



Principles of Re-establishment Guidance Note 4

Types of Re-establishment – Freehold Land

What is re-establishment?

'Although surveying in general requires the precise determination of distances and angles, cadastral surveying also involves the interpretation of this information to re-establish title figures. Re-establishment is therefore in many cases a surveyor's personal opinion due to the absence of old marks, or where old marks still exist, the disclosure of survey differences or errors in earlier surveys. Because of this it is difficult to lay down firm policies to solve every case likely to occur, and thus it is more practical to treat every case on its merits, employing certain basic principles'.

Frank Robson, surveyor and chief draftsman, Traverse, April 1970

Re-establishment is the act of reinstating a previously surveyed boundary in the same position as when it was created.

For a boundary to be capable of being re-established, the survey evidence must also be available as a registered document through the public arena. The parent survey may have been a result of alienation, subdivision, consolidation, amendment, conversion, exchange or change of land status of a parcel for actions under either the *Land Act 1958*, the *Transfer of Land Act 1958*, the *Subdivision Act 1988* or the *Local Government Act 1989*.

In instances where marks cannot be found from the parent survey, there also needs to be a practical method of connecting the current with the past. This could be achieved by linking the current survey through other surveys in the area or, in the absence of any subsequent surveys, deeming or accepting the adoptions of the current survey as being the same as those in the parent. The method of deeming the adoption to be the same as the parent survey should only be accepted after considering the effect of all evidence within the section of land.

Three types of re-establishment

If the title is the result of a survey-based dealing, re-establishment should be regarded as being one of three types:

- Direct Link
- Indirect Link
- Best Fit

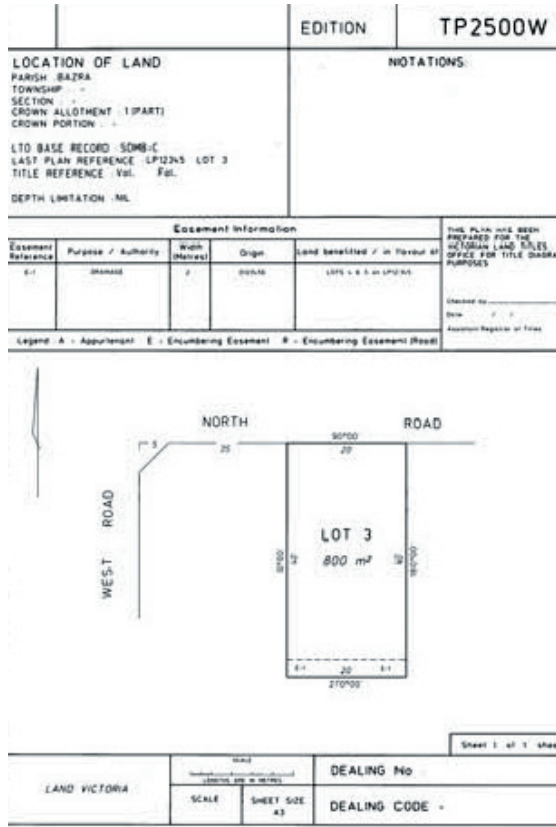
Examples

Please note: The following information relates to examples 1 to 6.

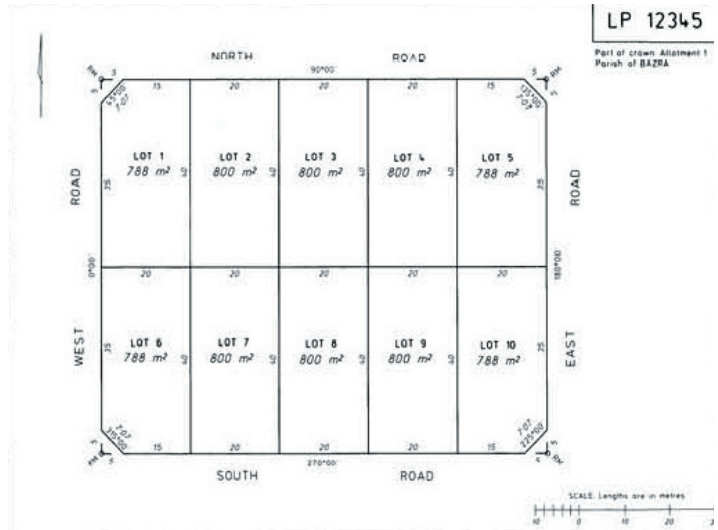
- TP 2500W is the current diagram source for lot 3.
- Lot 3 on TP 2500W was originally created by survey in LP 12345. The title plan reference was changed as a result of the drainage easement but its survey origin is still LP12345.
- The parent plan of subdivision created 10 lots and four splay corners. Recovery reference marks (RMs) were placed at each of the road intersection corners. From the low plan number, it can be assumed that the plan was created some time ago and probably as a result of measurements obtained by a steel band.

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Title diagram

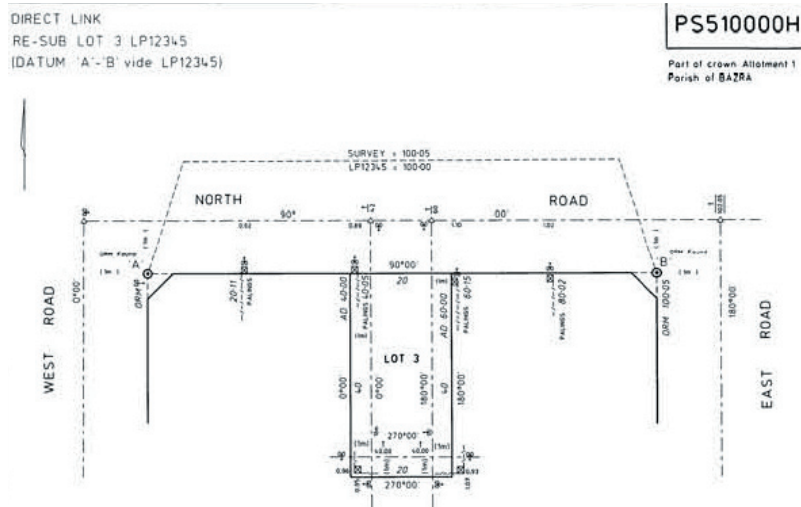


Parent survey



Example 1: Direct link with the parent survey

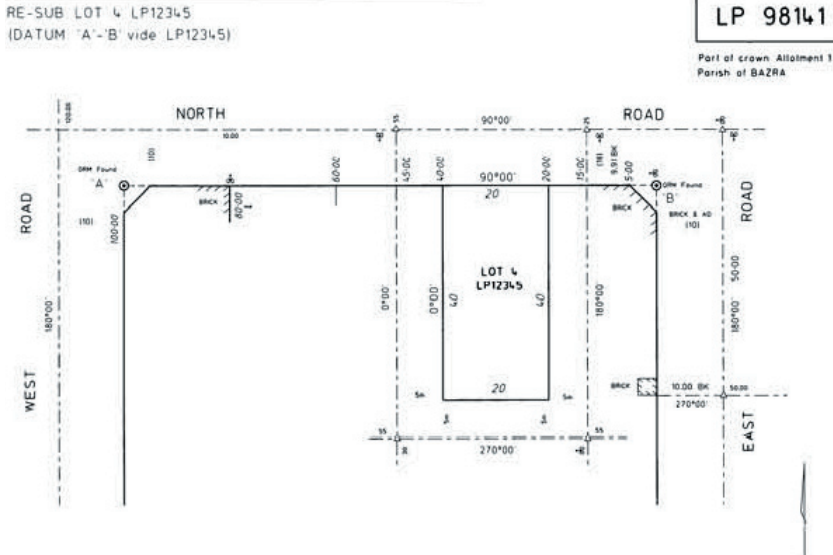
The current survey has found two of the original RMs placed at the road intersections by the survey for LP 12345. The 'A-B' datum has been confirmed by the very good agreement with occupation around the subject land and along the alignment.



The survey in PS 510000H has re-established LP 12345 by a direct link.

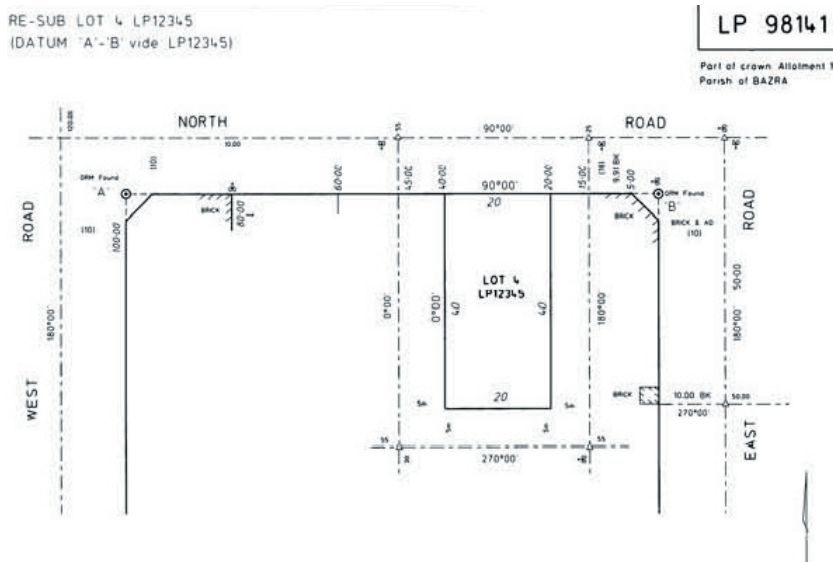
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Example 2: Indirect link with the parent survey



LP98141 was a survey-based re-establishment of lot 4 on LP12345.

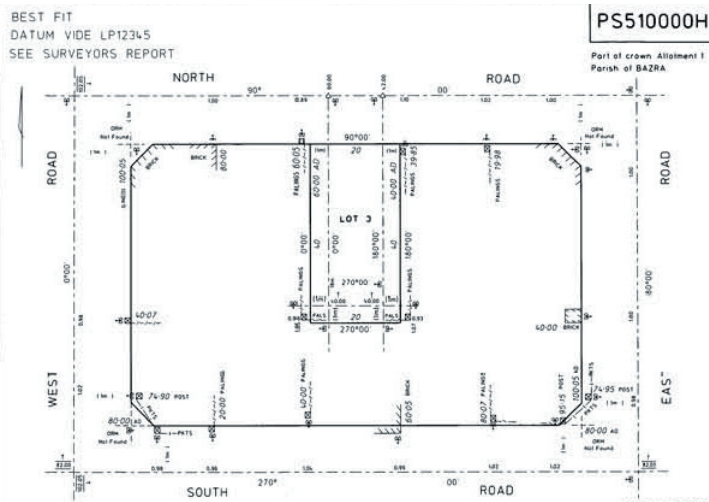
This survey found the original reference marks 'A' & 'B' from the parent survey and can be regarded as re-establishing the parent plan via a direct link with it.



PS 510000H has found the old brick reference marks 'A' & 'B' from LP98141. Since it is known that LP98141 established a direct link with LP12345, it can therefore be regarded that the current survey has re-established LP12345 via an indirect link through LP98141.

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Example 3: Best fit with the parent survey



The current survey is the first since the parent survey LP12345. No original survey marks have been found.

On the basis that current fencing/occupation is the best and only evidence of the original definition of the plan, all fencing within the section should be fully surveyed. That is, the island bounded by North, East, South and West Roads should be fully surveyed.

Road widths should also be recorded but occupation within the section should carry more weight in determining the alignments and boundaries.

The 'best fit' approach should only be used when none of the original survey marks are found.

Why is re-establishment so difficult?

We do not live in a perfect world and differences between surveys should be expected. They are not an exception but should be regarded as being normal. The variations could result from:

- different classification of the surveys, i.e. level land in the current regulations to that of E 3 under previous regulations
- poor surveying technique in the earlier work
- lack of quality control.

There is the added complication that:

- folios can have inherent errors
- adjoining surveys may have determined inappropriate cadastral boundaries.

With the exception of those folios endorsed with a 'warning as to dimensions', the Register does not differentiate between a distance of 40.23m in an 1852 conveyance and a distance of 40.23m being created in a 2007 subdivision.

The actual act of re-establishment has been likened more to an art form rather than a precise science; however, it is still heavily dependent upon mathematics to achieve an outcome. Although it is not considered possible to give a definitive statement on how it should be done, the following are examples that may help in making a decision on how the differences should be treated.

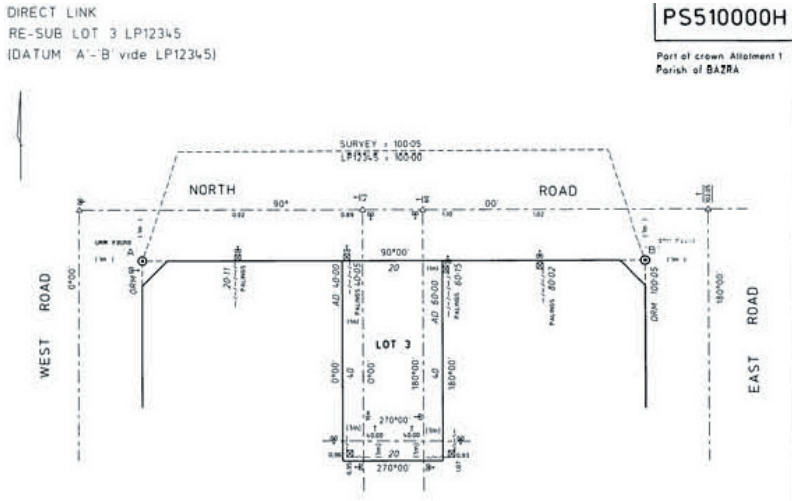
Example 4: Survey differences

This is an observed difference between known points that can be attributed to either the earlier survey equipment and/or field technique used. The difference should be within the variation allowed for by the certification of the parent survey.

That is, at the time of the earlier or parent survey these measurements were the best observations that could have been obtained given the classification of the survey.

The following abstract of field records is of a re-survey of lot 3 on LP 12345. The intention of the re-establishment is to reinstate the boundaries in the same position as those originally shown in the parent plan.

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An apparent direct link has been established with the parent plan.

The survey has found a small difference of +0.05m along North Road between the old RMs placed in the parent survey. In this type of situation two marks are not a datum. Confirmation is required that one or other of these marks have not moved. It would normally be expected that the survey should be extended to locate an additional control mark within the section.

If no additional marks are found there would be no objection to the variation being treated as a survey difference and the excess land being up within the section. The parcel should maintain title connection to one or other of the reference marks and is dependent on which one provides the best agreement with its perimeter fencing.

Conversely if the survey difference was -0.05m, it would be expected that the parent plan distance between East and West Roads be maintained so that all parcels in the section can be satisfied.

Example 5: Survey error

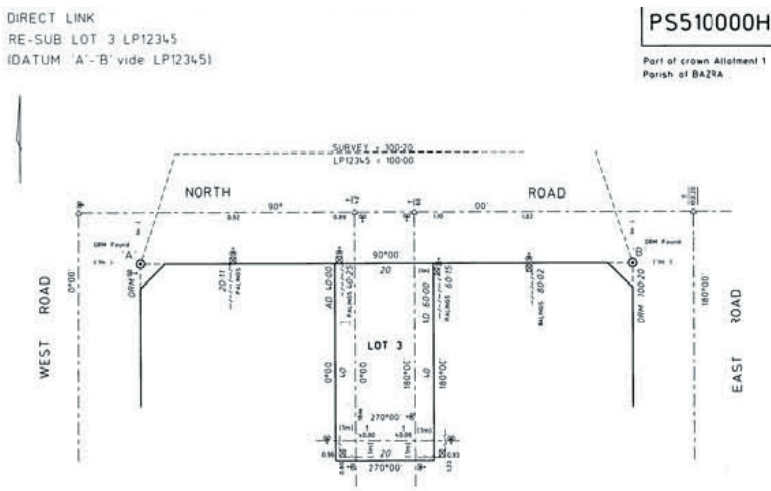
This is an observed difference between known points that is the result of poor surveying technique. The difference would be greater than that allowed for by the certification of the parent survey.

That is, at the time of the earlier or parent survey the measurement could have been of a higher accuracy if a more appropriate field technique had been employed.

The following abstract of field records is of a re-survey of lot 3 on LP 12345. The intention of the re-establishment is to reinstate the boundaries in the same position as those originally shown in the parent plan.

An apparent direct link has been established with the parent plan. However, the survey has found a significant difference of +0.20m along North Road between the old RMs placed in the parent survey.

In this type of situation two marks are not a datum. Confirmation is required that one or other of these marks have not been



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moved. It would normally be expected that the survey should be extended to locate an additional control mark within the section. In this situation and with the exception of occupation at chainage 80.02m, good agreement has been found between fencing and the reference mark at West Road.

It would appear that the RM at West Road has not been placed (by distance) in the position where it was expected to be. This could simply be the result of the steepness of the grade at the western end of North Road between chainages 0–60m.

The survey has shown that there could be additional land in the section by virtue of the parent survey measuring short or laying out long. The proposed adoptions are all to the west of occupation.

Provided we are satisfied that the ORMs were placed in this position by LP12345 (it would appear that this may be the case by occupation chainages) and the new alignments don't have any negative effect on the constructed roads then there would be no objection to the excess being taken up in this survey.

However as all the adopted boundaries are to the west of occupation the connection should be reversed from West Road to East Road and all the adoptions moved 0.20m to the east. After this adjustment there is still sufficient land to the east and the west to satisfy the requirements of the other titles.

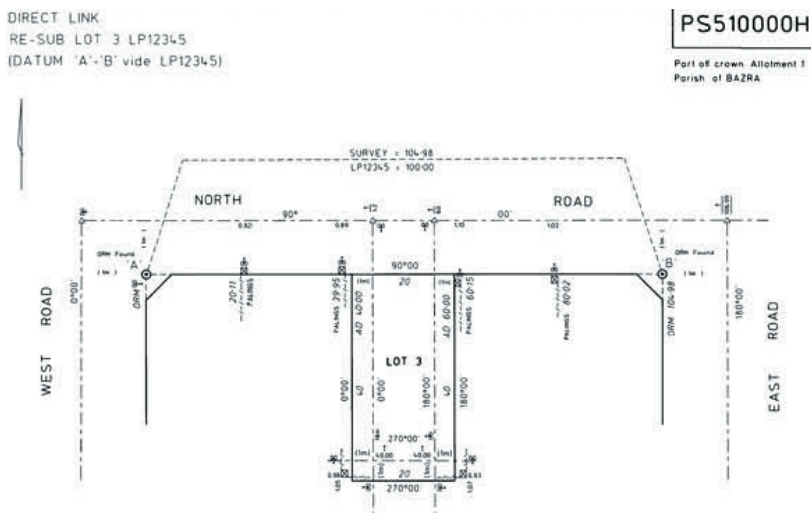
If a shortage of 0.20m was found between the ORMs, it would be recommended that 'A & B' be adopted for bearing datum and LP dimensions laid out from the RM that gave the best agreement with occupation within the section. This approach would be subject to having no negative effect on the constructed roads. It would not be acceptable to have an adoption 0.2m onto the constructed public highway. One of the parcels would have to take a shortage or if the corner parcel was the subject land a strip could be created as R-1 in the plan of subdivision.

Example 6: Gross error

This is a significant difference found between known points that are a result of either a reading, transcription or misunderstanding associated with the original parent survey. The difference would be much greater than that allowed for by the certification of the parent survey.

Provided more research and generally more survey work is undertaken, in most instances a logical explanation can be found to explain why the variation has occurred.

The following abstract of field records is of a re-survey of lot 3 on LP 12345. The intention of the re-establishment is to reinstate the boundaries in the same position as those originally shown in the parent plan.



PS510000H appears to have directly re-established LP12345 via datum points 'A & B'.

The survey has shown that a major error has occurred in the original survey for LP12345. The chainages to occupation along North Road would suggest that the ORM at East Road is in error.

A survey should be extended to find two or more datum points that agree, and in this instance road widths must be measured, and the alignments of East and West Roads projected northward and southwards so that it can be shown whether this is a localised problem or whether it impacts on other land in the area.

Provided confirmation can be found to support datum point 'A' such as by agreement with another RM or by agreement with the alignment of West Road north of North Road, LP 12345 dimensions should be maintained from datum point 'A'. It still may be possible to use 'B' for bearing datum, but only after it has been shown that the parent survey intended to place it in this position (although incorrectly).

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Legislation

Legislation to be considered in boundary definitions

1. Surveying (Cadastral Surveys) Regulations 2005
Regulation 10: the intention to relate the survey to both the subject land and the adjoining land
2. *Transfer of Land Act 1958*
Section 102: how and when to deal with excess land
3. *Limitation of Actions Act 1958*: avoidance of any affect on Crown land and land owned by the PTC, Council, or the Water Authorities Owners Corporation
4. *Property Law Act 1958*: dealing with errors in the original Crown surveys and the means to determine Crown boundaries in the absence of original marks
5. *Coastal Waters (State Title) Act 1980*: land invaded by the sea is lost to the freehold

Key points to remember

Research the survey information

If there are already surveys in the area read the surveyor's report, analyse the survey evidence and read the report by the examining draughtsperson. These documents can all provide a valuable insight into known survey problems in an area. If the base record shows an array of amendment applications then you can assume that there will be issues with the re-establishment.

Starting point

Most re-establishment can be achieved by three basic means:

- a direct link to the parent survey
- an indirect link to the parent survey
- the best fit.

The survey should use a minimum of two but preferably three points that relate to the datum survey. The points for bearing datum must be real marks such as PMs, PCMs, RMs or occupation and not theoretical ones, which could be open for interpretation. If no direct comparison is possible with the parent survey the surveyor's report should provide the link. If the survey deals with more than one folio and each has a different survey origin, it may be necessary for the number of datum points to increase accordingly.

Understand your title and what the dimensions mean

Firstly, what are the title's dimensions? When combined with a parcel's Crown description they are a means to uniquely define a parcel of land so as to avoid any duplication or overlap

Secondly, how were the boundaries created? Are they the result of a registered survey used to support any of the following: an alienation, a subdivision/consolidation, an amendment, a conversion or perhaps an exchange of land. Or, were they the result of a solicitor's transfer (not covered in this guidance note).

Consider:

- if there are there any Crown boundaries
- how the parcel is connected – to a street corner or to a Crown corner?
- if it abutts the adjoining parcel(s).

And lastly, are there any title irregularities? Consider whether:

- the title diagram closes and if it doesn't the reasons why
- the current diagram accords with the parent diagram
- there are any notifications about easements affecting the title
- there are warning about dimensions.

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What if the parent survey measurement is different?

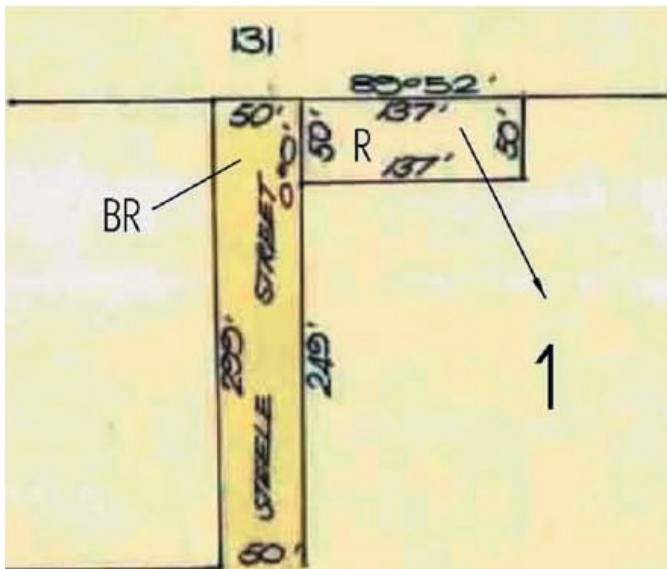
What should be done if two marks from the parent survey are found but your survey reveals a different distance between them?

Don't panic. If it is only a survey difference, the re-establishment can be based on either mark without affecting the integrity of the adopted boundaries. The difference in definition from either mark would be within the tolerances allowed for in the statutes. The older the survey, the greater the allowable limit.

If it is a survey or gross error you need to establish which mark is in question or where the error has occurred. For a drafting error in the parent survey, the datum, if possible, should be recomputed from a different set of data. For a survey error, the survey should be extended to isolate where the problem has occurred, i.e. find three marks that agree.

Remember, the adopted boundaries are ultimately your responsibility. There may be a tight schedule but you need to be comfortable with the end product.

Example 7: Error in title diagram



While the above diagram looks simple enough and by inspection closes, there is an error.

The land was originally created as a lot on a plan of subdivision, the boundaries of which were determined by an amending survey application. The parent plan shows the northern boundary as $90^{\circ} 08'$ while the title diagram shows it as $89^{\circ} 52'$.

Investigation has shown that the bearings on the current title diagram were the result of conversion of quadrant bearings to full circle bearings. History has shown in this type of situation that it is highly likely for errors to occur in conversion of quadrant bearings following a transfer. The parent plan should always be checked for conformity with the current title.

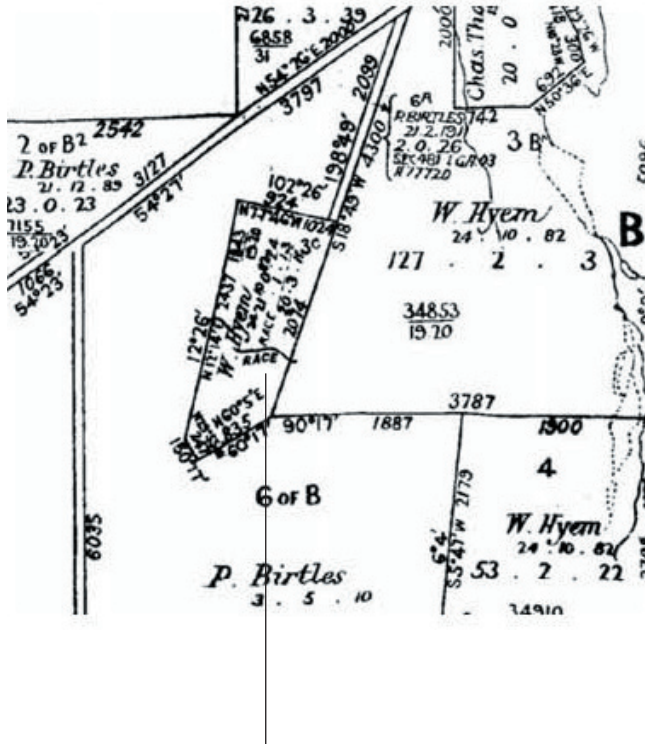
If there are differences, understand how and why those differences occurred.

Other points of interest:

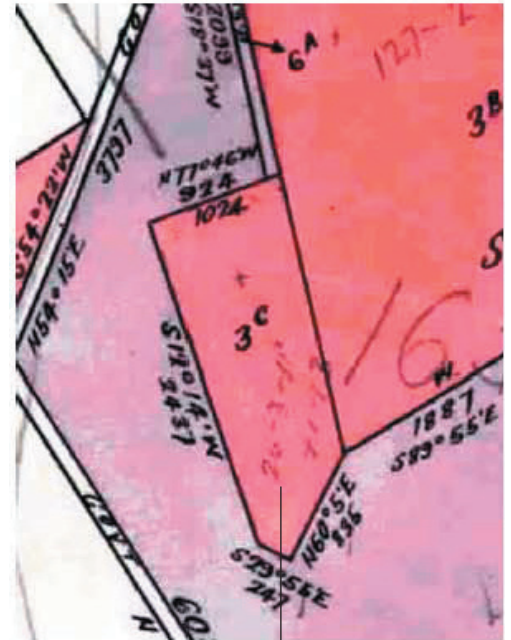
- The northern boundary is a Crown boundary. Because this boundary was dealt with by survey well over 100 years earlier, there is high probability that there will be survey differences along this boundary.
- The development involved two folios which had different rights of access. The first folio had rights to use Grant St only for access to Bourke Road while the second folio as shown above had additional rights over Steele St. It should also be noted that the rights over Steele St were limited to the Crown boundary. As part of the development full rights over Steele St had to be justified for all of the land in the plan to enjoy rights of access over the full length of Steele St.

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Example 8: Omission from title diagram



By notation, race excluded from Grant



No reference to Crown land

The compilation diagram on the right hand side has unfortunately omitted key information. The race on the Grant Street was noted as being specifically excluded. The notation referred to the overall area of Crown allotment 3C, less the area of the race. It would imply from the current title diagram that the race is now included. This could only occur if a new grant had been issued for the race, which by the Crown description had not occurred.

In all instances the base records should be checked for conformity with the current title information.