

CLIMATE CHANGE ADAPTATION IN THE ENVIRONMENT COURT: REVISITING THE 2010 *HOLT* CASE

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Common law precedents for some resource consent approvals in Aotearoa New Zealand are out of date due to the rapid increase in the science and understanding of the effects of climate change. This article considers one 2010 Environment Court case on a resource consent for building in the coastal area. It examines how the case would be decided if it arose today, with the benefit of the relevant law, policies and guidance now available to decision-makers. It suggests that the option taken by the Court in 2010, whereby the owners assumed the relevant inundation risks, would not be so available to a court today. This case is thus no longer good law.

I INTRODUCTION

The science of climate change is changing rapidly, and our understanding of its implications is increasing possibly even quicker. However, our common law has been slow to adapt, and is one area where understanding of the implications of climate change appears to be increasing very slowly. The key factor in this may not be to do with judges' understanding of climate change and its impacts; it may be due to the fact that the development of the common law can only proceed through deciding appropriate cases, which may or may not appear. If these cases do not arise when the science and other background factors change, we can be left with apparent precedent on the books, but which does not represent a good statement of the law if that same fact situation were to arise today.

We suggest that the area of resource consent approvals under the Resource Management Act 1991 (the RMA) is one where some of the common law precedents are insufficient and/or inaccurate: that some of these precedents are out of date due to the rapid increase in the science and understanding of the effects of climate change, and due to the associated guidance that has recently become available.

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The area with the likely largest number of unhelpful decisions is that of applications for resource consents for building in the coastal area; this is because of the increased knowledge about sea-level rise and associated coastal inundation, and of the associated coastal hazards and future risks from building in the coastal area.

One of the biggest changes in our coastal area resource consent laws occurred with the adoption of the 2010 New Zealand Coastal Policy Statement (NZCPS) that contains policies redirecting decision makers to avoid likely coastal hazards arising from climate change.¹ Before this, the NZCPS relied upon was from 1994;² the science relating to likely coastal hazards arising from climate change has since advanced considerably. The better understanding of the likely effects of climate change that has emerged since the earlier NZCPS is important as it relates to the size and urgency of the responses now required, which will determine whether or not particular developments in coastal areas are appropriate.

Perhaps unsurprisingly, the 2010 NZCPS policy on coastal hazards represents a significant change in direction from the previous NZCPS in this respect, with new policies on coastal hazards focusing on avoidance of risk for new and existing developments. The Environment Court itself has stated that the NZCPS has altered the field with respect to residential development in hazardous coastal areas, making Environment Court decisions before the passing of the 2010 NZCPS of "little assistance" for current appeals.³ Since this Environment Court comment, the Department of Conservation (DOC) has also produced its helpful guidance on the 2010 NZCPS (*DOC Guidance Note*).⁴

Also since 2010, the scientific information and guidance available to decision makers on future possible coastal climate-related hazards has increased and advanced. For example, in relation to climate science, before 2010 the foundation documents for assessing climate change effects used by the Environment Court were those contained in the Intergovernmental Panel on Climate Change's (IPCC) fourth assessment report (*AR4*),⁵ together with the Ministry for the Environment's (MfE) 2008

1 See Department of Conservation *New Zealand Coastal Policy Statement 2010* (November 2010) at [Policy 25]; discussed in more detail in Part III(C) below.

2 Interestingly, the judgment in *Otago Regional Council v Dunedin City Council* [2010] NZEnvC 120, [2010] NZRMA 263 [Holt] referred to "the NZ Coastal Policy Statement 2001" at [84]; however, a formal reference for a 2001 NZCPS has not been found.

3 *Gallagher v Tasman District Council* [2014] NZEnvC 245 at [176].

4 Department of Conservation *NZCPS 2010 guidance note: Coastal Hazards* (December 2017) [*DOC Guidance Note*].

5 Intergovernmental Panel on Climate Change *Climate Change 2007: Synthesis Report – Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (2007) [*Fourth Assessment Report (AR4)*].

guidance manual for local government on climate change effects and impact assessment.⁶ Whereas since then, the IPCC has produced an updated comprehensive assessment report,⁷ as well as a *Special Report on Global Warming of 1.5°C*.⁸ Further, as recently as 2017, MfE revised its guidance for local government on coastal hazards and climate change (*MfE Coastal Hazards and Climate Change Guidance*).⁹ Finally, also post-2010 have been the significant decisions of the Supreme Court in *Environmental Defence Society Inc v New Zealand King Salmon Co Ltd*,¹⁰ on the effect of national policy statements under the RMA in relation to local government planning documents, plus the most recent decision of the Court of Appeal relating to resource consents in *RJ Davidson Family Trust v Marlborough District Council*.¹¹ These developments indicate that all judicial decisions made before them will need to be examined closely for their precedential value in relation to climate adaptation.

This article examines one of the decisions made prior to the release of the 2010 NZCPS: *Otago Regional Council v Dunedin City Council (Holt)*.¹² This article will review the outcome of the case and the reasoning adopted by the Environment Court. The purpose of this article is to assess whether the outcome of the case would be the same had it been decided today, with the benefit of the relevant law and guidance now available. Such law and guidance includes the revised *MfE Coastal Hazards and Climate Change Guidance*,¹³ the 2010 NZCPS and the accompanying *DOC Guidance Note*,¹⁴ the IPCC *Special Report on Global Warming of 1.5°C*¹⁵ and the most recent case law affecting

6 Ministry for the Environment *Climate change effects and impacts assessment: A guidance manual for Local Government in New Zealand* (2nd ed, ME 870, May 2008).

7 Intergovernmental Panel on Climate Change *Climate Change 2014: Synthesis Report – Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (2014) [*Fifth Assessment Report (AR5)*].

8 Intergovernmental Panel on Climate Change *Global Warming of 1.5°C* (October 2018) [*Special Report on Global Warming of 1.5°C*].

9 Ministry for the Environment *Coastal Hazards and Climate Change: Guidance for Local Government* (ME 1341, December 2017) [*MfE Coastal Hazards and Climate Change Guidance*]. See also Ministry for the Environment *Preparing for Coastal Change: A Summary of Coastal Hazards and Climate Change Guidance for Local Government* (ME 1335, December 2017).

10 *Environmental Defence Society Inc v New Zealand King Salmon Co Ltd* [2014] NZSC 38, [2014] 1 NZLR 593 [*King Salmon*].

11 *RJ Davidson Family Trust v Marlborough District Council* [2018] NZCA 316, [2018] 3 NZLR 283 [*Davidson*].

12 *Holt*, above n 2, at [7].

13 *Preparing for Coastal Change: A Summary of Coastal Hazards and Climate Change Guidance for Local Government*, above n 9.

14 *DOC Guidance Note*, above n 4.

15 *Special Report on Global Warming of 1.5°C*, above n 8.

resource consents, most notably *Davidson*.¹⁶ In addition, the relevant district and regional plans need to be considered, in case they have changed as well.

The importance of revisiting such a case is to show how the law, policy and guidance to decision makers may alter the Court's approach toward effects associated with climate change and coastal hazards. It means that existing case law that lawyers may depend on in order to advise their clients may no longer be considered good law. It illustrates how fast this can change when we are dealing with rapidly advancing climate science, which is particularly pronounced in respect of the science on sea-level rise. This particular case is unique in that the Environment Court allowed a resource consent for a coastal development despite its "more than minor" and hazardous nature; the Court justified taking the identified coastal hazard risks on the basis that the design of the structure was to a standard which reduced the risk to a level reasonable for owners to assume the resulting risk. We suggest that this option would not be so available to a court today and that this case is no longer good law. This article explains why.

II OTAGO REGIONAL COUNCIL V DUNEDIN CITY COUNCIL (HOLT) [2010] NZENVC 120

A Facts

The *Holt* case concerned the granting of a resource consent to Rowen and Brendan Holt to build a house (and driveway) in an area zoned rural, 35km north of Dunedin.¹⁷ The Dunedin District Council granted the consent (subject to conditions), but the Otago Regional Council had concerns about the proposal and appealed the decision.¹⁸ The Otago Regional Council was unhappy about the risk of natural hazards likely to affect the site in the future; this was because the site was situated on a flood plain, approximately one metre above mean sea level (masl) in a wetland area next to the Karitane Estuary.¹⁹ A road bordering the property was 1.7–1.9 masl and formed "a stopbank to prevent Stornoway Road and the applicants' land from being flooded at each high tide except when water levels in the estuary exceed 1.7 masl".²⁰ Despite this stop bank, the applicants' land was known to be already subject to flooding from a range of sources, including rainfall in its own catchment, a secondary channel from the Waikouaiti River, and storm surges.²¹ These would increase as a result

¹⁶ *Davidson*, above n 11.

¹⁷ *Holt*, above n 2, at [7].

¹⁸ At [5]–[7].

¹⁹ At [10].

²⁰ At [12].

²¹ At [22].

of climate change: increased rainfall intensity, likely more and greater storms, and particularly sea-level rise.²²

In assessing likely future hazards, the Court was required to adopt a likely sea-level rise amount and timeframe. In having regard to the uncertainties of climate change per s 7(i) of the RMA, the Court followed the then MfE recommendations of on future sea-level rise.²³ The recommended timeframes for planning and decision were out to 2090. The average sea-level to be used for the purposes of this decision was to be increased by 0.5m, with the potential of +0.8m to be considered.²⁴ Thus, the evidence about future natural hazard risks that was relied on included these recommended sea-level rise increases.

In 2090, the property would still be above sea level. However, one of the more alarming natural hazard risks noted was the impact of a storm surge given the allowance for sea-level rise. It was stated that a storm surge with a 0.2 per cent annual exceedance probability (AEP) at high tide, with an allowance for wave run-up and 0.8m sea-level rise, would produce a water level on the property of 2.77m above masl.²⁵ Even more alarming, a 1 per cent AEP flood from the Waikouaiti River, coincident with a 0.2 per cent AEP storm surge could produce water levels even higher, reaching 2.97 masl.²⁶

With such potential effects in mind, the Court found that the main adverse effects of granting consent came from the significant risk of flooding to people on the property from storms and flood events. Flooding at low levels would reduce residential amenity for those living there, and at higher levels could pose safety threats. The Court commented that:²⁷

This is one of the relatively rare class of case under the RMA that directly raises the question of people's safety. Safety is a core part of the purpose of the RMA. As I have stated the principal issue in this proceeding is the possibility of flooding causing damage to the land or loss of life to occupants of the proposed dwelling.

To mitigate these risks, the proposal initiated that the house be constructed on wooden poles, raising the floor to an elevation of 3.7m above mean sea level, which would leave it 0.73m above the

22 At [21].

23 At [21].

24 At [21].

25 At [22].

26 At [22].

27 At [53].

maximum probable flood levels.²⁸ Additionally, the Holts volunteered to have "a boat ... tied to the house except when the boat is being used elsewhere".²⁹

B Decision

As the type of consent sought by the Holts was a non-complying activity under the Dunedin District Plan, the consent could only be granted if one of two tests were met under s 104D of the RMA. The first test is that the effects on the environment will be (only) minor; the second is that allowing the activity is not contrary to the objectives and policies of the relevant planning documents.³⁰ As the effects on the environment could not be considered minor under the first test, the second test became the focal point of the applicants' arguments. In arguing that the proposal was not contrary to the objectives and policies of the relevant planning documents, the applicants pleaded that the planning documents – most notably the Dunedin District Plan and Otago Regional Policy Statement (RPS) – contained an implicit policy allowing for the assumption of reasonable levels of risk. The Court found in favour of this argument and upheld this coastal development consent to be granted despite its more than minor and hazardous nature.³¹ This ability to personally assume the risk is the key precedential aspect of the *Holt* case.

The policies controlling development in flood-prone areas from the planning documents at the time this case arose were laden with concepts of "informed decision making" and "acceptable level of risks".³² The operative Otago RPS stated that land owners had a choice to evaluate the risks of natural hazards versus the benefits provided by the location, such that "adequately informed land owners can choose to accept responsibility for the natural hazard at their own risk".³³ The Court found that "[t]here is a thread in these policies that there is a level of risk that some might find acceptable, and that there should be flexibility for individuals to accept some risks."³⁴ Therefore, it found that s 104D was satisfied, since "in the light of the plan's acceptance of varied responses and its policies of control of development in flood-prone areas ... it is very difficult to regard the proposal as 'opposite in nature' to its objectives and policies".³⁵ It further commented that, while flooding could have adverse effects on the building itself, it "is no different in principle from placing a structure anywhere in New Zealand

28 At [8] and [73].

29 At [69].

30 Resource Management Act 1991, s 104D.

31 *Holt*, above n 2, at [83]–[87].

32 At [32].

33 At [36].

34 At [37].

35 At [54].

where it is at risk from an earthquake or tsunami.³⁶ Thus, they concluded that "[t]he solution is to design the structure to a standard which reduces the risk to an acceptable level" rather than to deny consent altogether.³⁷ In turn, the Court found that that the mitigation measures taken by the Holts – i.e. the use of poles and a boat – were sufficiently robust, meaning that it was "not unreasonable for them to assume the resulting risk".³⁸

In raising the issue of "moral hazard", the Court were concerned about what would happen to the acceptance of risk if the Holts one day sell their property to a third party.³⁹ The concern was that the third party may take matters into their own hands through legal or political action as they may be less informed or accepting of the risks posed.⁴⁰ In order to prevent issues down the road, the Holts volunteered conditions that would be executed in the form of a deed with the Council. The deed itself acknowledges the hazard and its potential effects, contains an agreement not to complain about the hazard implications, to not seek flood protection works from the Council and, most importantly, that they will obtain a similar covenant from any purchaser of the land if it is on sold.⁴¹ The deed and the ability to include a condition for subsequent purchasers was seen as "powerful matters in favour of the applicants" according to the Court.⁴² In addition, the design of the house on wooden poles was a key mitigating factor upon which the court relied.⁴³ These conditions lowered the risks to the point where they became acceptable, such that the Court found that the Holts could voluntarily assume them.

III NEW GUIDANCE, LAW AND PLANNING INSTRUMENTS

The acceptance of risk, alongside the conditions of the proposal to build the house on poles, was given greater weight by the Court than the risks involved with building in a coastal hazard zone. However, with the most recent *MfE Coastal Hazards and Climate Change Guidance*, provisions of the 2010 NZCPS, new proposed planning documents, and more up-to-date scientific evidence on sea-level rise, the balance between accepting and mitigating risks and avoiding building in coastal hazard zones would be approached differently by a court today.

36 At [50].

37 At [50].

38 At [82].

39 At [76].

40 At [76].

41 At [78] and [81].

42 At [81].

43 At [83].

A Planning Documents

In *Holt*, the case involved policies from both the Dunedin City Council and the Otago RPS. The court found that the activity was not contrary to the planning documents and therefore per s 104D, the ability of the applicants to assume risk was in line with the wording of the then current operative 2006 District Plan. Now, nine years later, while the 2006 District Plan is still operative, there is a proposed district plan and a proposed RPS in the pipeline. The Proposed Second Generation Dunedin City District Plan, known as the 2GP, is the proposed district plan.⁴⁴ Notified in September 2015, the 2GP is currently at the appeals stage whereby submitters can appeal the decisions on their submissions. The proposed RPS was notified in May 2015 and is at the same appeal stage as the 2GP. Both are partially implemented. There are a few changes in both proposed planning documents that could influence the outcome of *Holt*, were it decided today.

1 Proposed Second Generation Dunedin City District Plan (2GP)

Under the current operative District Plan, the status of the activity of building a house in a rural area is "non-complying". Our review next examines the 2GP to see whether or not the assumption of risk, and the mitigating conditions provided by the applicants would remain in line with the policy and objectives of this proposed plan.

As per the proposed map that is supplementary to the 2GP, the Holts' property in Karitane has a few map overlays based on its location. The first is the "coastal" overlay which denotes the property as coastal, which falls under the "rural zone" policies and objectives. Further, two overlays related to coastal hazards apply: "Hazard 2 (flood) overlay" and "Hazard 3 (coastal) overlay". These two overlays note the importance of the property's location in relation to the potential danger that it is exposed to as land on a flood plain and close to sea level. The zoning and overlay of this property under the proposed plan may have a potential effect on how the case is to be decided if it were to be heard in Court today.

Objective 16.2.3 of the 2GP indicates that rural character values and amenities of the rural zones are to be maintained or enhanced.⁴⁵ Policy 16.2.3.2 requires residential activities in such zones "to be at a density that maintains the rural character values and visual amenity of the rural zones". The activity status of the proposed building can be found in Rule 16.3.6 which states that "new buildings, and additions and alterations to buildings, which create more than 60m² of new ground floor area" have *restricted discretionary* status. Objective 11.2.1 states that land use and development ought to be "located and designed in a way that ensures that the risk from natural hazards, including climate change, is no more than low, in the short to long term". Surrounding policies suggest that, within the

44 See Dunedin City Council "2nd Generation District Plan (2GP) Appeals Version – electronic plan" <<https://www.dunedin.govt.nz>>.

45 Dunedin City Council *Rural Zones* at [Objective 16.2.3].

Hazard 2 (flood) overlay zone, only new buildings, or those activities that are sensitive or potentially sensitive to natural hazards are allowed, where "the scale, location and design of the building or other factors mean risk is avoided, or is no more than low".⁴⁶

Objective 11.3.3 affects buildings in the hazard 3 (coastal) overlay zone stating that "new buildings containing residential activity on the ground floor must be relocatable".⁴⁷ Those that are not relocatable are also given restricted discretionary activity status.⁴⁸ The 2GP provides a guidance Note on the relocatable buildings requirement under this policy, clarifying that relocatable buildings still may not ensure all risk is avoided.⁴⁹ Further, in mentioning ideas of voluntary assumption of risk, the Note describes that development in hazard prone areas such as those of the Holt property, are "at an owner's risk and the DCC does not accept any liability in regards to development and risk from natural hazards".⁵⁰

With regard to the activity status imposed, the 2GP provides policies on the assessment of such restricted discretionary activities. It notes that, as part of its guidance on the assessment of resource consents, the Council will "consider the policies of the New Zealand Coastal Policy Statement 2010 in terms of acceptable levels of risk".⁵¹ Further, as noted by the Plan, potential circumstances that may support a consent application include that the risk from natural hazards is, again, no more than low.⁵² At this point it is important to note that, for future application of this provision, the 2GP indicates that the risk from natural hazards in areas with a Hazard 2 (coastal) overlay are deemed moderate.⁵³ This is recognition that the land in question poses a greater level of risk than the Plan is willing to support.

The application of the case at hand would thus change under the proposed 2GP due to the change in activity status from non-complying to restricted discretionary. Restricted discretionary activities are assessed under different RMA provisions, namely ss 104 and 104C. This means that only those matters to which the Council has restricted its discretion will be considered, leaving it to grant or refuse consent. Further, this gives an ability to allow conditions of consent with respect to matters over which it has restricted its discretion. Therefore, as per the 2GP, the Council has discretion over the construction of a new building over 60m², and those that are not relocatable.

46 Dunedin City Council, above n 44, at [Policy 11.2.1.4] and [Policy 11.2.1.6].

47 At [Policy 11.3.3(1)].

48 At [Policy 11.3.3(2)].

49 At [Note 11.3.3A(1)].

50 At [Note 11.3.3A(2)].

51 At [Policy 11.5].

52 At [Policy 11.5].

53 At [Policy 11.5].

Notably, the proposed 2GP lacks any mention of "acceptable levels of risk". Under the current, operative District Plan, the Policy 17.2.1 explanation notes that: "in assessing the effects of hazards, attention will be given to the acceptable level of risk and any potential adverse effects".⁵⁴ Such wording is not found within the proposed planning document. This is important as the Holts' assumption of risk in their case was key to the granting of consent by the Court. Without this, the case would not have been decided in their favour.

At the time of writing this article, the 2GP is currently under appeal, including the provisions discussed above. In such circumstances, both the proposed rules of the 2GP and the operative current 2006 District Plan rules apply. However, where an activity has a different activity status under each plan, the more restrictive status applies. In the case at hand, this means that the activity status for the construction of the Holts' pole house would remain as non-complying status until the appeals of the 2GP requiring restricted discretionary are resolved. It is therefore important to note that, had the case been decided today, these planning provisions would remain the same and, if it was a matter of solely these provisions mentioned above, then the case could at least be argued in a similar way today. However, these are not the only relevant provisions.

2 *Partially Operative Regional Policy Statement (PORPS) 2019*

The Otago Regional Council also has a proposed RPS. This proposed RPS is currently partially operative and it, too, could have a potential impact on the outcome of the *Holt* case should it arise today.⁵⁵ The most significant part of the Partially Operative RPS (PORPS) is Part B: Chapter 4.⁵⁶ This Part recognises the risk that Otago faces in terms of both expected and unexpected changes related to climate change and natural hazards more generally. The focus of this Chapter is on building a resilient community by ensuring that they "develop in a way which helps to prepare for, respond, recover, and adapt to disruptions".⁵⁷ Further, as part of Objective 4.1, the PORPS notes the risks that natural hazards pose to, not just property, but to human safety;⁵⁸ this is a vital issue that was discussed by the Court in *Holt* in 2010.

Two key objectives of the PORPS stand out as relevant to the *Holt* case. The first is Objective 4.1 that states that "risks that natural hazards pose to Otago's communities are minimised".⁵⁹ In achieving

54 Dunedin City Council *Dunedin City District Plan (2006): 17 Hazards, Hazardous Substances and Earthworks* at 17:6.

55 Otago Regional Council *Partially Operative Otago Regional Policy Statement 2019* (Operative 14 January 2019).

56 At 21–51.

57 At 21.

58 At 24.

59 At [Objective 4.1] (emphasis added).

this risk, several policies indicate the need to be sceptical about the construction of a house in a zone of significant risk to natural hazards, such as with the facts of *Holt*. In particular, Policy 4.1.6 states that one must "minimise [the increase in] natural hazard risk to people, communities, property and other aspects of the environment" including by:⁶⁰

- a) *Avoiding* activities that result in significant risk from natural hazard; ...
- c) *Avoiding* activities that increase risk in areas potentially affected by coastal hazards over at least the next 100 years.

The strong direct language of the PORPS here indicates a stronger intent of the Otago Regional Council to not allow activities to take place in areas prone to natural hazard risk, now and over the next 100 years. Interestingly, the Dunedin City Council recognised this stricter control and attempted to appeal the use of the word "avoiding", wanting to change it to "appropriately manage"; however it was resolved through negotiations and Policy 4.1.6 was changed by Environment Court consent order in June 2018.⁶¹

In assessing activities for natural hazard risk to people, property and communities, Policy 4.1.4 states that this assessment ought to consider any measure taken to "avoid, remedy or mitigate those risks". Such considerations seem to be overshadowed by the use of "avoid" in Policy 4.1.6; however, Policy 4.1.4 may be an avenue through which the Holt family would give weight to their mitigation and adaptation measures as considerations for a consent application today. These include both the restoration of the wetland and the placing of the house on tall poles.

One key difference between the current and the proposed RPS is the reference (or lack of it) to "acceptable levels of risk". Objective 11.4.2 of the RPS used in *Holt* states that the objective is to avoid, remedy, or mitigate the adverse effects of natural hazards "to acceptable levels".⁶² Such wording is not found within the PORPS. As mentioned above in relation to the 2GP, this is important because the Holts' assumption of risk in their case played a significant role in the granting of consent by the Court and, without it, the case would not have been decided in their favour. This omission removes that justification, thereby suggesting that the case could not be so decided today.

The second important Objective is 4.2. Objective 4.2 provides: "Otago's communities are prepared for and able to adapt to the effects of climate change".⁶³ Policy 4.2.1 ensures that:⁶⁴

60 At [Policy 4.1.6].

61 See for example Otago Regional Council "Regional Policy Statement Review" (19 December 2018) <www.orc.govt.nz>

62 *Holt*, above n 2, at [35].

63 Otago Regional Council, above n 55, at [Objective 4.2].

64 At [Policy 4.2.1].

... people and communities are able to adapt to, or mitigate the effects of sea level rise, over no less than 100 years, by using:

- a) A sea level rise of at least 1 metre by 2115, relative to 1990 mean sea level (Otago Metric Datum); and
- b) Adding an additional 10mm per year beyond 2115, or the most up-to-date national or regional guidance on likely sea level rise.

Policy 4.2.2 similarly states that the same can be achieved in relation to climate change by: taking into account the effects of climate change and the most relevant data; applying a precautionary approach; encouraging activities that reduce the effects of climate change; and by encouraging systems' resilience.⁶⁵

The PORPS asks decision makers to consider sea-level rise of at least 1m by 2115. This is greater than the figures relied on in the *Holt* case. In *Holt*, the Court relies on evidence that suggests the sea-level rise considered was between 0.5m and 0.8m by 2090. Were the case decided today, the higher figures and longer timeframe would need to be used. An increase in sea-level rise values will change the calculations of a wide range of values provided in the case related to other natural hazards such as flooding and storm surges. This is not to mention the increased severity and likelihood of such natural hazard risks, especially further into the future. Such findings have the potential to change the decision in such a case as the risk will likely increase. Below, we discuss the *MfE Coastal Hazards and Climate Change Guidance* that provides more detail and recommendations for the values for sea-level rise.

B The Impact of Recent Case Law

The Court of Appeal in *Davidson* decided that a consent authority need only have regard to the provisions of pt 2 of the RMA when it is appropriate to do so.⁶⁶ The Court of Appeal confirmed that pt 2 remains highly relevant to the determination of resource consent applications. Authorities must have regard to pt 2 where careful scrutiny reveals that a plan has not been prepared in accordance with the provisions of pt 2. Conversely, the authority may choose not to refer to pt 2 when it adds nothing to the evaluative exercise.

The Court in *Holt* turned its mind to the application of the relevant pt 2 sections of the RMA through the way in which the Court was mindful of s 7(i), which requires authorities to have regard to the effects of climate change.⁶⁷ The effect of the outcome of *Davidson* is such that there is a need to consider whether the relevant planning instruments provide policies directive enough to prevent an analysis of pt 2. The Court of Appeal notes that, where the 2010 NZCPS is engaged, any resource

⁶⁵ At [Policy 4.2.2].

⁶⁶ *Davidson*, above n 11, at [47].

⁶⁷ *Holt*, above n 2, at [21].

consent application will be assessed having regard to its provisions and recourse to pt 2 would not be required.

In this case, the applicable NZCPS policies and the Dunedin and Otago planning documents implement pt 2, so recourse to pt 2 would not be required.⁶⁸ Due to the directive policies and hierarchy of planning documents, even if a consent authority resorted to application of pt 2, it would be unlikely to get any further guidance than the NZCPS and planning instruments provide. We thus turn next to the relevant provisions of the 2010 NZCPS.

C New Zealand Coastal Policy Statement 2010 (NZCPS)

The 2010 NZCPS policy on coastal hazards represents a significant change in direction from the 2001 NZCPS used in *Holt*.⁶⁹ The 2010 NZCPS contains new policies on coastal hazards with a focus on avoidance of risk for new and existing developments.

Policies 24–27 cover management of coastal hazard risks, including a requirement to undertake coastal hazard risk assessments for a timeframe of "at least the next 100 years" and to consider the effects of climate change.⁷⁰ If *Holt* was decided today, the risk assessment would need to be made out to 2120 as opposed to the 2090–2100 timeframe that was used. Implementation of the NZCPS places an onus on councils to acquire hazard risk data as well as address uncertainty when identifying at risk locations.⁷¹ Policy 25 also contains strong directive guidance to "avoid increasing the risk of social, environmental and economic harm from coastal hazards" and to "avoid redevelopment, or change in land use, that would increase the risk of adverse effects from coastal hazards".⁷²

Policy 3 promotes the continued application of a precautionary approach to managing activities in the coastal environment when their effects are uncertain but potentially significantly adverse and are vulnerable to effects of climate change.⁷³ It contains additional reference to what "precaution" might mean. This becomes helpful due to the uncertainty around longer term projections needed to satisfy the planning horizon of 100 years. As the *MfE Coastal Hazards and Climate Change Guidance* notes, greater uncertainty about climate change implies a greater probability of adverse consequences which require precautionary, flexible and adaptable responses.⁷⁴

68 *Davidson*, above n 11, at [77]–[82].

69 See *Holt*, above n 2, at [84], and our comment at n 2.

70 *New Zealand Coastal Policy Statement 2010*, above n 1, at [Policy 25].

71 At [Policy 24].

72 At [Policy 25(a) and (b)].

73 At [Policy 3].

74 *MfE Coastal Hazards and Climate Change Guidance*, above n 9, at 71, box 11.

The better understanding of the likely effects of climate change that has emerged since the earlier NZCPS is important as it relates to the size and urgency of the responses now required. Despite this, according to a DOC review conducted on the effects of the 2010 NZCPS on decision-making under the RMA, implementing the 2010 NZCPS coastal hazard policies is very challenging, particularly with regard to understanding and acceptance of the risks associated with coastal hazards.⁷⁵

The *DOC Guidance Note* on coastal hazards provide little guidance on the debate regarding voluntary assumption of risk.⁷⁶ The only part of the *Guidance Note* where accepted levels of risk is mentioned is with regard to recent New Zealand guidance on undertaking coastal hazard assessments by councils of areas within their jurisdiction. However, this addresses methods of engaging their communities in order to assist council decision-making on climate adaptation policies and measures; it does not provide guidance on the rules to be adopted.⁷⁷

In contrast, as the Court notes in the *Holt* case, the NZCPS is important for considering the mitigation measures proposed by the Hols. Of particular importance is the restoration and rehabilitation of the wetland. Policy 14 of the NZCPS looks to "[p]romote restoration or rehabilitation of the natural character of the coastal environment".⁷⁸ This can be achieved under the NZCPS by, "imposing or reviewing restoration or rehabilitation conditions on resource consents" and "where degraded areas of the coastal environment require restoration or rehabilitation, possible approaches include: ... rehabilitating dunes and other natural coastal features or processes, including saline wetlands".⁷⁹ The nature of Policy 26 supports these statements by further indicating that those working within the realms of the NZCPS:⁸⁰

... provide where appropriate for the protection, restoration or enhancement of natural defences that protect coastal land uses, or sites of significant biodiversity, cultural or historic heritage or geological value, from coastal hazards.

This covers wetlands as per Policy 26(2).⁸¹ Policies 14 and 26 therefore favour consents that condition the rehabilitation and restoration of wetlands. When the co-benefit of enhancing or maintaining natural character is in addition to their ability to reduce coastal hazard risks, it is hard to view such

75 Department of Conservation *Review of the effect of the NZCPS 2010 on RMA decision-making: Overview and key findings* (June 2017) at [176].

76 *DOC Guidance Note*, above n 4.

77 See for example the discussion of the Bay of Plenty Regional Council initiative for public engagement on acceptable levels of risk, to "support risk-based planning in the Bay of Plenty" at 31.

78 *New Zealand Coastal Policy Statement 2010*, above n 1, at [Policy 14].

79 At [Policy 14].

80 At [Policy 26(1)].

81 At [Policy 26(2)].

enhancement of natural defences and restoration of wetlands in a negative light. However, with the instructions to "provide, where appropriate" and "promote", these factors likely could not outweigh the directive to "avoid" the hazards of coastal development that is contained in Policy 25, in the light of the more recent authorities of *King Salmon*⁸² and *Davidson*.⁸³

The *DOC Guidance Note* on the NZCPS also notes that there is an inherent challenge with implementing the avoidance of any increase in the overall risk of harm from hazards. However, this is vital to the implementation of the NZCPS.⁸⁴ Coastal hazard risks will significantly increase with time because of the impacts of climate change. New developments will likely be affected by an increase in coastal hazards within the 100 year plus timeframe.⁸⁵ Therefore, policies acknowledging the need to avoid current – and most importantly, future – risks need to be at the forefront of decision-making. The chosen wording of the policies indicates this importance.

Acknowledging this, it is clear that, were the case decided today, the NZCPS would play a far greater role in the decision than it was in the original decision of the Environment Court. The Court in the *Holt* case itself did not delve into any detail on these points under the earlier NZCPS, rather a mere two short paragraphs.⁸⁶ In particular, the notion of avoiding new development in coastal hazard areas is far more prominent in the 2010 NZCPS and would play a greater role in suggesting that such a consent not be granted. As discussed below, the *MfE Coastal Hazards and Climate Change Guidance* provides even greater understanding of this.

IV COASTAL HAZARDS AND RELEVANT NATIONAL GUIDANCE

A Sea-level Rise

Sea-level rise is a major component of the *Holt* case and the Court's reasoning. Due to the non-linear and delayed responses of ocean and ice environments to ongoing climate change, it is not possible to determine precisely likely amounts of sea-level rise over the next 100 years.⁸⁷ However, it is possible to offer different scenarios of how the future might unfold, with likely sea-level rise amounts indicated for each scenario. The *MfE Coastal Hazards and Climate Change Guidance* promotes the use of such climate change scenarios in decision-making on coastal development.

82 *King Salmon*, above n 10.

83 *Davidson*, above n 11.

84 *DOC Guidance Note*, above n 4, at 45.

85 At 45.

86 *Holt*, above n 2, at [84]–[85].

87 *MfE Coastal Hazards and Climate Change Guidance*, above n 9, at 86.

The *MfE Coastal Hazards and Climate Change Guidance* uses the IPCC fifth assessment report (AR5) base projections of global temperature rise and sea-level rise, shown as the four representative concentration pathway scenarios (RCP).⁸⁸ An additional "upper 83rd percentile RCP8.5 scenario (H⁺)" has been added to represent a higher rate of sea-level rise which may be experienced beyond 2100 (such as due to faster polar ice sheet melt than is shown by the older models).⁸⁹ The IPCC has stated that it is "virtually certain",⁹⁰ and can conclude with "high confidence",⁹¹ that sea levels will continue to rise post-2100 even if warming is limited to 1.5°C.⁹² The *MfE Coastal Hazards and Climate Change Guidance* also indicates the need to add offsets to represent the local environment: an addition of 0.02–0.3m by 2100.⁹³

Furthermore, the IPCC *Special Report on Global Warming of 1.5°C* notes that the likely – albeit conservative – range in sea-level rise is of around 0.26–0.77m by 2100 with 1.5°C warming, and up to 0.93m for 2°C.⁹⁴ The *MfE Coastal Hazards and Climate Change Guidance* shows that, using such higher scenarios, sea level could reach 1.0 metre by 2100.⁹⁵ In comparison, the range of 0.5–0.8m was relied on by the Court in *Holt*, which is clearly too low. Moreover, the 2010 NZCPS requires the base set of global sea-level rise projections to be extended to 2120 to align with the planning timeframe of "at least 100 years"; this would mean that a figure of *more than 1.0m* sea-level rise needs to be factored in by a court deciding such a case today.⁹⁶

88 At 87. See *Fifth Assessment Report (AR5)*, above n 7.

89 *MfE Coastal Hazards and Climate Change Guidance*, above n 9, at 90. It is noted that scenario RCP8.5 is based on a "continuing high emission baseline scenario ... with no effective global emissions reduction", as we are currently seeing today (at 87). But "IPCC AR5 only provided an uncertainty range for each RCP scenario that covered the middle 66 per cent likely range from the 17th to 83rd percentile for sea-level rise; so there is a 33 per cent chance SLR could lie outside the *likely* range provided for each RCP" (at 97). Thus H⁺ was designed to cover the 17 per cent chance that sea-level rise would be higher than RCP8.5 figures (at 97).

90 At 94.

91 *Special Report on Global Warming of 1.5°C*, above n 8, at [B.2.2].

92 At [B2.2].

93 *MfE Coastal Hazards and Climate Change Guidance*, above n 9, at 99. We note that there is currently scientific work underway to identify more precisely the localised effects of sea-level changes around New Zealand. In addition to climate change-induced sea-level rise, councils need to factor in land level movements, some of which are rising and some of which are lowering. See for example Eloise Gibson "Ups and downs of rising seas in a shaky nation" (16 September 2019) Newsroom <www.newsroom.co.nz>. This will influence future guidance to councils and best practice standards.

94 *Special Report on Global Warming of 1.5°C*, above n 8, at [B2.1].

95 *MfE Coastal Hazards and Climate Change Guidance*, above, n 9, at 107, Table 11.

96 At 97.

The New Zealand H⁺ scenario (or "RCP 8.5 (83rd)") is the upper end of the "likely range" according to the *MfE Coastal Hazards and Climate Change Guidance*.⁹⁷ It reflects the possibility of "future surprises" toward the upper range of projections and represents a situation where more rapid rates of sea-level rise could occur due to dynamic ice sheet processes and instability thresholds.⁹⁸ The IPCC argues (with *medium confidence*) that the instability thresholds could be triggered with global warming from 1.5°C to 2°C.⁹⁹ Further, if no attempt is made to reduce emissions we could reach 1.5°C by 2030.¹⁰⁰

The *MfE Coastal Hazards and Climate Change Guidance* recommends the sea-level rise scenarios to be used when assessing different categories of activities, and provides guidelines for which should be used for different categories of activity:¹⁰¹

- A greenfields developments or major new infrastructure
- B intensification or change in land use of existing development
- C existing exposed development
- D low-risk non-inhabitable works and activities, particularly those with a functional need to be near the coast

Category A catches the *Holt* proposal as it relates to new developments. The *Guidance* recommends that only the highest (H⁺) scenario be used when assessing such proposals and effects.¹⁰² The rationale behind this recommendation stems from the long-life of new developments, coupled with the requirement in the NZCPS to avoid future risk over a 100-year time frame.¹⁰³

Importantly, scenario H⁺ predicts sea-level rise to be approximately 1.4m by 2120.¹⁰⁴ In such a scenario, the *Holts'* property would be permanently under water, not just during flooding events such as when suffering storm surges. According to the analysis of the Court in 2010, this would cause damage to the property and increased risk to life and health, the very types of risks that ought to be avoided. The risks of coastal inundation, storm surges, and their relationship to flooding in the area, are high and likely unacceptable. Importantly, the *MfE Coastal Hazards and Climate Change Guidance* indicates that coastal inundation will outweigh any other effect on its own 100 years from

97 At 105.

98 At 105 and 111.

99 *Special Report on Global Warming of 1.5°C*, above n 8, at [B2.2].

100 At [A.1].

101 *MfE Coastal Hazards and Climate Change Guidance*, above n 9, at 101.

102 At 107.

103 At 107.

104 At 105.

now. Therefore, in re-deciding *Holt*, a large emphasis needs to be put on sea-level rise and inundation. Not enough attention was initially given to sea-level rise in the case, nor to its potential impact on sea-level rise, flood risk, inundation, storm surges, waves and tsunamis. The risk and probabilities will change, especially with an increase in sea-level rise which is a vital flood hazard consideration.

B Flooding and Storm Surges

Chapter 5.8 of the *MfE Coastal Hazards and Climate Change Guidance* covers "climate change effects on storms, winds, storm tides and waves".¹⁰⁵ Such effects are described as secondary to ongoing sea-level rise.¹⁰⁶ Any changes in the impacts from these drivers will have implications for coastal storm inundation and groundwater and drainage levels, both of which are relevant to the case at hand. The *MfE Coastal Hazards and Climate Change Guidance* notes that the Otago Coast is one of the two locations with extreme storm surge projections calculated for different scenarios for 2070–2090. It has been calculated that extreme increases of 0.03m, or a five per cent height increase, are to be expected.¹⁰⁷ Additionally, the South Island is predicted to have stronger extreme daily winds in the future.¹⁰⁸ The southern New Zealand region should expect mean annual wave height increases of around two to three per cent.¹⁰⁹

The projected changes in storm frequency, wave heights, storm surge and winds overall for New Zealand are relatively modest or inconclusive.¹¹⁰ Therefore, the trends and projections of future changes are not as clear as for sea-level rise and are more likely to showcase local and regional variations. Although secondary to the dominating influence of sea-level rise, subtle changes in such ocean drivers acting concurrently with sea-level rise may lead to substantial changes in coastal hazard risk. Therefore, the *MfE Coastal Hazards and Climate Change Guidance* still provides relevant guidance emphasising the need to consider ocean drivers alongside sea-level rise projections.

Chapter 6 of the *MfE Coastal Hazards and Climate Change Guidance* addresses two types of coastal hazards, one of which is coastal inundation. Changes in storm frequency and intensity and the rise of sea-levels are the ways in which climate change will affect coastal inundation: this therefore forms a central part of the discussion in this Chapter. Sea-level rise will increase the exposure of coastal land to inundation and raise groundwater levels near the coast also.¹¹¹ For example, "in New

105 At 112.

106 At 112.

107 At 113.

108 At 114.

109 At 113.

110 At 114.

111 At 121.

Zealand, extreme sea levels that are expected to be reached or exceeded only once every 100 years ... at present day MSL, will occur once per year or more ... by 2050–2070".¹¹² The *Guidance* notes that any attempt to quantify the potential effects of climate change on inundation will depend on: "the characteristics of the area, the level of detail required for the issue under consideration, and the availability and suitability of datasets", whilst giving consideration to the interactions between various coastal hazard sources and any relevant uncertainties, particularly how sensitive inundation risk is to these uncertainties.¹¹³

According to the "[u]ncertain framework for coastal hazard assessments to support the dynamic adaptive planning pathways (DAPP) process",¹¹⁴ new developments such as the construction of a new building should be avoided in areas that will be subject to such inundation within 100 years. New developments are subject to higher levels of uncertainty due to their longevity and thus are unable to be easily replaced or relocated later. As for sea-level rise, coastal hazard assessments for new developments need to focus on the upper range hazard scenarios.¹¹⁵ As the Holt land is just under 1m above sea level, even with the road providing the stopbank of 1.7–1.9m above sea level, the Holts' property will be below the mean sea level by 2100 due to sea-level rise under H+. Moreover, the *MfE Coastal Hazards and Climate Change Guidance* notes that "trigger points (eg frequency of nuisance or damaging inundation, or severe erosion events) may be reached well before 1 metre of SLR occurs",¹¹⁶ strongly indicating that new developments be avoided. This adds to the guidance provided in relation to sea-level rise, discussed above, whereby properties at such high risk of coastal hazards ought to be avoided.

V CONCLUSION

In 2010, *Holt* was decided on a view that the level of risk associated with the relevant coastal hazards was low enough that the Holt family could voluntarily assume the risk and build a residential dwelling on a flood-prone, coastal area, even in the face of future sea-level rise and coastal inundation. The greatest risk focused on by the Court was the risk to human life, of which the Court found was low, and granted the consent with conditions – allowing the owners to assume the reasonable level of risk.

The Court noted that:¹¹⁷

112 At 121.

113 At 125–126.

114 At 139.

115 At 142–144.

116 At 143.

117 *Holt*, above n 2, at [14].

One of the questions in this case is whether, if the Court confirms the grant of consent to Mr and Mrs Holt, it will create a precedent for building on these other [neighbouring] sections, or elsewhere close to sea level within Dunedin City.

As we have shown in this article, we suggest that the case does not provide a good precedent for building on these other sections, and it would likely be decided differently were it considered today. Vast improvements have occurred since 2010, not only in the science and knowledge of the possible effects related to coastal hazards, but also in the assistance provided to decision makers through the implementation of more directive policies and guidance. With the assistance of the *MfE Coastal Hazards and Climate Change Guidance* and the directive policies of the NZCPS, it is likely that the Court would decline the *Holt* proposal to build a dwelling on that flood-prone coastal hazard area on the basis that the risk of coastal inundation was unacceptable.

The key differences between then and now are the changed sea-level rise predictions, the directives to consider such risks out to 100 years, and the proposed planning documents that are more directive and that also remove the ability to accept certain levels of risk. In addition, the relevant planning documents could have a profound effect on the decision should such a case be decided today. For the planning documents in this particular case, it would be due to a change in activity status for the construction of such a property in the rural zone. Furthermore, had the activity status remained the same, the likelihood of the proposal passing the RMA s 104D test of being consistent with all planning documents would be low. But Dunedin and Otago councils are not the only councils who have updated their planning documents to better reflect the NZCPS. These results are thus likely for planning documents in other areas as well. The greater direction toward the avoidance of activities in coastal hazard prone areas is clear, and allowing such an activity would likely contradict the 2010 NZCPS and relevant planning documents.

Along with the 2010 NZCPS, the December 2017 central government guidance on coastal hazards and council decision-making is key – both MfE and DOC guidance documents. Had such information and guidance been available to the Court when assessing *Holt*, we suggest that a different outcome of the case would have arisen. Had the Court known the potential effects from coastal inundation by 2120, along with the directive policy to *avoid* risk of such hazards, it would have found the effects to be unacceptable. Thus, we suggest that, following Policy 25 of the current NZCPS, the Court would likely decline such a resource consent today. Managing the risk of social, environmental and economic harm from coastal hazards under Policy 25 is the most directive policy in the NZCPS. Moreover, a precautionary approach should be adopted per Policy 3 in light of the uncertainties surrounding ice sheet instability and the reaction of other climatic processes to climate change. National policy that requires proactive, well-informed, precautionary and risk-based management of coastal hazards is provided and such an approach should be taken on the facts of the case.¹¹⁸

118 *DOC Guidance Note*, above n 4, at 9.

Perhaps the most dramatic factors that arise from the national guidance on coastal hazards are the newer calculations for sea-level rise and storm effects. With sea-level rise projections greater than those proposed in the initial case, this would have a flow-on effect and alter the inundation levels and concurrently the related AEP. Thus, the adjusted values are most likely to cause the court to deny the consent as the risk posed by sea-level rise and the associated implications would warrant the level of risk to be determined as unacceptable. The increase of storm surge intensity, frequency and levels of water on site could be enough to change the Court's view on allowing the Holt family to accept the risk and sign the deed.

Overall, the greater direction from central Government allows the Court to be better prepared to analyse cases that involve complex issues such as coastal hazards. In conclusion, with the assistance of the national guidance and the directive policies of the NZCPS and planning documents, it is likely that the Court would decline such an application on the basis that the risks from future coastal inundation were unacceptable. This means that *Holt* does not provide a useful precedent for allowing buildings in a coastal hazard zone and should be disregarded.

