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# Ambulatory boundaries in New South Wales: Real lines in the sand

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## ABSTRACT

**Uncertainties as to how ambulatory boundaries formed by tidal waters move and how these movements affect land title and property rights have concerned private and public coastal landowners for many years. Recent amendments to the *Coastal Protection Act 1979* (NSW) have added to this uncertainty, producing more confusion.**

The central ‘uncertainty’ is the effect of property law on NSW land titles when the ambulatory boundary formed by the receding shoreline crosses a ‘right-line’ private property boundary originally defined by survey. Since it is likely such scenarios will occur increasingly frequently as sea levels continue to rise the legal implications of this are examined closely.

This paper resolves this uncertainty, discusses the effect of a moving shoreline on coastal land titles in New South Wales under climate change conditions, briefly canvasses options for the future and concludes that planned relocation is preferable rather than attempting to defend against rising seas and receding shorelines for centuries.

## INTRODUCTION

Uncertainty as to how the movement of tidal waters that constitute natural boundaries to land affect the title of adjoining land were first addressed in disputes heard before common law courts in the 14<sup>th</sup> century.<sup>1</sup> The primary question at the core of this uncertainty has concerned the ownership of new land formed by the gradual deposition of sediment by the actions of wind and waves, through the natural process of accretion, or by the retreating of the sea.<sup>2</sup> However a second question concerning the ownership of land gradually covered by the advance of tidal waters has also exercised legal minds since the 17<sup>th</sup> century.<sup>3</sup> More recently, this question has gained fresh relevance, due to climate change impacts.

The body of law relevant to answering these questions is the common law doctrine of accretion, an ancient English doctrine that applies to natural boundaries between land and water.<sup>4</sup> Its principles determine the location of boundaries formed by gradually moving tidal water bodies and govern the ownership of land affected by the natural processes of sediment transport and changes in water level.<sup>5</sup> It operates in a complex legal framework of surviving common law, as modified by relevant State-based legislation.<sup>6</sup>

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<sup>1</sup> *Abbot of Peterborough's case* (c 1368), 41 Ed3 BR Rot. 28; and *Abbot of Ramsey's case* (1372) 45 Ed 3, Rot 13.

<sup>2</sup> One of the first cases to refer to both these processes was *Re Hull and Selby Railway Co* (1839) 5 M & W 327; 151 ER 139.

<sup>3</sup> See the discussion of the commentaries by Robert Callis and Sir Matthew Hale below.

<sup>4</sup> In *Southern Centre of Theosophy Incorporated v South Australia* (1978) 19 SASR 389, Walters J, at 393, observed that ‘the doctrine of accretion is a well known one, and its origin may be traced to Roman Civil Law’ and quoted from the Institutes of Gaius, Book 2, 70. The Institutes of Gaius are thought to have been written in the 2<sup>nd</sup> century AD. The term ‘the doctrine of accretion’ was first used judicially in *Foster v Wright* (1878) 4 CPD 438, at 447 (Lindley J).

<sup>5</sup> See LexisNexis *Halsbury's Laws of Australia* 355 Real Property/ VI Other/ (2) Boundaries Fences and Encroachments/ (B) Boundaries for Land Abutting Water/ (I) Tidal Water Boundaries [355-14005]. See also Legal Online *The Laws of Australia* Real Property > Physical limits to land > Boundaries > Accretion and erosion [28.15.52] – [28.15.54].

<sup>6</sup> E.g. The doctrine of accretion’s application to non-tidal lakes was explicitly repealed by the introduction of s 235A into the *Crown Lands Consolidation Act 1913* (NSW) by the enactment of the *Crown Lands Amendment Bill 1931* (NSW). This repeal was continued in s 172(4) of the *Crown Lands Act 1989* (NSW).

While this common law doctrine came into effect in NSW under constitutional principles at the time of colonisation by England,<sup>7</sup> and continues to apply, subject to statutory modifications,<sup>8</sup> the principal element of current property law in NSW is the Torrens title statute, the *Real Property Act 1900* (NSW), which replaced the old general land law, and earlier systems of private conveyancing and registration of deeds.

Like other Torrens title statutes, the *Real Property Act 1900* (NSW) sought to simplify and facilitate dealings in land by overcoming the difficulties inherent in the operation of the old general land law in the colonies in Australia, especially the need to show an unbroken chain of conveyance and possession from the time of the Crown grant in order to prove ownership of the land title.

Under the Torrens system operating in NSW, a proprietor gains an indefeasible title to land by its registration under the relevant provisions. The entry of the proprietor's name in the Register is adequate proof of ownership, subject to any other interests in the land, such as an easement or mortgage, being also recorded on the same land title in the Register.<sup>9</sup> However, indefeasible title 'does not extend to specific measurements' on the Certificate of Title,<sup>10</sup> and the registration of land does not certify its boundaries.<sup>11</sup>

## RECENT SOURCES OF UNCERTAINTY

Although the courts have made many decisions on the operation of the doctrine of accretion<sup>12</sup> to resolve the complex questions posed by the movement of natural boundaries, they were not considered in recent commentaries, and so some significant errors were published and new seeds of uncertainty were sown.

In NSW, this uncertainty may be traced to erroneous statements made in the otherwise authoritative article 'Beach Protection in New South Wales,'<sup>13</sup> which reported on the 1999 NSW Beach Management Inquiry and amendments made to the *Coastal Protection Act 1979* (NSW) in 2002. In summarising the state of coastal management in NSW, the article expressed the then prevailing view that:

Erosion of the natural road or reserve through beach recession has resulted in "right line" boundaries extending onto the active beach (ie below the MHWM), or even in some rare cases seaward of the LWM.<sup>14</sup>

The article also included the unqualified statement that 'the doctrine of accretion does not apply where the boundary is "right-line" or fixed'.<sup>15</sup> Confusingly, the article accurately reported that:

<sup>7</sup> From early in the colony's history English common law rules were applied in NSW: (*Mary*) *Lord v Commissioners for the City of Sydney* (1859) 12 Moo PC 473; 14 ER 991 (Sir John Coleridge). See the discussion of the introduction of English common law into the colony of New South Wales in *Cooper v Stuart* (1889) 14 App Cases 286, 291-3 (Lord Watson).

<sup>8</sup> An example of this is the insertion of s 55N into the *Coastal Protection Act 1979* (NSW) which states that application to claim and area of accretion may not be approved if it is 'not likely to be indefinitely sustained by natural means', or if 'public access to a beach, headland or waterway will, or is likely to be, restricted or denied'.

<sup>9</sup> LexisNexis *Halsbury's Laws of Australia*, 355 Real Property, III Torrens System, (I) Torrens System (F) Registration of Interests and Dealings (I) Registrable Interests [355-8115].

<sup>10</sup> See LexisNexis *Halsbury's Laws of Australia* 355 Real Property/VI Other/ (2) Boundaries, Fences and Encroachments/ (B) Boundaries for Land Abutting Water/ (I) Tidal Water Boundaries [355-1400].

<sup>11</sup> Peter Butt *Land Law* (6<sup>th</sup> ed Thomson Reuters, Sydney 2010), 756 [20 20]. Butt cited as authorities for this statement *Boyton v Clancy* (1998) NSW ConvR 55-872 and *Comserv (No.1877) PL v Figtree Gardens Caravan Park* (1999) 9 BPR 16,791, 16,796.

<sup>12</sup> These English cases, and relevant more recent cases from NSW, are discussed below.

<sup>13</sup> Bruce G Thom, 'Beach protection in NSW: new measures to secure the environment and amenity of NSW beaches' (2003) 20(5) *Environmental and Planning Law Journal* 325, 358. The article was accurate and informative on many matters but due to the omissions discussed here, it did not accurately report the operation of NSW law in regard to ambulatory boundaries.

<sup>14</sup> *Ibid* 330. For reasons which will be explained below this situation is not possible. MHWM = mean high water mark, LWM = low water mark.

<sup>15</sup> *Ibid* 342. This statement is not correct when the doctrine operates in its converse analogies of erosion and diluvion, and the ambulatory boundary crosses a 'right-line' boundary.

If the sea or tidal water gradually and imperceptibly eats away the land, the converse of the doctrine of accretion applies ("doctrine of erosion") and the landowner will as a consequence lose this area of land, presumably to the Crown.<sup>16</sup>

The reader gained no further certainty of this statement's relevant application in NSW however, since only authorities from the United States of America, where the Crown has no role, were provided for the otherwise accurate prediction that

If the sea gradually covers the land, as could occur under a slow and steady rise in sea level, the Crown should become the gainer of the land.<sup>17</sup>

Five English and three Australian cases that contradict the former statements and support the latter statements, are considered below.

The House of Representatives' 2009 inquiry into the coastal zone<sup>18</sup> perpetuated this uncertainty by quoting the Byron Shire Council's submission raising the concern of the 'right of public access to beaches' without addressing the issues raised. That submission said:

Titles to land in Australia either have fixed 'right-line' property boundaries or boundaries based on some natural (usually water) feature. Right line boundaries do not change even when the beach recedes into those properties. That is, in areas affected by coastal erosion, changing estuary mouth positions or sea level rise, the beach can end up on private properties. It is critical that the government have the ability to be able to amend property boundaries, or exercise the powers of acquisition, in the event that erosion intrudes significantly into those private properties and the beach becomes privately owned.<sup>19</sup>

It is unfortunate that this submission contained a series of errors and unfounded concerns and regrettable that the Inquiry report did not address and correct them, since authoritative decisions and legislative provisions that explicitly stated the relevant law were available at the time. These decisions, provisions and statements are considered in some detail below.

A further example of significant errors as regards the relevant law where private properties are affected by coastal erosion and sea level rise is the article 'Conveyancing and Property: Coastal Protection and Climate Change'<sup>20</sup> in which the author stated that:

Governments and legislatures cannot ignore the fundamental right of property owners to protect their land from the sea.<sup>21</sup>

An analysis of relevant case law and NSW legislation shows that this statement is incorrect.<sup>22</sup> If there once were such a common law right in NSW,<sup>23</sup> it was never a

<sup>16</sup> Ibid 351-2. However fn 65 stated that '[t]here are very few cases that provide legal support for the Crown to regain possession of "lost" land (*Hull and Selby Railway* 151 ER 139).' This is incorrect, as will be shown below.

<sup>17</sup> Ibid 352, fn 66.

<sup>18</sup> House of Representatives Standing Committee on Climate Change, Water, Environment and the Arts *Managing our Coastal Zone in a Changing Climate – the time to act is now* (2009).

<sup>19</sup> Ibid 147. See Submission 43, 10.

<sup>20</sup> Karen Coleman, 'Conveyancing and Property: Coastal Protection and Climate Change' (2010) 84 *Australian Law Journal* 421.

<sup>21</sup> Ibid 422.

<sup>22</sup> John R Corkill 'Claimed property right does not hold water' (2013) 87 *Australian Law Journal* 49-58.

<sup>23</sup> Such a right may have existed in NSW once due to the translation of English common law to the colony of New South Wales, but there is no conclusive evidence of it. In *Falkner v Gisborne District Council* [1995] 3 NZLR 622, Barker J, at 632, found such a common law right had existed in New Zealand but had been extinguished by statute.

fundamental right,<sup>24</sup> and has since been extinguished by statute.<sup>25</sup> Furthermore, State Parliaments have extensive powers and can, and have, lawfully ignored, amended or rescinded claimed property rights.<sup>26</sup>

Additional evidence of the continuing uncertainty regarding the effect of ambulatory boundaries at law can be found in the Commonwealth Coast and Climate Change Council's *Report to Minister Combet* (2011) that called for priority research to provide clarity regarding legal liability, land title status and property rights arising from the impacts of rising sea levels and increased storminess on coastal land.<sup>27</sup>

Regrettably, uncertainty regarding the location of coastal property boundaries has been further exacerbated by recent amendments<sup>28</sup> made to the *Coastal Protection Act 1979* (NSW). These amendments create a legislative scheme whereby private land owners may construct temporary coastal protection works on their private land<sup>29</sup> or on public land<sup>30</sup> to 'reduce the impact or likely impact from wave erosion on the landowner's land.'<sup>31</sup> No prior development consent or issue of a certificate is required for work on private land,<sup>32</sup> but a certificate issued by an authorised officer is required before works commence on public land.<sup>33</sup>

This legislation has, however, a key problem: neither the definition of the actual boundary between 'private' and 'public' coastal land, or the means for locating it, are stated in either the legislation or the amendments. Hence the 'line in the sand' that triggers the need for a certificate has remained uncertain.

On one view that conceives a property boundary as being 'fixed' forever by original survey and unaffected by coastal erosion the area of private land available for unapproved temporary coastal protection works might be substantial. However, on another interpretation where an ambulatory boundary supplants a property boundary originally defined by survey, due to the effect of erosion or diluvion a much smaller area of private land may be available. Under this second view, confining the coastal protection works to 'private' land may be impractical or impossible, and part or all of a proposed works may, in fact, need to occupy 'public' land, require a certificate and be subject to the provisions that govern its use. Thus the persistent uncertainty created by these clumsy amendments has potentially significant consequences.

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<sup>24</sup> The claimed right was held to be an only an 'imperfect right' in *Attorney General (UK) v Tomline* (1880) 14 Ch 58, 66 (Brett LJ). See also *Hudson v Tabor* [1877] 2 QBD 290, 294 (Lord Coleridge). See the discussion of 'fundamental right' in *Durham Holdings PL v New South Wales* (2001), [12]-[14], (Gaudron, McHugh, Gummow and Hayne JJ), [52]-[57] (Kirby J).

<sup>25</sup> The construction of permanent coastal protection works requires development consent under s 38, 39 and 80 of the *Environmental Planning and Assessment Act 1979* (NSW) and s 55 M of the *Coastal Protection Act 1979* (NSW).

<sup>26</sup> See *Durham Holdings PL v New South Wales* (2001) 205 CLR 399, [56] (Kirby J).

<sup>27</sup> These issues were not addressed in the subsequent Report provided to the Australian Government by Blake Dawson: Dr Meredith Gibbs and Tony Hill (Blake Dawson) *Coastal Climate Change Risk - Legal and Policy Responses in Australia* Commonwealth of Australia (Department of Climate Change and Energy Efficiency, Canberra, 2011) See < <http://www.climatechange.gov.au/climate-change/adapting-climate-change/australias-coasts-and-climate-change/adapting-coastal-clima-0> >.

<sup>28</sup> The Labor Government's *Coastal Protection and Other Legislation Amendment Act 2010* (NSW) (the 2010 amendments) introduced 'emergency' coastal protection works and the Coalition Government's *Coastal Protection Amendment Act 2012* (NSW) (the 2012 amendments), retitled them as 'temporary coastal protection works'.

<sup>29</sup> *Coastal Protection Act 1979* (NSW) s 55P (2) (a).

<sup>30</sup> *Ibid* s 55T.

<sup>31</sup> *Ibid* s 55P (2) (a).

<sup>32</sup> *Ibid* s 55O.

<sup>33</sup> *Ibid* s 55T (1).

In order to resolve the uncertainty perpetuated by these articles, inquiries and recent amendments, this article reports the courts' rulings of law on the operation of ambulatory boundaries and their effects on land title when they cross 'right-lines' boundaries.<sup>34</sup> But first, a few matters need explanation.

## WHAT ARE AMBULATORY BOUNDARIES and HOW DO THEY MOVE?

### Ambulatory boundaries: A summary

Ambulatory boundaries are natural boundaries formed by a permanent body of tidal or non-tidal water.<sup>35</sup> They are distinct from artificial boundaries defined by survey, which have been described as 'imaginary' lines.<sup>36</sup> 'Ambulatory' means 'capable of walking'<sup>37</sup> and the term, first used judicially in *Verrall v Nott* (1939) 39 SR(NSW) 89,<sup>38</sup> refers to the gradual movement necessary for the doctrine to apply.<sup>39</sup>

Unless a contrary indication is shown in the Crown grant or certificate of title,<sup>40</sup> boundaries to land formed by tidal waters are defined by reference to the high-water mark,<sup>41</sup> not the low-water mark or mean sea level. In NSW the high-water mark is defined as mean high-water mark (MHWM)<sup>42</sup> and its location is determined by surveyors using authorised methods.<sup>43</sup> All land below the MHWM, belongs *prima facie* to the Crown,<sup>44</sup> as the State Government.<sup>45</sup> Though coastal biologists and geographers employ a wider definition, in law the mean high water mark is the landward limit of the 'foreshore',<sup>46</sup> which extends down to low-water mark.<sup>47</sup>

Because it is the average of the medium or ordinary tides,<sup>48</sup> the calculation of MHWM does not include the higher monthly spring high tides or the lower monthly neap high tides.<sup>49</sup> Hence MHWM is not reached by the high water at neap tides and is regularly exceeded by spring high tides.<sup>50</sup> During storm events, the level of coastal waters may be elevated above their predicted height in a 'storm surge'.<sup>51</sup> However, the high-water mark of a storm surge is not an ambulatory boundary and does not constitute a legal boundary to property.

<sup>34</sup> Though it has wide usage, the term 'right-line' boundary is often inappropriate since many surveyed boundaries do not form right angles. The term 'boundary defined by survey' is considered more appropriate and is used in this article.

<sup>35</sup> Butt, above n 11, 33- 34. The ambulatory boundary of non-tidal waters is presumed to be the line of *ad medium filum* unless the original deed of grant or subsequent Certificate of Title specifies the boundary as 'the bank'.

<sup>36</sup> Ibid 26-27. See also LexisNexis *Halsbury's Laws of Australia* 35 Real Property/ VI Other/ (2) Boundaries, Fences and Encroachments/ (A) Boundaries in General/ (I) Introduction [355-13900]

<sup>37</sup> Arthur Delbridge, et al (eds) *Macquarie Dictionary* (3<sup>rd</sup> ed, 1997), 64.

<sup>38</sup> by Nicholas J at 97, following its use by Williams KC, counsel for the applicant at 92.

<sup>39</sup> The condition of 'gradual' change is discussed below.

<sup>40</sup> Legal Online *The Laws of Australia* 28 Real Property > Physical limits to land > Boundaries > Tidal boundaries [28.15.47].

<sup>41</sup> *Attorney General (UK) v Chambers* (1854) 4 De G M & G 206, 218; 43 ER 486, 490 (Cranworth LC).

<sup>42</sup> LexisNexis *Halsbury's Laws of Australia* 355 Real Property/VI Other/ (2) Boundaries, Fences and Encroachments/ (B) Boundaries for Land Abutting Water/ (I) Tidal Water Boundaries [355-1400].

<sup>43</sup> See NSW Government *Surveyor General's Directions No 6, Water as a Boundary* (2004), See also Division 5, ss 47 & 48 of the *Surveying and Spatial Information Regulation 2012* (NSW).

<sup>44</sup> LexisNexis *Halsbury's Laws of Australia* 355 Real Property/VI Other/ (2) Boundaries, Fences and Encroachments/ (B) Boundaries for Land Abutting Water/ (I) Tidal Water Boundaries [355-1400]. The Crown may however grant title to land below MHWM, and, if so, the instrument of title must describe it as such. See *Environment Protection Authority (EPA) of NSW v Saunders* (1994) 6 BPR 13,655, Bannon J at 13,659, discussed below.

<sup>45</sup> *New South Wales v Commonwealth* (1975) 135 CLR 337, 407 at [44], [45] (Gibbs J).

<sup>46</sup> *Mahoney v Neenan* [1966] IR 559, 565 (McLoughlin J). Confusingly, the term 'foreshore' is sometimes employed in non-legal usage to refer to land above MHWM: such land is more properly referred to as the 'shore'.

<sup>47</sup> *Mellor v Walmsley* (1905) 2 Ch 164, 177 (Romer J).

<sup>48</sup> *Attorney General (UK) v Chambers* (1854) 4 De G M & G 206, 218; 43 ER 486, 490 (Cranworth LC). *Tracey Elliot v Morley* (1907) 51 SJ 625. See s 5 *Surveying and Spatial Information Regulation 2012* (NSW).

<sup>49</sup> *Attorney General (UK) v Chambers* (1854) 4 De GM & G 206, 215; 43 ER 486, 490 (Cranworth LC).

<sup>50</sup> Ibid.

<sup>51</sup> NSW Government *Coastline Management Manual* (1990) 46, B12.

## The movement of ambulatory boundaries

The doctrine of accretion holds that, since the position of bounding water-lines may move over time, legal boundaries formed by water may also change over time,<sup>52</sup> 'but only if certain conditions are met'.<sup>53</sup> Two conditions must be satisfied: change must occur as a result of natural processes<sup>54</sup> and gradually.<sup>55</sup>

The relevant 'natural processes' are the movement of water and/or air through the action of waves and/or wind,<sup>56</sup> even if affected by human action.<sup>57</sup> Provided that any action is not unlawful and deliberately taken by the benefiting landowner, human influence will not disqualify the operation of the doctrine.<sup>58</sup>

The natural processes are not, however, limited to the gradual deposition of sediment by wave or wind (accretion) or its converse, gradual erosion. The gradual retreat (dereliction) or advance of the bounding water (diluvion) has long been recognised as part of the doctrine.<sup>59</sup> In tidal waters, these gradual movements may be described by more modern terms: a fall or rise in sea level.

Because the doctrine works 'both ways',<sup>60</sup> changes to an ambulatory boundary's position may add land to, or subtract land from, the adjoining property.<sup>61</sup>

Gradual change has been found to mean occurring 'little by little',<sup>62</sup> and 'step by step'.<sup>63</sup> This condition has sometimes been cited as 'gradual and imperceptible'<sup>64</sup> and evidence has been considered as to whether the change is 'perceptible'.<sup>65</sup> 'Imperceptible' has been ruled to mean 'imperceptible in its progress, not imperceptible after a long lapse of time',<sup>66</sup> so large changes have been recognised as falling within the doctrine.<sup>67</sup> Further, 'imperceptible' was said to refer to 'the

<sup>52</sup> *Attorney General (Ireland) v McCarthy* [1911] 2 IR 260, 277 (Palles CB). See Butt, above n 11, 33-4.

<sup>53</sup> Legal Online, *The Laws of Australia*, Real Property > Physical Limits to Land > Boundaries > Accretion and erosion [28.15.52].

<sup>54</sup> *Attorney General v Chambers*, (1859) 4 De G & J 55, 69; 45 ER 22, \* (Lord Chelmsford LC); *Attorney General (Ireland) v McCarthy* [1911] 2 IR 260, 298 (Gibson J).

<sup>55</sup> *R v Yarborough* (1824) 3 B & C 91, 106-8; 107 ER 669, \* (Abbott CJ).

<sup>56</sup> *Southern Centre of Theosophy Inc v South Australia* (1978) 19 SASR 389, 394 (Walters J); *Southern Centre of Theosophy Inc v South Australia* [1982] AC 706; 1 All ER 283, 290 (Lord Wilberforce).

<sup>57</sup> *Brighton & Hove General Gas Co v Hove Bungalows Ltd* [1924] 1 Ch 372, 390 (Romer J).

<sup>58</sup> *Southern Centre of Theosophy Inc v South Australia* [1982] AC 706; 1 All ER 283, 290 (Lord Wilberforce).

<sup>59</sup> *Re Hull and Selby Railway Co* (1839) 5 M&W 327, 333; 151 ER 139, 141 (Alderson B).

<sup>60</sup> *Williams v Booth* (1910) 10 CLR 341, 352 (O'Connor J), 362 (Isaacs J).

<sup>61</sup> *Attorney General (Ireland) v McCarthy* [1911] 2 IR 260, 298 (Gibson J); *Southern Centre of Theosophy Inc v South Australia* [1982] AC 706, \*; 1 All ER 283, 287 (Lord Wilberforce).

<sup>62</sup> *Attorney General v Chambers*, (1859) 4 De G & J 55, 67-8. Blackstone (vol 2, 262) was quoted by Lord Chelmsford. Blackstone's phrase 'little by little' was also quoted in *Williams v Booth* (1910) 10 CLR 341, 350 (Griffith CJ) and in *Attorney General of Southern Nigeria v John Holt & Co* (1915) AC 599, 613 (Lord Shaw).

<sup>63</sup> *Lloyd v Ingram* (1868) [no citation given] quoted in *Hindson v Ashby* [1896] 2 Ch 1, 29 (AL Smith LJ); and *Attorney General (Ireland) v McCarthy* [1911] 2 IR 260, 293 (Palles CB).

<sup>64</sup> *R v Yarborough* (1828) 5 Bing 163, 169; (1828) 4 ER 1087, 1093 (Best CJ); *Attorney General (Ireland) v McCarthy* [1911] 2 IR 260, 296 (Gibson J).

<sup>65</sup> *Attorney General v Reeve*, (1885) 1 TLR 675, 678 (Lord Coleridge).

<sup>66</sup> *The King v Yarborough* (1824) 3 B & C 91, 107; 107 ER 668, 674 (Abbott CJ); *Government of the State of Penang v Ben Hong Oon* [1972] AC 425, 434 (Lord Cross); *Southern Centre of Theosophy Inc v South Australia* [1982] AC 706, \*; 1 All ER 283, 291 (Lord Wilberforce).

<sup>67</sup> *Attorney General v Chambers*, (1859) 4 De G & J 55, 68; 45 ER 22, \* (Lord Chelmsford LC); *Attorney General (Ireland) v McCarthy* [1911] 2 IR 260, 298 (Gibson J).

faculties of average humanity',<sup>68</sup> then clarified to mean 'not being observed in its actual progress'<sup>69</sup> and has been given to mean not able to be perceived by the 'naked eye'.<sup>70</sup>

Although the Privy Council declared the words 'slow' and 'imperceptible' to be 'only qualifications of the word gradual',<sup>71</sup> the court subsequently held that a focus on 'gradual' alone was not consistent with established principle.<sup>72</sup> Nonetheless the court accepted, notwithstanding evidence of a series of 'perceptible jumps',<sup>73</sup> that the movement of the boundary in question had been 'imperceptible within the meaning of the authorities'.<sup>74</sup> While the 'test of imperceptibility'<sup>75</sup> was applied to the facts of that case, it is usually reported that, taken together, the words 'gradual, slow and imperceptible' constitute one condition,<sup>76</sup> not three.

Significantly the courts have not adopted a metric standard<sup>77</sup> to define 'slow', but have ruled that the test of gradual change is 'relative to the conditions to which it is applied'.<sup>78</sup> Because of these developments in definition, and the advent of new technology and techniques for measuring tiny changes in location and mass, the relevance of the term 'imperceptible' has been reduced, though its use has not been discontinued.<sup>79</sup>

The condition of gradual change is not without limit however. Sudden changes, sometimes referred to as the 'doctrine of avulsion',<sup>80</sup> are not recognised as constituting lawful changes in a legal boundary.<sup>81</sup> While several cases have ruled on changes that are outside the doctrine,<sup>82</sup> the courts' definition of what constitutes avulsion has been limited to 'sudden changes' in the course of a river.<sup>83</sup>

<sup>68</sup> *Attorney General (Ireland) v McCarthy* [1911] 2 IR 260, 296 (Gibson J).

<sup>69</sup> *Attorney General of Southern Nigeria v John Holt and Co* (1915) AC 599, 615 (Lord Shaw).

<sup>70</sup> See Butt, above n 11, 34 [2 47] and Legal Online, *The Laws of Australia*, Real Property > Physical Limits to Land > Boundaries > Accretion and erosion [28.15.52] but the authorities cited do not employ the term 'naked eye'. In *Southern Centre of Theosophy Incorporated v South Australia* (1978) 19 SASR 389, 394, Walters J when considering the meaning of the term 'imperceptible' quoted Callis, *Reading on the Statute of Sewers* (23 H 8, cap 5) (2<sup>nd</sup> ed, 1685), as having said it meant "if one had fixed his eye on a whole day thereon, it could not be perceived".

<sup>71</sup> *Secretary of State for India v Vizianagaram (Rajah)* (1921) LR 49 Ind App 67, 69 (Lord Carson).

<sup>72</sup> *Southern Centre of Theosophy Inc v South Australia* [1982] AC 706, \*; 1 All ER 283, 290 (Lord Wilberforce). The court considered that the earlier 'judgement concerned with Indian rivers ... should be related to the facts of that case'.

<sup>73</sup> *Ibid* 292. The court heard evidence from expert witnesses who referred to a series of six air photographs.

<sup>74</sup> *Ibid*.

<sup>75</sup> *Ibid* 291.

<sup>76</sup> *Secretary of State for India v Vizianagaram (Rajah)* (1921) LR 49 Ind App 67, 69 (Lord Carson); see Butt, above n 11, 34.

<sup>77</sup> *Attorney General (Ireland) v McCarthy* [1911] 2 IR 260, 296. Gibson J said 'The difficulty is, What is the unit or measure of time for "gradual and imperceptible"? ... Justinian and Bracton attempt no definition.'

<sup>78</sup> *Secretary of State for India v Vizianagaram (Rajah)* (1921) LR 49 Ind. App. 67, 69. Lord Carson compared 'the great rivers in India' with rivers in England and noted the 'comparative rapidity' of changes which take place in the former.

<sup>79</sup> See for e.g. clauses 48 and 49 of the *Surveying and Spatial Information Regulation 2012* (NSW)

<sup>80</sup> LexisNexis *Halsbury's Laws of Australia* 355 Real Property/VI Other/ (2) Boundaries, Fences and Encroachments/ (B) Boundaries for Land Abutting Water/ (I) Tidal Water Boundaries [355-1405].

<sup>81</sup> *Attorney General v Reeve* (1885) 1 TLR 675, 678 (Lord Coleridge).

<sup>82</sup> See *Trafford v Thrower* (1929) 45 TLR 502, in-filling; *Attorney General (Southern Nigeria) v John Holt & Co* (1915) AC 599, reclamation; *Pearce v Boulton* (1902) 21 NZLR 464, earthquake; *Hawaii v Zimrig* (1977) 566 P 2d 725, volcanic eruption; *Yukon Gold Co v Boyle Concessions Ltd* (1917) 50 DLR 742, cave-in of a river bank.

<sup>83</sup> See the court's discussion of the effect of avulsive changes on river boundaries in *Hazlett v Presnell* [1982] 149 CLR 107, 116-7, [10]-[11]. See also Delbridge, above n 37, 140. The term is also used in medicine to refer to a traumatic loss of 'a bodily structure or part' such as a limb: See *Collins English Dictionary* (3<sup>rd</sup> ed, 1991), 106.

Moreover, the court has acknowledged a 'logical, and practical, gap or grey area' between what is imperceptible and what is 'avulsive',<sup>84</sup> which is for the jury to determine, having regard to the specific facts of the case.<sup>85</sup>

How juries, or the courts, might apply the doctrine of avulsion when considering the limits of the operation of the doctrine of accretion, does however remain one area of current uncertainty. A discussion of the approaches which might be adopted by the courts to determine where these doctrine intersect is beyond the scope of this article and warrants a separate treatment.<sup>86</sup>

## THE ORIGINAL SOURCE OF UNCERTAINTY?

### An antiquated rule: Title to land survives inundation

It is possible that the original source of the notion that property title persists despite inundation by tidal waters was an antiquated rule, first expounded by Robert Callis, in *Upon the Statute of Sewers: 23 Henry VIII cap 5* in a series of lectures delivered in 1622.<sup>87</sup>

Although principally focused on urban drainage and sanitation schemes, Callis's work was recognised as 'the first English text which contained relevant observations about the border between land and sea...'<sup>88</sup>. Callis declared:

That if by little the sea sometimes decrease and leave some parcel to the land, and some other time is run over the same again, this ground belongs not to the King; for these be grounds whereto the subject may have a property, as in the grounds of the shore...<sup>89</sup>

This rule was given further exposition by Sir Matthew Hale in *De Jure Maris et Brachiorum Ejusdem*<sup>90</sup> (c 1667).<sup>91</sup> Hale declared that a landowner could retain title to land swallowed by 'the violence of the sea' provided the boundary could be ascertained, and asserted that the land could be regained if the sea receded, or by acts of 'art or industry' by the landowner, even if the inundation extended for forty years.<sup>92</sup>

That this was 'good law' in the mid-17<sup>th</sup> century is not surprising, since title to submerged lands was not uncommon in England at that time, since the terms of ancient Crown land grants often included the foreshore or areas of submerged lands, either implicitly or explicitly, as part of the 'manor'.<sup>93</sup> Further, some Crown grants specifically enabled the landholder to embank low-lying marshland to prevent its inundation.<sup>94</sup>

<sup>84</sup> *Southern Centre of Theosophy Incorporated v South Australia* [1982] AC 706, \*; 1 All ER 283, 291 (Lord Wilberforce).

<sup>85</sup> *Ibid.* See also *Attorney General (Ireland) v McCarthy* [1911] 2 IR 260, 296 (Gibson J).

<sup>86</sup> Such a treatment might consider whether the changes in the shoreline are 'sudden': i.e. happening 'quickly, without warning, or unexpectedly'. See Delbridge, above n 37, 2115.

<sup>87</sup> The date of first publication is obscure but was cited as 1647 by AC Barrett 'Deregulating the Second Republic' (1994-95) 47 *Federal Communications Law Journal* 165, fn 11. Callis' work was reprinted in a 2<sup>nd</sup> edition in 1685; a 3<sup>rd</sup> edition in the 1730s and a 4<sup>th</sup> edition in 1824.

<sup>88</sup> *Svendsen v State Of Queensland* (2002) 1 Qd R 216, 222 (Demack J).

<sup>89</sup> Robert Callis Equire, *Upon the Statute of Sewers: 23 Henry VIII cap 5*, (4<sup>th</sup> ed, 1824) pp 50-51. See <  
<http://books.google.com.au/books?hl=en&lr=&id=7yIzAAAAIAAJ&oi=fnd&pg=PA51&dq=Callis+On+Sewers&ots=0F2RycAmzh&sig=8pioN7oLykfcIEWS-ZFApQYmDRg#v=onepage&q=&f=true>>

<sup>90</sup> [translation: 'The Law of the Sea and Branches thereof'] Hale's treatise, is often simply referred to as *De Jure Maris*.

<sup>91</sup> Stuart A Moore, *A History of the Foreshore and the Law relating thereto* (Stevens & Haynes, London, 1888), gave the date as 1667, see xxxii & xl. Other sources sometimes cite c1670.

<sup>92</sup> Hale, above n 90, Cap. IV (2) 2. Hale cited a decision of Cooke and Foster in *M. 7 Jac. C.B.*, Dyer 326 and Ass 93 and other proceedings as authority for this statement. See Moore, above n 91, 381-2.

<sup>93</sup> The onus was on the claimant land owner to show proof of title by providing evidence of its grant E.g. *Attorney General (UK) v Smith and (Lord) Berkeley* (1638) Tr 14 Ch 1. See Moore, above n 91, 306-309.

<sup>94</sup> See Moore, above n 91, 313.



## The old rule's inconsistency with an emerging tenet

However, Hale's declaration did not persist as an enduring element of the common law, due to its conflict with an emerging tenet of English law: the Crown's claim to own the foreshore and all land below high-water mark due to the royal prerogative.<sup>95</sup>

In *De Jure Maris*, Hale restated the theory of the Crown's ownership of the foreshore, adding the qualification '*prima facie*', and an acknowledgement 'that such shore may be and commonly is parcel of the manor adjacent, and so may be belonging to a subject'.<sup>96</sup> However, the theory was subsequently recited in a series of decisions,<sup>97</sup> often *obiter* and without Hale's important disclaimer, and became, through 'constant reiteration',<sup>98</sup> part of English common law.<sup>99</sup>

By the time of the settlement of the colony of New South Wales, the theory was entrenched as part of the general land law of England,<sup>100</sup> and the Crown adopted a policy in its colonies of not granting land below the high-water mark (HWM) and reserving land adjacent to the foreshore for public purposes.<sup>101</sup>

This policy was first applied in the colony of New South Wales in 1825, to ensure that the foreshore and land below HWM in New South Wales did not become private property,<sup>102</sup> and the policy was confirmed in instructions issued to Governor Darling in 1826.<sup>103</sup> Subsequently, in 1828 the colonists were formally advised of the policy to reserve all land within 100 feet of HWM.<sup>104</sup> In 1831 the policy was restated as a general reservation by the Crown but the purchase of water front land above HWM was permitted for the purposes of commerce or navigation.<sup>105</sup> The policy to reserve coastal lands was affirmed in 1840<sup>106</sup> but rescinded in 1841, before being remade in 1843 as a matter for the Governor's discretion.<sup>107</sup>

<sup>95</sup> The claim was invented in the reign of Elizabeth I, by Thomas Hobbes in his treatise *Proofs of the Queen's Interest in Lands left by the Sea and the Salt Shores thereof* published in 1568-69, according to Moore, above n 91, 182.

<sup>96</sup> Hale, above n 90, Cap IV, (1) 3, see Moore, above n 91, 379. It is likely that Hale added these qualifications in recognition of the facts of the day, that many parts of the coast of England had been granted to subjects, and to reconcile the theory with his declaration of the then law relating to the regaining of title to land long submerged.

<sup>97</sup> Moore, above n 91, 651, cited the following as 'the principal cases in which the dictum has been laid down': *Kirby v Gibbs* (1667) 2 Keble 294, *Whitaker v Wise* (1671) 2 Keble 759, *Attorney General v Farmer* (1676) 2 Lev 172, *Attorney General v Richards* (1795), *Attorney General v Parmeter* (1811), *Parmeter v Gibbs* (1811), *Rex v Lord Grosvenor* (1819) 2 Starkie 511, *Blundell v Catterall* (1821) 5 B & A 268, *Chad v Tilsed* (1821) 5 Moore 192.

<sup>98</sup> Moore, above n 91, 651. Moore examined the ancient Crown grants and found that Digges' theory did not have any basis in fact, since the whole of the English coast had been granted by the Crown. Moore could find no evidence of the Crown reserving the foreshore or lands below high water mark, and, asserted that the theory was entirely 'untrue'.

<sup>99</sup> In *Attorney v Burridge* (1822) 10 Price 350, 369; 147 ER 335, 342, Richards CB, said, *obiter* "It is a doctrine of ancient establishment that the shore between the high and low water marks belongs *prima facie* to the King; and it is clear that the lands in question are between the ordinary high and low water marks, and consequently *prima facie* belong to the King; but it is equally clear that the King may grant his private right therein to his subjects." See Moore, above n 91, 651.

<sup>100</sup> After quoting Richards CB in *Attorney v Burridge* (1822), Moore, above n 91, 651, observed 'And this has been followed in all subsequent cases.' See also the discussion of this rule and the cases cited in the Earl of Halsbury, *The Laws of England* (1<sup>st</sup> ed, Butterworths & Co, London, 1914) Vol XXVIII, Waters and Watercourses, Part II, Sect 2, The Seashore, Sub-sect 3 Ownership of the Foreshore, 363 [663], fn (o).

<sup>101</sup> Peter Cabena *Victoria's Water Frontage Reserves – An Historical Review and Resource Appreciation* (1983), 14. Cabena noted that Royal Instructions for the reservation of coastal and river-side land for public purposes were first issued to the British Colonial Governor of Nova Scotia in 1719.

<sup>102</sup> *Ibid* 16-7. Cabena quoted from the *Royal Instructions* issued to the Governor of the colony of New South Wales, Sir Thomas Brisbane in 1825, directing him to reserve 'lands in the neighbourhood of navigable streams and the sea-coast' for public purposes 'before the waste lands of the Colony are finally appropriated to the use of private persons'.

<sup>103</sup> *Ibid*. Cabena cited the *Royal Instructions* issued to Lt-General Ralph Darling. See *Historical Records of Australia* vol 12, 166-7.

<sup>104</sup> *Ibid*. This advice was given via a Notice in the *Sydney Gazette and New South Wales Advertiser*, 22 August 1828.

<sup>105</sup> *Ibid*. Cabena cited the *Historical Records of Australia* vol 16, 864, and a Notice in the *Sydney Gazette and New South Wales Advertiser*, 5 July 1831.

<sup>106</sup> *Ibid* 18. Cabena cited Deputy Surveyor General Perry's Circular 40/289, 7 August 1840.

<sup>107</sup> *Ibid*. Cabena cited the Surveyor-General's Circular 43/181, 26 March 1843, and the *Port Phillip Government Gazette* 24 January 1849.

The effect of this Crown policy in the colony was to make redundant Hale's declaration regarding the retention of land submerged by the sea, and render superfluous the need for the qualifying disclaimer.

### The rule rejected and discontinued

As a consequence of this development in English common law, Hale's declaration that land title survived inundation by the sea came to be explicitly overruled by later decisions of the courts which determined that the land lost to the sea was gained by the owner of the foreshore, who was (usually) the Crown.<sup>108</sup>

An early instance of this overruling was in *Re Hull & Selby Railway Co* (1839) 5 M & W 327, 151 ER 139. Counsel for the defendant quoted the relevant section of Hale's *De Jure Maris*, but Hale's authority was rejected by Lord Abinger CB and Alderson B who said:

... if the sea gradually covered the land so granted, the Crown would be the gainer of the land.<sup>109</sup>

This rule was repeated in *Attorney General (UK) v Chambers* (1859) 4 De G & J 55; 45 ER 22. Lord Chelmsford said

... if the sea gradually steals upon the land, he loses so much of this property, which is thus silently transferred by the law to the proprietor of the sea-shore.<sup>110</sup>

In *Foster v Wright* (1878) 4 CPD 438 Lindley J was quite direct about the loss of land title and the transfer of its ownership, when he said

... land gradually incroached (sic) upon by water, ceases to belong to the former owner: *In re Hull and Selby Railway Co*.<sup>111</sup>

Further confirmation was provided in *Attorney General of Southern Nigeria v John Holt & Co* (1915) AC 599, where Lord Shaw said

... if erosion had continued, Their Lordships do not doubt that it would have been no defence against the claim of the Crown that the foreshore upon the line of inroad had been de facto transferred to the Crown as owners of the sea and its bed within territorial limits, and of the foreshore, even though the line of the eroded foreshore had made considerable invasion into the measured plots of lands, as these were described in the titles.<sup>112</sup>

Lord Shaw explained that:

... properties scheduled or specifically measured but in fact abutting on the seashore are not excluded from the operation of the rule which adds to riparian lands the increment which is caused by natural and gradual accretion from the sea.<sup>113</sup>

Though the latter quote referred to accretion, it is evident from the first quote that Lord Shaw was certain that the doctrine applied in its converse analogy of erosion, despite the fact that the allotments were originally created with a boundary defined by measurements.

In *Mahoney v Neenan* [1966] IR 559, McLoughlin J put this issue beyond doubt when he said:

... where there has been a gradual and imperceptible encroachment by the action of the tides the land which was formerly above high-water mark becomes the property of the State as the owner of the foreshore to the detriment of the owner of the land.<sup>114</sup>

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<sup>108</sup> Unless the foreshore had been included in a Crown grant.

<sup>109</sup> *Re Hull & Selby Railway Co* (1839) 5 M & W 327, 333; 151 ER 139, 141.

<sup>110</sup> *Attorney General v Chambers*, (1859) 4 De G & J 55, 68; 45 ER 22, \*.

<sup>111</sup> *Foster v Wright* (1878) 4 CPD 438, 446.

<sup>112</sup> *Attorney General of Southern Nigeria v John Holt & Co* (1915) AC 599, 611.

<sup>113</sup> *Ibid* 612.

<sup>114</sup> *Mahoney v Neenan* [1966] IR 559, 565.

However these English decisions are not the only cases that have ruled on the ownership of land lost to the sea.<sup>115</sup> The next section considers authoritative Australian decisions that accord with these precedents.

## RECENT CASES EXPLAIN HOW AMBULATORY BOUNDARIES WORK

Three comparatively recent but unexamined Australian cases provide explicit statements of how the doctrine of accretion operates when a tidal ambulatory boundary crosses a boundary defined by survey.

In the first, *Southern Centre of Theosophy Incorporated v South Australia* [1982] AC 706; 1 All ER 283, (*SCOTI*) an appeal to the Privy Council, Lord Wilberforce was explicit. He said:

If part of an owner's land is taken from him by erosion, or diluvion (i.e. advance of the water) it would be most inconvenient to regard his boundary as extending into the water; the landowner is treated as losing a portion of his land.<sup>116</sup>

Wilberforce was quite unequivocal about the changeable nature of land boundaries where he said:

The doctrine of accretion, in other words, is one which arises from the nature of land ownership from, in fact, the long-term ownership of property inherently subject to gradual processes of change. When land is conveyed, it is conveyed subject to and with the benefit of such subtractions and additions (within the limits of the doctrine) as may be take place over the years.<sup>117</sup>

Wilberforce discussed the decision in *Attorney General (Ireland) v McCarthy* (1911) 2 IR 260 and said

Gibson J explicitly considered the case where original boundaries are ascertainable by natural features or by documentary proofs, maps etc and ... (at 298) he said that it makes no difference whether the original boundaries are fixed by natural objects, or by constructions, or by measurements and maps. The principle governing the ownership of alluvion growing by imperceptible process of nature is the same...<sup>118</sup>

Wilberforce referred then to the boundary of the lease in question and a covenant requiring it to be fenced and said:

If on the other hand the land were to shrink, it is absurd to suppose that the tenant was obliged to maintain the fence in the water of the lake.<sup>119</sup>

The *SCOTI* case was cited in two important cases in NSW that involved allotments that were originally part of a sub-division, but which had been subsequently eroded by the sea.

In *Environment Protection Authority (EPA) v Saunders* (1994) 6 BPR 13,655, the NSW EPA sought to prosecute Eric Saunders and his company, Leaghur Holdings PL, for the pollution of waters, arising from Saunders' attempts to reclaim lands covered by the tidal waters of the River Clyde.

In his decision Bannon J observed that many allotments allegedly occupied by Saunders and the company were below high water mark.<sup>120</sup> He concluded that:

Having regard to the time frame over which erosion has occurred, and the position of the high water mark as depicted in the surveys made at different times, and having regard to the aerial photographs, it appears to me to be a reasonable inference that the erosion of the lots has been gradual and imperceptible within the meaning of those terms, as explained by Lord Wilberforce in *Southern Centre of Theosophy Inc v South Australia* [1982] AC 706 at 720.<sup>121</sup>

<sup>115</sup> Corroborating cases from the United States of America are not canvassed here.

<sup>116</sup> *Southern Centre of Theosophy Inc v South Australia* [1982] AC 706, \*; 1 All ER 283, 287. The Privy Council overturned the decision of the SA Supreme Court full bench and upheld the decision of Walters J in *Southern Centre of Theosophy Inc v South Australia* (1978) 19 SASR 389.

<sup>117</sup> *Southern Centre of Theosophy Inc v South Australia* [1982] AC 706, \*; 1 All ER 283, 287.

<sup>118</sup> Ibid 288.

<sup>119</sup> Ibid 289.

<sup>120</sup> *Environment Protection Authority v Saunders* (1994) 6 BPR 13,655, 13,658.

<sup>121</sup> Ibid 13,659.

He declared the applicable law, saying that:

... where the boundary is a fixed boundary, the title is open to correction or amendment if land is gained or lost by accretion or erosion... While it is open to the Crown to grant title to the bed of a river, a grant defined by metes and bounds as set out in a certificate of title is not to be presumed to be a grant of the bed of a tidal river, or of land elsewhere below high water mark. The Torrens system was intended to provide certainty as to title, but not to otherwise displace those parts of the law of property dealing with the gaining or loss of title by accretion or diluvion. Defined boundaries make no difference: *Southern Centre of Theosophy Inc v South Australia* [1982] AC 706 at 716, 717.<sup>122</sup>

Bannon J found that the allotments registered as owned by Leaghur PL now situated below high-water mark could not be occupied by the company since:

... the definition of land in s 3 of the *Real Property Act 1900* was not intended to affect the bed of the sea or tidal waters below High Water Mark, and, it follows, land below High Water Mark in tidal estuaries (unless otherwise indicated on the Certificate of Title)... The Torrens system is not a guarantee of the permanence of land. In the course of history, land is created and land disappears owing to the movements of nature. The Torrens system only guarantees title to existing land...<sup>123</sup>

Bannon J then concluded that title to these allotments had been effectively extinguished. He said he was inclined to the view that

... in spite of the Certificates of Title which became Exhibit AE, there was no land in the subdivision extending beyond High Water Mark as depicted in Mr Gibson's surveys ... as at the date of the two notices. Those Certificates of Title need to be corrected pursuant to s 42 of the *Real Property Act 1900*.<sup>124</sup>

The court found the offences proven against Saunders but, because the allotments allegedly occupied by the company did not exist as real property, the offences were not proven against the company.<sup>125</sup>

Bannon J's ruling that the definition of 'land' in s 3 of the *Real Property Act 1900* (NSW) meant "land above high-water mark" provided an important clarification of an issue likely to become more significant as shoreline recession, caused by higher sea levels and greater coastal erosion, affect lands either originally or subsequently bounded by tidal waters.

It is also clear from this decision that the Registrar-General has the power to amend boundaries to correct errors to titles that occur after the issue of the certificate of title.<sup>126</sup>

If any uncertainty regarding the applicable law remained, it should have been dispelled by the decision in a third case, *Environment Protection Authority v Leaghur Holdings PL* (1995) 87 LGERA 282. This appeal, launched to pursue the prosecution of Leaghur Holdings PL, focused on whether the company occupied the allotments then below MHW and was thus liable for the pollution emanating from them.<sup>127</sup> Significantly, the Court of Criminal Appeal rejected the appeal and unequivocally affirmed the decision.<sup>128</sup>

The court based its decision on Bannon J's conclusion that the company could not and therefore did not occupy the allotments. Allen J said:

I have no doubt his Honour was correct in holding that there was evidence to the contrary. It was that the relevant land had been lost to the sea, becoming part of the bed of the sea. This evidence raised as a reasonable possibility that the company, albeit registered as proprietor, did not own the land so taken back by the sea. His Honour found as fact that the land lost to the sea was lost to erosion which was

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<sup>122</sup> Ibid.

<sup>123</sup> Ibid 13,660.

<sup>124</sup> Ibid.

<sup>125</sup> Ibid 13,662.

<sup>126</sup> While Bannon J's decision referred to s 42, it is s 12(d) which empowers the Registrar-General to correct errors and omissions to the Register. It is possible that this discrepancy is the result of a typographic error.

<sup>127</sup> *Environment Protection Authority v Leaghur Holdings PL* (1995) 87 LGERA 282, 283.

<sup>128</sup> Ibid 290.

“gradual and imperceptible” within the meaning of those terms as explained by Lord Wilberforce in *Southern Centre of Theosophy Inc v State of South Australia* [1982] AC 706 at 720” and that the ownership of it reverted, accordingly, to the Crown.

He held, further, that the reversion of ownership to the Crown ensued notwithstanding the provisions of the *Real Property Act 1900* (NSW). The correctness of the law in that regard as stated by his Honour, is not challenged.<sup>129</sup>

Given that it was unanimous, applied the criminal standard of proof, and the findings of fact were crucial, this decision of the Court of Criminal Appeal is of very considerable weight as an authoritative declaration of the relevant law.

These three Australian cases make it clear that where land is gradually eroded by the sea, or covered by rising sea levels, a ‘right-line’ boundary originally defined by survey does not survive and any part that comes to lie below MHWL ceases to be ‘land’ that is ‘real property’. Further, they demonstrate that when the MHWL crosses a boundary originally defined by survey, that boundary ceases to exist and the property gains an ambulatory boundary.

It is also evident that boundaries said to be ‘fixed’ by the original survey are not in fact ‘fixed’ forever, and may be corrected to reflect the fact that they have been supplanted by an ambulatory boundary.

Finally, these cases show that there can be no doubt that where land originally registered with a boundary defined by survey is gradually and wholly eroded away or completely covered by tidal waters, and hence ‘lost’ to the sea, the land title does not extend into the tidal waters but reverts to the Crown as the State Government.<sup>130</sup>

The weight of these cases extinguishes any claim that the law regarding moving tidal boundaries is uncertain.

That these reported Australian cases were not considered by the 1999 Beach Management Review, in ‘Beach Protection in NSW’,<sup>131</sup> or by the House of Representatives’ 2009 Inquiry,<sup>132</sup> is a matter of concern, since it is apparent that, had they been considered, the errors and uncertainties described above need never have arisen. Why these cases were not discovered and their highly relevant rulings applied by the House of Representatives’ committee in response to submissions, when preparing the Inquiry’s report, is a mystery.

## **NO COMPENSATION IS PAYABLE FOR LAND ‘LOST’ TO THE SEA**

Because the issue of the payment of compensation for land lost to the sea was briefly considered by Thom in 2003,<sup>133</sup> raised in Byron Shire Council’s submission to the House of Representatives Inquiry in 2009,<sup>134</sup> and highlighted by the Commonwealth Coast and Climate Change Council in 2011<sup>135</sup> as an important issue requiring clarification, it is apposite to consider whether a basis exists for any claims for compensation.

### **The position under common law**

The observation made by Hale in *De Jure Maris* when he discussed the precedent of the *Abbot of Ramsey’s case* (c 1369) 43 E 3, R 13, gave one of the earliest indications that compensation was not payable for lost land. He said of that case:

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<sup>129</sup> Ibid 287.

<sup>130</sup> It is likely that this reversion of land title to the Crown occurs under the common law principle of ‘escheat’, a vestige of the doctrine of tenure. See LegalOnline *The Laws of Australia*, Real Property > Principles of Real Property > Doctrine of Tenure [28.1.410], [28.1.460]. See also Butt, above n 11, at 78-9 [4 24], 84-5 [4 46].

<sup>131</sup> Thom, above n 13.

<sup>132</sup> House of Representatives, above n 18.

<sup>133</sup> Thom, above n 13.

<sup>134</sup> House of Representatives, above n 18.

<sup>135</sup> Commonwealth Coasts and Climate Change Council, *Report to Minister Combet* (2011).

And note, here is no custom at all alledged; but it seems he relied upon the common right of his case, that as he suffered the loss so he should enjoy the benefit, even by the bare common law in the case of alluvion.<sup>136</sup>

Though Hale did not express it as 'the principle of no compensation', the absence of any requirement for the payment of compensation was confirmed in *Re Hull and Selby Railway Co* (1839) 5 M & W 328, when Baron Alderson concluded that

The principle laid down by Lord Hale, that the party who suffers the loss shall be entitled also to the benefit, governs and decides the question.<sup>137</sup>

This principle was further recognised, albeit obliquely, in *Attorney General (Ireland) v McCarthy* (1911) 2 IR 260 where Gibson J, declaring it was 'unnecessary to discuss the explanation of the doctrine of imperceptible accretion in English law' referred briefly to

the principle of compensation, there being a reciprocity of possible loss and possible gain.<sup>138</sup>

The principle was re-affirmed by the Privy Council in *Attorney General of Southern Nigeria v John Holt & Co* (1915) AC 599, where Lord Shaw said

It must always be borne in mind that the owner of lands does not derive benefit alone, but may suffer loss from the operation of this rule.<sup>139</sup>

In none of these cases did the court conclude that compensation was payable for the loss or gain of land. Thus the principle is seen to operate as a double-sided rule,<sup>140</sup> whereby a landholder may either gain or lose land without payment of compensation being due.

This principle was stated to the same effect in the United States

Every proprietor whose land is thus bounded is subject to loss by the same means which may add to his territory; and as he is also without remedy for his loss in this way, he cannot be held accountable for his gain'.<sup>141</sup>

It follows that if the loss of land to the sea is 'without remedy', there is no basis for a claim for the payment of compensation. Rather, it is evident that the doctrine of accretion operates in such a way that any additional land gained by accretion (or dereliction) is the only relevant form of compensation for any land lost to erosion or diluvion.

I conclude that, under the common law, no payment of compensation is due for either the gain or loss of land that occurs through the action of the sea, under any of the doctrine of accretion's modes.

### **Current New South Wales statute law offers no compensation**

In NSW, the legislation relevant to compensation is the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW). The provisions of this Act authorise the acquisition of private land by 'an authority of the State' if authorised by specific legislation.<sup>142</sup> The scheme of the Act requires an authority to adopt a 'proposal to acquire land' and to give notice of the proposed acquisition to the owner.<sup>143</sup> Such notice must guarantee the compensation 'will not be less than the market value'<sup>144</sup> and include other relevant particulars.<sup>145</sup>

However, the eligibility for compensation on just terms provided by s 10(1) of the Act is not triggered if a 'proposal to acquire' has not been adopted by an authority. The State's gain of land

<sup>136</sup> Hale, above n 90, Cap VI, II. See Moore, above n 91, p 396.

<sup>137</sup> *Re Hull and Selby Railway Co* (1839) 5 M & W 328, 333; 151 ER 139, 141.

<sup>138</sup> *Attorney General (Ireland) v McCarthy* [1911] 2 IR 260, 295-6.

<sup>139</sup> *Attorney General (Southern Nigeria) v John Holt & Co* (1915) AC 599, 614.

<sup>140</sup> *Ibid.*

<sup>141</sup> *New Orleans v United States* (1836) 10 Peters (US) 662; quoted in *Yearsley v Gipple* (1919) 104 Neb. 88; 8 ALR 636, at [\*\*642] (Letton J).

<sup>142</sup> *Land Acquisition (Just Terms Compensation) Act 1991* (NSW) s 5.

<sup>143</sup> *Ibid* ss 11 & 12.

<sup>144</sup> *Ibid* ss 10(1), 54, 56(2).

<sup>145</sup> *Ibid* s 15.

through the reversion of title to the Crown under common law does not require 'an authority of the State' to be authorised by legislation, and no 'proposal to acquire' need be formulated. Because it is by the action of the sea that private property is taken 'gradually, slowly and imperceptibly', and not through a decision taken by the State, the Act is not triggered. The land lost to the sea is therefore not 'acquired' under statute but is 'silently transferred by the law'<sup>146</sup> to the State Government under the common law. Hence no compensation is payable under the legislation because no relevant action of the State is involved.

Moreover, while some landowners may seek to characterise it as such, the loss of land to the sea is not properly described as an 'acquisition' of their property by the State Government: the land in question reverts to, and is simply gained, not acquired, by, the Crown. Further, since the courts have ruled that land in NSW that falls below MHWL ceases to be 'real property' under the *Real Property Act 1900* (NSW), the question of gain or acquisition becomes irrelevant because no 'property' is in fact transferred.

Hence it is apparent that the current statute in NSW does not operate to provide for the payment of compensation for land lost to the sea.

### No basis for a 'right' to compensation

Even if it could be properly said that the loss of land to the sea was in fact an 'acquisition' of 'property', which the above arguments doubt, the claim of an absolute 'right' to just terms compensation for compulsorily acquired private property in NSW has been rejected by the High Court of Australia in *Durham Holdings PL v New South Wales* (2001) 205 CLR 399.<sup>147</sup> While the *Australian Constitution*,<sup>148</sup> requires the Commonwealth Government to pay just terms compensation for its acquisition of private property, this provision does not apply to State Governments,<sup>149</sup> and it is not relevant to the loss of land to the sea, because the land that falls below the MHWL is gained by the Crown as the State Government, not the Commonwealth.<sup>150</sup>

Though landowners may seek to have the Commonwealth Government intervene to impose on State Governments an obligation for the States to pay compensation for a landowner's loss of land due to erosion or diluvion, it is apparent that the Commonwealth lacks the capacity to do so. Because the colonies retained the power to enact legislation to govern property law when they negotiated the powers of the then proposed Commonwealth Parliament,<sup>151</sup> the *Constitution* does not give the Commonwealth power over property or land law, except on Commonwealth land.<sup>152</sup> Thus the constitutional power to make laws relating to property in Australian states is operated by State Parliaments,<sup>153</sup> not by the Commonwealth.<sup>154</sup>

From the review above it is apparent that there is no legal basis for a claim for compensation from government and threats of litigation to achieve this end do not warrant credulity.

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<sup>146</sup> *Attorney General v Chambers*, (1859) 4 De G & J 55, 68; 45 ER 22, \* (Lord Chelmsford LC).

<sup>147</sup> The property acquired in this case were coal leases over an area of land dedicated as a national park. The court held that the 'normally' accepted legal convention of just terms compensation was not necessarily binding on State governments and a person or corporation had no right to compensation by the Crown if it compulsorily acquired private property under legislation passed by a State Parliament.

<sup>148</sup> *Commonwealth Constitution Act 1901* (Cth) s 51 (xxxi).

<sup>149</sup> *Durham Holdings PL v New South Wales* (2001) 205 CLR 399, [56], [57]. Kirby J cited *Mabo v Queensland* (1988) 166 CLR 186. In that case the *Queensland Coast Islands Declaratory Act 1985* (Qld) which acquired the native title rights to the Murray Islands without compensation, was held to be constitutionally valid.

<sup>150</sup> *New South Wales v Commonwealth* (1975) 135 CLR 337, 407, [44], [45] (Gibbs J).

<sup>151</sup> Simon Evans, 'Property and the Drafting of the Australian Constitution' (2001) 29(2) *Federal Law Review* 121, 125-7.

<sup>152</sup> *Commonwealth Constitution Act 1901* (Cth) s 122, cited in Evans, n 145, 125.

<sup>153</sup> Evans, above n 151, 125.

<sup>154</sup> *Ibid* fn 9. Evans noted the Commonwealth can however regulate property 'to some extent under other heads of legislative power': s 51 (xxvi) indigenous property rights, s 51(xxix) international treaty obligations.

Alternatively, landowners whose properties are affected by shoreline recession, due to increased coastal erosion and higher sea levels, may seek other legal remedies and commence proceedings to sue local or State Government authorities for nuisance or negligence, alleging a breach of a duty of care, for the recovery of loss and / or damage to their property, or to seek mandatory orders for the construction of rock revetments, seawalls or other sea defences.<sup>155</sup>

While a comprehensive discussion of these legal avenues and their prospects for success are beyond the scope of this article it should be noted that such proceedings face significant obstacles. Not the least of these is the significant extension of the exemption from legal liability conferred on local government authorities by amendments to s 733 of the *Local Government Act 1993* (NSW) made in 2010,<sup>156</sup> which included a suite of actions and inactions relating to coastal management, coastal protection works and climate change.<sup>157</sup>

It is important therefore that the development of future coastal management policy in NSW is not distorted by ill-founded claims to rights and compensation, or threats of litigation, but focuses on realistic scenarios likely to arise in the foreseeable future and, armed with a proper appraisal of current law, begins to develop practical, prudent responses to the challenges raised by the landwards movement of ambulatory boundaries.

## IMPLICATIONS OF CLIMATE CHANGE FOR COASTAL PROPERTY

The implications of the foregoing analysis for coastal properties as the impacts of climate change become apparent are straightforward.

As sea levels rise and storminess and coastal erosion increases,<sup>158</sup> the MHWL will move gradually landward and shoreline recession, already apparent in some places, will become more extensive.<sup>159</sup> As the coastal reserve<sup>160</sup> is eroded away by these natural processes, more public and private properties whose seaward boundary was originally defined by survey, will gain the ambulatory tidal boundary of MHWL. As shoreline recession progresses, increasing numbers of land titles will have the area of property held under them reduced,<sup>161</sup> as parts of their land fall below MHWL and cease to be 'real property'.

Advance of the shoreline will not be limited to land currently fronted by tidal waters. As the entrances to intermittently closed and open lakes and lagoons are affected by erosion and rising sea

<sup>155</sup> The potential for such legal proceedings were discussed by Lipman Z and Stokes R, 'Shifting Sands – The implications of climate change and a changing coastline for the private interests and public authorities in relation to waterfront land' (2003) 20(6) *EPLJ* 406; Gemmill G and Sun D, 'Liability of public authorities' (2003) 9 *LGLJ* 21-33; McDonald J 'A Risky Climate for Decision Making: The liability of development authorities for climate change impacts' (2007) 24(6) *EPLJ* 405; McDonald J, 'The adaptation imperative: Managing the legal risks of climate change impacts' (2007) 124-141, in Bonyhady T and Christoff P (eds.) *Climate Law in Australia* (2007); England P, *Climate Change: What Are Local Governments Liable For?* (2007) Griffith University Urban Research Program: Issues Paper 6, March 2007; England P, 'Heating Up: Climate Change Law and the evolving Responsibilities of Local Government' (2008) 13 *LGLJ* 209; Durrant N, *Legal Responses to Climate Change* (Federation Press, 2010) especially Chapters 20 and 21.

<sup>156</sup> By clauses [5] and [6] of Schedule 2 to the *Coastal Protection and Other Legislation Amendment Act 2010* (NSW) which inserted ss 733 (3) (b), (f2)-(f6). These additional matters included:  
(f2) anything done or omitted to be done regarding beach erosion or shoreline recession on Crown land, land within a reserve as defined in Part 5 of the *Crown Lands Act 1989* or land owned or controlled by a council or a public authority, and  
(f3) the failure to upgrade flood mitigation works or coastal management works in response to projected or actual impacts of climate change; See < [http://www.austlii.edu.au/au/legis/nsw/consol\\_act/lga1993182/s733.html](http://www.austlii.edu.au/au/legis/nsw/consol_act/lga1993182/s733.html) >

<sup>157</sup> Such exemptions only apply where councils act 'in good faith'. The High Court considered the meaning of 'in good faith' in *Bankstown City Council v Alamo Holdings PL* (2005) 223 CLR 660.

<sup>158</sup> See Pittock AB, *Climate Change - The Science, Impacts and Solutions* (2<sup>nd</sup> ed, CSIRO Publishing, Collingwood, 2009), 108-114. See also Roshanka Ranasinghe and Marcel Stive 'Rising seas and retreating coastlines' (2009) 97 *Climate Change* 465-468.

<sup>159</sup> Bird ECF, 'Present and Future Sea Level: The Effects of Predicted Global Changes' in Eisma D, *Climate Change Impact on Coastal Habitation* (Lewis Publishers, 1995), 36; Short AD and Woodroffe CD, *The Coast of Australia* (Cambridge University Press, 2009), 273; Australian Government *Climate Change Risks to Australia's Coast: A first pass national assessment* (Department of Climate Change, Canberra, 2009), 35, 69.

<sup>160</sup> The loss of the Crown reserve to erosion was considered in *McGrath v Williams* (1912) 12 SR (NSW) 477, 480-482 (Simpson CJ).

<sup>161</sup> The extent of potential impact in NSW was canvassed in Australian Government, above n 159, 77-85.



levels, it is likely that these water bodies, previously not subject to tides, will become continuously connected to, and part of, the tidal waters.<sup>162</sup> When these entrances become permanently open, the basis of earlier rulings that the doctrine of accretion did not apply, ie their non-tidal nature,<sup>163</sup> will change, and it follows logically that the doctrine of accretion will then apply to, and operate on, the boundaries and titles of lands fronting these water bodies.

Before long, some land titles will become so severely affected that residential occupation, and other land uses, will become unsafe and then impossible. Eventually some land titles will be wholly lost to the action of the sea and the ownership of this land will be transferred to the Crown, as the State Government.<sup>164</sup> If, or rather, when this happens no compensation will be payable for the loss of this land.

### Possible responses

It is possible that the NSW Government may enact legislation to amend or repeal the doctrine of accretion, but this will not stop shoreline recession due to higher sea levels and greater coastal erosion. However, any legislative change that affects the operation of NSW property law or the boundaries of allotments of coastal land must carefully consider the potential to trigger the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW) and incur a liability to pay compensation on just terms. It is also possible that the NSW Government will agree to purchase lands affected by shoreline recession

Given that residential land alone in NSW threatened by coastal erosion and a sea level rise of 1.1m has been valued at between \$12.4 and \$18.7 billion,<sup>165</sup> it would seem imprudent to voluntarily create a massive new liability for the NSW Treasury unless there were absolutely compelling and unavoidable reasons to do so.

Though some landowners may attempt to erect sea defences, such as permanent coastal protection works, this will probably not solve the problem but compound it, since sea walls are known to increase erosion at the toe and at the end of the wall, producing impacts on the adjacent beach and nearby properties.<sup>166</sup> Further, additional risk is may be generated if new development on 'protected' coastal land is permitted to proceed under a false sense of security.<sup>167</sup> It is likely that sea defences can only provide a temporary stay on the inevitable advance of the ambulatory tidal boundary<sup>168</sup> since sea level rise may exceed predictions for 2100,<sup>169</sup> continue for centuries,<sup>170</sup> and last for millennia.<sup>171</sup> Thus if, or when, the coastal protection works fail catastrophically, due to increased frequency of severe

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<sup>162</sup> See Philip Haines and Bruce Thom 'Climate Change Impacts on Entrance processes of Intermittently Open/Closed Coastal Lagoons in New South Wales' (2007) SI 50 *Journal of Coastal Research* 242.

<sup>163</sup> Eg *Attorney General v Merewether* (1905) 5 SR(NSW) 157 re Glenrock Lagoon; *Attorney General v Swan* (1921) 21 SR(NSW) 408 re Lake Illawarra; *Attorney General v Wheeler* (1944) 44 SR(NSW) 321 re Narrabeen Lagoon. See also *Crown Lands Act 1989* (NSW) s 172(4).

<sup>164</sup> *Environment Protection Authority v Leaghur Holdings PL* (1995) 87 LGERA 282, 287, discussed above.

<sup>165</sup> Australian Government, above n 159, 77-79.

<sup>166</sup> NSW Government, above n 51, 25, D21; ECF Bird, above n 159, 53.

<sup>167</sup> Australian Government, above n 159, 152, Appendix 1.

<sup>168</sup> Orrin H Pilkey and Rob Young, *The Rising Sea* (Island Press, 2009), 159.

<sup>169</sup> IPCC *Climate Change 2007: The Physical Science Basis, Summary for Policymakers* contribution of Working Group I to the Fourth Assessment Report of the IPCC (2007), predicted sea level rise of 18-59 cms over the 1990 baseline, by 2090-2099, but acknowledged that larger values cannot be excluded, p 11. Will Steffen *Climate change 2009: faster change and more serious risks* (Australian Government, Canberra, 2009) discussed the range of estimates of sea level rise by 2100 canvassed by various researchers and concluded, at 11, that a sea-level rise of up to 1.5m 'cannot be ruled out'. Other authors have postulated greater increases as possible: eg E Rignot (2008) argued that increases could be up to 3m over the 1990 baseline and James Hansen, NOAA (2007) estimated increases up to 5m by 2100: see the discussion of this in A Barrie Pittock, above n 158, 87-93. The disparity in estimates is due to uncertainty about the rate and extent of ice melt in major ice sheets.

<sup>170</sup> IPCC, above n 169, p 12.

<sup>171</sup> Pittock, above n 158, 125, discussed the potential for rapid melting and ice sheet disintegration and concluded that if the Greenland and West Antarctic ice sheets 'more or less completely melted' the world could experience 'sea level rise of up to 10 to 12 metres lasting for millennia'.

events,<sup>172</sup> the damage to coastal residences, infrastructure, and industry and the costs of their ultimate relocation, will be substantially greater than if the works had not been undertaken.<sup>173</sup>

Because there are serious questions as to whether the construction and maintenance of seawalls of sufficient dimensions to resist major storms and repeated episodes of erosion is technically possible, economically feasible, ecologically sustainable or socially justifiable,<sup>174</sup> it seems that the most prudent response is not defence, but the discontinuation of new development on vulnerable areas of the coastal zone, and the retirement and managed relocation of existing development, known as planned retreat.<sup>175</sup>

As well as safeguarding human safety, such a response would allow beaches to move landwards as shorelines recede, conserve other coastal environments as valuable public resources and protect the coast as a central element of Australian culture, in keeping with the long standing public trust doctrine.<sup>176</sup>

Managed relocation will require the orderly but rapid planning and development of new residential centres remote from the long-term risk of shoreline recession, and the timely construction of the social and economic infrastructure necessary to sustain them. To do so will require landowners and governments alike to abandon the confected uncertainty regarding the impact of receding shorelines on coastal property, accept the reality that the coast of the future will look nothing like the coast of the past, and begin to plan accordingly.

## CONCLUSION

Coastal landowners need to put aside any delusions about the usefulness of asserting imagined property rights in the face of the coming storms, recognise that there are practical limits to the effectiveness of coastal protection works and acknowledge shoreline recession as a natural phenomenon that will persist beyond the foreseeable future. While they may wish to convince themselves and development consent authorities, that they can, through the use of technology, resist the power of the ocean, landowners would be, in my opinion, much wiser to quickly recognise that under climate change conditions the ambulatory boundary formed by the shoreline will inevitably move landward, and relocate their residences away from this growing hazard.

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<sup>172</sup> The frequency of severe storms is predicted to increase markedly: with an increase in sea level of 0.5m by 2100, 'events which happen now every 10 years would happen about every 10 days in 2100'. See John A Church, et al, 'Sea-level Rise' in Peter W Newton (ed) *Transitions: Pathways Towards Sustainable Urban Development in Australia*, (CSIRO Publishing, Springer, 2008), 198.

<sup>173</sup> Pilkey and Young, above n 168, 166.

<sup>174</sup> See NCCOE, *Coastal Engineering Guidelines for working with the Australian coast in an ecologically sustainable way* (2<sup>nd</sup> ed, Engineers Media, Crows Nest, 2012), 27-47.

<sup>175</sup> Many sources report planned retreat as a key policy option for responding to sea level rise. See NSW Government, above n 51, 25, D9-10; Australian Government, above n 159, 146; Short and Woodroffe, above n 159, 275.

<sup>176</sup> See the discussion of this in Bruce Thom, 'Climate Change, Coastal Hazards and the Public Trust Doctrine' (2012) 8 (2) *Macquarie Journal of International Comparative Environmental Law* 21-41