australia have committed to the UNFCCC and Paris Agreement in order to address climate change, the standards set out in those instruments must reflect the minimum standard expected of the reasonable state in its response to the dangers posed by climate change. It is instructive that Australia as a party to both the UNFCCC and Paris Agreement has itself committed to the duties set out therein and must therefore be taken to accept the reasonableness of the standard articulated in these instruments against which fulfilment of those duties is to be measured. As set out below, the relevant standard articulated in these instruments is the 'best available science'.
- 333 The UNFCCC was adopted in 1992 and entered into force in Australia on 21 March 1994.⁷²⁸ Article 2 defines its ultimate objective as achieving stabilization of GHG concentrations in the atmosphere "at a level that would prevent dangerous anthropogenic interference with the climate system".⁷²⁹ Australia is an Annex I party to the UNFCCC, which commits the Commonwealth and other similar developed countries to limit their GHG emissions, calculated in accordance with the best available science, as specified in Art 4(2):

The developed country Parties and other **Parties included in Annex I commit** themselves **specifically** as provided for in the following:

- (a) Each of these Parties shall adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs. ...
- (b) In order to promote progress to this end, each of these Parties shall communicate, ... detailed information on its policies and measures referred to in subparagraph (a) above, as well as on its resulting projected anthropogenic emissions ... of greenhouse gases ...
- (c) Calculations of emissions ... of greenhouse gases for the purposes of subparagraph (b) above should **take into account the best available scientific knowledge**....

[Emphasis added]

334 From as early as 2010 at COP16 in Cancun, the parties to the UNFCCC noted the need to consider 'strengthening the long-term global goal on the basis of the best available

⁷²⁷ CRT.2000.0003.0001 Defence [77(b)(v)]; APP.0001.0006.0017.

⁷²⁸ APP.0001.0015.0003 3FASOC [32]; CRT.2000.0003.0001 Defence [32].

⁷²⁹ APP.0001.0003.0016.

scientific knowledge, including in relation to a global average temperature rise of 1.5° C.⁷³⁰ The parties decided to periodically review the adequacy of the long-term global goal of 2° C.⁷³¹

- 335 In 2012, at COP18 in Doha, the UNFCCC parties resolved to undertake a review to consider strengthening the long-term global temperature limit goal of below 2°C above pre-industrial levels on the basis of the best available scientific knowledge, including in relation to a global average temperature rise of 1.5 °C.⁷³² The Parties resolved to engage in a "structured expert dialogue," which "should be conducted in a transparent manner and with the full participation of Parties."⁷³³ As such, Australia would have been involved as part of the review and would have been aware of the scientific information being presented by the relevant experts.
- 336 On 4 May 2015, the UNFCCC published the Report on the Structured Expert Dialogue on the 2013-2015 Review.⁷³⁴ It found, confirming the best available science above, that a maximum global temperature increase of 1.5°C posed less severe projected impacts of climate change in low-lying islands such as the Torres Strait Islands compared to greater maximum global temperatures:

Experts emphasized the high likelihood of meaningful differences between $1.5 \,^{\circ}$ C and 2° C of warming regarding the level of risk from ocean acidification and of extreme events or tipping points, because impacts are already occurring at the current levels of warming; risks will increase with further temperature rise. In particular, experts from the IPCC ... indicated that the difference in projected risks between $1.5 \,^{\circ}$ C and $2 \,^{\circ}$ C of warming is significant for highly temperature-sensitive systems, such as the polar regions, high mountains and the tropics, as well as for some other regions, **in particular low-lying coastal regions**."⁷³⁵

337 Regarding the best available science on identifying carbon budgets consistent with certain global temperature increases, the report stated:

In terms of reducing global GHG emissions in order to limit global warming, the IPCC showed that the cumulative amount of total anthropogenic CO2 the world can emit is limited. There is an approximately linear relationship between cumulative total anthropogenic CO2 emissions and the global average temperature rise. Therefore, limiting global warming implies a maximum amount of cumulative CO2 emissions. This means

⁷³⁴ APP.0001.0013.0010.

⁷³⁰ APP.0001.0013.0005 Decision 1/CP.16 (Cancun Agreements), [4].

⁷³¹ APP.0001.0013.0005 Decision 1/CP.16 (Cancun Agreements), [138].

⁷³² UNFCCC Decision 1/CP.18, [85] accessible at: <u>https://unfccc.int/resource/docs/2012/cop18/eng/08a01.pdf#page=3</u>.

⁷³³ UNFCCC Decision 1/CP.18, [88] accessible at: <u>https://unfccc.int/resource/docs/2012/cop18/eng/08a01.pdf#page=3</u>.

⁷³⁵ APP.0001.0013.0010, 31 (emphasis added).

that halting the global average temperature rise at any level will require net zero global CO2 emissions at some point in the future. Furthermore, because of the cumulative budget constraint, higher global emissions in the near term would require lower global emissions in the long term, and, in case of overshooting, the use of CO2 removal technologies.⁷³⁶

338 Further, the UNFCCC noted the importance of factoring in regional impacts (such as low-lying islands) when setting targets to based on a certain global temperature increase:

Assessing the adequacy of the long-term global goal implies risk assessments and value judgments not only at the global level, but also at the regional and local levels. The global climate determines regionally experienced risks. While global assessments of climate risks inform global policy choices and global risk management, they should be complemented by regional and local perspectives. A key element of these perspectives is the value judgment of when the scale (e.g. frequency and severity) of climate impacts results in a transition from 'acceptable' to 'unacceptable'. This leads to a greater appreciation of the role played by all decision makers, including subnational authorities and cities.⁷³⁷

339 Following the release of the Structured Expert Dialogue Review, at COP21 in Paris parties to the UNFCCC resolved to invite the IPCC to report on the impacts of 1.5°C:

Emphasizing with serious concern the urgent need to address the significant gap between the aggregate effect of Parties' mitigation pledges in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with holding the increase in the global average temperature to well below 2 °C above preindustrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above preindustrial levels [...]^{*738}

- 340 The Paris Agreement was negotiated in 2015. It entered into force in Australia on
 9 December 2016.⁷³⁹ The Commonwealth appears to accept that Australia is bound by
 the Paris Agreement.⁷⁴⁰
- 341 The Paris Agreement "aims to strengthen the global response to the threat of climate change".⁷⁴¹ The means of achieving that aim are to limit the increase in global average temperature, increase adaptation measures, and make finance flows consistent with a pathway to low GHG and climate-resilient development.⁷⁴²As at February 2024, 198 states have committed to the Paris Agreement.⁷⁴³ In so doing, almost all states in the

⁷³⁶ APP.0001.0013.0010, 8.

⁷³⁷ APP.0001.0013.0010, 13.

⁷³⁸ APP.0001.0013.0008 UNFCCC Decision 1/CP.21, 2.

⁷³⁹ APP.0001.0015.0003 3FASOC [37], CRT.2000.0003.0001 Defence [37].

⁷⁴⁰ TRN.0016.1342 20 November 2023, Julia Gardiner T1359:26-27.

⁷⁴¹ APP.0001.0006.0017 Paris Agreement, art 2.

⁷⁴² APP.0001.0006.0017 Paris Agreement, art 2(1).

⁷⁴³ Parties to the United Nations Framework Convention on Climate Change, available at <u>https://unfccc.int/process/parties-non-party-stakeholders/parties-convention-and-observer-states</u>, accessed 17 February 2024.

world have agreed that limiting global average temperature increases by way of GHG emission reductions should be undertaken in accordance with the best available science:

The Parties to this Agreement ... Recognizing the need for an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge, ... Have agreed as follows: ⁷⁴⁴

Article 4

1. In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter **in accordance with best available science**, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.

[Emphasis added]

342 The Paris Agreement also reflects universal consensus that adaptation measures to be implemented by the reasonable state are to be based on the best available science:

<u>Art 7(5)</u>: Parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be **based on and guided by the best available science** and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate.

[Emphasis added]

- 343 Assessing progress under the Paris Agreement is to take place "in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support, and **in light of equity and the best available science**" (emphasis added).⁷⁴⁵
- 344 More recently, in 2021 at COP26, the parties to the UNFCCC adopted the Glasgow Climate Pact, which endorsed the findings of the IPCC SR1.5 in respect of the emissions reductions needed to reflect a global temperature limit of 1.5°C. The parties resolved to limit global temperature increase to 1.5°C, acknowledging that it will have lower impacts globally than at 2°C.⁷⁴⁶
- 345 In summary, therefore, in light of:

⁷⁴⁴ APP.0001.0006.0017 Paris Agreement, preamble.

⁷⁴⁵ APP.0001.0006.0017 Paris Agreement, art 14(1).

⁷⁴⁶ UNFCCC Decision -/CP.26 accessible at: <u>https://unfccc.int/sites/default/files/resource/cop26_auv_2f_cover_decision.pdf</u>.

- 345.1 the best available science going to a global temperature limit of 1.5°C to avoid the worst harm to Torres Strait Islanders and the accepted methodologies for calculating and distributing carbon budgets; and
- 345.2 and the corresponding internationally agreed standards set out in the UNFCCC and Paris Agreement,

the best available science is a relevant factor against which the standard of care is to be assessed.

The reasonable response

- 346 Considering the above, the Applicants submit that the response of a reasonable person in the position of the Commonwealth was and is to take reasonable steps to ensure that, having regard to the best available science, it:⁷⁴⁷
 - a) Identified the Current and Projected Impacts of Climate Change in the Torres Strait Islands;
 - b) Identified the risk, scope and severity of the Current and Projected Impacts of Climate Change in the Torres Strait Islands;
 - c) Identified the Global Temperature Limit necessary to prevent or minimise many of the most dangerous Current and Projected Impacts of Climate Change to small and low lying islands, such as the Torres Strait Islands;
 - d) Identified a Best Available Science Target reflecting the Global Temperature Limit identified at sub-paragraph (c) above to prevent or minimise the Current and Projected Impacts of Climate Change in the Torres Strait Islands; and
 - f) Implemented such measures as are necessary to reduce Australia's GHG emissions consistent with the Best Available Science Target identified at sub-paragraph (d) above.
- 347 The standard of care is appropriate having regard to the 'contextual and balanced assessment of the reasonable response'⁷⁴⁸ to the foreseeable risk of harm to Torres Strait Islanders if care were not taken by the Commonwealth. This requires consideration of not only the factors the Court must have regard to as set out above, but also any objectively agreed standards of reasonableness available in the circumstances.

⁷⁴⁷ APP.0001.0015.0003 3FASOC [82]. Note the jump from subparagraphs (d) to (f) is deliberate and reflects amendments to the pleading.

⁷⁴⁸ APP.0001.0020.0139 *Roads and Traffic Authority (NSW) v Dederer* [2007] HCA 42; (2007) 234 CLR 330, [69] (Gummow J).

Justiciability

348 It is sometimes said that there are some governmental actions or failures to act to which it is difficult to apply the notion of "taking reasonable care". As has been explained above in the duty discussion at [268], the concept of justiciability in tort is best dealt with at the breach stage. That is primarily because a single duty of care may be breached in a number of ways, some which raise justiciability concerns and others which do not. Before exploring those issues, it is necessary to define what is meant when a subject matter is said to be non-justiciable, and then to explain how the law's concerns on this front are appropriately accommodated at the breach stage.

Origins of justiciability

- 349 Justiciability is 'a slippery term of indeterminate reference',⁷⁴⁹ and one that is capable of obscuring as much as it reveals. Gummow and McHugh JJ have explained that the term 'non-justiciable' 'and its cognates have been used to describe controversies within or concerning the operations of one of the other branches of government which cannot be resolved by the exercise of the judicial power.'⁷⁵⁰ Relatedly, a dispute is said to be non-justiciable where it entails political questions more suited to the legislative or executive branch of government.
- 350 As Gummow J explained in *Attorney-General (Cth) v Alinta Ltd*: 'It needs to be emphasised that matters of policy may enter permissibly (and necessarily) into the exercise of judicial power in various ways'.⁷⁵¹ As long ago as 1898, one of the framers of the Constitution had said to similar effect: 'that the mere fact of a question of policy may be involved need not deter us from leaving to that court the determination'.⁷⁵²
- 351 The 'political questions' doctrine started its life in the United States. In *Baker v Carr*,⁷⁵³ the United States Supreme Court identified the following six considerations⁷⁵⁴ as bearing upon whether a dispute raised a political question inappropriate for judicial resolution:

a textually demonstrable constitutional commitment of the issue to a coordinate political department; or a lack of judicially discoverable and manageable standards for resolving it;

⁷⁴⁹ APP.0001.0020.0168 *Thomas v Mowbray* (2007) 233 CLR 307, [105] (Gummow and Crennan JJ).

⁷⁵⁰ APP.0001.0020.0025 Brodie v Singleton Shire Council (2001) 206 CLR 512, [92] (McHugh and Gummow JJ).

⁷⁵¹ APP.0001.0020.0012 Attorney-General (Cth) v Alinta Ltd [2008] HCA 2; 233 CLR 542, [14] (Gummow J).

⁷⁵² Convention Debates, vol IV, Melbourne 1898, 639 (Deakin).

⁷⁵³ APP.0001.0020.0017 *Baker v Carr* 369 US 186 (1962).

⁷⁵⁴ The considerations have since helpfully been grouped under the three ideas of jurisdiction, competence and prudence. See APP.0001.0020.0195 *Zivotofsky v Clinton* 566 US 189 (2012) (Sotomayor J).

or the impossibility of deciding without an initial policy determination of a kind clearly for non-judicial discretion; or the impossibility of a court's undertaking independent resolution without expressing lack of respect due coordinate branches of government; or an unusual need for unquestioning adherence to a political decision already made; or the potentiality of embarrassment from multifarious pronouncements by various departments on one question.⁷⁵⁵

352 The Court in *Baker* found the case before it to be justiciable, and very few⁷⁵⁶ subsequent decisions have held a matter to be non-justiciable on the basis of the political questions doctrine.⁷⁵⁷

Justiciability in the Australian courts

- 353 The political questions doctrine has not been widely accepted in Australia,⁷⁵⁸ although some of the factors from *Baker* do have echoes in Australian judgments. For example, in *South Australia v The Commonwealth*,⁷⁵⁹ South Australia sought orders to force the Commonwealth to perform an intergovernmental agreement to develop railway lines. While the High Court's dismissal of South Australia's claim is capable of being explained in orthodox contract terms,⁷⁶⁰ it has been cited in the tort context and elsewhere as providing an example of non-justiciable subject matter.⁷⁶¹ Certainly members of the High Court used language redolent of non-justiciability, writing that the purported agreement was 'political in character' and thus entailed duties of 'imperfect obligation' that were 'therefore not enforceable by processes of law'.⁷⁶²
- 354 The second *Baker* consideration can be seen in the High Court's decision in *Precision* Data Holdings Ltd v Wills, ⁷⁶³ where the Court said:

... if the ultimate decision may be determined not merely by the application of legal principles to ascertained facts but by considerations of policy also, then the determination

⁷⁵⁵ APP.0001.0020.0017 *Baker v Carr* 369 US 186 (1962) at 217 (Brennan J, for the Court).

 ⁷⁵⁶ See, eg, APP.0001.0020.0064 Gilligan v Morgan 413 US 1 (1973); APP.0001.0020.0115 Nixon v United States 506 US 224 (1993).

 ⁷⁵⁷ See generally APP.0001.0022.0016 Rachel Barkow, 'More Supreme Than Court? The Fall of the Political Question Doctrine and the Rise of Judicial Supremacy' (2002) 102 Columbia Law Review 237.

APP.0001.0020.0017 Baker v Carr 369 US 186 (1962) was applied by McTiernan J (in dissent) in APP.0001.0020.0179 Victoria v Commonwealth (PMA Case) (1975) 134 CLR 81, 138 and by Brennan J in APP.0001.0020.0061 Gerhardy v Brown (1985) 159 CLR 70, 138. For doubts about the political question doctrine see APP.0001.0020.0066 Habib v Commonwealth (2010) 183 FCR 62, [31] (Perram J).

⁷⁵⁹ APP.0001.0020.0155 South Australia v The Commonwealth (1962) 108 CLR 130.

⁷⁶⁰ APP.0001.0022.0011 Jeremy Kirk, 'Justiciability' in Cheryl Saunders and Adrienne Stone, *The Oxford Handbook of the Australian Constitution* (Oxford University Press, 2018) 510, 524.

⁷⁶¹ See APP.0001.0020.0131 Pyrenees Shire Council v Day [1998] HCA 3; (1998) 192 CLR 330, [182] (Gummow J); APP.0001.0020.0025 Brodie v Singleton Shire Council (2001) 206 CLR 512, [92] (McHugh and Gummow JJ); APP.0001.0020.0168 Thomas v Mowbray (2007) 233 CLR 307, [106] (Gummow and Crennan JJ).

⁷⁶² APP.0001.0020.0155 South Australia v The Commonwealth (1962) 108 CLR 130, 154 (Windeyer J), see also 141 (Dixon CJ), 148–9 (McTiernan J).

⁷⁶³ APP.0001.0020.0130 Precision Data Holdings Ltd v Wills (1991) 173 CLR 167.
does not proceed from an exercise of judicial power. That is not to suggest that considerations of policy do not play a role, sometimes a decisive role, in the shaping of legal principles.⁷⁶⁴

355 Considerations of policy can have a 'decisive role' in 'the shaping of legal principles'.⁷⁶⁵ It is thus no longer true, if it ever was, that '[t]he courts have nothing to do with policy'.⁷⁶⁶ Rather, questions of policy can and do regularly intrude into the judicial sphere⁷⁶⁷ – the question is how best the Court can deal with those matters.

Policy/operation distinction

356 It has been suggested that one way of accommodating justiciability concerns (whether at the duty or breach stage) is in the application of the policy/operational distinction. That suggestion was first made in the United Kingdom,⁷⁶⁸ although has since been rejected there,⁷⁶⁹ as it has in Canada⁷⁷⁰ and the United States.⁷⁷¹ The distinction has previously attracted support in Australia. In *Sutherland Shire Council v Heyman*,⁷⁷² Mason J stated:

The standard of negligence applied by the courts in determining whether a duty of care has been breached cannot be applied to a policy decision, but it can be applied to operational decisions. Accordingly, it is possible that a duty of care may exist in relation to discretionary considerations which stand outside the policy category in the division between policy factors on the one hand and operational factors on the other. ... ⁷⁷³

The distinction between policy and operational factors is not easy to formulate, but the dividing line between them will be observed if we recognize that a public authority is under no duty of care in relation to decisions which involve or are dictated by financial, economic, social or political factors or constraints. Thus budgetary allocations and the constraints which they entail in terms of allocation of resources cannot be made the subject of a duty of care. But **it may be otherwise when the courts are called upon to apply a standard of care to action or inaction that is merely the product of administrative direction, expert or professional opinion, technical standards or general standards of reasonableness.**

[Emphasis added]

APP.0001.0020.0130 Precision Data Holdings Ltd v Wills (1991) 173 CLR 167, 189 (the Court, citations omitted).

⁷⁶⁵ APP.0001.0020.0130 Precision Data Holdings Ltd v Wills (1991) 173 CLR 167, 189 (the Court, citations omitted).

APP.0001.0020.0015 Australian Communist Party v The Commonwealth (1951) 83 CLR 1, 277 (Kitto J).
 See generally APP 0001 0022 0006 Geoffrey Lindell 'The Instigrability of Political Questions: Recent

See, generally, APP.0001.0022.0006 Geoffrey Lindell, 'The Justiciability of Political Questions: Recent Developments', in HP Lee and George Winterton (eds), *Australian Constitutional Perspectives* (Law Book, 1992), 218.

⁷⁶⁸ APP.0001.0020.0051 East Suffolk Rivers Catchment Board v Kent [1941] AC 74; APP.0001.0020.0010 Anns v Merton London Borough Council [1978] AC 728.

⁷⁶⁹ APP.0001.0020.0159 Stovin v Wise [1996] AC 923; APP.0001.0020.0128 Poole Borough Council v GN & Anor [2019] UKSC 25, [31].

⁷⁷⁰ APP.0001.0020.0078 Just v British Columbia [1989] 2 SCR 1228, 1243–4 (Cory J).

⁷⁷¹ APP.0001.0020.0172 United States v Gaubert 499 US 315 (1991).

⁷⁷² APP.0001.0020.0162 Sutherland Shire Council v Heyman (1985) 157 CLR 424.

⁷⁷³ APP.0001.0020.0162 Sutherland Shire Council v Heyman (1985) 157 CLR 424, 468-469 (Mason J).

- 357 On the policy/operational analysis, the Applicants to contend, as set out at [310] above, that the relevant policy decision in the context of Australia's response to climate change was the decision to become a signatory to, and thereby commit to the standards of, the Paris Agreement. Having made this policy decision, the Commonwealth committed to setting and implementing its GHG emissions targets in a manner that takes into account best available science.⁷⁷⁴ The failures of the Commonwealth to identify and implement GHG emissions reductions targets consistent with that policy decision are the result of failures at an operational level. This position is bolstered by the manner in which the Commonwealth set its GHG emissions reduction targets, as discussed below, involving the appointment of public servants to advise, but in circumstances where those public servants failed to provide advice on what target would be reflective of best available science.
- 358 Accordingly, whether or not the Commonwealth breached the standard of care is a matter available for determination by this Court. A failure to set its GHG emissions target in accordance with best available science was a failure to operationalise the policy decision made by the Commonwealth to become a signatory to the Paris Agreement. Such an act or omission is 'the product of administrative direction, expert or professional opinion, technical standards or general standards of reasonableness',⁷⁷⁵ in respect of which it is open for the Court to find a breach of duty of care.

Preferred approach

- 359 However, the policy/operational distinction has more recently been acknowledged to be an unstable one.⁷⁷⁶ The increasing reluctance of courts to distinguish policy and operational activities reflects the artificiality of such a distinction.
- 360 Rather than relying upon the 'labels'⁷⁷⁷ entailed in the policy/operational distinction, the better approach is to acknowledge that 'budgetary, political and other constraints within

⁷⁷⁴ APP.0001.0006.0017 Paris Agreement, Article 4, 4; See also above at [340]-[343].

⁷⁷⁵ APP.0001.0020.0162 Sutherland Shire Council v Heyman (1985) 157 CLR 424 [469] (Mason J).

APP.0001.0020.0052 Electricity Networks Corporation v Herridge Parties [2022] HCA 37; (2022) 96 ALJR 1106,
 [31] (the Court); APP.0001.0020.0101 Sharma [235] (Allsop CJ), [859] (Wheelahan J).

APP.0001.0020.0101 Minister for the Environment v Sharma [2022] FCAFC 35; (2022) 291 FCR 311, [237] (Allsop CJ). See also Mark Aronson, Government Liability in Negligence' (2008) 32(1) Melbourne University Law Review 44, 56.

which such authorities must operate are factors to be taken into account in determining the scope of the duty of care and whether, in a particular case, it has been breached'.⁷⁷⁸

- 361 This approach can be described as the 'balancing out' of policy considerations in the breach analysis, consistent with the use of that language in the case law endorsing this approach.⁷⁷⁹ This approach accords with the uncontentious recognition that a court considering the standard of care required of a putative tortfeasor will take account of 'the expense, difficulty and inconvenience of taking alleviating action and any other conflicting responsibilities which the defendant may have.'⁷⁸⁰
- 362 Expressed another way, a court considering the question of breach can constrain or
 'limit' the scope of its inquiry. For example, Gleeson CJ observed in *Graham Barclay Oysters Pty Ltd v Ryan*⁷⁸¹ that:

[t]he scope for judicial examination of the reasonableness of governmental spending priorities ... cannot be, at large. ... setting priorities by government for the raising of revenue and the allocation of resources is essentially a political matter, and that, if the reasonableness of such priorities is a justiciable issue, that can be so only within limits.⁷⁸²

[Emphasis added]

363 Accordingly, courts may approach assertions of negligence in the allocation of resources circumspectly, in light of the necessarily finite nature of such resources and the competing demands on government resources. That is not to say, however, that such government activities are immune from tortious liability – the separation of powers is not a one-way street, limiting the judiciary and offering unfettered discretion to the executive and legislative branches. Such an approach acknowledges the respective spheres of competency of the judiciary and the executive, while not eschewing the protective responsibility of courts in developing the law of tort. The jurisprudence recognises that the approach to determining the scope of judicial power is neither one-size fits all nor a rote calculation.

⁷⁷⁸ APP.0001.0020.0205 *Romeo v Conservation Commission of the Northern Territory* [1992] HCA 5; (1992) 192 CLR 431, [138]–[140] (Kirby J).

⁷⁷⁹ APP.0001.0020.0131 *Pyrenees Shire Council v Day* [1998] HCA 3; (1998) 192 CLR 330, [183] (Gummow J).

⁷⁸⁰ APP.0001.0020.0191 *Wyong Shire Council v Shirt* [1980] HCA 12; (1980) 146 CLR 40, 47–8 (Mason J).

⁷⁸¹ APP.0001.0020.0065 (2002) 211 CLR 540.

⁷⁸² APP.0001.0020.0065 (2002) 211 CLR 540, [7] (emphasis added).

- 364 The Applicants submit that this approach, involving limited curial assessment of the reasonableness of political priorities, is preferred.⁷⁸³
- 365 There are significant factual differences distinguishing the current proceeding from *Barclay Oysters*, for example:
 - 365.1 Whereas in *Barclay Oysters* the Court found no actual specific awareness on the part of the public authority of risk of Hepatitis A, here the risk is known by the Commonwealth and has been for some time;⁷⁸⁴
 - 365.2 Whereas in *Barclay Oysters* a remote risk of injury existed, here the risk of harm was virtually certain;⁷⁸⁵
 - 365.3 Whereas in *Barclay Oysters* the alleged duty was directed to the "general public" or "consumers", here the alleged duty goes to a specific and circumscribed group with a special relationship to the Commonwealth;⁷⁸⁶
 - 365.4 Whereas in *Barclay Oysters* the State explicitly legislated the delegation of management of the relevant risk to an industry body, here there is no such delegation;⁷⁸⁷
 - 365.5 Whereas in *Barclay Oysters* the public authorities did not take significant steps to assert relevant control over the specific risk of harm, here the Commonwealth acknowledged and sought to mitigate damage from the harm;⁷⁸⁸
 - 365.6 Whereas in *Barclay Oysters* the harm was limited to a risk of illness to the general public, here the harm is existential to a confined and determinable class, Torres Strait Islanders.⁷⁸⁹

⁷⁸³ It has also been adopted in other areas of the law. See, eg, APP.0001.0020.0061 *Gerhardy v Brown* (1985) 159 CLR 70, 138 (Brennan J, emphasis added): 'When the character of a measure depends on such a political assessment, a municipal court must accept the assessment made by the political branch of government which takes the measure. It is the function of a political branch to make the assessment. It is not the function of a municipal court to decide, and there are no legal criteria available to decide, whether the political assessment is correct. The court can go no further than determining whether the political branch acted reasonably in making its assessment.'

⁷⁸⁴ See above at [279]-[301].

⁷⁸⁵ See above at [279]-[301].

⁷⁸⁶ See above at [180]-[190].

⁷⁸⁷ See above at [254]-[260].

⁷⁸⁸ See above at [236]-[248].

⁷⁸⁹ See above at [249]-[253].

366 McHugh J concluded with regard to control that:

if the authority has used its powers to intervene in a field of activity and increased the risk of harm to persons, it will ordinarily come under a duty of care. So also, if it knows or ought to know that a member of the public relies on it to exercise its power to protect his or her interests, the common law may impose a duty of care on the authority.⁷⁹⁰

- 367 Kirby J, in speaking of the underlying reasoning behind the High Court majority judgment in *Tame v New South Wales* stated, "it is obvious that the 'touchstone' of reasonableness is fundamental to the way in which they determined the existence or otherwise of a duty of care."⁷⁹¹ Ultimately, that reasonableness is the foundation of both negligence and its justiciability.
- 368 Fundamentally, what will be reasonable in, on the one hand, addressing potential risks from oyster farming, and on the other, determining the scope of a state's responsibility in relation to an existential threat to an ancient culture, will be different.

International approaches

- 369 It is instructive to consider how courts in other jurisdictions have addressed the judiciary's role when asked to determine liability in relation to climate change.
- 370 Recently, the Supreme Court of New Zealand recognised the inherent differences in addressing the common law to threats from climate change in its recent judgment in *Smith* v *Fonterra*.⁷⁹² In overturning the strikeout of a public nuisance and negligence claim, the Court explained that:

Climate change was described to us as an existential crisis, and the respondents would have it that its range and diffuse and disparate causes exceed the capacity of the common law for response. The Court of Appeal appeared to share that view. Another assessment, that might arise after the benefit of evidence and a full trial, may be that climate change is different in scale, but a consequence of a continuum of human activities that may or may not remain lawful depending on whether the harm they cause to others is capable of assessment and attribution.⁷⁹³

⁷⁹⁰ APP.0001.0020.0065 Graham Barclay Oysters Pty Ltd v Ryan, (2002) 211 CLR 540 at [81].

⁷⁹¹ APP.0001.0020.0065 Graham Barclay Oysters Pty Ltd v Ryan, (2002) 211 CLR 540 at [244].

⁷⁹² APP.0001.0020.0153 Smith v Fonterra Co-operative Group Limited (2024) NZSC 5.

⁷⁹³ APP.0001.0020.0153 Smith v Fonterra Co-operative Group Limited (2024) NZSC 5 [155].

- 371 In the Netherlands, in the case of *Urgenda*,⁷⁹⁴ the Hague District Court determined that the case was justiciable and that the plaintiff, Urgenda (an NGO) met the relevant legal tests to bring the claim. The Court carefully considered the principle of the separation of powers and determined that, to uphold the rule of law, there are instances where courts must review the actions of the government and parliament, including the present case.⁷⁹⁵
- 372 On appeal, the Dutch Supreme Court also engaged closely with the principle of separation of powers in its judgment. The Court acknowledged that "decision-making on the reduction of greenhouse gas emissions is a power of the government and parliament" and that they have a large degree of discretion in this respect.⁷⁹⁶ The Court found that it would be impermissible for it to issue a ruling creating a specific program, law or mechanisms aimed at achieving GHG emissions reduction.⁷⁹⁷ Nevertheless, the Supreme Court recognised that the judiciary has a role in determining whether the government authorities "have remained within the limits of the law by which they are bound".⁷⁹⁸ The Court emphasised that such review by the courts is a key aspect of a system governed by the rule of law. The Court affirmed the order of the lower courts that the Dutch Government reduce its emissions by at least 25% by 2020 (on 1990 levels) in order do its part to combat dangerous climate change and protect people within its jurisdiction.
- 373 In *Klimaatzaak*,⁷⁹⁹ the First Instance Court of Brussels affirmed that Articles 1382 and 1383 of the Belgian Civil Code (which concern extra-contractual liability) are domestic legal bases for the environmental liability of public authorities. As such, it found that the case was justiciable. The Court also established that the claimants (a not-for-profit organisation) met the relevant legal tests for standing.⁸⁰⁰
- 374 The Brussels Court of Appeal specifically indicated that the principle of the separation of powers does *not* imply that the State would be generally exempt from the obligation

⁷⁹⁴ APP.0001.0020.0174 Urgenda Foundation v The State of The Netherlands (2015) ECLI:NL:RBDHA:2015:7196 (official translation) (District Court).

⁷⁹⁵ APP.0001.0020.0174 Urgenda Foundation v The State of The Netherlands (2015) ECLI:NL:RBDHA:2015:7196 (official translation) (District Court), 4.95, 4.102.

⁷⁹⁶ APP.0001.0020.0174 Urgenda Foundation v The State of The Netherlands (2015) ECLI:NL:RBDHA:2015:7196 (official translation) (District Court), 8.3.2.

⁷⁹⁷ APP.0001.0020.0174 Urgenda Foundation v The State of The Netherlands (2015) ECLI:NL:RBDHA:2015:7196 (official translation) (District Court), 8.2.4.

⁷⁹⁸ APP.0001.0020.0174 Urgenda Foundation v The State of The Netherlands (2015) ECLI:NL:RBDHA:2015:7196 (official translation) (District Court), 8.3.2.

⁷⁹⁹ APP.0001.0020.0176 VZW Klimaatzaak, First Instance Court of Brussels (2021).

APP.0001.0020.0176 VZW Klimaatzaak, First Instance Court of Brussels (2021), section III(B)(1).

to compensate for damage caused to others by its fault, or that of its organs in the exercise of legislative functions:⁸⁰¹

the court does not violate the principle of the separation of powers if it confines itself to respecting the minimum requirements laid down by norms of international law which [...] have direct effect in the case submitted to it or, in the absence of such norms [...] on the basis of data on which there is scientific and political consensus, the minimum requirements.⁸⁰²

375 The above jurisprudence in domestic and international approaches to the role of courts in assessing governmental resources or conflicting responsibilities – as may arise in determining a response to the threat of climate change – lead to the conclusion that the present case is capable of balanced and (where necessary) limited curial assessment.

Breach

- 376 As set out above, the standard of care (reproduced below for convenience) is warranted in light of the mandatory and additional considerations forming the assessment of a reasonable response to a risk. Here, the response of a reasonable person in the position of the Commonwealth was and is to take reasonable steps to ensure that, having regard to the best available science, it:⁸⁰³
 - a) Identified the Current and Projected Impacts of Climate Change in the Torres Strait Islands;
 - b) Identified the risk, scope and severity of the Current and Projected Impacts of Climate Change in the Torres Strait Islands;
 - c) Identified the Global Temperature Limit necessary to prevent or minimise many of the most dangerous Current and Projected Impacts of Climate Change to small and low lying islands, such as the Torres Strait Islands;
 - d) Identified a Best Available Science Target reflecting the Global Temperature Limit identified at sub-paragraph (c) above to prevent or minimise the Current and Projected Impacts of Climate Change in the Torres Strait Islands; and
 - f) Implemented such measures as are necessary to reduce Australia's GHG emissions consistent with the Best Available Science Target identified at sub-paragraph (d) above.
- 377 The above steps comprising the standard of care are necessarily interrelated. That is, the first step at subparagraph (a) reasonably leads to the next at (b), and so on. Each is both

⁸⁰¹ APP.0001.0020.0176 VZW Klimaatzaak, First Instance Court of Brussels (2021), [225].

⁸⁰² APP.0001.0020.0176 VZW Klimaatzaak, First Instance Court of Brussels (2021), [227].

⁸⁰³ APP.0001.0015.0003 3FASOC [82]. Note the jump from subparagraphs (d) to (f) is deliberate and reflects amendments to the pleading.

consistent with the best available science and mandated by international standards founded in that science. Accordingly, a reasonable actor in the Commonwealth's position meeting standards (a) through (d) must ultimately arrive at, and meet, the standard at step (f).

- 378 Much like the nature of the risks posed by climate change, the standard of care is cumulative and involves a scale of increasing significance. As discussed above at [347], the aggregate standard of care is warranted in light of the high probability and magnitude of harm, and guided by objective scientific consensus.
- 379 The Commonwealth breached its Primary Duty of Care by failing to take any reasonable steps identified in the standard of care above. The Commonwealth's conduct culminated in breach at four points in time by its setting of its:

379.12030 target in 2015;

379.2 re-affirmed 2030 target in 2020;

379.32050 target in 2021; and

379.4 updated 2030 target in 2022 (ongoing).

380 In setting each of the above Nationally Determined Contribution (NDC) targets under the Paris Agreement, the Commonwealth failed to set a target:

380.1 based on any accepted carbon budget methodology for the setting of its target;

380.2 based on best available science;

380.3 consistent with keeping global warming within the global temperature limit; or

380.4 consistent with avoiding the worst climate impacts for Torres Strait Islanders.

381 As set out in Professor Meinshausen's report, and addressed above, each of the Commonwealth's NDC targets is inconsistent with keeping global temperature increase to 1.5°C, which is necessary to avoid the worst impacts of climate change for Torres Strait Islanders.

382 Consequently, the Commonwealth breached, and continues to breach, the Primary Duty of Care.

2015: Australia's 2030 Target

- 383 In August 2015, the Commonwealth determined a target of reducing GHG emissions by 26-28% below 2005 levels by 2030.⁸⁰⁴ This was reflected in Australia's indicative NDC, which became Australia's first NDC under the Paris Agreement upon its ratification on 9 November 2016.⁸⁰⁵
- 384 In breach of the Primary Duty of Care, the Commonwealth's 2030 target failed to reflect the global temperature limit to prevent or minimise the current and projected impacts of climate change in the Torres Strait.
 - 384.1Using the CCA's methodology, which is a very generous "Grandfathering" approach, Australia would have been allocated 0.97% of the remaining CO2 budget to limit global temperature rise to less than 1.5°C with a 50% chance. Australia's 2030 target set by the Commonwealth would exhaust this carbon budget by 2030.⁸⁰⁶
 - 384.2 When assessed against an equal per capita methodology, the 2030 target "would have seen Australia emit roughly three times" more than Australia's share of a 1.5°C budget by 2030.⁸⁰⁷
 - 384.3 When assessed against historical responsibility methodologies, the 2030 target would have seen Australia emit "**more than** three times" (emphasis added) than Australia's share of a 1.5°C budget.⁸⁰⁸
- 385 In short, the Commonwealth's 2030 target was inconsistent with achieving the global temperature limit and was not set in accordance with the best available science. Under all the methodologies assessed by Prof Meinshausen, Australia's allocation of the global carbon budget would have been exhausted by 2030 or earlier, and therefore inconsistent with the 1.5°C global temperature limit necessary to protect Torres Strait Islanders.

⁸⁰⁴ WIT.2000.0001.0001 First Affidavit of Julia Gardiner [23.1].

⁸⁰⁵ CRT.2000.0003.0001 Defence [50(b)].

⁸⁰⁶ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [73(a)].

⁸⁰⁷ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [73(b)].

⁸⁰⁸ APP.0001.0009.0001 Exhibit A45, Meinshausen Report, [73(c)].

- 386 In setting Australia's 2030 target, the Commonwealth failed to engage with the best available science, failed to consider how its target would impact Torres Strait Islanders, and failed to consider how or whether its target would engage with the cumulative GHG emissions required to hold global warming to any temperature limit.
- 387 The only witness called by the Commonwealth in relation to the setting of the 2015 NDC was Kelly Pearce, who was Head of the Australia's United Nations Framework Convention of Climate Change Taskforce.⁸⁰⁹ In that role, Ms Pearce advised the Australian government on options for an emissions reduction target in anticipation of the Paris COP.⁸¹⁰
- 388 The Taskforce released its final report, "Settling Australia's Post-2020 Target for Reducing Greenhous Gas Emissions: Final Report," on 21 August 2015.⁸¹¹ The report fails to engage with the best available science, impacts of Torres Strait Islanders and any methodology for keeping global temperature to 1.5°C.⁸¹²
- 389 Ms Pearce acknowledged that the Paris Convention required each signatory state to set its emissions reductions target in accordance with the best available science,⁸¹³ and that IPCC reports constitute the best available science.⁸¹⁴ Nevertheless, Ms Pearce also admitted that the final Taskforce report included only 1 reference to any form of climate science and zero references to any IPCC report.⁸¹⁵
- 390 Ms Pearce acknowledged that the purpose and role of the Climate Change Authority were directly relevant to the terms of reference of the Taskforce and the Climate Change Authority's work was a very important factor for the Taskforce to consider.⁸¹⁶ Nevertheless, she also admitted that the final Taskforce report included only one reference to the Climate Change Authority, and that was only to an emissions target scenario, one which the Taskforce rejected.⁸¹⁷

⁸⁰⁹ WIT.2000.0001.0035 Exhibit R16 Affidavit of Kelly Pearce [8.2].

⁸¹⁰ TRN.0018.1455 22 November 2023, Kelly Pearce, 1460:21-23.

⁸¹¹ WIT.2000.0001.0035 Exhibit R16 Affidavit of Kelly Pearce [11].

⁸¹² EVI.2001.0001.2411 Exhibit R16.2 Target for Reducing Greenhouse Gas Emissions: Final Report.

⁸¹³ TRN.0018.1455 22 November 2023, Kelly Pearce, 1465:1-24.

⁸¹⁴ TRN.0018.1455 22 November 2023, Kelly Pearce, 1514:33-36.

⁸¹⁵ TRN.0018.1455 22 November 2023, Kelly Pearce, 1515:4-41.

⁸¹⁶ TRN.0018.1455 22 November 2023, Kelly Pearce, 1479:29-33.

⁸¹⁷ TRN.0018.1455 22 November 2023, Kelly Pearce, 1516:24-1517:15.

- 391 Ms Pearce conceded that the final Taskforce report did not address impacts on Torres Strait Islanders⁸¹⁸ or impacts on vulnerable communities.⁸¹⁹ Nor was Ms Pearce familiar with Australian government work regarding impacts of climate change in the Torres Strait.⁸²⁰ The evidence of Pearce was that no specific activity was undertaken to understand the current or potential impacts of climate change in the Torres Strait beyond a general understanding of the impacts of climate change on low lying islands. Pearce also gave evidence that it was accepted that if Australia, as part of the global community, did not adequately respond to the risks of climate change, communities on low lying islands in the Torres Strait were particularly at risk.⁸²¹
- 392 Ms Pearce also acknowledged that the final Taskforce report does not refer to how the emissions target, or other emissions targets considered by the Taskforce, would play a role in achieving a goal keeping global temperature increase to well below 2°C or any other level.⁸²²
- 393 Despite recognition that State parties to the Paris Agreement should when communicating on their NDCs report "*how* the Party considers that its nationally determined contribution *is fair and ambitious*, in the light of its national circumstances, and *how it contributes towards achieving the objective of the Convention* as set out in its Article 2",⁸²³ the Commonwealth's report fail to identify *how* its targets are fair and ambitious and *how* they would achieve the objective of the Convention. Instead, the report (and those for each of its targets) asserts that they are fair and ambitious, without meaningful elaboration.⁸²⁴ The testimony of Julia Gardiner confirmed that there was no meaningful basis on which to assert that the target was "ambitious".⁸²⁵
- 394 To summarise, the Commonwealth failed to:
 - 394.1 assess whether it's GHG emissions reduction target was consistent with best available science so as to avoid exceeding the global temperature limit to avoid the worst impacts of climate change on Torres Strait Islanders;

⁸¹⁸ TRN.0018.1455 22 November 2023, Kelly Pearce, 1471:39-45.

⁸¹⁹ TRN.0018.1455 22 November 2023, Kelly Pearce, 1472:4-8.

⁸²⁰ TRN.0018.1455 22 November 2023, Kelly Pearce, 1477:36-1478:43.

⁸²¹ TRN.0018.1455 22 November 2023, Kelly Pearce, T1476:17-20.

⁸²² TRN.0018.1455 22 November 2023, Kelly Pearce, 1503:38-1504:11.

⁸²³ APP.0001.0013.0008 UNFCCC Decision 1/CP.21, 2 [27] (emphasis added).

⁸²⁴ For example, see EVI.2001.0001.0980.

⁸²⁵ TRN.00016.1342 20 November 2023, Julia Gardiner, T1371:4-1372:30.

- 394.2 provide *any* methodology for the setting of its target in accordance with best available science or how that target engaged with a global carbon budget;
- 394.3 consider impacts on Torres Strait Islanders from setting its target;
- 394.4 provide an explanation of how the target was fair and ambitious as required by the Paris Agreement;
- 394.5 set a target consistent with keeping temperature increase below the global temperature limit; and
- 394.6 set a target consistent with avoiding the worst harms to Torres Strait Islanders.

2020: Australia's Re-affirmed 2030 Target

- 395 Between 2015 and 2022, the Commonwealth maintained the same GHG emissions reduction target that had been set in 2015. The Commonwealth's evidence is that in December 2020, the Commonwealth reaffirmed its first NDC target to reduce emissions by 26-28% below 2005 levels by 2030.⁸²⁶
- 396 In breach of the Primary Duty of Care, the Commonwealth's re-affirmed 2030 target failed to reflect the global temperature limit to prevent or minimise the current and projected impacts of climate change in the Torres Strait.
- 397 Even at the time it had been announced in 2015, that GHG emissions reduction target was not in accordance with the best available science and could not have achieved the global temperature limit. However, the Commonwealth's conduct in failing to increase its GHG emissions reduction target caused Australia to fall further and further behind the best available science. In the period 2015 to 2022, the reports of the IPCC, UNEP, and the CCA expressed in increasingly urgent terms the need for greater action to address climate change as scientific understanding of its projected impacts deepened (see above at [321]).
- 398 Despite the best available science identifying the clear need for increased emissions reductions, the Commonwealth maintained the same unreasonable GHG emissions reduction target from 2015 through to June 2022. The failure of the Commonwealth to

⁸²⁶ WIT.2000.0001.0001 First Affidavit of Julia Gardiner [23.3].

set targets consistent with the best available science represented a failure to take that standard of care required of a reasonable state to prevent or minimise the harmful effects of climate change on Torres Strait Islanders. The Commonwealth offered no evidence that in reaffirming the 2030 target it incorporated consideration of best available science or impacts on Torres Strait Islanders.

399 Further, Article 4(3) of the Paris Agreement provides:

Each Party's successive nationally determined contribution will represent a *progression* beyond the Party's then current nationally determined contribution and reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances. (emphasis added)⁸²⁷

- 400 Consequently, as above, the Commonwealth failed to:
 - 400.1 assess whether it's GHG emissions reduction target was consistent with best available science so as to avoid exceeding the global temperature limit to avoid devastating impacts on Torres Strait Islanders;
 - 400.2 provide any methodology for the setting of its target or how that target engaged with a global carbon budget;
 - 400.3 consider impacts on Torres Strait Islanders from setting its target;
 - 400.4 provide an explanation of how its target was fair and ambitious as required by the Paris Agreement;
 - 400.5 set a target consistent with keeping temperature increase below the global temperature limit; and

400.6 set a target consistent with avoiding the worst harms to Torres Strait Islanders.

401 Further, maintenance of the 2030 target, in circumstances where the original 2030 target was insufficient and the subsequent best available science required a more aggressive target than in 2015, constitutes a continuing breach (and is contrary to Article 4(3) of the Paris Agreement).

⁸²⁷ APP.0001.0006.0017 Paris Agreement, 4.

2021: Australia's 2050 Target

- 402 On 26 October 2021, the Commonwealth communicated a "net zero" target for 2050.⁸²⁸
- 403 In breach of the Primary Duty of Care, the 2050 target failed to reflect the global temperature limit to prevent or minimise the current and projected impacts of climate change in the Torres Strait.
- 404 As identified by Professor Meinshausen above, the failure to increase the ambition of the 2030 target in 2020 meant that Australia would already exhaust its share of remaining cumulative global GHG emissions by 2030. As a result, the setting of a net zero target for 2050 did nothing to prevent ongoing Commonwealth breach.
- 405 The Commonwealth offered no evidence that setting the 2050 target it incorporated consideration of best available science or impacts on Torres Strait Islanders.
- 406 Consequently, as above, the Commonwealth failed to:
 - 406.1 assess whether it's GHG emissions reduction target was consistent with best available science so as to avoid exceeding the global temperature limit to avoid devastating impacts on Torres Strait Islanders;
 - 406.2 provide any methodology for the setting of its target or how that target engaged with a global carbon budget;
 - 406.3 consider impacts on Torres Strait Islanders from setting its target;
 - 406.4 provide an explanation of how its target was fair and ambitious as required by the Paris Agreement;
 - 406.5 set a target consistent with keeping temperature increase below the global temperature limit; and

406.6 set a target consistent with avoiding the worst harms to Torres Strait Islanders.

⁸²⁸ CRT.2000.0003.0001 Defence [50(h)].

2022: Australia's Updated 2030 Target

- 407 On 16 June 2022, the Commonwealth communicated an updated NDC target to reduce GHG emissions by 43% by 2030 (compared to 2005 levels).⁸²⁹
- 408 In breach of the Primary Duty of Care, Australia's updated 2030 target failed to reflect the global temperature limit to prevent or minimise the current and projected impacts of climate change in the Torres Strait:
 - 408.1 Even using the CCA's grandfathering methodology, the Australia's updated 2030 target would result in Australia's emissions needing to fall at an unprecedented and unfeasible rate after 2030 in order for Australia not to exceed its share of a 1.5°C budget. That is, there would be so little of Australia's allocation of a 1.5°C budget left, that Australia would need to achieve net-zero by 2033 at the latest.⁸³⁰
 - 408.2 Using the equal per capita methodology, Australia would have exhausted its share of a 1.5°C budget by 2022.⁸³¹ Prof Meinshausen makes clear that Australia's updated 2030 target is not consistent with remaining within a 1.5°C budget.⁸³²
 - 408.3 Using a historical responsibility methodology, Australia would have, "already exhausted its fair share as at the beginning of 2022" (i.e., depending on the methodology, Australia would have exhausted its share of a 1.5°C budget **before** 2022).⁸³³ Prof Meinshausen makes clear that Australia's updated 2030 target is not consistent with remaining within a 1.5°C budget.⁸³⁴
- 409 As such, when taking into account the remaining carbon budgets calculated using each of the methodologies assessed by Prof Meinshausen, it is clear that Australia's updated 2030 target continued to fall short of the standard of care.
- 410 The Commonwealth offered no evidence that in setting the updated 2030 target it incorporated consideration of best available science or impacts on Torres Strait Islanders.
- 411 Consequently, as above, the Commonwealth:

⁸²⁹ CRT.2000.0003.0001 Defence [50(e)].

⁸³⁰ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [74(a)].

⁸³¹ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [70(b)].

⁸³² APP.0001.0009.0001 Exhibit A45, Meinshausen Report [174(b)].

⁸³³ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [70(c)].

⁸³⁴ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [174(c)].

- 411.1 Did not assess whether it's GHG emissions reduction target was consistent with best available science so as to achieve the global temperature limit would avoid devastating impacts on Torres Strait Islanders;
- 411.2 Did not provide any methodology for the setting of its target;
- 411.3 Did not consider impacts on Torres Strait Islanders from setting its target;
- 411.4 Did not provide an explanation of how its target was fair and ambitious as required by the Paris Agreement;
- 411.5 Did not set a target consistent with keeping temperature increase below the global temperature limit; and
- 411.6Did not set a target consistent with avoiding the worst harms to Torres Strait Islanders.
- 412 The above confirms that the Commonwealth's failure to set targets based upon best available science is 'the product of administrative direction, expert or professional opinion, technical standards or general standards of reasonableness',⁸³⁵ in respect of which it is open for the Court to find a breach of duty of care.
- 413 Accordingly, as set out above, the Commonwealth breached its duty of care.

H. CAUSATION

Summary of argument

- 414 Global GHG emissions, wherever in the world they occur, cause global temperature increase. Global temperature increase causes the impacts of climate change wherever they are felt, including in the Torres Strait Islands. Every nation has contributed to global GHG emissions. Every nation has therefore contributed to the singular phenomenon that causes global temperature increase and the resulting impacts. Australia's contribution has been disproportionately large.
- 415 The common law of Australia has accepted that, where compensable injury is caused by the cumulative effect of wrongful conduct, a wrongdoer can be held liable for

⁸³⁵ APP.0001.0020.0162 Sutherland Shire Council v Heyman (1985) 157 CLR 424 [469] (Mason J).

contributing to that cumulative effect even if it cannot be shown that, but for that wrongdoer's contribution, the injury would not have occurred. In this way, the Commonwealth has caused the impacts of climate change in the Torres Strait, by virtue of its contribution to global temperature increase as a result of its breach of the Primary Duty of Care.

- 416 The Applicants therefore submit that the Commonwealth's breaches of the Primary Duty of Care caused the Applicants' to suffer loss on the basis that the Commonwealth's breaches made a material contribution to the Applicants' loss.
- 417 Additionally, or in the alternative, the Applicants submit that the Commonwealth can be held liable for materially contributing to the risk of harm faced by the Applicants.

Legal principles

- 418 The CLA applies to the issue of causation in this case.⁸³⁶ Section 11 relevantly provides:
 - (1) A decision that a breach of duty caused particular harm comprises the following elements—
 - (a) the breach of duty was a necessary condition of the occurrence of the harm *(factual causation)*;
 - (b) it is appropriate for the scope of the liability of the person in breach to extend to the harm so caused.
 - (2) In deciding in an exceptional case, in accordance with established principles, whether a breach of duty—being a breach of duty that is established but which can not be established as satisfying subsection (1)(a)—should be accepted as satisfying subsection (1)(a), the court is to consider (among other relevant things) whether or not and why responsibility for the harm should be imposed on the party in breach.
 - ...
 - (4) For the purpose of deciding the scope of liability, the court is to consider (among other relevant things) whether or not and why responsibility for the harm should be imposed on the party who was in breach of the duty.
- 419 The Court therefore needs to decide two questions: "a question of historical fact as to how particular harm" to the Group Members has occurred (and will occur); and a "normative question as to whether legal responsibility for that particular harm occurring

⁸³⁶ The law of the tort is the APP.0001.0020.0077 *lex loci delicti: John Pfeiffer Pty Ltd v Rogerson* (2000) 203 CLR 503. Here, that is Queensland. In this case, the group members' cause of action arises "in substance" in the Torres Strait Islands, where the loss has occurred and will occur. That is where the Commonwealth's negligence "assumes significance": APP.0001.0020.0008 *Amaca v Frost* (2006) 67 NSWLR 635, 640 [15], [18] (Spigelman CJ), quoting APP.0001.0020.0045 *Distillers Co (Biochemicals) Ltd v Thompson* [1971] AC 458, 468; APP.0001.0020.0181 *Voth v Manildra Flour Mills Pty Ltd* (1990) 171 CLR 538, 567.

in that way should be attributed to" the Commonwealth.⁸³⁷ The first question is "entirely factual" and the second is "entirely normative".⁸³⁸

- 420 The determination of factual causation in accordance with s 11(a) ordinarily involves the application of the "but for" test of causation. That is to say, a determination in accordance with s 11(1)(a) that negligence was a necessary condition of the occurrence of harm is a determination on the balance of probabilities that the harm that in fact occurred would not have occurred absent the negligence.⁸³⁹
- 421 However, it has been recognised that the cases exemplified by the decision in *Bonnington Castings Ltd v Wardlaw*⁸⁴⁰ explained further below may meet the test of factual causation under s 11(a) depending on the scientific evidence in the particular case. In some cases, although the relative contribution of two or more factors to the particular harm cannot be determined, it may be that each factor was part of a set of conditions necessary to the occurrence of that harm.⁸⁴¹
- 422 For this reason, section 11(2) recognises that, in an "exceptional case", proof of but for causation is not necessary to establish factual causation. It states in effect that, where a breach of duty is established but which does not satisfy subsection (1)(a), that breach may nonetheless be accepted as satisfying subsection (1)(a):
 - 422.1 "in accordance with established principles"; and
 - 422.2 considering (among other relevant things) whether or not and why responsibility for the harm should be imposed on the party in breach.
- 423 Section 11(2) reflects cases in which an "evidentiary gap" precludes a finding of factual causation on a "but for" analysis. The Ipp Report⁸⁴² instanced two categories of such cases:⁸⁴³

⁸³⁷ APP.0001.0020.0182 Wallace v Kam (2013) 250 CLR 375, 381 [11] (French CJ, Crennan, Kiefel, Gageler and Keane JJ) (applying s 5D(1) of the APP.0001.0021.0005 Civil Liability Act 2002 (NSW), which is in relevantly identical form to s 11 of the APP.0001.0021.0006 Civil Liability Act 2003 (Qld)).

⁸³⁸ APP.0001.0020.0182 *Wallace v Kam* (2013) 250 CLR 375, 381 [14] (French CJ, Crennan, Kiefel, Gageler and Keane JJ).

⁸³⁹ APP.0001.0020.0182 *Wallace v Kam* (2013) 250 CLR 375, 381 [16] (French CJ, Crennan, Kiefel, Gageler and Keane JJ).

⁸⁴⁰ APP.0001.0020.0023 Bonnington Castings Ltd v Wardlaw [1956] AC 613.

⁸⁴¹ APP.0001.0020.0160 *Strong v Woolworths Ltd* (2012) 246 CLR 182 at 194 [27] (French CJ, Gummow, Crennan and Bell JJ).

⁸⁴² APP.0001.0022.0005 Commonwealth of Australia, Review of the Law of Negligence: Final Report (2002).

⁸⁴³ APP.0001.0020.0160 *Strong v Woolworths Ltd* (2012) 246 CLR 182 at 193-194 [25] (French CJ, Gummow, Crennan and Bell JJ).

- 423.1 The first category involves the cumulative operation of factors in the occurrence of the total harm in circumstances in which the contribution of each factor to that harm is unascertainable. *Bonnington Castings* was said to exemplify cases in this category.
- 423.2 The second category involves negligent conduct that materially increases the risk of harm in circumstances in which the state of scientific or medical knowledge makes it impossible to prove the cause of the plaintiff's harm. *Fairchild v Glenhaven Funeral Services Ltd*⁸⁴⁴ was said to exemplify cases in this category.
- 424 The first category, which applies the "material contribution" standard, includes where harm results from the "cumulative operation of factors", but where the degree to which each factor has contributed to the harm cannot be ascertained,⁸⁴⁵ leaving it impossible to say whether the harm would have occurred but for any one factor. In *Strong* v *Woolworths Ltd*, the majority traced this principle to *Duke of Buccleuch* v *Cowan*, a nineteenth century Scottish case in which several factories had polluted a river, and the plaintiff successfully sued one in nuisance for materially contributing to the state of the river: "Liability was not dependent upon proof that the pollutants discharged by the defendant's factory alone would have constituted a nuisance".⁸⁴⁶
- 425 The foundational modern case is *Bonnington Castings*.⁸⁴⁷ The plaintiff had contracted pneumoconiosis, which was understood to be caused by cumulative exposure to silica dust. The plaintiff had used both pneumatic hammers and swing grinders at his employer's factory. The difficulty for the plaintiff was that the employer only had a statutory duty to install and use a dust extractor on the swing grinders.⁸⁴⁸ Despite this, the House held the employer liable, holding that its failure to use extractors on the swing grinders was a material contribution to the plaintiff's injury. Lord Reid reasoned as follows:⁸⁴⁹

The medical evidence was that pneumoconiosis is caused by a gradual accumulation in the lungs of minute particles of silica inhaled over a period of years. That means, I think, that the disease is caused by the whole of the noxious material inhaled and, if that material

APP.0001.0020.0056 Fairchild v Glenhaven Funeral Services Ltd [2003] 1 AC 32.

⁸⁴⁵ APP.0001.0020.0160 *Strong v Woolworths Ltd* (2012) 246 CLR 182, 194 [25] (French CJ, Gummow, Crennan and Bell JJ).

APP.0001.0020.0160 Strong v Woolworths Ltd (2012) 246 CLR 182, 192–92 [22] (French CJ, Gummow, Crennan and Bell JJ), explaining APP.0001.0020.0049 Duke of Buccleuch v Cowan (1866) 5 M 214.
 APB.0001.0020.0022 Reprint Continues Ltd v Wordhaw [1056] AC 612

APP.0001.0020.0023 Bonnington Castings Ltd v Wardlaw [1956] AC 613.
 APP.0001.0020.0022 Boundary Castings Ltd v Wardlaw [1956] AC 613.

⁸⁴⁸ APP.0001.0020.0023 Bonnington Castings Ltd v Wardlaw [1956] AC 613 at 614–15.

⁸⁴⁹ APP.0001.0020.0023 *Bonnington Castings Ltd v Wardlaw* [1956] AC 613 at 621.

comes from two sources, it cannot be wholly attributed to material from one source or the other. I am in agreement with much of the Lord President's opinion in this case, but I cannot agree that the question is which was the most probable source of the Respondent's disease, the dust from the pneumatic hammers or the dust from the swing grinders. It appears to me that the source of his disease was the dust from both sources, and the real question is whether the dust from the swing grinders materially contributed to the disease. What is a material contribution must be a question of degree. A contribution which comes within the exception *de minimis non curat lex* is not material, but I think that any contribution which does not fall within that exception must be material. I do not see how there can be something too large to come within the *de minimis* principle but yet too small to be material.

- 426 In short, any contribution to the harm (amid multiple conjunctive factors) above *de minimis* is material.
- 427 The reasoning in *Bonnington Castings* has been accepted and applied in Australia.⁸⁵⁰ As Edelman J recently put it, "[i]n exceptional cases, a defendant can be held responsible for a loss if their actions materially contributed to a loss which would have occurred in any event".⁸⁵¹ The High Court has said that a material contribution requires "only that the act or omission of a wrongdoer play some part in contributing to the loss".⁸⁵²
- 428 It is therefore one form of the exception in s 11(2) based on "established principles". As was held in *Strong*: "Negligent conduct that materially contributes to the plaintiff's harm but which cannot be shown to have been a necessary condition of its occurrence may, in accordance with established principles, be accepted as establishing factual causation, subject to the normative considerations to which [s 11(2)] requires that attention be directed".⁸⁵³
- 429 In *Sharma*, Beach J and Wheelahan J considered in *obiter* that the *Bonnington Castings* analysis did not apply because the contribution to CO₂ emissions from approval of the coal mine was not a contribution to the harm itself; instead, the indivisible condition which was said to cause the harm was temperature, not the CO₂ emissions directly. This

 ⁸⁵⁰ See, eg, APP.0001.0020.0092 March v E & M H Stramare Pty Ltd (1991) 171 CLR 506 at 514 (Mason CJ), citing APP.0001.0020.0050 Duyvelshaff v Cathcart & Ritchie Ltd (1973) 47 ALJR 410 at 417; 1 ALR 125 at 138 (Gibbs J); APP.0001.0020.0171 Tubemakers of Australia Ltd v Fernandez (1976) 50 ALJR 720 at 724; 10 ALR 303 at 310 (Mason J).

⁸⁵¹ APP.0001.0020.0086 Lewis v Australian Capital Territory (2020) 271 CLR 192, 247 [152] (Edelman J). See also APP.0001.0020.0068 Henville v Walker (2001) 206 CLR 459 at [106] (McHugh J).

⁸⁵² APP.0001.0020.0073 *Hunt & Hunt Lawyers v Mitchell Morgan Nominees Pty Ltd* (2013) 247 CLR 613 at 635 [45] (French CJ, Hayne and Keifel JJ).

⁸⁵³ APP.0001.0020.0160 *Strong v Woolworths Ltd* (2012) 246 CLR 182, 194 [26] (French CJ, Gummow, Crennan and Bell JJ).

was said to be distinguishable from *Bonnington Castings* where the noxious dust itself was inhaled and caused the harm, and the more appropriate analogy was to *Fairchild*.⁸⁵⁴

- 430 Respectfully, their Honours' passing comments⁸⁵⁵ did not fully grapple with the chain of causation in *Bonnington Castings*. In that case, the evidence showed that: the noxious dust was emitted into the air (from two separate sources); that dust included minute particles of silica; the silica particles were inhaled by the respondent over a period of years; over that time, the silica particles gradually accumulated in the respondent's lungs; as a result of the accumulation of silica particles in his lungs, the respondent contracted pneumoconiosis.⁸⁵⁶ It was not the case that the *emission* of noxious dust *directly caused* the respondent to contract pneumoconiosis. There were intervening steps including inhalation of the dust and gradual accumulation of the silica particles in the respondent's lungs over time.
- 431 In the same way, the intervening steps between emission of GHGs and harm to the Applicants ought not to be a bar to causation on the *Bonnington Castings* analysis, as long as the Applicants can prove on the balance of probabilities that each step in the chain of causation occurred (or would occur).
- 432 Additionally, in *obiter*, Beach J considered that the *Bonnington Castings* analysis did not apply as scope 3 emissions led only to an increase in the *risk* of producing a tipping point, which then causes a further risk that 4C above the baseline would occur.⁸⁵⁷ His Honour's reasoning highlights a key distinction between *Sharma* and the present case. In *Sharma*, the emissions had not yet been released and therefore any harm from the consequential increase in temperature and climate change impacts, whether on a linear basis or the nonlinear triggering of tipping points, was yet to arise. As such, the Minister's decision could at best be seen as increasing the *risk* of harm at some future point, which is more akin to *Fairchild*. The Applicants argued that any materiality of the harm ought to be considered at the causation stage,⁸⁵⁸ which would occur many years in the future. Although the relevant contribution to the harm would be 'tiny', the Applicants argued that the harm would be caused by an accumulation of emissions, and the science of attribution was

⁸⁵⁴ APP.0001.0020.0101 *Minister for the Environment v Sharma (Cth)* (2022) 291 FCR 311, 425-426 [434]-[435] (Beach J), 529 [882] (Wheelahan J).

⁸⁵⁵ These comments were in *obiter* because APP.0001.0020.0101 *Sharma* did not involve any consideration of the causation stage of the negligence analysis.

⁸⁵⁶ APP.0001.0020.0023 Bonnington Castings Ltd v Wardlaw [1956] AC 613, 617-618 (Lord Reid).

⁸⁵⁷ APP.0001.0020.0101 *Minister for the Environment v Sharma (Cth)* (2022) 291 FCR 311, [433]-[436] (Beach J).

⁸⁵⁸ APP.0001.0020.0101 *Minister for the Environment v Sharma (Cth)* (2022) 291 FCR 311, [200] (Allsop CJ).

increasing in sophistication and therefore the Court ought not to foreclose the possibility that it could be measured at some later point. Wheelahan J concluded that this argument "serves to highlight the dangers of assessing fragmented liability issues decades before any cause of action accrues."⁸⁵⁹

- 433 No such fragmentation issues arise in the present case as the Applicants allege that the expert evidence demonstrates that harm has already occurred and the Commonwealth's release of GHG emissions was a material contribution to that harm, not to the risk of some future harm.
- 434 Once harm has occurred, as French CJ said in *Amaca v Booth*, then if the association between two events has a 'causal explanation', an inference of causation may be reached on the balance of probabilities:

However, if the association between two events is shown to have a causal explanation, then the conclusion may be open, if the second event should occur, that the first event has been at least a contributing cause of that occurrence. An after-the-event inference of causal connection may be reached on the civil standard of proof, namely, balance of probabilities, notwithstanding that the statistical correlation between the first event and the second event indicated, prospectively, no more than a "mere possibility" or "real chance" that the second event would occur given the first event.⁸⁶⁰

- 435 The Court held that expert evidence, which demonstrated that exposure to asbestos caused mesothelioma and cumulative exposure to asbestos increased the risk of contracting mesothelioma, was sufficient to conclude that Mr Booth's exposure to asbestos was a material contribution and therefore causally relevant to his disease.⁸⁶¹ Similarly, the Federal Court, in the recent *Karpik v Carnival plc* judgment, canvassed seminal causation judgments before concluding that "it is uncontroversial that expert evidence that expresses itself in the form of possibilities and risks, rather than probabilities, can be relevant and support an inference of causation."⁸⁶²
- 436 Two additional points demonstrate that *Fairchild* is inapplicable to the present case. In *Fairchild* the question of causation was in regard to mesothelioma, not pneumoconiosis as in *Bonnington Castings*. Whereas pneumoconiosis is caused by an *accumulation* of silica or asbestos particles, mesothelioma, as summarised by Allsop CJ in *Sharma*, was

⁸⁵⁹ APP.0001.0020.0101 *Minister for the Environment v Sharma (Cth)* (2022) 291 FCR 311, [885] (Wheelehan J).

⁸⁶⁰ APP.0001.0020.0196 Amaca Pty Ltd v Booth [2011] HCA 53; 246 CLR 36 at [43].

⁸⁶¹ APP.0001.0020.0196 *Amaca Pty Ltd v Booth* [2011] HCA 53; 246 CLR 36 at [90-91].

⁸⁶² APP.0001.0020.0079 Karpik v Carnival plc (2023) FCA 1280 [818].

thought to be caused by "some, perhaps even a small number of, elongated sharp blue asbestos fibres" and "one or a small number of fibres could cause the cancer". This was the so called 'one fibre theory'.⁸⁶³ At the time of judgment, "it was not possible to prove who might be responsible for what fibres" and therefore, "medical science could never explain which of the defendants had (in the traditional sense) caused the disease, but *one of them* had done so"⁸⁶⁴ (emphasis added). As the United Kingdom Supreme Court explained in *Sienkiewicz v Greif (UK) Ltd,* the special rule of causation in *Fairchild* was developed where there was "ignorance about the biological cause of the disease" which rendered it "impossible for a claimant to prove causation according to the conventions 'but for' test", and this caused injustice to the claimants".⁸⁶⁵

- 437 That is clearly distinct from the present case. First, the expert evidence demonstrates that the impacts of climate change are caused by an accumulation of emissions, as in *Bonnington Castings*, not a single or any particular element of emissions, as in *Fairchild*. Second, the expert scientific evidence can precisely determine the contribution of each party to the *accumulation* of emissions, and there is therefore no "ignorance" about the cause of the harm.
- 438 As to the second category referred to in the Ipp Report, exemplified by *Fairchild*, whether negligent conduct resulting in a material increase in risk may be said to admit of proof of causation in accordance with established principles under the common law of Australia has not yet been considered by the High Court of Australia. It therefore does not currently form part of the law in this country.⁸⁶⁶ However, as explained below, the Applicants submit that, insofar as their claim relates to tipping points, material increase in the risk of harm occurring ought to be recognised in Australia as a form of causation.
- 439 As to the requirement in s 11(1)(b), the normative inquiry into scope of liability extends beyond what had traditionally been seen as elements of causation, to cover questions raised by intervening and successive causes, foreseeability and remoteness.⁸⁶⁷ The

⁸⁶³ The one fibre theory has since been discredited: APP.0001.0020.0196 *Amaca v Booth* 246 CLR 36; [2011] HCA 53 [80].

APP.0001.0020.0101 *Minister for the Environment v Sharma (Cth)* (2022) 291 FCR 311, [321]-[323] (Allsop CJ).

APP.0001.0020.0203 Sienkiewicz v Greif (UK) Ltd [2011] 2 WLR 523; [2011] 2 All ER 857 at 856.
 APP.0001.0020.0160 Strong v Weedworths Ltd (2012) 246 CLP 182, 104 [26] (Erongh CL Cummony Cromposition Compared to Compared t

APP.0001.0020.0160 Strong v Woolworths Ltd (2012) 246 CLR 182, 194 [26] (French CJ, Gummow, Crennan and Bell JJ); APP.0001.0020.0101 Minister for the Environment v Sharma (2022) 291 FCR 311, 408 [320] (Allsop CJ), 426 [436] (Beach J), 527 [875] (Wheelahan J).

⁸⁶⁷ APP.0001.0020.0103 *Monaghan Surveyors Pty Ltd v Stratford Glen-Avon Pty Ltd* [2012] NSWCA 94 at [70]; see also APP.0001.0020.0194 *Zanner v Zanner* (2010) 79 NSWLR 702 at [12].

normative test in s 11(1) (b) is augmented by s 11(2) and (4), which require the Court to explicitly "consider and to explain in terms of legal policy whether or not, and if so why, responsibility for the harm should be imposed on the negligent party". That requires "the identification and articulation of an evaluative judgment by reference to the purposes and policy of the relevant part of the law".868

The scope of the dispute regarding causation following breach of the Primary Duty of Care

- The dispute regarding causation in this case is narrow. It is common ground that 440 anthropogenic emissions of GHGs cause global temperature increase. It is also largely not in dispute that global temperature increase causes the impacts of climate change, which includes impacts in the Torres Strait Islands that particularly affect Torres Strait Islanders. In more detail, it is not in dispute that:
 - 440.1 increased emissions of GHGs by humans results in their accumulation in the atmosphere;869
 - 440.2 the accumulation of GHGs in the atmosphere results in heating of the lower atmosphere and an increase in global surface temperature;⁸⁷⁰
 - 440.3 there is a near-linear relationship between cumulative anthropogenic CO₂ emissions and the increase in global surface temperature, and every tonne of CO₂ adds to global warming;⁸⁷¹
 - 440.4 it is the cumulative total of CO₂ emissions that largely determines the quantum of global temperature increase together with the warming and cooling effects from other anthropogenic emissions over time;⁸⁷²
 - 440.5 reducing CO₂ emissions is necessary to stabilise global temperature increase;⁸⁷³
 - 440.6 Global temperature increase leads to the impacts of climate change enumerated in paragraph 10(c) and (d) of the 3FASOC;⁸⁷⁴

⁸⁶⁸ APP.0001.0020.0182 Wallace v Kam (2013) 250 CLR 375, 385 [23] (French CJ, Crennan, Kiefel, Gageler and Keane JJ) (quotation marks and citation omitted). 869

APP.0001.0015.0003 3FASOC [7], [10(a)]; CRT.2000.0003.0001 Defence [7], [10].

⁸⁷⁰ APP.0001.0015.0003 3FASOC [7], [10(b)]; CRT.2000.0003.0001 Defence [7], [10]. 871

CRT.2000.0003.0001 Defence [11(a)].

⁸⁷² CRT.2000.0003.0001 Defence [11(a)(i)].

⁸⁷³ APP.0001.0015.0003 3FASOC [11(c)(iv)]; CRT.2000.0003.0001 Defence [11(h)].

⁸⁷⁴ APP.0001.0015.0003 3FASOC [10(c)-(d)]; CRT.2000.0003.0001 Defence [10].

- 440.7 the frequency and/or severity of many impacts of climate change is projected to increase with global temperature increase;⁸⁷⁵
- 440.8 the Torres Strait Islands are vulnerable to some impacts of climate change, including sea level rise, storm surges, tropical cyclones, increasing air and surface temperatures and changing rainfall patterns.⁸⁷⁶ Further, some structures and significant sites on some Torres Strait Islands are located on low lying areas and subject to a risk of inundation events;⁸⁷⁷
- 440.9 the Torres Strait Islands have been affected by some impacts of climate change, including warmer days, ocean acidification, increase in ocean temperature and sea level rise, some of which (including warmer days) can affect human health.⁸⁷⁸ Further, some of the Torres Strait Islands have been subject to inundation events prior to and since 2014;⁸⁷⁹
- 440.10 some instances of exercise by Torres Strait Islanders of rights and interests possessed under traditional laws and customs are vulnerable to the current and projected impacts of climate change.⁸⁸⁰
- 441 It is also common ground that, in general:
 - 441.1 Tipping points exist, which are critical thresholds beyond which the climate system reorganises, including abruptly and/or irreversibly;⁸⁸¹ and
 - 441.2 the risk of triggering tipping points increases with global temperature increase.⁸⁸²
- 442 The Applicants have demonstrated on the evidence that:
 - 442.1 the risk of triggering tipping points increases with global temperature increase;⁸⁸³

⁸⁷⁵ APP.0001.0015.0003 3FASOC [11(b)(iv)], [26]; cf CRT.2000.0003.0001 Defence [11(b)], [26].

⁷⁶ APP.0001.0015.0003 3FASOC [28], [29], [31], [53], [57]-[59].; cf CRT.2000.0003.0001 Defence [28(a)], [61(b)].

⁸⁷⁷ CRT.2000.0003.0001 Defence [53].

⁸⁷⁸ APP.0001.0015.0003 3FASOC [57]; CRT.2000.0003.0001 Defence [57(b)-(c)].

⁸⁷⁹ CRT.2000.0003.0001 Defence [53].

⁸⁸⁰ CRT.2000.0003.0001 Defence [62B(a)].

⁸⁸¹ CRT.2000.0003.0001 Defence [11(c)].

⁸⁸² APP.0001.0015.0003 3FASOC [11(a)(iv)], [26]; cf CRT.2000.0003.0001 Defence [11(d)], [26].

⁸⁸³ APP.0001.0003.0093 Exhibit A40, Karoly Report [124]–[126].

- 442.2 the harm that would be brought to the Applicants would be catastrophic if, in particular, a tipping point were reached resulting in a significant rise in sea levels.⁸⁸⁴
- 443 The Commonwealth also admits that:⁸⁸⁵
 - 443.1 it has the power or ability to set national GHG emissions targets or budgets;
 - 443.2 it has the power or ability to take steps to reduce or minimise its own GHG emissions within operational and budgetary constraints; and
 - 443.3 a number of statutes and regulations confer powers on Commonwealth agencies or Ministers which, depending on the circumstances of a particular case, may be lawfully exercised so as to reduce or minimise GHG emissions from activities undertaken by other entities in Australia.
- 444 The key issue in dispute regarding causation is whether increased GHG emissions as a result of the Commonwealth's breaches of the Primary Duty of Care caused harm to the Applicants, and will cause further harm in the future. As explained earlier in these submissions, the Commonwealth's breach of the Primary Duty of Care was a failure to take reasonable steps to ensure that, having regard to the best available science, it:⁸⁸⁶
 - 444.1 identified the Current and Projected Impacts of Climate Change in the Torres Strait Islands;
 - 444.2 identified the risk, scope and severity of the Current and Projected Impacts of Climate Change in the Torres Strait Islands;
 - 444.3 identified the global temperature limit necessary to prevent or minimise many of the most dangerous current and projected impacts of climate change to small and low-lying islands, such as the Torres Strait Islands;

See APP.0001.0009.0002 Exhibit A53, Church Report [100]-[104]. The IPCC estimates SLR up to 0.9m by 2100 for warming of 2C, and up to 1.6m by 2100 in extreme warming scenarios. See above at [114]-[117].
 CRT 2000 0002 0001 Defense [76].

⁸⁸⁵ CRT.2000.0003.0001 Defence [76].

⁸⁸⁶ APP.0001.0015.0003 3FASOC [82].

- 444.4 identified a best available science target reflecting that global temperature limit to prevent or minimise the current and projected impacts of climate change in the Torres Strait Islands; and
- 444.5 implemented such measures as are necessary to reduce Australia's GHG emissions consistent with that best available science target.
- 445 The Applicants submit that the Commonwealth's breaches of the Primary Duty of Care have caused, and will cause, the Applicants to suffer loss in the following way:
 - 445.1 there is a near-linear relationship between increased global emissions of GHGs and global temperature increase;
 - 445.2 at relevant timescales, a ton of CO₂ or CO₂-equivalent GHG contributes to global temperature increase in the same way no matter where in the world, by whom, or when it was emitted;
 - 445.3 it is therefore the cumulative effect of global GHG emissions that is the cause of global temperature increase;
 - 445.4 the impacts of climate change in the Torres Strait Islands are caused by global temperature increase;⁸⁸⁷
 - 445.5 emissions from Australia are therefore *a cause* of the impacts of climate change in the Torres Strait Islands, in the sense that emissions from Australia have contributed to the cumulative effect of global GHG emissions, and therefore contributed to global temperature increase;
 - 445.6 if the Commonwealth had not failed to take the reasonable steps summarised at [444] above, Australia's GHG emissions would have decreased as a result, which in turn would have lessened its causal contribution to the impacts of climate change in the Torres Strait Islands;
 - 445.7 the Commonwealth's breach of the Primary Duty of Care therefore was a cause of the impacts of climate change in the Torres Strait Islands.

⁸⁸⁷ APP.0001.0015.0003 3FASOC [10(c)-(d)]; CRT.2000.0003.0001 Defence [10].

- 446 This submission is directed to establishing that the Commonwealth's breaches made a material contribution to the Applicants' loss.
- 447 We will first demonstrate that each of these propositions is established on the evidence, and then submit that the propositions are sufficient, as a matter of law, for the Court to find that causation is established.

Proof of each step in the chain of causation

448 As set out in detail below, the Applicants submit that causation is established because a necessary cause of the impacts of climate change in the Torres Strait is global temperature increase, and the Commonwealth's breaches of the Primary Duty of Care have materially contributed to that by way of a material amount of GHG emissions that otherwise would have been avoided. Alternatively, it is open to the Court to find that the Commonwealth's breaches have materially increased the risk of the impacts of climate change in the Torres Strait occurring.

(1) Material contribution to harm (Bonnington Castings)

- 449 Section 11(2) of the CLA permits a finding of causation in "exceptional cases", even though the defendant's negligence cannot be established as a necessary condition of the occurrence of the harm.⁸⁸⁸ As submitted in detail below, this case is a quintessential example of where harm results from "the cumulative operation of factors … in circumstances in which the contribution of each factor to that harm is unascertainable".⁸⁸⁹ In accordance with section 11(2) and the principles established in *Bonnington Castings* and like cases, the Commonwealth therefore ought to be held responsible for harm to the Applicants because its actions materially contributed to, and will continue to contribute to, harm which would have occurred in any event.
- 450 To reiterate, the evidence establishes that increased concentrations of GHGs in the atmosphere cause increasing average surface temperatures globally and in the Torres Strait. This, in turn, causes the impacts of climate change in the Torres Strait. It is the *cumulative total* of GHG emissions worldwide that causes average surface temperatures

⁸⁸⁸ See APP.0001.0020.0160 *Strong v Woolworths Ltd* (2012) 246 CLR 182, 194 [26] (French CJ, Gummow, Crennan and Bell JJ).

⁸⁸⁹ APP.0001.0020.0160 *Strong v Woolworths Ltd* (2012) 246 CLR 182, 194 [25] (French CJ, Gummow, Crennan and Bell JJ).

to increase.⁸⁹⁰ It is common ground that every ton of GHG emitted anywhere in the world contributes to that total.⁸⁹¹ As Dr Canadell put it:⁸⁹²

[T]he physical science basis of climate change has established very robustly that every ton of GHG emissions leads to an increase in global mean surface temperature.

...

It has been the sum of small and big emission sources that is responsible for the increase of 1.09°C of the global mean surface temperature above the mean of 1850–1900.

451 As noted above, it is also common ground that increases in global mean surface temperature are causally linked to the impacts of climate change. Again, as Dr Canadell stated in his report:⁸⁹³

[T]he physical science of climate change has also established that every additional increment of global warming contributes towards the increase in frequency and/or intensity of many different types of climate extremes, including land and marine heatwaves, short-term heavy rain, and further amplification of se level rise, the loss of glaciers and Arctic Sea ice, among other impacts in the physical (IPCC 2021), biological and socioeconomic world (IPCC 2022).

- 452 It follows that the Commonwealth's contributions to global GHG emissions, from 2014 onwards, are inextricable contributions to the cause of the impacts of climate change. The cause is global temperature increase.
- In his principal report, Professor Meinshausen was asked to calculate the remaining cumulative (that is, global) greenhouse gas emissions until 2050, consistent with a CO₂ budget to limit global temperature increase to 1.5°C above pre-industrial levels, as of 2014.⁸⁹⁴ He commenced by taking the IPCC's assessment in the Sixth Assessment Report of the remaining CO₂ budget to limit warming relative to 1850–1900 to less than 1.5°C with a 50% chance to be 500Gt of CO₂ from the beginning of 2020.⁸⁹⁵ He then adjusted this budget to correspond to the "pre-industrial" baseline,⁸⁹⁶ and added historical emissions from 2014–2020 to arrive at a CO₂ budget from the start of 2014 of 595 GtCO₂.⁸⁹⁷ Based on the relationship between cumulative CO₂ emissions and cumulative

⁸⁹⁰ APP.0001.0003.0093 Exhibit A40, Karoly Report [24]–[27].

⁸⁹¹ APP.0001.0003.0093 Exhibit A40, Karoly Report [26]; APP.0001.0015.0010 Exhibit A46 Meinshausen

Supplementary Report [26]; see also TRN.0015.1271 16 November 2023, Professor Pitman, T1329:35.

EXP.2000.0001.0196 Exhibit R13, Canadell Report [10].
 EXP.2000.0001.0196 Exhibit R13, Canadell Report [10].

⁸⁹³ EXP.2000.0001.0196 Exhibit R13, Canadell Report [10].

⁸⁹⁴ APP.0001.0009.0001 Exhibit A45, Meinshausen Report Q.4 (p 15).

⁸⁹⁵ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [39].

⁸⁹⁶ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [40].

⁸⁹⁷ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [41].

GHG emissions stablished in the Sixth Assessment Report, and correcting for accounting conventions and international aviation and shipping,⁸⁹⁸ Professor Meinshausen determined that the remaining global cumulative greenhouse gas emissions until 2050 consistent with limiting global temperature increase to 1.5°C above pre-industrial levels was 823GtCO₂-eq.⁸⁹⁹

- 454 Professor Meinshausen's report explained the three broad kinds of methodologies discussed in the international literature for determining national shares of the global carbon budget.⁹⁰⁰ The approach that would afford a nation such as Australia the *highest* share of emissions in the budget is known as "grandfathering" that is, nations with historically high *per capita* emissions are allocated more emissions than would be allocated under an equal *per capita* methodology, to permit a "smooth" transition to a net-zero economy that avoids economic shocks.⁹⁰¹
- 455 As addressed above at [130]-[134], Professor Meinshausen concludes that Australia's emissions targets, throughout the relevant period, are inconsistent with any calculation of Australia's share of the global CO2 budget. Even applying grandfathering, which does not incorporate concepts of equity required under the Paris Agreement, Australia's emissions targets are inconsistent with a 1.5°C world.
- 456 In response, the Commonwealth asked Dr Canadell to calculate how much less Australia's total GHG emissions would be from 2014 to date had the Climate Change Authority's grandfathering methodology been used to set an emissions target, and the corresponding reduction (or an avoided increase) in today's global mean surface temperature if those emissions had not occurred.⁹⁰² Professor Pitman opines that it is not possible to identify any specific effects on the Torres Strait from a temperature increase of that magnitude.⁹⁰³
- 457 However, as Professor Meinshausen's evidence demonstrates, assessing the impact of Australia's emissions through this lens is the incorrect approach and does *not* support the

⁸⁹⁸ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [43]–[44].

⁸⁹⁹ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [45].

⁹⁰⁰ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [52]–[57] and Figure 3.

⁹⁰¹ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [53]–[54].

⁹⁰² Dr Canadell calculated Australia's emissions would have been 485.75 MtCO₂-eq less, resulting in a 000218°C reduction in global mean surface temperature: EXP.2000.0004.0001 Canadell Supplementary Report [2].

⁹⁰³ EXP.2000.0001.0286 Exhibit R10, Pitman Report [41].

conclusion that Australia's emissions are not causally linked to the effects of climate change, or are immaterial. That is for three reasons.

458 First, the limit of our scientific capability to measure "the effect of individual underlying causes to a particular climate impact ... should not be used to justify an assumption that there is no effect".⁹⁰⁴ That is because:⁹⁰⁵

scientifically speaking, there is no question that any greenhouse gas emission causes radiative forcing, and — *in aggregate* — they then cause global-mean warming with various regional climate impacts, that might or might not be smaller or larger in magnitude than natural variability or our capability to directly measure the temperature change on site [emphasis added].

- 459 Further, the fact that climate models cannot yet separate out or differentiate between the impact of comparatively small increments of radiative forcing does not mean these increases do not have an effect. Professor Pitman accepted this in cross-examination.⁹⁰⁶
- 460 Second, the impacts of climate change are caused by the *total* or *aggregate* emissions of GHGs over time. That is common ground in this case.⁹⁰⁷ It follows that seeking to identify the impact of Australia's contributions to global GHG emissions in order to answer the binary question of whether Australia's emissions in excess of a certain amount caused a particular set of impacts is to ask the wrong question. The cause of the impacts of climate change is the aggregate of GHG emissions across the globe since the pre-industrial era.
- 461 Third, the evidence shows that Australia has made a material contribution to global GHG emissions in the period 2014–2022. In his Supplementary Report, Professor Meinshausen used the same approach as Dr Canadell to compute the temperature effect of the difference in emissions between, on one hand, the actual historical emissions of nations from 2014 to 2021, and on the other, their emissions if (counterfactually) each nation had committed to reaching net zero by 2024. The table showing the results of Professor Meinshausen's calculations shows that:⁹⁰⁸

⁹⁰⁴ APP.0001.0015.0010 Exhibit A46 Meinshausen Supplementary Report [8].

⁹⁰⁵ APP.0001.0015.0010 Exhibit A46 Meinshausen Supplementary Report [9].

⁹⁰⁶ TRN.0015.1271 16 November 2023, Pitman Report T1331:42–46.

⁹⁰⁷ APP.0001.0015.0010 Exhibit A46 Meinshausen Supplementary Report [9]; EXP.2000.0001.0286 Exhibit R10, Pitman Report [23]–[25].

APP.0001.0015.0010 Exhibit A46 Meinshausen Supplementary Report, Table 1.

- 461.1 if China reduced its emissions from 2014 to net zero in 2024, it would avoid 0.02°C of GHG-induced warming;
- 461.2 if the United States reduced its emissions from 2014 to net zero in 2024, it would avoid 0.0079°C of GHG-induced warming; and
- 461.3 if India reduced its emissions from 2014 to net zero in 2024, it would avoid 0.0053°C of GHG-induced warming.
- 462 Professor Meinshausen points out that even these extremely large emissions reductions would not necessarily result in any demonstrable links to specific impacts on the Torres Strait under current modelling techniques.⁹⁰⁹ If the Commonwealth's approach to causation were adopted, the upshot would be that no nation could bear responsibility for the impacts of climate change. This is precisely the kind of result that the *Bonnington Castings* line of cases seek to avoid.
- 463 Professor Meinshausen also calculated the "induced warming" caused by each nation's actual GHG emissions in the period 2014–2021 and ranks them. This shows that Australia ranks 17th in the world for its *absolute* contribution to global temperature increase in this period, and 11th for its *per capita* contribution. Further, the "ten countries with higher *per capita* emissions are countries with lower absolute emissions".⁹¹⁰ Australia's *per capita* contribution is higher than that of all of the countries with higher absolute contributions, including China, the United States, India, Indonesia and the Russian Federation. In this context, it cannot be said that Australia's contribution to GHG emissions and therefore global temperature increase is immaterial.
- 464 If Australia had reduced its GHG emissions in accordance with a 0.97% share of the global remaining budget as of 2014, the avoided emissions between 2014 to 2021 of 307.63 MtCO₂-eq⁹¹¹ would represent a reduction of 8% compared to Australia's actual emissions during this period.⁹¹² That is a significant reduction.⁹¹³

⁹⁰⁹ APP.0001.0015.0010 Exhibit A46 Meinshausen Supplementary Report [23]–[25]; cf EXP.2000.0001.0286 Exhibit R10, Pitman Report [44]–[45].

⁹¹⁰ APP.0001.0015.0010 Exhibit A46 Meinshausen Supplementary Report [21].

⁹¹¹ EXP.2000.0001.0196 Exhibit R13, Canadell Report, Table 4.

⁹¹² 307.63 MtCO₂-eq as a percentage of 3986 MtCO₂-eq (see APP.0001.0015.0010 Exhibit A46 Meinshausen Supplementary Report, Table 1, Column A).

⁹¹³ Professor Meinshausen calculations in his Supplementary Report are based upon the calculations in Dr Canadell's Report. However, Dr Canadell's Supplementary Report includes corrections significantly increasing the avoided emissions in his calculations, so that percentage reduction of avoided emissions would be even greater than 8%. EXP.2000.0004.0001 Canadell Supplementary Report [2]-[3]. See also *Gloucester Resources Ltd v Minister for*

- 465 Additionally, the degree of impact caused by the Commonwealth's breaches is increased because of the negative influence of the Commonwealth's emissions ambition of other countries. In cross-examination, Ms Kelly Pearce agreed with the propositions that:
 - 465.1 "A stronger Australian target could have a positive influence on the actions of other countries by demonstrating that emissions intensive economies can pursue and achieve ambitions targets. Conversely, other countries could use weak Australian action as a reason to delay stronger climate measures";
 - 465.2 "Countries could use the absence of action in another country as a reason to delay further action or defer existing commitments"; and
 - 465.3 "Drawing back from our international commitments is likely to have a negative influence, an effect heightened by Australia's high level of development."⁹¹⁴
- 466 For those reasons, the Applicants submit that the Commonwealth's breaches of the Primary Duty of Care materially contributed to the harm suffered by the Applicants and is likely to materially contribute to future harm.

(2) Material increase in risk of harm occurring (Fairchild)

- 467 In the alternative, the Applicants submit that the Commonwealth's breaches constitute a material increase in the risk of future harm to the Applicants and, to that extent, material increase in the risk of harm occurring ought to be recognised as a form of causation in the exceptional circumstances of this case. That is particularly so to the extent that the Commonwealth's breaches make it more likely that a tipping point will be reached.
- 468 In Sharma, Beach J considered in obiter that the Bonnington Castings approach had no application to a tipping point analysis. In summary, the Applicants in that case had contended that the CO₂ from GHG emissions creates the risk of reaching one or more tipping points. If the tipping point is reached, there is a risk that non-linear effects will cause the temperature to proceed from 2°C to 4°C above the baseline by 2100. If that occurs, the personal injury to members of the claimant class or some of them may occur. On the Applicants' case, the GHG emissions increased the likelihood or risk of producing

Planning (2019) 234 LGERA 257, [515] and [556] in which Preston CJ found that emissions of 37.8 MtCO₂-eq was a 'sizeable individual source of GHG emissions' and a 'meaningful amount of GHG emissions' and one reason to refuse the coal mine application in that case. See also APP.0001.0020.0183 *Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors (No 6)* [2022] QLC 21 [774]-[775].

the tipping point. For that reason, his Honour considered that the risk of harm arising from reaching the tipping point was more appropriately analogous with the *Fairchild* line of cases, rather than *Bonnington Castings*.⁹¹⁵

- 469 The Applicants accept that proving that the Commonwealth's breaches have contributed to an increased likelihood of tipping points occurring is more analogous to the *Fairchild* line of cases. That is because the Commonwealth's breaches of the Primary Duty of Care have not only, and will not only, increased global temperatures, but that that temperature increase itself increases the risk of triggering tipping points.
- 470 Therefore, the Applicants formally submit that causation in this case with respect to future harm can alternatively be proved by evidence that the Commonwealth's breaches materially increased the risk of harm to the Applicants, insofar as the Applicants' case relates to the risk of triggering tipping points causing more catastrophic harm than if no tipping points were triggered. The question of whether or not the approach in *Fairchild* forms part of the common law of Australia has been left open by the High Court.⁹¹⁶
- 471 It has been acknowledged that "the common law is going to have to evolve to deal with scenarios such as [multiple contributors to climate change]".⁹¹⁷ The material contribution to risk test is one such appropriate evolution.
- 472 In *Sharma*, Wheelahan J posited that any development of common law principles of causation in negligence to accommodate the *Fairchild* principle, or the contribution of insufficient causes to an end result, would have to confront an array of significant consequential issues, including whether the alleged tortfeasor is to be liable in solidum with any other tortfeasors for the whole of the damage, or only for some proportion.⁹¹⁸
- 473 Such consequential issues are, it is submitted, taken into account in the "normative" analysis required by s 11(2) and (4) (discussed below).

⁹¹⁵ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* (2022) 291 FCR 311, 425-426 [433]-[436] (Beach J).

⁹¹⁶ APP.0001.0020.0022 Bennett v Minister for Community Welfare (1992) 176 CLR 408, 416 (Mason CJ, Deane and Toohey JJ); APP.0001.0020.0196 Amaca Pty Ltd v Ellis (as executor of the estate of Cotton (dec'd)) (2010) 240 CLR 111, [12] (the Court).

⁹¹⁷ APP.0001.0020.0101 Minister for the Environment (Cth) v Sharma (2022) 291 FCR 311, 428 [440] (Beach J).

⁹¹⁸ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* (2022) 291 FCR 311, 529 [882] (Wheelahan J).

Why responsibility for harm should be imposed on Commonwealth

474 Sections 11(2) and 11(4) of the CLA require the Court to consider whether or not, and if so why, responsibility for the harm should be imposed on the negligent party. The Applicants acknowledge that causation in the context of global climate change presents a novel set of problems for the common law to deal with. But that, in itself, is not a new phenomenon. As the Supreme Court of New Zealand recently held in the context of reinstating a claim based on public nuisance arising from greenhouse gas emissions:⁹¹⁹

The common law has not previously grappled with a crisis as all-embracing as climate change. But in the 19th and early 20th centuries it had to deal with another existential crisis, albeit one of lesser scale, when the industrial revolution dramatically enlarged the risk of accidents through the mechanisation of factories, transportation and mining. The law's response was a mixture of the flawed (e.g. the common employment rule restricting claims by employees for injury) and the inspired (e.g. the duty of care based on neighbourhood, expounded by Lord Atkin in *Donoghue v Stevenson*).

- 475 Against this background, Applicants submit that the following normative factors tend strongly in support of imposing responsibility for the harm on the Commonwealth.
- 476 First, the salient features that point in favour of recognising a duty of care owed by the Commonwealth also support the proposition that the Commonwealth should be held responsible for the harm. Specifically:
 - 476.1 the Commonwealth has a significant degree of control over the risk of harm that Torres Strait Islanders are exposed to as a result of climate change;⁹²⁰
 - 476.2 Torres Strait Islanders are especially vulnerable to the risk of harm as a result of climate change;⁹²¹ and
 - 476.3 there is a special and distinctive historical and legal relationship between the Commonwealth and the people of the Torres Strait.⁹²²
- 477 Secondly, the collective nature of the cause of climate change-related harms, and Australia's disproportionate contribution to that cause, warrants recognition. As submitted above, global temperature increase occurs as a result of aggregate emissions of GHGs. Every nation, and therefore every national government, has contributed to

⁹¹⁹ APP.0001.0020.0153 Smith v Fonterra Co-operative Group Limited (2024) NZSC 5 at [156].

⁹²⁰ See above at [225]-[242].

⁹²¹ See above at [215]-[224].

⁹²² See above at [180]-[190].

global GHG emissions, and therefore to the impacts of climate change wherever (and whenever) they occur. But Australia's contribution has been vastly disproportionate to our population. As Professor Meinshausen's analysis demonstrates,⁹²³ Australia's GHG emissions from 2014 to 2021 resulted in *per capita* warming that ranked 11th in the world (out of 205 countries), and 17th in absolute terms. That is a startlingly outsized contribution from our small nation.

- 478 Thirdly, and relatedly, the Commonwealth's breach of the Primary Duty of Care is not cast as a failure to mitigate all GHG emissions from a particular point in time, but rather GHG emissions from 2014 that reflect a reduction target that is established in accordance with any sensible approach to global carbon budgeting. As Professor Meinshausen's report demonstrates, the best available science allows for calculation of a cumulative "budget" for greenhouse gas emissions until 2050 that is consistent with a 50% probability of limiting global temperature increase to 1.5°C above pre-industrial levels.⁹²⁴ The next question is how that global budget is to be allocated between nations. There are three approaches for doing this that have been dominant in the scholarly literature.⁹²⁵ None of Australia's 2030 target, its updated 2030 target, or its 2050 target are consistent with any accepted approach to allocating responsibility for emissions reduction.⁹²⁶ Professor Meinshausen estimates that Australia's 2030 target would have used up Australia's allocation of the remaining 1.5°C budget by 2030, and the updated 2030 target does not provide a practically feasible pathway to remain within the budget by 2033.927 If other countries exceeded their budgets in the same manner, then the prospects of remaining within the global budget would disappear. Recognising Australia's causal contribution to the impacts of climate change accords with basic notions of equity.
- 479 Fourthly, imposing responsibility on the Commonwealth would further the human rights of Torres Strait Islanders as recognised under the *Human Rights Act 2019* (Qld) (*HRA*). That is for the following reasons.
 - 479.1 The HRA provides that "All individuals in Queensland have human rights."⁹²⁸ Those human rights are those defined in Divisions 2 and 3 of Part 2 of the HRA.

⁹²³ APP.0001.0015.0010 Exhibit A46 Meinshausen Supplementary Report, Table 1.

⁹²⁴ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [38]-[47].

⁹²⁵ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [53].

⁹²⁶ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [72]-[74].

⁹²⁷ APP.0001.0009.0001 Exhibit A45, Meinshausen Report [73]-[74].

⁹²⁸ APP.0001.0021.0014 Human Rights Act 2019 (Qld) ('HRA') s 11.
In *Waratah* Coal Pty Ltd v Youth Verdict Ltd & Ors (No 6),⁹²⁹ the President of the Land Court of Queensland (Kingham P) analysed in detail the human rights implications of a decision to approve a thermal coal mine in the Galilee Basin. In brief summary, her Honour concluded that the impacts of climate change would limit the following human rights under the *HRA*:

- (a) <u>The right to life, and not to be arbitrarily deprived of life (s 16)</u>: Because climate change "at any level will limit the right to life to some extent and is already doing so", approving the project "would contribute to foreseeable and preventable life-terminating harm" that was not outweighed by projected economic benefits of the project.⁹³⁰
- (b) <u>The cultural rights of Aboriginal and Torres Strait Islander peoples (s 28)</u>: Because the Torres Strait Islands are at a significantly increased risk of damaging coastal floods and storm surges,⁹³¹ and because of the "distinct significance" of the right protected by s 28(2)(e) to conserve and protect the environment in light of First Nations' witnesses active commitment to and participation in caring for country,⁹³² "climate change impacts will have a profound impact on cultural rights and, for some peoples who will be displaced from their country, it risks the survival of their culture, the very thing s 28 is intended to protect."⁹³³ Her Honour noted in particular that the "Torres Strait Island peoples face an existential risk from sea level rise."⁹³⁴ Again, these factors were not outweighed by projected economic benefits of the project.⁹³⁵
- (c) <u>The rights of children (s 26(2))</u>: The rights of children would be limited by approval of the project "because of the vulnerability of children to climate change impacts and the disproportionate burden those impacts will have on children today and in the future".⁹³⁶

⁹²⁹ APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21.

⁹³⁰ APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21 at [1512]–[1513].

⁹³¹ APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21 at [1544].

APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21 at [1557].
 APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Vardict Ltd & Ors [2022] OLC 21 at [1555].

APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21 at [1565].
 APP.0001.0020.0182 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] OLC 21 at [1565].

⁹³⁴ APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21 at [1568].

APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21 at [1566].
 APP.0001.0020.0182 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] OLC 21 at [1586].

⁹³⁶ APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21 at [1586].

- (d) <u>The right to property (s 24(2))</u>: The evidence included estimations regarding the increased annual cost or value loss of property in Queensland due to climate change impacts (some \$1.512 billion), which was evidence of limitation of the right to property.⁹³⁷
- (e) <u>The right to privacy and home (s 25(a))</u>: This right was limited in particular because there was evidence of "plans to relocate up to 2,000 people from the Torres Strait" as a result of sea level rise, and accordingly that "[c]limate change "presents a real and serious risk to the homes of residents of the Torres Strait".⁹³⁸
- (f) <u>The right to enjoy human rights without discrimination (s 15(2))</u>: The human rights consequences of climate change would fall disproportionately on the young and old, and especially on First Nations people due to their heightened vulnerabilities to health-related impacts and the impact on cultural rights.⁹³⁹
- 479.2 Based on this analysis, her Honour concluded that:⁹⁴⁰

[T]he Project would impair the ability of the identified groups from retaining the benefit of the individual rights engaged by the Project. The evidence about the economic and other benefits of the Project is not cogent and persuasive in justifying the limit.

- 479.3 *Waratah* powerfully illustrates that the impacts of climate change will limit the human rights of all Queenslanders and especially Torres Strait Islanders that are protected under the *HRA*. Holding the Commonwealth responsible for its contribution to the impacts of climate change is therefore consistent with the protection and promotion of those human rights under the statute law of Queensland.
- 479.4 To be clear, the Applicants do not here make a submission concerning the interpretation of the CLA in accordance with section 48 of the *HRA*, nor make any contention that this Court is a public authority bound by the *HRA* to act compatibly with human rights (cf section 58(1)).

⁹³⁷ APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21 at [1614].

⁹³⁸ APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21 at [1626], [1628].

⁹³⁹ APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21 at [1646]–[1653].

⁹⁴⁰ APP.0001.0020.0183 Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors [2022] QLC 21 at [1657].

- 480 Fifthly, imposing responsibility on the Commonwealth would be consistent with foreign decisions that have held national governments accountable for harm caused, or to be caused, by climate change, even while acknowledging that each nation's contribution was individually small. For example:
 - 480.1 In *Urgenda Foundation v The State of the Netherlands*, the Hague District Court, in its assessment of the State's tortious liability, found that, "a sufficient causal link can be assumed to exist between the Dutch greenhouse gas emissions, global climate change and the effects (now and in the future) on the Dutch living climate. The fact that the current Dutch greenhouse gas emissions are limited on a global scale does not alter the fact that these emission contribute to climate change."⁹⁴¹ The Court reached this conclusion based on an analysis of: (i) the nature and extent of the damage caused by climate change and the foreseeability of the risks, (ii) the nature of the acts and omissions of the State (in relation to the extent of its GHG emissions reduction), (iii) the onerousness of precautionary measures, the (iv) discretion of the State to execute its public duties, (v) attributability and (vi) damages. The Dutch Supreme Court upheld the lower court's decision and findings in respect of tortious liability.
 - 480.2 The Hague District Court made clear that the Government is required to do its part to mitigate climate change, even if it is only responsible for generating a small share of global GHG emissions.⁹⁴² The Dutch Supreme Court expanded this reasoning (albeit with a focus on causation in the context of human rights).⁹⁴³ It stated that relevant obligations under the European Convention of Human Rights oblige the Dutch State to do its part to combat dangerous climate change.⁹⁴⁴ The Supreme Court determined that every State has an obligation to do what is necessary to combat climate change:⁹⁴⁵

⁹⁴¹ APP.0001.0020.0174 Urgenda Foundation v The State of The Netherlands (2015) ECLI:NL:RBDHA:2015:7196 (official translation) (District Court) [490].

⁹⁴² APP.0001.0020.0174 Urgenda Foundation v The State of The Netherlands (2015) ECLI:NL:RBDHA:2015:7196 (official translation) (District Court) [479].

⁹⁴³ APP.0001.0020.0157 State of the Netherlands (Ministry of Economic Affairs and Climate Policy) v Stichting Urgenda (2019) ECLI:NL:HR:2019:2007 (official translation) (Supreme Court of the Netherlands, Civil Division).

APP.0001.0020.0157 State of the Netherlands (Ministry of Economic Affairs and Climate Policy) v Stichting
 Urgenda (2019) ECLI:NL:HR:2019:2007 (official translation) (Supreme Court of the Netherlands, Civil Division)
 [5.7.1].

APP.0001.0020.0157 State of the Netherlands (Ministry of Economic Affairs and Climate Policy) v Stichting
 Urgenda (2019) ECLI:NL:HR:2019:2007 (official translation) (Supreme Court of the Netherlands, Civil Division)
 [5.7.4].

"The Netherlands is obliged to do 'its part' in order to prevent dangerous climate change, even if it is a global problem. The UNFCCC is based on the idea that climate change is a global problem that needs to be solved globally. Where emissions of greenhouse gases take place from the territories of all countries and all countries are affected, measures will have to be taken by all countries. Therefore, all countries will have to do the necessary [...] in accordance with its specific responsibilities and capabilities."⁹⁴⁶

- 480.3 In the *Klimaatzaak Appeal*, the Brussels Court of Appeal held that Belgian government authorities violated tortious provisions of the Belgian Civil Code. In considering causation, the Court noted that, "if the damage suffered has been caused by several concurrent faults, each of the authors is liable for the reparation of the entire damage".⁹⁴⁷ To exclude a causal link, the judge must, "be able to say that, without the fault, the damage would nevertheless have occurred as it did [...] all other conditions of damage being identical."⁹⁴⁸ The Court held that a causal link between the faults and the damage by reference to three time periods grouped by (i) damage that has already materialised (ii) damage that is unavoidable, but has not fully materialised yet and (iii) damage which is avoidable because emissions have not yet taken place. In so doing, the Court was clear that the government authorities may still be held liable for their actions, even if Belgium's emissions are small at the global scale. The Court stated that, "[it] is clear from the latest IPCC reports that every GHG emission counts and has an impact on global warming, since it reduced the residual carbon budget at world level".⁹⁴⁹
- 480.4 In *Notre Affaire à Tous*, the Paris Administrative Court concluded that there was a causal link between the French Government's conduct and harms suffered by the applicants that are attributable to climate change. In its decision, the Court endorsed the findings of the Public Rapporteur, who was appointed to provide a non-binding legal opinion to the Court. The Public Rapporteur's opinion was that State has a duty to do its part to mitigate climate change, despite the fact that France has an individually small contribution to global emissions:

⁹⁴⁶ APP.0001.0020.0157 State of the Netherlands (Ministry of Economic Affairs and Climate Policy) v Stichting Urgenda (2019) ECLI:NL:HR:2019:2007 (official translation) (Supreme Court of the Netherlands, Civil Division) [5.7.1]–[5.7.2].

⁹⁴⁷ APP.0001.0020.0176 VZW Klimaatzaak v Kingdom of Belgium & Others [2021] Belgium, Court of First Instance of Brussels (unofficial translation) [222].

⁹⁴⁸ APP.0001.0020.0176 VZW Klimaatzaak v Kingdom of Belgium & Others [2021] Belgium, Court of First Instance of Brussels (unofficial translation) [222].

⁹⁴⁹ APP.0001.0020.0176 VZW Klimaatzaak v Kingdom of Belgium & Others [2021] Belgium, Court of First Instance of Brussels (unofficial translation) [233].

"[E]ach country is responsible for reducing its GHG emissions in proportion to its share of responsibility. When we reason on the scale of the territory and the Rté de la France [responsibility of France], we believe that this co-responsibility does not dissolve the causal link between the ecological damage and the action of the French State alone.⁹⁵⁰

- 481 Finally, as explained at [439] above, the normative inquiry includes considerations of foreseeability and remoteness. As Beach J has recently explained, "[r]emoteness concerns whether the kind of damage suffered was foreseeable as a possible outcome of the kind of carelessness charged against the defendant".⁹⁵¹
- 482 The Commonwealth contends that because Australia contributes a small proportion of global GHG emissions, it is not reasonably foreseeable that the Commonwealth's conduct in determining its GHG emissions reductions targets would cause the Applicants and Group Members harm.⁹⁵²
- 483 A similar argument on behalf of the Commonwealth was rejected by a majority in *Sharma*.⁹⁵³ As held by Allsop CJ:⁹⁵⁴

"That it can never be proved that a small contribution to the risk was the contribution which caused the harm is no reason for not imposing a duty to act reasonably not to increase the risk if there is a real and not fanciful possibility that the contribution in question may cause or materially contribute to the harm.

• • •

...one cannot say that there is no reasonable foreseeability of harm to the Children from the release of emissions caused by the combustion of the coal mined made available by the decision [to approve the coal mine]."

484 In the same way, and as explained at [275439] above, there was a real and not fanciful possibility that the Commonwealth's decision not to set a best available science target materially contributed, and may materially contribute, to the impacts of climate change

⁹⁵⁰ APP.0001.0020.0118 Notre Affaire à Tous and Others v France (2nd Decision) [2021] No 1904967 1904968 1904972 19049764-1 Unoff Transl (Administrative Court of Paris) Opinion of the Public Rapporteur, Amélie Fort-Besnard, 20.

⁹⁵¹ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* (2022) 291 FCR 311, [421] (Beach J).

⁹⁵² Amended Concise Statement in Response, [4].

⁹⁵³ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* (2022) 291 FCR 311, 410 [329]–[332] (Allsop CJ), 424 [423] and 428 [440] (Beach J).

⁹⁵⁴ APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* (2022) 291 FCR 311, 410 [329] and [332] (Allsop CJ).

and therefore the harm to the Applicants. Remoteness or foreseeability is not a reason to diminish the Commonwealth's responsibility.

485 For those reasons, the Applicants submit that causation with respect to the Primary Duty of Care has been established.

I. REMEDIES

486 The Applicants seek declaratory and injunctive relief, as well as damages. Each of the three forms of remedy is discussed further below.

Declarations

487 By their amended originating application dated 7 October 2022, the Applicants sought two declarations in respect of the Primary Duty:

1. A declaration that the Commonwealth owes a duty of care to Torres Strait Islanders, including the Applicants and the Group Members, to take reasonable steps to:

a. protect Torres Strait Islanders; and/or

b. protect Torres Strait Islanders' traditional way of life, including taking steps to preserve *Ailan Kastom*; and/or

c. protect the marine environment in and around the Protected Zone, including the Torres Strait Islands;

from the Current and Projected Impacts of Climate Change in the Torres Strait Islands (**Duty** of Care).

2. A declaration that the Commonwealth is in breach of the Duty of Care.

488 The Court's power under s 21 of the *Federal Court of Australia Act 1976* (Cth) to grant declaratory relief in civil proceedings is 'undoubtedly wide'.⁹⁵⁵ The judicial power to make a declaration 'is a large and most useful one'.⁹⁵⁶ The High Court has explained that 'It is a discretionary power which "(i)t is neither possible nor desirable to fetter ... by

APP.0001.0020.0101 Minister for the Environment v Sharma [2022] FCAFC 35; (2022) 291 FCR 311, [781]
 (Wheelahan J); APP.0001.0021.0013 Federal Court of Australia Act 1976 (Cth).

APP.0001.0020.0035 Commonwealth v Sterling Nicholas Duty Free Pty Ltd [1972] HCA 19; (1972) 126 CLR 297, 305 (Barwick CJ).

laying down rules as to the manner of its exercise."⁹⁵⁷ Ultimately, the considerations confining the power to make declarations are only those 'which mark out the boundaries of judicial power'.⁹⁵⁸ With that in mind, the Court should make the declarations sought by the Applicants for the following reasons.

- 489 *First*, the declarations 'will settle the dispute finally'⁹⁵⁹ as between the Applicants and the Respondent as to the existence of the duties of care. That is because the declaration of duty and breach (for each of the duties) will be 'based on a concrete situation and ... amount[s] to a binding decision raising a *res judicata* between parties'.⁹⁶⁰ In circumstances where the parties through their pleadings and evidence have squarely joined issue on the existence and breach of the duties, there is a public interest in this Court giving binding effect to its resolution of the issues litigated between the parties in declarations: 'it is desirable that there should be an authoritative resolution of the dispute presented to the Court'.⁹⁶¹
- 490 *Second*, and relatedly, unlike in *Sharma*, here the Applicants have shown both the existence of the duties and the Respondent's *breaches of them*. There is no request to this Court to declare a duty 'in the ether', but rather in the 'known world of breach, causation and damage'.⁹⁶² Given that in this case 'the relevant circumstances pertaining to the relationship' have 'crystallised', there is no prudential reason to refrain from declaring the existence of the duty.⁹⁶³
- 491 *Third*, again in contrast to *Sharma*, there is nothing 'interlocutory' about the declarations sought in this case.⁹⁶⁴ Rather, the declarations will be made after the question of liability

 ⁹⁵⁷ APP.0001.0020.0006 Ainsworth v Criminal Justice Commission [1992] HCA 10; (1992) 175 CLR 564, 582–3
 (Brennan J) quoting Forster v Jododex Aust Pty Ltd [1972] HCA 61; (1972) 127 CLR 421, 437 (Gibbs J).

⁹⁵⁸ APP.0001.0020.0006 *Ainsworth v Criminal Justice Commission* [1992] HCA 10; (1992) 175 CLR 564, 582–3 (Brennan J).

⁹⁵⁹ APP.0001.0020.0019 Bass v Permanent Trustee Co Ltd [1999] HCA 9; (1999) 198 CLR 334, [48] (Gleeson CJ, Gaudron, McHugh, Gummow, Hayne and Callinan JJ, citation omitted) quoting Zamir & Woolf, The Declaratory Judgment, 2nd ed (1993) at 132.

⁹⁶⁰ Contrast APP.0001.0020.0019 *Bass v Permanent Trustee Co Ltd* [1999] HCA 9; (1999) 198 CLR 334, [48] (Gleeson CJ, Gaudron, McHugh, Gummow, Hayne and Callinan JJ).

⁹⁶¹ APP.0001.0020.0003 *AWB Ltd v Cole (No 6)* [2006] FCA 1274; (2006) 235 ALR 307, [5] (Young J).

APP.0001.0020.0101 *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [538] (Beach J).
 APP.0001.0020.0101 Cf Minister for the Environment (Cth) v Sharma [2022] ECAFC 35; (2022) 400 ALR 203, [538]

⁹⁶³ APP.0001.0020.0101 Cf *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203, [760] (Wheelahan J).

APP.0001.0020.0101 Cf *Minister for the Environment (Cth) v Sharma* [2022] FCAFC 35; (2022) 400 ALR 203,
 [778]–[780] (Wheelahan J), citing APP.0001.0020.0065 *Graham Barclay Oysters Pty Ltd v Ryan* [2002] HCA 54;
 (2002) 211 CLR 540, [128] (Gummow and Hayne JJ).

has been finally determined, including a finding of damage to Group Members.⁹⁶⁵ The making of the declarations as to the existence of the duties, and the Commonwealth being in breach, is also desirable to give effect to the statutory scheme for group proceedings by maximising the utility of the s 33ZB procedure.⁹⁶⁶

- 492 *Finally*, the utility of the declarations in this case is underscored by the fact that they are sought against the Executive. Even absent a coercive effect, the declarations can be expected to mould the Executive's future conduct.⁹⁶⁷ In this respect, analogy can be drawn with the ability of courts to make declarations about future conduct (although the Applicants do not ask the Court to go so far in this case) of which it has been said '[the] capacity of courts to declare that conduct, which has not yet taken place, will or will not be in breach of the law "contributes enormously to the utility of the jurisdiction".⁹⁶⁸
- 493 Accordingly, there is no discretionary reason for the Court to refuse the declarations sought by the Applicants. Rather, the Court should make the declarations to vindicate the Applicants' having made good their claim and to prevent re-litigation.⁹⁶⁹

Injunctive relief

- 494 By their amended originating application dated 7 October 2022, the Applicants seek an injunction to require the Commonwealth to implement such reasonable measures as are necessary to:
 - 494.1 protect the Torres Strait Islands and the cultural and customary rights of Torres Strait Islanders from GHG emissions;

⁹⁶⁵ APP.0001.0020.0048 Dovuro Pty Ltd v Wilkins [2003] HCA 51; (2003) 215 CLR 317, [143]–[144] (Hayne and Callinan JJ). See also Australian Competition and Consumer Commission v Cement Australia Pty Ltd [2014] FCA 148, [10]–[11] (Greenwood J).

APP.0001.0020.0088 Lloyd v Belconnen Lakeview Pty Ltd (No 2) [2020] FCA 698, [1] (Lee J). This point not criticised on appeal: APP.0001.0020.0020 Belconnen Lakeview Pty Ltd v Lloyd [2021] FCAFC 187; (2021) 156 ACSR 273, [108] (the Court).

⁹⁶⁷ APP.0001.0020.0059 Franklin v The Queen (No 2) [1974] QB 205, 218; APP.0001.0020.0034 Commissioner of Taxation v Indooroopilly Children Services (Qld) Pty Ltd [2007] FCAFC 16; (2007) 158 FCR 325, [3]–[7] (Allsop J, Stone and Edmonds JJ agreeing at [1] and [48]). See also APP.0001.0020.0040 Davies v Minister for Urban Development and Planning [2011] SASC 87; (2011) 109 SASR 518, [24] (Bleby J); APP.0001.0020.0057 Fauna and Flora Research Collective Inc v Secretary to the Department of Environment, Land, Water and Planning [2018] VSC 366, [24] (Keogh J); Kristen, Walker, 'When can a Court's Decision be Ignored?' 46(2) Melbourne University Law Review 572, 586–7.

⁹⁶⁸ APP.0001.0020.0075 *IMF (Aust) Ltd v Sons of Gwalia Ltd* [2004] FCA 1390; (2004) 211 ALR 231, [44] (French J) quoting APP.0001.0020.0035 *Commonwealth v Sterling Nicholas Duty Free Pty Ltd* [1972] HCA 19; (1972) 126 CLR 297, 305 (Barwick CJ).

 ⁹⁶⁹ Cf APP.0001.0020.0149 Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for Environment [2021] FCA 560; (2021) 391 ALR 1, [515] (Bromberg J). See also APP.0001.0020.0030 Carnie v Esanada Finance Corporation Ltd [1995] HCA 9; (1995) 182 CLR 398, 423–4 (Toohey and Gaudron JJ, Mason CJ, Deane and Dawson JJ agreeing).

494.2 reduce Australia's GHG emissions consistent with Best Available Science; and 494.3 otherwise avoid injury and harm to Torres Strait Islanders, from such emissions.

- 495 The scope of injunctive relief can be determined with reference to the accepted standard of care. As set out at [82] of the 3FASOC, those reasonable measures required of the Commonwealth referred to above necessarily include steps to ensure that, having regard to the Best Available Science, it:⁹⁷⁰
 - 495.1 Identifies the Global Temperature Limit necessary to prevent or minimise many of the most dangerous Current and Projected Impacts of Climate Change to small and low-lying islands, such as the Torres Strait Islands;
 - 495.2 Identifies a Best Available Science Target reflecting the Global Temperature Limit identified above to prevent or minimise the Current and Projected Impacts of Climate Change in the Torres Strait Islands; and
 - 495.3 Implements such measures as are necessary to reduce Australia's GHG emissions consistent with the Best Available Science Target identified above.
- 496 The Applicants have already pointed to evidence above at Part C as to the harms they have suffered, and are at risk of suffering, as a result of the Commonwealth's breaches of the Primary Duty. It should be uncontentious that where a person can show 'threatened harm from threatened negligent conduct' an 'injunction will be to restrain breach and so restrain foreseeable caused harm.'⁹⁷¹
- 497 That is what the Applicants seek here. They do not seek an injunction to require the Respondent to set a particular GHG target nor dictate how to achieve it. Rather, they seek injunctions correlative to the Primary Duty.
- 498 Were the Court to grant such relief, the Commonwealth would retain the appropriate flexibility befitting a government actor in determining how to fulfil its duty⁹⁷² that is,

⁹⁷⁰ APP.0001.0015.0003 3FASOC [81].

⁹⁷¹ APP.0001.0020.0101 Minister for the Environment (Cth) v Sharma [2022] FCAFC 35; (2022) 400 ALR 203, [296] (Allsop CJ). See also APP.0001.0020.0126 Plaintiff S99/2016 v Minister for Immigration and Border Protection [2016] FCA 483; (2016) 243 FCR 17, [469], [474] (Bromberg J), quoting JD Heydon, MJ Leeming & PG Turner, Meagher, Gummow & Lehane's Equity: Doctrines and Remedies (5th ed., 2015)) [21-105].

APP.0001.0020.0149 Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for the Environment [2021] FCA 560; (2021) 391 ALR 1, [501]–[502] (Bromberg J). See, in a different context, APP.0001.0020.0121 Patrick Stevedores Operations No 2 Pty Ltd v Maritime Union of Australia [1998] HCA 30; (1998) 195 CLR 1, [54], [61] (Brennan CJ, McHugh, Gummow, Kirby and Hayne JJ).

how to fix GHG targets consistently with the best available science and reduce emissions accordingly. This approach has also been reflected internationally in the Dutch *Klimaatzaak Appeal*.⁹⁷³ There, the Court of Appeal ordered Belgian public authorities amend their 2030 NDCs to at least a 55% reduction from 1990 levels. In discussing the power to make such an order to remedy unlawful conduct, the Court said mandatory orders of this kind, '... cannot in fact deprive the public authority of the choice of measures to be implemented to achieve the ordered result.'⁹⁷⁴ The Court of Appeal also assessed whether – in particular under tort law – it would be appropriate to seek injunctive relief to prevent 'damage (so-called dangerous global warming and excessive damage to the residual carbon budget) [that] has not yet occurred'.⁹⁷⁵ The Court found in the affirmative, concluding 'in the current state of positive law, an action to prevent future damage is admissible when the fault has already been committed and the damage is sufficiently serious.'⁹⁷⁶

- 499 The principles guiding the Court's discretion as to the grant of such an injunction are well settled in Australia.
- 500 *First*, the Applicants must show an apprehended breach of a legal right. It will be all the more easy, 'as a matter of evidence', to show that when, as here, the Respondent has recently engaged in a breach of that right and/or is in continued breach of it.⁹⁷⁷ (However, the absence of past harm does not prevent the granting of an injunction.⁹⁷⁸) Here, there has been a long and persistent breach of the duty.⁹⁷⁹
- 501 *Second*, the Applicants 'must show that what the respondent is threatening and intending to do will cause [them] imminent and substantial damage''.⁹⁸⁰ The concept of

⁹⁷³ APP.0001.0020.0175 VZW Klimaatzaak v Kingdom of Belgium & Others [2023] Belgium, Court of Appeal (unofficial translation).

⁹⁷⁴ APP.0001.0020.0175 *VZW Klimaatzaak v Kingdom of Belgium & Others* [2023] Belgium, Court of Appeal (unofficial translation), [271].

⁹⁷⁵ APP.0001.0020.0175 VZW Klimaatzaak v Kingdom of Belgium & Others [2023] Belgium, Court of Appeal (unofficial translation), [278].

⁹⁷⁶ APP.0001.0020.0175 VZW Klimaatzaak v Kingdom of Belgium & Others [2023] Belgium, Court of Appeal (unofficial translation), [281]. See also [283].

⁹⁷⁷ APP.0001.0020.0074 Hurst v State of Queensland (No 2) [2006] FCAFC 151, [22] (the Court).

See, generally, APP.0001.0022.0020 Tim Baxter, 'Slow Death of Past Damage as an Essential Element of Negligence' (2019) 26(3) *Tort Law Review* 123.
 See above at [222] [412]

⁹⁷⁹ See above at [383]-[413].

⁹⁸⁰ APP.0001.0020.0011 Apotex Pty Ltd v Les Laboratoires Servier (No 2) [2012] FCA 748; (2012) 293 ALR 272, [46] (Bennett J), citing APP.0001.0020.0146 Royal Insurance v Midland Insurance (1908) 26 RPC 95, 97 and APP.0001.0020.0146 Bendigo and Country Districts Trustees and Executors Co Ltd v Sandhurst and Northern District Agency Co Ltd (1909) 9 CLR 474, 478.

'imminence' guards against a court granting an injunction prematurely.⁹⁸¹ Here, as set out in these submissions, the Court has witnessed and heard evidence of rapid damage being suffered by the persons during the claim period and into the future, lands and waters of the Torres Strait at least partially as a result of the Respondent's breaches of the duty of care.

- 502 As set out above at [298]-[301], the imminent harm arising from the Commonwealth's ongoing breach of the Primary Duty is apparent to Torres Strait Islanders more and more with each year, each season, and each day.
- 503 As discussed at [287]-[293], the gravity of the harm is of the highest order, risking severance of over 65,000 years of connection to land and sea. The test for imminent and substantial harm is therefore plainly satisfied on the evidence.
- 504 *Third*, 'the Court will have regard to the degree of probability of the apprehended injury, the degree of seriousness of the injury and the requirements of justice between the parties'.⁹⁸² Here, as outlined at [279]-[285] the degree of probability of the apprehended injury must be assessed as extremely high in light of the evidence, including when the prospect of tipping points is accounted for.
- 505 Turning to the degree of seriousness of the injury, this is a consideration plainly weighing in favour of the grant of an injunction in this case. It is hard to conceive of a harm more serious than that to which Torres Strait Islanders would be exposed by a continued breach of the duty of care. By non-Indigenous standards, loss of human life is often considered the most serious harm imaginable. For Torres Strait Islanders, loss of *Ailan Kastom* should be assessed as equally serious, including because of its intergenerational effects.⁹⁸³ As acknowledged in Australian native title jurisprudence, the connection between Indigenous peoples and their lands and waters involves 'an unquestioned scheme of things in which the spirit ancestors, the people of the clan, particular land and everything that exists on and in it, are organic parts of one indissoluble whole'.⁹⁸⁴ The

APP.0001.0020.0011 Apotex Pty Ltd v Les Laboratoires Servier (No 2) [2012] FCA 748; (2012) 293 ALR 272, [46] (Bennett J).
 APP.0001.0020.0011 Apotex Pty Ltd v Les Laboratoires Servier (No 2) [2012] FCA 748; (2012) 293 ALR 272, [46]

APP.0001.0020.0011 Apotex Pty Ltd v Les Laboratoires Servier (No 2) [2012] FCA 748; (2012) 293 ALR 272, [46]
 (Bennett J) citing APP.0001.0020.0074 Hurst v State of Queensland (No 2) [2006] FCAFC 151, [21] (the Court).
 See above at Part C.

APP.0001.0020.0089 Love v Commonwealth (2020) 270 CLR 152 [290] (Gordon J), citing Milirrpum v Nabalco Pty Ltd (1971) 17 FLR 141 at 167, quoted in APP.0001.0020.0185 Ward (2002) 213 CLR 1 at 64 [14], in turn quoted in Griffiths (2019) 93 ALJR 327 at 368 [153]; 364 ALR 208 at 255. See also APP.0001.0020.0136 R v Toohey; Ex parte Meneling Station Pty Ltd (1982) 158 CLR 327 at 358.

probability and seriousness of the apprehended harm both being high, an injunction should issue. There is nothing about the 'requirements of justice between the parties' that suggests otherwise, for example is has not been said that the Group Members have contributed in any way to the situation in which they now find themselves.

- 506 *Fourth*, the Court will consider whether there are other means by which the breach of the Applicants' rights might be 'averted or sufficiently compensated for',⁹⁸⁵ including by damages. Here, no such other means are apparent; the Applicants are completely reliant on the Respondent complying with its obligations under the duty in order to minimise the ongoing harm to them. Damages are plainly an inadequate remedy for the losses particularly, but not only, the ongoing loss of fulfilment of *Ailan Kastom*⁹⁸⁶ suffered by reason of the ongoing breaches of duties. The preservation of *Ailan Kastom* is priceless to the peoples of the Torres Strait. The High Court has acknowledged the connection between Indigenous peoples and their lands and waters as 'not a species of what European law understands as ownership or possession'.⁹⁸⁷ Unlike western property transactions, it is not disposable for the exchange of money. It is uncontroversial that 'the loss of [Indigenous] culture of such great antiquity is irreplaceable and not adequately compensated by damages'.⁹⁸⁸
- 507 For those reasons, this case is readily distinguishable from the first instance decision in Sharma,⁹⁸⁹ and is closer to Attorney-General v Council of Borough of Birmingham and Attorney-General v Colney Hatch Lunatic Asylum.⁹⁹⁰
- 508 In *Sharma*, Bromberg J was not prepared to grant a quia timet injunction. The two decisive considerations for his Honour were: first, that the restraint sought was overinclusive that is, it extended beyond what was justified by imposition of liability in negligence; and, second, that the applicants had not established the probability of the breach of duty.⁹⁹¹ In the present case, the proposed injunction tracks closely the terms of

APP.0001.0020.0134 R v Macfarlane; Ex parte O'Flanagan and Ex parte O'Kelly (1923) 32 CLR 518, 539 (Isaacs J).

 ⁹⁸⁶ See, by analogy, APP.0001.0020.0109 Munkara v Santos NA Barossa Pty Ltd [2023] FCA 1348, [121]
 (Charlesworth J); APP.0001.0020.0108 Munkara v Santos NA Barossa Pty Ltd (No 2) [2023] FCA 1421, [86]
 (Charlesworth J).

⁹⁸⁷ APP.0001.0020.0089 Love v Commonwealth (2020) 270 CLR 152 [341] (Gordon J).

APP.0001.0020.0169 Thorpe v Head, Transport for Victoria [2020] VSC 804, [64] (Forbes J).
 APP.0001.0020.0140 Sharma has been litigation account time Sister Maria Paintid Advance Ministry

⁹⁸⁹ APP.0001.0020.0149 Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for Environment [2021] FCA 560; (2021) 391 ALR 1, [510]–[511] (Bromberg J).

⁹⁹⁰ APP.0001.0020.0014 Attorney-General v Council of Borough of Birmingham (1858) 70 ER 220; APP.0001.0020.0013 Attorney-General v Colney Hatch Lunatic Asylum (1868) LR 4 Ch App 146.

APP.0001.0020.0149 Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for Environment
 [2021] FCA 560; (2021) 391 ALR 1, [510] (Bromberg J).

the duty and does not suffer the same problem of disproportionate restraint as concerned Bromberg J. That is to say, the Applicants do not seek to require a specific response from the Respondent as to how the duty must be observed.⁹⁹² Further, the Applicants in the present case have provided evidence to satisfy this Court that the Australia's 2050 and updated 2030 targets remain in place, such that absent the injunction there will be an ongoing breach of duty.

- 509 By contrast, in *Colney Hatch*, the plaintiffs approached the court for an injunction to restrain a nuisance of the ongoing release of sewerage into water.⁹⁹³ The Court of Chancery found the nuisance to be 'clearly established'.⁹⁹⁴ However, the defendants opposed the injunction, including on the basis of the steps they had already taken 'to remedy the evil complained of'.⁹⁹⁵ The Court granted the injunction (albeit suspended for three months), and was not impressed by the purported efforts to remedy the evil, which had been 'made in the wrong direction' and had been 'unsuccessful'.⁹⁹⁶
- 510 Similarly, in the earlier case of *Attorney-General v Council of Borough of Birmingham* the Court granted an injunction to restrain the ongoing dumping of sewerage in the River Tame.⁹⁹⁷ These two cases, and others, demonstrate the appropriateness of injunctions to restrain a tortfeasor from continuing conduct in breach of their tortious obligations even where they are purporting to make some efforts at remediation. This is a case where that approach is called for. The Commonwealth argue that it is doing enough to address the problem of climate change, including by the setting and maintaining of Australia's 2050 and updated 2030 targets. But having taken *some* action does not spare it from the obligation to take *sufficient* action, as called upon by the duty.
- 511 Finally, lest it be said to the contrary, if the Applicants establish liability they should not be denied the protective remedy of an injunction because of any countervailing public or policy interests that might be asserted by the Respondent.⁹⁹⁸ The 'fact that the wrongdoer is in some sense a public benefactor' has never 'been considered a sufficient reason for

⁹⁹² Contrast APP.0001.0020.0149 Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for the Environment [2021] FCA 560; (2021) 391 ALR 1, [501]–[502] (Bromberg J).

⁹⁹³ APP.0001.0020.0013 Attorney-General v Colney Hatch Lunatic Asylum (1868) LR 4 Ch App 146.

⁹⁹⁴ APP.0001.0020.0013 Attorney-General v Colney Hatch Lunatic Asylum (1868) LR 4 Ch App 146, 163 (Selwyn LJ). ⁹⁹⁵ APP 0001 0020 0013 Attorney General v Colney Hatch Lunatic Asylum (1868) LR 4 Ch App 146, 163 (Selwyn LD).

APP.0001.0020.0013 Attorney-General v Colney Hatch Lunatic Asylum (1868) LR 4 Ch App 146, 163 (Selwyn LJ).

⁹⁹⁶ APP.0001.0020.0013 Attorney-General v Colney Hatch Lunatic Asylum (1868) LR 4 Ch App 146, 165 (Selwyn LJ).

APP.0001.0020.0014 Attorney-General v Council of Borough of Birmingham (1858) 70 ER 220.
 APP.0001.0020.0110 Mumacu Southour Desiring Ltd [1055] VI P.222, 227 (Scholl I), See Synthese

⁹⁹⁸ APP.0001.0020.0110 *Munro v Southern Dairies Ltd* [1955] VLR 332, 337 (Scholl J). See further

APP.0001.0022.0010 Jason Varuhas, 'The Socialisation of Private Law' (2021) 137 Law Quarterly Review 141.

refusing to protect by injunction an individual whose rights are being persistently infringed'.⁹⁹⁹

Damages

512 If the Court finds, as the Applicants contend it must on the strength of the evidence, that they have suffered loss as a result of the Respondent's breaches of its duty of care, an award of damages would ordinarily follow to reflect their actual loss. That some of the loss suffered by the Applicants and Group Members is difficult to quantify in monetary terms does not absolve the Court of its responsibility to, 'so far as money can do',¹⁰⁰⁰ put the Applicants in the position they would have been but for the Respondent's breaches of duty – that is, to compensate their actual loss.¹⁰⁰¹

Loss of fulfilment of Ailan Kastom

- 513 Torres Strait Islander witnesses for the Applicants wrote and spoke of *Ailan Kastom* as 'The spirit that we live in our communities',¹⁰⁰² 'how I teach my kids and my family',¹⁰⁰³ 'everything about our way of life',¹⁰⁰⁴ 'identity, existence and life',¹⁰⁰⁵ 'culture, tradition and lifestyle',¹⁰⁰⁶ 'our way of living'¹⁰⁰⁷ and a 'survival kit'.¹⁰⁰⁸
- 514 At the level of the pleadings, there is apparently no debate as to the centrality of *Ailan Kastom* to life in the Torres Strait. The concept is defined in paragraph 55 of the 3FASOC, and admitted by the Respondent,¹⁰⁰⁹ to mean:

the body of customs, traditions, observances and beliefs of Torres Strait Islanders generally, or of a particular community or group of Torres Strait Islanders. It includes, among other things:

- (a) connection to the marine and terrestrial environment, including as part of cultural ceremony;
- (b) participating in cultural ceremony;

⁹⁹⁹ APP.0001.0020.0150 *Shelfer v City of London Electric Lighting Co* [1895] 1 Ch 287, 315–6 (Lindley LJ).

¹⁰⁰⁰ APP.0001.0020.0142 *Robinson v Harman* [1848] All ER Rep 383.

¹⁰⁰¹ The *restitutio in integrum* principle: APP.0001.0020.0087 *Livingstone v Rawyards Coal Co* (1880) 5 App Cas 25, 39 (Lord Blackburn).

¹⁰⁰² APP.0001.0012.0004 5 June 2023, Uncle Pabai, T42.2.

¹⁰⁰³ APP.0001.0009.0008 Affidavit of Uncle Pabai [14].

¹⁰⁰⁴ APP.0001.0009.0005 Affidavit of Uncle Paul [153].

¹⁰⁰⁵ APP.0001.0009.0013 Affidavit of Laurie Nona [10].

¹⁰⁰⁶ APP.0001.0009.0009 Affidavit of Frank Fauid [80].

APP.0001.0009.0011 Affidavit of Gerald Bowie [49]. See also APP.0001.0012.0004 5 June 2023, Uncle Pabai, T67.14.

¹⁰⁰⁸ APP.0001.0012.0004 5 June 2023, Fred Pabai, T91.35 – 6.

¹⁰⁰⁹ CRT.2000.0003.0001 Defence [55].

- (c) use of plants and animals for food, medicine and cultural ceremony;
- (d) burying Torres Strait Islanders in local cemeteries and performing mourning rituals;
- (e) visiting sacred sites, including on uninhabited islands; and
- (f) dugong and marine turtle hunting, and other marine hunting and fishing.
- 515 It is also pleaded¹⁰¹⁰ and admitted¹⁰¹¹ that 'Connection to sea country and marine hunting is integral to *Ailan Kastom* in the Torres Strait Islands.' Central to *Ailan Kastom*, among other things, are dugong and turtles: the core of 'a complex system of logic, knowledge, magic and language, environmental perception, social expectations and responsibilities, and the roots of Islander totems, myths and legends'.¹⁰¹²
- The Respondent denies that loss of fulfilment of *Ailan Kastom* is compensable. Before responding to that submission at the level of principle, it is helpful to look at the evidence of that loss. Appreciating what has been lost is helpful because 'throughout the administration of the common law of negligence, the actual impact of the injury or harm on the particular defendant has always been a paramount consideration'.¹⁰¹³ As Jagot J has said extra-curially in a related context 'it is important that the labels of "cultural loss" and "spiritual loss" not become matters for recitation obscuring whatever underlying reality might be exposed by the evidence in the particular case.'¹⁰¹⁴ Thus, the evidence provides a concrete context in which this Court can consider the question of whether or not such losses are compensable in Australian law (as they are overseas¹⁰¹⁵).
- 517 The Applicants allege a range of cultural loss that has, and will continue to be, suffered by the Group Members as a result of the Respondent's failure to adequately mitigate carbon emissions. As has been averted to in the opening sections of these submissions above at [136]-[167], this loss includes severance of connection to land that will be erased or irrevocably damaged by climate change impacts such as erosion and tidal

¹⁰¹⁰ APP.0001.0015.0003 3FASOC [56(a)].

¹⁰¹¹ CRT.2000.0003.0001 Defence [56(a)].

¹⁰¹² APP.0001.0003.0018 Torres Strait Regional Authority, *Dugong and Marine Turtle Teaching Resource and Information Package* (2009), [_0006].

APP.0001.0022.0007 Graeme Orr, 'Damages for Loss of Cultural Fulfilment in Indigenous Community Life' (1997)
 4(6) Indigenous Law Bulletin 17.

¹⁰¹⁴ APP.0001.0022.0012 Justice Jayne Jagot, 'Native Title Compensation for Economic Loss' (National Judicial College of Australia's 30th Anniversary of Mabo Conference on the Sunshine Coast on 3 June 2022).

¹⁰¹⁵ See the somewhat complex case law in Canada summarised in APP.0001.0022.0022 Zoe Oxaal, 'Removing That Which Was Indian from the Plaintiff: Tort Recovery for Loss of Culture and Language in Residential Schools Litigation' (2005) 68 Saskatchewan Law Review 367.

inundation;¹⁰¹⁶ loss or alteration of sacred sites;¹⁰¹⁷ loss of culturally important biodiversity;¹⁰¹⁸ increasing heat and other environmental changes that make it harder to gather in community;¹⁰¹⁹ loss associated with the changing of weather and climate patterns and the alteration of the seasons.¹⁰²⁰

518 Uncle Pabai has given evidence of a number of ways in which changes in the climate have caused a loss of fulfilment of Ailan Kastom. He explains how the rising seawater and encroaching mangroves have affected the Boigu cemetery, and the sadness and worry that causes because of the significance of the cemetery as a place for ceremony and talking to ancestors.¹⁰²¹ The Court also had the benefit of a view to the cemetery, where the damage to graves from the rising sea was plainly visible and captured by court staff in photographs.¹⁰²² Another aspect of the intergenerational cycle that has been disrupted by climate change is the ability of Uncle Pabai and others to pass knowledge on to the younger generation, for example by teaching gardening (which has been made harder by the salination of the garden beds¹⁰²³) and teaching about the constellations (which has also been negatively impacted by climate change¹⁰²⁴). Another significant effect of climate change on Ailan Kastom is the erosion of the red sandbank and Warul Kawa, a place of great significance to Uncle Pabai and others.¹⁰²⁵ This has caused worry that the ancestors will turn their backs on the people of Boigu.¹⁰²⁶ Also damaged were the southern beaches and camping spots of Boigu, to which families had traditional connections.¹⁰²⁷ Other cultural practices previously enjoyed by Uncle Pabai that have

¹⁰¹⁶ APP.0001.0009.0008 Affidavit of Uncle Pabai [199].

APP.0001.0009.0005 Affidavit of Uncle Paul [105]-[107]; APP.0001.0009.0008 Affidavit of Uncle Pabai [113], [121]; APP.0001.0009.0007 Affidavit of Uncle Herbert [33]; APP.0001.0012.0003 12 June 2023, Uncle Paul, T468:23, T477:29 (cultural connection to Saibai); T491-492 (cultural ceremonies); T465-468 (and [doc ID], 13 June 2023, T569:11) (cemetery importance/ancestors); T463:4, 465, 470-471, 490; APP.0001.0012.0004 5 June 2023, Uncle Fred Oral, 94, APP.0001.0012.0007 6 June 2023, Uncle Fred, 102:43; 103, T108-110 (culturally significant sites/ceremonies); APP.0001.0012.0004 5 June, Uncle Fred, T96:11 (red sand bank).

¹⁰¹⁸ APP.0001.0012.0004 5 June 2023, Uncle Pabai (Oral), P-59-63; 73-77; APP.0001.0009.0013 Affidavit of Uncle Laurie [34], [46]-[47].

¹⁰¹⁹ APP.0001.0009.0010 Affidavit of Aunty Jen [48].

APP.0001.0009.0010 Affidavit of Aunty Jen [56]-[60]; APP.0001.0009.0005 Affidavit of Uncle Paul [113];
 APP.0001.0009.0013 Affidavit of Uncle Laurie [32]; APP.0001.0009.0006 Affidavit of Bala Boggo [42], [43];
 APP.0001.0012.0003 12 June 2023, Uncle Herbert oral, 527-528 (seasonal calendar/constellations);
 APP.0001.0009.0009 Affidavit of Uncle Frank [46], [48].

¹⁰²¹ APP.0001.0009.0008 Affidavit of Uncle Pabai [79]–[101]. See also APP.0001.0012.0004 5 June 2023, Uncle Pabai, T60.1 – 62.28.

¹⁰²² See APP.0001.0010.0001 record of views, photographs 13, 14 and 15 in particular. See also APP.0001.0012.0007 6 June 2023, Uncle Fred, T122.45 – 47.

¹⁰²³ APP.0001.0012.0004 5 June 2023, Uncle Pabai, T43.41 – 44.9 and T79.9 – 13.

¹⁰²⁴ APP.0001.0009.0008 Affidavit of Uncle Pabai [108], [118]. APP.0001.0012.0004 5 June 2023, Uncle Pabai, T77.43 - 44.

¹⁰²⁵ APP.0001.0009.0008 Affidavit of Uncle Pabai [184]–[193]. See also APP.0001.0012.0004 5 June 2023, Uncle Pabai, T62.35 – 63.28.

¹⁰²⁶ APP.0001.0009.0008 Affidavit of Uncle Pabai [104]–[106].

¹⁰²⁷ APP.0001.0012.0004 5 June 2023, Uncle Pabai, T46.6 – 47.21.

been affected include crabbing and the ability to conduct the dugong ceremony on the beach in front of town.¹⁰²⁸ At a more abstract level, Uncle Pabai describes the way rising sea levels are making it impossible for him to fulfil his obligation as a Boigu man to protect cultural sites.¹⁰²⁹

- 519 Uncle Paul similarly described the parts of *Ailan Kastom* that he can no longer practice anymore, including canoeing across Saibai through trenches¹⁰³⁰ (a remnant example of which was seen on a view¹⁰³¹), visiting sacred sites where access is now too muddy,¹⁰³² planting crops in the family garden in front of the houses,¹⁰³³ and fishing for barramundi and crabs in the swamps,¹⁰³⁴ and dugong in the seagrass beds.¹⁰³⁵ Uncle Paul spoke in strong terms of the significance of the Saibai cemetery and the effects of inundation¹⁰³⁶ (again reflected in what the Court saw on a view¹⁰³⁷), including the inability of families to know exactly where someone was buried due to shifting markers.¹⁰³⁸ He also described the importance of cultural knowledge about constellations and its saddening degradation or destabilisation,¹⁰³⁹ and the importance of Warul Kawa.¹⁰⁴⁰
- 520 Accordingly, the loss of *Ailan Kastom* impacts virtually all aspects of the Applicants' and Group Members' lives, from day to day activities to the heart of their identities and communities.
- 521 The above-described loss, it is submitted, is of the same character as that which Australian and international case law has recognised in various contexts. Consistently with tort law's trend of increasing cognizance of non-economic loss,¹⁰⁴¹ it is now

¹⁰²⁸ APP.0001.0009.0008 Affidavit of Uncle Pabai [142]–[159].

¹⁰²⁹ APP.0001.0009.0008 Affidavit of Uncle Pabai [198].

¹⁰³⁰ APP.0001.0009.0005 Affidavit of Uncle Paul [43].

¹⁰³¹ See APP.0001.0010.0001 record of views, photograph 77. See also APP.0001.0012.0006 13 June 2023, Uncle Paul, T588.11 – 24.

¹⁰³² APP.0001.0012.0003 12 June 2023, Uncle Paul, T460.19 – 30.

¹⁰³³ APP.0001.0009.0005 Affidavit of Uncle Paul [50]. See also APP.0001.0012.0003 12 June 2023, Uncle Paul, T464.19 – 23, T474.5 – 14, T632.18 – 19.

¹⁰³⁴ APP.0001.0009.0005 Affidavit of Uncle Paul [67].

¹⁰³⁵ APP.0001.0009.0005 Affidavit of Uncle Paul [114]–[122].

¹⁰³⁶ APP.0001.0009.0005 Affidavit of Uncle Paul [74]–[100], [132].

 ¹⁰³⁷ See APP.0001.0010.0001 record of views, photographs 62, 63 and 65 in particular. See also APP.0001.0012.0006 13 June 2023, Uncle Paul, T576.19 – 20.

¹⁰³⁸ APP.0001.0012.0003 12 June 2023, Uncle Paul, T466.16 – 47.

¹⁰³⁹ APP.0001.0009.0005 Affidavit of Uncle Paul [111]–[113]. See also APP.0001.0012.0003 12 June 2023, Uncle Paul, T468.41 – 45, T469.22 – 26, T470.1 –2.

¹⁰⁴⁰ APP.0001.0009.0005 Affidavit of Uncle Paul [143]–[150]. See also APP.0001.0012.0003 12 June 2023, Uncle Paul, T475.38 – 43.

¹⁰⁴¹ See, generally, APP.0001.0022.0015 Penelope Watson, 'Redressing Dignitary Injuries and Non-economic Loss in Novel Torts: Challenges for the Law of Remedies' in Jeffrey Berryman and Rick Bigwood (eds), *The Law of Remedies New Directions in the Common Law* (Irwin Law, 2010).

appropriate that damages be available to compensate a person for loss of fulfilment of *Ailan Kastom*.

- 522 Australian Courts have long recognised that Aboriginal and Torres Strait Islander plaintiffs can recover damages for loss of cultural fulfillment. The principle was recently maintained in *Northern Territory of Australia v Griffiths* (*Timber Creek*),¹⁰⁴² in which the High Court upheld an award of \$1.3 million in damages for non-economic/cultural loss of the Ngaliwurru and Nungali Peoples for infringement to native title rights and associated loss of cultural fulfillment.
- 523 The Court found that the task of assessing cultural loss required it 'to translate the spiritual hurt from compensable acts into compensation'.¹⁰⁴³ The test involved an assessment of 'the amount which society would rightly regard as an appropriate award for the loss'.
- 524 While the Court's decision in *Timber Creek* was made within the context of a native title claim, previous authorities support the award of similar damages stemming from claims in tort, including the following cases that were referred to by the Commonwealth in *Timber Creek*:¹⁰⁴⁴
 - 524.1 In *Roberts v Devereux*,¹⁰⁴⁵ the Supreme Court of the Northern Territory awarded the plaintiff damages of \$1,000 in tort for 'loss of enjoyment of life' constituted, in part, by the plaintiff's inability 'to play his full part in ceremonies'.¹⁰⁴⁶
 - 524.2 In *Napaluma v Baker*,¹⁰⁴⁷ the Supreme Court of South Australia awarded damages in another tortious claim under the head of loss of amenity arising from a loss of ability to participate in indigenous cultural activities, rituals and ceremonies.¹⁰⁴⁸

¹⁰⁴³ APP.0001.0020.0117 Northern Territory v Griffiths [2019] HCA 7; (2019) 269 CLR 1 [155].

¹⁰⁴² APP.0001.0020.0117 Northern Territory v Griffiths [2019] HCA 7; (2019) 269 CLR 1.

¹⁰⁴⁴ A number of these cases are drawn from the helpful summary contained in the Commonwealth's submissions in *Timber Creek* at <https://www.hcourt.gov.au/assets/cases/04-Darwin/d1-2018/TimberCreek Cth-OOA.pdf>.

Roberts v Devereux (unreported, 22 April 1982, Forster CJ, Supreme Court of the Northern Territory). A note of the case can be found in APP.0001.0020.0004 Colin R McDonald, 'Roberts v Devereux' (1982) 1(4) Aboriginal Law Bulletin 29.

Roberts v Devereux (unreported, 22 April 1982, Forster CJ, Supreme Court of the Northern Territory). A note of the case can be found in APP.0001.0020.0004 Colin R McDonald, 'Roberts v Devereux' (1982) 1(4) Aboriginal Law Bulletin 29.

¹⁰⁴⁷ APP.0001.0020.0113 Napaluma v Baker (1982) 29 SASR 192.

¹⁰⁴⁸ APP.0001.0020.0113 Napaluma v Baker (1982) 29 SASR 192, 194-195.

- 524.3 In *Dixon v Davies*,¹⁰⁴⁹ the Supreme Court of the Northern Territory awarded damages of \$20,00 in tort for 'loss of cultural fulfilment' under the heads of pain and suffering and loss of amenity.¹⁰⁵⁰
- 524.4 In *Weston v Woodroffe*,¹⁰⁵¹ a tortious personal injury case, Muirhead ACJ awarded damages under the heads of pain and suffering and loss of amenities for some damage arising from the plaintiff's cultural pursuits.
- 524.5 In *Mulladad v Palmer*, ¹⁰⁵² the Supreme Court of the Northern Territory 'made some allowance for the plaintiff's loss of amenities of life, having regard to the fact that he will be unable to indulge in communal dancing and hunting to the extent that he formerly did'.
- 524.6 In Milpurrurru v Indofurn Pty Ltd,¹⁰⁵³ von Doussa J awarded damages under s 115(2) and 115(4) of the Copyright Act 1968 (Cth) for infringements of copyright held by indigenous persons. He did so in a context where s 115(4)(b) of the Act permitted the award of 'additional damages' having regard to 'all other relevant matters'. There was authority that s 115(2) damages could include compensation for personal suffering caused by insult and humiliation.¹⁰⁵⁴ However, his Honour relied exclusively on s 115(4)(b) to award damages covering all the non-pecuniary factors referred to below.¹⁰⁵⁵ His Honour ultimately awarded damages of \$82,000 in total, of which \$70,000 was attributable to s 115(4) 'additional damages'. In calculating those additional damages, his Honour appeared to incorporate a component for the fact that the infringements had 'caused personal distress and, potentially at least, ha[d] exposed the artists to embarrassment and contempt within their communities', which losses were 'a reflection of the cultural environment in which the artists reside[d]'.¹⁰⁵⁶ His Honour also appeared to incorporate a component for what he called 'cultural damage', by which he may have meant 'the pirating of cultural heritage'.¹⁰⁵⁷

¹⁰⁴⁹ APP.0001.0020.0046 *Dixon v Davies* (1982) 17 NTR 31.

¹⁰⁵⁰ APP.0001.0020.0046 Dixon v Davies (1982) 17 NTR 31, 34–5.

¹⁰⁵¹ APP.0001.0020.0186 Weston v Woodroffe (1985) 36 NTR 34.

¹⁰⁵² APP.0001.0020.0106 Mulladad v Palmer (Unreported, Northern Territory, Supreme Court, Rice J, 5 May 1987).

¹⁰⁵³ APP.0001.0020.0099 Milpurrurru v Indofurn Pty Ltd (1994) 54 FCR 240.

¹⁰⁵⁴ APP.0001.0020.0099 *Milpurrurru v Indofurn Pty Ltd* (1994) 54 FCR 240 [277].

¹⁰⁵⁵ APP.0001.0020.0099 *Milpurrurru v Indofurn Pty Ltd* (1994) 54 FCR 240 [280].

¹⁰⁵⁶ APP.0001.0020.0099 *Milpurrurru v Indofurn Pty Ltd* (1994) 54 FCR 240 [277].

¹⁰⁵⁷ APP.0001.0020.0099 *Milpurrurru v Indofurn Pty Ltd* (1994) 54 FCR 240 [277].

- 524.7 In *Namala v Northern Territory*, the Supreme Court of the Northern Territory awarded damages in a tortious personal injury case under the head of 'subjective suffering', 'resulting from a loss of cultural fulfilment through inability to fully participate in traditional cultural ceremonies and activities'.¹⁰⁵⁸
- 524.8 In *Cubillo v Commonwealth of Australia (No 2)*, liability in negligence was not established.¹⁰⁵⁹ However, in the course of that decision O'Loughlin J said, 'I do not think that it could be argued that the cultural loss that a part Aboriginal person has suffered does not sound in damages.'¹⁰⁶⁰
- 524.9 Applying O'Loughlin J's comments in *Cubillo*, the Supreme Court of South Australia in *Trevorrow v South Australia (No 5)*¹⁰⁶¹ – another Stolen Generation claim based (in part) in negligence – awarded damages to reflect the plaintiff's failure to develop a cultural identity and his inability to rejoin his community and perform cultural activities.¹⁰⁶² This aspect of the decision was undisturbed on appeal.¹⁰⁶³
- 525 Similarly, the Supreme Court of New Zealand in *Smith v Fonterra Cooperative Group Limited & Ors*¹⁰⁶⁴ recently recognized the potential for tort law to compensate for 'tikanga-based' harm, where 'tikanga' broadly translates to Maori customs and values.¹⁰⁶⁵
- 526 Underneath all of these cases is a recognition of the interest of Indigenous persons in the fulfilment of their traditional culture. Such interests that is, 'interests … which arise from traditional cultural connection with the sea [and, it would follow, land], without any proprietary overlay' have recently been described by the Full Court of this Court as 'well known to contemporary Australian law'.¹⁰⁶⁶ If anything, this interest has been recognised to be *more* valuable than that protected by damages for loss of enjoyment of

¹⁰⁵⁸ APP.0001.0020.0112 Namala v Northern Territory (1996) 131 FLR 468 [474].

¹⁰⁵⁹ APP.0001.0020.0038 Cubillo v Commonwealth of Australia (No 2) [2000] FCA 1084; (2000) 103 FCR 1.

¹⁰⁶⁰ APP.0001.0020.0038 *Cubillo v Commonwealth of Australia (No 2)* [2000] FCA 1084; (2000) 103 FCR 1, [1499] (O'Loughlin J).

¹⁰⁶¹ APP.0001.0020.0170 *Trevorrow v South Australia (No 5)* [2007] SASC 285; (2007) 98 SASR 136, [1192]–[1203] (Gray J)

¹⁰⁶² APP.0001.0020.0170 *Trevorrow v South Australia (No 5)* [2007] SASC 285; (2007) 98 SASR 136, [1192]–[1203] (Gray J).

¹⁰⁶³ APP.0001.0020.0156 State of South Australia v Lampard-Trevorrow [2010] SASC 56; (2010) 106 SASR 331.

APP.0001.0020.0153 Smith v Fonterra Co-operative Group Limited (2024) NZSC 5.

¹⁰⁶⁵ APP.0001.0020.0153 Smith v Fonterra Co-operative Group Limited (2024) NZSC 5 [182], [188].

¹⁰⁶⁶ APP.0001.0020.0148 Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193; (2022) 296 FCR 124, [68] (Kenny and Mortimer JJ).

life. The High Court has explained: 'Spiritual connection identifies and refers to a defining element in a view of life and living. It is not to be equated with loss of enjoyment of life or other notions and expressions found in the law relating to compensation for personal injury. Those expressions do not go near to capturing the breadth and depth of what is spiritual connection with land.'¹⁰⁶⁷

- 527 There is no reason why damages should not be available to vindicate that interest. After all, the remedy of damages is, like other civil remedies, directed towards 'vindicating the interests that underlie the right or rights infringed'.¹⁰⁶⁸
- 528 Consistently with the trajectory of Australian law in various fields, the law of tort should now recognise as compensable the loss of fulfillment of *Ailan Kastom*. The fact that such loss may be 'incommensurable with money'¹⁰⁶⁹ or 'not susceptible of *measurement* in money'¹⁰⁷⁰ is not to the point. The law now recognising – in various contexts, but particularly tort – the interest of Indigenous persons in the fulfilment of their culture, ought also to provide a remedy for the damage to that interest.

Property Damage

- 529 It has long been recognised that damages are an appropriate remedy to compensate for loss resulting from property damage. The Applicants' lay evidence reveals the scale of property damage already suffered by the Applicants and Group Members as a result of the Respondent's breach of the duty of care. This damage primarily stems from flooding and inundations caused by climate change-fuelled increases in sea levels and the frequency and severity of extreme sea level events.
- 530 In the Torres Strait, such events have already caused damage to houses,¹⁰⁷¹ vehicles,¹⁰⁷² and possessions such as tools¹⁰⁷³ and appliances.¹⁰⁷⁴ Salt water inundations have also led to widespread over-salinity in soils in the Torres Strait,¹⁰⁷⁵ which has caused damage to

¹⁰⁶⁷ APP.0001.0020.0117 Northern Territory v Griffiths [2019] HCA 7; (2019) 269 CLR 1, [187] (Kiefel CJ, Bell, Keane, Nettle and Gordon JJ).

APP.0001.0022.0017 Robyn Carroll and Normann Witzleb, "It's Not Just about the Money': Enhancing the Vindicatory Effect of Private Law Remedies' (2011) 37 *Monash University Law Review* 216, 219. See also *Uren v John Fairfax & Sons* [1966] HCA 40; (1966) 117 CLR 118, 150 (Windeyer J): 'compensation by damages operates in two ways—as a vindication of the plaintiff to the public and as consolation to him for a wrong done'.

¹⁰⁶⁹ APP.0001.0020.0166 *Thatcher v Charles* [1961] HCA 5; (1961) 104 CLR 57, 72 (Windeyer J).

 ¹⁰⁷⁰ APP.0001.0020.0190 Wright v British Railways Board [1983] 2 AC 773, 777 (Lord Diplock, emphasis in original).
 ¹⁰⁷¹ APP.0001.0009.0008 Affidavit of Uncle Pabai [170].

¹⁰⁷² APP.0001.0009.0007 Affidavit of Uncle Herbert [32].

¹⁰⁷³ APP.0001.0009.0007 Affidavit of Uncle Herbert [32]; APP.0001.0009.0005 Affidavit of Uncle Paul [131].

¹⁰⁷⁴ APP.0001.0009.0005 Affidavit of Uncle Paul [131], [140].

¹⁰⁷⁵ SUB.0001.0003.3029, SUB.0001.0003.3037 and SUB.0001.0003.3038.

gardens and prevented Group Members from being able to grow food.¹⁰⁷⁶ Inundations have also caused devastating and irreversible damage to culturally important sites such as cemeteries and gravesites on multiple islands.¹⁰⁷⁷

- 531 In respect of Uncle Pabai in particular, the evidence establishes one inundation flooded the downstairs toilet and laundry of his house, as well as rusting the poles on which the house sits and washing away the backfilled soil in the yard.¹⁰⁷⁸ The increasing observed salinity of his yard has 'wrecked' his home garden bed, limiting the crops he can grow there.¹⁰⁷⁹ His family garden bed has been similarly damaged.¹⁰⁸⁰ His campsite on the south of the island has also been eroded,¹⁰⁸¹ and his structure there pushed over.¹⁰⁸²
- 532 Uncle Paul's property has also been affected by inundations, with his laundry flooded on at least two occasions, and his appliances (tools and washing machine) damaged.¹⁰⁸³

Injury, disease, or death

533 It is well accepted that a claim for personal injury sounds in damages. In the present case, the injury, disease or death already experienced by the Torres Strait Islanders primarily relates to apparently eating a less healthy diet without home grown vegetables.¹⁰⁸⁴ It is accepted, however, that there is not clear evidence of either of the Representative Applicants suffering such harms despite their general evidence about the loss of gardening practices leading to less healthy diets on the islands.¹⁰⁸⁵ That should not prohibit other Group Members from raising such claims following the initial trial.¹⁰⁸⁶

Conclusion

534 The Court should grant relief in the terms sought.

 ¹⁰⁷⁶ APP.0001.0009.0008 Affidavit of Uncle Pabai [113], [121]; APP.0001.0009.0007 Affidavit of Uncle Herbert [33].
 ¹⁰⁷⁷ APP.0001.0009.0008 Affidavit of Uncle Pabai [87]; APP.0001.0009.0005 Affidavit of Uncle Paul [85]; APP.0001.0012.0007 6 June 2023, Uncle Fred, T122:45.

¹⁰⁷⁸ APP.0001.0009.0008 Affidavit of Uncle Pabai [170].

¹⁰⁷⁹ APP.0001.0009.0008 Affidavit of Uncle Pabai [113].

¹⁰⁸⁰ APP.0001.0009.0008 Affidavit of Uncle Pabai [120].

¹⁰⁸¹ APP.0001.0009.0008 Affidavit of Uncle Pabai [130]–[141].

¹⁰⁸² APP.0001.0012.0004 5 June 2023, Uncle Pabai, T49.4 – 13.

¹⁰⁸³ APP.0001.0009.0005 Affidavit of Uncle Paul [131], [140], [180].

¹⁰⁸⁴ APP.0001.0009.0009 Affidavit of Uncle Frank [49]-[53].

 ¹⁰⁸⁵ See, eg, APP.0001.0009.0008 Affidavit of Uncle Pabai [124]; APP.0001.0012.0004 5 June 2023, Uncle Pabai, T84:6–8.

¹⁰⁸⁶ For the avoidance of doubt, the Applicants do not make a claim for loss or damage from the loss of any native title rights as defined in s 223 of the APP.0001.0021.0016 *Native Title Act 1993* (Cth) for either the Primary or Alternative Duty of Care.

PART 3. THE ALTERNATIVE DUTY

J. OUTLINE OF APPLICANTS' ADAPTATION CASE

- 535 The Applicants and Group Members are Torres Strait Islanders. They are as a group the most disadvantaged in Australian society. That preceding sentence is to be found in the *Aboriginal and Torres Strait Islander Act* 2005 (Cth). A similar sentence is found in the *Native Title Act* 1993 (Cth). Legislative recognition of this disadvantage is an appropriate measure of the level, breadth and significance of the disadvantage. Climate change and in particular marine inundation and erosion of the Torres Strait continues and expands the long history of disadvantage endured by (relevantly) the Torres Strait Islanders.
- 536 The 6 Islands the subject of the allegations of breach in the Alternative Duty of Care (Saibai, Boigu, Poruma, Iama, Masig and Warraber) have been inundated and eroded as a result of sea level rise and extreme weather events associated with climate change. The fact of inundation and erosion and the Commonwealth's knowledge of these risks does not appear to be in dispute in this proceeding. Accordingly, reasonable foreseeability and the fact of damage (as opposed to quantification of damage) may not feature as matters in serious dispute in the Alternative Duty of Care.
- 537 Since at least 2001, the Torres Strait Islanders have asked the Commonwealth to (among other things) fund measures to protect the Torres Strait from marine inundation and erosion. A decade or so later, the Commonwealth approved the first of two stages of funding for seawalls to be constructed on the 6 Islands. Those funds were insufficient to fund the construction of all seawalls, the consequence being that seawalls have only been constructed on 3 of the 6 Islands. Some 20 years after first seeking funding for seawalls, there are no funds currently in place to fund the construction of seawalls on Iama, Masig and Warraber.
- 538 The inadequacy of funding can be examined in another way. The Commonwealth has provided \$32 million towards the construction of seawalls in the Torres Strait. During

this same period, the Commonwealth provided over \$328.2 million to the climate change efforts in the Pacific.

- 539 The Torres Strait Islanders' request for funding and the Commonwealth's provision of funding is a critical component of the closeness or legal nexus upon which the duty of care is founded. That nexus is further evidence of the Commonwealth's voluntary assumption of a range of obligations of protection of the Torres Strait Islands and its indigenous inhabitants under an international treaty, international covenants and domestic arrangements. The presence of the treaty, covenant and domestic arrangements are a special feature of this case which strongly support the existence of a duty.
- 540 In addition, the obligations under the international treaty, international covenants and domestic arrangements are evidence of the significant and special measure of control the Commonwealth was obliged to exercise over the safety of the Torres Strait Islanders and did in fact exercise that control through funding, albeit negligently (it is alleged).
- 541 Together these salient features establish a duty of care on the Commonwealth to broadly, protect the Torres Strait Islanders from the reasonably foreseeable risks of marine inundation and erosion.
- 542 It is alleged that the Commonwealth had no coherent plan to fund the seawalls on the 6 Islands. The availability, source and amounts of funds were not pre-determined or established. Therefore, funding evolved unpredictably and with no capacity to provide additional funding when required to complete the construction.
- 543 These limitations are acutely exposed by the circumstances surrounding the two stages of funding and the current lack of any defined and established funding arrangement for the construction of the as yet unbuilt seawalls on Iama, Masig and Warraber. These matters form the basis of the breach of duty.

K. SOME RELEVANT FACTS

Seawall Project Stage 1

544 Seawalls Project Stage 1 planned to construct seawalls on Saibai, Boigu, Poruma, Iama, Masig and Warraber¹⁰⁸⁷.

¹⁰⁸⁷ Exhibit R8 (NIA.2002.0001.0022 at 0039 to 0040).

- 545 All of the works planned to be constructed on Saibai under Stage 1 were in fact constructed, with practical completion of the seawall in May 2017.¹⁰⁸⁸
- 546 Of the works planned for Boigu under Stage 1, only the upgrade of the drains, repairs to existing bund and seawalls and the rebuilt of the rock armour seawall near the boat ramp were completed. Practical completion of these works was achieved in November 2017.¹⁰⁸⁹ Works planned under Stage 1 but not constructed at this time were the "wave return wall, reconstruction of the jetty and barge ramp areas and raising, extending and repairing the Bund Wall."¹⁰⁹⁰
- 547 Approximately \$240,000 of the funds allocated for Stage 1 was spent on "emergency sand bagging to protect infrastructure" on Poruma. The remaining works planned for Poruma under Stage 1 including "emergency coastal infrastructure repairs and seawall and erosion control" were not constructed.¹⁰⁹¹
- 548 None of the works planned for Iama, Masig and Warraber under Stage 1 were constructed.¹⁰⁹²

Seawall Project Stage 2

- 549 Seawalls Project Stage 2 planned to construct seawalls on Boigu, Poruma, Iama, Warraber and Masig.¹⁰⁹³
- 550 The works planned to be constructed on Boigu¹⁰⁹⁴ under Stage 2 were constructed. The seawalls planned on Poruma under Stage 2 were constructed except for a descoping to remove ~120m of geobag seawalls to the eastern end of the island.¹⁰⁹⁵

Exhibit R8 (NIA.2002.0001.0022 at 0039). The cemetery wall was constructed between December 2014 and June 2015 (See Exhibit R8 (NIA.2002.0001.0022 at 0045); and TRN.0015.1271 T1276.30 (16 Nov 2023)). The cemetery wall was constructed by TSIRC (Exhibit R8 (NIA.2002.0001.0022 at 0045)). The sea and bund wall were constructed between September 2015 and May 2017 by Koppens, with AECOM being the superintendent (Exhibit R8 NIA.2002.0001.0022 at 0045). The sea and bund walls were certified in June 2017 (Exhibit R8 NIA.2002.0001.0022 at 0039).

¹⁰⁸⁹ NIA.2002.0001.0022 at 0040.

¹⁰⁹⁰ Exhibit R8 NIA.2002.0001.0022 at 0040.

¹⁰⁹¹ Exhibit R8 NIA.2002.0001.0022 at 0040.

¹⁰⁹² Exhibit R8 NIA.2002.0001.0022 at 0040.

¹⁰⁹³ NIA.2000.0001.0307 at 0312 to 0313.

¹⁰⁹⁴ Practical completion on the seawalls on Boigu was achieved on 22 March 2022 (WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0040; TRN.0014.1172 T1250.10 (15 Nov 2023)).

¹⁰⁹⁵ NIA.2014.0001.0026.

- 551 Practical completion of the Stage 2 works on Boigu occurred on 22 March 2022.¹⁰⁹⁶
 Practical completion of Stage 2 works on Poruma occurred on 30 December 2022.¹⁰⁹⁷
- 552 None of the works planned for Iama, Masig and Warraber¹⁰⁹⁸ under Stage 2 were constructed. In its Defence, the Commonwealth pleads that "processes are underway to procure services to construct coastal protection structures on Masig, Iama and Warraber".¹⁰⁹⁹

Unconstructed seawalls (Warraber, Masig and Iama)

553 On or about 5 May 2023, the scope of works planned for Iama, Warraber and Masig under Stage 2 were reduced¹¹⁰⁰ and the descoped works were placed on hold due to funding constraints.¹¹⁰¹

Island	Original Scope	Descope
Iama	Wave return wall – 2100m	Reduced to 349m
	Earth bund walls - 600m	Removed
	Rock seawall - partial	Removed
	demolition, reconstruction,	
	and raising of the height –	
	200m	
	Rock armour seawall -	Removed
	450m	
	geotextile sand bag seawall	Reduced to 190m
	with bund – 650m	

554 The reduced works are as follows: ¹¹⁰²

¹⁰⁹⁶ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0040; TRN.0014.1172 T1250.10 (15 Nov 2023).

¹⁰⁹⁷ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0041.

¹⁰⁹⁸ TRN.0015.1271 T1286.10 (16 Nov 2023).

¹⁰⁹⁹ CRT.2000.0003.0001 Defence [(74)(b)(iv)].

¹¹⁰⁰ cf. NIA.2000.0001.0307 at 0313 with NIA.2008.0002.0001 at 0029.

¹¹⁰¹ NIA.2014.0001.0026.

¹¹⁰² cf. NIA.2000.0001.0307 at 0313 with NIA.2008.0002.0001 at 0029.

	New culvert at stormwater	Removed
	outlet on the beach	
	Road bund crossing (three)	Removed
Warraber	Wave return wall - 325m	Removed
	Geotextile bund wall - 50m	Removed
	Rock seawall - Partial	Removed
	demolition, reconstruction	
	and raising of height- 690m	
	Rock seawall - repair and	Removed
	top up 280m	
	Sand stockpiling	Retained
	Geotextile sand bag seawall - 300m	Reduced to 295m
	Road bund crossing (two)	Removed
Masig	Geotextile sand bag seawall – 1,300m	Reduced to 1,105m
	Geotextile bund wall – 2,800m	Retained

555 To date, none of the works planned to be constructed on Warraber, Masig and Iama under either Stage 1 or Stage 2 have been constructed.

Funding

556 Over the period 2013 to 2019, the Commonwealth approved a total of \$32 million for the construction of seawalls on the 6 Torres Strait Islands:

- 556.1 on 4 June 2012, the Commonwealth announced \$12 million in Stage 1 funding.¹¹⁰³ The funding agreement was not executed until 11 April 2014;¹¹⁰⁴
- 556.2 on 16 December 2019, the Commonwealth approved \$20 million in Stage 2 funding.¹¹⁰⁵

L. PROPER APPROACH TO ESTABLISHING A NOVEL DUTY

557 The proper approach to establishing a novel duty of care is set out at paragraphs [177] to [179].

M. THE RELATIONSHIP BETWEEN THE PARTIES

- 558 The special relationship between Torres Strait Islanders and the Commonwealth is set out at paragraphs [180] to [190]. There is a clear nexus or closeness between the Commonwealth and the Torres Strait Islanders. Of particular relevance to the Alternative Duty of Care:
 - 558.1 under the Treaty, the Commonwealth agreed to protect the "traditional way of life and livelihood of Australians who are Torres Strait Islanders...";¹¹⁰⁶
 - 558.2 the Torres Strait Islanders have requested funding from the Commonwealth, since about 2001¹¹⁰⁷ and more specifically on 15 February 2012 in relation to Stage 1¹¹⁰⁸ and on 21 June 2018 in relation to Stage 2;¹¹⁰⁹
 - 558.3 the Commonwealth provided a total of \$32 million for Stage 1 and Stage 2 in direct response to the requests from the Torres Strait Islanders;¹¹¹⁰
 - 558.4 the Commonwealth has funded various other measures with a view to protecting the Torres Strait Islands from the impacts of climate change:

¹¹⁰³ INF.2000.0002.0001.

¹¹⁰⁴ WIT.2000.0001.0015 First Affidavit of Chris Connolly at 54; INF.2000.0001.0565.

¹¹⁰⁵ NIA.2002.0001.0161.

¹¹⁰⁶ See paragraph 605 to 607.

¹¹⁰⁷ APP.0001.0014.0025 at p 5.

¹¹⁰⁸ INF.2000.0002.0354.

¹¹⁰⁹ NIA.2002.0001.0014.

¹¹¹⁰ See paragraph 556.

- (a) \$1 million for tidal gauge monitoring in the Torres Strait and \$400,000 for further climate change adaptation research;¹¹¹¹
- (b) funded the James Cook University to "undertake research on the risks associated with erosion and inundation of the 6 most vulnerable islands in the Torres Strait".¹¹¹² It then funded further research to better understand climate change impacts on the 13 remaining Torres Strait Islands;¹¹¹³
- 558.5 the Commonwealth is the national government of Australia. It has:
 - (a) recognised the special disadvantage on the Torres Strait Islands¹¹¹⁴ and have sought to redress that with the passage of the *Native Title Act* 1993 (Cth), the *Aboriginal and Torres Strait Islander Act* 2005 (Cth) and the Closing the Gap policy;
 - (b) voluntarily bound itself under international treaties and agreements to protect the Torres Strait Islanders from the impact of climate change.¹¹¹⁵
- 558.6 the Torres Strait Islanders are citizens of Australia who are "as a group, the most disadvantaged in Australian society"¹¹¹⁶ who have:
 - (a) no ability to protect themselves from the marine inundation and erosion impacting their Islands;
 - (b) no power to influence the Commonwealth to fund the seawalls on the Torres Strait Islands.
- 558.7 Established the TSRA to (among other functions) "formulate and implement programs for Torres Strait Islanders..."¹¹¹⁷ and more recently the National Indigenous Australians Agency (**NIAA**) to lead and coordinate Commonwealth

¹¹¹¹ NIA.2009.0036.8142.

¹¹¹² NIA.2009.0036.8142; DCC.2001.0001.2640 at 2641.

¹¹¹³ INF.2000.0002.0373 at 0379.

¹¹¹⁴ The Objects to the APP.0001.0021.0002 Aboriginal and Torres Strait Islander Act 2005 (Cth) states that "The objects of this Act are, in recognition of the past dispossession and dispersal of the Aboriginal and Torres Strait Islander peoples and their present disadvantaged position in Australian society"; The Preamble to the APP.0001.0021.0016 Native Title Act 1993 (Cth) states that "As a consequence, Aboriginal peoples and Torres Strait Islanders have become, as a group, the most disadvantaged in Australian society."

¹¹¹⁵ See below at [605]-[613].

¹¹¹⁶ The Preamble to the APP.0001.0021.0016 Native Title Act 1993 (Cth).

¹¹¹⁷ s 142A(1)(b) APP.0001.0021.0002 Aboriginal and Torres Strait Islander Act 2005 (Cth).

policy development and implementation.¹¹¹⁸ The TSRA developed a climate change strategy¹¹¹⁹ and adaptation and resilience plans¹¹²⁰ which broadly addressed climate change projections, likely impacts and actions to reduce climate risks in the Torres Strait.

N. VULNERABILITY

Legal principles

559 The legal principles on vulnerability are set out at paragraph [215].

Submission on vulnerability

- 560 The Commonwealth admits in its Defence that "...some Indigenous peoples in Australia, are more vulnerable to the impacts of climate change than other peoples, by reason of (inter alia) their place of residence, occupation, connection to the land and environment and/or social and economic disadvantage." ¹¹²¹
- 561 We submit that the Applicant and the Group Members are vulnerable in the requisite sense by reason of (adopting the words of the Commonwealth's plea) "...their place of residence, occupation, connection to the land and environment and/or social and economic disadvantage"¹¹²².
- 562 Firstly, it is the fact that at least 5 of the 6 Islands have been repeatedly impacted by marine inundation (see Table below¹¹²³). The evidence from the Commonwealth's expert, Dr Harper, was these types of events "...they're not that uncommon. You know, they're there most of the time...".¹¹²⁴ Further, in its Defence, the Commonwealth:
 - 562.1 "admits that some of the Torres Strait Islands have been subject to inundation events prior to and since 2014";¹¹²⁵

¹¹¹⁸ See paragraph 642.

¹¹¹⁹ APP.0001.0004.0016 (Torres Strait Climate Change Strategy 2014-2018).

¹¹²⁰ APP.0001.0004.0017 (Torres Strait Regional Adaptation and Resilience Plan 2016-2021).

¹¹²¹ CRT.2000.0003.0001 Defence [29(b)]. *See* also [62(b)].

¹¹²² CRT.2000.0003.0001 Defence [29(b)]. See also [62(b)].

¹¹²³ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report at [_0005]-[_0006].

¹¹²⁴ TRN.0014.1172 T1234.10 (15 Nov 2023).

¹¹²⁵ CRT.2000.0003.0001 Defence [53(b)].

- 562.2 "says that some parts of the Torres Strait Islands have been affected by inundation during high tides and surge events from time to time for many years, including prior to 2014"; ¹¹²⁶
- 562.3 "says that some structures and significant sites on some Torres Strait Islands are located on low lying areas and subject to a risk of inundation events." ¹¹²⁷

ISLAND	DATE	LEVEL OF
		INUNDATION
Iama	2006	0.18m above HAT
	January 2018	(approx.) 0.3m above HAT
	January 2023	(approx.) equal to HAT
Warraber	January 2006	0.25 above HAT
Saibai	January 2006	(approx) 0.2m above HAT ¹¹²⁸
	2009	(approx) 0.3 above HAT ¹¹²⁹
	2010	(approx) 0.1m above HAT
	January 2018	(approx) 0.25m above HAT
Boigu	(likely) 2009	(approx) 0.3m above HAT
Poruma	Feb 2019	(approx) 0.1m above HAT
	August 2023	(approx) 0.2m above HAT

¹¹²⁶ CRT.2000.0003.0001 Defence [57(e)].

¹¹²⁷ CRT.2000.0003.0001 Defence [53(a)].

¹¹²⁸ Mr Bettington's evidence was that this was "effectively a 50 year ARI storm tide". TRN.0014.1172 T1230.1 (15 Nov 2023) and Table 3 at APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0004.

¹¹²⁹ Mr Bettington's evidence was this was "more extreme than a 100 year event". TRN.0014.1172 T1230.15 (15 Nov 2023) and Table 3 at APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0004.

- 563 "Inundation of some Torres Strait islands is occurring twice a year with king tide events. The extent of inundation can be exacerbated if the king tide event is accompanied by compounding weather or sea conditions..."¹¹³⁰
- 564 Further, the fact evidence identifies numerous instances of inundation. For example:
 - 564.1 Uncle Pabai: "Every few years, in about January and February, Boigu is inundated during king tides. This happens during monsoon season, and the tides can be many meters high. Depending on the height of the tides, and given how low and flat Boigu is, the sea water comes in and inundates the land."¹¹³¹
 - 564.2 Uncle Pabai: "In the last 20 years, the sea water has inundated the cemetery on a number of occasions. It happens almost every monsoon season, which is usually in January and February."¹¹³²
 - 564.3 Uncle Pabai: "In 2007, Boigu was flooded during a high tide. This is the largest flood in my lifetime. The old seawall did not prevent the flooding. The water came in from the ocean, and also flooded into the swamps and then into village through the back of the village."¹¹³³
 - 564.4 Uncle Paul: "Outside of the town, the sea comes in through the rivers from the south and east of the island, through the swamps. This happens every king tide. It is worse during monsoon season. It fills up each of the swamps, which then flows onto the next swamp and so on. Eventually, because there are swamps behind the town, the water from the swamps also comes flowing into the town. So, water inundation from the sea occurs from both sies of the town the beachfront and the swamps."¹¹³⁴
 - 564.5 Uncle Paul: "There was a very bad flood that happened about 10 years ago, in around 2012. The roads were all underwater, and people's homes were flooded. My laundry is at the bottom of my house, and my washing machine and some of my tools were damaged from the flooding. I remember the pressure from the

¹¹³⁰ NIA.2009.0036.8142 at 8143.

¹¹³¹ APP.0001.0009.0008 Affidavit of Uncle Pabai Pabai at [160].

¹¹³² APP.0001.0009.0008 Affidavit of Uncle Pabai Pabai at [87].

¹¹³³ APP.0001.0009.0008 Affidavit of Uncle Pabai Pabai at [113].

¹¹³⁴ APP.0001.0009.0005 Affidavit of Uncle Paul Kabai at [126].

floodwater impacted the drainage pipes beneath my neighbourhood, and the sewerage manholes for the drains blew open.

Around this time, the western cemetery had also been very badly damaged by inundation from the sea water. Many graves were washed away. You can still see this in some of the photos that I referred to above.

There was another bad flood in around 2018."1135

- 564.6 Uncle Herbert: "Every month the big tide comes in. They are getting bigger and more frequent. It wasn't like that before. The frequency makes me sad. This is a real fear for me. It is a burden for me to know this is happening."¹¹³⁶
- 564.7 Uncle Herbert: "In 2023 yeah, 2021, 2020 each waku dhoebu moepal gets flooded. That means each February big tide.

MR LLOYD: That's 2020, 2021, not 2022 but then 2023.

HERBERT WARUSAN: No, all of them."1137

- 565 Second, the Commonwealth admits in its Defence that:
 - 565.1 "... the Torres Strait Islands are vulnerable to some impacts of climate change, including sea level rise, ..." ¹¹³⁸
 - 565.2"...small and low-lying islands are vulnerable to several impacts of climate change, such as sea level rise, ..."¹¹³⁹
- 566 Since 1900, sea levels worldwide have been increasing at an accelerating rate¹¹⁴⁰. The twentieth century rates "are an order of magnitude" or "ten times" larger than pre-industrial rate rise.¹¹⁴¹ This is also the case for sea levels in the northern part of

¹¹³⁵ APP.0001.0009.0005 Affidavit of Uncle Paul Kabai at [131-133].

¹¹³⁶ APP.0001.0009.0007 Affidavit of Uncle Herbert Warusan at [31].

¹¹³⁷ APP.0001.0012.0003 T541.35-40 (12 June 2023).

¹¹³⁸ CRT.2000.0003.0001 Defence [61(b)].

¹¹³⁹ CRT.2000.0003.0001 Defence [28(a)]. See also [62(b)].

¹¹⁴⁰ Sea level rises at 1.73mm per year from 1900 to 2018. Based on tide gauge data, the rate of rise since 1970 is about 0.06 mm per year. It is extremely likely that the rate of rise over this period is faster than any century of the last millennia (Church TRN.0020.1551 T.1557.25 (24 Nov 2023)). Based on altimeter data the rate of rise between 1993 and 2018 is in the range of 2.66 to 3.61mm per year with an acceleration of 0.094 mm per year (Church TRN.0020.1551 T.1557.25 (24 Nov 2023)).

¹¹⁴¹ Church TRN.0020.1551 T.1557.40 (24 Nov 2023)).

Australia.¹¹⁴² The changes in the gravitational field and the rotation mean that the local sea level rise in the Torres Strait is larger than¹¹⁴³ or close to¹¹⁴⁴ the global average.

- 567 "The Torres Strait Islands are particularly exposed to sea level rise due to limited options for retreat away from the coast due to their small size and mostly flat topography, and the fact that a number of islands are low lying."¹¹⁴⁵
- 568 Further, the increased sea level will cause an increase in the frequency, severity and intensity of extreme weather events. Under SSP1-1.9 and by 2050 mean sea level is calculated to rise by 18cm with a 1 in 100 year extreme sea level event likely to "return" once every 25 years or about once every 5 years (depending upon the multiplication factor used).¹¹⁴⁶ At the other end of the spectrum, under SSP5-8.5 and by 2050 mean sea level is calculated to rise by 24cm with a 1 in 100 year extreme sea level event likely to "return" about once every 20 years or about once every 2 years (depending upon the multiplication factor used).¹¹⁴⁷
- 569 The melting of glaciers results in a "greater than global average contribution (by up to 25%) to sea-level rise in regions distant to the location of mass loss". Northern Australia is "in the region of greater than average sea-level rise from [this] process".¹¹⁴⁸
- 570 The risk of inundation could significantly increase in future:
 - 570.1 ocean thermal expansion and loss of glaciers are slow processes. This means that emissions continue to cause sea level rise for hundreds of years.¹¹⁴⁹ A big concern with this delay is that thresholds can be crossed leading to many metres of sea level rise into the future from our actions now;¹¹⁵⁰

¹¹⁴² 3.1mm per year for period 1993 to 2009 and 2.1mm per year for the period 1996 to 2009 (Church TRN.0020.1551 T.1558.20 (24 Nov 2023)).

¹¹⁴³ Church TRN.0020.1551 T1578.30, T1580.40, T1581.5 (24 Nov 2023) (Exhibit A53. Paras. 28 and 54. Church Report APP.0001.0009.0002_0016).

¹¹⁴⁴ Church TRN.0020.1551 T1581.25 (24 Nov 2023).

APP.0001.0007.0158_0009. Mr Bettington described Saibai as "a very flat community" (TRN.0014.1172 T1227.40 (15 Nov 2023)).
 APP.0001.0000.0002 Exhibit A52 Church Perpert Table 4 0010

¹¹⁴⁶ APP.0001.0009.0002 Exhibit A53 Church Report Table 4. _0010.

¹¹⁴⁷ APP.0001.0009.0002 Exhibit A53 Church Report Table 4 0010.

¹¹⁴⁸ APP.0001.0009.0002 Exhibit A53 Church Report [29]_0010.

¹¹⁴⁹ TRN.0020.1551 Church T1569.45 (24 Nov 2023). TRN.0020.1551 Church T1569.25 (24 Nov 2023).

¹¹⁵⁰ TRN.0020.1551 Church T1569.35 (24 Nov 2023).

- 570.2 Dr Harper and Mr Bettington agreed that in relation to Boigu and Saibai any sea level increase in the future under each of the IPCC Scenarios will result in "fairly significant" inundation;¹¹⁵¹
- 570.3 The Commonwealth says in its Defence "...that there is high confidence that small islands are projected to be at risk and very sensitive to coastal climate change and other stressors such as oceanic warming, sea level rise, tropical cyclones and mass coral bleaching and mortality although there is a lack of precise quantitative studies of projected impacts of sea level rise at Global Temperature Increase of 1.50 C and 20 C". ¹¹⁵²
- 571 Third, the Commonwealth has recognised that Aboriginal and Torres Strait Islanders are an especially disadvantaged group within Australian society:
 - 571.1 The Objects to the *Aboriginal and Torres Strait Islander Act* 2005 (Cth) states that "The objects of this Act are, in recognition of the past dispossession and dispersal of the Aboriginal and Torres Strait Islander peoples and their present disadvantaged position in Australian society";¹¹⁵³
 - 571.2 The Preamble to the *Native Title Act* 1993 (Cth) states that "As a consequence, Aboriginal peoples and Torres Strait Islanders have become, as a group, the most disadvantaged in Australian society."
- 572 The Applicants submit that this disadvantage makes them and the Group Members especially vulnerable in the requisite sense.
- 573 Fourth, the Applicants and the Group Members were without the necessary financial means to self-fund the seawalls. In approving¹¹⁵⁴ the TSIRC's Application for Stage 1 funding under the Regional Development Australia Fund Round 2¹¹⁵⁵ (the **RDA Fund**), the Advisory Panel stated that it "... considered that this project addressed a significant need in an area of low socio-economic status".¹¹⁵⁶

¹¹⁵¹ TRN.0014.1172 T1199.25 (15 Nov 2023) Bettington.

¹¹⁵² CRT.2000.0003.0001 Defence [59(b)].

¹¹⁵³ APP.0001.0021.0002 Aboriginal and Torres Strait Islander Act 2005 (Cth) s 3.

¹¹⁵⁴ INF.2004.0001.0065 at 0077.

¹¹⁵⁵ INF.2004.0001.0001.

¹¹⁵⁶ INF.2004.0001.0065 at 0078.

- 574 The Applicants and the Group Members were not eligible to apply to the RDA Fund for the Stage 1 funding. It was available to the TSIRC being a "local government body".¹¹⁵⁷ But neither of the Applicants nor the Group Members were eligible applicants for this particular Fund.
- 575 The local Council for the 6 Islands, the TSIRC¹¹⁵⁸, was also economically disadvantaged. It relied on funding from the Commonwealth (among others). Mr Bettington's evidence was that "So TSRIC are the client but there is a funding agency as well. So TSRIC effectively has no money. All the money comes from grants".¹¹⁵⁹
- 576 Fifth, the Applicant and the Group Members had no ability or power to influence the timing and amount of funding made available from the Commonwealth and there is a significant power imbalance between them:
 - 576.1 on 15 February 2012, the TSIRC applied for funding under the RDA Fund.¹¹⁶⁰ On 31 May 2012, the \$5 million Stage 1 funding under the RDA Fund was approved.¹¹⁶¹ This approval was publicly announced on 4 June 2012.¹¹⁶² The funding agreement was not entered into until 11 April 2014¹¹⁶³;
 - 576.2 on 23 August 2018, the Queensland Government asked the Commonwealth to match its commitment of \$20 million to fund Stage 2.¹¹⁶⁴ The funding was not approved until 16 December 2019;¹¹⁶⁵
 - 576.3 the most viable amount of funding under the RDA Fund¹¹⁶⁶ for Stage 1 was \$5 million. The Commonwealth's funding under Stage 2 was in response to a request from the Queensland Government to match its commitment of \$20 million in funding¹¹⁶⁷ and in response in part to the 21 June 2018 request from the TSIRC;¹¹⁶⁸

¹¹⁵⁷ INF.2004.0001.0001 at 0011.

¹¹⁵⁸ The TSIRC is an "indigenous regional council" under the APP.0001.0021.0015 *Local Government Act 2009* (Qld). It was formed in 2008.

¹¹⁵⁹ TRN.0014.1172 T1256.1 (15 Nov 2023).

¹¹⁶⁰ INF.2000.0002.0354 at 0355.

¹¹⁶¹ INF.2004.0001.0081 at 0100.

¹¹⁶² INF.2000.0002.0001.

¹¹⁶³ WIT.2000.0001.0015 First Affidavit of Chris Connolly at 54; INF.2000.0001.0565.

¹¹⁶⁴ NIA.2002.0001.0022 Exhibit R8.

¹¹⁶⁵ NIA.2002.0001.0161.

¹¹⁶⁶ INF.2004.0001.0001.

¹¹⁶⁷ NIA.2000.0001.0243 at 0244[6].

¹¹⁶⁸ NIA.2002.0001.0014; [2] to NIA.2002.0001.0022 Exhibit R8.
- 576.4 there is no currently available fund for the construction of the seawalls on Iama, Masig and Warraber that were descoped under Stage 2. In May 2023, the NIAA and the TSRA had been investigating funding for the seawalls on Iama, Masig and Warraber. Those investigations are preliminary and no decision on "whether and how best to seek funding" ¹¹⁶⁹ has been made;
- 576.5 Uncle Laurie Nona in his evidence stated that "Yeah. Well, I will put it this way. Youse don't give us enough money"; "as I can recall, [the Commonwealth] did give us amount of money but we needed more. So we just did with what we got"; and "I'm saying that we've asked for more money but we've just got given the amount that the Commonwealth thinks they – that is needed to be spent up here";¹¹⁷⁰
- 576.6 the minutes of the Torres Strait Coastal Management Committee dated 23 November 2011 noted that:
 - (a) "community leaders in the Torres Strait have been calling for government assistance for over a decade to reduce the impact of these vents through the construction of suitable coastal engineer solutions"; and
 - (b) [Withdrawn]:
 - (i) [Withdrawn]
 - (ii) [Withdrawn]
 - (iii) [Withdrawn]¹¹⁷¹
- 577 Sixth, the Group Members have no ability to obtain funding and sufficient funding for the seawalls on Iama, Masig and Warraber.:
 - 577.1 Dr Simpson's evidence was that:
 - (a) Since 15 May 2023, "the NIAA and the TSRA have been investigating possible options for funding a third stage of the seawalls project";¹¹⁷²

¹¹⁶⁹ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0003[8] and [9].

¹¹⁷⁰ APP.0001.0012.0002 TT 420.4-47 (9 June 2023).

¹¹⁷¹ APP.0001.0014.0025 at p 5.

¹¹⁷² WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0003[8].

- (b) "The approval of any further funding from the Commonwealth to the TSRA for the seawalls project may have to go through the Australian Government budget process."¹¹⁷³ This will require the "relevant portfolio Minister to determine whether to support the development of a New Policy Proposal". ¹¹⁷⁴ A New Policy Proposal has not yet been developed and consideration is being given to "whether funding can be sought through existing grant or loan programs".¹¹⁷⁵ Whether approval to develop a New Policy Proposal will be given and if so, when, appears to be uncertain;¹¹⁷⁶
- 577.2 The seawalls on Iama, Masig and Warraber were to be constructed under Stage 1, but remain unconstructed and unfunded:
 - (a) Stage 1 planned to construct seawalls on Saibai, Boigu, Poruma, Iama, Masig and Warraber;¹¹⁷⁷
 - (b) Stage 2 planned to construct seawalls on Boigu, Poruma, Iama, Warraber and Masig.¹¹⁷⁸
- 578 Seventh, the Applicant (and the Group Members) and the TSIRC did not possess the requisite technical skill and knowledge to construct seawalls that were effective barriers to minimise marine inundation.
- 579 Mr Bettington's evidence in relation to the construction of the Saibai cemetery wall that was constructed by TSIRC¹¹⁷⁹ was that "the works as constructed had gaps between the walls; there was incomplete finishes. It was not very impressive work at all".¹¹⁸⁰ "It has valves which they put-called frog exclusion…which were completely useless."¹¹⁸¹
- 580 The fact evidence identified the inadequacy of community built seawalls:

580.1 Uncle Paul:

¹¹⁷³ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0003[9].

¹¹⁷⁴ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0003[10].

¹¹⁷⁵ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0004[12].

¹¹⁷⁶ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0004[13] to [16].

¹¹⁷⁷ NIA.2002.0001.0022 Exhibit R8 at 0039 to 0040.

¹¹⁷⁸ NIA.2000.0001.0307 at 0312 to 0313.

¹¹⁷⁹ Exhibit R8 NIA.2002.0001.0022 at 0045.

¹¹⁸⁰ TRN.0015.1271 T1281.5 (16 Nov 2023).

¹¹⁸¹ TRN.0015.1271 T1282.10 (16 Nov 2023).

In about the mid-1970s, the local people of Saibai built a seawall, just in front of the village area. It did not go down as far as the western cemetery. It was made of things like rock, brick and cement. In some places it was about three or four metres high, in some places it was one or two metres high. It was designed to stop the erosion. It was not designed to stop the inundation. This old seawall was on the shoreline, and was a little bit closer to the village than the current seawall.

Over the years, that seawall started to collapse. The foundations of it would get undermined by water coming in, and the wall would then fall over. Water got behind the wall too, and washed out the land behind it, which also made it very unstable. The community would try to repair these issues from time to time, by placing more sand behind the wall, or bags of cement to fill up holes.

However, by about the early 2000s, it was obvious that the seawall was not helping to stop the sea water from coming into Saibai."¹¹⁸²

580.2 Uncle Pabai:

"There have been many attempts over the years to try and stop the seawater from inundating the town of Boigu.

Sometime in the 1970s when I was a small child, the community constructed a seawall to try and protect the island from the tides. I'm not sure if it was funded by the government. It was constructed mainly of rocks...

Back with the old seawall, we would still get flooded. It was from both ends, the east and the west. And some water would come into the middle of the village, but at least back in the day we were able to predict the seasons better."¹¹⁸³

580.3 Boggo Billy:

"After this happened, the locals built a seawall in about the early 1980s on the northeast side of the island, by the Esplanade. The wall was first made of old truck tyres, then in the 1990s it was re-made of rocks by contractors who were building a shipping channel. They did the community a favour by putting the rocks on the seawall."¹¹⁸⁴

"On the southwestern beach, where 'Little' Warraber used to be, the council and the rangers have put in a barrier made of green waste to try and stop the erosion. The council asked the community to collect their green waste for the council and rangers to build the barriers."¹¹⁸⁵

581 Eighth, Mr Bettington's evidence was that when he went to Saibai in 2011, he formed the view that works on the seawalls on Saibai at the time were nothing more than "band-

¹¹⁸² APP.0001.0009.0005 Affidavit of Uncle Paul Kabai at [123-125].

¹¹⁸³ APP.0001.0009.0008 Affidavit of Uncle Pabai Pabai at [161-163].

¹¹⁸⁴ APP.0001.0009.0006 Affidavit of Boggo Billy at [85].

¹¹⁸⁵ APP.0001.0009.0006 Affidavit of Boggo Billy at [113].

aid solutions ... They would repair five metres here and 10 metres there, never actually fixing – never actually improving the situation at all...¹¹⁸⁶

- 582 Ninth, the Applicant and Group Members have limited ability to adapt to the sea level rise and the consequent marine inundation. They are uniquely connected to their land and sea and so relocation would be devastating, as explained by multiple fact witnesses:¹¹⁸⁷
 - 582.1 Uncle Pabai:

"If Boigu, or our cultural sites were lost, it would be devastating. It is very difficult for me to explain this in words. It makes me very sad. I tell my children and my grandchildren "No matter what happens, if you have your country and your culture, you can be proud." However, if they are lost, how can I say that? What will they be?"¹¹⁸⁸

582.2 Uncle Paul:

"It is very hard for me to talk about what it would mean if Saibai was lost, or if I had to leave it because it was underwater or uninhabitable."

"My country would disappear. I would lose everything: my home, my community, my culture, my stories and my identity. Without Saibai, I do not know who I would be."¹¹⁸⁹

- 582.3 Uncle Herbert: "If we had to leave, we could not take the language and culture with us. Language and culture are tied to the land. Our culture is strong. It would be like a woman remembering a song and having goosebumps because she thinks of her husband who has passed."¹¹⁹⁰
- 582.4 Uncle Frank Fauid:

"My dad lives there. My land's there, my house there. I have property rights over that island as a traditional owner. My ancestor buried there. I got sacred place over - Fauid from sacred place lives on Poruma. We have a sacred place there. And I have eight generations live on that place. I cannot leave that place without my heritage and we're going to grow them. That's my home."¹¹⁹¹

¹¹⁸⁶ TRN.0014.1172 T1262.20 (15 Nov 2023).

¹¹⁸⁷ See also above at [287]-[293].

¹¹⁸⁸ APP.0001.0009.0008 Affidavit of Uncle Pabai Pabai at [199].

¹¹⁸⁹ APP.0001.0009.0005 Affidavit of Uncle Paul Kabai at [161-162].

¹¹⁹⁰ APP.0001.0009.0007 Affidavit of Uncle Herbert Warusan at [51].

¹¹⁹¹ APP.0001.0012.0009 T809.35 (16 June 2023).

- 583 Saibai and Boigu are low-lying islands. The houses on those islands are on stilts¹¹⁹², which provides a measure of protection against marine inundation. However, retreat to higher ground is not an available solution on those islands.
- 584 Tenth, the disadvantage means that the Islanders will be disproportionately impacted by the marine inundation because of their close physical and spiritual relationship with land and sea and their Ailan Kastom more broadly. In addition, the disproportion is highlighted when regard is had to the negligible contribution of the Torres Strait Islanders to greenhouse gas emissions relative to the impact on their Islands and themselves.
- 585 Eleventh, the Commonwealth briefing note from about 2012 records "In the future, the projected magnitude of climate change driven sea level rise is very likely to seriously exacerbate the vulnerability to inundation and erosion. Indigenous communities, such as those in the Torres Strait, typically possess limited adaptive capacity, due to their socio-economic circumstances and the remoteness of settlements."¹¹⁹³
- 586 Twelfth, the Commonwealth says in its Defence "...that there is high confidence that small islands are projected to be at risk and very sensitive to coastal climate change and other stressors such as oceanic warming, sea level rise, tropical cyclones and mass coral bleaching and mortality although there is a lack of precise quantitative studies of projected impacts of sea level rise at Global Temperature Increase of 1.50 C and 20 C."¹¹⁹⁴

O. KNOWLEDGE OF THE RISK

Legal Principles

587 The legal principles on knowledge are set out at paragraph [225]. In particular, "the case for imposing a duty is always strengthened if the defendant actually knew of the risk. It is strengthened further if the defendant knew the magnitude of the risk. The significance of the defendant's knowledge of the risk of loss and its magnitude will depend on the facts of each case".¹¹⁹⁵

¹¹⁹² TRN.0014.1172 T1195.15, T1247.34 (15 Nov 2023).

¹¹⁹³ NIA.2009.0036.8142 at 8143.

¹¹⁹⁴ CRT.2000.0003.0001 Defence [59(b)].

¹¹⁹⁵ APP.0001.0020.0189 Woolcock Street Investments Pty Ltd v CDG Pty Ltd (2004) 216 CLR 515 at 550 [87].

Submission on knowledge

- 588 The Applicants do not expect that the Commonwealth will contend that it did not possess actual knowledge of the risk of marine inundation and erosion faced by the Torres Strait Islands from sea level rise and extreme weather events. The contemporaneous documents disclose multiple instances in which the Commonwealth has acknowledged these risks.
- 589 Firstly, in TSIRC's application¹¹⁹⁶ under the RDA Fund¹¹⁹⁷ for funding of Stage 1 was lodged with the **Department** of Regional Australia, Regional Development and Local Government on 15 February 2012. That application disclosed that:
 - 589.1"...coastal infrastructure [was] required to help protect six low lying island communities in the Torres Strait from destructive coastal erosion and tidal flooding that pose an immediate and increasing threat to their security, viability and well being... [The coastal infrastructure] will provide significantly improved immunity to these communities from storm surge, king tides and expected sea level rise due to climate change;"¹¹⁹⁸
 - 589.2 "... the low lying coastal communities of the Torres Strait are faced with a unique challenge in trying to respond to sea level rise without the benefit of being able to move further inland from the coast. Some of the islands facing this challenge are barely higher than current mean sea levels;"¹¹⁹⁹
 - 589.3"...Currently coastal erosion and flooding causes a number of problems for communities including: ... * erosion of shorelines * flooding low set homes ... * salt contamination of community gardens * damage to important cultural heritage sites such as cemeteries ...¹²⁰⁰
- 590 Second, in assessing TSIRC's Application under the Fund, the Department's assessors¹²⁰¹ acknowledged that:¹²⁰²

¹¹⁹⁶ INF.2000.0002.0354 Exhibit 5 to First Connolly Affidavit.

¹¹⁹⁷ INF.2004.0001.0001.

¹¹⁹⁸ INF.2000.0002.0354 at 0357.

¹¹⁹⁹ INF.2000.0002.0354 at 0359.

¹²⁰⁰ INF.2000.0002.0354 at 0367.

¹²⁰¹ WIT.2000.0001.0015 Connolly First Affidavit at 0022.

¹²⁰² INF.2000.0002.0373 at 0377.

"[t]he Sea Wall would protect the community from annual tidal inundation and significant coastal erosion adjacent to key community assets and infrastructure. Currently, erosion and flooding cause a number of problems for communities including:

•••

• damage to important cultural heritage sites, such as cemeteries;

...

- salt contamination of community gardens."
- 591 Third, the Department of Climate Change and Energy Efficiency commented on the TSIRC's application under the Fund.¹²⁰³ These comments were provided to the Department:

.... A Commonwealth funded study in 2010 showed that climate change impacts such as sea level rise 'unless managed well, will cause a decline in the quality of life for the communities of Torres Strait'. Six of the most vulnerable islands (Boigu, Saibai, Poruma, Masig, Iama, Warraber) have had an assessment of the likely impacts of future climate change completed. Impacts will vary from island to island but for the low lying islands of Boigu and Saibai, the study showed that elevation and fortification are the only viable protection options. Consultant feedback affirms that Boigu and Saibai Islands already have the most significant inundation and erosion problems in the Torres Strait and that Boigu's problems could be fixed at relatively low cost.

While coastal protection works will assist communities in the short-term, in the longer term the relocation of some communities may need to be considered and planned for. ...

592 Fourth, the Department of Premier and Cabinet (Qld) also commented on the TSIRC's application under the Fund.¹²⁰⁴ These comments were provided to the Department:

Six communities in the region have been identified as being vulnerable to sea erosion, storm tide inundation and future climate change affects such a 0.8m sea level rise. These constitute an imminent threat to residential areas and public infrastructure.¹²⁰⁵

593 Fifth, in the list¹²⁰⁶ of projects to be funded that was provided by the Advisory Panel to the Department to the Minister for Regional Australia, Regional Development and Local Government, it is recorded that:

The project will help the most vulnerable Torres Strait Island communities in their battle against the impacts of King tides and climate change. Seawalls and other coastal

¹²⁰³ INF.2000.0002.0373 at 0379.

¹²⁰⁴ INF.2000.0002.0373 at 0379.

¹²⁰⁵ INF.2000.0002.0373 at 0380.

¹²⁰⁶ The list was signed by the Minister for Regional Australia, Regional Development and Local Government on 31 May 2012 (INF.2004.0001.0081 at 0100).

management measures delivered through this program will provide considerable immunity to these otherwise vulnerable communities".¹²⁰⁷

- 594 Sixth, the Funding Agreement for the Stage 1 funding between the Commonwealth and the TSIRC records that the purpose of the "critical infrastructure to six islands on the Torres Strait"¹²⁰⁸ was "to provide a sustainable coastal protection system for vulnerable Torres Strait Island communities, protecting against the impact of coastal erosion and tidal inundation, reducing the likelihood of damage to community infrastructure and enhancing community and environmental health". ¹²⁰⁹
- 595 Seventh, on 4 June 2012, in a joint media release¹²¹⁰ with the Queensland Government, the following statements were attributed to:
 - 595.1 Ms Jenny Macklin MP, (Commonwealth) Minister for Families, Community Services and Indigenous Affairs for Disability Reform:

"...seawalls and other coastal management measures will help the most vulnerable Torres Strait Island communities in their battle against the impacts of king tides"¹²¹¹;

"The seawalls will help prevent damage caused by coastal erosion and inundation, and will also protect existing infrastructure in the communities";¹²¹²

"I know people in the communities of the Torres Strait are very concerned by the coastal erosion and sea water inundation during king tides".¹²¹³

595.2 Mr Crean, the Minister for Regional Australia, Regional Development and Local Government:

"The \$5 million grant to the Torres Strait Island Regional Council for the most vulnerable islands, Boigu and Sabai, will be protected by the construction of new, or replacement of old sea walls and wave return walls."¹²¹⁴

"The sea wall will protect the community from annual tidal inundation and significant coastal erosion adjacent to key community assets and infrastructure."¹²¹⁵

596 Eighth, there exists various contemporaneous documents which establish that prior to Stage 1 funding, the Commonwealth had knowledge of the risk of inundation and erosion

¹²⁰⁷ INF.2004.0001.0081 at 0100.

¹²⁰⁸ INF.2000.0001.0565 at 0600 (clause 1.1).

¹²⁰⁹ INF.2000.0001.0565 at 0600 (clause 1.4).

¹²¹⁰ INF.2000.0002.0001.

¹²¹¹ INF.2000.0002.0001 at 0002.

¹²¹² INF.2000.0002.0001 at 0002.

¹²¹³ INF.2000.0002.0001 at 0002.

¹²¹⁴ INF.2000.0002.0001 at 0002.

¹²¹⁵ INF.2000.0002.0001 at 0002.

on the Torres Strait Islands.¹²¹⁶ For example, the (Commonwealth) Department of Climate Change acknowledged in its report assessing 'Climate Change Risks to Australia's Coast"¹²¹⁷ that:

- 596.1 "... remote Indigenous communities in the north of Australia and communities living on the low-lying Torres Strait Islands are particularly vulnerable to sea-level rise. Some Torres Strait communities are affected under current king tide conditions and even very small levels of sea-level rise are likely to have a major impact on these communities";¹²¹⁸
- 596.2 "Many communities are subject to significant coastal hazard issues with erosion and inundation directly threatening housing, ... cultural sites including cemeteries, traditional gardens An anomalous high spring tide in January 2009 resulted in extensive flooding of island settlements;¹²¹⁹
- 596.3 "Given the low-lying nature of several islands, and the extent of current inundation problems, vulnerability to sea-level rise is extremely high, particularly for Boigu and Saibai but also for the central coral cay islands, as well as several other communities located on low coastal flats. Even small increases in sea level due to climate change are likely to have a major impact on these communities, with increasing frequency and extent of inundation, although for the coral cay islands there is some potential for moderation of this impact through onshore transport of reef sand and associated island growth. Large sea level increases could see several Torres Strait islands completely inundated, thus having enormous implications for the communities involved, their culture and identity... As noted by Green and Mulrennan, under worst case sea-level rise scenarios it is likely that eventually relocation would be required from several communities involving considerable cost culturally, spiritually and economically";¹²²⁰
- 596.4 "The extent of vulnerability of the region and its peoples to climate change together with the human rights implications are highlighted in the 2008 Native Title Report by the Aboriginal and Torres Strait Islander Social Justice Commissioner, which

¹²¹⁶ See above at [231].

¹²¹⁷ APP.0001.0019.0007.

¹²¹⁸ APP.0001.0019.0007_0008.

¹²¹⁹ APP.0001.0019.0007_0127.

¹²²⁰ APP.0001.0019.0007_0127.

along with recent submissions by the Torres Strait Regional Authority emphasise the need for immediate and comprehensive action to address the climate change concerns in the region";¹²²¹

- 596.5 "Torres Strait Island communities face particular challenges in living on small lowlying and exposed islands, several of which already suffer from inundation under king tides. Continuing inundation events for these islander communities will require the development of short-term coastal protection and may require long-term relocation plans for approximately 2000 Torres Strait islander peoples".¹²²²
- 597 Further, the Commonwealth Department of Climate Change and Energy Efficiency stated in its case study on Saibai in its 2009 report 'Risks from Climate Change to Indigenous Communities in the Tropical North of Australia' that:
 - 597.1 "Saibai Islanders have considerable experience of flooding and coastal erosion, and long-term knowledge of their environment."
 - 597.2 "Today, the local Spring tidal range is between 3.5 and 4.0 metres, making Saibai very vulnerable to flooding; these tides are worse when they occur in conjunction with storm surges and heavy onshore winds and waves during the north-westerly season. Major flooding events have occurred in January 2006, and more recently in January 2009, when king tides inundated parts of the village."
 - 597.3 "Higher sea levels than present will result in greater flooding during king tide and/or storm surge events... More intense storm surges would exacerbate these problems."
 - 597.4 "Sites of cultural heritage significance to the community would also be subject to increased threat, in particular, the village graveyard."¹²²³
- 598 Ninth, in its Defence the Commonwealth pleads that it "... knew of the assessment of the extent of scientific consensus in relation to the risks and projected impacts of climate

¹²²¹ APP.0001.0019.0007_0127.

¹²²² APP.0001.0019.0007_0128.

¹²²³ APP.0001.0007.0155.

change, including the risks and impacts of climate change for small and low-lying islands..."¹²²⁴

- 599 Tenth, in its Defence the Commonwealth pleads that it "knew of the contents of [various] reports and documents ...from at least on or around the date of their publication".¹²²⁵ Among those documents included the IPCC Fifth Assessment Report and the IPCC Special Report on 1.5°C.
- 600 Eleventh, in the 2015 National Climate Resilience and Adaptation Strategy¹²²⁶, the Commonwealth acknowledged¹²²⁷ that Climate projections released by Australia's CSIRO and Bureau of Meteorology in 2015 indicate that under all future emissions scenarios:
 - 600.1 "extreme rainfall events are likely to become more intense (high confidence);"
 - 600.2 "the number of tropical cyclones is projected to become less frequent with a greater proportion of high intensity storms (medium confidence) and a greater proportion extending beyond the southern latitude of 25 degrees (low confidence)";
 - 600.3 "sea levels will continue to rise throughout the 21st century (very high confidence), with increased frequency of storm surge events".
- 601 Twelfth, in 2016, the TSRA released the Torres Strait Regional Adaptation and Resilience Plan 2016-2021.¹²²⁸ In this Plan, the TSRA notes:
 - 601.1 "For the Torres Strait the most important changes are: Rising sea levels Sea levels in the region are currently increasing at a rate of between 6-8 mm per year, and will continue to rise into the future..."¹²²⁹
 - 601.2"Adaptation Outcome 1: Coastal communities and infrastructure are protected from sea-level rise and coastal impacts, and communities have options in responding to long-term sea-level rise";¹²³⁰

¹²²⁴ CRT.2000.0003.0001 Defence [77(c)].

¹²²⁵ CRT.2000.0003.0001 Defence [77(a)].

¹²²⁶ APP.0001.0007.0149.

¹²²⁷ APP.0001.0007.0149_0009.

¹²²⁸ APP.0001.0004.0017.

¹²²⁹ APP.0001.0004.0017_0011.

¹²³⁰ APP.0001.0004.0017_0014.

- 601.3 Currently, many coastal communities are vulnerable to current conditions, such as king tides and storms which drive erosion and inundation events;¹²³¹
- 601.4 Coastal erosion and inundation are of particular concern and significance to Torres Strait communities, and sea level rise is a very serious medium to long-term risk for low lying island communities.¹²³²
- 602 [Withdrawn]:
 - 602.1 [Withdrawn]; ¹²³³

602.2 [Withdrawn].1234

P. ASSUMPTION OF RESPONSIBILITY

Legal principles

603 The legal principles on assumption of responsibility are set out at paragraph [243]. In particular, the assumption of responsibility salient feature is "...an assumption by one party of a responsibility to take care to avoid or prevent injury, loss or damage to the person or property of another..."¹²³⁵

Submission on assumption of responsibility

- 604 The Applicants submit that the Commonwealth has assumed responsibility to take care to avoid loss and damage to the Applicants and the Group Members. That assumption of responsibility is evidenced in a number of ways.
- 605 Firstly, the Commonwealth is bound by an international treaty obligation to "protect the traditional way of life of the Torres Strait".
- 606 On 18 December 1978¹²³⁶, Australia and Papua New Guinea entered into a **Treaty** in relation to the sovereignty and maritime boundaries over the Torres Strait.¹²³⁷ Under the

¹²³¹ APP.0001.0004.0017_0029. ¹²³² APP 0001_0004_0017_0049

¹²³² APP.0001.0004.0017_0049.

¹²³³ [Withdrawn] ¹²³⁴ [Withdrawn]

¹²³⁴ [Withdrawn] 1235 A PR 0001 001

¹²³⁵ APP.0001.0020.0162 Sutherland Shire Council v Heyman (1985) 157 CLR 424 at 498.

¹²³⁶ The Treaty "entered into force for Australia on 15 February 1985" (CRT.2000.0003.0001 Defence to 3FASOC at 0022[61b]).

¹²³⁷ APP.0001.0003.0022.

Treaty, the Commonwealth, has "sovereignty"¹²³⁸ over (relevantly) all the Torres Strait Islands the subject of this proceeding.¹²³⁹

607 The Commonwealth admits in its Defence that:

"...the <u>principal purpose</u> of ... establishing the Protected Zone, ... is to acknowledge and protect the traditional way of life and livelihood of the traditional inhabitants including their traditional fishing and free movement (Torres Strait Treaty, Article 10.3)"; ¹²⁴⁰ [Emphasis added]

"...a <u>further purpose</u> ... in establishing the Protected Zone is to protect and preserve the marine environment and indigenous fauna and flora in and in the vicinity of the Protected Zone (Torres Strait Treaty, Article 10.4)". ¹²⁴¹ [Emphasis added]

- 608 In seeking to achieve these purposes, the Commonwealth admits that it is obliged under the Treaty to "...take legislative and other measures necessary to protect and preserve the marine environment ... ".¹²⁴² "Other measures" includes "measures for the prevention and control of pollution or other damage to the marine environment from all sources and activities under its jurisdiction or control and shall include, in particular, measures to minimise to the fullest practicable extent (inter alia) the release of toxic, harmful or noxious substances from land-based sources, ... from or through the atmosphere, ...". ¹²⁴³
- 609 While the Treaty does not prescribe the "measures" the Commonwealth is required to take to "protect the traditional way of life" that omission, in the Applicants' submission, does not absolve the Commonwealth of the obligation to "protect the traditional way of life" of the Torres Strait Islanders. This is supported by the fact that it is a principle of

¹²³⁸ APP.0001.0003.0022: Under Article 2(4) of Treaty term "sovereignty" is defined as follows: sovereignty over an island shall include sovereignty over: (a) its territorial sea; (b) the airspace above the island and its territorial sea; (c) the seabed beneath its territorial sea and the subsoil thereof; and (d) and island, rock or low-tide elevation that may lie within its territorial sea.

¹²³⁹ APP.0001.0003.0022: Under Article 2(1)(a), Papua New Guinea recognises the sovereignty of Australia over (a) the islands known as Anchor Cay, Aubusi Island, Black Rocks, Boigu Island, Bramble Cay, Dauan Island, Deliverance Island, East Cay, Kaumag Island, Kerr Islet, Moimi Island, Pearce Cay, Saibai Island, Turnagain Island and Turu Cay; and (b) all islands that lie between the mainlands of the two countries and south of the line referred to in paragraph 1 of article 4 of this Treaty.

¹²⁴⁰ CRT.2000.0003.0001 Defence to [66(a)]; and Article 10(3) at APP.0001.0003.0022 [.0005]. The Department of Foreign Affairs and Trade describes the Treaty as follows: "As well as defining the maritime boundaries between Papua New Guinea and Australia, the Treaty protects the ways of life of traditional inhabitants in the Torres Strait Protected Zone (TSPZ): <u>The Torres Strait Treaty | Australian Government Department of Foreign Affairs and Trade (dfat.gov.au).</u>

¹²⁴¹ CRT.2000.0003.0001 Defence [66(b)]; Article 10(4) at APP.0001.0003.0022 [.0005].

¹²⁴² CRT.2000.0003.0001 Defence [67(a)].

¹²⁴³ CRT.2000.0003.0001 Defence [67(b)].

customary international law that treaties must be adhered to and performed in good faith.¹²⁴⁴

- 610 Further, through the Council of Australian Governments, the Commonwealth and the State governments agreed that the Commonwealth's role in leading the national adaptation reform will include: \circ ensuring that national efforts to adapt to climate change meet any relevant international treaty requirements.¹²⁴⁵
- 611 Second, the Treaty obligation is complemented by the ICCPR. The Commonwealth ratified this Covenant on 13 August 1980. The Covenant provides:
 - 611.1 In Article 17 that:

"No one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence, nor to unlawful attacks on his honour and reputation."

611.2 In Article 27

"In those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right, in community with the other members of their group, to enjoy their own culture, to profess and practise their own religion, or to use their own language."

612 On 18 September 2023, the UN Human Rights Committee ruled in *Billy v Australia*¹²⁴⁶ that:

"The Committee recalls that States parties must prevent interference with a person's privacy, family or home that arises from conduct not attributable to the State, at least where such interference is foreseeable and serious. Thus, when environmental damage threatens disruption to privacy, family and the home, States parties must prevent serious interference with the privacy, family and home of individuals under their jurisdiction;" ¹²⁴⁷

"traditional Indigenous way of life" and " a special relationship with their territory...fall within the scope of protection under article 17 of the Covenant"; ¹²⁴⁸

¹²⁴⁴ In APP.0001.0020.0197 *Billy v Australia* CCPR/C/135/D/3624/2019, UN Human Rights Committee ruled at paragraph 8.4 that (18 September 2023) "... a treaty be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose. In this regard, the Committee notes that under article 31 of the Convention, the context for interpretation of a treaty includes in the first place the text of the treaty, including its preamble and annexes..."

¹²⁴⁵ EVI.2001.0006.2001 at 0694 to 0695. See further 622.

APP.0001.0020.0197 Billy v Australia CCPR/C/135/D/3624/2019, UN Human Rights Committee (18 September 2023).

¹²⁴⁷ APP.0001.0020.0197 *Billy v Australia* CCPR/C/135/D/3624/2019, UN Human Rights Committee (18 September 2023) at page 14[8.9].

¹²⁴⁸ APP.0001.0020.0197 *Billy v Australia* CCPR/C/135/D/3624/2019, UN Human Rights Committee (18 September 2023) at page 14[8.10].

"... the information made available to it indicates that, by failing to discharge its positive obligation to implement adequate adaptation measures to protect the authors' home, private life and family, the State party violated the authors' rights under article 17 of the Covenant;"¹²⁴⁹

"The Committee recalls that article 27 establishes and recognizes a right which is conferred on individuals belonging to minority Indigenous groups and which is distinct from, and additional to, the other rights that all persons are entitled to enjoy under the Covenant. The Committee also recalls that, in the case of Indigenous Peoples, the enjoyment of culture may relate to a way of life which is closely associated with territory and the use of its resources, including such traditional activities as fishing or hunting. Thus, the protection of this right is directed towards ensuring the survival and continued development of cultural identity. The Committee further recalls that article 27 of the Covenant, interpreted in the light of the United Nations Declaration on the Rights of Indigenous Peoples, enshrines the inalienable right of Indigenous Peoples to enjoy the territories and natural resources that they have traditionally used for their subsistence and cultural identity. Although the rights protected under article 27 are individual rights, they depend in turn on the ability of the minority group to maintain its culture, language or religion."¹²⁵⁰

"...the Committee considers that the information made available to it indicates that the State party's failure to adopt timely adequate adaptation measures to protect the authors' collective ability to maintain their traditional way of life and to transmit to their children and future generations their culture and traditions and use of land and sea resources discloses a violation of the State party's positive obligation to protect the authors' right to enjoy their minority culture. Accordingly, the Committee considers that the facts before it amount to a violation of the authors' rights under article 27 of the Covenant."¹²⁵¹

- 613 Further, the relationship of obligation and protection recognised in the Torres Strait Treaty was later reinforced, at a national level, by Australia's endorsement of the UNDRIP.¹²⁵²
- 614 Third, the Commonwealth provided Stage 1 funding¹²⁵³ in direct response to an application for funding from the TSIRC and with full knowledge of the risk of marine inundation and erosion facing the Torres Strait Islands.¹²⁵⁴

¹²⁴⁹ APP.0001.0020.0197 *Billy v Australia* CCPR/C/135/D/3624/2019, UN Human Rights Committee (18 September 2023) at page 16[8.12].

¹²⁵⁰ APP.0001.0020.0197 *Billy v Australia* CCPR/C/135/D/3624/2019, UN Human Rights Committee (18 September 2023) at page 16[8.13].

¹²⁵¹ APP.0001.0020.0197 *Billy v Australia* CCPR/C/135/D/3624/2019, UN Human Rights Committee (18 September 2023) at page 16[8.14].

¹²⁵² See further discussion of the UNDRIP above at 188.

¹²⁵³ The Commonwealth admits in its Defence that it "has taken and/or funded a number of actions in order to mitigate the impacts and projected impacts of climate change in Australia and the Torres Strait Islands" (CRT.2000.0003.0001 Defence [73(a)]).

¹²⁵⁴ See paragraphs 588 to 602.

- 614.1 TSIRC applied¹²⁵⁵ to the Department for Stage 1 funding under the Fund¹²⁵⁶ on 15 February 2012;
- 614.2 the Department assessed¹²⁵⁷ the TSIRC's application;¹²⁵⁸
- 614.3 the Minister of Regional Australia, Local Government, Arts and Sport (Cth) approved Stage 1 funding;¹²⁵⁹
- 614.4 despite the change in government and the fact funds were not allocated under the Fund by the outgoing government, the incoming government announced its commitment to Stage 1 funding on 25 February 2014, with \$5m allocated under the Community Development Grants Programme and \$7m from the Indigenous Housing and Infrastructure programme (with \$1 million already provided).¹²⁶⁰
- 615 Fourth, the Commonwealth provided Stage 2 funding¹²⁶¹ in direct response in part to a 21 June 2018 request from the TSIRC¹²⁶² and with full knowledge of the risk of marine inundation and erosion facing the Torres Strait Islands.¹²⁶³ On 16 December 2019, the Commonwealth approved \$20 million in Stage 2 funding.¹²⁶⁴
- 616 Fifth, the Department of the Prime Minister and Cabinet and the Minister for Indigenous Affairs, were made aware that the TSIRC "made public statements criticising the lack of commitment from the Commonwealth Government to Seawalls funding [Stage 2]...".¹²⁶⁵
- 617 Sixth, since 15 May 2023, "the NIAA and the TSRA have been investigating possible options for funding a third stage of the seawalls project".¹²⁶⁶
- 618 Seventh, the Department of Climate Change (Cth) funded the James Cook University to "undertake research on the risks associated with erosion and inundation of the 6 most

¹²⁵⁵ INF.2000.0002.0354.

¹²⁵⁶ INF.2004.0001.0001. ¹²⁵⁷ INF 2000 0002 0373: II

¹²⁵⁷ INF.2000.0002.0373; INF.2004.0001.0065; WIT.2000.0001.0015 Connolly First Affidavit at 0022.

 ¹²⁵⁸ INF.2000.0002.0354.
¹²⁵⁹ INF.2000.0002.0241.

¹²⁶⁰ INF.2000.0002.0241. INF.2003.0003.4147.

¹²⁶¹ The Commonwealth admits in its Defence that it "has taken and/or funded a number of actions in order to mitigate the impacts and projected impacts of climate change in Australia and the Torres Strait Islands" (CRT.2000.0003.0001 Defence [73(a)].

¹²⁶² NIA.2002.0001.0014; [2] to NIA.2002.0001.0022 Exhibit R8

¹²⁶³ See paragraphs 588 to 602.

¹²⁶⁴ NIA.2002.0001.0161.

¹²⁶⁵ [4] to NIA.2002.0001.0022 Exhibit R8.

¹²⁶⁶ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0003[8].

vulnerable islands in the Torres Strait".¹²⁶⁷ James Cook University produced two reports in 2010. The first was titled "A Synthesis of Climate Change and Coastal Science to Support Adaptation in the Communities of the Torres Strait."¹²⁶⁸ The second was titled "Coastal Erosion and Inundation in the Central Island Group (Masig, Poruma, Warraber and Iama), Torres Strait: Science Supporting Adaptation".¹²⁶⁹ The Department of Climate Change subsequently provided further funding to James Cook University to better understand climate change impacts on the 13 remaining inhabited Torres Strait Islands.¹²⁷⁰ The report from that research was titled, "Understanding climate change driven coastal erosion and inundation on Torres Strait communities and the development of adaptation options."¹²⁷¹

- 619 Eighth, in May 2010, the Commonwealth "announced additional funding of \$1 million for tidal gauge monitoring in the Torres Strait and \$400,000 for further climate change adaptation research".¹²⁷²
- 620 Ninth, during Stage 1 and 2 the Commonwealth through, variously, the NIAA, the Department of Prime Minister and Cabinet (DPMC), the Department of Regional Australia, Infrastructure and Regional Development (DIRD) and the Department of Local Government, Community Recovery and Resilience (DLGCRR) attended the Program Governance Committee (PGC). That Committee provided members with a coordination and information sharing mechanism relating to policy and planning, project milestones, quality assurance, and costs and value for money¹²⁷³, and oversaw "the scope and development" of Stage 2 (among other responsibilities).¹²⁷⁴ The PGC was required to approve the Project Implementation Plans for Stage 1 and 2.¹²⁷⁵
- 621 Tenth, in a joint media release¹²⁷⁶ with the Queensland Government:

¹²⁶⁷ NIA.2009.0036.8142; DCC.2001.0001.2640 at 2641.

¹²⁶⁸ APP.0001.0007.0290 at [0002].

¹²⁶⁹ NIA.2001.0001.1201 at [1227].

¹²⁷⁰ INF.2000.0002.0373 at 0379.

 ¹²⁷¹ DCC.2001.0001.2640 at 2641; and NIA.2009.0036.8142: "The Department of Climate Change provided funding for the James Cook University to undertake research on the risks associated with erosion and inundation of the 6 most vulnerable islands in the Torres Strait."
¹²⁷² NIA 2009.0026 \$142

¹²⁷² NIA.2009.0036.8142.

¹²⁷³ INF.2005.0001.0001 at 0057.

¹²⁷⁴ WIT.2000.0001.0046 First Simpson Affidavit at 0051[26]-[27]; 0052[32]; 0053[36].

¹²⁷⁵ NIA.2000.0001.0324 at 0030.

¹²⁷⁶ INF.2000.0002.0001.

621.1 the Minister for Families, Community Services and Indigenous Affairs for Disability Reform, Ms Jenny Macklin MP, said seawalls and other coastal management measures will help the most vulnerable Torres Strait Island communities in their battle against the impacts of king tides¹²⁷⁷. She made the following statements:

"The seawalls will help prevent damage caused by coastal erosion and inundation, and will also protect existing infrastructure in the communities," Ms Macklin said¹²⁷⁸.

"I know people in the communities of the Torres Strait are very concerned by the coastal erosion and sea water inundation during king tides'.¹²⁷⁹

621.2 Mr Crean, the Minister for Regional Australia, Regional Development and Local Government, made the following statements:

"The \$5 million grant to the Torres Strait Island Regional Council for the most vulnerable islands, Boigu and Sabai, will be protected by the construction of new, or replacement of old sea walls and wave return walls."¹²⁸⁰

"The sea wall will protect the community from annual tidal inundation and significant coastal erosion adjacent to key community assets and infrastructure."¹²⁸¹

- 622 Eleventh, through the Council of Australian Governments, the Commonwealth and the State governments agreed on a range of matters relevant to climate change adaptation that evidence the Commonwealth's assumption of responsibility:
 - 622.1 "Governments-on behalf of the community-should primarily be responsible for managing [climate change] risks to public goods and assets (including the natural environment)";¹²⁸²
 - 622.2 "Governments...manage public assets. These include, for example, providing flood and coastal protection...";¹²⁸³
 - 622.3 "Governments...should ensure that climate change risks are appropriately factored into their management and funding of public assets;" ¹²⁸⁴

¹²⁷⁷ INF.2000.0002.0001 at 0002.

¹²⁷⁸ INF.2000.0002.0001 at 0002.

¹²⁷⁹ INF.2000.0002.0001 at 0002. ¹²⁸⁰ INF 2000.0002.0001 at 0002

¹²⁸⁰ INF.2000.0002.0001 at 0002. ¹²⁸¹ INF 2000.0002.0001 at 0002

¹²⁸¹ INF.2000.0002.0001 at 0002.

¹²⁸² EVI.2001.0006.2001 at 0691.

¹²⁸³ EVI.2001.0006.2001 at 0691.

¹²⁸⁴ EVI.2001.0006.2001 at 0693.

- 622.4 "The Australian Government has stewardship of the national economy and is responsible for promoting Australia's national interests more broadly. As climate change will impact on virtually every sector of the economy and society, the Commonwealth will need to take a leadership role in positioning Australia to adapt to climate change impacts that may affect national prosperity or security. By exercising its role the Commonwealth will help to improve adaptive capacity and build climate resilience. In some cases this will require targeted action, for example the Australian Government manages some important assets including natural assets such as Kakadu that are vulnerable to the impacts of climate change. In other cases the Commonwealth will play a role in driving and coordinating national reform efforts;" ¹²⁸⁵
- 622.5 "The Australian Government is well placed to generate and coordinate most of the important public good science and other information that will be needed. Much of this information is too costly for individual businesses, groups or local governments to generate for use in adaptation planning;" ¹²⁸⁶
- 622.6 "Some climate change risks have the long-term potential to undermine the national economy, national security or affect natural systems of national significance. The Commonwealth has a responsibility to lead national reform to ensure Australia is well placed to deal with these risks...The Commonwealth's role in leading the national adaptation reform will include: \circ ensuring that national efforts to adapt to climate change meet any relevant international treaty requirements... \circ consider the needs of vulnerable communities." ¹²⁸⁷
- 623 Twelfth, the Commonwealth admits "that the UNFCCC entered into force in Australia on 21 March 1994".¹²⁸⁸
- 624 Thirteenth, the Commonwealth admits that the Paris Agreement¹²⁸⁹ "was adopted on 12 December 2015, opened for signature on 22 April 2016, entered into force generally on

¹²⁸⁵ EVI.2001.0006.2001 at 0693.

¹²⁸⁶ EVI.2001.0006.2001 at 0693.

¹²⁸⁷ EVI.2001.0006.2001 at 0694 to 0695.

¹²⁸⁸ CRT.2000.0003.0001 Defence [68(a)].

¹²⁸⁹ APP.0001.0006.0017.

4 November 2016 and entered into force in Australia on 9 December 2016".¹²⁹⁰ Under the Paris Agreement, the Commonwealth:

- 624.1 has adopted "the global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response...";¹²⁹¹
- 624.2 "recognise[d] that adaptation is a global challenge faced by all with local, subnational, national, regional and international dimensions...";¹²⁹²
- 624.3 "recognise[d] the current need for adaptation is significant...";¹²⁹³
- 624.4 "acknowledge[d] that adaptation action should follow a country- driven, genderresponsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate"; ¹²⁹⁴
- 624.5 Each Party shall, as appropriate, engage in adaptation planning processes and the implementation of actions, including the development or enhancement of relevant plans, policies and/or contributions, which may include:
 - (a) The implementation of adaptation actions, undertakings and/or efforts;
 - (b) The process to formulate and implement national adaptation plans;
 - (c) The assessment of climate change impacts and vulnerability, with a view to formulating nationally determined prioritized actions, taking into account vulnerable people, places and ecosystems.

¹²⁹⁰ CRT.2000.0003.0001 Defence [35(a)].

¹²⁹¹ APP.0001.0006.0017_0010 (Article 7(1)).

¹²⁹² APP.0001.0006.0017_0010 (Article 7(2)). ¹²⁹³ APP.0001.0006 0017_0010 (Article 7(4))

¹²⁹³ APP.0001.0006.0017_0010 (Article 7(4)).

¹²⁹⁴ APP.0001.0006.0017_0010 (Article 7(5))

- 625 Fourteenth, the Commonwealth (through the TSRA) has developed the Torres Strait Regional Adaptation and Resilience Plan 2016-2021.¹²⁹⁵
- 626 Fifteenth, the Commonwealth established itself as an essential partner in the project such that the project could not proceed without Commonwealth engagement. For example, on 29 January 2014, a senior advisor from DPMC emailed colleagues noting that she had just attend a PGC meeting at which it was 'very clear' that the Commonwealth was 'the only obstacle to the project getting underway'.¹²⁹⁶ The Commonwealth actively chose to assume such a central role in the project, and in so doing has entered the field in the requisite sense.

Q. KNOWN RELIANCE

Legal principles

- 627 Often "reliance" and "voluntary assumption of risk" are considered complementary salient features¹²⁹⁷. Satisfaction of both these salient features can lead to the recognition of a duty of care. ¹²⁹⁸
- 628 The legal principles on reliance are set out at paragraphs [243]-[244].

Submission on known reliance

- 629 The Torres Strait Islanders "as a group, [are] the most disadvantaged in Australian society".¹²⁹⁹ This fact is acknowledged by the Commonwealth.¹³⁰⁰
- 630 That disadvantage extended to the risks to and impacts of marine inundation and erosion.This fact was also known to the Commonwealth.¹³⁰¹

¹²⁹⁵ APP.0001.0004.0017.

¹²⁹⁶ NIA.2001.0001.0196.

¹²⁹⁷ APP.0001.0020.0162 Sutherland Shire Council v Heyman (1985) 157 CLR 424 at 498: "...an assumption by one party of a responsibility to take care to avoid or prevent injury, loss or damage to the person or property of another or reliance by one party upon such care being taken by the other in circumstances where the other party knew or ought to have known of the reliance. Both the identity and the relative importance of the factors which are determinative of an issue of proximity are likely to vary in different categories of case...".

APP.0001.0020.0071 Hill v Van Erp (1997) 188 CLR 159 at 184 per Dawson J: "...Where there is no threat of those undesirable consequences, the assumption of responsibility by a defendant and reliance, or request, by a plaintiff may suggest policy reasons for recognising the existence of a duty of care, although they may not be determinative...".

The Preamble to the APP.0001.0021.0016 *Native Title Act* 1993 (Cth) states that "As a consequence, Aboriginal peoples and Torres Strait Islanders have become, as a group, the most disadvantaged in Australian society."
The Preamble to the APP.0001.0016 *Native Title* Act 1002 (Cth)

¹³⁰⁰ The Preamble to the APP.0001.0021.0016 *Native Title Act* 1993 (Cth).

¹³⁰¹ See above at [588]-[602].

- 631 The disadvantage meant that the Torres Strait Islanders were wholly reliant on the Commonwealth to protect them from the impacts of marine inundation and erosion through the provision of funding for the construction of the seawalls. At the very least, the Commonwealth was put on notice of this reliance upon receipt and assessment of the TSIRC's application¹³⁰² for Stage 1 funding and the TSIRC's direct request¹³⁰³ to the Commonwealth for Stage 2 funding.
- 632 In any event, the TSIRC's application¹³⁰⁴ to the Commonwealth for Stage 1 funding and the TSIRC's direct request¹³⁰⁵ to the Commonwealth for Stage 2 funding, confirmed the Torres Strait Islanders were relying on the Commonwealth to provide funding for Stage 1 and Stage 2.

R. CONTROL

Legal principles

- 633 The legal principles on control are set out at paragraphs [225] to [227]. In particular, "control" means"...a significant and special measure of control over the safety of the person or property of citizens as to impose upon the [the Commonwealth] a duty of care..."¹³⁰⁶
- 634 Various other expressions and elements of control have appeared in the authorities, including:
 - 634.1 "control over the relevant risk of harm...¹³⁰⁷...that eventuated..."¹³⁰⁸
 - 634.2 "physical control";¹³⁰⁹
 - 634.3 "control or minimise the risk" ¹³¹⁰.
- 635 The requisite control can arise from one or more of:

¹³⁰² INF.2000.0002.0354.

¹³⁰³ NIA.2002.0001.0014; [2] to NIA.2002.0001.0022 Exhibit R8.

¹³⁰⁴ INF.2000.0002.0354.

¹³⁰⁵ NIA.2002.0001.0014; [2] to NIA.2002.0001.0022 Exhibit R8.

¹³⁰⁶ APP.0001.0020.0025 Brodie v Singleton Shire Council (2001) 206 CLR 512 at 559.

¹³⁰⁷ APP.0001.0020.0065 Graham Barclay Oysters Pty Ltd v Ryan (2002) 211 CLR 540 at 598[150].

¹³⁰⁸ APP.0001.0020.0065 Graham Barclay Oysters Pty Ltd v Ryan (2002) 211 CLR 540 at 598[152].

¹³⁰⁹ APP.0001.0020.0065 Graham Barclay Oysters Pty Ltd v Ryan (2002) 211 CLR 540 at 598[151].

APP.0001.0020.0036 Crimmins v Stevedoring Industry Finance Committee (1999) 200 CLR 1 at 24[43].

635.1 "powers vested by statute"; ¹³¹¹ or

635.2 from "specific power[s], to protect the [Applicants] from the danger";¹³¹² or

635.3 "assumed obligations".¹³¹³

Submission on control

- 636 It is submitted that the Commonwealth had the requisite control in the sense that the Commonwealth had "...a significant and special measure of control over the safety of the person or property of" ¹³¹⁴ the Applicants and the Group Members. This control is evidenced in a number of ways.
- 637 The Commonwealth acknowledges that Torres Strait Islanders are the "most disadvantaged" group in Australian society¹³¹⁵. As a consequence, the Commonwealth has utilised its powers under s 51(xxvi) of the Constitution to pass legislation which establishes "...a significant and special measure of control over the safety of..." Torres Strait Islanders in respect of various aspects of their social, economic or cultural wellbeing.
- 638 Under s 51(xxvi) of the Constitution, the Commonwealth passed legislation such as the Native Title Act 1993 (Cth) and the Aboriginal and Torres Strait Islander Act 2005 (Cth) to, in broad terms, "[recognise and protect] the connection of Aboriginal and Torres Strait

¹³¹¹ APP.0001.0020.0025 *Brodie v Singleton Shire Council* (2001) 206 CLR 512 at 559: "... it has become more clearly understood that, on occasions, the powers vested by statute in a public authority may give it such a significant and special measure of control over the safety of the person or property of citizens as to impose upon the authority a duty of care...".

APP.0001.0020.0036 Crimmins v Stevedoring Industry Finance Committee (1999) 200 CLR 1 at 24[43]: The notion of general reliance has been the subject of some criticism (55) and more recent decisions of this Court have tended to focus on the vulnerability of the person who suffers injury (56), on the one hand, and, on the other, the knowledge of risk and the power of the party against whom a duty of care is asserted to control or minimise that risk...".

APP.0001.0020.0036 Crimmins v Stevedoring Industry Finance Committee (1999) 200 CLR 1 at 39[91].

APP.0001.0020.0036 Crimmins v Stevedoring Industry Finance Committee (1999) 200 CLR 1 at 39[93]: One of the questions suggested to be asked as to whether a statutory authority owes a novel duty of care is "By reason of the defendant's statutory or assumed obligations or control, did the defendant have the power to protect a specific class including the plaintiff (rather than the public at large) from a risk of harm? If no, then there is no duty...".
APR 0001.0020.0025 Prodict Shing Council (2001) 206 CLP 512 at 550

APP.0001.0020.0025 Brodie v Singleton Shire Council (2001) 206 CLR 512 at 559.
"The objects of the Aboriginal and Torras Strait Islandar Act 2005 (Cth) are in reco.

¹⁵ "The objects of the *Aboriginal and Torres Strait Islander Act* 2005 (Cth) are, in recognition of the past dispossession and dispersal of the Aboriginal and Torres Strait Islander peoples and their present disadvantaged position in Australian society (d) to ensure co-ordination in the formulation and implementation of policies affecting Aboriginal persons and Torres Strait Islanders by the Commonwealth, State, Territory and local governments, without detracting from the responsibilities of State, Territory and local governments to provide services to their Aboriginal and Torres Strait Islander residents".

The Preamble to the APP.0001.0021.0016 *Native Title Act* 1993 (Cth) states that "As a consequence, Aboriginal peoples and Torres Strait Islanders and have become, as a group, the most disadvantaged in Australian society."

Islander peoples with land and waters within the territory of the Commonwealth of Australia". ¹³¹⁶

- 639 It is submitted that the establishment and ongoing funding of the TSRA and its mandated functions conferred on the Commonwealth "a significant and special measure of control over the safety" ¹³¹⁷ of the Torres Strait Islanders. The mandated functions of the Authority included:
 - 639.1 "to recognise and maintain...Ailan Kastom...";¹³¹⁸
 - 639.2 "to formulate and implement programs for Torres Strait Islanders...";¹³¹⁹
 - 639.3 "to monitor the effectiveness of programs for Torres Strait Islanders...";¹³²⁰
 - 639.4 "to develop policy proposals to meet national, State and regional needs and priorities of Torres Strait Islanders";¹³²¹ and
 - 639.5 "to assist, advise and co-operate with Torres Strait Islander...communities, organisations and individuals at national, State, Territory and regional levels".¹³²²
- 640 Additionally, the TSRA is empowered to, relevantly, "make a grant of money...to...an individual...or...a body corporate (other than a Regional Council)...or...an unincorporated body for the purpose of furthering the social, economic or cultural development of the Torres Strait Islanders".¹³²³
- 641 More particularly, the TSRA developed a climate change strategy¹³²⁴ and adaptation and resilience plans¹³²⁵ which broadly addressed climate change projections, likely impacts and actions to reduce climate risks. It is submitted that the strategy and plan were

¹³¹⁶ APP.0001.0020.0169 Love v Commonwealth (2020) 270 CLR 152 at 209[130] per Gageler J (as he then was) described s 51(xxvi) of the Constitution as follows: "Recognition and protection of the connection of Aboriginal and Torres Strait Islander peoples with land and waters within the territory of the Commonwealth of Australia is another topic of vital national importance, which the Commonwealth Parliament has since 1967 had specific power to address under s 51(xxvi) of the Constitution."

¹³¹⁷ APP.0001.0020.0025 Brodie v Singleton Shire Council (2001) 206 CLR 512 at 559.

¹³¹⁸ s.142A(1)(a) APP.0001.0021.0002 *Aboriginal and Torres Strait Islander Act 2005* (Cth).

¹³¹⁹ s.142A(1)(b) APP.0001.0021.0002 *Aboriginal and Torres Strait Islander Act 2005* (Cth).

¹³²⁰ s.142A(1)(c) APP.0001.0021.0002 *Aboriginal and Torres Strait Islander Act 2005* (Cth).

¹³²¹ s.142A(1)(d) APP.0001.0021.0002 *Aboriginal and Torres Strait Islander Act 2005* (Cth).

¹³²² s.142A(1)(e) APP.0001.0021.0002 *Aboriginal and Torres Strait Islander Act 2005* (Cth).

¹³²³ s.142F APP.0001.0021.0002 *Aboriginal and Torres Strait Islander Act 2005* (Cth).

APP.0001.0004.0016 (Torres Strait Climate Change Strategy 2014-2018).
APP.0001.0004.0017 (Torres Strait Pagingel Adaptation and Pagiliance P.

¹³²⁵ APP.0001.0004.0017 (Torres Strait Regional Adaptation and Resilience Plan 2016-2021).

developed in furtherance of the Commonwealth's "significant and special measure of control over the safety"¹³²⁶ of the Torres Strait Islanders.

- 642 It is submitted that the establishment of the NIAA and its mandated functions conferred on the Commonwealth "a significant and special measure of control over the safety"¹³²⁷ of the Torres Strait Islanders. The Agency's functions included:
 - 642.1 "to lead and coordinate Commonwealth policy development, program design and implementation and service delivery for ... Torres Strait Islander people";¹³²⁸
 - 642.2"to provide advice to the Prime Minister and the Minister for Indigenous Australians on whole-of-government priorities for ...Torres Strait Islander people"; ¹³²⁹
 - 642.3 "to build and maintain effective partnerships with … Torres Strait Islander people, state and territory governments and other relevant stakeholders to inform whole-of-government priorities for … Torres Strait Islander people, and enable policies, programs and services to be tailored to the unique needs of communities"; ¹³³⁰
 - 642.4 "to analyse and monitor the effectiveness of programs and services for Aboriginal and Torres Strait Islander people, including programs and services delivered by bodies other than the Agency"; ¹³³¹
 - 642.5 "to coordinate Indigenous portfolio agencies and advance a whole-of-government approach to improving the lives of Aboriginal and Torres Strait Islander people".¹³³²
- 643 More particularly, an employee of the NIAA was a member of the Program Governance Committee, which oversaw Stage 2.¹³³³

¹³²⁶ APP.0001.0020.0025 *Brodie v Singleton Shire Council* (2001) 206 CLR 512 at 559.

¹³²⁷ APP.0001.0020.0025 *Brodie v Singleton Shire Council* (2001) 206 CLR 512 at 559.

¹³²⁸ (e)i. to APP.0001.0018.0004.

¹³²⁹ (e)ii. to APP.0001.0018.0004.

¹³³⁰ (e)iii. to APP.0001.0018.0004.

¹³³¹ (e)vii. to APP.0001.0018.0004.

¹³³² (e)viii. to APP.0001.0018.0004.

¹³³³ WIT.2000.0001.0046 First Simpson Affidavit at 0051[26]-[27]; 0052[32]; 0053[36].

- 644 Prior to the establishment of the NIAA, the Indigenous Affairs Group within the Department of the Prime Minister and Cabinet lead government policy and programs for Aboriginal and Torres Strait Islander peoples.¹³³⁴
- 645 Employees of the Department of Regional Australia, Infrastructure and Regional Development and the Department of Prime Minster and Cabinet were members of the PGC which oversaw Stage 1.¹³³⁵ The Commonwealth was an active and essential partner in developing, overseeing, and reviewing the efficacy¹³³⁶ of Stage 1.
- 646 It is submitted that the Commonwealth's provision of funding was as a result of the TSIRC's specific requests for funding for Stage 1¹³³⁷ and Stage 2¹³³⁸. The provision of funding in response to these requests evidences the Commonwealth's "significant and special measure of control over the safety" of the Torres Strait Islanders. This funding was provided in the context of the Commonwealth's actual knowledge of the fact and magnitude of the risks of inundation and erosion¹³³⁹ and, that wave walls function to minimise the risks of marine inundation¹³⁴⁰ and the seawalls function to minimise erosion.¹³⁴¹
- 647 The Commonwealth funded the James Cook University to "undertake research on the risks associated with erosion and inundation of the 6 most vulnerable islands in the Torres Strait".¹³⁴² The Commonwealth subsequently provided further funding to James Cook University to better understand climate change impacts on 13 remaining Torres Strait Islands.¹³⁴³ It is submitted that these steps evidence the Commonwealth's "significant and special measure of control over the safety" of the Torres Strait Islanders.
- 648 It is submitted that by the Commonwealth voluntarily agreeing to the obligation to protect the "traditional way of life" of the Torres Strait Islanders under the Treaty also evinces

¹³³⁴ https://www.niaa.gov.au/our-business

¹³³⁵ See for example NIA.2001.0001.0648; INF.2005.0001.0110; INF.2005.0001.0131; INF.2005.0001.0138.

¹³³⁶ NIA.2002.0001.0022 Exhibit R8.

¹³³⁷ INF.2000.0002.0354.

¹³³⁸ NIA.2002.0001.0014; [2] to NIA.2002.0001.0022 Exhibit R8.

¹³³⁹ See above at [588]-[602].

¹³⁴⁰ TRN.0014.1172 T1201.1 (15 Nov 2023): Mr Bettington's uncontradicted evidence in cross-examination is that it is the wave wall and not the seawall that provides flood mitigation, in that it reduces (rather than eliminates) the impacts and frequency of severe events.¹³⁴⁰ The wave wall won't eliminate flooding because there is "leakage", "overtopping" and "rainfall" all of which combine to cause flooding…"

¹³⁴¹ TRN.0014.1172 T1200.40 (15 Nov 2023): Mr Bettington's evidence is that the "...seawall is actually rock face in front. The concrete barrier behind it we've called a wave wall. So the seawall is an erosion defence, and that's the rock. Okay..."

¹³⁴² NIA.2009.0036.8142; DCC.2001.0001.2640 at 2641.

¹³⁴³ INF.2000.0002.0373 at 0379.

an intention on the part of the Commonwealth to establish "a significant and special measure of control over the safety" of the Torres Strait Islanders.

S. DUTY & REASONABLE FORESEEABILITY

Legal principles (Duty)

- 649 "[A] postulated duty of care must be stated in reference to the kind of damage that a plaintiff has suffered and in reference to the plaintiff or a class of which the plaintiff is a member."¹³⁴⁴
- 650 "...Ordinarily, a duty of care is expressed in terms of a duty to take those steps that a reasonable person, in the position of the person who owes the duty of care, would take to avoid a foreseeable risk of injury to another. However, a public body or statutory authority cannot properly be equated with a natural person. Nor is a public body with the powers and functions of the Authority properly to be equated with a reasonable employer of waterside labour and subjected to the same duty of care."¹³⁴⁵

Legal principles (reasonable foreseeability)

- 651 The principles on foreseeability are set out at paragraphs [273] to [275]. In particular "... reasonable foreseeability involves a more general inquiry at the duty stage than at the breach stage. At the duty stage, in addressing reasonable foreseeability, one is considering whether it is reasonably foreseeable as a possibility that careless conduct of any kind on the part of the defendant may result in damage of some kind to the person or property of the plaintiff." ¹³⁴⁶
- 652 One of the questions that is useful in determining whether a novel duty of care exists (in the case of a statutory authority) is, was "it reasonably foreseeable that an act or omission of the defendant, including a failure to exercise its statutory powers, would result in injury to the plaintiff or his or her interests? If no, then there is no duty."¹³⁴⁷

¹³⁴⁴ APP.0001.0020.0162 Sutherland Shire Council v Heyman (1985) 157 CLR 424 at 487 (Brennan J).

APP.0001.0020.0036 Crimmins v Stevedoring Industry Finance Committee (1999) 200 CLR 1 at 21[33].
APP.0001.0020.0101 Minister for the Environment v Sharma (2022) 291 FCR 311 at 423[417] per Beach J. See also Allsop CJ at 365[131]: "The primary judge commenced with reasonable foreseeability of harm. ... the primary judge recognised (correctly, with respect) that in considering the question of duty the task is a "generalised enquiry"...at a "higher level of abstraction" than when considering breach: ... The foreseeable real (that is not farfetched or fanciful) risk of harm:... does not need to be to the plaintiff or some particular person or persons, but "it is sufficient if the injury is to a class of persons of which the plaintiff was one might reasonably have been foreseen":..., and that foreseeability is not of the particular harm in character or sequence of events but of like kind:

¹³⁴⁷ APP.0001.0020.0036 Crimmins v Stevedoring Industry Finance Committee (1999) 200 CLR 1 at 39[93].

The alternative duties

- 653 The Alternative Duties are set out in paragraph 82A of the Third Further Amended Statement of Claim.¹³⁴⁸ Those Duties are to be read with:
 - 653.1 the letters from Phi Finney McDonald to the Australian Government Solicitor dated 12 November 2023 and 20 November 2023;

653.2 His Honour's ruling on 14 and 23 November 2023.¹³⁴⁹

- 654 Broadly, the Alternative Duties are duties on the Commonwealth to take reasonable steps to protect the Applicants and the Group Members against the foreseeable risks of marine inundation and erosion arising from sea level rise and extreme weather events and impacting their respective islands in the Torres Strait.
- 655 The "reasonable steps" that were required to be taken are identified below.
- 656 <u>All 6 Islands</u>: The Alternative Duty is as follows. The Commonwealth owed a duty to the Applicant and the Group Members to establish and lead and coordinate a coherent plan for the funding to construct the seawalls on each of the 6 Islands so as to protect the Applicants and Group Members from the foreseeable risks of marine inundation and erosion caused by sea level rise and extreme weather events.
- 657 This Alternative Duty required the Commonwealth to not be passive in the coordination, sourcing and provision of funding for the seawalls on the Torres Strait.

¹³⁴⁹ TRN.0013.1118 T1169.5 (14 November 2023): "...the Commonwealth breached its-that adaptation duty, if I can call it that alternative duty, because it did no more than fund through this grants process other bodies through the seawalls project. And that involved the construction of seawalls. There's an allegation that the funds that were provided through those programs were inadequate, that there was a delay in providing those funds. And ultimately that the seawalls that were constructed pursuant to it were ineffective flood barriers..."

¹³⁴⁸ APP.0001.0015.0003 at _0045 to _0046.

TRN.0013.1118 T1169.30 (14 November 2023): "...So, in a sense, I think it can be part of the applicant's case that the Commonwealth was required to do more than simply passively fund the seawalls through those grant programs. But they-the claim that, had they taken more of a lead or aggressive role in relation to it, they would have explored-the elevating the islands scenario is not open..."

TRN.0019.1530 T1542.25 (23 November 2023): "...But what I was trying to convey was that Mr Boston had said that, you know, it's not enough for the Commonwealth just to take a passive approach and provide funding without doing more. He went on to say doing more includes other things...(T1542.35) like raising the islands. But raising the islands is off the list, so too is relocating. I don't think he suggested that was pressing. So really, that circles back to seawalls, wave-return walls and bunds. So its kind of a long way of saying that it's open to argue that by simply-that the seawalls that were provided were ineffective and they were ineffective because the Commonwealth did no more than take a passive backseat funding position, and if he-if it had been more active, they might have provided-something more efficient might have been provided..."

- 658 It is submitted that it was "reasonably foreseeable as a possibility that careless conduct of any kind on the part of the [Commonwealth] may result in damage of some kind to the person or property of the [the Applicants and Group Members]" ¹³⁵⁰.
- 659 The careless conduct is set out at paragraph 700 below.
- 660 <u>Poruma</u>: The Alternative Duties are as follows.
- 661 Firstly, the Commonwealth owed a duty to the Group Members who are indigenous to Poruma to lead and co-ordinate the funding of seawalls on Poruma under Stage 1 so as to protect the Poruma Group Members from the foreseeable risks of marine inundation caused by sea level rise and extreme weather events.
- 662 Second, the Commonwealth owed a duty to the Group Members who are indigenous to Poruma to establish non-competitive and predictable funds/grants to fund the seawalls on Poruma under Stage 1, so as to protect the Poruma Group Members from the foreseeable risks of marine inundation caused by sea level rise and extreme weather events.
- 663 Third, the Commonwealth owed a duty to the Group Members who are indigenous to Poruma to lead and co-ordinate the provision of the additional funding required to construct the seawalls on Poruma during Stage 1, so as to protect the Poruma Group Members from the foreseeable risks of marine inundation caused by sea level rise and extreme weather events.
- 664 Fourth, the Commonwealth owed a duty to the Group Members who are indigenous to Poruma to provide the additional funding required to construct the seawalls on Poruma during Stage 1 so as to protect the Poruma Group Members from the foreseeable risks of marine inundation caused by sea level rise and extreme weather events.
- 665 It is submitted that it was "reasonably foreseeable as a possibility that careless conduct of any kind on the part of the [Commonwealth] may result in damage of some kind to the person or property of the [the Group Members]" ¹³⁵¹ who are indigenous to Poruma.

¹³⁵⁰ APP.0001.0020.0101 *Minister for the Environment v Sharma* (2022) 291 FCR 311 at 423[417] per Beach J. See also Allsop CJ at 365[131].

¹³⁵¹ APP.0001.0020.0101 *Minister for the Environment v Sharma* (2022) 291 FCR 311 at 423[417] per Beach J. See also Allsop CJ at 365[131].

- 666 The careless conduct is set out at paragraph 712 below.
- 667 Iama, Masig and Warraber: The Alternative Duties are as follows.
- 668 Firstly, the Commonwealth owed a duty to the Group Members who are indigenous to Iama, Masig and Warraber to lead and co-ordinate the funding of seawalls on those Islands so as to protect Group Members who are indigenous to those Islands from the foreseeable risks of marine inundation caused by sea level rise and extreme weather events.
- 669 Second, the Commonwealth owed a duty to the Group Members who are indigenous to Iama, Masig and Warraber to establish non-competitive and predictable funds/grants to fund the seawalls on those Islands so as to protect the Group Members who are indigenous to those Islands from the foreseeable risks of marine inundation caused by sea level rise and extreme weather events.
- 670 Third, the Commonwealth owed a duty to the Group Members who are indigenous to Iama, Masig and Warraber to provide the additional funding required to construct the seawalls on those Islands so as to protect the Group Members who are indigenous to those Islands from the foreseeable risks of marine inundation caused by sea level rise and extreme weather events.
- 671 It is submitted that it was "reasonably foreseeable as a possibility that careless conduct of any kind on the part of the [Commonwealth] may result in damage of some kind to the person or property of the [Group Members]" who are indigenous to Iama, Masig and Warraber.¹³⁵²
- 672 The careless conduct are the failures to take precautions set out at paragraph 722 below.

T. BREACH

Legal principles

673 The legal principles on breach are set out at paragraphs [276] to [278]. This includes the following.

¹³⁵² APP.0001.0020.0101 *Minister for the Environment v Sharma* (2022) 291 FCR 311 at 423[417] per Beach J. See also Allsop CJ at 365[131].

674 Section 9 of the CLA provides:

- (1) A person does not breach a duty to take precautions against a risk of harm unless—
 - (a) the risk was foreseeable (that is, it is a risk of which the person knew or ought reasonably to have known); and
 - (b) the risk was not insignificant; and
 - (c) in the circumstances, a reasonable person in the position of the person would have taken the precautions.

(2) In deciding whether a reasonable person would have taken precautions against a risk of harm, the court is to consider the following (among other relevant things)—

- (a) the probability that the harm would occur if care were not taken;
- (b) the likely seriousness of the harm;
- (c) the burden of taking precautions to avoid the risk of harm;
- (d) the social utility of the activity that creates the risk of harm.
- 675 "... the first step in the analysis requires the appropriate identification of the risk against which it is alleged that a particular defendant failed to exercise reasonable care. Commonly, the proper identification of the risk can be difficult, if not problematic. Necessarily, the risk must be defined taking into account the particular harm that materialised, and the circumstances in which that harm occurred. However, the risk, referred to in [s9], is not to be confined to the precise set of circumstances in which the plaintiff was injured. It is well established that, in order that a defendant be held to be negligent, it is not necessary that that defendant should have reasonably foreseen that the particular circumstances, in which the plaintiff was injured, might occur. Rather, what must be reasonably foreseeable is the nature of the particular harm that ensued, or, more relevantly, the nature of the circumstances in which that harm was incurred."¹³⁵³
- 676 "... each of the sub-paragraphs of [s.9(1)], the court must consider [these] question[s] ... from the viewpoint of the defendant in the circumstances that were known, or ought to have been known, to the defendant. Such an analysis must be prospective, and not retrospective."¹³⁵⁴
- 677 Section 9(1)(b) "requires a plaintiff to establish that the risk was "not insignificant". By selecting the phrase "not insignificant", the legislature has postulated a test that is more

¹³⁵³ APP.0001.0020.0198 Erickson v Bagley [2015] VSCA 220 at [33].

¹³⁵⁴ APP.0001.0020.0198 *Erickson v Bagley*[2015] VSCA 220 at [35]

demanding, for a plaintiff, than the common law test, although "... not by very much". In that way, the statute has sought to ensure that liability is not imposed on a defendant too readily."¹³⁵⁵

678 "It is important that the court not adopt a mechanical or formulaic approach in applying the three prerequisites specified in [s9(1)]. Ultimately, the content of the standard of care, required of an alleged tortfeasor, is an issue of fact, which is to be resolved by an exercise of common sense, taking into account the jury's (or, in the relevant case, the judge's) worldly experience."¹³⁵⁶

Risk not insignificant

- 679 The risk for the purposes of s.9 of the CLA is the risk of marine inundation as a result of sea level rise and extreme weather events. That risk was "not insignificant" for the reasons that follow.
- 680 Firstly, the historical risk to at least 5 of the 6 Islands from marine inundation (although varying) has been significant:¹³⁵⁷

ISLAND	DATE	LEVEL OF INUNDATION
Iama	2006	0.18m above HAT
	January 2018	(approx.) 0.3m above HAT
	January 2023	(approx.) equal to HAT
Warraber	January 2006	0.25 above HAT

¹³⁵⁵ APP.0001.0020.0198 Erickson v Bagley [2015] VSCA 220 at [36].

¹³⁵⁶ APP.0001.0020.0198 *Erickson v Bagley* [2015] VSCA 220 at [37].

¹³⁵⁷ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0005 and _0006.

Saibai	January 2006	(approx) 0.2m above
		HAT ¹³⁵⁸
	2009	(approx) 0.3 above HAT ¹³⁵⁹
	2010	(approx) 0.1m above HAT
	January 2018	(approx) 0.25m above HAT
Boigu	(likely) 2009	(approx) 0.3m above HAT
Poruma	Feb 2019	(approx) 0.1m above HAT
	August 2023	(approx) 0.2m above HAT

- 681 The evidence from the Commonwealth's expert, Dr Harper, was these types of events "...they're not that uncommon. You know, they're there most of the time...".¹³⁶⁰ In its Defence, the Commonwealth "admits that some of the Torres Strait Islands have been subject to inundation events prior to and since 2014".¹³⁶¹
- 682 Mr Bettington's evidence is that the events in the Table (above), show a frequency of occurrence without a cyclone occurring. Therefore, if a cyclone were to occur the flooding events shown in Table 4 "might actually be a lot more severe".¹³⁶²

¹³⁵⁸ Mr Bettington's evidence was this was "effectively a 50 year ARI storm tide". TRN.0014.1172 T1230.1 (15 Nov 2023) and Table 3 at APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0004.

¹³⁵⁹ Mr Bettington's evidence was this was "more extreme than a 100 year event". TRN.0014.1172 T1230.15 (15 Nov 2023) and Table 3 at APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0004.

¹³⁶⁰ TRN.0014.1172 T1234.10 (15 Nov 2023).

¹³⁶¹ CRT.2000.0003.0001 Defence [.0019].

¹³⁶² TRN.0014.1172 T1216.5 (15 Nov 2023) Bettington.

- 683 Second, the risks of marine inundation the 6 Islands in the future is also significant for various reasons:
 - 683.1 Drs Barnes and Harper and Mr Bettington all agreed that in relation to Boigu and Saibai any sea level increase in the future under each of the IPCC Scenarios will result in "fairly significant" inundation;¹³⁶³
 - 683.2 There is a direct causal relationship between GHG emissions and temperature increase. The increase in temperature will cause "ocean thermal expansion" and the melting of glaciers, which result in sea level rise.¹³⁶⁴ Sea levels in the Torres Strait have been increasing at about twice the global average rate (estimated to be between 6-8 mm per year in the past decade). The Torres Strait Islands are particularly exposed to sea level rise due to limited options for retreat away from the coast due to their small size and mostly flat topography, and the fact that a number of islands are low lying.¹³⁶⁵ The increased sea level will cause an increase in the frequency, severity and intensity of extreme events. Some further particulars:
 - (a) the melting of glaciers results in a "greater than global average contribution (by up to 25%) to sea-level rise in regions distant to the location of mass loss". Northern Australia is "in the region of greater than average sea-level rise from [this] process";¹³⁶⁶
 - (b) the relationship between increase in GHG emissions and the increase in sea level rise is "potentially worse" than linear because GHGs "could cause you to cross a temperature threshold which leads to ongoing mass loss and faster mass loss";¹³⁶⁷
 - (c) as to the relationship between increase sea level and increase in severity and intensity of extreme weather events: under SSP1-1.9 and by 2050 mean sea level is calculated to rise by 18cm with a 1 in 100 year extreme sea level event likely to "return" once every 25 years or about once every 5 years (depending

¹³⁶³ TRN.0014.1172 T1199.25 (15 Nov 2023) Bettington.

¹³⁶⁴ T1559.10 (24 Nov 2023) Professor Church.

¹³⁶⁵ APP.0001.0007.0158_0009. Mr Bettington described Saibai as "a very flat community" (TRN.0014.1172 T1227.40 (15 Nov 2023).

¹³⁶⁶ APP.0001.0009.0002 Exhibit A53 Church Report [29] _0010).

¹³⁶⁷ TRN.0020.1551 Church T1573.40 (24 Nov 2023).

upon the multiplication factor used).¹³⁶⁸ At the other end of the spectrum, under SSP5-8.5 and by 2050 mean sea level is calculated to rise by 24cm with a 1 in 100 year extreme sea level event likely to "return" about once every 20 years or about once every 2 years (depending upon the multiplication factor used);¹³⁶⁹

- (d) since 1900, sea levels worldwide have been increasing at an accelerating rate¹³⁷⁰. The twentieth century rates "are an order of magnitude" or "ten times" larger than pre-industrial rate rise.¹³⁷¹ This is also the case for sea levels in the northern part of Australia.¹³⁷² The changes in the gravitational field and the rotation mean that the local sea level rise in the Torres Strait is larger than¹³⁷³ or close to¹³⁷⁴ the global average;
- (e) for the first few decades of this century, sea level rise is dependent primarily on past emissions and to a lesser extent on future emissions.¹³⁷⁵ Beyond 2050, sea level rise is less dependent on historical emissions and more dependent on the emissions beyond 2050. Increase in emissions beyond 2050 will have a significant increase in sea level rise;¹³⁷⁶

¹³⁶⁸ APP.0001.0009.0002 Exhibit A53 Church Report Table 4_0010.

¹³⁶⁹ APP.0001.0009.0002 Exhibit A53 Church Report Table 4_0010.

¹³⁷⁰ Sea level rises at 1.73mm per year from 1900 to 2018. Based on tide gauge data, the rate of rise since 1970 is about 0.06 mm per year. It is extremely likely that the rate of rise over this period is faster than any century of the last millennia (TRN.0020.1551 Church T.1557.25 (24 Nov 2023)). Based on altimeter data the rate of rise between 1993 and 2018 is in the range of 2.66 to 3.61mm per year with an acceleration of 0.094 mm per year (TRN.0020.1551 Church T.1557.25 (24 Nov 2023)).

¹³⁷¹ TRN.0020.1551 Church T.1557.40 (24 Nov 2023)).

¹³⁷² 3.1mm per year for period 1993 to 2009 and 2.1mm per year for the period 1996 to 2009 (TRN.0020.1551 Church T.1558.20 (24 Nov 2023)).

¹³⁷³ TRN.0020.1551 Church T1578.30, T1580.40, T1581.5 (24 Nov 2023); APP.0001.0009.0002 Exhibit A53 Church Report [28], [54] _0016.

¹³⁷⁴ TRN.0020.1551 Church T1581.25 (24 Nov 2023).

¹³⁷⁵ TRN.0020.1551 Church T.1561.40; T1577.5 (24 Nov 2023).

¹³⁷⁶ In discussing Table 1 to APP.0001.0009.0002 Exhibit A53 Church Report _0025, Professor Church's uncontradicted evidence was that "So for RCP8.5, we're talking about 11 millimetres per year. So that's approximately equivalent to the last major deglaciation of the earth when sea level rise-when sea level rose at a rate of a meter per century for many thousands of years. So this is essentially pointing to a longer-term commitment..."(TRN.0020.1551 Church T1561.10 (24 Nov 2023).

Professor Church calculated the mean sea level for Torres Strait relative to 1995-2014 (Table 4) and relative to 1900 (Table 5) under various Shared Socio-economic Pathways under IPCC 6th Assessment Report

⁽APP.0001.0009.0002_0031). In these Tables, Professor Church included the Woodworth and SSA multiplication factors. So for example, under SSP1-1.9 for 2100 relative to 1995-2014, a Woodworth multiplication factor of 19 will mean that a 1 in 100 year even will become a one in five year event at the same sea level height (TRN.0020.1551 Church T1562.25 (24 Nov 2023).

Professor Church's evidence is that "It's certainly true that the difference in the scenarios is larger after 2050 than it is before 2050, which is a result of emissions – not just historical emissions which impact all scenarios, but also the difference between future emissions between now and 2050 and from 2050 on." (TRN.0020.1551 Church T1571.25 (24 Nov 2023)).

- (f) ocean thermal expansion and loss of glaciers are slow processes. This means that there is a lag (of perhaps hundreds perhaps thousands of years¹³⁷⁷) between when emissions occur and the resulting sea level rise. A big concern with this delay is that thresholds can be crossed leading to many metres of sea level rise into the future from our actions now;¹³⁷⁸
- 684 Third, an extreme weather event of 2.80m AHD will result in 50% of the community on Saibai being flooded.¹³⁷⁹ That is 50% "of the ground where the houses occupy or the shops or whatever is underwater".¹³⁸⁰ That event had an Average Recurrence Interval (ARI)¹³⁸¹ of 25 years at 1900 (baseline), and 5 years in 2023.¹³⁸² This is further supported by Mr Bettington's "observed flooding due to abnormally high-water levels in non-Cyclonic (ambient) conditions".¹³⁸³ Dr Barnes mapped the 50% flood level on Saibai.¹³⁸⁴
- 685 Both Dr Harper and Mr Bettington have calculated that the 2023 extreme water levels for Saibai (with an (ARI) of 10, 25, 50, 100 and 500 years) will exceed the 50% flooding level.¹³⁸⁵ Both Dr Barnes and Mr Bettington mapped the 100 year ARI extreme water level for 2023.¹³⁸⁶
- 686 Further, the 50% flooding level will also be exceeded by the water levels calculated by Dr Harper and Mr Bettington for 2050 and 2100 under various Shared Socioeconomic Pathways (SSPs) under the IPCC's 6th Assessment Report and under ARIs of 10, 25, 20, 200 and 500 years.¹³⁸⁷

Professor Church's evidence is that "to create this significant overlap?---It's saying that to 2050 the emissions from now to 2050 have too small an influence to make a huge difference in the contributions over that period. But that's not true by the time you get to 2100. (TRN.0020.1551 Church T1576.35 (24 Nov 2023)).

¹³⁷⁷ TRN.0020.1551 Church T1569.45 (24 Nov 2023).

¹³⁷⁸ TRN.0020.1551 Church T1569.35 (24 Nov 2023).

 ¹³⁷⁹ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0008 at Table 9; TRN.0014.1172 T1195.40 (15 Nov 2023); Dr Barnes agreed that his version (APP.0001.0015.0004_0020) of Mr Bettington's 50% flooding of Saibai (APP.0001.0009.0003 Exhibit 48 Bettington Report 0034) is "almost identical" (T1194.30) (15 Nov 2023).
¹³⁸⁰ TPN 0014 1172 Bettington T1194.1 (15 Nov 2023)

¹³⁸⁰ TRN.0014.1172 Bettington T1194.1 (15 Nov 2023).

¹³⁸¹ Average Recurrence Interval is described by Mr Bettington as "the likelihood of an extreme event occurring is described...as Average Recurrence Interval (ARI). This describes the average number of years for a water level to be reached or exceeded once (APP.0001.0009.0003 Exhibit 48 Bettington Report _0017).

¹³⁸² APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0008 at Table 9.

APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0008 at Table 4) See January 2006; 2009; 2010; and January 2018 events recorded in Table 4.

¹³⁸⁴ APP.0001.0015.0004 Supplementary Report of the Conference of Experts at _0018.

APP.0001.0015.0001 Joint Report of Conclave of Experts 0014 Table 8.

¹³⁸⁶ APP.0001.0015.0004 Supplementary Report of the Conference of Experts at _0016 and _0017.

¹³⁸⁷ In relation to 2050: Joint Report of Conclave of Experts APP.0001.0015.0001_0015 Table 11; at _0016 Table 12; at _0017 Table 13. In relation to 2100: APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report Table 18
- Mr Bettington's uncontradicted evidence is that under the 2050 projections, the 50% flooding event could occur as frequent as every 2 years (under the SSP3-7.0 scenario)¹³⁸⁸. In relation to the 2100 projections, the 50% flooding event could occur as frequently as "several times per year"¹³⁸⁹ (under the SSP3-7.0 scenario).¹³⁹⁰ Both Dr Barnes and Mr Bettington have mapped these scenarios.¹³⁹¹
- Fourth, at 3.40m AHD 50% of the community on Boigu will be flooded.¹³⁹² That is 50%
 "of the ground where the houses occupy or the shops or whatever is underwater".¹³⁹³ That event had an ARI of 35 years at 1900, and 12 years in 2023.¹³⁹⁴
- 689 Both Dr Harper and Mr Bettington have calculated that the 2023 extreme water levels for Boigu (with an ARI of 25, 50, 100 and 500 years) will exceed the 50% flooding level.¹³⁹⁵
- 690 Further, the 50% flooding level will also be exceeded by the water levels calculated by Dr Harper and Mr Bettington for 2050 and 2100 under various SSPs under the IPCC's 6th Assessment Report and under ARIs of 10, 25, 20, 200 and 500 years.¹³⁹⁶
- Mr Bettington's uncontradicted evidence is that under the 2050 projections, the 50% flooding event could occur as frequent as every 4 years (under the SSP3-7.0 scenario)¹³⁹⁷. In relation to the 2100 projections, the 50% flooding event could occur as frequently as twice a year (under the SSP3-7.0 scenario).¹³⁹⁸
- 692 Fifth, at 3.60m AHD 50% of the community on Poruma will be flooded.¹³⁹⁹ That is 50%
 "of the ground where the houses occupy or the shops or whatever is underwater".¹⁴⁰⁰ That event had an ARI of >500 years at 1900, and >500 years in 2023.¹⁴⁰¹

¹³⁸⁸ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report at 0013, Table 14.

¹³⁸⁹ APP.0001.0009.0003 Bettington Report 0064.

¹³⁹⁰ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0013 at Table 18.

¹³⁹¹ APP.0001.0015.0004 Supplementary Report of the Conference of Experts at 0019 to 0026.

¹³⁹² APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report at 0008 at Table 9.

¹³⁹³ TRN.0014.1172 Bettington T1196.1 (15 Nov 2023).

¹³⁹⁴ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report at 0008 at Table 9.

¹³⁹⁵ APP.0001.0015.0001 Joint Report of Conclave of Experts 0014 Table 8.

¹³⁹⁶ In relation to 2050: (Joint Report of Conclave of Experts APP.0001.0015.0001_0015 Table 11; at _0016 Table 12; at _0017 Table 13). In relation to 2100: APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report at _0013, Table 14.

¹³⁹⁷ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0011 at Table 14.

APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0013 at Table 18.

APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report 0008 at Table 9.

¹⁴⁰⁰ TRN.0014.1172 15 November 2023 Stuart Bettington T1196:1.

¹⁴⁰¹ APP.0001.0015.0011_0008 Exhibit A49 Bettington Supplementary Report at Table 9

- 693 Mr Bettington's "observed flooding due to abnormally high-water levels in non-Cyclonic (ambient) conditions"¹⁴⁰² on Poruma in February 2019 and August 2023.¹⁴⁰³ Mr Bettington's uncontradicted evidence in cross-examination was that "the numbers appear to be above the frequency I would expect to see, given the occurrences we're talking about".¹⁴⁰⁴
- 694 Mr Bettington's uncontradicted evidence is that under the 2050 projections, the 50% flooding event could occur as frequent as every 150 years (under the SSP3-7.0 scenario)¹⁴⁰⁵. In relation to the 2100 projections, the 50% flooding event could occur as frequently as every 20 years (under the SSP3-7.0 scenario).¹⁴⁰⁶
- 695 Sixth, at 3.50m AHD 50% of the community on Warraber will be flooded.¹⁴⁰⁷ That is 50% "of the ground where the houses occupy or the shops or whatever is underwater".¹⁴⁰⁸ That event had an ARI of >500 years at 1900, and 100 years in 2023.¹⁴⁰⁹
- 696 Mr Bettington's "observed flooding due to abnormally high-water levels in non-Cyclonic (ambient) conditions"¹⁴¹⁰ on Warraber in January 2006.¹⁴¹¹ There were further flooding events on 29/30 January 2018 (a predicted high tide event impacted caused sea water to over top the existing seawalls¹⁴¹² and January 2023.¹⁴¹³ Mr Bettington's uncontradicted evidence in cross-examination was that "the numbers appear to be above the frequency I would expect to see, given the occurrences we're talking about".¹⁴¹⁴
- 697 Mr Bettington's uncontradicted evidence is that under the 2050 projections, the 50% flooding event could occur as frequent as every 40 years (under the SSP3-7.0

¹⁴⁰² APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0008 at Table 4) See January 2006; 2009; 2010; and January 2018 events recorded in Table 4.

¹⁴⁰³ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0006 at Table 4.

¹⁴⁰⁴ TRN.0014.1172 15 Nov 2023, Stuart Bettington, T1214:15.

¹⁴⁰⁵ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0011 at Table 14.

¹⁴⁰⁶ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0013 at Table 18.

¹⁴⁰⁷ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0008 at Table 9.

¹⁴⁰⁸ TRN.0014.1172 15 November 2023, Stuart Bettington, T1196:1.

¹⁴⁰⁹ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0008 at Table 9.

¹⁴¹⁰ APP.0001.0015.0011_0005 Exhibit A49 Bettington Supplementary Report at Table 4; see January 2006, 2009, 2010, and 2018 events recorded in Table 4.

¹⁴¹¹ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0005 at Table 4.

¹⁴¹² INF.2005.0001.0116 at 0117.

¹⁴¹³ APP.0001.0012.0008 T665.23; T668; and T675 (15 June 2023).

¹⁴¹⁴ TRN.0014.1172 T1214.15 (15 Nov 2023).

scenario)¹⁴¹⁵. In relation to the 2100 projections, the 50% flooding event could occur as frequently as every 3 years (under the SSP3-7.0 scenario).¹⁴¹⁶

698 Mr Bettington's evidence is that an event with 100 year ARI is "commonly adopted for acceptable risk of flooding in the broader community".¹⁴¹⁷

Submission on no coherent plan (all 6 Islands)

- 699 It is submitted that the relevant risk for the purposes of s.9 of the CLA is the risk of marine inundation as a result of sea level rise and extreme weather events. For the reasons given at:
 - 699.1 paragraphs 588 to 601 above, that risk was "foreseeable" within the meaning of that term in s.9(1)(a) of the CLA;
 - 699.2 paragraphs 679 to 696 above, that risk was "not insignificant" within the meaning of that term in s.9(1)(a) of the CLA.
- 700 Further, in addressing the criteria under s.9(1)(c) and s.9(2) of the CLA as to "whether a reasonable person would have taken precautions against [the] risk of harm" the Applicants and the Group Members submit that the "precaution" that should have been taken by the Commonwealth was the establishment of a coherent plan for the funding of the construction of seawalls on the 6 Islands.
- 701 In 2012, the Council of Australian Governments agreed to the Roles and Responsibilities for Climate Change Adaptation in Australia. In that document, the Commonwealth (among others) agreed that:
 - 701.1 "Identifying the roles of government in adapting to climate change is the first step in building a coordinated approach;"
 - 701.2 "the Commonwealth will need to take a leadership role in positioning Australia to adapt to climate change impacts that may affect national prosperity or security. By exercising its role the Commonwealth will help to improve adaptive capacity and build climate resilience";

¹⁴¹⁵ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0011 at Table 14.

¹⁴¹⁶ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0013 at Table 18.

¹⁴¹⁷ APP.0001.0009.0003 Bettington Report Exhibit A48 at [0023].

- 701.3 The "Commonwealth will...provide leadership on national adaptation reform...The Commonwealth's role in leading the national adaptation reform will include \cdot ensuring that national efforts to adapt to climate change meet any relevant international treaty requirements... consider the needs of vulnerable communities."¹⁴¹⁸
- 702 The Applicants and the Group Members rely upon the following matters to submit that it was reasonable for the Commonwealth to have taken this precaution against the risk of harm.
- 703 Firstly, the Torres Strait Islanders are as a group, extremely disadvantaged and vulnerable.¹⁴¹⁹ They are unable to protect themselves from the risk of marine inundation caused by sea level rise and extreme weather events. That risk is extreme.¹⁴²⁰ At all times, the Commonwealth was aware of these matters.¹⁴²¹
- 704 Further, they are neither able to protect themselves from the risk of marine inundation nor influence or compel the Commonwealth to take precautions to protect them from the risk of marine inundation. The lack of influence compounds the Torres Strait Islanders' vulnerability.
- 705 Second, the Commonwealth is obligated to protect the Torres Strait Islanders from the risks of marine inundation from sea level rise and extreme events as a result of the obligations that arise under the Treaty, the Paris Agreement, the International Convention on Civil and Political Rights,¹⁴²² the COAG Agreement ¹⁴²³ and its assumption of responsibility in respect of known risk faced by the most vulnerable group in Australia.
- 706 Third, under s 51(xxvi) of the Constitution, the Commonwealth has the power to recognise and protect "the connection of Aboriginal and Torres Strait Islander peoples with land and waters within the territory of the Commonwealth..."¹⁴²⁴
- 707 Fourth, Torres Strait Islanders' statutory human rights and traditional way of life are at risk from marine inundation. The *Human Rights Act 2019* (Qld) confers "distinct cultural

¹⁴¹⁸ EVI.2001.0006.2001.

¹⁴¹⁹ See paragraphs 562 to 585. ¹⁴²⁰ See paragraphs 670 to 606

 $[\]begin{array}{ll} ^{1420} & \text{See paragraphs 679 to 696.} \\ ^{1421} & \text{See paragraphs 588 to 601} \end{array}$

 $[\]begin{array}{ll} 1421 \\ 1422 \\ 1$

¹⁴²² See paragraph 729.

¹⁴²³ EVI.2001.0006.2001 at 0694 to 0695.

¹⁴²⁴ APP.0001.0020.0169 Love v Commonwealth (2020) 270 CLR 152 at 209[130] per Gageler J (as he then was).

rights"¹⁴²⁵ on the Torres Strait Islanders and protects those rights by prescribing that Torres Strait Islanders "must not be denied the right to":

- 707.1 "enjoy, maintain, control, protect and develop their identity and cultural heritage, including their traditional knowledge, distinctive spiritual practices, observances, beliefs and teachings"; ¹⁴²⁶
- 707.2 "to maintain and strengthen their distinctive spiritual, material and economic relationship with the land, territories, waters, coastal seas and other resources with which they have a connection under Aboriginal tradition or Island custom"; ¹⁴²⁷
- 707.3 "to conserve and protect the environment and productive capacity of their land, territories, waters, coastal seas and other resources." ¹⁴²⁸
- 708 Fifth, the Commonwealth did not have any pre-set and coherent plan to fund the seawalls on the 6 Islands. Given the magnitude of the risk, the vulnerability of the Torres Strait Islanders, the Commonwealth's assumption of responsibility and the obligations imposed on the Commonwealth to protect the Torres Islanders, it is submitted that the establishment of a pre-set and coherent plan was a minimum precaution that the Commonwealth could have adopted.
- 709 Sixth:¹⁴²⁹
 - 709.1 community leaders in the Torres Strait, the TSRA and TSIC have sought funding for coastal engineering solutions since about 2001; and
 - 709.2 unsuccessful applications for funding were made to the Natural Disasters Mitigation Program in 2007 for a package of works including seawall repair and construction to protect the most vulnerable islands.¹⁴³⁰
- 710 The coherent plan should have clearly identified:

710.1 the Commonwealth's role in funding seawalls in the Torres Strait;

¹⁴²⁵ s.28 APP.0001.0021.0014 Human Rights Act 2019 (Qld).

¹⁴²⁶ s.28(2)(a) APP.0001.0021.0014 *Human Rights Act* 2019 (Qld).

¹⁴²⁷ s.28(2)(d) APP.0001.0021.0014 *Human Rights Act* 2019 (Qld).

¹⁴²⁸ s.28(2)(e) APP.0001.0021.0014 *Human Rights Act* 2019 (Qld).

¹⁴²⁹ APP.0001.0014.0025 at p 5.

¹⁴³⁰ APP.0001.0014.0025 at p 5; NIA.2011.0001.0009.

- 710.2 the source/s of the Commonwealth's funding of the seawalls in the Torres Strait;
- 710.3 the amounts available and any further contingency amounts for the construction of seawalls in the Torres Strait;
- 710.4 the role of the Queensland government in the funding of the seawalls in the Torres Strait.
- 711 The circumstances of the funding of Stage 1 and Stage 2 expose the absence of a coherent plan (in particular the matters set out in the preceding paragraph):
 - 711.1 a definitive source of the Commonwealth's Stage 1 funding had not been pre-set:
 - (a) prior to the TSIRC lodging an Expression of Interest¹⁴³¹ for Stage 1 funding under the RDA Fund, the Commonwealth had received advice from the Regional Development Australia Committee, that "sea walls are not identified in the RDA's 2011-2012 Regional Roadmap. Consequently, a proposal would not be likely to be eligible for consideration under the Regional Development Australia Funding (RDAF) Guidelines";¹⁴³²
 - (b) the Commonwealth considered but dismissed various other funds.¹⁴³³ Further, the Major Infrastructure Program was ruled out because the Commonwealth Department, "Queensland agencies, and TSRA-[were] unwilling to divert currently available funding for infrastructure in the Torres Strait into coastal protection works";¹⁴³⁴
 - (c) by 4 June 2012, \$5 million of the Commonwealth's \$12 million contribution to Stage 1 funding was to be provided under the RDA Fund, and the remaining \$7 million from the Department of Families, Community Services and Indigenous Affairs.¹⁴³⁵ It transpired that the former Labor Government had announced funding but had not allocated the funds for its \$12 million contribution.¹⁴³⁶ This led to the new (Coalition) government announcing on

¹⁴³⁴ NIA.2009.0036.8142.

¹⁴³¹ INF.2006.0001.0046 at 0047.

¹⁴³² NIA.2009.0036.8142 at 8142-8143.

¹⁴³³ NIA.2009.0036.8142 and 8143 Natural Disaster Resilience Program, the Natural Disaster Relief and Recovery Arrangements and, the Major Infrastructure Program.

¹⁴³⁵ INF.2000.0002.0241.

¹⁴³⁶ WIT.2000.0003.0001 Connolly Supplementary affidavit at [7.6].

25 February 2014 that it had approved the \$5 million contribution under the Community Development Grants Programme and \$7 million under the Indigenous Housing and Infrastructure programme (with \$1 million already provided).¹⁴³⁷ This final approval appears to have been made without formal application by the TSIRC;

- (d) the remaining \$7 million of the Commonwealth's \$12 million Stage 1 contribution remained unfunded for a period of time. The Deputy Prime Minister refused a request for the \$7 million to come out of the Infrastructure and Regional Development portfolio.¹⁴³⁸ And as a consequence, two options were considered¹⁴³⁹: (a) uncommitted contingency funds from Major Infrastructure Programme and \$4 to \$5 million from the Indigenous Housing and Infrastructure Program; or (b) \$6 million from Indigenous Housing and Infrastructure Program.
- 711.2 Stage 1 funding was unpredictable because:
 - (a) the RDA Fund, was unpredictable as evidenced by:
 - (i) the Fund was a competitive fund;¹⁴⁴⁰
 - (ii) the views expressed by the Regional Development Australia Committee about Stage 1 "not likely to be eligible for consideration";¹⁴⁴¹
 - (iii) the fact that the Advisory Committee's recommendation to the Minister that Stage 1 receive funding was based on extraneous considerations. The Committee recommended Stage 1 for funding on the basis that "Queensland was under-represented in funding relative to its population.

¹⁴³⁷ INF.2003.0003.4147.

¹⁴³⁸ NIA.2001.0001.0029 at 0030[6].

¹⁴³⁹ NIA.2001.0001.0029 at 0030[8].

¹⁴⁴⁰ WIT.2000.0001.0015 Connolly First Affidavit at 0016[11].

¹⁴⁴¹ NIA.2009.0036.8142 at 8142-8143.

Inclusion of the project also improved that balance of funding within the State...";¹⁴⁴²

- (iv) the Commonwealth's contribution to Stage 1 funding was dependent on the Queensland Government matching the Commonwealth's \$12 million funding commitment. That was not a criteria under RDA Fund. The Commonwealth made that request to the Queensland Government on 4 June 2012. ¹⁴⁴³ The Queensland Government did not match this funding until 14 January 2013.¹⁴⁴⁴ There did not appear to be a formal policy or mechanism by which the Queensland funding could be secured;
- (v) the fact that the Commonwealth had initially announced but had not actually allocated its contribution to Stage 1 funding.¹⁴⁴⁵
- 711.3 Stage 1 funding was delayed. There was a period of just under 2½ years from the Expression of Interest for funding to the execution of the Funding Agreement:
 - (a) on 11 December 2011, TSIRC lodged an Expression of Interest¹⁴⁴⁶ for Stage 1 funding under the RDA Fund. Despite the fact that on or about 9 June 2012, the Commonwealth notified the TSIRC that it was successful in its application for \$5 million in funding under the RDA Fund¹⁴⁴⁷, the government had not allocated the funds before entering caretaker arrangements prior to the 7 September 2013 election;¹⁴⁴⁸
 - (b) on 29 January 2014, a senior advisor from DPMC emailed colleagues noting that she had just attend a PGC meeting at which it was 'very clear' that the Commonwealth was 'the only obstacle to the project getting underway';¹⁴⁴⁹

¹⁴⁴² INF.2004.0001.0065_0007.

¹⁴⁴³ INF.2000.0002.0001 at 0002.

¹⁴⁴⁴ INF.2000.0002.0241 at 0243.

¹⁴⁴⁵ WIT.2000.0003.0001 Connolly Supplementary affidavit at [7.6].

¹⁴⁴⁶ INF.2006.0001.0046 at 0047.

¹⁴⁴⁷ INF.2000.0002.0343.

¹⁴⁴⁸ INF.2003.0002.7089; WIT.2000.0003.0001 Connolly Supplementary affidavit at [7.6]; INF.2000.0001.0565 at 0610.

¹⁴⁴⁹ NIA.2001.0001.0196.

- (c) the former (Labour) Government announced but had not allocated Stage 1 funding, and it wasn't until 25 February 2014 that incoming government announced that the \$5 million that had been originally announced under the RDA Fund had been allocated under the Community Development Grants Programme, and \$7 million had been allocated under the Indigenous Housing and Infrastructure programme (with \$1 million already provided)¹⁴⁵⁰;
- (d) on 11 April 2014, the Funding Agreement was executed.¹⁴⁵¹
- 711.4 Stage 1 funding was inadequate:
 - (a) under Stage 1, seawalls were planned to be constructed on Saibai, Boigu,
 Poruma, Iama, Masig and Warraber.¹⁴⁵² However:
 - (i) only part of the scoped works for Boigu could be constructed;¹⁴⁵³
 - (ii) only emergency works (and none of the planned works) on
 Poruma could be constructed;¹⁴⁵⁴
 - (iii) the seawalls planned for Iama, Masig and Warraber could not be constructed.¹⁴⁵⁵
 - (b) between 2008 and 2010, the Commonwealth committed \$328.2 million to the climate change efforts in the Pacific.¹⁴⁵⁶ In comparison:
 - (i) in May 2010, the Commonwealth "announced additional funding of \$1 million for tidal gauge monitoring in the

¹⁴⁵⁰ INF.2003.0003.4147.

¹⁴⁵¹ INF.2000.0001.0565.

¹⁴⁵² NIA.2002.0001.0022 Exhibit R8 at 0039-0040.

¹⁴⁵³ Exhibit R8 NIA.2002.0001.0022 Exhibit R8 at 0040. Of the works planned for Boigu under Stage 1, only the upgrade of the drains, repairs to existing bund and seawalls and the rebuilt of the rock armour seawall near the boat ramp were completed. Works planned under Stage 1 but not constructed at this time were the "wave return wall, reconstruction of the jetty and barge ramp areas and raising, extending and repairing the Bund Wall."

¹⁴⁵⁴ Approximately \$240,000 of the funds allocated for Stage 1 was spent on "emergency sand bagging to protect infrastructure" on Poruma. Works planned for Poruma under Stage 1 including "emergency coastal infrastructure repairs and seawall and erosion control" was not constructed.

¹⁴⁵⁵ None of the works planned for Iama, Masig and Warraber under Stage 1 were constructed. Exhibit R8 NIA.2002.0001.0022 Exhibit R8 at 0040. In its Defence, the Commonwealth pleads that "processes are underway to procure services to construct coastal protection structures on Masig, Iama and Warraber" CRT.2000.0003.0001 Defence [74(b)(iv)].

¹⁴⁵⁶ NIA.2009.0036.8142-8143.

Torres Strait and \$400,000 for further climate change adaptation research".¹⁴⁵⁷

- (ii) over the period 2013 to 2019, the Commonwealth approved a total of \$32 million for the construction of seawalls on the 6 Torres Strait Islands.
- 711.5 Stage 2 funding was inadequate:
 - (a) Stage 2 planned to construct seawalls on Boigu, Poruma, Iama, Warraber and Masig;¹⁴⁵⁸
 - (b) construction of the seawalls on Boigu commenced on 1 October 2021.¹⁴⁵⁹
 - (c) on 8 March 2022, the costs for the construction of Stage 2 works were "identified as being greater than the remaining budget".¹⁴⁶⁰ The Commonwealth were aware of this fact (through Dr Simpson (the NIAA representative) presence at the Program Governance Committee Meeting on that date). Accordingly, only planned seawalls on Boigu¹⁴⁶¹ and Poruma¹⁴⁶² were constructed. There were insufficient funds available to construct the Stage 2 seawalls planned for Iama, Masig and Warraber;
- 711.6 Stage 2 funding was delayed. The TSRA first requested Stage 2 funding on 8 May 2018.¹⁴⁶³ Over a 1¹/₂ years later and on 16 December 2019 the Commonwealth approved that funding.¹⁴⁶⁴ In that 1¹/₂ year period, there were repeated requests from the Queensland Government¹⁴⁶⁵ and the TSRA¹⁴⁶⁶ for the Commonwealth to match the \$20 million in funding the Queensland Government had approved for Stage 2;

¹⁴⁵⁷ NIA.2009.0036.8142.

¹⁴⁵⁸ NIA.2000.0001.0307 at 0312-0313.

¹⁴⁵⁹ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0040.

¹⁴⁶⁰ NIA.2005.0001.0096.

¹⁴⁶¹ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0040; TRN.0014.1172 T1250.10 (15 Nov 2023): On 22 March 2022, practical completion of the seawalls on Boigu was achieved.

¹⁴⁶² WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0041: On 30 December 2022, practical completion of the seawalls on Poruma was achieved.

¹⁴⁶³ NIA.2002.0001.0022 Exhibit R8 at [2].

¹⁴⁶⁴ NIA.2002.0001.0161.

¹⁴⁶⁵ NIA.2002.0001.0022 Exhibit R8 at [1] [23 August and 18 September 2018 requests].

¹⁴⁶⁶ NIA.2002.0001.0014 [21 June 2018 request].

711.7 there is no currently available fund for the construction of seawalls planned on Iama, Masig and Warraber. In May 2023, the NIAA and the TSRA had been investigating funding for the seawalls on Iama, Masig and Warraber. Those investigations are preliminary and no decision on "whether and how best to seek funding"¹⁴⁶⁷ has been made.

Submission on breach (Poruma)

- 712 It is submitted that the relevant risk for the purposes of s.9 of the CLA is the risk of marine inundation as a result of sea level rise and extreme weather events. For the reasons given at:
 - 712.1 paragraphs 588 to 601 above, that risk was "foreseeable" within the meaning of that term in s.9(1)(a) of the CLA;
 - 712.2 paragraphs 679 to 696 above, that risk was "not insignificant" within the meaning of that term in s.9(1)(a) of the CLA.
- 713 Further, in addressing the criteria under s.9(1)(c) and s.9(2) of the CLA as to "whether a reasonable person would have taken precautions against [the] risk of harm" the Group Members who are indigenous to Poruma submitted that the "precautions" that should have been taken by the Commonwealth were:
 - 713.1 from about 11 December 2011¹⁴⁶⁸, the Commonwealth should have established a non-competitive and predictable funds/grants allocated to specifically and fully fund the seawalls on Poruma under Stage 1;
 - 713.2 from about 11 December 2011, the Commonwealth should have led and coordinated the funding of the seawalls on Poruma under Stage 1;
 - 713.3 from about 3 May 2016¹⁴⁶⁹, the Commonwealth should have led and co-ordinated the provision of additional funding required to construct the seawalls on Poruma under Stage 1; and

¹⁴⁶⁷ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0003[8]-[9].

¹⁴⁶⁸ INF.2006.0001.0047.

¹⁴⁶⁹ DFA.2000.0002.8900 at 8915: "The \$26.2 million granted to deliver seawalls is clearly not enough and leaves Council in our current difficult position where we are being forced to decide which of our communities survive and which do not"...."It is likely that the final cost for the current seawall construction at Saibai alone will come in around \$25-26 million, and that is with significant in-kind contribution from the Council"..."The seawall for Boigu

- 713.4 from about 3 May 2016, the Commonwealth should have provided the additional funding required to construct the seawalls on Poruma under Stage 1.
- 714 The Poruma Group Members rely upon the following matters to submit that it was reasonable for the Commonwealth to have taken precautions against the risk of harm.
- 715 Firstly, the Poruma Group Members repeat paragraphs 724, 725, 727 to 732 below.
- 716 Second, the seawalls on Poruma were to be constructed in about 2014/2015 as part of Stage 1. Having not been constructed, those seawalls formed part of Stage 2. Practical completion of the seawalls on Poruma was achieved on 30 December 2022.¹⁴⁷⁰
- 717 In January 2018 (i.e. after the commencement of construction of Stage 1 and prior to practical completion of the seawalls on Poruma), Poruma was impacted by marine inundation.¹⁴⁷¹
- 718 In discussing more recent impacts of climate change, Uncle Frank said:

"When the high tide comes in, the waves take the sand from the bottom of the sandbank, which causes the top of the sandbank to fall. This sand goes out to sea and doesn't come back. When the water comes back in, the coconut trees fall. We lose a lot of coconut trees frequently because the water comes deeper and deeper inland";¹⁴⁷²

"...the garden areas have also been lost to the sea. Nothing much grows in the land any more, at least not like it used to;" $^{1473}\,$

"The erosion of the land means that there is more sand going to other places and creating sandbanks in the ocean. The little islets near Poruma used to have grasses on them. Now they are just sand..."¹⁴⁷⁴

- 719 Third, the Group Members who are indigenous to Poruma repeat the matters in paragraphs 727 to 731 below.
- 720 Fourth, on 3 May 2016, that is, at least 1 year prior to practical completion of the seawalls on Saibai¹⁴⁷⁵ and Boigu¹⁴⁷⁶, the TSIRC informed the Commonwealth that funding under

was initially costed by the consultant at \$2.6 million. Latest costings for Boigu based on recent market testing indicate the cost will be closer to \$6.9 million".

¹⁴⁷⁰ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0041.

¹⁴⁷¹ INF.2005.0001.0116; INF.2000.0001.1257.

¹⁴⁷² APP.0001.0009.0009 0009[43].

¹⁴⁷³ APP.0001.0009.0009 0009[44].

¹⁴⁷⁴ APP.0001.0009.0009 0010[55].

¹⁴⁷⁵ May 2017 (*See* NIA.2002.0001.0022 Exhibit R8 at 0039).

¹⁴⁷⁶ November 2017 (*See* NIA.2002.0001.0022 Exhibit R8 at 0040).

Stage 1 was inadequate¹⁴⁷⁷. Despite this, the Commonwealth did not provide any further funding under Stage 1 so that the seawalls on Poruma could be constructed.

Submission on breach (Iama, Masig and Warraber)

- 721 It is submitted that the relevant risk for the purposes of s.9 of the CLA is the risk of marine inundation as a result of sea level rise and extreme weather events. For the reasons given at:
 - 721.1 paragraphs 588 to 601 above, that risk was "foreseeable" within the meaning of that term in s.9(1)(a) of the CLA;
 - 721.2 paragraphs 679 to 696 above, that risk was "not insignificant" within the meaning of that term in s.9(1)(a) of the CLA.
- 722 Further, in addressing the criteria under s.9(1)(c) and s.9(2) as to "whether a reasonable person would have taken precautions against [the] risk of harm" the Group Members who are indigenous to the islands of Iama, Masig and Warraber submit that the "precautions" that should have been taken by the Commonwealth were:
 - 722.1 from about 11 December 2011¹⁴⁷⁸, the Commonwealth should have established a non-competitive and predictable funds/grants allocated to specifically and fully fund the seawalls on Iama, Masig and Warraber as originally scoped;
 - 722.2 from about 11 December 2011, the Commonwealth should have led and coordinated the funding of the seawalls on Iama, Masig and Warraber;
 - 722.3 from about 3 May 2016¹⁴⁷⁹, the Commonwealth should have led and co-ordinated the provision of additional funding required to construct the seawalls on Iama, Masig and Warraber under Stage 1;

¹⁴⁷⁷ DFA.2000.0002.8900 at 8915: "The \$26.2 million granted to deliver seawalls is clearly not enough and leaves Council in our current difficult position where we are being forced to decide which of our communities survive and which do not"...."It is likely that the final cost for the current seawall construction at Saibai alone will come in around \$25-26 million, and that is with significant in-kind contribution from the Council"..."The seawall for Boigu was initially costed by the consultant at \$2.6 million. Latest costings for Boigu based on recent market testing indicate the cost will be closer to \$6.9 million".

¹⁴⁷⁸ INF.2006.0001.0046.

¹⁴⁷⁹ DFA.2000.0002.8900 at 8915: "The \$26.2 million granted to deliver seawalls is clearly not enough and leaves Council in our current difficult position where we are being forced to decide which of our communities survive and which do not"...."It is likely that the final cost for the current seawall construction at Saibai alone will come in around \$25-26 million, and that is with significant in-kind contribution from the Council"..."The seawall for Boigu

- 722.4 from about 3 May 2016, the Commonwealth should have provided the additional funding required to construct the seawalls on Iama, Masig and Warraber under Stage 1;
- 722.5 from about 8 March 2022¹⁴⁸⁰, the Commonwealth should have led and co-ordinated the provision of additional funding required to construct the seawalls on Iama, Masig and Warraber under Stage 2;
- 722.6 from about 8 March 2022, the Commonwealth should have provided the additional funding required to construct the seawalls on Iama, Masig and Warraber under Stage 2;
- 722.7 from about 5 May 2023¹⁴⁸¹, the Commonwealth should have led and co-ordinated the provision of additional funding required to construct the seawalls on Iama, Masig and Warraber as descoped;¹⁴⁸²
- 722.8 from about 5 May 2023¹⁴⁸³ the Commonwealth should have established a noncompetitive and predictable funds/grants allocated to specifically and fully fund the seawalls on Iama, Masig and Warraber as descoped.¹⁴⁸⁴
- 723 The Group Members who are indigenous to the islands of Iama, Masig and Warraber rely upon the following matters to submit that it was reasonable for the Commonwealth to have taken the above precautions against the risk of harm. The risk of harm being the risk of marine inundation as a result of sea level rise and extreme weather events.
- 724 Firstly, estimating the probable construction costs is not an exact science. In an exchange with Mr Bettington about his under-estimation of construction costs, His Honour noted "Wouldn't be the first time, I don't imagine."¹⁴⁸⁵ The funding provided for the Commonwealth made no allowance for this feature of cost estimation.

was initially costed by the consultant at \$2.6 million. Latest costings for Boigu based on recent market testing indicate the cost will be closer to \$6.9 million".

¹⁴⁸⁰ NIA.2005.0001.0096.

¹⁴⁸¹ NIA.2008.0002.0001.

¹⁴⁸² See paragraph 554 above.

¹⁴⁸³ NIA.2008.0002.0001.

¹⁴⁸⁴ See paragraph 554 above.

¹⁴⁸⁵ TRN.0014.1172 T1263.15 (15 November 2023).

- 725 The under-estimation in relation to the seawalls was further compounded by the fact that the probable construction costs were estimated from a concept design rather than a detail design.¹⁴⁸⁶
- 726 Second, seawalls on Iama, Masig and Warraber were to be constructed in about 2014/2015 as part of Stage 1. Having not been constructed, those seawalls formed part of Stage 2 but again were not constructed. While the seawalls remain unconstructed, the islands of Iama, Masig and Warraber are exposed to the risk of marine inundation. That risk materialised in January 2018, with a high tide event causing marine inundation on Iama, Masig and Warraber.¹⁴⁸⁷
- 727 Third, the Torres Strait Islanders are as a group, extremely disadvantaged and vulnerable.¹⁴⁸⁸ They are unable to protect themselves from the risk of marine inundation caused by sea level rise and extreme weather events. That risk is extreme.¹⁴⁸⁹ At all times, the Commonwealth was aware of these matters.¹⁴⁹⁰ In particular, the Commonwealth knew that "Iama, Poruma, Warraber and Masig...are also amongst the group of most vulnerable to the effects of climate change."¹⁴⁹¹
- 728 Further, they are neither able to protect themselves from the risk of marine inundation nor influence or compel the Commonwealth to take precautions to protect them from the risk of marine inundation. The lack of influence compounds the Torres Strait Islanders' vulnerability.
- 729 Fourth, the Commonwealth is obligated to protect the Torres Strait Islanders from the risks of marine inundation from sea level rise and extreme events:
 - 729.1 the Treaty entered into force for Australia on 15 February 1985. Under the Treaty, the Commonwealth agreed to protect the "traditional way of life and livelihood of Australians who are Torres Strait Islanders...";¹⁴⁹²
 - 729.2 the Paris Agreement entered into force in Australia on 9 December 2016. Under the Paris Agreement, the Commonwealth agreed to "…establish the global goal on

¹⁴⁸⁶ NIA.2002.0001.0022 Exhibit R8 at 0065 [7.3].

¹⁴⁸⁷ See paragraphs 696, 764 and 773 below.

¹⁴⁸⁸ See paragraphs 562 to 585. ¹⁴⁸⁹ See paragraphs 670 to 606

 $[\]begin{array}{ll} ^{1489} & \text{See paragraphs 679 to 696.} \\ ^{1490} & \text{See paragraphs 588 to 601} \end{array}$

¹⁴⁹⁰ See paragraphs 588 to 601.

¹⁴⁹¹ DCC.2001.0001.2640 at 2685.

¹⁴⁹² See paragraph 605 to 607 above.

adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response...".¹⁴⁹³

- 729.3 Australia ratified the International Covenant on Civil and Political Rights on 13 August 1980:
 - (a) under Article 17, the Commonwealth has a "...positive obligation to implement adequate adaptation measures to protect the [Torres Strait Islanders'] home, private life and family...;" ¹⁴⁹⁴
 - (b) under Article 27, the Commonwealth has a positive obligation to protect Torres Strait Islanders' right to enjoy their culture and an "inalienable right... to enjoy the territories and natural resources that they have traditionally used for their subsistence and cultural identity..."¹⁴⁹⁵
- 730 In addition, under s 51(xxvi) of the Constitution, the Commonwealth has the power to recognise and protect "the connection of Aboriginal and Torres Strait Islander peoples with land and waters within the territory of the Commonwealth…"¹⁴⁹⁶
- 731 Further, Torres Strait Islanders' statutory human right and traditional way of life are at risk from marine inundation. The Human Rights Act 2019 (Qld) confers "distinct cultural rights"¹⁴⁹⁷ on the Torres Strait Islanders and protects those rights by prescribing that Torres Strait Islanders "must not be denied the right to":
 - 731.1 "enjoy, maintain, control, protect and develop their identity and cultural heritage, including their traditional knowledge, distinctive spiritual practices, observances, beliefs and teachings"; ¹⁴⁹⁸

¹⁴⁹³ See paragraph 624.

¹⁴⁹⁴ APP.0001.0020.0197 *Billy v Australia* CCPR/C/135/D/3624/2019, UN Human Rights Committee (18 September 2023) at page 16[8.12].

¹⁴⁹⁵ APP.0001.0020.0197 *Billy v Australia* CCPR/C/135/D/3624/2019, UN Human Rights Committee (18 September 2023) at page 16[8.13] to [8.14].

¹⁴⁹⁶ APP.0001.0020.0169 Love v Commonwealth (2020) 270 CLR 152 at 209[130] per Gageler J (as he then was).

¹⁴⁹⁷ s.28 APP.0001.0021.0014 *Human Rights Act* 2019 (Qld).

¹⁴⁹⁸ s.28(2)(a) APP.0001.0021.0014 Human Rights Act 2019 (Qld).

- 731.2 "to maintain and strengthen their distinctive spiritual, material and economic relationship with the land, territories, waters, coastal seas and other resources with which they have a connection under Aboriginal tradition or Island custom"; ¹⁴⁹⁹
- 731.3 "to conserve and protect the environment and productive capacity of their land, territories, waters, coastal seas and other resources." ¹⁵⁰⁰
- 732 Fifth, the Commonwealth knew of the need for further funding prior to practical completion of Stage 1 and Stage 2:
 - 732.1 on 3 May 2016, that is, at least 1 year prior to practical completion of the seawalls on Saibai¹⁵⁰¹ and Boigu¹⁵⁰², the TSIRC informed the Commonwealth that funding under Stage 1 was inadequate.¹⁵⁰³ Despite this, the Commonwealth did not provide any further funding under Stage 1;
 - 732.2 on 8 March 2022, the costs for the construction of Stage 2 works were "identified as being greater than the remaining budget".¹⁵⁰⁴ The Commonwealth was aware of this fact (through Dr Simpson-the NIAA representative-present at the Program Governance Committee Meeting on that date) but did not provide any further funding under Stage 2.

U. DAMAGE & CAUSATION

Legal principles

- 733 The legal principles on causation are set out at paragraphs [418]-[420] onwards. In particular we note the following.
- 734 Section 11 of the CLA provides:

A decision that a breach of duty caused particular harm comprises the following elements-

¹⁴⁹⁹ s.28(2)(d) APP.0001.0021.0014 Human Rights Act 2019 (Qld).

¹⁵⁰⁰ s.28(2)(e) APP.0001.0021.0014 Human Rights Act 2019 (Qld).

¹⁵⁰¹ May 2017 (See NIA.2002.0001.0022 Exhibit R8 at 0039).

¹⁵⁰² November 2017 (See NIA.2002.0001.0022 Exhibit R8 at 0040).

¹⁵⁰³ DFA.2000.0002.8900 at 8915: "The \$26.2 million granted to deliver seawalls is clearly not enough and leaves Council in our current difficult position where we are being forced to decide which of our communities survive and which do not"...."It is likely that the final cost for the current seawall construction at Saibai alone will come in around \$25-26 million, and that is with significant in-kind contribution from the Council"..."The seawall for Boigu was initially costed by the consultant at \$2.6 million. Latest costings for Boigu based on recent market testing indicate the cost will be closer to \$6.9 million".

¹⁵⁰⁴ NIA.2005.0001.0096.

the breach of duty was a necessary condition of the occurrence of the harm (factual causation);

it is appropriate for the scope of the liability of the person in breach to extend to the harm so caused (**scope of liability**).

(2) In deciding in an exceptional case, in accordance with established principles, whether a breach of duty—being a breach of duty that is established but which can not be established as satisfying subsection (1)(a)—should be accepted as satisfying subsection (1)(a), the court is to consider (among other relevant things) whether or not and why responsibility for the harm should be imposed on the party in breach.

(3) ...

(4) For the purpose of deciding the scope of liability, the court is to consider (among other relevant things) whether or not and why responsibility for the harm should be imposed on the party who was in breach of the duty.

735 Section 12 of the CLA provides:

In deciding liability for breach of a duty, the plaintiff always bears the onus of proving, on the balance of probabilities, any fact relevant to the issue of causation.

- 736 The distinction between factual causation and scope of liability "should not be obscured by judicial glosses". ¹⁵⁰⁵
- 737 The factual causation inquiry is "entirely factual" 1506 to be determined by the "application of a but for test of causation. That is to say, a determination in accordance with [s 11(1)(a)] that negligence was a necessary condition of the occurrence of harm is nothing more or less than a determination on the balance of probabilities that the harm that in fact occurred would not have occurred absent the negligence." 1507
- **The law's recognition that concurrent and successive tortious acts may each be a cause of a plaintiff's loss or damage is reflected in the proposition that a plaintiff must establish that his or her loss or damage is "caused or materially contributed to" by a defendant's wrongful conduct. It is enough for liability that a wrongdoer's conduct be one cause¹⁵⁰⁸. The relevant enquiry is whether the particular contravention was a cause, in the sense that it materially contributed to the loss. Material contribution has been said to require

¹⁵⁰⁵ APP.0001.0020.0182 *Wallace v Kam* (2013) 250 CLR 375 at 383[14].

¹⁵⁰⁶ APP.0001.0020.0182 *Wallace v Kam* (2013) 250 CLR 375 at 383[14].

¹⁵⁰⁷ APP.0001.0020.0182 *Wallace v Kam* (2013) 250 CLR 375 at 383[16].

¹⁵⁰⁸ APP.0001.0020.0068 *Henville v Walker* [2001] HCA 52; (2001) 206 CLR 459 at 469[14].

only that the act or omission of a wrongdoer play some part in contributing to the loss."¹⁵⁰⁹

- 739 The scope of liability inquiry "is entirely normative, turning in accordance with [s11(4)] on consideration by a court of (amongst other relevant things) whether or not, and if so why, responsibility for the harm should be imposed on the negligent party."¹⁵¹⁰
- ⁷⁴⁰ "In a novel case, however, [s 11(4)] makes it incumbent on a court answering the normative question posed by [s 11(1)(b)] explicitly to consider and to explain in terms of legal policy whether or not, and if so why, responsibility for the harm should be imposed on the negligent party. What is required in such a case is the identification and articulation of an evaluative judgment by reference to "the purposes and policy of the relevant part of the law". Language of "directness", "reality", "effectiveness" or "proximity" will rarely be adequate to that task. Resort to "common sense" will ordinarily be of limited utility unless the perceptions or experience informing the sense that is common can be unpacked and explained." ¹⁵¹¹

Submission on damage and causation (all 6 Islands)

- 741 Since about 2001, there have been requests by community leaders, the TSIRC and the TSRA for funding for the construction of coastal protection measures on the Torres Strait Islands. From this point in time:
 - 741.1 it was not until 4 June 2012, (some 11 years later) that the Commonwealth announced \$12 million in Stage 1 funding¹⁵¹²;
 - 741.2 it was not until 11 April 2014, (some 13 years later) that a funding agreement for Stage 1 funding was executed¹⁵¹³;
 - 741.3 it was not until 16 December 2019, (some 18 years later) that the Commonwealth approved \$20 million in Stage 2 funding¹⁵¹⁴;

¹⁵⁰⁹ APP.0001.0020.0073 Hunt & Hunt Lawyers v Mitchel Morgan Nominees Pty Ltd (2013) 247 CLR 613 at 635[45].

¹⁵¹⁰ APP.0001.0020.0182 *Wallace v Kam* (2013) 250 CLR 375 at 383[14].

¹⁵¹¹ APP.0001.0020.0182 *Wallace v Kam* (2013) 250 CLR 375 at 385[23].

¹⁵¹² INF.2000.0002.0241; INF.2000.0001.0565 at 0610.

¹⁵¹³ INF.2000.0001.0565.

¹⁵¹⁴ NIA.2002.0001.0161.

- 741.4 it was not until 23 February 2021, (some 20 years later) that the funding agreement for Stage 2 funding was executed¹⁵¹⁵;
- 741.5 it has been some 23 years and the funding of Iama, Masig and Warraber (as fully scoped) has not been approved.
- 742 While the seawalls on the 6 Islands were unconstructed because of the absence of funding, marine inundation and erosion have occurred on the 6 Islands.
- Firstly, the seawalls around Saibai were constructed between September 2015 and May 2017.¹⁵¹⁶
 Prior to the commencement of construction of the seawalls significant inundation occurred on Sabai:

743.1 January 2006;¹⁵¹⁷

743.22009;1518

743.32010;1519

743.42012.1520

744 Following construction of the seawalls and on January 2018, marine inundation occurred on Saibai. ¹⁵²¹

745.1 Uncle Paul gave evidence that:

"Outside of the town, the sea comes in through the rivers from the south and east of the island, through the swamps. This happens every king tide. It is worse during monsoon season. It fills up each of the swamps, which then flows onto the next swamp and so on. Eventually, because there are swamps behind the town, the water from the swamps also comes flowing into the town. So, water inundation from the sea occurs from both sides of the town – the beachfront and the swamps";¹⁵²²

⁷⁴⁵ In addition:

¹⁵¹⁵ NIA.2000.0001.0324.

¹⁵¹⁶ Exhibit R8 NIA.2002.0001.0022 at 0045.

¹⁵¹⁷ Mr Bettington's evidence was this was "effectively a 50 year ARI storm tide". TRN.0014.1172 T1230.1 (15 Nov 2023) and Table 3 at APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0004.

¹⁵¹⁸ Mr Bettington's evidence was this was "more extreme than a 100 year event". TRN.0014.1172 T1230.15 (15 Nov 2023) and Table 3 at APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0004.

¹⁵¹⁹ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0005.

¹⁵²⁰ APP.0001.0009.0005 Affidavit of Uncle Paul Kabai at [131].

¹⁵²¹ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0005.

¹⁵²² APP.0001.0009.0005 Affidavit of Uncle Paul Kabai at [126].

"There was a very bad flood that happened about 10 years ago, in around 2012. The roads were all underwater, and people's homes were flooded. My laundry is at the bottom of my house, and my washing machine and some of my tools were damaged from the flooding. I remember the pressure from the floodwater impacted the drainage pipes beneath my neighbourhood, and the sewerage manholes for the drains blew open.

Around this time, the western cemetery had also been very badly damaged by inundation from the sea water. Many graves were washed away. You can still see this in some of the photos that I referred to above.

There was another bad flood in around 2018."¹⁵²³

745.2 Uncle Herbert gave evidence that:

"Every month the big tide comes in. They are getting bigger and more frequent. It wasn't like that before. The frequency makes me sad. This is a real fear for me. It is a burden for me to know this is happening."¹⁵²⁴

"In 2023 - yeah, 2021, 2020 each waku dhoebu moepal gets flooded. That means each February big tide.

MR LLOYD: That's 2020, 2021, not 2022 but then 2023.

HERBERT WARUSAN: No, all of them."¹⁵²⁵

- 746 Second, in relation to the Stage 1 works for Boigu, only the upgrade of the sea and bund walls were undertaken. Practical completion of these works was achieved in November 2017.¹⁵²⁶ The remaining Stage 1 works for Boigu (including the new wave return wall (approx. 1022m) and earthworks to raise existing bund and extend by (approx. 450m), among other works) were constructed as part of Stage 2 works¹⁵²⁷. Practical completion of these works occurred on 22 March 2022.¹⁵²⁸
- 747 Prior to the construction of the seawalls in Stage 1 and in 2009, marine inundation occurred on Boigu.¹⁵²⁹
- 748 Following construction of the seawalls in Stage 2 and in October 2022, marine inundation occurred on Boigu. That lay evidence was that "A few months ago, I tried to plant cassava in my home garden, using the stars to tell me when was a good time to plant and

¹⁵²³ APP.0001.0009.0005 Affidavit of Uncle Paul Kabai at [131-133].

APP.0001.0009.0007 Affidavit of Uncle Herbert Warusan at [31].

¹⁵²⁵ APP.0001.0012.0003 T541.35-40 (12 June 2023).

¹⁵²⁶ NIA.2002.0001.0022 at 0040.

¹⁵²⁷ NIA.2008.0002.0001 at 0028.

¹⁵²⁸ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0040; TRN.0014.1172 T407.10 (15 Nov 2023).

¹⁵²⁹ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report _0005.

when the tides were unlikely to be high. However, the tides came in despite what the stars said, and my garden was wrecked. The soil is too salty to grow much in it¹⁵³⁰

- 749 In addition, Uncle Pabai gave evidence that:
 - 749.1 "Every few years, in about January and February, Boigu is inundated during king tides. This happens during monsoon season, and the tides can be many meters high. Depending on the height of the tides, and given how low and flat Boigu is, the sea water comes in and inundates the land."¹⁵³¹
 - 749.2 "In the last 20 years, the sea water has inundated the cemetery on a number of occasions. It happens almost every monsoon season, which is usually in January and February."¹⁵³²
 - 749.3 "In 2007, Boigu was flooded during a high tide. This is the largest flood in my lifetime. The old seawall did not prevent the flooding. The water came in from the ocean, and also flooded into the swamps and then into village through the back of the village."¹⁵³³
- 750 Third, in relation to Poruma see [763] to [768] below.
- 751 Fourth, in relation to Iama see [769] to [783] below.
- 752 Fifth, in relation to Masig see [769] to [783] below.
- 753 Sixth, in relation to Warraber see [769] to [783] below.
- 754 Seventh, in its Defence, the Commonwealth:
 - 754.1 "admits that some of the Torres Strait Islands have been subject to inundation events prior to and since 2014";¹⁵³⁴

¹⁵³⁰ APP.0001.0009.0008 Affidavit of Uncle Pabai Pabai at [113].

¹⁵³¹ APP.0001.0009.0008 Affidavit of Uncle Pabai Pabai at [160].

¹⁵³² APP.0001.0009.0008 Affidavit of Uncle Pabai Pabai at [87].

APP.0001.0009.0008 Affidavit of Uncle Pabai Pabai at [113].

¹⁵³⁴ CRT.2000.0003.0001 Defence at 0019[53b].

- 754.2 "says that some parts of the Torres Strait Islands have been affected by inundation during high tides and surge events from time to time for many years, including prior to 2014"; ¹⁵³⁵
- 754.3 "says that some structures and significant sites on some Torres Strait Islands are located on low lying areas and subject to a risk of inundation events." ¹⁵³⁶
- 755 It is submitted that factual causation is satisfied because "but for" these breaches the erosion and marine inundation that occurred on the 6 Islands would have occurred because the seawalls would have been built and erosion and/or marine inundation would have been mitigated or avoided.
- 756 Mr Bettington's uncontradicted evidence is that wave walls provide flood mitigation which reduces the impacts and frequency of severe events¹⁵³⁷ and the seawalls prevent erosion.¹⁵³⁸
- 757 Therefore, it is submitted that the Commonwealth's breaches:

757.1 "materially contributed to"; and

757.2 are "one cause" of,

the marine inundation and/or erosion on all 6 Islands.

- 758 In addressing the scope of liability criteria, it is submitted that the Commonwealth should be responsible for the harm suffered by the Applicants and the Group Members because (in summary):
 - 758.1 under the Treaty, the Commonwealth has ratified a voluntary obligation to protect the "traditional way of life and livelihood of Australians who are Torres Strait Islanders...";

¹⁵³⁵ CRT.2000.0003.0001 Defence at 0021[57e].

¹⁵³⁶ CRT.2000.0003.0001 Defence at 0019[53a].

¹⁵³⁷ TRN.0014.1172 T358.1 (15 Nov 2023).

APP.0001.0009.0003 Exhibit 48 Bettington Expert Report _0075 at [5.5.2]: "The construction of engineered seawalls is an effective defence against coastal erosion." TRN.0014.1172 T357.40 (15 Nov 2023): Mr Bettington's evidence is that the "...seawall is actually rock face in front. The concrete barrier behind it we've called a wave wall. So the seawall is an erosion defence, and that's the rock. Okay. ..."

- 758.2 under the COAG arrangements, the Commonwealth has agreed with the States and Territories, to take a "leadership role in positioning Australia to adapt to climate change";
- 758.3 the Commonwealth has either directly or indirectly sought to comply with the above obligations by funding Stage 1 and Stage 2, in addition to various other steps which evidence an assumption of responsibility for the protection of the Torres Strait Islands from marine inundation and erosion. In so doing, there is an established nexus between the Commonwealth and the Torres Strait Islanders.
- 759 The particulars of this summary are discussed below.
- There is a clear nexus between the Commonwealth and the Torres Strait Islanders: 760
 - 760.1 under the Treaty, the Commonwealth agreed to protect the "traditional way of life and livelihood of Australians who are Torres Strait Islanders ... ";1539
 - 760.2 the Torres Strait Islanders have requested funding from the Commonwealth, since about 2001¹⁵⁴⁰ and more specifically on 15 February 2012 in relation to Stage 1¹⁵⁴¹ and on 21 June 2018 in relation to Stage 2^{1542} ;
 - 760.3 the Commonwealth provided a total of \$32 million for Stage 1 and Stage 2 in direct response to the requests from the Torres Strait Islanders;¹⁵⁴³
 - 760.4 the Commonwealth has funded various other measures with a view to protecting the Torres Strait Islands from the impacts of climate change:
 - (a) \$1 million for tidal gauge monitoring in the Torres Strait and \$400,000 for further climate change adaptation research;¹⁵⁴⁴
 - (b) funded the James Cook University to "undertake research on the risks associated with erosion and inundation of the 6 most vulnerable islands in the

¹⁵³⁹ See paragraphs 605 to 607. 1540

APP.0001.0014.0025 at p 5. 1541

INF.2000.0002.0354. 1542

NIA.2002.0001.0014. 1543

See paragraph 556 1544 NIA.2009.0036.8142.

Torres Strait".¹⁵⁴⁵ It then funded further research to better understand climate change impacts on the 13 remaining Torres Strait Islands;¹⁵⁴⁶

760.5 the Commonwealth is the national government of Australia. It has:

- (a) recognised the special disadvantage on the Torres Strait Islands¹⁵⁴⁷ and have sort to redress that with the passage of the *Native Title Act* 1993 (Cth), the *Aboriginal and Torres Strait Islander Act* 2005 (Cth) and the Closing the Gap policy;
- (b) voluntarily bound itself under international treaties and agreements to protect the Torres Strait Islanders from the impact of climate change (*See* further below);
- 760.6 the Torres Strait Islanders are citizens of Australia who are "as a group, the most disadvantaged in Australian society".¹⁵⁴⁸ For the purpose of this analysis, the Applicant and the Group Members should be treated as:
 - (a) having no ability to protect themselves from the marine inundation and erosion impacting their Islands;
 - (b) having no power to influence the Commonwealth to fund the seawalls on the Torres Strait Islands.
- 760.7 Established the TSRA to (among other functions) "formulate and implement programs for Torres Strait Islanders..."¹⁵⁴⁹ and more recently the NIAA to lead and coordinate Commonwealth policy development and implementation (*See* paragraph 642 above). The TSRA developed a climate change strategy¹⁵⁵⁰ and

¹⁵⁴⁵ NIA.2009.0036.8142; DCC.2001.0001.2640 at 2641.

¹⁵⁴⁶ INF.2000.0002.0373 at 0379.

¹⁵⁴⁷ The Objects to the APP.0001.0021.0002 Aboriginal and Torres Strait Islander Act 2005 (Cth) states that "The objects of this Act are, in recognition of the past dispossession and dispersal of the Aboriginal and Torres Strait Islander peoples and their present disadvantaged position in Australian society". The Preamble to the APP.0001.0021.0016 Native Title Act 1993 (Cth) states that "As a consequence, Aboriginal peoples and Torres Strait Islanders have become, as a group, the most disadvantaged in Australian society."

¹⁵⁴⁸ The Preamble to the APP.0001.0021.0016 *Native Title Act* 1993 (Cth).

¹⁵⁴⁹ s.142A(1)(b) APP.0001.0021.0002 Aboriginal and Torres Strait Islander Act 2005 (Cth).

¹⁵⁵⁰ APP.0001.0004.0016 (Torres Strait Climate Change Strategy 2014-2018).

adaptation and resilience plans¹⁵⁵¹ which broadly addressed climate change projections, likely impacts and actions to reduce climate risks in the Torres Strait.

- 761 Second, the Commonwealth is, by force of various international agreements and domestic arrangements, responsible for protecting the Torres Strait Islands and coordinating and leading adaptation measures to protect those Islands:
 - 761.1 under the Treaty, the Commonwealth agreed to protect the "traditional way of life and livelihood of Australians who are Torres Strait Islanders...";¹⁵⁵²
 - 761.2 under the Roles and Responsibilities for Climate Change Adaptation in Australia, agreed to by the Council of Australian Governments, the Commonwealth agreed that:
 - (a) "the Commonwealth will need to take a leadership role in positioning Australia to adapt to climate change impacts that may affect national prosperity or security. By exercising its role the Commonwealth will help to improve adaptive capacity and build climate resilience";¹⁵⁵³
 - (b) The Commonwealth's role in leading the national adaptation reform will include: ○ ensuring that national efforts to adapt to climate change meet any relevant international treaty requirements...○ consider the needs of vulnerable communities."¹⁵⁵⁴
 - 761.3 under the Paris Agreement, the Commonwealth agreed to "…establish the global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response…".¹⁵⁵⁵
- 762 Third, on 18 September 2023, the UN Human Rights Committee ruled that:
 - 762.1 under Article 17 of the International Covenant on Civil and Political Rights, the Commonwealth has a "...positive obligation to implement adequate adaptation

¹⁵⁵¹ APP.0001.0004.0017 (Torres Strait Regional Adaptation and Resilience Plan 2016-2021).

¹⁵⁵² See paragraph 605 to 607.

¹⁵⁵³ EVI.2001.0006.2001 at 0693.

¹⁵⁵⁴ EVI.2001.0006.2001 at 0694 to 0695.

¹⁵⁵⁵ See paragraph 624.

measures to protect the [Torres Strait Islanders'] home, private life and family...;"1556

762.2 under Article 27 of the International Covenant on Civil and Political Rights, the Commonwealth has a positive obligation to protect Torres Strait Islanders' right to enjoy their culture and an "inalienable right... to enjoy the territories and natural resources that they have traditionally used for their subsistence and cultural identity..."¹⁵⁵⁷

Submission on damage and causation (Poruma)

- 763 The seawalls on Poruma were part of Stage 1. Construction was to commence in September 2013, with completion in June 2014.¹⁵⁵⁸ Other than emergency coastal infrastructure repairs, no seawalls were constructed on Poruma during Stage 1.
- In January 2018 (and prior to practical completion of the seawalls on 30 December 2022¹⁵⁵⁹) Poruma was impacted by marine inundation, causing damage to homes, 0.5m of erosion and fallen trees.¹⁵⁶⁰
- 765 The breaches relied upon by the Poruma Group Members are:
 - 765.1 from about 11 December 2011¹⁵⁶¹, the Commonwealth should have established a non-competitive and predictable funds/grants allocated to specifically and fully fund the seawalls on Poruma under Stage 1;
 - 765.2 from about 11 December 2011, the Commonwealth should have led and coordinated the funding of the seawalls on Poruma under Stage 1;
 - 765.3 from about 3 May 2016¹⁵⁶², the Commonwealth should have led and co-ordinated the provision of additional funding required to construct the seawalls on Poruma under Stage 1; and

¹⁵⁵⁶ APP.0001.0020.0197 *Billy v Australia* CCPR/C/135/D/3624/2019, UN Human Rights Committee (18 September 2023) at page 16[8.12].

¹⁵⁵⁷ APP.0001.0020.0197 *Billy v Australia* CCPR/C/135/D/3624/2019, UN Human Rights Committee (18 September 2023) at page 16[8.13] to [8.14].

¹⁵⁵⁸ Exhibit R8 NIA.2002.0001.0022 at 0040.

¹⁵⁵⁹ WIT.2000.0002.0001 Simpson Supplementary Affidavit at 0041.

¹⁵⁶⁰ INF.2005.0001.0116; INF.2000.0001.1257.

¹⁵⁶¹ INF.2006.0001.0046.

¹⁵⁶² DFA.2000.0002.8900 at 8915: "The \$26.2 million granted to deliver seawalls is clearly not enough and leaves Council in our current difficult position where we are being forced to decide which of our communities survive and

- 765.4 from about 3 May 2016, the Commonwealth should have provided the additional funding required to construct the seawalls on Poruma under Stage 1.
- 766 It is submitted that factual causation is satisfied because "but for" these breaches the seawalls on Poruma would have been built and the marine inundation and consequential damage that occurred would have been mitigated or avoided. In other words, the Commonwealth's breaches:

766.1 "materially contributed to"; and

766.2 are "one cause" of,

the marine inundation on Poruma in January 2018.

- 767 Mr Bettington's uncontradicted evidence is that wave walls provide flood mitigation which reduces the impacts and frequency of severe events.¹⁵⁶³
- 768 For the reasons given at paragraphs 758 to 762 above, it is submitted that the scope of liability criteria is satisfied.

Submission on damage and causation (Iama, Masig and Warraber)

- Stage 1 planned to construct seawalls on Iama, Masig and Warraber (in addition to Saibai, Boigu and Poruma)¹⁵⁶⁴. None of the seawalls planned for Iama, Masig and Warraber under Stage 1 were constructed.¹⁵⁶⁵
- 770 Stage 2 planned to construct seawalls on Iama, Masig and Warraber (in addition to Boigu and Poruma).¹⁵⁶⁶
- 771 On 5 May 2023, the seawalls planned for Iama, Masig and Warraber under Stage 2 were descoped.¹⁵⁶⁷ No construction of the seawalls on these islands have commenced.

which do not"...."It is likely that the final cost for the current seawall construction at Saibai alone will come in around \$25-26 million, and that is with significant in-kind contribution from the Council"..."The seawall for Boigu was initially costed by the consultant at \$2.6 million. Latest costings for Boigu based on recent market testing indicate the cost will be closer to \$6.9 million".

¹⁵⁶³ TRN.0014.1172 T358.1 (15 Nov 2023).

¹⁵⁶⁴ Exhibit R8 (NIA.2002.0001.0022 at 0039 to 0040).

¹⁵⁶⁵ Exhibit R8 NIA.2002.0001.0022 at 0040.

¹⁵⁶⁶ NIA.2000.0001.0307 at 0312 to 0313.

¹⁵⁶⁷ See paragraph 554

- 772 Between 2013 to the present date, Iama, Masig and Warraber have each been impacted by marine inundation.
- 773 On or about 29/30 January 2018, a predicted high tide event (approx. 0.3m above HAT¹⁵⁶⁸) impacted Iama causing:

773.1 Flooding;1569

- 773.2 Inundation with debris;¹⁵⁷⁰
- 773.3 The relocation of 15 people;¹⁵⁷¹

773.4 Damage to 6 dwellings;¹⁵⁷²

- 773.5 Power to be lost for 5 days.¹⁵⁷³
- ⁷⁷⁴ In January 2023, Iama experienced another flooding event equal to HAT.¹⁵⁷⁴
- 775 [Withdrawn]¹⁵⁷⁵
- 776 On or about 29/30 January 2018, a predicted high tide event impacted Masig causing the downing of trees, the breaking of windows and sand build up at barge area.¹⁵⁷⁶
- 777 In March 2019, high tides with storm surges destroyed buildings by the shore a cyclone caused severe flooding, erosion and destroyed buildings¹⁵⁷⁷.
- 778 On or about 29/30 January 2018, a predicted high tide event impacted Warraber causing sea water to over top the existing seawalls and bringing trees down and breaking windows¹⁵⁷⁸.
- 779 In January 2023, flooding occurred on Warraber causing:

¹⁵⁶⁸ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report at _0006.

¹⁵⁶⁹ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report at _0006.

¹⁵⁷⁰ INF.2000.0001.1257.

¹⁵⁷¹ INF.2005.0001.0116 at 0117.

¹⁵⁷² INF.2005.0001.0116 at 0117.

¹⁵⁷³ INF.2005.0001.0116 at 0117.

¹⁵⁷⁴ APP.0001.0015.0011 Exhibit A49 Bettington Supplementary Report at _0006.

¹⁵⁷⁵ [Withdrawn]

¹⁵⁷⁶ INF.2005.0001.0116 at 0117.

¹⁵⁷⁷ DCC.2000.0001.9907 at [53].

¹⁵⁷⁸ INF.2005.0001.0116 at 0117.

779.1 causing 2 metres of erosion right out the front of the church¹⁵⁷⁹; and

779.2 washing away a shed¹⁵⁸⁰ and trees¹⁵⁸¹.

- 780 The breaches relied upon by the Iama, Masig and Warraber Group Members are:
 - 780.1 from about 11 December 2011¹⁵⁸², the Commonwealth should have established a non-competitive and predictable funds/grants allocated to specifically and fully fund the seawalls on Iama, Masig and Warraber as originally scoped;
 - 780.2 from about 11 December 2011, the Commonwealth should have led and coordinated the funding of the seawalls on Iama, Masig and Warraber;
 - 780.3 from about 3 May 2016¹⁵⁸³, the Commonwealth should have led and co-ordinated the provision of additional funding required to construct the seawalls on Iama, Masig and Warraber under Stage 1;
 - 780.4 from about 3 May 2016, the Commonwealth should have provided the additional funding required to construct the seawalls on Iama, Masig and Warraber under Stage 1;
 - 780.5 from about 8 March 2022¹⁵⁸⁴, the Commonwealth should have led and co-ordinated the provision of additional funding required to construct the seawalls on Iama, Masig and Warraber under Stage 2;
 - 780.6 from about 8 March 2022, the Commonwealth should have provided the additional funding required to construct the seawalls on Iama, Masig and Warraber under Stage 2;

¹⁵⁷⁹ APP.0001.0012.0008 T665.23 15 June 2023.

¹⁵⁸⁰ APP.0001.0012.0008 T668 15 June 2023.

¹⁵⁸¹ APP.0001.0012.0008 T675 15 June 2023.

¹⁵⁸² INF.2006.0001.0046.

¹⁵⁸³ DFA.2000.0002.8900 at 8915: "The \$26.2 million granted to deliver seawalls is clearly not enough and leaves Council in our current difficult position where we are being forced to decide which of our communities survive and which do not"...."It is likely that the final cost for the current seawall construction at Saibai alone will come in around \$25-26 million, and that is with significant in-kind contribution from the Council"..."The seawall for Boigu was initially costed by the consultant at \$2.6 million. Latest costings for Boigu based on recent market testing indicate the cost will be closer to \$6.9 million".

¹⁵⁸⁴ NIA.2005.0001.0096.

- 780.7 from about 5 May 2023¹⁵⁸⁵, the Commonwealth should have led and co-ordinated the provision of additional funding required to construct the seawalls on Iama, Masig and Warraber as descoped;¹⁵⁸⁶
- 780.8 from about 5 May 2023¹⁵⁸⁷ the Commonwealth should have established a noncompetitive and predictable funds/grants allocated to specifically and fully fund the seawalls on Iama, Masig and Warraber as descoped.¹⁵⁸⁸
- 781 It is submitted that factual causation is satisfied because "but for" these breaches the seawalls on Iama, Masig and Warraber would have been built and the marine inundation and consequential damage that occurred would have been mitigated or avoided. In other words, the Commonwealth's breaches:
 - 781.1 "materially contributed to"; and

781.2 are "one cause" of,

the marine inundation on Iama, Masig and Warraber in January 2018.

- 782 Mr Bettington's uncontradicted evidence is that wave walls provide flood mitigation which reduces the impacts and frequency of severe events.¹⁵⁸⁹
- 783 For the reasons given at paragraphs 758 to 762 above, it is submitted that the scope of liability criteria is satisfied.

V. RELIEF

- 784 The Applicants and the Group Members seek the following relief.
- 785 Firstly, damages (to be assessed).
- 786 Second, declarations:
 - 786.1 That the Commonwealth owed duties to the Applicants and the Group Members to take reasonable steps to protect them against marine inundation and erosion arising

¹⁵⁸⁵ NIA.2008.0002.0001.

¹⁵⁸⁶ See paragraph 554

¹⁵⁸⁷ NIA.2008.0002.0001.

¹⁵⁸⁸ See paragraph 554.

¹⁵⁸⁹ TRN.0014.1172 T358.1 (15 Nov 2023).

from sea level rise and extreme weather events and impacting their respective islands in the Torres Strait;

- 786.2 That the Commonwealth breached the duties to the Applicants and the Group Members;
- 786.3 That the Applicants and Group Members have suffered damage as a result of the Commonwealth's breaches.

Date: 26 February 2024

Fiona McLeod SC Tomo Boston KC Lindy Barrett Joanna Dodd Shanta Martin Julian Murphy Julia Wang Tom Rawlinson

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