What is a 'Land Survey'?

Board of Surveying and Spatial Information

September 2024 Edition 3





Registered Land Surveyors are the only surveyors sufficiently qualified, competent and capable to define and identify land boundaries in NSW









History of land surveying in Australia



At the time of English settlement (1788) there were

- No physically defined boundaries other than natural features i.e. no fences, roads, walls
- No existing survey marks, consequently, land granted could only be defined by:
 - 'Metes and Bounds' or measurements and limits of the boundary lines.
 - Relating a land parcel with respect to a recognisable feature, or, after some time, relating a land parcel to an existing parcel
- Descriptions of land were ambiguous; techniques of land measurement and standards were rudimentary and sometimes land was granted before it was even marked out on the ground.

All the above shaped the way the laws for boundary definition in NSW evolved

Land Titles in NSW



Four land titling systems currently exist in NSW

- Torrens Title (being most of the privately owned land)
- Old System Title (those lands granted before 1863 and not yet converted)
- Crown Title (being those lands held in the name of the State for which a certificate of title has not yet been created)
- Exploration and Mining Titles (not covered in this document)

It is a basic principle of the Torrens Title system that every current parcel be based on a plan of survey that defines its boundaries. Similarly, any parcel of Old System or Crown Title intended to be converted to Torrens Title must also be based on a suitable plan upon which a first certificate of title can be issued.

Conversion of Old System to Torrens Title may involve limited title (boundaries not accepted by government) and qualified title (no guarantee of ownership) – be careful!

The State Cadastre





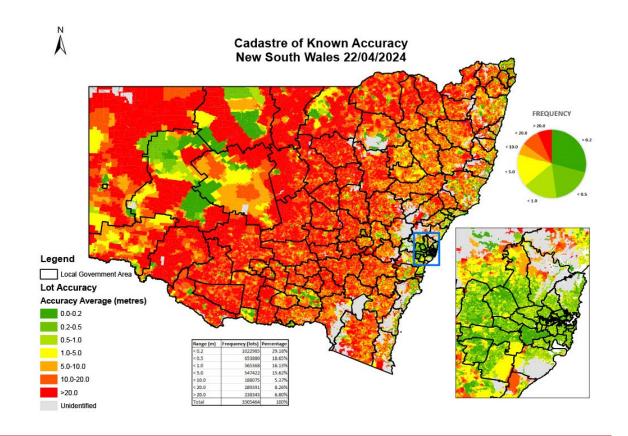
The State Cadastre is an inventory that records boundaries, dimensions and measurements on, above or below the Earth's surface for the purpose of defining rights, interests, restrictions and responsibilities within the jurisdiction of NSW.

A 'cadastral survey' is a land boundary survey and is therefore a survey made for the purpose of forming or maintaining the cadastre.

The NSW Spatial Cadastre



- The NSW Spatial Cadastre, also known as the Digital Cadastral Database (DCDB) was originally developed from paper maps and plans and is continually updated based on the registration of new survey plans.
- The accuracy of the spatial cadastre varies across the State as can be seen in the map to the right. For information on the history of the NSW spatial cadastre please refer to https://www.spatial.nsw.gov.au/news/his tory_of_the_nsw_spatial_cadastre



The spatial cadastre has no legal status to define property boundaries and is simply a geographical representation of property boundaries

Cadastral Surveying





- Cadastral surveying specialises in the establishment and re-establishment of property boundaries.
- The fundamental role of the Registered Land Surveyor is to re-establish a parcel boundary as per the intent of the original survey or create a new boundary using modern survey methodology.

This can be difficult and ambiguous for older surveys

Registered Land Surveyors - RLS



- A Registered Land Surveyor (RLS) is registered under the Surveying & Spatial Information Act 2002 to undertake land surveys.
- They use their skills in measurement and interpretation of evidence to define the locations of corners and boundaries of parcels of land, and to prepare a plan upon which the Title is based

and (just as importantly)

Use their understanding of the law associated with boundary definition to resolve ambiguities or contradictions in the evidence for the locations of boundaries.



Registered Land Surveyors are the only surveyors sufficiently qualified, competent and capable to define and identify land boundaries

Qualifications of a Registered Land Surveyor



- 1. A recognised four-year Bachelor's degree in surveying from an Australian University or an equivalent overseas qualification.
- 2. At least two years' experience in surveying under the supervision of a Registered Land Surveyor.
- 3. Undertake complex projects and pass competency examinations set by BOSSI in Urban Cadastral Surveying, Rural Cadastral Surveying, Strata and Community Title, Town Planning and Engineering Design, leading to a 'Certificate of Competency' and Registration as a Land Surveyor.
- 4. Maintain competence every year through Continuing Professional Development (CPD), monitored by BOSSI.

Qualifications of a Technician or Engineering Surveyor

No minimum qualification required – could be a Certificate III, Diploma or Bachelor degree.

A Bachelor's degree is not enough, a TAFE Diploma is not sufficient

What is BOSSI?

NSW GOVERNMENT

BOSSI is the Board of Surveying and Spatial Information, created by the *Surveying and Spatial Information Act 2002* and is responsible for



Registration of Land and Mining Surveyors and ongoing administration of the Register.



Investigation of complaints against Land and Mining surveyors and implementing disciplinary action which may arise as a result.



Prosecution of unregistered surveyors undertaking land or mining surveys for fee or reward.



Provision of advice to the Minister for Customer Service and Digital Government on the practice of surveying, spatial information and all other matters in connection with the administration of the Surveying and Spatial Information Act 2002.



BOSSI Complaints



- BOSSI investigates complaints against registered surveyors regarding professional incompetence or professional misconduct
- BOSSI investigates complaints against unregistered persons who
- Undertake land surveys for fee or reward, or
- Advertise that they are willing to undertake land surveys for fee or reward.



BOSSI receives a significant number of complaints each year in relation to unregistered persons surveying land boundaries

What is a 'survey'?



Under the Surveying and Spatial Information Act 2002

survey, when used as a noun, means an activity that includes <u>any</u> of the following:

- a) the taking of measurements of distance, height, depth, level or direction in relation to land, including the air space above land and the subsurface below land and including land covered by water,
- b) the insertion of survey marks in or on any land,
- c) the <u>recording of any measurements</u> so taken and the location of any survey marks so inserted,
- d) the collating of any measurements and locations so recorded,
- e) the <u>preparation of plans or other documents</u> (whether in writing or in electronic form) to illustrate the results of any such measurements or the location of any such survey marks,

but does not include any activity involved in mapping or the preparation of navigational charts or any other activity declared by the regulations not to be a survey.

This means that a hardcopy survey plan or an electronic survey model is included in the definition of a 'survey'

What is a 'land survey'?



Under the Surveying and Spatial Information Act 2002

land survey means a survey (other than a mining survey) that is carried out in connection with:

- (a) the reservation or dedication of land for any purpose, or
- (b) the creation, variation, transfer or extinguishment of any interest in land, or
- (c) the preparation of a plan for lodgement under Division 3 of Part 23 of the Conveyancing Act 1919, or
- (c1) the preparation of documents required to be prepared under the Strata Schemes Development Act 2015 by a registered land surveyor, or
- (d) the identification or marking out, or both, of the boundaries of a parcel of land.

The definition includes <u>ANY</u> survey (plan or sketch) identifying boundaries

This definition has been tested and proven in court

Electronic survey plans



- A survey plan is a diagrammatic and/or hardcopy representation of an electronic survey model
- An electronic survey file (e.g. dwg, pdf, LXML) is included in the definition of a 'survey' under the Act. This is considered the primary source of information
- If boundaries are shown on the plan, dimensions between fences, structures and boundaries can be obtained by interrogating the electronic model
- Offsets to boundaries may not necessarily be shown on the plan as they can be obtained from the electronic model.

Was your electronic survey plan containing boundaries authorised by a Registered Land Surveyor?

Who can undertake a 'land survey'?

- A Registered Land Surveyor (RLS) or someone acting under the supervision of a RLS, who takes full responsibility for the work
- A Registered Land Surveyor engaged in the name of, or on behalf of, a firm.

Who cannot undertake a land survey without being supervised?

Anyone else, including those who call themselves a Chartered Surveyor, Building Surveyor, Engineering Surveyor, Technician Surveyor, Graduate Surveyor, Registered Mining Surveyor, Mining Surveyor or just a 'Surveyor'.

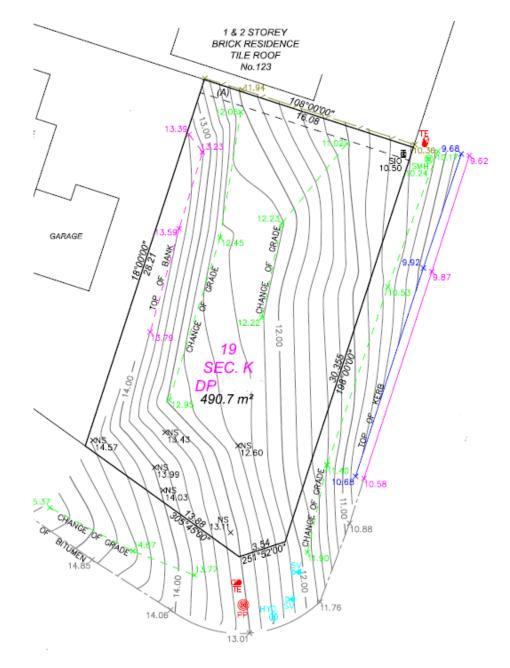




When is a survey, or part of a survey, a 'land survey'?

- If you undertake a survey and prepare a plan that identifies land boundaries, that part of the survey and plan is a 'land survey'.
- The identification of land boundaries means that the boundary is identified by, for example
 - Bearings and distances
 - Offsets from structures or improvements such as fencing









ORDIN OF LENES HE 2716 (LOA 765 (AHD.) (SOURCE SCIMS AS AT 21 WAY 200).

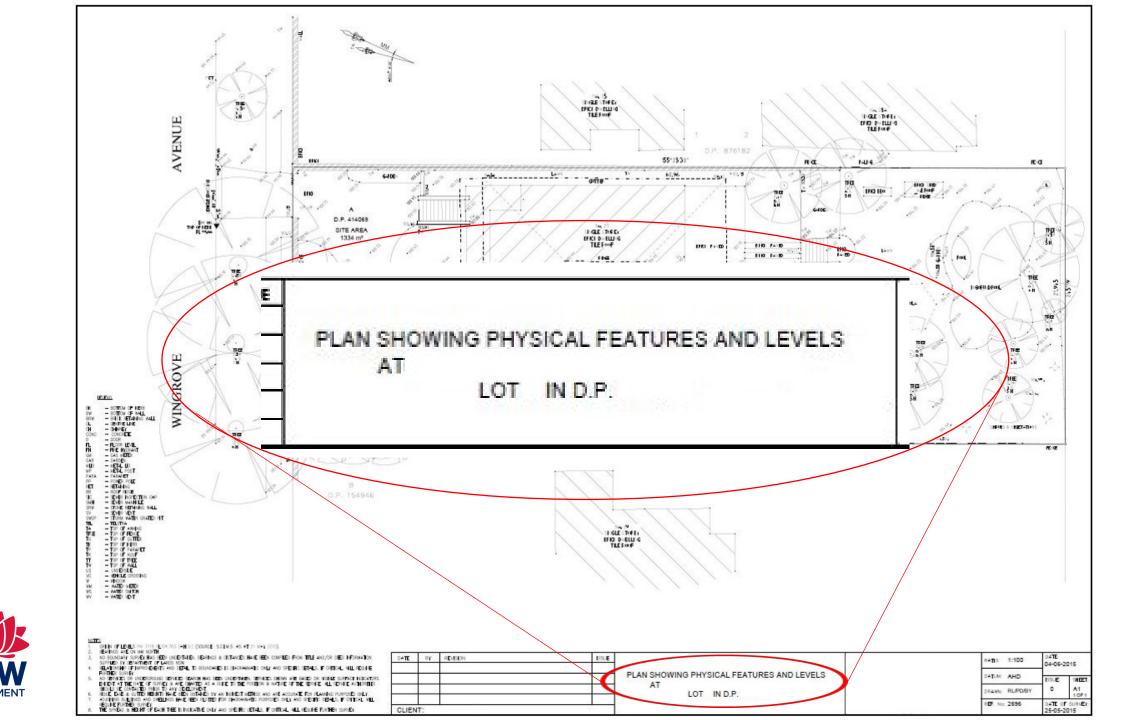
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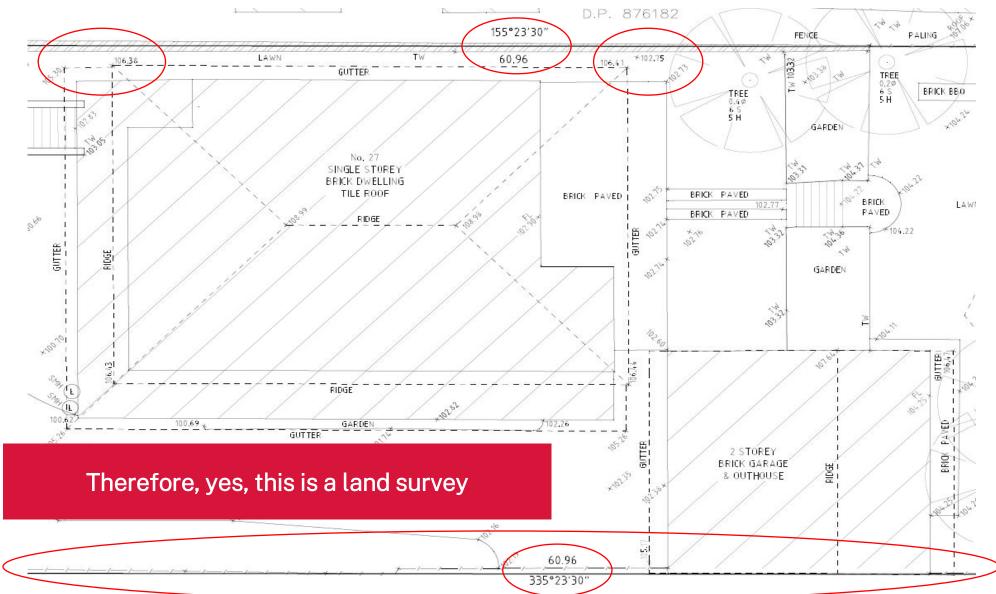
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PLAN SHOWING PHYSICAL FEATURES AND LEVELS AT LOT IN D.P.



- 1. The plan shows boundary dimensions
- 2. While it does not show connections to boundaries these could be obtained from the digital file
- 3. It shows structures like fencing and a 2-storey brick garage apparently on, over or near the boundary

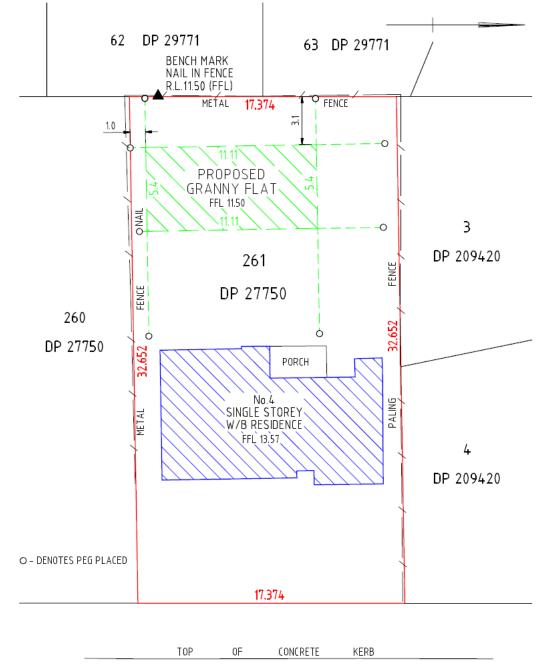


Is this a land survey?

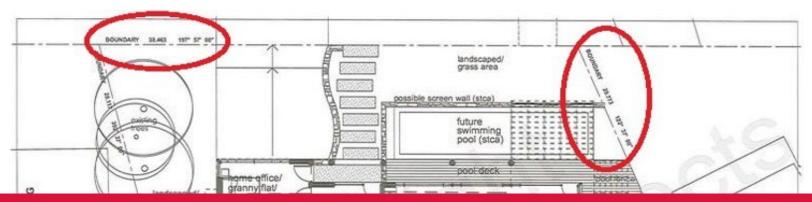
Setting out proposed building at fixed offsets from boundaries

Yes...
Red lines indicate a boundary, and offsets are shown to the red line.





What about plans prepared by other professions?



Plans prepared by architects, engineers or town planners do not define boundaries They are **not** survey plans and **not** covered under the Surveying and Spatial Information Act 2002





Plan headings are irrelevant

DRAWING	SITE SURVEY
SCALE	1:100
DATUM	AHD

PLAN SHOWING LEVELS & SITE DETAILS AT
No.28 KEPOS STREET,
REDFERN,NSW.

LOT 33 SECTION D IN DP 978876
TOTAL SITE AREA: 116m 2
Client:RON BOVA

A2
1100
units=metres

DRAWING DETAIL

Granny flat setout points

PROJECT: DETAIL CONTOUR SURVEY

NO 14 MYEE ROAD

MACQUARIE FIELDS

CLIENT:



Plan Showing Detail & Levels

No.10 Taffs Avenue, Lugamo
Lot R In D.P. 28839
Local Government Area Of Hurstville

Prepared For Mr N Petrevaki

Scale 1: 100

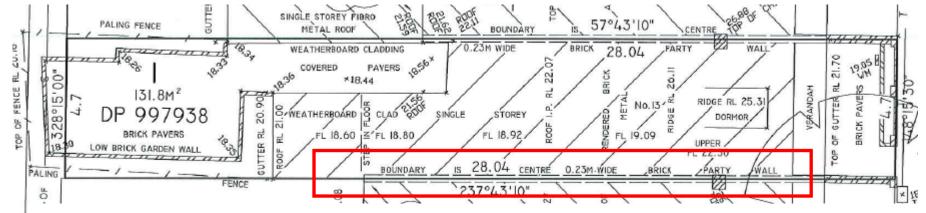
Datum : A.H.D.
Source : SSM 65060 (R.L.:62.332) S.C.I.M.S.

DETAIL SURVEY OF LOT 709 IN DP 234736 No.64, ILLAWONG AVENUE PENRITH, NSW

Disclaimers and explanatory notes on the survey plan







NOTES:

- THESE NOTES ARE AN INTEGRAL PART OF THIS DRAWING AND ARE NOT TO BE REMOVED.
- AUSTRALIAN HEIGHT DATUM WAS ESTABLISHED FROM S.S.M.51493 R.L.8.775 LOCATED AT THE INTERSECTION OF LAURA ST & EDGEWARE RD
- BOUNDARIES NOT MARKED.
- BOUNDARIES NOT SURVEYED.
- BEARINGS, DISTANCES AND AREAS OF BOUNDARIES HAVE BEEN COMPILED FROM PLANS MADE AVAILABLE AT LAND &
- DO NOT SCALE OFF THIS FLAN. WHERE RELATIONSHIP OF IMPROVEMENTS TO BOUNDARIES ARE CRITICAL THEY SHOULD BE CONFIRMED BY A BOUNDARY SURVEY.
- TREE TRUNKS, SPREADS AND HEIGHTS ARE DIAGRAMMATIC AND ESTIMATED ONLY. IF ANY OF THESE ELEMENTS ARE CRITICAL
 TO DESIGN, A FURTHER SURVEY SHOULD BE REQUESTED FOR ACCURATE LOCATION.
- THIS PLAN IS PREPARED FOR DEVELOPMENT APPLICATION PURPOSES ONLY & IS NOT TO BE USED FOR ANY OTHER PURPOSES.
- Underground services locations have been obtained from Dial before You Dig (DBYD) searching facility and show the existence of services only. Services shown are based on surface indicators evident at the date of survey during field survey and charted as a guide to the position and nature of the service. If position and depth of a service is critical to design or construction the service must be exposed by "potholing" carried out by a person accredited by the relevant service

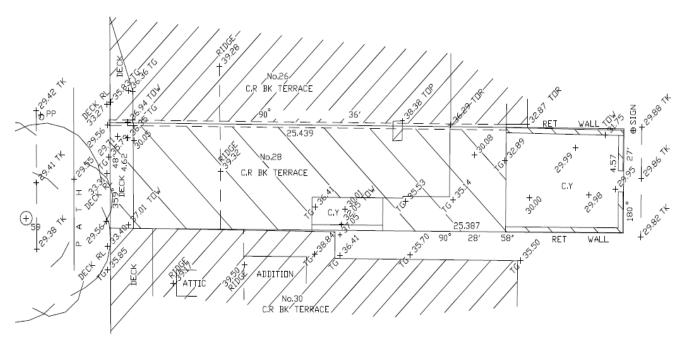
Disclaimers and explanatory notes may limit liability but do not remove it. If there is a conflict between the disclaimer and the plan, the plan prevails.

WITH THIS NOTE.

- THIS DETAIL SURVEY IS NOT A "LAND SURVEY" AS DEFINED BY THE SURVEYING AND SPATIAL INFORMATION ACT, 2002.
 IF CONSTRUCTION IS PROPOSED IN PROXIMITY OF BOUNDARY IT IS STRONGLY RECOMMENDED THAT A FURTHER SURVEY BE REQUESTED FOR MARKING OF RELEVANT BOUNDARY OR COMPLIANCE SETBACK LINE.
- THE SUBJECT LAND IS AFFECTED BY LIMITED TITLE. THE BOUNDARIES OF THE LAND HAVE NOT BEEN INVESTIGATED BY THE REGISTRAR GENERAL. THE LIMITATION MAY BE REMOVED BY THE LODGEMENT OF A PLAN OF SURVEY WHICH SATIFACTORILY DEFINES THE BOUNDARIES OF THE PARCEL.



Disclaimers on the survey plan



NUTES

- Boundaries have not been investigated.
- Visible services located only.No underground search has been undertaken We recommend Dlal 1100 before you Dlg.
- Boundary almensions shown are taken from DP 978876.
- The position of structures, services, trees, etc are diagrammatic only.
- The title boundaries as shown hereon were not marked at the time of survey and have been determined by plan dimensions only and not field survey.

IT IS NOTED ON TITLE:

QUALIFIED TITLE, CAUTION PURSUANT TO SECTION 28J OF THE REAL PROPERTY ACT, 1900, ENTERED 15-8-2005 BK 3302 NO.453.

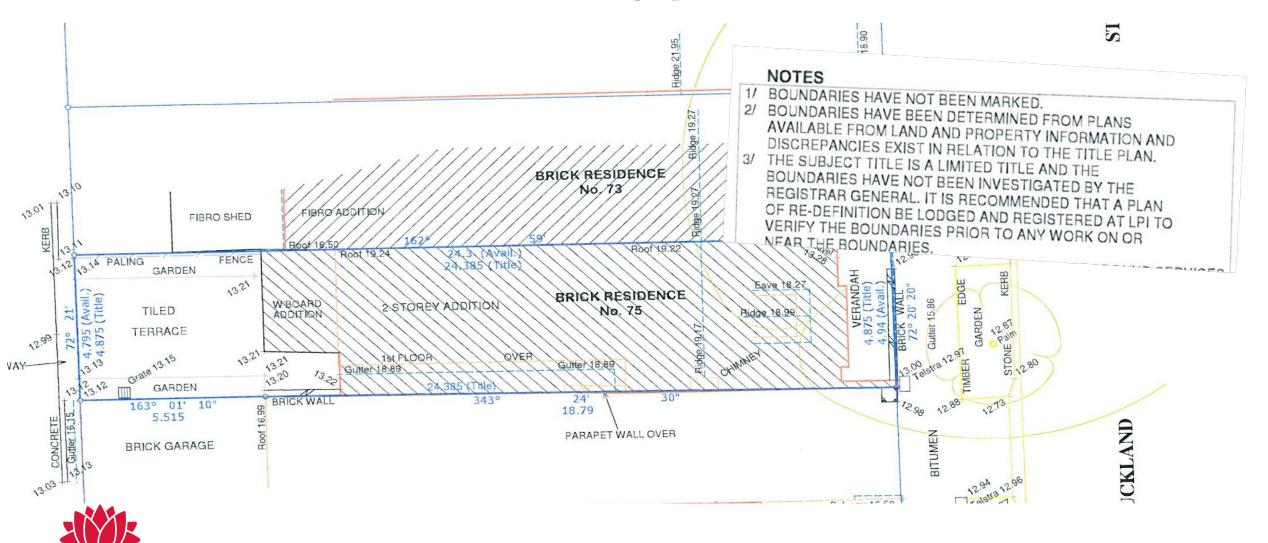
LIMITED TITLE.LIMITATION PURUANT TO SECTION 28(T) OF THE REAL PROPERTY ACT,1900.

THE BOUNDARIES OF THE LAND COMPRISED HEREIN HAVE NOT BEEN INVESTIGATED BY THE REGISTRAR GENERAL.

IT APPEARS THAT THE NORTHERN BOUNDARY IS RUNNING THROUGH THE CENTER OF A PARTYWALL ACCESS TO THE ADJOING PROPERTY WAS NOT AVAILABLE AT THE TIME OF THE SURVEY AND THE WIDTH CANNOT BE CONFIRMED, CROSS EASEMENTS FOR SUPPORT HAVE NOT BEEN CREATED OR REGSITERED FOR THE PARTYWALL.



Disclaimers on the survey plan



Surveys not requiring strict accuracies Clause 9 Surveying and Spatial Information Regulation 2017

(1) A surveyor may make a survey for a purpose not requiring strict accuracy under arrangements with a client, and in such a manner and with such marking as are agreed on between the surveyor and the client.

- If you undertake a survey not requiring strict accuracy, then it is recommended that a signed certification be placed on the plan (and in the electronic file) identifying that it is a survey under CI 9 of the Surveying and Spatial Information Regulation 2017.
- This option is not available to surveyors who are not registered, as they are neither qualified nor competent to determine the location of a land boundary (at any level on accuracy).



Environmental Planning and Assessment Regulation 2021

Development Applications (DAs) must comply with the Application Requirements as published on the NSW Planning Portal.

1.3 Requirements for a Site Plan

A site plan must indicate:

- a. the location, boundary dimensions, site area and north point of the land
- b. existing vegetation and trees on the land
- c. the location and uses of existing buildings on the land
- d. existing levels of the land in relation to buildings and roads
- e. the location and uses of buildings on sites adjoining the land.

1.4 Requirements for drawings

Drawings must include:

 a. the location of any proposed buildings or works (including extensions or additions to existing buildings or works) in relation to the land's boundaries and adjoining development

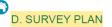


Council Requirements for DAs

- Many councils specifically require site/survey plans to be prepared and appropriately endorsed by a Registered Land Surveyor with their BOSSI identification number
- Examples include
 - Randwick City Council
 - City of Parramatta
 - Campbelltown City Council
 - Sutherland Shire Council
 - Dubbo Regional Council
 - Ballina Shire Council



	the Environmental Flamming and Assessment Regulation 2000
Survey Plan	A contour and detail survey plan less than 12 months old must accompany all applications except: Where a change of use is proposed with no external works Where the application relates to an internal fitout Where the application relates to signage mounted on an existing structure.
	The plan must be prepared by a registered surveyor and show their name, signature, Surveyors ID number and date. The plan must be in in a scale of 1:100 or 1:200 with scale bar shown and demonstrate the minimum following information:



This plan must be prepared by a Registered Surveyor and show the exact location of buildings and other features, at the same scale as the plans and elevations.

DEVELOPMENT APPLICATION MATRIX

Other Development



	A plan which shows:	Refer to matrix.
	Plan at 1:100, or 1:200 for larger sites.	
	Clearly nominate property boundaries.	
	Plan to show all existing structures on site.	
	Plan to show all existing vegetation on site.	
	Levels to Australian Height Datum (AHD), including contours	
Survey Plan	and spot levels at regular intervals on both the subject site and adjacent footpath/Council reserve.	
	Plan to show north point, drawn to true north.	
	Plan to show location of any easements/restrictions/services affecting the site.	
	Plan to show location of any traffic devices within proximity	
	of the subject site, and any services within the footpath area.	
	The plan must be prepared by a registered surveyor.	

BOSSI Convictions

- BOSSI has been successful in taking legal action against unregistered persons either undertaking land surveys or advertising that they can undertake land surveys for fee or reward.
- BOSSI cannot undertake legal action if the complaint is lodged more than 6 months after the date of the survey.
- Those taken to court include students who are part way through their tertiary qualification and have set up an ABN and entity name.
- Summaries are published on the BOSSI website
 https://www.bossi.nsw.gov.au/publications/disciplinary_actions/summary_of_prosecution_actions_and_outcomes



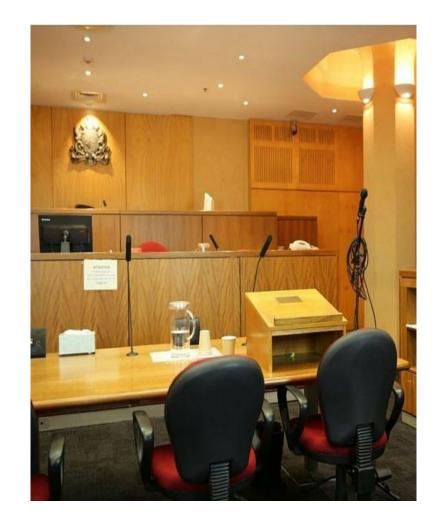
Penalties

If the defendant pleads 'guilty' and it's a first offence

- May get a discretionary Section 10 under the Crimes (Sentencing Procedure) Act 1999 - no conviction recorded, no penalty
- Good behaviour bond for maximum of 24 months.
- Court costs for you and BOSSI (typically around \$10k)

If the defendant pleads 'not guilty' but is found guilty in court and it's not first offence, or pleads 'guilty'

- Convicted of a criminal offence may restrict your ability to travel overseas (e.g. USA)
- Maximum fine is \$5,500
- Court costs for you and BOSSI (typically around \$10k)





Penalties

PUBLIC NOTICE

The Board of Surveying and Spatial Information is a Corporation constituted by the Surveying and Spatial Information Act, NSW, 2002 ("the Act") and a statutory body representing the Crown.

On 7 March, 2013 , in breach of the Act, advertised in this newspaper on page 6 for surveying work in the Tumut area. has now been prosecuted by the Board and on 18 February 2014 has pleaded Guilty to being an unregistered surveyor and placing the advertisement referred to above.

The Board warns persons that the use of unqualified persons to carry out Surveying work places at risk the reliability of the definition of the boundaries of their real estate. Qualified Surveyors are the only persons permitted to carry out surveying work and are the only persons entitled to sign plans for lodgement at the Land Titles Office (now known as the NSW Land & Property Information office).

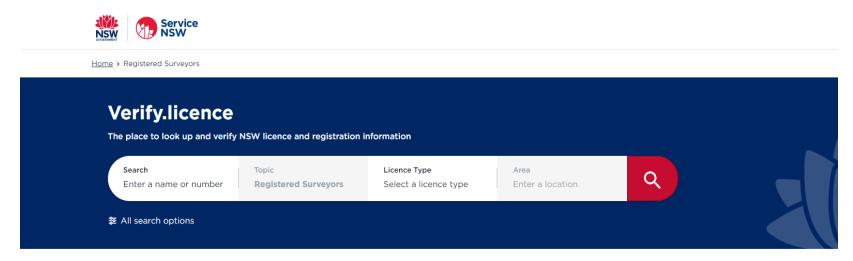
is not a Registered Surveyor with the Board of Surveying and Spatial Information and has never been so registered. He is not qualified to carry out surveying work in the State of NSW.



Find a registered surveyor

https://verify.licence.nsw.gov.au/home/BOSSI

What can I download?



Registered Surveyors Search for NSW registered Surveyor's licence and registration information. Look up the latest licence record information here before engaging a Surveyancer to complete work. The Surveyor register displays classes, and no conditions apply. Expand All Collapse All What will this register display?



Document Control



Edition	Date	Details
1	May 2018	Initial draft
2	September 2018	First published
3	September 2024	General update to content and formatting

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Author: Board of Surveying and Spatial Information

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bossi@customerservice.nsw.gov.au