A Review of the Quality of Reinstatement in Queensland Survey Plans and Identification Plans

Glenn Campbell
Overview

- Objective
- Reinstatement Standards
- Method
- Results
- Implications
Is the standard of reinstatement on identification plans different to that of registered survey plans?
Cadastral Reinstatement Standards

- A cadastral surveyor … must take account of the rights and obligations of each party affected by the boundary.

SMIR s11 (1)

- Reliable
- Sufficient Extent
- Depth Proven
Cadastral Reinstatement Standards

- ...cadastral boundaries are reinstated in accordance with the hierarchy of reinstatement evidence
  
  SMIR s11 (2)

- A set of rules recognised in the surveying profession—
  - for giving weight to evidence of cadastral boundaries;
  - used in the reinstatement of cadastral boundaries.
Cadastral Reinstatement Standards

- *find out and record the position of any permanent improvements*  
  SMIR s10 & 18

- Occupation
A cadastral surveyor must place sufficient reference marks on a cadastral survey to facilitate future reinstatement of a cadastral survey.

Reference Marks

CSR s3.22.2 (1)
## Assessment Criteria

<table>
<thead>
<tr>
<th>Standard</th>
<th>Aspect</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>SMIR 2004 s11 (1)</em></td>
<td>Reinstatement Reliability</td>
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<td><em>SMIR 2004 s11 (2)</em></td>
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<td><em>SMIR 2004 s10 (2)</em> &amp; s18(2)(a) &amp; (g)*</td>
<td>Description of Permanent Structures</td>
<td><strong>Occupation</strong></td>
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<td><em>Cadastral Requirements</em> s3.22.2</td>
<td>Presence of Reference marks</td>
<td><strong>Ref Marks</strong></td>
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</table>
Method

- Randomly select 200 plans
  - 60% Survey Plans
  - 40% Identification Plans
- Sub-select 100 ‘non simple’ plans
- Five cadastral surveyors
  - 12 SPs, 8 IDs
  - Full Search
- Evaluated on 1-10 scale
Results

- 100 plans
  - 1 surveyor self assessing
  - 1 repeated plan
- 98 sample size
- 88 sample size for depth
  - Some secondary interests
Geographic Distribution
## Assessment Criteria

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<td><strong>Cadastral Requirements s3.22.2</strong></td>
<td>Presence of Reference marks</td>
<td><strong>Ref M</strong> (Marks)</td>
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## Inter-assessor Evaluation

<table>
<thead>
<tr>
<th></th>
<th>Surveyor 1</th>
<th>Surveyor 2</th>
<th>Surveyor 3</th>
<th>Surveyor 4</th>
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<td>Surveyor 2</td>
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<td>* ** * *</td>
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<td>Surveyor 3</td>
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<td>Surveyor 4</td>
<td>* ** **</td>
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</table>
Survey Plans

Survey Plan Ratings

Number of Plans

Criterion Rating

Reliability
Extent
Depth
Hierarchy
Occupation
Ref Marks
Identification Survey Plans

Identification Plan Ratings

Number of Plans

Criterion Rating

- Reliability
- Extent
- Depth
- Hierarchy
- Occupation
- Ref Marks
## Intercomparison

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Survey Plan</th>
<th>Identification Plan</th>
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<tr>
<td></td>
<td>Mean</td>
<td>Std Dev</td>
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<tr>
<td>Reinstatement Reliability</td>
<td>7.93*</td>
<td>2.63</td>
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<td>Reinstatement Extent</td>
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<tr>
<td>Depth Proven</td>
<td>8.24</td>
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<td>8.41</td>
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<tr>
<td>Presence of Reference Marks</td>
<td>8.95*</td>
<td>1.78</td>
</tr>
</tbody>
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Findings

- Differences not significant in most criteria
- Inter-assessor variation was greater
- Both groups have plans of inadequate quality
- Education vs Enforcement
Who needs help?

...as we know, there are known knowns -
there are things we know we know.
We also know there are known unknowns.
That is to say, we know there are some
things we do not know,
But there are also unknown unknowns,
the ones we don't know we don't know.

Donald Rumsfeld, Feb. 12, 2002
Some Options?

- Corrective Training
  - Identification Problem
- Stop Digging
  - Graduate training
- Task Clarity
  - Reinstatement Standard?
Acknowledgements

- Surveyors Board of Queensland
Questions?

Glenn Campbell
University of Southern Queensland

Tel: 4631 2909
Fax: 4631 2526

Email: Glenn.Campbell@usq.edu.au