

PROPERTY MAPPING
WHEN CAN IT BE CHANGED?
AND OTHER MAPPING QUESTIONS YOU'VE ALWAYS WANTED TO
KNOW BUT WERE AFRAID TO ASK



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Property mapping is an integral component of the land tenure system that was established by the *Land Registration Act [LRA]*. The parcel-based land registration system was introduced in Colchester County in March 2003. It has been in place in all counties in Nova Scotia for over thirteen years.

Property Mapping holds an interesting place in a parcel-based system that does not guarantee location, boundaries or extent of a parcel¹. This truth is a matter of some confusion, if not controversy. As has been previously reviewed, it is extremely challenging to explain what mapping **is** and **is not** to ‘civilians’.² The challenge of explaining that mapping is a drawing, not a survey [and that it changes over time, by definition] is difficult for people to ‘wrap their heads around’.

Recently, a citizen wrote the Premier after seeing his parcel on the provincial map and said that the Province had “moved my land”. Images of a backhoe aside, explaining mapping changes can be difficult. Not just for landowners!

To practitioners in many other jurisdictions, the term “property mapping” is used interchangeably with “cadastre”. When people talk about “the cadastre” they generally mean a government-held register of property titles combined with an *accurate* description of the location of the parcel.

One observer notes as follows:

¹ See Land Registration Act S. 21

21 (1) The legal description of a parcel in a register is not conclusive as to the location, boundaries or extent of the parcel.

(2) Provincial mapping is not conclusive as to the location, boundaries or extent of a parcel.

² See Coffin, C.A. Mark, *Provincial Property Mapping and the Role of the Property Mapper*, 2004 [appendix “A” to this paper.

cadastre is a systematically organized database of property data within a certain jurisdiction. This information is based on a comprehensive survey of a property's boundaries. Related to the term cadastre are the terms cadastral survey, which is a survey of boundaries of land parcels, and cadastral map, which is a map indicating the boundaries of land parcels. Although cadastres were originally established for land taxation purposes, in many countries. When a cadastre is used for land tax purposes, it is a fiscal cadastre; when it is used for land registration purposes, it is a legal cadastre. It is important to note, however, that *a cadastre, or even a cadastral survey, is not a requirement for a land registration system. [emphasis added]*³

Cadastres in North America were built before European settlement. In the United States, “most of the United States (outside the 13 original colonies, Kentucky, Tennessee, and Texas) has been surveyed using the Public Land Survey System”.⁴ In Canada, the Dominion Land Survey from 1871 filled this function for the Western Provinces. In both countries, the cadastral surveys were made relative to meridians and baselines. They divided the surveyed areas into townships, land areas of approximately 36 square miles [six miles by six miles]. These townships were divided into sections, each approximately one-mile square.

British Columbia’s cadastre is depicted below:⁵

³ Hanstad, Tim, *Designing Land Registration Systems for Developing Countries*, 13 **AUILR** 647 (1997-1998)

⁴ Huff, Tristan, *Land Survey and Mapping: An Introduction for Woodland Owners*, Pacific Northwest Publications, 2015

⁵ Source: Land Title and Survey Authority of British Columbia, *BC’s Online Cadastre*, <http://maps.gov.bc.ca/ess/sv/olc>

Operational experience with the LRA shows that three topics continue to vex lawyers more than any other. The ‘big three’ are:

- Extent Uncertainty
- Mapping Changes
- MGA Compliance Statements

The goal of this presentation is to de-mystify these three topics.

Issue 1: Extent Uncertainty

A parcel’s extent can be a matter of title or survey. Sometimes the pieces ‘just don’t fit together’ narratively, sometimes survey plans ‘argue with each other’. Either way, property mappers try to accurately depict the discrepancies.

Sometimes, drawing out legal descriptions shows that there is an overlap or gap in ownership interests that does not encompass the entire extent of the parcels. If two entire parcels have competing ownership, that’s another matter.⁶

These gaps or overlaps are created by the following evidence registered at the Land Registration Office [LRO]:

- a) by adjoining registered survey plans of equal value purporting to show the same boundary line in different locations;
- b) a survey plan which clearly shows a boundary line having been previously surveyed in a different location; or

⁶ See LRA Section 36, Priority Rules.

c) based on document descriptions that clearly appear to overlap.

All three scenarios arise at the LRO.

Scenario A

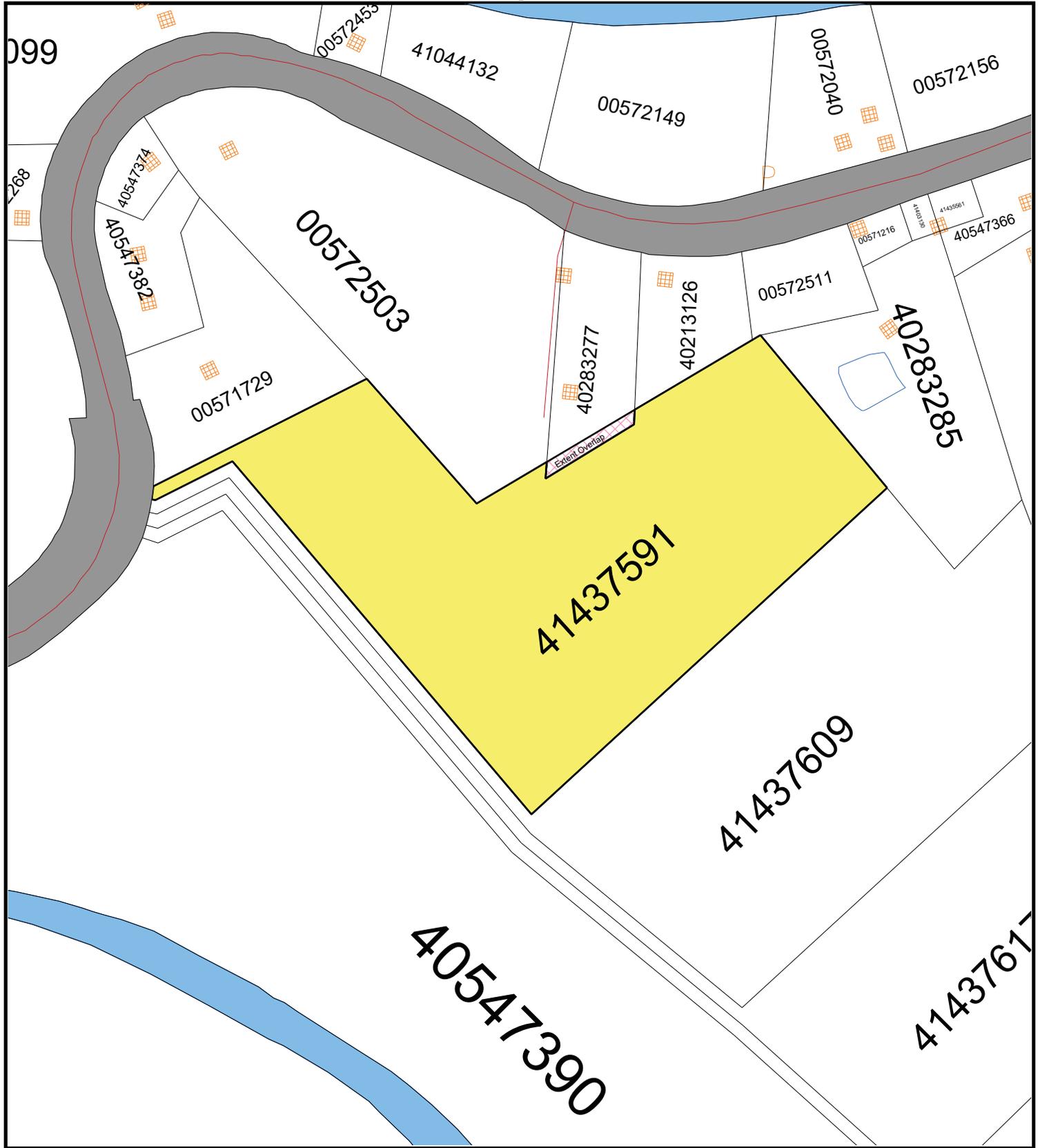
Adjoining registered survey plans of equal value purporting to show the same boundary line in different locations

“Equal value” is defined as: registered survey plans which are certified and/or signed by a member of the Association of Nova Scotia Land Surveyor or person qualified to do so and where:

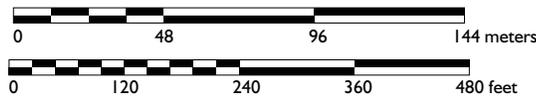
- both competing plans are ‘tied to control’ (by Nova Scotia Control Monument, High Precision Monument or discernible land mark)
- neither competing plan is tied to control.; or
- both competing plans are grid north or both magnetic north.⁷

Two plans of equal value may depict the parcel boundaries or a parcel boundary in different locations. When the two plans are placed in the mapping graphics, the overlap of the parcels as per the competing equal value surveys is depicted.

⁷ *This does not include sketches, location certificates, compiled plans, transportation plans or plans where there is no survey information as having equal value to a survey plan as mentioned above.*



Scale 1 : 2400



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This map is a graphical representation of property boundaries which approximate the size, configuration and location of properties. Care has been taken to ensure the best possible quality, however, this map is not a land survey and is not intended to be used for legal descriptions or to calculate exact dimensions or area.
THIS IS NOT AN OFFICIAL RECORD

Scenario B

A survey plan which clearly shows a boundary line having been previously surveyed in a different location

When these ‘dueling surveys’ are both depicted in the graphics, the different opinions as to the location of the boundary is shown as follows:

Scenario C
Document Descriptions Clearly Appear to Overlap

This uncertainty is not caused by competing plans. It is narrative in nature. This happens rarely because specific factors MUST be present:

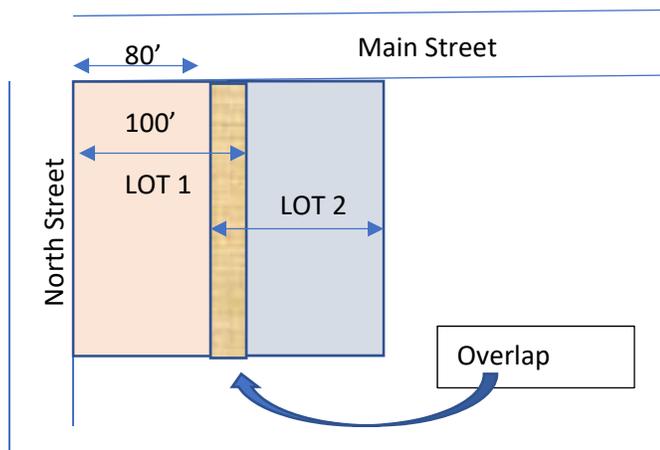
1. The starting point must be easily determined
2. The distances from the starting point MUST be measurable & create a distinct overlap/gap

For example:

Two deeds both start at the intersection of Main and North Streets

Lot one runs from starting point 100 feet along main Street

Lot two starts and intersection of Main and North, run 80 feet along Main street to point of beginning.



Extent Uncertainty & Migration

A PID or parcel that is affected by an extent uncertainty does not prevent a lawyer from migrating the title to the parcel.

The PDCA MUST be the description for the entire parcel, including the extent overlap area.

Extent Uncertainty indicates an extent issue, not a title issue.

The extent uncertainty area cannot be “saved and excepted” from the description

For Extent Uncertainty to be removed from the graphics, we would expect to see, one of the below documents to be registered:

- A Boundary Line Agreement;
- An affidavit from one of the surveyor’s indicating they made an error; or
- An approved plan to deal with the overlap

Issue 2: Mapping Changes

Mapping changes are made for the following reasons:

- Request for PID Assignments
- Retracement and subdivision plans
- Subdivision exemptions
- Highway realignments
- PDCA submission where our mapping does not appropriately represent the description
- Registered documents that require mapping alterations (deeds with multiple lot mapped as one)

Any time the graphic database is required to be changed (including removing, editing or adding text or shading to the graphics), Mappers create what is known as a “drafting transmittal”.

If lawyer becomes aware of a mapping issue, such as incorrect mapping/location the best option is to send in a request for PID assignment (whether a new PID is required) with the information to make the mapping change.

This not only provided the mapper with the information to make the change but also gives the submitter a 5-day timeline.

External comments can also be provided on the PDCA to indicate mapping updates are required, however this may result in the PDCA taking longer than the three days, if mappers need to investigate and search for documents to support the change.

Mapping changes to an LR parcel are made, however mappers take into consideration if the LR parcel is adversely affected (e.g.: parcel boundaries or configuration would be substantially altered, or a new parcel created within its present boundaries)

To determine if a parcel is adversely affected, mappers use as a general guide of 10% or more of an LR parcel has been affected, considering the following:

- where the parcel is located (rural, urban, etc.),
- the source of the information affecting the LR parcel, the source of the information used to map the affected LR parcel,
- the amount of intrusion to the LR parcel, the specifics and nature of the intrusion (i.e. include a structure or portion of)
- the amount of land affected

Mapping changes to LR parcels are based on:

- New survey information [This can be a survey of the migrated lot or an abutting parcel.]
- Discovered that lot was mapped in wrong location
- Boundary line agreements
- Missing saving and excepting
- Parcels migrated by adverse possession
- The agreement of the registered owner of the LR parcel is required

A letter is sent to the registered owner and migrating lawyer of LR parcels when mapping changes are made, outlining the change to be made and the reason (documentation) that caused the change.

Issue 3: MGA Compliance Statements

Parcels acquired by adverse possession

This scenario seems to be particularly problematic. Examples of MGA compliance statements in this scenario show that the statements are ‘all over the map’.

First and foremost, it should be noted that there is no subdivision approval exemption in the MGA for parcels created by adverse possession.

For these parcels, “other” or “not subject to” with an explanation that the parcel is complaint because of adverse possession is **not** appropriate.

To be compliant with **Part IX of the MGA** the parcel would need to

- have existed in the configuration being claimed, prior to planning control;
- have been conveyed in the configuration being claimed, prior to April 15, 1987 (MGA s291); or
- be a crown grant

Parcels severed by a public highway

This scenario has a similar range of MGA compliance statements as for parcels acquired through adverse possession. The description for a parcel of land may always have saved and excepted the public highway crossing the parcel. If this is the case, the compliance statement should not be an exemption under MGA clause 268(2)(c)⁸. A more appropriate would be “Other: severed by a public road”.

⁸ 268(2)(c) resulting from an acquisition or disposition of land by Her Majesty the Queen in right of the Province or in right of Canada or by an agency of Her Majesty;

Appendix "A"

Provincial Property Mapping & the Role of the Property Mapper (2004)

Real estate lawyers have been working with Nova Scotia's property mapping system for over three decades. Many practitioners have had direct, even frequent, contact with mapping staff. Despite this familiarity, mapping and the related Nova Scotia Property Records Database remains *terra incognita* for many. With the proclamation of the *Land Registration Act* (LRA) and the implementation of a "parcelized" system of land registration, the real estate bar is obliged to understand the role of mapping and of the property mapper in the land tenure system, old and new.

In a system plagued with "from the big rock to the birch tree" property descriptions, where instruments are indexed to grantors' names rather than land parcels, the accuracy that the Nova Scotia Property Records Database and the related graphics has achieved is really quite impressive. The Nova Scotia Property Records Database is the database of information about parcels of land and the registry of deeds records indexed to the parcels. The data base and the related mapping was born in the early 1970's when the Council of Maritime Premiers started the Land Registration and Information Service (LRIS). LRIS disbanded between the late 1980's to the early 1990s leaving each province to build and maintain their own mapping and related databases. The database and mapping is not perfectly complete and accurate, but it is our best attempt at graphically representing the parcels of land in Nova Scotia and the documents that have affected the interests in those parcels over the years.

As a result, the property records data base and the property maps attract a fair amount of criticism. This nay-saying originates from a fundamental misunderstanding about what the mapping and related database is, how and why it was built, and how it is updated and improved. This paper will address all of these points. It will also discuss the many roles of the property mapper, including their additional roles in the new land registration system, as well as the purpose of the mapping in the new system.

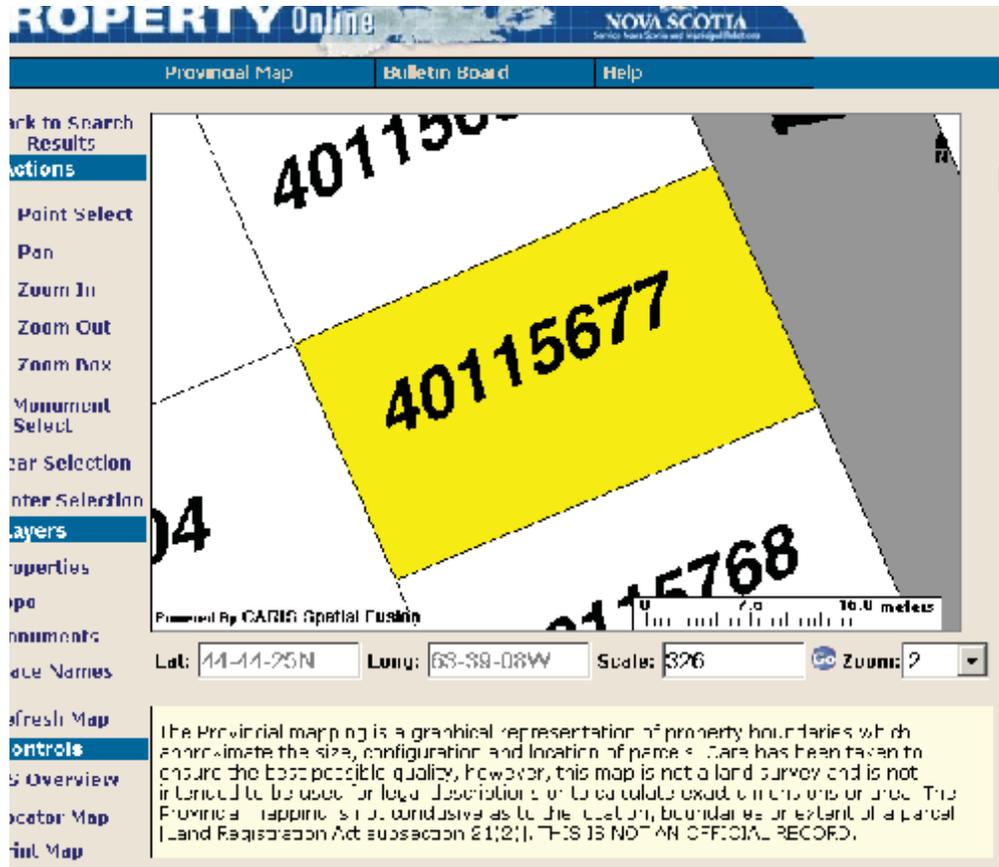
In the beginning.....

The Provincial property mapping system traces its roots to the Land Registration and Information Service (LRIS). LRIS was established in 1973 by the Council of Maritime Premiers as a program to be implemented in four phases over a ten-year period. Phases I and II involved establishing a co-ordinate survey control network and preparation of urban and resource base maps. Phase III included preparation of property maps and implementation of an improved land tenure system. This improved system was to take the form of a parcel-based land titles system. Nova Scotia's portion of LRIS was folded into the Nova Scotia Department of Municipal Affairs (now Service Nova Scotia and Municipal Relations–SNSMR), which has the responsibility for completing what amounts to Phase III of the LRIS program. Property mapping was, and remains, inextricably linked with land tenure reform.

In order to establish property mapping in Nova Scotia, LRIS contracted with local surveyors and title researchers to do an initial map of all of the land parcels in the province (the “initial lift” mapping). They estimated the size, shape and location of land parcels on a region by region basis. Parcels were identified using the best information available, such as surveys, deed descriptions, assessment maps, field evidence and air photos. Once compiled, the information was digitized so that it could be accessed via computer.

What mapping is, and what it isn't

The digital property mapping system was not only designed to capture a graphic representation of hundreds of thousands of polygons. It was developed as an electronic index to information about land. This information includes land ownership and assessment particulars, all registry of deeds documents and non-recorded documents determined by the property mapper to have affected the interest in the parcel over time, and other land-related data. The result is a comprehensive file on each parcel of land, accessed through a unique parcel identification number (PID) and through other search criteria such as name, civic address, document, etc. For all that the property mapping is, it is not a giant plan of survey. Every parcel graphic on *Property Online* is presented to the user in the following format:



Note that the rather prominent disclaimer says “The Provincial mapping is a graphical representation of property boundaries which approximate the size, configuration and location of parcels. Care has been taken to ensure the best possible quality, however, this map is not a land survey and is not intended to be used for legal descriptions or to calculate exact dimensions or area. The Provincial mapping is not conclusive as to the location, boundaries or extent of a parcel.”

Despite its prominence, property owners and real estate professionals sometimes treat the parcel graphic as if it were survey-quality information. *Property Online* map printouts have even surfaced in a list of documents, supporting one side or the other in a Supreme Court action over parcel boundaries or area.

The graphics and their accuracy are not the only things that are misunderstood. A second source of misunderstanding results from documents that have been indexed to parcels by mappers over the years [the “attributes” associated with the PID]. In the *Registry Act* environment, the Province provides a document repository service. Interests are indexed to names rather than parcels. These documents are also referenced against the PID in the Property Records Database. It is up to system users to form their own opinion on the quality of a person’s title to a given parcel of land. As such, the ownership and other instrument details listed in *Property Online* are not guaranteed to be correct or even relevant to the land under search. The mandate of the Property Registration Section with regard to the ownership reflected in the Property Records Database, is to reflect the documents recorded in the registry and not to form opinions in cases of unclear ownership. If there is a dispute over ownership of land, the Property Registration Section can only provide information regarding what is on record at the Registry of Deeds and await a court decision to make a determination regarding the ownership. Documents which are not recorded in the Registry of Deeds, such as proof of death of a joint tenant, are also used to update ownership information in the Property Records Database.

Property mappers take care to index instruments to the appropriate PID, but it becomes an educated guess when the description of the property is very poor. Parcel details appear with the following disclaimer on *Property Online*:

“Non-Land Registration parcels ARE NOT REGISTERED PURSUANT TO THE Land Registration Act. As such, ownership and all information in this report is believed to be an accurate reflection of registered documents affecting the parcel of land to which it relates, however, it is not intended to be relied upon by the reader as advice on the current state of any title to land. A search of the records at the appropriate Registry of Deeds office may be required to determine the current owner(s) of the parcel of land under consideration. THESE ARE NOT OFFICIAL RECORDS.”

The disclaimer is a reflection of the fact that in the Registry of Deeds system, the Province

is simply a repository for instruments affecting title to land. The disclaimer also deals with the fact that the property mapper has determined that the documents listed actually affect that parcel of land, based on the information in the document and about the parcel. This link to the parcel is not guaranteed either.

The third source of misunderstanding can be seen when people complain about the fact that the mapping does not perfectly reflect the current configuration of a given parcel of land. The mapping was designed as an evolutionary system, one that improves with age and use. The “initial lift” set the base-line (so to speak), and the graphics and instrument information is refined as property mappers have more plans and instruments to index to the PID. As more real estate transactions take place, the mapping is enhanced by newly available information. The most accurate mapping and ownership information available in the province is for areas where the most development and ownership transfers have taken place over the years. The least accurate information is contained in the areas where there has not been a lot of real estate activity over the last 30 years and few, if any surveys of the parcels are available.

Survey plans and approved subdivision plans filed at the Registries of Deeds and Land Registration Offices are the main sources of information that enable a change to the size, shape and location of parcels mapped in *Property Online*. Property owners and other users of *Property Online* provide invaluable feedback and evidence regarding location, shape, and size of parcels of land, which is an important element in the ongoing maintenance and improvement of the database.

Lawyers should keep these comments about the graphics and instrument indexing in mind the next time they or their clients discover a discrepancy in the mapping index. Feedback to property mappers is vital to improving mapping. As well, lawyers should take the opportunity to explain the “ins and outs” of the mapping so that they will not draw false conclusions about the information on *Property Online*.

A day in the life.....

Property mappers’ duties extend well beyond reacting to the plans and instruments registered in

the Registries of Deeds around the Province.

SNSMR's Assessment Division has depended on the property mappers, since 1996. The property mappers play a significant role in building the filed assessment roll and the preliminary roll each year. Property mappers are responsible for creating all new assessment accounts, updating land area and ownership for all assessment accounts. Property mappers also maintain descriptive location information and civic addresses for many areas of the province and maintain the match between assessment account and PID; the mechanism that allows the bi-weekly data exchange between land information and assessment. The property mappers handle all the inquiries and appeals regarding ownership, size and location for the Assessment Division, and this keeps them busy in the peak period of January and July. This work involves doing all the research and providing conclusions to the land owner and to assessment for these issues.

Property mappers also engage in co-operative projects with the Department of Natural Resources, the Nova Scotia Farm Loan Board, Assessment and Municipalities. These file improvement projects reconcile PIDs with parcel records held by, and identifiers used by, the various authorities. They also respond to inquiries from the public and other Departments about information indexed to PIDs.

In the four two-person registries in the Province, property mappers must also assist Registrars in their "front counter" registry activities. Property mappers also participate in Property Registration's internal audit activities and conduct data integrity checks and assessment database quality control activities semi annually.

Enter the LRA

Clause 37(4)(g) of the LRA requires that, prior to registration, each parcel must first have its property identification number certified by the registrar (read property mapper) to match the description of the parcel. Section 5 of the *Land Registration Administration Regulations* fleshes out the requirements for this Parcel Description Certification Application (PDCA). The PDCA process cannot be fully understood without reference to those requirements, along with those outlined in subsections 37(5)

to (8) of the LRA. They read as follows:

- 37 (5) Where the registrar is satisfied that the application is complete *and properly identifies the parcel* (emphasis added), the registrar shall register the parcel subject to any limitations, additions or encumbrances specified in the opinion of the qualified solicitor.
- (6) Where the registrar is not satisfied that the application is complete *and properly identifies the parcel* (emphasis added), the registrar shall reject the application and return it to the applicant.
- (7) Where the registrar cannot locate the parcel, the registrar may require the applicant to provide such further information concerning the size and location of the parcel as will permit the registrar to determine the parcel identification number for the parcel and a geographical representation of the parcel, showing it in relation to neighbouring parcels with reasonable accuracy.
- (8) A parcel that cannot be located with reasonable accuracy or for which the description does not permit the creation of a geographical representation of the parcel shall not be registered.

The requirements for the description content and for the process of changing descriptions are outlined in the Land Registration Administration Regulations 6 to 11 inclusive. The PDCA process, as outlined in the LRA and Administration Regulations, is an attempt to ensure more than the relative accuracy of the parcel's location and the description meets the requirements for content. It is meant to ensure that parcel descriptions are complete and accurate when the "curtain is dropped" on the parcel's title. Once a parcel is registered in the new system, historic searches will no longer be conducted. Discrepancies in the legal description will not be uncovered by the usual review of historic documents. Moreover, all relevant appurtenances, burdens, and exceptions in the legal description must be gathered together where the proper description for the parcel, including all "savings and exceptings", is actually derived from several document sources.

The role of the property mapping in the new land registration world, is very similar to that in the traditional world. There is no guarantee of location, boundaries or extent and the graphics will improve with better information provided by users. During the PDCA process, if there is a gross error on the mapping, the property mapper will correct this as part of the process, but small changes requested, will require the requester to provide relevant data to support the change. This has been the same process followed to date for mapping, prior to introduction of the *Land Registration Act*.

Property mappers now spend a significant percentage of their time processing PDCAs and much less on processing the traditional documents, as 80 % of these documents are now coming into the Land Registration system. Former Registry of Deeds front office staff does this work now.

Submitters have been advised that anything of note in the description or application should be ‘flagged’ in the comments section of the PDCA [e.g. current abutters’ names from the owner where the description calls for original or long-gone abutters]. The actual PDCA has optional fields for the last book and page reference for the parcel, as well as the Assessment Account Number. While not mandatory, these pieces of information will help the application to be vetted more quickly.

To date, property mappers have been meeting the target turn-around time for PDCAs [i.e. three business days for acceptance, rejection or a demand for more information] in all land registration counties. With their many other responsibilities, only cooperation and understanding from the practicing bar will ensure that the target times continue to be met.

While the “brave new world” is not without its frustrations, SNSMR is committed to consulting with its stakeholders and staff in order to improve the processes and system. The result will be a land tenure system that is founded upon a high level of data integrity, which of course is in the interests of all Nova Scotians.