

FEDERAL COURT OF AUSTRALIA**Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for the Environment [2021] FCA 560**

File number: VID 607 of 2020

Judgment of: **BROMBERG J**

Date of judgment: 27 May 2021

Catchwords: **NEGLIGENCE** – representative proceeding seeking a declaration that a duty of care be recognised and an injunction be granted restraining its breach – *Environment Protection and Biodiversity Conservation Act 1999* (Cth) – novel duty of care – whether the Minister for the Environment owes Australian children a duty of care when approving under s 130 and s 133 of the EPBC Act the extraction of coal from a coal mine – risk of injury from climate change – claim that CO₂ emissions from coal to be extracted will contribute to increased global surface temperatures leading to extreme weather events and consequent exposure of Australian children to the increased risk of personal injury, property damage and economic loss – discussion of applicable legal principles for ascertaining whether a novel duty of care exists – salient features approach adopted – whether feared harm reasonably foreseeable – whether the Minister has control, responsibility and knowledge in relation to foreseeable harm – extent of children’s vulnerability to feared harm – whether recognised relationships between Minister and children exist including by reference to *parens patriae* doctrine – discussion of coherence in the law – whether imposition of liability in negligence is incoherent with statutory discretion provided to Minister under s 130 and s 133 of the EPBC Act to approve or not approve extension of coal mine – whether incoherence with principles of administrative law – whether potential liability indeterminate – whether other policy considerations tend against a duty of care being recognised – duty of care recognised but only in relation to the avoidance of personal injury to the children
INJUNCTION – principles for grant of *quia timet injunction* discussed – whether reasonable apprehension of breach of duty of care established – whether extent of restraint justified – injunction refused

Legislation: *Administrative Decisions (Judicial Review) Act 1977* (Cth)

Environment Protection and Biodiversity Conservation Act 1999 (Cth)

Judiciary Act 1903 (Cth)

Civil Laws (Wrongs) Act 2002 (ACT)

Civil Liability Act 1936 (SA)

Civil Liability Act 2002 (NSW)

Civil Liability Act 2002 (Tas)

Civil Liability Act 2002 (WA)

Civil Liability Act 2003 (Qld)

Environmental Planning and Assessment Act 1979 (NSW)

Wrongs Act 1958 (Vic)

Federal Court Rules 2011 (Cth)

Cases cited:

Agar v Hyde (2000) 201 CLR 552

Al Saudi Banque v Clark Pixley [1990] Ch 313

Alec Finlayson Pty Ltd v Armidale City Council (1994) 51 FCR 378

Amaca Pty Ltd v Booth (2011) 246 CLR 36

Apotex Pty Ltd v Les Laboratoires Servier (No 2) (2012) 293 ALR 272

Armidale City Council v Alec Finlayson Pty Ltd [1999] FCA 330

Attorney-General v Colney Hatch Lunatic Asylum (1868) LR 4 Ch App 146

Attorney-General v Council of the Borough of Birmingham (1858) 70 ER 220

Bamford v Albert Shire Council [1998] 2 Qd R 125

Bamford v Turnley (1862) 122 ER 27

Blue Wedges Inc v Minister for Environment Heritage and the Arts (2008) 167 FCR 463

Blyth v Birmingham Waterworks (1856) 156 ER 1047

Bolton v Stone [1951] AC 850

Bonnington Castings Ltd v Wardlaw [1956] 1 All ER 615

Boynton v Gill (1640) Rolle's Abr. Nusans, fo. 90, pl. 7

Bridgetown/Greenbushes Friends of the Forest Inc v Executive Director of Conservation and Land Management (1997) 18 WAR 102

Brodie v Singleton Shire Council (2001) 206 CLR 512

Brookfield Multiplex Ltd v Owners Corporation Strata Plan 61288 (2014) 254 CLR 185

Bryan v Maloney (1995) 182 CLR 609

CAL No 14 Pty Ltd v Motor Accidents Insurance Board (2009) 239 CLR 390

Caledonian Collieries Ltd v Speirs (1957) 97 CLR 202

Caltex Refineries (Qld) Pty Ltd v Stavar (2009) 75 NSWLR 649

Carey v Freehills [2013] FCA 954

Carnie v Esanda Finance Corporation Ltd (1995) 182 CLR 398

Cattanach v Melchior (2013) 215 CLR 1

Chapman v Hearse (1961) 106 CLR 112

Crimmins v Stevedoring Industry Finance Committee (1999) 200 CLR 1

Crossley and Sons Ltd v Lightowler [1867] LR 2

D'Orta-Ekenaike v Victoria Legal Aid (2005) 223 CLR 1

Dalby v Berch (1330) Y.B. Trin. 4 Edw. III, fo. 36, pl. 26

Dansar Pty Ltd v Byron Shire Council (2014) 89 NSWLR 1

Department of Health and Community Services v JWB and SMB (1992) 175 CLR 218 (*Marion's Case*)

Department of Health and Community Services v JWB and SMB (1992) 175 CLR 218

Donoghue v Stevenson [1932] AC 562

Equuscorp Pty Ltd v Haxton (2012) 246 CLR 498

Esanda Finance Corporation Ltd v Peat Marwick Hungerfords (1997) 188 CLR 241

Fletcher v Rylands (1865-1866) LR 1 Ex 265

Fuller-Wilson v State of New South Wales [2018] NSWCA 218

Geddis v Proprietors of the Bann Reservoir [1878] 3 App Cas 430

Graham Barclay Oysters Pty Ltd v Ryan (2002) 211 CLR 540

Hargrave v Goldman (1963) 110 CLR 40

Heaven v Pender (1883) QBD 503

Hoffmann v Boland [2013] NSWCA 158

Hole v Barlow (1858) 4 CBNS 334

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Hopkins v AECOM Australia Pty Ltd (No 3) [2014] FCA 1043

Hulle v Orynge (1466) Y.B. Mich. 6 Edw. IV, fo. 7, pl. 18 (the *Case of the Thorns*)

Hunter and New England Local Health District v McKenna (2014) 253 CLR 270

Hunter Area Health Service v Presland (2005) 63 NSWLR 22

Hurst v Queensland (No 2) [2006] FCAFC 151

Johnson Tiles Pty Ltd v Esso Australia Pty Ltd [2003] VSC 27

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Makawe Pty Limited v Randwick City Council [2009] NSWCA 412

Miller v Miller (2011) 242 CLR 446

Minister for Aboriginal Affairs v Peko-Wallsend Ltd (1986) 162 CLR 24

Minister for Immigration and Ethnic Affairs v Teoh (1995) 183 CLR 273

Minister for Immigration and Multicultural Affairs v W157/00A (2002) 125 FCR 433

Minister for Immigration and Multicultural and Indigenous Affairs v Lorenzo [2005] FCAFC 13

Mitchil v Alestree (1676) 1 Vent 295

MM Constructions (Aust) Pty Ltd v Port Stephens Council (No 7)[2012] NSWCA 417

Mount Isa Mines Ltd v Pusey (1970) 125 CLR 383

Northern Territory v GPAO (1999) 196 CLR 553

Overseas Tankship (UK) Ltd v The Miller Steamship Co [1967] AC 617

Pape v Federal Commissioner of Taxation (2009) 238 CLR 1

Parramatta City Council v Lutz (1988) 12 NSWLR 293

Perre v Apand Pty Ltd (1999) 198 CLR 180

Plaintiff M68/2015 v Minister for Immigration and Border Protection (2016) 257 CLR 42

Plaintiff S99/2016 v Minister for Immigration and Border Protection (2016) 243 FCR 17

Port Stephens Shire Council v Booth [2005] NSWCA 323

Precision Products (NSW) Pty Ltd v Hawkesbury City Council (2008) 74 NSWLR 102

Pyrenees Shire Council v Day (1998) 192 CLR 330

Re Eve [1986] 2 SCR 388

Rodriguez & Sons Pty Ltd v Queensland Bulk Water Supply Authority trading as Seqwater (No 22) [2019] NSWSC 1657

Rosenberg v Percival (2001) 205 CLR 434

Royal Insurance Co Ltd v Midland Insurance Co Ltd (1908) 26 RPC 95

Rylands v Fletcher (1868) LR 3 HL 330

Sanda v PTTEP Australasia (Ashmore Cartier) Pty Ltd (No 7) [2021] FCA 237

Shaw Savill and Albion Co Ltd v The Commonwealth (1940) 66 CLR 344

Shirt v Wyong Shire Council [1978] 1 NSWLR 631

Skelton v Collins (1966) 115 CLR 94

Smethurst v Commissioner of Police (2020) 94 ALJR 502

South Australia v Commonwealth (1962) 108 CLR 130

St Helens Smelting Co v Tipping (1865) 11 ER 1483

State of New South Wales v Paige (2002) 60 NSWLR 371

Stuart v Kirkland-Veenstra (2009) 237 CLR 215

Sullivan v Moody (2001) 207 CLR 562

Sutherland Shire Council v Becker [2006] NSWCA 344

Sutherland Shire Council v Heyman (1985) 157 CLR 424

Sydney Water Corporation v Turano (2009) 239 CLR 51

Tame v New South Wales (2002) 211 CLR 317

Tarkine National Coalition Inc v Minister for the Environment (2015) 233 FCR 254

The Commonwealth v Mewett (1997) 191 CLR 471

Ultramares Corporation v Touche (1931) 174 NE 441

Uriaere v Minister for Home Affairs [2018] FCA 2084

Vairy v Wyong Shire Council (2005) 223 CLR 422

Vaitaiki v Minister for Immigration and Ethnic Affairs (1998) 150 ALR 608

VicForests v Friends of Leadbeater's Possum Inc [2021] FCAFC 66

Voli v Inglewood Shire Council (1963) 110 CLR 74

Walton v Gardiner (1993) 177 CLR 378

Weber v Greater Hume Shire Council (2019) 100 NSWLR 1

Weld v The Gas-Light Company (1816) 171 ER 442

Wellesley v Duke of Beaufort (1827) 38 ER 236

Wellesley v Wellesley (1828) 4 ER 1078

William Aldred's Case (1610) 77 ER 816

Wollongong City Council v Fregnan [1982] 1 NSWLR 244

Woolcock Street Investments Pty Ltd v CDG Pty Ltd (2004) 216 CLR 515

Wyong Shire Council v Shirt (1980) 146 CLR 40

X v State of South Australia (No 3)(2007) 97 SASR 180

Zhang v Minister for Immigration (1993) 45 FCR 384

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Date of hearing: 2 to 5 March 2021

Counsel for the Applicants: Mr N Hutley SC with Mr E Nekvapil, Ms K Brazenor and Ms S Brenker

Solicitor for the Applicants: Equity Generation Lawyers

Counsel for the First Respondent: Mr S Free SC with Ms Z Maud

Solicitor for the First Respondent: Australian Government Solicitor

Counsel for the Second Respondent: Mr T Howard SC

Solicitor for the Second Respondent: Ashurst Australia

ORDERS

VID 607 of 2020

BETWEEN: **ANJALI SHARMA AND OTHERS NAMED IN THE SCHEDULE (BY THEIR LITIGATION REPRESENTATIVE SISTER MARIE BRIGID ARTHUR)**
First Applicant

AND: **MINISTER FOR THE ENVIRONMENT (COMMONWEALTH)**
First Respondent

VICKERY COAL PTY LTD (ACN 626 224 495)
Second Respondent

ORDER MADE BY: BROMBERG J

DATE OF ORDER: 27 MAY 2021

THE COURT ORDERS THAT:

1. The applicants' application for an interlocutory injunction is dismissed.
2. The claims made by each of the applicants (other than those made on behalf of the represented persons) for a *quia timet injunction*, are dismissed.
3. The parties consult and, on or before 3 June 2021, file proposed orders addressing the matters dealt with at paragraph 520 of the Court's reasons for judgment.

Note: Entry of orders is dealt with in Rule 39.32 of the *Federal Court Rules 2011*.

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1 The applicants claim that the first respondent, the Commonwealth Minister for the Environment (**Minister**) owes them and other Australian children a duty of care. They also claim an injunction to restrain an apprehended breach of that duty. In assessing whether a duty of care exists, the law of negligence focuses upon the foreseeability of harm and the relationship between the person who has caused or contributed to the harm (or will do so) and the persons who have or may be harmed.

2 That is the focus of these reasons. They commence with an introduction to the parties, their respective cases and the conduct which the applicants say is subject to a duty of care – a decision by the Minister made under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**) to approve the extraction of coal from a coal mine. Details about the application for approval are then given in Section 2 of these reasons. In Section 3, my reasons turn to consider the evidence about the degree of risk and the magnitude of the risk of harm feared by the applicants. The foreseeability and likelihood of that harm arising and being caused or contributed to by carbon dioxide (**CO₂**) emissions in the Earth’s atmosphere generated by the combustion of coal from the coal mine is also considered.

3 Section 4 of these reasons addresses the legal principles applicable to establishing the existence of a duty of care and the statutory scheme in which the Minister is empowered to approve or not approve a “controlled action” such as the expansion of a coal mine. My reasons then divide to consider reasonable foreseeability of harm and those features of the relations between the Minister and Australian children which support a finding that a duty of care exists (Section 5 – The Affirmative Salient Features) and those features that do not (Section 6 – The Negative Salient Features). In Section 7, I conclude that the existence of a duty of care is established and should be recognised by the law of negligence. In Section 8, I deal with and reject the application for an injunction to restrain an asserted apprehended breach of the duty of care by the Minister. The further necessary steps to finalise this litigation are then addressed in Section 9.

1. THE PARTIES AND THEIR CLAIMS

4 The applicants in this proceeding are eight Australian children: Anjali Sharma, Isolde Shanti Raj-Seppings, Ambrose Malachy Hayes, Tomas Webster Arbizu, Bella Paige Burgemeister, Laura Fleck Kirwan, Ava Princi and Luca Gwyther Saunders (the **applicants**). The applicants are all children residing in Australia. As a consequence of their youth, the proceeding is brought by their litigation representative Sister Marie Brigid Arthur, a Sister of the Brigidine Order of Victoria. The applicants bring the proceeding on their own behalf and as a representative proceeding under Division 9.2 of the *Federal Court Rules 2011* (Cth), representing children who ordinarily reside in Australia (the **Represented Children**) as well as “other Represented Children”, being children residing anywhere in the world. During the course of the hearing the applicants confined their claims for relief to themselves and the Represented Children, that is, the Australian Children. I will refer to the applicants and the Represented Children collectively as the **Children**.

5 The Minister is an officer of the Commonwealth within the meaning of s 75(v) of the *Constitution*, and relevantly, the Minister responsible for administering the EPBC Act.

6 The second respondent is **Vickery Coal Pty Ltd**, a wholly owned subsidiary of **Whitehaven Coal Pty Ltd**. Whitehaven holds development consent under the *Environmental Planning and Assessment Act 1979* (NSW) (**EPA Act**) for a coal mine in northern New South Wales, known as the Vickery Coal Project (the **Approved Project**). Although approved some time ago, coal production from the Approved Project is yet to commence. The Approved Project occupies a site within the Gunnedah and Narrabri local government areas, approximately 25 kilometres north of Gunnedah in New South Wales.

7 On or around 11 February 2016, Whitehaven applied to the Minister to expand and extend the Approved Project in accordance with s 68 of the EPBC Act (the **Extension Project**). Vickery replaced Whitehaven as the proponent of the Extension Project on 17 July 2018. If approved, the Extension Project would, amongst other things, increase total coal extraction from the mine site from 135 to 168 million tonnes

(Mt). When combusted, the additional coal extracted from the Extension Project will produce about 100 Mt of CO₂.

8 The Minister has before her the decision to approve or refuse the Extension Project under s 130(1) and s 133 of the EPBC Act. This proceeding concerns that decision.

9 In this proceeding the applicants claim that the Minister owes each of the Children a duty to exercise her power under s 130 and s 133 of the EPBC Act with reasonable care so as not to cause them harm. That duty of care is said to arise by reason of the existence of a legal relationship between the Minister and the Children recognised by the law of negligence.

10 The applicants apprehend that the Minister will fail to discharge the duty by exercising her discretion in favour of the approval of the Extension Project. The applicants seek declaratory and injunctive relief designed to preclude the Minister from failing to discharge the duty of care they claim she has.

11 The particular harm relevant to the alleged duty of care is mental or physical injury, including ill-health or death, as well as economic and property loss. The applicants assert that the Children are likely to suffer those injuries in the future as a consequence of their likely exposure to climatic hazards induced by increasing global surface temperatures driven by the further emission of CO₂ into the Earth's atmosphere. The feared climatic hazards include more, longer and more intense bushfires, storm surges, coastal flooding, inland flooding, cyclones and other extreme weather events.

12 The applicants allege that such harm will occur in the future and mainly towards the end of this century when global average surface temperatures are forecast to be significantly higher than they are currently. Broadly speaking, it is at that time that, unlike today's adults, today's children will be alive and will be the class of persons most susceptible to the harms in question. Indeed, the applicants say that today's children will live on Earth during a period in which, if CO₂ concentration continues to increase, some harm is very probable, serious harm is likely and cataclysmal harm is possible. This seems to be the basis for the proceeding being directed to providing relief to children, as distinct from all persons. On this basis, the applicants say that the Children are vulnerable to a known, foreseeable risk of serious harm, which the Minister can control, but they cannot. In addition, the applicants say that by her position in the Commonwealth Executive, the Minister has special responsibilities to Australian children.

13 The applicants say that if the Minister approves the Extension Project, carbon presently stored safely underground at the mine site of the Extension Project will be extracted, combusted and emitted as CO₂ into the Earth's atmosphere and will materially contribute to CO₂ concentration.

14 The applicants accept that by this proceeding they seek that the Court recognise a novel duty of care. They say that the salient features of the relationship between the Minister and the Children support the recognition of the posited duty. Further, they say that such a duty raises a natural extension of the historical development of the law of tort in making responsible a person with the ability to cause or control harm to their "neighbour". They say today's adults have gained both previously unimaginable power to harm tomorrow's adults, and the ability to control that harm. The applicants seek the aid of the Court to impose a correlative responsibility to protect them from what they say is a serious threat of irreversible future harm.

15 The Minister does not dispute that climate change presents serious threats and challenges to the environment, the Australian community and the world at large. However, the Minister denies the existence of a duty of care as alleged. The Minister denies that injury to the Children from the approval of the Extension Project is reasonably foreseeable and says that the relevant salient features point overwhelmingly against the recognition of the novel duty of care contended for by the applicants. Additionally, the Minister contends that if a duty of care exists, there is no reasonable apprehension that the duty will be breached and for that and other reasons no proper basis to grant injunctive relief. The Minister contends that the proceeding should be dismissed.

16 The applicants also sought an interlocutory injunction to restrain the Minister from exercising her power under s 130 and s 133 of the EPBC Act pending the hearing and determination of the proceeding. It was only in

relation to this limited aspect of the applicants' claim that Vickery sought to be joined as a respondent to the proceeding and participate at the hearing.

17 As a matter of case management, and with the consent of the parties, the hearing of the interlocutory injunction was adjourned to, and heard in conjunction with, the final hearing. This course was facilitated by the Minister providing an undertaking to the Court not to make a decision under s 130 and s 133 of the EPBC Act before the conclusion of the final hearing. The Minister later extended that undertaking to effectively facilitate the publication of these reasons. Ultimately, it has not been necessary for me to determine the application for an interlocutory injunction and for that reason I will dismiss that application.

2. THE APPLICATION FOR APPROVAL TO EXTEND THE COAL MINE

18 The relevant background to the Approved Project and the Extension Project was not in dispute and I have drawn the following account from the Statement of Agreed Facts filed by the parties and the from parties' respective submissions.

19 An initial proposal to develop the coal mine north of Gunnedah was made by Whitehaven in 2014 under the EPA Act. This is the Approved Project, and it was approved as a 'State Significant Development' within the meaning of s 89C(1) (now s 4.36(1)) of the EPA Act on 19 September 2014). That initial application did not invoke the operation of the EPBC Act. That is because on 17 May 2012, a delegate of the Minister determined that the proposed action was not a 'controlled action' under s 75 of the EPBC Act, if implemented in a particular manner. It therefore did not require the Minister's approval under the EPBC Act.

20 The Approved Project sought to extract further coal buried deeper in the ground than in past mining activities on the site. It had ambitions of extracting of 135 Mt of coal over a 30-year period, at a rate of up to 4.5 Mt of run-of-mine (**ROM**) coal per year. In addition, associated developments were proposed which would facilitate the transportation of ROM coal on public roads to Whitehaven's existing coal handling and preparation plant (**CHPP**). This facility enables coal to be processed and loaded onto trains for rail transport to the Port of Newcastle.

21 Despite these ambitions, coal production at the mine has not yet commenced.

22 As set out above, on or around 10 February 2016, Whitehaven applied to the Minister to extend the Approved Project in accordance with s 68 of the EPBC Act. The focus of this proceeding is the application for the Extension Project. The proposed actions of the Extension Project include:

- (i) an increase in the total coal extraction from the site of the Approved Project from 135 to 168 Mt;
- (ii) an increase in the peak annual extraction rate from 4.5 to 10 Mt per annum (**Mtpa**) of coal and an additional disturbance area of 776 hectares; and
- (iii) the development of a new CHPP and train-load-out facility at the site of the Approved Project (both of which would process coal from other nearby mines), which would involve:
 - (a) stockpiling and processing a total of 13 Mtpa of ROM coal;
 - (b) production of up to 11.5 Mtpa of metallurgical and thermal coal products;
 - (c) transportation of up to 11.5 Mtpa of coal from the rail load facility, the rail spur line and via the public rail network to Newcastle for export to other countries;
 - (d) development of a new rail spur to connect the load out facility to the main Werris Creek to Mungindi Railway line;
 - (e) construction of a water supply borefield and associated infrastructure; and

- (f) changes to the final landform in certain specified ways relating to the overburden emplacement areas and pit lake void.

23 The Extension Project will cause, directly or indirectly, emissions of greenhouse gases, particularly CO₂. These estimated emissions are referred to in terms of CO₂ equivalent (**CO₂-e**) emissions. Direct greenhouse gas emissions occur from sources that are owned or controlled by the relevant entity or development (referred to as **Scope 1 emissions**). Indirect greenhouse gas emissions arise from the generation of purchased energy products (principally electricity) by the relevant entity or development (referred to as **Scope 2 emissions**). Other indirect greenhouse gas emissions arise from sources that are not owned or controlled by the relevant entity or development but are nonetheless a consequence of its mining activity (referred to as **Scope 3 emissions**).

24 Over the course of its life, the Extension Project will, compared with the Approved Project, lead to the following levels of greenhouse gas emissions:

- (i) an overall reduction of approximately 1 Mt of CO₂-e in Scope 1 emissions;
- (ii) an overall increase of approximately 0.15 Mt CO₂-e in Scope 2 emissions; and
- (iii) an overall increase of approximately 100 Mt CO₂-e in Scope 3 emissions.

25 Those actions will take place over a period of 26 years, with one year projected for construction. In this context, the Minister's delegate determined that the Extension Project constituted a 'controlled action' under s 75(1) of the EPBC Act. The relevant controlling provisions were s 18 and s 18A, and s 24D and s 24E (relating to listed threatened species and communities and water resources respectively). As a consequence of declaring the Extension Project a 'controlled action', the Minister is required to assess the application under s 130(1) and s 133 of the EPBC Act. Section 130(2) of the EPBC Act prescribes that the proposed action is assessed either pursuant to a bilateral agreement or pursuant to Pt 8 of the Act. The Extension Project was assessed pursuant to a bilateral agreement between the Commonwealth and the State of NSW (**Bilateral Agreement**) which accredits the assessment process under the EPA Act.

26 In May 2020, the NSW Department of Planning, Industry and Environment (**NSW Department**) provided its assessment report (**NSW Department Report**) in accordance with the Bilateral Agreement. A number of environmental, social and economic factors were considered in the NSW Department Report. It found that the possible adverse environmental impacts associated with the Extension Project were outweighed by the public interest in granting its approval. On balance, the NSW Department Report concluded that the Extension Project was acceptable under certain conditions.

27 Given the status of the Extension Project as a 'State Significant Development' under the EPA, the extension application was also assessed by the NSW Independent Planning Commission (**IPC**) for development consent. The IPC is the designated development consent authority of the Extension Project site under cl 8A of the *State Environmental Planning Policy (State and Regional Development) 2011* and s 4.5(a) of the EPA Act. On 12 August 2020, the IPC granted development consent for the extension project, subject to certain conditions (**Development Consent**) and published its Statement of Reasons for Decision (**IPC Report**).

28 The Development Consent and the NSW Department Report were provided to the Minister on 14 August 2020. Generally, the receipt of the assessment report provides the Minister with 30 business days, or such longer period as she specifies in writing, to decide whether to approve the application. However, on 9 December 2020, a delegate of the Minister extended this time to 30 April 2021 pursuant to s 130(1A) of the EPBC Act. Further and as previously indicated, in the context of this proceeding the undertaking given by the Minister was further extended.

3. THE RISK OF HARM

29 The relief the applicants seek depends upon the Court being satisfied that the approval of the Extension Project by the Minister involves a risk of future injury to each of the Children. The risk of injury alleged by the

applicants extends to many forms of what may broadly be described as climatic hazards. Each of these hazards, bushfires being one example, are alleged to be events which climate change will induce in terms of either frequency, ferocity or geographical spread. The risk of harm in question in this case is therefore harm induced by climate change and, more specifically, harm induced by increases in the Earth's average surface temperature. The applicants alleged that such harm will occur in the future and mainly towards the end of this century when global surface temperatures are forecast to be significantly higher than they are currently.

30 In a nutshell, the applicants' case is that the scientific evidence demonstrates the plausible possibility that the effects of climate change will bring about a future world in which the Earth's average surface temperature (currently at about 1.1°C above pre-industrial temperature levels) will reach about 4°C above pre-industrial temperature levels by about 2100. Supported by unchallenged expert evidence, the applicants contended that a 4°C future world may come about in one of two ways: *first*, where the greenhouse effect upon the Earth's increasing temperature is driven by an approximately linear relationship between increased human emissions of CO₂ and increased temperatures, and *second*, in circumstances where continuing human emissions of CO₂ will result in 'Earth System' changes, which diminish the Earth's current ability to reflect heat, absorb CO₂, and retain CO₂ currently held in carbon sinks, triggering 'tipping cascades' which propel the Earth into a 4°C trajectory. That scenario was referred to in the evidence as "**Hothouse Earth**". Under this scenario, humans will lose the capacity to control climate change and global surface temperatures will continue warming even if human emissions of CO₂ are curtailed.

31 Further, the unchallenged evidence of the applicants is that the best available outcome that climate change mitigation measures can now achieve is a stabilised global average surface temperature of 2°C above pre-industrial levels. However, at that temperature and beyond, there is an exponentially increasing risk of the Earth being propelled into an irreversible 4°C trajectory because of 'Earth System' changes.

32 Given the plausible prospect of Earth's temperature stabilising at 4°C or greater if stabilisation at 2°C is not achieved, the applicants contended that 100 Mt of CO₂ emissions, attributable to the Extension Project, will be significant and material to future increased global average surface temperatures. This, in turn, will expose the Children to a greater risk of injury.

33 To enable an understanding of the different climate scenarios or the "future worlds" in which that risk of harm to the Children is to be assessed, it is necessary to consider the evidence relevant to those elements of the applicants' case to which I have just referred.

34 Most of the evidence to which I will refer was given by Professor Steffen in his report dated 7 December 2020. Professor Steffen is an eminent specialist with over 30 years' experience in climate and 'Earth System' science research and teaching. Neither his expertise nor the opinions he gave were challenged. A brief account of his experience and expertise is set out in the Schedule to these reasons.

35 The opinions which Professor Steffen gave were sourced in both his own substantial research and that of other specialists in the field. To a large extent, his evidence relied upon the research and climate change modelling published by the Intergovernmental Panel on Climate Change (**IPCC**). As a factsheet published by the Minister's Department states, the IPCC is the leading international body for assessing scientific research on climate change and is acknowledged by governments around the world as the most reliable source of advice on climate change. The IPCC was established in 1988 to provide the world with a clear scientific view on the current state of knowledge on climate change and its potential environmental and socio-economic impacts. The IPCC is organised into three working groups and a taskforce that focuses on greenhouse gas emissions. The main role of each working group is to summarise the state of knowledge on climate change in reports published by the IPCC, known as IPCC Assessment Reports. To ensure that those reports are credible, transparent and objective, the reports must pass through a rigorous two-stage scientific and technical review process before being accepted by the IPCC Plenary which is constituted by representatives of member countries of the United Nations and the World Meteorological Organisation.

36 The following account of the evidence is also taken from reports prepared by the Commonwealth Scientific and Industrial Research Organisation (**CSIRO**) and the Australian Bureau of Meteorology (**BoM**). Neither the

expertise of the relevant authors of the CSIRO or BoM publications, nor the opinions contained therein, were in contest.

3.1 The Effect of Greenhouse Gases upon Earth's Surface Temperature

37 The greenhouse effect describes the relationship between the atmospheric concentration of greenhouse gases and global average surface temperature. The Earth's surface absorbs energy from the sun in the form of visible and ultraviolet radiation, and discharges some of this energy back into space in the form of infrared radiation (heat). CO₂ is a greenhouse gas. CO₂ absorbs a significant proportion of the outgoing radiation and re-radiates some of it back into the lower atmosphere (troposphere) and into the Earth's surface, thus warming the surface and lower atmosphere.

38 It is well-established that, when burned to produce energy, fossil fuels such as coal produce greenhouse gases, particularly CO₂.

39 Emissions of CO₂ from industrial sources (currently about 90%) and land-use change (currently about 10%) have raised the atmospheric concentration of CO₂ and the global average surface temperature by 1.1°C compared to pre-industrial levels. From pre-industrial levels to the present, the combustion of coal by humans is estimated to have produced around 1,000 gigatonnes (Gt) of CO₂ out of a total of 2,180 Gt emitted by human activity generally. That is, the combustion of coal has contributed about 46% of the total emission of CO₂. Professor Steffen estimates that this has contributed about 0.5°C of the total of 1.1°C temperature rise from the reference date up to the present date. The commonly used reference date for climate change related parameters as defined by the IPCC is the 1850-1900 average, or, where data is available for individual years, 1876. This is referred to as “pre-industrial”.

40 Increasing emissions of CO₂ from the Earth's surface increase the concentration of CO₂ in the atmosphere, which intensifies the greenhouse effect. In other words, the more outgoing infrared radiation (heat) is trapped and re-radiated by CO₂, the more the Earth's surface and lower atmosphere are warmed. Other greenhouse gases such as methane and nitrous oxide also influence global average surface temperature.

41 Professor Steffen opined that there is an approximately linear relationship between human emissions of CO₂ from all sources and the increase in global average surface temperature (subject to the non-linear impact of feedbacks, which are discussed below). In the absence of the non-linear effects of feedbacks, further emissions of CO₂ from human activities (combustion of fossil fuels and land use) will increase the global average surface temperature at a rate of about 1°C for every 1,800 Gt of CO₂ emitted).

42 The concentration of atmospheric CO₂ is currently rising at a rate of about 2.5 ppm (parts per million) per year and this is driving increasing temperatures at the rate of 0.24°C per five-year period or nearly 0.5°C per decade. If this rate continues throughout this century, by 2100 the global average surface temperature will reach about 5°C above the pre-industrial level.

43 At some point in the future, increases in global average surface temperature will likely slow and then stabilise for a multi-decadal period. The rate at which global surface temperature will stabilise depends upon a number of factors. These include, the cumulative CO₂ emitted by human activities since the beginning of the Industrial Revolution and also the feedbacks within the ‘Earth System’ that strengthen or weaken the trajectories of CO₂ and temperature. I turn then to explain the ‘Earth System’, feedback processes and what Professor Steffen referred to as the “**tipping cascade**”.

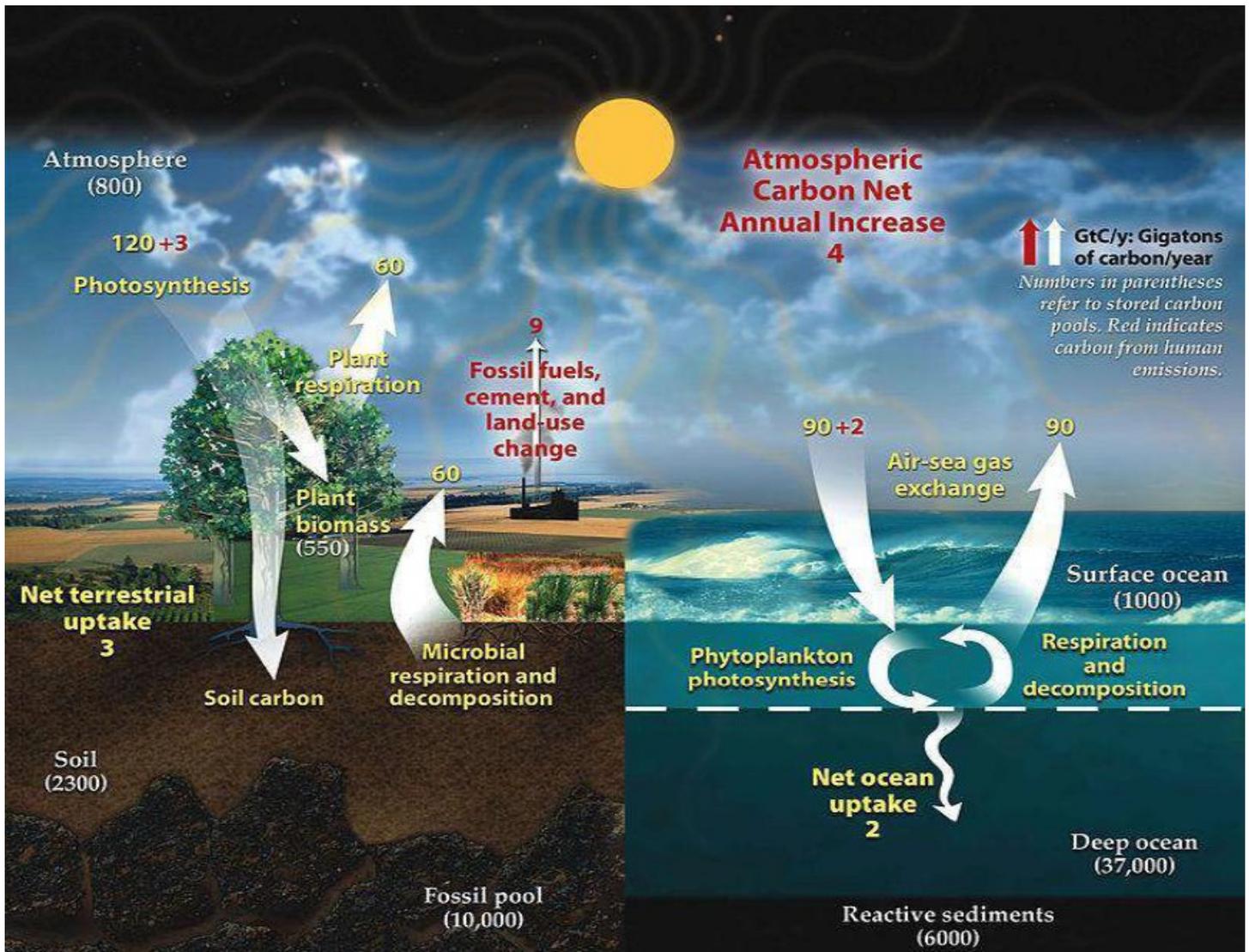
3.2 The Earth System, Carbon Sinks, Feedbacks, the Tipping Cascade and ‘Hothouse Earth’

44 Professor Steffen described the Earth as a single complex system in which the biosphere, and increasingly human activities, play a vital role in the stable functioning of the planet as a whole. He explained that the ‘Earth System’ (a conceptual construct developed to explain the processes on Earth which cycle materials and energy) is defined as “the suite of interlinked physical, chemical, biological and human processes that cycle (transport and transform) materials and energy in complex, dynamic ways within the system” (**Earth System**).

45 As explained by Professor Steffen, within the Earth System there are numerous natural ‘sub-systems’ which:

- (i) filter most of the damaging ultraviolet radiation from the sun, allowing life to flourish on the surface of the Earth;
- (ii) facilitate the movement of freshwater around the Earth, providing the necessary rainfall for ecosystems to flourish; and
- (iii) absorb CO₂ from the atmosphere, which regulates the Earth’s energy balance. Plants perform this role as they photosynthesise.

46 The role of atmospheric CO₂ in the Earth System is that it acts as the thermal regulator, a fundamental controller of the surface temperature of the planet. The ‘carbon cycle’ describes the movement of carbon between land, atmosphere and oceans. It is shown in *Figure 2* in Professor Steffen’s report, replicated here:

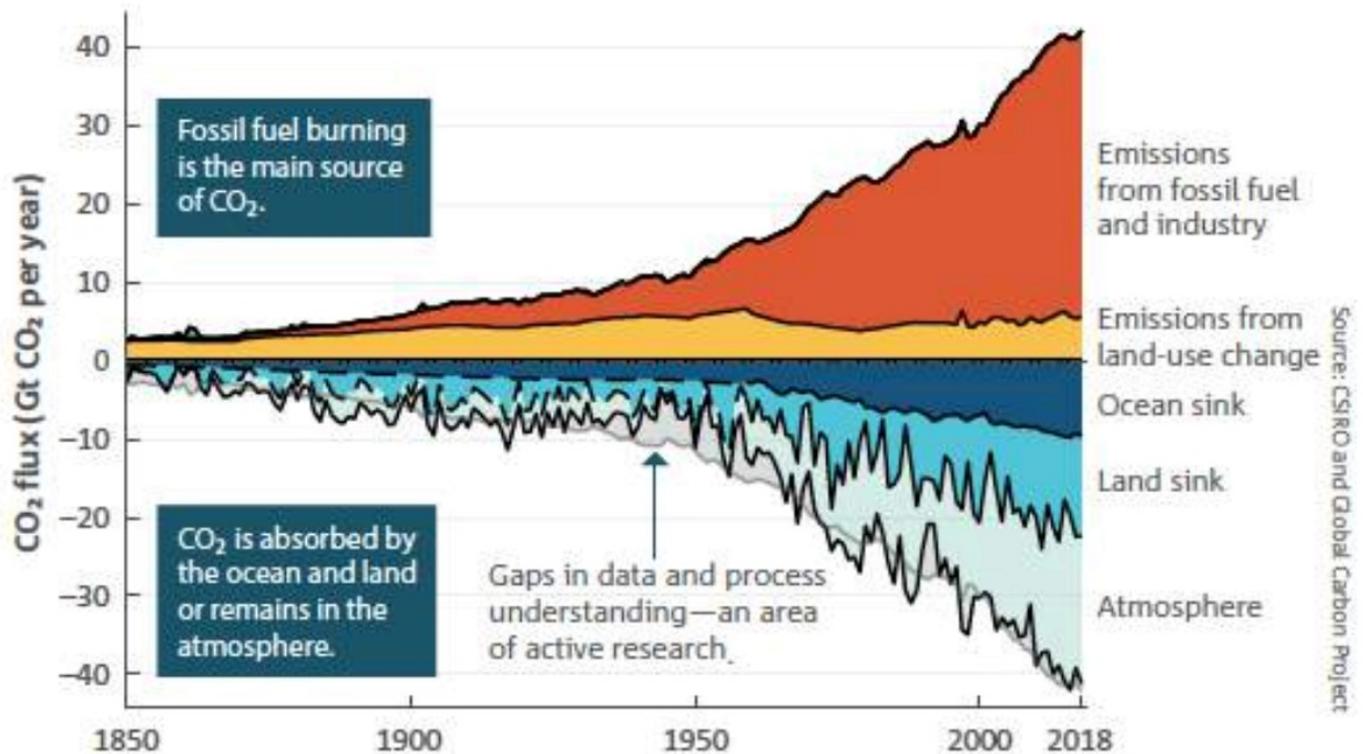


The global carbon cycle showing the movement of carbon between land, atmosphere and oceans in billions of tons (gigatonnes - Gt) of carbon per year.

Yellow numbers are natural fluxes, red are human-driven fluxes, and white are stored carbon.

47 As is depicted in *Figure 2*, there are natural features of the environment, including the oceans and land-based sources (eg the Amazon rainforest), which absorb more CO₂ than they produce (referred to as “carbon sinks”). About 55% of human emissions of CO₂ are absorbed by land and ocean carbon sinks. The remaining

45% that is left in the atmosphere is the primary driver of the increasing global average surface temperature. Land and ocean carbon sinks “fall far short” of absorbing the increased burden on the system caused by human emissions of CO₂. This is depicted by *Figure 3* of Professor Steffen’s report and is consistent with the joint report prepared by the CSIRO and BoM, entitled *State of the Climate: 2020 (CSIRO and BoM report)*. *Figure 3* shows human emissions of CO₂ from 1850 to 2018 and the partitioning of this additional CO₂ in the Earth System among the atmosphere, the land (vegetation and soils) and the ocean:



The human emissions of CO₂, primarily from the combustion of fossil fuels, are partitioned among the atmosphere and carbon sinks on land and in the ocean. The “imbalance” between the total emissions and total sinks reflects imprecisions in our measurements and understanding, primarily of the land and ocean sinks. Source: Friedlingstein et al. (2019) and CSIRO and BoM (2020).

49 It is important to understand that within the carbon cycle there are processes known as ‘feedbacks’ which accelerate, and have the potential to further accelerate, the warming of the Earth’s average surface temperature. Examples include:

melting ice, including the melting of Arctic sea ice and the loss of ice from the Greenland and Antarctic ice sheets. Melting Arctic sea ice will uncover darker seawater, which absorbs more sunlight and accelerates warming. Melting permafrost also releases CO₂ and methane into the atmosphere;

forest dieback, which concerns degradation through drought, heat and fire affecting large biomes such as the Amazon rainforest and boreal forests in Siberia and Canada. Increasing drought and heat will increase fire frequency, causing bushfires that will emit CO₂ presently stored in the Earth’s forest systems; and

changes in circulation patterns, such as the Atlantic Ocean circulation of the northern hemisphere jet stream. A warming ocean affects global ocean and atmospheric circulation, global and regional sea levels and uptake of anthropogenic CO₂ and causes losses in oxygen and impacts on marine ecosystems.

50 According to Professor Steffen and the IPCC, feedback processes accelerate the warming of the Earth System by destroying the Earth's ability to absorb CO₂ or reflect heat. These feedback processes thus compound climate change arising from human emissions of CO₂ and other greenhouse gases, producing a non-linear trajectory of increasing temperatures.

51 As the global average surface temperature rises towards 2°C and beyond, the risk of such feedbacks being activated increases. Because many feedback processes are interconnected, triggering one feedback process may have a rippling effect on others. Professor Steffen referred to this as a tipping cascade. If this tipping cascade is activated, Professor Steffen opined that humans will lose the capacity to control the trajectory of climate change, leading to a much hotter Earth. He refers to this as the Hothouse Earth scenario.

52 Hothouse Earth is one of the future world scenarios that I will shortly explain. Before I do that, there are a few other matters to note which Professor Steffen's report addressed.

53 Assuming that the stabilisation of CO₂ is not affected by non-human factors such as 'feedback processes', the stabilisation of CO₂ in the Earth's atmosphere requires that human emissions of CO₂ reach net zero. Professor Steffen stated that reaching net zero is a pre-requisite for global average surface temperature to stabilise. However, there will be a lag between global average surface temperature stabilising and the stabilisation of atmospheric CO₂ of several decades at least and possibly up to a century. That is because of the time needed for the heat content of the major components of the Earth System – land, ocean, ice and atmosphere – to equilibrate, with a net transfer of heat from the ocean to the atmosphere.

3.3 Effects to Date of Human Emissions of CO₂

54 Professor Steffen was asked to describe the effects to date of human emissions of CO₂ in Australia and globally. His evidence was as follows:

The human emissions of CO₂ (and other greenhouse gases, although CO₂ is the most important) have already changed Earth's climate in very many significant ways. As an overview, the planet's atmosphere and ocean are heating at an increasing rate, polar ice is melting, extreme weather events are becoming more extreme, sea levels are rising, and ecosystems and species are being lost or degraded.

(a) The most important impacts of climate change to date on Australia include the following (CSIRO and BoM 2020):

- Australia's climate has warmed on average by $1.44 \pm 0.24^\circ\text{C}$ since national records began in 1910, leading to an increase in the frequency of extreme heat events. Summer extreme temperatures are increasingly breaching 35°C and even 40°C in most of our capital cities and many regional centres.
- There has been a decline of around 16 per cent in April to October rainfall in the southwest of Australia since 1970. Across the same region, May–July rainfall has seen the largest decrease, by around 20 per cent since 1970.
- In the southeast of Australia there has been a decline of around 12 per cent in April to October rainfall since the late 1990s.
- There has been a decrease in streamflow at the majority of streamflow gauges across southern Australia since 1975.
- Rainfall and streamflow have increased across parts of northern Australia since the 1970s.

- There has been an increase in extreme fire weather, and in the length of the fire season, across large parts of the country since the 1950s, especially in southern Australia.
- There has been a decrease in the number of tropical cyclones observed in the Australian region since 1982.
- Oceans around Australia are acidifying and have warmed by around 1°C since 1910, contributing to longer and more frequent marine heatwaves.
- Sea levels are rising around Australia, including more frequent extremes, that are increasing the risk of inundation and damage to coastal infrastructure and communities.

(b) The effects of climate change are clear and unequivocal around the planet - on every continent and in every ocean basin. The most important impacts of climate change to date globally include the following (IPCC 2013):

- Warmer and/or fewer cold days and nights over most land areas.
- Warmer and/or more frequent hot days and nights over most land areas.
- Increases in the frequency and/or duration of heat waves in many regions.
- Increase in the frequency, intensity and/or amount of heavy precipitation (more land areas with increases than with decreases).
- Increases in intensity and/or duration of drought in many regions since 1970.
- Increases in intense tropical cyclone activity in the North Atlantic since 1970.
- Increased incidence and/or magnitude of extreme high sea levels.

Global observational evidence published since the IPCC Fifth Assessment Report in 2013 reinforce these trends. For example:

- Measurements from satellite altimeters show a climate-change driven acceleration of mean global sea level over the past 25 years (Nerem et al. 2018). Averaged globally over the past 27 years, sea level has been rising at 3.2mm/year. But for the past five years, the rate was 4.8mm/year, and for the 5-year period before that the rate was 4.1mm year (Canadell and Jackson 2020, based on data from the European Space Agency and Copernicus Marine Service).
- Climate change is rapidly increasing the thermal stress for coral reefs as measured at 100 coral reef locations around the world. The level of thermal stress during the 2015-2016 El Niño was unprecedented over the period 1871-2017 (Lough et al. 2018).

- Intense tropical cyclone activity has increased from 1980 to 2016. Storms of 200 km/hr have doubled in number, and storms of 250 km/hr have tripled in number (Rahmstorf et al. 2018).

3.4 Future Effects – The Future World Scenarios

55 In his evidence, Professor Steffen outlined the approach adopted by climate scientists to project how continued CO₂ emissions from human activity might affect the Earth System in the future and what the impacts of any such change (including on the level at which Earth's surface temperatures stabilise) might be:

- (a) The most common approach involves quantitative projections by reference to Earth System models based on mathematical descriptions of the major features of the Earth System and their interactions.
- (b) The models are driven by projected human emissions of greenhouse gases and land-use change, as well as natural drivers of climate change such as solar radiation.
- (c) The outputs of the models provide insight into the risks presented by different levels of climate change, often characterised by changes in global average surface temperature.
- (d) The analysis is supplemented by evidence from past changes in the Earth System (such as the melting of the ice caps during previous warm periods) which may provide insights as to how the Earth System might change in the future.

56 One such model is the representative concentration pathway (**RCP**), which accounts for the full suite of greenhouse gases and land use over time. RCPs are framed in terms of “radiative forcing”, which refers to the change in energy levels in the Earth system due to particular drivers of climate change. Radiative forcings which are larger than zero indicate global warming, while radiative forcings which are smaller than zero indicate global cooling.

57 The IPCC has published four RCPs: RCP 2.6, RCP 4.5, RCP 6.0 and RCP 8.5. The numbers refer to the radiative forcing in the year 2100. Each RCP consists of a data set which includes a set of starting values and the estimated emissions up to 2100. Each data set is based on historic information and a set of plausible assumptions about future economic activity, energy sources, population growth and other socio-economic factors. The four RCPs cover a range of emission scenarios with and without climate mitigation policies. For example, RCP 8.5 is based on minimal effort to reduce emissions. RCP 2.6 requires strong mitigation efforts, with early participation from all emitters followed by active removal of atmospheric CO₂. RCP 2.6 is described by the IPCC Synthesis Report (2014) as a stringent mitigation scenario. RCP 4.5 and RCP 6.0 are described as “intermediate scenarios” and RCP 8.5 as a scenario with “very high emissions of greenhouse gases”. The IPCC stated that scenarios without additional efforts to constrain greenhouse gas emissions lead to pathways ranging between RCP 6.0 and RCP 8.5.

58 Professor Steffen stated that the lowest RCP (2.6) would result in a global average surface temperature rise of below 2°C by the year 2100, while the highest RCP (8.5) would lead to a temperature rise of 4°C or more by 2100. The continuum of projected increasing global average surface temperature under each scenario from 2046 to 2100 is shown in Table 2.1 of the IPCC Synthesis Report (2014). It should be noted, however, that the reference point used here is not the pre-industrial level. Instead, changes in temperature have been calculated by reference to the 1986-2005 period:

Table 2.1 | Projected change in global mean surface temperature and global mean sea level rise for the mid- and late 21st century, relative to the 1986–2005 period. {WGI Table SPM.2, 12.4.1, 13.5.1, Table 12.2, Table 13.5}

		2046–2065		2081–2100	
	Scenario	Mean	Likely range ^c	Mean	Likely range ^c
Global Mean Surface Temperature Change (°C) ^a	RCP2.6	1.0	0.4 to 1.6	1.0	0.3 to 1.7
	RCP4.5	1.4	0.9 to 2.0	1.8	1.1 to 2.6
	RCP6.0	1.3	0.8 to 1.8	2.2	1.4 to 3.1
	RCP8.5	2.0	1.4 to 2.6	3.7	2.6 to 4.8
	Scenario	Mean	Likely range ^d	Mean	Likely range ^d
Global Mean Sea Level Rise (m) ^b	RCP2.6	0.24	0.17 to 0.32	0.40	0.26 to 0.55
	RCP4.5	0.26	0.19 to 0.33	0.47	0.32 to 0.63
	RCP6.0	0.25	0.18 to 0.32	0.48	0.33 to 0.63
	RCP8.5	0.30	0.22 to 0.38	0.63	0.45 to 0.82

Notes:

^a Based on the Coupled Model Intercomparison Project Phase 5 (CMIP5) ensemble; changes calculated with respect to the 1986–2005 period. Using Hadley Centre Climatic Research Unit Gridded Surface Temperature Data Set 4 (HadCRUT4) and its uncertainty estimate (5 to 95% confidence interval), the observed warming from 1850–1900 to the reference period 1986–2005 is 0.61 [0.55 to 0.67] °C. *Likely* ranges have not been assessed here with respect to earlier reference periods because methods are not generally available in the literature for combining the uncertainties in models and observations. Adding projected and observed changes does not account for potential effects of model biases compared to observations, and for natural internal variability during the observational reference period. {WGI 2.4.3, 11.2.2, 12.4.1, Table 12.2, Table 12.3}

^b Based on 21 CMIP5 models; changes calculated with respect to the 1986–2005 period. Based on current understanding (from observations, physical understanding and modelling), only the collapse of marine-based sectors of the Antarctic ice sheet, if initiated, could cause global mean sea level to rise substantially above the *likely* range during the 21st century. There is *medium confidence* that this additional contribution would not exceed several tenths of a meter of sea level rise during the 21st century.

^c Calculated from projections as 5 to 95% model ranges. These ranges are then assessed to be *likely* ranges after accounting for additional uncertainties or different levels of confidence in models. For projections of global mean surface temperature change in 2046–2065, *confidence* is *medium*, because the relative importance of natural internal variability, and uncertainty in non-greenhouse gas forcing and response, are larger than for the 2081–2100 period. The *likely* ranges for 2046–2065 do not take into account the possible influence of factors that lead to the assessed range for near term (2016–2035) change in global mean surface temperature that is lower than the 5 to 95% model range, because the influence of these factors on longer term projections has not been quantified due to insufficient scientific understanding. {WGI 11.3.1}

^d Calculated from projections as 5 to 95% model ranges. These ranges are then assessed to be *likely* ranges after accounting for additional uncertainties or different levels of confidence in models. For projections of global mean sea level rise *confidence* is *medium* for both time horizons.

59 In his evidence, Professor Steffen proposed three possible climate futures, which he correlated to the IPCC RCPs as I will later explain. First, it is convenient to give an outline of the main characteristics of each of Professor Steffen’s three scenarios. “Scenario 1” forecasts that global average surface temperature will stabilise in the second half of this century “at, or very close to, 2°C” above the pre-industrial level. The Minister contended that there was some ambiguity in Professor Steffen’s specification of the temperature at which global average surface temperatures would stabilise for “Scenario 1” and contended that he really meant below 2°C and around 1.8°C. For the reasons later given, I do not accept that contention. I will call Professor Steffen’s “Scenario 1” – a “**2°C Future World**”. It is equivalent to the RCP 4.5 scenario. Each of those scenarios are based on a linear relationship between future emissions of CO₂ and increased global average surface temperature.

60 Under Professor Steffen’s “Scenario 2”, it is projected that global average surface temperature will stabilise late this century but more likely early into the 22nd century at, or very close to, 3°C, above the pre-industrial level. I will call this Scenario “**3°C Future World**”. According to Professor Steffen, that Scenario is approximately equivalent to the upper end of RCP 6.0 envelope of temperature scenarios. The scenario is premised on present national policy settings guiding future emissions trajectories.

61 “Scenario 3” forecasts that global average surface temperature will continue to rise throughout this century with a temperature of about 4°C above the pre-industrial level by late this century, but with the surface temperature likely continuing to rise into the 22nd century. Professor Steffen called this Scenario Hothouse Earth. For convenience and consistency, I will call it a “**4°C Future World**”. In terms of temperature outcomes at or around the end of this century, this scenario corresponds with the IPCC’s RCP 8.5 which forecasts a 4°C or more temperature rise by the end of this century.

62 However, the two scenarios differ in the paths they each take to reach a similar conclusion about temperature at the end of this century. RCP 8.5 is based on human emissions of CO₂ being the dominant driver

of temperature rise, whereas Professor Steffen's scenario is non-linear by reference to the impact of human CO₂ emissions and is premised upon feedback processes being activated and adding significant amounts of greenhouse gases to the atmosphere and playing an important role in the ultimate temperature rise.

63 Professor Steffen did not propose a possible scenario of his own which correlated with RCP 2.6. He did however give consideration to that scenario. He stated that RCP 2.6 is consistent with the Paris Agreement signed within the United Nations Framework Convention on Climate Change in 2015 ("**Paris Agreement**") target of limiting temperatures to well below 2°C with the ambition to limit temperature to 1.5°C above the pre-industrial average. Professor Steffen predicts that the target of 1.5°C is now very likely to be "inaccessible without significant overshoot" (temperatures rising above 1.5°C) followed by a drawdown of CO₂ from the atmosphere by natural means (such as reforestation), industrial means (such as carbon capture and storage) or both.

64 In this context which includes consideration by Professor Steffen of some six years' worth of data about emissions since the IPCC published its RCPs, Professor Steffen opined that the lowest temperature increase that can realistically be contemplated today is that the global average surface temperature will stabilise at, or very close to, 2°C above pre-industrial levels. This is Professor Steffen's "Scenario 1" and what I have called a 2°C Future World and reflects RCP 4.5.

65 Professor Steffen's analysis essentially contemplated that there are only two future worlds now likely to be accessible: either a 2°C Future World or a 4°C Future World. In Professor Steffen's opinion, RCP 8.5 appears to be increasingly unlikely as renewable energies become cheaper and begin to replace fossil fuels at large scales. However, as indicated already, Professor Steffen opined that essentially the same temperature level (about 4°C by about 2100) envisaged by RCP 8.5 will be reached if the 4°C Future World scenario becomes the reality. Professor Steffen considered a 4°C Future World as plausible given sufficient levels of human emissions of CO₂. However, if certain mitigation measures are taken, Professor Steffen suggested that a 2°C Future World is also plausible. Although Professor Steffen identified a 3°C Future World as a possibility, he opined that there is a "very significant risk" that a 3°C Future World is not accessible because there is a danger that "strongly non-linear feedbacks will be activated by a 3°C warning". In other words, Professor Steffen forecasts that a tipping cascade will likely be activated by a 3°C temperature rise. He stated that that could occur at "even lower" temperatures, noting that a 2°C temperature rise could trigger a 4°C Future World trajectory but the probability of such a scenario was "much lower" for a 2°C rise than for a 3°C rise. He alternatively expressed this by saying there was "a small (but non-zero) probability of initiating a tipping cascade at a 2°C temperature rise". Professor Steffen's assessment is supported by the IPCC's projection of a "moderate" risk of feedback processes being triggered at a 2°C temperature rise. Professor Steffen opined that this risk will undoubtedly rise with a 3°C temperature increase.

66 A fundamental point made by Professor Steffen's analysis is that if sufficient measures are not taken to reduce human emissions of CO₂ so as to stabilise surface temperature at 2°C, global average surface temperatures will then enter an irreversible 4°C Future World or Hothouse Earth trajectory. Professor Steffen opined that 'feedback processes' will be activated by a 3°C (or even lower) temperature rise with a consequent "significant risk" that a tipping cascade will be triggered taking the global average surface temperature beyond 3°C and onto the 4°C Future World trajectory. That is depicted in Figure 4 of Professor Steffen's report.

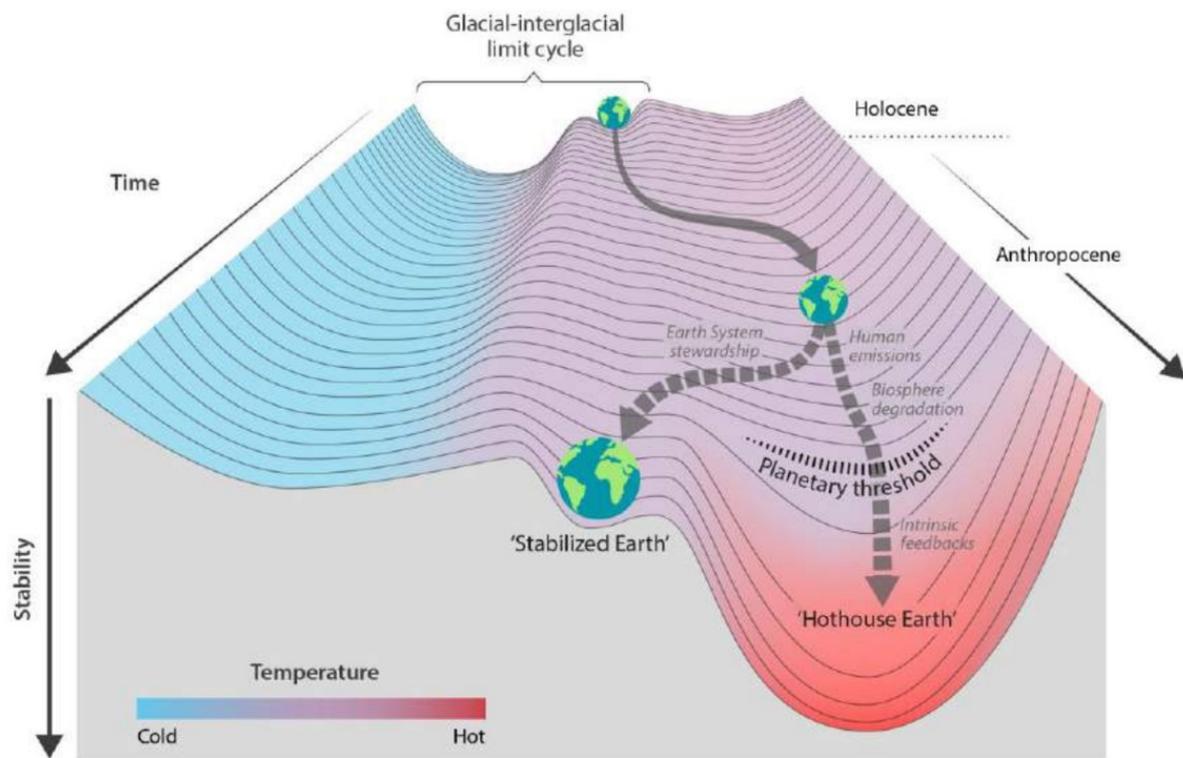


Fig. 4: Stability landscape showing the pathway of the Earth System out of the Holocene to its present position in the hotter Anthropocene. The “fork in the road” is shown here as the two divergent pathways of the Earth System in the future (broken arrows). Currently the Earth System is on a ‘Hothouse Earth’ pathway, driven by human emissions of greenhouse gases and biosphere degradation towards a potential planetary threshold at $\sim 2^{\circ}\text{C}$ (horizontal broken line at 2°C in Figure 1), beyond which the system follows an essentially irreversible pathway driven by intrinsic biogeophysical feedbacks (Scenario 3). The other pathway leads to ‘Stabilized Earth’, a pathway of Earth System stewardship guided by human-created feedbacks to a quasi-stable, human-maintained basin of attraction (Scenario 1). Note that the fork in the road (planetary threshold) eliminates the possibility of Scenario 2. (Steffen et al. 2018).

3.4.1 Effects of a 2°C Future World

67 In relation to each of the three scenarios postulated by Professor Steffen, he described the projected global impacts followed by a description of the impacts in Australia. He noted that the risks and impacts described were linked to the stabilisation of the global average surface temperature for each of the three scenarios. He emphasised that stabilisation will take multiple decades at a minimum and stated that, therefore, the risks and impacts described were relevant to the current generation of children and the following generation or two.

Scenario 1: Stabilisation at a rise in global average surface temperature of about 2°C above the pre-industrial level (IPCC 2018).

- 37% of the global population will be exposed to extreme heat at least once every five years. This will have severe impacts on human health and wellbeing, as well as on worker productivity.
- Sea-level will rise by 0.46 m by 2100, leading to large increases in coastal flooding, saltwater intrusion in low-lying areas, and more damaging storm surges. The most vulnerable countries include

small island states, Bangladesh, low-lying Southeast Asian cities and settlements, and many regions along the African coast.

- 99% of coral reefs will be dead from severe bleaching; this means that the Great Barrier Reef will cease to exist as we know it today, as well as other coral reefs around the world.
- A decline of 3 million tonnes in marine fisheries, with the most severe impacts on developing countries that rely on marine fish for a large fraction of protein in their diets.
- Ecosystems will shift to a new biome on 13% of Earth's land, leading to large rates of extinctions as well as a surge in invasive species as individual organisms migrate in response to a changing climate.
- 6.6 million square kilometres of Arctic permafrost will thaw, releasing large amounts of CO₂ and methane to the atmosphere, accelerating the warming trend.
- 7% reduction in maize harvests in the tropics, with the poorest countries suffering the most damaging impacts.
- 16% of plant species will lose at least half of their current range, leading to significant within-ecosystem changes as well as an increase in extinction rates.

For Australia, Scenario 1 would significantly increase the likelihood in any given year of extreme weather events (King et al. 2017): (i) 77% likelihood of severe heatwaves, power blackouts and bushfires; and 74% likelihood of severe droughts, water restrictions and reduced crop yields. More generally, CSIRO and BoM 2020, have used simulations from the latest generation of climate models to project changes to Australia's climate over the next few decades. These projections would thus be relevant for a 1.5-2°C world, and thus provide useful insights for Scenario 1:

- Continued warming, with more extremely hot days and fewer extremely cool days.
- A decrease in cool season rainfall across many regions of the south and east, likely leading to more time spent in drought.
- A longer fire season for the south and east and an increase in the number of dangerous fire weather days.
- More intense short-duration heavy rainfall events throughout the country.
- Fewer tropical cyclones, but a greater proportion projected to be of high intensity, with ongoing large variations from year to year.
- Fewer east coast lows particularly during the cooler months of the year. For events that do occur, sea level rise will increase the severity of some coastal impacts.

- More frequent, extensive, intense and longer-lasting marine heatwaves leading to increased risk of more frequent and severe bleaching events for coral reefs, including the Great Barrier and Ningaloo reefs.
- Continued warming and acidification of its surrounding oceans.
- Ongoing sea level rise. Recent research on potential ice loss from the Antarctic ice sheet suggests that the upper end of projected global mean sea level rise could be higher than previously assessed (as high as 0.61 to 1.10 m global average by the end of the century for a high emissions pathway, although these changes vary by location).
- More frequent extreme sea levels. For most of the Australian coast, extreme sea levels that had a probability of occurring once in a hundred years are projected to become an annual event by the end of this century with lower emissions, and by mid-century for higher emissions.

3.4.2 *Effects of a 3°C Future World*

68 The effects forecast by Professor Steffen for a 3°C Future World were as follows:

Scenario 2: Stabilisation at a rise in global average surface temperature of about 3°C above the pre-industrial level. Here I focus on projected impacts on Australia of this scenario, based on a recent assessment by the Australian Academy of Sciences (Hoegh-Guldberg et al. 2020, and references therein):

- Many of Australia's ecological systems, such as coral reefs and forests, would be unrecognisable, accelerating the decline of Australia's natural resources through the loss or change in the distribution of thousands of species and ecological processes. (As noted for scenario 1, the Great Barrier Reef will no longer exist at temperature rises of 2°C or more).
- Much larger climate change-driven changes to water resources are likely, leading to increasingly contested supplies for natural flows, irrigated agriculture and other uses.
- At 3°C, living in many Australian cities and towns would be extremely challenging due to more frequent and severe extreme weather events, including much higher temperatures and more severe water shortages.
- Sea levels will rise by 0.4 to 0.8 metres by 2100 and by many metres over subsequent centuries. These changes will cost hundreds of billions of dollars over coming decades as coastal inundation and storm surge increasingly impact Australia's coastal communities, infrastructure and businesses. Between 160,000 and 250,000 properties are at risk of flooding when sea levels rise to 1 metre above pre-industrial.
- The probability of large-scale extreme events, such as large storms, floods, droughts, hail storms, tropical cyclones, heatwaves and other climate-related phenomena will increase rapidly.

- High fire danger weather will increase significantly, leading to more catastrophic fire seasons such as the 2019/2020 Black Summer fires.
- Grain, fruit and vegetable crops will suffer more severe reductions in yields in a 3°C world, and rising heat stress will negatively affect extensive and intensive livestock systems.
- Rural communities will face increasingly harsh living conditions due to increasing debt from diminishing crop yields, insurance losses from worsening extreme weather events, and more challenging working conditions due to increasing extreme heat.
- Australia at 3°C will be hotter, drier and more water stressed with impacts on water security, availability, quality, economies, human health and ecosystems. Many locations in Australia in a 3°C world would be very difficult to inhabit due to projected water shortages.
- Multiple impacts of a 3°C world would damage the health and wellbeing of Australians. These include escalating heat stress, more frequent and intense bushfires, reduced access to food and water, increasing risk of infectious disease, and deteriorating mental health and general wellbeing.

3.4.3 *Effects of a 4°C Future World*

69 The projected effects of a 4°C Future World were described by Professor Steffen as follows:

Scenario 3: The Hothouse Earth scenario, with stabilisation in the 22nd century at a global average surface temperature level at least 4°C, and probably higher, above the pre-industrial level. There has been much less research on the impacts of a 4-5 °C temperature rise in global average surface temperature. However, a few of the potential impacts that could arise from such a high level of warming were summarised in Steffen et al. (2018: Supplementary Information). These include:

- Multiple impacts on agricultural regions, including depletion of soil fertility, changes in water availability and loss of coastal agricultural lands, with the risk of widespread starvation in the most vulnerable regions and/or large migrations out of those regions, increasing the risk of conflict elsewhere.
- Destruction of coral reefs from ocean warming and acidification, and consequent loss of livelihoods for those communities and societies dependent on reefs.
- Amazon rainforest at risk of conversion to savanna from both climate and land-use change. This would lead to large releases of CO₂ to the atmosphere as well as large increases in extinction rates of species that depend on the rainforest.
- Tropical drylands at risk of becoming too hot and dry for agriculture, and too hot for human habitation. This has very large implications for many regions in Africa in particular, but also parts of Asia and much of Australia (see below).
- Very large risks from coastal flooding to transport, infrastructure and coastal ecosystems. Economic damages could trigger regional or global economic collapse as major coastal cities on all continents

become uninhabitable.

- Reliability of South Asian (Indian) Monsoon vulnerable to high aerosol loading and to the warming of the Indian Ocean and adjacent land. Well over 1 billion people in south Asia depend on a reliable monsoon system. Failure of the monsoon would very likely lead to large-scale starvation, migration and conflict.
- Mountain glaciers melting at rapid rates, changing amount and timing of run-off. Freshwater resources of over 1 billion people at risk.
- Large changes to riparian and wetlands, with loss of water of some places and increased flooding in others.

For Australia, the corresponding impacts (harms) of Scenario 3 are:

- Much of Australia's inland areas (savanna and semi-arid zones) will become uninhabitable for humans, except for artificial enclosed environments.
- The southeast and southwest agricultural zones will become largely unviable, due to extreme heat and a reduction in cool season rainfall. This would lead to a large depopulation of regional Australia.
- Australia's large coastal cities (Brisbane, Sydney, Melbourne, Adelaide, Perth) will suffer increasing inundation and flooding from storm surges as sea level rises to metres above its pre-industrial level over the coming centuries. This will drive severe economic challenges, both because of direct damage from flooding and the large costs of adaptation.
- The Great Barrier Reef will no longer exist.
- Most of the eastern broadleaved (eucalypt forests) will no longer exist due to repeated, severe bushfires.

3.4.4 What Needs to Be Done to Achieve a 2°C Future World

70 Professor Steffen's evidence also addressed the probability of a 2°C Future World and what would need to be done to achieve it and thus (on his analysis) avoid a 4°C Future World.

71 Professor Steffen opined that there is a 67% probability of achieving a 2°C Future World if cumulative CO₂ emissions from 2021 onwards are restricted to about 855 Gt of CO₂ (equivalent to about 20 years of emissions at 2019 rates). That would require net-zero emissions by 2050 by all major emitting countries.

72 Professor Steffen referred to research by McGlade and Ekins (2015) which, using a 'carbon budget framework', concluded that there was a 50% probability of the world meeting a 2°C temperature target if a global CO₂ emissions budget of 1,100 Gt of CO₂ was achieved for the 2011-2050 period. Professor Steffen noted that this carbon budget was somewhat higher than the budget of 855 Gt of CO₂ which he had used in his own analysis (on the basis of a 67% probability). McGlade and Ekins analysed the available global fossil fuel "reserves" and "resources", defining "resources" as all of the fossil fuels that are known to exist and "reserves" as a subset of "resources", being those fossil fuels that are currently "economically and technologically viable to exploit". McGlade and Ekins showed that if all of the world's existing fossil fuel "reserves" were burnt, about 2,860 Gt of CO₂ would be emitted and that about 2,000 Gt of these emissions would come from the combustion

of coal. This level of emissions is about 2.5 times greater than the allowable carbon budget for reaching a 2°C temperature target. On that basis, McGlade and Ekins concluded that globally, 62% of the world's existing fossil fuel reserves need to be left in the ground, unburnt, and, having performed a regional analysis, it was concluded that over 90% of Australia's existing coal reserves cannot be burnt to be consistent with a 2°C temperature target.

73 The definition of “reserves” used by McGlade and Ekins would appear to include the 100 Mt of coal from the Extension Project, it being “economically and technologically viable to exploit now”. On the basis of the carbon budget analysis used by McGlade and Ekins to predict a 50% probability of meeting a 2°C Future World, Professor Steffen offered this conclusion:

The obvious conclusion from the carbon budget analysis above is that currently operating coal mines must be phased out as soon as possible (preferably no later than 2030), and that no new coal mines, or extensions to existing coal mines, can be allowed.

3.5 Deliberation and Conclusions

74 The following plausible scenarios were demonstrated by that evidence:

- (i) the Paris Agreement target of limiting global average surface temperature to well below 2°C, with the ambition to limit temperature to 1.5°C above the pre-industrial level, is now unlikely to be achieved without significant overshoot;
- (ii) the best future stabilised global average surface temperature which can be realistically contemplated today, is 2°C above the pre-industrial level; and
- (iii) if the global average surface temperature increases beyond 2°C, there is a risk, moving from very small (at about 2°C) to very substantial (at about 3°C), that Earth's natural systems will propel global surface temperatures into an irreversible 4°C trajectory, resulting in global average surface temperature reaching about 4°C above the pre-industrial level by about 2100.

75 Furthermore, the evidence demonstrates that the risk of harm to the Children from climatic hazards brought about by increased global average surface temperatures, is on a continuum in which both the degree of risk and the magnitude of the potential harm will increase exponentially if the Earth moves beyond a global average surface temperature of 2°C, towards 3°C and then to 4°C above the pre-industrial level.

76 The applicants also seek to establish propositions which are in contest. Those propositions are directed to the extent that 100 Mt of CO₂ from the Extension Project will materially contribute to the Children's risk of being injured by one or more of the hazards induced by climate change.

77 Whether the emission of 100 Mt of CO₂ from the Extension Project would increase the risk of harm to the Children is relevant to two aspects of the case. *First*, it bears on whether a duty of care should be recognised and, in particular, to the question of whether it is reasonably foreseeable that the emission of the 100 Mt of CO₂ will increase the risk of the Children being harmed. *Second*, it is relevant to whether I should grant the injunction the applicants seek. For that purpose, I will need to be satisfied (to the extent later discussed) that it is likely that the emission of the 100 Mt of CO₂ will cause the Children harm which, relevantly, is an inquiry as to whether it is likely that the emissions will materially contribute to that harm.

78 As French CJ said in *Amaca Pty Ltd v Booth* (2011) 246 CLR 36 at [41], “[t]he risk of an occurrence and the cause of an occurrence are quite different things”. Ordinarily, risk is assessed prospectively and causation is assessed retrospectively. However, because, for the purposes of the injunction, I may need to address the prospect of the Minister's conduct causing harm to the Children, any causation assessment will necessarily be prospective rather than retrospective.

79 The submissions of the parties as to the prospective connection between the Minister's impugned conduct (the emission of 100 Mt of CO₂) and the increased risk of harm to the Children, were largely made by reference to a causation inquiry and not particularly directed to the risk-focused assessment required by the reasonable foreseeability inquiry. Despite that, the following discussion will assist in determining each of the inquiries I may need to make. My conclusions as to foreseeability inquiry and the causation inquiry (in so far as it has been necessary to come to a conclusion) are given later.

80 The applicants contended that the 100 Mt of CO₂ from the Extension Project would make a material contribution to future increases in the global surface temperature and thus the degree and magnitude of the risk of harm faced by the Children. That was put in two ways although primary reliance was placed on the second. First, the applicants contended that the approval, extraction, export and combustion of carbon from the Extension Project will emit a material quantity of CO₂ into the atmosphere. They contended that the more CO₂ that is emitted, the higher the level of CO₂ concentration will be before it reaches its zenith. The higher the level of CO₂ concentration when it reaches its zenith, the worse the harm to today's children will be.

81 The Minister responded to that contention by quantifying the increase in global temperature that 100 Mt of CO₂ would cause. Assuming a purely linear relationship between increased emissions of CO₂ and increased temperature, the calculation was available by reference to Professor Steffen's evidence that further emissions will increase global average surface temperature at a rate of about 1°C for every 1,800 Gt of CO₂ emitted. The emission of 100 Mt of CO₂ would therefore result in an increase of one eighteen-thousandth of a degree Celsius.

82 The Minister contended that an increase of that magnitude was *de minimis*, which I take to mean negligible (see *Bonnington Castings Ltd v Wardlaw* [1956] 1 All ER 615 at 618-619 (Lord Reid)). To make good that contention, the Minister contended by way of example that if it were to be assumed that global average surface temperature would otherwise stabilise at 2°C, it would logically follow that, with the addition of 100 Mt of CO₂, the temperature would instead stabilise at 2.00005°C. It was then said that there was simply no evidence before the Court about what that magnitude of increase meant in terms of measurable risk. It was suggested that climate change modelling does not operate at a sufficient level of specificity to provide an answer.

83 The wealth of scientific knowledge demonstrated by the evidence before me suggests that science is likely capable of providing that answer. However, I am unable to say that the evidence itself demonstrates the extent, if any, that a fractional increase in average global temperature of the kind in question poses an additional risk of harm to the Children. But that conclusion does not answer the way in which the applicants put their case. They argue that it is the accumulation of CO₂ which causes exposure to the risk of harm and accumulated CO₂, including the contribution to that accumulation which the 100 Mt of CO₂ will make, that will bring about increased temperatures and the harm that the evidence demonstrates will follow. In that way, the applicants say there will be a material contribution to injury.

84 The second way the case was put by the applicants was to adopt what an economist might call a marginal analysis. This contention was made by reference to the contribution that 100 Mt of CO₂ may have on the level at which the global average surface temperature will stabilise. In that respect, the applicants first relied on Professor Steffen's evidence that CO₂ emissions from the Extension Project "would increase the level at which atmospheric CO₂ concentration is eventually stabilised, and thus would increase the level at which the global average surface temperature is eventually stabilised". The applicants then relied on the Future World scenarios identified already and the propositions set out at [74] above including that there is a risk, moving in degree from very small to very substantial as the global average surface temperature increases from 2°C to 3°C above the pre-industrial level, that a 'tipping cascade' will trigger a 4°C Future World trajectory. The applicants contended that once global average surface temperatures reach or exceed 2°C above the pre-industrial level, the risk of a 4°C Future World increases exponentially and that with that heightened realm of risk in prospect, the emission of an additional 100 Mt of CO₂ is material. On that basis and given that the evidence demonstrates an increase in both the degree and magnitude of risk of harm to the Children as between a 2°C Future World and a 4°C Future World, the applicants contended that the emission of 100 Mt of CO₂ in the context of the risk profile just described, is a material contribution to the risk of exposure to harm.

85 The Minister sought to challenge that submission in a number of ways. First, the Minister characterised the applicants' case as dependent upon demonstrating that the 100 Mt of CO₂ from the Extension Project would be

emitted outside the available budget of emissions necessary to meet a 2°C target. The Minister contended that it is likely that the 100 Mt of CO₂ would be emitted compliantly with the Paris Agreement and thus within a lower than 2°C target.

86 Putting aside for the moment what I think is a mischaracterisation of the applicants' case, there is not sufficient evidence before me on which I could conclude that there is no real prospect of the 100 Mt of CO₂ being burnt outside the available fossil fuel budget necessary to meet a 2°C target. The Minister called no evidence. The Minister essentially contended that the Court should infer that the 100 Mt of CO₂ would likely be emitted in accordance with the Paris Agreement. There is no sufficient basis for that inference. The Minister relied upon little else than speculation, in circumstances where the evidence showed that at least one of the potential consumers of the coal is not a signatory to the Paris Agreement.

87 Further and in any event, there is evidence before me which tends to support the proposition that the 100 Mt of CO₂ will not be emitted as part of the available carbon budget necessary to achieve a 2°C target. Professor Steffen's opinion was that it was "obvious" from the carbon budget analysis, that "no new coal mines, or extensions to existing coal mines, can be allowed". There can be no doubt that in making that statement Professor Steffen had the Extension Project in mind. True it is that he did not go on to explain why, but to say it is "obvious" by reference to the carbon budget analysis he relied on implies that the reason is to be found in his prior reliance on the study made by McGlade and Ekins, who had analysed the position for Australia and had calculated that over 90% of Australia's existing coal reserves cannot be burnt to meet a 2°C target. That observation reveals the logic behind Professor Steffen's conclusion and it is logic which may be relied upon irrespective of whether the conclusion he proffered was based upon his specialist expertise. If there is no capacity to include 90% of existing Australian reserves of coal in the carbon budget, it seems unlikely that a capacity for new reserves to be included exists. Even "existing" reserves, by which Professor Steffen must have meant those already being exploited, logically have only a 1 in 10 chance of being included in the budget. There is no evidence sufficient to support a contention that the 100 Mt of CO₂ from the Extension Project is earmarked for some priority treatment relative to other coal sufficient to put it in the top 10% of candidates for inclusion in the budget.

88 I should say that, whilst the applicants' contention about risk is stronger on the basis of there being a real prospect of the 100 Mt of CO₂ being emitted on or after average surface temperature has reached 2°C, the contention does not depend upon that. The contention depends upon the plausible prospect that surface temperature will reach a point where a 'tipping cascade' will be triggered even by a fractional increase in temperature. As that fractional increase will be the product of an accumulation of CO₂, it is not essential to the applicants' contention that the 100 Mt of CO₂ is emitted outside of the 'carbon budget'. What is essential is that the emission does not occur after the 'tipping cascade' is triggered. No one contended for that proposition and, on the evidence I do not think it was available.

89 The Minister also suggested that the applicants' position relied upon demonstrating that a 2°C Future World was the most likely scenario and that the applicants had overstated Professor Steffen's evidence on that point because, when properly analysed, Professor Steffen was really saying that a stabilised average global temperature of about 1.8°C was the most likely scenario. There are some differences in the way that Professor Steffen has described the stabilised average global temperature for his "Scenario 1". It is variously described as "at, or very close to, 2°C", "around 2°C", "approximately 2°C", "a 2°C target", and on one occasion he said "approximately equivalent to, or slightly higher than the upper Paris [A]ccord target of 'well below 2°C'". Read in context, the better view is that when Professor Steffen was referring to the stabilised average global temperature for his "Scenario 1" he meant 2°C or slightly lower but not "well below 2°C" and not the upper target of the Paris Agreement.

90 In any event, the applicants did not say that a 2°C Future World is the most likely scenario. Their contention was that a 2°C Future World is a plausible possibility in circumstances where at temperatures at or slightly lower than 2°C, there is a small (but non-zero) probability that a tipping cascade will trigger a 4°C Future World trajectory. Professor Steffen's unchallenged evidence establishes that trajectory as a plausible scenario, should the global average surface temperature exceed 2°C or slightly lower. That was a necessary element of the applicants' contention and it was established.

4. DOES THE MINISTER OWE THE CHILDREN A DUTY OF CARE?

91 The applicants, who are all less than 18 years of age, contend that the Minister owes a duty of care to them and the class of persons they represent. The class description was originally identified as children born before the date the proceeding was filed who ordinarily reside in Australia or elsewhere, but during the course of the proceeding the applicants limited the relief sought to children residing in Australia. I have therefore proceeded on the basis that the relief claimed, including the scope of the duty of care claimed, is limited to Australian children including the applicants.

92 Although formulated a little differently by the applicants' Amended Concise Statement (and with my adjustment to take into account that relief is now limited to Australian children), the content of the posited duty as described by the applicants' submissions is the duty of the Minister to exercise her power under s 130 and s 133 of the EPBC Act with reasonable care to not cause the Children harm resulting from the extraction of coal and emission of CO₂ into the Earth's atmosphere. The type of harm that the applicants assert the duty should cover is mental or physical injury, including ill health or death, as well as damage to property and economic loss.

93 As formulated by the applicants, the duty would extend to any decision under s 130 and s 133 of the EPBC Act involving the extraction of *any* amount of coal. However, the evidence and submissions made were not directed to any extraction of coal but were focused specifically on the Extension Project and the Minister's prospective decision to approve or not approve the extraction of 33 Mt of coal and the consequent emission of 100 Mt of CO₂, which the applicants assert will make a reasonably foreseeable contribution to climate change and the risk of harm that the applicants fear. The applicants' case cannot support the establishment of a duty in respect of the Minister's approval of the extraction of any amount of coal, no matter how small. That is because reasonable foreseeability of harm is an essential pre-condition to the existence of a duty of care. It was not the applicants' case that it is reasonably foreseeable that the extraction and combustion of any amount of coal would cause the Children injury. The description of the asserted duty was not limited to the Extension Project and was not expressly limited by a reasonable foreseeability requirement. Such a requirement must, however, be implicit in the applicants' description of the duty of care asserted.

94 I will proceed on the basis that the duty of care asserted is not confined to the approval of the Extension Project but extends to an approval of the extraction of coal which foreseeably exposes the Children to harm. However, I can only conveniently assess whether such a duty exists by reference to the evidence and that evidence and, in particular, the evidence going to the reasonable foreseeability inquiry is specific to the Extension Project. I will therefore confine the findings I will make about the existence of a duty of care to the approval of the Extension Project. If those findings give rise to a duty of care that can be described in terms which extend beyond the Extension Project, I will consider a wider description after further submissions are made by the parties as envisaged by my concluding remarks in Section 9. For present purposes I will refer to the duty of care asserted by the applicants as "the posited duty of care" meaning a duty on the Minister to take reasonable care in the exercise of her statutory powers not to cause the Children harm arising from the extraction of coal from the Extension Project and the consequent emission of CO₂ into the Earth's atmosphere.

95 The existence of a duty of care is a necessary condition of liability in negligence: *Brookfield Multiplex Ltd v Owners Corporation Strata Plan 61288* (2014) 254 CLR 185 at [19] (French CJ). The applicants do not identify any authority holding that the posited duty of care exists in directly comparable factual circumstances. They ask the Court to find what is in such circumstances referred to as a "novel" duty of care.

4.1 Ascertaining whether a Novel Duty Exists – the Applicable Legal Principles

96 Whether a novel duty of care exists is to be ascertained by reference to a multi-factorial assessment in which considerations (**salient features**) relevant to the appropriateness of imputing a legal duty upon the putative tortfeasor are assessed and weighed. I discussed the appropriate approach to the ascertainment of a novel duty of care in *Plaintiff S99/2016 v Minister for Immigration and Border Protection* (2016) 243 FCR 17 at [201]-[229]. The principles there discussed are not in contest and were relied upon by the parties. For convenience the discussion of those principles is here updated but largely repeated.

97 A salient features approach was adopted by Allsop P (with whom Simpson J agreed) as applicable to determining whether a novel duty of care exists in *Caltex Refineries (Qld) Pty Ltd v Stavar* (2009) 75 NSWLR 649, at [102]. Relevantly, his Honour said this (emphasis added):

This rejection of any particular formula or methodology or test the application of which will yield an answer to the question whether there exists in any given circumstance a duty of care, and if so, its scope or content, has been accompanied by the identification of an approach to be used to assist in drawing the conclusion whether in novel circumstances the law imputes a duty and, if so, in identifying its scope or content. If the circumstances fall within an accepted category of duty, little or no difficulty arises. *If, however, the posited duty is a novel one, 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.*

98 At [103] his Honour set out a list of seventeen salient features. They are these:

- (a) the foreseeability of harm;
- (b) the nature of the harm alleged;
- (c) the degree and nature of control able to be exercised by the defendant to avoid harm;
- (d) the degree of vulnerability of the plaintiff to harm from the defendant’s conduct, including the capacity and reasonable expectation of a plaintiff to take steps to protect itself;
- (e) the degree of reliance by the plaintiff upon the defendant;
- (f) any assumption of responsibility by the defendant;
- (g) the proximity or nearness in a physical, temporal or relational sense of the plaintiff to the defendant;
- (h) the existence or otherwise of a category of relationship between the defendant and the plaintiff or a person closely connected with the plaintiff;
- (i) the nature of the activity undertaken by the defendant;
- (j) the nature or the degree of the hazard or danger liable to be caused by the defendant’s conduct or the activity or substance controlled by the defendant;
- (k) knowledge (either actual or constructive) by the defendant that the conduct will cause harm to the plaintiff;
- (l) any potential indeterminacy of liability;
- (m) the nature and consequences of any action that can be taken to avoid the harm to the plaintiff;
- (n) the extent of imposition on the autonomy or freedom of individuals, including the right to pursue one’s own interests;
- (o) the existence of conflicting duties arising from other principles of law or statute;
- (p) consistency with the terms, scope and purpose of any statute relevant to the existence of a duty; and
- (q) the desirability of, and in some circumstances, need for conformance and coherence in the structure and fabric of the common law.

99 *Stavar* has been followed in intermediate appellate courts (*Makawe Pty Limited v Randwick City Council* [2009] NSWCA 412 at [17] (Hodgson JA) and [92]–[94] (Simpsons J); *Hoffmann v Boland* [2013] NSWCA 158 at [31] (Basten JA) and [127]–[130] (Sackville JA); *Ku-ring-gai Council v Chan* [2017] NSWCA 226 at [68] (Meagher JA; McColl JA and Sackville AJA agreeing at [1] and [115] respectively); *Fuller-Wilson v State of New South Wales* [2018] NSWCA 218 at [14] (Basten JA; White JA and Emmett AJA agreeing at [90] and [102] respectively)) and in this Court (*Hopkins v AECOM Australia Pty Ltd (No 3)* [2014] FCA 1043 at [26] (Nicholas J); *Carey v Freehills* [2013] FCA 954 at [313]–[317] (Kenny J)). As Kenny J stated in *Carey*, by reference to *Makawe* and *Hoffmann*, the salient factors listed by Allsop P were not exhaustive (at [316]). It is not necessary to make findings in relation to each factor. Rather, as Basten JA said at [31] of *Hoffmann*, the features provide a “valuable checklist” of the kinds of factors that can be of assistance: “[e]ach involves considerations of varying weight; some will be entirely irrelevant”, and it is necessary to “focus upon the considerations which are relevant in the circumstances of the particular case.”

100 Kenny J’s discussion in *Carey* traces the rejection in the High Court of the doctrine of proximity as a determinative factor and the adoption of a salient features approach to the determination of whether a novel duty of care is established. Her Honour relevantly said this at [313] (emphasis in original):

Where a duty of care is claimed to have arisen in a **new** circumstance or with respect to a new category of relationships, Australian law now requires a multi-factorial approach in assessing whether a duty of care has indeed arisen. As the New South Wales Court of Appeal noted in *Caltex Refineries (Qld) Pty Ltd v Stavar* [2009] NSWCA 258; (2009) 75 NSWLR 649 (*Caltex v Stavar*) 675 [101], the High Court has rejected the doctrine of proximity as a determinative factor in deciding whether a duty of care existed, as well as “the two stage approach in *Anns v Merton London Borough Council* [1977] UKHL 4; [1978] AC 728 based on reasonable foreseeability, the expanded three stage approach in *Caparo Industries Plc v Dickman* [1990] 2 AC 605 [*Caparo v Dickman*] and any reformulation of the latter two”. See, for example, *Hill v van Erp* at 210 (McHugh J), 237-239 (Gummow J), *Perre v Apand Pty Ltd* [1999] HCA 36; (1999) 198 CLR 180 at 193-194 [9]- [10] (Gleeson CJ), 197-198 [25]-[27] (Gaudron J), 208-213 [70]-[83], 216 [93] (McHugh J), 268 [245]-[247], 273 [255], 285 [280]-[287] (Kirby J), 303 [330]-[335] (Hayne J), 319 [389], 324 [398]-[400], 326 [406] (Callinan J); *Sullivan v Moody* (2001) 207 CLR 562 at 577-580 [43]-[53] (Gleeson CJ, Gaudron, McHugh, Hayne and Callinan JJ); *Graham Barclay Oysters Pty Ltd v Ryan* [2002] HCA 54; (2002) 211 CLR 540 at 583 [99] (McHugh J), 625 [234]-[236] (Kirby J); and *Stuart v Kirkland-Veenstra* [2009] HCA 15; (2009) 237 CLR 215 at 260 [132] (Crennan and Kiefel JJ).

101 To those authorities may be added the support for a multi-factorial approach found in *Brookfield* at [24] (French CJ) where his Honour said (citing *Sullivan v Moody* (2001) 207 CLR 562 at [50]) that “different classes of case raise different problems, requiring a ‘judicial evaluation of the factors which tend for or against a conclusion, to be arrived at as a matter of principle’”.

102 It is recognised in the authorities that cases in which the defendant is a repository of a statutory power or discretion are in a special class of case (see, e.g., *Sullivan v Moody* at [50] (Gleeson CJ, Gaudron, McHugh, Hayne and Callinan JJ); *Hunter and New England Local Health District v McKenna* (2014) 253 CLR 270 at [17]-[18] (French CJ, Hayne, Bell, Gageler and Keane JJ)). Liability in special cases is sometimes limited or negated, for reasons of policy (c.f. *D’Orta-Ekenaike v Victoria Legal Aid* (2005) 223 CLR 1 at [102] (McHugh J)).

103 Intermediate appellate courts have recognised that “[t]here is no authoritative guidance from the High Court for the determination of when a common law duty of care exists with respect to the exercise of statutory power” (*Hunter Area Health Service v Presland* (2005) 63 NSWLR 22 at [7] (Spigelman CJ); see also *Sutherland Shire Council v Becker* [2006] NSWCA 344 at [19] (Giles JA), [82] (Bryson JA)). The absence of a guiding principle has also been recognised by Crennan and Kiefel JJ in *Stuart v Kirkland-Veenstra* (2009) 237 CLR 215 at [131].

104 However, recent judgments of the High Court that have adopted a salient features methodology exemplify the approach to be taken and identify the factors which ordinarily are of the greatest significance when determining whether a novel duty of care is established in respect of the exercise of statutory power. As Spigelman CJ in *Presland* said at [10], the salient features approach to the exercise of a statutory power is exemplified in the joint judgment of Gummow J and Hayne J in *Graham Barclay Oysters Pty Ltd v Ryan* (2002) 211 CLR 540 (later endorsed by Gummow, Hayne and Heydon JJ in *Stuart* at [112]-[113]) where at [146]-[149] their Honours said this (footnotes omitted):

The existence or otherwise of a common law duty of care allegedly owed by a statutory authority turns on a close examination of the terms, scope and purpose of the relevant statutory regime. The question is whether that regime erects or facilitates a relationship between the authority and a class of persons that, in all the circumstances, displays sufficient characteristics answering the criteria for intervention by the tort of negligence.

Where the question posed above is answered in the affirmative, the common law imposes a duty in tort which operates alongside the rights, duties and liabilities created by statute.

...

An evaluation of whether a relationship between a statutory authority and a class of persons imports a common law duty of care is necessarily a multi-faceted inquiry. Each of the salient features of the relationship must be considered. The focus of analysis is the relevant legislation and the positions occupied by the parties on the facts as found at trial. It ordinarily will be necessary to consider the degree and nature of control exercised by the authority over the risk of harm that eventuated; the degree of vulnerability of those who depend on the proper exercise by the authority of its powers; and the consistency or otherwise of the asserted duty of care with the terms, scope and purpose of the relevant statute.

105 Two important observations flow from that passage. *First*, whether a duty is owed by a statutory authority requires a close examination of the terms, scope and purpose of the relevant statutory regime. That point has been repeatedly emphasised in the authorities: *Graham Barclay Oysters* at [78] (McHugh J) and at [213] (Kirby J); *Stuart* at [113] (Gummow, Hayne and Heydon JJ); *Sullivan v Moody* [55]-[62] (Gleeson CJ, Gaudron, McHugh, Hayne and Callinan JJ). *Second*, whilst the ultimate question is whether a requisite relationship exists between the statutory authority and a class of persons, the criteria for assessing whether that relationship exists, and thus whether the tort of negligence will intervene, is to be found in the salient features of that relationship. I would respectfully agree with Spigelman CJ who at [11] of *Presland* stated that four matters (salient features) of significance came out of the above passage:

the purpose to be served by the exercise of the power;

the control over the relevant risk by the repository of the power;

the vulnerability of the persons put at risk; and

coherence.

106 It is necessary, however to bear in mind, as Gummow and Hayne JJ observed at [145] of *Graham Barclay Oysters* that it is “[t]he totality of the relationship between the parties ... [which] is the proper basis upon which a duty of care may be recognised”. As the Minister correctly contended, whether a requisite relationship which gives rise to a duty of care is established must be assessed by reference to all the relevant salient features, although the starting point should be the statute and the nature of power conferred upon the respondent.

107 What is further emphasised by the authorities is that in determining whether a novel duty arises it is appropriate and necessary to reason analogically from decided cases (*Crimmins v Stevedoring Industry Finance Committee* (1999) 200 CLR 1 at [76] (McHugh J); *Brookfield* at [25] (French CJ)). The search is for principle. Whilst, as the High Court said in *Sullivan v Moody* at [49], there are “policies at work in the law which can be identified and applied to novel problems”, the law of torts “develops by reference to principles, which must be capable of general application, not discretionary decision-making in individual cases”.

108 That observation from *Sullivan v Moody* was elaborated upon by Nettle J in a helpful summation of the elements which influence the determination of whether a duty of care is owed. In *King v Philcox* (2015) 255 CLR 304 at [80], his Honour said this (references omitted):

As Deane J concluded in *Jaensch*, the question of whether a duty of care is owed in particular circumstances falls to be resolved by a process of legal reasoning, by induction and deduction by reference to the decided cases and, ultimately, by value judgments of matters of policy and degree. Although the concept of “proximity” that Deane J held to be the touchstone of the existence of a duty of care is no longer considered determinative, it nonetheless “gives focus to the inquiry”. It does so by directing attention towards the features of the relationships between the parties and the factual circumstances of the case, and prompting a “judicial evaluation of the factors which tend for or against a conclusion” that it is reasonable (in the sense spoken of by Gleeson CJ in *Tame*) for a duty of care to arise. That these considerations may be tempered or assisted by policy considerations and value judgments is not, however, an invitation to engage in “discretionary decision-making in individual cases”. Rather, it reflects the reality that, although “[r]easonableness is judged in the light of current community standards”, and the “totality of the relationship[s] between the parties” must be evaluated, it is neither possible nor desirable to state an “ultimate and permanent value” according to which the question of when a duty arises in a particular category of case may be comprehensively answered.

109 In summary:

- (1) The approach to determining whether a duty of care exists is multi-factorial (*Stavar* at [102]-[103]; *Makaweat* [17], [92]-[94]; *Hoffmann* at [31], [127]-[130]; *Carey* at [313]-[317]; *Brookfield* at [24]).
- (2) The seventeen factors listed by Allsop P in *Stavar* are a valuable checklist as to the kinds of matters that may be relevant in a multi-factorial analysis (*Hoffmann* at [31]; *Carey* at [316]). But they are not exhaustive, not all considerations will be relevant in each case, and the considerations that are relevant will be of various weights (*Carey* at [316]; *Stavar* at [104]).
- (3) The case where the respondent is a repository of statutory power or discretion is a special class of case, which raises its own problems (*Sullivan v Moody* at [50]; *McKenna* at [17]-[18]). However, the correct approach remains multi-factorial (*Presland* at [7], [9]-[10]; *Becker* at [19] and [82]; *Stuart* at [131]-[133]).
- (4) In such cases, however, certain factors listed in *Stavar* assume especial relevance. Coherence with the statutory scheme and policy considerations are of critical importance (*Stuart* at [113]; *Presland* at [11]; *Crimmins* at [93]; *Graham Barclay Oysters* at [146]). So, too, may be control, reliance, vulnerability, and the assumption of responsibility (see, variously, *Stuart* at [133]; *Graham Barclay Oysters* at [81], [149], [151]; *Presland* at [11]; *Sutherland Shire Council v Heyman* (1985) 157 CLR 424 at 486 (Brennan J) and 498 (Deane J); *Pyrenees Shire Council v Day* (1998) 192 CLR 330 at [115] (McHugh J) and [168] (Gummow J); *Crimmins* at [93], [104], [108] (McHugh J)).

110 Some further, more general observations about the law of negligence should also be kept in mind. The broad principle which underlies liability in negligence is stated in the famous speech of Lord Atkin in *Donoghue v Stevenson* [1932] AC 562 at 580 and, in particular, its reference to the neighbourhood principle (emphasis added):

At present I content myself with pointing out that in English law there must be, and is, some general conception of relations giving rise to a duty of care, of which the particular cases found in the books are

but instances. The liability for negligence, whether you style it such or treat it as in other systems as a species of “culpa,” is no doubt based upon a general public sentiment of moral wrongdoing for which the offender must pay. But acts or omissions which any moral code would censure cannot in a practical world be treated so as to give a right to every person injured by them to demand relief. In this way rules of law arise which limit the range of complainants and the extent of their remedy. *The rule that you are to love your neighbour becomes in law, you must not injure your neighbour; and the lawyer's question, Who is my neighbour? receives a restricted reply. You must take reasonable care to avoid acts or omissions which you can reasonably foresee would be likely to injure your neighbour. Who, then, in law is my neighbour? The answer seems to be—persons who are so closely and directly affected by my act that I ought reasonably to have them in contemplation as being so affected when I am directing my mind to the acts or omissions which are called in question.*

111 Referring to that passage in *Perre v Apand Pty Ltd* (1999) 198 CLR 180 at [100], McHugh J said this (emphasis in original, references omitted):

In determining whether the defendant owed a duty of care to the plaintiff, the ultimate issue is always whether the defendant in pursuing a course of conduct that caused injury to the plaintiff, or failing to pursue a course of conduct which would have prevented injury to the plaintiff, *should have had* the interest or interests of the plaintiff in contemplation before he or she pursued or failed to pursue that course of conduct. That issue applies whether the damage suffered is injury to person or tangible property or pure economic loss. If the defendant should have had those interests in mind, the law will impose a duty of care. If not, the law will not impose a duty.

112 The enduring importance of the neighbourhood principle espoused by Lord Atkin to the analysis of whether a duty of care exists may be observed in the conclusion expressed by French CJ, Gummow, Hayne, Crennan and Bell JJ in *Sydney Water Corporation v Turano* (2009) 239 CLR 51 at [53]; see also Nettle J in *King* at [79]; and see Balkin R and Davis JLR, *Law of Torts* (5th edition, LexisNexis Butterworths, 2013) pp 202-203.

113 A second observation made in *Donoghue v Stevenson*, but on this occasion by Lord Macmillan at 619, is also of importance, particularly in the context of a court being asked to recognise a novel duty (emphasis added):

In the daily contacts of social and business life human beings are thrown into, or place themselves in, an infinite variety of relations with their fellows; *and the law can refer only to the standards of the reasonable man* in order to determine whether any particular relation gives rise to a duty to take care as between those who stand in that relation to each other. *The grounds of action may be as various and manifold as human errancy; and the conception of legal responsibility may develop in adaptation to altering social conditions and standards. The criterion of judgment must adjust and adapt itself to the changing circumstances of life.*

114 Referring to that passage, Gleeson CJ in *Tame v New South Wales* (2002) 211 CLR 317 at [14] stated that the issue of reasonableness is “at the heart of the law of negligence” and that “[r]easonableness is judged in the light of current community standards”: see further Nettle J in *King* at [92] and at [97] where his Honour assessed what is reasonable by reference to “contemporary social conditions and community standards”. Those observations are echoed by McHugh J who at [97] of *Tame* stated that in the law of negligence a risk “was regarded as unreasonable and one to be prevented only if reasonable members of the community would think it sufficiently great to require preventative action”. Those observations were also referred to by Basten JA in *Stavar* at [160], his Honour observing at [163] that the existence of a duty depends on matters of both fact and evaluative judgment.

115 As is apparent from the observation of McHugh J at [100] in *Perre* (set out at [111] above), the perspective from which the existence of the duty of care is to be assessed is prospective. That is so because the “ultimate

issue” is whether the alleged tortfeasor should have had the interests of the claimant in contemplation *before* it pursued or failed to pursue a course of conduct: see further *Stavar* at [177] (Basten JA).

4.2 The Law’s Adaptation to Altering Social Conditions – The Early Environmental Cases

116 The recognition of a novel duty of care represents a development in the law. As the common law develops in this manner, new legal rights are conferred on some persons and corresponding legal obligations are imposed on others. Lord Macmillan’s famous statement in *Donoghue v Stevenson*, extracted above at [113], recognises that the common law will respond to human errancy by imposing legal responsibility and, driven by the standards of the reasonable person, sensitive as they must be to the changing circumstances of human existence, the “conception of legal responsibility may develop in adaptation to altering social conditions and standards”(Donoghue v Stevenson at 619 (Lord Macmillan)).

117 In this case, the law is being asked to respond to altering social conditions brought about by human interference to the natural environment. The deterioration of social conditions brought about by the degradation of the habitat or the environment in which people live and on which they rely has been a constant impetus for the development of the common law. It is instructive to briefly consider the history of the development of the torts of nuisance and negligence with a focus upon the early cases which had to grapple with how the law should address the ever-increasing capacity of human beings to alter the environment to the detriment of others with whom that environment is shared. Relevantly, some of the early cases involved environmental damage done in the performance of a statutory authority or power. The following brief review of the early cases largely adopts that which was helpfully provided in the applicants’ written submission.

118 As early as the 12th century, the assize of nuisance lay for loss of profit through the defendant’s interference with incorporeal rights, such as the plaintiff’s rights of way, watercourse or pasture on the plaintiff’s land but exercised over other land (see Kiralfy AKR, *Potter’s Historical Introduction to English Law and its Institutions* (4th ed, Sweet & Maxwell, 1958) p 420).

119 By the 13th century, the assize of nuisance was also used for interference with the enjoyment of the plaintiff’s land by making that land unusable or uninhabitable, such as from fumes, fires, the diversion of a watercourse or raising a mill pond so that it floods the plaintiff’s land (Kiralfy (1958) p 420). For example, in *Dalby v Berch* (1330) Y.B. Trin. 4 Edw. III, fo. 36, pl. 26, the claimant was awarded damages for pollution that had rendered his house uninhabitable as a result of noxious gases from the defendant’s lime-kiln.

120 In *Hulle v Orynge* (1466) Y.B. Mich. 6 Edw. IV, fo. 7, pl. 18 (the *Case of the Thorns*), a majority of the King’s Bench held that if a person damages another’s property, there is a tort even if the action that caused such damages was itself lawful. In writing a concurring opinion, Pigot (a lawyer) is reported to have held that “if a man has a fish-pond in his manor and he empties the water out of the pond to take the fishes and the water floods my land, I shall have a good action, and yet the act was lawful”. Similarly, Brian (a lawyer) is reported to have held that “[w]hen any man does an act, he is bound to do it in such a manner that by his act no prejudice or damage is done to others”: see Fifoot CHS, *History and Sources of the Common Law: Tort and Contract* (Stevens and Sons Limited, 1949) pp 195-197.

121 During the 16th and 17th centuries, the action on the case supplanted the assize (Kiralfy (1958) p 423). Actions on the case made relief available for harm suffered by “offensive trades” (Kiralfy (1958) p 424). In *William Aldred’s Case* (1610) 77 ER 816, the plaintiff claimed the defendant had erected and used a pigsty too close to his house such that the stink (or the “stopping of the wholesome air”), among other things, made his own house unbearable to live in (at 821). In *Boynton v Gill* (1640) Rolle’s Abr. Nusans, fo. 90, pl. 7, the court held that where a trade was an annoyance it must be carried out in ‘waste places’ where no one would suffer damage: (Kiralfy (1958) p 425).

122 Until the recognition in modern times of negligence as a tort in itself, many actions on the case that today would be described as negligence were historically described as nuisance (*Hargrave v Goldman* (1963) 110 CLR 40 at 61-62 (Windeyer J)). The modern tort of negligence can be traced back to *Mitchil v Alestree* (1676) 1 Vent 295. In that case, a man who brought an unruly horse into Lincoln’s Inn Fields (to break the horse in) was held liable for an injury to a passer-by. The claim was based not on particular knowledge of the animal’s unruliness,

but on the broad ground that the whole operation was clearly likely to lead to someone being hurt (Kiralfy (1958) p 387).

123 In the 12th to 17th centuries, the power of humans to cause injury was generally limited by physical proximity, except where nature provided an intermediate causal agent, such as water, fire, air or wild animals. By 1768, at about the time the Industrial Revolution was commencing, the author of Buller's *An Institute of the Law Relative to Trials at Nisi Prius* wrote that "[e]very man ought to take reasonable Care that he does not injure his Neighbour; therefore, where-ever a Man receives any Hurt through the Default of another, though the same were not wilful, yet if it be occasioned by Negligence or Folly, the Law gives him an Action to recover Damages for the Injury so sustained": see Cornish WR, Banks S, Mitchell C, Mitchell P, Probert R *Law and Society in England 1750-1950* (2nd ed, Hart Publishing, 2019) p 461.

124 During the 19th century, the various actions on the case were developed into the separate torts of nuisance and negligence.

125 Private nuisance cases increased in response to the impact of the Industrial Revolution on the local environment. In 1808, a visitor of Manchester said "the steam engine is pestiferous, the Dyehouses noisome and offensive, and the water of the river as black as ink or the Stygian Lake" (McLaren JPS, "Nuisance Law and the Industrial Revolution – Some Lessons from Social History" (1983) 3(2) *Oxford Journal of Legal Studies* p 164-165). In 1835, when a French statesman known as de Tocqueville visited Manchester, he observed, "[a] sort of black smoke covers the city. The sun seen through it is a disc without rays" (McLaren (1983) p 165).

126 In *Attorney-General v Council of the Borough of Birmingham* (1858) 70 ER 220, the Court granted an interim injunction against public sewage works ordered by an Act of Parliament pursuant to which Birmingham Council was dumping sewage into the River Tame which ran through the plaintiff's property. An undertaking was also given "to prevent the pollution of the river Tame, so as to render it injurious to the inhabitants of the houses adjoining its course, and also to prevent its being so polluted as to become offensive and unfit for use" (at 228).

127 In *Hole v Barlow* (1858) 4 CBNS 334 it was held that, as long as the defendant's use of the land was itself proper and convenient, then such use could not be a nuisance even if it interfered with the plaintiff's use and enjoyment of their land. That view was not followed in *Bamford v Turnley* (1862) 122 ER 27. In that case, the defendant's burning of bricks in a kiln emitted noxious fumes to the surrounding area, making his neighbours and their servants ill. In delivering separate reasons from the majority, Bramwell B also rejected the argument that the defendant's actions were lawful because they were for the public benefit (at 33-34).

128 In *St Helens Smelting Co v Tipping* (1865) 11 ER 1483, the House of Lords dismissed an appeal from the verdict of a jury awarding damages to the plaintiff on the basis that certain noxious vapours emitted by the defendant's smelting plant damaged the plaintiff's trees, hedges and plants. The copper smelting plant had drastic effects on the environment. In delivering judgment, Lord Westbury LC (with whom Lord Cranworth and Lord Wensleydale agreed) affirmed the jury's verdict and rejected the appellant's argument that it was entitled to carry on copper smelting with "impunity" (as the whole neighbourhood was a manufacturing neighbourhood), despite the fact this may have resulted in the "utter destruction, or the very considerable diminution" of the value of the plaintiff's property (at 1487).

129 The courts also recognised potential issues of causation at a time when pollution was widespread. The English Court of Appeal held in *Crossley and Sons Ltd v Lightowler* [1867] LR 2 Ch App 478 that the fact that a stream was fouled by others was not a defence to a suit to restrain the fouling by the defendant. In this respect, Lord Chelmsford LC stated (at 483): "[t]he Defendants cannot justify their interference with the Plaintiffs' right to have the water of [the stream] in the state in which it would be without their additional pollutions".

130 Concern about the risks inherent in industrial activities led to the imposition of strict liability for hazardous activities in some cases. In *Fletcher v Rylands* (1865-1866) LR 1 Ex 265 at 280 (upheld on appeal in *Rylands v Fletcher* (1868) LR 3 HL 330), Blackburn J gave as a particular instance of a person who should have an action for damages, "[t]he person ... whose habitation is made unhealthy by the fumes and noisome vapours of his neighbour's alkali works".

131 The 19th century also saw the development of negligence as an independent tort. Sir Percy Winfield attributed its rise to “industrial machinery. Early railway trains, in particular, were notable neither for speed nor for safety. They killed any object from a Minister of State to a wandering cow, and this naturally reacted on the law” (Winfield PH, “The History of Negligence in the Law of Torts” (1926) 42(2) *The Law Quarterly Review* p 195). The power to cause harm was enhanced by the Industrial Revolution, so that it no longer relied on natural intermediaries such as fire, water or wild animals, but extended to industrial poisons and pollutants (albeit still often borne by air or water) and machines.

132 By 1856, the courts had provided a general definition of negligence: “the omission to do something which a reasonable man, guided by those considerations which ordinarily regulate the conduct of human affairs, would do, or doing something which a prudent and reasonable man would not do” (*Blyth v Birmingham Waterworks* (1856) 156 ER 1047 at 1049 (Alderson B)).

133 By 1883, the development of a requirement of a ‘duty of care’ in negligence was well underway. In *Heaven v Pender* (1883) QBD 503 at 509, Brett MR stated the circumstances in which a relationship was created such that “a duty arises to use ordinary care and skill to avoid such danger”. However, it should be noted that although Cotton and Bowen LJ agreed in the result in that case, they did not agree with the broader principle proposed by Brett MR (at 516-517).

134 In the 19th century, the growth of industrialised activity by persons or bodies acting under statutory powers saw actions against them in which it was consistently held that the conferral of authority or discretionary power under statute was no defence to a private law action in tort. In *Weld v The Gas-Light Company* (1816) 171 ER 442, Lord Ellenborough stated “I am clearly of opinion, that where any Company, such as the Gas-Light Company, is entrusted with the execution of a power from which mischief may result to the community, they are bound to execute it as innocently as they can ...” (at 442).

135 In *Geddis v Proprietors of the Bann Reservoir* [1878] 3 App Cas 430, the House of Lords held the reservoir proprietors liable to neighbouring landowners when releasing water onto the land which destroyed the landowner’s crops. Lord Blackburn held (at 455- 456):

[I]t is now thoroughly well established that no action will lie for doing that which the legislature has authorized, if it be done without negligence, although it does occasion damage to anyone; but an action does lie for doing that which the legislature has authorized, if it be done negligently. And I think that if by a reasonable exercise of the powers, either given by statute to the promoters, or which they have at common law, the damage could be prevented it is, within this rule, “negligence” not to make such reasonable exercise of their powers.

136 Courts of equity would grant an injunction to restrain tortious conduct, although done in performance of a statutory authority or discretionary power, provided the conduct was not required by Parliament. In *Attorney-General v Colney Hatch Lunatic Asylum* (1868) LR 4 Ch App 146, the Court of Appeal in Chancery decreed that an injunction should be granted (but suspended for three months) to restrain visiting magistrates of an asylum, who were exercising a statutory power, from allowing the sewage from that asylum into a stream. Lord Hatherley LC rejected an argument that Parliament was responsible because it had conferred the power to build the asylum (at 159). To similar effect, Selwyn LJ observed at 165 that “an Act of Parliament merely authorizing the erection of such an asylum cannot justify an interference with the rights of neighbours to the extent contended for”.

137 That historical review of the cases is of some assistance. However, there are limitations which should be recognised. Although of contextual assistance, many of the cases concern the law of nuisance and not the law of negligence with which I am here concerned. Secondly, later developments in the law must be brought to account. Nevertheless, the cases reviewed demonstrate the willingness of the common law to respond to changing social conditions including those brought about by the increasing power of human beings to cause harm to others. That is the context in which the applicants contend that because today’s adults have gained previously unimaginable power to harm tomorrow’s adults, the common law should now impose correlative responsibility.

4.3 The Methodology of Development of the Common Law

138 The applicants do not shy from the proposition that their case calls for a development in the law. They accept that legal principles which control the capacity of a court to develop the law are applicable. They contend, however, that the common law is not a set of static rules. By reference to Windeyer J in *Skelton v Collins* (1966) 115 CLR 94 at 135, the applicants assert (and I accept) that the common law “is a body of principles capable of application to new situations, and in some degree of change by development”. The applicants’ submissions recognised that in the development of the law the doctrine of precedent should provide necessary stability (referring to Lord Goff’s observations in *Kleinwort Benson Ltd v Lincoln City Council* (1999) 2 AC 349 at 378), but emphasised that precedent will not always trump the need for desirable change in the law and that in developing the common law judges must “necessarily look to the present and to the future as well as to the past” (referring to observations made in *Perre* at [92] by McHugh J as adopted in *Brodie v Singleton Shire Council* (2001) 206 CLR 512 by Gaudron, McHugh and Gummow JJ at [108]).

139 Both parties accept that in the development of the law of negligence by the recognition of a novel duty of care the method of development is analogical. It is, as mentioned above, appropriate and necessary to reason analogically from decided cases.

140 The applicants submitted that their case proceeds by analogical reference to two categories of negligence. *First*, the applicants referred to the *Speirs* line of authority (*Caledonian Collieries Ltd v Speirs* (1957) 97 CLR 202), which holds that statutory powers must be exercised with reasonable care and that the common law may impose liability for harm caused by their negligent exercise. *Second*, the applicants referred to what they called the *Rylands v Fletcher* line of authority, which holds a person liable for harm caused by dangerous things which escape from that person’s land.

141 The Minister does not challenge the foundational proposition said by the applicants to flow from each of the lines of authority upon which the applicants relied. The Minister contended, however, that there is no relevant analogy between this case and the two lines of authority relied upon by the applicant. The Minister drew upon various distinctions between this case and the lines of cases relied upon by the applicants. Conversely, the applicants emphasised the similarities and sought to diminish the significance of any differences.

142 Neither approach is to be criticised. Each involved analogical reasoning. It is not necessary to reason from any particular line of authorities, although the *Speirs* line is a helpful source of guidance. Having regard to the salient features relevant to this case, it is informative to reason analogically from those cases which are most closely analogous to this case. That is the essence of the approach taken by the parties and the approach that I will adopt.

4.4 The Salient Features to Be Considered

143 The exercise in which I am engaged is that of undertaking a close analysis of the facts which bear upon the relationship between the Minister and the Children. That analysis is to be conducted by reference to those salient features which indicate whether a legal duty should be imposed upon the Minister to take reasonable care to avoid harm or injury to the Children: *Stavar* at [102] (Allsop P). That expression of the Court’s task as well as the description of the duty as a ‘duty of care’ are themselves revealing of the nature of the relationship required to impute to one person a duty of care in respect of another. The law often imposes legal obligations upon persons charged with the responsibility to care, look out for or, at the least, do no harm to the interests of others. What is it in the facts of this case that tends to affirm a conclusion that the Minister bears a responsibility to look out for and take care to avoid her conduct inflicting harm upon the Children? Why, to adopt the question flowing from the neighbourhood principle and which McHugh J in *Perre* at [100] posed as the “ultimate issue”, should the Minister have the interests of the Children in contemplation when she exercises her power to approve the extraction of coal and its consequential emission of carbon into the atmosphere? If the Minister should have the interests of the Children in mind “the law will impose a duty of care” and “[i]f not, the law will not impose a duty of care” (*Perre*, at [100] (McHugh J)). The simplicity expressed by that query somewhat belies the underlying complexity required for an answer by a close analysis of the facts against the salient features. But in the search for that answer the subject of the question (should A have had the interests of B in contemplation) should not be lost.

144 In order to focus the later discussion on those salient features which require detailed consideration, it is convenient that I now identify the salient features relied upon by each of the parties in support of the argument each made.

145 The applicants emphasised the degree and nature of control able to be exercised by the Minister to avoid harm (**‘control’**), the vulnerability of the Children (**‘vulnerability’**), the reasonable foreseeability and nature of the harm (**‘reasonable foreseeability’**) as well as a recognised category of relationship between the Minister and the Children (**‘recognised relationship’**) as of especial importance. They contended that each of those salient features supported the recognition of the posited duty of care. There are a number of salient features which need to be considered. I ultimately conclude that each of those salient features tend to support a duty of care being recognised. Those salient features are affirmative of a duty of care being recognised and for that reason I shall refer to them by that designation. They are dealt with in the following section.

146 The Minister contended that the posited duty was extraordinary, submitting that there is no precedent for a duty analogous to the duty contended for by the applicants. Of the salient features addressed, the Minister argued that incoherence and inconsistency with the EPBC Act and public law principles (**‘coherence’**) was determinative. The Minister contended that **‘reasonable foreseeability’**, **‘control’**, the salient features of **‘proximity’**, **‘reliance and responsibility’** as well as **‘indeterminacy’** all supported the rejection of the duty for which the applicants contend. Insofar as I have concluded that any of those salient features tend towards the rejection of the posited duty I have addressed those in the section headed “The Negative Salient Features”.

147 There is one salient feature I should mention now. I regard **‘coherence’** as having especial importance to the outcome of this proceeding. My discussions of that salient feature appears much later in these reasons. The statutory scheme of the EPBC Act is of critical relevance to **‘coherence’** as a salient feature. However, the statutory scheme has broader relevance and an appreciation of it is necessary for my discussion of other of the salient features including **‘control’**. For that reason, an outline of the statutory scheme will follow.

148 There is one matter that I determine in my discussion of **‘coherence’** that has a consequent impact upon the scope of my discussion about each of the salient features. I have concluded that **‘coherence’** is determinatively against a duty of care being recognised which would require the Minister to take reasonable care to avoid harm to the Children beyond harm by way of personal injury. In other words, **‘coherence’** precludes the recognition of a duty of care extending to property damage or pure economic loss to which the Children may be exposed. My discussion of each of the salient features is premised on that conclusion.

4.5 The Statutory Scheme

149 The power which is the subject of the posited duty is a statutory power and for that reason the relevant statutory context provided by the EPBC Act looms large in my consideration of **‘coherence’** as a salient feature. The statutory power here in question is the power of the Minister to determine whether or not what the EPBC Act refers to as a “controlled action” should or should not be approved. That power is given by s 130 and s 133 of the EPBC Act. The statutory circumstances in which an action becomes a controlled action and the statutory context in which the Minister’s statutory discretion to approve or not approve such an action need to be outlined. I will do that commencing with the objects of the EPBC Act.

150 The objects of the EPBC Act include providing for the protection of the environment, especially those aspects of the environment that are matters of “national environmental significance”: s 3(1)(a). Section 3(1)(b) states that a further object is the promotion of “ecologically sustainable development” through the conservation and “ecologically sustainable use” of natural resources. Each of those terms used in s 3(1)(b) is defined. Section 528 provides the meaning of “ecologically sustained use” as the “use of the natural resources within their capacity to sustain natural processes while maintaining the life-support systems of nature and ensuring that the benefit of the use to the present generation does not diminish the potential to meet the needs and aspirations of future generations”. The principles of “ecologically sustainable development” are given meaning by s 3A which provides:

Principles of ecologically sustainable development

The following principles are *principles of ecologically sustainable development*:

- (a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations;
- (b) if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;
- (c) the principle of inter-generational equity—that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;
- (d) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making;
- (e) improved valuation, pricing and incentive mechanisms should be promoted.

151 Other objects listed in s 3(1) include to promote the conservation of biodiversity (para (c)); to provide for the protection and conservation of heritage (para (ca)); and to assist in the co-operative implementation of Australia's international environmental responsibilities (para (e)).

152 With those objectives, the EPBC Act establishes a protective scheme for those aspects of the environment specified by Pt 3 which include but are not limited to matters of “national environmental significance”. That is done, in substance, by providing the Minister with the capacity to determine whether the taking of action which has or is likely to have a “significant impact” on a protected aspect of the environment should be permitted to proceed: s 11. Broadly speaking, that is achieved by prohibiting a person from taking an action with such an impact unless the Minister has given approval for the action under Pt 9 of the EPBC Act or decided that approval is not required. A regime for determining whether or not approval is required is established by Pt 7. That Part requires that certain proposed actions be referred to the Minister for the Minister to decide whether any of the provisions in Pt 3 would prohibit the taking of the action.

153 If a person proposes to take an action that the person thinks may be or is a “controlled action”, the person must refer the proposal to the Minister for a decision as to whether or not the action is a controlled action: s 68(1). An action is a “controlled action” if the taking of the action by the person without approval under Pt 9 would be prohibited by a provision of Pt 3 of the EPBC Act: s 67. The provision of Pt 3 that would prohibit the action (if not approved) is the “controlling provision”: s 67. A person must not take a controlled action unless an approval is in operation under Pt 9 for the purposes of the relevant provision of Pt 3: s 67A. A person who has engaged, engages or proposes to engage in conduct consisting of an act that constitutes an offence or other contravention of the EPBC Act or the regulations may be restrained by injunction on the application of the Minister or an “interested person”: s 475. An “interested person” includes an Australian citizen whose interests have been, are or would be affected by the conduct or who has engaged in a series or activities for protection or conservation of, or research into, the environment at any time in the 2 years immediately before the conduct: s 475(6).

154 The aspects of the environment which are sought to be protected from an action with a “significant impact” upon them specified in Div 1 of Pt 3 are referred to as “matters of national significance” (see ss 74(2), 77(1)(a)(iii), 78B(5), 132(d)(ii)). Those matters are World Heritage properties (Subdiv A); National Heritage places (Subdiv AA); wetlands of international importance (Subdiv B); listed threatened species and communities (Subdiv C); listed migratory species (Subdiv D); a Commonwealth Marine Area (Subdiv F); and the Great Barrier Reef Marine Park (Subdiv FA). Beyond those “matters of national significance”, other aspects of the environment are also specified under Div 1 of Pt 3. Protection is there afforded to the environment generally from any nuclear action taken by a constitutional corporation, the Commonwealth or an agency of the Commonwealth (Subdiv E) and also to a water resource affected by a coal seam gas development or a large coal mining development of a constitutional corporation, the Commonwealth or

an agency of the Commonwealth (Subdiv FB). Additionally, matters of national environmental significance prescribed by regulations made under the EPBC Act are also protected (Subdiv G). Division 2 of Pt 3 sets out further matters which require approval. They are acts of the Commonwealth or a Commonwealth agency taken within or outside Australia which have or are likely to have a “significant impact” on the environment and acts in respect of Commonwealth land and Commonwealth heritage places located overseas.

155 The phrase “significant impact” is not defined but s 527E relevantly provides the following meaning for the word “impact”:

- (1) For the purposes of this Act, an event or circumstance is an *impact* of an action taken by a person if:
 - (a) the event or circumstance is a direct consequence of the action; or
 - (b) for an event or circumstance that is an indirect consequence of the action—subject to subsection (2), the action is a substantial cause of that event or circumstance.

156 As is apparent from the matters listed above, not all aspects of the environment are the subject of the scheme for approval established by the EPBC Act. The subject matters of those aspects of the environment which are covered suggests that constitutional limitations upon the legislative power of the Commonwealth Parliament shaped that coverage. It is particularly apparent, including by reference to the terms of ss 137, 138, 139 and 140, that the EPBC Act was enacted largely relying upon s 51(xxix) of the *Constitution* so as to give effect to Australia’s obligations under a number of environmental and world heritage treaties or conventions.

157 It is pertinent to note that whilst protection is afforded to various listed species and their habitats, neither the health, wellbeing nor survival of human beings, nor their habitats (by which I mean homes or private real property) are protected aspects of the environment directly specified by Pt 3. Actions with significant impacts on those subject matters are not prohibited subject to either the Minister’s approval or the Minister’s decision that approval is not required.

158 That people and in particular future generations of people, should be able to enjoy the “health, diversity and productivity” of the environment is, however, a matter emphasised by the “principle of inter-generational equity” expressed in s 3A(c). Further, “protection of the environment” is an object of the EPBC Act (s 3(1)(a)) and the definition of the term “environment” given by s 528 refers specifically to “people and communities”. The term is there defined as follows:

environment includes:

- (a) ecosystems and their constituent parts, including people and communities; and
- (b) natural and physical resources; and
- (c) the qualities and characteristics of locations, places and areas; and
- (d) heritage values of places; and
- (e) the social, economic and cultural aspects of a thing mentioned in paragraph (a), (b), (c) or (d).

159 Paragraph (a) addresses “people” directly and, by reason of para (e), the social, economic and cultural aspects of the subject matters otherwise dealt with by the definition must also be understood as dealing with the interests of people. From that definition and the statute read as a whole, the conclusion may be drawn that the object of the EPBC Act is not the protection of environment *per se* but the protection of the interests of human beings in the environment including, in particular, those aspects of the environment which are specified in Pt 3.

160 As the “controlled actions” of relevance to the application to approve the Extension Project are addressed by ss 18, 18A, 24D and 24E of the EPBC Act, additional reference should be given to those provisions including so as to illustrate, beyond the outline already given, the scheme of the EPBC Act for regulating action taken in respect of a protected subject matter. In this respect I adopt, with some variation, most of what was helpfully outlined in the Minister’s written submission.

161 Sections 18 and 18A protect certain categories of listed threatened species and ecological communities by prohibiting an action that will have, or is likely to have, a significant impact on those species or ecological communities. Contravention of s 18 results in the imposition of a civil penalty and s 18A creates offences. Subsections 19(1) and 19(2) exclude the operation of s 18 and s 18A in relation to an action if there is a relevant approval to take the action by the person in operation under Pt 9 of the EPBC Act.

162 Sections 24D and 24E protect water resources from action that involves a coal seam gas development or a large coal mining development by prohibiting an action if it has, will have or is likely to have a significant impact on a water resource. Contravention of s 24D results in the imposition of a penalty and s 24E creates offences. Subsections 24D(1) to (3) do not apply if an approval to take the action is in operation under Pt 9: s 24D(4)(a). Similarly, the action described in ss 24E(1) to (3) does not constitute an offence if an approval of the action under Pt 9 of the EPBC Act is in operation: s 24E(4)(a).

163 Division 1 of Pt 9 of the EPBC Act governs the process by which the Minister may approve a controlled action under Pt 3. Relevantly, the Minister may approve for the purpose of a controlling provision the taking of controlled action after receiving the “assessment documentation” relating to the controlled action: s 133(1) of the EPBC Act. Part 8 provides for the assessment of impacts of controlled actions in order to inform decisions made as to whether the taking of the action should be approved. Various methods of assessment including “environmental impact statements” (Div 6 of Pt 8) are provided for. The Minister must identify the method to be adopted in any particular case: s 87. However, s 83(1) provides that an assessment of the kind required by Pt 8 need not be conducted where, *inter alia*, a bilateral agreement between the Commonwealth and a State is operative. In such a case an assessment conducted by the State may be substituted for the assessment that would otherwise be required by Pt 8: s 47.

164 For the application to approve the Extension Project, the “assessment documentation” referred to by s 133(1) included the NSW Department Report referred to above at [26]. That was submitted to the IPC and given to the Minister pursuant to cl 6.2 of the Bilateral Agreement, which was made between the Commonwealth and New South Wales pursuant to s 47(1) of the EPBC Act: s 133(8) and s 130(2).

165 As required by s 47(4) of the EPBC Act, the bilateral agreement (cl 6.2(a)) provides that:

NSW will ensure there is sufficient Information in the Assessment Report on the impacts of a controlled action covered by this Agreement on each relevant Matter of [national environmental significance] so that the Commonwealth decision-maker may consider those impacts when determining whether to approve the action and, if so, on what conditions. The extent of the assessment will be proportionate to the level of likely environmental risk.

166 Section 130(1) imposes a duty on the Minister to decide whether or not to approve, for the purposes of each controlling provision for a controlled action, the taking of the action. Relevantly, the Minister must do so within 30 business days of receiving the assessment report (s 130(1B)(a)) or such longer time as the Minister specifies in writing (s 130(1A)).

167 Before the Minister decides whether or not to approve the taking of an action, and what conditions (if any) to attach to the approval, she must inform any other Minister whom she believes has “administrative responsibilities relating to the action” of the decision that she proposes to make and invite the other Minister(s) to comment on the proposed decision within 10 business days: s 131(1). Without limiting the comments that another Minister may give, s 131(2) provides that in response to an invitation another Minister may make comments that “relate to economic and social matters relating to the action” and those comments may be considered by the Minister “consistently with the principles of ecologically sustainable development”.

168 Section 131AA requires the Minister to give notice of her proposed decision, including any conditions that she proposes to attach to the approval, to the proponent of the action and invite the person to provide comments within 10 business days. In making the final decision as to whether or not to approve the action, the Minister must take into account “any relevant comments” provided in response to an invitation: s 131AA(6).

169 If an action involves a coal seam gas development or a large coal mining development, and the Minister believes that the taking of the action is likely to have a significant impact on water resources and may have an adverse impact on a matter protected by a provision of Pt 3, she must obtain the advice of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (established by s 505C) before deciding whether or not to approve the action: s 131AB.

170 The Minister may, but is not required to, publish her proposed decision and any conditions that the Minister proposes to attach to the approval on the Internet, and invite comments in writing on the proposed decision: s 131A. Section 132 provides the Minister the capacity to request that further information be provided where “on reasonable grounds” she believes she does not have enough information to make an informed decision.

171 Section 133 deals with the grant of approval and relevantly provides:

Grant of approval

Approval

(1) After receiving the assessment documentation relating to a controlled action, or the report of a commission that has conducted an inquiry relating to a controlled action, the Minister may approve for the purposes of a controlling provision the taking of the action by a person.

(1A) If the referral of the proposal to take the action included alternative proposals relating to any of the matters referred to in subsection 72(3), the Minister may approve, for the purposes of subsection (1), one or more of the alternative proposals in relation to the taking of the action.

Content of approval

(2) An approval must:

- (a) be in writing; and
- (b) specify the action (including any alternative proposals approved under subsection (1A)) that may be taken; and
- (c) name the person to whom the approval is granted; and
- (d) specify each provision of Part 3 for which the approval has effect; and
- (e) specify the period for which the approval has effect; and
- (f) set out the conditions attached to the approval.

Note: The period for which the approval has effect may be extended. See Division 5.

172 Section 136 of the EPBC Act deals with the matters that the Minister either must or may consider in approving or imposing conditions upon the approval of a controlled action. It provides:

General considerations

Mandatory considerations

(1) In deciding whether or not to approve the taking of an action, and what conditions to attach to an approval, the Minister must consider the following, so far as they are not inconsistent with any other requirement of this Subdivision:

- (a) matters relevant to any matter protected by a provision of Part 3 that the Minister has decided is a controlling provision for the action;
- (b) economic and social matters.

Factors to be taken into account

(2) In considering those matters, the Minister must take into account:

- (a) the principles of ecologically sustainable development; and
- (b) the assessment report (if any) relating to the action; and
 - (ba) if Division 3A of Part 8 (assessment on referral information) applies to the action—the finalised recommendation report relating to the action given to the Minister under subsection 93(5); and
 - (bc) if Division 4 of Part 8 (assessment on preliminary documentation) applies to the action:
 - (i) the documents given to the Minister under subsection 95B(1), or the statement given to the Minister under subsection 95B(3), as the case requires, relating to the action; and
 - (ii) the recommendation report relating to the action given to the Minister under section 95C; and
 - (c) if Division 5 (public environment reports) of Part 8 applies to the action:
 - (i) the finalised public environment report relating to the action given to the Minister under section 99; and
 - (ii) the recommendation report relating to the action given to the Minister under section 100; and
 - (ca) if Division 6 (environmental impact statements) of Part 8 applies to the action:
 - (i) the finalised environmental impact statement relating to the action given to the Minister under section 104; and
 - (ii) the recommendation report relating to the action given to the Minister under section 105; and
 - (d) if an inquiry was conducted under Division 7 of Part 8 in relation to the action—the report of the commissioners; and
 - (e) any other information the Minister has on the relevant impacts of the action (including information in a report on the impacts of actions taken under a policy, plan or

program under which the action is to be taken that was given to the Minister under an agreement under Part 10 (about strategic assessments)); and

(f) any relevant comments given to the Minister in accordance with an invitation under section 131 or 131A; and

(fa) any relevant advice obtained by the Minister from the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development in accordance with section 131AB; and

(g) if a notice relating to the action was given to the Minister under subsection 132A(3) —the information in the notice.

Note: The Minister must also take into account any relevant comments given to the Minister in response to an invitation under paragraph 131AA(1)(b). See subsection 131AA(6).

Person's environmental history

(4) In deciding whether or not to approve the taking of an action by a person, and what conditions to attach to an approval, the Minister may consider whether the person is a suitable person to be granted an approval, having regard to:

(a) the person's history in relation to environmental matters; and

(b) if the person is a body corporate--the history of its executive officers in relation to environmental matters; and

(c) if the person is a body corporate that is a subsidiary of another body or company (*the parent body*) — the history in relation to environmental matters of the parent body and its executive officers.

Minister not to consider other matters

(5) In deciding whether or not to approve the taking of an action, and what conditions to attach to an approval, the Minister must not consider any matters that the Minister is not required or permitted by this Division to consider.

173 In deciding whether or not to approve the taking of an action, and what conditions to attach to an approval, the Minister must consider the matters set out in s 136(1) “so far as they are not inconsistent with any other requirement” of Subdiv B of Div 1 of Pt 9. The provisions of that subdivision address decisions about World Heritage properties (s 137), National Heritage places (s 137A), Ramsar wetlands (s 138), threatened species and endangered communities (s 139), migratory species (s 140) and certain nuclear installations (s 140A). For instance and in relation to whether or not to approve the taking of an action specified in s 18 or s 18A, the Minister must not act inconsistently with Australia's obligations under a number of international Conventions specified in s 139, including the Convention on Biological Diversity done at Rio de Janeiro on 5 June 1992. Save as to those negative stipulations, the EPBC Act does not provide any criteria as to which the Minister must be satisfied in order to grant approval.

174 The matters that “must” be considered, which are identified in s 136(1) are:

(a) matters relevant to any matter protected by a provision of Part 3 that the Minister has decided is a controlling provision for the action;

(b) economic and social matters.

175 In considering those matters, the Minister “must take into account” the matters set out in s 136(2). Such matters include the principles of ecologically sustainable development set out in s 3A and mentioned above. Furthermore, the Minister is permitted to also consider “whether the person is a suitable person to be granted an approval”, having regard to the person’s history in relation to environmental matters: s 136(4). The Minister must not consider any matters that she is not required or permitted by Div 1 of Pt 9 to consider: s 136(5).

176 I will return to address the proper construction of s 136, but before doing so, two matters should be mentioned.

177 *First*, the Minister may attach a condition to an approval of an action if she is satisfied that the condition is “necessary or convenient” for protecting a matter protected by a provision of Pt 3 for which the approval has effect (s 134(1)(a)) or protecting specifically from the action any such matter (s 134(2)(a)). The Minister may also attach a condition if satisfied that the condition is “necessary or convenient” for repairing or mitigating:

damage to a matter protected by a provision of Pt 3 for which the approval has effect whether or not the damage has been, will be or is likely to be caused by the action (s 134(1)(b)); or

damage that may or will be, or has been, caused by the action to such a matter (s 134(2)(b)).

178 Subsection 134(3) sets out a non-exhaustive list of conditions that may be attached to an approval. On its text, s 134 only empowers the Minister to attach a condition that is directed to protecting a matter protected by a provision of Pt 3.

179 *Second*, s 487 of the EPBC Act confers an extended right of standing to seek judicial review pursuant to the *Administrative Decisions (Judicial Review) Act 1977* (Cth) of, *inter alia*, decisions made under the EPBC Act. Section 487(2) deems an individual to be a *person aggrieved* by the decision for the purpose of the judicial review proceeding if they are an Australian citizen or resident and, at any time in the two years immediately before the decision, have engaged in a series of activities in Australia for protection or conservation of, or research into, the environment.

180 The proper construction of s 136 of the EPBC Act has been the subject of Full Court authority with which no party took issue. In *Tarkine National Coalition Inc v Minister for the Environment* (2015) 233 FCR 254, Jessup J (with whom Kenny and Middleton JJ agreed), described Subdiv B of Div 1 of Pt 9, in which s 136 is found, as establishing “a closed system of the matters the Minister [is] to consider in making [her] decision and the things that should be taken into account” (at [28]). However, no party contended that the potential for harm to Australia’s children was not a matter that the Minister may permissibly take into account in deciding whether or not to approve an action. The applicants contended that such a matter fell within the expression “economic and social matters” in s 136(1)(b). The Minister did not contend to the contrary. That expression is unqualified and there is no basis for thinking that it was intended to be confined to those economic and social matters which are a beneficial rather than an adverse consequence of the “controlled action” subject to the Minister’s approval. The Act’s concern with adverse economic and social matters can be seen from ss 270(3)(c), 287(3)(c) and 464(3) as well as the objects in s 3 and, in particular, the object in s 3(1)(b) in light of the elaboration provided by s 3A(a).

181 A particular “economic” or “social” matter is *not*, on the authority of *Tarkine*, a mandatory consideration that the Minister is required to take into account or to consider. At [25]-[28], Jessup J relevantly said this:

Returning to s 136, I would make four observations about the structure and content of this section. First, subss (1) and (2) made a distinction between the matters that the Minister “must consider” (subs (1)) and the things that the Minister “must take into account” in considering those matters (subs (2)). The purpose of subs (1), as it seems to me, was to mark out the broad categories of consideration to which the Minister was required to turn his mind, and specifically to require consideration not only of the matters protected by Pt 3 of the EPBC Act but also of matters that, otherwise, appear to be of no

concern under that Act, namely, “economic and social matters”. Neither para (a) nor para (b) of s 136(1) dealt, at the level of detail, with particular matters that required consideration. For example, what, if any, particular “social matter” might have required consideration in a proposal that came before the Minister was, it seems, a matter for the Minister.

Secondly, the expression “matters relevant” in s 136(1) was not defined in the EPBC Act. By contrast, the expression “relevant impacts”, used in s 136(2)(e), was defined and gave content, at the level of detail, to the Minister's obligation to take things into account. I shall return to this definition below.

Thirdly, while the range of things that the Minister was to take into account under subs (2) was extensive, with the exception of those referred to in paras (a) and (e), each was a concrete document or some similar existing artefact. In effect, what the Minister had to take into account were the contents of those documents or artefacts. This approach to regulation is to be contrasted with a situation in which the things to be taken into account were identified by description, or generically, such as, for example, where a decision-maker was required to take account of the condition of the habitat of a particular species. Subject to the exceptions mentioned, the scheme of s 136 was one in which it was assumed that specific subjects of this and similar kinds were already dealt with in the documents or artefacts referred to. The role of the Minister was to take into account the things that were before him in this way, rather than being either obliged or entitled to undertake additional research or investigations.

Fourthly, the terms of s 136(5) should be noted. While they require no further explanation, they confirm the impression that Subdiv B established a closed system of the matters that the Minister was to consider in making his decision, and the things that should be taken into account.

182 At [44], Jessup J characterised the purpose of s 136(1) as “categorical”, that is, as intended to set out the categories within which the Minister may choose to take a matter into account. As his Honour relevantly said of s 136(1) at [45]:

I do not regard this provision as the source of any obligation to take particular matters into account, in point of detail. So long as the Minister, in making his or her approval decision, proceeded by reference to the categories in s 136(1), the decision could not be assailed on the ground that some particular matter, falling within either para (a) or para (b), had not been considered. The particular matters that had to be taken into account were the concern of subs (2).

183 The reasoning of North J in *Blue Wedges Inc v Minister for Environment Heritage and the Arts* (2008) 167 FCR 463 at [115] is to the same effect.

5. THE AFFIRMATIVE SALIENT FEATURES

5.1 Reasonable Foreseeability of Harm

184 I turn then to consider reasonable foreseeability of harm as a salient feature. In doing so I will make extensive reference to the evidence about the risk of personal injury alleged by the applicants. That evidence is also relevant to other issues I need to consider but is conveniently referred to in this section. Extensive reference to the evidence is not commonly made by courts when considering reasonable foreseeability for the purpose of determining whether a duty of care exists. That is because aspects of that inquiry overlap with inquiries about breach of duty and causation of harm and it is usually more convenient for a close analysis of the evidence to be conducted in relation to the question of breach. As this is a peculiar case in which the establishment of a duty of care is being considered prior to any alleged breach or actual harm, I have made adjustments to accommodate the peculiarity. I confine my assessment to the foreseeability of the risk of personal injury and not property damage or pure economic loss for reasons alluded to above at [148] and further explained in Section 6, which deals primarily with ‘coherence’.

185 A duty of care is owed to an individual and must be considered in relation to the facts of that individual's case: *Agar v Hyde* (2000) 201 CLR 552 at [66] (Gaudron, McHugh, Gummow and Hayne JJ). As their Honours went on to say at [66]-[67]:

That does not mean that the conduct of a person cannot give rise to a duty of care to many persons. Nor does it mean that a person cannot owe a duty to someone whom he or she does not know or cannot identify.

Nevertheless, the basic rule of the law of negligence is that it is "incumbent on a claimant to establish breach of an independent duty to himself as a particular individual".

186 In assessing the reasonable foreseeability of harm for the purpose of considering whether a duty of care is owed, the Court is obliged to undertake a "generalised inquiry": *Wyong Shire Council v Shirt* (1980) 146 CLR 40 at 47 (Mason J); *Vairy v Wyong Shire Council* (2005) 223 CLR 422 at [72] (Gummow J). In other words, the inquiry takes place at a "higher level of abstraction" than that which is required when considering a breach of a duty of care: *Vairy* at [71] (Gummow J, citing Glass JA in *Shirt v Wyong Shire Council* [1978] 1 NSWLR 631 at 639). In the context of the particular task presented by this case, the question that needs to be answered in relation to each of the Children is whether a reasonable person in the position of the Minister would foresee that the approval of the Extension Project would expose the Children to a risk of personal injury (cf. *Crimmins* at [223] (Kirby J)).

187 That assessment can only be made prospectively by reference to the risk of the future harm alleged. Reasonable foreseeability of that harm will be established where, at the time of the Minister's approval, there exists a real risk of the harm occurring. A real risk is a risk which is not far-fetched or fanciful: *Shirt* at 48 (Mason J); *McKenna* at [30] (French CJ, Hayne, Bell, Gageler and Keane JJ). The test of foreseeability has been described as "undemanding": *Shirt* at 44 (Mason J, citing Glass JA in *Shirt v Wyong Shire Council* at 641).

188 To establish a duty of care it is not necessary for a plaintiff to demonstrate that the defendant should reasonably foresee (or have foreseen) that the plaintiff or some particular person or persons may be at real risk of harm. It is, as Dixon CJ, Kitto, Taylor, Menzies and Windeyer JJ said in *Chapman v Hearse* (1961) 106 CLR 112 at 121, "sufficient if it appears that injury to a class of persons of which [the particular person] was one might reasonably have been foreseen" by the defendant (see also *Crimmins* at [223] (Kirby J)).

189 *Chapman v Hearse* was a case in which a rescuer who came to the aid of a person injured in a car accident was then himself injured by the driver of a car passing the scene of the first accident. The "class of persons" the Court had in mind was a class defined by the geographical and temporal proximity of a member of the class to the scene of the first accident and their "moral and social duty to render aid" (at 120). It was those common characteristics of class membership which made it reasonably foreseeable that a member of that class (a rescuer) would be exposed to the harm inflicted.

190 That case, however, was concerned with the foreseeability of a single member of a class being harmed. I am concerned with the foreseeability of some 5 million people being harmed. For the applicants to succeed in establishing that the Minister should reasonably foresee harm to each of those persons, I need to be satisfied that each member of that class is exposed to a real risk of harm from the Minister's conduct. That forensic exercise is not without its difficulties, given the general nature of the evidence. None of the evidence about the risk of future harm is directed to any particular child or any particular sub-group of the Children.

191 However, as will become apparent when I turn to consider the foreseeability of the particular harms relied upon by the applicants, the age of a person may have a relevant nexus to the risk of exposure to those harms because susceptibility thereto tends to be age-related. Alternatively or perhaps additionally, age may have a temporal connection to the particular harm because the exposure is not immediate but delayed and only persons of a younger age are likely to be exposed to the harm or to its full intensity. A common shared circumstance of relevance to each of the Children is that they are all under 18 years of age. In relation to some of the harms in question, there is a geographical or locational element which is relevant to the risk of harm. A

common shared circumstance is that all the Children are geographically located in Australia. Common circumstances such as those have enabled a conclusion that some of the events induced by climate change relied upon by the applicants expose each of the Children to a real risk of harm. The evidence of other such events permits a conclusion that some of the Children may be exposed to a real risk of harm, but it does not permit an identification, even by way of a sub-class, of who those children are.

192 Before embarking upon the analysis required, there are further observations made in *Chapman v Hearse* which are of relevance to the present case. As the Court said at 120, the test for the existence of a duty of care does not depend upon “the precise sequence of events” which lead to the injury being reasonably foreseeable. Nor is it necessary that the precise damage that may be caused be reasonably foreseeable. That is because “...it would be quite artificial to make responsibility depend upon, or to deny liability by reference to, the capacity of a reasonable [person] to foresee damage of a precise and particular character or upon [that person’s] capacity to foresee the precise events leading to the damage complained of” (at 121). Further, their Honours characterised reasonable foreseeability as “not, in itself, a test of ‘causation’” (at 122).

193 The applicants do not contend that any of the alleged harms would be occasioned as a direct result of the Minister’s conduct. What is effectively alleged is a series of steps or processes in a chain of events between the Minister’s conduct and each category of harm alleged. That is so because the risk of the harm alleged depends on future emissions of CO₂ increasing global average surface temperature which, in turn, increase the frequency, ferocity or geographical range of one or more hazards (such as bushfires) in circumstances where susceptibility to harm is not entirely a function of exposure to climate-induced hazards.

194 The Minister’s contentions in respect of ‘reasonable foreseeability’ were founded upon a causal analysis, including as to the materiality of the impugned conduct to the alleged risks of harm. The Minister contended that the foreseeability of harm from the conduct of the Minister which the applicants impugn was causally negated by the complex interaction of factors that will evolve over the coming decades. She contended that each step in the causal chain of events relied upon by the applicants to connect the Minister’s conduct to the harm alleged was a contingency and that the possibility of that contingency not occurring denied the foreseeability of the harm. As noted already, ‘reasonable foreseeability’ is not a test of causation. As the discussion at the end of this section demonstrates by reference to authority, foreseeability of risk and likelihood of risk are different concepts. An event may be foreseeable even though its occurrence is improbable, including because one or more of the necessary steps in the chain of events which connect the defendant’s conduct with the alleged harm is improbable. Furthermore, “[f]oreseeability does not mean foresight of the particular course of events causing the harm. Nor does it suppose foresight of the particular harm which occurred, but only of some harm of a like kind”: *Mount Isa Mines Ltd v Pusey* (1970) 125 CLR 383 at 402 (Windeyer J). As Gummow J said in *Rosenberg v Percival* (2001) 205 CLR 434 at [64], “[t]he precise and particular character of the injury or the precise sequence of events leading to the injury need not be foreseeable”. I therefore reject the Minister’s approach to ‘reasonable foreseeability’, which essentially amounted to a contention that the mere possibility of a break in the causal chain will suffice to deny the reasonable foreseeability of harm. I accept, however, that it is necessary to consider whether the steps in the chain of events asserted by the applicants, individually or collectively, by reason of the complexity of their interactions or otherwise, deny reasonable foreseeability because they deny the existence of a real risk that the Minister’s conduct will expose the Children to the particular harm in question.

195 The chain of events commences with the Minister’s conduct itself – the lifting of a statutory prohibition enabling Vickery to extract an additional 33 Mt of coal from its coal mine. For the purposes of this exercise, approval by the Minister must be assumed. The next steps in the chain of events to be considered are the extraction of the coal, its sale, its combustion and the consequential emissions of CO₂ into the Earth’s atmosphere. None of those contingencies serves to deny the real risk of harm. There is evidence of a market for the coal and its likely sale to and combustion in Japan, South Korea and Taiwan.

196 The next step in the chain is that the emission of CO₂ into the Earth’s atmosphere from the combustion of that coal will increase global average surface temperature. But that is not a contingency. The proposition is not disputed and is the subject of unchallenged expert evidence. What is disputed is the significance of the temperature increase. The Minister disputes that her conduct will make a material contribution to the alleged harms occurring even if it is the case that climate change bears responsibility for those harms. That is a matter to which I will return.

197 Next, the various types of harm contended for by the applicants depend upon there being a nexus between an increase in global average surface temperature and the increased frequency or gravity of extreme climatic events such as heatwaves or bushfires which create a particular risk of harm. Some such risks are alleged to be an indirect or flow-on consequence of climate change induced phenomena. It is convenient to set out now what the Minister accepts that is of relevance to the risk here under discussion.

198 It is not in dispute that the emission of CO₂ into the atmosphere bears the lion's share of responsibility for the warming of the Earth's surface since the Industrial Revolution. The Minister accepts and thus must be taken to have actual knowledge or understanding of the fact that, due to increased greenhouse gas emissions (primarily CO₂), the global average surface temperature is increasing and that humans are primarily responsible. The Minister accepts that increases in temperature affect the environment, economy and society. Climate change exacerbates inherent risks in the Australian climate and introduces new risks. She accepts that heatwaves, droughts, bushfires, floods and tropical cyclones are all part of the Australian climate experience and that economic infrastructure in Australia's cities and ports is vulnerable to sea level rises and storm surges. Australia's agriculture, mining and other industries are all vulnerable to increasing frequency of severe heatwaves and intensity of drought, floods and storms. Further, the Minister accepts that terrestrial and marine ecosystems are facing serious threats from climate change, including extreme weather events, bushfires, ocean acidification and marine heatwaves. There is an acceptance that the effects of increased temperatures are likely to be compounded by climate change induced events such as severe storms, heatwaves, more extreme droughts and floods, and sea level rise. It is not disputed that these events will have impacts on the Australian economy, Australia's natural and managed terrestrial and marine ecosystems, and on the health and wellbeing of individuals, communities and society.

199 Looking to the future, the Minister accepts that under all future emission scenarios, it is very likely that: (a) average temperatures will continue to increase and Australia will experience more heat extremes and fewer frosty days; (b) extreme rainfall events will become more intense; (c) southern and eastern Australia will experience more extreme fire-related weather; (d) the time in drought will increase over southern Australia; (e) sea levels will continue to rise throughout the 21st century, with increased frequency of storm surge events; and (f) oceans around Australia will warm and become more acidic. The Minister also accepts that the projected effects of climate change vary depending upon the extent of global emissions of greenhouse gases in coming years.

200 The nexus between increasing global average surface temperature and the harms alleged by the applicants is broadly encompassed by the facts which the Minister accepts. In any event, that nexus is dealt with by the applicants' evidence. In relation to the risk of each particular kind of personal injury to which the applicants contend climate change exposes the Children, whether that nexus is established to the standards required in the application of the test of reasonable foreseeability is later addressed.

201 It is necessary then to identify each of the alleged risks of harm to the Children relied upon by the applicants. The particulars of the alleged harm were set out at [16] of the applicants' Amended Concise Statement as follows:

Particulars of harm include mental or physical injury, including ill-health or death, or economic loss, from:

(a) more, longer and more intense: (i) bushfires, storm surges, coastal flooding, inland flooding, cyclones and other extreme weather events; (ii) periods of extreme heat; (iii) periods of drought;

(b) sea-level rise;

(c) increasing loss of non-human species and ecosystems, on land and in oceans;

(d) systemic breakdowns and overwhelming of infrastructure networks and critical services, including electricity, water supply, internet, health care, and emergency services;

- (e) food insecurity and breakdown of food systems;
- (f) adverse impacts on: (i) national and global economies; (ii) financial markets; (iii) industries, businesses and professions; (iv) the number and quality of employment opportunities; (v) standard of living; and (vi) living costs;
- (g) increasing smoke, heat, and disease;
- (h) loss of clean water, clean air and nutriment (**essentials**);
- (i) social and political unrest, violence and scarcity as essentials are depleted, and humans try to move in search of essentials, habitable land, or both; and
- (j) mental harm caused by solastalgia, and the experience and anticipation of the above.

202 Those particulars travel beyond the risk of personal injury and include the risk of economic harm which I need not assess for reasons later given. However, the way in which the description of harm has been structured in the Amended Concise Statement makes it a little difficult to entirely separate the economic harm alleged from personal injury. The applicants' written submissions together with the evidence relied upon provided greater specification. Under a heading "Physical and mental harm" and by reference to a categorisation made in Professor Capon's Report, the applicants grouped the alleged physical and mental harms into a number of categories being "direct impacts", "indirect impacts" and "flow-on impacts" on human health. "Direct impacts" were described as including specific risks of personal harm (injury or death) inflicted as a result of the occurrence of particular phenomena such as bushfires or heatwaves. "Indirect impacts" were said to comprise changes to physical systems, biological systems and ecosystem structure and function. Finally, "flow-on impacts" were described as being brought about by social, economic and demographic disruption. These categories of impacts will be elaborated on below.

203 I regard the applicants' categories of "indirect harms" and "flow-on impacts" as intended to encompass all of the physical and mental harms listed in the particulars given at [16] of the Amended Concise Statement, other than those directly resulting from the particular climatic events listed at (a) of that paragraph. If more extensive physical or mental harms encompassed by those categories were intended to be alleged in [16] of the Amended Concise Statement, they were not sufficiently specified, there was no evidence about them (that the Court was taken to) and I could not be satisfied of their reasonable foreseeability.

204 I do not accept that the applicants have demonstrated that each of the Children is exposed to a real risk of climate change induced personal injury in relation to any of the harms in the categories of "indirect impacts" or "flow-on impacts". Some of the Children may be exposed, but the evidence does not permit their identification either directly or as members of a clearly identifiable sub-class. Before coming to a more detailed assessment of those alleged harms, I turn to consider the injury-inducing events which I am satisfied expose each of the Children to a real risk of harm from extreme weather events brought about by climate change.

5.1.1 Heatwaves

205 The likely exposure of the Children to the risk of personal injury or death by reason of heatwaves induced by climate change was largely dealt with by expert evidence given by Dr Mallon and Dr Meyricke.

206 Dr Mallon's expertise is set out in the Schedule, but particular aspects of his experience should be emphasised. Since 1997 Dr Mallon has worked in the field of climate change physical impact analysis, providing risk analysis to governments, the private sector and non-government organisations. He described his area of specialisation as being "the quantification of human and financial impacts from climate change, and cost-benefit-analysis of adaptation". He is a director of two companies who provide climate change physical impact analysis. One of those, **XDI Pty Ltd**, is considered to be one of the world's top four providers of physical risk analysis.

The other, **Climate Risk** Pty Ltd, assesses how extreme weather and climate might cause harm to built assets and to communities.

207 Dr Mallon explained that models developed by Climate Risk are inherently probabilistic in nature. The main mechanism by which climate change impacts are evaluated and quantified under those models is the changing probability of events capable of breaching the design threshold of a given asset or the coping capacity of component elements. As Dr Mallon further explained, failure and strain thresholds can also be applied by those models to cohorts of people, which means that the number of people affected by extreme events can be quantified going forward. Dr Mallon stated that modelling can be utilised to analyse impacts such as flooding and forest fires. He referred specifically to the modelling developed by Climate Risk to assess heat stress and stated that the model uses metrics specifically designed to capture the circumstances which cause heat stress – metrics which are presently used as warnings by the CSIRO and the BoM – and applies them to detailed climate change modelling data. Dr Mallon observed that it thus becomes possible to forward compute the annual projected numbers of people likely to suffer discomfort or heat stress, call a doctor, or attend hospital.

208 Dr Mallon was asked to assess possible future impacts, including those of the kind identified at [16] of the Amended Concise Statement, resulting from various phenomena including climate change related extreme events (such as heatwaves) specified at [15] of the Amended Concise Statement. His Report does so but selectively. First, Dr Mallon helpfully chose to confine his consideration of future impacts to Australia's children. He assessed the future impacts upon that cohort in relation to three broad categories – wealth, prosperity and health – and then presented his opinion in terms of the following three epochs:

impacts in the near future (approximately 2020-2030);

impacts in the middle of the Children's working lives (approximately 2040-2060); and

impacts at the end of the Children's lives (approximately 2070-2100).

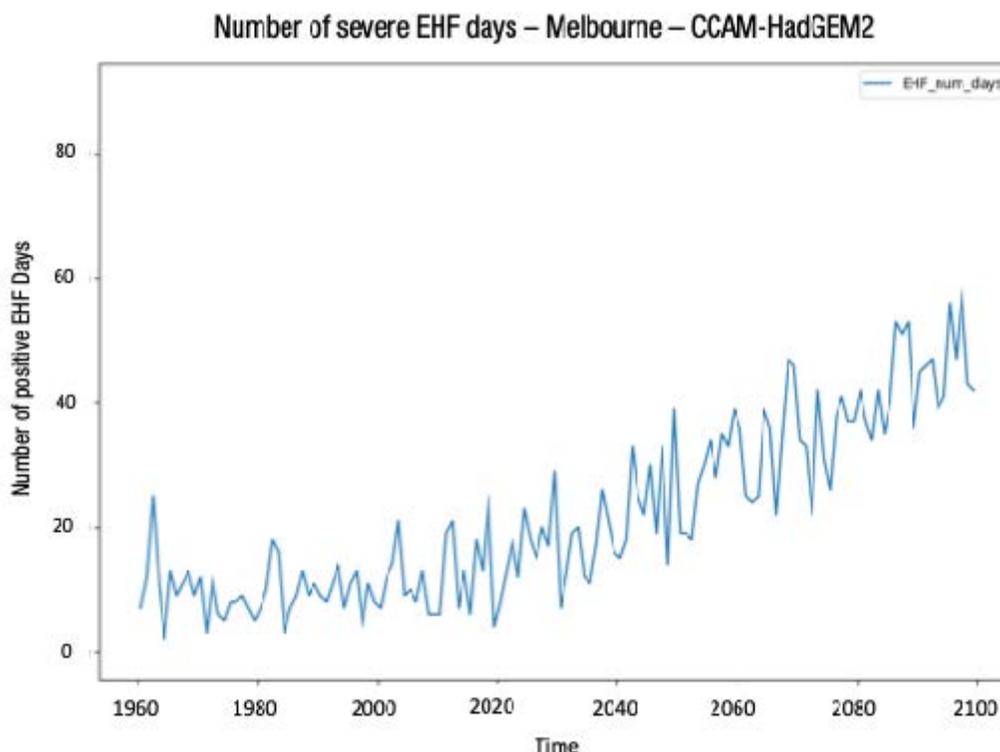
209 The first two categories (impacts on wealth and prosperity) are not relevant to this discussion. The third category is. Dr Mallon opined that there are many climate change impacts that would affect the health of the Children. Those impacts range from injury and extreme events such as cyclones to the long term impacts of smoke inhalation during bushfires. However, Dr Mallon confined his specific assessment on health impacts to the ill-effects of heat stress. He seems to have done so for a number of reasons. First, he considered that all Australians (and thus the entirety of the relevant cohort) "will be affected by increases in temperatures and especially extreme temperatures". Furthermore, he stated that he had confined the subjects of his assessments to those in relation to which he had access to sufficiently detailed modelling upon which to form an opinion. He also referred to time constraints on the preparation of his Report as a limiting factor.

210 In assessing heat stress impacts upon the Children, Dr Mallon further confined his assessment to the third epoch, being the years 2070 to 2100. The upper temporal limit appears to have been chosen because that is about as far as current climate change models extend and because, statistically speaking, the Children will have passed the average Australian life expectancy between 2078 and 2098. The lower temporal limitation appears to be the product of two assumptions made by Dr Mallon. The first is that, in his view, RCP 8.5 (a scenario which in terms of surface temperature is comparable to what I have earlier referred to as a 4°C Future World) is the most applicable future scenario for predicting the extent and timing of future atmospheric temperature increases. That assumption is relevant to the extent of the frequency and severity of heatwaves likely to be experienced by the Children. The second assumption deals with when the burden of heat stress will likely have its greatest impact upon the Children. As Dr Mallon stated, the burden of heat stress does not fall equally on the population and hits the elderly particularly hard. Dr Mallon gave the example of the 2003 French heatwave which resulted in 14,729 excess deaths, 11,731 of which involved the death of a person over the age of 75. As Dr Mallon stated, the Children will all be over 80 years old by 2100.

211 Dr Mallon's opinion about the likely impact of heat stress upon the Children is relatively succinct and it is helpful to set it out in full:

9.3 There is an emerging body of research to suggest that the health impacts of heat are not solely dependent on temperature, but on ‘thermal shock’ or the inability to acclimatise to heatwaves and also the inability to cool down or get respite from severe temperature (Goldie et al, 2017). The Climate Risk science team has adopted the CSIRO developed metric Excess Heat Factor (EHF) to interpret the climate change modelling data in terms of ill health. These are used for quantification of heat-stress related doctor, ambulance and hospital presentation.

9.4 The figure below shows the trends in Excess Heat Factor in Melbourne over time for one of the climate models considered. EHF includes the degree to which people are able to acclimatise to increasing temperatures ahead of a heat wave and uses an average daily temperature which captures both the daily extreme and the night time minimum.



9.5 Using EHF to predict the days where a heat wave is likely to cause ill health combined with elevated presentation rate data during actual heat waves (Nitschke, Tucker, and Bi 2007, Department of Health & Human Services 2014, Jegasothy et al. 2017) enables forward looking projections of presentations to doctor, ambulance or hospital due to heat-stress under RCP8.5, see the table below.

Year	Ambulance	Hospital	Doctor
1990	6,650	10,300	1,130,000
2020	14,000	21,900	2,390,000
2050	24,900	38,900	4,240,000
2100	56,300	88,000	9,600,000

9.6 Based on the sample of 1% of all addresses and assuming average occupancy levels, my team has estimated the thermal shock of heat waves. In Southern states like Victoria heat stress presentations to doctors, paramedics and hospitals will more than double. But for Australia as a whole the incidents will increase by 850% or an eight fold increase.

9.7 In practical terms that means that 8 million doctor visits will be attributable to climate change driven warming, equivalent to an average 38% of the population attending the doctor due to a heat stress event. There are also expected to be 50,000 of additional hospitalisations due to heat stress.

212 In the next paragraph of his report, Dr Mallon referred to observations I have already dealt with about the burden of heat stress falling unequally. Having given the example of the 2003 French heatwave, Dr Mallon then said this at [9.8]-[9.9]:

So we can assume that the doctor visits and hospitalisations will be heavily represented by today's children. If such ratios play out for the cohort in question, then every year, 1% of the group will be hospitalised with heat-stress exacerbated illness - an estimated tenth of that figure today. Put another way, it would imply that in the last 20 years of these children's lives, on average one [in] five will suffer at least one heat-stress episode serious enough to require acute care in a hospital.

Some of those heat-stress events will be fatal, but as my team has not undertaken these statistical calculations or projections I am unable to offer an opinion.

213 Later in his report and in setting out a summary of his conclusions, Dr Mallon stated:

10.12 I have specifically considered the impacts on the cohort of children when they pass 75 years of age, when statistically speaking they are at a significantly heightened risk from heat-stress related health impacts. Climate change will cause an 8.5 fold increase in the probability of an average person having a heat-stress related presentation to a doctor or hospital. On the balance of probabilities it's likely that 1 in 5 of the cohort will be hospitalised due to heat stress during the senior years. Some of these people will die due to exacerbated underlying health conditions.

214 Dr Meyricke's expertise as an actuary is set out in the Schedule. Her specific academic and research experience in relation to climate change mitigation and also as to the risk of mortality should be noted. Her report was based on her published research on the subject titled "Climate Change, Mortality and Retirement Incomes" and co-written with Rafal Chomik: Meyricke and Chomik (2019).

215 Dr Meyricke's report considered possible future impacts of heat and heatwaves on mortality, including analysis of the effects of such impacts on the Children. She defined a heatwave to be three or more days of unusually high maximum and minimum temperatures in any area. She stated that heatwaves significantly increase mortality across the globe. In Australia, heatwaves have caused more deaths since 1890 than bushfires, cyclones, earthquakes, floods and severe storms combined. Dr Meyricke opined that in addition to deaths, heatwaves also drive an increase in heat-related illness (or morbidity) as exemplified in the following table.

Table 1 – Excess deaths and impact on public health and services during two Victorian heatwaves

Nature of impact	2009 (26 Jan to 1 Feb)	2014 (12 Jan to 18 Jan)
Excess deaths	374	167
Heat-related emergency department presentations	714	621
After Hours doctor consultations	1,955	3,687
Ambulance dispatches (metropolitan Melbourne)	7,035	8,359

216 As Dr Meyricke stated, Table 1 illustrates the numbers of excess deaths (being the number of deaths over what would normally be expected for the same period), emergency department presentations, after-hours doctor consultations and ambulance dispatches during two separate week-long heatwaves in Melbourne. To put the incidents exemplified by Table 1 into context, Dr Meyricke stated that the 374 excess deaths in Victoria during the heatwave which commenced on 26 January 2009 represented a 62% increase in total all-cause mortality during the period of the heatwave.

217 Dr Meyricke stated that the health and mortality effects of heatwaves are more pronounced in older people, explaining that the increased vulnerability of the elderly to heatwaves relates to a combination of altered homeostatic mechanisms and the higher prevalence of chronic diseases among the elderly. To demonstrate the point, Dr Meyricke stated that, while individuals aged 75 years or older made up 6.5% of the Victorian population, in the 2009 heatwave in Victoria exemplified in Table 1:

- 61% of the 7,035 ambulance dispatches were for those 75 years or older;
 - 65% of the 1,955 after-hours doctor consultations were for those 75 years or older;
 - 46% of the 714 Emergency Department heat-related presentations were for those 75 years or older;
- and
- 66% (or 248) of the 374 excess deaths occurred in those 75 years or older.

218 Dr Meyricke acknowledged that as the risk of heat-related mortality increases with ageing, individuals currently under 18 years of age would be most at risk from heatwaves in their late adulthood (that is, around when they reach age 65, in 47 to 65 years' time). Meyricke and Chomik (2019) estimated that excess mortality in persons over 65 years old is approximately four to six times higher than excess all-ages mortality caused by similar heatwaves. Excess mortality expected in the period from 2020 to 2040 is 1% for all ages (in Sydney), but 4% in persons over 65 years old (in Brisbane). Over the period between 2060 and 2080, excess mortality from heat is projected to be 2% for all ages, but 12% in persons over 65 years old.

219 Dr Meyricke opined that with ongoing improvement in public awareness and risk mitigation, the extent of excess mortality from climate change could be limited, for instance by the Children taking measures in mitigation such as increasing the time spent indoors over the course of their lifetimes, compared with past generations. She stated, however, that whilst human capacity to adapt to varied climates is considerable, there are absolute limits to the amount of heat exposure an individual can tolerate. Even with highly effective adaptation (for example, all time spent indoors in air-conditioned environments) there are residual risks, such as air conditioning system failure or power failure. Dr Meyricke opined, therefore, that “even with effective adaptation and risk mitigation there will still be excess mortality in future, amongst individuals currently under 18 years of age, from heatwaves”. She stated that an increase in mortality risk globally, even after allowing for adaption, is expected by the World Health Organisation (**WHO**), which has stated (WHO 2018)):

Overall, climate change is projected to have substantial adverse impacts on future mortality, even considering only a subset of the expected health effects, under optimistic scenarios of future socioeconomic development and with adaptation.

220 Dr Meyricke's opinion is consistent with the prediction made by the IPCC Synthesis Report (2014) with 'high confidence' that climate change will lead to an increased risk of heat-related mortality compared to a baseline without climate change.

221 Professor Steffen's evidence was not directed at the detrimental effects of heatwaves as specifically as the evidence that I have already addressed. However, Professor Steffen did opine that even under his “Scenario 1” (ie a 2°C Future World), there would be a significant increase in the likelihood of extreme weather events in Australia and in particular a 77% likelihood of severe heatwaves in a given year. In relation to “Scenario 2” (a 3°C Future World), Professor Steffen referred to heatwaves increasing rapidly and included escalating heat stress as one of the impacts upon the health and wellbeing of Australians. He did not specifically refer to heat stress under his “Scenario 3” (a 4°C Future World), but it logically follows that his view about the prevalence of heatwaves and heat stress would be at least as grave as for a future world with a lower stabilised temperature.

222 A report by the Victorian Department of Environment, Land, Water and Planning entitled *Victoria's Climate Science Report: 2019 (DELWP report)* predicts that in 2090 (with average temperatures in Victoria increasing between 2.8 to 4.3°C) parts of Victoria could experience days of up to 55°C in summer and 33°C in winter.

223 Referring to a study of extreme heat events in Australia between 1844 and 2010, Professor Capon stated that “[h]eatwaves are the most deadly natural hazard in Australia”. He opined that climate change is increasing the frequency and intensity of these extreme events and that risk to health can be expected to increase.

224 All of that evidence is available to the Minister and is to be regarded as being within her knowledge. As earlier mentioned, the Minister accepts that under all future emissions scenarios it is very likely that global average surface temperature will continue to increase and that Australia will experience “more heat extremes”. She accepts that the effects of increased temperatures are likely to be compounded by events induced by climate change, such as heatwaves.

225 Particularly in the absence of any challenge to the more specific evidence called by the applicants about heatwaves and their likely effect on the Children, all of that evidence should be regarded as reliable. The evidence addresses the age characteristic of the Children and makes out a sufficient link between that characteristic and the exposure to the harm in question. That is done by reference to the likely time in the lives of the Children when heatwaves are likely to be most frequent and most extreme and the time when the Children will be most susceptible to being harmed by heat stress. It establishes not only that many of the Children are exposed to a real risk of harm but that each of the Children is so exposed. I am satisfied that a reasonable person in the Minister’s position would foresee that each of the Children is exposed to a real risk of death or personal injury from heatwaves induced by climate change. It remains to consider whether it is reasonably foreseeable that the Minister’s impugned conduct will contribute to the risk of those harms. I will address that issue shortly.

5.1.2 *Bushfires*

226 Turning then to the risk of personal injury or death due to bushfires caused by climate change, the applicants sought to extrapolate from the harms caused by the 2019-2020 Australian bushfire season (“**Black Summer fires**”), as well as other major bushfires recently experienced in Australia. Reports by the CSIRO and the BoM demonstrate an increase in extreme fire weather and in the length of fire seasons across large parts of Australia since the 1950s. This is, in part, due to changes in temperature, rainfall and relative humidity, which affect fuel moisture content (dryness). Climate change also affects the amount of fuel that may be ignited in a bushfire, including via increased CO₂ emissions which can alter the rate and amount of plant growth. As these trends continue, Australia is projected to experience an increase in the number of dangerous fire weather days and longer fire seasons, particularly in southern and eastern Australia. This mirrors the DELWP report, which anticipates that, by the 2050s, with continuing high emissions of CO₂ (that is, RCP8.5) Bendigo, Ballarat and Shepparton will experience more than a 60% increase in the projected number of high fire danger days compared to 1986-2005.

227 Evidence was given by former State and Territory fire chiefs and senior emergency services personnel (Mr Waller, Mr Warrington, Mr Dunn and Mr Mullins) of their personal and professional experience of major bushfires in south-eastern Australia, including the Eastern Alpine bushfires in 2003, the Canberra bushfires in 2003, the Grampian bushfires in 2005-6, the Great Divide bushfires in 2006-7, the Victorian Black Saturday fires in 2009 and the Black Summer fires in 2019-2020.

228 That evidence speaks to increasing bushfire risk from the perspective of ignition, intensity and spread, and the impact on people, property and the environment. In particular, those witnesses gave evidence as to:

- (i) the increased frequency of major bushfires in south-eastern Australia;
- (ii) the impact of increased bushfire intensity (including the incidence of pyro-convective events or “fire storms”) in driving bushfire spread and reducing the defensibility and survivability of bushfires;
- (iii) the lengthening fire seasons, with a consequent impact on firefighting resources and resource-sharing;

- (iv) increasing climate-driven constraints on the implementation of planned burning and back-burning as fire mitigation tools, and the reduced impact of planned burning on bushfire spread;
- (v) the increasing incidence of bushfires in areas that were not previously prone or amenable to bushfires (such as Queensland rainforests); and
- (vi) the impact of climate change in reducing the capability of the natural environment to slow or stop fire spread (for example, through the progressive drying up of creeks and gullies that would previously have stopped or impeded fire spread).

229 Dr Mallon considered that forest fire events in recent years have shown the increases in severity and duration of forest fire events which have led to longer fire seasons and loss of life and property. He opined that, looking forward, the analysis suggested increased probability of fire conditions in many areas and, more worryingly still, increased penetration in areas not normally associated with forest fires. His report noted that as at 2019, 4% of Australian properties were exposed to forest fire. Addressing an example of a fire last summer in Nymboida where 150 homes were destroyed by fire, Dr Mallon stated that his models suggested that the probability of fire weather has increased by 17% since 1990 and that the increase could be much worse if it were to include the combined impact of increasing drought probability, which has increased by 8%.

230 Professor Steffen opined in relation to his “Scenario 1” (a 2°C Future World) that there was a 77% likelihood of severe bushfires in any given year. He opined that under that scenario there would be a longer fire season for the south and east of Australia and an increase in the number of dangerous fire weather days. Under his “Scenario 2” (a 3°C Future World), Professor Steffen opined that high fire danger weather will increase significantly, leading to more catastrophic fire seasons such as the Black Summer fires. Further, he stated that more frequent and intense bushfires would damage the health and wellbeing of Australians. For his “Scenario 3” (a 4°C Future World) Professor Steffen predicted that most of Australia’s eastern broadleafed (eucalypt) forest “will no longer exist due to repeated, severe bushfires”.

231 To demonstrate the extent of future harm to health from extreme bushfires, the applicants relied on the following evidence sourced from various studies about the health effects of the Black Summer fires and provided by Professor Capon (references removed):

Tragically, 33 people lost their lives during that bushfire season, including 9 firefighters. Epidemiologists have since estimated that the smoke from those bushfires was associated with 429 premature deaths, 3230 hospitalisations for cardiovascular and respiratory problems, and 1523 emergency department presentations for asthma. Other health impacts of fires include the long-term health sequelae of burns, impacts on eye health, substance use, and domestic and family violence. The mental health toll from the 2019-20 bushfires, including from loss of property and livelihoods, is yet to be fully calculated.

232 A scientific journal article by Alexander Filkov et al. titled *Impact of Australia’s Catastrophic 2019/20 Bushfire Season on Communities and Environment. Retrospective Analysis and Current Trends* provided a critical review of the health impacts from the smoke generated by the Black Summer fires. From November to January, thick smoke covered coastal cities of New South Wales, such as Sydney, which were not themselves affected by major bushfires. This culminated in 81 days of poor or hazardous air quality in Sydney during 2019, which is greater than the prior 10 years combined. The 24-hour average of PM2.5 concentrations (that is, concentrations of particulate matter 2.5 micrometres or less in diameter) in the air over most areas of Sydney during December 2019 were four times higher than the WHO Air Quality guideline value. At one point during the fires, Canberra had the world’s worst air quality. The authors observed that the increase in PM2.5 concentrations experienced were likely to induce an increase of approximately 5.6% in daily all-cause mortality, 4.5% in cardiovascular mortality and 6.1% in respiratory mortality.

233 What is made clear from this evidence is that the spread of bushfire smoke from a catastrophic fire is vast and more than capable of affecting every Australian. As noted by the authors, the smoke from the Black Summer fires spread to the whole South Island of New Zealand on 1 January 2020. By the following day, the smoke had

already reached the North Island of New Zealand, affecting glaciers in the country and casting a brown tint over the snow. By 7 January 2020, the smoke had travelled approximately 11,000 kilometres across the South Pacific Ocean to Chile, Argentina, Brazil and Uruguay.

234 On the evidence before me, it is undoubtedly likely that some of the Children, and perhaps many hundreds or thousands of them, will be killed or injured by future climate change induced bushfires on the Australian continent. However, taking into account the capacity of fire smoke to spread, as demonstrated by evidence of the Black Summer fires, it is reasonably foreseeable that all Australians will be exposed to the risk of ill-health from an atmosphere polluted by smoke from one or more bushfires. That is particularly so in circumstances, which are also reasonably foreseeable, where bushfires induced by climate change will wipe off the face of the Earth most of Australia's eastern eucalypt forests in a 4°C Future World.

235 Of the people living in Australia who are currently alive, it is the Children who are most likely to remain alive long enough to fully experience the wholesale destruction by fire of much of Australia's forests in the latter part of this century. I am satisfied that each of the Children is exposed to a real risk of harm from bushfires. I am therefore satisfied that a reasonable person in the position of the Minister would foresee that, by reason of the effect of increased CO₂ in the Earth's atmosphere upon the increasing extent and ferocity of bushfires in Australia, each of the Children is exposed to a real risk of either death or personal injury from bushfires. The further issue of the foreseeability of the contribution to the risk of harm of the Minister's conduct is addressed below.

5.1.3 Other 'Direct Impacts'

236 Other climatic events relied upon by the applicants were inland and coastal flooding and cyclones. The evidence about those events was scant and, insofar as it existed, was pitched at a high level of generality which, in terms of identifying risks to health, was not sufficiently directed to the Children to enable a conclusion that each child is exposed to a real risk of injury or that some approximate number of them are at risk. The evidence mainly relied upon by the applicants was that given by Professor Capon. But that evidence barely touched upon the field in question. Insofar as it was given, it was given in the context of a global report of the IPCC which specifically acknowledged local geographical variations and in any event the only concrete example provided was sea level rises which (without specification) were said to "[threaten] population health". Professor Steffen briefly mentioned cyclones suggesting the likelihood of fewer but more extreme tropical cyclones for Australia. There is some evidence in the report of Dr Mallon about inland and coastal flooding and cyclones but only in the context of his consideration of future damage to property. However, in the "undemanding" assessment here being undertaken it may be assumed that a reasonable person would have a general appreciation that, because of their hazardous nature, severe flooding and extreme cyclones pose a risk of harm to humans and, if those events are more frequent or more severe, that risk is increased. On that basis it may be said that some harm to some of the Children is reasonably foreseeable.

5.1.4 'Indirect' and 'Flow-on' Impacts

237 Evidence about these two broad categories of alleged harm was given by Professor Capon. Whilst that evidence was unchallenged and I have no reason to doubt the expertise of Professor Capon or the veracity of the opinions he gave, the evidence had its limitations. The evidence given about these categories of harm was only given at a high level of generalisation with scant particular examples. The evidence does not sustain a finding that each of the Children, or some clearly identifiable sub-class thereof, is exposed to a real risk of personal injury from the events in question.

238 Professor Capon's evidence as to harm in the "indirect impacts" category was essentially this (references removed):

27. The second category of health impacts from climate change are indirect (also called secondary or system-mediated) health impacts. These can be further sub-categorised into (1) changes to physical systems, (2) changes to biological systems, and (3) changes to ecosystem structure and function.

28. An example of the first sub-category of these system-mediated health impacts—changes to physical systems—is urban air pollution. In Australia, urban air pollution comes from a variety of sources including transport, energy production and manufacturing industry. However, the level of air pollution to which Australian people are exposed is also affected by weather conditions. For example, hot weather conditions can lead to higher levels of ozone formation at ground level and, therefore, increased risks to health (e.g. exacerbating childhood asthma).

29. An example of the second sub-category of system-mediated health impacts—changes to biological systems—is the changing abundance and distribution of mosquitoes and other vectors for infectious diseases. In Australia, important endemic vector-borne viruses include Ross River and Barmah Forest. Although dengue is not currently endemic in Australia, outbreaks are associated with imported cases.

30. An example of the third sub-category of system-mediated health impacts—changes to ecosystem structure and function—is the impact of climate change on the habitat of wild animals which can lead to new opportunities for spill-over of pathogens to domestic animals and humans.

239 As to the harms in the “flow-on impacts” category, Professor Capon said this (references removed):

31. The final category of health impacts from climate change are flow-on health impacts. These have also been called tertiary health impacts, and are perhaps the most profound impacts. They are mediated via social, economic and demographic disruption.

32. One important example of these flow-on impacts in Australia are the effects of prolonged drought which lead to reduced levels of soil moisture, declines in agricultural productivity, and declines in rural incomes. This affects the wellbeing of rural communities and the mental health of farmers. Psychiatrists are concerned about rising levels of depression from prolonged drought in Australia.

33. Another important example of these flow-on health impacts is displacement from inundation in low-lying island communities with attendant risks to community wellbeing and mental health.

34. Remote settlements are vulnerable to health impacts of climate change due to isolated location, quality of infrastructure, economic resources, limited transport and existing health vulnerabilities. Remote Indigenous communities are particularly vulnerable.

240 Having set out those categories, Professor Capon’s report then turned to the request made of him to opine as to whether any of the alleged harms particularised at [16] of the Amended Concise Statement were likely to be inflicted on the world’s children, including the Children. His broad response to that question reflected the breadth of the question. In essence, the evidence that followed amounted to no more than that some of the world’s children in some parts of the world, including Australia, may become exposed by climate change to the risk of harm, including by events induced by climate change and of the kind exemplified by the evidence extracted above, and more exposed as temperatures rise higher and higher.

241 Professor Capon gave evidence that vector-borne viruses including Ross River, Barmah Forest and Dengue Fever exist in Australia. His evidence said nothing further specifically about the Ross River or Barmah Forest viruses. His evidence suggested that a vector-borne virus like Dengue Fever will make more people ill because climate change is increasing the geographic range of mosquitos who carry such a disease. He did so by reference to a wide-ranging report on the global health consequences of climate change which itself noted that there will be “regional differences” in the extent to which individuals are put at risk. The report also noted that the effect of climatic change on infectious diseases “will further expand the geographic range of these diseases, with increases and decreases projected depending on the disease (for example malaria, dengue, West Nile virus, and Lyme disease), the region, and the degree of temperature change”. That evidence is clearly insufficient to demonstrate a real risk of increased exposure to vector-borne diseases – even Dengue Fever – for each of the

Children. Although Professor Capon suggested that the geographical spread of disease will increase, neither the timing, extent or location of any spread was given and the relational exposure of that spread to the Children was not addressed. Further, the report on which Professor Capon relied noted that geographical range could also decrease, depending on the disease. The evidence was at a high level of generality and insufficiently directed to the Children to enable the conclusion of reasonable foreseeability of the particular harm contended by the applicants. I do not consider that it may be presumed that, by reason of “common sense and ordinary human experience” (*King* at [82] (Nettle J)), a reasonable person would have some foresight about this particular risk sufficient to cure the informational deficit presented by the evidence.

242 I come to the same view about the emergence of new human pathogens as a foreseeable risk of climate change.

243 Mental health risks were also referred to by Professor Capon. Speaking to a global report, Professor Capon suggested that diminished mental health would arise from increased human conflict brought about by displacement of human populations either due to inundation of low-lying islands or in coastal zones or, alternatively, due to declines in agricultural productivity and rural incomes because of droughts. However, that evidence was based on a global report and is so divorced from the Australian experience that I would not conclude that Professor Capon was suggesting it had application to Australia. I do not consider that the reasonable foreseeability of that harm to any of the Children is demonstrated.

244 Professor Capon also opined that mental illness, including rising levels of depression, would be caused by reduced farm productivity and income losses brought about by drought. Meyricke and Chomik (2019) referred to two studies published in 2018 and stated that climate change is likely to drive longer, harsher and more frequent droughts in parts of Australia and that the negative impacts of drought on mental health of those living in remote and regional communities is “widely evidenced”.

245 At common law mental harm may only be compensated where the harm constitutes a “recognised psychiatric illness”: *Tame* at [7] and [41] (Gleeson CJ) at [61]-[64] (Gaudron J) and at [201] (Gummow and Kirby JJ). The question then is whether a reasonable person in the position of the Minister should foresee that a person in the position of the Children might suffer a recognisable psychiatric injury as a result of a climate change induced drought. In relation to those of the Children whose lives and livelihoods may be severely affected by drought, reasonable foreseeability is demonstrated. However, that would only be so in relation to some of the Children and not each of them.

246 Lastly, as opined by Professor Capon, the level of air pollution is exacerbated by weather conditions, with warmer weather conditions leading to higher levels of ozone formation at ground level and, therefore, increased risks to health. These health impacts include damage to the heart, lungs and other vital organs and an exacerbation of childhood asthma. That evidence was confirmed by Meyricke and Chomik (2019), who stated that climate change is likely to exacerbate the health and mortality impacts of air pollution. In illustrating this further, the authors rely on a 2014 study which stipulates that in Sydney the influence of climate change on ozone concentrations alone is expected to cause an additional 55-65 deaths per year in 2051-2060. That evidence is geographically confined to Sydney but it may be inferred that exposure to the risk of ill-health by reason of air pollution caused by climate change would similarly be experienced in each of the major metropolitan cities of Australia. Whilst I do not come to the view that the risk is a foreseeable risk in relation to each of the Children, I would conclude that a real risk is reasonably foreseeable in relation to some and probably large numbers of the Children.

5.1.5 Conclusion on Reasonable Foreseeability of Harm

247 I have concluded that a reasonable person in the Minister’s position would foresee that, by reason of the effect of increased CO₂ in the Earth’s atmosphere and the consequential increase in global average surface temperature, each of the Children is exposed, through the occurrence of heatwaves or bushfires, to the risk of death or personal injury. However, as earlier noted, the proper inquiry is narrower. What needs to be established is that the injury to the Children is a foreseeable consequence of the Minister’s approval of the Extension Project. Accordingly, I need to be satisfied that a reasonable person in the Minister’s position would foresee that a risk of injury to the Children would flow from the contribution to increased

atmospheric CO₂ and consequent increased global average surface temperature brought about by the combustion of the coal which the Minister's approval would facilitate.

248 That the combustion of 33 Mt of coal from the Extension Project will contribute to an increase in atmospheric CO₂ is both obvious and foreseeable. That the increase in atmospheric CO₂ from the combustion of the coal sourced from the Extension Project would increase global average surface temperature may not be immediately obvious to a lay person, or even a reasonable lay person. However, the Minister must be taken to be aware of the unchallenged evidence given by Professor Steffen that CO₂ emissions caused by the Extension Project would increase global average surface temperature and thus would increase the level at which that temperature is eventually stabilised.

249 The discussion at [74]-[90] above demonstrates why I consider that the emission of 100 Mt of CO₂ from the Extension Project increases the risk of the Children being exposed to harm and particularly so in the realm of the risk profile which plausibly arises should the 'tipping cascade' be triggered and engage a 4°C Future World trajectory.

250 Furthermore, it is relevant to note on the issue of reasonable foreseeability of harm that both the IPC Report and the NSW Department Report considered that the "Scope 3" emissions from the Extension Project (that is, the 100 Mt of CO₂) would be "a significant contributor to anthropological climate change".

251 It should be reiterated that the risk of injury flowing from the Extension Project need only be a real risk. A foreseeable risk may be a remote risk: *Shirt* at 46 (Mason J). As the High Court said in *Chapman v Hearse* at 122, reasonable foreseeability is not, in itself, a test of causation. The foreseeability of the risk of injury and the likelihood of the risk are "two different things": *Shirt* at 47 (Mason J). When courts "speak of a risk of injury as being 'foreseeable' [they] are not making any statement as to the probability or improbability of its occurrence, save that [they] are implicitly asserting that the risk is not one that is far-fetched or fanciful": *Shirt* at 47 (Mason J).

252 A risk flowing from the conduct of a defendant may be small, even "infinitesimal", but nevertheless not be "fantastic or far-fetched" and does constitute a real risk: *Shirt* at 46 (Mason J). In that respect, Mason J in *Shirt* cited Lord Reid's discussion about reasonable foreseeability in *Overseas Tankship (UK) Ltd v The Miller Steamship Co* [1967] AC 617 (*The Wagon Mound (No. 2)*) at 642-643. What is apparent from that discussion, and in particular the analysis made of *Bolton v Stone* [1951] AC 850, is that so long as the risk is real, the probability of its occurrence (even if infinitesimal) does not negate its foreseeability. Similarly, in *Rosenberg v Percival*, Gummow J said at [64] that "[a] risk is real and foreseeable if it is not far-fetched or fanciful, even if it is extremely unlikely to occur".

253 I accept that, even on the marginal risk assessment referred to at [84], the prospective contribution to the risk of exposure to harm made by the approval of the extraction of coal from the Extension Project may be characterised as small. It may fairly be described as tiny. However, in the context of there being a real risk that even an infinitesimal increase in global average surface temperature may trigger a 4°C Future World, the Minister's prospective contribution is not so insignificant as to deny a real risk of harm to the Children. The risk of harm in question is reasonably foreseeable even without regard to the unparalleled severity of the consequences of that risk crystallising. But the magnitude of the danger to which the Minister's conduct is likely to contribute must also be taken into account. When that is done, the conclusion that, by reference to "contemporary social conditions and community standards" (*King* at [97] (Nettle J)), a reasonable person in the Minister's position would foresee the risk and take reasonable and available steps to eliminate it, is established. If it were necessary in this inquiry to ask whether the risk may reasonably be disregarded (as is stated by McHugh J in *Tame* at [108] and in *Graham Barclay Oysters* at [87]) my answer would be "no": cf. *Graham Barclay Oysters* at [89] (McHugh J).

254 Those conclusions do not depend upon but are bolstered by the fact that the reasonable foresight and response in question is that of the reasonable person in the position of the Minister for the Environment exercising powers under the EPBC Act. Section 136(2)(a) of that Act requires that in approving or not approving a controlled action, the Minister must take into account the "principles of ecologically sustainable development". Those principles are set out in s 3A and include what is known as the 'precautionary principle'. As to the origin

of the ‘precautionary principle’ and its adoption in Australia see *VicForests v Friends of Leadbeater’s Possum Inc* [2021] FCAFC 66 at [169]-[173] (Jagot, Griffiths and SC Derrington JJ). Although not referred to as the ‘precautionary principle’ in s 3A(b), the same principle is identified and given that designation by s 391(2) of the EPBC Act. The ‘precautionary principle’ as specified by 3A(b) provides:

if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

255 A number of judicial authorities have considered the ‘precautionary principle’. What relevantly emerges is that in assessing future risks of environmental damage in situations of scientific uncertainty a “cautious” approach to actions which may bring about environmental degradation is to be taken and, in taking such an approach, a heightened recognition or “an optimistic view” of the risk of environmental damage should be taken by decision-makers: *Bridgetown/Greenbushes Friends of the Forest Inc v Executive Director of Conservation and Land Management* (1997) 18 WAR 102 (Wheeler J).

256 In my view, the applicability of the ‘precautionary principle’ to the Minister’s decision-making, attunes both the foresight and response required of a reasonable person in the Minister’s position to the risks that the plausible scientific evidence confirms will be faced by the Children.

257 In sum, this is a case where the foreseeability of the probability of harm from the defendant’s conduct may be small, but where the foreseeable harm, should the risk of harm crystallise, is catastrophic. The consequent harm is so immense that it powerfully supports the conclusion that the Children should be regarded as persons who are “so closely and directly affected” that the Minister “ought reasonably to have them in contemplation as being so affected when...directing [her] mind to the acts...which are called in question”: *Donoghue v Stevenson* at 580 (Lord Atkin). Accordingly, ‘reasonable foreseeability’ is a strong salient feature in support of the posited duty of care being recognised by the law of negligence.

5.2 CONTROL, RESPONSIBILITY AND KNOWLEDGE

258 Each of these features bears upon the relations between the Minister and the Children. The greater level of control over, responsibility for and knowledge of the risk of harm, the closer will be the relations. So much is apparent from the cases.

259 In *Pyrenees Shire Council* (the facts of which are discussed at [364] below) at [166], Gummow J referred to a principle stated by Dixon J in *Shaw Savill and Albion Co Ltd v The Commonwealth* (1940) 66 CLR 344 at 360 that “[t]he obligation of due care to avoid harm to others, though a general duty, arises *out of the situation* occupied by the person incurring it or the circumstances in which he is placed” (emphasis added). Applying that principle as a tool of analysis at [168], Gummow J asked: what was the “situation occupied by the Shire”? His Honour did so by reference to the governing statutory scheme and the dangerous fireplace from which the harm had flowed to the plaintiff. Justice Gummow observed that the situation occupied by the Shire (by reason of the governing statute) was that it had been given “a significant and special measure of control over the safety from fire of persons and property”. His Honour then said “[s]uch a situation of control is indicative of a duty of care”. In that case, control was manifested in the statutory capacity to address the danger or hazard from which the foreseeable exposure of risk to the plaintiff flowed, in circumstances where the Shire had entered upon the exercise of its power to intervene.

260 Similarly, in *Crimmins* (the facts of which are also later discussed at [369]), it was the responsibility given by the statute over safety which was critical to the relations between the statutory authority and the waterside worker whose safety was ultimately compromised.

261 No duty of care was established in *Graham Barclay Oysters* against either the defendant Council or State. In that case, the plaintiffs were consumers of oysters who had suffered physical injury after eating oysters harvested from a polluted lake. They alleged that the Council (which exercised regulatory functions, including environment protection functions, in the area of the lake) and the State (which had powers through departments

and agencies in relation to various aspects of the lake's management and in respect of oyster-growing) were negligent in their failure to take steps to prevent the injury.

262 The leading judgment of Gummow and Hayne JJ (with whom Gaudron J agreed at [58]) emphasised at [150] that “[t]he factor of control is of fundamental importance in discerning a common law duty of care on the part of a public authority”. It was the absence of sufficient control by the Council which was critical to the posited duty not being recognised in relation to the Council. Other considerations not relevant to this discussion, including that the State's statutory capacity to intervene had not been engaged (at [183]), were pertinent to the absence of a duty of care owed by the State.

263 Their Honours regarded the “form of control over the relevant risk of harm” exercised by the Council to be remote in both a legal and practical sense (at [150]).

264 At [151]-[152], Gummow and Hayne JJ distinguished the extent of control the Council had from the control which the relevant statutory authority had in *Brodie* and in *Pyrenees Shire Council*, as well as in cases involving the management and control by statutory authorities of public reserves or premises. Their Honours considered that in *Brodie* the Council had physical control over the condition of roads in circumstances where roads were the “direct source of harm” to road users. In the case of statutory authorities with management and control over land or premises, their Honours considered that “the fact of control over, and knowledge of” the land or premises had been significant in identifying a common law duty of care. Consistently with my earlier analysis of *Pyrenees Shire Council*, their Honours reasoned that the “degree of control was the touchstone of the Shire's duty to safeguard others from the risk of fire in circumstances where the Shire had entered upon the exercise of its statutory powers of fire prevention and it alone among the relevant parties knew of, and was responsible for, the continued existence of the risk of fire” (at [151]).

265 By contrast, the Council in *Graham Barclay Oysters* at no stage exercised control over the direct source of harm to the consumers – that is, the oysters themselves (at [152]). Control over some aspect of the physical environment (in which the oysters were farmed) was insufficient to establish a duty (at [152]). It was relevant that between the capacity for the Council to have intervened to avert the harm and the ultimate harm suffered, there stood numerous commercial enterprises (“an entire oyster-growing industry”), each of which, in the pursuit of profit, was “[engaged] in conduct that presents an inherent threat to public safety” (at [153]).

266 Whilst the Council had powers to monitor and, where necessary, to intervene in order to protect the physical environment of areas under its administration, it did not control the process by which commercial oyster growers cultivated, harvested and supplied oysters, nor the times or locations at which they did so (at [154]). The Council had not been given, by virtue of its statutory powers, “such a significant and special measure of control over the risk of danger that ultimately injured the oyster consumers so as to impose upon it a duty of care the breach of which may sound in damages at the suit of any one or more of those consumers” (at [154]).

267 In coming to that conclusion, Gummow and Hayne JJ at [154] referred to *Agar v Hyde* and stated that the Council did not “so closely and directly [affect]” oyster consumers so as to warrant the imposition of a duty of care. As I later discuss in relation to *Agar v Hyde* at [441], the reference there made and adopted in this passage is a reference to *Donoghue v Stevenson* and the neighbourhood principle. In essence what was here being said was that the extent of control exercised by the Council was insufficient to warrant the consumers of oysters being in the contemplation of the Council when exercising its monitoring powers or when giving any consideration to its capacity to intervene.

268 *Graham Barclay Oysters* was a case based in nonfeasance, that is, a failure to exercise power. It was there asserted that the Council and the State had statutory powers which they should have exercised in order to avoid harm being occasioned. In other words, it was the failure to act to avoid a danger or hazard which was said to be responsible for the harm caused. It was in that context that the Court considered that the extent of control held by the Council over the relevant risk of harm was remote.

269 In this case it is not the failure of the Minister to exercise a power to avert a risk which provides the relevant context. The relevant context for considering the extent of control over the risk of harm flowing from the Minister's impugned prospective conduct is the positive exercise by the Minister of a power, not to avert

risk, but a power which creates a real risk of harm. This case is in the category of cases referred to by Mason J in *Heyman* at 460 “in which an authority in the exercise of its functions has created a danger, thereby subjecting itself to a duty of care for the safety of others”.

270 The relevant context is stronger than it was in *Pyrenees Shire Council* where, in substance, there was a failure by the Council to exercise a statutory power to avert the risk of harm, although the Council had entered upon that exercise.

271 The risk of harm to the Children is not remote, it is reasonably foreseeable and it is therefore a real risk for reasons already explained. The Minister has direct control over the foreseeable risk because it is her exercise of power upon which the creation of that risk depends. To my mind, there is therefore a direct relation between the exercise of the Minister’s power and the risk of harm to the Children resulting from the exercise of that power. The entirety of the risk of harm flowing from that exercise of power is therefore in the Minister’s control.

272 What arises “out of the situation” occupied by the Minister is also instructive.

273 By reason of the functions conferred on the Minister by the EPBC Act, she has responsibility over those aspects of the environment which the Commonwealth Parliament has chosen to regulate. The scope of that regulation is broad and is reflected in the EPBC Act’s object of providing for “protection of the environment”. The reference made to “people and communities” in the definition of the term “environment” in s 528 (as applied through the objects specified by s 3(1)(a) and read in conjunction with the territorial application of the Act to “acts, omissions, matters and things in the Australian jurisdiction” (s 5(2); and see the meaning of “Australian jurisdiction” in s 5(5)) means that the responsibility conferred upon the Minister is, *inter alia*, directed to protecting the interests of Australians including Australian children. An emphasis upon children, including their interest in a healthy environment, is also provided by the principle of inter-generational equity specified by s 3A(c) “that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations”.

274 The Minister occupies the situation of having responsibility over the environment and the interests of Australians as part of that environment, with an emphasis on ensuring a healthy environment for the benefit of future generations. She also has, as my discussion about ‘coherence’ later demonstrates, a responsibility to consider and give weight to the safety of people when exercising her power to approve or disapprove a controlled action which endangers the safety of people. Taking the approach taken by Gummow J in *Pyrenees Shire Council* at [168], when these responsibilities of the Minister are connected to the source of the risk of harm in question (being the Minister’s prospective contribution to the various environmental hazards upon which the applicants rely), what emerges is that the Minister has been given by the statute a significant special measure of control not only over the source of the risk of harm but also over the safety of persons who are thereby put at risk. As Gummow J said in *Pyrenees Shire Council* “[s]uch a situation of control is indicative of a duty of care” (at [168]). Essentially the same analysis was made in *Crimmins* by reference to the responsibility for safety conferred by the governing Act upon the Authority and its connection to the danger which resulted in harm to the waterside worker: see McHugh J at [127] and my later discussion of *Crimmins* at [374]-[375] and [379].

275 In *Heyman*, Mason J also spoke of the “situation” in which a statute may place a statutory authority as indicative of the fact that the statute “facilitates the existence of a common law duty of care” (at 460). His Honour referred to examples in the cases where the “situation” created by the statute was a situation in which the authority had control over the risk of harm because of its occupation of premises, or its ownership and control of premises or a structure. Those observations are echoed in the observation made by Gummow and Hayne JJ in *Graham Barclay Oysters* (at [146]) that the existence of a duty of care depends upon whether the statutory “regime erects or facilitates a relationship between the authority and a class of persons”. At [149], their Honours said that “[t]he focus of analysis is the relevant legislation and the position occupied by the parties”. In *Stuart* at [113] essentially the same proposition was stated by Gummow, Hayne and Heydon JJ when their Honours said that whether a duty is owed will, *inter alia*, “require examination of the degree and nature of control exercised over the risk of harm that has eventuated”.

276 The applicants’ submission in relation to control was brief. They contended that the Minister has the power to approve, approve on appropriate conditions, or refuse to approve, the further extraction of coal.

On that basis they said that the Minister can therefore control the harm.

277 In her response by reference to *Plaintiff S99* at [260], the Minister contended that the significance of ‘control’ as a salient feature is that it is seen to favour the imposition of a duty if a person has it within their power to avoid harm being suffered. To that extent I agree. However, the Minister’s submission sought to address ‘reasonable foreseeability’ and ‘control’ in combination which proved to be problematic.

278 In addressing ‘control’ the Minister relied on her submission on ‘reasonable foreseeability’ and her contention that there were many links and a great number of contingencies in the causal chain between a decision made by the Minister and the harm said to be caused to the Children. It was because of the presence of a complex interaction of factors in that causal chain, including as to whether a meaningful contribution to the harm in question could be made by the Minister’s decision to approve the Extension Project that the Minister submitted that she had no control over the prospective harm. In other words, the Minister contended that ‘control’ was not relevantly engaged because the Minister could not control those other elements in the likely causal chain which would lead to the Children being harmed. One such element pointed to, by way of example, was whether or not the controlled action proceeds – that is, whether or not the operators of the coal mine proceed to extract the coal. The Minister contended that, because she does not have control over an element in the causal chain such as that, she cannot be said to have control over the avoidance of harm.

279 In essence, the submission contended that a defendant cannot be said to have control in the relevant sense, unless the defendant has the capacity to avoid the risk of harm at each point in the causal chain at which harm could be avoided. Put another way, unless the defendant has an exclusive capacity to avoid the risk of harm, the defendant lacks control.

280 The submission must be rejected. If control in that sense was required to be established in order for a duty of care to be recognised, a duty would rarely, if ever, be recognised.

281 It is sufficient to make that point by reference to *Crimmins*. In *Crimmins*, between the statutory authority and the mesothelioma suffered by the waterside worker was the worker’s employer – in fact a number of employers – to whom the Authority had allocated the worker. Although the Authority had overarching responsibility for safety in a general sense, on any view, primary responsibility for the worker’s safety rested with the employers in question. That each of those employers had the capacity (let alone the primary responsibility) to avert the harm inflicted on the worker, did not deny the control found by the majority to be held by the Authority: see at [45], [125]-[127] and [130] (McHugh J with whom Gleeson CJ agreed at [3]).

282 Addressing ‘reasonable foreseeability’ and ‘control’ in combination, the Minister’s submission essentially conflated the two inquiries. In doing so, the submission substituted the state of satisfaction required, being that there is a real risk of harm, to a requirement that there be a causal nexus between conduct and injury.

283 Just as the ‘reasonable foreseeability’ inquiry can only be conducted prospectively, so too must the inquiry about ‘control’ and its connection to the risk of harm and the capacity to prevent that risk. Logically, there is no alternative. Nor is there a rational basis for assessing risk of harm on a different standard than that applicable to the ‘reasonable foreseeability’ inquiry. It must follow that if a real risk of harm is established to flow from a defendant’s conduct on the ‘reasonable foreseeability’ inquiry, the defendant will have control over averting that risk where the existence of that real risk of harm depends on the defendant’s conduct.

284 For all those reasons, I consider that the Minister has very substantial, if not exclusive, control over the real risk of harm to the Children that would flow from her approval of the Extension Project. She has “a significant and special measure of control” (*Pyrenees Shire Council* at [168] *Brodie* at [102], and *Graham Barclay Oysters* at [151]) over the risk of harm by reason of the “situation” the EPBC Act has placed her in, a situation which facilitates the existence of a duty of care.

285 ‘Knowledge’ also supplements ‘control’, because knowledge in relation to the risk of harm which may flow from a defendant’s conduct enhances the capacity to avert and thus control the risk. Knowledge can, however, be seen as a stand-alone salient feature, as it was in *Stavar* (at [103](k)).

286 Here, the Minister has at least all of the knowledge about the risk of harm to the Children which the evidence has provided. The evidence about the risk to the Children is substantial. None of it is contested, although the Minister has put in contest the extent of the contribution to the risk of harm that may be attributed to her prospective conduct. However, in that respect, the Minister has the understanding provided by my determination that the Children are exposed to a real risk of harm from the Extension Project should it be approved. That is the state of knowledge that the Minister is fixed with for the purpose of this analysis.

287 That knowledge serves to support the proposition that the Children should be regarded as persons who are “so closely and directly affected” by an approval that the Minister “ought reasonably to have them in contemplation as being so affected” (*Donoghue v Stevenson* at 580 (Lord Atkin)) when directing her mind to whether or not the Extension Project should be approved. ‘Knowledge’ is therefore to be regarded as affirmative of the existence of the posited duty of care.

288 ‘Control’ has especial importance in relation to whether a duty of care is owed by a statutory authority. Here, the Minister has substantial and direct control over the source of harm and also control which flows from the situation of responsibility which the Minister occupies. Her control is also enhanced by her knowledge of the potential consequences of the conduct within her control. The salient features of control, responsibility and knowledge tend strongly in support of the existence of relations between the Minister and the Children sufficient for the common law to impose a duty of care.

5.3 VULNERABILITY, RELIANCE AND RECOGNISED RELATIONSHIPS

289 The evidence demonstrates that the Children are extremely vulnerable to a real risk of harm from a range of severe harms caused by climate change, or more specifically, increased global average surface temperature brought about by increased greenhouse gases in the Earth’s atmosphere. Professor Capon endorsed the conclusion that a “business-as-usual trajectory will result in a fundamentally altered world, with the lives of today’s children profoundly affected by climate change”.

290 In a Future World where global average surface temperature is 3°C above pre-industrial levels, Professor Steffen’s evidence projected that the Great Barrier Reef will no longer exist; extremely harsh living and working conditions will be faced by rural communities and many locations in Australia will be very difficult to inhabit; at 4°C much of Australia’s inland areas will become uninhabitable for humans with Australia’s south-east and south-west agricultural zones largely unviable; at 3°C, by reason of water shortages and extreme weather events, living in many Australian cities and towns will be extremely challenging and sea level rises will increasingly impact upon coastal communities; at 4°C Australia’s coastal cities will suffer increasing inundation and flooding from sea level rises driving severe economic challenges; at 3°C high fire danger weather will increase significantly leading to more catastrophic fire seasons like the Black Summer fires; and at 4°C most of Australia’s eastern eucalypt forest will no longer exist due to repeated severe bushfires.

291 A comprehensive account of the risks to the lives, safety and health of the Children has already been given. Perhaps the most startling of the potential harms demonstrated by that evidence is that one million Australian Children are expected to suffer at least one heat-stress episode serious enough to require acute care in a hospital. Many thousands will suffer premature death from either heat-stress or from bushfire smoke.

292 The economic loss and the property losses which the Children are projected to experience was largely dealt with in the report of Dr Meyricke. That report is detailed and well-reasoned and the opinions there expressed are unchallenged. However, it is only necessary here to set out Dr Mallon’s ultimate conclusion that each of the Children, on average, is expected to lose between \$41,000 and \$85,000 of family wealth and, on average, (in today’s dollars) \$170,000 in lost income as a result of extreme weather and higher temperatures induced by climate change. Those conclusions are set out in the following summary given by Dr Mallon:

10.5 The results provided suggest that the cohort of today’s children can on average expect to lose between \$41,000 and \$85,000 of family wealth due to climate driven corrections in the property market. These will account for the elevated and increasing risk of about 750,000 dwellings exposed to flooding,

coastal inundation, forest fire and subsidence. The figures do not include the southerly movement of cyclones, and should therefore be considered conservative.

10.6 Of the cohort of today's children, approximately 30% will be in jobs where rising temperatures will decrease their productivity because, per workplace health and safety expectations, they will need to take more breaks or work more limited hours to avoid heat exhaustion. As a result, these people will on average forego about \$75,000 in income over their working lives.

10.7 Those with air-conditioned places of work will be vulnerable to increased disruptions of critical infrastructure like power, telecommunications and supply chain stability. Based on the fraction of infrastructure sites exposed to extreme weather, in my opinion increased extreme weather will place a drag on the economy through supply chain and business continuity disruption over the course of the century. The associated cumulative impact will be \$25,000 per year over the working life of a cohort member (with no economic growth, and no discounting).

10.8 I have estimated the cumulative impact of reduced agricultural productivity on the national economy based on the work of Professor Tom Kompas (Steffen et al. 2019), to be at least \$60,000 per capita over the life of a member of the cohort.

10.9 Thus my constrained estimate of financial impacts due to the chosen climate change scenario is that today's children will each forego between \$125,000 and \$245,000, with a best estimate of about \$170,000 in lost income (in today's dollars) through the specific impacts of revaluation of hazard exposed property, heat related productivity losses, supply chain disruption and agricultural output impairment.

293 It is difficult to characterise in a single phrase the devastation that the plausible evidence presented in this proceeding forecasts for the Children. As Australian adults know their country, Australia will be lost and the World as we know it gone as well. The physical environment will be harsher, far more extreme and devastatingly brutal when angry. As for the human experience – quality of life, opportunities to partake in nature's treasures, the capacity to grow and prosper – all will be greatly diminished. Lives will be cut short. Trauma will be far more common and good health harder to hold and maintain. None of this will be the fault of nature itself. It will largely be inflicted by the inaction of this generation of adults, in what might fairly be described as the greatest inter-generational injustice ever inflicted by one generation of humans upon the next.

294 To say that the Children are vulnerable is to understate their predicament. However, it is not vulnerability in the abstract which is relevant for determining whether a duty of care is owed to them by the Minister. Their vulnerability must be connected to their relation with the Minister or their reliance upon the Minister: *Stuart* at [134] (Crennan and Kiefel JJ). And it is.

295 The vulnerability of the Children here in question has a nexus with the Minister because the source of their exposure to risk includes the impugned conduct of the Minister. That conduct exposes them to a real risk of harm as earlier recorded. The unparalleled severity of the consequences of the risk, should it crystallise, bears upon its significance. The directly relevant risks of harm are confined to personal injury as they must be because, as stated earlier, the scope of the recognisable duty of care cannot, in this case, extend beyond personal injury. However, those risks of harm are sufficient in themselves to establish especial vulnerability. Nevertheless, the other risks of harm demonstrated by the evidence provide a context in which the significance of the risks of immediate relevance may be assessed.

296 The vulnerability of the Children is partly a function of the magnitude of the potential risk of harm they face but is also a function of their powerlessness to avoid that harm. The Minister made no submission that the prospective harms could be avoided by the Children. To some extent, the evidence suggested that possibility. For instance, Dr Meyricke gave evidence that by largely confining their activities to air-conditioned premises, tomorrow's elderly adults may diminish the risks to their health which may result from exposure to heatwaves.

However, those kind of measures are not of much relevance to this inquiry because the vulnerability of a plaintiff is to be assessed by reference to the steps that the person can reasonably be expected to take to avoid the harm inflicted by a defendant. No such measures were identified by either the Minister or the evidence. Further, no issue of autonomy arises: *Stuart* at [90] (Gummow, Hayne and Heydon JJ). The Children have no choice but to live in the environment which will be bequeathed to them.

297 The Minister did contend that the vulnerability of the Children was not unique because there are other children around the World and there are adults also who would be equally vulnerable. However, a person's vulnerability to harm is not denied by the fact that there are others equally vulnerable or even others more vulnerable.

298 This is not a case where it may be said that a defendant has assumed responsibility for the plaintiff: see the discussion in *Plaintiff S99* at [232]-[242]. However, the general rather than individual nature of the Minister's responsibility for Australians, derived from the EPBC Act, is nevertheless relevant to 'reliance'.

299 To avoid the prospective harm, the Children look to the Minister for assistance for two obvious reasons. *First* and in relation to the risk of harm that flows from the Minister's impugned conduct, it is the Minister who has control over the conduct and therefore has the capacity to avoid that risk. *Second*, it is the Minister who relevantly has a responsibility for the health of the environment and for those persons whose safety may be compromised by her conduct which endangers it. That the Children rationally look to the Minister for assistance in relation to their vulnerability demonstrates that, in their relations with the Minister, there exists a form of dependency encapsulated by 'reliance' as a salient feature.

300 Like 'vulnerability', the potency of 'reliance' as a salient feature is limited by the extent of the contribution that may be made by the Minister to the risks of harm faced by the Children. But again, the magnitude of the harm, should it occur, is sufficient to render the risk flowing from the Minister's potential conduct to be significant.

301 There is a further aspect going to the nature of the Children's vulnerability and thus also to the extent of their dependence or reliance upon the Minister. That aspect raises the special vulnerability of the Children as minors.

302 The applicants rely upon that special vulnerability and argue that it is encapsulated in the *parens patriae* doctrine, which they say demonstrates that there is a protective aspect inherent in the relationship between the Minister in her capacity as a member of the Executive and the Children by reference to what is asserted to be a recognised relationship.

303 In relation to the *parens patriae* doctrine, the applicants contended that the doctrine supports the inherent jurisdiction of the Crown to do what is for the benefit of those who are incompetent: *Re Eve* [1986] 2 SCR 388 at 410 (La Forest J), cited with approval in *Department of Health and Community Services v JWB and SMB*(1992) 175 CLR 218 (*Marion's Case*) at 258 (Mason CJ, Dawson, Toohey and Gaudron JJ). The origins of the doctrine lie in the "direct responsibility of the Crown for those who cannot look after themselves" (at 259), and it is invoked in modern times in support of the inherent jurisdiction of a court with respect to persons who, being in need of care, are unable to take care of themselves: *Marion's Case* at 258-259. The precise scope and limits of the doctrine are not defined, and it has been asserted by the courts for the purposes of directly protecting the welfare of children and supervising their guardians. It is not limited to circumstances where there is an actual or apprehended threat of harm from abuse or neglect: *Marion's Case* at 258-259 (Mason CJ and Dawson, Toohey and Gaudron JJ), 301-302 (Deane J).

304 The applicants submit that, in practice, the *parens patriae* jurisdiction has been delegated to the Courts (as to which see also *Wellesley v Duke of Beaufort* (1827) 38 ER 236 at 243; *Wellesley v Wellesley* (1828) 4 ER 1078 at 1080-1081; Joseph Story, *Commentaries on Equity Jurisprudence as Administered in England and America*(Melville Bigelau 13th ed, Boston 1886), vol II chapter XXXV; and as to the exercise of the *parens patriae* jurisdiction by the Family Court see *Marion's Case* at 256 (Mason CJ and Dawson, Toohey and Gaudron JJ), at 294 (Deane J) and at 318 (McHugh J); *P v P* (1994) 181 CLR 583 at 607 (Mason CJ, Deane, Toohey and

Gaudron JJ); and *Northern Territory v GPAO* (1999) 196 CLR 553 at [63] (Gleeson CJ and Gummow J) and at [141] (Gaudron J).

305 In her submissions, the Minister rejects the contention that the Children are relevantly incompetent and in need of the special custodial care of the Crown.

306 However, the protective aspect for which the applicants contend, in the particular context of the exercise of executive power, finds support in the judgment of Gaudron J in *Minister for Immigration and Ethnic Affairs v Teoh* (1995) 183 CLR 273. *Teoh* was a case concerning an application for review by a foreign national of the refusal of his application for a right of permanent entry to Australia. The applicant in that case had children who were Australian citizens. Gaudron J referred to the *parens patriae* doctrine in making the following observations(at 304, footnotes omitted):

[Australian citizenship] involves obligations on the part of the body politic to the individual, especially if the individual is in a position of vulnerability. And there are particular obligations to the child citizen in need of protection. So much was recognised as the duty of kings, which gave rise to the *parens patriae* jurisdiction of the courts. No less is required of the government and the courts of a civilised democratic society.

In my view, it is arguable that citizenship carries with it a common law right on the part of children and their parents to have a child's best interests taken into account, at least as a primary consideration, in all discretionary decisions by governments and government agencies which directly affect that child's individual welfare...

[A]ny reasonable person who considered the matter would, in my view, assume that the best interests of the child would be a primary consideration in all administrative decisions which directly affect children as individuals and which have consequences for their future welfare. Further, they would assume or expect that the interests of the child would be taken into account in that way as a matter of course and without any need for the issue to be raised with the decision-maker. They would make that assumption or have that expectation because of the special vulnerability of children, particularly where the break-up of the family unit is, or may be, involved, and because of their expectation that a civilised society would be alert to its responsibilities to children who are, or may be, in need of protection.

307 Mason CJ and Deane J touched on the same subject matter at 292 where their Honours said:

That view entails the conclusion that there was a want of procedural fairness. It may also entail, though this was not argued, a failure to apply a relevant principle in that the principle enshrined in Art 3.1 [of the United Nations Convention on the Rights of the Child) may possibly have a counterpart in the common law as it applies to cases where the welfare of a child is a matter relevant to the determination to be made.

308 In *Vaitaiki v Minister for Immigration and Ethnic Affairs* (1998) 150 ALR 608 (Burchett, Whitlam and Branson JJ), an issue arose as to whether the Administrative Appeals Tribunal, in reviewing a decision to deport the appellant, was required to take the best interests of the appellant's children into account. The leading judgment of the Full Court was given by Burchett J who (at 616) referred to the observations of Gaudron J in *Teoh* and said this:

In addition, and for reasons explained by Gaudron J, at the least the substantive law required the interests of young children who were Australian citizens to be taken into account as very significant matters. The view should not be entertained that, when parliament provided for the assertion of community interests under the former s 55, it excluded from those interests the well-being of the community's weakest and most vulnerable members, who are also its future.

309 The comments of Gaudron J in *Teoh* were also considered by a Full Court (Branson, Goldberg and Allsop JJ) in *Minister for Immigration and Multicultural Affairs v W157/00A* (2002) 125 FCR 433. That was a judicial review application in which the cancellation of the respondent's visa was challenged on the basis that the Minister had failed to take into account the best interests of the respondent's children. The respondent relied on the observations of Gaudron J in *Teoh* to contend that the Minister was under a common law obligation to give consideration to the best interests of the children. Justice Branson stated that she was "far from satisfied" that that submission was "without merit" (at [79]). It was however a contention unnecessary for the Court to determine because the Court was not satisfied that the best interests of the children had not been taken into account by the Minister. Acknowledging that the question did not arise for that reason, Allsop J said that the contention was "one of importance and some difficulty" (at [115]). Goldberg J agreed (at [84]) with the reasons of each of Branson J and Allsop J.

310 In both *Minister for Immigration and Multicultural and Indigenous Affairs v Lorenzo* [2005] FCAFC 13 (Wilcox, Sackville and Finn JJ) and *Uriaere v Minister for Home Affairs* [2018] FCA 2084 (Wigney J), the observations of Gaudron J in *Teoh* were considered in the context of visa cancellation decisions and in relation to the issue of whether the best interests of the visa holders' children had been taken into account. In each case it was unnecessary for the Court to consider whether the common law obliged the relevant Minister to have taken the best interests of the children into account. In *Lorenzo* the Court proceeded on the presumption that the respondent had the common law right referred to by Gaudron J in *Teoh* (at [57]-[58]). In *Uriaere*, Wigney J found against the applicant on the particular facts of that case "even accepting the force of the dicta of Gaudron J in *Teoh*" (at [36]).

311 It is not necessary for me to determine whether legal obligations are imposed upon the Minister by reason of the *parens patriae* doctrine. It is sufficient to observe that common law jurisdictions have historically identified and our courts continue to identify that there is a relationship between the government and the children of the nation, founded upon the capacity of the government to protect and upon the special vulnerability of children. Whether that recognition is sourced in the common law or merely in the "expectation that a civilised society would be alert to its responsibilities to children who are, or may be, in need of protection" (*Teoh* at 304 (Gaudron J)), the recognition that children have a special vulnerability bolsters 'vulnerability' and 'reliance' as affirmative indicators of a duty of care.

312 I would add that it is not merely the vulnerability of the Children which I find potent. It is also their innocence. They bear no responsibility for the unparalleled predicament which they now face. That innocence is also deserving of recognition and weight in a consideration of the relationship between the Children and the government they look to for protection.

313 I should mention in this section two further matters. The applicants also raised s 51(xxxix) and s 61 of the *Constitution* and *Pape v Federal Commissioner of Taxation* (2009) 238 CLR 1, in support of a contention that the Commonwealth has a constitutional function to respond to existential threats to the nation. They submitted that this uniquely national aspect of the Executive's function is relevant to a posited obligation to protect children from the cataclysmic effects of climate change which threaten the Australian nation and the people who will then inhabit it.

314 In essence, the submission seeks to point to additional responsibilities which are said to be held by the Minister as a member of the Executive. However, even if I were to accept that through her membership of the Executive, the Minister has the general function of responding to existential threats to the nation, I do not consider that in the context of the specific responsibilities held by the Minister and derived from the EPBC Act the submission made by the applicants contributes anything of significance to an understanding of the relations between the Minister and the Children.

315 Second, not much attention was paid by the applicants' submissions to 'proximity' as a salient feature. 'Proximity' considers "the nearness in a physical, temporal or relational sense of the plaintiff to the defendant": *Stavar* (at [103(g)]). I accept the Minister's submission that there is no physical or temporal nearness between the Minister and the Children. However, the affirmative salient features here considered demonstrate a relational nearness. 'Proximity' is therefore an affirmative salient feature but, of itself, adds no additional support to the recognition of a duty of care.

6. THE NEGATIVE SALIENT FEATURES

6.1 Coherence of the Posited Duty with the Statutory Scheme and Administrative Law

316 The Minister contended that the posited duty of care is incoherent with the EPBC Act and more generally with public law principles. The applicants denied that the posited duty was inconsistent with the EPBC Act or incoherent with public law.

317 The High Court has referred to “coherence in the law” or applied coherence-based reasoning in a wide range of contexts. There are helpful discussions of the concept of coherence and the cases in which it has been considered in the academic literature including Grantham R and Jensen D, ‘Coherence in the Age of Statutes’ (2016) 42 *Monash University Law Review* 360 and Fell A, ‘The Concept of Coherence in Australian Private Law’ (2018) 41(3) *Melbourne University Law Review* 1160. Whilst there is much background assistance to be gained from the wider discussion, it is sufficient to confine my consideration of ‘coherence’ to those authorities in which coherence-based reasoning has been applied in relation to whether a duty of care should be recognised.

318 Of the relevant High Court authorities to which I was referred, the most comprehensive discussion of ‘coherence’ is found in *Sullivan v Moody*. That reasoning has been variously endorsed or followed without apparent disagreement in each of the more recent judgments of the High Court dealing with the topic: *Graham Barclay Oysters* at [147] and [149] (Gummow and Hayne JJ); *Tame* at [24] and [28] (Gleeson CJ), at [57] and [58] (Gaudron J), at [123] (McHugh J), at [231] (Gummow and Kirby JJ), at [298] (Hayne J) and at [323] and [335]-[336] (Callinan J); *McKenna* at [29]-[33] (French CJ, Hayne, Bell, Gageler and Keane JJ); and *Stuart* at [113] (Gummow, Hayne and Heydon JJ).

319 Two further High Court authorities are of relevance, *Miller v Miller* (2011) 242 CLR 446 and *CAL No 14 Pty Ltd v Motor Accidents Insurance Board* (2009) 239 CLR 390.

320 Before turning to consider the authorities and, in particular *Sullivan v Moody*, it is useful to make some general observations about ‘coherence’ which I draw from the relevant authorities.

321 To arrive at a proper understanding of ‘coherence’, it must first be recognised that ‘coherence’ is a creature of the common law. It is not a law or a principle created by or attributable to Parliament. Coherence-based reasoning is a “policy consideration” applied by the common law: *Miller v Miller* at [15] (French CJ, Gummow, Hayne, Crennan, Kiefel and Bell JJ); *Equuscorp Pty Ltd v Haxton* (2012) 246 CLR 498 at [23] and [34] (French CJ, Crennan and Kiefel JJ). It is a policy consideration which is deployed by the common law to assist in the development and application of the common law, primarily in respect of its interaction with statute law, but also internally as between different principles of the common law.

322 In relation to its interaction with statutory law, coherence-based reasoning has a broader conception than that which the applicants’ submissions would allow. It is not merely about a court construing from a statute Parliament’s intent to exclude the common law from the statute’s field of operation. It is primarily about the common law determining that there are policy reasons as to why it is not appropriate for the common law to enter a particular field or parts thereof. Where Parliament is already in the field, coherence-based reasoning is driven by a need to avoid joint occupation of the field that would undermine, contradict or substantially interfere with the purpose, policy and operation of the statutory law already in place. It is not necessary for the common law to adhere to the existing statutory law as though they are glued together as a seamless whole. What is required by coherence-based reasoning is that the two laws cohere, one sitting compatibly alongside the other without “incongruity” or “contrariety”: *Miller v Miller* at [74]. In *Sullivan v Moody*, an absence of coherence was expressed in terms of a lack of consistency (see for example at [62] (Gleeson CJ, Gaudron, McHugh, Hayne and Callinan JJ)).

323 The principal concern underlying the requirement for consistency is, as the Court in *Sullivan v Moody* said at [55], a “question about coherence of the law”. The fundamental problem presented by cases of this kind is, as the Court said at [50], “the need to preserve the coherence of other legal principles, or of a statutory scheme

which governs certain conduct or relationships”. Drawing on those observations, McHugh J in *Tame* at [123] said that “the need for the law to be coherent is a relevant factor in determining whether a duty exists”.

324 In *Sullivan v Moody*, the plaintiffs alleged that the State of South Australia incompetently conducted investigations into allegations that they had sexually abused their respective children. The plaintiffs alleged that as a result of the negligent investigations they had suffered harm including psychiatric injury and personal and financial loss. The statutory scheme applicable to the investigation provided that the interests of the children were paramount.

325 The Court held that the duty for which the plaintiffs contended could not be reconciled with the statutory functions being exercised given the objective of the statute that those functions be exercised in the interests of the children. It was inconsistent with those functions and that objective to impose a legal duty to protect people suspected of inflicting the harm in the course of investigating allegations of serious harm to children, and such a duty would conflict with the duty owed to the children (at [62]).

326 What gave rise to the relevant inconsistency on the facts of that case was described by the Court at [62] as follows (emphasis in original):

The statutory scheme that formed the background to the activities of the present respondents was, relevantly, a scheme for the protection of children. It required the respondents to treat the interests of the children as paramount. Their professional or statutory responsibilities involved investigating and reporting upon, allegations that the children had suffered, and were under threat of, serious harm. It would be inconsistent with the proper and effective discharge of those responsibilities that they should be subjected to a legal duty, breach of which would sound in damages, to take care to protect persons who were suspected of being the sources of that harm. The duty for which the appellants contend cannot be reconciled satisfactorily, either with the nature of the functions being exercised by the respondents, or with their statutory obligation to treat the interests of the children as paramount. As to the former, the functions of examination, and reporting, require, for their effective discharge, an investigation into the facts without apprehension as to possible adverse consequences for people in the position of the appellants or legal liability to such persons. As to the latter, the interests of the children, and those suspected of causing their harm, are diverse, and irreconcilable. That they are irreconcilable is evident when regard is had to the case in which examination of a child alleged to be a victim of abuse does not allow the examiner to form a definite opinion about whether the child has been abused, only a suspicion that it *may* have happened. The interests of the child, in such a case, would favour reporting that the suspicion of abuse has not been dispelled; the interests of a person suspected of the abuse would be to the opposite effect.

327 The statutory scheme there considered required the repository of statutory power to treat the interests of the children as paramount, whereas the duty posited by the plaintiffs would have required that the interests of those suspected of causing the children harm be themselves protected from harm. That conflict, the Court reasoned, made the asserted duty of care inconsistent with the proper and effective discharge of the statutory and professional responsibilities of the repository of the statutory power. It was in that context that the source of the inconsistency was said to be founded in the “nature of the functions being exercised” and in the “statutory obligation to treat the interests of the children as paramount”.

328 The extent of the inconsistency was regarded as significant and expressed in terms of an inability to reconcile features of the statutory scheme with features of the posited duty. The nature of an inconsistency with statutory duties necessary to deny the existence of a duty of care had been earlier discussed by the Court at [53]-[60]. The Court stated that a duty of care would not exist where to find such a duty “would so cut across other legal principles as to impair their proper application” (at [53]). A duty of care should not be found if that duty was incompatible with other duties which the respondent owed (at [55]). At [60] in the passage set out below at [362], the Court opined that the fact that a repository of a statutory duty was constrained by the manner in which powers and discretions may be exercised does not of itself rule out the possibility that a duty of care is also owed, at least where those duties were not “irreconcilable”. Dealing then with public authorities charged

with exercising responsibilities and powers in the public interest or in the interest of a specified class of persons, the Court observed that “the law” would not ordinarily subject such an authority to a duty to have regard to “conflicting” interests, claims or obligations.

329 I will deal separately with the Minister’s contention that the posited duty is incoherent with public law. The Minister primarily asserted incoherence with the EPBC Act because the imposition of the posited duty would be inconsistent with the statutory task required of the Minister by s 130 and s 133 of that Act. At its highest, the impairment of the statutory task and the decisional freedom given to the Minister was said to be that the statutory discretion would be effectively foreclosed because the imposition of a duty of care would dictate a particular outcome, namely, the refusal of the Extension Project. It is convenient that I describe that as an assertion of the foreclosure of the discretion. However, the Minister also contended that the process of decision-making would be impaired because the posited duty would require that the avoidance of harm to the Children be effectively elevated to a mandatory and paramount consideration and would thus “distort” or “skew” the Minister’s discretion. It is convenient that I describe that as an assertion of a process-based impairment of the discretion. I appreciate that the Minister did contend that the “distortion” of her discretion extended to its effective foreclosure but, for convenience, I will place that impairment in the first category identified above.

330 The applicants drew attention to s 75(iii) of the *Constitution* and contended that, by that provision, the Executive is liable in tort including in the exercise of functions conferred by the legislature, unless the legislature has excluded liability. For those propositions, the applicants relied on observations made in *Plaintiff M68/2015 v Minister for Immigration and Border Protection* (2016) 257 CLR 42 at [125] where Gageler J restated the law as held by Gummow and Kirby JJ in *The Commonwealth v Mewett* (1997) 191 CLR 471 at 549-50 as follows (citations omitted):

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. Any exclusion of actions of the Executive Government from common law liability was to result not from the existence of a generalised immunity from jurisdiction but through the operation of such substantive law as might be enacted by the Parliament under s 51(xxxix) or under another applicable head of Commonwealth legislative power.

331 At [126], Gageler J went on to consider the purpose of s 75(v) of the *Constitution* which provides that the High Court of Australia has jurisdiction in all matters in which an injunction is sought against an officer of the Commonwealth. Relevantly, Gageler J said this (citations omitted):

Its effect was also to ensure that an officer of the Commonwealth could be restrained by injunction from acting inconsistently with any applicable legal constraint even when acting within the scope of the authority conferred on that officer by the Constitution or by legislation.

332 That observation entails a recognition that a repository of statutory power may validly exercise the power but nevertheless do so negligently. That proposition is of some importance to the applicants’ contention and is supported by other authorities to which I will later refer.

333 The applicants submitted that to recognise a duty of care in the exercise of a statutory power, a court must first conduct a “consistency” analysis. That analysis, the applicants contended, asks whether the legislature has conferred some power on the Executive which, of its essence, would be so altered or impaired by the recognition of a common law duty to certain classes of persons that it may be said that the legislature has, by implication, intended to exclude liability. Thus the applicants say that the judiciary will recognise a duty only having concluded that the legislature has not expressly or impliedly excluded it and that the judiciary’s recognition that the statute excludes liability in negligence has variously been labelled “inconsistency” and “incoherence”.

334 The applicants deny that for a duty of care to “distort” or “skew” the exercise of a statutory power entails incoherence because, if it did, it would mean that there could never be a duty imposed on a statutory authority which is vested with a discretion to do a positive act. They rely on a long line of authority in support of the proposition that liability in negligence may be imposed on a statutory authority exercising a statutory power or discretion. They contended that there was no inconsistency between the posited duty and the duty under s 130 and s 133 of the EPBC Act because the posited duty:

- (i) is not inconsistent with the Minister’s statutory duty to make a decision;
- (ii) does not require the Minister to have regard to issues which she is precluded from considering under the EPBC Act; and
- (iii) does not dictate how the Minister must exercise her discretion.

335 The authorities do not, in my view, support the restrictive approach to ‘coherence’ for which the applicants contend. Whilst ‘coherence’ in this context is very much focused upon consistency between the statute and the asserted duty, the identification of inconsistency is not limited to a consideration of the exclusionary intent of the statute or to a direct conflict of obligations and extends to an impairment in the performance or exercise of a statutory power or discretion. *Sullivan v Moody*, as well as other authorities relied upon by the Minister to which I will shortly turn, supports the proposition that what I have called a process-based impairment can provide a basis for a finding of incoherence.

336 On the other hand, the Minister was unable to identify any occasion where the apparent foreclosure of a statutory discretion caused by the imposition of liability in negligence has ever been regarded as raising incoherence or inconsistency. The applicants rely on numerous authorities where liability in negligence was imposed in relation to the negligent exercise or non-exercise of a statutory power or discretion in the absence of any observation of incoherence. Those authorities suggest that the decisional freedom given to the holder of a statutory discretion to exercise the discretion validly in a particular way is not necessarily to be regarded as impaired by the imposition of liability for negligence, at least where liability is confined to an award of damages.

337 Each of the contentions made by the Minister relied upon what the Minister asserted was the broad discretionary power conferred upon her to approve or not approve a controlled action. I agree with that characterisation of the power and the Minister’s associated submission that the statutory scheme contemplates a broad enquiry by the Minister and the weighing of competing considerations.

338 The discretion given to the Minister to approve or not approve a controlled action is unconfined by any statutory criteria which specifies the state of satisfaction required for approval or disapproval. There are negative stipulations made by ss 137-140A which, broadly speaking, require that the Minister not act inconsistently with a specified international treaty or international convention and not approve the construction of a nuclear installation, but the Minister’s discretion is otherwise only circumscribed by the considerations she is permitted to take into account, including some that are mandatory, and the objects of the EPBC Act. The considerations the Minister must take into account include those specified in s 136(1). The factors which are required to be taken into account when the Minister considers those matters are specified by s 136(2). While s 136(5) restricts the matters that the Minister may consider to those matters required by Div 1 of Pt 9, those matters include any matter relevant to any matter protected by a provision of Pt 3 (s 136(1)(a)) and economic and social matters (s 136(1)(b)). Those categories encompass a wide range of possible considerations none of which are mandatory and all of which are available to be considered and weighed in the evaluative exercise the Minister must undertake in approving or not approving a controlled action.

339 The Minister contended, and I accept, that it is likely that in such an exercise the Minister will be called upon to weigh competing considerations. As the Minister stated, the balancing process between potentially competing interests the EPBC Act is looking to promote can be seen in part from s 3A(a), which forms part of the “principles of ecologically sustainable development” there described. Section 136(2)(a) provides that the Minister must take those principles into account and, as mentioned earlier, the promotion of “ecologically sustainable development” is an object of the EPBC Act listed in s 3(1)(b). The EPBC Act’s promotion of decision-making processes that “effectively integrate both long-term and short-term economic, environmental,

social and equitable considerations” (s 3A(a)) highlights an intent that competing considerations be assessed and that a balance be struck between them.

340 The Minister submitted that the scheme of the EPBC Act provides her with a broad discretion and contemplates that the statutory exercise required to approve, or not approve, a particular controlled action involves the striking of a balance between competing considerations. She contended that there was inconsistency between the statutory scheme and the posited duty because the duty would, in practicable terms, impose a mandatory obligation upon the Minister to consider the potential for the controlled action to cause harm to the Children, when that consideration is not a mandatory consideration under the EPBC Act. That was said to be a species of distortion and thus incoherence.

341 The principal authority relied upon by the Minister in support of her submission asserting incoherence is the judgment of Allsop P (as his Honour then was) in *MM Constructions (Aust) Pty Ltd v Port Stephens Council (No 7)* [2012] NSWCA 417. In that case, Allsop P (with whom Bergin in Eq agreed) determined that the duty of care there asserted was not established, including because it was inconsistent with the balancing exercising required of the Council by the EPA Act in determining whether to approve or modify a development proposal. The appellants were developers who had submitted development plans to the Council for approval. They claimed that the Council had been negligent in handling their development application and subsequent modification application. Their claim in negligence was founded on an asserted duty upon the Council to act with reasonable care in its handling of their applications for approval so as to avoid foreseeable economic loss to them.

342 To make good her reliance upon *MM Constructions*, the Minister contended that the scheme of the EPA Act was relevantly analogous to the scheme of the EPBC Act. It is convenient to consider that issue now.

343 The objects of the EPA Act (s 5) and the relevant provisions setting out the matters for consideration in the determination of a development application (s 79C) are set out in the judgment of Allsop P at [82] to [83]. At [98], his Honour noted that in making its judgment about whether to approve or not approve, the Council “must consider the broad range of interests public and private of the kind set out in the EPA Act, ss 5 and 79C”.

344 The Minister sought to say that the balancing exercise required of the Council under the EPA Act was relevantly equivalent to that required by the Minister under the EPBC Act. I largely accept that contention but not entirely. In *MM Constructions*, Allsop P stated that the EPA Act “lays down the balance of interests to be assessed by the Council” (at [98]). I do not accept that quite the same characterisation may be made of the EPBC Act because the extent to which mandatory considerations were specified by the EPA Act differs greatly from those specified by the EPBC Act. Under the EPBC Act, and for reasons mentioned already, the limited categories of considerations which the Minister must consider include a broad range of considerations which are discretionary rather than mandatory. Nevertheless, whilst the Minister has greater freedom to choose which considerations deserve to be taken into account than did the Council under the NSW Act, the exercise required in each case involves, *first*, an assessment of the benefits and detriments of a particular proposal and, *second*, for the designated decision-maker to strike a balance as between any competing considerations and competing interests.

345 In *MM Constructions* at [89], Allsop P (with whom Bergin CJ in Eq agreed at [229]) referred to the *Speirs* line of authority, and at [100], citing his Honour’s prior statements in *Precision Products (NSW) Pty Ltd v Hawkesbury City Council* (2008) 74 NSWLR 102, emphasised the continued force of *Speirs* and like cases. However, at [90] his Honour also sought to emphasise that neither *Speirs* nor *Heyman* “is the foundation for the broad proposition that any foreseeable loss of any kind from the exercise of any power, whatever its character, if exercised without reasonable care, is recoverable”. His Honour stated that a “duty of some character must be gleaned as a matter of statutory construction or from the common law, in the context of the statute”. His Honour continued at [91] by pointing out that a number of considerations needed to be borne in mind about the imposition of a duty in that case. *First*, consideration should be given to the fact that the damage sought to be recovered was for pure economic loss. *Second*, consideration should be given “as to the conformance of the statutory responsibilities of the Council with the content of the putatively imposed duty of care and the prospective interests of the [appellants] to be protected as well as to the realm of public administrative law”.

346 His Honour considered a number of salient features and determined that there was relevantly no reliance, no assumption of responsibility and no vulnerability upon which the appellants could rely to establish the posited duty of care (at [93]-[96]). His Honour then considered whether imposition of a duty of care was in conformance with the statutory scheme. His Honour said at [98] (citations omitted):

Approval of a variation to a consent may be to the financial benefit of the applicant; a refusal would not be. Approval, however, may be to the financial detriment of a nearby landholder, and refusal to its benefit. In making a judgment about whether to approve or not, the Council must consider the broad range of interests public and private of the kind set out in the EPA Act, ss 5 and 79C. The power is exercised in that milieu of interests, including the environment, the public interest and the interests of other landholders. Thus, though the place of the applicant is not as starkly antithetical to the exercise of the power as was the party in *Precision Products* discussed at [12] of that judgment, it can nevertheless be said that the breadth of the interests and considerations attending the decision to approve an application, or not, conflict or may conflict with the duty to take into account the interests of the applicant. The legislation lays down the balance of interests to be assessed by the Council. They are to be weighed in the exercise of public power. The balance is adjusted in that way. Giving a private right of action through an imposed duty of care based on an applicant's economic interest may tend to skew that balance. Further, if the applicant's economic interests were to be protected, why not anyone whose economic interests may be affected? The statutory balance, intended to be reached by the bona fide decisions of Council, may be affected by the consideration of private litigation by those who wish to threaten it. These considerations affect the assessment of a lack of vulnerability. They also point to a degree of lack of conformance, indeed potential conflict, between the public duty of the Council in making the relevant decision, and considering the application therefor, and a private duty to act with reasonable care to avoid causing economic loss to the applicant: cf *Sullivan v Moody* (2001) 207 CLR 562 at [55]-[60].

347 A number of observations may be made of that passage. His Honour did not use the term “distort” or “distortion” but the synonymous expression “skew”. The nature of the inconsistency accepted by Allsop P was found in the performance of the statutory task or, in other words, not in the existence of the statutory discretion but in the process of its exercise. It was the performance of the statutory task which was or may be skewed or distorted by the imposition of a duty. That was found to be sufficient to demonstrate incoherence or inconsistency. That an impairment upon the performance of the statutory duty may be sufficient to found an inconsistency is also apparent from the judgment in *Precision Products*, referred to by Allsop P in the passage set out above.

348 In *Precision Products*, the Council issued clean-up notices to the appellant following a site inspection of its premises by council officers. The notices required the appellant to cease use of, remove and dispose of hazardous substances. The appellant claimed damages for economic loss as a consequence of the alleged negligent exercise of statutory power by the Council which was said to have caused damage to the appellant's business by requiring it to cease the use of, and to remove stock from, the premises on which it conducted its business.

349 At [112] of *Precision Products*, Allsop P (with whom Beazley and McColl JJA agreed) said (emphasis added and citations omitted):

To cast on the EPA, or an authority such as the Council, the responsibility of taking into account the interests of the person who is, or may be, responsible for the pollution and requiring the authority to exercise care (enforceable by damages at common law) in going no further than is reasonable or necessary or proportionate to protect the environment is to infuse into the statutory process considerations that may have a tendency to discourage the due performance of the principal statutory duty. It might well lead to a defensive or overly cautious approach, or a hesitancy in ensuring that all steps are taken to protect the environment.

350 That inconsistency or incoherence may arise because of an impairment upon the process of performance of a statutory duty is also apparent from *X v State of South Australia (No 3)* (2007) 97 SASR 180 and in particular the judgment of DeBelle J. In *X v South Australia*, the appellant was sexually abused by a convicted paedophile after that person had been released by the Parole Board and whilst the Parole Board exercised supervisory functions in respect of that person's release under licence into the community. The appellant claimed that the Parole Board owed a duty of care to prevent harm to children with whom the convicted paedophile might come into contact.

351 In considering whether the Parole Board owed a duty of care, DeBelle J said this at [178] (emphasis added):

A number of factors may be relevant to the resolution of the question whether there is consistency between a common law duty of care and the scope and purpose of the statute. They include:

- The fact that a common law duty of care *may cause decisions to be made in a "detrimentally defensive frame of mind"*: *Hill v Chief Constable of West Yorkshire* [1989] AC 53 at 63; *Brooks v Commissioner of Police of the Metropolis* [2005] 1 WLR 1495; [2005] 2 All ER 489 at [30].
- The fact that a common law duty of care *would have a tendency to discourage the due performance of statutory duties*: *X (Minors) v Bedfordshire County Council* [1995] 2 AC 633 at 739.
- The fact that imposition of a duty of care *may undermine the effectiveness of the duties imposed by the statute*: *Graham Barclay Oysters* (at [78]). This appears to be a restatement of the observations of Kirby J in *Crimmins* (at [216]), that the imposition of a common law duty *could distort the performance of the functions of the statutory body* in the attempt to avoid private actions.

352 In determining that the posited duty of care had not been established, DeBelle J again focused upon the performance of the statutory duty and the likelihood of its impairment. At [180], his Honour said (emphasis added):

If the Board is subject to a duty of care, *there is a real likelihood it will act defensively and be prone to cancel the release on licence, even for relatively minor infringements of conditions which have not caused harm. The Board is required to deal with people with a propensity to offend or at least to press their individual position to the limits. The Board must decide how it might best advance the process of rehabilitation. If the Board considers that, when exercising its discretion, it might be liable for an allegedly careless decision, it would be prone to excessively cautious decision-making and unduly disposed to cancel release on licence with the consequence that the process of rehabilitation would be stultified. A release on licence could be cancelled for the slightest breach of a condition. In short, a duty of care would lead to a detrimentally defensive frame of mind on the part of the Board. That in turn would undermine the effectiveness of the functions of the Board, if not also undermine the effectiveness of the statutory purpose to rehabilitate prisoners in a manner consistent with the safety of the public. Shortly put, the imposition of a duty of care would discourage the proper performance by the Board of the statutory functions committed to it.*

353 The other member of the majority in *X v South Australia* was Duggan J. At [26], his Honour said this (emphasis added):

In the event that the Board was required to deal with an application to amend the conditions of release or cancel the release on licence of a person, it was exercising a discretion which may have involved competing interests of rehabilitation and protection of the public. *There is good reason for holding that this discretion should not be inhibited by a duty of care.*

354 Again, the concern of the Court was with the duty of care inhibiting the due performance of the statutory duty.

355 Likewise, in *Tame*, it was an inconsistency between the duty of care and the “performance” of the duty of the police-officer, which precluded a common law duty of care being recognised: at [24]-[27] (Gleeson CJ); at [57] (Gaudron J); at [231] (Gummow and Kirby JJ); and at [298]-[299] (Hayne J). In *McKenna*, as the Court said at [29], it was the performance of the statutory obligations of the medical practitioners which would not have been consistent with the duty of care. It was that which the Court regarded (applying *Sullivan v Moody* at [60]) as giving rise to “inconsistent obligations”.

356 That, of course, is not to say that the performance of a statutory function and the content of that statutory obligation are unrelated. They will be closely related because the nature of the functions duly performed will be shaped by the nature of the obligation or power under which those functions must be performed including by reference to statutory purpose. The search for inconsistency or incoherence ought not be overly compartmentalised. In some cases it will be revealed by focusing on the process required to perform the statutory task. In others the nature of the statutory power itself may reveal an inconsistency. In each case, however, statutory purpose will be relevant. The characterisation process is not technical or formalistic, nor is it confined to legal effects. The presence of incoherence may be revealed by assessing the practical application and effect of the statutory power in question. In that respect, it seems to me that, ordinarily, whether there is “a real likelihood” (to adopt the phrase used by DeBelle J in *X v South Australia* at [180]) of incoherence is an appropriate question when the performance of a statutory duty is being assessed.

357 That analysis involves a rejection of the applicants’ restrictive approach to ‘coherence’ as earlier mentioned. However, the applicants are correct to say that a constraint or impairment upon discretionary power has commonly not precluded courts from finding that a duty of care may co-exist with a statutory discretion.

358 I turn then to consider the authorities relied upon by the applicants.

359 That liability in negligence may arise in the exercise of statutory powers is apparent from *Speirs*, which is the leading authority in the line of authorities relied upon by the applicants. In that case the respondent’s husband died from injuries sustained in a collision between his vehicle and a runaway train. The collision occurred at a level crossing on a railway line constructed under statutory authority. Upholding the liability of the appellant railway operator, the majority (Dixon CJ, McTiernan, Kitto and Taylor JJ) relevantly said at 220 (citations omitted, emphasis added):

On the assumption [that the appellant was the subject of the authorities and immunities conferred by the private statutes], the well-settled principle applies that when statutory powers are conferred they must be exercised with reasonable care, so that if those who exercise them could by reasonable precaution have prevented an injury which has been occasioned, and was likely to be occasioned, by their exercise, *damages for negligence may be recovered*.

360 In circumstances where the deceased had suffered personal injuries caused by an event that was under the control of the appellants and from which he could not adequately protect himself, the majority had no difficulty in finding that a common law duty of care existed (at 221).

361 The principle in *Speirs* was cited by Mason J in *Heyman* at 458-459 to say that “[i]t is now well settled that a public authority may be subject to a common law duty of care when it exercises a statutory power or performs a statutory duty”, and that “it has been generally accepted that, unless the statute manifests a contrary intention, a public authority which enters upon an exercise of statutory power may place itself in a relationship to members of the public which imports a common law duty of care”. In *Crimmins* at [62], McHugh J referred to the principle in *Speirs* as dealing with a “settled” and “well-known” category of duty of care.

362 As Basten JA noted in *Weber v Greater Hume Shire Council* (2019) 100 NSWLR 1 at [29]-[30] (with Gleeson JA agreeing), the principle in *Speirs* is observable in the following passage of *Sullivan v Moody* at [60]:

The circumstance that a defendant owes a duty of care to a third party, or is subject to statutory obligations which constrain the manner in which powers or discretions may be exercised, does not of itself rule out the possibility that a duty of care is owed to a plaintiff. People may be subject to a number of duties, at least provided they are not irreconcilable.

363 There are many examples of that principle to which the applicants referred. It is sufficient to refer to two of those examples at this point.

364 In *Pyrenees Shire Council*, the Council had authority under the relevant statute to deal with fire prevention. The statute provided a discretion that the Council “may carry out or cause to be carried out any works or take any other measures for the prevention of fires”. The statute also provided that, for the purpose of preventing fires, an owner or occupier of any land upon which a chimney or fireplace is erected “may”, by notice in writing, be directed by the Council to alter the fireplace or chimney so as to make it safe. The tenants of two adjoining premises sued the Council in negligence for damages arising from property damage resulting from a fire caused by a latent defect in the chimney of the premises. The Council had inspected the premises about two years earlier, when different tenants were in occupation, and had found the defect. Although the Council wrote to the former tenants of the adjoining premises stating that it was imperative that the fireplace not be used unless fully repaired, the Council took no further steps. It had the statutory powers to require compliance with its notice, but it did not exercise them.

365 The High Court upheld the existence of a duty of care by the Council to exercise its powers to prevent a known risk of fire causing personal or property damage to members of a particular class of people (at [17], [25]-[26], [28] (Brennan CJ), at [108], [111]-[113], [115] (McHugh J), at [168]-[169] (Gummow J) and at [254]-[255] (Kirby J)) or where they are vulnerable to harm from immense danger which they cannot control, understand or recognise (at [107] (McHugh J) and at [255] (Kirby J)) in circumstances where the Council exercised significant and special control over that risk (at [168] (Gummow J)).

366 At [124] Gummow J said (citations omitted):

Sutherland Shire Council v Heyman established that the circumstance that a public authority is the repository of a statutory discretion does not prevent the application of the ordinary principles of the law of negligence.

367 At [168] Gummow J emphasised that the “touchstone” of the duty recognised was control and knowledge. His Honour cited with approval the dissenting judgment of McHugh JA (as his Honour then was) in *Parramatta City Council v Lutz* (1988) 12 NSWLR 293 at 328 where his Honour had said this (emphasis added):

In principle, there is much to be said for the view that a public authority should be under a duty to take affirmative action when the control of conduct or activities has been ceded to it by common understanding or when it receives some benefit from the conduct or activities. If in addition to the right of control the authority knows or ought to know of conduct or activities which may foreseeably give rise to a risk of harm to an individual, the authority should be under a duty to prevent that harm. Just as a teacher who has control of a classroom has a duty to prevent pupils from injuring others, so a public authority with legal or de facto control of a social situation should have a duty to take affirmative action to prevent harm to others. *The touchstone of affirmative duty would be control and not the possession of any discretionary statutory powers. Failure to exercise such powers would go to breach of duty, but the common law duty would arise from actual or ceded control.*

368 Despite the discretionary nature of the Council’s power, including its discretion to take no action, the imposition of liability in negligence, it may be said, dictated that the Council’s discretion should have been exercised to issue a notice requiring the fireplace or chimney to be altered to make it safe. The Council’s failure to do so sounded in damages but no member of the Court suggested that there was an impairment of the Council’s statutory discretion by the imposition of that liability. Justice Gummow at [179] expressly considered but rejected incoherence, at least in so far as the exercise of the Council’s statutory powers to take additional fire

prevention measures “would have interfered with the budgetary priorities of the Shire, or distorted its priorities in the discharge of its statutory functions”. What should be noted, however, is that the imposition of liability in negligence was consistent with the obvious statutory purpose of the scheme which had conferred the discretion, that measures should be taken by the Council to pursue the prevention of fire.

369 In *Crimmins*, a statutory Authority (the Australian Stevedoring Industry Authority) was required by the relevant statute to perform its functions and exercise its powers “with a view to securing the expeditious, safe and efficient performance of stevedoring operations”. One of the Authority’s functions was to ensure sufficient waterside workers were available for stevedoring operations at each port. In performing that function the Authority allocated casual waterside workers to work from time to time for one or more of various stevedores which were registered to employ them at the port. Brian John Crimmins, a registered waterside worker, was employed between 1961 and 1965 by various stevedores to which he had been allocated to work by the Authority. Crimmins developed mesothelioma caused by exposure to asbestos in the course of the relationships of employment to which he was directed by the Authority. He asserted that the authority had failed to take reasonable care to avoid this foreseeable risk of injury.

370 A majority of the High Court (Gleeson CJ, Gaudron, McHugh, Kirby and Callinan JJ) found that the Authority owed Crimmins a duty of care. That finding involved a conclusion that the statute under which the Authority operated was not inconsistent with the recognition of such a duty. As to that conclusion, Gleeson CJ (at [3]) was in agreement with the reasons given by McHugh J to which I will return.

371 Justice Gaudron referred to the broad legislative statement of purpose or objective with which the Authority’s functions and powers were to be exercised (as mentioned above). Her Honour considered it important that this encompassed the purpose of securing the safety of stevedoring operations (at [17]). Her Honour considered that that objective was entirely consistent with the existence of the posited duty of care (at [17]). Her Honour then noted the various functions of the Authority set out in the relevant statute and also its power to “do all such [things] as it sees fit” in the performance of its functions (at [20]-[21]). At [25], her Honour stated that it was “not in issue that a statutory body, such as the Authority, may come under a common law duty of care both in relation to the exercise and the failure to exercise its powers and functions”. Her Honour then turned to further address the compatibility of the posited duty with the powers and functions conferred on the Authority. At [26]-[27], her Honour said this (citations omitted, emphasis added):

In the case of discretionary powers vested in a statutory body, it is not strictly accurate to speak, as is sometimes done, of a common law duty superimposed upon statutory powers. Rather, the statute pursuant to which the body is created and its powers conferred operates “in the milieu of the common law”. And the common law applies to that body unless excluded. Clearly, common law duties are excluded if the performance by the statutory body of its functions would involve some breach of statutory duty or the exercise of powers which the statutory body does not possess.

Legislation establishing a statutory body may exclude the operation of the common law in relation to that body’s exercise or failure to exercise some or all of its powers or functions. Even if the legislation does not do so in terms, the nature or purpose of the powers and functions conferred, or of some of them, may be such as to give rise to an inference that it was intended that the common law should be excluded either in whole or part. That is why distinctions are sometimes drawn between discretionary and non-discretionary powers, between policy and operational decisions and between powers and duties. Where it is contended that a statutory body is not subject to a common law duty in relation to the exercise or non-exercise of a power or function because of the nature or purpose of that power, what is being put is that, as a matter of implication, the legislation reveals an intention to exclude the common law in relation to the exercise or non-exercise of that power.

372 Having considered and negated any negative implication from a provision in the relevant statute which required that in the performance of its functions the Authority should avoid imposing limitations upon employers with respect to their control of waterside workers, her Honour expressed this conclusion at [30]:

In a context in which the Authority's functions were to be performed and its powers exercised "with a view to securing the expeditious, safe and efficient performance of stevedoring operations" (s 8), it is impossible, in my view, to derive any implication from s 17(2) to the effect that the Authority was not intended to be subject to a duty of care in relation to the performance of any of the functions set out above, including that of regulating the performance of stevedoring operations.

373 In what I think is an important discussion about coherence which serves to explain that the capacity to validly exercise a statutory power is not necessarily in tension with a co-extensive duty of care which may cut across its exercise, McHugh J at [81] to [83] said this:

Common law courts have offered a number of different solutions to the problem of imposing an affirmative duty of care on a statutory authority. In *Stovin v Wise*, Lord Hoffmann (with whose speech Lord Goff of Chieveley and Lord Jauncey of Tullichettle agreed) said:

In summary, therefore, I think that the minimum preconditions for basing a duty of care upon the existence of a statutory power, if it can be done at all, are, first, that it would in the circumstances have been irrational not to have exercised the power, so that there was in effect a public law duty to act, and secondly, that there are exceptional grounds for holding that the policy of the statute requires compensation to be paid to persons who suffer loss because the power was not exercised.

With great respect to the learned judges who have expressed these views, I am unable to accept that determination of a duty of care should depend on public law concepts. Public law concepts of duty and private law notions of duty are informed by differing rationales. On the current state of the authorities, the negligent exercise of a statutory power is not immune from liability simply because it was within power, nor is it actionable in negligence simply because it is ultra vires. In *Heyman*, Mason J rejected the view that mandamus could be "regarded as a foundation for imposing . . . a duty of care on the public authority in relation to the exercise of [a] power. Mandamus will compel proper consideration by the authority of its discretion, but that is all".

The concerns regarding the decision-making and exercise of power by statutory authorities can be met otherwise than by directly incorporating public law tests into negligence. Mr John Doyle QC (as he then was) has argued, correctly in my opinion, that there "is no reason why a valid decision cannot be subject to a duty of care, and no reason why an invalid decision should more readily attract a duty of care".

374 In considering whether a common law duty of care was owed by the Authority, McHugh J first considered a number of what might now be described as salient features (at [100]-[113]). His Honour then considered the statutory scheme. His Honour referred to the broadly expressed purpose and object for the Authority's functions (at [115]) and then to various provisions of the relevant statute, noting at [127] that the Authority's power over stevedoring employers was limited by the statute. His Honour then addressed a central consideration – the purpose of the statutory scheme – and (at [127]) said this (emphasis added):

But nothing in the Act prohibited the Authority from taking steps to eliminate, so far as was reasonably practicable, the risk of harm to waterside workers. On the contrary, *the obvious expectation of the Act* was that the Authority would investigate the safety of waterfront conditions and encourage employers to eliminate unsafe practices. Furthermore, although the making of orders under s 18 was to be the result of a consultative process, the Authority had the power to make orders binding on one or more employers in respect of particular working conditions. The scheme and terms of the Act placed a responsibility on the Authority for the maintenance of a certain minimum standard of safety on the waterfront.

375 His Honour emphasised the Authority’s function to ensure that standards of safety were observed (at [128]), and concluded that there was nothing in the relevant statute which forbade, or was inconsistent with the imposition of a common law duty of care on the Authority (at [129]-[130]). His Honour also considered, but rejected, the idea that the posited duty may distort the exercise of the Authority’s powers by requiring the Authority to act defensively. In that respect his Honour said at [132] (emphasis added):

There are no other reasons to deny a duty of care. There are no considerations such as those that led the House of Lords to deny a duty of care in *X (Minors) v Bedfordshire County Council* — cutting across of a statutory scheme, the “delicacy” of the relationship between the parties or the fact that the officers of the Authority might adopt a “more cautious and defensive approach to their duties”. *Quite the opposite — in this case a recognition of a duty would likely have made the Authority more vigilant in its role.* Nor do I think that the position of the Port Inspectors is analogous to the position of police officers, given that the Authority was charged with responsibility for the safety of a specific class — the waterside workers under its direction.

376 Coherence-based reasoning is evident in each of those extracts from *Crimmins*. No incoherence was observed by reference merely to the discretionary powers and functions of the Authority. Nor was the fact that liability in negligence dictated that the authority’s discretionary powers should be exercised to avoid exposure of waterside workers to the risk of personal injury recognised as an impediment to coherence. It is again I think, important to observe that even though it is possible to say on the facts of *Crimmins* (as it was on the facts of *Pyrenees Shire Council*) that the valid exercise of the statutory discretion was affected by the imposition of liability in negligence, a purpose of the statutory scheme which had conferred the discretion was consonant with the imposition of that liability. Both the statute and the law of negligence were driven by a concern that reasonable care should be taken to avoid waterside workers being injured.

377 It is also important in my view, that despite the existence of discretionary powers in both *Pyrenees Shire Council* and *Crimmins*, the Council and Authority respectively had, by the exercise of their functions, either created or contributed to a danger and, in each case, a danger to the safety of the people or property that the Council or Authority had been charged with protecting. The common law ordinarily imposes a duty of care on a statutory authority where the act of the authority in the exercise of its functions has created a danger for the safety of others. As Mason J observed in *Heyman* at 460 (citations omitted):

But an authority may by its conduct place itself in such a position that it attracts a duty of care which calls for exercise of the power. A common illustration is provided by the cases in which an authority in the exercise of its functions has created a danger, thereby subjecting itself to a duty of care for the safety of others which must be discharged by an exercise of its statutory powers or by giving a warning.

378 In a passage cited and relied upon by McHugh J in *Pyrenees Shire Council* at [104], Mason J went on at 464 to say this (citations omitted):

[T]here will be cases in which the plaintiff’s reasonable reliance will arise out of a general dependence on an authority’s performance of its function with due care, without the need for contributing conduct on the part of a defendant or action to his detriment on the part of a plaintiff. Reliance or dependence in this sense is in general the product of the grant (and exercise) of powers designed to prevent or minimise a risk of personal injury or disability, recognised by the legislature as being of such magnitude or complexity that individuals cannot, or may not, take adequate steps for their own protection. This situation generates on one side (the individual) a general expectation that the power will be exercised and on the other side (the authority) a realisation that there is a general reliance or dependence on its exercise of power. The control of air traffic, the safety inspection of aircraft and the fighting of a fire in a building may well be examples of this type of function.

379 In *Crimmins*, it was the risk of harm to persons which as Gaudron J explained gave rise to a duty owed by a statutory authority such as the defendant in that case. At [25], and relying on each of the observations of

Mason J in *Heyman* earlier cited above (either directly or by reference to the judgment of McHugh J in *Pyrenees Shire Council*), Gaudron J said (citations omitted):

It is not in issue that a statutory body, such as the Authority, may come under a common law duty of care both in relation to the exercise and the failure to exercise its powers and functions. Liability will arise in negligence in relation to the failure to exercise a power or function only if there is, in the circumstances, a duty to act. What is in question is not a statutory duty of the kind enforceable by public law remedy. Rather, it is a duty called into existence by the common law by reason that the relationship between the statutory body and some member or members of the public is such as to give rise to a duty to take some positive step or steps to avoid a foreseeable risk of harm to the person or persons concerned.

380 There are many other cases involving statutory authorities who have been found to owe a duty of care to take some positive step or steps to avoid a foreseeable risk of harm to a person or persons. Statutory authorities charged with the control and management of roads are a case in point. The governing statute for a road authority will inevitably provide the authority with a discretion as to where and when to apply its limited resources to the maintenance and repair of a road or a bridge. But that kind of statutory discretion has never been held to deny the existence of a duty of care concerned with a danger to the safety of persons brought about in the exercise of the powers of the road authority.

381 *Brodie* is an example of such a case. In the leading judgment of Gaudron, McHugh and Gummow JJ, their Honours at [140] observed that the powers vested in road authorities “give them a significant and special measure of control over the safety of the person and property of road users”. Their Honours went on to say that that may have made it incumbent upon the Authority to exercise its powers, “by averting the danger to safety or by bringing it to the notice of persons in the situation of the plaintiff”. Their Honours referred to the powers of the statutory authority in *Pyrenees Shire Council* as being powers that were in that category. At [142] their Honours said that the High Court in various circumstances “has favoured the imposition of a duty of care requiring the exercise of statutory powers affecting the safety of users of public roads”. At [144] their Honours set out the observation of Gaudron J in *Crimmins* at [25] which I have quoted above.

382 The general proposition that their Honours were addressing in *Brodie* was perhaps best described at [102] as follows (citations omitted):

The decisions of this Court in *Sutherland Shire Council v Heyman*, *Pyrenees Shire Council v Day*, *Romeo v Conservation Commission (NT)* and *Crimmins v Stevedoring Industry Finance Committee* are important for this litigation. Whatever may be the general significance today in tort law of the distinction between misfeasance and non-feasance, 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. This may oblige the particular authority to exercise those powers to avert a danger to safety or to bring the danger to the knowledge of citizens otherwise at hazard from the danger. In this regard, the factor of control is of fundamental importance.

383 What then are the discriminating features which distinguish the finding of incoherence in a case like *MM Constructions*, where an impairment upon decisional freedom did sound in incoherence, and cases such as *Pyrenees Shire Council* and *Crimmins*, where an impairment of a statutory discretion did not deny the holding that a duty of care existed?

384 That was a question which the Minister’s submissions had to confront, and particularly so in the context of the Minister’s contention that although a salient features multi-factorial approach applied, incoherence was here a determinative factor against a finding that the posited duty existed.

385 When so confronted, the Minister’s able Counsel made a number of responses. An overarching response was that to reason by analogy with the cases was problematic. I disagree. It is entirely appropriate to assess the

cases for guidance in a search for a rationale or principle which may reconcile why the decisional freedom of a statutory authority has been regarded as impermissibly curtailed in some cases but not of significance in others.

386 In distinguishing *Pyrenees Shire Council* and cases like it, where an authority had a statutory discretion whether or not to take a particular action, the Minister stated that a completely different kind of discretion was involved. So much may be true. A discretion not to act is different to a discretion to act in a particular way. However, why is that difference to be regarded as telling? Whilst the nature of the impairment upon the discretion may be different, the imposition of a duty of care can impair every kind of discretion and perhaps more so when the decisional freedom to take no action at all is impaired.

387 The Minister then suggested that the distinguishing feature was to be found in the nature of the power exercised, the subject of that power and the statutory context in which that power is exercised. That attempt to find an explanation descended into the “policy/operational” dichotomy which has largely been discredited (as discussed at [475]). Furthermore, it failed to account for the difference between the approach taken in *MM Constructions* as compared to that taken in a case like *Alec Finlayson Pty Ltd v Armidale City Council* (1994) 51 FCR 378, despite the statutory function (the approval of a development application) being the same and the statutory context provided by the statute (the promotion of environmental protection) being similar.

388 In *Alec Finlayson*, industrial use of certain land had led to contamination of the soil by toxic and carcinogenic substances. The Council rezoned the land, formerly in an industrial zone, as residential land. Subsequently, the Council granted development applications for subdivisions of the land for residential use, and thereafter approved plans of subdivision and building applications. The relevant statute required the Council, in determining a development application, to consider (amongst other things) whether the land was unsuitable for the development by way of susceptibility of flood, inundation, subsidence, slip or bushfire or any other risk. The Council knew the site was contaminated when it rezoned the land and granted development approval. The applicant purchased part of the land and commenced development but alleged that it had suffered loss when it was revealed that areas within the subdivision were seriously contaminated with chemicals. Justice Burchett determined that the Council owed a duty of care to the applicant in relation to its conduct in granting development approval for residential use.

389 Tellingly, in my view, Burchett J considered that a “fundamental feature” of that case was that the Council took positive steps which created a danger (at 409-410). Relying on the observations of Mason J in *Heyman* (at 459-460), Burchett J stated that when the Council took those steps it “created a danger, thereby subjecting itself to a duty of care for the safety of others” (at 410).

390 On appeal in *Armidale City Council v Alec Finlayson Pty Ltd* [1999] FCA 330 (Beaumont, Moore and Merkel JJ), the duty of care was upheld. The Full Court at [30] stated that it “does not follow from the fact that the Council was purporting to exercise its statutory function, that no cause of action in negligence could arise as a matter of statutory interpretation”. Dealing with an argument which raised inconsistency between the duty of care and the existence of a statutory right of appeal, their Honours concluded there was nothing in the governing statute which would preclude the possibility of a cause of action arising at common law in appropriate circumstances (at [30]). Lastly, in upholding the finding of a breach of duty (at [32]) the Full Court said:

Given the serious public health hazard, the Council’s duty could only have been competently discharged by an outright refusal of the application, or at least a refusal except upon acceptance and performance by the applicant for approval of appropriate remediation conditions.

391 Here then is a clear and unequivocal instance of the imposition of liability in negligence dictating the exercise of a broad statutory discretion to approve or not approve an action. Yet there was no relevant suggestion of incoherence made either by Burchett J or the Full Court. There are other examples of cases in which the intersection of liability in negligence and a statutory power of approval did not give rise to any suggestion of incoherence: *Voli v Inglewood Shire Council* (1963) 110 CLR 74 (Dixon CJ, Windeyer and Owen JJ); *Wollongong City Council v Fregnan* [1982] 1 NSWLR 244 (Hutley, Glass and Mahoney JJA); *Bamford v Albert Shire Council* [1998] 2 Qd R 125 (McPherson and Pincus JJA, and Thomas J); and *Port Stephens Shire Council v Booth* [2005] NSWCA 323 (Beazley and Giles JJA, and Hunt AJA);

392 When challenged to distinguish *Alec Finlayson*, Counsel for the Minister made this observation (emphasis added):

That was contaminated land where the local Council knew that land was unfit for human occupation, [and] notwithstanding that, it rezoned the land and granted development consent for someone to reside on that land...It could not possibly have been suggested that the way that the statutory discretion to grant a consent operated, was that the Parliament intended that the Council could weigh up [whether it was or was not] appropriate to allow people to occupy a carcinogenic block of land.

393 I think there is force in that observation. It may readily be appreciated that the statutory scheme considered in *Alec Finlayson* would not have contemplated the safety of persons as anything other than a relevant consideration of great weight. A legislative expectation of that kind, in circumstances where a statutory authority exercises its power in relation to a matter which may endanger the safety of persons, may be thought to be so obvious that it really goes without saying. To employ the language of McHugh J in *Crimmins* at [127], the “obvious expectation of the Act” was that human safety would be protected in the exercise of the Council’s discretion to approve a development of land for human habitation. If that be so, the imposition of a duty of care upon the Council to take reasonable care to avoid the harm contemplated by the statute could not have been incoherent with the intent of the statutory scheme but, to the contrary, would sit conformably alongside it. Or, as McHugh J in *Crimmins* said in dealing with the possibility of distortion of the statutory discretion at [132], rather than distorting the discretion the recognition of a duty “would likely have made the Authority more vigilant in its role”.

394 *Alec Finlayson* demonstrates, again, that liability in negligence may cut across, impair or dictate the exercise of a statutory discretion (including an approval power) without incoherence being observed. Like *Pyrenees Shire Council* and *Crimmins*, the duty of care imposed by the law of negligence was consonant with a purpose of the statutory scheme in question.

395 In reconciling the authorities, what must be recognised is that coherence-based reasoning places great importance on statutory purpose cohering with the imposition of liability in negligence. Consistency between statutory purpose and the duty of care imposed by the law of negligence is apt to be regarded as a potent consideration favouring a conclusion of coherence. An interference or impairment of a statutory discretion conferred by the statute has negative implications for coherence. However, both considerations must be weighed. As statutory discretion is subordinate to statutory purpose because a discretion is to be exercised “only in accordance with the objects and policy of the Act” (*Walton v Gardiner* (1993) 177 CLR 378 at 409 (Brennan J)), consistency with purpose will be the paramount consideration.

396 The cases relied upon by the Minister can be reconciled with those relied upon by the applicants, once it is recognised that coherence between the imposition of liability for negligence and a statutory power or discretion requires a consistency assessment which has regard to both statutory purpose and statutory function and which will ordinarily give priority to consistency between the purpose of the statute and the concern or object of the duty of care. In *MM Constructions*, in *X v South Australia* and in *Sullivan v Moody*, there was no consistency or coherence with statutory purpose capable of negating the inconsistency with the discretionary function. To the contrary, the statutory purpose itself was inconsistent with the imposition of liability in negligence.

397 I turn then to assess the coherence of the imposition of the posited duty of care with the EPBC Act and the Minister’s approval function under s 130 and s 133. The posited duty is concerned with the avoidance of various categories of harm to the Children. I will deal first with safety and that aspect of the posited duty of care which is concerned with the avoidance of personal injury to the Children. That concern is, in my view, both consonant with a purpose of the statutory scheme of the EPBC Act and a relevant consideration that the Minister must take into account in exercising her power of approval under s 130 and s 133 of the EPBC Act.

398 The preservation of human life and the avoidance of personal injury is likely to be a relevant consideration whenever decisions are made about a matter which may give rise to a danger to human safety. That simply reflects the importance our community attaches to the preservation of life and personal safety. An expectation

that a statutory power will not be used without care being taken to avoid killing or injuring persons will almost always cut across the exercise or performance of a statutory power including a broad discretionary power. It is unlikely that a societal priority of that magnitude would not be reflected and accommodated in any statutory scheme which provided a statutory authority the capacity to carry out functions which could endanger human safety. It would therefore be surprising for incoherence to arise between a common law duty to take reasonable care for the lives and safety of persons and a statutory scheme which contemplates that the powers it confers would not be used to unreasonably endanger the lives and safety of persons.

399 The avoidance of death and personal injury to humans by the taking of reasonable care may legitimately be regarded as the obvious intent of any legislative scheme which confers functions or powers capable of creating a danger to human safety, unless a contrary intention is shown. Parliament may be assumed to have intended that in the performance of the powers and functions conferred by it, reasonable care will be taken to avoid endangering the safety of humans. Unless legislation has identified considerations which are to take priority over human safety or which are to compromise the natural priority that attends human safety, Parliament may be taken to have intended that the priority given to safety by the community is reflected in the statutory scheme it has created.

400 There are, of course, instances where a contrary intention may be indicated. Sometimes the personal safety of different classes of persons will be in contest. *Sullivan v Moody* exemplifies that situation. The compatibility analysis in *Sullivan v Moody* required the mental injury to persons suspected of causing personal injury to children to be assessed against the statute's clear intent to protect children, including from personal injury occasioned by sexual abuse. The statute's primary concern to protect the safety of children was paramount and circumscribed the extent of the scheme's concern to avoid injury to others.

401 Sometimes, the avoidance of personal injury must give way to a consideration which the statute regards to be more important. *X v South Australia* is an exceptional case of that kind but is explained by its unique statutory context. The dominant relevant interests in contest under the scheme there in question – the liberty of the individual and individual safety – are both fundamental interests of high societal value. The scheme was concerned with the safety of individuals but countenanced that the need to rehabilitate prisoners and release them from detention may compromise the safety of others (at [179] (Debelle J)). It was in that context that the majority held that the decisional freedom given by the statute to the decision-maker to achieve the statute's intended balancing of interests was not to be impaired by a duty to take care not to harm the safety of those individuals who may be harmed upon a prisoner's release.

402 The EPBC Act contemplates that competing interests be taken into account in a decision made under that Act to approve or not approve a controlled action and that a balance may be struck between those competing interests. However, there is nothing to suggest that in the context of an approval potentially creating or contributing to a danger to human safety, the priority usually given to the need to take reasonable care to avoid endangering the safety of humans in almost any decision-making process, has not found its natural place in the intended statutory balance as a relevant consideration deserving at least elevated weight.

403 The concern of the EPBC Act for human health and safety is, to some extent, reflected expressly in various provisions of that Act. The process under which threatened species which enjoy the EPBC Act's protection are identified and "listed" by the Minister is a case in point. Reflecting the obvious priority given to human species over other species, s 193(1) empowers the Minister to determine that a species is not appropriate for inclusion as a listed species where the Minister is satisfied that a native species "poses a serious threat to human health". Additionally, conduct taken to preserve human safety or human health is exculpated from liability for various offences created by the EPBC Act: see ss 212, 236 and 255.

404 The Minister's contention that the recognition of the posited duty would in practical terms impose a distortion upon the Minister's discretion, was premised on harm to the Children not being a mandatory consideration required to be taken into account in an approval decision under s 130 and s 136. I disagree. Human safety is a relevant mandatory consideration in relation to a controlled action which may endanger human safety. In relation to a controlled action of that kind, the lives and safety of the Children are not optional considerations but have to be taken into account by the Minister when determining whether to approve or not approve the

controlled action. That implication is found in the “subject-matter, scope and purpose” of the EPBC Act: *Minister for Aboriginal Affairs v Peko-Wallsend Ltd* (1986) 162 CLR 24 at 40 (Mason J).

405 As discussed above at [158], the EPBC Act’s purpose is in part protective of people and communities as a defined part of the environment. It is impossible to accept that if the Minister was called upon to approve or not approve an activity which potentially endangers human safety – for example, the extraction of asbestos from a new mine – the scheme of the EPBC Act would permit the Minister to choose freely whether or not she should consider human safety in making her decision.

406 I do not consider human safety to be a permissive rather than mandatory consideration. I accept that the economic or property interests of humans are permissive considerations within the mandatory category of “social matters” described in s 136(1)(b). However, there is nothing “social” about the protection of life and limb. In my view human safety sits outside of the categories specified by s 136(1). It is a relevant consideration which arises by implication from the subject-matter, scope and purpose of the EPBC Act.

407 Faced with a controlled action which poses a real risk to the safety of members of the Australian community, the Minister may be expected to give at least elevated weight to the need to take reasonable care to avoid that risk of harm. To do so would be consonant with the policy of the EPBC Act. In such circumstances, the imposition of a duty of care which may, as a practical matter, impose a requirement upon the Minister to consider and give elevated weight to the need for reasonable care to be taken to avoid death or personal injury will not distort the Minister’s discretion or skew the intended statutory balance.

408 As the posited duty would be in harmony with the statutory scheme in relation to the need to protect the safety of humans, there is no reason to think that it is likely the Minister would exercise her discretion with a “defensive frame of mind” to avoid potential liability for damages by reason of the posited duty. Furthermore, the defendant here is the Commonwealth of Australia and it has the capacity to immunise itself from liability for damages. It is difficult to see why the potential for liability which could have been avoided by the Commonwealth, but was not, should properly be regarded as giving rise to an inconsistency because the Commonwealth would be motivated to avoid the liability which it chose not to avoid. Additionally, the reasoning of McHugh J in *Crimmins* at [132] needs to be taken into account. His Honour regarded that vigilance rather than defensiveness would likely result from the imposition of liability in negligence where statutory purpose and the concern or objective of a duty of care are consonant.

409 For all those reasons, I do not accept that the process-based impairments upon the exercise of power under s 130 and s 133 which the Minister relied upon are made out in relation to that part of the posited duty of care concerned with the avoidance of personal injury. If the likelihood of that kind of impairment had been established, I would nevertheless have regarded it as outweighed by the consistency between statutory purpose and the duty of care in relation to the avoidance of personal injury to the Children.

410 I turn then to consider the outcomes-based impairment upon which the Minister relied in asserting that the imposition of a duty of care would dictate the exercise of her discretion. There are a number of difficulties with that assertion. Although the imposition of liability in negligence may have the effect of dictating the exercise of a discretion, that would not be the effect of merely recognising a duty of care. Liability in negligence is imposed by a breach of a duty of care not simply by the recognition that a duty of care exists. The recognition of the posited duty of care will not, of itself, dictate the non-approval of the Extension Project.

411 The Minister’s assertion of that kind of impairment was really premised on non-approval being the inevitable result of the imposition of a duty of care. However, liability in negligence is assessed against the content of a duty of care and the test, at the level of breach, is different to that at the level of duty. The content of a duty of care, as assessed at the level of breach, includes the reasonableness of a defendant’s response. As Mason J said in *Shirt* at 47-48, the reasonableness of the 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.

See also *Brodie* at [151] (Gaudron, McHugh and Gummow JJ).

412 As was emphasised by Gaudron, McHugh and Gummow JJ in *Brodie* at [162] at the level of breach, “[t]he formulation of the duty of care includes consideration of competing or conflicting responsibilities of the authority”. Further, as Gaudron J said in *Crimmins* at [34], a common law duty in relation to the exercise or non-exercise of the power of a statutory authority “only imposes a duty to take those steps that a reasonable authority with the same powers and resources would have taken in the circumstances in question” (see further McHugh J in *Crimmins* at [90]).

413 The response that will be required by the Minister to avoid liability in negligence should a duty of care be recognised depends upon a range of considerations to which not very much attention was paid to at the trial. I am not in a position to say that the inevitable result of the recognition of the posited duty of care is the disapproval of the Extension Project (see further the discussion at [502]-[503] below). It would be premature to observe incoherence at the level of duty when the incoherence contended for may or may not arise at the level of breach in circumstances where, as Spigelman CJ said in *State of New South Wales v Paige* (2002) 60 NSWLR 371 at [105], “[t]he issue of inconsistency or incompatibility may arise, like many other elements, at both the level of duty and the level of breach”.

414 In any event, even if at the level of duty a foreclosure of the Minister's discretion is observable, that functional impairment must be weighed against the consistency of statutory purpose and the duty of care in relation to the avoidance of personal injury to children. In my view, when so weighed and taking into account that statutory discretion is subordinate to statutory purpose, there is no observable incoherence or, at least, no sufficient incoherence to regard this salient feature as determinative.

415 In arriving at that conclusion I have been mindful of the Minister's submission which placed great weight on the fact that the EPBC Act imposes a duty on her to make a decision. That submission is not without some force. However, there is also force in the response to it made by the applicants. The Minister's duty to decide is made express by the EPBC Act. However, that duty is hardly unique. Any repository of a statutory power who is given a capacity to decide whether to approve or not approve an application, or otherwise decide upon a particular matter ordinarily has a duty to exercise that power which, eventually, mandamus will compel. It is not the existence of a duty to decide which, of itself, raises incoherence. The imposition of a duty of care, or the imposition of liability in negligence, will not preclude the Minister from performing her duty by determining the application before her.

416 I have reached a contrary conclusion in relation to that part of the posited duty of care which concerns property damage and economic loss. The scheme of the EPBC Act contains no suggestion that in the broad range of interests that need to be considered by the Minister, the loss of property or economic loss that may be inflicted upon the Children is to be treated differently to any other financial interest that the Minister may consider. True it is that the EPBC Act promotes the principle of inter-generational equity (s 3A(c)). That would tend to suggest that the interests, including the economic interests, of the Children as well as future generations should be counted in the statutory balance to be struck by the Minister. But that does not mean that the importance of those interests should necessarily be elevated above the economic interests of today's adults. For essentially the same reasoning as that applied by Allsop P in *MM Constructions* at [98] (as set out earlier), the imposition of a duty of care requiring the Minister to take reasonable care to avoid loss of property or economic loss occasioned upon the Children, would likely distort or skew the exercise of the Minister's broad discretion. There is no statutory purpose requiring that economic or property rights be protected. Indeed the scheme of the EPBC Act contemplates that interests or rights of this kind may be compromised in order to protect the environment. There is therefore no resort to statutory purpose which is available to negate the functional inconsistency in question. Accordingly, in this respect incoherence is made out determinatively, and denies the existence of a duty of care extending to property and pure economic loss.

417 Lastly, I should deal with a different aspect of the statutory scheme which the Minister asserted the posited duty of care would distort. The Minister contended that the EPBC Act established a particular scheme for arming

the Minister with the information she needs to approve or not approve a controlled action. That scheme, so the Minister contended, is directed to the provision of information on the “impacts” of an action upon a matter protected by a provision of Pt 3. Given the restricted causal standard in the definition of “impact” in s 527E, the Minister submitted that the information which may be provided about an “impact” and which the Minister is required to take into account pursuant to s 136(2)(e) would not deal with indirectly caused events or consequences of a controlled action such as climate change leading to harm of the kind sought to be avoided by the posited duty of care. It was said that, in the context of that scheme, the posited duty is inconsistent with the statutory scheme because the scheme fails to accommodate the posited duty by not arming the Minister with the information necessary to discharge the duty.

418 This submission is without merit. The EPBC Act must contemplate that information can be put before the Minister to enable the Minister to carry out her statutory task. That task includes the Minister taking into account a wide range of matters and not merely the direct impacts of a controlled action upon a matter protected by a provision in Pt 3. The broad power given to the Minister by s 132 to request information, provides the Minister with the means of obtaining relevant information not already put before her. There is no potential for an information deficit of the kind contended for by the Minister which would demonstrate inconsistency or incoherence between the posited duty and the statutory scheme.

419 The Minister also contended that the imposition of the posited duty would be incoherent with administrative law principles. That was said to be so because the recognition of the alleged duty would be inconsistent with the limited role of the courts in supervising the legality of statutory decision-making, as it would involve the courts in considering the merits of an administrative decision.

420 There are two broad observations that should be made at the outset of this discussion. The first was made in *South Australia v Commonwealth* (1962) 108 CLR 130 where Dixon CJ (at 140) said that “the subject matters of private and public law are necessarily different”. The second observation is that the first observation does not deny that the law of tort may bear directly upon the conduct of public administration. That second observation, made with reference to the observation of Dixon CJ, was made by Gummow J in *Pyrenees Shire Council* at [123] where his Honour said at [123] (citations omitted):

That is not to deny that the law of tort, with its concerns for compensation, deterrence and “loss spreading”, may bear directly upon the conduct of public administration. The established actions for breach of statutory duty and for misfeasance in public office counter any such general proposition. Again, significant questions of public law have been determined as issues in actions in tort, particularly in trespass. Further, in this country, sovereign immunity in tort was modified or removed long before the enactment of the *Crown Proceedings Act 1947* (UK) and the *Federal Tort Claims Act* of 1946 (the US Tort Claims Act) in the United States, and there is a long history here of the entrusting of governmental functions to statutory corporations.

421 The Minister relied upon the observations made by Allsop P in *Precision Products* at [119] that:

if standards of administration are to be regulated and enforced by recourse to the recovery of damages at common law, the courts must necessarily become involved, not just in the constitutional role of ensuring legality, but also in laying down standards of administrative conduct by reference to a standard of reasonable care.

422 The Minister’s contention has force but only if the principle upon which it depends is confined to the territory in which it truly operates.

423 The role of the courts in judicial review of administrative decisions is, as Allsop P put it, that of ensuring legality. That is done by assessing whether an impugned administrative decision is legally valid. It is not done and cannot be done consistently with administrative law principles by reference to the merits of the decision, including by a consideration of whether the impugned decision was made with reasonable care.

424 Where the content of a duty to exercise reasonable care is directed to the making of a valid decision (that is, a duty to take reasonable care to make a valid decision or not to make an invalid decision) incoherence between the posited duty and administrative law principles may arise. Incoherence in that situation arises because a particular and specific procedure for addressing legally invalid administrative decisions, including as to the nature of the relief available, already exists and the policy of the legislature in question will be understood as intending to preclude the imposition of a different procedure for addressing the same subject: see the discussion of Spigelman CJ in *Paige* at [132]-[155].

425 Where in form or in substance the subject of the posited duty is the legal validity of the administrative decision, there will likely be incoherence between the posited duty and administrative law. That was the position in *Precision Products*. The incoherence with administrative law was identified by Allsop P at [120] as “the positing of a duty to exercise reasonable care not to make a flawed decision by, for instance, failing to give procedural fairness or failing to confine the power within statutory limits”.

426 However, those are not the circumstances of this case. The subject of the posited duty is not the validity of any decision made or to be made by the Minister under the EPBC Act. The posited duty, whether assessed at the level of duty or at the level of breach, is not that the Minister must exercise reasonable care not to make a flawed decision either generally or by reference to any particular instance of flawed decision-making. The subject of the posited duty is not, in either form or substance, legally invalid decision-making. No part of the applicants’ case in negligence, neither in their assertion of a duty nor in their assertion of a prospective breach, relies upon a contention that any decision taken or to be taken, or any step taken or to be taken, in the process of decision-making, is or will be legally invalid. Their action in negligence is “not brought in addition to or in substitution for any public law remedy”: *Pyrenees Shire Council* at [172] (Gummow J).

427 Accordingly, I reject the Minister’s contention that the posited duty of care is incoherent with administrative law principles.

6.2 Indeterminacy

428 The Minister contended that the extent and potential indeterminacy of liability was a further feature that pointed overwhelmingly to the rejection of the posited duty. The Minister’s submissions were directed to the full extent of the posited duty as originally asserted by the applicants. However, I need no longer consider indeterminacy by reference to pure economic loss or property damage because I have already determined that any duty that may be recognised would not extend to harm of that kind. Further, the class of persons to whom the posited duty is owed is confined to Australian children rather than to all children.

429 Indeterminacy is often referred to as a “policy” consideration which can weigh against recognition of a duty of care where the imposition of liability might be for “an indeterminate amount for an indeterminate time to an indeterminate class”: see *Bryan v Maloney* (1995) 182 CLR 609 at 618 (Mason CJ, Deane and Gaudron JJ), quoting Cardozo CJ in *Ultramares Corporation v Touche* (1931) 174 NE 441 at 444; *Perre* at [15] (Gleeson CJ), at [32] (Gaudron J), at [106] (McHugh J), at [243] and [298] (Kirby J), at [329] (Hayne J) and at [393] (Callinan J); *Woolcock Street Investments Pty Ltd v CDG Pty Ltd* (2004) 216 CLR 515 at [21] (Gleeson CJ, Gummow, Hayne and Heydon JJ). The consideration of “policy” in this context should not be reduced to a sense of what is fair, just or reasonable as an outcome in any particular case. As previously mentioned by reference to the following observation of Gleeson CJ, Gaudron, McHugh, Hayne and Callinan JJ in *Sullivan v Moody* at [49] (referred to above at [107]), “[t]here are policies at work in the law which can be identified and applied to novel problems, but the law of tort develops by reference to principles, which must be capable of general application, not discretionary decision-making in individual cases”.

430 The significance of indeterminacy tends to differ in relation to different forms of harm. It is most relevant in respect of economic loss and less relevant and not commonly considered in relation to physical harm to person or property. The reason for the differential deployment of indeterminacy as a useful lens for determining whether a duty of care exists has much to do with the problem indeterminacy seeks to avoid. That problem is primarily the *ex ante* lack of ascertainability of the nature and extent of the claims likely to result from the putative wrongdoer’s conduct. This is usually not a problem, or far less of a problem, in relation to physical harm than in relation to economic loss. Generally speaking, “[p]hysical injury to person or property is usually

readily identifiable”: *Perre* at [6] (Gleeson CJ). The nature of physical harm arising from particular conduct will tend to reflect the nature of the conduct and its predictable consequence. The nature of economic loss tends to be more varied and its prevalence is often multiplied by causal indirectness. When defining the limits of a duty of care in a case involving physical damage, the damage itself usually provides a sufficient limiting factor: see Millett J in *Al Saudi Banque v Clark Pixley* [1990] Ch 313 at 330, cited by Gummow J in *Esanda Finance Corporation Ltd v Peat Marwick Hungerfords* (1997) 188 CLR 241 at 302.

431 In the recent case of *Sanda v PTTEP Australasia (Ashmore Cartier) Pty Ltd (No 7)* [2021] FCA 237 Yates J said at [1043]:

I accept the applicant’s submission that where, as here, a duty involves the avoidance of physical harm (not merely the avoidance of pure economic loss), the limits of the physical consequences that attend a respondent’s conduct can almost always be sufficiently identified, in terms of time and space, for the purposes of identifying the class of persons to whom the duty is owed, with sufficient certainty.

432 Determinacy in relation to physical harm tends to be assessed by the affirmative element of reasonable foreseeability (see *Perre* at [5] (Gleeson CJ) at [70] (McHugh J); at [186] (Gummow J) and at [343] (Hayne J)) and in the application of the neighbourhood principle’s requirement of sufficient closeness and directness. For that reason indeterminacy is less often observed in cases confined to physical harm to person or property: see the useful discussion by Jonathan BR Beach QC (now Justice Beach of this Court) in *Indeterminacy: The Uncertainty Principle of Negligence* (2006) 108 Australian Construction Law Newsletter 6 at 18.

433 To the extent that the nature of physical harm arising from particular conduct does not tend to reflect the nature of the conduct and its predictable consequence, the common law provides other control mechanisms: see *Weber* at [21] (Basten JA, with Gleeson JA agreeing at [200]) and at [209] (Sackville AJA)). One such control mechanism is causation (see *Weber* at [25] (Basten JA, with Gleeson JA agreeing at [200]) and at [209] (Sackville AJA)).

434 The control mechanisms applicable for physical injury were regarded by Gummow and Kirby JJ in *Tameas* sufficient for a recognised psychiatric injury, without the need for additional mechanisms to be imposed (see at [186]-[196]), including so as to avoid “a disproportionate burden on defendants” (at [192]). In relation to the concern to avoid “a disproportionate burden on defendants”, their Honours noted that whilst that was a concern that may be applicable to purely physical injury, it was not suggested that the concern justified “denying a duty of care in that category of case” (at [193]).

435 The Minister did not put her case by reference to the principles identified above. The Minister’s contentions about indeterminacy were confined to one consideration – the magnitude of potential liability and the class of persons to whom the duty would be owed. The Minister asserted that the applicants’ attempt to confine the class to children was arbitrary and if the posited duty exists it would follow that the same duty is owed to everyone, everywhere. That was said to bring about a potential liability of “astonishing extent and breadth”. The Minister submitted that liability was of a vast scope even if confined to children as the potential claimants. Reliance was placed on an observation made by Gaudron, McHugh, Gummow and Hayne JJ in *Agar v Hyde* at [67] that the proposition there put forward that a duty was owed to the “many thousands, perhaps hundreds of thousands, of persons who played rugby union throughout the world under the laws of the game... [was] so unreal as to border on the absurd”.

436 The short answer to the submissions made by the Minister is that they misconceive what the inquiry about indeterminacy is really about. As McHugh J said in *Perre* at [139] “the size of the class is irrelevant... Its numbers are not to the point. The principle of indeterminacy is designed to protect the defendant against indeterminate liability, not numerous plaintiffs”. As his Honour had earlier observed at [107], “it is not the size or numbers of claims that is decisive in determining whether potential liability is so indeterminate that no duty of care is owed” (see also *Sanda* at [1041]-[1042]; *Dansar Pty Ltd v Byron Shire Council* (2014) 89 NSWLR 1 at [170] (Meagher JA, with Leeming JA agreeing at [184]); *Weber* at [22]-[24] (Basten JA, with Gleeson JA agreeing at [200] and at [210] (Sackville AJA)); *Rodriguez & Sons Pty Ltd v Queensland Bulk Water Supply Authority trading as Seqwater (No 22)* [2019] NSWSC 1657 at [86]). At [334] of *Perre*, Hayne J relevantly

observed that references to the possibility of large compensable losses being sustained by many people or to “floodgates or the like” are of no assistance to the inquiry. His Honour emphasised the importance of understanding what is meant by indeterminate liability and observed that the damage suffered by persons affected by the defendant’s negligence “may be very large; there may be many who are affected. But neither of those considerations means that the liability is indeterminate” (at [336]). In *Cattanach v Melchior* (2013) 215 CLR 1 at [32] Gleeson CJ similarly emphasised that “indeterminacy does not mean magnitude” of liability (see, also, *Sanda* at [1042]; *Johnson Tiles Pty Ltd v Esso Australia Pty Ltd* [2003] VSC 27 at [1208]-[1209] (Gillard J)).

437 The size of a class of potential claimants may be very wide indeed. The well-established duty of care owed by an authority with responsibility for the safety of a road is owed to all road users. In the internationally-connected world in which we live, every living person is within the class of potential road users and thus a potential claimant. However, there are no observations about indeterminacy in a case like *Brodie*. Nor is there a rational or just basis for using the size of the class or of potential liability as a negative control mechanism. To do so would result in those responsible for widespread damage being absolved from liability – the more widespread and extensive the damage, the greater will be the extent of absolution conferred by the law. The “crushing” nature of potential liability which is sometimes referred to in justification of a size-based analysis provides no rational or just foundation either. That which may be crushing for some will be pocket-money for others. The attribution of legal responsibility for wrongful conduct should not be founded upon equality of treatment.

438 It may be true, as a generalisation, that a large potential liability is more likely to reflect indeterminacy than not. If, as I will explain, indeterminacy in this context is really about a defendant’s inability to sufficiently ascertain the nature and extent of its prospective liability, the larger the class of potential claimants and the more extensive the nature of their potential claims, the more difficult it may be to assess prospective liability. That may explain why size is sometimes used as a surrogate or proxy for indeterminacy. But it should not be considered in isolation. In any event, in many cases involving personal injury, prospective liability may not be assessable at all. This is not necessarily a reason to deny the existence of a duty of care. As Gillard J stated in *Johnson Tiles* (at [920]):

When a catastrophe occurs, such as a jumbo jet falling on a crowded sports stadium, or colliding with a high rise building, or a train derailment involving many carriages, it is not possible to say, prior to the negligent act, the likely size or number of claims. Further, one could not realistically calculate the likely number of claims or the nature of them prior to such a mishap. Nor could the amounts of the claims be realistically calculated. The claimants could be 100 labourers or 100 brain surgeons. They are not reasons for refusing to recognise a duty of care to avoid physical injury or property damage.

439 Similarly, McHugh J in *Perre* stated that “courts do not hesitate to find a duty of care where an accident has caused extensive property damage or injury to many people” (at [108]).

440 The Minister’s submission was not assisted by its use of size as a proxy for indeterminacy, even though that approach is reflected in the judgment of DeBelle J in *X v South Australia* at [184]-[185]. Further, the Minister’s reliance upon the observations made by Gaudron, McHugh, Gummow and Hayne JJ in *Agar v Hyde* is misplaced. Read in context, their Honours were not using the potential size of the class as a proxy for indeterminacy. In fact, their Honours were not dealing with indeterminacy at all. The basis for the remark made at [67], that it bordered on the absurd to hold that a duty of care was owed by an individual member of the international rule-setting Board for rugby union to “many thousands, perhaps hundreds of thousands of persons”, is given at [70] as follows (emphasis added, citations omitted):

In our opinion, when an appellant attended meetings of the Board, the law of negligence did not require him to conclude that thousands, perhaps hundreds of thousands, of rugby players were *so closely and directly affected* by his presence as a Board member that he ought to consider whether he should propose an amendment to the laws of the game to protect each player from injury. Unless it did, no duty of care to the respondents could arise.

441 The first sentence in that passage referred to the famous statement of Lord Atkin in *Donoghue v Stevenson* at 580 (set out above at [110]). As Beach (2006) helpfully explains at 17, the observation made in *Agar v Hydewas* not about indeterminacy but “an application of *Donoghue v Stevenson*” and, in particular, the affirmative requirement of neighbourhood – that a duty only extends to those persons “who are so closely and directly affected by my act that I ought reasonably to have them in contemplation as being so affected when I am directing my mind to the acts or omissions which are called in question”.

442 Subject to what is said below concerning the alleged arbitrary nature of the class, the reasoning above is sufficient to reject the Minister’s submissions on indeterminacy. Nevertheless and despite the overlap with reasonable foreseeability and neighbourhood, I consider it is appropriate in the context of a novel duty to further analyse, for completeness, whether indeterminacy of liability should tend against the recognition of the posited duty.

443 For this purpose, I assume in the Minister's favour that the conditions and requirements elaborated upon below are applicable in relation to a duty of care confined to injury to persons. Nevertheless, I have reached the view that, on the facts of this case, indeterminacy is not sufficiently made out to deny the existence of the posited duty.

444 At the outset of this analysis, two questions may be asked: *first* what is the principle of indeterminacy fundamentally about, and *second* what, if anything, at least in relation to personal injury, does it contribute as a limiting or controlling factor beyond the contribution already made by the related principles of reasonable foreseeability, neighbourhood and causation?

445 To the first question, McHugh J in *Perre* provides an answer at [106]. His Honour said this:

Concern about indeterminacy most frequently arises where the defendant could not determine how many claims might be brought against it or what the general nature of them might be.

446 And at [107]:

Liability is indeterminate only when it cannot be realistically calculated. If both the likely number of claims and the nature of them can be reasonably calculated, it cannot be said that imposing a duty on the defendant will render that person liable “in an indeterminate amount for an indeterminate time to an indeterminate class”.

447 The close relationship between indeterminacy and the principles of reasonable foreseeability and neighbourhood can be seen in the following observations made by McHugh J at [108]:

Indeterminacy depends upon what the defendant knew or ought to have known of the number of claimants and the nature of their likely claims, not the number or size of those claims.

448 As his Honour said at [109]:

If the defendant knows or has the means to know who are the members of an ascertainable class affected by its conduct and the nature of the likely losses to members of that class, its liability is not indeterminate.

449 At [336], having explained that the magnitude of the class or of the harm did not define indeterminacy, Hayne J then said this:

What is meant by indeterminate in the present context is that the persons who may be affected cannot readily be identified.

450 The analysis of the facts by Callinan J in *Perre* (at [409]) considered that the principle of indeterminacy required that the putative tortfeasor either foresaw or had the capacity to foresee the class of people “capable of” being or “likely to be” adversely affected by its conduct.

451 As to the capacity to ascertain the potential claimant class, the language used in *Perre* is not uniform. At [336], Hayne J referred to the claimant class as “persons who may be affected”. McHugh J referred to the “likely number of claims” at [107] but at [139] referred to the claimant class as a “class whose members were at risk” of harm, though given what his Honour said at [144] he ought not to be taken to have included persons who “might be at risk”. In relation to the class of persons adversely affected, Callinan J used the terms “capable of” and “likely to be” interchangeably at [409].

452 Whilst not entirely consonant, what those observations suggest must be ascertainable in relation to pure economic loss is the class of persons that is likely (in the sense of there being a real risk rather than a mere possibility of a risk) to be affected by the putative tortfeasor’s conduct. I will use the word “likely” in the sense just identified.

453 Additionally, that the nature of the likely claims should also be reasonably ascertainable was expressly required by McHugh J in *Perre* and seems implicit from the approaches taken by Hayne J and Callinan J. It must be emphasised, however, that these conditions were identified in the application of the indeterminacy principle to pure economic loss, where the additional control provided by the principle of indeterminacy is well recognised to be both necessary and appropriate.

454 The two conditions just addressed ((i) the likely number of claimants and (ii) the nature of their likely claims)) are also identified in *Beach* (2006), where the word “likely” is also used in the sense identified above by reference to the observations from *Perre* referred to above: see at 6 and 10. The learned author also emphasises the global nature of the assessment to be made by reference to those conditions: see at 7. I agree. Precision cannot be required if the perspective from which these conditions are to be assessed is prospective. So much is exemplified in the analysis made by McHugh J in *Perre* at [143] where his Honour quantified prospective liability by reference to “the general nature of the likely claims of members of the class” and utilised heads of damage (loss of sales for at least five years and diminution in the value of land) to conclude that prospective liability was “not so vague” as to deny its characterisation as determinate (see also *Perre* at [32] (Gaudron J) and at [206] (Gummow J, with whom Gleeson CJ agreed at [12] and [15]); *Sanda* at [1042]; *Johnson Tiles* at [914]).

455 The Minister contended that the Children were only a sub-class of those to whom a duty of care would be owed if the posited duty was owed to the Children. That submission was made as part of the size-based assessment of indeterminacy which I have rejected, but nevertheless I will consider it in the context of the proper question and treat it as contending that the Children are not reflective of the number of persons who are likely to be claimants under the posited duty of care. There are two aspects to that contention. *First*, the claimant class would extend to adults and, *second*, it would not be confined to Australians.

456 I will deal with the second aspect first. As earlier discussed, the EPBC Act facilitates a relationship between the Minister and the Children. That is done in circumstances where the responsibility conferred upon the Minister which facilitates the relation is directed to protecting the interests of Australians. Accordingly, the content of the aforementioned affirmative elements necessary to establish the posited duty of care rely at least in part upon the Minister’s particular responsibility for Australians, with a consequential conclusion that the relevant neighbourhood of the posited duty is confined to Australians. That provides a complete answer to the proposition that there are likely to be non-Australian claimants who will rely upon the posited duty.

457 The question whether the potential class of claimants fails to reflect the likely Australian claimants is informed, in part, by asking whether adult Australians are likely to suffer personal injury by reason of the impugned conduct of the Minister. The likelihood, as earlier explained, is to be assessed in terms of a real risk of injury rather than a mere possibility of risk.

458 In this case, the applicants rely on the intensity of exposure to harm and thus the significance of risk of harm as a defining characteristic which distinguishes children from adults. The duty that they contend for is a

duty to the Children, at least in part, because they (and not today's adults) will live on Earth in about 80 years' time when, on the evidence, there is a significant risk that in a 4°C Future World those persons now alive and likely to be then alive will likely be subjected to catastrophic harm.

459 Essentially, greater certainty of exposure to harm and exposure to more extreme forms of harm provides some distinction between today's children and today's adults. However, it is not possible to say that the distinction relied upon by the applicants is entirely rational. There can be no doubt that the dividing line is arbitrary. Nothing other than contemporary societal acceptance as to the appropriate boundary of childhood supports the fact that persons who are 17 years old are within the cohort and those who are 18 years old are not.

460 However, boundaries are rarely able to be drawn other than globally and conceptual purity or precision is not to be expected. In *Perre* at [343], Hayne J gave the following response to the submission made by the defendant that the class was arbitrary:

But there are at least two answers to that contention. First, the application of any limiting mechanism (whether foreseeability alone, or, in cases of pure economic loss, foreseeability and some other criterion or criteria) will apply tests that will leave some persons within their reach and others beyond it. Any test is, to that extent, an arbitrary one. Secondly, and perhaps more importantly, the application of the Western Australian regulation to define the duty of care is, in this case, the application of a criterion of responsibility of which the respondent knew.

461 In *Weber*, uncertainty of the membership or scope of the class of potential claimants was not regarded as problematic. As Basten JA stated at [23] (emphasis added):

[I]t is fallacious to argue that a duty of care cannot arise if the members of the class to whom it is owed cannot be identified before the harm eventuates. *There is no doubt that a motorist owes a duty of care to other road users; on the other hand, the membership of that class will be constantly changing. The same may be said of a manufacturer of bottled ginger beer and the manufacturer of chemicals who allows a polluting substance to leach into a groundwater system.*

462 As *Stavar* demonstrated, indeterminacy as observed by reference to the class of potential claimants is "intimately related to the risk of harm and the reasonable methods of avoidance of risk of that harm": at [112] (Allsop P). In that case, the claimant suffered mesothelioma by reason of her exposure to asbestos dust which had been brought home on the work clothes of her husband who had worked at the defendant's refinery. At first instance, the relevant class was determined to be members of the households of those workers who had worked at the refinery. That finding was challenged on the basis that the class of potential claimants was much wider, that is, anyone in any circumstance who may have come into contact with the work clothes of the defendant's workers.

463 The challenge was rejected. Allsop P opined that the class chosen at first instance conformed with the state of knowledge available to the defendant about the nature of the risk of exposure to asbestos in domestic settings such as the households of the workers. The essential element which made the claimant class appropriate was the state of knowledge available to the defendant about the heightened extent of the risk to persons in the chosen class (see at [112] to [114]), the relevant knowledge being certain medical and occupational health and safety material available at the time (see at [113]). Basten JA at [194] also referred to the intensity of exposure to asbestos as a defining characteristic of the class. His Honour noted at [195] that there was no submission made by the defendant that the wider class contended for was likely to be subject to the same level of intensity of exposure to the workers' work clothes as those persons within the households of the workers.

464 In *Stavar*, the analysis was not confined to what the defendant actually knew. It was an objective inquiry as to the knowledge "available at the relevant time" (see [113]). If it is correct to approach the matter in this way, the question in this case is what the Minister knows or "ought to know" about the number of claimants and the likely nature of their claims (see *Perre* at [109]; *Sanda* at [1042]; *Stavar* at [113]; *Johnson Tiles* at [914]). However, as indicated above, indeterminacy does not depend simply on the size of claims; nor does it depend on

the ability to ascertain with certainty the members of the class of persons to whom the duty is owed (*Perre* at [34] (Gaudron J), [107]-[108] (McHugh J) and [206] (Gummow J); *Sanda* at [1042]).

465 By reason of the peculiar nature of this case, and compared to most other defendants in negligence cases, the Minister has the advantage that, at a time prior to taking the action alleged to be negligent, the lion's share of potential claimants have come forward. In doing so, not only have they identified themselves, they have foreshadowed the nature of their claims with significant particularity. The Minister also has the benefit of knowing that the capacity of claimants to make claims is constrained by the law and that, relevantly, it is only claims of personal injury that may be pursued by potential claimants. The nature of the claimable personal injury harms in prospect are canvassed by the evidence, including in relation to the reasonable foreseeability of harm. The evidence also informs the Minister about the nature of the susceptibility of particular categories of persons to particular harm. It demonstrates that harms brought about by climate change induced hazards are capable of being studied and are the subject of substantial study. It also demonstrates that with the assistance of actuaries and other relevant specialists, the number of potential claimants that may come forward by reason of a particular kind of climate induced hazard and the nature of their likely claims can be estimated with a reasonable degree of confidence. The evidence about the effects of heatwaves provides a good example.

466 Dr Mallon's report, however, demonstrates much more than that. It shows that there are many persons and institutions – for example, insurance companies, banks, corporations or government – who face exposure to financial risk from hazards induced by climate change. Those persons need to know the extent of their exposure. There are specialists, perhaps a small industry of specialists, which, as Dr Mallon's report illustrates, can provide those persons with the capacity to be reasonably well-informed about potential exposure to climate change induced risk.

467 Obviously, the extraordinarily widespread risks of exposure from hazards induced by climate change provide mountains of uncertainty which challenge the work of actuaries and other such specialists. But it is hard to accept that sophisticated institutions like insurance companies conduct successful commercial operations without the benefit of broadly-based but nevertheless sufficient information about the number of likely claims and the nature of the likely claims that may arise by reason of the risk of such hazards. Whether the Minister has or can reasonably obtain access to that kind of information was not addressed by the evidence. In the absence of the Minister demonstrating a lack of capacity, I would not presume that access to relevant predictive information is unavailable.

468 It must be borne in mind that a lack of certainty is not unusual. As Gillard J observed in *Johnson Tiles*, accuracy of a pre-estimate of the number and size of claims “is impossible in most, if not all, claims in common law negligence” and “[o]ne does not know, when a train derails, how many persons could be affected, what property would be damaged, and the size of the claims” (at [921]).

469 In sum, there are three matters which serve to deny a determinative negative role for indeterminacy. First, the posited duty of care is only concerned with personal injury where indeterminacy commonly has no role to play. That is so because, as I think the facts of this case go some way to demonstrate, there are other controlling mechanisms available which avoid a defendant being unfairly burdened with liabilities that the defendant could not have reasonably expected would flow from the failure to take reasonable care.

470 Second, the Minister is informed (including by this proceeding) or has the capacity to be sufficiently informed, at least in global terms, about the likely number of potential claimants and the likely nature of their claims. I consider that to be sufficient because, together with the work done already by other controlling mechanisms (‘reasonable foreseeability’ and ‘coherence’) and the work that can be done by others (such as causation), a reasonable person in the Minister's position will be sufficiently informed about her potential liability. In those circumstances, the prospect that the Minister will be eventually burdened with liability that she could not reasonably have expected to flow from her conduct lacks potency when balanced against other considerations in an exercise grounded in reasonableness.

471 There is one further matter and, perhaps, it is the elephant in the room. Negligence is about attributing responsibility for careless conduct by reference to the contemporary standards of the reasonable person. Attribution ought to reflect the extent of a defendant's responsibility for the harm suffered. There can be no

doubt that the Minister will not bear sole responsibility for the harms alleged by the Children, should those harms eventuate. The fact that others would share responsibility was adverted to by the Minister in a “floodgates” argument which I find unpersuasive but will say more of shortly. But the fact that others would share responsibility greatly diminishes the ubiquitous cry of immense liability which underpinned the Minister’s submission about indeterminacy. Speaking figuratively, it may well be the case that the fractional increase in global average surface temperature that the 100Mt of CO₂ attributable to the impugned prospective conduct of the Minister may reflect the fractional responsibility that will be attributable to the Minister for that conduct.

472 The law has many available mechanisms by which responsibility may be fairly distributed amongst joint wrong-doers. The imposition of joint liability and the various statutes of the States and Territories which limit and apportion liability for negligence (see the *Civil Liability Act 2002* (NSW); the *Civil Laws (Wrongs) Act 2002* (ACT); the *Civil Liability Act 2003* (Qld); the *Civil Liability Act 1936* (SA); the *Civil Liability Act 2002* (Tas); the *Wrongs Act 1958* (Vic); and the *Civil Liability Act 2002* (WA)) are available mechanisms. Another is the principle of proportionality (see *Perre* at [108] (McHugh J)) which, though not raised here on the question of the existence of the posited duty, may be capable of being raised downstream should the duty be recognised. The availability of those mechanisms and in particular the former bear upon the historic policy rationale and thus the ongoing utility of indeterminacy as a controlling mechanism.

473 Lastly and in respect of indeterminacy of time, while it may be said that the Minister will not know precisely when particular claims will arise in the future, I consider this is also not significant to the recognition of the posited duty of care. There are many examples of cases where the prospective defendant, having knowledge of the risk of the conduct it was undertaking, would not necessarily have known the time at which an individual claim might arise. An example of this is provided in *Stavar* and other mesothelioma cases, where the symptoms of the disease may not manifest in any particular plaintiff for a number of years. Like this case, liability in cases such as the mesothelioma cases is bounded in time by the likely life span of the unfortunate victims.

6.3 Other Control Mechanisms

474 It is sometimes said that a duty of care cannot be imposed where it would cut across a “policy decision” or, in other words, that no duty of care should be owed in respect of the exercise of a power by a statutory authority involving public policy: *Dansar* at [68]-[69] (Macfarlan JA). It is to that question that I now turn.

475 The discussion should rationally commence with some consideration of what the exercise of power in question here entails. There can be no doubt that the exercise of a broad discretionary power given to the Minister requires evaluative judgment. I accept the Minister’s contention that it is a value-laden exercise. However, that is a common feature of the exercise of a statutory discretion. Whether a local council should have maintained a bridge in good repair or build a new wing for a medical centre is also a value-laden decision. That example, and there are many like it, explains why the operational/policy dichotomy on which the observation in *Dansar* is based is now thought to be of dubious utility: *Pyrenees Shire Council* at [182] (Gummow J); *Vairy* at [86] (Gummow J).

476 In a representative democracy some decisional fields are necessarily the exclusive domain of the legislature. Legislative and quasi-legislative decisions fall into that category. As to quasi-legislative decisions, the abundant authorities are clear that those decisions do not attract a duty of care: *Heyman* at 469 (Mason J); *Pyrenees Shire Council* at [182] (Gummow J); *Crimmins* at [32] (Gaudron J), at [87] and [93] (McHugh J), at [170] (Gummow J), and at [292] (Hayne J); *Graham Barclay Oysters* at [14] (Gleeson CJ); *Vairy* at [81] and [85]-[86] (Gummow J). “Core policy-making functions” also find support as a further exception: *Crimmins* at [87] and [93] (McHugh J). There are, however, many examples of a duty of care being recognised in relation to a statutory approval process. *Alec Finlayson* is an example. Further examples are recorded at [391] above. It has not been suggested that statutory decision-making of that kind is a “core policy-making function”.

477 The Minister did not contend that her statutory task was quasi-legislative in character or a core policy-making function. Her submission relied on the “policy/operational” dichotomy but was primarily based on the inappropriateness of common law intervention into the policy-based statutory task the Minister asserted she must perform.

478 In that respect the Minister said that her statutory duty was political or policy-based because it required choices to be made or value-laden political judgments to be made about matters of importance. For the reasons already given, the characterisation of the task as political and value-laden is not helpful in and of itself. However, the fundamental point made by the Minister was that her statutory task was steeped in policy considerations appropriately dealt with by her without intervention by the common law. In that respect the Minister contended that how to manage the competing demands of society, the economy and the environment over the short, medium and long term, is a multifaceted political challenge. In the context of climate change, measures to manage those competing demands occur within the context of evolving national and international strategies. It was said that reducing greenhouse gas emissions while simultaneously managing the demands of society and the economy is a complex and nuanced task. The Minister contended that the imposition of a common law duty of care that, by contrast, would render tortious all activities that involve generating (or allowing someone else to generate) material quantities of greenhouse gases is a blunt and inappropriate response.

479 That contention essentially argued that the Minister is better placed to deal with the complex task of addressing climate change than the common law. The correctness of the proposition, at least in a general sense, cannot be doubted. However, the Minister's reliance on that proposition was based on a number of false premises. *First*, that the imposition of a common law duty of care would be addressing the problem of climate change and thus interfere with the statutory task given to the Minister. *Second*, that the intervention of the common law here, would render tortious all or a multitude of activities that involve the generation of greenhouse gases.

480 The second premise was also raised by the Minister as a further policy issue. I will deal with that shortly, but I dismiss it.

481 As to the first premise, the posited duty of care will not and cannot address climate change. All that it can and will do is impose an obligation on the Minister when deciding whether or not to approve the Extension Project to take reasonable care to avoid personal injury to the Children. The imposition of a duty of care does not mandate the Minister's decision. As already discussed, the EPBC Act itself imposes an obligation upon the Minister to take into account the personal safety of the Children.

482 The imposition of liability for the breach of a duty of care arising from careless conduct causing personal injury is at the heart of the common law's place in the legal system. That of itself cannot be an inappropriate intervention upon a statutory field whilst the *Speirs* line of authority remains good law and, in relation to the Executive, at least where "a particular exercise of power has increased the risk of harm to an individual": *Graham Barclay Oysters* at [91] (McHugh J). The possibility of such an intervention being inappropriate because of its distortive impact upon the statutory task is addressed by the requirement of coherence. That is the work done by that principle. All of the potential inappropriate impacts upon the Minister's statutory task have already been addressed and negated.

483 The question then is what remains to sustain the idea that the imposition of a duty of care in this case would be an inappropriate intervention by the common law. The elephant in the room may well be that the Minister's statutory task falls within the realm of a contested political issue as to, *first*, whether climate change is real and, *secondly*, if so, whose interests should take priority in addressing it.

484 Quite correctly, the Minister did not draw my attention to that controversy. Courts are regularly required to deal with legal issues raised in the milieu of political controversy. A political controversy can never provide a principled basis for a Court declining access to justice.

485 The Minister's appeal to there being policy choices at play echoed that made in *Brodie* to which Gaudron, McHugh and Gummow JJ gave the following response at [106]:

Appeals also were made to preserve the "political choice" in matters involving shifts in "resource allocation". However, 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”.

486 Although perhaps not raised expressly as a policy consideration, the Minister’s submission was interspersed with references to what in essence was a ‘flood-gates argument’ to the effect that the recognition of a duty of care in this case would impose tortious liability on all or a multitude of persons involved in generating emissions of greenhouse gases. It was said, for instance, that if a duty of care exists here, it would follow that the same duty is owed by everyone, everywhere.

487 Again, the contention has a false premise. It is trite that liability for negligence does not flow merely from injury caused by careless conduct. Liability in negligence requires a breach of a duty of care and whether that duty exists depends on the existence of a relationship between the plaintiff and the defendant sufficient to warrant the intervention of the tort of negligence.

488 The relations between the Minister and the Children discussed at length in these reasons are peculiar to them. That does not mean that some or even many of the characteristics found in that relationship may not be found in the relations between others. However, the multi-factorial analysis necessary to determine if a duty exists requires the totality of the relationship to be considered: *Graham Barclay Oysters* at [145] (Gummow and Hayne JJ). The totality of the relations between the Minister and the Children is unique to them. Contrary to the premise of the Minister’s contention, it does not follow from the recognition of a duty of care based on the relationship between the Minister and the Children that the Minister owes a duty of care to others or that anyone else involved in contributing to greenhouse gas emissions owes the same duty.

489 I am not persuaded that the recognition of the posited duty should be declined for ‘policy’ reasons.

7. CONCLUSIONS ON DUTY OF CARE

490 ‘Coherence’, ‘control’, ‘vulnerability’ and ‘reliance’ all assume especial relevance in an assessment of whether a novel duty of care should be recognised (see [109] above). On the present facts, I regard ‘coherence’ as agnostic, but even if it is to be treated as tending against the recognition of a duty of care, ‘control’, ‘vulnerability’ and ‘reliance’ are affirmative of a duty being recognised and significantly so. ‘Indeterminacy’ and the policy considerations dealt with under the heading “Other Control Mechanisms” are also largely agnostic but if they tend in any direction it may be said that they tend against a duty being recognised. ‘Reasonable foreseeability’ strongly favours the recognition of duty of care. In totality, in my view, the relations between the Minister and the Children answer the criterion for intervention by the law of negligence.

491 That conclusion is confirmed when re-examined through the lens of the neighbourhood principle and the criteria of reasonableness fundamental to the law of negligence. By reference to contemporary social conditions and community standards, a reasonable Minister for the Environment ought to have the Children in contemplation when facilitating the emission of 100 Mt of CO₂ into the Earth’s atmosphere. It follows that the applicants have established that the Minister has a duty to take reasonable care to avoid causing personal injury to the Children when deciding, under s 130 and s 133 of the EPBC Act, to approve or not approve the Extension Project.

8. SHOULD AN INJUNCTION BE ISSUED?

492 The applicants seek a *quia timet* injunction to restrain the Minister from an apprehended breach of the duty of care they assert she owes to the Children. I will consider that application by reference to the duty of care I have determined ought to be recognised which would require the Minister to take reasonable care to avoid causing the Children personal injury when deciding to approve or not approve the Extension Project.

493 The applicants seek an injunction in the following terms:

an injunction under s 75(v) of the Constitution, or s 23 of the Federal Court of Australia Act 1976 (Cth) (the FCA Act), or both, to restrain the Minister from exercising power under ss 130 and 133 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth)...in a manner that would permit the extraction of coal in accordance with proposal EPBC ID Number 2016/7649.

494 I accept the Minister’s submission that the restraint that would be imposed by the injunction sought would inevitably require the Minister not to approve the application for the Extension Project. That is so because the application seeks the Minister’s permission to extract coal in accordance with the proposed Extension Project. If I granted the injunction, the Minister could approve that application, but only on the condition that coal is not extracted. It follows that the only effective decision the Minister could make if the injunction is granted is not to approve the Extension Project.

495 The Court’s jurisdiction to issue an injunction of the kind sought by the applicants is not in contest. The Minister is an officer of the Commonwealth. Section 75(v) of the *Constitution* provides that the High Court of Australia has jurisdiction in all matters in which an injunction is sought against the officer of the Commonwealth. This Court is provided with co-existence jurisdiction by s 39B(1) of the *Judiciary Act 1903*(Cth). Relying upon *Smethurst v Commissioner of Police* (2020) 94 ALJR 502 at [112] (Gageler J), the applicants contended, and I accept, that an injunction can be issued against an officer of the Commonwealth where that officer “threatens to do something in an official capacity to infringe a common law right... [in which case] an injunction can issue in the exercise of judicial discretion to vindicate the common law right”. Here the applicants submit that the common law right is found in the common law of tort under the broad umbrella of the law of negligence. The applicants then contended, and it is not in contest, that *Plaintiff S99* and the authorities that have followed it establish that a permanent *quia timet* injunction can be granted to restrain an apprehended breach of a duty of care.

496 That requires satisfaction of each of two matters which are not unrelated. *First*, a reasonable apprehension of a breach of the duty of care must be established. *Second*, the principles for the grant of a *quia timet* injunction must be satisfied.

497 I discussed the principles in relation to the grant of a *quia timet* injunction in *Plaintiff S99* at [467]-[502]. I do not propose to set out the detail of what I said in *Plaintiff S99* here, as the principles there stated were not in dispute. In summary, a *quia timet* injunction can be granted to prevent or restrain an apprehended or threatened wrong which would result in substantial damage if committed (*Hurst v Queensland (No 2)* [2006] FCAFC 151 at [20] (Ryan, Finn and Weinberg JJ)). I consider such an injunction is available on a final basis in cases involving the apprehended or threatened breach of a duty of care (see *Plaintiff S99* at [473]-[474] and [478]). The relevant general principles for the grant of a *quia timet* injunction were provided by Bennett J in *Apotex Pty Ltd v Les Laboratoires Servier (No 2)* (2012) 293 ALR 272 at [46] as follows:

- A *quia timet* injunction is granted to prevent a threatened infringement of the rights of the applicant. The applicant must show that what the respondent is threatening and intending to do will cause imminent and substantial damage to the applicant: *Royal Insurance Co Ltd v Midland Insurance Co Ltd*(1908) 26 RPC 95 at 97; followed in *Bendigo and Country Districts Trustees and Executors Co Ltd v Sandhurst and Northern District Agency Co Ltd* (1909) 9 CLR 474 at 478; [1909] HCA 63 (*Bendigo*).
- The word “imminent” means that the injunction must not be granted prematurely. The degree of probability of future injury is not an absolute standard. What is to be aimed at is justice between the parties, having regard to all the relevant circumstances: *Hooper v Rogers* [1975] Ch 43 at 50; [1974] 3 All ER 417 at 421. However, this is not to be taken as conveying that future injury need not be shown to be likely at all: *Magic Menu Systems* at FCR 270; ALR 208.
- *Quia timet* injunctions are not to be granted unless the imminence of the act to be prohibited is sufficiently clearly established to justify the court’s intervention. (I C F Spry *The Principle of Equitable*

Remedies: Specific Performance, Injunctions, Rectification and Equitable Damages, 8th ed, Law Book Co, NSW, 2010 (*Spry*), referred to and adopted by Weinberg J in *Glaxosmithkline* at [94].)

- In deciding whether to grant a *quia timet* injunction, 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: *Hurst v Queensland (No 2)* [2006] FCAFC 151 at [21].

498 I consider the above principles are applicable where an injunction is sought against the Commonwealth (see *Plaintiff S99* at [489]).

499 The applicants contended that the duty of care will be breached if the Minister approves the Extension Project and that because there is a reasonable apprehension that the Minister will approve the Extension Project, it follows that there is a reasonable apprehension of a breach of the duty of care. The applicants' submissions assumed that approval of the Extension Project will constitute a breach of the duty of care. However, that may not be so for a number of reasons. At the level of breach, the relevant inquiry to be made will include not only an assessment of reasonable foreseeability but also, taking into account the Minister's competing or conflicting responsibilities, an assessment as to whether the only reasonably available response to the reasonable foreseeability of personal injury to the Children is that the Minister not approve the Extension Project: see [411] above; *Shirt* at 47-48 (Mason J); *Brodie* at [151] (Gaudron, McHugh and Gummow JJ).

500 The extent to which the Minister's competing or conflicting responsibilities will influence the reasonable response to the foreseeable harm which is required of the Minister was not the subject of any submissions. Nor were submissions relevantly made about the Minister's capacity to make a reasonable response, including by imposing conditions on an approval under s 134(1) and (2) of the EPBC Act. The applicants proceeded on the basis that non-approval would be the only response available to the Minister if she was to avoid breaching the duty of care without justifying why that would necessarily be so.

501 Despite the lack of contest on this issue, I am not satisfied that a more nuanced response from the Minister, something short of unconditional approval, is necessarily unavailable as a reasonable response to the foreseeable harm to the Children. Logic would suggest that various possibilities may be available in the context of an acceptance of the applicants' case that the feared harm to the Children does not arise if a 2°C target for global average surface temperature is achieved.

502 The failure of the parties to explore what is possible leaves me with significant discomfort. By pre-empting the Minister's decision, the injunction which is sought may deny rather than induce the reasonable response which the duty of care requires. A court should always avoid imposing a restraint unless satisfied it is warranted and, where the imposition of a restraint may fetter a statutory discretion, there is even greater reason for not imposing an unnecessary and unjustified restraint. My discussion of 'coherence' has emphasised the importance of this consideration. For what I think were largely strategic reasons, the parties resisted the idea that coherence has a role to play in relation to the grant of relief. I disagree. The fine balance which needs to be struck by coherence-based reasoning demands that insofar as the imposition of liability in negligence impedes the exercise of statutory discretion, it only does so to the extent justified by the imposition of that liability. Relevantly, the imposition of liability in negligence justifies that the Minister makes a reasonable response to the foreseeable harm to the Children. No more than a reasonable response and any resultant impairment upon the statutory discretion is justified. A restraint imposed by an injunction which travels beyond any impairment that is justified by the imposition of liability in negligence raises incoherence. It is imperative therefore that any restraint which is imposed is carefully calibrated to avoid incoherence. An over-reach in a restraint imposed by the Court would not only be unjustified but also irremediable. It was necessary for the applicants to have satisfied the Court that the restraint it seeks is justified including because it would not create incoherence. The applicants have not done that.

503 To assess the prospect of breach I also need to assess what it is the Minister is likely to do now, in the prevailing circumstances, and not those that existed prior to the trial. The Minister now has a mountain of new information brought forward through this proceeding which was otherwise not previously before her. Additionally, she has the assessments made by the Court about the reliability of that information and the

plausibility of the climatic scenarios that may expose the Children to a real risk of harm. She will now appreciate, contrary to the submissions made on her behalf at trial, that in deciding whether or not to approve the Extension Project she must take into account, as a mandatory relevant consideration, the avoidance of personal injury to people. She now knows that a duty of care owed by her to the Children has been demonstrated and that, subject to the Court making declarations, it will now be recognised by the law. She also has the benefit of understanding that an unconditional approval of the Extension Project is not necessarily the only means available to her as a reasonable response to the foreseeable harm to the Children.

504 Subject to exercising her rights of appeal and succeeding on any appeal, a well-advised and responsible Minister would take notice of those matters. If the Minister does, as I expect she will, due consideration will be given by her to avoiding conduct in breach of the duty of care. It is not the case, as the applicants contended, that an approval is just as likely as non-approval and therefore a reasonable apprehension of breach is thereby established.

505 If it were the case that any rights the applicants and the class they represent may have to injunctive relief would be irretrievably lost unless an injunction was now granted, a lower threshold may be appropriate for determining whether a breach of the duty is reasonably apprehended. However, there are a number of reasons for thinking that any rights the applicants may have are not necessarily foreclosed should an injunction be refused.

506 *First*, it might be expected that the Minister will consider publishing a “proposed decision” inviting public comment, as is facilitated by s 131A of the EPBC Act. In the circumstances, including that the Minister now has before her extensive information about the possible catastrophic risk for 5 million members of the public which may flow from her approval of the Extension Project, it may reasonably be expected that the Minister will consider providing the public an opportunity to comment on her proposed decision as s 131A may reasonably be understood to contemplate. *Second*, the Minister herself has submitted that any rights the applicants have would not necessarily be lost. She contended that any decision by her in respect of the application for approval is amenable to judicial review. She stated that if it transpires that she should grant approval under the EPBC Act for the Extension Project, the legal validity of that decision could be tested in judicial review proceedings which could be finalised well before any emissions of CO₂ were generated by reason of the approval of the Extension Project. The Minister contended that if the applicants are able to demonstrate that such an approval is invalid on administrative law grounds, including because of any suggested overlapping common law duty to take reasonable care, then their rights will be adequately protected.

507 That submission suggests the Minister’s acceptance that the negligent exercise of her approval power would result in the invalid exercise of that power. No authority for that proposition was given and I have reservations about whether it is correct. Nevertheless, the concession may be significant. It is at least correct to say that it is only a valid approval decision that has the potential to foreclose the applicants’ capacity to obtain injunctive relief and that a valid decision may not necessarily be made by the Minister.

508 In the circumstances, including that the harm in question is not imminent, I consider it is highly undesirable to pre-empt the Minister’s decision. It would be far more appropriate to assess whether any breach of the duty of care should be restrained once it is known what it is the Minister proposes to do or what she has done in relation to the application to approve or not approve the Extension Project.

509 Some of the matters already addressed, are also relevant to the principles applicable to the grant of a *quia timet* injunction which are directed to guiding the Court’s discretion.

510 The applicants have not satisfied the Court that the extent of the restraint they seek is justified by the imposition of liability in negligence. The applicants have not satisfied the Court that it is probable that the Minister will breach the duty of care in making her decision as to whether or not to approve the Extension Project. They have not satisfied the Court that they will have no further opportunity to apply for injunctive relief. It is preferable in the interests of justice and in balancing the interests of the parties, that the grant of any injunctive relief that may be appropriate await the Minister making either a proposed decision or alternatively a decision under s 130 and s 133 of the EPBC Act to approve or not approve the Extension Project. Other considerations raised by the Minister, including that the likelihood of harm to the Children is not sufficiently significant to warrant an injunction, need not be considered. The applicants’ failure to satisfy the Court that a

breach of the duty is reasonably apprehended, together with my concern that the applicants have not established that a restraint in the form sought is warranted, suffice to support my conclusion that an injunction should be refused.

511 Lastly, I should add that the applicants' reliance on *Plaintiff S99*, where a *quia timet* injunction was issued, is misplaced. In that case, the respondent had already breached the duty of care prior to the grant of a *quia timet* injunction (see at [405]) in circumstances where injunctive relief was urgent. *Council of the Borough of Birmingham* and *Colney Hatch Lunatic Asylum*, two of the early environmental cases on which the applicants relied, are also distinguishable. Neither case involved an apprehended breach of a duty of care and in each case harm had already been occasioned at the time the injunction was granted.

512 For those reasons, I refuse the applicants' application for a *quia timet* injunction.

9. CONCLUSION AND FURTHER STEPS

513 For the reasons given above, I have concluded that the applicants have established that the Minister has a duty to take reasonable care to avoid causing personal injury to the Children when deciding, under s 130 and s 133 of the EPBC Act, to approve or not approve the Extension Project. I have also concluded that an injunction restraining the Minister from exercising her power under s 130 and s 133 of the EPBC Act in a manner that would permit the extraction of coal from the Extension Project should not be granted.

514 A number of questions arise as to what declarations or orders the Court should make.

515 One of those questions concerns whether any declaration or order made by the Court should extend to the children who are represented by the applicants. As set out at the beginning of these reasons, the applicants have brought the proceeding in a representative capacity on behalf of children who reside in Australia or elsewhere. An issue as to whether the representative nature of the proceeding should be continued was initially raised by the Minister's Concise Statement in Response, but it was not pursued. No submissions have been made on that question at all. Any orders I now make will be binding on each person represented (Rule 9.22(1) of the Rules). Although no order binding on a person represented may be enforced without the Court's leave (Rule 9.22(2) of the Rules), there may nevertheless be consequences for a represented person arising from the doctrine of *res judicata*: see *Carnie v Esanda Finance Corporation Ltd* (1995) 182 CLR 398 at 423-424 (Toohey and Gaudron JJ); *Zhang v Minister for Immigration* (1993) 45 FCR 384 at 401-402 (French J). Further, although the applicants did not press for relief in relation to children residing outside of Australia, those children remain represented persons in the proceeding.

516 By reason of those concerns, before making any declarations or orders that may be binding on a represented person, I should hear from the parties and consider whether any such orders should be made including whether the representative nature of the proceeding should be confined or continued.

517 Until that is done, it is appropriate that I confine any binding orders I now make to the applicants alone. I will therefore dismiss the applicants' claim for an injunction and reserve for later consideration whether the claim for an injunction made on behalf of the represented persons should be dismissed or, alternatively, discontinued.

518 I will not, at this juncture, make a declaration as to the duty of care owed by the Minister which reflects my conclusions on that issue. Apart from the question of whether any declaration made should extend to any of the represented persons, the utility of any declaration and the terms of any such declaration should also be addressed by further submissions.

519 Additionally, I need to hear the parties on the question of any order that should be made as to the legal costs of the proceeding.

520 It may be that all of those issues can be addressed in writing pursuant to a timetable agreed by the parties for the exchange of submissions and determined on the papers. Alternatively, either or both of the parties may

wish to be heard orally. The appropriate course is best determined after the parties have had an opportunity to consult and advise my Chambers of their preference and their available dates for a further short hearing, should such a hearing be considered necessary. I will direct that the parties consult about those issues and provide within 5 working days hereof a draft of the orders they propose.

521 Finally, the commendable efforts made to assist the Court in its deliberation deserve to be acknowledged. I extend my gratitude to the parties and their legal representatives for providing submissions of the highest quality and for the cooperative and efficient manner in which the proceeding has been conducted.

I certify that the preceding five hundred and twenty-one (521) numbered paragraphs are a true copy of the Reasons for Judgment of the Honourable Justice Bromberg.

Associate:

Dated: 27 May 2021

SCHEDULE A

The Expert Witnesses

Professor William Steffen. Professor Steffen holds a doctorate (and two honorary doctorates) in Chemistry and is an Emeritus Professor at the Fenner School of Environment and Society, the Australian National University, Canberra. He currently acts as a Councillor of the Climate Council of Australia.

Professor Steffen has over 30 years' experience in climate and Earth System science research and teaching. His research interests span a broad range within climate and Earth science, with an emphasis on system-level understanding of climate change, incorporation of human processes in Earth System modelling and analysis and sustainability and climate change. Over this time, Professor Steffen has made substantial contributions to the development of science policy, both nationally and internationally. To name but a few, from 1998 to 2004, Professor Steffen served as Executive Director of the International Geosphere-Biosphere Programme, an international network of scientists studying global environmental change. From 2004 to 2011, Professor Steffen was a science advisor to the Department of Climate Change and Energy Efficiency. In 2011, Professor Steffen was on the panel of independent experts supporting the Multi-Party Climate Change Committee to the Australian Government, chaired by (former) Prime Minister Hon Julia Gillard. From 2011 to 2013, Professor Steffen was the Commissioner on the Australian Government's Climate Commission.

Within the international arena, Professor Steffen has been an author and reviewer to several IPCC assessment and special reports, including:

- (a) IPCC Fourth Assessment Report (2007) Working Group I: Couplings between Changes in the Climate System and Biogeochemistry. He was the lead author on terrestrial carbon cycle section.
- (b) IPCC Special Report on Land Use, Land-Use Change and Forestry (2000). This report was instrumental in establishing accounting rules for land-based carbon uptake and emissions in the context of national reporting to the UNFCCC (United Nations Framework Convention on Climate Change).
- (c) Contribution to IPCC Special Report on Global Warming of 1.5C: Chapter 1: Framing and Context.
- (d) Reviews of Australian impacts sections on two IPCC Assessment reports (Working Group II).

Overall, Professor Steffen has produced over 150 publications spanning Earth System science, climate change and sustainability, including lead-authored publications in widely regarded journals such as in the *Science*, *Proceedings of the National Academy of Sciences (USA)* and the *Nature* journal.

Dr Karl Mallon. Dr Mallon holds a first-class Honours degree in Physics and doctorate in Mechanical Engineering. Dr Mallon has worked in the field of energy and emissions modelling and climate change physical impact analysis since 1997. This includes work for private companies, governmental bodies and international organisations. His work in this field has been recognised by the awards from the German Government and Australian climate adaptation profession.

Dr Mallon currently acts as a Director at Climate Risk Pty Ltd and XDI Pty Ltd, two companies specialising in physical risk analysis and climate risk. His first company, Climate Risk Pty Ltd, assists clients in planning, costing and prioritising appropriate adaptation actions to address risks to built-assets and communities. His second company, XDI Pty Ltd, identifies climate risks by analysing supply chain nodes that provide power, water, telecommunications, gas or (road/rail) access to any analysed asset. Within this field, it has been regarded as one of the top four providers of physical risk analysis in the world. Both Climate Risk Pty Ltd and XDI Pty Ltd provide services across a broad array of national and international industries, including:

- (a) utilities (water, power, transport and telecommunication utilities);
- (b) banks;
- (c) insurers;
- (d) local government;
- (e) State government (including health, environment, education, justice; strategic development, treasury and transport agencies);
- (f) Federal government;
- (g) non-government organisations (including environment groups);
- (h) social services peak bodies;
- (i) community service organisations;
- (j) multi-lateral development banks.

Dr Ramona Meyricke. Dr Meyricke is a Fellow of the Institute of Actuaries who holds a doctorate in Climate Change Mitigation Research and has completed post-doctoral research in Population Ageing. Her post-doctoral research focused particularly on the methodologies for long-term forecasting of mortality rates and longevity risk and understanding the interacting role of individual-level risk factors and systematic risk factors in mortality risk.

Dr Meyricke has been a qualified Fellow of the Institute of Actuaries since 2007. Her experience as an actuary has predominantly focused on two main practice areas: superannuation and retirement income; and life insurance. Since 2019, Dr Meyricke has undertaken actuarial and analytical consulting in a range of fields involving Health, Workers' Compensation and Compulsory Third-Party insurance. Since 2018, Dr Meyricke has contributed to several projects initiated by the Institute of Actuaries Climate Change Working Group, which have commented on the impact of climate change. She has also published several journals in this field.

Dr Anthony Capon. Dr Capon holds a Bachelor of Medicine and Bachelor of Surgery and a doctorate in Child Health. He is a Fellow of the Australasian Faculty of Public Health Medicine in the Royal Australasian College of Physicians. Dr Capon is currently the Director of the Monash Sustainable Development Institute and a Professor of Planetary Health in the School of Public Health and Preventive Medicine at Monash University. Dr Capon has extensive experience researching epidemiology and population health, particularly in the realm of climate change. He has held numerous fellowships, including with the World Health Organization and National Health and Medical Research Council. Dr Capon has acted as the inaugural Director of the Public Health Unit and Medical Officer of Health (MOH) in the Western Sydney Area Health Service and has worked in epidemiology and population health research at the Australian National University. As a member of the Rockefeller Foundation – *Lancet* Commission on Planetary Health, he contributed to the landmark report “Safeguarding human health in

the Anthropocene epoch” published in *The Lancet* in 2015. Dr Capon has presented several keynote addresses and lectures, including the 2020 Redfern Oration for the Royal Australasian College of Physicians. He holds several honorary appointments across a breadth of planetary health, climate change and medical institutions and committees.

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SCHEDULE OF PARTIES

VID 607 of 2020

Applicants

- Second Applicant: ISOLDE SHANTI RAJ-SEPPINGS
- Third Applicant: AMBROSE MALACHY HAYES
- Fourth Applicant: TOMAS WEBSTER ARBIZU
- Fifth Applicant: BELLA PAIGE BURGEMEISTER

Sixth Applicant: LAURA FLECK KIRWAN

Seventh Applicant: AVA PRINCI

Eighth Applicant: LUCA GWYTHYR SAUNDERS