GENERAL SURVEY LAW

Relating to Legal Survey Practice

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PART FOUR: ALIQUOT PARTS IN ONTARIO

During pioneering times vast areas of land had to be opened rapidly and economically for settlement. As a framework for these operations, township lines, concession lines and some lot lines were surveyed in each township. As these townships were evolved over the years, projected systems were set up governing the methods by which the unsurveyed lots in each type of township should be surveyed when surveys became necessary. Land was then granted within this framework as lots or aliquot parts of lots in a concession, in many cases without survey. Where surveys were made of these grants, the plans were never, and are not today, ratified or confirmed by the Crown, nor were they made of public record.* Subsequent conveyances were frequently made by the individual owners by the method of aliquot parts, specified only by area, again in many cases without survey, and, in those cases where the severance was the result of a survey, by plans not ratified or confirmed by the Crown (private surveys).

It follows then that the quantity or extent of an unsurveyed township lot, an aliquot part or a part specified only by area, must vary with the accuracy of the original township and concession outline.

Again, the disappearance of such a large portion of the evidence of these original outline surveys and the establishment over long periods of occupational lines of ownership tend also to increase the confusion regarding the already nebulous definition of lots and aliquot parts unsurveyed in the original township surveys.

Every practising land surveyor in Ontario knows this beyond argument and the practice of conveying land by such means should be avoided in the future.

All the conditions that attended the rapid development of the land and made this system necessary originally have now disappeared. The land is largely settled and has been for a long time, and we have a larger number of surveyors to carry out the necessary surveys.

Particular care should be taken in the Land Titles Office where title is guaranteed. Although area and extent are not the subject of the guarantee, it is well known that for an effective guarantee of title to be given, the extent at least of property must be known accurately, and this can only be attained by survey.

Obtaining a survey, however, is only part of the process. If the description continues to refer to the land as a lot, aliquot part or part by area you are in precisely the same position as before. A new definition of the lot or aliquot part must be made which divorces it from the vagaries of projected methods.

The ultimate requirement in survey, plan and description, to effect this separation efficiently, is the existing registered plan of subdivision, because:

(a) It is surveyed and defined by monuments;

(b) Any retracement of the limits thereon must be made entirely on the basis of evidence originally created and no part of the retracement is governed by any projected methods established in the Surveys Act;

(c) The description of land is reduced to the best form of description, e.g. Lot 1 on plan M-800;

(d) All land shown is re-identified from original lots and concessions into lots on a plan of record.

We must next examine the registration situation to find out what means are available to the surveyor and landowner to accomplish this separation in the most effective manner.

In the Registry Office there are only two types of plan that provide for the re-identification of land by survey and plan and they are Judge's Plans and Registered Plans for Subdivision.

Once plans of this type are registered, the original fabric of lots or concessions underlying the plans have no further legal effect on the areas within the plans, and whether or not the lots and concession exist in fact or in theory by Surveys Act projection is a matter of no importance, since separation from that system is now complete.

*Patent plans are not approved or confirmed by the Surveyor General.

The usual conveyance of land by metes and bounds description, with or without a survey sketch attached to the instrument, achieves nothing with regard to re-identification.

The land conveyed is tied to the lot and concession fabric by usually a single tie. Should the evidence of the survey (if there was one) of the land conveyed be removed, re-identification of the parcel is dependent upon whether occupation fits the deed description, or, if it does not fit or there is no occupation, then upon the tie to the original lot and concession fabric. At this stage the surveyor making the re-definition survey is faced in many cases with the problem of defining a portion of the original fabric, which if done in accordance with the Surveys Act immediately lands him deep in a sea of "if so intended's", "if not so intended's" or a hundred other equally portentous phrases that govern the multitudinous systems of projection.

The land-owner of course is usually disinherited by the survey fees, and any attempt to justify the cost by explaining the operation of the Surveys Act merely lends credence to the current rumor that the terms "surveyor" and "highway robber" are synonymous.

Therefore the land in the description remains part of the original lot and its position is frequently dependent upon the position of the lot corner, which latter position is often variable.

There is little need to expound further the difficulties attendent upon re-definition of many descriptions of this nature existing in both Registry and Land Titles Offices, yet in this day and age we continue to convey land in this manner.

Since registered plans of subdivision provide the best vehicle for conveyancing, it was felt in the Land Titles Office that conveyances of parts of lots within registered plans and parcels of rural land should be made as the result of surveys and plans in a similar manner. Therefore the description reference plan was evolved and is now in constant use. The areas of land to be conveyed are designated as PART 1, PART 2, etc., and the plan is checked, approved and recorded under a number. The description of land thereon is similar to that of a registered plan and conveyancing is in every respect similar.

Separation from the original lot and concession fabric is achieved and resurvey is always a matter of evidence of the first survey rather than projected methods. While the description reference plan is in many instances tied only to adjacent or surrounding surveys of official record, there are times when it must be tied to an original lot and concession. When this occurs, the surveyor is required to show on the plan all the evidence he has found and used in connection with the location of the lot corner and that evidence is checked and approved and automatically becomes of public record with the recording of the plan.

In this manner the re-location of that lot corner becomes a matter of evidence of the previous recorded survey instead of a re-location in terms of projected methods.

The advantages of this plan system on re-survey is at once obvious as compared to the metes and bounds method of conveyancing in that the metes and bounds description cannot give a real picture of the evidence found and created by the surveyor and in practice seldom attempts to do so, while the plan shows all such evidence and is capable of more faithful re-location at a later date.

The situation existing today in this province resolves itself into this: all patented lands registered as lots or aliquot parts represent unknown quantities of land and are therefore potentially dangerous to any system of titles.

In the Land Titles Office our policy is directed at correcting this situation by observance of the following two principles:

(a) In future dealings in lots or aliquot parts, the lots or aliquot parts will whenever possible be surveyed and a new description will be made, reflecting the plan and survey only, thereby alienating the land from its original definition and recording its true extent.

(b) Registration of any further land patents described as lots or aliquot parts will be refused unless surveyed by modern approved methods and unless the descriptions reflect those surveys and plans.

PART FIVE: BOUNDARIES

Retracement of Boundaries

That aspect of survey law that deals with the retracement of boundaries shown on plans or described in deeds has always caused a certain amount of difficulty, possibly

because rules have not been set up by any government agency charged with the administration of law, titles, or survey.

For guidance we must look to previous court decisions; we must analyze each according to the particular circumstances of the case, and formulate general rules to work by in similar circumstances.

A common question is "under what circumstances may courses in a deed be varied by extrinsic evidence?"

The question, of course, presupposes that the physical evidence on the ground does not conform to the courses in the deed, and the general rule is as follows: If the deed refers to (a) physical features, monuments, fences, or (b) plans attached to the deed, or a survey of the particular parcel concerned, the existence of whatever evidence remains to be found of those surveys, physical features, etc., will constitute the governing factors of a retracement of the boundaries of the deed.

The following extracts from the Canadian Encyclopaedic Digest will indicate the basis for this rule.

"AMBIGUITY IN DESCRIPTION OF BOUNDARY. The general rule to find the intent where there is any ambiguity in the grant, is to give most effect to those things about which men are least liable to mistake. On this principle, the things usually called for in a grant, that is, the things by which the land granted is described, have been thus marshalled: first, the highest regard had to natural boundaries; secondly, to lines actually run and corners actually marked at the time of the grant; thirdly, if the lines and courses of an adjoining tract are called for, the lines will be extended to them, if they are sufficiently established; fourthly, to courses and distances, giving preference to the one or the other according to circumstances."[5]

"In an action of ejectment, it appeared that a certain beech tree mentioned in defendant's deed as a bound gave him about 11 chains more on his eastren line than his grant mentioned, but it was found by the jury to be the natural boundary of his lot. Per Dodd, J.: 'Adopting the principle that the highest regard is to be had to natural boundaries, we must find some means, if the corner of the grant at the extent of 53 chains from the eastern corner of the lot will not strike the beech, either to alter the course or extend the line from the 53 chains until the course in the grant will go to the beech. . . . Kent in his Comm. 4th vol. p. 466 says: 'In the description of the land conveyed, the rule is that known and fixed monuments control courses and distances, and where natural, and ascertained objects are wanting, and the courses and distances cannot be reconciled, the one or the other may be preferred according to circumstances.' ' "[6]

Further extracts from the same source are of interest to surveyors.

"DESCRIPTIONS BY REFERENCE TO BOUNDARY MARKS. When plans and monuments as well, are mentioned in a grant, or the latter are marked on a plan attached to such grant, it is the duty of the Court in construing the same, to give full effect if possible to all that is so written or delineated. Having regard both to the description set out in a grant as well as to an attached plan in all its particulars, precedence is to be given to monuments laid down on the ground, if the plans and monuments mentioned or shown as aforesaid do not coincide in meaning. However, where no monuments are referred to, the limits of the land conveyed must be determined by the courses and distances stated in the grant."[7]

"DESCRIPTIONS BY REFERENCE TO PLAN. Where reference is made in the description in a deed to a plan attached, the interpretation to be given to the description must be one that accurately fits and describes what is to be found in the plan."[8]

Natural Boundaries

NAVIGABLE NON-TIDAL, INLAND WATERS

There is a great deal of doubt and uncertainty existing, in this province at least, as to the precise legal interpretation of the terms commonly applied to natural boundaries of navigable non-tidal bodies of water, viz: *shore, high water mark, bank, margin of the water* and *water's edge.*

The reason for this uncertainty may well be attributed to the fact that the case of Parker v. Elliott (1852) 1 U.C.C.P. 471, 491, (C.A.) has been widely quoted as defining the term "bank" to mean "high water mark" and that few people have bothered to find out what "high water mark" means.

Parker was the riparian owner of Lots 22, 23 & 24 in the 1st Concession of Pickering Township, which parcel was described in the Crown Grant as "Commencing within one

chain of the S.E. angle of Lot 25 on the bank of Lake Ontario." Thence passing around the property and concluding "along the bank of the lake to the place of beginning."

In an action of trespass, while plaintiffs did not have a good paper title, it appeared that their possessory title covered the land described in the Crown Grant as extending to Lake Ontario and along the bank of the lake.

The land in dispute was a strip of land about 4 chains wide which crosses in front of the lots and separates the waters of Lake Ontario from a sheet of water within, known as Frenchman's Bay, which strip, plaintiff contended, formed part of the lots. Chief Justice Macaulay, in delivering judgement, says inter alia, that "the bank as intended in the patent must be taken to mean the land line defined by the high water mark." Justices Sullivan and Maclean concurred in the judgement, although differing in opinion as to the employment of "high water mark" as the definition of "bank".

The following foot-note to the case correctly sums up the nature of the noted differences in opinion: "McLean, J., differed from Macaulay, C. J., as to the question of high and low water mark, he agreeing with Sullivan, J., that a *distinction of high or low water could only be drawn where tide exists, and not in inland waters of this province.*"

As opposed to the interpretation of "bank" as "high water mark", by Macaulay, C. J., in 1854, there are the following more recent cases which give a very clear interpretation of the terms commonly applied to natural boundaries:

(a) Caroll v. Empire Limestone Co., (1919) 45 O.L.R., 121, 48 D.L.R. 44 (C.A.).
"Held, the boundary of the land described in the Crown patent was the water's edge or the low water mark."
"The land as granted by the Crown was described as extending to the bank of Lake Erie and as running along the bank."

(b) Burke v. Niles, (1870) 13 N.B.R. 166 (C.A.).
The Crown grant was described as being bounded by a line running along the bank or edge of the lake.
Held, "the intention of the Crown was that the lake should be one of the boundaries, and the word "bank" was equivalent to "margin of the lake," so that the grant extended to the water's edge and there was therefore no strip left ungranted between the margin of the lake and the top of the bank."

(c) Williams v. Pickard (1908) 17 O.L.R. 547, reserving 15 O.L.R. 655 (C.A.).
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."
Per MacLaren, J. " 'Bank' is defined in the Oxford dictionary as the shelving or sloping margin of a river or stream; the ground bordering upon a river; in the standard dictionary as 'the land at the edge of a watercourse'; and by Callis on Statutes of Sewers (1824) p. 90, as 'the utmost border of dry land.' "
In Hindson v. Ashby (1896) 1 Ch. 78, at p. 84, 65 L.J. Ch. 91, 21 Mews 615, Romer, J. adopts the words used in an American case that "the banks of a river are those elevations of land which confine the waters when they rise out of the bed'.

(d) Stover v. Lavoia (1906) 8 O.W.R. 398, affirmed 1907, 9 O.W.R. 117 (C.A.).
Held, "the limit of plaintiff's land was the edge of the water in its natural condition at low water mark," in the case where "the plaintiff's land extended to the shore of Lake St. Clair."

These cases indicate the synonymity of the terms, *line of the shore*, *line of the bank*, *margin of the water* and *water's edge*, which are one and the same in the legal interpretation of a line of demarcation.

Any of the above four terms may be found in the construction of a grant and it is to this construction that a surveyor must adhere and apply his knowledge and training in finding the physical limit on the ground that has been specified by the grant.

Since the courts have so clearly stated that in inland non-tidal waters all these terms have the same meaning legally, it behoves us to read the cases and find out which, if any, trouble to define the terms in those physical aspects that are familiar on the ground, to surveyors.

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

Callis on Statutes of Sewers defines "bank" as the "utmost border of dry land."

In Howard v. Ingersoll, 13 Howard 381, Curtiss, 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 ordinary high water mark, nor of ordinary low water mark, nor of a 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 be noted that the description of "bank" given in the opening phrases of this judgement is the physical description of a bank, not the legal interpretation of that word as a boundary line. The legal line of demarcation is to be found in the words "*a line dividing the bed from the banks*" and Curtiss J. goes on to describe those physical evidences which are to be sought in defining that line.

In a grant of land the parcel was described as extending "to within one chain of the Niagara river," the strip so reserved being intended to be used as a road. It was held, *the strip should be measured from the water's edge,* and not from the top of the river bank, even though such construction might have the result that the clear strip from the river bank was too narrow to serve adequately as a road allowance.[9]

In summation therefore we find that the terms *shore, bank, margin of the water* and *water's edge,* applied to navigable, non-tidal bodies of water, are synonymous as lines of demarcation and that the physical evidence to be sought in defining these lines may be described as follows:

(a) Edge of the water in its natural condition.
(b) Utmost border of dry land.
(c) A line dividing the bed from the banks.
(d) The water's edge.
(e) An over-riding condition throughout that such lines of demarcation must be related to or governed by the water,
 (i) In its natural condition,
 (ii) Where its presence and action are common and usual in ordinary years.

Particular attention should be paid to (e) above, in view of the fifth term sometimes applied to a natural boundary, hitherto not mentioned, and now to be discussed. This is the term "high water mark", which, in the opinion of Justices McLean, J., and Sullivan, J., in Parker v. Elliott, should not have been employed in the inland waters of Ontario. Be that as it may, the provincial government does now employ this term in connection with the patenting of land, as a rule rather than as an exception, and we must know what is intended in its legal and physical sense.

Since no statute defines this term, we must fall back upon precedent. A perusal of case-law in connection with littoral owners shows that land bounded by the tidal waters of the sea, river or harbour and variously described in grants as being bounded actually by the sea, river, harbour, shore of the river or the high water mark, the line of demarcation to be used is the *ordinary high water mark.* This line has been variously described in case-law as the *usual* high water mark and the *customary* high water mark and is to be taken as the "medium high tide line, between the spring and the neap tides."[10]

Therefore the term high water mark is properly applied only where the lunar cycle of tidal action occurs with such regularity as to enable a continued and ever recurring difference between high and low water mark, and the courts have established that high water mark shall mean the *ordinary, customary* or *usual* high water mark.

On the other hand in inland non-tidal waters, while conditions of high and low water exist, the causes thereof are not the same. They are not regular nor are they the result of the lunar cycle. In fact they result from floods, freshets, storms and winds and are unpredictable beyond the cycle of such of them as may be engendered by the annual freeze-up and thaw.

In considering the term *high water mark* in inland, non-tidal navigable waters, the matter is put very clearly in Plumb v. McGannon (1871) (32 Q.B. 8) where Mr. Justice Wilson states, "The true limit would appear to be by analogy to tidal waters, the average height of the river after the great flow of the spring has abated, *and the river is in its ordinary state.*" He stated also that "the great flow caused by the melting of ice and snow, and by the spring rains, or by other unusual floods or causes, is to be excluded in the determining of high water mark."

If you will now refer back to where we determined the line of demarcation of shore, bank, margin of water and water's edge you will recall the conditions of the water were stated to be

(i) In its natural condition,

(ii) Where its presence and action are common and usual in ordinary years.

It is at once clear that the conditions there are the same as those stated by Mr. Justice Wilson as necessary to determine "high water mark."

To the four previous terms applied to natural boundaries we may now add "high water mark", which in its legal and physical interpretation is precisely one with the rest, and the judgement delivered by Chief Justice Macaulay in Parker v. Elliott thereby becomes understandable and in accordance with prior and subsequent judgements.

NON-NAVIGABLE, NON-TIDAL INLAND WATERS

Under S. 1 of R.S.O. 1897, c.111, in all matters of controversy relative to property and civil rights, resort is to continue to be had to the laws of England as they stood on the 15th of October, 1792. By those laws where title to non-tidal rivers is in question there is a prima facie presumption that the grant of lands on the border of the stream carries with it the ownership of the bed to the middle thread of the stream unless there is something in the body of the grant which limits its boundary to the water's edge, and subject also to any public rights of navigation.

This common law presumption of ownership *usque ad medium filum acquae*, was upheld in the case of Keewatin Power Co. v. Kenora (1908) 16 O.L.R. 184, varying 13 O.L.R. 237, despite the fact that the river concerned was the Winnipeg river and navigable.

It was held "the presumption of the English Common law was only a presumption of fact, and might well be rebutted, for example, in the case of the Great Lakes and rivers forming part of the International boundary line, by reason of their size and extent; but the river in question was no larger than many rivers in England and Ireland to which the rule had been applied, and so the rule should here be applied."

As to this decision, legislation was brought into effect reversing the Court of Appeal. This legislation in 1911 is now known as the Bed of Navigable Waters Act and states that where land bordering on a navigable body of water or stream had been heretofore or might thereafter be granted by the Crown, it should be presumed, in the absence of an express grant of it, that the bed of such body of water or stream was not intended to pass to the grantee of the land and that the grant should be construed accordingly and not in accordance with the rules of English Common law.

This therefore leaves the application of the *ad medium filum* rule to inland, non-tidal, non-navigable bodies of water.

NAVIGABLE AND NON-NAVIGABLE WATERS

Since riparian ownership is limited to the water's edge in navigable waters and extends to the centre thread of the stream in non-navigable waters, it is necessary to determine in many instances when a body of water is or is not navigable.

In such cases navigability is at times a matter of considerable difficulty to determine and there is no statute for guidance. It may be said to be a matter of fact and not of law. Where considerable doubt exists as to the de facto navigability of a body of water, resort must be had to the courts for a decision.

Inquiries have been instituted with the Federal Department of Public Works which administers the Navigable Waters Protection Act, but the officials charged with the administration of this Act declined to assume any responsibility whatsoever as to the navigability of any given body of water, other than those well known to be navigable.

Inquiries with the Department of Lands and Forests (Ont.), charged with administration of the Beds of Navigable Waters Act, elicited much the same response, although this department issues licenses of occupation or permits for the crossings of navigable waters by pipelines, etc. Presumably therefore this department will give decisions and issue permits for such crossings.

There are however certain interesting cases on navigability and they should be referred to.

In Dixon v. Snetsinger, 1873, 23 U.C.C.P. 235, Mr. Justice Gwynne decided that in order to determine whether a certain stream is navigable or not, we must consult the Civil law, and not the Common law of England.

This Civil law was the law in force before the conquest of Canada from the French, and was in general replaced by the Common law of England. The following is taken

from a decision in Gage v. Bates, 1858, 7 U.C.C.P. 116: "Navigable rivers, in the language of the Civil law, are not merely rivers in which the tide flows and reflows, but rivers capable of being navigated; that is navigated in the common sense of the term."

In Atty.-General v. Harrison, 12 Chy. 470, the Syderham River is decided to be a navigable stream, although at the time obstructed by fallen trees and sunken logs.

In Dixon v. Snetsinger, a channel of the river St. Lawrence was extremely rapid, but small Canadian boats, 25 feet long, used to pass up, being drawn through the rapids by men with cables. This was held to be a navigable river.

It would therefore seem that a navigable stream in Canada is one actually navigable by boats or vessels used in the prosecution of commerce.

ACCRETION AND EROSION

It is a rule of law that, where an accretion or erosion takes place gradually and imperceptibly, the title to land is added to or diminished as the case may be.

Conversely, if the water suddenly recedes from or encroaches upon the land, the title is not affected.

It would be a comparatively simple matter to correct title for an accretion, but care should be exercised by surveyors in the case of rivers and streams. In certain cases where the accretion goes beyond the former middle line and indeed beyond the former opposite bank, the surveyor should show on his plan the position of the former middle line and the opposite bank, because it will be necessary to adjust the title also of the owner across the river. If this were not done, titles would be issued twice to the same area of land.

The application of the law of accretion and erosion is of particular interest where road reserves along the banks and shores of rivers and lakes are concerned.

In the case of Doe d. McDonald v. Cobourg Harbour Commissioners (1844) Rob. & Jas. Dig. 3936, Rob. & Har. Dig. 148, defendants were Harbour Commissioners for the Town of Cobourg, situated on Lake Ontario, and as such they had erected a wharf and completed other harbour works. As a result of this work, a considerable alluvial deposit had accumulated in front of plaintiff's land which was near to the end of the street.

It was held, on the question of accretion, that the alluvial deposit created an addition by so much to plaintiff's land.

Per Patterson J., "A lot which, in the original survey, is bounded on the lake, will have the lake for its boundary, though the water may have encroached upon it or gradually receded; and the same rule must apply to allowances for road which are parts of the territorial divisions of the country just as lots are."[11]

Where land is conveyed by a grant which extends along the shore of Lake Ontario, and a beach is formed by accretion so that there is a strip of land between the line of the shore at the time of the grant and the line of the shore at a subsequent material time, the owner of the land granted is entitled to the strip of land.

With respect to the division of accreted land between adjoining riparian and littoral owners, there does not appear to be any case law, at least in this province.

However, in Batchelder v. Keniston (Amer. Rep. 12, p. 143) the following rule was observed: "Give to each owner a share of the new shore line in proportion to what he held in the old shore line, and complete the division of the land by running a line from the bound between the parties on the old shore to the point thus ascertained on the new."

This rule was followed in Riddiford v. Feist (1902) 22 N.Z.L.R., 5 G.L.R. 43, and seems to be a just and equitable rule.

LEGAL CASES CITED

[5]McPherson vs. Cameron (1868) 7 N.S.R. 208 (CA). *Canadian Encyclopedic Digest,* p. 427, 428.

[6]*Canadian Abridgements,* p. 1168.

[7]Landry vs. Landry (1920) 48 N.B.R. 47. *Canadian Encyclopedic Digest,* Vol. 2, p. 431.

[8]Blank vs. Romkey (1913) 47 N.S.R. 127. *Canadian Encyclopedic Digest,* Vol. 2, p. 433.

[9]Stanton vs. Windeat (1844) 1 U.C.Q.B. 30 (CA).

[10]Turnbull vs. Saunders (1921) 48 N.B.R. 666 (CA).

[11]Buck vs. Cobourg & Peterborough Rly. (1854) 5 U.C.C.P. 552 (CA).