

NATURAL BOUNDARIES

Abstract

In this paper the resolution of problems associated with natural boundaries is examined from four basic aspects:

1. Legal definitions of natural limits
2. Physical characteristics associated with those limits
3. Rebuttable presumptions of ownership *ad medium filum aquae*
4. The legal effect of alteration in position of natural boundaries.

This paper was originally authored **circa 1977** by Mr S Lewis, at the time Deputy Surveyor General of Tasmania. **None of the substantive content has been altered or updated.**

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Introduction

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Much of the legal precedent making up the common law governing natural boundaries has been in existence for a century or more, and consequently much of the content of this paper, although authored 30 years ago, remains relevant today.

As there is a dearth of Tasmanian case law on this subject, the paper references cases from several jurisdictions with similar cadastral systems that may have application in assisting surveyors undertaking surveys of natural boundaries make decisions that would likely be accepted by Tasmanian courts.

Readers should be aware that the paper is neither exhaustive or authoritative in relation to common law and the treatment of natural boundaries in the Tasmanian context. In addition, statute law and administrative decisions of government, including those mentioned in this paper, change over time and may supersede common law or dictate how it will be applied in a particular jurisdiction. In this regard, [Recorder of Titles Circular Memorandum No. 1/1999](#) significantly impacts the treatment of *ad medium filum aquae* within the Tasmanian titles system.

Legal Definitions of Natural Limits

Tidal Waters

Terms commonly employed in grants and conveyance descriptions to define such boundaries are:

- (a) To the High water mark,
- (b) To the saltwater,
- (c) To the seashore, shore, shore of the bay etc.,
- (d) To the Bank of a river (tidal), or even more simply "to the River",
- (e) To the Low watermark (V.D.L. grants),

and of course undoubtedly there would be more variations.

High Water Mark

In section 4.4 of his book on *Legal Aspects of Boundary Surveying in New South Wales* Hallmann says,

"Where the intended bound is the sea or a tidal inlet of the sea such limit is presumed at common law to be, in the absence of evidence showing a contrary intention, the local mean high-water mark ie it is the mean of all ordinary, local high tides, including springs and neaps, as read over a sufficiently long period of time."

In *Mellor v. Walmesley*⁽¹⁾ land was described in a conveyance as "situate on the seashore" and "bounded on the west by the seashore". It was held that seashore must be taken to be 'foreshore', ie the land between medium high and low water marks, and further that while such foreshore did not pass to the grantee, nevertheless he was entitled to unrestricted access to the sea.

In *Scratton v. Brown* ⁽²⁾ it was held that "The sea-shore landwards is limited by the line of the medium high tide between the spring and neap tides or, in other words, that part of the shore which for four days in every week, or for most of the year, is reached and covered by the tides".

By analogy then, the landward limit of foreshore must be the seaward limit of those grants expressing an intention to have as a bound the sea, the shore, the salt water, the high water mark or any other such general term.

There is nothing of course to prevent the Crown as owner from granting the foreshore, but that would be a special case and the description would normally speak particularly of foreshore.

The Limitations Act 1974 S.10(5) defines the landward limit of foreshore as being the shore and bed of any tidal water below medium high tide between the spring and neap tides.

The legal definition of such bounds so far as granted lands are concerned seems to be clearly the Mean or Ordinary High Water Mark.

Inland Waters

Terms variously employed to describe natural boundaries, whether on lakes or rivers (having no tidal influence) are bank, shore of the lake, water's edge or more simply, to the river or to the lake and thence by the river or lake etc. While there is here no tidal influence there are nevertheless natural phenomena such as freshets, floods and droughts affecting water levels and consequently there is a body of case law dealing with such boundaries as distinct from those affected by tides.

In *Stover v. Lavoia* ⁽³⁾, where the plaintiff's land extended to the shore of Lake St. Clair, it was held that the limit of the plaintiff's land was the edge of water in its natural condition at low water mark".

In *Caroll vs Empire Limestone Co.* ⁽⁴⁾ where land granted by the Crown was described as extending to the bank of Lake Erie and as running along the bank, it was held that "the boundary of the land described in the Crown patent was the water's edge or the low water mark".

In *Williams vs Pickard* ⁽⁵⁾ and dealing with a river, in this case the description in a grant of land adjacent to a river, set out as one boundary a course running "along the bank with the stream". Held "the description in the deed must be taken to include all the land to the water's edge".

Hallmann ⁽⁶⁾ says "the true bank is presumed at common law to be that bank of the non-tidal stream or lake which as a limit to its bed is, or was at the relevant time, adequate to contain the water therein when the stream or lake is or was at its mean or average stage, but without reference to extraordinary freshets in time of floods or to extreme diminution during droughts".

These are but a few of a number of cases and authorities indicating that the legal interpretation of a line of demarcation for inland non-tidal water boundaries does not vary no matter what term is used descriptively to define the boundary. It resolves itself to the water's edge in its customary or usual state as so well described by Hallmann.

Physical characteristics associated with Natural Boundaries

Inland Waters

In the construction of grants the surveyor will encounter any or all of the terms so far referred, therefore he must apply his knowledge and training to finding the physical limits on the ground that will satisfy the legal interpretations. Here again much can be learnt from the above mentioned cases and a particular case, *Howard vs Ingersoll*⁽⁷⁾, is useful:

Curtis J. states "The banks of a river are those elevations of land which confine the waters where they rise out of the bed; and the bed is that soil so usually covered by water as to be distinguishable from the banks by the character of the soil, or vegetation, or both, produced by the common presence and action of flowing water. But neither the line of the high water mark, nor of the ordinary low watermark, nor of the middle stage of water can be assumed as a line dividing the bed from the banks. This line is to be found by examining the bed and the banks and ascertaining where the presence and action of water are so common and usual, and so long continued in ordinary years, as to mark upon the soil of the bed a character distinct from that of the banks, in respect to vegetation as well as in respect to the nature of the soil itself".

It should here be noted that the word 'bank' in the opening phrases is the physical bank, not the legal interpretation of that word as a boundary line. The legal demarcation is to be found in the words "a line dividing the bed from the banks".

In summation, not only do we have a synonymy in the legal definition of shore, bank, water's edge etc., we have physical evidence to be sought which may be set out as:

- (a) Edge of the water in its natural condition,
- (b) A line dividing the bed from the banks,
- (c) The water's edge,

with an overriding condition throughout that such lines must be related to or governed by water:

- (i) In its natural condition, and
- (ii) Where its presence and action for so many years has marked a characteristic change in both soil and vegetation.

Tidal Waters

While Inland Waters are subjected to rise and fall of level, the changes are not cyclic (at least beyond those resulting from winter floods and summer droughts), nor are they subject to lunar influence as are tides.

Almost two thirds of our coastline has been defined by surveyors for the purpose of granting land. Whether the grants extended to the sea or whether a strip of land was reserved from sale is immaterial. A legally defined natural boundary has been established in both cases.

Fortunately the surveyors were of a practical turn of mind and in most cases accepted a line demarcating the edge of the vegetation, or where the character of the soil changed from loam to sand or gravel, probably on the rather common-sense basis that the Crown did not wish to alienate its foreshore and neither would a selector be anxious to purchase land which was covered and uncovered regularly by tides.

One thing is certain, no surveyor then had or now has time to set up equipment for an entire lunar month to determine what is the level of ordinary or mean high water mark along any particular stretch of coastline.

Moreover, if that natural bound has once been determined previously by whatever rough and ready means, a new determination is irrelevant, because the problem now is to determine in accordance with best evidence rules where that bound was originally located, not where the surveyor ought to have put it, in accordance with some scientific level incapable of economic or practical application.

Rebuttable presumption of Ownership at *Ad Medium Filum Aquae*.

(Note here the impact of [Recorder of Titles Circular Memorandum No. 1/1999](#))

Where land is bounded by non-tidal waters a presumption exists at common law that the title to the land described therein extends to the middle thread of the water.

Lists now exist (not to be taken as exhaustive) of those matters and things which are insufficient to rebut the presumption. Hallmann, and Kelly⁽⁸⁾ at P. 6 state collectively that:

- (a) A description area which can be satisfied without including half of the river bed,
- (b) That the land is increased greatly by half of the river bed,
- (c) That the plan referred to by the grant does not include half the river bed,
- (d) That the land is described as bounded by the river bed,
- (e) That the grantor is owner of the land on both sides of the river,

are all insufficient to rebut the presumption.

The question is what would constitute a sufficient rebuttal ?

In *Strange v. Russel*⁽⁹⁾ Cooper J. said "If the conveyance conveys a special plot of land defined by number and by metes and bounds, and refers to a book of reference or the plans treated as distinct allotments or parcels of land, the effect of the conveyance is to convey only the land specifically described and the presumption does not arise".

J.E. Moore LL.B, a Legal Officer in the Registrar-General's Department New South Wales in the *Australian Law Journal Vol. 41 P. 539*, says the law holds that it is the exclusion of the land that must be evidenced by the terms of the grant and not its inclusion.

Express exclusion then will rebut the presumption, but here one wonders how half a river-bed may be expressly excluded if it were not, in the first place, included in the grant description.

The application of the *ad medium filum* rule in N.S.W. has been statutorily restricted in the *Crown Lands Consolidation Act 1913* in that sands and gravels of river beds were excluded from sale or lease, and in 1923 this was extended to lakes, estuaries and lagoons, and again the *Crown Lands Consolidation Act of 1931* confirmed these exclusions.

In 1911 the Province of Ontario statutorily barred the application of the rule to inland navigable bodies of waters and streams, but since in England the rule has been applied to lakes.

In the absence of any statute to the contrary it seems it may be applied in Tasmania to inland waters, whether rivers or lakes. While I understand the question has not arisen often or perhaps at

all in Tasmania, the treatment of an application to have an equitable share of a river bed included in a riparian owner's certificate of title would be of interest.

J . E. Moore says that in New South Wales, where such an application is made (and presumably made with respect to land granted prior to 1913) that if the Registrar-General is satisfied that the title extends *ad medium filum* the certificate will indicate that the land so extends. If no express claim is made the certificate will be silent on the subject.

In *Rotter v. Canadian Exploration Ltd.* ⁽¹⁰⁾, the Court of Appeal in British Columbia held that the rule, being only a rule of construction, has no application under the Torrens System "which recognises no other interest in land except that which appears on the record" and further that where a Torrens Act is silent on the question "the rule must be taken as excluded by intendment and necessary implication". This decision was not referred to in *Lanyan's case* ⁽¹¹⁾ where the High Court held that the rule applied to a certificate issued under a Real Property Ordinance.

For Surveyors I think it is enough to know of the existence and the possible implications of the Rule. Where there is a possibility of its advantageous application to a client's land the solicitor concerned will undoubtedly instruct you accordingly.

The Legal Effect of Alteration in Natural Boundaries

Essentially this part deals with accretion and erosion of land by the natural action of flowing water.

The doctrine is that owners, whether the Crown or a subject, adjoining such ambulatory natural boundaries gain the alluvium won by accretion and suffer the loss caused by erosion, providing the process is imperceptible and results from natural action of the waters. In practice it is said the Rule can be applied only to rivers and the sea-shore on the basis that lakes do not contain live water. By 'imperceptible change' is meant a process that cannot be perceived from day to day. It does not mean imperceptible after a long lapse of time, but rather that daily, weekly or monthly one cannot see where the old boundary was.

Sudden changes as are evidenced by the existence of billabongs, ox-bows or bayous, caused by flooding river plains which have reached their base-level of erosion (pene plains) physically alter natural boundaries but effect no change to limits of ownership. Land thus added to an owner's property as the result of such accretion (more properly reliction of the waters) confers no right, title or interest even though the change may persist for years. While this is the doctrine, the Supreme Court of New Zealand in *Humphrey v. Burrell* ⁽¹²⁾ has declared that accretion is not presumed, but always requires formal proof. The question is a matter of fact unaffected materially by presumptions or considerations of onus of proof.

Several matters of practical consideration emerge from this affecting surveyors and registration authorities:

1. When or if an application is made to correct a title by the amount of an accretion, it is necessary to show on the plan the former river bound as well as the new one, otherwise you will have no defined area to deal with.
2. It is necessary to show the former bound of the opposite bank of the river in order to define the middle thread of river. If this is not done the Recorder of Titles may unwittingly issue title to land which in any event is presumed to have been granted *ad medium filum* to the applicant. It is probably only when the accretion goes beyond the middle thread of the former river bounds that

such an application would be entertained. However these are properly matters for the Recorder's administration to determine.

3. Were accreted land has to be divided as between owners adjoining on the same side of a river or upon the sea, the question of an equitable distribution of the land becomes a consideration. J.E. Moore recommends in the *Australian Law Journal Vol. 41,P. 540*, the adoption of the principle in *Portage La Prairie v. Cartier* ⁽¹³⁾, which is to extend the common boundary between owners, directly to the centre thread at right angles to the tangent of the centre thread. There is a method also whereby each owner is given a proportionate frontage of the whole of the new frontage as his old title had upon the whole of the old frontage of all owners concerned. Mere production of common boundaries will not serve as an equitable solution, for obvious reasons, should anyone boundary meet the river at an oblique angle.

Conclusion

Finally, I believe surveyors should study carefully all available literature and cases on Natural Boundaries because they have a responsibility to present material facts properly to lawyers and Registration Authorities and if they have no knowledge of the appropriate legal presumptions and rules of law they will not know what are the material facts to present.

When you are in doubt legal advice should be sought, because as Surveyors we are laymen at law, nevertheless Justice Coolley of the Michigan Supreme Court said:

"Judges and Juries may be required to follow after the surveyor over the same ground and that it is exceedingly desirable that he (the surveyor) govern his actions by the same lights and rules that will govern theirs."

List of Cases

1. Mellor v. Walmesley, (1939) 39 S.R. 89.
2. Scratton v. Brown (1825) 4B & C 485 107 E.R. 1140.
3. Stover v. Lavoia (1906) 8 O.W.R. 398, affirmed 1907, 9 O.W.R.117 (C.A.)
4. Caro11 v. Empire Limestone Co. (1919) 45 O.L.R., 121, 48 D.L.R. 44 (C.A.)
5. Williams v. Pickard (1908) 17 O.L.R. 547, reserving 15 O.L.R., 655 (C.A.)
6. Hallmann, F., *Legal Aspects of Boundary Surveying as Apply in N.S.W*, section 4.4 .
7. Howard v.Ingerso11, 13 Howard 381.
8. Kelly, E. M., (Solicitor of the Supreme Court of New Zealand), *Law Relating to Surveying*
9. Strang v. Russel1 (1905) 24 N.Z.L.R. 916.
10. Rotter v. Canadian Exploration Ltd. (1959), 23 D.L.R. (2nd) 136.
11. Lanyon Pty. Ltd. v. Canberra Washed Sands Pty. Ltd. (1966) 40 A.J.L.R. 363.
12. Humphrey v. Burrell (1951) N.Z.L.R., 262 at pp. 281-286.
13. Portage La Prairie v. Cartier (1924) 1 D.L.R. 175 at P. 778

Bibliography Notes

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