The Boundary Point

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Case Commentaries on Property Title and Boundary Law

The Boundary Point is published by Four Point Learning as a free monthly e-newsletter, providing case comments of decisions involving some issue or aspect of property title and boundary law of interest to land surveyors and lawyers. The goal is to keep you aware of decisions recently released by the courts in Canada that may impact your work.

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The role of an expert witness within the law of evidence has evolved to a point in which the expert's role and purpose are now better understood – but also with safeguards about such evidence not being accorded too high a level of authoritativeness so as to not jeopardize the fact-finding role of a court. It is therefore especially interesting when "new" subject areas of expertise emerge and are tendered for proof of a fact in a legal proceeding. In *Nuchatlaht v. British Columbia,*[1] British Columbia sought to exclude evidence from an archaeologist who was prepared to explain what the archaeological record tells us concerning the use and occupation of the Claim Area at issue in an Indigenous title claim to a portion of Nootka Island on the west coast of Vancouver Island. For land surveyors and lawyers, active in the field of Aboriginal law and land title claims, any evidence relevant to establishing the spatial extent of a claim area is therefore of particular interest, as is this ruling.

New Forms of Evidence of Indigenous Presence: Culturally Modified Trees

Key Words: *archaeology, evidence, Indigenous presence, CMT, Aboriginal title*

In *Nuchatlaht v. British Columbia*, the court explained,

> This is an aboriginal title case in which the plaintiffs seek title to a portion of Nootka Island. The Province applies to exclude the expert report of Jacob Earnshaw. All parties have consented to the hearing of this application before the trial which will likely be heard in March 2022.
>
> Mr. Earnshaw was asked to address the following by plaintiff's counsel:
>
> 1. To perform reconnaissance surveys within the Nuchatlaht claim area to understand the condition of recorded Culturally Modified Trees (hereafter CMT)

[1] *Nuchatlaht v. British Columbia*, 2021 BCSC 370 (CanLII), https://canlii.ca/t/jdknn

sites as well as search out and record other previously unrecorded archaeological sites.

2. Prepare written reports outlining findings.
3. Prepare a written expert report, with my opinion on the following issues:
    a) The extent of archaeological research into the claim area.
    b) What the archaeological record tells us concerning the use and occupation of the Claim Area.

In his report, Mr. Earnshaw defined Culturally Modified Trees (CMTs):

> . . . culturally modified trees are archaeological features that refer to any tree with modifications related to the cultural use of the forest by Indigenous people.

The Province raises issues of bias or impartiality, novel approach, qualifications and necessity of the opinion.[2]

This interesting challenge will, of course, pique the interest of many readers. Although the court explained the expert's definition of Culturally Modified Trees ("CMTs"), we may wonder, what are these? Why have we not heard more of this before? Is this evidence of a historic Indigenous presence or occupation? Could it be further evidence of the spatial extent of use and occupation by ancestors of plaintiffs making an Aboriginal title land claim? For that matter, is the phenomenon of CMTs restricted to the west coast of Canada or are these found elsewhere? In 2001, the BC Ministry of Small Business, Tourism and Culture published a second edition of a handbook, *Culturally modified trees of British Columbia*.[3]

Before continuing with a review of the ruling in *Nuchatlaht*, a summary of a short literature review[4] which disclosed some interesting results, follows.

In "Culturally Modified Trees in the Pacific Northwest,"[5] the authors explain,

> In the last decade, a growing body of mostly unpublished research on culturally modified trees (CMTs) has demonstrated: (1) their wide distribution throughout the Pacific Northwest, and (2) their inherent anthropological value for studying Native and non-Native forest use. Culturally scarred trees from the Oregon Cascades to the Kodiak Archipelago in Alaska are predominately cedar, hemlock, spruce, and pine, and can in many cases be

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[2] *Ibid.*, at paras 1 to 4

[3] *Culturally modified trees of British Columbia*, Previously published: Stryd, Arnoud H. *Culturally modified trees of British Columbia*. British Columbia, Ministry of Forests, 1998. Available at: https://www.for.gov.bc.ca/hfd/pubs/docs/mr/Mr091.htm

[4] This "short" review of peer-reviewed journals used the keywords, "culturally", "modified" and "trees" as required fields for a search in the abstracts of papers found at https://www.jstor.org/

[5] Mobley, Charles M., and Morley Eldridge. "Culturally Modified Trees in the Pacific Northwest." *Arctic Anthropology*, vol. 29, no. 2, 1992, pp. 91–110. *JSTOR*, www.jstor.org/stable/40316316 accessed 18 Apr. 2021

> correlated with ethnographically-known traditions of bark and wood use. Nonetheless, the morphological variability displayed by reported samples is wide, and CMT typologies have necessarily been regionally specific. Criteria for discriminating natural from cultural modification have become more sophisticated. Techniques for dendrochronological analysis of CMTs have been perfected, with reported samples dating as old as A.D. 1467.[6]

In "Dendrochronology, CMTs, and Nuu-Chah-Nulth History on the West Coast of Vancouver Island,"[7] the authors assert,

> Archaeologists have been aware of culturally modified trees (CMTs) for many years, but the interpretive potential of CMTs, and their key role in the recent archaeological record, have been largely ignored. This study attempts to correlate dendrochronological data from CMTs on the west coast of Vancouver Island with the history of the Nuu-chah-nulth people over the past 250 years. It is apparent that important patterns in Nuu-chah-nulth history during this period are reflected in the distribution of dates from CMTs; patterns such as territorial warfare, trade, demographic trends, and acculturation. It is asserted that the interpretive potential of CMTs should be explored more intensively by archaeologists.[8]

In "Trail Trees: Living Artifacts (*Vivifacts*) of Eastern North America,"[9] the authors report,

> Living trees historically modified by human populations, oftentimes referred to as "culturally modified trees" (CMTs), are found throughout the North American landscape. In eastern North America specifically, indigenous populations bent thousands of trees to mark trails, and some of these still exist in the region today. In this article, we present a synthesis of current knowledge on trail trees, including their speculated functions, formation, and selection. We also examine the theoretical implications of these living artifacts (or *vivifacts*) and how they may open new avenues for investigation by archaeologists, environmental historians, and ethnobiologists. To conclude, we make a call for expanded public recognition and documentation of trail trees, discussing the need for their incorporation into forest and park management plans.[10]

With reference to CMTs serving as cultural artifacts, the author in "Culturally Modified Trees, Indian Reserves and the Crown's Fiduciary Obligations,"[11] noted almost 20 years ago that,

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[6] *Ibid.*, Abstract. All rights reserved.

[7] Pegg, Brian. "Dendrochronology, CMTs, and Nuu-Chah-Nulth History on the West Coast of Vancouver Island." *Canadian Journal of Archaeology / Journal Canadien d'Archéologie*, vol. 24, no. 1, 2000, pp. 77–88. *JSTOR*, www.jstor.org/stable/41058129

[8] *Ibid.*, Abstract. All rights reserved.

[9] Kawa, Nicholas C., et al. "Trail Trees: Living Artifacts (*Vivifacts*) of Eastern North America." *Ethnobiology Letters*, vol. 6, no. 1, 2015, pp. 183–188. *JSTOR*, www.jstor.org/stable/26423616

[10] *Ibid.*, Abstract. All rights reserved.

[11] McNeil, Kent. "Culturally Modified Trees, Indian Reserves and the Crown's Fiduciary Obligations." *Supreme Court Law Review.* 21 (2003):105-38

> The Supreme Court of Canada delivered three decisions in 2002 involving the Aboriginal peoples of Canada. None of these decisions dealt directly with Aboriginal or treaty rights. They were concerned instead with provincial authority in relation to Aboriginal cultural property, creation of and entitlement to Indian reserves, and the Crown's fiduciary obligations. I will begin by providing a brief description of the cases. *Kitkatla Band v. British Columbia (Minister of Small Business, Tourism and Culture)* involved a constitutional challenge to the applicability of the British Columbia *Heritage Conservation Act* to cultural objects - specifically, culturally modified trees - that were claimed by the Kitkatla First Nation to be part of their heritage. The Kitkatla argued that the provincial statute could not authorize the alteration or destruction of these trees, as protection of them fell within exclusive federal jurisdiction over "Indians, and Lands reserved for the Indians." The Supreme Court disagreed, for reasons discussed in this paper…[12]

That CMTs could be both an ***object*** of Indigenous property and cultural heritage, while also ***evidence*** of the spatial extent of a claim to Aboriginal title to land, was an issue that was alive and considered by the Supreme Court of Canada in *Kitkatla Band v. British Columbia (Minister of Small Business, Tourism and Culture)*.[13] The headnote in that decision, reported in CanLII, explains:

> The respondent Interfor held a forest licence over land in the central coast of British Columbia. Interfor provided direct notification of its development plans to the appellant Kitkatla Band since early 1994, but these plans never specifically identified the Kumealon area. The appellants claimed aboriginal rights in this area and had been engaged in treaty negotiations with the province. Interfor was alerted to this claim, and the firm of archaeologists it had hired contacted the Band in order to ascertain their views. Of concern was the possible presence of native heritage sites and objects, including culturally modified trees (CMTs) in the area to be harvested. These trees have often been altered by aboriginal people as part of their traditional use and they have cultural, historical and scientific importance. The archaeologist reported the presence of a significant number of these trees in seven cutblocks Interfor intended to harvest. Interfor applied to the respondent Minister for a site alteration permit under s. 12 of the provincial *Heritage Conservation Act* to authorize the cutting and processing of CMTs during logging operations. The Minister wrote to the Band and invited their written submissions. The Band failed to respond by the deadline. The Minister granted a site alteration permit without having considered a single archaeological report.

Even *Wikipedia* has an entry for "Culturally Modified Trees" and notes,

> No historical source - leave alone the cultural meaning - is so heavily endangered, and on the other hand as precise, as the CMT archives. They open new research fields, but need

[12] *Ibid.*, Abstract. All rights reserved.

[13] *Kitkatla Band v. British Columbia (Minister of Small Business, Tourism and Culture)*, 2002 SCC 31 (CanLII), [2002] 2 SCR 146, 286 NR 131, 210 DLR (4th) 577, [2002] 6 WWR 1, 1 BCLR (4th) 1, 165 BCAC 1, [2002] 2 CNLR 143, [2002] SCJ No 33 (QL) https://canlii.ca/t/51tg

> very exact methodology. A crucial precondition for research is the preservation of old growth forests. So in addition to ecological, cultural and other scientific reasons to keep them alive, they are historic sites of highest rank.
>
> Countries whose forests are at least partially untouched, have in most cases not yet realized what they have in front of their doors. For example, for the history of northern Asia, they can frequently be the only witnesses of the past. Once destroyed, the history is forgotten forever.
>
> In Canada, where research was for obvious reasons concentrated in the western provinces with its old forests, Ontario has documented CMTs in 2001.[14]

The analysis used by the court in *Nuchatlaht*, in considering the motion to exclude the evidence of the expert was clearly explained and followed references to the same tests and authorities referred to in earlier issues of *The Boundary Point* and *Principles of Boundary Law in Canada*. The court explained the threshold test for admissibility:

> The leading authority for admissibility of expert evidence is *White Burgess Langille Inman v. Abbott and Haliburton Co.*, 2015 SCC 23. The court summarised the criteria:
>
> > [23] At the first step, the proponent of the evidence must establish the threshold requirements of admissibility. These are the four *Mohan* factors (relevance, necessity, absence of an exclusionary rule and a properly qualified expert) and in addition, in the case of an opinion based on novel or contested science or science used for a novel purpose, the reliability of the underlying science for that purpose: J. (J.-L.), at paras. 33, 35-36 and 47; *Trochym*, at para. 27; *Lederman, Bryant and Fuerst*, at pp. 788-89 and 800-801. Relevance at this threshold stage refers to logical relevance: *Abbey* (ONCA), at para. 82; J. (J.-L.), at para. 47. Evidence that does not meet these threshold requirements should be excluded. Note that I would retain necessity as a threshold requirement: D. (D.), at para. 57; see D. M. Paciocco and L. Stuesser, *The Law of Evidence (7th ed. 2015)*, at pp. 209-10; *R. v. Boswell*, 2011 ONCA 283, 85 C.R. (6th) 290 (Ont. C.A.), at para. 13; R. v. C. (M.), 2014 ONCA 611, 13 C.R. (7th) 396 (Ont. C.A.), at para. 72.
> >
> > [24] At the second discretionary gatekeeping step, the judge balances the potential risks and benefits of admitting the evidence in order to decide whether the potential benefits justify the risks. The required balancing exercise has been described in various ways. In Mohan, Sopinka J. spoke of the "reliability versus effect factor" (p. 21), while in J. (J.-L.), Binnie J. spoke about "relevance, reliability and necessity" being "measured against the counterweights of consumption of time, prejudice and confusion": para 47. Doherty J.A. summed it up well in Abbey, stating that the "trial judge must decide whether expert evidence that meets the preconditions to admissibility is sufficiently beneficial to the trial process to warrant its admission

[14] https://en.wikipedia.org/wiki/Culturally_modified_tree#Beginnings_of_examination

> despite the potential harm to the trial process that may flow from the admission of the expert evidence": para. 76.

The first challenge to Mr. Earnshaw's evidence is that he is biased or lacks impartiality.

Justice Cromwell for the court in *White Burgess* stated, at para. 40, that independence and impartiality go to not just weight but to threshold admissibility.

At para. 48 he dealt with a shifting onus:

> Once the expert attests or testifies on oath to this effect [that his is impartial] , the burden is on the party opposing the admission of the evidence to show that there is a realistic concern that the expert's evidence should not be received because the expert is unable and/or unwilling to comply with that duty. If the opponent does so, the burden to establish on a balance of probabilities this aspect of the admissibility threshold remains on the party proposing to call the evidence. If this is not done, the evidence, or those parts of it that are tainted by a lack of independence or by impartiality, should be excluded. This approach conforms to the general rule under the Mohan framework, and elsewhere in the law of evidence, that the proponent of the evidence has the burden of establishing its admissibility.

I note here that Mr. Earnshaw testified at the *voir dire* and said he was impartial with respect to his opinion.

The Court continued with respect to the threshold for admissibility:

> [49] This threshold requirement is not particularly onerous and it will likely be quite rare that a proposed expert's evidence would be ruled inadmissible for failing to meet it. The trial judge must determine, having regard to both the particular circumstances of the proposed expert and the substance of the proposed evidence, whether the expert is able and willing to carry out his or her primary duty to the court. For example, it is the nature and extent of the interest or connection with the litigation or a party thereto which matters, not the mere fact of the interest or connection; the existence of some interest or a relationship does not automatically render the evidence of the proposed expert inadmissible. In most cases, a mere employment relationship with the party calling the evidence will be insufficient to do so. On the other hand, a direct financial interest in the outcome of the litigation will be of more concern. The same can be said in the case of a very close familial relationship with one of the parties or situations in which the proposed expert will probably incur professional liability if his or her opinion is not accepted by the court. Similarly, an expert who, in his or her proposed evidence or otherwise, assumes the role of an advocate for a party is clearly unwilling and/or unable to carry out the primary duty to the court. I emphasize that exclusion at the threshold stage of the analysis should occur only in very clear cases in which the proposed expert is unable or unwilling to provide the court with fair, objective and non-partisan evidence. Anything less than clear unwillingness or inability to do so should not lead to

> exclusion, but be taken into account in the overall weighing of costs and benefits of receiving the evidence.
>
> [50] As discussed in the English case law, the decision as to whether an expert should be permitted to give evidence despite having an interest or connection with the litigation is a matter of fact and degree. The concept of apparent bias is not relevant to the question of whether or not an expert witness will be unable or unwilling to fulfill its primary duty to the court. When looking at an expert's interest or relationship with a party, the question is not whether a reasonable observer would think that the expert is not independent. The question is whether the relationship or interest results in the expert being unable or unwilling to carry out his or her primary duty to the court to provide fair, non-partisan and objective assistance.[15]

When applying these principles to the specific conduct of the expert pointed to by British Columbia as being "biased," the court noted,

> Turning to the arguments here, one of the reasons the Province says Mr. Earnshaw is biased or impartial is because he has posted on Twitter his disapproval of cutting old growth forest. I do not see that as impartiality or bias, and certainly not one that would rise to the level of disqualification. His main interest in archaeology is CMT's. There is nothing inappropriate with him wanting those trees to be preserved. Indeed, it would be surprising for an archeologist to not have an opinion on the destruction (I use the term neutrally) of what he or she studies. To use an analogy, I do not think that a court would have prevented Howard Carter, who discovered the tomb of Tutankhamun, from giving expert testimony on Egyptian history if he had decried the destruction or looting of the pyramids.
>
> The Province also says that Mr. Earnshaw is biased because he has written about CMT's previously, including his master's thesis. Once again, I do not see that this results in him not being able to provide an independent report. Experts are experts because they focus on a particular area. They may even express an opinion or theory in their writings, for example, that the less tread there is in a tire the tire more susceptible it is to hydroplaning. That does not mean that their evidence within that area should not be admitted.[16]

The next basis for the Province's argument to exclude the evidence of the expert was that it constituted "novel science."

> Next, the Province argues that Mr. Earnshaw's report propounds a novel theory or methodology and that the courts have advised caution in admitting such evidence: *R. v. Bingley*, 2017 SCC 12, paras. 15, 41-43 and *R. v. J.-L.-J*, 2000 SCC 51, paras. 25, 33 & 35. The Province argues:
>
> > Mr. Earnshaw's novel approach is first described in Chapter 8 of his 2016 thesis. Based on his thesis, He advocates that CMTs are largely overlooked in the current method of CMT assessment, which he says focuses on standing forests rather than

[15] *Nuchatlaht v. British Columbia*, *supra.*, fnote 1, at paras. 5 to 10

[16] *Ibid.*, at paras. 5 to 10

> logged forests (his terminology is clearcuts")." He describes his method as post-impact assessment and explains it as looking for embedded scars in stump cross-sections of logged old growth trees. He postulates, theorizes and concludes, based on limited data, that CMTs exist within Cultural Forests across vast portions of the British Columbia coast and in far greater numbers than current CMT assessments predict. He argues that Cultural Forests are evidence of land ownership and management by First Nations.
>
> It is true that novel theory must be scrutinised at the admissibility stage. However, the closer the opinion gets to the ultimate issue, the greater the scrutiny: *R. v. Mohan*, 1994 CanLII 80 (SCC), [1994] 2 S.C.R. 9 at para. 28. Here the opinion does not approach the ultimate issue. The basis for Mr. Earnshaw's opinion is not completely untested: it was contained in his thesis and one peer-reviewed article.
>
> Mr. Earnshaw has acknowledged the limits of the report. For example, he said he could not determine which groups were responsible for creating the archaeological sites. Further, this is not a scientific report with formulas and calculations that makes it impossible for the court to assess. Nor has the Province adduced any evidence to show that the theory is novel.[17]

The court ruled that the expert's report would not be excluded on the basis of alleged novel science. The Province next argued that the expert was not a properly qualified expert and dismissed that argument. A further argument was advanced based on the "necessity" of the expert's report. Again, the court rejected that argument concluding that

> The report may not give the near-conclusive evidence needed for the plaintiffs but nevertheless it is not irrelevant. It would, if accepted, advance the basis of the claim. It is up to the plaintiffs to determine what other evidence they call to fill in the required evidentiary gaps.[18]

Lastly, the court used an "overall balancing" assessment of the evidence in terms of whether the pitfalls of admitting the report outweighed its usefulness and concluded that the report ought to be admitted. In addition to what I have said above, admitting the report will not result in an inordinate use of court time. The motion brought by the Province was dismissed.

Aside from the interesting references to CMTs and the role such living cultural artifacts might play as evidence of use and occupation, the ruling also raises other considerations for land surveyors. How often are surveyors expected to interpret markings on a tree in terms of whether the tree was "blazed" in the original survey of a line on the ground? Aside from acquiring anecdotal experience, what is the special "expertise" of a land surveyor in retracing such a line when the evidence that remains are trees with some "markings" – or worse – the

[17] *Ibid.*, at paras. 13 to 15

[18] *Ibid.*, at para. 20

area has been logged or burnt over? These are not simple academic musings but are questions that are triggered when retracing an "obliterated boundary." As a court recently noted,

> Halliday therefore proceeded as if there was an obliterated boundary.
>
> The Respondent submits on these appeals that s. 24(2) and Method 49 are the statutorily-mandated process, as followed by Halliday and implicitly confirmed by the Coordinator. However, neither Halliday nor the Coordinator addressed the applicable definition of "obliterated boundary" in the *Surveys Act.* That term is defined in s. 1 as follows:
>
> > "obliterated boundary" means a boundary established during an original survey or during a survey of a plan of subdivision registered under the *Land Titles Act* or the *Registry Act* where the original posts or blazed trees no longer exist and which cannot be re-established from the field notes of either of such surveys or by evidence under oath; [Emphasis added in original]
>
> Thus, as defined in the *Act*, an obliterated boundary is one that was established in the original survey.[19]

We can expect more jurisprudence on these questions in years to come.

Editor: Izaak de Rijcke

Cross-references to *Principles of Boundary Law in Canada*

Chapter 7: *Aboriginal Title and Boundaries*, in *Principles of Boundary Law in Canada* is a helpful adjunct to the nature of aboriginal title and the complex concepts arising from same. This ruling confirms again the very unique (*sui generis*) nature of aboriginal title, even when the subject area is public land owned by crown provincial.

FYI

There are many resources available on the Four Point Learning site. These include self-study courses, webinars and reading resources – all of which qualify for *formal activity* AOLS CPD

[19] *Duarte v. Ontario*, 2018 ONSC 2612 (CanLII), https://canlii.ca/t/hrnmq at paras. 65 to 67

hours.[20] These resources are configured to be flexible with your schedule, range from only a few hours of CPD to a whole year's quota.

Land Registration Research Cybrary

AOLS members can now benefit from a searchable catalogue of material covering the underlying principles of research in the land registration system, what records are available, how they are organised and made accessible, and how the research can be completed in the context of history and a surveyor's quest to find the best evidence of a boundary. Access to the cybrary requires an enrolment code provided by completing the associated form in the External Training webpage.

Risk Management in Searching for Boundary Evidence

This CPD product is an outgrowth from the presentation "*Risk Management in Searching for Boundary Evidence in the Electronic Land Registration*" delivered by Anne Cole and Izaak de Rijcke at the AOLS AGM in February, 2020. The original presentation has been reconfigured as 3 webinars with accompanying resources.[21]

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[20] Please note that the designation of CPD hours is based on the estimated length of time for the completion of the event. The criteria used are those set out in GeoEd's *Registered Provider Guide* for Professional Surveyors in Canada. Other professions may qualify under different criteria. References to AOLS are to its Continuing Education Committee. Elsewhere in Canada, please confirm your eligibility for claiming CPD hours.

[21] This CPD product qualifies for 3 *Formal Activity* AOLS CPD hours. Please note that access to this CPD opportunity is free for AOLS members with an enrolment code provided by completing the associated form in the external training webpage.