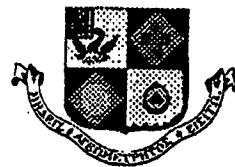
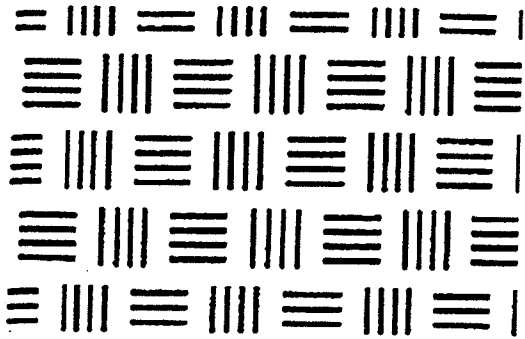


Surveyors Operations Manual

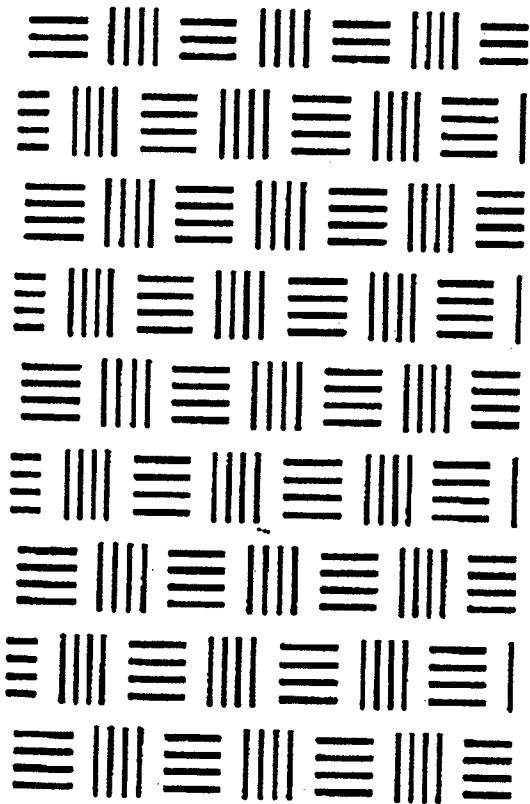


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Part A

Introductions and Index



**Introduction to the Surveyors Operations
Manual by the Reviewing committee.**

**Foreword notes by the President's of the
Surveyors Board of Queensland and
Institution of Surveyors Australia
(Queensland Division); the Director-
General's - Department of Lands and the
Department of Minerals and Energy
respectively.**



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Important Note

Information is provided as a guide for practitioners in Queensland and readers should adapt the information supplied to suit the circumstances of any particular project, locality or client, etc. The information should not be taken as a substitute for detailed professional advice from other disciplines where information from other disciplines forms part of the information provided in the Surveyors Operation Manual.

Published by : Surveyors Board of Queensland

**P.O. Box 810
Spring Hill Qld 4004**

Phone : 3839 7744

Late Notice

At the time of going to print, the Queensland Government advised changes to Department names. Please take note of the following:-

Department of Minerals and Energy is now Department of Mines and Energy and
Department of Lands is now Department of Natural Resources.

March, 1996

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Foreword by the President of the Surveyors Board

Foreword by the President, Institution of Surveyors Australia (Queensland Division).

Foreword by the Director General, Department of Lands

Foreword by the Director General, Department of Minerals and Energy.

Contents of Manual

Introduction

The Board Operations Manual (BOM) was released in November 1992. The content of the Manual was substantially reviewed in November, 1995, and additional material from the Department Minerals & Energy, added. The name of the manual was changed to the Surveyors Operation Manual (S.O.M.).

The SOM is a dynamic and fluid document. This review and additions result from input received from individuals, and the thrust to improve and expand on the information in the SOM.

The next review is scheduled for November 1996. You can assist in this by providing your ideas and associated reasoning, in writing, on changes and additions to the Board, for consideration by the contributors to the Manual, the Departments of Lands and Minerals & Energy, the Profession and the Surveyors Board.

Your material will receive consideration and should be forwarded to the Committee at P.O. Box 810, Spring Hill, Qld 4004.

Surveyors Operations Manual Committee
January, 1996



Dear Colleague,

This review of the Surveyors Operations Manual, comes about as a result of input from the Manual's users. Without this important feedback, the Surveyors Operations Manual would become a static document.

It has been decided to rename the Manual, the Surveyors Operations Manual, to reflect input into the Manual from both the Department of Lands and Minerals & Energy.

Surveying and the associated technology, continues to develop. The profession is cognisant of these changes and considers that the Surveyors Operations Manual should also reflect these developments in technology.

The Board considers that the Manual should become a reference document for surveyors. Discussions with senior officers of the Department of Minerals and Energy, has provided a positive response on incorporating instructions on mine and mining lease surveys into the Manual.

Please be aware that this is a fluid document. If you become aware of areas in the Manual where change or additional material is required, please become involved and advise the Manual's Review Committee of your thoughts and ideas.

EC COTTRELL

President
Surveyors Board Of Queensland

January, 1996



THE INSTITUTION OF SURVEYORS, AUSTRALIA, QUEENSLAND DIVISION

13th February 1996.
Dear Colleague,

HEAD OFFICE - BRISBANE
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101 Wickham Terrace,
Brisbane, Q 4000
GPO Box 3175,
Brisbane, 4001
Telephone: (07) 831 6668
Fax No.: (07) 832 6398

The Institution of Surveyors represents over 700 Professional Surveyors practicing in Queensland. The primary objective of the Institution is to improve the working environment for all Surveyors and in particular its members.

To this end the Institution has input into several areas:

- * Education
- * Legislation
- * Continuing Professional Development
- * Promotion
- * Professional Practice

The Institution considers it is important for standards of professional practice to be set and maintained within the profession. This occurs by administration of the adopted Code of Ethics, representation on Legislative Panels and Industry Associations and input into the formulation of Standards of Recommended Practice.

To date Standards of Practice have been found in numerous areas and it is appropriate for them to be amalgamated into a single document: **The Surveyors Operations Manual**. This manual replaces the current Board Operations Manual and has been collated with inputs from the Surveyors Board, Professional Associations, Government Instrumentalities and other stakeholders.

The Institution endorses the adoption of this Manual by all Professional Surveyors.

The document is considered neither Comprehensive or static. Whilst the principles enunciated are often prescriptive there may be circumstances where individual sections may conflict or be ambiguous. In these situations the final determination may rely upon the professional judgment of the surveyor.

With the passage of time the document will require revision and the Institution welcomes criticism, suggestions and input from all surveyors so the document will accurately reflect current standards of practice.

Yours Faithfully,

**G.L. HARGRAVE
PRESIDENT.**

DEPARTMENT OF NATURAL RESOURCES**Office: Postal Address: Ausdoc:**

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Cnr Main & Vulture Sts

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Locked Bag 40

Coorparoo Delivery Centre

Coorparoo Q 4151

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Brisbane



2nd April 1996

To the Reader,

The Survey Requirements of the Department of Natural Resources is a compendium of requirements, based on the legislation, policy and procedures affecting cadastral surveys in Queensland.

The document distinguishes between mandatory requirements, usually based on legislation or departmental policy, from those other provisions which provide guidance subject to the professional judgement of surveyors.

It has been prepared to provide cadastral surveyors with a guide to the requirements of the Department of Natural Resources in its role as a survey plan registering authority in Queensland.

I commend the document to you.



T Fenwick
Director General

**DEPARTMENT OF MINERALS AND ENERGY**

OUR REF.

YOUR REF.

Queensland
Minerals &
Energy Centre
61 Mary Street
Brisbane QLD 4000
G.P.O. Box 194
Brisbane QLD 4001
Telephone: (07) 3237 1435
Facsimile: (07) 3229 7770

26 OCT 1995

The President
Surveyors Board of Queensland
PO Box 810
SPRING HILL QLD 4004

Dear Sir

On 1 May this year significant amendments to the Mineral Resources Act came into force.

The major change to affect surveyors is the removal from the Act of the requirement for survey before grant of a mining lease. However, surveys of mining leases and other tenures will still be necessary in many cases. The Department is eager for the requirements of mining legislation and Departmental standards and policies to reach as wide an audience of surveyors as is possible.

To this end, the offer of the Surveyors Board of Queensland for the Department to contribute to the new *Surveyors Operations Manual* has been accepted with thanks. I am pleased to participate in this example of cooperation between a statutory board and two government departments.

The Department's chapter in the new *Manual* is designed to acquaint surveyors with the most relevant parts of the Acts, Regulations and Departmental policies. This replaces the Department of Minerals and Energy's survey *Handbook*. It is essential for surveyors who are working under the *Mineral Resources Act*, or any other Act dealing with mining or exploration, to have a thorough understanding of the legislative requirements.

Yours faithfully


ROSS WILLIMS
Director-General



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Specifications for the various types of Technical Projects which candidates for registration can submit to the Surveyors Board as evidence of technical competence in the appropriate fields of surveying.

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Directions and Recommended Practices under the *Surveyors Act 1977* to assist surveyors in the performance of their work.

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Gathering of information, evidence and how a complaint may be progressed. Counselling and re-education under the Board's guidance, arbitration, "second tier" procedures and the Surveyors Disciplinary Committee. Publication of the outcome.

Part G

Surveyors Board Forms

Specimen copies of all forms used by the Surveyors Board and approved by the Board under the Surveyors Regulation 1992.

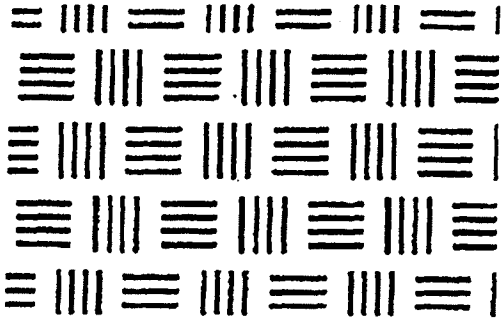
Parts H - X
Reserved for future use

Part Y
Surveyors Act

Use this Part to file your updated copy of the Surveyors Act obtained from the Government Printer - GOPRINT

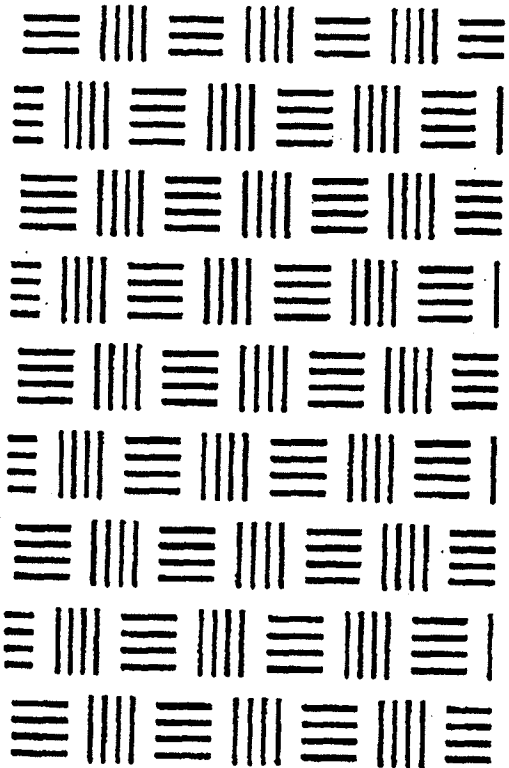
Part Z
Surveyors Regulation

Use this Part to file your copy of the Surveyors Regulation obtained from the Government Printer - GOPRINT



Part B

General



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**Statements of Policy adopted by the
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to time and Memoranda to Registered Persons**

B2
**General and
Technical Information**

The Surveyors Board Of Queensland

**P.O. BOX 810
SPRING HILL QLD 4004**

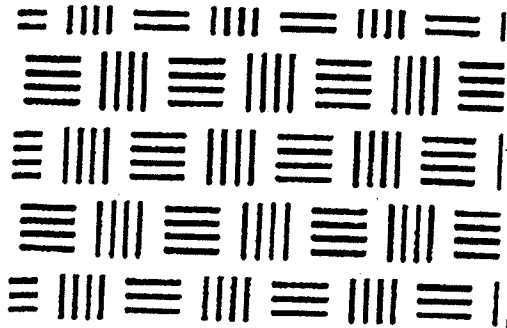
Phone: 3839 7744

IMPORTANT NOTE

Should a conflict arise between these Guidelines and various Acts and Regulations referred to, then the provisions of those Acts and Regulations will prevail. The Guidelines shall not be taken as a substitute for detailed professional advice.

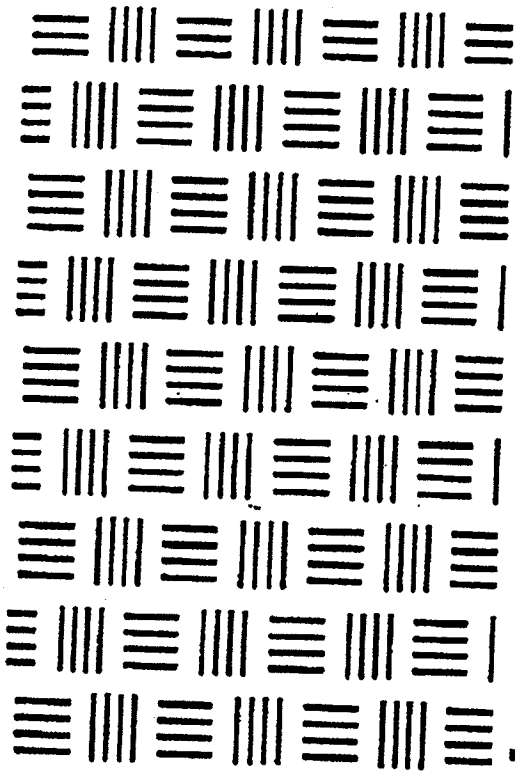
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Part B1

Policy Statements and Notices



Statements of Policy adopted
by the Surveyors Board of
Queensland from time to time
and
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Policies

1.0 Surveyors Board of Queensland - Corporate Objectives

Mission Of The Board

The Board ensures public confidence in surveying.

Objectives Of The Board

In all the Board's functions cognisance would at all times be given to equal opportunity.

EDUCATION To accredit educational and training programs to achieve the highest level of academic standard and professional competence in surveying.

REGISTRATION To implement a registration model that recognises multi-skilling and staged career path development.

STANDARDS To establish and monitor surveying standards which comply with national standards and which are directed toward assuring accountability to and protection for the public.

ARBITRATION To develop arbitration processes with the profession, to resolve disputes impacting on the community.

DISCIPLINE To implement effective investigatory and disciplinary procedures dealing with breaches of the Surveyors Act.

GOVERNMENT LEGISLATION To ensure that the enabling legislation is administered and pro-active advice is provided to government on existing and proposed legislation impacting on surveyors.

RESOURCES To institute a funding model which reflects the beneficiaries of the Board's activities.

December, 1995.

Memoranda

Memorandum No 1/93

SUBJECT:

Complaint by Registered Person Against a Registered Person.

The Board from time to time, receives complaints from Surveyors against other Surveyors. While the nature of the complaints vary, a considerable number relate to the accuracy of measurements and/or method of reinstatement of cadastral boundaries. The Board is bound to investigate all complaints received. This involves the commitment of considerable funds and resources.

In matters involving a difference between two Surveyors, the Board believes that where possible, every effort should be made to resolve the matter between the parties concerned. This also relates to disputes involving the Registering Authorities.

If a satisfactory resolution cannot be reached between the parties, then a complaint to the Board is appropriate. A complainant, when lodging a complaint to the Board, should ensure it is accompanied by a thorough report including plans, sketches and photographs detailing the facts.

While it is not intended to deter Surveyors from lodging complaints, the alternatives outlined above and within Part F of this Manual, should be first considered.

See also Section 23 of the Surveyors Regulation 1992.

March, 1993

Memorandum No 2/93

SUBJECT:
Body Corporate Registration.

The Surveyors Act 1977 at Section 47 provides for certain penalties for a person who holds out as a surveyor unless the person is registered as a surveyor under the Act. The section also prohibits the use of the words "registered", "licensed", "consulting", "consultant" in connection with the word "surveyor", unless the person is licensed or registered under the Act.

Section 47A of the Act provides for the steps to be taken by a person intending to practice surveying under a business name.

The Acts Interpretation Act 1954 provides the following meaning on "Person" or "Party" - Includes a body corporate. Further, the Act provides that every word in the singular number shall be construed as including the plural number, unless the contrary intention appears.

The Board will continue to monitor the operations of firms, especially where advertising and letterheads are concerned, to ensure that 'persons' are appropriately registered.

March, 1993.

Memorandum No 3/93

SUBJECT: Professional Behaviour By Registered Persons.

The Board continues to deal with Registered persons, who fail to maintain even the basic standards expected of professional and competent surveyors. There is a demonstrated lack of professionalism displayed by a minority of practising surveyors, some with long standing experience. While these surveyors represent only a very small part of the profession, their performance is reflecting poorly on the profession as a whole.

The Board has resolved that it will move with firmness and determination in all cases of undesirable or unprofessional conduct brought to its attention. Matters of concern include:

- (i) standard of survey work carried out in the field and the supervision thereof
- (ii) staffing and conduct of branch offices (often managed by unqualified personnel)
- (iii) non compliance with the provisions of the Surveyors Act and Regulation, with particular reference to the lodgement of plans for registration without the survey having been completed
- (iv) the apparent widespread practice of not lodging copies of Identification Surveys, see also Memorandum No. 8/93.
- (v) an apparent lack of professional responsibility demonstrated by some surveyors appointed as examiners and assistant examiners for Professional Assessment Projects
- (vi) other matters that come to the attention of the Board from time to time.

The Board wishes to remind Surveyors that the continuation of the registration system depends largely on its being able to continually demonstrate that a high level of competency exists amongst registered persons. The continued support of all Surveyors is necessary to identify and address examples of unprofessional behaviour.

March, 1993.

Memorandum No 4/93

SUBJECT:

Notice on charge of Section 41(3) Fee and Restoration Fee.

1. The Section 41(3) fee is to be charged for renewal of registration in cases where (i) renewal has not been applied and paid for by the last day of November in each year as required by Section 41(2) and (ii) application for renewal is made within the 12 month period following the lapse of registration.

Except in cases where prior advice has been provided to the Board and the reasons submitted are acceptable to the Board, or where exceptional circumstances prevailed, the Board may use its discretion. In these cases the Restoration Fee and normal Registration fee are charged.

2. The Restoration fee is to be charged in such instances where registration has been cancelled by the Board and application is being made to be restored to the register.

This fee is also to be charged in such instances where registration has been allowed to lapse for more than 12 months and application for restoration is made within a period of not less than 12 months nor greater than 2 years after the lapse of registration.

The restoration fee is charged in addition to the prescribed registration fee.

3. New Application If registration has been allowed to lapse and more than 2 years pass before restoration is again sought, new applications for registration must be submitted and these will be assessed by the Registration Committee.

If in these cases the application is successful, the original registration number will be continued.

March, 1993

Memorandum No 5/93

SUBJECT: Board Philosophy in Dealing with a Complaint.

The intent of the Surveyors Act 1977, at Part IVA, is that the Board considers the registration of persons to ensure that the public interest is protected in relation to surveys and persons carrying out those surveys. That is, a person is registered with the Board, in order to safeguard the public interest.

The Act has not been written to invoke disciplinary action of a punitive nature. Judge Morley in a Surveyors Disciplinary Committee hearing in August, 1991 said of the Surveyors Act 1977, 'the Committee's powers are not punitive powers but are powers which are protective of both the standards of the surveyors' profession and of the public interest in the maintenance of those standards'.

The powers under S61 are protective and the section sets out the disciplinary actions. Judge Morley went on to say that the generally accepted meaning of the verb "discipline" is "to bring under control..., to chastise...". As a substantive, "discipline" has the corresponding meaning of "the training of scholars and subordinates to proper conduct and action by instructing and exercising them in the same". The adjective "disciplinary" means "pertaining to or promoting discipline". See Shorter Oxford English Dictionary.

Within the context of the Act, both the expression "disciplinary action" in S54(c) and the powers defined by S61 as those able to be exerted by that "action" are parts of a law having a special application to the relationships between any given registered surveyor, his or her professional colleagues, those who seek the professional services of a surveyor or may do so, and that part of the public interest upon which the rendering of those professionals services will or may have an impact.

The Board for a number of years now, has approached its duties in relation to complaint resolution, along the lines that the public interest must be protected and not disadvantaged. Where there is an error in the survey, it must be corrected and the registered person should be appropriately re-educated and/ or retrained.

Many investigations are able to be concluded through discussion and co-operation, as the registered person is able to provide appropriate answers or rectify the matter of concern. To this end, the Board considers that registered persons should assist the Board in the conduct of an investigation. The person against whom a complaint is laid is innocent and the Board's charter is to gather all the facts pertaining to a complaint. Co-operation from all parties who may have relevant information to a complaint, is essential in determining an appropriate outcome.

March, 1993.

Memorandum No 6/93

SUBJECT: Supervision

An increasing number of complaints against Surveyors received by the Surveyors Board can be traced to a lack of adequate supervision by the Registered person responsible for a survey performed by other technical staff. The Board, when carrying out its investigations, has discovered a wide range of interpretations by surveyors as to what was required in the Surveyors Regulation 1992, Part 3 and specifically Section 18, 'Performance of Surveyors'.

Supervising Surveyors should also note the requirements of Section 20 'Placement of survey marks', in the Surveyors Regulation 1992.

The Board considers that the interests of the public must be protected and that the supervising surveyor must fulfil his professional responsibilities when supervising others.

The Surveyors Regulation 1992, has clarified what was stated in the 1978 Regulations and the surveyor shall continue to:-

- "(a) ensure that the survey is performed in accordance with the regulation and to the standard of accuracy prescribed;
- (b) ensure that any part of a survey that is not performed by the Surveyor personally is performed by persons for whose work the Surveyor accepts responsibility;
- (c) ensure that the survey is carried out under the immediate personal supervision of a Surveyor who shall attend in the field to the extent necessary to give effective supervision to the carrying out of the survey in accordance with the Regulation and any relevant Directions to Surveyors issued by the Board".

In considering an appropriate definition for the nature and extent of supervision, the Board was mindful of two recent findings. The first emerged out of a disciplinary hearing in Queensland presided over by Judge Morley in August, 1991.

In considering the nature of professional services offered to the public, Judge Morley commented that skills and professional services offered by surveyors are personal and that "the surveyor's vocation is a profession. The Surveyor's professional services are not business or trade services which are able to be performed by representatives, agents or employees."

The second relevant case involved the character and extent of supervision by a Surveyor, brought into question during an appeal hearing in the District Court of NSW against a decision by the Surveyors Board of NSW.

The appellant submitted that in relying upon the considered knowledge and experience of a person who was not a registered surveyor, he was taking reasonable precautions to verify the accuracy of a survey. He further submitted that he (the appellant) did not need to attend upon the land and did not need to give personal supervision to the field work. It was submitted that he was entitled to rely upon un-supervised field work in drawing the plan and certifying as to the accuracy of the survey.

These submissions were rejected by the presiding judge.

As part of the judgement it was stated that "...where a survey is not made by the surveyor himself, but is made under the supervision of a surveyor, Regulation 7 (of the NSW Act) fairly and squarely imposes upon the surveyor a requirement to personally attend on the land ("the ground") to be surveyed and to personally supervise ("exercise...immediate oversight and personal direction") the survey of that land. I cannot see how a surveyor could meet the requirements of Regulation 7 without attending on the land and supervising the survey of that land. I cannot see how a surveyor, if he or she did not make the survey himself or herself, could certify as to the accuracy of the survey without attending on the land and supervising the survey of that land".

Neild J.R. went on to say that he was satisfied that the appellant (a) failed to attend on the land; (b) failed to supervise the field work and that these departures plus other constituted misconduct in a professional respect.

The Surveyors Regulation 1992, provides for a definition of 'supervision' and at Section 18 the regulatory requirement. This now implements the policy developed by the Board and circulated to registered persons in September, 1991. The policy is reprinted hereunder.

SUPERVISION

"Supervision means the immediate personal oversight by the responsible surveyor of the planning and execution of all surveys, including the method of measurement and placement of survey marks, the preparation of the plan of survey and, in the case of a cadastral survey, the examination of evidence of the limits of ownership relied on in the fixation of existing boundaries."

March, 1993

Memorandum No 7/93

SUBJECT:

Guidance to surveyors for the Establishment of and Connection to a Co-ordinated Survey Framework

The Surveyors Board is conscious that the use of total stations and computerised drafting systems are now commonly used within the profession. As surveyors derive co-ordinates during a survey, these have a potential use in GIS applications.

Many organisations, including local authorities, are investing in information systems using GIS technology. The effective and efficient use of survey derived co-ordinates in land information systems will rely on survey data incorporating points which are spatially unique.

This requires the establishment of suitable standards and procedures for the determination of AMG & AHD values. Further, the placement and connection to suitable Permanent Survey Marks (PSM) and the presentation of co-ordinate values on the face of plans of survey are necessary, if the benefits of survey integration are to be fully realised. Many of these standards and procedures are already in place.

With respect to placement of and the connection to PSM's, the Board is working with the Department of Lands to develop a strategy, for the systematic introduction of a dense network of co-ordinated PSM's, particularly in rapidly developing urban areas. The establishment and recording of control mark information in a readily accessible data base is also part of this strategy. This will assist surveyors in gaining access to reliable and up to date information.

It is proposed that the strategy will be completed by 30 June 1993. Once implemented, it is the Board's intention to require strict compliance with the relevant provisions of the Survey Co-ordination Act 1952 and the Surveyors Act 1977 with respect to the establishment of and connection of surveys to PSM's.

In the meantime, GPS technology now provides the profession with the capacity to generate co-ordinated points effectively and efficiently. Standards and specifications that must be met are defined in the Board's Operations Manual, Special Publication No. 1 of the Intergovernmental Advisory Committee on Surveying and Mapping (ICSM) and the standards and specifications of the Department of Lands.

These publications also include details of suitable GPS field techniques, although these are soon to be republished, given the recent development in GPS "rapidstatic" survey methods. Details of the appropriate method of publishing co-ordinate values on the face of a plan of survey are contained in the Survey Plan Guideline section of the Board's Operations Manual.

Where a PSM is to be co-ordinated, it should be done by a closed connection, to Class C standard (as per the IGSM publication) to at least two stations on the

existing State control network. Where cadastral surveys are conducted using GPS techniques in accordance with the Surveyors Regulation, 1992, Section 29(1), connection to the State Control Network is mandatory where existing control is within 50 km.

Despite the revolutionary and cost effective solutions that satellite technology offers, it should in no way compromise the traditional professional and ethical values that are fundamental to good survey practice. Independent self check, closure and calibration etc, still need to be a consideration, despite the techniques adopted.

With respect to surveys in areas lacking survey control, the Surveyors Board encourages the profession to undertake the establishment of a network of Permanent Survey Marks (preferably co-ordinated) to facilitate the introduction of survey integration and underwrite the best utilisation of Geographic Information Systems.

In summary, as the establishment of denser co-ordinated survey marks progresses, and access to information relevant to their currency, co-ordinated values and accuracy becomes more readily available, the Board will require surveyors to comply with the requirements of the Survey Go-ordination Act 1952 and the Surveyors Act 1977.

While the Board has not finalised its policy in these matters, the above conceptualises the current thinking.

February, 1993

Memorandum No 8/93

SUBJECT:

Identification Surveys

Under the Surveyors Regulation 1992, a Licensed Surveyor, when carrying out a survey for the purpose of identifying or remarking boundaries of land (Section 26), is required to prepare a 'plan' and forward a copy of such plan to the Registering Authority within sixty days after the completion of the survey (Section 30).

Identification Survey plans must be endorsed with the standard Form 13 Certificate and signed by the Licensed Surveyor.

Despite amendments made to the Survey Plan Guidelines in 1992 to reflect this, the Board is finding increasing evidence that the Form 13 Certificate is not being used for Identification Surveys in many instances. Surveyors should ensure that all Identification Survey Plans are endorsed with the correct certificate. The Board is further concerned that in some instances, accepted professional standards with respect to reinstatement, marking and plan presentation, are not being maintained by some Licensed Surveyors.

The Board continues to note an increase in reports, that plans of surveys effected under the Surveyors Regulation 1992 are not being deposited in accordance with the requirements of Section 30.

The Board has resolved to investigate these reports and to pursue disciplinary action against any Surveyor who has not complied.

June, 1993

Memorandum No 9/93

SUBJECT: Group Title Plans of Subdivision

The Surveyors Regulation 1992 set out the requirements for survey. Group Title Subdivisions are one type of survey. The surveyor has certain responsibilities and for GTP's, these include, amongst others:

1. There is no difference between a Surveyor's responsibility for the performance of a Group Title Subdivision and the performance of any other cadastral survey.
2. It is acknowledged that the marking of some Lot corners on Group Title Subdivisions is not always feasible. However, it is important that sufficient recovery marks are placed in order to facilitate later reinstatement.
3. These may include surveyed connections to improvements situated on the land, at the time of survey.
4. Connections to Recovery Marks should be recorded in an appropriate manner.
5. The reinstatement of the external boundaries of the parcel must be recorded. (eg, by Identification Survey or Resurvey).
6. Encroachments are to be shown and they are to be dimensioned.

May, 1993

Memorandum No 1/96

SUBJECT:

Guidance to Surveyors in Relation to Survey Infrastructure

This memorandum should be considered as an update to Memorandum 7/93 "Guidance to surveyors for the Establishment of and Connection to a Co-ordinated Survey Framework". That memorandum recognised the need for a more integrated approach to surveys given the increased reliance by many organisations on survey data in GIS applications.

The previous memorandum reflected the legislative environment at the time. A proposal to change existing legislation is now progressing and the Government plans to have legislation in relation to Survey Infrastructure ready by the middle of 1997.

In the interim, the Board continues to support Survey Infrastructure initiatives which deal with practical survey issues such as connections to Permanent Survey Marks and reference to AMG and the AHD.

Since the publication of Memorandum 7/93, the Department of Natural Resources (DNR) has made considerable progress on establishment of Queensland's geodetic network and on making survey control information more easily accessible.

From a state wide perspective, the 100km GPS network will be completed in the 1996/97 financial year. This supports the move to a geocentric datum by the year 2000 and establishes a strong framework for more local geodetic networks. Another important factor has been the significant progress in the development of 3-5km GPS networks in many urban areas throughout the state. Considerable work by many organisations, including Local Authorities and private survey firms, has contributed to increasing the density of the network providing a consistent reference frame for local surveys.

In relation to access to information, the Basic Land Information Network project within DNR now enables efficient, on demand production of key maps of survey control. In recent months imaging of PSM and Control Station Summary sketches has been completed. Coordinate and height information and the corresponding images are now available on line for any PSM anywhere in the state at any land service centre.

In relation to technical standards, the Board continues to support the desirability of linking to national approaches such as those promoted by the ICSM. ICSM continues to revise and update its "Standards and Practices for Control Surveys" (Special Publication 1). During 1996, ICSM also released "Best Practice Guidelines on the Use of GPS for Surveying Applications".

It is intended that these guidelines will be supplemented with local content and released as part of a future update to the SOM during 1997. In the interim the Board supports the principles of the ICSM Best Practice Guidelines when undertaking cadastral surveys using GPS, including the need to connect to existing control to facilitate the traceability of the GPS measurements.

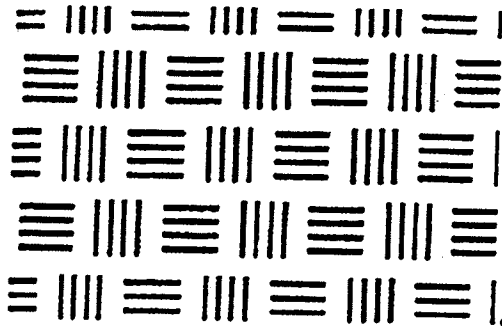
The Board supports a DNR proposal to develop a section of the SOM to pull together and further document technical standards in relation to Survey Integration once the relevant legislation progresses. In the interim, the Board continues to support the statements in Memorandum 7/93 regarding compliance to Class C standard (ICSM SP1) when PSMs are to be coordinated.

Also, as an interim measure, the Board supports the November 1996 amendments to the Survey Requirements of the DNR which change the status of two important sections relating to Survey Integration from advisory to mandatory. These sections are Page E3-28 *Section 1.49 Meridian* and Page E3-30 *Section 1.54 Permanent Survey Marks*.

The requirement for connection to PSMs on larger surveys furthers the concept of "integratable surveys" whereby cadastrally connected PSMs can be coordinated using GPS techniques which are now highly efficient. Such an approach allows surveys to be brought into and maintained in a common reference frame (presently realised by AMG and the AHD).

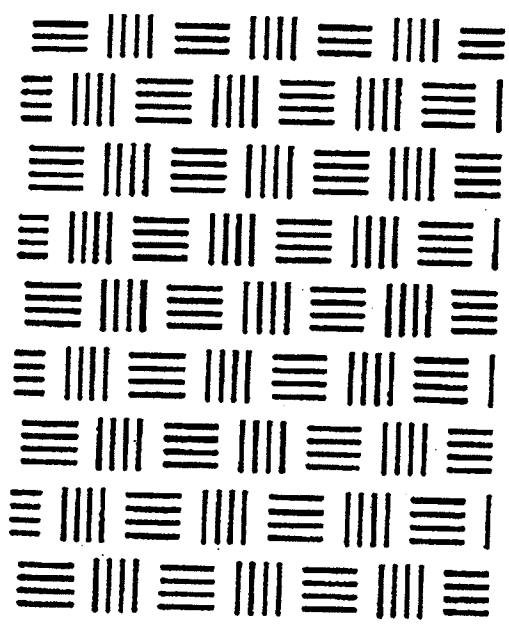
Given the increasingly important role played by Local Authorities and other significant users of information systems based on survey data, the Board intends to work with such organisations and the registering authorities to continue to progress Survey Integration matters.

November, 1996



Part B2

Information



General Information

Technical Information



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Introduction

The Surveying Profession, through its various representative bodies, provides both general and technical information, as a further resource for surveyors. The information includes criteria, opinions, procedures and practices, to assist the professional surveyor in making considered judgements on surveys and associated surveying advice.

It is the responsibility of each surveyor, to address each survey instruction with diligence and care. The specific circumstances are paramount and must be addressed generally and specifically. The information provided is but one source, it may not be complete or be relevant to each circumstance. The professional and competent surveyor would carry out adequate research to satisfy themselves on the particular matter being addressed by them, prior to giving their advice.

**Surveyors Operations Manual Committee
January, 1996**

General Information

1.0 Historical Marking

(Section 26 Surveyors Regulation 1992)

During survey, consideration shall be given to historical marking.

Survey legislation prior to 1977 provided for the following types of marking.

1.1 Pointer Pegs

Adjacent to portion and road corners in country lands, split hardwood pegs, free of sap wood, twelve inches (300mm) long and one and a half inches (40mm) square, were driven level with the surface of the ground. These pegs were aligned with the theodolite in the direction of the boundaries, and driven at exact distances, generally of twenty links (4.023m) from corner posts.

Pointer pegs first appeared in the Queensland General Directions of 1878. They continued in use up till the 1950's (not placed by all surveyor's) and did not appear in the 1964 Rules and Directions for the guidance of Surveyors.

1.2 Reference Tree

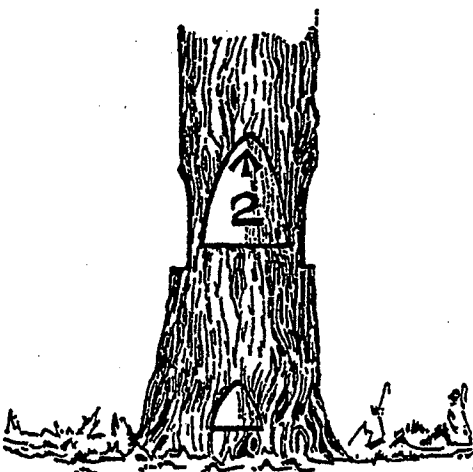
Reference trees were used for the early surveys in Queensland from 1839 onwards but it was not until 1898 that surveyors were required to cut a bench mark at the base of the tree for a traverse connection to a property corner. Prior to 1898, surveyors took connections to the shield on the tree.

Reference trees are still considered to be excellent reference marks, particularly in rural areas without extensive closer settlement. Surveyors should be aware of Vegetation Protection Orders, environment considerations and in particular the ecology balance for mud-flats, mangroves and the like.

When reinstating corners, if the reference tree appears to have been destroyed, decayed or burnt, a diligent search must be made for the butt of the tree or remains of the tree.

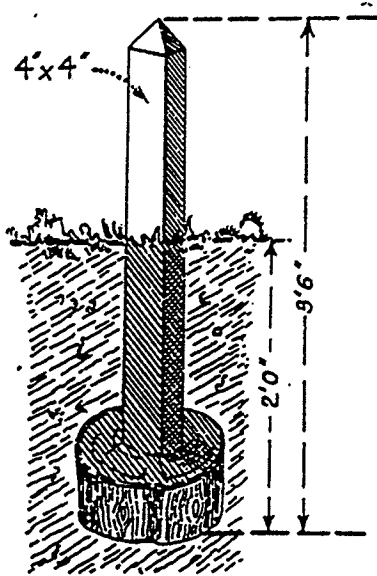
When a tree is used as a reference mark, the bark should be removed in the form of a shield about 1.5 metres from the ground and exactly facing the corner. On this barked space a broad arrow and the lot number are cut into the heart-wood. The bearing and distance should be observed from the corner to a chisel cut in the centre of a bench mark cut well into the heart-wood at the base of the tree and exactly facing the corner.

As of 1978, surveyors reverted to reference from corners to trees and not from trees to corners.



*Corner Tree -
Country Portion*

1.3 Survey Post



A survey post was cut from hardwood, three feet six inches (1.05m) long and dressed to no less than four inches (100mm) square, with a butt six inches (150mm) long and the full round size of the timber left on the bottom of the posts and the top pointed as indicated in the diagram.

Survey posts are still acceptable for marking corners, particularly in rural areas where there is no immediate likelihood of the fencing of boundaries proceeding.

When reinstating a corner where a survey post had originally been placed but now appears to be gone, a diligent search must be made for the butt or remains of the survey post below ground level.

Corner Post. Country Portion
showing butt.

Survey posts came into general use on country portion surveys by 1870 before this "large stakes" were in use.

1.4 Lockspits

The word 'lockspit' derives from the ancient terms for whole ('lock') and turf ('spit').

The principal corners of the portions were marked by corner posts. Outside a fifteen inch (37mm) radius from the posts, lockspits three feet (900mm) long and six inches (150mm) deep were dug in the direction of boundary lines.

On very stony lands, rows of stones placed in the direction of the surveyed line were substituted for dug-out lockspits. In dense scrubs, or where soils were of such a nature that lockspits quickly filled up and consequently were useless as permanent indicators of direction of survey lines, they were omitted.

Lock spits first appeared in the New South Wales Instructions for Marking Crown Land by Government Surveyors in 1853 but have been used long before this in New South Wales and overseas as marking for boundaries. The first appearance of them is in the 1878 Queensland General directions and they were used up until the 1950's but were not included in the 1964 Rules and Directions (They were rarely used in the 1940's and 1950's).

1.5 Line Pegs

At distances not exceeding ten chain (201.168m) apart, and always so situated as to be visible one from the other, split hardwood pegs one foot six inches (450mm) long and two inches (50mm) square, clear of sap wood, were aligned with the theodolite and driven fourteen inches (350mm) into the ground.

Line Pegs first appeared in the 1878 General Directions of Queensland and their use continues right up to present time.

1.6 Fence Traverses - Grazing Farms

The survey legislation of 1964 (Rules and Directions) detailed the method of traversing and marking fences that were used as the boundaries of Grazing Farms.

In the survey of Grazing Farms, fences were traversed only and suitable fence posts (preferably strainer posts), adopted as corners or corner pegs or posts placed near or under the fence. The straight lines between corners were computed and adopted as boundaries, care being taken that the distance of the fence from the computed boundary nowhere exceeded about 20 links (4m) and that the corners were not more than 80 chains (1600m) apart.

The fence posts so adopted were marked with a broad-arrow, and, if no tree was available, marked with the portion number also, iron pins were placed in accordance with Clause 58 of the Rules and Directions.

As it was desired to preserve traverse lines along fences forming portion or road boundaries in grazing area, such traverses were marked by placing a hardwood peg two inches (50mm) square and eighteen inches (450mm) long under or beside the fence opposite each picket, the chainage and offset in each case being recorded in the field notes and the nearest convenient tree blazed on three sides.

As some uncertainty seemed to exist among surveyors as to the method of traversing and pegging fences to be adopted as boundaries of Grazing Farms, the following rules were to apply:

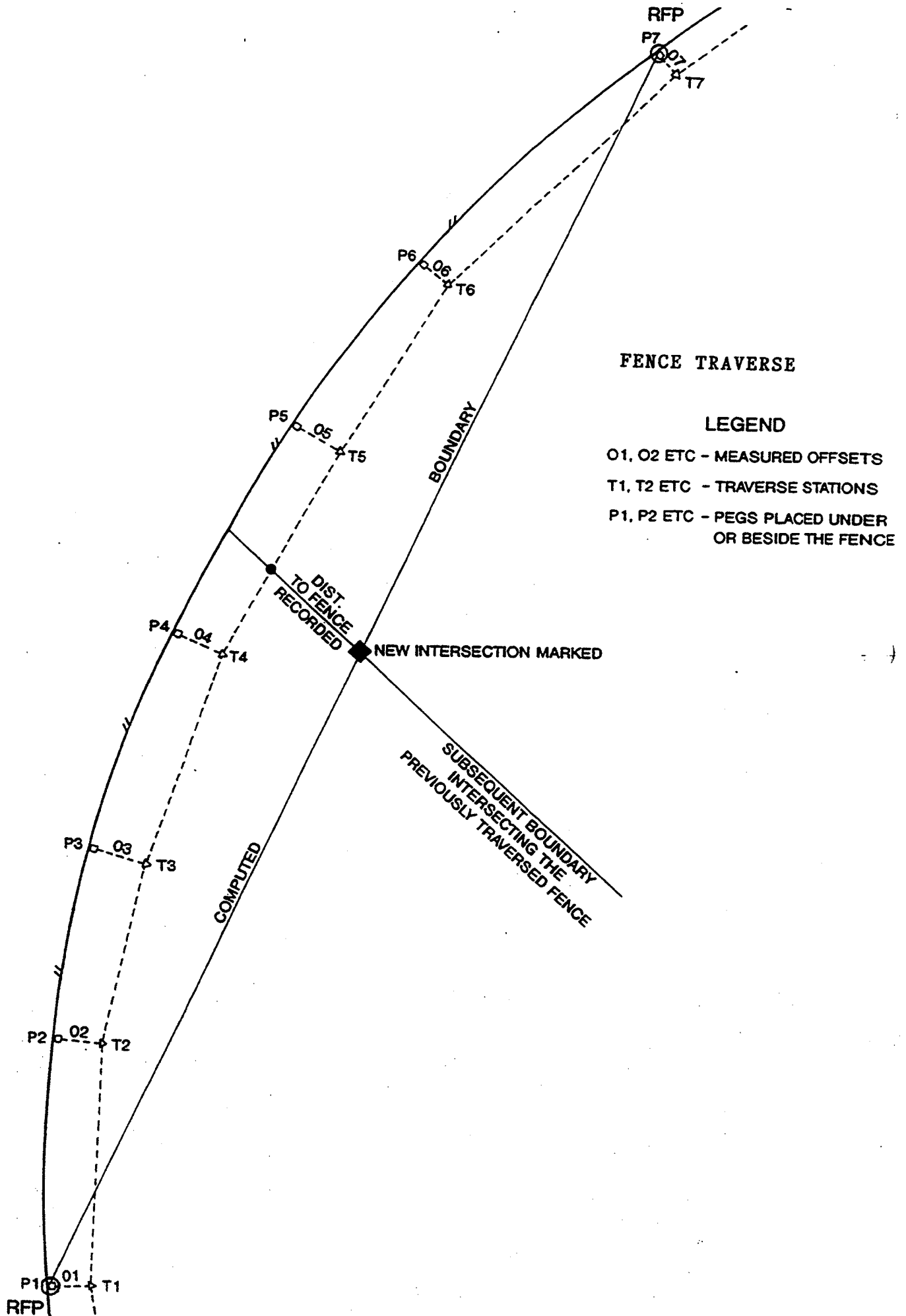
- 1.6.1 As the fence is the physical boundary, the computed lines between corners were to be kept as close to the fence as possible so that areas were not greatly affected
- 1.6.2 The traverse lines were to be kept reasonably close to the fence to facilitate the placing of pegs under (or beside) the fence;
- 1.6.3 Pegs two inches (50mm) by two inches (50mm) by eighteen inches (450mm) were to be placed under the fence square off pickets not more than 20 chains (400m) apart;

- 1.6.4** A corner peg 3 inches (75mm) by 3 inches (75mm) by 18 inches (450mm) was to be placed under the fence where there was a definite bend, or, the strainer post adopted, but otherwise corners were to be established not more than about 80 chains(1600m) apart;
- 1.6.5** In order that the traverse lines could be easily re-established, a careful offset was to be taken from the traverse line to each peg and recorded in the field notes. (No attempt was to be made to place intermediate pegs on the computed through line);
- 1.6.6** The computed line, fence and pegs were shown in the centre column of the field book - the traverse lines on the relative side;
- 1.6.7** When intersecting or commencing on a previously traversed fence, the traverse line was to be established and the corner placed on the original computed line;
- 1.6.8** When fence traverses and intersections as above were required by instructions of even date- the post or peg was to be placed under the fence and used as a corner when computing the boundaries along the fence line.

It is important for surveyors to realise that pegs found under or beside such fences were not necessarily on the boundary which is the straight line computed between the adopted corners.

The relationship between the pegs found and the computed boundary can be calculated from the information supplied by the surveyor in his field book.

See Diagram on next page.



2.0 Table of the Counties of Queensland

TABLE OF THE COUNTIES OF QUEENSLAND

Showing the COUNTY VARIATION and the Location (with Latitude and Longitude) of the INITIAL POINT for each.

Trigonometrical Station shown *
 Astronomical Station shown †
 Latitude Station shown ‡

Revised to 1st August, 1963.

NOTE:—DATUM FOR LONGITUDE: No. 1, BENCH MARK, SURVEY OFFICE, BRISBANE—LONGITUDE 153° 01' 29".6 E.

County	Initial Point	Latitude S.	Longitude E.	County Variation
		° ' "	° ' "	°
Abbotsford	Station S (G. 250,199) on Rabbit fence, at north-west corner Ben Castle Block	26 39 53.0	141 23 56.4	5
Aberdeen	North corner portion 2, parish of Goongary	25 56 37.9	149 18 58.3	7
Albany	South-east corner View Hill Block, at tree marked broad-arrow over A over V	21 43 32	146 16 11	6
Albion	North-west corner portion 8, parish of Owl's Nest	21 23 42.6	142 46 07.6	5
Allison	North-west corner portion 5, parish of Collins	21 31 14.4	141 03 40.4	4
Amaroo	50-mile peg (Bedford's Survey, Trig. S. 9)	23 05 12.8	139 08 48.7	4
Archer	Tree marked broad-arrow over MD6 over B5, at north-west corner Meta Downs No. 6 Block	13 25 28	142 31 12	5
Argylla	Intersection peg at 161532 feet on the old Cloncurry—Mount Isa Road	20 41 12.7	139 53 36.2	4
Aubigny	Bloodwood Hill *	27 22 48.10	151 34 35.71	8
Auburn	North corner Police Reserve (R. 57), town of Chinchilla	26 44 28.7	150 37 29.5	8
Ayrshire	Winton †	22 23 11.94	143 02 25.49	5
Balarga	North-east corner Koolatah No. 8 Block	15 10 20	142 42 09	5
Bando	North-west corner section 4, town of Coongoola	27 39 10.8	145 54 03.4	6
Banks	Crossing of closed Cooktown—Laura Railway over Normanby River	15 23 27.6	144 52 29.3	6
Barcoo	South corner portion 3, parish of Albilbah	24 27 08.7	144 14 20.2	6
Bathinia	Station 5 (Bh. 25) on east boundary portion 3, parish of Spottswood	24 43 16.0	149 28 01.4	7
Beaconsfield	Cloncurry †	20 42 23.3	140 30 17.8	4
Beaufort	Hobartville Head Station	23 18 17	146 30 27	6
Bell	Twin Hills †	21 57 40.10	146 56 29.54	6
Belmore	St. George †	28 01 44.5	148 35 22.8	7
Belyando	Alpha †	23 39 01.05	146 38 33.7	6
Bentinck	Bullaganang Mountain *	28 35 05.73	151 24 50.46	8
Binburie	Brighton Downs †	23 21 54.52	141 33 47.55	5
Bolwarra	Tree marked broad-arrow over L over 102, in Bolwarra Holding, on Lynd River	17 31 40	144 04 27	5
Boondooma	Mount Dangore *	26 27 31.23	151 36 21.84	8
Bowen	Mount Perry †	25 10 38.5	151 38 31.9	8
Brahe	Tree marked broad-arrow over F over ND, at south-east corner Flora North Block	20 11 52	139 07 06	4
Brighton	South corner portion 6v, parish of Middleton, county of Woodstock	22 31 06.2	141 36 21.2	5
Buckingham	Tree marked broad-arrow over CXC over M7, at east corner Mungerebar Holding	22 09 20	139 29 08	4
Buckland	Station 7 (Bu. 22) on south boundary portion 5, parish of Hawthorne	24 33 26.7	147 33 55.0	7
Bulgroo	Bulgroo Head Station	25 47 20	143 42 16	6
Buller	North-west corner Porta Downs Block, near tree marked broad-arrow over C over EV	18 17 06	138 49 12	4
Bullo	North-east corner portion 3v, parish of Ardoch	27 02 25.5	144 09 20.4	6
Bulwer	Miles †	26 39 34.6	150 11 03.6	8
Bundara	West corner portion 10, parish of Silverleaf	25 45 15.1	147 49 19.3	7
Burarie	North-east corner section IV, town of Noocundra	27 48 55	142 35 22	5
Burdekin	South-west corner portion 4v, parish of West Burdekin	19 51 28.3	146 21 37.4	6
Burenda	North-west corner east severance portion 5, parish of Barford	25 30 57.3	146 32 39.7	6
Burke	Burketown †	17 44 38.70	139 32 48.44	4
Burrandilla	South corner portion 18, parish of Burrandilla	26 09 02.2	145 49 22.1	6
Byerley	Tree marked broad-arrow over R over XLVI on Red River, at north-east corner Charmwood Holding	17 26 48	143 29 23	5

TABLE OF COUNTIES, WITH THE COUNTY VARIATION AND INITIAL POINT FOR EACH--continued

County	Initial Point	Latitude S.	Longitude E.	County Variation
Cairns ..	Station 55a (Cns. 23) on Road in portion 9, parish of Dunsmure	22 36 55.5	148 14 40-6	0
Cameron ..	Yanko Head Station ..	28 35 20	141 53 50	5
Canning ..	North corner section I, town of Woodford ..	26 56 27.4	152 45 51-1	9
Canobie ..	West corner Noorgal Block, at tree marked broad-arrow over Z over 17	19 30 40	140 46 09	4
Cardwell ..	Cardwell † ..	18 16 12.3	146 01 54-4	6
Carlisle ..	South-west corner section III, town of Mirani ..	21 09 37.9	148 51 54-2	7
Carnarvon ..	North-east corner portion I, parish of Minnel ..	28 18 26-4	149 53 08-7	8
Carpentaria ..	Tree marked broad-arrow over LXXX, near south-east corner Inverleigh No. 1 Block, at "M" Lagoon	18 06 32	140 16 55	4
Carrandotta ..	Tree marked broad-arrow over J over CXXIX, on Georgina River, near west corner Carrandotta Holding	22 00 00	138 29 55	4
Carruthers ..	260-mile post on Border Survey (M.51.99.)	29 00 00-0	141 22 35-1	5
Cassillis ..	North-east corner portion 4, parish of Heness ..	27 56 32-7	146 41 40-6	7
Cavendish ..	Perseverance Mountain ..	27 24 54-73	152 09 43-85	8
Chataway ..	North-east corner portion 3, parish of Egera ..	20 55 35-0	146 14 59-5	6
Chatsworth ..	North-west corner portion 7, parish of Mayfields ..	21 22 38-7	139 42 48-6	4
Chelmsford ..	South corner section VII, town of Maytown ..	16 03 06-1	144 17 10-6	5
Chesteron ..	North-east corner portion I, parish of Attica ..	25 12 40-5	147 28 18-9	7
Cheviot ..	North corner section IV, town of Welford ..	25 02 49-8	143 39 57-8	5
Chudleigh ..	North-west corner portion I, parish of Stawell ..	19 54 39-5	143 54 42-8	5
Churchill ..	Mount Zahel ..	27 48 41-67	152 19 39-05	9
Clarke ..	Crossing of telegraph line over Gray Creek ..	18 57 44	145 03 04	6
Claude ..	Tree marked broad-arrow over C at junction Claude River and Goodlife Creek	24 31 42	147 05 00	6
Clermont ..	Clermont † ..	22 49 29-56	147 38 24-74	7
Clinton ..	Gladstone † ..	23 50 25-91	151 15 27-24	8
Clive ..	Texas Mountain ..	28 51 25-66	151 12 40-04	8
Coen ..	South-east corner Strathearn No. 1 Block, at tree marked broad-arrow over S 1 over R 1	14 06 55	142 39 00	5
Cogoon ..	South-west corner portion 1, parish of Ballaroo ..	27 21 14-2	148 27 14-8	7
Conbar ..	Tree marked broad-arrow over W over 2, at north-east corner Ness Block	27 08 20	143 24 30	6
Consuelo ..	West corner portion 1, parish of Warrinilla ..	24 50 11-5	148 32 12-1	7
Cook ..	Bundaberg † ..	24 52 18-0	152 20 44-8	8
Cooper ..	Tree marked broad-arrow over C over 171, on Maapoo Waterhole (Cooper's Creek)	27 35 45	141 15 10	5
Coorajah ..	East corner portion 2, parish of Coorajah ..	25 12 42-8	144 15 07-0	6
Cootah ..	West corner Drumduff Holding ..	15 57 20	142 37 34	5
Copperfield ..	Carpentaria Downs Head Station ..	18 43 02	144 19 09	5
Coreena ..	North-west corner portion 10v, parish of Buthinilla, county of Evora	23 26 23-0	145 37 23-9	6
Cumberland ..	South-west corner R. 60, parish of Brompton ..	22 35 09-9	143 59 03-9	5
Curralle ..	Mount Howitt Head Station ..	26 30 57	142 15 57	5
Currawilla ..	Currawilla Head Station, at tree marked broad-arrow over F over XV	25 08 16	141 20 18	5
Dagmar ..	South-west corner R. 4, parish of Thornborough	16 56 51-0	145 00 13-3	6
Dairyptic ..	South-west corner portion 3v, parish of Southwick	19 48 59-1	145 43 54-0	6
Daroo ..	South-west corner section IV, town of Betoota ..	25 41 45	140 44 46	4
Davenport ..	Charters Towers † ..	20 04 10-00	146 15 02-09	6
Dawson ..	Station 6 (Dw. 50) on north boundary portion 16, parish of Woolton	24 55 34-9	150 16 10-1	8
Deas Thompson ..	East corner portion 39v, parish of Langmorn ..	23 43 03-9	150 54 43-2	8
Denison ..	South-west corner section VII (School Reserve), town of Springsure ..	24 07 04-8	148 05 16-0	7

Derby	South-east corner portion 31, parish of Weranga	27	19	27-3	150	52	23-5	8
Diamantina	Davenport Downs Head Station	24	08	10	141	06	45	5
Dickson	East corner portion 3v, parish of Martyr	22	04	19-5	147	40	30-1	7
Douglas	Hughenden †	20	50	41-43	144	11	52-64	5
Drake	South-east corner portion 2, parish of Havilah	20	51	53-9	147	46	28-8	7
Drummond	Drummond Crossing over Alpha Creek at 199635 feet on Alpha-Tambo Road	24	08	36-0	146	37	15-4	6
Drury	Station 1 (Dr. 15) on south boundary portion 3, parish of Labona	22	06	09-4	146	19	35-7	6
Dublin	South corner portion 110, parish of Tyrconnel	26	27	04-1	147	32	10-7	7
Dulhunty	Moreton Telegraph Station	12	27	23	142	38	11	5
Dunbar	Tree marked broad-arrow over R over RP7, on Magnificent Creek, near Mitchell River Mission Station	15	28	44	141	44	15	4
Durham	Durham Downs Head Station	27	05	03	141	54	36	5
Durrie	Nurdah Out Station, at tree marked broad-arrow over I over XXXII	25	38	50	140	01	45	4
Dutton	North-west corner portion 4, parish of Fairlight	20	33	34-7	143	51	20-3	5
Eddington	Station 126 (En. 62) on south boundary portion 9, parish of Eddington	20	39	19-0	141	32	44-1	5
Einasleigh	Tree marked broad-arrow over L over LI over 2, at north-east corner Fiery Block	17	57	24	143	35	12	5
Elderslie	North corner portion 2, parish of Haliuim	22	38	03-5	142	23	29-0	5
Elgin	Surat †	27	09	16-4	149	04	09-1	7
Elphinstone	Woodstock Railway Station, at 24 mile peg	19	35	52-5	146	50	12-3	6
Esmeralda	South-west corner Esmeralda Holding	18	39	55	142	16	25	5
Etheridge	North-west corner portion 19 (School Reserve), parish of Bumba	18	09	05-1	142	51	37-1	5
Eurynye	Tree marked broad-arrow over A over 81, on east boundary Feu East Block	24	08	09	139	47	20	4
Evora	North-west corner portion 10v, parish of Busthinia	23	26	23-0	145	37	23-9	4
Eyre	North-west corner Glengyle Holding	24	33	30	138	26	54	4
Farrar	Connemara †	24	13	16-65	142	16	45-05	5
Ferguson	Banana †	24	28	47-0	150	07	40-8	8
Fermoy	North-west corner portion 3, parish of Deballada	23	04	10-3	142	54	18-4	5
Fielding	Tree marked broad-arrow over Z over XVIII, at north-west corner Roderick Holding	19	04	42	141	55	40	5
Fitzroy	Nanango †	26	40	22-7	152	00	22-4	8
Flinders	Miriam Vale †	24	19	44-8	151	33	42-8	8
Fortescue	Taroorn †	25	38	26-2	149	47	42-8	8
Foxton	Tree marked broad-arrow over A over 25, on Amelia C., in Amelia Creek Holding	21	06	15	145	40	36	6
Franklin	Vanrook Head Station	16	57	55	141	56	24	4
Fraser	Sandy Cape Lighthouse	24	43	53-6	153	12	31-9	4
Gayundah	North-west corner portion 1, parish of Clare	22	32	22-6	145	40	52-1	9
Georgina	South-west corner Alderley Holding	22	38	45	139	08	50	6
Gilbert	Georgetown †	18	17	31-8	143	32	43-1	4
Gladstone	South-east corner Camping Reserve (R. 34), parish of Barratta	19	48	28-5	147	07	56-7	5
Glanworth	North-west corner portion 1, parish of Behool	25	14	24-7	145	44	38-4	6
Glengyle	Tree marked broad-arrow over G over D7, at corner rabbit fence, at north-west corner Doval Block	24	55	25	139	08	18	4
Glenora	Tree marked broad-arrow over C over G on Yappa River, at north-east corner Cowabunya Block	19	02	03	142	50	52	5
Gordon	Eromanga †	26	40	06-37	143	15	59-75	6
Gould	Tree marked broad-arrow over P over J, at south-east corner Highbury Holding	16	33	58	143	13	03	5
Gowan	South-west corner portion 3, parish of Listowel	25	20	05-5	145	03	04-6	5
Granada	South-west corner portion 5, parish of Melinda	19	50	35-5	140	22	06-9	6
Gregory	Landsborough's marked tree, marked broad-arrow over RTR over N 10 over 1862, on Gregory River, in Riversleigh Holding	18	55	26	138	56	54	4
Grey	Station 34 (Ge. 13) on north boundary portion 1, parish of Whitula	25	22	14-2	142	16	49-6	4
Griffith	South corner section VII, town of Pentland	20	31	39-0	145	23	51-7	5
Grosvenor	Grosvenor Downs †	22	03	02-0	148	07	49-0	7
Gunnawarra	North-west corner portion 2, parish of Kinrara	18	20	31-1	145	03	19-7	6

TABLE OF COUNTIES, WITH THE COUNTY VARIATION AND INITIAL POINT FOR EACH—continued

County	Initial Point	Latitude S.	Longitude E.	County Variation
Haddon	No. 1 Well, near Meeba Downs Station, in Westby Holding	25 47 35	141 27 18	0
Hamilton	Hamilton Tank	22 46 14	140 36 08	5
Hann	Musgrave Telegraph Station	14 46 57	143 30 07	4
Herbert	Bowen †	20 00 50-6	148 14 51-4	5
Hillaloug	Station 28 (Hln. 16) on east boundary portion 1, parish of Tiverton	21 07 18-4	148 19 43-0	7
Hodgkinson	South-west corner R. 4, parish of Thornborough	16 56 51-0	145 00 13-3	7
Howitt	North-west corner portion 7, parish of Smithburne	17 01 57-0	141 14 38-0	6
Humboldt	North-west corner allotment 1, section VI, town of Blackwater	23 35 10-1	148 52 51-7	4
Humeburn	North-east corner portion 6, parish of Narraport	27 19 18-9	145 00 14-6	7
Iffley	Iffley Head Station	18 52 19	141 12 25	6
Jardine	McDonnell Telegraph Station (Disused)	11 38 51	142 26 54	4
Kalkah	Tree marked broad-arrow over Y over 13, at south-east corner Minka Holding, on Coleman River	14 54 38	142 56 22	4
Kamileroi	Station 61 (Ki. 4) on south boundary portion 5, parish of Beling	19 14 01-1	139 43 07-4	5
Kendall	North-west corner Meta Downs No. 4 Block, at tree marked broad-arrow over RES over MD4	13 41 15	141 58 00	4
Kennedy	Station 4 (Ke. 41) on west boundary portion 7, parish of Walliam	26 57 17-1	147 40 48-6	7
Killarney	Collaroy †	22 02 12-9	149 11 08-5	7
Kimberley	Duarings †	23 42 54-6	149 40 22-2	7
King	West corner Strathleven No. 1 Block	15 51 50	143 16 51	7
Koolatah	Tree marked broad-arrow over R over 25, on Mitchell River	15 16 54	141 52 51	5
Kungie	10 mile post on Border Survey (M51.99), west of Warrego River	29 00 00-0	145 30 14-2	4
Kyabra	Station 21 (Kb 4) on west boundary portion 2, parish of Cooloo	26 05 48	142 57 12	6
Kynuna	South corner allotment 9, section XI, town of Kynuna	21 34 55-1	141 55 13-9	5
Kyrunda	North-east corner portion 3v, parish of Norley	28 03 56-9	143 17 06-5	5
Labouchere	Taroom †	25 38 26-2	149 47 42-8	7
Lamington	Tree marked broad-arrow over C, at north-east corner Yapparton Holding	18 24 20	141 34 55	4
Landsborough	South-east corner portion 2, parish of Goorala	19 15 23-7	140 09 58-0	4
Lang	North-west corner portion 19 (School Reserve), parish of Bumba	18 09 05-1	142 51 37-1	5
Langlo	South-west corner portion 2v, parish of Langlo	25 41 01-7	145 38 44-5	6
Lennox	Kilkivan †	26 05 09-1	152 14 34-7	6
Leura	North-east corner portion 1, parish of Defarge	23 12 28-2	149 20 37-3	7
Liebig	Marlborough †	22 51 28-3	149 52 43-0	8
Livingstone	Rockhampton †	23 22 46-0	150 30 44-3	8
Lukin	Tree marked broad-arrow over RES over B3, on Edward River, at south corner Bathwick No. 3 Block	14 40 09	142 01 40	4
Lynd	11 miles 40 chains on Etheridge Railway, on bridge over Tate River	17 28 35-9	144 37 25-0	5
Lyndhurst	Crossing of Peninsula Developmental Road (Main Roads plan 43399) over Einasleigh River, near Lyndhurst Head Station	19 12 13-0	144 22 13-2	5
Lytton	Jandowae †	26 46 58-7	151 06 36-5	8
Mackenzie	Gayndah †	25 37 37-3	151 36 41-5	8
Malwa	South-east corner Eton Vale No. 2 Block	23 48 40	140 21 33	4
Maneroo	West corner portion 10v, parish of Evesham	23 11 34-5	143 37 33-9	5
Manfred	South corner portion 3, parish of Lara	20 12 46-6	141 37 43-2	5

Manuka	North-east corner portion 1, parish of Manuka	21	36	50-1	143	19	39-5	5
Marame	North-west corner Mentana No. 23 Block, near tree marked broad-arrow over 33	16	07	24	142	26	38	5
Maranoa	West corner portion 3, parish of Dromore	27	34	16-8	148	07	16-6	5
March	Maryborough †	25	32	16-0	152	42	06-9	9
Marga	South corner Staaten River Holding, near tree marked broad-arrow over W over 21	17	05	10	142	24	50	9
Marsh	Inglewood †	28	25	06-5	151	04	23-6	8
Mayne	Dunham Towers Out Station, in Carcara Holding	23	52	38	142	18	42	8
McKinlay	Adavale †	25	54	39-48	144	35	54-59	5
Melville	Cape Bowen	14	30	33	144	39	55	6
Merivale	Mount Gammie	28	07	03-13	151	42	24-35	8
Meriti	Selwyn Railway Station	21	31	43-2	140	30	01-6	4
Mexico	South-west corner portion 9v, parish of Burgoyne	23	48	56-0	146	04	58-7	6
Mitchell	South-west corner portion 4v, parish of Thornleigh	24	24	12-2	144	50	18-7	4
Monkira	Tree marked broad-arrow over 1 over XXI, on Mackhara Waterhole	24	47	52	140	37	33	6
Morstone	West corner Rocklands No. 6 Block, near tree marked broad-arrow over LXXXIII	19	23	07	138	19	39	4
Mosman	Crossing of telegraph line over Kennedy River, at tree marked broad-arrow over B	15	25	42	144	10	55	5
Mowarra	South-west corner portion 9, parish of Drylands	24	57	00-0	142	18	13-6	5
Mueller	South-east corner Adavale Block, near tree marked broad-arrow over AV over AVI over HP5	18	29	22	138	12	54	4
Munga	North-east corner portion 7v, parish of Orkadilla	26	08	50-5	147	12	26-2	7
Mungallala	South-east corner portion 1, parish of Yunnerman	27	59	13-7	147	06	21-8	7
Murchison	St. Lawrence †	22	20	50-5	149	32	04-9	7
Murray	South-west corner portion 1, parish of Robey	20	23	03-3	146	56	51-4	7
Musgrave	South corner portion 1, parish of Silsoe	23	29	41-4	143	30	18-6	6
Nares	Cairns †	16	55	27-77	145	46	48-14	6
Nash	North-west corner Chad Holding, near tree marked broad-arrow over CH over GF	20	42	40	138	31	36	7
Nebine	Iron pin, near north-west corner section III, town of Tego	28	50	56-1	146	47	06-0	4
Newcastle	Hawkwood †	25	46	58-3	150	48	59-7	8
Nicholson	Tree marked broad-arrow over C, on Clifdale Creek, at crossing of Darwin Road	17	35	50	138	26	28	4
Nickavilla	South-east corner P.P.I., parish of Gunnadorah	26	30	57-9	144	19	45-8	6
Nive	South-east corner north severance portion 2, parish of Malta	24	50	30-4	146	46	14-2	6
Noorama	South-west corner portion 3v, parish of Weelamurra	28	23	33-6	146	11	44-4	7
Norley	Tree marked broad-arrow over K over B over B, near Teeballah W.H., north-east corner Klandra Block	27	27	20	143	56	37	6
Norman	Normanton †	17	40	14-33	141	04	37-34	4
Numalla	65-mile post on Border Survey (MS1.99)	29	00	00-0	144	35	44-1	4
Nyama	Tree marked broad-arrow over U over 12, on Umpadiboo Creek	24	42	45	139	55	55	6
Oaklands	Blackbull Railway Station, at 56 miles 52 chains	17	56	28-9	141	45	08-6	4
O'Connell	Tree marked broad-arrow over XI, on Burdekin River, on north boundary South Merino Block	19	10	34	145	27	23	6
Oondooroo	North-east corner portion 1, parish of Mills	22	07	41-4	143	07	12-8	5
Orrery	South-east corner portion 46v, parish of Hood	26	03	01-6	146	38	12-5	6
Percy	Tree marked broad-arrow over D over B1, at junction Duffer Creek and Styx River	19	11	10	143	56	46	5
Philip	Wando Vale Head Station	19	40	04	144	53	11	5
Pitteroo	Station 17 (G. 250.238) on rabbit fence, at north-east corner Whippa North Block, at tree marked broad-arrow over RP	28	08	49-5	142	40	02-9	6
Piturie	North corner section III, town of Urandangie	21	36	43-7	138	19	10-4	4
Plantagenet	East corner portion 44v, parish of Woodbine	23	44	21-0	147	29	50-0	7
Porchester	Burketown †	17	44	38-70	139	32	48-44	4
Portland	Longreach †	23	26	39-52	144	14	53-84	6
Pring	South-west corner section IV, town of Southwood	27	46	10-1	149	58	27-1	8

TABLE OF COUNTIES, WITH THE COUNTY VARIATION AND INITIAL POINT FOR EACH--continued

County	Initial Point	Latitude S.	Longitude E.	County Variation
Pakington	South-west corner portion 7v, parish of Windah	23 35 29.6	149 59 38.6	8
Palmer	South-east corner section 1, town of Wyandra	27 15 04.3	145 58 42.7	6
Palmerston	North corner portion 6v, parish of Ewen, county of Liebig	22 39 29.5	150 18 21.0	8
Paluma	South-west corner portion 8, parish of Bowen Downs	22 32 58.7	144 53 25.4	6
Parker	Bayley Point	16 54 57	139 02 25	4
Paroo	North-west corner portion 1, parish of Bierbank	26 47 01.9	145 03 44.2	6
Pelham	West corner portion 52, parish of Scoria	24 31 09.7	150 34 43.1	8
Pender	Station S (G. 250.199) on rabbit fence, at north-west corner Ben Castle Block	26 39 53.0	141 23 56.4	5
Pera	Tree marked broad-arrow over RES over MD4, at north-west corner Meta Downs No. 4 Block	13 41 15	141 58 00	4
Kaglan	North-west corner portion 28, parish of Annandale	24 05 03.5	150 28 03.3	8
Rawbelle	Station 54 (Rw. 309) on north-east boundary R. 68, parish of Rawbelle	25 01 44.4	150 50 38.3	8
Richmond	Richmond †	20 44 05.88	143 08 30.71	5
Rochedale	South-west corner Leadmore No. 5 Block, near tree marked broad-arrow over L5 over RT2	20 45 26	139 10 15	4
Rodney	South-west corner portion 2v, parish of Collier	23 06 43.5	144 50 58.1	6
Rogers	Station 37 (Rg. 336) on west boundary portion 4, parish of Myall Grove	27 03 38.1	150 04 41.4	8
Roper	Junee Head Station	22 56 03	149 08 16	7
Rosebery	North corner Town Reserve, town of Birdsville	25 52 53	139 21 26	4
Rosebrook	South-west corner portion 6, parish of Matahna	23 08 42.6	142 15 29.1	5
Ross	South-east corner portion 1, parish of Onay	26 25 00.6	146 35 52.5	6
Rupert	Richmond †	20 44 05.88	143 08 30.71	5
Ruthven	North-east corner portion 2, parish of Moonda	24 12 00.0	143 50 40.6	5
Rutledge	Station 22 (Ru. 1) on south boundary portion 1, parish of Mendip	22 35 13.5	147 04 36.9	6
Salisbury	Bobawaba Railway Station, at 47 miles 6,970 links	19 49 28.1	147 34 26.7	6
Sandringham	Sandringham Head Station	24 04 50	139 03 34	4
Savannah	North-west corner Malpas Holding, near tree marked broad-arrow over Z over XVII	19 32 28	142 08 49	5
Saxby	Station 220 (Sx. 7) in portion 1, parish of Blowpark	20 00 16.6	141 57 08.2	5
Sellheim	Mount McConnell †	20 48 08.80	146 58 58.34	6
Selwyn	Maibon Railway Station, at 31 miles 7,234.5 links	21 04 26.7	140 17 59.3	4
Sheilburne	Middle Peak	11 55 39	142 51 26	5
Sidmouth	Angle of Northern Telegraph Line, about 1 mile southerly from Stewart River	14 10 03	143 21 18	5
Solander	Port Douglas †	16 29 00.93	145 27 53.5	6
Somerset	Paterson	10 48 11.8	142 23 44.4	4
Stanley	No. 1 State Bench Mark, Survey Office, Brisbane	27 28 28.6	153 01 29.6	9
Stokes	Tree marked broad-arrow over HP over B, at south-west corner Boongalee Block	18. 15 36	140 38 04	4
Strathleven	North-east corner Strathleven Holding, at tree marked broad-arrow over T1 over P3	15 54 06	143 32 14	5
Strathmore	South corner Staaten River Holding, near tree marked broad-arrow over W over 21	17 05 10	142 24 50	5
Sturt	Tree marked broad-arrow over T over 4, at west corner Table-top No. 4 Block	23 39 14	138 22 14	4
Surrey	Croydon †	18 12 13.63	142 14 51.89	5

Talawanta	Tree marked broad-arrow over ND2 over D, at south-west corner Endymion Holding	18	23	08	140	11	00	4
Talbot	North-east corner R. 29, parish of Lilyvale	23	12	07-2	148	20	45-5	7
Taidora	Station 16a (Td. 12) on north boundary portion 2, parish of Merindee	19	14	29-3	141	21	23-7	4
Tambo	North corner portion 4, parish of Hawick	24	29	54-0	145	47	18-7	6
Tanbar	Tree marked broad-arrow over C over 70, on Cooper's Creek, at north-west corner Keeroongooloo Holding	25	48	44	142	11	47	5
Tate	Mount Surprise Railway Station, Tangent point at 0.m. 7.233-4 links	18	08	47-5	144	18	58-5	5
Tewinga	Tree marked broad-arrow over ED1, on south boundary Cresfield No. 2 Block	19	45	20	139	48	20	4
Thunda	North-east corner portion 1, parish of Moothandella	25	31	33-4	143	06	00-0	5
Tingarra	Tree marked broad-arrow over A over XXI, on Arcadia Creek, in Arcadia Holding	25	14	48	148	48	30	7
Titheroo	South-west corner Saitaire Block	28	39	47-7	143	21	20-0	6
Toko	Tree marked broad-arrow over L over 18, on Linda Creek, near west corner Idamca Lakes No. 11 Block	22	39	06	138	22	34	4
Tomoo	South-west corner portion 2, parish of Tony	27	22	48-3	147	17	22-6	7
Toorak	Eulolo Head Station	21	13	30	141	32	23	5
Torres	Thursday Island †	10	35	07-48	142	13	06-51	4
Towerhill	North-west corner portion 8V, parish of Eastfield	21	58	57-5	144	44	28-7	6
Uanda	North-west corner portion 11V, parish of Midlothian	21	27	03-7	144	42	39-9	5
Ujarunda	South-east corner portion 2, parish of Lomax	27	03	17-7	146	41	29-4	7
Undilla	Tree marked broad-arrow over R over XIV, on Thornton River, on north-west boundary R. 1, parish of Narah	19	21	58	138	50	51	4
Vergemont	Tree marked broad-arrow over K over XXX, on Vergemont Creek, near north boundary Vergemont No. 1 Block	23	50	12	143	08	46	5
Victor	Tree marked broad-arrow over G over XXVI, at junction Percy and Gilbert Rivers	19	08	25	143	28	04	5
Wairuna	Crossing of Ingham road over Burdekin River, near Oakhills Head Station	18	32	36	145	35	48	6
Waldegrave	Roma †	26	34	31-32	148	47	05-04	7
Walker	South-east corner portion 2, parish of Aberfoyle	21	49	47-8	145	15	07-5	6
Walsh	Tree marked broad-arrow over N over XXIX, at junction Brown Creek and Mitchell River	16	32	00	143	40	40	5
Warbreccan	North-west corner portion 16, parish of Chaunsit	24	48	17-6	142	53	16-0	5
Warburton	Tree marked broad-arrow over C over XXIII, on south-east boundary Clarendon Holding	22	13	27	140	53	28	4
Ward	Mount Tamborine *	27	55	13-03	153	09	37-46	9
Warner	South-east corner Kaikah No. 6 Block, at tree marked broad-arrow over K6	15	15	54	143	21	46	5
Warrong	South-west corner portion 6, parish of Ogilvie	25	22	00-6	147	59	26-7	7
Waverley	East corner portion 2, parish of Moonah	21	26	48-6	139	03	58-0	4
Weipa	Tree marked broad-arrow over B over XXVI, on Wentlock River	12	14	50	142	03	16	4
Wellisley	Sweers Island (Inscription Point)	17	06	56	139	35	40	4
Wellington	Eulo †	28	09	44-95	145	02	13-44	6
Wentworth	Tree marked broad-arrow over L over 11, on Lagoon Creek, near crossing of Darwin Road	17	20	50	138	16	58	4
Weramo	South-east corner Grayshall Block	25	26	40	138	26	36	4
Weringa	Remains of Cacoory Station, near Cacoory Waterhole on Gilmour Creek	25	14	49	139	33	32	4
Westgrove	North-east corner portion 21, parish of Simmie	25	41	31-2	148	40	56-7	7
Weymouth	Tree marked broad-arrow over BR over 1, at north-east corner Big River No. 1 Block, on Wentlock River	13	07	50	143	10	30	5
Wicklow	Hawkwood †	25	46	58-3	150	48	59-7	8
Wilkie Gray	North-east corner portion 304, parish of Argentine	19	20	08	146	10	55	6
Wills	Boulia †	22	54	45-43	139	54	24-44	4

TABLE OF COUNTIES, WITH THE COUNTY VARIATION AND INITIAL POINT FOR EACH--continued

County	Initial Point	Latitude S.	Longitude E.	County Variation
Wilson ..	Station 29 (G. 250,238) on rabbit fence, near tree marked broad-arrow over T over 24, on Dingera Creek, near south-east corner O'Hea Block	28 08 08-2	141 52 43-9	0 5
Windeyer ..	West corner portion 6, parish of Cathay ..	24 39 21-5	146 22 55-5	6
Windor ..	Noranside Station, at well ..	22 09 46	140 05 55	4
Windula ..	North-west corner portion 3, parish of Bellalle ..	26 58 55-7	142 46 44-0	5
Wodehouse ..	Nebo † ..	21 41 24-0	148 41 30-7	7
Wokingham ..	South-east corner R. 1, parish of Nukun ..	21 56 43-2	142 27 54-7	5
Wolseley ..	South-east corner portion 17, parish of Bimera ..	24 25 09-7	143 28 28-3	5
Wondoola ..	Donors Hill Head Station ..	18 42 40	140 33 20	4
Wongalee ..	Intersection north boundary portion 1, parish of Galah, and Prairie Creek ..	20 16 31-2	144 33 04-5	5
Wonomo ..	South-east corner Boonul Block, near tree marked broad-arrow over E over CXXI ..	20 08 15	138 21 54	4
Woodstock ..	North corner portion 10v, parish of Eyerah ..	22 18 33-5	141 41 37-4	5
Woolgar ..	North-east corner Blacktown Block, near tree marked broad-arrow over B over 11 ..	19 45 14	143 00 28	5
Wooroolah ..	East corner portion 1v, parish of Berriedale ..	24 59 18-8	145 21 19-2	6
Wooroona ..	Tree marked broad-arrow over S over 11, at Shotover Head Station ..	24 03 42	149 05 50	7
Woura ..	Iron pin, near north-east corner section 1, town of Prairie ..	20 52 22-3	144 35 58-1	5
Wrotham ..	Tree marked broad-arrow over G over MD, at north-east corner Wrotham Park Holding ..	16 29 16	144 08 40	5
Wyara ..	North-east corner Zenoni Block, at post marked broad-arrow over S ..	28 29 16	143 51 10	6
Yagoonya ..	Tree marked broad-arrow over 37, near junction Wyaaba Creek and Staaten River ..	16 26 52	141 34 18	4
Yappar ..	South-west corner portion 11, parish of Burleigh ..	20 18 00-3	142 47 21-0	5
Yarrol ..	Station 10 (Y1 453) on north boundary portion 1, parish of Dalgaungul ..	25 06 23-4	151 19 48-7	8
York ..	Merluna Head Station ..	13 03 52-2	142 26 36-9	5
Youranigh ..	North-east corner portion 1v, parish of Montes ..	23 54 09-4	145 01 31-2	6

3.0 Major Qld Legislation Affecting Surveyors

Short Title	Admin. Dept
Surveyors Act 1977 and Regulation 1992	Natural Resources
Survey Co-ordination Act 1952	Natural Resources
Special Freeholding of Leases Act 1991	Natural Resources
Land Act 1994	Natural Resources
Building Units and Group Titles Act 1980	Natural Resources
Acquisition of Land Act 1967 and Regulation 1993	Natural Resources
Land Title Act 1994 and Regulation 1994	Natural Resources
Miner's Homestead Leases Act 1913	Natural Resources
Place Names Act 1994	Natural Resources
Queensland Boundaries Declaratory Act 1982	Natural Resources
Water Resources Act 1989 and Regulations	Natural Resources
Irrigation Areas (Land Settlement) Act 1962	DPI
River Improvement Trust Acts 1940 and Regulations	DPI
	DPI
Beach Protection Act 1968 and Regulations	E & H
Canals Act 1958 and Regulation 1992	E & H
Contaminated Land Act 1991 and Regulations 1991	E & H
Property Law Act 1974 and Regulation 1993	JAG
Dividing Fences Act 1953	JAG
Workplace Health and Safety Act 1989 and Regulations	DEVETIR
Local Government Act 1993 and Regulations 1994	HLGP
Local Government (Planning & Environment) Act 1990	HLGP
City of Brisbane Act 1924 and Regulation	HLGP
Integrated Resort Development Act 1987	HLGP
Mixed Use Development Act 1993	HLGP
Mineral Resources Act 1989 and Regulation 1990	Mines
Coal Mining Act 1925	Mines
Petroleum Act 1923	Mines
Petroleum (Submerged Lands) Act 1982	Mines
Industrial Development Act 1963 and Regulations	BIRD
Transport Infrastructure Act 1994	Transport
Transport Infrastructure Act (Railways) Act 1991 and Regulations - Repealed	Transport
Transport Infrastructure Act (Roads) Act 1991 and Regulations	Transport

In addition to the above, there are a number of Government practices which are in existence in Queensland which may not be contained in the above. The onus is on all Registered persons to familiarise themselves with these practices.

Limited list. For specific details, contact the relevant Department.

All Queensland Acts are available only from GOPRINT, 371 Vulture Street, Woolloongabba, Q 4101 or 135 George Street, Brisbane Q 4000.

TEL: 3246-3399 or FAX: 3246-3534

(see over for legend to Administering Departments)

- Department of Business, Industry and Regional Development** BIRD
 Enterprise House
 46 Charlotte Street, BRISBANE Q 4000
 1/11 George Street, BRISBANE Q 4000
 TEL: 3224 8568; FAX: 3229 6514
- Department of Mines and Energy** MINES
 Queensland Minerals and Energy Centre
 61 Mary Street, BRISBANE Q 4000
 G.P.O. Box 194, BRISBANE Q 400
 TEL: 3237 1435; FAX: 3229 7770
- Department of Natural Resources** NATURAL
 Landcentre RESOURCES
 Cnr Main and Vulture Streets, WOOLLOONGABBA Q 4102
 Locked Bag 40, COORPAROO DELIVERY CENTRE Q 4151
 TEL: 3896 3111; FAX: 3896 3275
- Department of Housing, Local Government and Planning** HLGP
 Queensland Minerals and Energy Centre
 61 Mary Street, BRISBANE Q 4000
 GPO Box 690, BRISBANE Q 4001
 TEL: 3227 7111; FAX: 3224 5589
- Department of Environment and Heritage** E & H
 160 Arm Street, BRISBANE Q 4000
 PO Box 155, NORTH QUAY B 4002
 TEL: 3227 7111; FAX: 3227 6485
- Department of Employment, Vocational Education, Training
 and Industrial Relations** DEVETIR
 State Law Building
 Cnr George and Ann Streets, BRISBANE Q 4000
 Locked Mail Bag 527 G.P.O. Q 4001
 TEL: 3239 3111; FAX: 3229 0445
- Department of Justice and Attorney-General** JAG
 4th Floor, State Law Building
 50 Ann Street, BRISBANE Q 4000
 TEL: 3239 3520; FAX: 3220 0289
- Department of Transport** TRANSPORT
 Capital Hill Building
 85 George Street, BRISBANE Q 4000
 GPO Box 1549, BRISBANE Q 4001
 TEL: 3834 2011; FAX: 3834 2022
- Department of Primary Industries** DPI
 Primary Industries Building
 80 Ann Street, BRISBANE Q 4000
 GPO Box 46, BRISBANE Q 4001
 TEL: 3239 3111; FAX: 3221 2490

CAM TO AMG

The attached table provides additions (in degrees and minutes) to be applied to CAM bearings to obtain AMG bearings.

The addition is a general value for a county and has an accuracy of +/- 1 minute, however in some places the error reaches 2 minutes.

It is appropriate to use information from this table when a survey plan has no astronomical observation but is related to CAM.

Where a survey plan has an astronomical observation the Grid Convergence should be calculated and added to the true bearing to obtain AMG bearing (grid bearing).

NOTE: AMG Grid Convergence is -

+ east of central meridian
and - west of central meridian

The three zones covering Queensland are:

Zone	Western Boundary	Eastern Boundary	Central Meridian
54	138°E	144°E	141°E
55	144°E	150°E	147°E
56	150°E	156°E	153°E

On the attached table where a County crosses zone boundaries, a correction is provided for each zone with the appropriate zone number.

There is a different CAM to AMG conversion because of the opposite sign of the AMG convergence in each zone, one is east - the other is west of their respective Central Meridians. Also, the difference in longitude between the initial point of the County and the Central Meridian of each zone contributes to the difference.

TABLE SHOWING APPROXIMATE ADDITION TO CONVERT BEARING FROM CAM TO AMG

(For most parts of most counties the angle given is within +/- 1 minute. However, in some places the error reaches 2 minutes.)

Table with columns: County, Zone, Angle, County, Zone, Angle, County, Zone, Angle, County, Zone, Angle, County, Zone, Angle, County, Zone, Angle, County, Zone, Angle. Rows list various counties and their associated zones and angles.

Technical Information

1.0 High Water Mark

1.1 Introduction

This Section is provided to assist Surveyors in using their professional judgement in determining High Water Mark. Reinstatement principles apply to High Water Mark boundaries in the same way as they apply to right line boundaries in that all of the available evidence needs to be collected before deciding on the original position or the altered position of the boundary.

Should a balance area of a title result after adopting these guidelines, the Surveyor should seek advice as to in whom the balance area would vest.

There is a wide range of legislation that impacts on the use and administration of land and waterways adjacent to a High Water Mark and in determining how to deal with any land affected, consideration should also be given to the other relevant legislation and regulations.

1.2 High Water Mark - Determination Of

Referred to in Section 24 of the *Surveyors Regulation 1992* and defined in the *Land Act 1994* and in the *Harbours Act 1955*.

It should be noted that the definition of High Water Mark is the same in both the *Land Act 1994* and the *Harbours Act 1955*. The *Land Act 1994* provides comprehensive references to High Water Mark. Parts 3 and 4 of Chapter 1, Part 1 of Chapter 2, and the schedule 6 are relevant. The *Harbours Act 1955* defines High Water Mark at Section 8 of the Act.

1.2.1 Common Law HWM

Unless otherwise specified, Common Law HWM applies to tidal boundaries fixed prior to the introduction of the *Surveyors Regulation 1992* on 10 April 1992 and resurvey of the same.

HWM (Common Law) is the position reached on the land by the mean height of all high tides, including spring and neap tides, recorded over a long time.

1.2.2 Statute Law HWM

Unless otherwise specified, High Water Mark as defined in the *Harbours Act 1955*, is intended to apply to tidal boundaries fixed after the introduction of the *Surveyors Regulation 1992* on 10 April 1992. When new titles are required, plans registered after this date incorporating new high water mark boundaries, are required to conform with the statute law HWM definition. In all other cases the common law definition of High Water Mark applies.

HWM (*Surveyors Regulation 1992*) is the position reached on land by the mean height of high water at spring tides recorded over an appropriate period of time.

1.3 Mean High Water Spring Tide (MHWS)

There appears to be no technical definition of the term Ordinary High Water Mark at Spring Tides available. In the calculation of the height of High Water Ordinary Spring Tides, Spillsbury explains that in the UK (where these terms originate) tides which are considered to be very different from the norm are omitted from the calculation. By analogy it is expected that the similar term "Ordinary High Water Mark at Spring Tides" would be treated in the same manner. Accordingly, calculation of "Ordinary High Water Mark at Spring Tides" is subject to professional judgement of the person computing the height when selecting those tides to exclude.

Recognising this obstacle, the Departmental (Transport) practice has been to accept the height of Mean High Water Spring Tide (MHWS) as substitute for the "Ordinary High Water Mark at Spring Tides". MHWS is easily calculated by rule and includes all spring tides in the calculation. Statistically in the long term, the values of Ordinary High Water Mark at Spring Tides and MHWS will be the same.

1.4 Diurnal Tides

The definition of spring tide cannot be applied to tides which are diurnal in their form (ie 1 tide per day) such as the Gulf of Carpentaria. This diurnal tide case is too difficult to incorporate in general rules and in any event has little practical significance. At the worst case it would fall to practical people to set a "reasonable" equivalent HWM boundary line at the time of survey.

In all cases Surveyors should use their professional judgement as to the position of the High Water Mark on the ground. In complex cases or where doubt exists additional specialist advice should be sought.

1.5 Mean Conditions

Attention is drawn to the fact that all the tidal levels refer to "mean" conditions. Accordingly there will be times when the tides flow onto the landward side of any HWM boundary.

1.6 Tidal Database

The Department of Transport has at its disposal the Queensland Tidal Database which contains tidal levels for a large number of coastal places. This information could be made available to Surveyors.

1.7 Methods for determining position of a tidal boundary

Article 22 of the Manual of the New South Wales Integrated Survey Grid, published by the Department of Lands NSW, provides some details of tidal boundaries. The article also includes a number of methods of determining the position of a tidal boundary. The methods are listed below:

1.7.1 Levelling from a bench mark**1.7.2 Levelling from a local tide gauge****1.7.3 The range ratio method**

These methods are suitable for the determination of both MHW and MHWS. Additionally the following procedure could be included as a fourth method.

1.7.4 Height Transfer at High Tide

It is required to locate the HWM - Ordinary High Water at Spring Tide. In accordance with paragraph 1.2, Mean High Water Spring Tide is an appropriate measure of the height of Ordinary High Water Mark at Spring Tide.

By reference to the nearest Standard Port listed in the Qld Tide Tables, select a tide which is predicted to rise to approximately the height of MHWS (within a few centimetres).

Observe the height of that high tide at the survey site and at the Standard Port.

Prior arrangements should be made with the authority controlling the standard port tidal station to obtain the required tidal heights from that station. It may take several weeks before the standard port tidal heights can be made available.

Confirm the height determination by observing the high tides 25 hours before and after the selected tide.

Because the selected tide may not rise to exactly the predicted height, it is advisable to correlate the observed tides at both places. Use the height of the Mean High Water Spring Tide (MHWS) at the Standard Port to estimate the equivalent height (MHWS) at the survey site. An example calculation is included below.

Locate the intersection of the Mean High Water Spring Tide plane on the ground. That line is the best estimate of the line of Ordinary High Water at Spring Tide.

This procedure should not be used during times of abnormal weather or flooding. Subject to this proviso and in cases where the position of the line is not critical, tidal predictions may be used in lieu of the observations at the standard port.

1.7.5 Sample Calculation

The following sample calculation, which is based on the table on the following page, is provided for guidance.

To obtain a transferred height at the survey site.

Subtract the height in Column 2 from the height of MHWS at the Standard Port and add the height in Column 3.

MHWS - Column 2 + Column 3 = estimate of MHWS at the survey site, eg

(1) for the tide 25 hours before: $2.16 - 2.14 + 1.27 = 1.29$

(2) for the tide at the selected date: $2.16 - 2.28 + 1.41 = 1.29$

(3) for the tide 25 hours after the selected date: $2.16 - 2.39 + 1.52 = 1.29$

Note- It is not usual to obtain the same value for each estimate of MHWS.

If it is acceptable to use tidal predictions from the Standard Port in place of the observed heights then use the heights from Column 1 in lieu of the heights from Column 2 in the formula below.

Example Calculation - Height Transfer at High Tide					
Survey Site: Standard Port:			Some Place Brisbane Bar		
Column 1		Column 2		Column 3	
Brisbane Bar		Brisbane Bar		Some Place	
Predicted High Tides only		Observed High Tides		Observed High Tides	
	Time	Height m Port Datum	Height m Port Datum	Height m AHD (D)	
25 Hrs before	1023 2230	2.04 1.40	2.14	1.27 N/A	
Selected date	11.4 2255	2.14 1.63	2.28	1.41 N/A	
25 Hrs	1215	2.30	2.39	1.52	
Brisbane Bar Mean High Water Spring Tide: 2.16m Source: Queensland Official Tide Tables					

Note: in this example, the observed tides are approximately 0.10m higher than they were predicted to be.

2.0 Alternative Survey Methods

The Department of Minerals and Energy have provided a guideline for GPS Surveys to be lodged with M & E. These guidelines are available from the Department on request.

Reference should also be made to Memorandum 7/93, Guidance to surveyors for the Establishment of and Connection to a Co-ordinated Survey Framework, at page B-11.

3.0 Easement Surveys

Easement surveys are cadastral surveys and shall be carried out in accordance with Section 24 of the *Surveyors Regulation 1992*.

3.1 Deemed Tramway Easements

3.1.1 Historical Legislation

The Sugar Experiment Stations Act 1948 amended legislation:

- Requiring the Central Board to keep a "Register of Easements",
- Empowered the Central Board, upon application by a mill owner, to grant an easement upon any land for tramway purposes, and
- Created Deemed Easement rights to mill owners who constructed tramlines prior to 25 October 1948.

The registration of such easements in the Register of Easements was considered to be full and sufficient notice to all persons of the interest created in favour of the mill owner.

It was further specified that the Real Property Acts 1861 were to be read subject to the above provision.

The 1948 legislation provided for statutory easements with a width of eight feet (approximately 2.5 metres) either side of the centre line of the tramway, for all tramways constructed prior to 25 October 1948.

3.1.2 Existing Legislation

The *Sugar Industry Act 1991* provides for the following:

- Repeal of previous legislation,
- Vesting of the granting of easements and maintenance of the register to the Queensland Sugar Corporation,
- Continuation of the statutory easements created in relation to tramways constructed prior to 25 October 1948,
- Introduction of a sunset clause whereby statutory easements will cease to exist if not recorded in the Register of Easements before 30 June 1996, and
- Obligation by the mill owner to notify the Registrar of Titles once an easement has been granted, so that an Administrative Advice can be attached to the Title for the land being encumbered.

The Department of Natural Resources advise that such notifications are being sent to the Registrar of Titles.

4.0 Unmarked Corners and Boundaries

Refer to Section 27 of the *Surveyors Regulation 1992*.

4.1 Where a surveyor is satisfied that a corner or boundary under survey should not be or cannot be marked, the following procedures shall apply:

4.1.1 Sufficient control shall be established as would permit any unmarked corner or boundary to be readily marked or reinstated at a future date from that control;

4.1.2 The accuracy of the unmarked boundary as calculated through the control is shown to be of the same accuracy as is required of the whole survey or a higher accuracy;

4.1.3 Corners and boundaries left unmarked are clearly shown as such in survey records and on the plan.

4.2 Where a surveyor is required to mark any previously unmarked corner or boundary, Section 26 shall apply.

5.0 Unsurveyed Railway Boundaries

Refer to Section 26 of the *Surveyors Regulation 1992*.

5.1 Prior to 1914, surveys of railway land were not normally carried out unless the land was being resumed from a surveyed portion held under leasehold or freehold tenure.

5.2 Section 92(1)(3) of the *Railway Act 1914* vested in the Commissioner of Railways, all Crown Land within railway fences. It is generally accepted that this applied only to land fenced prior to 1914.

As there is usually no conclusive evidence as to the age of the fences it has normally been sufficient, where Unallocated State or roads abut railway land, to adopt the fences as the boundary of the railway land.

Refer to item 1.4.4, page E2-17.

5.3 Under Section 214 (1) of the *Transport Infrastructure Act 1994* existing Rail Corridor Land became unallocated State land, to be leased to the State under the *Land Act 1994* Section 17 (b) and subleased to Queensland Rail. The State of Queensland will be represented by the Chief Executive, Queensland Department of Transport.

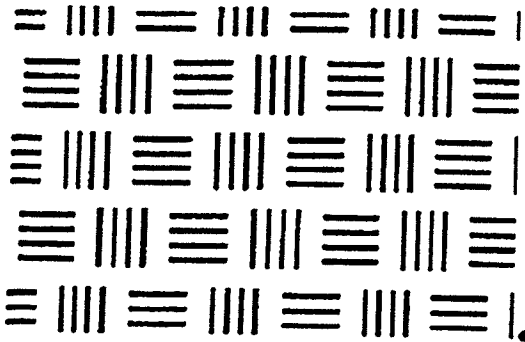
5.4 Under Section 215 (1) of the same Act, within 5 years Queensland Rail must identify the boundaries of existing Rail Corridor Land by compilation, survey or another way sufficient to identify the land. This land is to be referred to as a rail transport corridor, unless otherwise indicated by the Queensland Department of Transport.

6.0 Resumption Boundaries

Refer to Section 24 of the *Surveyors Regulation 1992*.

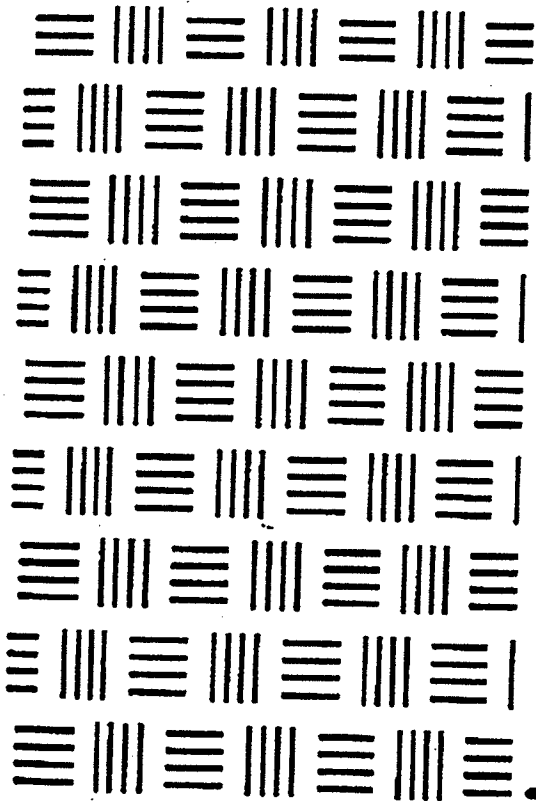
- 6.1** Where a survey is required of land to be resumed, the plan(s) shall show the boundaries of the land to be resumed and the balance of the lots affected by the resumption.
- 6.2** Resumption lines shall be marked where they intersect the common boundaries of parcels held under one ownership with separate titles or under consolidated titles.
- 6.3** Where permanent fencing has been erected along a resumption boundary prior to the survey, the surveyor, unless otherwise advised, must consult with the resuming authority to confirm that the fence should be adopted as the resumption boundary.
- 6.4** Where a resumption plan indicates that an area of road is available for closure, sufficient survey shall be carried out to enable the road to be closed if required or to remain open if application for closure is not forthcoming.
- 6.5** Where land is being taken by resumption, boundaries shall be cleared and marked except where unnecessary damage to cultivation or the environment would result, in which case concurrence of the Constructing Authority should be obtained.

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Part C

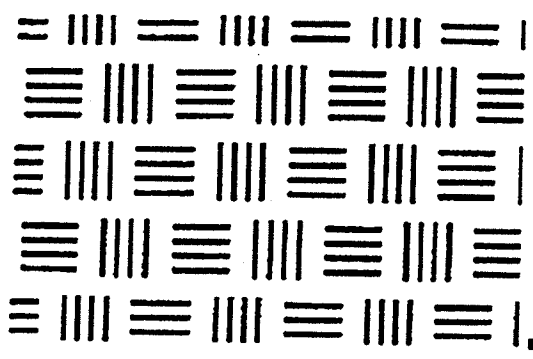
Registration Requirements



C1
Registration of Individuals

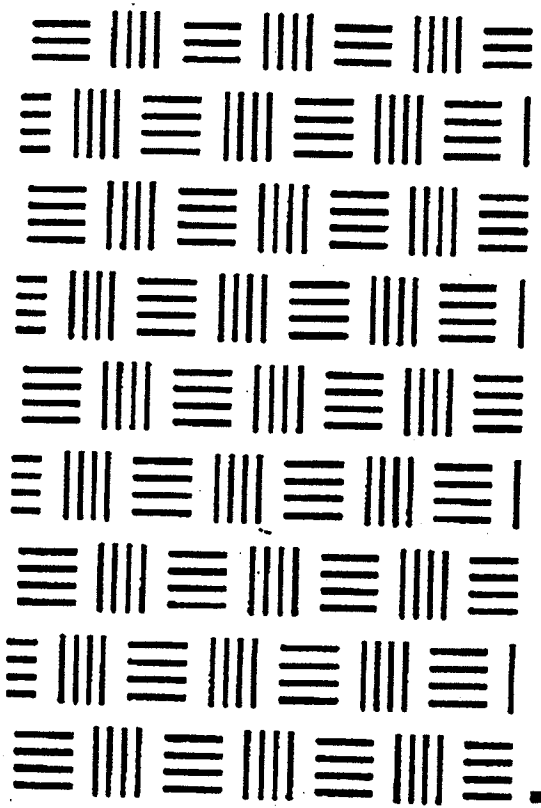
C2
Registration of Bodies Corporate

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Part C1

Registration of Individuals



**Requirements, Directions and Guidelines
for Registration of Surveying Associates,
Surveying Graduates and
Surveyors and the Endorsement of
Licensed and Consulting Surveyors.**

Reciprocity

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Requirements

Sections 1.0 to 5.0 should be read in conjunction with the relevant Sections of the Act and Regulation.

1.0 Associate

Section 38A (Act) -- Section 6 (Regulation)

1.1 Associate Diploma in Surveying or equivalent.

1.1.1 QIT, OR

1.1.2 USQ (DDIAE) Associate Diploma in Surveying 2 years fulltime, 4 years external, OR

Bachelor of Technology in Surveying 3 years fulltime, 6 years external, OR

1.1.3 Completed a course of study acceptable to the Board and is the holder of a diploma, certificate or other qualification conferred after due examination by a prescribed educational institution.

--plus 4 years approved practical experience in any of the following areas, cadastral, engineering, topographic, or hydrographic surveying or some other type of surveying which in the opinion of the Board is appropriate for persons seeking registration.

1.2 A person is otherwise qualified if he has gained over a period of seven years practical experience and competence in cadastral, engineering, topographic or hydrographic surveying, or in some other type of surveying which in the opinion of the Board is appropriate for persons seeking registration. (See Directions E, Page C1-12.)

1.3 Further, the applicant must satisfy the Board as to his capacity to maintain a high level of performance in the technical aspects of the practice of surveying.

1.4 An applicant shall complete Form 1 and such application shall be accompanied by the prescribed fee.

2.0 Graduate

Section 38 (Act) -- Section 7 (Regulation)

2.1 Degree in Surveying or equivalent.

2.1.1 U of Q Bachelor of Surveying, 4 years full-time, OR

2.1.2 QUT (QIT) Bachelor of Applied Science (Surveying), 3 years full-time or part-time equivalent, OR

- 2.1.3 USQ Bachelor of Surveying, 8 years external, OR
- 2.1.4 Appropriate qualifications from a tertiary education institution recognised under the reciprocating Boards arrangements within Australia and New Zealand.
- 2.2 An applicant shall complete Form 2 and such application shall be accompanied by the prescribed fee.

3.0 Surveyor

Section 37 (Act) -- Section 8 (Regulation)

3.1 Academic Qualifications

- 3.1.1 Holds a degree in Surveying as set out in 2.1, and
- 3.1.2 Shall have gained practical experience in surveying and satisfactorily completed projects, sufficient to satisfy the Board of his/her capacity to maintain a high level of performance in all respects (ethical, administrative & technical) of the practice of surveying, OR
- 3.1.3 Shall have gained the Graduate Diploma in Surveying Practice from QUT., OR

3.2 Equal or Higher Qualifications

- 3.2.1 Shall satisfy the Board that he/she possesses academic qualifications that the Board considers to be equal to or higher than the academic qualifications referred to in Direction 3.1.1; and
- 3.2.2 Shall satisfy the Board that he/she has gained practical experience and satisfactorily completed projects in surveying that the Board considers to be equal to or greater than the requirements referred to in Requirements 3.1.2 or 3.1.3 above; OR

3.3 Absence of Formal Qualifications

- 3.3.1 Shall satisfy the Board that over a period of three years experience in the practice of surveying he/she has demonstrated a high level of competence and professionalism; and
- 3.3.2 Shall, if required by the Board, pass such examinations (whether written or oral or both), and gain such additional practical experience and do such additional projects, as the Board considers to be sufficient for the purpose of qualifying him/her to be registered under the Act; OR

3.4 Reciprocity

- 3.4.1** Shall satisfy the Board that he/she is registered as a Surveyor with the Surveyors Board or other competent authority of a State or Territory of the Commonwealth, or of New Zealand, or that he/she is entitled to be so registered; and
- 3.4.2** Shall, if required by the Board, pass such examinations (whether written or oral or both), and gain such practical experience or additional practical experience and do such additional projects, as the Board considers to be sufficient for the purpose of qualifying him/her to be registered under the Act.

3.5 Application

An applicant shall complete Form 3 and such application shall be accompanied by the prescribed fee.

4.0 Licensed Surveyor

Section 42 (Act) – Section 9 (Regulation)

- 4.1** A person registered as a Surveyor or an applicant for registration as a Surveyor who seeks to have his/her registration in the Register of Surveyors endorsed to the effect that he/she may perform cadastral surveys:
- 4.1.1** Shall satisfy the Board that he/she has completed a period of twelve months practical experience in cadastral surveying as set out hereunder.
- The practical experience:-
- (i) shall be performed under the supervision of a licensed surveyor; and
 - (ii) shall relate to cadastral surveying in both urban and rural areas; and
 - (iii) shall include a professional assessment project in cadastral surveying; and
 - (iv) may include, wholly or in part, cadastral surveying performed for the purposes of Directions A Practical Experience, B - Projects and C - PAP; OR
- 4.2** Shall have gained the Graduate Diploma in Surveying Practice from QUT;
OR

4.3 Shall satisfy the Board that he/she is licensed or otherwise authorised by the Surveyors Board or other competent authority of a State or Territory of the Commonwealth, or of New Zealand, to perform cadastral surveys; and

4.3.1 Shall, if required by the Board, pass such examinations (whether written or oral or both), and gain such practical experience or additional practical experience and do such additional projects, as the Board considers to be sufficient for the purpose of qualifying him/her to be licensed under the Act.

4.3.2 An applicant shall complete Form 4 and such application shall be accompanied by the prescribed fee.

5.0 Consulting Surveyor--

Section 42A (Act) -- Section 10 (Regulation)

5.1 A person registered as a Surveyor or an applicant for registration as a Surveyor who seeks to have his/her registration in the Register of Surveyors endorsed to the effect that he/she is a Consulting Surveyor shall satisfy the Board that he/she intends to provide survey services to the public for a fee.

5.2 A person who has completed the Graduate Diploma in Surveying Practice shall obtain 12 months appropriate experience after graduation before an application for endorsement as a consulting surveyor will be considered.

In circumstances where extensive practical experience of an appropriate nature is demonstrated, the Board may waive this requirement.

5.3 A person who has completed the Board's practical experience requirements, as set out in 3(i)(b), shall obtain 12 months appropriate experience after completion of the PAP, before an application for endorsement as a consulting surveyor will be considered.

In circumstances where extensive practical experience of an appropriate nature is demonstrated, the Board may waive this requirement.

5.4 An applicant shall take out and maintain professional indemnity insurance and public liability insurance policies to the value of:

- (i) professional indemnity insurance - \$250,000; and
- (ii) public liability insurance - \$2,000,000.

5.5 An applicant shall complete Form 5 and such application shall be accompanied by the prescribed fee.

Directions

A. Practical Experience - Surveyor

- A.1.0** Before making application to the Board for registration as a Surveyor, every Surveying Graduate shall have gained under the supervision of a Surveyor all the practical experience on which he/she relies for the purposes of registration.
- A.2.0** Such practical experience shall be gained over a period of two years unless the Board in a particular case in the exercise of its discretion under Section 37 of this Act increases or reduces that period.
- A.3.0** All graduates and students should ensure that practical experience is gained under the supervision of a registered surveyor or in the case of cadastral surveying a licensed surveyor.
- A.4.0** The Surveyor supervising the practical experience being undertaken by a Surveying Graduate or student shall report thereon to the Board in Form 6. At the end of each period of experience or at the end of each six months, whichever is the lesser period.
- A.5.0** The Board may accept the practical experience gained by a Surveying Graduate or student or it may refuse to accept the whole or any part of the experience if the Board is of the opinion that such experience is in any respect unsatisfactory.
- A.6.0** The Board may grant credit in respect of the practical experience required as follows:
- (a) Up to 18 months to an applicant holding the degree of Bachelor of Applied Science (Surveying) from the Queensland Institute of Technology or its equivalent if the course was done in the sandwich mode;
 - (b) Up to six months to an applicant holding the degree of Bachelor of Surveying from the University of Queensland or its equivalent;
 - (c) Up to two years in particular cases where the Board is satisfied the applicant has obtained the appropriate experience.
- A.7.0** The minimum requirements for practical experience shall be a period of at least six months in urban and six months in rural cadastral surveying and at least six months in engineering and six months in another discipline of surveying.

B. Projects

B.1.0 Before making application to the Board for registration as a Surveyor, every Surveying Graduate shall have substantially completed, to the Board's satisfaction, the projects set out in this Direction, prior to commencing the professional assessment project (PAP).

B.2.0 A Surveying Graduate may apply to the Board for acceptance of all or any of the projects completed by him/her as a student in lieu of all or any of the projects referred to in paragraph five.

B.3.0 A completed project shall not be submitted to the Board for approval until after registration as a Surveying Graduate. In special circumstances the Board shall decide whether a project may be submitted prior to such registration.

B.4.0 Each project shall be undertaken within a period of two years preceding an application to be examined in that project. Credits for projects passed will lapse after three years but the Board at its discretion may grant an extension of time.

B.5.0 Subject to paragraph (6.0), the projects shall comprise:-

B.5.1 Boundary survey

A boundary survey is a survey to reinstate the boundaries of a parcel of land which constitutes a moderate reinstatement challenge.

B.5.1.1 A boundary survey of a country area of not less than 15 hectares, two boundaries of which shall coincide with and be reinstated from previous surveys, and one boundary of which shall be a water course or other natural feature, or an irregular road, and shall include a sun observation for meridian; OR

B.5.1.2 A boundary survey of an urban area, suitable for lodgement with the appropriate authority, with occupation on or near the boundaries in such positions that at least one boundary must be determined by indirect methods, and shall include a sun observation for meridian; AND

B.5.2 Engineering or Hydrographic

B.5.2.1 The survey and design for a proposed road or railway not less than 500 metres in length, with the requisite digital terrain model, and calculations for earthworks and provision of drainage as required; or

B.5.2.2 A working chart of a hydrographic survey of about 2 square kilometres, including reduction of soundings and plotting of sounding locations; and

B.5.3 Topographic

B.5.3.1 A topographical survey of hilly country embracing an area of not less than 10 hectares, showing contours at height intervals appropriate to the scale and purpose of the survey; or

B.5.3.2 A map of a densely settled area of about 1,500 hectares or of a sparsely settled area of about 10,000 hectares, drawn to a suitable scale and plotted from a single photogrammetric model, with contours and heights appropriate to the scale of the map and the purpose of the survey; and

B.5.4 Geodetic and Astronomy

B.5.4.1 A survey for the establishment of geodetic control points of at least third order precision, requiring the establishment of at least four new points if the exercise involves a traverse, or at least two new points if the exercise involves a network, based on at least two existing points, and including planning, ground marking, field observations, computations and adjustments; and

B.5.4.2 An exercise to determine the AMG bearing of a line between two stations in the geodetic project above, using stellar observations to an accuracy of ± 5 seconds.

B.5.5 Design

B.5.5.1 A design of moderate complexity of an urban residential area covering about 16 hectares.

A significant part of the project is to be located in terrain where slopes are in excess of fifteen percent. The design with relevant topographic information is to be shown on a plan at an appropriate scale.

The plan is to be supported by a report which develops a rationale for the establishment of the development and presents discussions on environmental, engineering, economic and land use factors; OR

B.5.5.2 A design for a farming development to accommodate approximately 20 family units within an area ranging from about 200 hectares to 1,000 hectares. The proposal is to be expressed on plans which include relevant topographical information and details of vegetation and soil types, and illustrate the regional context of the proposed development, the existing and proposed roads and farm boundaries, water supply facilities and community amenities. The plan are to be supported by a report, which develops a rationale for the proposed development and presents a discussion on environmental, engineering, economic and land use factors.

B.6.0 Alternate Projects

As an alternative to the projects referred to in paragraph (B.5.0), the Board may in respect of any Surveying Graduate approve a proposed list of projects and determine the requirements for such projects, in any case

where the Board is satisfied that the completion of such proposed projects will enable the Surveying Graduate to achieve a level of performance acceptable to the Board. For detail see Part D2 item 10.0.

Prior approval must be obtained by the Graduate from the Board.

B.7.0 Application

An application in respect of the acceptance of the projects shall be made to the Board in Form 7. Such application shall be accompanied by the prescribed fee.

C. Professional Assessment Project

C.1.0 Before making application to the Board for registration as a Surveyor, a Surveying Graduate shall complete, to the Board's satisfaction, a professional assessment project (PAP).

C.2.0 The professional assessment project shall not be commenced until the Surveying Graduate has substantially completed to the Board's satisfaction:

- (a) the projects prescribed by Direction B. - Projects: and
- (b) twelve months of the practical experience prescribed by Direction A. - Practical Experience:

Provided that in special circumstances the Board may accept in lieu of the PAP, a project undertaken by an honours or post-graduate student during the course of his/her higher studies.

C.3.0 The Board shall initiate a discussion with the graduate prior to commencing the PAP or as soon thereafter as possible.

C.4.0 The professional assessment project shall be of moderate complexity, and sufficiently broad for the Surveying Graduate or student to adequately demonstrate his/her competence and professionalism in surveying.

C.5.0 The Surveying Graduate shall, prior to commencing work thereon, apply to the Board in Form 8 for approval of the proposed project. Such application shall be accompanied by the prescribed fee.

C.6.0 The Board shall appoint an examiner who, where necessary, shall be assisted by an assistant examiner and, if the project is one in the category of cadastral surveying, both examiner and assistant examiner shall be Licensed Surveyors.

C.7.0 Both examiner and assistant examiner shall assess the competence of the Surveying Graduate by observing his/her performance of the project, and shall conduct such oral or practical examinations as they deem necessary.

C.8.0 The Board may conduct such further oral or practical examination as recommended by the examiner or as it sees fit, either in the category of surveying chosen or in other categories of surveying.

D. Board Instructions

D.1.0 The Board may from time to time issue instructions in relation to the projects set out in Directions B and C.

D.2.0 Such instructions shall be binding on all persons to whom they are issued unless in any case the Board upon application made to it has approved a departure from or variation of any such instruction.

E. Administrative Arrangements

E.1.0 Administrative Arrangement for Registration of Surveying Associates

(Section 38A, Surveyors Act 1977 & Section 6, Surveyors Regulation 1992)

Section 38A(a)(ii) of the Surveyors Act 1977 and Section 6(2) of the Surveyors Regulation 1992 require that the applicants for registration as a Surveying Associate have gained four (4) years practical experience, as well as having completed a course of study, or seven (7) years practical experience otherwise sufficient to satisfy the Board.

The Board's Direction on the practical experience requirement for registration as a Surveying Associate is that:

"Practical experience is to be at a level of competency sufficient to satisfy the Board of the applicants capacity to maintain a high level of performance in the technical aspect of the practice of surveying.

The verification that the applicant has attained such level of competency will be by:

➤ lodgement with the Board, during the period of supervision and training, of a training agreement between the candidate and supervising surveyor setting out the,

- degree of supervision to be provided,
- they type of survey work to be trained on, and

-- the standard of technical competence to be achieved.

➤ Lodgement at the end of the period of a certification by the supervising surveyor that the candidate has attained a suitable level of competence to be registered and supported by documentation of the facts of the training.

The Board retains the right to test such competence in some way should it be considered by the Board to be necessary in a case or cases.

Reciprocity

7.0 Reciprocal Registration -

Section 37(b) (Act) – Section 8(3)(c) (Regulation)

For registration in Queensland as a Surveyor, of a person currently registered in another State or Territory or New Zealand, the applicant has to submit the following:

7.1 Letter of Accreditation

A Letter of Accreditation, in the form attached hereto, from the Surveyors Board with whom they are currently registered.

To obtain a Letter of Accreditation, the applicant is required to provide information, covering a range of matters, in a format approved by the Reciprocating Boards.

This form is available from all Reciprocating Boards on request.

7.2 Applications and Fees

Written application on the prescribed forms:

➤ Form 3 - Application for Registration as a Surveyor plus the prescribed fee, and

if the applicant seeks endorsement to perform cadastral surveys:

➤ Form 4 - Application for Endorsement to Perform Cadastral Surveys plus the prescribed fee, provide suitable evidence of cadastral surveying practical experience to support the application, and

if the applicant intends to provide survey services to the public for a fee:

➤ Form 5 - Application for Endorsement as a Consulting Surveyor plus the prescribed fee, evidence of practical experience considered suitable by the Board, and

7.3 Supporting Documentation

The following documentation is required to accompany the applications :

- two (2) recent (within the last year) references to the applicants good fame and character,
- a completed Statutory Declaration in the form attached hereto, and
- a certified statement that the applicant has studied:
 - the Surveyors Act 1977;
 - the Surveyors Regulation 1992;
 - the Survey Go-ordination Act 1952;
 - "Law Related to Land Boundaries and Surveying" by a A G Brown, and
 - the legislation contained in the list set out in Part B - General Information.

7.4 Consulting Endorsement

If the applicant is seeking endorsement as a Consulting Surveyor they are required to hold:

- current Professional Indemnity Insurance to a minimum cover of \$250,000 and provide verification thereof, and
- current Public Liability Insurance to a minimum cover of \$2,000,000 and provide verification thereof.

7.4.1 Letterheads

The applicant is further required to submit to the Board a copy of their letterhead, or proposed letterhead and invoices for the Board's approval.

SURVEYORS BOARD OF QUEENSLAND

SURVEYORS ACT 1977

LETTER OF ACCREDITATION

TO THE SURVEYORS BOARD OF (State or NZ)

This is to certify that (Registrants name)

- (a) is a (category of registration) who was first registered in (State) on (date of first registration).
- (b) current registration expires on (date of expiry).
- (c) registration is endorsed for (type of endorsement).
- (d) is not presently under any actual or possible disciplinary action.
- (e) The following conditions apply:

Dated this day of 19

_____ President

(Affix seal here)

_____ Secretary

SURVEYORS ACT, 1977
STATUTORY DECLARATION

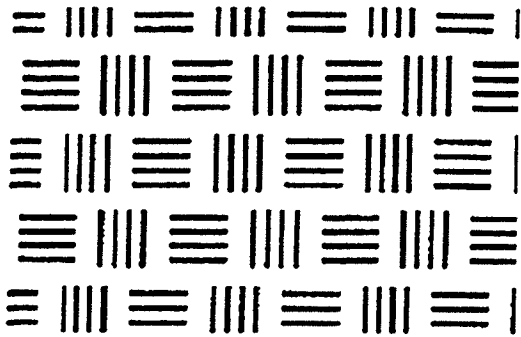
I, _____ do here by solemnly and sincerely declare that I will, to the best of my ability and without partiality, favour or affection, correctly survey and delineate the boundaries of any land I may be instructed to survey, in strict compliance with the Surveyors Act 1977 the Surveyors Regulation 1992 and Directions in force for the time being of the Board constituted by the Surveyors Act 1977.

(Signed)

Taken and declared before me, at _____ this _____ day
of _____ 19 _____

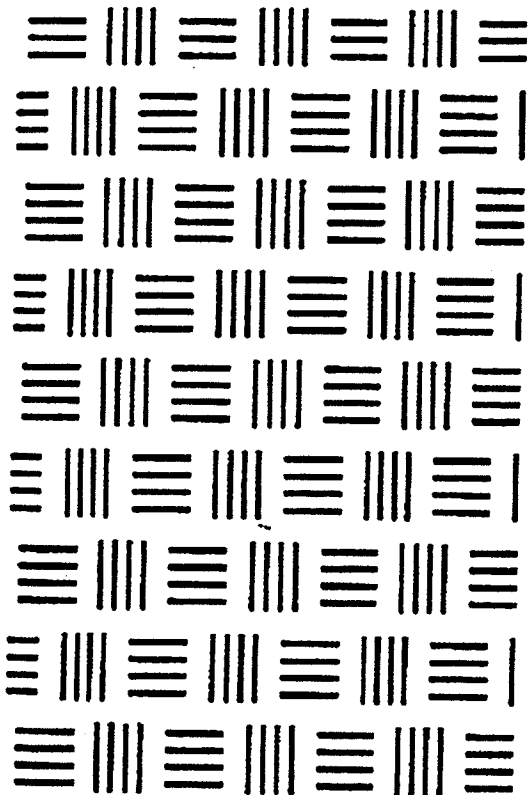
(Signed)
A Justice of the Peace/
Commissioner for Declarations

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Part C2

Registration of Bodies Corporate



**Requirements, Directions and Guidelines
for Registration of Bodies Corporate as
Surveyors and Endorsement
of registered Bodies Corporate as
Licensed and Consulting Surveyors**

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Requirements

1.0 Body Corporate -

Section 40 (Act) - Section 11 (Regulation)

1.1 Business Entity Providing Survey Services

A business entity which presents itself to the public as being a surveyor or in the business of providing survey services is required to be registered with the Board. The Board considers that the business entity which presents itself to the public is one and the same as the entity which is registered and/or licensed.

1.1.1 Any registered person being an individual, may practise under his or her own name with suitable designation eg, Licensed Surveyor or Consulting Surveyor.

1.1.2 Any registered person being a body corporate may practise under the name of that body corporate, or under another name in a manner approved by the Board. This applies to:

- a sole practitioner who, for business reasons, is the employee of his own private trading company, which company has been registered with the Board; and
- a company which wishes to use a business name of which it is the beneficial owner. It is a requirement that the name of the beneficial owner(s) of any business name, must be shown on all relevant stationery. Further, the names, qualifications and designations of the principals and/or directors of that entity must be shown. Where there are only two directors, one of whom is the spouse of the registered person (sole practitioner), the name of the registered person only is to be shown.

1.1.3 A group of registered persons trading as a body corporate, or a registered person with bona fide associates, are to ensure that the business entity is registered under the Act.

1.1.4 In Summary

- The name of the entity must truly reflect the composition of that entity.
- The name of the beneficial owner(s) of the business name, if one is used, must be shown on all stationery.
- The name and registered status of the registered person(s), principals and directors of the body corporate must be shown on all stationery

1.2 Registration of Other Structures

1.2.1 Partnerships etc

The present legislation does not allow the Board to register partnerships, Public companies limited by shares and Government organisations offering surveying services.

1.2.2 Trusts

The Board has determined that for the public interest to be upheld, a prospective client should be able to readily ascertain the entity or individual with whom he is dealing in relation to surveys.

The manner in which trusts can be set up, does not provide this "open" view of the entity. To this end, the Board currently does not register entities set up as Trusts.

1.3 Business Names

The Surveyors Act 1977 at Section 47 provides for certain penalties for a person who holds out as a surveyor unless the person is registered as a surveyor under the Act. The section also prohibits the use of the words "registered", "licensed", "consulting", "consultant" in connection with the word "surveyor", unless the person is licensed or registered under the Act.

Section 47A of the Act provides for the steps to be taken by a person intending to practice surveying under a business name.

The Acts Interpretation Act 1954 provides the following meaning on "Person" or "Party" - Includes a body corporate'. Further, the Act provides that every word in the singular number shall be construed as including the plural number, unless contrary intention appears.

The Board will continue to monitor the operations of firms, especially where advertising and letterheads are concerned, to ensure that 'persons' are appropriately registered.

It is widely believed that once a business or company name is registered, that name is afforded some form of legal protection. This is not the case. Such registrations are not designed to give any such rights. They are an obligation of doing business and their intention is to protect consumers, not the registrant.

The Business Names Act 1962 defines "Business" as including a trade and profession and "Business name" means a name, style, title or designation under which a business is carried on. The Business Names Act 1962 provides for, amongst other matters, the registration and renewal of registration of business names.

The Corporations Law provides a similar mechanism, enabling company names to be registered.

1.4 Body Corporate Names - Approval, Content, Stationery

1.4.1 The body corporate must apply to the Board for prior approval of the proposed name and letterhead before making application for registration.

The following items should be adhered in a name:-

- a company name shall only contain names of registered persons,
- stationery shall only show the names of registered persons. The appropriate category of registration and qualification(s) is to be shown against each name,
- the name of a person who is holder of another qualification, may be shown on a letterhead, provided, the persons designation within the practice is also shown,
- a company (or business) name shall not include the term "and Associates" unless registered persons are actually carrying out such functions.

1.4.2 A body corporate name cannot include:-

- the name of a person who is not registered with the Board,
- Surveyor, or Surveyors in the name or in association with Registered, Licensed, Consulting, or Consultant, or
- the name of a Partnership or Trust.

(See examples in this Part).

1.4.3 The Letterhead of a body corporate is to include:-

- the body corporate name and address, and if operating under a "trading" name, both the body corporate name and trading name must be clearly shown,
- where the body corporate is a Company registered with the Australian Securities Commission, the ACN number must be shown,
- the names and qualifications of all directors who are registered persons or hold qualifications acceptable to the Board.

(See examples in this Part).

The names of unregistered persons who do not hold qualifications acceptable to the Board cannot be shown.

1.5 Body Corporate to be Registered

A body corporate is to be registered as a surveyor if it includes the name of a registered surveyor or words descriptive of the practice of surveying; and is a name which the Board considers desirable in relation to the practice of surveying.

1.6 Directors to be Registered Surveyors

A majority of the Directors of the body corporate must be registered surveyors or where there are only two Directors at least one must be a registered surveyor and be the principal beneficiary with a minimum of 51% shareholding.

1.6.1 Where the body corporate intends to engage in cadastral surveys the registration is to be endorsed to that effect and the majority of Directors must be licensed surveyors or where there is only two Directors, the principal beneficiary must be a licensed surveyor.

1.6.2 A body corporate shall not practice or hold itself out as a consulting surveyor unless each of its Directors who is a registered surveyor is endorsed to the effect that he/she is a consulting surveyor.

1.6.3 Where a body corporate has only two directors and one of these directors is not a surveyor, that director shall submit a letter stating that in the event of the registered surveyor director no longer being able to carry out the survey functions from whatever causes, that he/she will take immediate steps to have the registered surveyor replaced with another suitably qualified director.

1.6.3.1 (See sample letter at page C2-11)

1.7 Insurance

The body corporate must hold current insurance for:

1.7.1 Professional Indemnity Insurance cover to a minimum of \$250,000, and

1.7.2 Public Liability Insurance cover to a minimum of \$2,000,000

1.8 Branch Offices - Operation of

Section 11 of the *Surveyors Regulation 1992* states:

'Registration of body corporate'

11. The Board may register, or renew the registration of a body corporate as a surveyor if -

(d) *the business of the body corporate at each place of business in the State is personally supervised and managed by a registered surveyor;*

The public would also reasonably expect that the person representing the body corporate with whom they are dealing, is a professional person appropriately registered and endorsed.

1.9 Application for Initial Registration

Application for registration of the body corporate is to include:

- Form 3 - Application for Registration as a Surveyor plus the prescribed fee;
- Form 4 - Application for Endorsement to Perform Cadastral Surveys plus the prescribed fee;
- Form 5 - Application for Endorsement as a Consulting Surveyor plus the prescribed fee;
- Form 10 - Application for Registration as a Surveyor by a Body Corporate - Solicitors Certificate;
- A list of current Directors and their qualifications;
- Evidence of the Professional Indemnity Insurance and the Public Liability Insurance and to the currency thereof;

A copy of the certificate of registration of the company, or business name.

Form 4 and the associated fee is not required if the body corporate will not be engaged in and does not intend to engage in cadastral surveys.

1.10 Annual Registration

The Surveyors Act 1977 at Section 41 provides for renewal of a person's registration. The re-registration period is set between 1 October and 30 November each year.

The Board will assist registered persons by posting to them a renewal notice by 30 September. The notice will set out the fee due and list the requirements for re-registration.

Where a registration has not been renewed by 30 November, a late notice shall be posted by 15 December. This notice will set out the fees due, including the late lodgement fee.

When a registered person has not paid the required fees by close of business on 31 December, the name of that person shall be removed from the register.

Restoration of a name to the register shall occur on receipt of all fees, and costs including the late registration and restoration fees.

2.0 Body Corporate Name Styles

Acceptable	Unacceptable
Thompson Surveys Pty Ltd	W A Thompson & Partners Pty Ltd
Teerink & Thompson Pty Ltd (where both are registered persons)	Thompson Family Trust
W A Thompson Pty Ltd (Trading as Thompson Surveys)	Thompson & Thompson Surveys Pty Ltd (where one is a register surveyor and their spouse, who is not a registered person)
W A Thompson & Associates Pty Ltd (& Associates is acceptable only where there are in fact Associates.	Thompson Surveying Pty Ltd
Brisbane Survey Services Pty Ltd	W A Thompson Consulting Surveyor/s Pty Ltd
Survey and Mapping Services Pty Ltd	W A Thompson Registered Surveyor/s Pty Ltd
	W A Thompson Licensed Surveyor/s Pty Ltd
	W A Thompson Surveyor/s Pty Ltd

Examples

THOMPSON SURVEYS PTY LTD

Consulting Surveyors

ACN 012 345 678

Shop 4, Land Centre, Woolloongabba. Qld 4102 Telephone (07) 987 6543

Principal: W A Thompson LS., B App Sc (Surv), M.L.S. Aust

THOMPSON SURVEYS PTY LTD

Consulting Surveyors

ACN 012 345 678

Shop 4, Land Centre, Woolloongabba. Qld 4102 Telephone 07 987 6543

Principal: W A Thompson LS., B App Sc (Surv), M.L.S Aust

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Principals: W A Thompson LS., B App Sc (Surv), M.L.S Aust
D M Thompson LS., B App Sc (Surv), M.L.S. Aust
IF Mudd, B. Cart,(Hons)

Examples

THOMPSON SURVEYS PTY LTD
trading as
SOUTH QUEENSLAND SURVEYS

Consulting Surveyors

ACN 012 345 678

Shop 4, Land Centre, Woolloongabba. Qld 4102 Telephone 07 987 6543

Principals: W A Thompson L.S., B App Sc (Surv), M.L.S. Aust
D M Thompson L.S., B App Sc (Surv), M.L.S. Aust
IF Mudd, B. Cart,(Hons)

THOMPSON SURVEYS PTY LTD
Consulting Surveyors

ACN 012 345 678

Shoe 4. Land Centre. Woolloongabba. Qld 4102 Telephone 07 987 6543

Principal: W A Thompson L.S., B App Sc (Surv), M.L.S. Aust

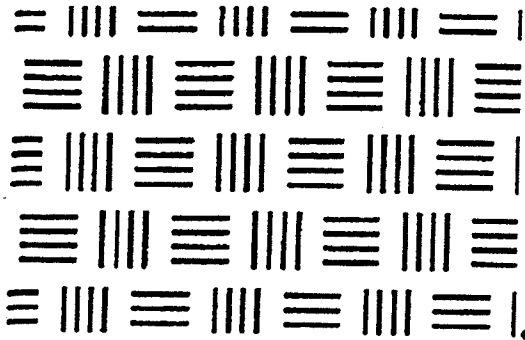
Example Letter

To: The Secretary
Surveyors Board of Queensland
PO Box 810
SPRING HILL QLD 4004

Dear Secretary,

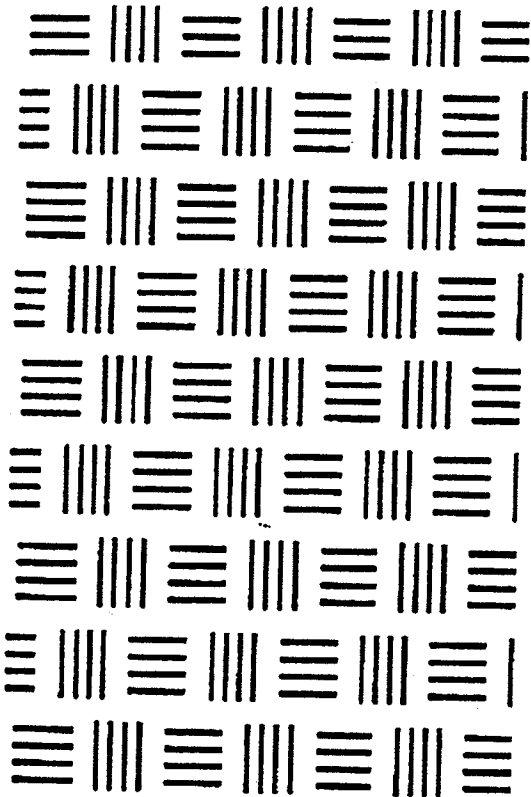
I, (name of non-Surveyor Director), being a non-Surveyor Director of (name of Body Corporate) which has only two Directors, hereby give my undertaking that I will take immediate steps to have registered Surveyor Director, (name of Surveyor Director), replaced with another suitably qualified Surveyor Director in the event of (name of Surveyor Director) being no longer able to carry the survey functions from whatever causes.

(signature of non-Surveyor Director)



Part D

Education and Practical Experience

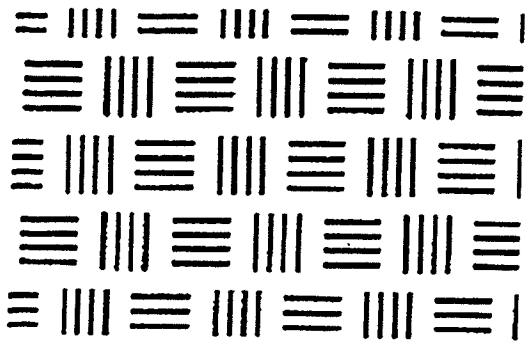


D1
**Experience Alternatives for
Registration**

D2
Project Specifications

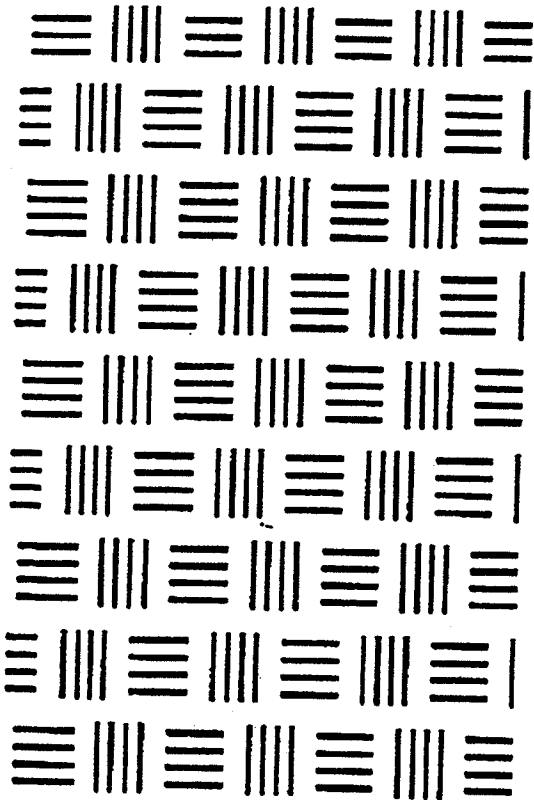
D3
**Professional Assessment
Project**

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Part D1

Experience Alternatives for Registration



Alternatives for obtaining the
required practical experience
for Registration

including

Project Options,
Survey Practice Course,
and Alternate Mechanisms

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1.0 Introduction

One of the responsibilities of the Surveyors Board is to assess the competence and suitability of candidates for registration and licensing.

As part of this process, candidates are required to satisfactorily undertake the Graduate Diploma in Surveying Practice set out at item 3.0 or to complete the projects as set out at item 2.0.

Graduates are strongly advised to give serious consideration to undertaking the Survey Practice Course. It was set up by the Board and the profession as a means of strengthening the education and training of surveyors. Graduates should seek further information from the Course Administrator. Many surveying organisations are now providing scholarships to assist graduates in doing the course, so this should be discussed with your employer.

In the case of the Professional Assessment Project, it is essential that the candidate establishes appropriate contact with the examiner from the onset of any project and ensures ongoing communication with the examiner. This manual sets out criteria for presentation, report writing and drafting requirements for all projects.

2.0 Project Option

2.1 Examples of Completed Projects

The Board holds a number of sample project submissions, covering the key project topics and the PAP. These samples are available for perusal, at the Board's office during normal business hours.

Candidates who are in doubt about aspects of registration and licensing, after reading this Manual, should contact either the Board's Office or the Convenor of the Registration Committee. On aspects specific to the Board projects, the candidate should address the inquiry to the Board's Chief Examiner.

2.2 Workshop on Registration

Every year the Board sponsors a seminar on its requirements for Registration/Licensing. Students and Graduates should be aware of this seminar and attend at least one. The seminar is usually held in September.

2.3 Strategies for Completion of Projects

Students should plan well ahead so that they achieve registration/licensing with the Board with maximum efficiency in minimum time, yet meeting the Board's detailed requirements and demonstrating a high level of competence and professionalism.

2.3.1 Experience

The experience component of the Board's requirements is two-years, however, the Board has the power (Sec 36) to increase or reduce such period as it thinks fit.

Normally the Board would require that experience be under a registered/licensed surveyor and at a high level of operation (post graduate). However, the Board will accept experience at an undergraduate level depending on the circumstances, eg. external students.

Therefore students should plan to get as much experience as possible and have it certified and accepted prior to completing studies. Experience reports should be submitted to the Board at six monthly intervals.

2.3.2 Projects

Similarly the projects may be attempted prior to completion of study is provided the work is done after the satisfactory completion of the subject(s) covering that topic.

2.3.3 The PAP

The Professional Assessment Project ideally should be done last, ie. after the completion of experience and technical projects. However, the Board takes into account the length of time needed for the completion of a PAP and the difficulty some graduates may have in finding a suitable project.

So the Board will accept a PAP proposal at any time after graduation, provided the graduate has made substantial progress towards registration. The Board considers each case on its merits when appraising the PAP application.

2.4 Example Strategies

2.4.1 By studying full-time (directly from Grade 12) via B. Surv. at QUT

- 18 week practical experience to be gained during the course (would likely be discounted to 9 by the Board depending on the level of operation.)
- complete the Geodetic/Astro after year 3/semester 1
- complete the Topography/Mapping after year 3/semester 2
- complete the Urban Design in year 4/semester 2

- after graduation seek 95 weeks of broad experience. After one year complete the Cadastral and Engineering and by the end of the period have completed the PAP.

2.4.2 By studying the B.App.Sc.(Surv) at QUT with prior experience or by taking a sandwich option:

- practical experience would be discounted by about 1½ to 1 depending on the level of operation
- in Land Surveying 3 complete a practical which meets the Board's specifications for the Cadastral Project
- complete Geodetic/Astro in year 2/semester 2
- complete topography/Mapping in year 3/semester 1
- complete Urban Design in year 3/semester 2
- depending on prior experience and competence, Engineering may be done during the sandwich period
- after graduation complete practical experience (suggest minimum of 6 months cadastral) and complete PAP

2.4.3 By studying Bachelor of Surveying externally at the University of Southern Queensland with six years of work experience

- practical experience may be satisfied depending on level of experience
- complete Topographic/Mapping project in year 3 (external) or semester 3 (internal)
- complete Engineering Project in year 4 (external) or semester 4 (internal)
- complete Urban Design in year 5 (external) or semester 5 (internal)
- complete Geodetic/Astro Project in year 6 (external) or semester 6 (internal)
- complete Cadastral or mine surveying in year 7 external
- complete the PAP as soon as possible after completing the degree

2.5 Suggested Programme

The table on the following page illustrates a suggested programme for completing the Board Projects required for registration through the Projects Option.

Suggested Project Programme		
Project	QUT Degree	USQ
Urban Cadastral OR	After Land Surveying 4 (include Astro) and Land Administration 3	Can be done in E4026 Project Surveying after: E4020 Cadastral Surveying E4025 Land Law and Valuation
Rural Cadastral	After Land Surveying 4 (include Astro) and Land Administration 3	Can be done in E4026 Project Surveying after: E4020 Cadastral Surveying E4025 Land Law and Valuation
Engineering OR	After Land Surveying 6 and Engineering Science 3	Can be done in E4014 Construction Surveying after: E0003 Road Design and Location E4006 Automated Surveying Systems
Hydrographic	After Land Surveying 6	Can be done in E4014 Construction Surveying after: E0003 Road Design and Location E4006 Automated Surveying Systems
Topographic OR	After Land Surveying 6	Can be done in E4006 Automated Surveying Systems after: E4003 Surveying B E4018 Data Presentation
Mapping	After Photogrammetry 3	Can be done in E4024 Photogrammetry and Remote Sensing
Geodetic/Astro	After Land Surveying 5	Can be done in E4021 Geodetic Surveying B after: E4019 Geodetic Surveying A
Urban Design OR	After Land Development Prac 3	Can be done in E4015 Urban Design and Development after year 4
Rural Design	After Land Development Prac 3	Can be done in E4015 Urban Design and Development after year 4
Alternative Projects		
Underground Mine	After Land Surveying 6	After E4011 Mine Surveying
Open Cut Mine	After Land Surveying 6	After E4011 Mine Surveying
Detail Survey	After Land Surveying 6	After E4006 Automated Survey Systems
Other Alternatives GIS		

2.6 Project Timetables

Completion of a degree in surveying, and thus being able to proceed to registration as a Surveying Graduate, is only the first step in moving toward registration as a Surveyor.

The surveying graduate on completion of the degree, is in a position similar to other professionals such as accountants and lawyers, in that the profession has established requirements for professionalism and competence. In order to achieve these requirements, a number of projects must be completed at a satisfactory level and within a reasonable time frame.

The Board considers that the projects, including the professional assessment project, should be capable of being completed in a two year period.

Candidates need to plan the finalisation of their projects, in line with their work commitments and a dedication and purpose to finalising their professional status. The Board recognises work pressures and the like, however, it considers that the two year period is adequate provided a realistic commitment is made by the candidate. The candidate is required to lodge his timetable for completion of projects and the PAP at the time he seeks registration as a surveying graduate.

Where a candidate becomes aware that the timetable set cannot be adhered to, due to extenuating circumstances, this should be set out in writing to the Board, together with the reasons. An amendment timetable should also be lodged for Board consideration.

Consideration will be given to granting credit for projects completed towards obtaining a Degree in Surveying provided that the application for credit is submitted within twelve months from the completion of the Degree. Credit where granted in those cases will be taken as having been granted as at the date of completion of the Degree.

Credit for projects may lapse after three years from date granted in cases of projects completed after registration, or from the date of completion of the Degree.

A project may not be more than 2 years old when lodged with the Board.

Credit for any technical project or Professional Assessment Project will automatically lapse four (4) years after the date the Board awarded credit for that project, unless all technical projects and the Professional Assessment Project have been completed.

Candidates should note that the Board will review project credits on an annual basis. Where a candidate is not meeting project submission in

line with the timetable and within the 2 year time frame, consideration will be given to the withdrawal of credits for projects.

The Board, at its discretion, may grant an extension of credit for up to an additional twelve months.

2.7 Resubmission of Projects

The Board has noted that some candidates resubmit the Technical and Professional Assessment projects a number of times, until eventually, the project meets an acceptable standard. This is tantamount to Examiners conducting a correspondence course.

Projects are set to enable candidates to demonstrate an acceptable level of competence, rather than an absolute level of expertise. Examiners assess projects on this basis. To this end, where a candidate is not able to display an acceptable level of competence with minor additions to a project, then the candidate needs to obtain additional training.

Projects submitted for appraisal and found to be deficient in minor areas, may on the recommendation of the Examiner, be resubmitted once by the candidate.

A re-lodgement fee applies in this instance.

Where the resubmitted project does not receive a "Pass", it will be recorded as a failure. In these cases, the candidate will be required to submit a new project.

2.8 Recognition of Post Graduate Studies

Where candidates have completed:

- a degree in Surveying (Honours),
- a Masters, a Doctorate or a Graduate Diploma in a relevant field, or
- completed a Double Degree, in Surveying and a related field,

the Board will consider initial registration as a Surveyor.

The practical experience requirements for these candidates will continue to apply, with the post-graduate period or half of the term of the double degree being able to be included in the practical experience period.

For these candidates to have their registration endorsed as a Licensed Surveyor, they have to complete a Cadastral PAP and their practical experience **MUST** be in cadastral surveying.

2.9 Discussion with Candidates Approaching Registration

It is the policy of the Board to request candidates, who are approaching registration, to meet with the Registration Committee. It is the intention to have a discussion with all candidates who have substantially completed their technical projects, but preferably before they commence their Professional Assessment Project (PAP).

The purpose of the discussion is to open lines of communication between the Board and the candidate. In the majority of cases the candidates only communication with the Board would have been with the Secretary and possibly with some of the examiners of the technical projects.

These discussions are not formal interviews or oral examinations. They are also not linked to the interview process that is part of the PAP. A discussion would usually not exceed thirty minutes.

The graduate has spent at least three years in a tertiary institution, exposed to the theoretical and practical aspects of the practice of surveying (ethical, administrative and technical). Further, the graduate has gained practical experience under the supervision of a registered/licensed surveyor for at least two years or an equivalent period. During this period, or where credit has been given for practical projects associated with Surveying courses, the graduate has completed the required technical projects.

The Graduate is at the stage where he/she has satisfied the education and training requirements of the Board and this discussion should now determine the individuals attitude, administrative capacity and ethical outlook to the profession of surveying.

As it is not practical to have country based candidates come to Brisbane for these discussions, the Board has directed that where appropriate, a discussion be held with the candidate in a country centre by:

- (a) two Board members, or
- (b) one Board member and a respected local surveyor, or
- (c) two respected local surveyors.

These discussions are arranged through the Board's Secretary.

3.0 Graduate Diploma in Surveying Practice

3.1 Introduction

The Graduate Diploma in Surveying Practice, referred to as the Survey Practice Course, is a joint venture of the Surveyors Board of Queensland, the Association of Consulting Surveyors and the Queensland University of Technology.

3.2 Entry Requirements

3.2.1 Normal Entry

To be eligible to enrol in the course leading to the Graduate Diploma in Surveying Practice, an applicant shall;

(a) hold from the Queensland University of Technology the degree of Bachelor of Applied Science (Surveying);

OR

(b) hold from the Queensland University of Technology the degree of Bachelor of Surveying;

OR

(c) hold from the University of Queensland the degree of Bachelor of Surveying;

OR

(d) hold from the University of Southern Queensland the degree of Bachelor of Surveying;

OR

(e) hold from another tertiary institution a degree acceptable to the Surveyors Board of Queensland and considered by the Head of School of Surveying (QUT) to be at least equivalent to the degree of Bachelor of Applied Science (Surveying) of that University.

3.2.2 Qualifying entry

Applicants who do not meet the requirements for normal entry but who hold a tertiary qualification in a technological field or other equivalent qualification may be required to complete such pre-requisite surveying and other subjects as may be determined by the Head of School of Surveying prior to enrolment in the course.

3.2.3 Prior Practical Experience

At least one year field experience following graduation in the practice of surveying is desirable prior to entry into the Survey Practice Course.

3.3 Course Objectives

- To provide surveying graduates with a period of intensive education and training so that they will reach the standard of competence required for licensing by the Surveyors Board of Queensland;
- To impart practical skills in surveying procedures and develop the ability to apply them without difficulty;
- To assist students to recognise their own limitations and make use of other professions when appropriate;
- To enhance the ability to communicate effectively

3.4 Course Structure

The course was prepared in conjunction with industry and is designed to replace, in part, a system in which surveying graduates receive their training from practising surveyors. Over a period of two years the training is tested by the Surveyors Board of Queensland on the basis of projects submitted for assessment. On satisfactory completion of all the required projects the Board will grant a licence to practice when it is satisfied that the applicant is competent.

The Survey Practice Course replaces this arrangement with systematic training and education by the most able practitioners available. On graduation, students are licensed by the Board and, following a year as an employed surveyor, are eligible to practice on their own account, subject to the Board's requirements for consultancy.

The program extends over two semesters of 18 weeks duration including a mid-semester break of one week in each period. There is also a two week break between semesters. Total contact time amount is 1292 hours which is allocated between field and office time including lectures, workshops, discussions and project work.

Approximately nine weeks of the course is devoted to actual field survey work, some of which is in a camp environment. This enables the students to gain confidence in accepting responsibility for logistic and personnel matters as well as communication and management skills.

The times allocated to each subject are shown in Table 1. It should be noted that there is some educationally desirable overlap between several of the subjects. For example, the techniques learned in subjects such as Survey Computing, Office Operations, Engineering Surveying and Detail Surveys can be applied in several of the other subjects.

Survey Practice Course -- Hours in each subject by type of activity				
	Lect.	Feild	Office	Total
Semester 1				
Cadastral Surveying	27	138	191	356
Surveying Project Management	24	-	76	100
Office Operations	45	-	45	90
Survey Computing	8	-	39	47
Practice Law	17	-	13	30
Professional Practice	4	-	4	8
Semester 2				
Cadastral Surveying	6	87	154	247
Engineering Surveying	32	95	83	210
Mapping	30	-	46	76
Building Control Surveys	14	12	12	38
Surveys for Government	19	-	19	38
Detail Surveying	3	14	13	30
Innovations & Systems Develop.	12	-	10	22
Total Hours	241	346	705	1292

3.5 Text and Reference Books

Lecture Notes and Practice Papers, which have been prepared specifically for the course by the profession, are made available to the students at cost price.

Students are required to purchase copies of certain statutes, texts and the Surveyors Operations Manual that will be the basis of their professional library. These are recommended by the practising surveyors, who include reference texts in lecture notes where applicable.

3.6 Teaching Methods and Assessment

Instruction is offered by professional practitioners, from both the public and private sectors, chosen from amongst the most competent and experienced in each subject area. Considerable emphasis is placed upon application of theory and the problems experienced in practice.

In general, students receive a short period of instruction in each subject followed by experience on real surveys under the direction and guidance of these practitioners. Emphasis is given to the planning, managing and costing of each task.

As the course is project orientated students complete tasks, under practice conditions, that are comparable to those performed in practice, thereby making the course relevant to current surveying practice and maintaining a high professional standard. Files on each job are opened and maintained by individual students throughout the duration of the course.

In this way they develop systematic methods of dealing with each job and of carrying it through to completion. Such records are expected to help students when they apply for positions after graduation.

Students are provided with practice notes and specimen files in respect of each topic that is discussed. Subsequently, exercises are followed by further discussion and assessment. Discussions and exercises are conducted and overseen by practising surveyors. These surveyors

provide case studies and prepare practice papers as part of their appointments.

Assessment is continuous and is partly by the practising surveyors and partly by the full-time staff of QUT. Both written work and field performance is assessed.

3.7 Dress

Students are required to be attired in a professional manner. The Course Administrator specifies dress requirements for both office and field work.

3.8 Further information

Further information can be obtained from:

**The Course Administrator, Survey Practice Course
School of Surveying
QUT - Gardens Point Campus
GPO Box 2434 (2 George Street)
BRISBANE 4001**

Telephone: (07) 3864 2804/3 Fax No: (07) 38641809

4.0 Registration – Alternate Mechanisms

4.1 Introduction

The Board has introduced a Policy, in line with the requirements for registration set down in the Act and Regulation, whereby applicants for registration, subject to specific criteria, may seek to apply under the alternate mechanism policy.

The detailed guidelines and administrative procedures are available from the Board on request.

4.2 Degree and 15 Years Experience

The following summarises the requirements of the policy and associated administrative arrangements.

The policy may apply to persons who have a degree in Surveying, but have not progressed to registration and licensing over a significant (at least 15 Year) period

- such a person would satisfy Sec. 37 (1) (a) by the submission of two recent written references preferably by Queensland Surveyors.
- such a person would satisfy Sec. 37 (1) (b) (i) (A) and Regulation 8 (1) (a) or (b) on the basis of the surveying degree.
- the person would then meet the competency requirement by addressing Sec. 37 (1) (b) (ii) and Reg. 8 (3) (b) i.e. by establishing that over a specific two-year period the person has demonstrated the capacity “to maintain a high level of performance in all aspects (ethical, technical and administrative) of the practice of Surveying.

This would be done by the following:

- A detailed submission to the Board outlining ethical, technical and administrative tasks over a recent two-year period; and
 - by completing a Professional Assessment Project; and
 - by submitting to an oral examination by the Board.
- persons wishing to be considered under this category would be well advised to make a short submission to the Board to determine if the Board is prepared to consider such an application.

- the consultancy endorsement would be subject to demonstration of at least twelve months experience in practice at an appropriate management and administrative level.

Normally the above steps would be taken sequentially, but in special cases applicants could apply to the Board for a variation.

- fees applicable to this Category include Fee for examination under Reg.8(3) (b); assessment of a Professional Assessment Project; and Application and registration fees for registration and licensing (if the latter is applicable).

The detailed guidelines and administrative procedures are available from the Board on request.

4.3 No Formal Qualifications and 15 Years Experience

The following summarises the requirements of the policy and associated administrative arrangements.

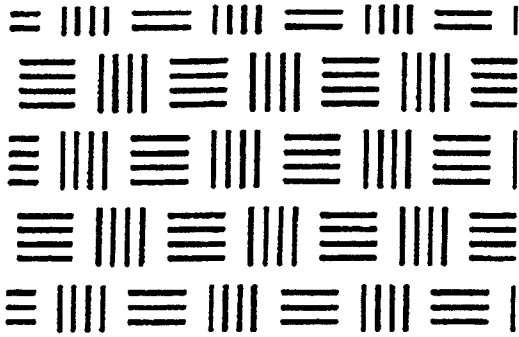
The policy may apply to persons who do not meet the normal academic qualifications, are not capable of entering the education system and have at least 15 years certified practical experience.

- such a person would satisfy Sec.37 (1) (a) by the submission of two recent written references, preferably by Queensland Surveyors.
- such an applicant would be dealt with under Secs. 17 (c); 33 (1); 35 (1); 37 (1) (b) (ii) and Reg. 8 (3) (b) (i) and (ii).
- such an applicant would include the following:
 - A curriculum vitae showing the breadth and depth of experience. This document would argue a case for equivalent to the technical projects in demonstrating technical competence (including currency); and
 - a detailed submission of activities over a recent two year period explaining aspects of technical, ethical and administrative tasks at an appropriate level; and
 - a Professional Assessment Project; and
 - an oral examination by the Board.
- persons wishing to be considered under this category would be well advised to make a short submission to the Board to determine if the Board is prepared to consider such an application.

- the licensing endorsement would be subject to the two submissions above establishing competence in cadastral matters, and the P.A.P. and oral examination being based on cadastral aspects.
- the consultancy endorsement would be subject to demonstration of at least twelve months experience in practice at an appropriate management and administrative level.

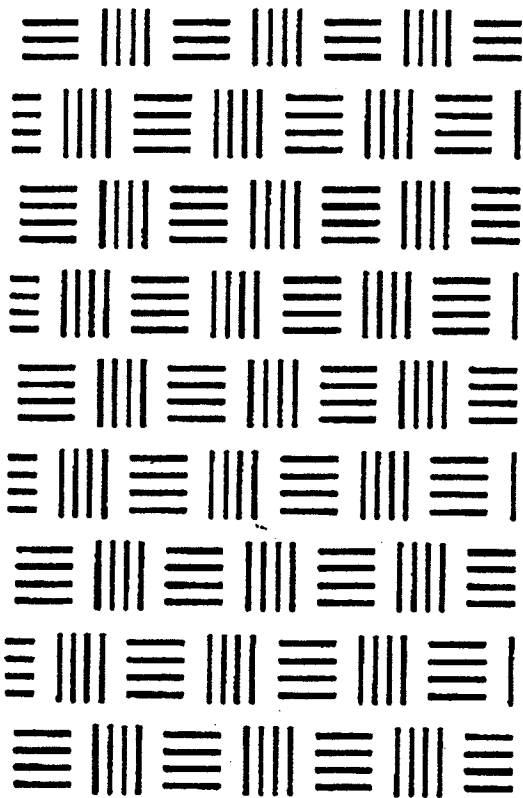
Normally the above steps would be taken sequentially, but in special cases applicants could apply to the Board for a variation.

- fees applicable to this Category include Fee for examination under Reg. 8 (3) (b); assessment of a Professional Assessment Project: and Application and registration fees for registration and licensing (if the latter is applicable).



Part D2

Project Specifications



**Specifications for the various
types of Technical Projects
which Candidates for
registration can submit to the
Surveyors Board as evidence
of Technical Competence in
the appropriate fields of
surveying**

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1.0 Rural Cadastral Survey – Project 5(a)(i)

1.1 General

This practical exercise is designed to satisfy the requirements of a boundary survey:-

"a boundary survey of a country area of not less than 15 hectares, two boundaries of which shall coincide with and be reinstated from previous surveys, and one boundary of which shall be a water course or other natural feature, or an irregular road, and shall include a sun observation for meridian. "

The above statement is interpreted to mean that the candidate must actually survey the surround of the country area of not less than 15 hectares.

It includes the planning, field observations, computations and plan drafting necessary for the lodgement of a cadastral survey with the appropriate registering authority.

A candidate must apply to the Chief Examiner for a variation in this interpretation if exceptional circumstances appear to warrant such action.

All phases of the project are to be performed personally by the candidate, with any necessary assistance for field work.

The drafting work should comply with the requirements of the Survey Plan Guidelines, as set out under Section E of the Surveyors Operations Manual. It should be drawn by a computer driven plotter using a recognised software package and is to be in ink and is to be on the appropriate plan form.

It may be done manually and in that case a fine point writing pen is acceptable with the quality of the penmanship not being a consideration when testing the project, however, the work must be neat and legible. The candidate may elect to have the work done by a draftsman but if so should prepare a complete brief to the draftsman and submit this brief to the Examiner as part of the project.

The entire exercise must be carried out in a professional manner, especially with respect to observation, documentation and computation. Reference should be made to the authorities quoted at the end of this specification.

Candidates should note that although a plan may be registered by the registering authority, it does not mean that it would be awarded a pass for the Boards purpose of assessing an applicant.

1.2 Selection Of A Project

It is important to give considerable thought to the selection of a project so that it adequately reflects the ability and skill of the applicant.

Suggested criteria should be:

- meets the stated specification above;
- the survey should represent a moderate re-instatement challenge; and
- there should be alternative solutions to the positioning of the boundaries so that the project represents a reasonable re-instatement challenge.

1.3 Planning

In general candidates may perform the survey in any area that conforms with the requirements of the Board. The candidate shall determine the objectives of the survey and shall carry out the necessary search.

It is a good idea to document a survey history of the area as detailed by the succession of plans in the search. Title details should also be documented. This should be done prior to field work.

1.4 Field Work

Field work is to be carried out personally by the candidate in accordance with generally accepted practices. All work should comply with the Surveyors Act 1977 and Surveyors Regulation 1992.

All equipment should be calibrated.

1.5 Documentation

Field records shall be submitted for this project, and shall be in such a form that a plan can be drawn from them without the need for further information.

1.6 Computations

All appropriate computations shall be carried out and submitted. If a computer program is used for any computation, full details of the hardware and software utilised should be given.

Results of all computations shall be submitted as part of the field records.

1.7 Report

The survey shall be accompanied by a comprehensive report. The report should outline the intention of the survey and give a detailed account of the reinstatement and any other relevant matters.

1.8 References

- The Surveyors Act 1977
- Surveyors Regulation 1992.
- Survey Co-ordination Act 1952.
- Surveyors Operations Manual

Section E-1 - Directions and Recommended Practices.

Section E-2 - Guidelines for Preparation of Survey Plans.

2.0 Urban Cadastral Survey – Projects 5(a)(ii)

2.1 General

This practical exercise is designed to satisfy the requirements of a boundary survey:

“a boundary survey of an urban area, suitable for lodgement with the appropriate authority, with occupation on or near the boundaries in such positions that at least one boundary must be determined by indirect methods, and shall include a sun observation for meridian.”

It includes the planning, field observations, computations and plan drafting necessary for the lodgement of a cadastral survey with the appropriate registering authority. Identification surveys are acceptable, provided they meet the requirements of being a reasonable reinstatement challenge.

All phases of the project are to be performed personally by the candidate, with any necessary assistance for field work.

The drafting work should comply with the requirements of the Survey Plan Guidelines, as set out under Section E of the Surveyors Operations Manual. It should be drawn by a computer driven plotter using a recognised software package and is to be in ink and is to be on the appropriate plan form. It may be done manually and in that case a fine point writing pen is acceptable with the quality of the penmanship not

being a consideration when testing the project, however, the work must be neat and legible. The candidate may elect to have the work done by a draftsman but if so should prepare a complete brief to the draftsman and submit this brief to the Examiner as part of the project.

The entire exercise must be carried out in a professional manner, especially with respect to observation, documentation and computation. Reference should be made to the authorities quoted at the end of this specification.

Candidates should note that although a plan may be registered by the registering authority, it does not mean that it would be awarded a pass for the Board's purposes of assessing an applicant.

2.2 Selection Of A Project

It is important to give considerable thought to the selection of a project so that it adequately reflects the ability and skill of the applicant.

Suggested criteria should be:

- meets the stated specification above;
- the survey should represent a moderate re-instatement challenge;
and
- there should be alternative solutions to the positioning of the boundaries so that the project represents a reasonable re-instatement challenge.

2.3 Planning

In general, candidates may perform the survey in any area that conforms with the requirements of the Board. The candidate shall determine the objectives of the survey and shall carry out the necessary search.

It is a good idea to document a survey history of the area as detailed by the succession of plans in the search. Title details should also be documented. This should be done prior to field work.

2.4 Field Work

Field work is to be carried out personally by the candidate in accordance with generally accepted practices. All work should comply with the Surveyors Act 1977 and Surveyors Regulation 1992.

All equipment should be calibrated.

Where radiations are used the filed records should show clearly the checks that are made to verify such measurements.

2.5 Documentation

Field records shall be submitted for this project, and shall be in such a form that a plan can be drawn from them without the need for further information.

2.6 Computations

All appropriate computations shall be carried out and submitted. If a computer program is used for any computations, full details of the hardware and software utilised should be given.

Results of all computations shall be submitted as part of the field records.

2.7 Report

The survey shall be accompanied by a comprehensive report. The report should outline the intention of the survey and give a detailed account of the reinstatement and any other relevant matters.

2.8 References

- The Surveyors Act 1977. ,Surveyors Regulation 1992
- Survey Go-ordination Act 1952.
- Surveyors Operations Manual

Section E-1 - Directions and Recommended Practices.

Section E-2 - Survey Plan Guidelines.

3.0 Engineering Survey And Design – Projects 5(5)(5)

3.1 General

The submitted project should demonstrate the candidate's understanding of surveying and of engineering design principles and their application in a specific set of circumstances in order to satisfy the requirements of an engineering survey and design:

"the survey and design for a proposed road or railway not less than 500 metres in length, with the requisite digital terrain model, and calculations for earthworks and provision of drainage as required."

3.2 Field Information

Field information necessary to complete the design is to be presented in accordance with the standards of a relevant Constructing Authority (to be nominated). References to several such Authorities are included at paragraph 3.7.

3.3 Design

As a guide to candidates the following factors are typical of those to be considered:

3.3.1 Road

widening, superelevation and sight distance in relation to design speed; limiting grades; a reasonable balance of earthworks (or an alternative earthwork arrangement); pipe or culvert size in relation to catchment area, rainfall and runoff.

3.3.2 Railway

ruling grade and minimum curvature of the line; grade compensation on curves; minimum interference to other services; flood levels where applicable; drainage; minimum resumption requirements; local traffic requirements; a reasonable balance of earthworks (or an alternative earthwork arrangement).

3.4 Presentation

Irrespective of the contents of the accompanying report, all information necessary for the construction of the scheme is to be presented on the plans which are used as working documents by construction personnel.

The drafting work should comply with the requirements of the main supervising authority. It should be drawn by a computer driven plotter using a recognised software package and is to be in ink and

is to be on the appropriate plan form. It may be done manually and in that case a fine point writing pen is acceptable with the quality of the penmanship not being a consideration when testing the project, however, the work must be neat and legible.

The candidate may elect to have the work done by a draftsman but if so should prepare a complete brief to the draftsman and submit this brief to the Examiner as part of the project.

3.5 Plans

Plans should show the following information as appropriate:

- scheme location; typical cross-section with dimensions and pavement details; tabulated curve widening and superelevation details; (in the case of railways) connections to the existing line and centre-line distance equalities; services crossing and closely paralleling the proposed centre-line and proposed modifications to these services;
- design details including horizontal and vertical alignment; drainage details; watershed areas; earthwork quantities; proposed property resumption boundaries;
- digital terrain model;
- description of bench marks and datums; references to field books and other plans.

3.6 Report

The report should cover the candidate's assumptions and reasons for the adoption or rejection of certain design principles (for example, the requirements of a Constructing Authority) for a particular set of circumstances, the method of applying those principles and any conclusions drawn.

The report is to include all calculations including those for earthworks, pavement volumes, drainage work and grading.

Electronic data collection and electronic field methods should include sound procedures and checks. Although documentation of these may not be required by the Constructing Authority, they must be documented in the project report to demonstrate the candidate's knowledge.

Collection of data by level and staff and the subsequent reduction of this data is a significant source of error. Where non-standard methods are used the candidate must show that the method is sound and checks all reductions.

Where a design or drafting package has been used to produce the design components or the plans, a precis of the procedures used should be included in the report. The candidate should demonstrate in writing, their knowledge of the particular areas of the package. A suitable approach would be to write a user guide for those parts of the package that have been used.

When permission has been given to submit a project that does not address specific topics required by this specification, the candidate must address the theory of such topics in the report. The theory must be discussed in sufficient detail to demonstrate the candidate's knowledge of the topic.

3.7 References

- Queensland Department of Transport - Engineering Survey Manual
- National Association of Australian State Road Authorities - Policy for Geometric Design of Rural Roads, 1976

- Queensland Department of Transport

Railway Survey Design and Drafting Manual: Chief Engineers
Publication No. 5

Railway Engineering Survey Manual: Chief Engineers
Publication No. 3

Surveys for Electrification of Brisbane Suburban Railway
Network

Survey Design Manual: Electrification, Brisbane Suburban
System: Chief Engineers Publication No.8

Turnouts and Crossings: Setting Out Manual, Chief Engineers
Publication No. 15

- Local Government By-Laws and Regulations
- Other Equivalent Publications

4.0 Hydrographic Survey – Projects 5(b)(ii)

4.1 General

The submitted project should demonstrate the candidate's understanding, knowledge and awareness of all aspects of preparation, execution and reporting of a Hydrographic Survey in a marine environment to satisfy the criteria

"To produce a Working chart of a Hydrographic Survey of about two (2) square kilometres, including the reduction of soundings and plotting of sounding locations".

4.2 Field Information

Field information is to be collated under three main headings:

- Establishment of Vertical Datum
- Establishment of horizontal Control
- Offshore Operations
 - (i) Basic Seamanship
 - (ii) Instrumentation
 - (iii) Calibration
 - (iv) Data Acquisition

4.2.1 Vertical Datum

The establishment of Vertical Datum should contain a degree of understanding of tidal planes and datums. The adoption of an existing tide board or automatic tide recording gauge is not sufficient.

An example of minimum understanding of tidal planes and tidal datums could be a short technical discussion or a tidal datum transfer by mathematical or graphical means over a minimum three day recording period.

Tide boards and recorders established during the course of the survey should have their zero's connected by levelling at Fourth Order Standard to at least one bench mark with values established for Chart Datum (CD) Lowest Astronomical Tide (LAT) and Australian Height Datum (AHD).

4.2.2 Horizontal Control

Horizontal Control should be established to achieve a Class C standard as per the IGSM Standards and Specifications for Control Surveys, July 1990.

Methods used for the establishment of Horizontal Control may be:

- Closed and adjusted traverse from existing coordinated AMG Control Stations.
- Braced quadrilateral by triangulation or Trilateration (or both) from existing coordinated AMG Control Stations.
- Static Differential GPS measurements on new stations with observed baselines.

Computation and adjustment sheets are to be presented in the report but not necessarily show hand worked solutions.

4.2.3 Offshore Operations

4.2.3.1 Basic Seamanship

This will entail a demonstrated awareness of the basic concepts of the regulations for operating vessels for commercial activities (including hydrographic surveying) and the selection of a suitable vessel for the particular survey task.

A demonstrated awareness of mechanical and safety precautions to be taken prior to embarking upon the survey project should also be shown.

4.2.3.2 Instrumentation

The offshore operation should be controlled using electronic position fixing methods. Optical methods of position fixing are not acceptable unless it can be demonstrated that such method is the most suitable for the particular task.

Position fixing will therefore most likely be carried out by one of the following methods:

- Bearing/Range
- Range/Range
- Real time Differential GPS

Other methods may be acceptable but should first be verified with the examiner.

4.2.3.3 Calibration

Calibration procedures should be documented and executed. Certified records of calibrations should include:

- Pre Survey calibration of position fixing system and daily stability checks.
- Daily calibrations of echo sounder by standard methods.
- Daily checks on automatic tide recorder.
- Calibration of EDM or instrumentation used for Horizontal Control.
- Determination of squat of survey vessel.
- Determination of transducer and antenna offsets.

4.2.3.4 Data Acquisition

Data acquisition may be accomplished by fully automated, semi automated or manual methods.

If fully or semi automated methods are used, adequate description of the processes, acquisition rates and data logged must be provided.

Diagrams of operational computer screens, selectable menus and print-outs of raw and processed data should be provided.

Description and samples of initial data input for survey area, line format and navigation control should also be provided. Annotated analogue records from echo sounders, tide gauges and other sensors should be provided to support logged digital data.

Pre plotted deck sheets and field annotations on all records should be provided and include positions of fixed objects, shorelines, navigation marks and obstacles, weather and sea conditions.

If manual methods are used, field plotting and navigation should be shown on the deck sheets and adequate field books or recording sheets kept of positioning data.

It should be noted that scale selection should provide for maximum line separation of 1 cm as a general rule. Position fixes should be at no greater distance than 4 cm apart and cross check lines spaced no more than 7.5 cm apart at plan scale.

4.3 Presentation

The final plan should indicate soundings at less than line interval except in the case of a regular bottom where spacing can be increased. The plan may be contoured. All relevant data should be shown, eg. navigation aids, wharves, piles, leads, beacons, buoys, designed channel widths, approaches, berths. Description of bench marks, datums, grid system, north point, legend, references to field books and other plans should also be shown.

Drafting should comply with recognised standards ie. either Admiralty or Department of Transport, Division of Marine and Ports. Figure style, decimal point and sign convention should be nominated and noted in the Title Block. Automated or hand drafted plans are acceptable. The plan should be drafted in ink on stable film.

The quality of penmanship is not a consideration when testing the project, however, the work must be neat and legible. The candidate may elect to have the plan drafted by a draftsman but if so, should prepare a complete brief to the draftsman and submit this brief to the Examiner as part of the project.

4.4 Report

The report should indicate the overall briefing for the project, the client's particular requirement, the planning, deployment of personnel and their responsibilities, execution, safety precautions, time costs and any additional explanations that would indicate to the Examiner the Candidates competence.

The Report should also contain technical descriptions and data as specified in paragraphs 4.2 and 4.3 above and should clearly show the application of tide reductions and other calibrations. The Report should also include diagrams, Station Summary sketches and photographs where applicable.

The Report should accompany the fair drawn plan/chart and covering letter.

4.5 References

- Admiralty Manual Hydrographic Surveys Volume I and Volume II
- Admiralty Tidal Handbook - Datums for Hydrographic Surveys (and other related subjects)
- Standard Reference Charts - Chart 5011, Chart D6067 (Published by Hydrographic Department, Taunton, U.K.)
- IGSM, Standards & Specifications for Control Surveys, July, 1990.

5.0 Topographic Survey – Project 5(c)(i)

5.1 General

This project is designed satisfy the requirements on:

"a topographical survey of hilly country embracing an area of not less than 10 hectares, showing contours at height intervals appropriate to the scale and purpose of the survey. "

While this leaves the candidate some choice in the matter, it is likely that such a survey would be performed for the planning of a facility such as a school or an industrial complex and that a scale of 1:500 with 1 metre contours would be appropriate.

5.2 Planning

The candidate may perform the survey in any area but should bear in mind the constraints of ease of access to the land and equipment and convenience of supervision. The purpose of the survey suggests open country on the outskirts of urban development, and the term "hilly" in an area of 10 ha, implies that significant parts of the area will be at a grade of 1 in 10 or more.

5.3 Control

The survey is to be controlled by marks co-ordinated on the A.M.G. and heights on A.H.D. The accuracy and distribution of control should be appropriate to the purpose of the survey and only one mark need be of a semi-permanent nature (See Geodetic and Astronomy Project) and referenced and recorded accordingly. This mark should have sufficient observations recorded to ensure re-orientation of the survey.

5.4 The Topographical Survey

Field records should be properly kept and will form part of the project report. The presentation of the survey should be in graphic form. The accuracy requirements of the graphical presentation should comply with industry standards.

5.5 Presentation

The drafting work should comply with the requirements of the principal Government agency. It should be drawn by a computer driven plotter using a recognised software package and is to be in ink and is to be on the appropriate plan form.

It may be done manually and in that case a fine point writing pen is acceptable with the quality of the penmanship not being a consideration when testing the project, however, the work must be neat and legible.

The candidate may elect to have the work done by a draftsperson but if so should prepare a complete brief to the draftsperson and submit this brief to the Examiner as part of the project.

5.6 Report

The survey should be accompanied by a comprehensive report on the above aspects of the survey.

6.0 Mapping Project – Projects 5(c)(ii)

6.1 General

This project is designed to satisfy the requirements on:

"a map of a densely settled area of about 1500 hectares or of a sparsely settled area of about 1 0, 000 hectares, drawn to a suitable scale and plotted from a single photogrammetric model, with contours and heights appropriate to the scale of the map and the purpose of the survey. "

The project involves the photogrammetric plotting of a single model that will test the photogrammetric knowledge and skill of the applicant. Machine plots with enhancements at a reasonable cartographic standard will satisfy the Board. The provision of control in the field and field completion, are not included in the specification. The candidate may obtain control data from appropriate sources.

The project should be performed in accordance with the "Photogrammetric Specifications" issued by the Department of Lands. Academic or other staff involvement in the project will be limited to the provision of advice and supervision.

6.2 Planning

Candidates should select an appropriate area for the survey and search at the Department of Lands or other organisation for suitable photography, following which prints, diapositives and control data will then have to be obtained. The following scales and contour intervals are suggested as appropriate:

6.2.1 Closely Settled Areas:

Mapping at 1:10,000 with 5 metre contours. This may be performed on an appropriate stereo plotter from photography at an appropriate scale.

6.2.2 Sparsely Settled Areas:

Mapping at 1:50,000 with 10m - or 20m contours - depending on the terrain and using suitable photography. This can be performed on an appropriate plotting machine.

Since the Board intends that a single model be plotted, it should be ensured that the area of overlap is sufficient to fulfil the requirements of the Project.

6.3 Plotting

Photogrammetric plotting is to be done on stable transparent drawing material in ink or pencil. The sheet dimensions and preparation,

specification except that colours, as deleted from that specification, should be used. Where original plotting is in monochrome pencil, coloured inks or pencil should be used for completion, and the accuracy checks specified shall apply after this completion.

6.4 Presentation

The drafting work should comply with the requirements of the Survey Plan Guidelines, it should be done in ink (fine point writing pen is acceptable) and is to be on the appropriate plan form. The quality of the penmanship is not a consideration when testing the project, however, the work must be neat and legible.

The candidate may elect to have the work done by a draftsman but if so he should prepare a complete brief to the draftsman and submit this brief to the Examiner as part of the project. The plan may alternatively be drawn by a computer driven plotter using a recognised software package.

6.5 Report

A comprehensive report shall accompany the mapping project.

6.6 References

➤ Department of Lands

Photogrammetric Specifications

Instructions for Photogrammetric Mapping at 1:25,000

7.0 Geodetic Control And Astronomy – Project 5(d)

7.1 General

This practical exercise is designed to satisfy the requirements on:

"a survey for the establishment of geodetic control points of at least Class C standard, requiring the establishment of at least four new points if the exercise involves a traverse; or at least two new points if the exercise involves a network based on at least two existing points, and including planning, ground marking, field observations, computations and adjustments";

and

"an exercise to determine the AMG bearing of a line between two stations in the geodetic project above, using stellar observations to an accuracy of +/-5 seconds. "

The exercise can be considered as minor control and includes planning, ground marking, field observations and computations associated with fixing:

➤ 4 (four) new control stations if the exercise is a traverse

OR

➤ 2(two) new control stations if the exercise is a geometric network;

AND

➤ a stellar observation between any 2 (two) new control stations.

Consideration should be given to using daylight stars.

At least two stations from the Queensland or Australian Geodetic Surveys must be adopted. These stations will have known A.M.G. and A.H.D. values and are to be considered error-free. In the case of traverses azimuth checks on control are required at each end.

Approximate A.H.D. heights are to be obtained for the new stations by an appropriate method.

All phases of the project are to be performed personally by each candidate. Logistical support for field work may be utilised.

The entire exercise must be carried out in a professional manner, especially with respect to observation, documentation and computation.

7.2 Planning

In general, candidates may select any area in which to work, although if work is to be effected on private property, owners must be informed and permission obtained. Special permission is required if clearing is necessary.

In choosing an area and the measurement techniques to be adopted, regard must be had for the limitations imposed by available equipment, particularly if the work is effected by E.D.M.E.

Planning will also include consideration of network or traverse geometry.

7.3 Ground Marking

Under no circumstances are marks to conform to Department of Lands specifications for marking, **unless the exercise is being effected under instruction by the Department of Lands or a Registered Surveyor.**

Marking must be of sufficient durability to ensure that selected stations remain recoverable for a period of at least 6 months unless instructed otherwise by Department of Lands.

Sufficient reference marks should be connected to enable the station position to be relocated. Recovery marks should not be placed.

7.4 Field Observations

Field observations are to be carried out in accordance with standard practices for geodetic control surveys.

Equipment used for the exercise must be capable of achieving Class C standard.

All equipment is to be calibrated.

7.5 Computations

Any computing facilities may be used for computation of the exercise subject to the limitations described:

7.5.1 Reduction of Observations

All angular and linear measurements are to be reduced by applying appropriate corrections and reduced to the main station if eccentric stations are used.

All slope distances are to be reduced to the spheroid using appropriate formulae.

If reductions are performed on programmable calculators or computers, then one such reduction should be performed manually (non-programmable calculator) in a manner which illustrates the method of use and application of the reduction formulae.

The computations are to be carried out clearly and concisely. Any suitably recognised method of adjustment of the observations may be applied, provided that the residuals resulting from the adjustment method can be examined and assessed.

Where standard error ellipses are calculated within a computer program, the major axes of such ellipses must lie within a circle having a radius equal to $(20.D)$ mm where D is the distance in km of the station to the nearest fixed point.

7.6 Report

The report of the exercise must include full documentation including plans and diagrams for all stations occupied and observed. All original field notes or booking forms, together with calculations relating to obtaining the final co-ordinates and azimuth are to be included in the report.

The report must include reasons for the use of the particular instruments and observation techniques applied. Details and records of calibrations of equipment are to be provided - particularly in respect of E.D.M.E.

Where computer programs are used, an explanation of the computations performed by the program are to be included in the report. The adjustment technique adopted is to be explained and arguments advanced in support of the adopted method.

7.7 References

- Robbins, A.R. (1976) Field and Geodetic Astronomy, Ministry of Defence, U.K.
- Mackle, J.B. Astronomy for Surveyors, 7th Ed., Blackie, London.
- Department of Lands, "Recommended Procedures for Minor Control."

8.0 Urban Design Survey – Projects 5(e)(i)

8.1 General

The purpose of this project is to enable candidates to apply sound engineering and design principles to varying terrain when confronted with man-made constraints and legal requirements in urban land development (including planning constraints) so as to satisfy the requirements on:

"(i) A design of moderate complexity of an urban residential area covering about 16 hectares.

A significant part of the project is to be located in terrain where slopes are in excess of fifteen percent. The design with relevant topographic information is to be shown on a plan at an appropriate scale.

The plan is to be supported by a report which develops a rationale for the establishment of the development and presents discussions on environmental, engineering, economic and land use factors".

In accordance with the aims of the Department of Housing and Local Government the project should also demonstrate the candidate's familiarity with the Australian Model Code for Residential Development (AMCORD) Edition # 2.

8.2 Design

8.2.1 Site Selection

The site selected should have a variable topography with at least twenty percent of the area having slopes in excess of fifteen percent.

8.2.2 Road System

The road system shall conform to a nominated standard for geometric road design.

8.2.3 Allotment Design

Allotment design should demonstrate a flexible approach to creating environmentally acceptable living areas and conform to a nominated Local Authority's Subdivisional By-laws.

8.2.4 Drainage And Sewerage Pattern

The drainage and sewerage pattern should be shown on the plan, but may take the form of overlays if desired.

8.2.5 Application Of Amcord

At least 2.0 hectares of the site shall be designed in accordance with AMCORD Edition # 2, incorporating some terrain having slopes in excess of fifteen percent.

8.2.6 Presentation

The design plan shall be drawn at a scale of 1:1,000 with one metre contours and be to a standard suitable for presentation to the nominated Local Authority

OR

the candidate may elect to produce a comprehensive drawing showing all the required detail which together with a minimum brief could be suitably enhanced by a draftsman to fulfil the nominated Local Authority's specifications. This drawing should be of such a standard that there will be no confusion as to the intent of the design and so enable the Board readily to assess its merit.

8.3 Report

- The text of the report shall include:
- the rationale for the establishment of the development including planning constraints
- discussion of the physical and social environment, engineering and economic considerations and the provisions of services for the development
- discussion of any legal requirements and constraints that affect the development
- discussion on the particular application of AMCORD Edition # 2, eg. distribution of allotment sizes, variation in road alignment, etc.

The report is to be presented on A4 paper, preferably typed in double spacing, and should include all documentary evidence needed to verify the standards adopted in the design.

9.0 Rural Design Survey – Project 5(e)(ii)

9.1 General

The purpose of this specification is to enable candidates to satisfy the requirements on:

"A design for a farming development to accommodate approximately 20 family units within an area ranging from about 200 hectares to 1, 000 hectares. The proposal is to be expressed on plans which include relevant topographical information and details of vegetation and soil types and illustrate the regional context of the proposed development, the existing and proposed roads and farm boundaries, water supply facilities and community amenities. The plans are to be supported by a report, which develops a rationale for the proposed development and present a discussion on environmental, engineering, economic and land use factors."

9.2 Data Collection

All the data necessary for the completion of a satisfactory design is to be collected and presented in map form (preferably a base map with overlays at the same scale). All of this data should be available from published material (including aerial photography) and the need for field inspection should be minimal. The data collected should include:

- A location map showing communications, services and regional content.
- A base map showing topography by contours.
- Overlay to base map scale showing the remaining five physical land parameters using standard classification systems, viz. Geology, Soils, Geomorphological process, Vegetation and Climate.
- An overlay showing tenures, the present cadastral configuration and improvements.

9.3 Data Manipulation

A series of criteria are to be developed which when applied to the basic data above highlight areas of constraint and opportunities for the proposed farming activity.

Using the above criteria sieve maps can then be drawn. (Standard systems may be used if considered appropriate ie. The Land Capability System).

9.4 Design Criteria

Criteria are to be established for:

- The efficient functioning of the development as a whole, eg. roads, communications, services, etc.; and

The satisfactory management of each individual farm, ie. area requirements for various land types, optimum paddock sizes on each land type, soil and water conservation considerations, access, building sites, yards, etc.

9.5 Design

A map is to be drawn showing the proposed cadastral boundaries.

Other information may be added to this map as considered relevant or to highlight some feature of the design.

A plan, at an appropriate scale, is to be drawn showing the layout of a typical farm unit.

9.6 Presentation

The work is to be presented for assessment as a written proposal supplemented by maps and supported by an approximate estimate of engineering costs and potential farm incomes. It is to be of a professional standard and at a stage ready for printing and cartographic enhancement.

The quality of the penmanship is not a consideration when testing the project, however, the work must be neat and legible. The candidate may elect to have the work done by a draftsman but if so he should prepare a complete brief to the draftsman and submit this brief to the Examiner as part of the project. The plan may alternatively be drawn by a computer driven plotter using a recognised software package.

9.7 Report

The report should include a discussion of the main features of the design and an assessment of the degree to which design criteria have been satisfied.

10.0 Alternative Projects

10.1 Introduction

Direction 6.0 provides that:

"As an alternative to the projects referred to in paragraph (5), the Board may in respect of any surveying graduate approve a proposed list of projects and determine the requirements for such projects, in any case where the Board is satisfied that the completion of such proposed projects will enable the surveying graduate to achieve a level of performance acceptable to the Board. "

10.2 Underground Mine Survey – Project 5(f)

10.2.1 General

This project involves a survey of a small mine or part of a larger mine and should comprise a surface survey, the transfer of meridian and height through at least one vertical or near vertical opening and an underground survey.

The candidate should assume that future development will be carried out based on the result of the azimuth transference. He should then traverse another shaft and close his survey. If an incline to the surface is used for closure then the co-ordinate on the surface should be treated as the single plumb wire. The traverse should then be adjusted by the first try, then after suitable corrections have been made by the second try, showing the full calculations involved.

10.2.2 Planning

The candidate may perform the exercise in any mine to which he has access and with whose regulations he is familiar.

Equipment used on the project should be suitably calibrated.

10.2.3 Field Work

The project should involve:

- A surface traverse connecting with all mine openings used and the co-ordinate network.
- Transfer of meridian and position between levels or from surface to any level with suitable verification by traverse to another shaft and closing on a single wire or known position.
- Transfer of Reduced Levels between mine levels closing levels on known point.
- Typical pick up of plan, cross-sections detail and profile of a 30m section of tunnel.

- Correlation of the survey into AMG and/or the mine co-ordinate system.

10.2.4 Report

The report should include:

- A plot of underground detail showing walls, timbers, supports etc. at a scale of 1:500.
- A plot of all traverse information at a scale of 1:1000.
- A plot of the field work in plan and cross-sections at five metres intervals and a profile a scale of 1:250.
- Field notes and calculation of all traverses, closes, Wees quadrilaterals etc.
- A report on all aspects of the project including the closure errors aimed for and achieved. (1 in 5000 in plan and +/- 20mm in any level loop should be the minimum sought).

The drafting work should comply with the requirements of the Survey Plan Guidelines, as set out under Section E of the Surveyors Operations Manual or those set by the principal registering body.

It should be drawn by a computer driven plotter using a recognised software package and is to be in ink and is to be on the appropriate plan form. It may be done manually and in that case a fine point writing pen is acceptable with the quality of the penmanship not being a consideration when testing the project, however, the work must be neat and legible.

The candidate may elect to have the work done by a draftsman but if so should prepare a complete brief to the draftsman and submit this brief to the Examiner as part of the project.

10.2.5 Notes

Horizontal Control

In actual practice after the azimuth transfer, development would commence on survey peg lines. This survey is called the working survey and is carried out using sag and convergence corrections only.

As the survey progresses and development continues, a second survey called a "check survey" is carried out. This survey commences at the base established by the azimuth transfer and uses all necessary corrections and procedures to ensure that any error is kept to a minimum. It is this survey that is finally connected to another known point and then adjusted.

Level Control

Level traverses follow the development in the same manner as the horizontal control above. Similarly check level traverses are carried out to lessen the chance of accumulating errors that may occur when only very short sections are levelled. It is not unusual for ten more of these short level traverses to be used to effect breakthrough.

10.2.6 References

- Mineral Resources Act 1989
- Mines Regulation Act 1964
- Survey Co-ordination Act 1952
- Usually each mine has its own requirements except those specified in 10.2.5

10.3 Open Cut Strip Mining – Project 5(g)

10.3.1 General

This project involves a complete survey of a small open cut mine or part of a larger open cut mine operation and should comprise the following:

- 10.3.1.1 A complete plan control survey involving either a traverse with at least two cross connections, or a hybrid triangulation/trilateration engineering control survey.
- 10.3.1.2 A level network height survey of the major height control stations surrounding the open cut mining operation to third order levelling accuracy specifications.
- 10.3.1.3 Both plan and height surveys are to be adjusted by an appropriate method applicable to the accuracy of the survey under consideration. For a traverse the order of accuracy of all loops should be at least 1:20,000. All level loops must close to third order specifications. Least squares techniques can be used to adjust both plan (Variation of Go-ordinates) and height (Level network adjustment) control traverses.
- 10.3.1.4 A complete topographic survey of at least three open cut bench platforms within the bounds of the control survey area. An alternative in drag line operations would be a complete topographic survey associated with the actual drag line - see 3.3 below.
- 10.3.1.5 The appropriate volumes surveys associated with the extraction of mineral ore from these three bench platforms or drag line.

10.3.1.6 The location of mineral extraction equipment and structures pertinent to the mining operation, eg. Drag lines, Crushers, Storage bins etc. and the reasons for such locations.

10.3.1.7 Candidates attempting this subject should be aware of the Board of Examiners Mines Regulations regarding qualified persons working on a mine site.

10.3.2 Planning

The candidate may perform the exercise in any mine to which the candidate has access and with whose regulations the candidate is familiar. All equipment used on the project must be suitably calibrated.

10.3.3 Field Work

The project should involve:

10.3.3.1 A plan control survey connecting into either the mining cadastral lease boundaries or the normal cadastral system in at least two locations.

10.3.3.2 A level network survey of the surround of the open cut mining operation, involving level control being established on each respective bench in at least two locations. This includes the floor of the open cut operation. If the height differences are considerable accurate trigonometrical heighting techniques may be used.

10.3.3.3 A cross section detail survey of at least three benches over a distance of 50 metres. Appropriate volumes surveys after mining and extraction are required. With drag lines involving only one bench the distance of topographic detail should be approximately 150 metres.

10.3.3.4 Correlation of the survey into AMG and/or the mine survey co-ordinate system. With the height survey correlation into either AHD and/or the mine datum survey system.

10.3.4 Computations, Computers And Programmable Calculators

If a computer or programmable calculator is used to reduce or adjust any observed survey information; the candidate must demonstrate a knowledge of the internal operations of the formulae involved. Showing typical worked examples applicable to the actual project undertaken.

10.3.5 Report

The submission should include:

10.3.5.1 A plot of the open cut mining operation showing all control and topographic detail including contours at an appropriate contour interval applicable to the project.

The suggested scale is 1:500; however, if this scale is found unsuitable for relevant practical reasons stated by the candidate the scale may be varied.

- 10.3.5.2 An overlay control plot at the same scale.
- 10.3.5.3 All original field notes and initial control information.
- 10.3.5.4 All calculations associated with the project. If computer programs are used or programmable hand calculators are used, clear concise example calculations applicable to the candidates survey must be submitted.
- 10.3.5.5 A report on all aspects of the project including the initial accuracy's to be achieved in plan and height (1:20,000 in plan and third order levelling in height) and the actual results obtained. Key information in the form of tables and diagrams (results, typical examples etc.) should be cited in the main area of the report, while bulk computations, field notes etc. should be placed in the appendices.
- 10.3.5.6 The drafting work should comply with the requirements of the Survey Plan Guidelines, as set out under Section E of the Surveyors Operations Manual or those set by the principal registering body. It should be drawn by a computer driven plotter using a recognised software package and is to be in ink and is to be on the appropriate plan form.

It may be done manually and in that case a fine point writing pen is acceptable with the quality of the penmanship not being a consideration when testing the project, however, the work must be neat and legible. The candidate may elect to have the work done by a draftsman but if so should prepare a complete brief to the draftsman and submit this brief to the Examiner as part of the project.

10.3.6 References

- Mines Regulation Act 1964.
- Survey Co-Ordination Act 1952.
- Usually each mine has its own requirements except those specified in 10.2.5.1 and 10.2.5.2.

10.4 Topographic Survey – Project 5(h)

10.4.1 General

This project is designed as an alternative to that specified under projects 5(c)(i).

"a detail and level survey of part of a redevelopment site of moderate complexity in a built-up environment and upon which a significant development is planned."

The survey is to be of an area intended for redevelopment of not less than 1000 sq.m showing contours or reduced levels at intervals appropriate to the scale and all detail suitable for purpose of the survey.

While this leaves the graduate extreme latitude of choice in the matter it would appear that such a survey would most likely be performed for the planning of a new development such as a multistorey building or an industrial facility or commercial complex and that a scale of 1:200 with 0.5m contours or spot heights would be appropriate. Surrounding detail external of the site boundaries would be essential.

10.4.2 Planning

The candidate must select an area which is sufficiently difficult to demonstrate the ability to produce sufficient information to allow a new development to be designed with confidence ie. in the knowledge that significant redesign should not be necessary due to insufficient information being supplied. It is assumed that the location and description of underground services will form a significant part of this survey. Candidates will therefore need to consult the following authorities:

Local Council Engineering Section, Gas Company, Telecom, SEQEB, etc.

and to research and consult the relevant industrial safety requirements particularly in relation to investigating sewers and stormwater drains. Also the Departments of Transport has specific safety requirements in relation to surveys involving facilities under their control.

10.4.3 Control

It is assumed that the survey will be connected to boundaries and that levels will be on AHD. For the purposes of this project there is no requirement to carry out a full cadastral reinstatement.

10.4.4 The Detail Survey

The survey may be performed in any efficient and economical manner. Field records should be properly kept in accordance with good survey practice, and will form part of the project report. If the data recorded is in a computer form the graduate should be required to demonstrate an understanding of the process.

The presentation of the survey should be in graphic form and comply with industry standards. The accuracy requirements of the graphical presentation will reflect the amount and significance of the information to be shown.

The drafting work should comply with the requirements of the Survey Plan Guidelines, as set out under Section E of the Surveyors Operations Manual. It should be drawn by a computer driven plotter using a recognised software package and is to be in ink and is to be on the appropriate plan form.

It may be done manually and in that case a fine point writing pen is acceptable with the quality of the penmanship not being a consideration when testing the project, however, the work must be neat and legible.

The candidate may elect to have the work done by a draftsman but if so should prepare a complete brief to the draftsman and submit this brief to the Examiner as part of the project.

10.4.5 Report

The survey should be accompanied by a comprehensive report on the above aspects of the survey. This report should cover the purpose of the proposed development, difficulties encountered in the survey, and details of the information available on underground services etc. The standard of information supplied by the relevant authorities and their record keeping and retrieval process should also be noted.

10.5 As Constructed Survey Project 5(i)

10.5.1 General

This project is designed as an alternative to the Engineering Survey and Design Project 5(b)(i).

The Survey should be over a newly developed site that has the recent provision of services such as water, sewerage, drainage and power. The area of the survey may vary, but it is anticipated that it would be greater than 1.5 hectares or encompass approximately 15 parcels of land.

The project would most likely be performed over a new residential development and should include information on

- sewers
- stormwater
- water reticulation
- kerb and street furniture
- contour information and lot surface levels.

The scale of the final plot would be expected to be between 1:500 to 1:1000 scale and a nominal contour interval of 0.5m.

10.5.2 Planning

The candidate must select an area which has a sufficient complexity of new service information to illustrate an understanding of the mapping of "as constructed" surveys. The requirements for capture and presentation of data of the Local Government should be determined and included in the report.

The accuracy of the survey methods utilised should be justified in accordance with requirements by the Engineering branch of the Local Government.

10.5.3 Datum

The survey should be connected to the AMG coordinate system with levels on AHD. The cadastral survey should be connected to and included on the final plan.

10.5.4 The As Constructed Survey

The survey must be performed in any efficient and economical manner. Field records should be properly kept in accordance with good survey practice, and will form part of the project report. If the data recorded is in a computer form the candidate should be required to demonstrate an understanding of the process.

The presentation of the survey should be in graphic form and the appropriate parts of Section E of the Surveyors Operations Manual will apply. The accuracy requirements of the graphical presentation will reflect the amount and significance of the information to be shown.

The plan presentation and accuracy should comply with the relevant Local Government requirements.

The drafting may be performed manually and in that case, a fine point writing pen is acceptable with the quality of the penmanship not being a consideration when testing the project, however, the work must be neat and legible.

The candidate may elect to have the work done by a draftsman, but if so, should prepare a complete brief to the draftsman and submit this brief to the Examiner as part of the project.

10.5.5 Report

The survey should be accompanied by a comprehensive report on the above aspects of the survey. This report should cover the purpose of the survey, difficulties encountered in the survey, and details of the information available on underground services etc.

Details of equipment and computer software utilised should be included. Engineering design plans for the survey and other ancillary information must accompany the report.

10.6 Geographic Information System Project 5(j)

10.6.1 General

This project is designed to be an alternative to the Topographic Survey Project 5 (c) (i).

The Geographic Information System (GIS) Project is designed to illustrate competence in the area of development and management of these systems. It is envisaged that the project would encompass all aspects of a GIS including design, data collection, manipulation, analysis and map generation. The level of detail and scope of the project will vary depending on the application. Approval for the project should be sought prior to commencement.

Typically, a suitable project would be one which would encompass a proposed development over a site which requires the management of a variety of geographic information. The project should involve the integration of this information in order to assist the decision making process.

An example of a project would be the compilation of GIS for a proposed subdivision application. The GIS could be used to display to Council different design schemes and to examine "what if" scenarios.

10.6.2 Planning

As with any project careful design and planning is critical. The candidate should ensure that the proposed project methodology will deliver the final outcomes. The planning of the project may include the initial GIS design, assessment of data and costing.

10.6.3 Project Operation

The completion of the project may involve a number of stages including

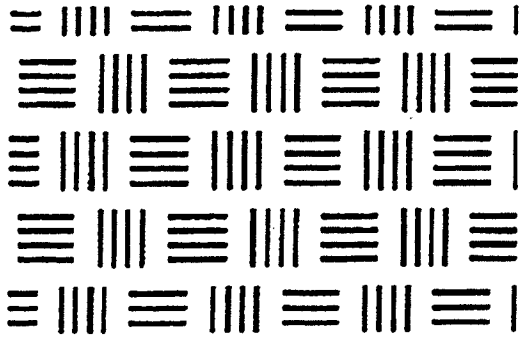
- | | | |
|-------|-------------------|--|
| (i) | Data Capture | involving the capture of land and geographic information by methods such as digitising, traditional survey or photogrammetry. In some instances this information may be supplied or acquired through another organisation. |
| (ii) | Data Manipulation | involving the editing and reorganisation of spatial data to enable the integration of various data sets. This process may include the transformation of data sets from one map projection to another. |
| (iii) | Data Analysis | the successful completion of the project may involve a variety of GIS analysis operations such as overlay analysis, buffering or querying. |

- (iv) Map Output the culmination of the GIS project will normally result in a variety of tabular and graphical output. Map outputs should summarise the results and conclusions from the work performed.

10.6.4 Report

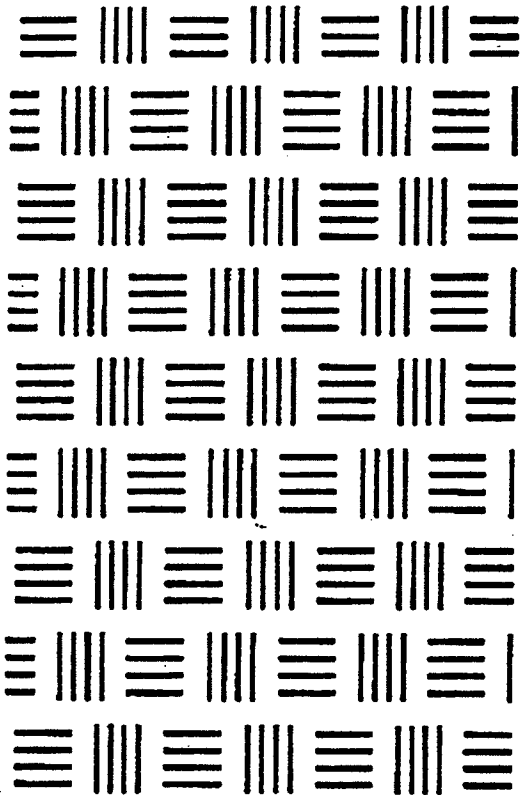
The report should be presented in a professional format and clearly describe all stages of the project. It should be accompanied by supporting materials and give examples of outputs and results achieved.

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Part D3

Professional Assessment Project



**Specifications for the
Professional Assessment
Project (PAP) which
Candidates for Registration
submit to the Board as
evidence of Professionalism
and
Guidelines for Examiners**

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Specifications

1.0 General

A professional assessment project may be undertaken in any category of surveying. A person seeking to become a licensed surveyor is required by the Surveyors Regulation Section 9 to undertake the project in cadastral surveying. The project should ordinarily embrace work undertaken in the normal course of business of the firm or authority in which the applicant is employed.

2.0 Examiners

2.1 The Board shall appoint an Examiner who, where necessary, shall be assisted by an Assistant Examiner and, if the project is one in the category of cadastral surveying, both Examiner and Assistant Examiner shall be Licensed Surveyors. The Assistant Examiner shall, whenever possible, be the surveyor who supervises the applicant in his normal place of work.

2.2 The Examiner, Assistant Examiner and applicant shall consult together to plan the project. The Assistant Examiner shall observe the performance of the applicant, each day if possible. The Examiner shall consult with the Assistant Examiner and observe the performance of the applicant, each week if possible.

3.0 Application to Proceed

3.1 Before submitting his application for approval of a proposed professional assessment project (Form 8), the applicant shall, in consultation with the Assistant Examiner, make all arrangements necessary for the performance of the project.

3.2 The applicant shall describe on Form 8 the nature of the project proposed and by giving a brief description of the category of surveying to be undertaken, the objectives of the project and the methods to be adopted to achieve the objectives, the locality of the survey, and shall nominate the Assistant Examiner.

3.3 The Assistant Examiner proposed by the applicant shall support the application with a statement of his intention to perform the necessary supervision of the project.

4.0 Report Content

The candidate in the performance of the project, should consider the ethical, administrative and technical aspects and report on the following:

- the discussions which determine the objectives of the project,
- in planning of the work,
- obtain all consents necessary,
- make a full search of relevant existing data,
- personally perform the surveys and calculations,
- supervise the drawing of plans or maps,
- prepare a costing statement,
- arrange lodgement of the results of the project,
- and submit a report to the Examiner on each of the actions above

5.0 Examiners Reports

5.1 The Assistant Examiner shall report to the Examiner on the performance of the applicant throughout the project and on the candidate's ethical, administrative and technical performance aspects as these pertain to the project.

5.2 On completion of the project, the Examiner shall report on the performance of the applicant and recommend whether the Board should accept the project.

The Examiner's and Assistant Examiner's report **MUST** include:

- a recommendation whether the candidate should be awarded a pass for the project;
- a statement on whether the candidate has shown competence and professionalism; and
- a recommendation on the suitability of the candidate for registration as a surveyor and if appropriate, licensing.

Guidelines for Examination

6.0 Assessment

6.1 The Examiner's attention is drawn to the following and in particular to the provisions for the conduct of an oral or practical examination.

6.1.1 Both Examiner and Assistant Examiner shall assess the competence of the surveying graduate by observing the candidate's performance on the project and shall conduct such oral or practical examinations as they deem necessary.

6.1.2 The Board may conduct such further oral or practical examination as recommended by the Examiner or as it sees fit, either in the category of surveying chosen or in other categories of surveying.

6.2 The Examiner and Assistant Examiner shall take into consideration the check list set out hereunder.

The check list refers specifically to a cadastral project; a number of its headings will apply equally to a project in some other branch of surveying, others will not. The Examiner of the latter type project will need to take this into account. The Examiner may see fit to introduce alternative components to meet particular requirements.

The check list is to be regarded as a guide and should not be converted into a quantitative marking scheme by the allocation of marks to the components or sub-components.

7.0 Checklist

7.1 Objectives

Discussion with client; identification of purpose of the survey. Completion date to meet clients needs.

7.2 Planning

Instruments and other equipment; personnel; travelling and accommodation; notice of entry; time schedule; cost estimate; ascertain the relevant land tenure, encumbrances, reservations, etc.; administrative process adopted.

7.3 Approvals

Correspondence and discussion with client and planning authority and/or the Department of Lands on consent matters such as zoning. The assessment of conditions of approval and their relevance.

7.4 Search

Location map; search of Department of Lands and Department of Minerals and Energy documentation (plans, field notes, PSM sketches, proclaimed survey area data, etc.)

7.5 Field Work and Calculations

Datum; reinstatement; field procedures; meridian; marking; survey records; calculations; report on field survey.

7.6 Plan

Supervision of draftsman; compliance with Survey Plan Guidelines; suitability for proposed action.

7.7 Costing Statement

Charge out rates in accordance with contractual arrangements, explanation of unforeseen costs.

7.8 Lodgement of Results

Endorsement of plan by surveyor, registered proprietor, Local Authority, Chief Executive (Department A) (if required), lodgement of plan and any other supporting documents with the registering authority.

8.0 Professional Aspects

The candidate's professional approach to the project in terms of compliance with the code of ethics and relationships with the client, statutory bodies and other professionals.

9.0 Report Of The Examiner

As the Board's eyes and ears, the Examiner and the Assistant Examiner offer judgements and opinions on the candidate's performance. This is so that (in the words of Section 37 of the Act) the candidate can "Satisfy the Board of his capacity to maintain a high level of performance in all aspects (ethical, administrative and technical) of the practice of surveying."

In order to be "satisfied" the Board seeks from Examiners a full report which, as well as commenting on the points listed, discloses all doubts or deficiencies about the candidate's performance and offers opinions on any matter connected with the project or resulting from discussions with the candidate.

The Examiner is required to conclude the report with a recommendation on whether the candidate, in the Examiner's opinion, has shown competence and professionalism.

The examiner recommends on whether the candidate is fit to be registered as a surveyor and endorsed as a licensed surveyor.

So as not to disadvantage candidates and to allow the Board sufficient time to digest their reports properly, Examiners are requested to submit their reports on the project at least ten (10) days before a Board meeting.

10.0 Board Philosophy on the Professional Assessment Project

The purpose of the Professional Assessment project is to make a final check on the fitness of the candidate for registration. The Board has from time to time adopted certain views on how it may be used for this purpose. The candidate has already demonstrated technical ability by completing the technical projects. These are considered to constitute a demonstration at a reasonable (not specialist) level of that ability.

The Professional Assessment Project is expected to be "...sufficient to satisfy the Board of the candidate's capacity to maintain a high level of performance in all aspects (ethical, administrative and technical) of the practice of surveying." (Section 37 of the Act)

The Board demands continued technical ability - hence it needs some field survey, but not necessarily as demanding as that in the technical projects.

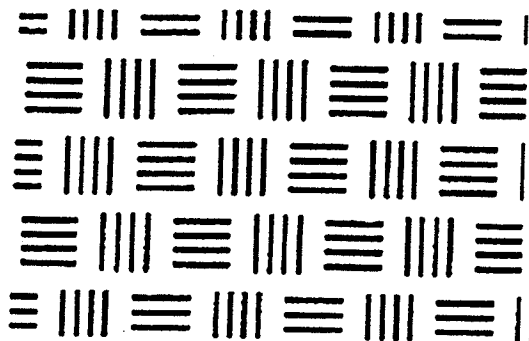
The administrative ability is assessed by the way the Examiners see the candidate's performance in discussion and negotiation. If the project is within the public sector, similar negotiations would be assessed with respect to the client department. These examples are not exhaustive but provided there is a significant administrative input, an assessment can be made.

Sometimes the negotiating process breaks down at an advanced stage and the candidate may feel a need to start again on a new project. This is not so. If, for example, the process stops due to unwillingness of the clients to accept Council conditions, the Examiners can proceed from that point by discussing with the candidate on what their advice would be and how they would proceed with an appeal or whatever the succeeding steps might be. The Examiner, could if necessary, observe the candidate in the field on another job to assess the field aspect.

The Board's attitude is that provided it can be satisfied under Section 37 by the candidate through advice from the Examiners, it should allow the process to be as smooth as practicable.

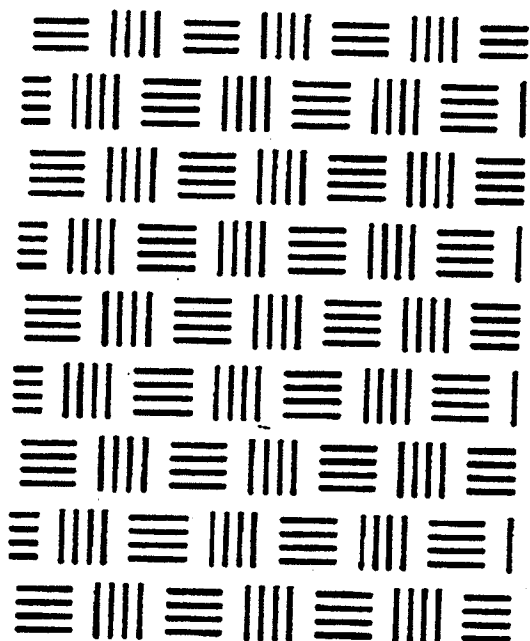
The Board also believes that by the time the candidate is presenting a Professional Assessment Project, a candidate should have a good understanding of their role and responsibility in the community and in relation to their fellow professionals; Examiners may well initiate discussion on this and other aspects of professionalism.

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Part E

Standards for Surveys



E1

**Directions and Recommended
Practices for Surveyors**

E2

Survey Plan Guidelines - General

E3

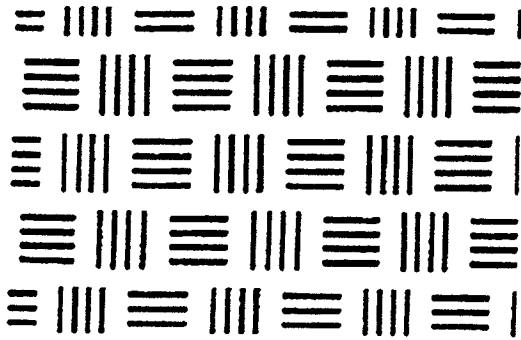
Dept. of Natural Resources - Requirements

E4

Dept. of Mines & Energy - Requirements

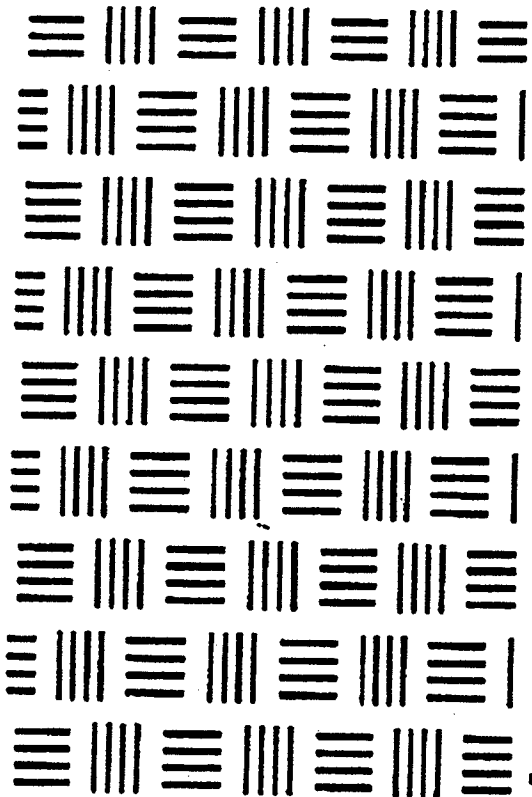


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Part E1

Directions and Recommended Practices



Directions
and
Recommended Practices

to assist surveyors in the
performance of their work

Issued By: The Surveyors Board Of Queensland

**P.O. BOX 810
SPRING HILL QLD 4004**

Phone: 3839 7744

IMPORTANT NOTE

Should a conflict arise between these Guidelines and various Acts and Regulations referred to, then the provisions of those Acts and Regulations will prevail. The Guidelines shall not be taken as a substitute for detailed professional advice.

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Introduction

1.0 Legislation

The Surveyors Act 1977 as amended provides for:

- > the constitution of the Surveyors Board of Queensland.
- > the qualifications of persons for registration as surveyors, surveying graduates and surveying associates.
- > the constitution of a Surveyors Disciplinary Committee.
- > the regulation of the practice of surveying.

2.0 Authority For Directions

2.1 Section 77 (1) (fa) of the Surveyors Act 1977 states that the Governor-in-Council may make regulations not inconsistent with the Act providing, with respect to the powers of the Board relating to securing compliance with the regulations, the issue by the Board of directions to surveyors in relation to the performance of surveys and the achievement of the prescribed standards of accuracy;

2.2 Section 5 of the Surveyors Regulation 1992 provides for the issue of those directions.

“Board’s directions

5.(1) The Board may issue directions to surveyors in relation to the performance of surveys and the achievement of the standards of accuracy specified in this regulation.

(2) Without limiting subsection (1), directions may be given in relation to the storage, transfer and use of electronic survey data.

(3) A surveyor must comply with the directions of the Board”.

3.0 Review

These Directions will be under constant review and the Board would appreciate **constructive comment in writing** to ensure that the purpose of the Directions is at all times legitimate.

The Board will be constantly reviewing all survey legislation to ensure that professional integrity is promoted. The Board is ever conscious of the need to prevent the introduction of restrictive clauses that inhibit professional practice.

4.0 Departure From Directions

A surveyor may use any method and/or equipment in performing a survey where it can be demonstrated that such method and/or equipment is capable of achieving the purpose of the survey.

Where a surveyor uses methods and/or equipment which involve a significant departure from any Direction, the surveyor shall submit with the survey records sufficient information to identify the methods and/or equipment used.

5.0 Definitions

Relevant definitions have been sourced from appropriate legislation. The definitions reproduced below are those which are referred to elsewhere in this Section.

“AMG” means the Australian Map Grid specified in the Australian Geodetic Datum Technical Manual of the Australian Survey and Land Information Group; (*Surveyors Regulation 1992*).

“bed and banks” with reference to a watercourse or lake means land over which the water of that watercourse or lake normally flows or that is normally covered by that water whether permanently or intermittently. The term does not include land abutting or adjacent to the bed or banks that is from time to time covered by flood water: For the purposes of this definition “bed” means the relatively flat and “banks” the relatively steep portions of the first mentioned land: (*Water Resources Act 1989*).

“cadastral survey” means any process of determining, mapping or planning the boundaries of a piece of land or waters required or authorised-

- (a) under any Act dealing with the alienation, leasing, and occupation of Crown lands or with mining, or affecting titles to land; or
- (b) by the proprietor, lessee or mortgagee under any Act affecting titles to land; or
- (c) by the owner, proprietor, lessee, mortgagee or occupier of, or any person holding a registered interest in, any land for the re-establishment of, or identification of, or adjustment of any boundary of such land; or
- (d) under any Act to be made or certified by a licensed surveyor; (*Surveyors Act 1977*).

“encroachment” means encroachment by a building, including encroachment by overhang of any part as well as encroachment by intrusion of any part in or upon the soil; (*Property Law Act 1974*).

“high water mark” means the ordinary high water mark at spring tides (*Land Act 1994*).

“identification survey” means a cadastral survey carried out for the purpose of identification, re-establishment, marking or remarking of existing boundaries of a piece of land or waters (*Surveyors Act 1977*).

“natural feature” means a topographical feature suitable for use as a boundary in a cadastral survey, and includes-

- (a) a mountain range; and
- (b) a cliff; and
- (c) a river; and
- (d) a watercourse; and
- (e) a seashore; (*Surveyors Regulation 1992*).

“occupation” means a permanent improvement situated on or near the boundary of land, and includes-

- (a) a building; and
- (b) a fence; and
- (c) a wall; (*Surveyors Regulation 1992*).

“plan” includes any survey plan, sketch for identification survey, map, aerial photograph or description made or obtained as part of any survey or surveys; (*Surveyors Act 1977*).

“State Control Survey: - A survey of high precision being carried out at the direction of the Surveyor-General for the purpose of establishing permanent marks to enable surveys throughout the State to be co-ordinated. (*Survey Co-ordination Act 1952*).

“supervision”, in relation to a survey, means the immediate personal oversight of the planning and execution of the survey, including:

- (a) the method of measurements; and
- (b) the placement of survey marks; and
- (c) the preparation of the plan of survey; and
- (d) in the case of a cadastral survey, the examination of evidence of ownership relied on when fixing an existing boundary; (*Surveyors Regulation 1992*).

“survey” means the act or process of determining the form, contour, position, area, height, depth or any other similar particulars of the earth's surface, whether on land or water, or of any natural or artificial features on, below or above any part of that surface or planning the position or the length and direction of the bounding lines of any part of that surface, or of any such natural or artificial features thereof and includes the making or obtaining of a plan or plans thereof; (*Surveyors Act 1977*).

“survey mark” means a mark of the prescribed form used for the purposes of a survey. (*Surveyors Act 1977*)

“survey records” means the documents necessary to adequately record every aspect of the survey. (*Surveyors Regulation, 1992*).

Directions

- 1.0 Survey Plans**
(Section 30 Surveyors Regulation 1992)
- 1.1** Lodgement of plans shall conform to the requirements of the Registering Authorities.
- 1.2** Sample plans for a variety of land actions are contained in the Survey Plan Guidelines.

Recommended Practices

101.0 Introduction

101.1 Guidelines

The Board considers that in the interest of the surveying profession, it should publish a set of Recommended Practices that may assist surveyors in the performance of their work.

In this respect, the Recommended Practices can be considered as guidelines for performance for all persons practising within the profession.

The Surveyors Regulation 1992 provides the basis on which professional practice and associated responsibility focuses in order to obtain the necessary quality results and outcomes.

A historical section has been included at the end of the recommended practices as both a guide and reference.

101.2 Review

These Recommended Practices will be under on-going review and the Board would appreciate constructive comment in writing to ensure that the Recommended Practices are of assistance to practising professionals.

101.3 Departure From Recommended Practices

Recommended Practices are guidelines only and should not be construed as restricting a surveyor's performance or practice.

102.0 Supervision (Section 18 Surveyors Regulation 1992)

A Registered and Licensed Surveyor's professional responsibility includes judgemental factors and the ability to interpret the appropriate level of supervision that is required for each cadastral survey. This includes supervision of both employees and registered persons who are contracted to carry out work.

The extent of supervision will depend on the complexity of the work being performed and the qualifications, experience and competency of the person performing the task.

Appropriate levels of supervision shall be carried out by a Registered or Licensed Surveyor when accepting responsibility for the work of a Registered Person.

This supervision shall be fully documented as part of the quality control procedures and shall form part of the survey records.

103.0 Connection Of Surveys (Section 21 Surveyors Regulation 1992)

Where surveys, such as telecommunication sites, are effected in isolated areas and the cost of connecting those surveys by traditional means to existing surveys is prohibitive, the position of those surveys can be determined by using GPS equipment. Contact the DNR District Surveyor.

104.0 Encroachment (Section 26 Surveyors Regulation 1992)

Surveyors have a professional responsibility to disclose all matters of encroachment.

The procedures relating to the application for relief of a building encroachment are dealt with under Division 1 of Part 11 of the *Property Law Act 1974*.

The following definitions are from S183, *Property Law Act 1974*.

“building” means a substantial building of a permanent character:
The term includes a wall;

“encroaching owner” means the owner of land contiguous to the boundary beyond which an encroachment extends;

“adjacent owner” means the owner of land over which an encroachment extends;

“boundary” means the boundary line between contiguous parcels of land;

“owner” means any person entitled to an estate of freehold in possession:

- (a) whether in fee simple or for life or otherwise;
- (b) whether at law or in equity;
- (c) whether absolutely or by way of mortgage, and includes a mortgagee under a registered mortgage of a freehold estate in possession in land under the Real Property Acts;

“subject land” means that part of the land over which an encroachment extends;

The intention of the legislation was to deal with man made encroachments made with the buildings materials of the day and which are of a substantial and lasting character. The courts have used its discretion in the interpretation of what defines a “building”.

In *ExParte Van Achterberg (1984) 1 Qd.R 160* the court held that "a weldmesh fence set in concrete foundations of up to two feet deep and one foot wide" was a "building" under the Act. Interstate cases decided under similar legislation have ruled concrete driveways to be "buildings".

It should be noted that either the encroaching or the adjacent owner may apply to the court for relief under the *Property Law Act* in respect of any building encroachment.

To protect the interests of adjoining owners, the nature and extent of encroachment needs to be shown on survey plans deposited with the Natural Resources Department (Section 30 of the *Surveyors Regulation 1992*). This requirement extends to Group Titles Plans. Eaves and guttering that extends beyond the boundary of a lot, is one example of such encroachment.

In Queensland the problem of a building erected entirely on the wrong parcel of land is dealt with under Division 2 (Improvements Under Mistake in Title) of Part 11 of the *Property Law Act 1974*.

For reference to the above-mentioned cases and other published information, contact the Surveyors Board.

105.0 Meridian Determination

105.1 Australian Map Grid - AMG

105.1.1 Surveys on AMG

The meridian of each survey should be established on AMG by reference to:

- (a) Co-ordinated permanent marks
- (b) Solar or stellar observations or
- (c) previous or adjoining surveys

The practice of describing the meridian of a survey in terms of the meridian of a previous or adjoining survey which has not been referred to either true meridian, AMG or CAM, should be discouraged.

105.2 Integration of Surveys

The Board fully supports the principles of co-ordination of surveying activities, and to facilitate the integration of survey data, it is recommended that where the meridian can not be accurately related to AMG, then a local meridian between permanent survey marks may be adopted.

It is intended that pockets of "integrated surveys" will develop, and future correlation to the Australian Map Grid, could be achieved by determining the co-ordinates of these permanent marks, possibly by GPS. Refer to page E1-9 item 103.0.

Hence, it is recommended that such permanent marks be selected, and/or placed, giving due regard to their role in the integration of survey data.

105.3 Large Projects

Many sizeable projects such as major water storage facilities and resumptions, residential staged development, etc are currently established on the AMG co-ordinate system. This form of co-ordination will be facilitated if the geodetic densification of Queensland concentrates initially on the 'needs' areas of the State.

105.4 Professional Responsibility

Based on the premises and assumptions already made, AMG co-ordination will allow surveyors to operate with more accuracy, efficiency and confidence, with a perceived saving to the community that pays for work to be done.

It is essential therefore that all surveyors actively participate in the ongoing discussion.

If the geodetic densification is to proceed, the survey profession should ensure that the geodetic control is established on a 'needs' basis.

When such control is readily available, the cost to the small consumer can be justified.

105.5 Extensive Surveys

In extensive surveys, unless GPS equipment or sufficient co-ordinated marks are available, observations should be taken as necessary to confirm meridian stability.

105.6 Future Reinstatement of Meridian

Opportunities should be taken to read accurate bearings from stations on the survey to beacons on control survey marks and to precisely identifiable parts of buildings or other structures to assist future reinstatement of meridian.

105.7 Survey in Separate Parts

Where a survey consists of separate parts, the same meridian should be used for the parts. The common meridian can be obtained by observation or by connection.

106.0 Permanent Marks (Section 29 Surveyors Regulation 1992)

106.1 It is preferable to place new permanent marks in close proximity to the survey rather than to make lengthy connections to existing marks.

- 106.2** Where local conditions preclude the placement of permanent marks, an explanatory report should be included in the survey records.
- 106.3** Every opportunity should be taken to make connections to existing permanent marks in close proximity to the survey, particularly those not previously connected to cadastral surveys. Details of permanent marks that have been previously connected to cadastral surveys are shown on survey plans. Sketches of permanent marks are available from the Department of Natural Resources District Offices.
- 106.4** A search should be made for permanent marks installed during the construction of roads, railways, etc. Some of these may be indicated by a finder post while others may be found in concrete structures associated with the project.
- 106.5** All Form 6 and updates on the information shown thereon, should be lodged with Department of Natural Resources District Offices. Vide Survey Co-ordination Act 1952, Section 7.
- 107.0** **Marking Boundaries**
(Section 27 Surveyors Regulation 1992)
- 107.1** Pegs should be used to mark corners and boundaries of land. Also see Section 19 (2) of Surveyors Regulation 1992.
- 107.2** Lot numbers should be marked on corner pegs.
- 107.3** For rural surveys, where a fence post is used as a corner it should be branded with a broad arrow and the lot number except where a reference tree is taken.
- 107.4** For rural surveys, alternate marks such as a survey post, a galvanised iron pipe or star picket may be placed at corners where circumstances so dictate, provided such marks are identifiable as survey marks.
- 107.5** New boundaries should be cleared and marked sufficiently to enable the boundary to be readily and unambiguously discernible on the ground at the completion of survey.
- 107.6** Where clearing is required, scrub, undergrowth and small trees should be removed without unnecessarily disturbing or destroying native flora and fauna.
- 107.7** Unless fencing is to proceed immediately, trees standing nearest to the line should be blazed with a horseshoe shaped mark cut into the heart-wood on opposite sides of the tree in such positions that the marks face along the survey line.
- 107.8** Trees through which the boundary line passes should be double blazed on opposite sides so that the marks face along the boundary line.

- 107.9** Where corner marks are not intervisible, marks should be placed, on line between the corners. Refer also to page B2-4 item 1.0.

108.0 Reference Marking (Section 28 Surveyors Regulation 1992)

108.1 Iron Pin

The positions and depths at which pins are placed should be decided by the surveyor so as to minimise the chance of disturbance from any cause and the depth at which the pin is placed should be recorded if the depth is excessive.

Where original iron pins are found, the depth of the pin should be recorded where the depth is excessive.

108.2 Rural Areas

In rural areas, reference marks include reference trees (where there is little likelihood of the tree being destroyed in the foreseeable future), buried iron pins, and other appropriate marks.

108.3 Urban Areas

In urban areas, reference marks include iron pins, screws/nails in kerbing or manhole surrounds, star bars, corners of shop or buildings and street signposts.

108.4 Estate Development

In residential estate development, it is essential that an adequate number of reference marks are deployed to allow reinstatement of lot boundaries at reasonable cost.

A variety of surface and sub-surface marks (mark in kerb, pin, etc) should be placed to minimise the destruction of reference marks by machinery and earthworks and maximise future reinstatement.

Permanent marks should be placed to facilitate future co-ordination and reinstatement.

109.0 Photogrammetric Surveys

The Registering Authorities are able to accept the use of photogrammetry for some types of cadastral survey. Features of a photogrammetric survey are:

- the survey is over sufficiently large distances to enable computed bearings and distances to meet accuracy standards (Section 31), and
- boundaries are clearly identifiable on the ground, eliminating the need for marking (Section 27a), and

➤ the photogrammetric survey connects to and supports field survey (Section 21).

Photogrammetric surveys are appropriate where the boundary can be readily identified on the ground and on the aerial photograph. This implies that the boundary will follow an existing structure (eg fence) or a prominent natural feature such as a ridge or water course.

The accuracy required will determine the minimum scale of photography to be used. In many cases suitable photography may already be available from the Department of Natural Resources or private operators.

Clearly identifiable points on the photographs are measured in the field and connected to the local cadastral survey datum, generally through the AMG co-ordinate system to provide control for the photogrammetry.

Photogrammetric measurement and computation must be undertaken by a suitably qualified person.

110.0 Location Certificates

The Board recognises the need for services to be available to the public, which do not require precise reinstatement and measurement of boundaries.

These services can be provided by surveyors, who have both the training and expertise in surveying, through a "Location Certificate".

Field investigations associated with location certificates do not include the placement of survey marks.

110.1 Location Certificates are designed to ensure:

- Land described in any transfer or other legal document, actually is the parcel which a purchaser wishes to buy;
- Improvements being transferred or dealt with are within the boundaries so described; and
- There are no registered encumbrances such as easements, affecting the land that the purchaser is not aware of.
- There are no unregistered encumbrances such as encroachments on or by the land.

110.2 Consulting Surveyors Queensland provides an information paper on this subject as part of the Technical Publications Series.

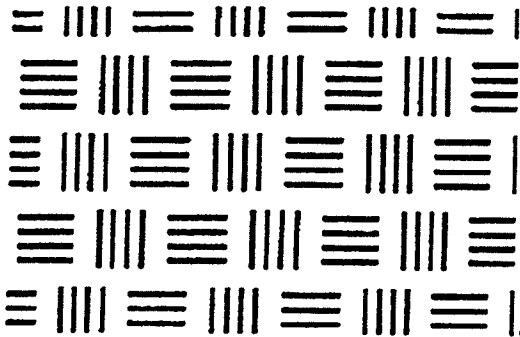
111.0 Stakings

“Staking” or marking the approximate location of the position of the boundary or corner of a parcel of land is not permissible unless it is part of the process in carrying out the subdivision of new parcels of land. If it is to be used, it must be as an integral part of the procedure required during subdivision.

“Staking” to indicate proposed boundaries in a new subdivision prior to final marking is acceptable as an aid to contraction or other works involved in the new subdivision, but not otherwise.

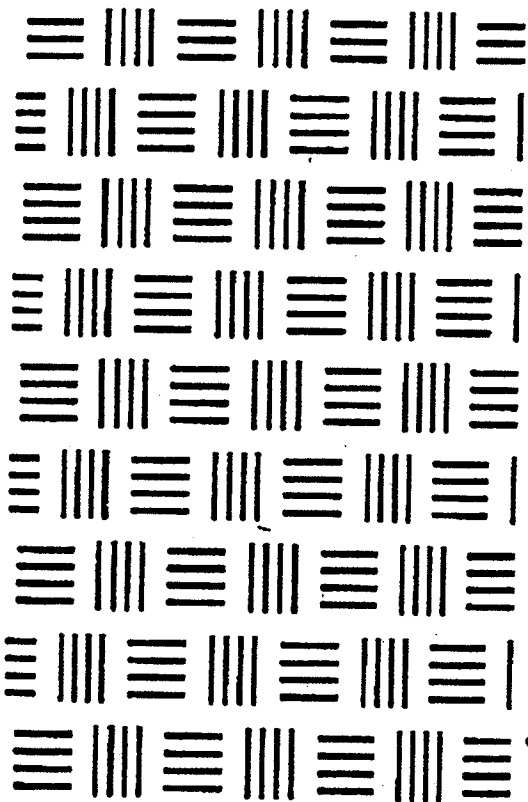
A new subdivision process terminates with the registration of the survey plan.

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Part E2

Guidelines For Preparation of Survey Plans



Outlining the recommended drafting practices
which the Surveyors Board believe will satisfy
the requirements of the Registering
Authorities

Covers both

Department of Natural Resources and
Department of Mines & Energy survey plans



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PREFACE

These Guidelines outline the recommended drafting practices which the Surveyors Board of Queensland believe will satisfy the requirements of the Registering Authorities.

The Guidelines indicate drafting procedures that will ensure:

- plans submitted are suitable for the purpose of the survey
- the property is accurately and unambiguously described so that tenure documents based on the plan will be correct
- the survey data can be incorporated into archives as a resource for future surveys
- survey marks placed by the survey are accurately recorded
- the plans can be reproduced on a reduced scale without loss of clarity and quality.

These procedures support Section 30 of the Surveyors Regulation 1992 and are directed towards achieving consistency in the recording of Surveys and Survey Data.

President, Surveyors Board of Queensland

GENERAL

The amendments to these Guidelines are made by replacement of the applicable page(s). Each amendment page when issued is identified by a revision number and an updated copy of the Revision Log Page will indicate all the amendments.

These Guidelines cancel and replace the previous 1992 Edition of the Board Operations Manual and amendments issued in July, 1993, April, 1994 and September, 1995.

The Manual has been renamed the Surveyors Operations Manual. This reflects the substantive input into the Manual on Guidelines from the Department of Natural Resources and the Department of Mines and Energy.

Surveyors Operations Manual Committee.

January, 1996.

General Requirements

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Y		
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1.1 Abbreviations – General

For use where space prevents use of full word.

A limit of three consecutive letters is preferred eg. Cen. face
S.F.P. or C. face S.F.P. (Not C.F.S.F.P.)

The full stops denoting an abbreviation may be omitted.

About.....	Abt
Addition.....	Addn
Alignment Spike.....	A.Sp.
Alluvial Mining Claim.....	A.M.C.
Application Post.....	Appln Post
Approximately.....	Approx.
ARCADE.....	ARC.
Australian Geodetic Datum.....	A.G.D.
Australian Height Datum.....	A.H.D.
Australian Map Grid.....	A.M.G.
Avenue.....	Ave.
Balance.....	Bal.
Bank.....	Bk
Bitumen.....	Bit.
Block.....	Blk
BOULEVARD.....	BLVD
BOUNDARY.....	BDY
Brick.....	Br
BROADWAY.....	BDWY
Brook.....	Brook
Building.....	Bldg
Building Unit Plan.....	B.U.P.
Business Area.....	B.A.
Calculated.....	Calc.
Centre.....	Cen. (C)
CHANNEL.....	CHNL
CHASE.....	CH.
CIRCLE.....	CCL.
CIRCUIT.....	CCT.
CLOSE.....	CL.
Coal Mining Lease.....	C.M.L.
Concrete.....	Conc.
Connection.....	Conn
Construction.....	Constn
Continued.....	Contd
Corner.....	Cor.
County.....	Cty
COURT.....	CT
Creek.....	Ck
CRESCENT.....	CRES.
CROWN PLAN.....	C.P.

Datum Post.....	D Post
Dead.....	Dd
Deep Driven Mark.....	D.D.M.
Department of Natural Resources.....	D.N.R.
Department of Mines & Energy.....	D.M.E.
D.M.E. Plan.....	M.P.
Departmental.....	Deptl
Developmental.....	Dev.
Diagram.....	Diag.
Distance.....	Dist.
Disturbed.....	Distd
Dog Spike.....	D. Spk.
Dredging Area.....	D.A.
Dredging Claim.....	D.C.
Dredging Lease.....	D.L.
Drill Hole (& Wing).....	D.Hole,D/H. or D/H. & W.
DRIVE.....	DR.
Easement.....	Emt
East.....	E.
Electric Light Pole.....	E.L.P.
ESPLANADE.....	ESP.
Exploration Permit.....	E.P.
Coal.....	E.P.C.
Minerals.....	E.P.M.
Petroleum.....	E.P.P.
EXPRESSWAY.....	EXPWY
Extended.....	Extd
Fence Posts:	
Round Fence Post.....	R.F.P.
Square Fence Post.....	S.F.P.
Square Concrete Fence Post.....	Conc.S.F.P.
Round Steel Fence Post.....)..... either
Round Galv.Iron Fence Post.....)..... Steel FP
Steel Fence Post.....)..... or
Tubular Steel Fence Post.....)..... G.I.F.P.
Corner Square Fence Post.....	Cor S.F.P.
Centre Round Fence Post.....	Cen R.F.P.
Centre Face Square Fence Post.....	Cen.Face S.F.P. (C.Face S.F.P.)
Fences: eg. 2 Barbed Wire, 1 Plain Wire.....	2B.1P
FREEWAY.....	FWY
Foot.....	Ft
Found.....	Fd
Galvanised.....	Galv.
Galvanised Iron.....	G.I.
Gold Field Homestead.....	G.F.H.
Gold Mining Lease.....	G.M.L.

Ground.....	Gnd
Group Title Plan.....	G.T.P.
GROVE.....	GR
Gully Trap.....	G/T
Headwall.....	Hdwl
Hectares.....	ha.
HIGHWAY.....	HWY
High Water Mark.....	H.W.M.
Holding.....	Hldg(H.)
Identification.....	Ident
Identification Survey.....	I.S.
Instruction.....	Inst.
Intersection.....	Intsn
Iron Pin.....	I. Pin (I.P. never used)
ISLAND.....	IS.
Kerb.....	Kb
Kilometre (s).....	Km
LANE.....	LA.
Leaning.....	Leang
Left Bank.....	L.Bk
Licensed Gem Claim.....	L.G.C.
Line Peg.....	L.P.
Local Government.....	Local Govt
Low Water Mark.....	L.W.M.
Manhole.....	M/H
Market Garden Area.....	M.G.A.
Mark.....	Mk
Measurement.....	Mmt
Metre (s).....	m.
Mineral Claim.....	M.C.
Mineral Development License.....	M.D.L.
Miners Homestead.....	M.H.
Miners Homestead Lease.....	M.H.L.
Miners Homestead Perpetual Lease.....	M.H.P.L.
Mining Lease.....	M.L.
Mining Title Freehold Lease.....	M.T.F.L.
Mount.....	Mt
Mountain.....	Mtn
Nails:	
Galv. Iron Nail.....	G.I.Nail
Lead Head Nail.....	L.H.Nail
Ramset Nail.....	Ram.Nail
Round Head Nail.....	R.H.Nail
Spring Head Nail.....	S.H.Nail
No Original Mark.....	No O.Mk.
North.....	Nth (N.)

Noted & Checked	N & C.
Number	No.
Obliterated	Obltd
Occupation	Occupn
Old	Old
Original	Orig. (O.)
Original Iron Pin	O.I.P.
Original Line Peg	O.L.P.
Original Peg	O.P.
Original Permanent Mark	O.P.M.
Original Pointer Peg	O.Ptr
Original Reference Tree	O.R.T.
Original Survey Post	O.S.P.
Overhead	O/H
PARADE	PAR.
PARKWAY	PKWY
PATHWAY	PTHWY
Peg	Peg(P)
Permanent	Perm.
Permanent Mark	Perm Mk (P.M.)
Petroleum Lease	P.L.
Petroleum Well Location	P.W.L.
Pipeline license	P.Lic.
PLACE	P.L.
Placed	Pld
PLAZA	PLZ.
Plinth	Plth
Pointer	Ptr
Portion	Por.
Power Pole	P.P.
PROMENADE	PROM.
QUAY	QY
RAILWAY	RLY
Ranged	Rgd Only
Reads	Rds
Recreation	Rec.
Redundant Catalogue Plan	R.C.
Registered Plan	R.P.
Reinstated	Reinstd
Remains	Rmns
Remarked	Remkd
Removed	Remvd
Renewed	Renwd
Reset	Reset
Reserve	Res.
Reserved	Resd
Residence Area	R.A.

Restricted Mining Claim	R.M.C.
Restricted Mining Purposes Claim	R.M.P.C.
Right Bank	R.Bk
Right of Access	R. of A.
Right of Way	R. of W.
RIVER	RIV.(R)
ROAD	RD
Section	Sec.
Sheet	Sh.
South	Sth(S.)
Special Bauxite Mining Lease	S.B.M.L.
Special Coal Mining Lease	S.C.M.L.
Special Gem Claim	S.G.C.
Special Mining Lease	S.M.L.
Special Perpetual Mining Purposes Lease	S.P.M.P.L.
Spike	Spk.
Split	Split
Standard	Stand
Star Picket	S.Pkt
Station	Stn
Straightened	Strghd
Strainer	Strr
STREET	ST
Stump	Stp
Suburban	Subn
Surface	Surf.
Surface Area	Surf. Area (S.A.)
Surveyed	Survd
Tailings Area	T.A.
Telegraph Pole	T.P.
TERRACE	TER.
Traverse	Trav.
Unallocated State Land	U.S.L.
Underground	U/G
Very Old	V.Old
Water Hole	W.H.
Water Right	W.R.
Watershed	W'shed
West	W.

If Upper and Lower case is used for a word to be abbreviated, then use Upper and Lower case for abbreviation eg:

RAILWAY - RLY ; Railway Fence - Rly fence;

CHANNEL - CHNL; Kerb and Channel - Kerb & Chnl

1.2 Abbreviations - Common Trees

Bauhinia	Bauh.	Mahogany	Mahog.
Beefwood	Beefwd	Mangrove	Mgrove
Blackbutt	Bkbutt	Messmate	Mmate
Blackwood	Blackwd	Milkwood	Milkwd
Bloodwood	Bldwd	Moreton Bay Ash	M.B. Ash
Bollywood	Bollywd	Nutwood	Nutwd
Bonewood	Bonewd		
Bottle Brush	Bot. Brush	Peppermint	Pmint
Bottle Tree	Bot. Tree	Pepperwood	Pepperwd
Boxwood	Boxwd	Poplar Gum	Pop. Gum
Brigalow	Brig.		
Cabbage Gum	Cab. Gum	Quandong	Qdong
Camphorwood	Camphwd	Rosewood	Rosewd
Candlenut	Candnt		
Cheesewood	Cheesewd	Saffron Heart	Saf. Heart
Coachwood	Coachwd	Sandalbox	Sandbox
Coolibah	Coolbh	Sandalwood	Sandwd
Corkwood	Corkwd	Sassafras	Sasfras
Cottonwood	Cottonwd	Satinwood	Satinwd
Cypress Pine	Cy. Pine	Scrubtree	Scrub
		Scrubwood	Scrub
Dead Finish	Dd Fin.	Silkwood	Silkwd
		Spotted Gum	Sp. Gum
Fibrewood	Fibrewd	Stringybark	Stybk
Gum Topped Box	G.T. Box	Tallowwood	Tallowd
		Tulipwood	Tulipwd
Ironbark	Ironbk	Turpentine	Turp.
Ironwood	Ironwd		
Johnson River Hardwood	J.R. Hardwd	Whitewood	Whitewd
Kurrajong	Kjong	Yellowjacket	Y Jacket
Lancewood	Lancewd	Yellowwood	Yellowd

(Other tree names are generally shown in full)

1.3 Accuracy

- 1.3.1 Under the Surveyors Regulation 1992 "the word "accuracy" has the commonly understood meaning - precise, exact, correct in accordance with a standard - and so has a wider meaning than that frequently used by surveyors when referring to accuracy of measurement".

Certification of the words used in Form 13, 17, and 18 of the Surveyors Regulation 1992 (Section 25 and 30) - "that the plan is accurate" implies a declaration that the plan is correct in every detail and is in accordance with the standards of accuracy specified in the Surveyors Regulation 1992 and is suitable for the intended action.

For Section 25 compiled plans, the word "accurate" also applies to the available information from which the plan is compiled, regardless of the surveyed status of that available information. (Section 31 (7) of Surveyors Regulation 1992.)

See also "PLOTTING" 1.50 and "SCALE OF PLANS" 1.58
See also Dept. A Example Plans 5 to 8 and Notes on pages E2--90, E2--92 & E2--94.

1.4 Adjoining Description

- 1.4.1 All adjoining information will be shown in sloping hairline.

See also "STYLES" 1.62.3

- 1.4.2 For all Registering Authorities the latest adjoining registered descriptions and relevant catalogue numbers are to be shown as follows:

Sample

21	42	ML 4	16
SL10432	CP808793	MP34567	RP123456

NOTE:

- *P12345* is never shown - show *RP123456* regardless of status for plans of Freehold lands.
- County Prefixes, eg. SL, WD etc., no longer form part of the Catalogue Number for new plans of State Tenure. These have been replaced by a generic C.P. (Crown Plan) which will form part of the Catalogue Number and shall be shown as such for adjoining descriptions.(See above example.)

Ongoing surveys involving several plans should show the most recent adjoining descriptions pertinent to that survey (ie. show the new description created on the survey as adjoining information).

See also "PLAN FORMS" 1.49

1.4.3 Adjoining Easements

Sample	<i>Emt A</i>	<i>Emt G</i>	<i>Emt J</i>
	<i>SL20657</i>	<i>RP213175</i>	<i>CP12345</i>

- Show existing Easements and Registered Plan numbers that abut the subject boundary.

See also "EXISTING REGISTERED EASEMENTS" 1.29.3

1.4.4 Adjoining Railways

- Show Railway Name in all cases
- For Land held by the Queensland Rail in a Certificate of Title, the full RP. Description must also be shown.

See also Railways DNR requirements E3 1.57 & B2 Pg 24.

1.4.5 Adjoining Building Units Or Group Title Plans

- In addition to adjoining Lot on Plan descriptions the adjoining registered Building Units Plan Number or adjoining registered Group Title Plan Number must also be shown.

Sample	<i>BUP 6418</i>	<i>GTP 5942</i>
	<i>2</i>	<i>6</i>
	<i>RP264 458</i>	<i>RP238671</i>

This information is obtainable from the reverse side of the plan form and/or a search of the DNR Computer Inventory of Survey Plans (CISP) and DNR Office Working Maps.

**1.4.6 Adjoining Dept. B
(For D.M.E. Plans Only)**

- All existing and underlying Tenures are to be shown.
- Provided the Mining Tenure can be described by reference to a "Lot on Plan", then the "Lot on Plan" description only will suffice.

See also "D.M.E. SPECIMEN PLANS 1 & 2"

1.5 Alignment Offsets

Offset lines should be avoided if possible.

Offset marks should be referenced as a direct connection from corners.

See also "CORNER REFERENCES" 1.21.6

1.6 Alterations/Additions/Amendments

1.6.1 For Plans "deposited" in DNR District Offices or "lodged" in the Department of Mines & Energy

- Before a plan is "Endorsed" (DNR) or "Registered" (D.M.E) any alterations will be effected by erasure and corrections and additions shown in black. In most cases this will entail the return of the plan to the Surveyor.
- Once the plan is "registered" any alterations or additions will be effected by "crossing out" and amending in red. In these cases the plan will be suitably endorsed with a qualifying statement signed by the designated Officer.

See also "ALTERATIONS" DNR Requirements E3 1.8

See also "PATENT ERROR" DNR Requirements E3 1.53

See also "SURVEYORS BOOK" DNR Requirements E3 1.68

1.7 A.M.G. Connections

Whenever any survey has been connected to a co-ordinated point on the Australian Map Grid (AMG), the co-ordinates may be tabulated.

AMG co-ordinates are to be computed in accordance with The Australian Geodetic Datum Technical Manual - Special Publication Number 10.

See also "GO-ORDINATES" 1.20

See also "CORNER INFORMATION DIAGRAMS A & B"

See also "MERIDIAN" - 1.42

See also "MERIDIAN" DNR Requirements E3 1.49

1.8 Areas

A calculated area is preferred. In the case of Balance lots, a balance area may be acceptable if that lot does not close within the prescribed limits, or where otherwise appropriate.

Eg. -- A remaining lot bounded by a watercourse which has not been re-traversed during the course of survey.

1.8.1 Calculated

Parcels of land which are to exhibit a calculated area will be deduced by closure and adjustment (preferably Bowditch) and shown -

1.8.1.1 In square metres to the nearest square metre where the parcel is less than one hectare. This includes Access Restriction Strips.

1.8.1.2 In hectares to four significant figures.

1.8.1.3 Where land is of very small extent (less than one square metre) and of high value (inner city area), the area may be shown to not more than one decimal point.

See also "METRIC DOCUMENTATION" 1.43

1.8.2 Multiple Line Areas

1.8.2.1 It is no longer a requirement to show multiple line areas on new plans. An exception is where the block contains a Reservation in Title in terms of Section 23 of the Land Act.

1.8.2.2 When working from an original plan with a multiple line area, deductions for the new plan area are always taken from the existing "Nett" or "Balance" area.

1.8.2.3 Only the true Nett area of a Lot is shown regardless of other Lots whether fully surrounded or not, or included Road etc.

1.8.2.4 Example Involving Original Multiple Line Areas:

1.8.2.5 By computation and adjustment, information from the computer is:

gross area	184.4746378	ha
and road area	20.5822597	ha
by subtraction the nett area is	163.8923781	ha

Plan presentation will be 163.9 ha

NOTE: The "rounded" nett area is adopted.

1.8.2.6 If the road was existing and

- in imperial units, say 50ac 3r 17p
- calculate gross area as in 1.8.2.5
- conversion of imperial road area (vide 1.19) gives 20.5808 ha
- calculation provides a 'nett' area of 163.8938378 ha

Plan presentation will be 163.9 ha

NOTE: The "rounded" nett area is adopted.

1.8.3 Balance

Where a balance area may be adopted, the new nett area is determined by SUBTRACTING the surveyed area (rounded as prescribed) FROM THE EXISTING NETT AREA of the parcel.

NOTE: There is no rounding of this resulting area.

Examples Involving Multiple Line Areas

1.8.3.1	existing plan shows	85.1.17		
		4.3.11	Rd	
		80.2.6		
	by survey lot 4 is created:	4.19	ha	
	convert existing imperial nett area to metric (vide 1.19)	32.5924	ha	
		- 4.19	ha	(New Lot 4)
	by subtraction the new nett deduces plan presentation will be	28.4024	ha	Bal

NOTE: The "unrounded" nett area is adopted.

1.8.3.2	existing plan shows	158.534	ha	
		2.134	ha	Rd
		156.4	ha	
	by survey lot 4 is created:	1234	m ²	
	by subtraction the new nett deduces	156.2766	ha	
	Plan presentation will be	156.2766	ha	Bal

NOTE: The "unrounded" nett is adopted.

1.8.4 Imperial Exclusions (eg Road Reservation etc Sec 23 of Land Act)

Where the area of original exclusions (Road reservation, Forestry Entitlement Area etc.) are imperial, these are converted to the nearest square metre and a three line area shown on the plan. Eg.

34.5425	ha	
1.9501	ha	Rd Resn
32.5924	ha	Bal

See also "RESERVATIONS IN TITLE" DNR Requirements E3 1.60

See also "CONVERSIONS" 1.19

See also "VINCULUM" 1.68.4

See also "AREAS" DNR Requirements E3 1.12

See also "VINCULA" DNR Requirements E3 1.74

1.8.5 "About" Areas

Show to 3 significant figures

See also "DNR Example Plan" No. 7 & explanatory notes.

1.9 Bearings

1.9.1 Bearings are shown upright on face of plan, sloping in all tabulations & in a clockwise direction for completed blocks.

1.9.2 Bearings to be shown in degrees, minutes & seconds, rounded off as appropriate & reduced to the meridian of the survey.

1.9.3 It is preferable that the following use of '0' be adopted.

eg. 270°0', 270°03', 270°00'30"

Note that 270°00'00" is to be avoided.

See also "DIMENSIONS" 1.27

See also "RANGED ONLY & READS BEARINGS" 1.52

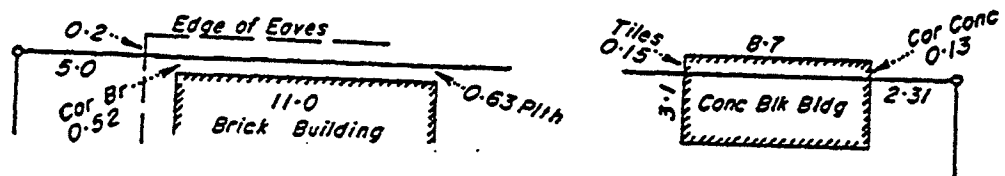
See also "ORIGINAL DIMENSIONS" 1.47

See also DNR example plan No 7 & explanatory notes.

1.10 Buildings

Encroachment must be clearly illustrated and may be shown as follows:

Sample



See also Section 26.2 of the Surveyors Regulation 1992.

See also "ENCROACHMENT" DNR Requirements E3 1.34

See also Recommended Practice 104.0 E1 Pg 9

1.10.2 When classified as a reference mark (immovable object), connections thereto may be shown "on face" or tabulated in required manner.

1.10.3 Other improvements such as bridges, dams, mine shafts, etc., may be shown if connected to in the course of survey.

See also "CORNER REFERENCES" 1.21.6

1.11 Calculated Lines

1.11.1 Calculated lines are those lines derived by computation from survey information. A calculated line is generally between surveyed corners on a "Deposited"/"Lodged" plan.

1.11.2 Show as full lines with computed bearings and distances, and the word "Calc". Show "Calc Orig" on successive plans.

1.11.3 If appropriate to tabulate, show 'Calc' outside column.

See also "EASEMENTS" 1.29

See also "UNSURVEYED AND CALC BNDRIES" DNR Requirements E3 1.72

1.12 Cancelled Boundaries

1.12.1 These are boundaries rendered redundant by the new survey and are shown by broken lines of about 6mm lengths, where necessary.

1.12.2 Once cancelled they are no longer shown on future plans.

D.M.E. -- Shown with all dimensions on face or tabulated in "TRAVERSES ETC" column - original indicated.

See also "LAPSED BOUNDARIES" D.M.E. E2--139, Item 3.11.

See also "LINEWORK" 1.38.8

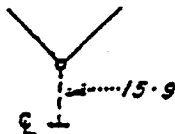
See also "TRAVERSES" 1.67

1.13 Centre Lines

1.13.1 Road Centre Lines

When shown indicate as follows:

Sample



1.13.2 Railway Centre Lines

Connections to "Rly € " are to be shown either on face or by tabulation in the "TRAVERSES ETC" column.

1.14 Certificates

The Surveyor's CERTIFICATE is to be in accordance with Form 13 or Form 18 under either Section 25 or 30 of the Surveyors Regulation 1992 and is valid for twelve months from the date of signature.

If the date of signature lapses, the plan will be re-certified utilising Form 17.

Vide Section 76(a) of the Surveyors Act, 1977.

Sample Certificate -- Licensed Surveyor [Form 13]

1.14.1

I, John William Brown hereby certify that I have surveyed the land comprised in this plan personally, that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act 1977 and the Surveyors Regulation 1992 and that the said survey was completed on 20/6/92

..... Licensed Surveyor

Date : 30/6/92

**Sample Certificate -- Licensed Surveyor Supervising Licensed Surveyor
[Form 13]**

1.14.2 I, John William Brown hereby certify that I have surveyed the land comprised in this plan by Robert Ellis Junior, Licensed Surveyor for whose work I accept responsibility, that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act 1977 and the Surveyors Regulation 1992 and that the said survey was completed on 20/6/92

..... Licensed Surveyor

Date : 30/6/92

**Sample Certificate -- Licensed Surveyor supervising Registered Person
(Form 13)**

1.14.3 I, John William Brown hereby certify that I have surveyed the land comprised in this plan personally and by Paul Mark Smith, Registered Surveyor * for whose work I accept responsibility, and that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act 1977 and the Surveyors Regulation 1992 and that the said survey was completed on 20/6/92

..... Licensed Surveyor

Date : 30/6/92

(*) Substitute Surveying Graduate or Surveying Associate where applicable.

**Sample Certificate -- Company as Licensed Surveyor supervising Licensed Surveyor
[Form 13]**

1.14.4 J W Brown Surveys Pty Ltd ACN 123456789 hereby certify that the Company has surveyed the land comprised in this plan by Robert Ellis Smith, Licensed Surveyor for whose work the Company accepts responsibility, that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act 1977 and the Surveyors Regulation 1992 and that the said survey was completed on 20/6/92



.....
John William Brown, Director & Licensed Surveyor

.....
Brian Lloyd Gardiner, Director Date: 30/6/92

Sample Certificate -- Company as Licensed Surveyor delegating supervision to Licensed Surveyor who supervises another Registered Person [Form 13]

1.14.5 J W Brown Surveys Pty Ltd ACN 123456789 hereby certify that the Company has surveyed the land comprised in this plan by Robert Ellis Smith, Licensed Surveyor and by Paul Mark Smith, Registered Surveyor* for whose work the Company accepts responsibility, that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act 1977 and the Surveyors Regulation 1992 and that the said survey was completed on 20/6/92



.....
John William Brown, Director & Licensed Surveyor

.....
Brian Lloyd Gardiner, Director Date: 30/6/92

(*) Substitute Surveying Graduate or Surveying Associate where applicable.

Sample Certificate -- Licensed Surveyor [Form 18]

1.14.6 I, John William Brown hereby certify that I have made this plan pursuant to Section 25 of the Surveyors Regulation 1992, and that the plan is accurate and compiled from MP 20261 in the * Department of Mines & Energy, Brisbane.

.....
Licensed Surveyor Date: 30/6/92

(*) Substitute or add "Department of Natural Resources" where applicable.

Sample Certificate -- Company As Licensed Surveyor [Form 18]

1.14.7 J W Brown Surveys Pty Ltd ACN 123456789 hereby certify that the Company has made this plan pursuant to Section 25 of the Surveyors Regulation 1992, and that the plan is accurate and compiled from CP842126 and RP181275 in the Department of Natural Resources.*



.....
John William Brown, Director & Licensed Surveyor

.....
Brian Lloyd Gardiner, Director Date: 30/6/92

(*) Substitute or add "Department of Mines & Energy, Brisbane" where applicable.

Sample Recertification -- Licensed Surveyor**[Form 17]**

1.14.7A I, John William Brown hereby certify that this plan is accurate at this date of recertification.

.....
John William Brown, Licensed Surveyor Date: 30/6/92

This certificate should be shown on:

- Face of the plan above the Form 13 Certificate
- or • On face of plan
- or • Reverse of plan in area where other certifications are placed.

1.14.8 Surveyors name must be shown in full. The Surveyor should be registered at time of survey and signing of the plan.

1.14.9 If the Surveyor signs his responsibility for another person, the qualifications of that person must be shown eg. Registered Surveyor, Surveying Graduate or Surveying Associate.

See Section 30 (2) of the Surveyors Regulation 1992.

1.14.10 If responsibility for survey is accepted by a company, the plan must be signed under the Company Seal by two directors, one of whom must be a Licensed Surveyor. The designation of the signatories should be shown.

See Section 14(2)(b) of the Surveyors Regulation 1992.

1.14.11 The date of signature must not precede the survey completion date. The plan must be signed and dated prior to lodgement for sealing with the Local Authority.

1.14.12 All Notations Including The Amendment Certificate Etc And Signatures Must Be In Black Ink.

See also "INK" 1.34

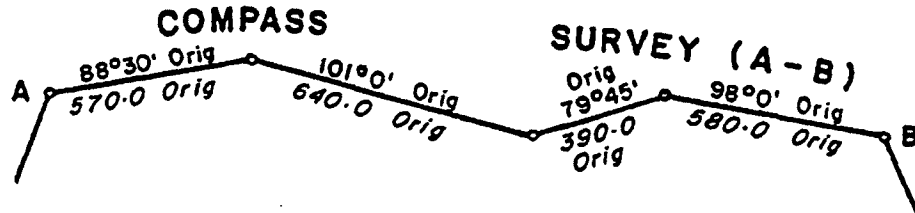
See also "D.M.E. REQUIREMENTS" E2--135, item 3.3.

1.14.13 Where a plan contains a mixture of survey information and information compiled from other sources, a Form 13 certificate is to be placed on the plan. The Form 13 has relevance to the survey information. A statement indicating the origin of compiled information should be shown on the face of the plan.

1.15 Compass Survey

When parts of the boundary of a block have been previously surveyed by compass, these boundary lines should be noted by the term "COMPASS SURVEY" on face.

Sample



See also "WATERSHEDS" 1.70

1.16 Computer Assisted Drafting

This method of plan preparation must follow the same guidelines as set out in this manual.

1.16.2 The presentation of lettering styles may vary to those recommended in 1.62 to accommodate the commercial C.A.D. packages available.

1.16.3 The size and boldness of the text however must comply with the objective for clarity of information when the plan is reproduced at a reduced scale.

See also "SCALE OF PLANS" 1.58

See also "STYLES" 1.62

1.17 Connections To Distant Points

"Reads" Bearings to Beacons, T.V. Towers etc. can be shown on face or entered in the TRAVERSES ETC." column if the plan is crowded.

See also "RANGED ONLY & READS BEARINGS" 1.52

1.18 Consolidated Title

Definition:

A Consolidated Title contains a number of individual parcels of land for which separate Titles can issue upon request.

See also "CONSOLIDATED TITLES DNR REQUIREMENTS" E3 1.27

See also "DNR Example Plan No 3"

See also "D.M.E. REQUIREMENTS" E4--20.

1.19 Conversions

Conversion factors to be adopted are as follows:

Links to Metres :	LKS x 0.201168
Distances to be converted to 3 decimal places	
Perches to Square Metres :	Per. x 25.29285264
Perches to Square Metres :	$M2 = (P \times 625) \times 0.201168^2$
Acres to Hectares :	Acre x 0.404 685 64
Acres to Hectares :	$H = (A \times 10) \times 0.201168^2$
Acres to be converted to the nearest square metre (40 perches = 1 rood; 4 roods = 1 acre)	

See also "AREAS" 1.8

See also "METRIC DOCUMENTATION" 1.43.7

See also "ORIGINAL DIMENSIONS" 1.47

1.20 Co-ordinates

AMG co-ordinates are to be computed in accordance with The Australian Geodetic Datum Technical Manual - Special Publication Number 10.

1.20.1 Co-ordinated Corners

Co-ordinates for corners of the subject lot may be shown on a plan provided that the origin of those co-ordinates (ie. Permanent Mark shown on DNR Form 6 or Control Station Summary) together with a connection to that Permanent Mark are shown. Plans showing co-ordinates for lot corners must provide a statement of heights used to determine the co-ordinates.

1.20.2 Co-ordinates - Permanent Marks

All co-ordinates (except those scaled) shown on the face of Survey Plans must clearly identify the origin station/s.

1.20.2.1 A.M.G. Co-ordinates result from a Geodetic Adjustment of Australia - AGD 84 - PRIMARY.

Supplementary Section from :
Surveying and Land Information Group (eg ZZQLD001)
and Department of Natural Resources (eg BRISCON)

1.20.2.2 Provisional A.M.G. Co-ordinates result from a suitable adjustment technique applied to a local control system, the position and orientation of which has been established by connections to control stations with A.M.G. co-ordinates.

1.20.2.3 Derived A.M.G. Co-ordinates result from simple un-adjusted connections, traverses, radiations etc. from existing control stations with A.M.G. or Provisional A.M.G. co-ordinates.

- 1.20.2.4** **Approximate A.M.G. Co-ordinates** are co-ordinates that have not been obtained by computational methods but by careful scaling from a Published Map, or from a point position determined by satellite observation.

1.20.3 Presentation Of Co-ordinates

Co-ordinates may be presented in a panel on the face of the plan as illustrated hereunder.

The accuracy should be tabulated for AMG co-ordinates shown on the face of plans. This should be shown as Class or Order as defined in the Inter-Government Advisory Committee on Surveying and Mapping Standards and Specifications for Control *Surveys*) July 1990, IGAGSM Publication No. 1.

1.20.3.1 A.M.G. Co-ordinates

Sample:

A.M.G. CO-ORDINATES - AGD-84

<i>STATION</i>	<i>EAST</i>	<i>NORTH</i>	<i>ZONE</i>	<i>ORDER</i>
<i>GRAVATT SM 40337</i>	<i>455 031.799</i>	<i>7 019 023.527</i>	<i>56</i>	<i>1</i>

1.20.3.2 Provisional A.M.G. Co-ordinates

Sample:

*PROVISIONAL A.M.G. CO-ORDINATES - AGD-84
CAIRNS - CORMORANT PASS REEF MAPPING*

<i>STATION</i>	<i>EAST</i>	<i>NORTH</i>	<i>ZONE</i>	<i>ORDER</i>	<i>CLASS</i>
<i>PM 46307</i>	<i>439 572.255</i>	<i>7 256 243.661</i>	<i>56</i>		<i>C</i>

1.20.3.3 Derived A.M.G. Co-ordinates

Sample:

DERIVED A.M.G. CO-ORDINATES AGD-84

<i>STATION</i>	<i>EAST</i>	<i>NORTH</i>	<i>ZONE</i>	<i>CLASS</i>
<i>PM 21899</i>	<i>500 301.361</i>	<i>6 974 239.173</i>	<i>56</i>	<i>D</i>

1.20.3.4 Approximate A.M.G. Co-ordinates

Sample:

APPROXIMATE A.M.G. CO-ORDINATES

<i>STATION</i>	<i>EAST</i>	<i>NORTH</i>	<i>ZONE</i>
<i>PM 20657</i>	<i>457 200</i>	<i>7 624 520</i>	<i>56</i>

- 1.20.4** For provisional and derived A.M.G. co-ordinates the descriptions and values of the points from which these co-ordinates were generated, together with the associated computations (including height determinations) should form part of the survey record.

See also - "A.M.G. CONNECTIONS" 1.7

See also - "CORNER INFORMATION" 1.21 - DIAGRAMS A & B

See also - "MERIDIAN" DNR Requirements E3 1.49

See also - "PERM SURVEY MARKS" DNR Requirements E3 1.54

See also - "PROCLAIMED SURVEY AREAS" DNR Requirements E3 1.56

1.21 Corner Information

Corner information deals with the method of presentation on the face of the plans for:

➤ **Corner Marks**

i.e. ORIGINAL Corner Marks and NEW Corner Marks

➤ **Corner References**

i.e. ORIGINAL Reference Marks (& Occupation) and NEW Reference Marks (& Occupation)

➤ **Notations**

1.21.2 General Guidelines

- 1.21.2.1** Information marking the corner (ie Monument at the corner) should be written first, and information referring to Reference Marks and/or Occupation should be written in order of proximity after the corner mark.

See Diagrams "A" and "B" following on pages 38 and 39.

- 1.21.2.2** It is preferred that Occupation references are determined "square" from the principal lines run (eg. Stn 3 - Diagrams "A" & "B"); except where a bearing and distance is required to avoid ambiguity. (eg. Stn 23 - Diags. "A" & "B")

- 1.21.2.3** Corner information should generally be shown as in Diagram "A" (ie on face") provided the plan can be reproduced at a reduced scale without loss of clarity, otherwise the Tabulated method as in Diagram "B" should be used. A mixture of "on face" and Tabulated presentation is to be AVOIDED.

1.21.2.4 The word "found" (fd) written after a mark eg. *Peg fd, Pin fd* etc. denotes a mark at a surveyed position with no origin or cadastral connection shown on a Registered Plan, Identification Survey, Redundant Catalogue Plan, sketch in a Registered Document, or Alignment Marking Files lodged in a Registering Authority.

1.21.2.5 The methods of presentation are influenced by the priority to ensure clarity of information is maintained upon reduction and reproduction of the plan.

1.21.3 **Corner Marks**

Refers to Survey marks and/or Branded Occupation recovered, placed or adopted at the corner eg. Pegs, Pins, Survey Posts, Star Pickets or Survey Marks recovered or placed in occupation at the corner to represent the corner.

Sample *Nail in Cen RFP ; Ramset in Br Wall ; Screw in Conc*

(The type of nail can be shown if indicated in the survey records eg. Clout, Ramset, Spring Head etc).

1.21.4 **Original Corner Marks**

1.21.4.1 When the origin of the mark recovered at the corner is known (ie recorded on a previously registered survey or a lodged Identification Survey or lodged Redundant Catalogue Plan), the mark is classified as "original" and shown by the abbreviation "O".

Sample *OP ; OSP ; O Nail in Cen RFP ; OP (I. S. 2345)*
O Ramset In Br Wall ; O Screw in Conc ;
O Nail in Conc (R.C. 800361)

etc.

NOTE: The decision to utilise corner marks shown on Identification Survey and Redundant Catalogue plans for reinstatement purposes rests with the Surveyor.

1.21.4.2 When the origin of the mark recovered at the corner is known, the mark may be identified by the addition of the catalogue number of the plan of origin.

See also - Diagrams "A" and "B" following on pages 38 and 39.

1.21.4.3 When the origin of the mark recovered at the corner is unknown (ie no previous cadastral connection on a registered plan, Identification Survey or Redundant Catalogue Plan) the mark should be classified as being "found"

Sample *Peg fd ; Screw in Conc fd*
etc.

- 1.21.4.4** When there is no original survey mark or evidence of any type remaining at the position of the previously surveyed corner, the term "No O Mk" is used.

See also - "NEW CORNER MARKS" 1.21.5

The term "No Mk" is never shown on a plan.

- 1.21.4.5** When the original corner mark has become inaccessible since the original survey and hence is not able to be connected to, then the term "not fd", suitably qualified is used.

Sample *OP not fd ; O D/H not fd*
(in deep fill) (under conc)
etc.

- 1.21.4.6** When remains of a survey mark or evidence of a survey mark position is found at the corner, the following terms may be used where applicable.

Sample *Rmns OP ; OP hole ; Rmns OSP ; OSP hole*
etc.

See also - "NEW CORNER MARKS" 1.21.5

- 1.21.4.7** When an existing survey mark is found disturbed and that same mark is reset in the original corner position, the following terms may be used where applicable.

Sample *OP distd ; OSP lying out*
Reset Reset
etc.

The term "replaced" should NOT be used.

- 1.21.4.8** When an existing survey mark or remains thereof is removed at time of survey, and is replaced by a new mark of the same type, the Term "renewed" is used.

Sample *Rmns OP ; OP burnt ; Butt OSP ; Peg pld*
renwd renwd renwd OP 0.14S ; 0.05 w
remvd
etc.

The term "replaced" should NOT be used.

- 1.21.4.9** When an existing survey mark or remains thereof is removed at time of survey, and is replaced by a new mark of a different type, the term "removed" is used and the new mark quoted.

Sample Peg Branded (A) placed at Stns 2, 5, 7, 11 - 13 Branded Peg placed at all new corners

Survey Post branded (A 3) placed of Stns 1 - 4, 5, 9 and 13
etc.

1.21.5.3 Variations such as "Peg pld in cairn of stones, Peg driven flush, Plastic or Concrete Peg placed, Star Picket pld" etc must be indicated either "on face" or by statement.

The term "No Mark pld" suitably qualified may be used if appropriate.

Sample No mk pld ; No mk pld
(in swamp) (inaccessible)
etc.

1.21.5.4 Occupation adopted as new corner.
(When impracticable to place a Peg or Post)

If a new corner is established at which occupation exists, eg. Fence Post, Walls, Buildings, Poles, Man Holes or any such immovable object, the position of the occupation is referenced from the corner.

Sample Cen RFP ; Cor Br Bldg ; C face SFP
0-3s 0-06w 0-02N 0-05E 220°15', 2.657
etc.

1.21.5.5 When Nails, Screws etc are placed as a new survey mark in occupation to establish the corner, the occupation is referenced.

Sample Nail in RFP ; Ramset in Cor Br | Nail in Cen RFP at
Cen 0.015s ; Cor Br 0.12w | Stns 1, 4, 6 - 9

(shown at corner on face) (statement on face)

etc.

1.21.5.6 If occupation is adopted as the new corner and is branded, this must also be quoted.

Sample N.E. Cor SFP (A R) | Cen RFP (A 2) at
(shown at corner on face) | Stns 2, 3, 5 - 8
(statement on face)

1.21.6 Corner References (Reference Marks)

1.21.6.1 Refers to Reference Marks (eg. Iron Pins, Permanent Survey Marks, Spikes, Nails, Screws, Star Pickets, Broad Arrows, Drill Holes, Pointer Pegs, Marks on Poles, Branded Trees, Bench Marks etc) or Occupation (eg. Fence Posts, Walls, Buildings, Poles, Man Holes, Gully Traps or any such immovable objects) which are placed or connected to in the course of the survey.

1.21.6.2 These marks are in addition to the monument denoting the corner. All connections will be from the corner to the reference mark or occupation.

1.21.6.3 Reference Marks may be shown on the face of the plan. Where space does not permit, references may be shown by diagram or in the "REFERENCE MARKS" Column.

Exception:

Permanent Marks: Show in separate column headed "PERMANENT MARKS"

See also - Diagrams "A" & "B" following on pages 38 and 39.

1.21.7 Original Reference Marks & Occupation

1.21.7.1 When the origin of the Reference Marks recovered at the corner is known (ie recorded on a previously registered survey or a lodged Identification Survey or lodged Redundant Catalogue Plan, enabling the true position of the existing corner to be re-established) the mark is classified as "Original" and shown as such by the abbreviation "O". Occupation as evidence of ownership should be recorded.

See Section 26(1)(a) and 26(1)(f) of Surveyors Regulation 1992.

Sample *OIP ; ORT ; O nail in Cen RFP ; O Screw in Conc ; OIP(I.S. 1568)*
etc.

NOTE: The decision to utilise Reference Marks shown on Identification Surveys and Redundant Catalogue Plans for reinstatement purposes rests with the surveyor.

1.21.7.2 When the origin of the mark recovered away from the corner is unknown, the mark should be described by "found".

Sample *Pin fd ; Nail in Bit fd*
etc.

1.21.7.3 When it is evident the original reference mark is missing or destroyed, the following terms are used.

- 1.21.7.10** When an original reference mark is removed at the time of survey and replaced by a new mark of a different type, the term "removed" is used and the new mark quoted.

Sample *OIP remvd ; O Ptr remvd*
 PM pld Pin pld
 etc.

- 1.21.7.11** When an existing reference mark is found and connected to a new corner of the survey, show as a new connection.

Sample *OIP ORT Stp*
 New Conn New Conn

NOTE: In addition to the connection to the new corner, a connection to the original corner should also be shown in the usual manner.

1.21.8 New Reference Marks & Occupation

- 1.21.8.1** When new Reference Marks are placed or established during the course of the survey, the new Reference Marks are shown either on face or tabulated in the "REFERENCE MARKS" Column.

Exception:

New Permanent Marks: Show in separate column headed "PERMANENT MARKS"

The new references to Occupation are shown on face unless a survey mark has been placed in or on the Occupation.

Sample *Screw in N.E. face Br Pillar ; Nail in Cen RFP*
 Cor Br 0-75E Cen RFP 180°11', 1.31
 etc.

In these cases the survey mark (ie. Screw, Nail) takes priority over the occupation and is thus treated as a Reference Mark.

- 1.21.8.2** When showing New Reference Marks by the method of tabulation, no reference to mark is shown on face.

1.21.9 Notations

- 1.21.9.1** Notations on face of plan are used in situations where

➤ A survey establishes new corners.

See also - "NEW CORNER MARKS" 1.21.5

➤ Space for clear presentation of information "on face" is limited.

➤ When the marking of a number of corners have been treated in the same manner.

1.21.9.2

Samples

Peg placed at
Stns 3 - 9, 11 - 15

Survey Post branded (A R) placed
at all new corners.

Peg branded (A 4)
placed at all new corners

Gen RFP (A R) at
Stns 2, 3, 5 - 9 8 - 12

Nail in Conc placed at
Stns 1, 4, 6, 9 - 12

Iron Pin placed at
Stns 1 - 7, 9 - 12

etc.

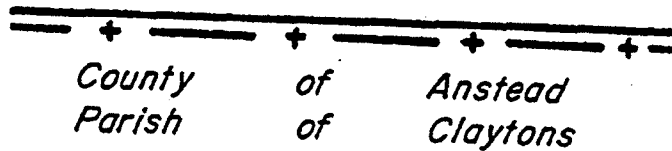
See also Section 4 Technical Information B2 page 24

1.22 County Boundary

1.22.1 County boundaries are shown outside and as close as possible to the subject block and are never broken for dimensions.

Sample

4



1.22.2 County boundaries are not to be shown in the middle of the roadway if both sides of the road are shown.

1.22.3 If the opposite side of the road is not shown, the County boundary may be shown in the road, as close as possible to the subject block, but not within the subject block.

1.22.4 Show County boundary in middle of Creek or River if space permits. Show County boundary on opposite side of Creek or River to the subject block if space is limited.

See also - "LINEWORK" 1.38.11

See also - "STYLES" 1.62.0 & EXAMPLE PLANS.

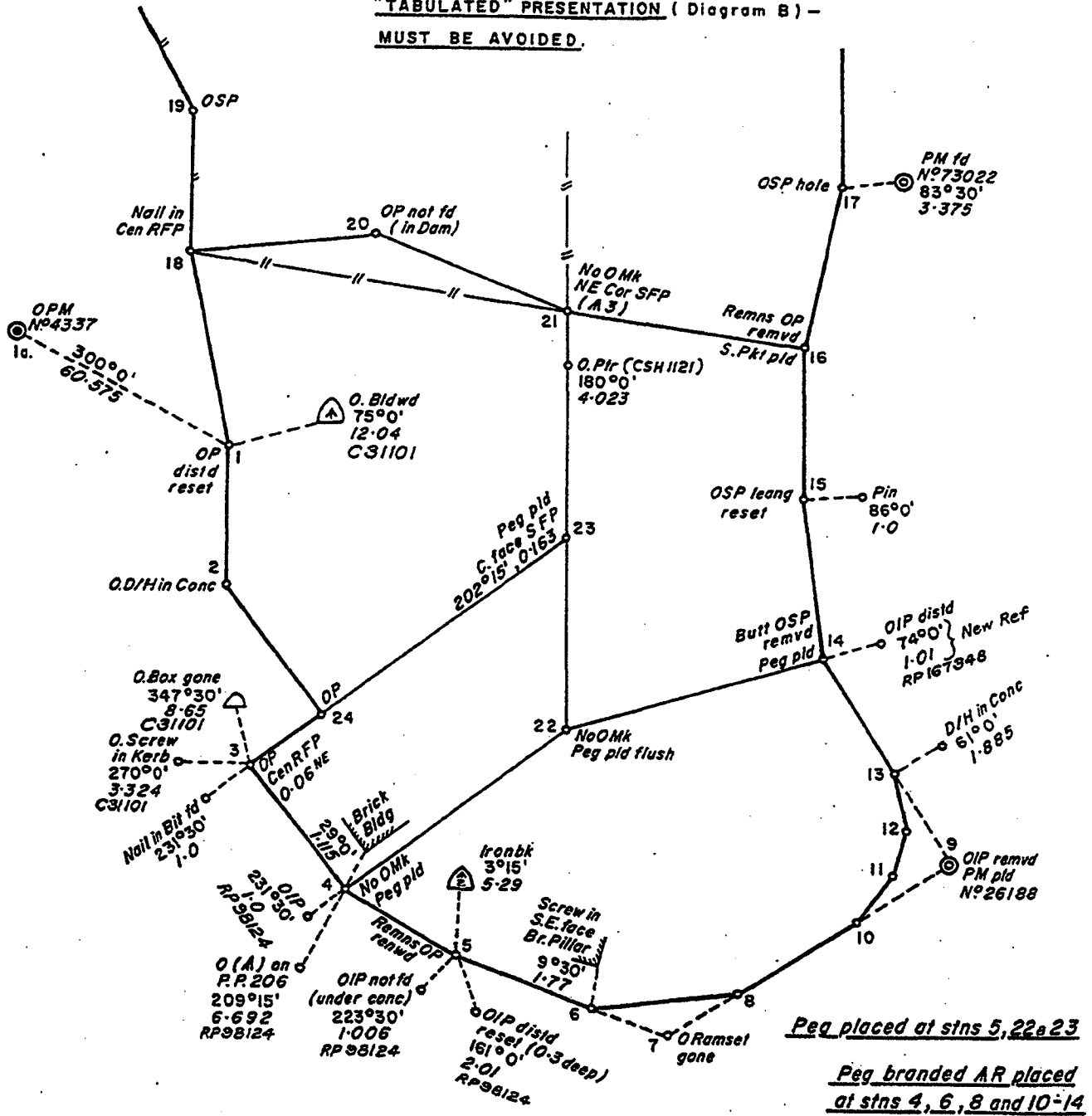
1.23 Curved Boundaries

Curved Boundaries are not normally accepted by Department of Natural Resources for new Cadastral boundaries as the boundary is not readily and unambiguously discernible on the ground at the completion of a cadastral survey (Section 27(a) Surveyors Regulation 1992).

Continued on page 40.

Diagram A (On face presentation)

NOTE : A MIXTURE OF "ON FACE" PRESENTATION AND "TABULATED" PRESENTATION (Diagram B) - MUST BE AVOIDED.



PERMANENT MARKS : When co-ordinates have been established, these may be treated as follows for 'On face' presentation :

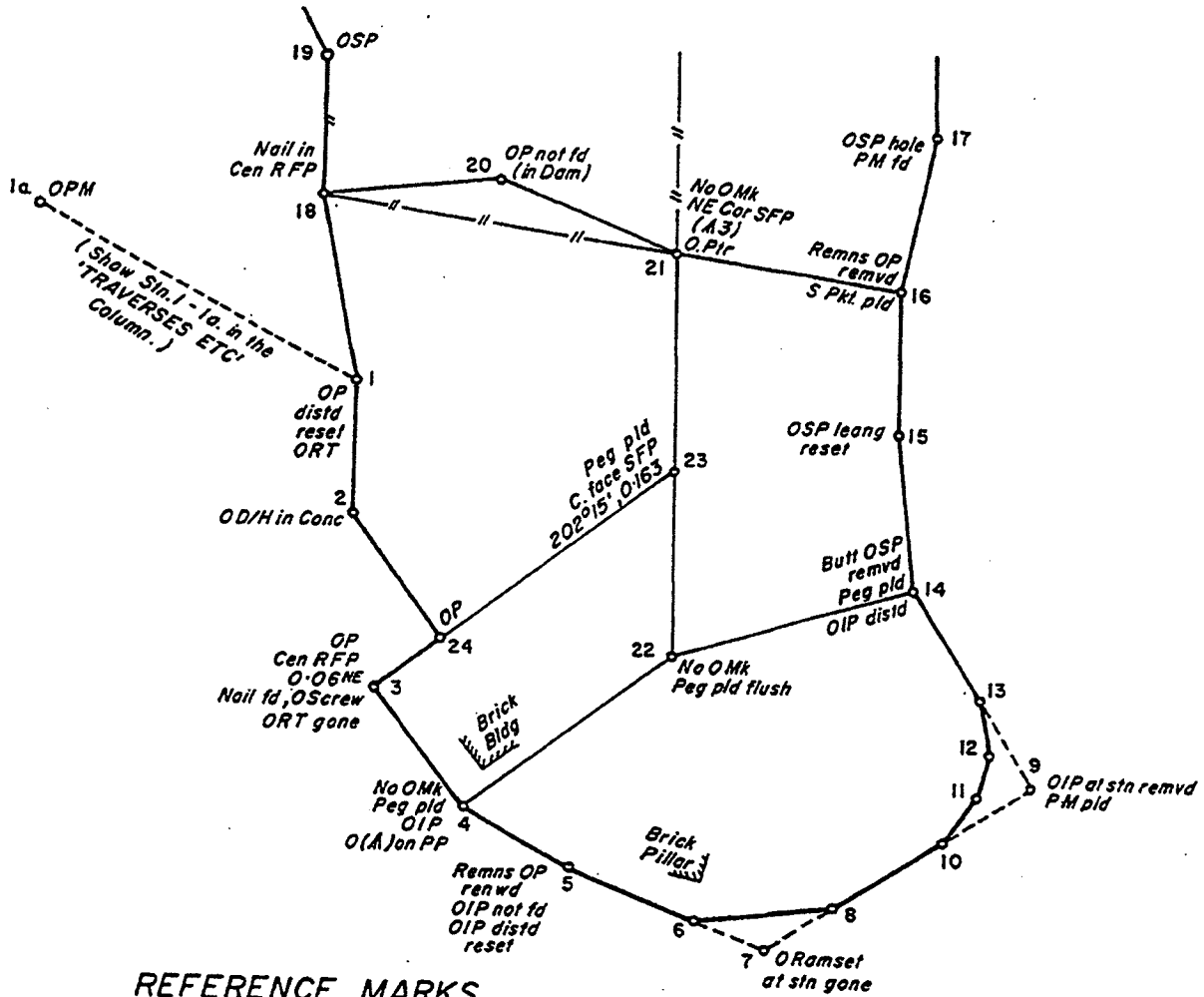
Example

A.M.G.CO-ORDINATES (A.G.D. 84)

STN	EAST	NORTH	ZONE	ORDER
OPM4337	723 659.96	7 657 837.81	57	2

(Enter in 'A.M.G. CONNECTIONS' tabulations.)

Diagram B (Tabulated presentation)



REFERENCE MARKS

STN	TO	ORIGIN	BEARING	DIST
1	O.Bldwa (A.1)	C31101	75° 0'	12.04
3	Nail fd in Bit	C31101	231° 30'	1.0
	O Screw in Kerb	C31101	270° 0'	3.324
	O Box Gone	C31101	347° 30'	8.65
4	OIP	RP98124	231° 30'	1.0
	Car Br Bldg	RP98124	29° 0'	1.115
	O A. on PP.206	RP98124	209° 15'	6.692
5	OIP not fd under conc	RP98124	223° 30'	1.006
	OIP reset 0.3 deep	RP98124	161° 0'	2.01
	Ironbk A2		3° 15'	5.29
6	Screw in SE face BR Pillar		9° 30'	1.77
13	D/H in Conc		61° 0'	1.685
14	OIP distd (New Ref)	RP167348	74° 0'	1.01
15	Pin		86° 0'	1.0
21	O Pir	CSH1121	180° 0'	4.023

Peg branded AR placed at stns 4, 6, 8 and 10-14

Peg placed at stns 5, 22 & 23.

PERMANENT MARKS

PM	BEARING	DIST	Nº
1a - OPM	at station		4337
9 - PM	at station		26188
17 - PM	83° 30'	3.375	73022

(NOTE: For Tabulations - listings are consecutive, showing all marks referenced from the station. All reference marks for a station MUST BE KEPT TOGETHER and shown listed at their progressive distances from the station.)

PERMANENT MARKS:

When co-ordinates have been established, these may be treated as follows for 'Tabulated' presentation:

PERMANENT MARKS

AM.G.CO-ORDINATES (A.G.D. 84)

PM	BEARING	DIST	STN	EAST	NORTH	ZONE	ORDER
1a - OPM	at station		OPM4337	723 659.96	7 657 837.81	57	2

(Add to existing 'PERM. MARK' tabulation in a suitable format.)

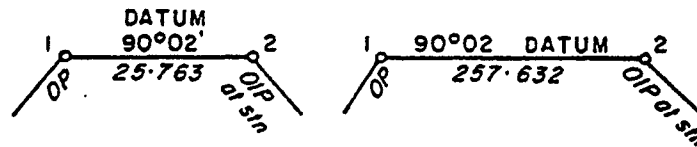
In exceptional circumstances where a curved feature defines the boundary to be adopted, with prior approval of the Department of Natural Resources, a curved boundary may be utilised.

See also - "CURVED BOUNDARIES" DNR REQUIREMENTS E3 1.29

1.24 Datum

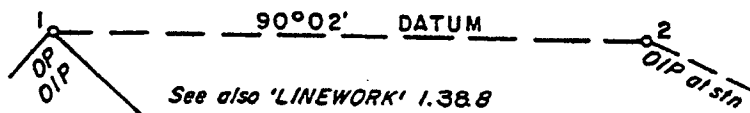
Show thus

Sample



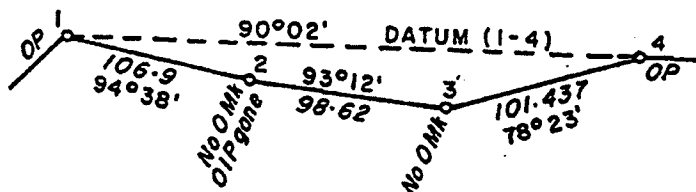
1.24.1 For cancelled boundary or traverse.

Sample



1.24.2 Where there are insufficient marks for a datum on one line, the following may be adopted.

Sample



1.24.3 When datum is obtained by observation for meridian, show "DATUM BY OBS" on appropriate line.

1.24.4 When more than one plan is drafted from the one set of survey records (eg new estates) and the DATUM line is located on one plan only, the following note should be shown on all plans.

Sample

This is one of plans (... Catalogue N°s.....) from the one survey. For DATUM see plan

See also - "PLAN FORMS" 1.49

See also - "PLANS" DNR Requirements E3 1.55

1.25 Description Of Country

For DNR:

Description of country may be shown for surveys in rural areas.

For DME :

Not required except for natural features

See also - "FEATURES" 1.30

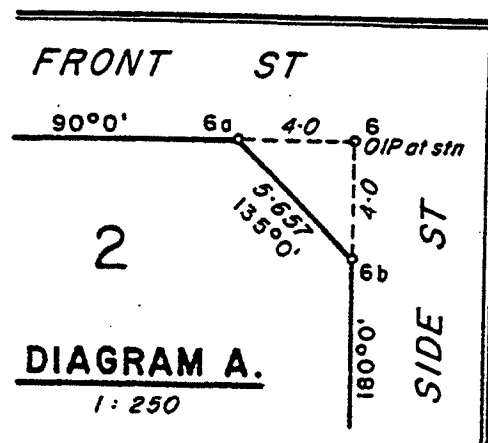
See also - "SPECIMEN PLAN"

See also - "SYMBOLS" 1.65

1.26 Diagrams

- On face of plan show eg. SEE DIAGRAM A
- Lot number - repeat on diagram.
- Roads and Streets, if subject on plan, are shown hairline on diagram.
- Enclose all diagrams in a border to separate from rest of plan (straight lines preferred).
- Diagrams should be drawn to scale if possible.
- Where more than one diagram is shown on the one plan they should be labelled consecutively A, B, C etc.

Sample



Note: 6-6a and 6-6b will be tabulated as required.

1.27 Dimensions

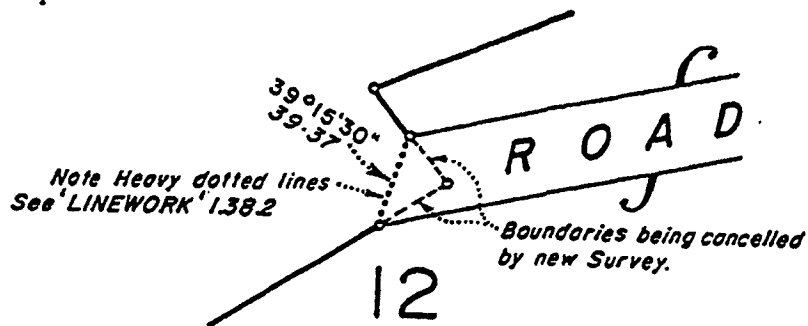
1.27.1 Complete dimensions must be shown on the face of plan, preferably in a clockwise direction, for each parcel for which a title can issue from the subject plan.

1.27.2 "Through" distances shall be shown on the plan as necessary in order to "dimension" boundaries of land parcels, or groups of land parcels, over which tenure is to issue.

"through" distances (shown in brackets) can be totals of survey values from the new survey, or a combination of new and original survey information.

- 1.27.3** Dimensions, across roads, which will form boundaries of subject parcels shall be direct connections, and where applicable, exclude as much internal road as practical so that the dimensions of the parcel are in the simplest form.

Sample



- See also - "ABOUT DIMENSIONS" See Notes with Dept. A example plan 7
 See also - "BEARINGS" 1.9
 See also - "CONVERSIONS" 1.19
 See also - "DISTANCES" 1.28
 See also - "METRIC DOCUMENTATION" 1.43
 See also - "ORIGINAL DIMENSIONS" 1.47
 See also - "ROADS" 1.57
 See also - "VINCULUM" 1.68

1.28 Distances

Distances are shown as per survey records.

- 1.28.1** Distances are shown sloping on face of plan and in all tabulations.
- 1.28.2** Always shown inside block.
- 1.28.3** The balance distance shall be deduced from the plan from which the title or deed was issued.

Where the dimensions of the balance are found to be imperfect, or a calculated area is to be adopted, the Licensed Surveyor can then derive data from any registered survey in order to determine the boundaries of the block.

- 1.28.4** Each severance within the subject land should be fully dimensioned if surveyed.

See - also "ROADS" 1.57

1.28.5 Brackets

When intermediate distances are shown, the "through" distance is to be shown with brackets.

Station numbers should be used for clarity.

See also - "ABOUT DISTANCES" & Notes with Dept A. example plan 7

See also - "DIMENSIONS" 1.27

See also - "METRIC DOCUMENTATION" 1.43

See also - "ORIGINAL DIMENSIONS" 1.47

1.29 Easements

1.29.1 Plan Of Easement Only

Boundaries are broken

Sample

_____ See 'LINEWORK' 1.38.6

1.29.11. Dimensions of the complete surround of an Easement are required in a clockwise direction.

The dimensions of the block of which the subject Easement is within, need not be completed. However a bearing and distance to at least one corner of the subject block **must** be shown.

1.29.1.2 The Easement must be shown to scale on the plan form. In addition, a diagram being not to scale may be utilised if required.

1.29.1.3 Where Easement boundaries are Calculated, they must be shown as "Calc" on plan.

See also - "CALCULATED LINES" 1.11.3

1.29.1.4 Where more than one Easement or Proposed Easement is surveyed in the one tenure, each shall be named with a different letter.

1.29.1.5 Where more than one Easement is created on the one plan, they should be named consecutively ie. "C", "D", "E" etc.

1.29.1.6 The use of letters "I", "O" & "Q" is discouraged when describing Easements.

See also "DEPT A. REQUIREMENTS" E3 1.33

See also - DEPT A. EXAMPLE PLAN No.II

1.29.2 Plan Of Easement With Subject Block

1.29.2.1 Easement Diagram (usually "Not to Scale") to be utilised. This is to 'divorce' the easement information from that of the subject block.

1.29.2.2 Where an Easement envelops an entire parcel/tenement, an Easement plan is not necessary. The block is encumbered by tenure document only. However, if the Easement is restricted in height or depth (ie. in Strata), then a plan of the Easement is required.

See also - DEPT A. SPECIMEN PLAN No. 2

1.29.3 Existing Registered Easements

1.29.3.1 Existing Easements, together with their descriptions and plan number (or dealing number with easements shown on sketch only), shall be accurately plotted on the Subject Lot.

Exception:

1.29.3.2 Easements within parcel being resumed by the State. (Existing Easements or part thereof are automatically extinguished in the State Resumption Process.)

1.29.4 For Dept B.

No provision exists to register an Easement over a Mining Lease under the Mineral Resources Act.

See also - "ADJOINING EASEMENTS" 1.4.3

See also - "DEPT A. REQUIREMENTS" E3 1.33

See also - DEPT A. EXAMPLE PLANS 11, 12 & 13.

See also - "TRANSFERS TO THE STATE" Dept A. Reqmts E3 1.70

See also - "EMT ALLOCATIONS" Dept A Reqmts E3 1.6.4

1.30 Features

Both Dept A. and Dept B. plans require natural features such as gullies, mountain ranges, etc. to be shown if located in the course of survey.

See also - "DESCRIPTION OF COUNTRY" 1.25

See also - "SYMBOLS" 1.65

1.31 Fences

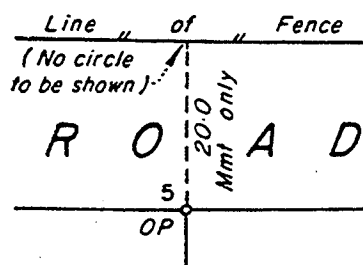
1.31.1 Type of fence to be shown if possible eg. 2PIB, Netting etc

1.31.2 'Read' bearings may be shown on fences that are existing on previous boundary lines.

If useful, 'Read' bearings may be shown on internal fences.

1.31.3 Connections across roads to fence lines to be treated as follows.

Sample



(No Tabulation)

TRAVERSES ETC		
LINE	BEARING	DIST
5-Fence	Mmt only	20.0

(With Tabulation)

See also - "RANGED ONLY AND READS BEARINGS" 1.52

1.32 High Water Mark

Boundary dimensions to be shown to HWM where applicable.

See also - "HWM" DEPT A. REQUIREMENTS E3 1.42

1.33 Identification Surveys

For Dept B. Requirements see E2 3.10 Pg 138.

For Dept A.

See also - "DEPT A. REQUIREMENTS" E3 1.43

See also - "EXAMPLE PLANS" Nos 16, 17

See also - "ORIGINAL CORNER MARK" 1.21.4.1

See also - "ORIGINAL REFERENCE MARK" 1.21.7.1

See also - MEMORANDUM No 8/93, B1 Pg 13.

1.34 Ink

All plans within the definition of the Surveyors Act 1977, lodged or deposited with a Registering Authority for registration, shall be drawn in BLACK INK.

The ink used for drafting, signing (black ink only), amending and noting plans shall be of a permanent and water-proof variety.

Biros and felt pens etc. will not be considered acceptable.

1.35 Insets

This method of plan presentation is to be avoided.

See also - "NOT TO SCALE" 1.45

See also - "SCALE OF PLANS" 1.58

1.36 Lease Plans

See - "DEPT B. REQUIREMENTS" E2 3.12 Pg 139

See - "DEPT A. REQUIREMENTS" E3 1.46 & 1.47

See - DEPT A. EXAMPLE PLANS 20 - 22, 34 & 35

1.37 Line Pegs

When survey records not lodged, new Line Pegs shall be shown on the plan.

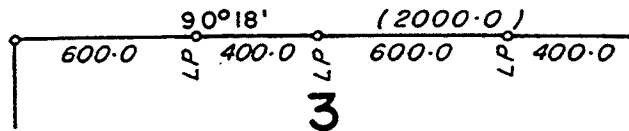
Placement of line pegs will be indicated by one of the following methods.

1.37.1.1 Statement eg Line Peg placed of intervals of 200-0 from Stns 1, 3, 6, 12 & 15

1.37.1.2 Tabulation eg **LINE PEGS**

STN	BEARING	DIST.
2	180° 42'	203.53
	180° 42'	406.22
	180° 42'	600.3
5	272° 33'	201.42
	272° 33'	400.63

1.37.1.3 On face of plan eg.



7.37.2 Original Line Pegs

Show "OLP" on face

Measured distances shown in survey records which serve to fix position of OLP, are to be shown on face of plan.

Approximate distances are not shown.

Note: If intermediate pegs are not shown on the plan, survey records showing the position of these pegs **must be lodged**.

Kilometre Pegs are treated in the same manner as Line Pegs. If branded, indicate "on face" or tabulate.

1.38 Linework

1.38.1 Boundaries of Subject Land

1.38.2 Boundaries of Subject Land across roads (these to be direct connections)




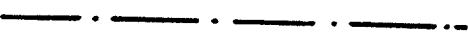


See also - "DIMENSIONS" 1.27.3

1.38.3 Dept B. Surface Areas, Right of Access or Right of Way

1.38.4 Adjoining Background Tenures (Dept B.)

1.38.5 Lapsed Boundaries (Dept B.)
Original Portion Boundaries (Dept A.)

1.38.6 Easements and Leases:
Subject
Adjoining

1.38.7	Traverse, Secants etc.	
1.38.8	Cancelled Boundaries	
1.38.9	Unsurveyed Line	
1.38.10	Parish Boundary	
1.38.11	County Boundary	
1.38.12	State Boundary	

The above is a recommended format for line thickness.

Line length and thickness may be varied if clarity of plan will benefit.

1.39 Locality

For Dept A. plan forms, the "TOWN/LOCALITY" segment in the Title Block should state the name of the City, Town, Suburb or District or describe the location of the survey in relation to a permanent feature on a published map. However, if where the original description referred to a gazetted city/town, then that city/town SHOULD be shown.

Local/District names shown in the Title Block should be in accordance with the Gazetteer of Place Names which can be accessed at Dept A. District Offices.

Usage of new Local/District names eg New Estate Developments, should first be referred to Dept A. for consideration under Place Names.

For Dept B. provision exists for the office insertion of the latitude and longitude of the centre of the plan form by scaling if necessary when more accurate information is not available. The stated co-ordinates are strictly for location purposes.

1.40 Lots

1.40.1 Lot numbers are generally shown on Street frontages for urban lands and approximately 1/3 from the top boundary of the Lot for rural lands.

1.40.2 The lot number for the Balance of a block or for an amended block should retain the original numerical identifier.

1.40.3 The numbering of newly created lots can be at the discretion of the Licensed Surveyor provided the numbering is :

- Unique on a plan
- Avoids repetitive use of numbers 1 and 2
- Not similar to numbers of adjoining lots
- Limited to a number of three digits

See also - "LOT ALLOCATIONS" DEPT A. REQMTS E3 1.6.1
 See also - "ORIG PORTION ALLOCATIONS" DEPT A. REQMTS
 E3 1.6.2
 See also - "ORIG PORTIONS" DEPT A. REQMTS E31.52
 See also - "TRANSFER TO STATE" DEPT A. REQMTS E3 1.70

1.41 Measurement Only

Show as required on face of plan or tabulated in the "TRAVERSES ETC" column.

1.42 Meridian

It is preferable that all surveys be related to AMG.

Vide Section 105.0, Page E1--10 of the Recommended Practices for Surveyors.

1.42.1 The meridian of every survey should be indicated as follows.

Sample *AMG Vide WD4829 Add 5°48' for AMG CAM
 Vide RP801576 Vide SL1234
 Zone 55*

Detail is generally shown in the Meridian Box however where space is limited the Meridian information should be shown directly above the Title Block.

Sample *MERIDIAN: Add 6°11' for AMG Vide Plan W31639, Zone 56.*

1.42.2 If observations are taken, details should be tabulated on face of plan.

Sample

<i>MERIDIAN</i>		
<i>LINE</i>	<i>PLAN BEARING</i>	<i>A.M.G. BEARING</i>
<i>4-3</i>	<i>15°38'50"</i>	<i>21°26'50"</i>
	<i>ADD 5°48' for</i>	<i>A.M.G. - ZONE 55</i>
		<i>C.A.M. BEARING</i>
<i>4-3</i>	<i>15°38'50"</i>	<i>16°35'50"</i>
	<i>ADD 0°57' for</i>	<i>C.A.M.</i>

1.42.3 It would be advantageous for continuous surveys to be on the one meridian.

See also - "MERIDIAN" E3 1.49

1.43 Metric Documentation

1.43.1 The symbol "m" will NOT be shown following a length

Eg. 20.115 not 20.115 m

1.43.2 The decimal point is to be prominently shown at the mid height of the figures where possible.

- 1.43.3** Numbers should be grouped in threes right or left from the decimal point, and a space should be used instead of a comma.
Eg. 65 093·762 13 not 65,093.76213
- However, except in tabular work (eg. co-ordinates), the space may be omitted in groups of only four figures.
Eg. 4076·3012
- 1.43.4** A space should be left between the numeral and the unit or unit symbol.
Eg. 2076 m not 2076m
Eg. 5·273 ha not 5·273ha
- 1.43.5** No full stops will follow symbols.
- 1.43.6** Use of "zeros."
- 1.43.6.1** Where the figure is less than one, use a zero before the decimal point.
Eg. 0.745 not ·745
- 1.43.6.2** For **whole** numbers, a zero will be shown as the last character of length to the right of the decimal point.
Eg. 4·0, 51·0, 200·0 not 4·00 or 501·20 or 67·530
- However, when showing (1) Road widths or (2) Areas, the above procedure is **NOT** to be adopted
Eg. ROAD 60 WIDE not ROAD 60·0 WIDE
Eg. 12 ha not 12·0 ha
- 1.43.7** **Rounding**
- When rounding to fewer digits than the total number available, the following procedure is adopted.
- 1.43.7.1** Where the digit immediately following the last digit to be retained is less than 5, that digit should be left as is.
Eg. 7·624 25 to four digits = 7·624
- 1.43.7.2** When the digit immediately following the last digit to be retained is 5 or greater, that digit should be increased by one.
Eg. 4·624 51 to four digits = 4·625
- 1.43.7.3** If the digit to be discarded is exactly 5 and there is no indication of what the following digits might be, the last digit retained should be rounded to the nearest even digit.
Eg. 5.4665 rounded to 3 decimals becomes 5.466
5.4655 rounded to 3 decimals becomes 5.466

NOTE:

It is essential that the decimal point be shown as clearly and prominently as possible.

See also "AREAS" 1.8

See also "DIMENSIONS" 1.27

See also "DISTANCES" 1.28

See also "ORIGINAL DIMENSIONS" 1.47

1.44 North Point And Data Orientation

North Point is not shown unless a plan is turned. When it is necessary that a plan be rotated through 90°0' then 270°0' becomes 0°0'.

When a plan is turned, all information is shown orientated accordingly ie. to the North Point. (this includes tabulations and statements). There should be no circumstances where a plan needs to be turned upside down to read any data.

1.45 Not To Scale

Use with discretion. Break line for each block affected. Advantageous to plot this work to 'some scale' for sake of proportional representation. The wording "*Not to Scale*" is to be shown on appropriate line or lines.

See also "INSETS" 1.35

See also "SCALE OF PLANS" 1.58

NOTE:

New surveyed lines of subject blocks are drawn in an uninterrupted manner to the scale as shown in the title.

1.46 Offsets

Not shown on plan in normal circumstances.

If sufficient connections to the boundary line have been made, all information is to be related to the boundary line.

If there are insufficient connections, offset will be shown.

1.47 Original Dimensions

1.47.1 Shown with "Orig" written in conjunction with each bearing and distance. "Bal" to be used for subtraction. "By Addn" can be used for additions.

Sample

$$\begin{array}{l} \frac{270^{\circ}0' \text{ Calc Orig}}{52.0 \text{ Calc Orig}} \end{array} \quad \begin{array}{l} \frac{270^{\circ}0' \text{ Orig}}{545.33 \text{ Orig}} \end{array} \quad \begin{array}{l} \frac{270^{\circ}0' \text{ Orig}}{146.215 \text{ Bal}} \end{array} \quad \begin{array}{l} \frac{270^{\circ}0' \text{ Orig}}{215.427} \\ \text{By Addn} \end{array}$$

NOTE : The term "Bal Orig", "Bal by Addn" are not used.

- 1.47.2** Original distances to be converted to metric are to be shown to three decimal places.

See also "CONVERSIONS" 1.19

See also "METRIC DOCUMENTATION" 1.43.7

- 1.47.3** When utilising original information, an endorsement is required stating the source of this information.

Sample Original information compiled from plan SL1234 in Dept A.

OR

from MP10537 in Dept B., Brisbane.

When a number of plan sources are used for original information, the statement is as follows:

Sample Original information compiled from plans RP213546 and CP808763 in Dept A. and from MP10537 in Dept B., Brisbane.

- 1.47.4** The word "Original" is not shown on Section 25 compiled plans.

See also "DIMENSIONS" 1.27

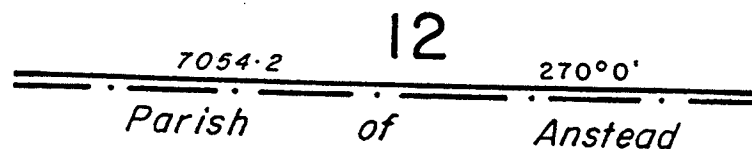
See also "DISTANCES" 1.28

See also "METRIC DOCUMENTATION" 1.43

See also "WATERCOURSES" 1.69

1.48 Parish Boundary

Sample



Show outside subject block and as close to line as possible. Parish boundary is never broken by dimensions.

Subject to same conditions as "COUNTY BOUNDARY" 1.22

See also "LINEWORK" 1.38.10

1.49 Plan Forms

- 1.49.1** For surveys to be lodged in Dept B. the official Dept B. plan form shall be used.

See also "PLAN " Pg E4--40

- 1.49.2** For cadastral surveys lodged in Dept A. the common prenumbered plan form shall be used.

Vide Dept A Requirements E3--30 1.55

The title block should be completed in full prior to deposit/lodgement of the plan, except for the endorsed box which should only be completed by accredited surveyors.

1.49.3 Availability

Plan forms can be purchased from the following locations:

Secretary, Association of Consulting Surveyors
1st Floor, Silverton Place 101 Wickham Terrace
BRISBANE QLD 4000

Phone: (07) 8316668
Fax: (07) 832 6398

For Dept B:

Department of Mines & Energy
GPO Box 194
BRISBANE QLD 4001

1.49.4 Surveys Involving Several Plan Forms

1.49.4.1 A Survey Through A Number Of Land Parcels

When a number of plans are drawn for a continuing survey of a Road, Railway, Easement etc. through a number of land parcels, each plan shall be autonomous.

Each plan shall depict the survey in a particular land parcel or parcels in an unbroken manner and be complete with its Tabulations, Diagrams, Statements etc. (ie. treat as individual surveys.)

See also "ADJOINING DESCRIPTION" 1.4.

See also "DATUM" 1.24.

1.49.4.2 A Survey Of Large Lot Or One With Intricate Detail

When a number of plan forms are required to show details of a very large lot or a lot with intricate detail, the following shall be adopted:

- The subject lot shall be plotted to scale on one plan form showing information as scale will permit, but shall include the Lot number, area, adjoining property descriptions, action statements and metes and bounds. In cases of extreme density, metes and bounds may be tabulated or shown via diagrams on supplementary plan forms. Sufficient station numbers shall be shown to enable identification of detail on accompanying plan forms, as well as notations on the relevant parts of the first plan referring to the appropriate supplementary plans.

Eg. *See Plan RP830156 Sh 2*

NOTE: Prior approval is to be obtained from the local Dept A. District Senior Surveyor for preparation of Dept A. survey plans in this format. (See "Dept A. Requirements" E3 (iii) for locations, addresses, etc)

- Each plan form shall show the same title
 - Eg. Lot 6 cancelling Lot 6 on CP804267 (For Dept A.)
 - Eg. ML1234 (For Dept B.)
- Each plan form will have the same Catalogue Number
 - Eg. RP830156 Sheet 1, RP830156 Sheet 2 etc
 - with the main or first plan being catalogued as Sheet 1.
- All plan forms of the survey shall be noted with the following statement
 - Eg. SHEET 1 OF 5 SHEETS, SHEET 2 OF 5 SHEETS etc

1.49.4.3 A Survey Involving A Large Number Of New Lots

When a number of plan forms are required to show a survey containing a large number of new lots (eg new estates), these plans shall be autonomous.

The plans are to be presented similar to any other individual survey on a single plan form, except for the following variations.

Eg. A survey involving 4 plans of subdivision cancelling a lot/s in total.

- A statement to be shown on each plan :
 - "This is one of four plans from the one survey RP800100 to RP800103" For DATUM see RP800100
- The cancelling clause on three of the above plans will cancel "part of Lot ____ on RP ____ and the 4th plan will cancel the "Balance of Lot on RP ____".
- Being an ongoing survey involving several plans, new descriptions created by the survey are shown appropriately as adjoining descriptions on the accompanying plans.

See also "ADJOINING DESCRIPTION" 1.4.2

See also "DATUM" 1.24 - Pg E2--40

See also "ALLOCATIONS" DEPT A. REQUIREMENTS E3 1.6

1.50 Plotting

Plans shall be accurately drawn to scale to within a minimum of 1 part in 150.

The co-ordinate system of accuracy control should be used where necessary to achieve the required standard.

See also "SCALE OF PLANS" 1.58

1.51 Proclaimed Survey Areas

Proclaimed Survey Areas are established under Section 12(2)(b) and

12(3) of the Survey Co-ordination Act 1952-89 and Section 29(1) of the Surveyors Regulation 1992.

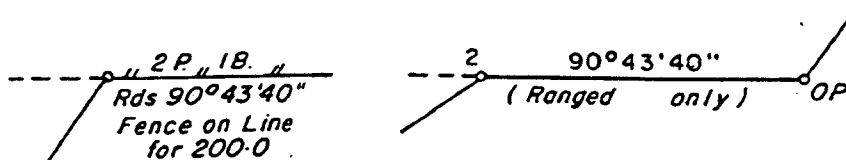
PSA's should be identified by statement on the face of the plan directly above the Title Block.

See also "P.S.A's" DEPT A. REQUIREMENTS E3 1.56

1.52 Ranged Only And Reads Bearings

Show as follows:

Sample



See also "CONNECTIONS TO DISTANT POINTS" 1.17

See also "FENCES" 1.31

1.53 Reserved Esplanade

1.53.1 The landward boundary of the esplanade is fixed at the time of survey for a Deed of Grant to issue.

1.53.2 The seaward boundary is subject to accretion and erosion.

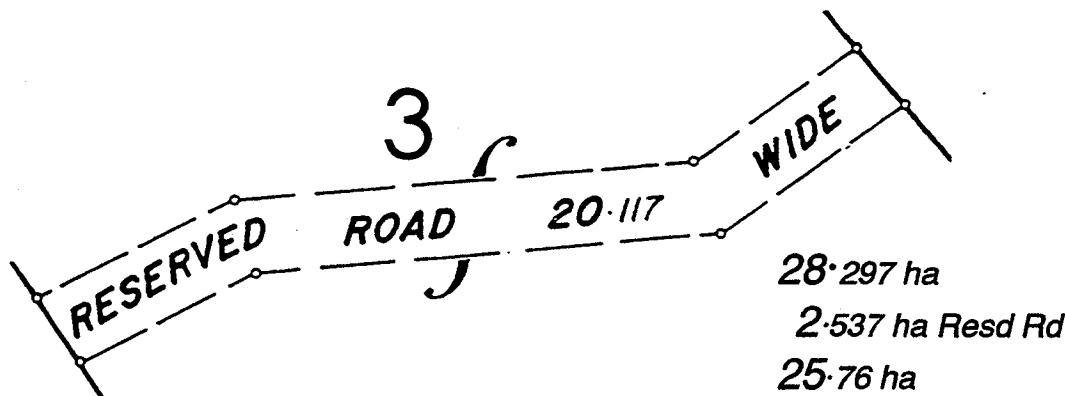
See also "ROADS" 1.57

See also "AMBULATORY BOUNDARIES" Dept A. Reqmts E3 1.10

1.54 Reserved Roads

Reserved Roads & Esplanades either surveyed or unsurveyed, are shown on the face of the plan in a specific location and are also shown as being excluded from the parcel on the face of the plan.

Sample



See also "AREAS" 1.8

See also "ROADS" 1.57

See also "RESERVED ROADS" Dept A. Reqmts E3 1.64.6

1.55 Resurvey

When a resurvey is carried out with a view to correction of or issue of title or instrument of lease, the normal plan requirements shall apply.

The title of the plan shall be :

*Eg. Lot 15, being Resurvey of Lot 15 on RP135694
Cancelling Lot 15 on RP135694.*

See also "DEPT A." EXAMPLE PLAN No 25

See also "DEPT B. REQUIREMENTS" E2--138 3.10

See also "RESURVEY" Dept A. Reqmts E3 1.61

1.56 Road Reservation

A Road Reservation does not have a specific location within a lot and is State Land reserved from the title.

Areas shall be shown on plans as follows:

Sample

36.635 ha

3.075 ha Rd Resn

33.56 ha

(Title issues on the Nett area of the Lot only.)

See also "AREAS" 1.8.4

See also "RESNS IN TITLE" Dept A. Reqmts E3 1.60

1.57 Roads

- 1.57.1** The present name of Roads, Streets and Esplanades shall be shown and be in accordance with the relevant Local Authority nomenclature.
- 1.57.2** Refer to Dept D. Main Roads Gazette for correct HIGHWAY and MAIN ROAD name.
- 1.57.3** Where only one side of road has been surveyed, calculated distances on unsurveyed side are not normally shown.
- 1.57.4** Esplanades are shown and treated in the same manner on plans as for roads.
See also "RESERVED ESPLANADE" E3--36 1.64.6
- 1.57.5** Dimensions and widths for internal roads are shown for complete blocks. Use "Orig" where applicable.
- 1.57.6** For roads forming boundaries of subject blocks, the width, when opposite side is shown must be indicated and plotted to scale
Eg. ROAD 60.35 WIDE

1 .57.7 For roads in an unsurveyed state see DEPT A. EXAMPLE PLAN No 6.

See also "DIMENSIONS" 1.27.3

See also "DEPT A. EXAMPLE PLANS Nos 26 -- 32"

See also "DEPT B. REQUIREMENTS" E2--144 3.16

See also "ROADS" Dept A. Reqmts E3 1.64

1 .58 Scale Of Plans

1 .58.1 Plans shall be drawn accurately to a scale that will allow all details and annotations being clearly shown on an A4 second generation copy of the original. This requirement should assist in determining the selection of the appropriate plan scale.

1.58.2 A complete plot of the subject block or blocks is drawn on the plan in an uninterrupted manner to the scale as shown in the Title.

1 .58.3 Diagrams drawn either

➤ to another suitable scale; and/or

➤ Not to scale' may be used for clarification.

1.58.4 It is suggested that plans and diagrams be drawn to one of the following scales, or multiples to the power of 10 thereof:

Suggested Plan Scales			
1:1	1:2	1:4	1:7.5
1:1.25	1:2.5	1:5	1:8
1:1.5	1:3	1:6	

See also "NOT TO SCALE" 1.45

See also "PLOTING" 1.50

1.59 Secants

Dimensions of secants are shown "on face" or tabulated in the "TRAVERSES ETC" column.

See also "DIMENSIONS" 1.27

See also "LINEWORK" 1.38.7

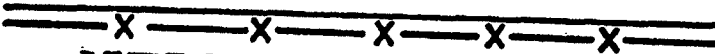
See also "TABULATIONS" 1.66

See also "TRAVERSES" 1.67

1.60 State Boundary

Sample

31



NEW SOUTH WALES

See State Boundary Agreement Act, 1983.

Subject to same conditions as "COUNTY BOUNDARY" 1.22

See also "LINEWORK" 1.38.12

1.61 Station Numbers

Station numbers are to be shown upright in as simple a format as possible. ie. 1,2,3, with 1a, 1b etc. for secants and close proximity work only.

Adequate station numbers should be shown on the plan to describe survey lines, qualify action statements and other "on face" statements.

See also SPECIMEN PLANS Nos 1 and 2

1.62 Styles

1.62.1 The use of mechanical guides and computerised drafting equipment will produce styles that may vary from those shown in this segment. The use of this equipment to produce plans is acceptable provided -

- That the end result displays the information in a clear and concise manner.
- That variable pen sizes, lettering heights, etc. are used to indicate the information in an unambiguous manner, attempting to demonstrate the guidelines contained within the pages of this manual.
- That the plan can be reproduced at a reduced scale to enable microfilming to take place.

See also "INK" E2--45 1.34 See also Dept. B Specimen Plans E2--147 & 148.

See also Dept. A Specimen Plans E2--81 & 82.

1.62.2 Subject Lot, Mining Tenure (where used as legal property descriptions), Easement, Island and Diagram.

Sample

ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890

- 1.62.3** Adjoining Style of 1.62.2 above and their catalogue numbers. Adjacent (non-adjointing) Road, Street, Railway, Channel & Drainage Area. All distances and all column headings and entries. Statements & Endorsements. Corner Information, Plan Title (where applicable), Features (Gully, Bldg, 2B 1P fence etc), Read and Ranged Only Bearing, Area (right of decimal).

Sample *ABCDEFGHIJKLMN OPQRSTUVWXYZ*
abcdefghijklmnopqr stuvwxyz 1234567890

- 1.62.4** Subject Road, Street, Lane, Pathway, Drain and Channel Area, Railway, Highway, Expressway, Freeway and Plan Title (where applicable).

Sample *ABCDEFGHIJKLMN OPQRSTUVWXYZ*
1234567890

- 1.62.5** Subject Bay, Sea, Ocean, River, Creek. Area (left, of decimal), Plan Title (where applicable), Adjoining State eg. N.S.W

Sample *ABCDEFGHIJKLMN OPQRSTUVWXYZ*
1234567890 abcdefghijk lmnopqrstuvwxy

- 1.62.6** Adjacent (non-adjointing) River, Parish Name (Upper and Lower Case), Bay, Ocean, Sea

Sample *ABCDEFGHIJKLMN OPQRSTUVWXYZ*

- 1.62.7** Adjoining County Name, Adjoining or Internal Creek NOTE: For Capitals use style 1.62.6

Sample *abcdefghijklmnopqr stuvwxyz*

- 1.62.8** Subject Holding, Parish Name on face (when applicable).

Sample *ABCDEFGHIJKLMN OPQRSTUVWXYZ*
1234567890 abcdefghijk lmnopqrstuv

- 1.62.9** All bearings (except Column entries and Reads), Station Numbers

Sample *1234567890 abcdefghijk lmnopqrstuvwxy z*

- 1.62.10 > Lapsed Lease description for D.M.E. PLANS ONLY
- > Previous property descriptions on face when entire parcels have disappeared as a result of State Resumptions for new Road, Rly etc for D.O.L. plans only.

Sample

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
1 2 3 4 5 6 7 8 9 0

1.63 Survey Records

When additional data is lodged in support of the survey eg. creek traverse offsets, this information shall be indicated in the appropriate box on the face of the plan.

ie. YES/NO SURVEY RECORDS DEPOSITED

If survey records for a number of plans are in the one book, one plan number should be chosen to be shown on the front of the Field Book and on the front of each plan in the Survey Records Box.

Where the reinstatement of a survey is complex or there are significant differences from either original or other surveys, a report in a Field Book cover should be lodged with the plan.

Where the present definition of High Water Mark (HWM) differs significantly from original HWM, a report in a Field Book cover should be lodged with the plan.

See also DOL Requirements E3 1.67

See also DME "FIELD NOTES" E2--138 3.8

1.64 Surveys In Strata

1.64.1 Parcels of land with height or depth restrictions shall be fully defined on the face of the plan and shall be described as Lot..... (In Strata) or Proposed Easement..... (In Strata) in the Title Block.

1.64.2 If a Lot or Easement being created or cancelled has a depth or height restriction, that Lot or Easement shall be described as "In Strata" ie Lot 6 (In Strata), Proposed Emt A (in Strata) in the Title Block. The full depth or height restriction information shall be shown on the face of the plan.











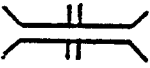





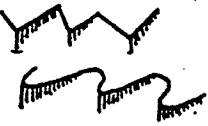






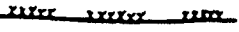
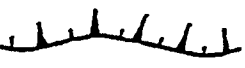
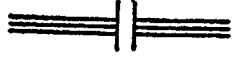





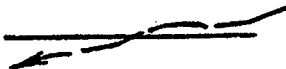
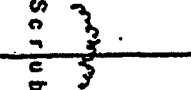





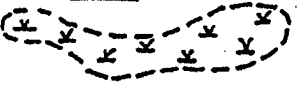
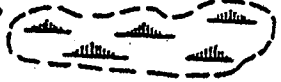
Heights shall be in terms of the Australian Height Datum and be referred to a Permanent Survey Mark of known Reduced Level which is stated on the face of the plan and connected if applicable.

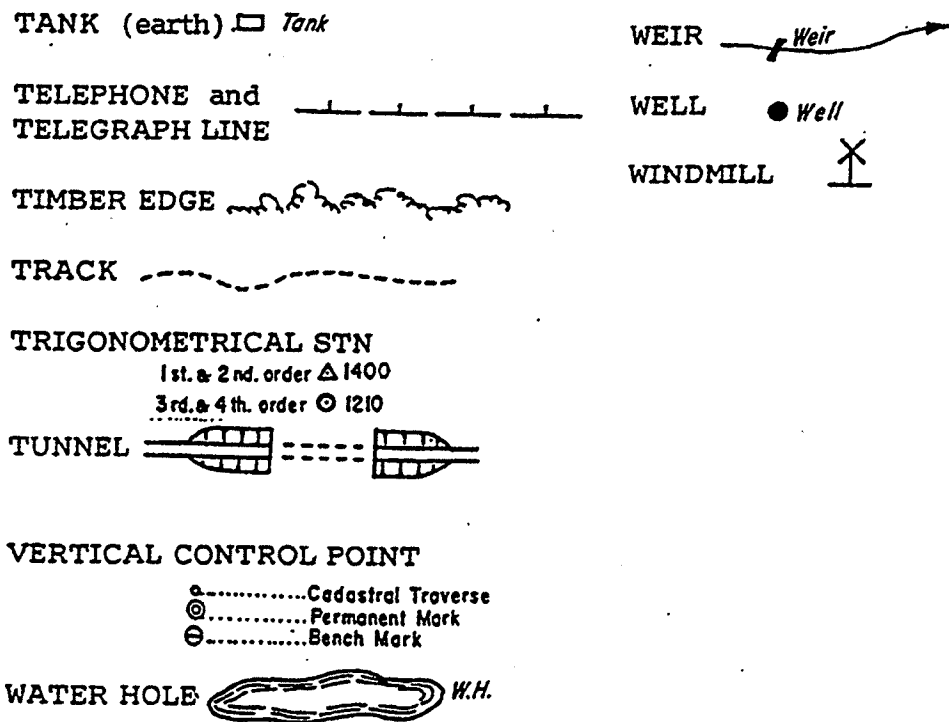
See also Dept. A EXAMPLE PLANS Nos 12, 13, 37, 38

See also Dept. B "DEPTH RESTRICTIONS" E2--141 3.12.5

See also Dept. A Requirements "SURVEYS IN STRATA" E3 1.69

1.65 Symbols

ADIT 	MINING DISTRICT 
ASTRONOMICAL STATION 	MINING FIELD 
BENCH MARK ● B.M. Number	OBSERVATION STATION 
BINDER (VINCULUM)  Internal	PEAK 
BORE ● Bore	PERMANENT MARK 
BORE & DRAIN 	PERMANENT WATER HOLE  P.W.H.
BRIDGE & CULVERT 	PHOTOGRAMMETRIC CONTROL POINT 
BROAD ARROW 	POWER LINE 
BUILDING  (Approx Shape & Descripn) L/Set Brick	QUARRY 
CLIFF or ESCARPMENT (traversed) OR 	RAILWAY SINGLE TRACK 
CREEKS & RIVERS (not traversed) 	RAILWAY DOUBLE TRACK 
CUTTING 	RANGE or RIDGE  MID RANGE
DAM 	RETAINING WALL 
EMBANKMENT or STEEP BANK 	ROAD OVERBRIDGE 
FENCE <i>on Boundary</i>  <i>Internal</i> 	ROCKY FORESHORE 
GRAVEL PIT 	SAND 
GULLY 	SCRUB or TIMBER EDGE 
HORIZONTAL CONTROL POINT 	SHAFT 
LAKE or LAGOON 	SUBWAY UNDER RAILWAY 
LIGHTHOUSE 	SURVEY STATION ○ (Small circle with number)
MANGROVES 	SWAMP 



1.66 Tabulations

When a plan has been 'turned', tabulations are to be treated likewise so as to facilitate easy reading of plan.

See also "CORNER INFORMATION" Diag. B

See also "NORTH POINT & DATA ORIENTATION" 1.44

See also "TRAVERSES" 1.67

1.67 Traverses

1.67.1 Extraneous field traverse information is generally not shown.

1.67.2 When traverse lines are shown, dimensions are shown on face or tabulated in the "TRAVERSES ETC" column.

When tabulation is adopted, numerical order is preferred.

Sample

TRAVERSES ETC		
LINE	BEARING	DIST
1-2	180°07'	13.13
3-4	236°43'30"	105.26
5-5a	355°32'40"	20.117

- 1.67.3 Where a traverse has been run to establish a new boundary along an inaccessible tract (cliff, etc.) the traverse is shown in the normal manner and the boundary shown calculated.

Vide Section 24 of the Surveyors Regulation 1992.

See also "DATUM" 1.24.1

See also "LINEWORK" 1.38.7

See also "OFFSETS" 1.46

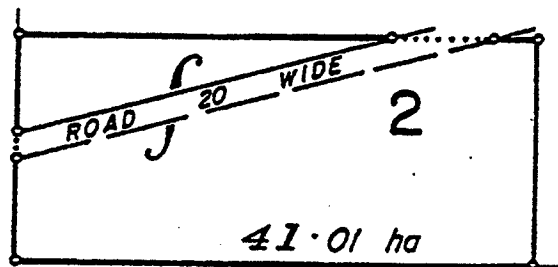
See also "WATERCOURSES" 1.69.2

1.68 Vinculum

- 1.68.1 Vincula 'bind' two or more land segments, separated by road, railway etc, to form a single tenement which is usually designated by one property description.

- 1.68.2 Tenure issues on the "NETT" area only.

Sample



See also "AREAS" 1.8.2 & 3

See also "Dept. B REQUIREMENTS" E2--146 3.21

See also "Dept. A REQUIREMENTS" E3 1.74

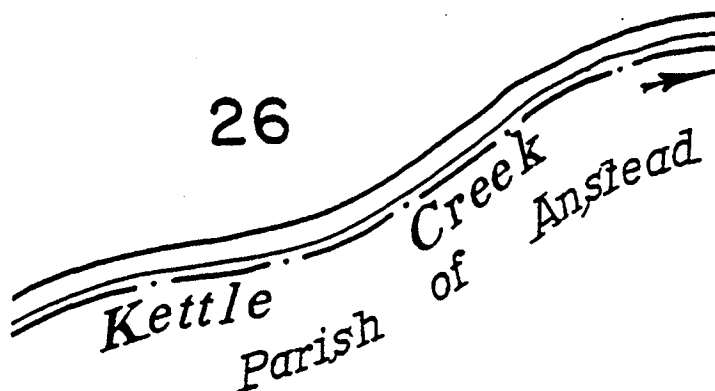
See also "LOCAL GOVT AGREEMENTS" Dept. A REQMTS E3 1.48.2

See also "Dimensions" 1.27.3

1.69 Watercourses

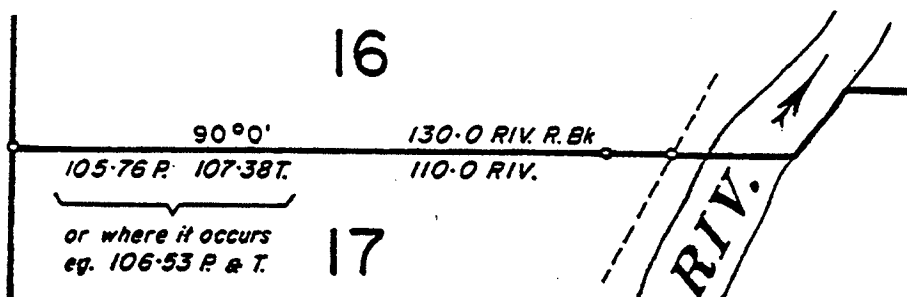
- 1.69.1 Show opposite bank of watercourse if practicable. It is not always necessary, however, to show information on the other side of watercourse forming boundaries except for adjoining Parish and County names.

Sample



- 1.69.2 Distances on the boundary terminating at a watercourse are to include distance to:
- Post or Peg.
 - Traverse.
 - Bank or Watercourse Boundary (Ck, Riv, etc).

Sample



- 1.69.3 Survey records must be lodged showing the watercourse traverse, measurements to the bank and area calculations.
- 1.69.4 An arrow indicating "downstream" ONLY must always be shown.
- 1.69.5 While traverses of watercourses are to be indicated on plan when run, there is no necessity to show when original. The original catalogue number shown along the watercourse will suffice.
- 1.69.6 Where original traverses of watercourses are used to obtain a new area of a lot, it is required that the original traverse dimensions be shown on the plan.

A statement indicating origin of original offsets is also to be shown.

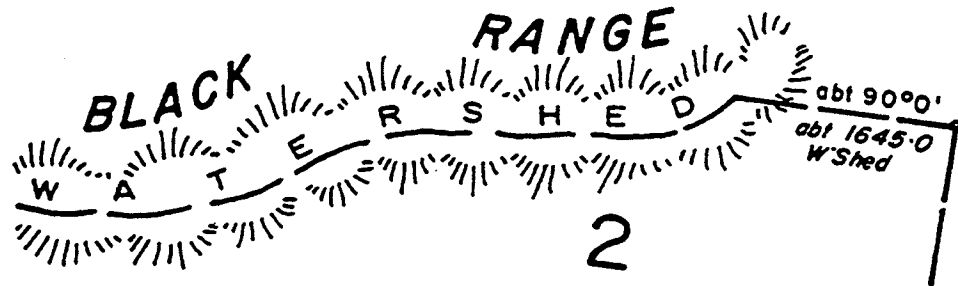
For cases involving vast original traverse data, the original plan number shown along the watercourse boundary will suffice, provided survey records are lodged.

See also "AMBULATORY BOUNDARIES" DNR REQMTS E3 1.10

1.70 Watersheds

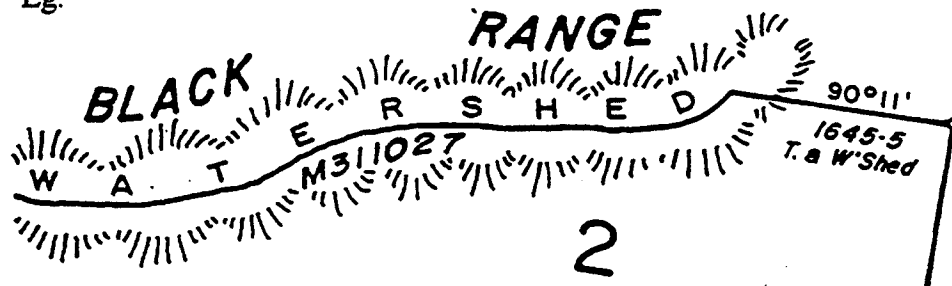
When "WATERSHED" is the boundary, the following guidelines should apply:

1.70.1 Unsurveyed Watershed Sample

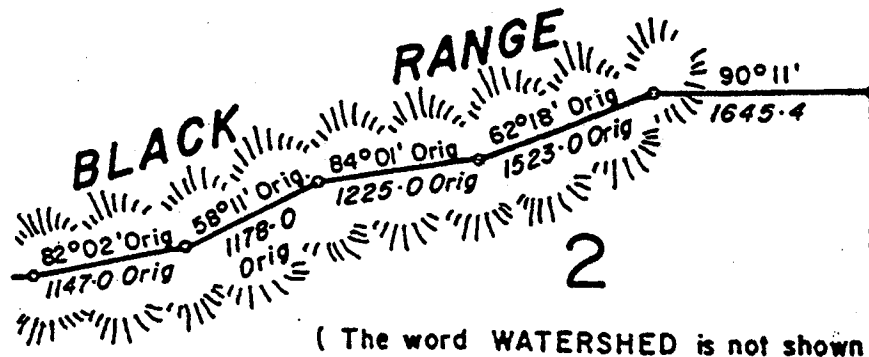


1.70.2 Surveyed Watershed

1.70.2.1 Eg. Sample



1.70.2.2 If traverse lines have been adopted as the boundary and corners have been marked, then right lines are shown. Sample



- 1.70.3** If in doubt as to which of the above methods is to be used, a search of the original tenure document should be made.
- 1.70.4** Relevant boundaries are labelled "COMPASS SURVEY" as required.
See also "COMPASS SURVEY" 1.15

Department of Natural Resources

- SPECIMEN PLANS
- EXAMPLE PLANS

General:

Specimen Plans Nos 1 & 2 on pages 81 to 83 are models of the desired survey plan format and presentation that should be adopted when preparing plans for deposit and registration in the Department of Natural Resources.

Example Plans Nos 1 to 39 on pages 84 to 131 are examples of the actions necessitating lodgement of cadastral plans in the Department of Natural Resources.

The majority of the examples are copies of original plans held in the DNR which have been suitably adapted to represent specific actions. As such, these examples may not necessarily conform in every respect to all guidelines stated in this manual. For DNR Specimen Plans, see pages 81 to 83.

The Department of Natural Resources District Senior Surveyor should be contacted for enquiries concerning surveys that may not be included in the following examples. See Page E3-iii for District Office listings.

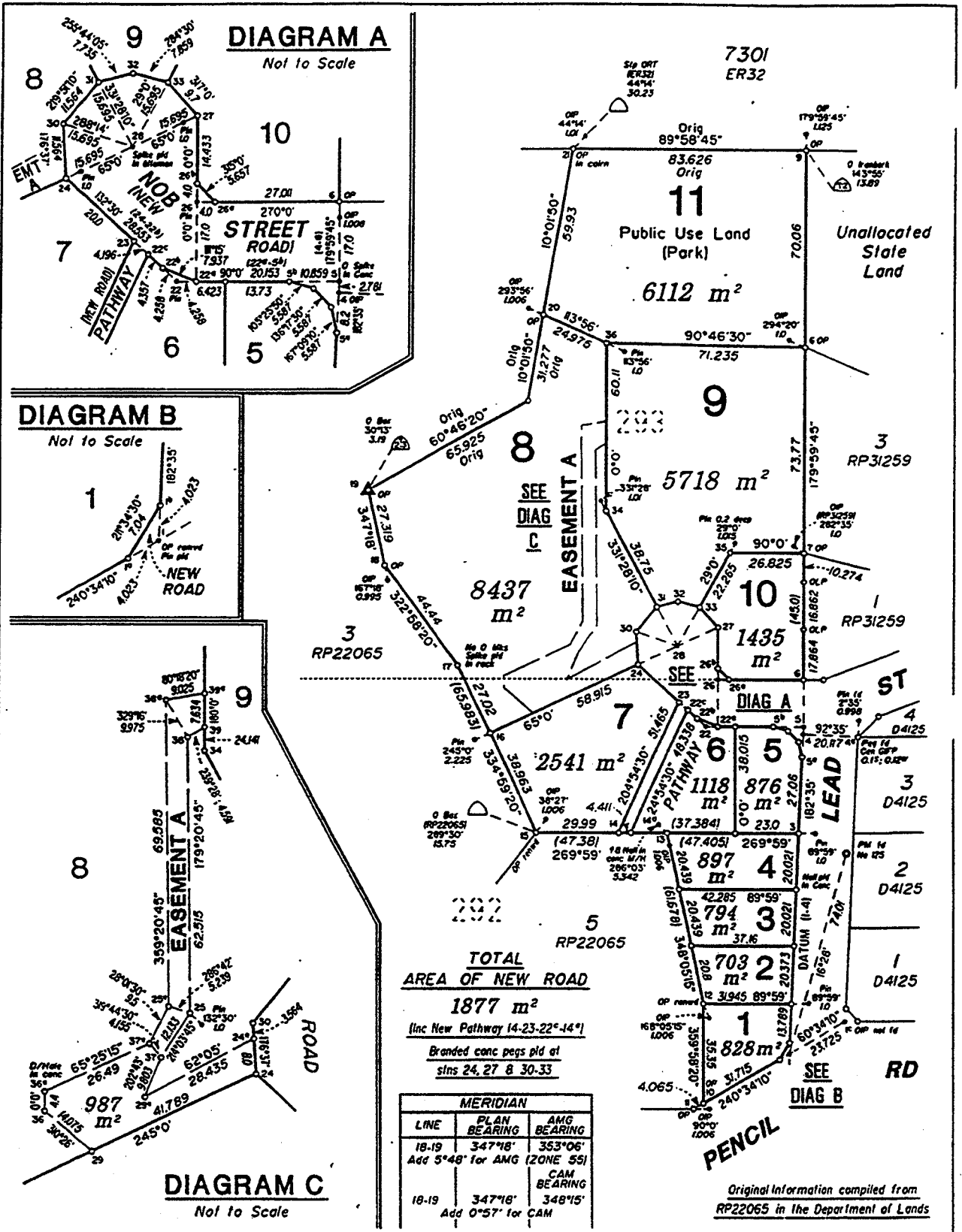
INDEX

Item	Section	Page
A	Addition Of Unallocated Stateland	
	vacant Land To F/hold Consolidated Title	Example Plan No 3
	reclaimed Land To F/hold or L/hold	
	Example Plan No 2
	road Closure To F/hold or L/hold	
	Plan No 1
B		
C	Channel - See Channel/drain	Example Plan No 4
	Compiled Plans.....	
	surveyed Parcel.....	Example Plan No 5
	unsurveyed Parcel (located).....	Example Plan No 7
	unsurveyed Parcel (isolated).....	Example Plan No 8
	large Unsurveyed Parcel.....	Example Plan No 6
	Creek Traverse	Example Plan No 9
	State Resumptions In F/hold Land (main Road, Railway, Channel Etc) -	
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D	Depth Restrictions (title To Varying Depths).....	Example Plan No 10
E	Easement Affected By Survey Action.....	Opposite Example Plan No 11
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	Esplanades - Unsurveyed.....	Example Plan No 14
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	on Registered Plan Form.....	Plan No 20
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	subdivision describing the resumed area as a lot.	
N		
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Item	Section	Page
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	Sub Leases In State Tenure.....	Example Plan No 36
T	Tenure In Strata	Example Plan Nos 37, 38
U	Unmarked Lines & Corners	Example Plan No 39

Pages 69 – 80 intentionally left blank.

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I, Mark Allan SURVEYOR
herby certify that I have surveyed
the land comprised in this plan
personally
and that the plan is accurate, that the said survey was
performed in accordance with the Surveyors Act 1977
and the Surveyors Regulation 1992 and that the said
survey was completed on 4/10/95.

Director &
Licensed Surveyor

Director
Date

PLAN OF
Lots 1 - 11
& Proposed Emt A in Lot 8
Cancelling Lots 1, 2 & 4 on RP22065

PARISH.....**METRIC**.....
COUNTY.....**Eraser**.....
TOWN/LOCALITY.....**MAP**.....
LOCAL GOVERNMENT.....**STAPLE S.C.**.....
LANDS REGION.....**RULER**.....

ORIGINAL Portions 292 & 293

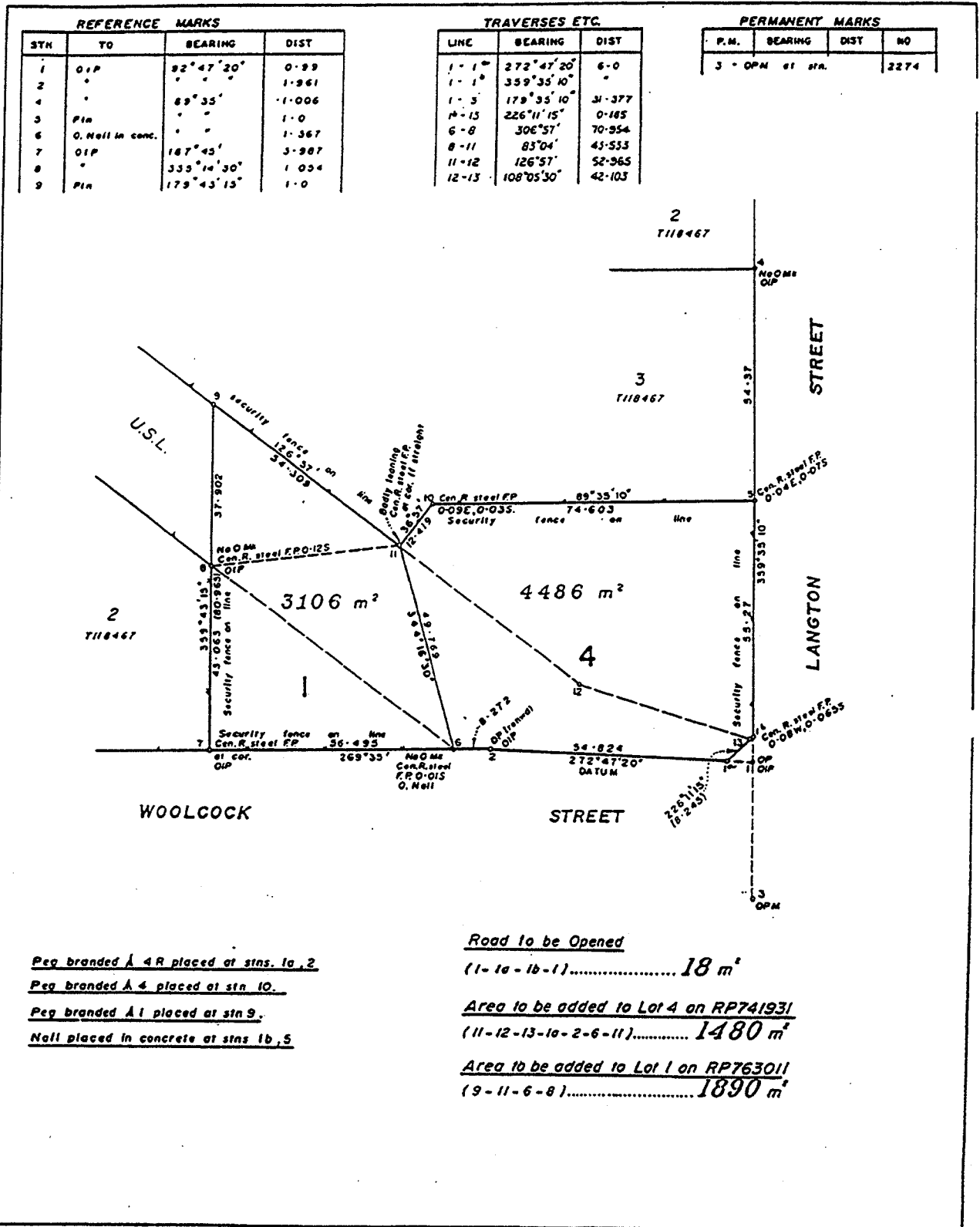
MERIDIAN As Shown	MAP REF 9541-21134	SCALE 1:1250	ENDORSED	ARCHIVED Brisbane
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YES SURVEY RECORDS DEPOSITED

SPECIMEN 2

<p style="text-align: center;">(Dealing No.)</p>	<p>Lodged by</p> <p><small>(Include address, phone number and reference)</small></p> <p>Particulars entered in the Register on the Titles listed below.</p>																																													
<p>I/We</p> <p>.....</p> <p>.....</p> <p>(Names in full)</p> <p>* As Registered Owner of this land * As Lessee/s of Miners Homestead agree to this Plan, # and dedicate the Public Use Land as shown hereon in accordance with Section 50 of the Land Title Act 1994.</p> <p>.....</p> <p>Signature of * Owner/s * Lessee/s</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;">Title Reference</th> <th style="width:45%;">Description</th> <th style="width:10%;">New Lots</th> <th style="width:10%;">New Road</th> <th style="width:10%;">Easements</th> </tr> </thead> <tbody> <tr> <td>..1874D21A..</td> <td>..Lot.2.on.RP22065..</td> <td>..5..8..</td> <td>..New.Road..</td> <td>..A..</td> </tr> <tr> <td>..1874D21B..</td> <td>..Lot.4.on.RP22065..</td> <td>..1..4..</td> <td>..New.Road..</td> <td>..A..</td> </tr> <tr> <td>..1874D213..</td> <td>..Lot.1.on.RP22065..</td> <td>..7..11..</td> <td>..New.Road..</td> <td>..A..</td> </tr> <tr> <td>.....</td> <td>.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>.....</td> <td>.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>.....</td> <td>.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> </tbody> </table> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">PORTION ALLOCATION</th> </tr> <tr> <th style="width:50%;">Lots</th> <th style="width:50%;">Portion</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1 - 6</td> <td style="text-align: center;">292</td> </tr> <tr> <td style="text-align: center;">7 8 8</td> <td style="text-align: center;">292 8 293</td> </tr> <tr> <td style="text-align: center;">9,10 8 11</td> <td style="text-align: center;">293</td> </tr> </tbody> </table> <p>* Rule out whichever is inapplicable # NOTE: A Lessee of a Miners Homestead is unable to dedicate Public Use Land.</p> <p>.....</p> <p>* certifies that all the requirements of this Council, the Local Government Act 1993, the Local Government (Planning and Environment) Act 1990 and all Local Laws, # and the City of Brisbane Act 1924 and all Ordinances thereunder, have been complied with and approves this plan of Subdivision, SUBJECT TO</p> <p>.....</p> <p style="text-align: right;">Dated this day of 19.....</p> <p style="text-align: right;">..... Mayor # Appointed Officer</p> <p style="text-align: right;">..... Chief Executive Officer</p> <p>* Insert the name of the Local Government # Delete for Local Governments other than the City of Brisbane</p>	Title Reference	Description	New Lots	New Road	Easements	..1874D21A..	..Lot.2.on.RP22065..	..5..8..	..New.Road..	..A..	..1874D21B..	..Lot.4.on.RP22065..	..1..4..	..New.Road..	..A..	..1874D213..	..Lot.1.on.RP22065..	..7..11..	..New.Road..	..A..	PORTION ALLOCATION		Lots	Portion	1 - 6	292	7 8 8	292 8 293	9,10 8 11	293
Title Reference	Description	New Lots	New Road	Easements																																										
..1874D21A..	..Lot.2.on.RP22065..	..5..8..	..New.Road..	..A..																																										
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<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:20%;">SURVEY EXAMINATION</th> <th style="width:20%;">ORIGINAL GRANT</th> <th style="width:20%;">CHARTING</th> <th style="width:20%;">LODGEMENT FEES</th> <th style="width:20%;">REFERENCES</th> </tr> </thead> <tbody> <tr> <td>Exam. Fee \$</td> <td></td> <td>Charted</td> <td>Survey Exam \$</td> <td>Lands File</td> </tr> <tr> <td>Receipt No.</td> <td></td> <td></td> <td>Lodg. Exam & Ass \$</td> <td>Local Government Reference</td> </tr> <tr> <td>Date</td> <td></td> <td></td> <td>..... New Titles \$</td> <td>Surveyors Reference</td> </tr> <tr> <td>Deposited</td> <td></td> <td></td> <td>Photocopy \$</td> <td></td> </tr> <tr> <td>Examined</td> <td></td> <td></td> <td>Postage \$</td> <td></td> </tr> <tr> <td>Passed</td> <td></td> <td></td> <td>TOTAL \$</td> <td style="text-align: center; vertical-align: middle;">PLAN</td> </tr> </tbody> </table>	SURVEY EXAMINATION	ORIGINAL GRANT	CHARTING	LODGEMENT FEES	REFERENCES	Exam. Fee \$		Charted	Survey Exam \$	Lands File	Receipt No.			Lodg. Exam & Ass \$	Local Government Reference	Date New Titles \$	Surveyors Reference	Deposited			Photocopy \$		Examined			Postage \$		Passed			TOTAL \$	PLAN											
SURVEY EXAMINATION	ORIGINAL GRANT	CHARTING	LODGEMENT FEES	REFERENCES																																										
Exam. Fee \$		Charted	Survey Exam \$	Lands File																																										
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Deposited			Photocopy \$																																											
Examined			Postage \$																																											
Passed			TOTAL \$	PLAN																																										

Addition of State Land. (Including Road Closure)



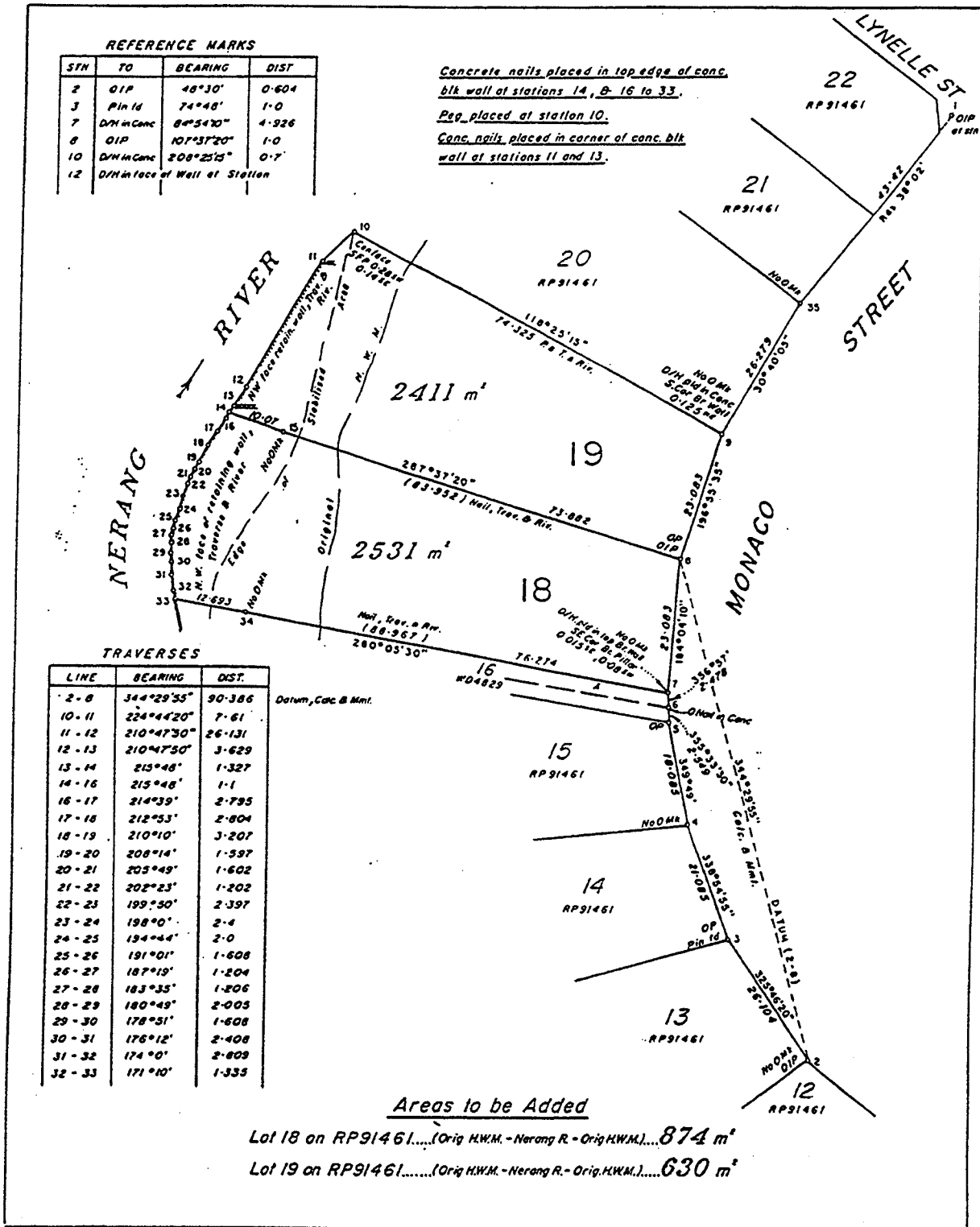
Peg branded A 4R placed at stns. 1a, 2
Peg branded A 4 placed at stn. 10.
Peg branded A 1 placed at stn 9.
Nail placed in concrete at stns 1b, 5

Road to be Opened
(1-1a-1b-1)..... 18 m²
Area to be added to Lot 4 on RP741931
(11-12-13-1a-2-6-11)..... 1480 m²
Area to be added to Lot 1 on RP763011
(9-11-6-8)..... 1890 m²

<p>I Mark Allan Surveyor I hereby certify that I/We/Ourself have surveyed the land contained in this plan (unless otherwise stated) and that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on <u>6/2/92</u> <i>Mark Allan</i> Licensed Surveyor/ Director Date <u>16/2/92</u></p>	<p>PLAN OF Lots 1 and 4 Cancelling Lot 1 on RP763011 and Lot 4 on RP741931 ORIGINAL SECTIONS 135 & 266</p>	<p>PARISH <u>COONAMBELAH</u> COUNTY <u>Elphinstone</u> LOCAL AUTHORITY <u>CITY OF TOWNSVILLE</u> LAND AGENTS/ENGINEERS DISTRICT</p>												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>MERIDIAN</th> <th>MAP REF</th> <th>SCALE</th> <th>FILE REF</th> <th>ENDORSED</th> <th>REGISTERING DIST</th> </tr> <tr> <td>CAM Vide</td> <td>City of</td> <td>1: 000</td> <td>SL43617</td> <td></td> <td>BRISBANE</td> </tr> </table>	MERIDIAN	MAP REF	SCALE	FILE REF	ENDORSED	REGISTERING DIST	CAM Vide	City of	1: 000	SL43617		BRISBANE	<p>EXAMPLE 1</p>	
MERIDIAN	MAP REF	SCALE	FILE REF	ENDORSED	REGISTERING DIST									
CAM Vide	City of	1: 000	SL43617		BRISBANE									

- NOTES:**
- Action statements on face of plan indicating purpose of survey and full description of land involved
 - Parcels retain their previous numerical identifier as the new description for the amended lots

Addition of State Land (Reclamation)



Mark Allan Surveys
 I, Mark Allan Surveys, certify that the above survey was carried out in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 6/2/92.

Mark Allan Surveys
 Licensed Surveyor/ Director
 Date 15/2/92

PLAN OF Lots 18 and 19
Canceling Lots 18 & 19 on RP91461.

ORIGINAL PORTION 1

MERIDIAN	MAP REF	SCALE	FILE REF	ENDORSED	REGISTERING DIST
CAM Vite	9541-11442	1: 000	RC39842	BRISBANE	BRISBANE

YES SURVEY RECORDS DEPOSITED

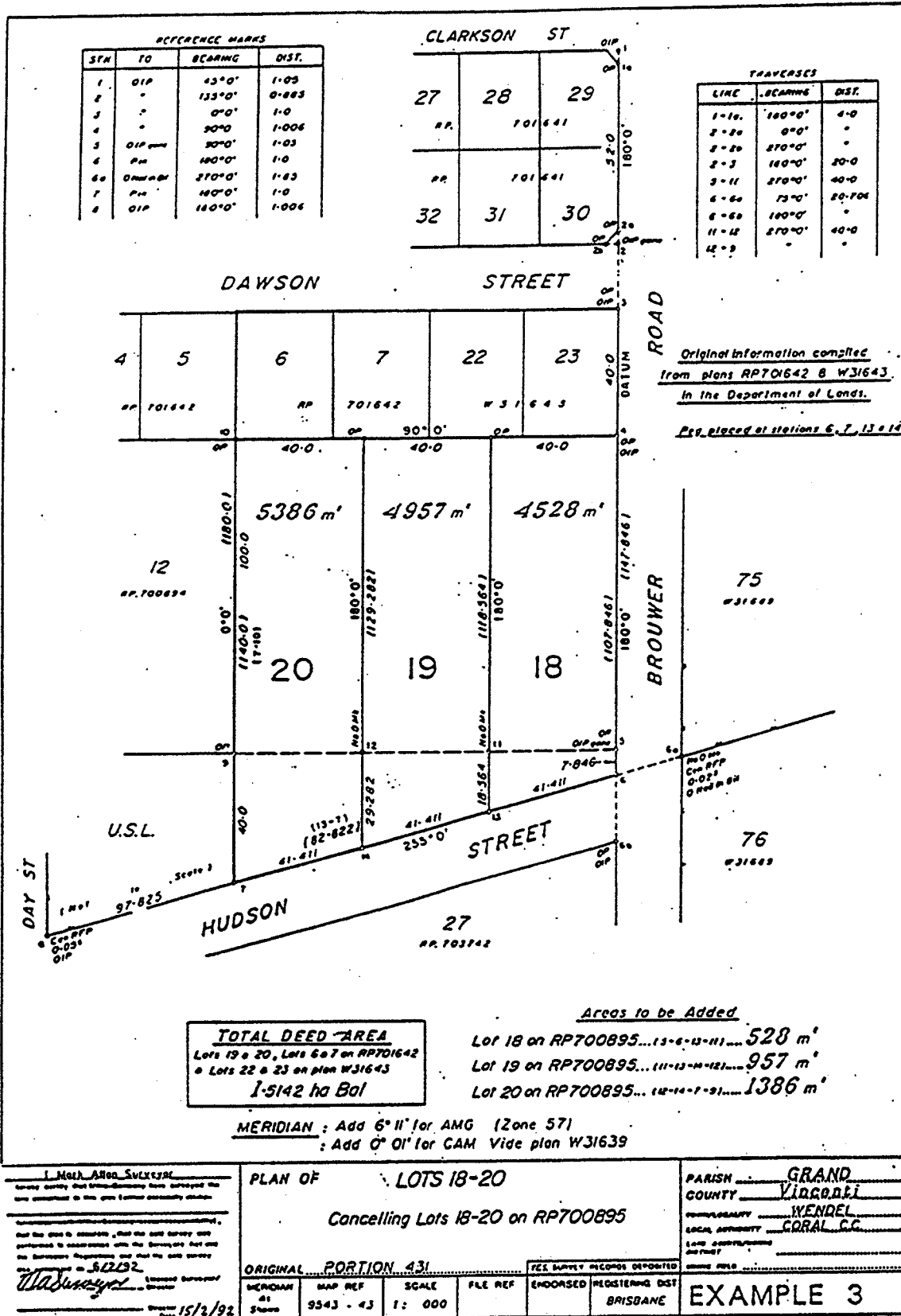
PARISH GILSTON
 COUNTY Ward
 LOCAL AUTHORITY BROADBEACH WATERS
 LOCAL AUTHORITY LOGAN, CC
 LAND AGENTS/ENGINEERS DISTRICT

EXAMPLE 2

NOTES:

1. Description of areas being added in Action statement and full description of land involved
2. Description of new and original ambulatory boundaries on the plan
3. In this particular instance, the Retaining Wall, River and Traverse are co-incident
4. Parcels retain their previous numerical identifier as the new description for the amended lots

Addition (State Land to Freehold Consolidated Title)

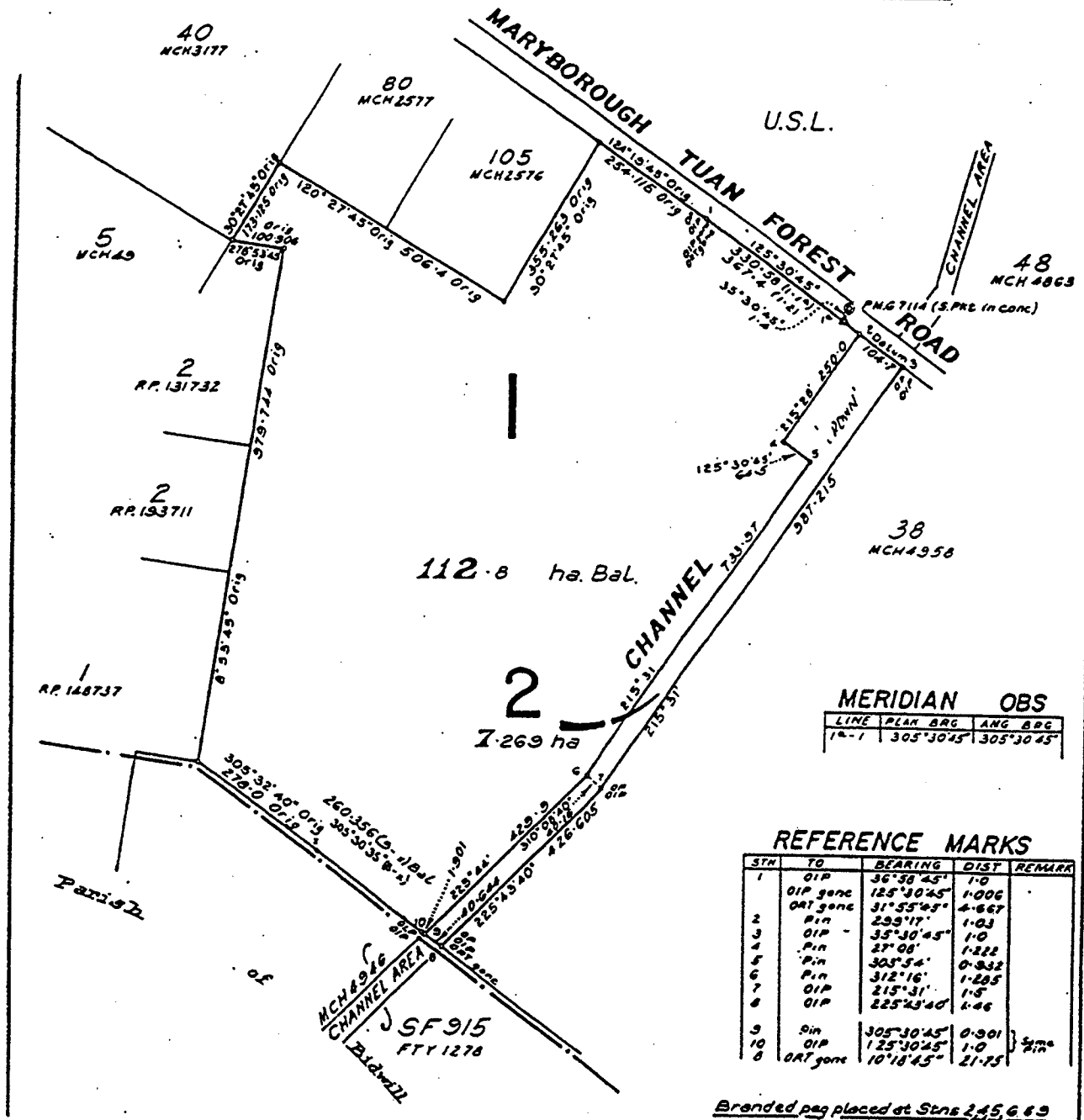


NOTES:

1. Bordered statement for indicating "TOTAL DEED AREA" of new Consolidated Title. (NB. Lot 18 is not part of this Title).
2. Action statements and full description of land involved.
3. Parcels retain their previous numerical identifier as the new description for the amended Lots.

Channel/Drain

Original Information compiled from RP202564
in the Department of Lands.



<p>Mark Allan Surveyor</p> <p>I hereby certify that I and my assistants have surveyed the land comprised in this plan (either personally or by a competent person) and that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on <u>6/2/92</u>.</p> <p><i>M.A. Swain</i> Licensed Surveyor/Director Date <u>16/2/92</u></p>	<p>PLAN OF Lots 1 & 2 Cancelling Lot 2 on RP202564</p>	<p>PARISH ELLIOTT</p> <p>COUNTY MARLBOROUGH</p> <p>REGION/LOCALITY HAUTON</p> <p>LOCAL AUTHORITY CORAL CO.</p> <p>LAND AGENTS/AGENCY DISTRICT</p>												
	<p>ORIGINAL <u>PORTION 69</u></p> <table border="1"> <tr> <th>MERIDIAN</th> <th>MAP REF</th> <th>SCALE</th> <th>FILE REF</th> <th>ENDORSED</th> <th>REGISTERING DIST</th> </tr> <tr> <td>ANG Vics Plan MCH4958</td> <td>9348 - 33</td> <td>1: 000</td> <td></td> <td></td> <td>BRISBANE</td> </tr> </table>	MERIDIAN	MAP REF	SCALE	FILE REF	ENDORSED	REGISTERING DIST	ANG Vics Plan MCH4958	9348 - 33	1: 000			BRISBANE	<p>YES SURVEY RECORDS DEPOSITED</p> <p>EXAMPLE 4</p>
MERIDIAN	MAP REF	SCALE	FILE REF	ENDORSED	REGISTERING DIST									
ANG Vics Plan MCH4958	9348 - 33	1: 000			BRISBANE									

NOTES:

1. Channels/Drains are required by the Department of Primary Industries.
2. Channels/Drains are described as such on the face of the plan (Do not designate as Area or Reserve).
3. The parcel retains its previous numerical identifier.

<p>Council of the _____ of _____ certifies that all the requirements of this Council, the Local Government Acts and all By-Laws have been complied with and approves this Plan of Subdivision</p> <p style="text-align: right;">Dated this _____ day of _____ 19____ Mayor or Chairman Town or Shire Clerk</p>	<p>Previous Title <i>CT 6009-105 Lot 2 RP 202564 G 808050 Resumption Lot 2 to the Crown</i></p>																																																																																										
<p>I/We _____ (Names in full)</p> <ul style="list-style-type: none"> • as Proprietor/s of this land. • as Lessee/s of Miner's Homestead <p>agree to this plan and dedicate the new road as shown hereon to public use.</p> <p>Signature of • Proprietor/s • Lessee/s • Rule out which is inapplicable.</p>	<p>This survey has been examined and may be used for land dealings.</p> <p style="text-align: right;">Surveyor General Date</p> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Lot</th><th>Vol.</th><th>Fol.</th><th>Lot</th><th>Vol.</th><th>Fol.</th><th>Lot</th><th>Vol.</th><th>Fol.</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Lot	Vol.	Fol.	Lot	Vol.	Fol.	Lot	Vol.	Fol.																																																																																	
Lot	Vol.	Fol.	Lot	Vol.	Fol.	Lot	Vol.	Fol.																																																																																			
<p>AS CONSTRUCTING AUTHORITY THE COMMISSIONER OF WATER RESOURCES APPROVES THIS PLAN OF SUBDIVISION</p> <p>DATED AT BRISBANE THIS _____ DAY OF JUNE 1992</p> <p>SECRETARY TO THE COMMISSIONER OF WATER RESOURCES.</p>	<p>Lodged by _____</p> <p style="text-align: right;">Received Registrar of Titles</p>																																																																																										
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:20%; padding: 2px;"> <p><i>File Ref.</i></p> <p>Deposited / /</p> <p>Audited / /</p> <p>Passed / /</p> <p>Survey Records: File/Field Notes</p> <p>Charted / /</p> <p>Original Grant</p> </td> <td style="padding: 2px;"> <p>Particulars entered in Register Book</p> <p>Vol. _____ Folio _____</p> <p style="text-align: right;">at _____</p> </td> </tr> </table>	<p><i>File Ref.</i></p> <p>Deposited / /</p> <p>Audited / /</p> <p>Passed / /</p> <p>Survey Records: File/Field Notes</p> <p>Charted / /</p> <p>Original Grant</p>	<p>Particulars entered in Register Book</p> <p>Vol. _____ Folio _____</p> <p style="text-align: right;">at _____</p>	<p>Fees Payable</p> <p><i>Postal fee and postage</i></p> <p><i>Logt. Exam. & Ass.</i></p> <p><i>New Title</i></p> <p><i>Entd. on Deeds</i></p> <p><i>Photo Fee</i></p> <p><i>Total</i></p> <p><i>Short Fees Paid</i></p>																																																																																								
<p><i>File Ref.</i></p> <p>Deposited / /</p> <p>Audited / /</p> <p>Passed / /</p> <p>Survey Records: File/Field Notes</p> <p>Charted / /</p> <p>Original Grant</p>	<p>Particulars entered in Register Book</p> <p>Vol. _____ Folio _____</p> <p style="text-align: right;">at _____</p>																																																																																										
<p>REGISTRAR OF TITLES</p>	<p>EXAMPLE 4</p>																																																																																										

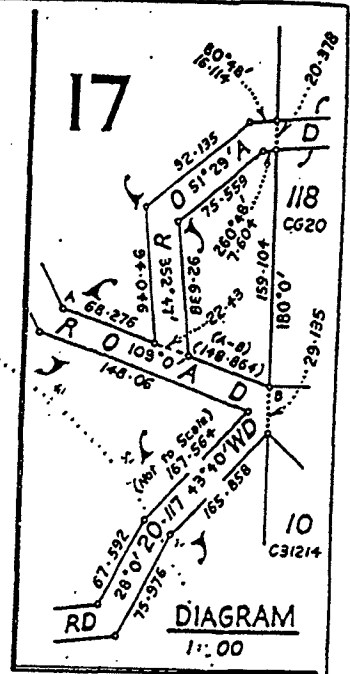
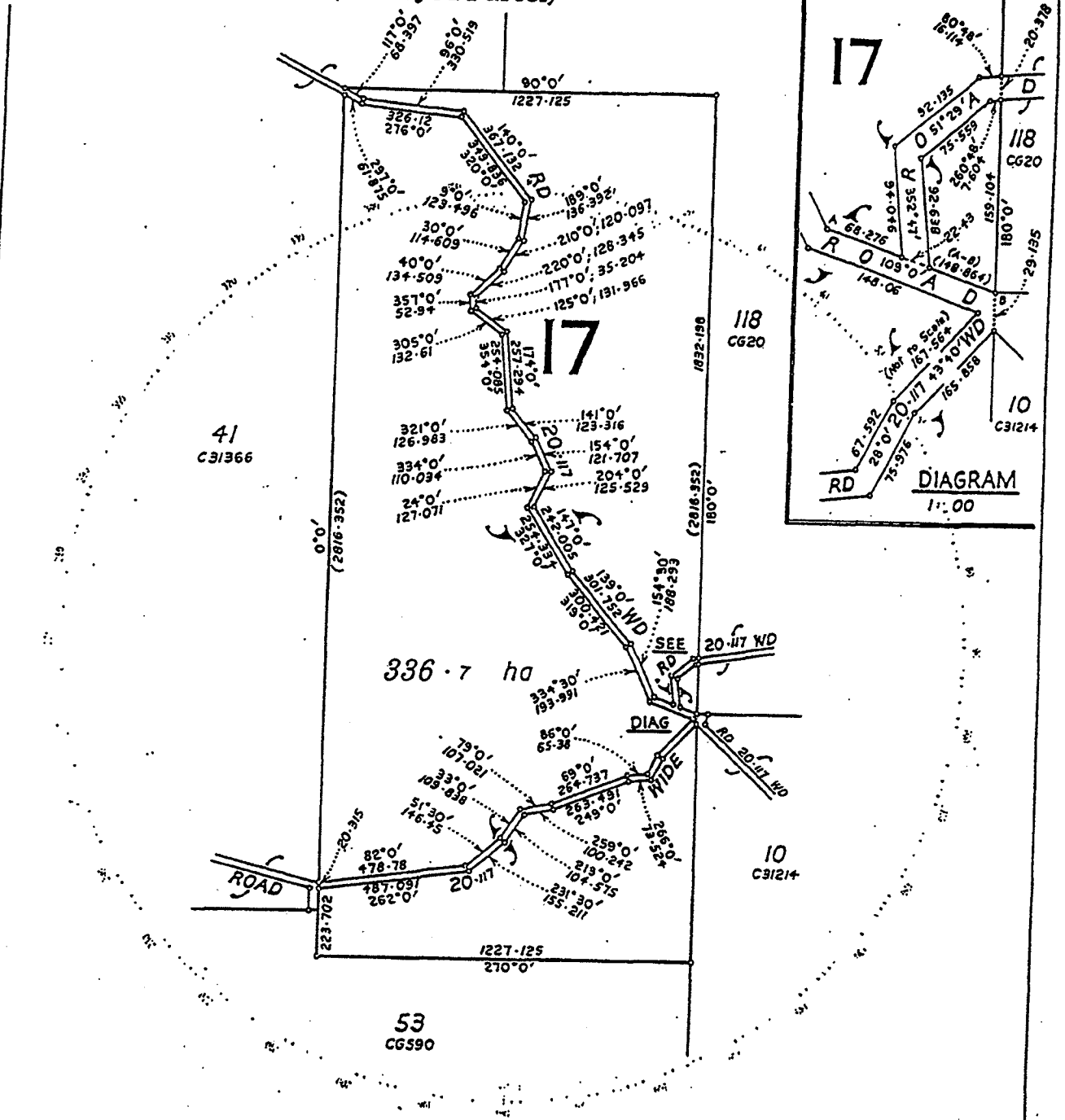
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Compiled Plan (Surveyed Parcel)

NOTES

1. Metes and bounds shall be shown for internal roads, railways etc.
2. For heavily congested plans, metes and bounds need not be shown for internal roads, railways etc. provided all plan catalogue numbers from which this data can be obtained are shown in lieu thereof.
3. Plan catalogue number for Creek Traverse to be shown.
4. Parcel retains its previous numerical identifier as the new description for the amended Lot.

Compiled Plan (Surveyed Parcel)



I, Mark Allen Surveyor hereby certify that I have made this plan pursuant to Section 25 of the Surveyors Regulation 1992, that the plan is accurate and compiled from plans C31363 & CG2799 in the Department of Lands.

7.7.92
Date

M.A. Surveyor
Licensed Surveyor

<p>PLAN OF Lot 17 Cancelling Lot 17 on plan C31363</p>		<p>PARISH <u>MONSILDALE</u> COUNTY <u>Canning</u> LOCAL AUTHORITY <u>SWANSON</u> LOCAL AUTHORITY <u>MORETON S.C.</u> LAND AGENTS/NAME DISTRICT MINING FIELD</p>	
<p>ORIGINAL PORTION 17</p>		<p>NO SURVEY RECORDS DEPOSITED</p>	
<p>MERIDIAN of Plan C31363</p>	<p>MAP REF 9344 - 14</p>	<p>SCALE 1: 000</p>	<p>FILE REF RC35412</p>
<p>ENDORSED</p>		<p>REGISTERING DIST BRISBANE</p>	
<p>EXAMPLE 5</p>			

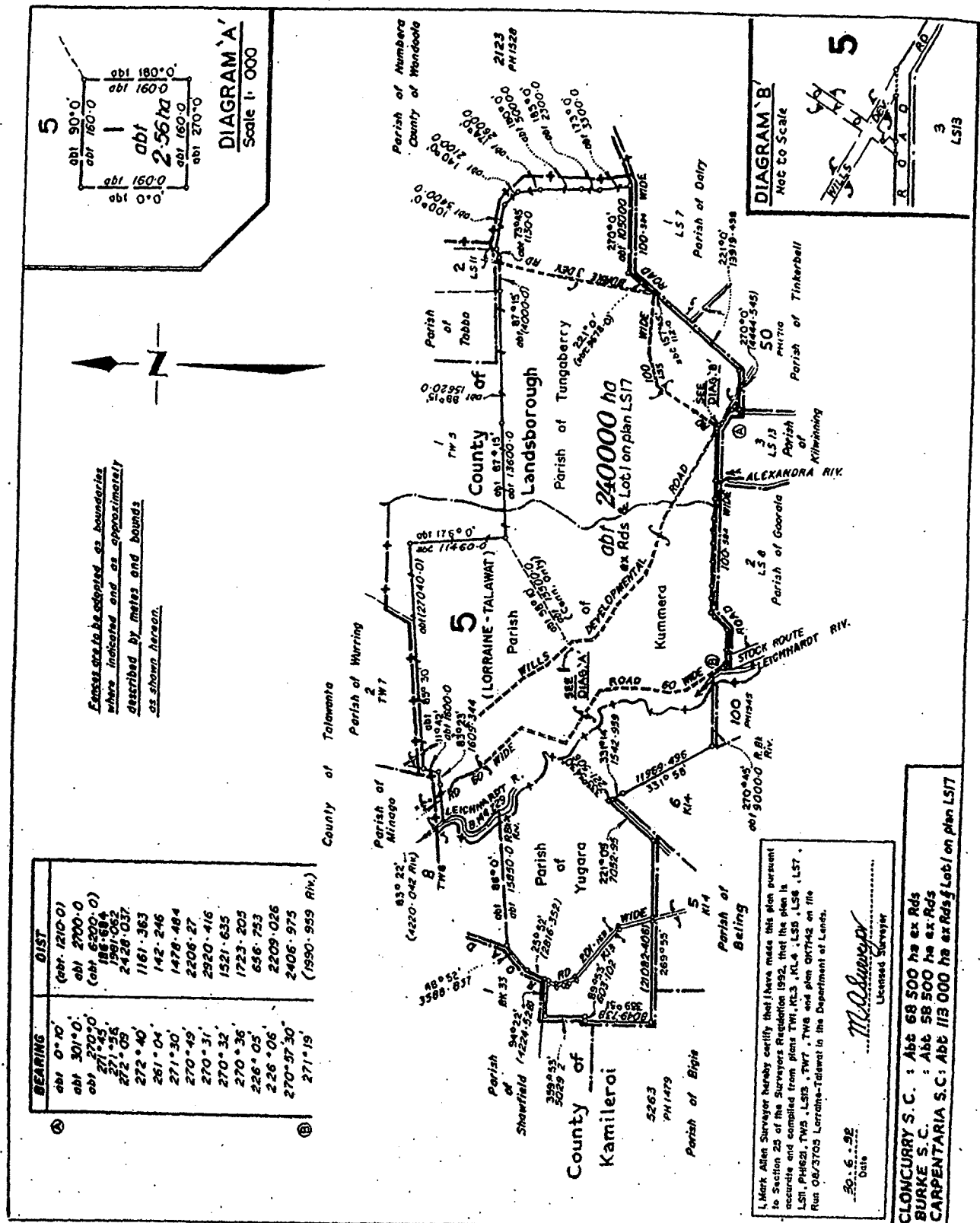
Compiled Plan Of Large Unsurveyed Parcel

Pastoral Holding/Grazing Farms

NOTES

1. The name of the Station/Holding to be shown under the Subject Lot Number on the Face of the plan and in the Title Book as a "LOCALITY".
2. Areas appropriated to relevant Local Authorities to be shown on face.
3. Roads within the Lot, shown as dotted lines on Departmental working maps are by legislation 60 metres wide unless otherwise specified.
4. Roads - surveyed or unsurveyed are to be shown as a series of double straight lines.
5. Statement concerning "Fences to be adopted as boundaries" etc is to be shown if applicable.
6. Plan is compiled by collating the latest available data surrounding the Lot. This may vary from surveyed information to "scaling" and approximating information from published maps, sketches on Dept. A Files etc. The plan is NOT drafted purely by tracing or digitising from a published map.
7. Additional information eg. Maps, aerial photography, sketches, reports etc. That is used in the compilation process is to be incorporated into the Form 18 certificate for cadastral plans.
8. This type of plan may be the basis for "upgrading" the accuracy of existing mapping.
9. See notes with Example Plan No. 7 for accuracies of Metes and Bounds & Areas.

Compiled Plan of Large Unsurveyed Parcel



Excess are to be adopted as boundaries where indicated and as approximately described by metes and bounds as shown hereon.

BEARING	DIST
abt 0° 10'	(abt. 1210.0)
abt 301° 0'	abt 2700.0
abt 270° 0'	(abt 6200.0)
abt 271° 45'	185.58
271° 55'	1981.062
272° 05'	2428.037
272° 40'	1161.363
261° 04'	142.246
271° 30'	1478.484
270° 49'	2208.27
270° 31'	2920.416
270° 32'	1521.635
270° 36'	1723.205
226° 05'	656.753
226° 06'	2209.026
270° 37' 30"	2406.975
271° 19'	(1990.959 Riv.)

I, Mark Allen Surveyor hereby certify that I have made this plan pursuant to Section 25 of the Surveyors Regulation 1992, that this plan is accurate and compiled from Plans TW1, TW2, TW3, TW4, TW5, TW6, TW7, TW8 and plan OR1742 on file Run 08/3705 Lorraine-Talawat in the Department of Lands.

30.6.92
Date

M. A. Surveyor
Licensed Surveyor

CLONCURRY S.C. : Abt 68 500 ha ex Rds
 BURKE S.C. : Abt 58 500 ha ex Rds
 CARPENTARIA S.C. : Abt 113 000 ha ex Rds Lot 1 on plan LS17

herby certify that I/the Company have surveyed the land comprised in this plan (either personally or by those work I/the Company am responsible), that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed.

 Licensed Surveyor/
 Director

 Drafter
 Date

PLAN OF **Lots 1 and 5**
 Cancelling Lot 3075 on plan PH1621.

ORIGINAL LOT 3705 (Lorraine-Talawat)

MERIDIAN MAG Vide Plan 48123 (Zone 55E)	MAP REF SE 54 - 10 SE 54 - 14	SCALE 1 : 000	FILE REF Run: 08/3705	NO SURVEY RECORDS DEPOSITED	ENDORSED REGISTERING DIST BRISBANE
--	-------------------------------------	------------------	-----------------------------	-----------------------------	---------------------------------------

PARISH **AS SHOWN**
 COUNTY **Kamilleroi/Landborough**
 LOCAL AUTHORITY **LORRAINE-TALAWAT**
 LAND AGENTS/WORKING DISTRICT

EXAMPLE 6

Compiled Plan Unsurveyed Parcel (Located)**NOTES:**

1. There are no strict guidelines for the accuracy of the Metes and Bounds or Areas for unsurveyed Section 25 compiled plans.
2. Bearings, Distances and Areas should be shown to an accuracy which would reasonably reflect the "Control" from which this data is approximated.
3. The following scale of accuracies may be utilised as a guideline when approximating metes and bounds. Unsurveyed boundaries are shown as broken lines (Abt 12 mm long). Show 'Abt' on bearings and distances. Show 'Abt orig' on successive plans.

BEARINGS : Nearest 0° 15'

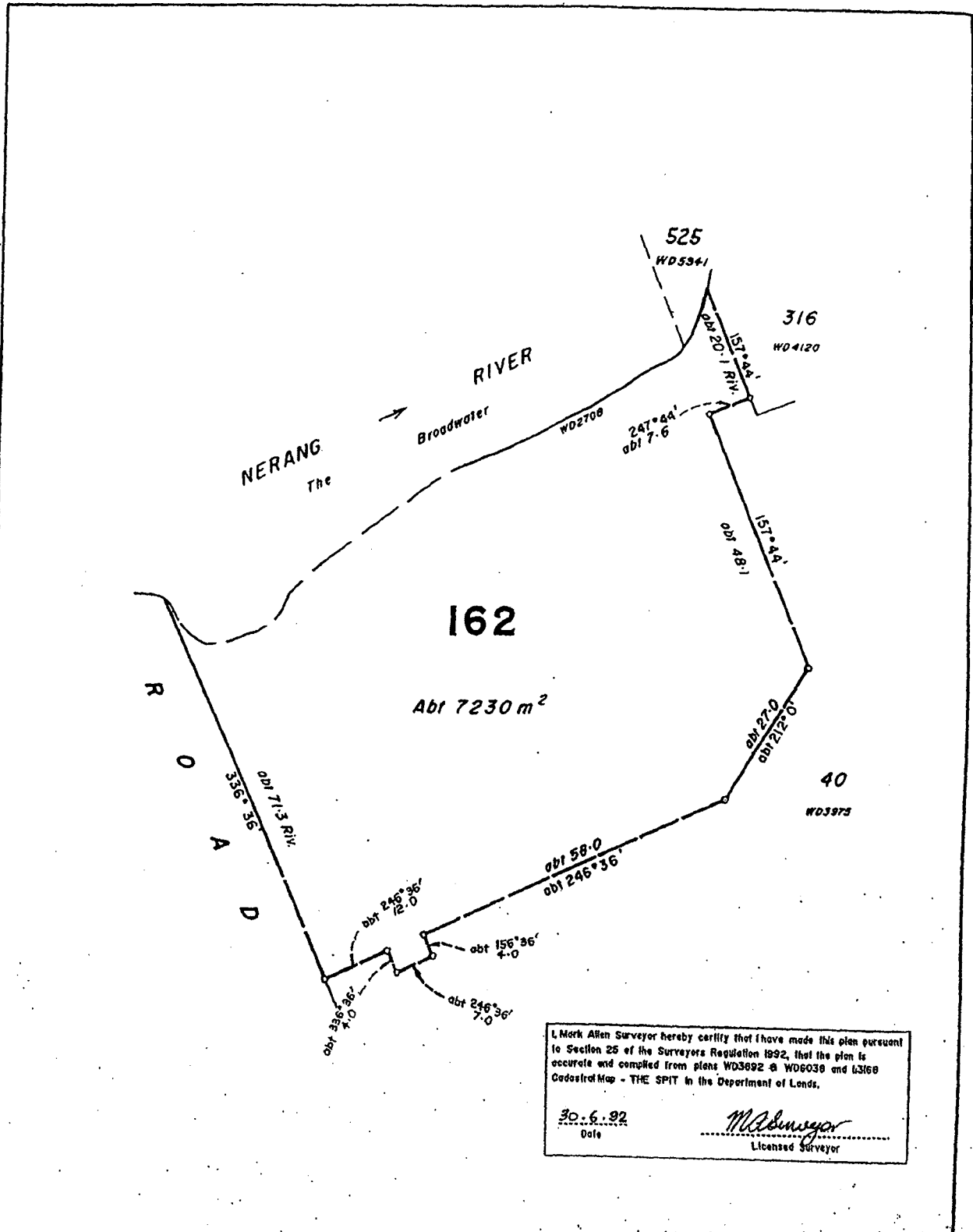
DISTANCES	(According to Scale of Plan)
UP to 1:1250	Nearest 0.5 metres
1:1500 to 1:2500	Nearest 1.0 metres
1:3000 to 1:8000	Nearest 2.0 metres
1:10000 to 1:25000	Nearest 10.0 metres
1:30000 to 1:80000	Nearest 20.0 metres
1:100000 to above	Nearest 50.0 metres

CLOSE RATIO:

It is desirable that a close ratio of not less than 1:2000 be achieved when compiling plans of Lots with unsurveyed boundaries.

4. Generally "Abt" areas are to be shown to no greater accuracy than three significant figures.
5. Parcel retains the most recent numerical identifier as the new description for the amended Lot.
6. Additional information eg. maps, aerial photography, sketches, reports etc. that is used in the compilation process is to be incorporated into the Form 18 certificate for cadastral plans.

Compiled Plan Unsurveyed Parcel (Located)



I, Mark Allen Surveyor hereby certify that I have made this plan pursuant to Section 25 of the Surveyors Regulation 1992, that the plan is accurate and compiled from plans WD3692 & WD6038 and L3160 Cadastral Map - THE SPIT in the Department of Lands.

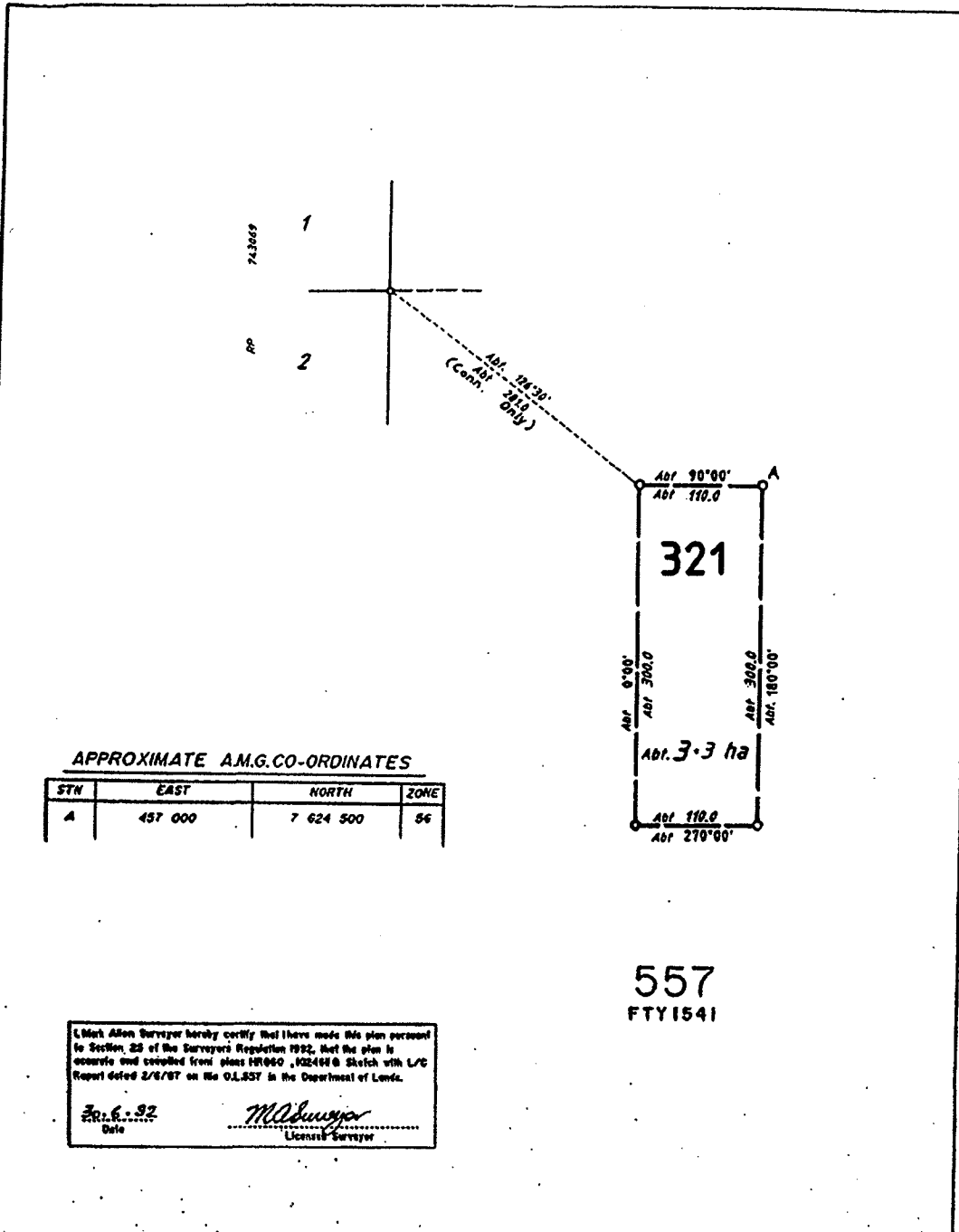
30.6.92
Date

M. Allen
Licensed Surveyor

<p>Jointly certify that I/the Company have surveyed the land comprised in this plan (either personally or by)</p> <p>For whose work I/the Company accept responsibility, that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on</p> <p>Licensed Surveyor/Director</p> <p>Director</p> <p>Date</p>	<p>PLAN OF Lot 162 Cancelling Lot 162 on plan WD6038 and Lot 310 on plan WD3892.</p>		<p>PARISH <u>GILSTON</u> COUNTY <u>WARD</u> LOCAL AUTHORITY <u>GOLD COAST C.C.</u> LAND AGENTS/MARKS DISTRICT</p>	
	<p>ORIGINAL PORTIONS 162 & 310</p>		<p>NO SURVEY RECORDS DEPOSITED</p>	
<p>MERIDIAN <u>CANT. VIDE</u> Plan <u>WD6038</u></p>	<p>MAP REF <u>THE SPIT</u></p>	<p>SCALE <u>1:000</u></p>	<p>FILE REF <u>SL40126</u></p>	<p>ENDORSED (REGISTERING DIST) <u>BRISBANE</u></p>

EXAMPLE 7

Compiled Plan Unserved Parcel (Isolated)



APPROXIMATE A.M.G.CO-ORDINATES

STN	EAST	NORTH	ZONE
A	457 000	7 624 500	56

I, Mark Allen Surveyor hereby certify that I have made this plan pursuant to Section 25 of the Surveyors Regulation 1992, that the plan is accurate and compiled from plans FTY960, K02468 Sketch with L/C Report dated 2/6/97 on the O.L.337 in the Department of Lands.

20.6.92
Date

M. Allen
Licenced Surveyor

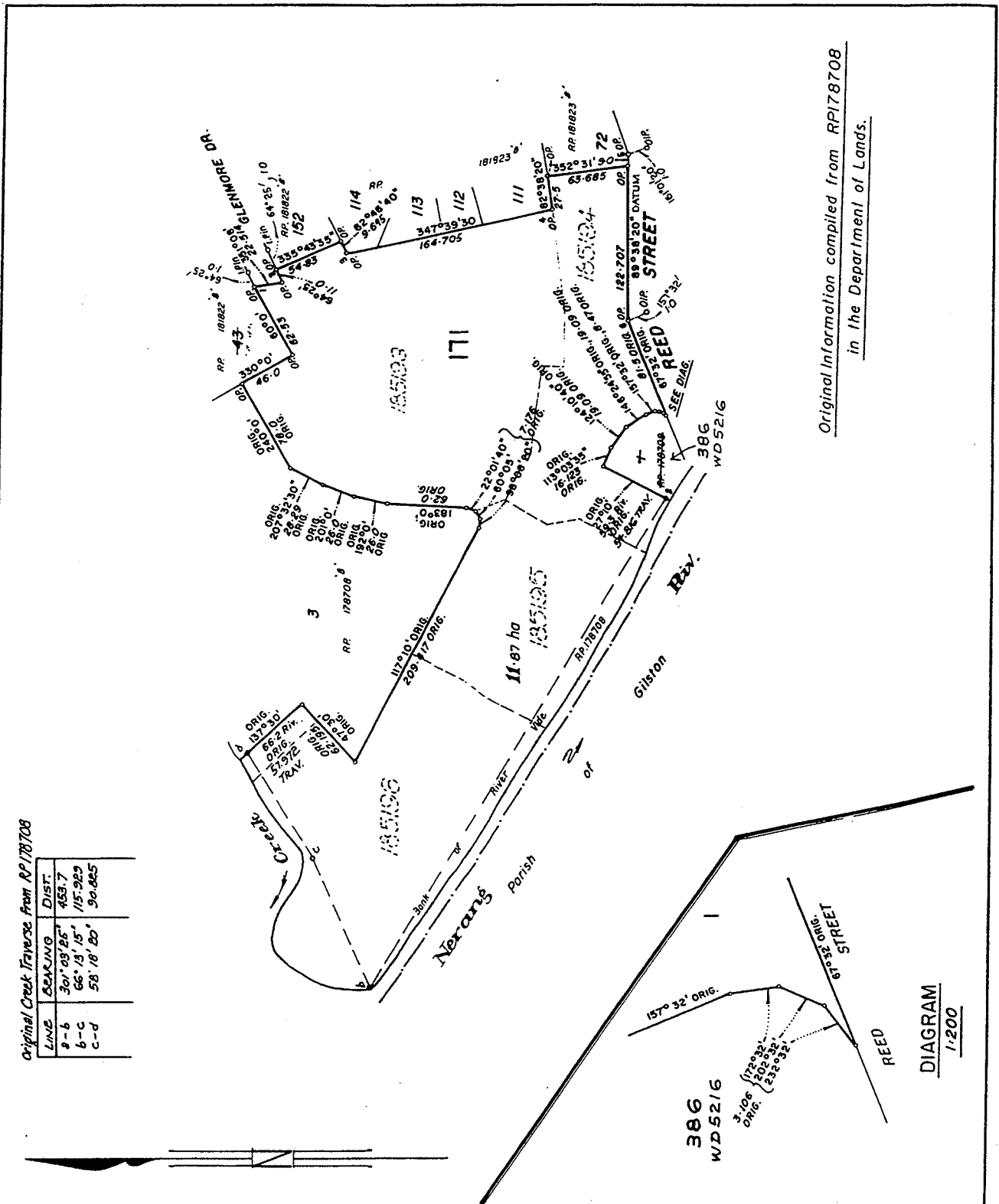
MERIDIAN : Approximate AMG (Zone 56)

<p>Surveyor certifies that I/the Company have surveyed and had compiled in this plan (either personally or for others work I/the Company accept responsibility), that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on _____</p> <p>Licensed Surveyor/ Director Date</p>	<p>PLAN OF Lot 321 Cancelling part of Lot 557 on plan FTY1541.</p>		<p>PARISH PRING COUNTY Herbert TOWN/Locality MT. COUPAGE LOCAL AUTHORITY BOWEN C.C. LAND ADMIN/ADMIN DISTRICT MINING FIELD</p>										
	<p>ORIGINAL</p> <table border="1"> <tr> <th>MERIDIAN As Shown</th> <th>MAP REF</th> <th>SCALE</th> <th>FILE REF</th> <th>REG SURVEY RECORDS DEPOSITED</th> </tr> <tr> <td></td> <td>8557</td> <td>1: 000</td> <td>Res 10/2</td> <td>ENDORSED REGISTERING DIST BRISBANE</td> </tr> </table>	MERIDIAN As Shown	MAP REF	SCALE	FILE REF	REG SURVEY RECORDS DEPOSITED		8557	1: 000	Res 10/2	ENDORSED REGISTERING DIST BRISBANE	<p>EXAMPLE 8</p>	
MERIDIAN As Shown	MAP REF	SCALE	FILE REF	REG SURVEY RECORDS DEPOSITED									
	8557	1: 000	Res 10/2	ENDORSED REGISTERING DIST BRISBANE									

NOTES

1. Connection required to a Cadastral point for "location" of Lot 321 for mapping purposes.
2. Approximate A.M.G. co-ordinates may be used to "locate" the land parcels.
3. Information given in the Surveyor's Certificate is to include all relevant compilation material used eg. Sketch with Report, Approval, Offer etc. (show date also) and Dept. A File Reference etc.
4. See notes with Example Plan No 7 for accuracies of Metes and Bounds and Areas.

Creek Traverse (Details from Previous Lot used for New Lot)

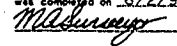


Original Information compiled from RPI78708
in the Department of Lands.

Original Creek Traverse from RPI78708

LINE	BEARING	DIST.
a-b	301° 03' 26"	453.7
b-c	66° 13' 15"	115.923
c-d	58° 18' 20"	90.865

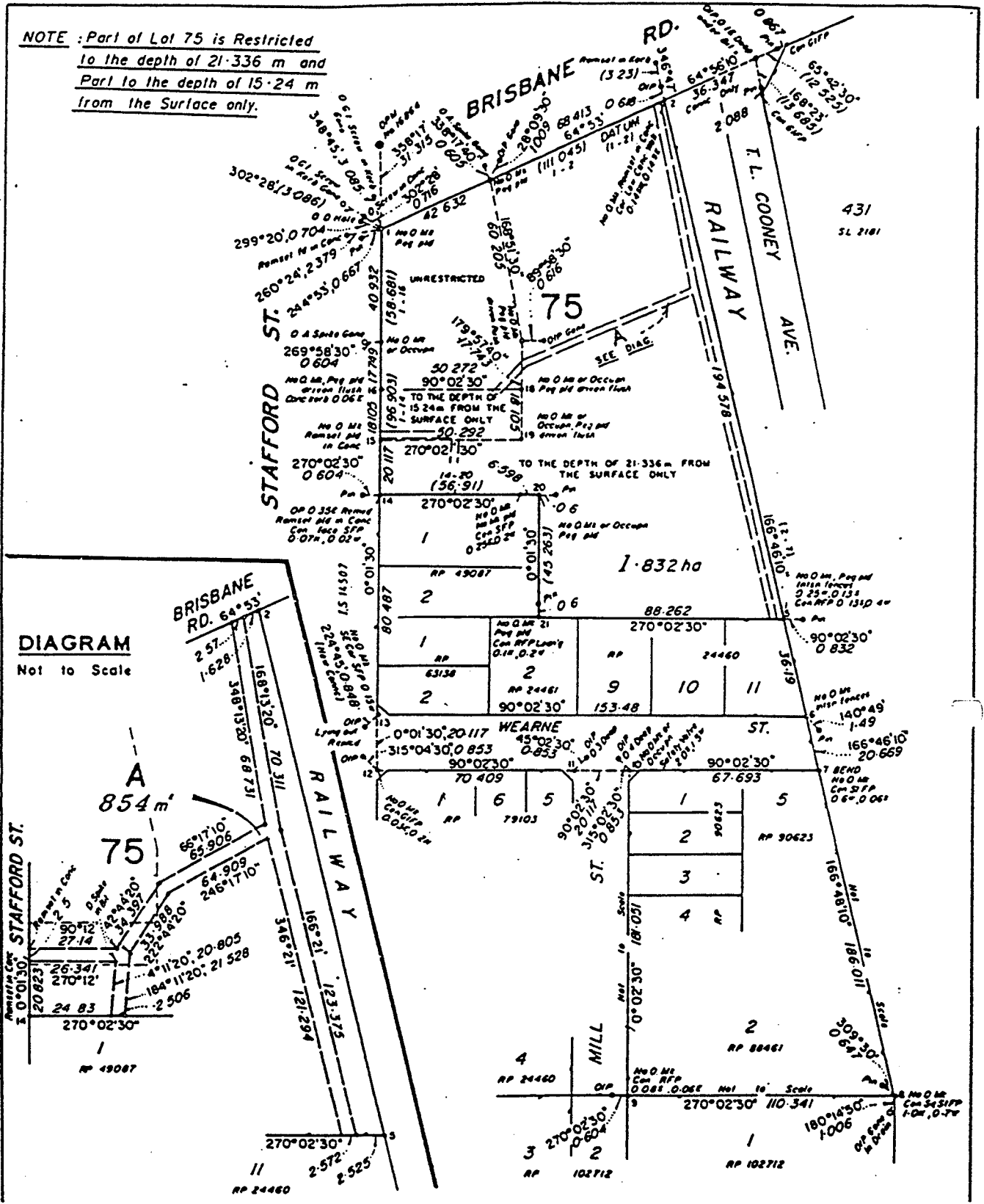
DIAGRAM
1:200

I, Mark Allan Surveyor hereby certify that I/the Company have surveyed the land comprised in this plan (either personally or by- for whose work I/the Company accept responsibility), that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 6/2/92.  Licensed Surveyor/ Director Date 15/2/92		PLAN OF Lot 171 Cancelling balance of Lot 2 on RPI78708		PARISH <u>NERANG</u> COUNTY <u>Ward</u> TOWN/LOCALITY <u>SOUTHPORT</u> LOCAL AUTHORITY <u>GOLD COAST C.C.</u> LAND AGENTS/MINING DISTRICT MINING FIELD	
ORIGINAL PORTION 32		YES SURVEY RECORDS DEPOSITED		ENDORSED REGISTERING DIST	
MERIDIAN of RPI78708	MAP REF Town Map Southport Sh 4	SCALE 1: 000	FILE REF	BRISBANE	
				<h2>EXAMPLE 9</h2>	

NOTE:
1. Area calculated using creek traverse information from previous plan

Depth Restrictions (Title to Varying Depths)

NOTE : Part of Lot 75 is Restricted to the depth of 21.336 m and Part to the depth of 15.24 m from the Surface only.



<p>I Mark Allan Surveyor hereby certify that I and my assistants have surveyed the land comprised in this plan (either personally or under my supervision) and that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 5/2/92. Mark Allan Licensed Surveyor/Drafter Date 16/2/92</p>		<p>PLAN OF Lot 75 in Strata and Proposed Easement A in Strata in Lot 75 Cancelling Lot 2 on RP24456 (To the Depth of 15.24m from the surface only), Lot 18 2 on RP52307 (To the Depth of 21.336m from the surface only), Lot 2 on RP24457, Lot 2 on RP24458 (To the Depth of 21.336m from the surface only), Lot 2 on RP24459 (To the Depth of 21.336m from the surface only) and Lot 2 on RP44829 (To the Depth of 21.336m from the surface only) and Lot 2 on RP44829.</p> <p>ORIGINAL PORS 374,375,376, 8, 382</p>		<p>PARISH IPSWICH COUNTY Stanley LOCAL AUTHORITY BLACKSTONE LOCAL AUTHORITY IPSWICH, C.C. LAND ACQUISITION DISTRICT SHOWN FIELD</p>	
<p>MERIDIAN of RP44829</p>	<p>MAP REF 9543 - 43</p>	<p>SCALE 1: 000</p>	<p>FILE REF</p>	<p>ENDORSED REGISTERING DIST BRISBANE</p>	<p>EXAMPLE 10</p>

Note:

1. Demarcation of change in depth restriction to be marked on the surface

Council of the _____ of _____ certifies that all the requirements of this Council, the Local Government Acts and all By-Laws have been complied with and approves this Plan of Subdivision

Dated this _____ day of _____ 19____
 Mayor or Chairman
 Town or Shire Clerk

Previous Title

Allocation			To the depth of		
Volume	Folio	Lots	Lots	Alot.	

I/We

(Names in full)

- as Proprietor/s of this land.
 - as Lessee/s of Miner's Homestead
- agree to this plan and dedicate the new road as shown hereon to public use.

Signature of • Proprietor/s • Lessee/s
 • Rule out which is inapplicable.

This survey has been examined and may be used for land dealings.

Surveyor General

Date

Lot	Vol.	Fol.	Lot	Vol.	Fol.	Lot	Vol.	Fol.

Lodged by

Received
 Registrar of Titles

Fees Payable

- Postal fee and postage
- Logt. Exam. & Ass.
- New Title
- Entd. on Deeds
- Photo Fee
- Total
- Short Fees Paid

File Ref.
 Deposited / /
 Audited / /
 Passed / /
 Survey Records: File/Field Notes
 Charted / /
 Original Grant

Particulars entered in Register Book

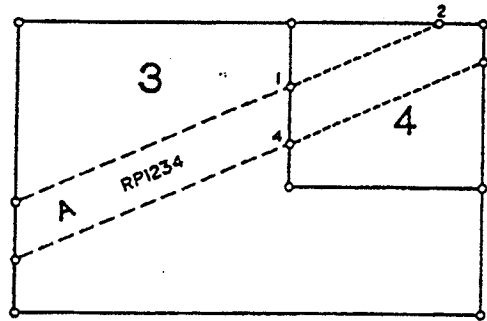
Vol. Folio

at

REGISTRAR OF TITLES

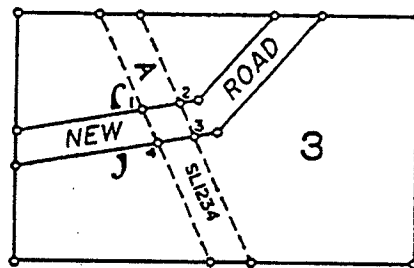
Plan Requirements For Actions Affecting Easements

Area Resumed by The State (lot 4) in Freehold or State Land (including Main Road Resumptions)



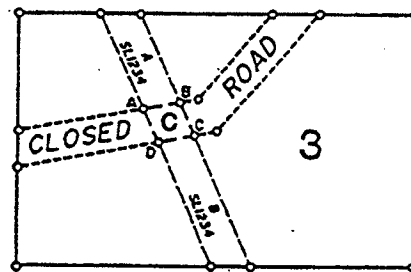
Area to be Excised from EmtA on RPI234 (1-2-3-4).....0000 m

Road To Be Opened (including area to be excised) at the Instance of Local Authority in F^hold & State Land



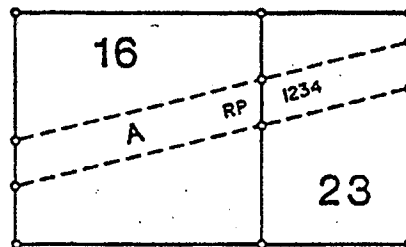
Area of EmtA on plan SL1234 affected (1-2-3-4).....000m

Road To Be Closed (including Area To Be Added)



Plan required of Proposed Easement C (A-B-C-D) to register easement rights over the old road.

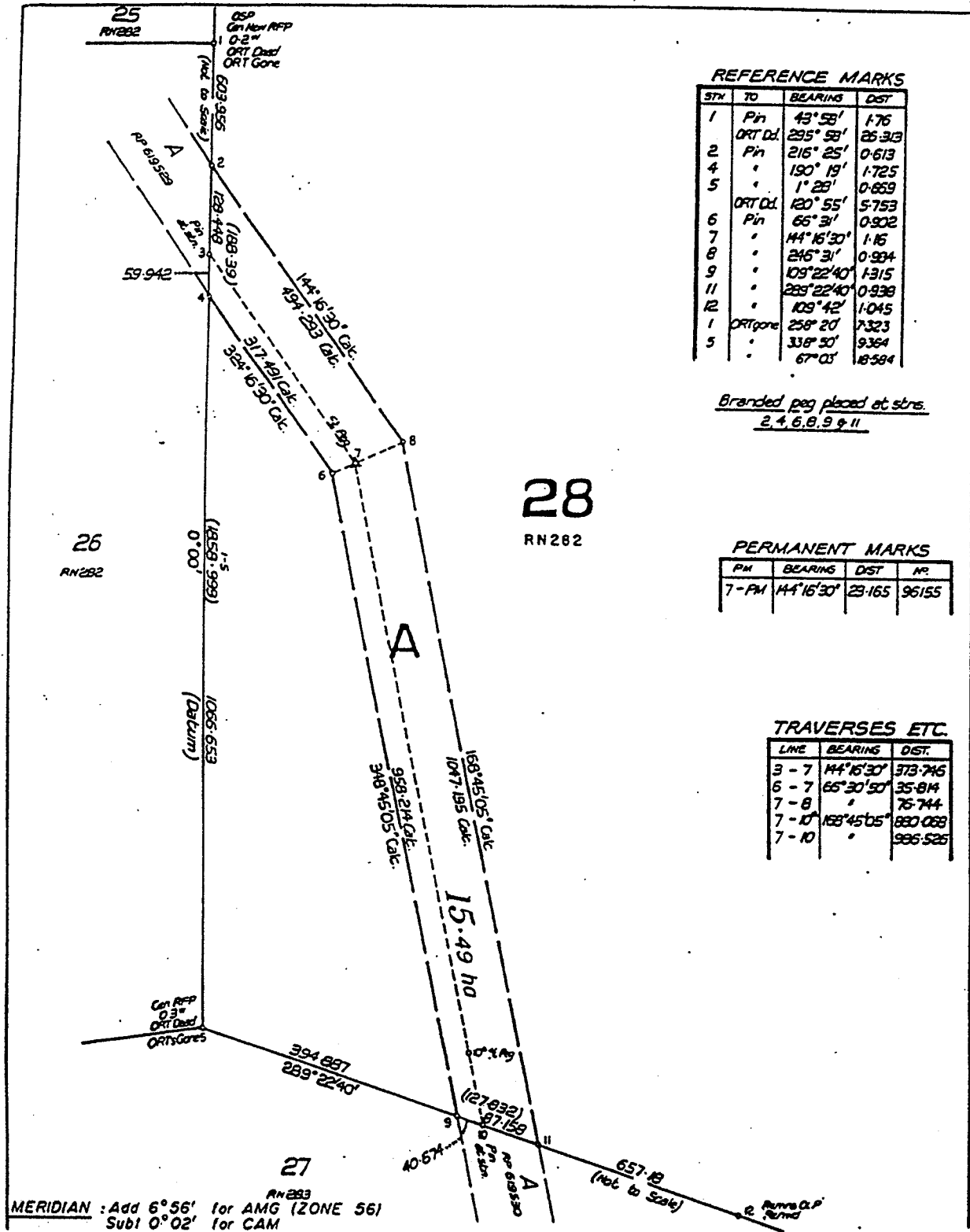
Subdivision (Freehold And Leasehold Land)



NOTES:

1. If the same type of Tenure is to issue over the Lot being sold (Lot 23) no new Easement or Easement action is required.
2. If an absolute surrender of Lot 23 to the State has taken place and a new lease of a different type is to issue thereover, then a new plan of easement is required in both Lots 16 and 23.
3. See also Easements Dept. A requirements E3 1.33.

Easements



REFERENCE MARKS

STN	TO	BEARING	DIST
1	Pin	43° 58'	1.76
	ORT Dd.	295° 58'	25.313
2	Pin	216° 25'	0.613
4	"	190° 19'	1.725
5	"	1° 28'	0.659
	ORT Dd.	120° 55'	5.753
6	Pin	66° 31'	0.902
7	"	44° 16' 30"	1.16
8	"	245° 31'	0.934
9	"	109° 22' 40"	1.315
11	"	289° 22' 40"	0.938
12	"	109° 42'	1.045
1	ORT gone	258° 20'	7.323
5	"	338° 30'	9.364
	"	67° 03'	18.584

Branded peg placed at stns.
2, 4, 6, 8, 9 & 11

PERMANENT MARKS

PM	BEARING	DIST	Nº
7-PM	44° 16' 30"	23.165	96155

TRAVERSES ETC.

LINE	BEARING	DIST.
3-7	44° 16' 30"	373.746
6-7	65° 30' 50"	35.814
7-8	"	76.744
7-10	168° 45' 05"	880.088
7-10	"	986.525

MERIDIAN : Add 6° 56' for AMG (ZONE 56)
Subl 0° 02' for CAM

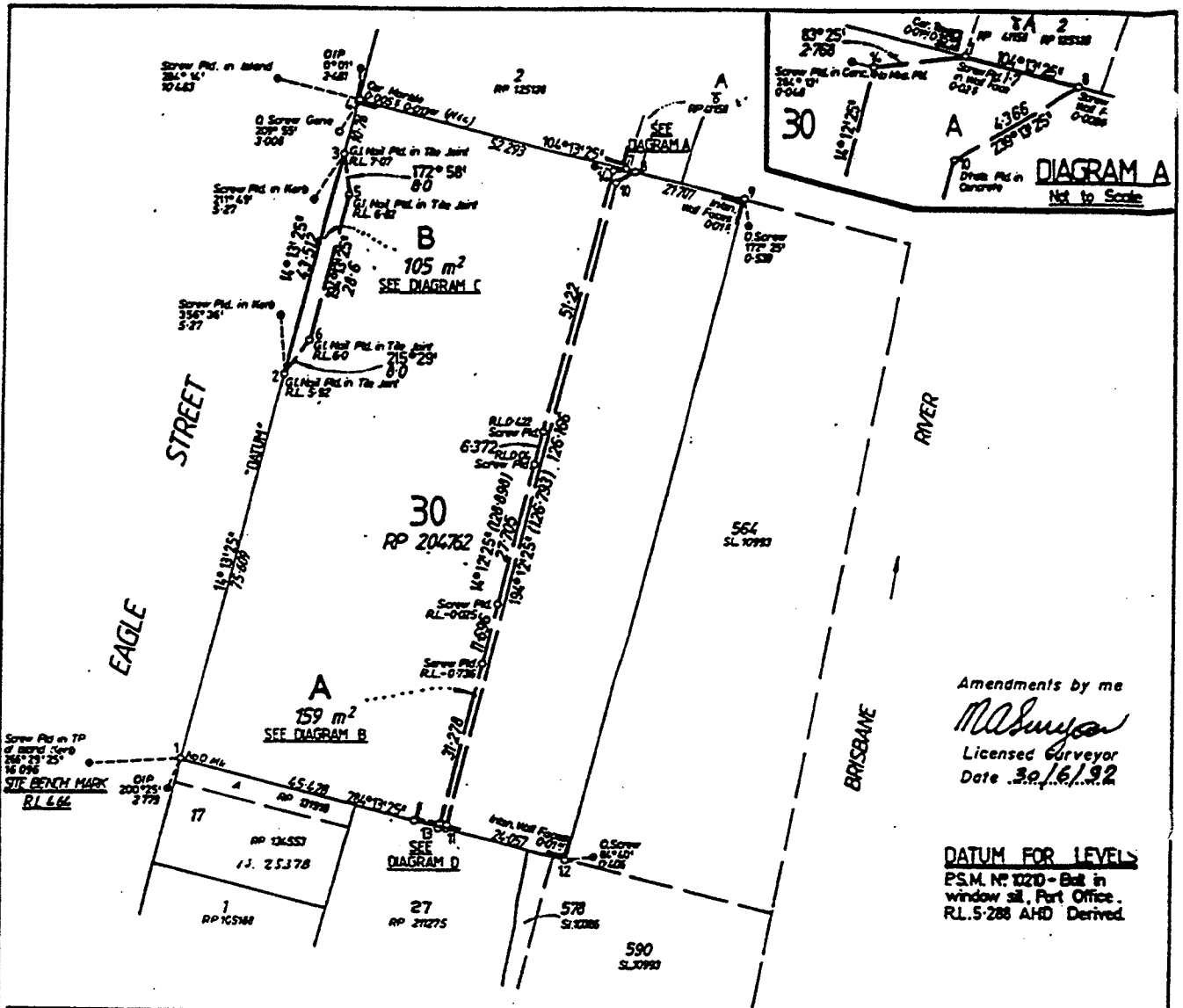
<p>I Mark Allan Surveyor</p> <p>Surveyor certify that I/the Company have surveyed the land comprised in this plan (unless otherwise stated)</p> <p>and that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 5/2/92.</p> <p><i>Mark Allan</i> Licensed Surveyor/Drafter Drafter Date 15/2/92</p>	<p>PLAN OF Proposed Easement A in Lot 28 on plan RN282.</p>		<p>PARISH.....GELBERA..... COUNTY.....RAGLAN..... LOCAL AUTHORITY.....MT. MORGAN.....S.C..... LOCAL AUTHORITY/REGISTRY DISTRICT.....</p>												
	<p>ORIGINAL PORTION 28</p> <table border="1"> <thead> <tr> <th>MERIDIAN AS SHOWN</th> <th>MAP REF</th> <th>SCALE</th> <th>FILE REF</th> </tr> </thead> <tbody> <tr> <td>AS SHOWN</td> <td>8950 - 2</td> <td>1: 000</td> <td>F35/8749</td> </tr> </tbody> </table>		MERIDIAN AS SHOWN	MAP REF	SCALE	FILE REF	AS SHOWN	8950 - 2	1: 000	F35/8749	<p>TITLE SURVEY RECORDS DEPOSITED</p> <table border="1"> <thead> <tr> <th>ENDORSED</th> <th>REGISTERING DIST</th> </tr> </thead> <tbody> <tr> <td></td> <td>BRISBANE</td> </tr> </tbody> </table>		ENDORSED	REGISTERING DIST	
MERIDIAN AS SHOWN	MAP REF	SCALE	FILE REF												
AS SHOWN	8950 - 2	1: 000	F35/8749												
ENDORSED	REGISTERING DIST														
	BRISBANE														

EXAMPLE 11

NOTES:

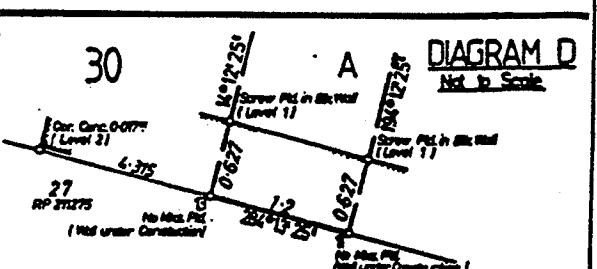
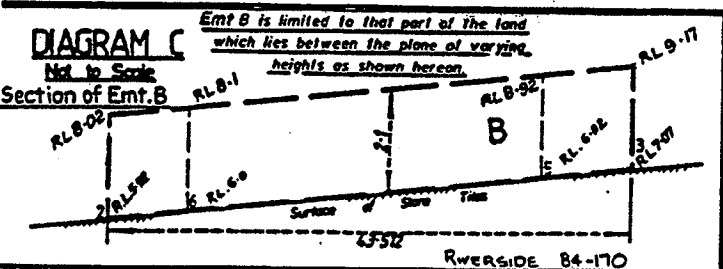
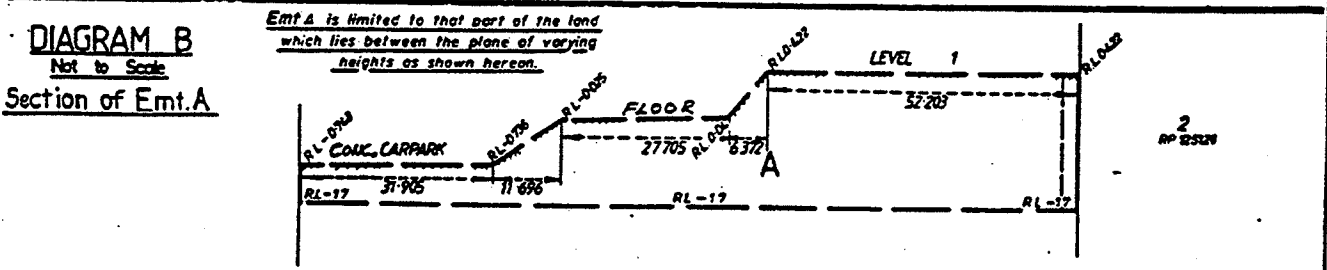
- 1.
2. The wording in the Title Block and full description are shown on the face of the plan.
3. Surveyed or deduced distances must be shown to a cadastral corner when the Easement crosses a subject boundary.
4. Alpha descriptors should not be repeated in any one parcel.

Easement with Height Restrictions



Amendments by me
M. Sweeney
 Licensed Surveyor
 Date 30/6/92

DATUM FOR LEVELS
 P.S.M. No. 0220 - Bolt in window sill, Post Office.
 R.L. 5-288 AHD Derived.



PLAN OF Proposed Emts A & B in Strata in Lot 30 on RP204762.

1. Mark Allan Surveyor
 I, Mark Allan Surveyor, do hereby certify that this plan has been prepared in accordance with the provisions of the Survey Act 1982 and that the plan is correct, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 6/2/92.

Parish NORTH BRISBANE COUNTY Stanley
 City of BRISBANE
 LOCAL AUTHORITY BRISBANE C.C.
 LAND ACQUISITION DISTRICT
 SHIRE FILE

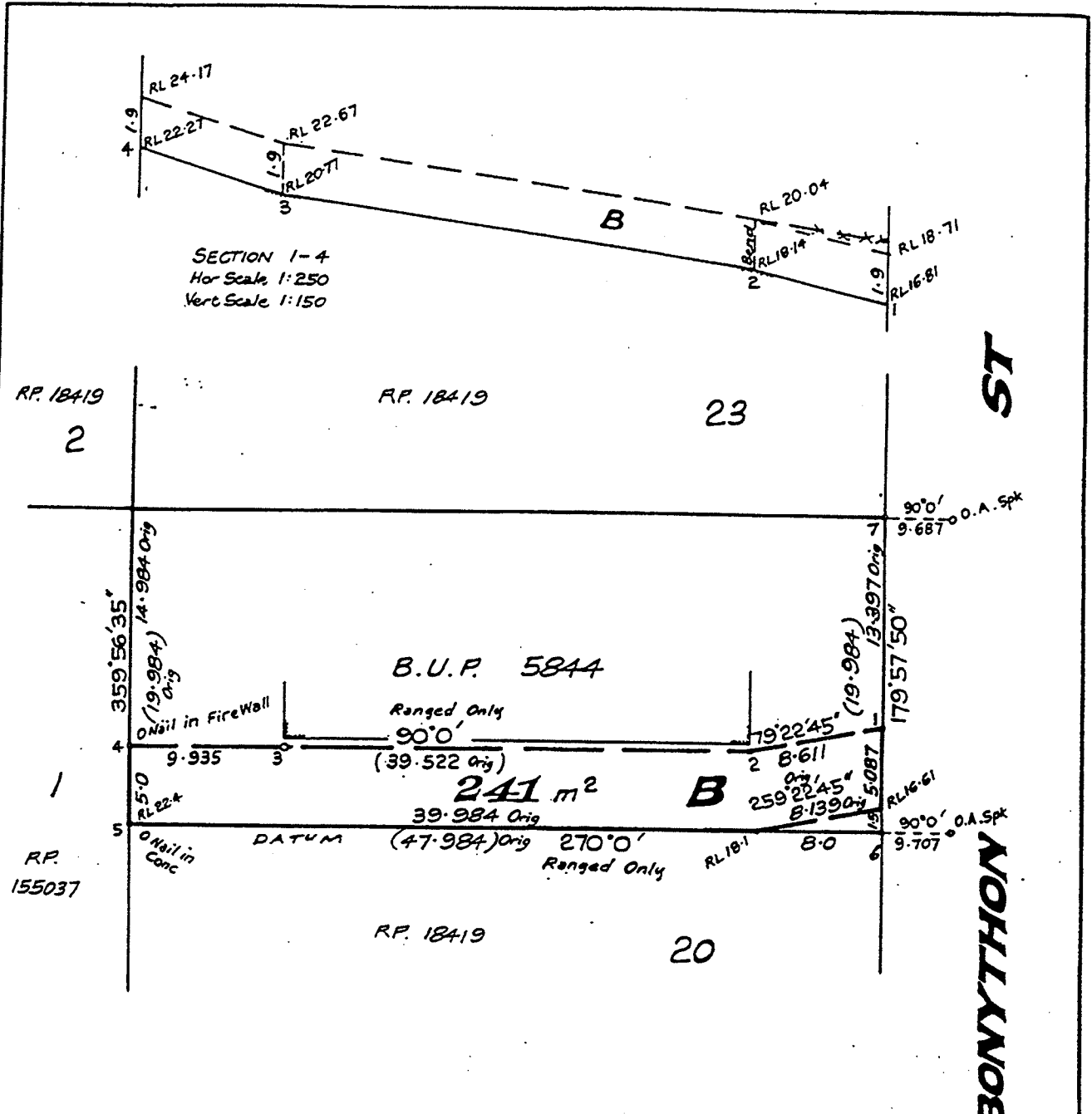
ORIGINAL Allots 4-1020822 of Sect 32

MERIDIAN of RP204762	MAP REF C.C.B	SCALE 1: 000	FILE REF	YES SURVEY RECORDS DEPOSITED	ENDORSED REGISTERING DIST BRISBANE
----------------------	---------------	--------------	----------	------------------------------	------------------------------------

Drawn Date 15/2/92

EXAMPLE 12

Easement in BUP with Height Restriction



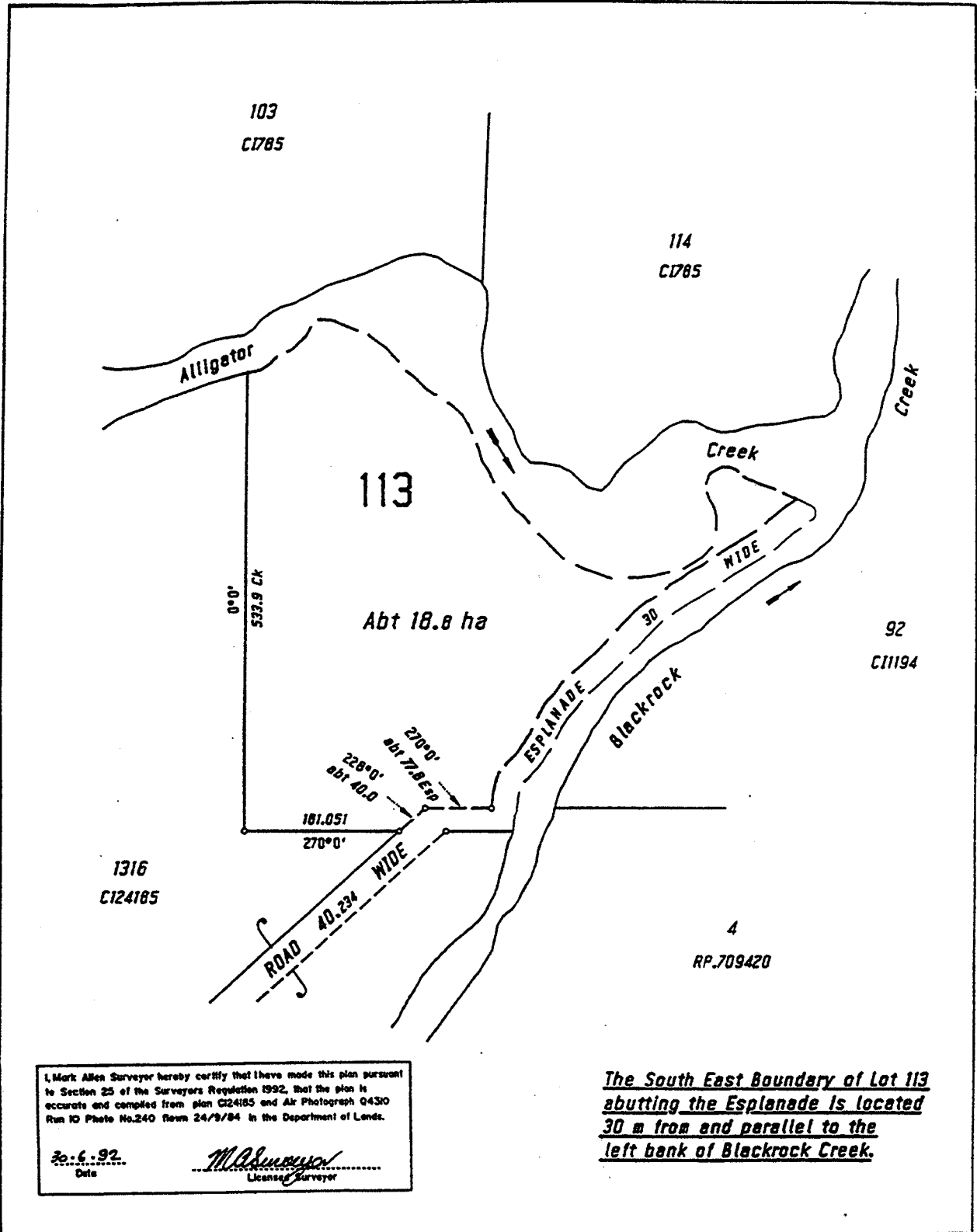
Amendments by me
M. Adams
Licensed Surveyor
Date 3/16/97

DATUM FOR LEVELS
PSM 7544
Located in Roblane St Windsor
RL23.209 AHD (Der)

Emt B is limited to that part of the land which lies between the plane of varying heights as shown hereon.

<p>I, Mark Allan Surveyor do hereby certify that I/the Company have surveyed the land comprised in this plan (unless otherwise stated) and that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 5/12/92</p> <p><i>M. Allan</i> Licensed Surveyor/ Director Date 15/2/92</p>		<p>PLAN OF Proposed Easement B in Strata in Common Property on BUP5844.</p>		<p>PARISH ENOGGERA COUNTY Stanley LOCALITY WINDSOR LOCAL AUTHORITY BRISBANE C.C. LAND ACQUISITION DISTRICT SHIRE FIELD</p>	
<p>ORIGINAL ALLOT 10</p>		<p>YES SURVEY RECORDS DEPOSITED</p>		<p>BRISBANE</p>	
MERIDIAN of RP18419	MAP REF C.C.67	SCALE 1: 000	FILE REF	ENDORSED	REGISTERING DIST BRISBANE
					EXAMPLE 13

Esplanades (Unsurveyed)



I, Mark Allen Surveyor hereby certify that I have made this plan pursuant to Section 25 of the Surveyors Regulation 1992, that the plan is accurate and compiled from plan C124185 and Air Photograph Q430 Run ID Photo No.240 flown 24/9/84 in the Department of Lands.

20.6.92
Date

M. Allen
Licensed Surveyor

The South East Boundary of Lot 113 abutting the Esplanade is located 30 m from and parallel to the left bank of Blackrock Creek.

hereby certify that I/the Company have surveyed and completed this plan (other persons) by for whose work I/the Company accept responsibility, that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed Licensed Surveyor/ Director Director Date		PLAN OF Lot 113 Cancelling Lot 113 on plan C124185.		PARISH <u>ST. HELENS</u> COUNTY <u>Carlisle</u> TOWN/LOCALITY <u>BLACKROCK</u> LOCAL AUTHORITY <u>PIONEER S.C.</u> LAND AGENTS/AGENCY DISTRICT	
ORIGINAL PORTION <u>113</u>		SURVEY RECORDS DEPOSITED		ENDORSED REGISTERING DIST BRISBANE	
MERIDIAN CANT Vide plan C124185	MAP REF 9543 - 43	SCALE 1: 000	FILE REF SL30894	EXAMPLE 14	

- NOTES**
- Statement on face of plan for location of Esplanade boundary.
 - Refer to Surveyors Regulations and Recommended Practices for Survey Procedures.
 - See also notes with Example Plan No 7

Excision (From State Tenure added to State Tenure)

AREA TO BE EXCISED FROM
LOT 2 on plan C25516 and
ADDED TO LOT 3 on plan C25519
(7-3-4-6).....1400m²

REFERENCE MARKS

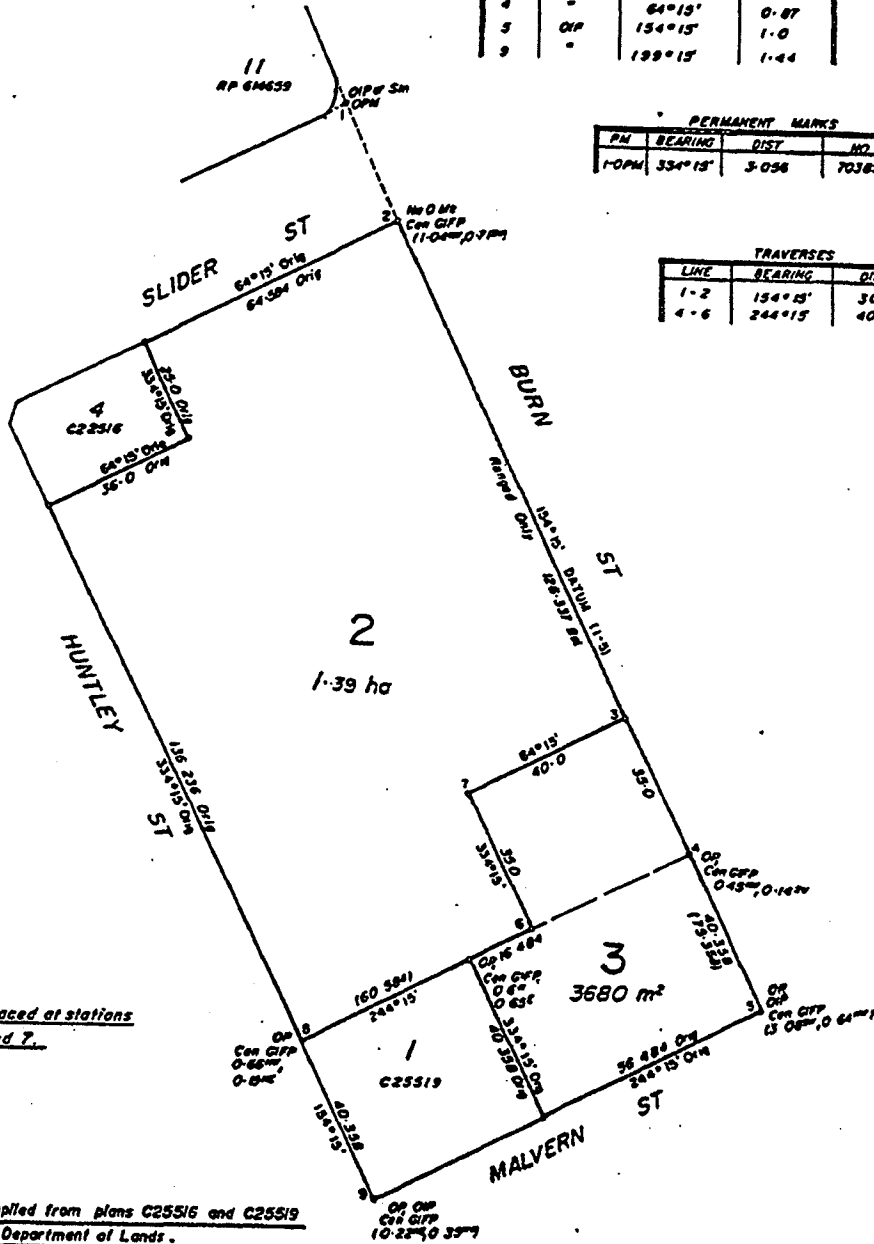
STN	TO	BEARING	DIST
3	PM	64° 15'	0.95
4	-	141° 04'	4.109
5	OP	64° 15'	0.87
6	-	154° 15'	1.0
9	-	199° 15'	1.44

PERMANENT MARKS

PM	BEARING	DIST	NO
1-OPM	334° 15'	3.056	70385

TRAVERSES

LINE	BEARING	DIST
1-2	154° 15'	30.175
4-6	244° 15'	40.0



Branded Peg placed at stations
3, 6 and 7.

Original information compiled from plans C25516 and C25519
 in the Department of Lands.

I, Mark Allan Surveyor,
 hereby certify that I/the Company have surveyed the
 land described in this plan (either personally or by
 sub-contractors) and that the said survey was
 performed in accordance with the Surveyors Act and
 the Surveyors Regulations and that the said survey
 was completed on 5/22/92.
 Mark Allan
 Licensed Surveyor/
 Director
 Date 16/2/92

PLAN OF Lots 2 & 3
 Cancelling Lot 2 on plan C25516 and
 Lot 3 on plan C25519.

PARISH KHOSH BULDUK
 COUNTY Talbot
 LOCAL AUTHORITY CAPELLA
PEAK DOWNS S.C.

ORIGINAL PORTION 10

MERIDIAN	MAP REF	SCALE	FILE REF
CAM 1984	551 - 44342	1: 000	Res 1900 - 66

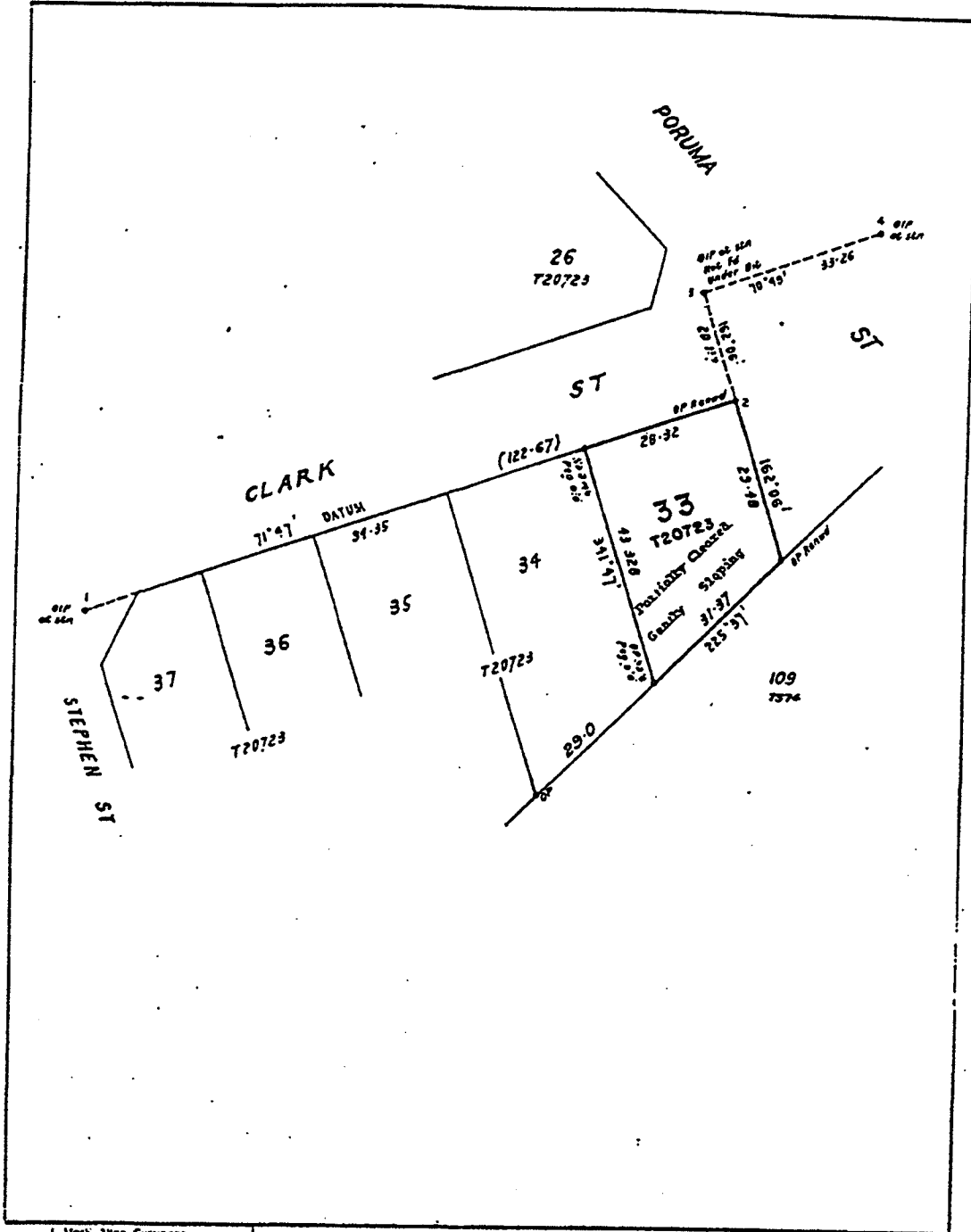
ENDORSED	REGISTERING DIST
	BRISBANE

EXAMPLE 15

NOTES:

1. Wording of Action Statement and full description of land involved.
2. Parcels retain their previous numerical identifier as the new description for the amended Lots.

Identification Survey

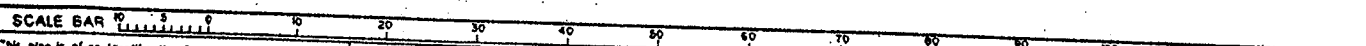
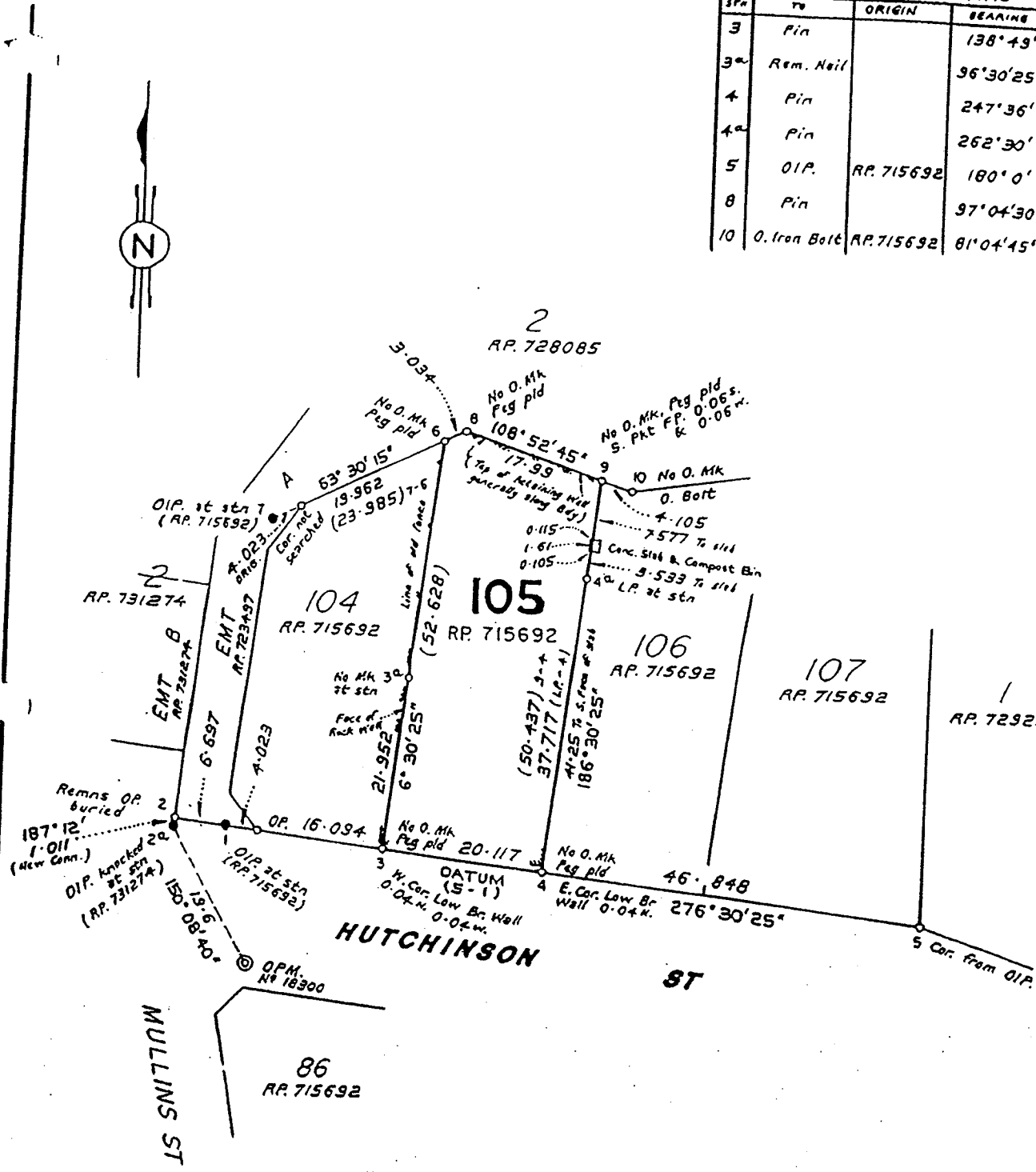


<p>Surveyor's Declaration</p> <p>I, Mark Allen Survekor, Surveyor, certify that the Compendium have surveyed the land depicted in the plan in accordance with the provisions of the Survey Act 1982.</p> <p>and that the plan is correct, and that the survey was carried out in accordance with the Survey Act and the Survey Regulations and that the survey was completed on 15/2/92.</p> <p><i>Mark Allen Survekor</i> Surveyor</p> <p>Drawn 15/2/92 Date</p>		<p>PLAN OF IDENTIFICATION SURVEY of Lot 33 on plan T20723.</p>		<p>PARISH <u>PORT KENNEDY</u> COUNTY <u>TORRES</u> TERRITORY <u>THURSDAY ISLAND</u> LOCAL AUTHORITY <u>TORRES S.C.</u></p>	
<p>ORIGINAL <u>PORTION 26</u></p>		<p>TITLE SURVEY RECORDS DEPOSITED</p>		<p>OTHER FILE</p>	
<p>MERIDIAN C&M T20723</p>	<p>MAP REF Town Map</p>	<p>SCALE 1: 000</p>	<p>FILE REF</p>	<p>ENDORSED</p>	<p>REGISTERING DIST BRISBANE</p>
<p>EXAMPLE 16</p>					

- NOTE:**
1. Full description is shown on the subject Lot and in the Title of the plan in subject style (i.e. Lot on plan description).
 2. The Department encourages the use of Common Plan Form for these surveys, however Identification Surveys lodged as sketch plans and survey records will be accepted. Plans are to be legible and conform with A2, A3 or A4 size.
 3. Identification Surveys will not be registered, nor examined at the time of lodgement. However, an option to examine the plan will be reserved by the Department.
 4. Identification Surveys will be catalogued eg. IS489072, charted on the Departmental working map, noted on the Computerised Inventory of Survey Plans (CISP) and microfilmed.
 5. Map Reference should be shown on Identification Surveys lodged as a sketch plan.

Identification Survey

STN	TO	ORIGIN	BEARING	DIST.
3	Pin		138° 49'	1.326
3 ^a	Rem. Nail		36° 30' 25"	1.245
4	Pin		247° 36'	1.69
4 ^a	Pin		262° 30'	2.69
5	O.P.	RP. 715692	180° 0'	0.614
8	Pin		97° 04' 30"	7.252
10	O. Iron Bolt	RP. 715692	81° 04' 45"	1.03



This plan is of an Identification Survey only, and as such is not examined for registration. It is lodged with the Department of Lands for survey information only. In accordance with the Surveyors Regulation, 1992, no responsibility can therefore be accepted for any future alteration in boundary definition, which may result from surveys of adjoining lands or subsequent registration of new survey plans.

I, Mark Allan Survevor,
 hereby certify that I/the Company have surveyed the land comprised in this plan (either personally or by-
~~whomsoever was with the Company except responsibility~~)
 that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 6/12/92.

M.A. Survevor Licensed Surveyor / Director
 29/10/92 Director Date

MARK SURVEYOR
 CONSULTING SURVEYOR AND PROPERTY DEVELOPMENT CONSULTANT
 247 HARLEY ST CAIRNS
 P.O. Box 1080 Cairns 4870
 Phone (070) 56000 Fax (070) 516001

CLIENT
 O.S. & R.F. POST

DRAWN O/P 24/9/92 F.B.K. JOB No
 CHECKED PEG 26/9/92 140 92/1111

PLAN OF IDENTIFICATION SURVEY OF
 Lot 105 on RP715692

ORIGINAL PORTION 291

MERIDIAN of RP715692	MAP REF 8064-321/3	SCALE 1: 000	FILE REF
NO. SURVEY RECORDS DEPOSITED		ENDORSED	REGISTERING DIST
			D O L

PARISH CAIRNS
 COUNTY Nares
 TOWN/LOCALITY CITY OF CAIRNS
 LOCAL AUTHORITY CAIRNS C.C.
 LAND AGENTS/MINING DISTRICT
 MINING FIELD

EXAMPLE 17

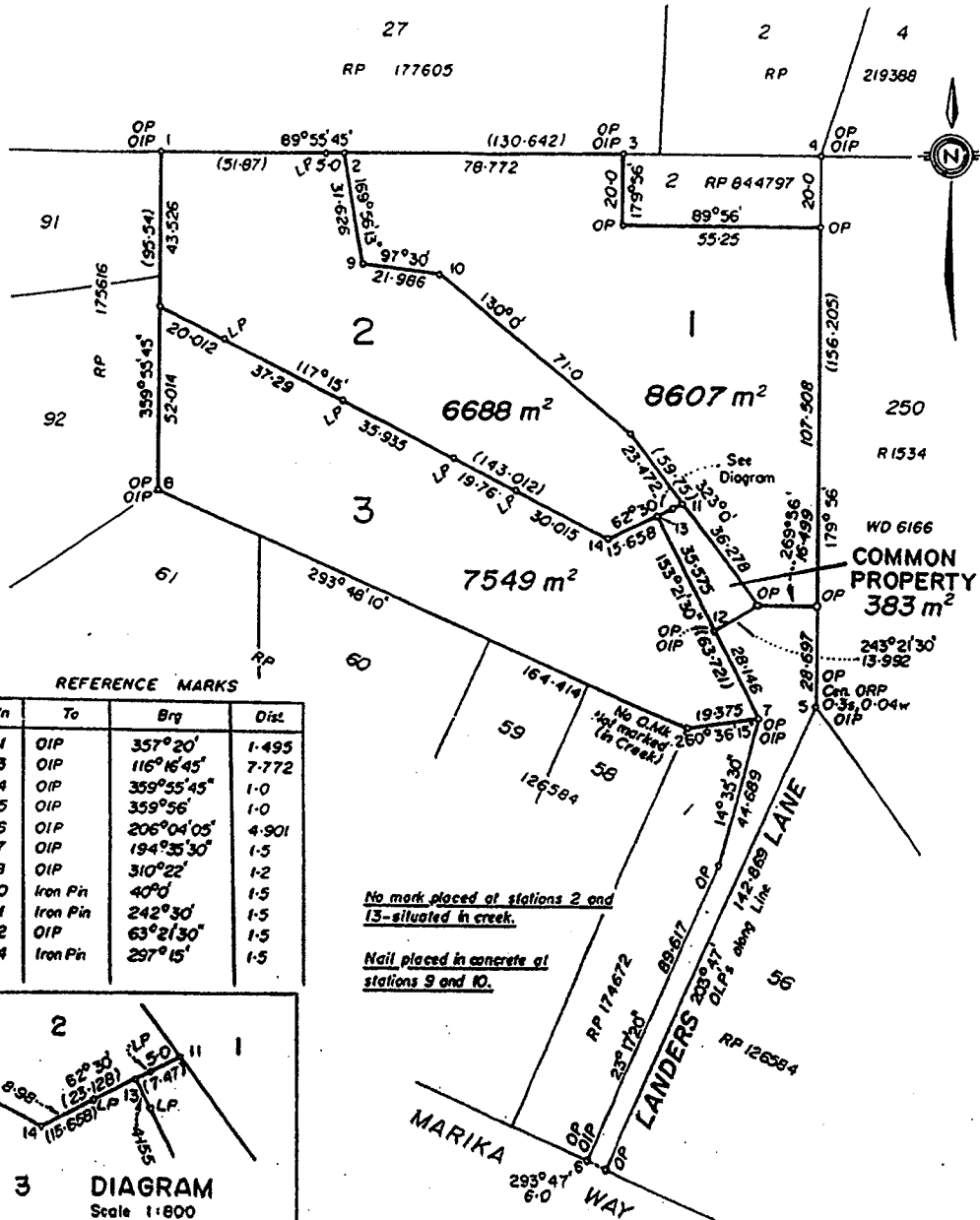
Group Title Plan

Building Units and Group Titles Act 1980 — 1990
BUILDING UNITS AND GROUP TITLES REGULATIONS 1980

Name of Parcel "LANDERS LANE"

Regulation 8(1)
Sheet No. 2 of 6 Sheets

GROUP TITLES PLAN NO.

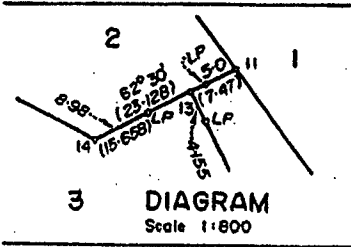


REFERENCE MARKS

Sta	To	Brg	Dist
1	OIP	357°20'	1.495
3	OIP	116°16'45"	7.772
4	OIP	359°55'45"	1.0
5	OIP	359°56'	1.0
6	OIP	206°04'05"	4.901
7	OIP	194°35'30"	1.5
8	OIP	310°22'	1.2
10	Iron Pin	40°0'	1.5
11	Iron Pin	242°30'	1.5
12	OIP	63°21'30"	1.5
14	Iron Pin	297°15'	1.5

No mark placed at stations 2 and 13—situated in creek.

Nail placed in concrete at stations 9 and 10.



SCALE: 1:800

SIGNATURE OF REGISTERED PROPRIETOR:

EXAMPLE 18

[Signature]
Shire Clerk
Town
Council of the Shire of Albert

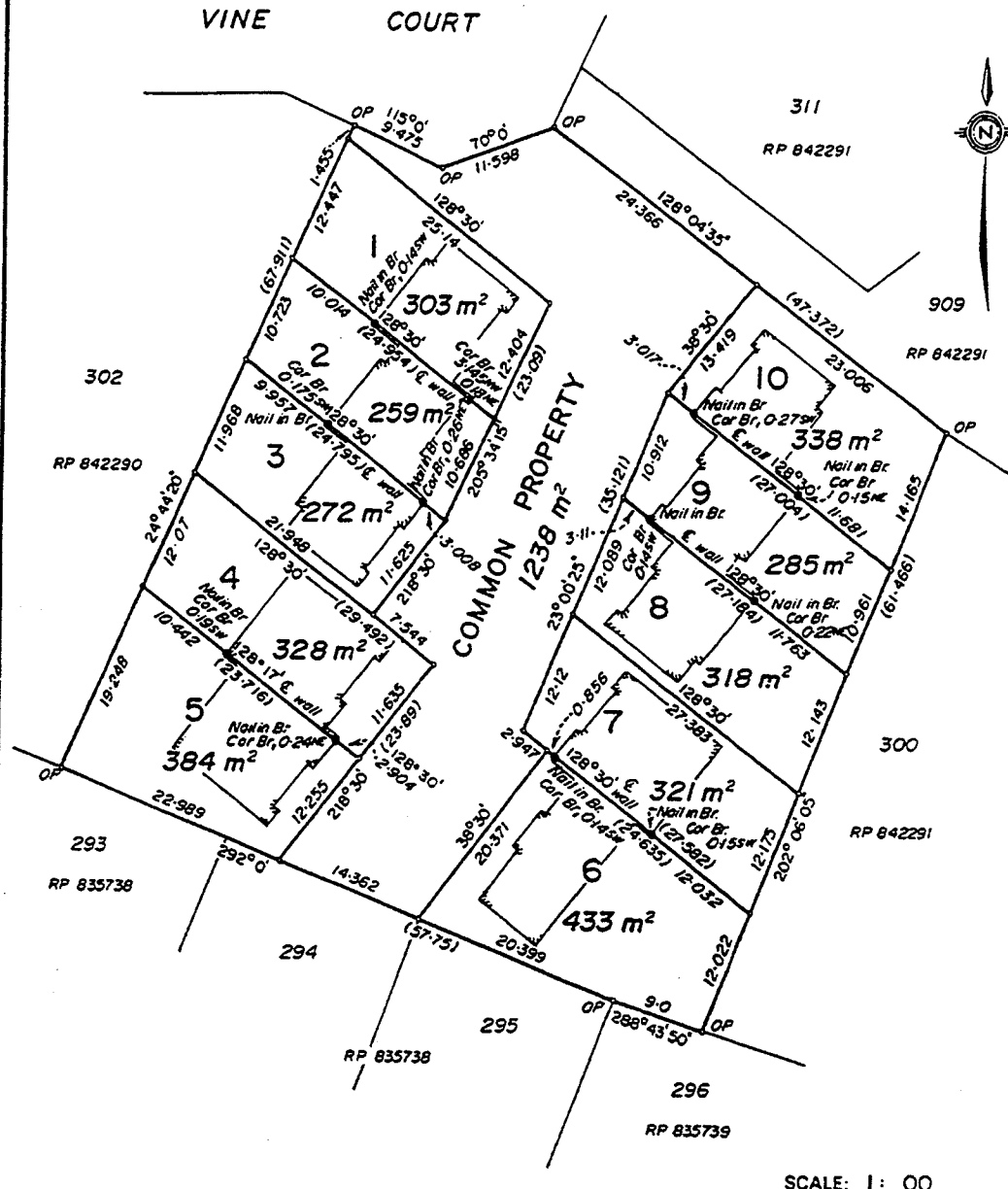
Group Title Plan

Building Units and Group Titles Act 1980 — 1990
BUILDING UNITS AND GROUP TITLES REGULATIONS 1980

Name of Parcel: "IRON RANGE"

Regulation 8(1)
Sheet No. 2 of 6 Sheets

GROUP TITLES PLAN NO.



SCALE: 1: 00

SIGNATURE OF REGISTERED PROPRIETOR:



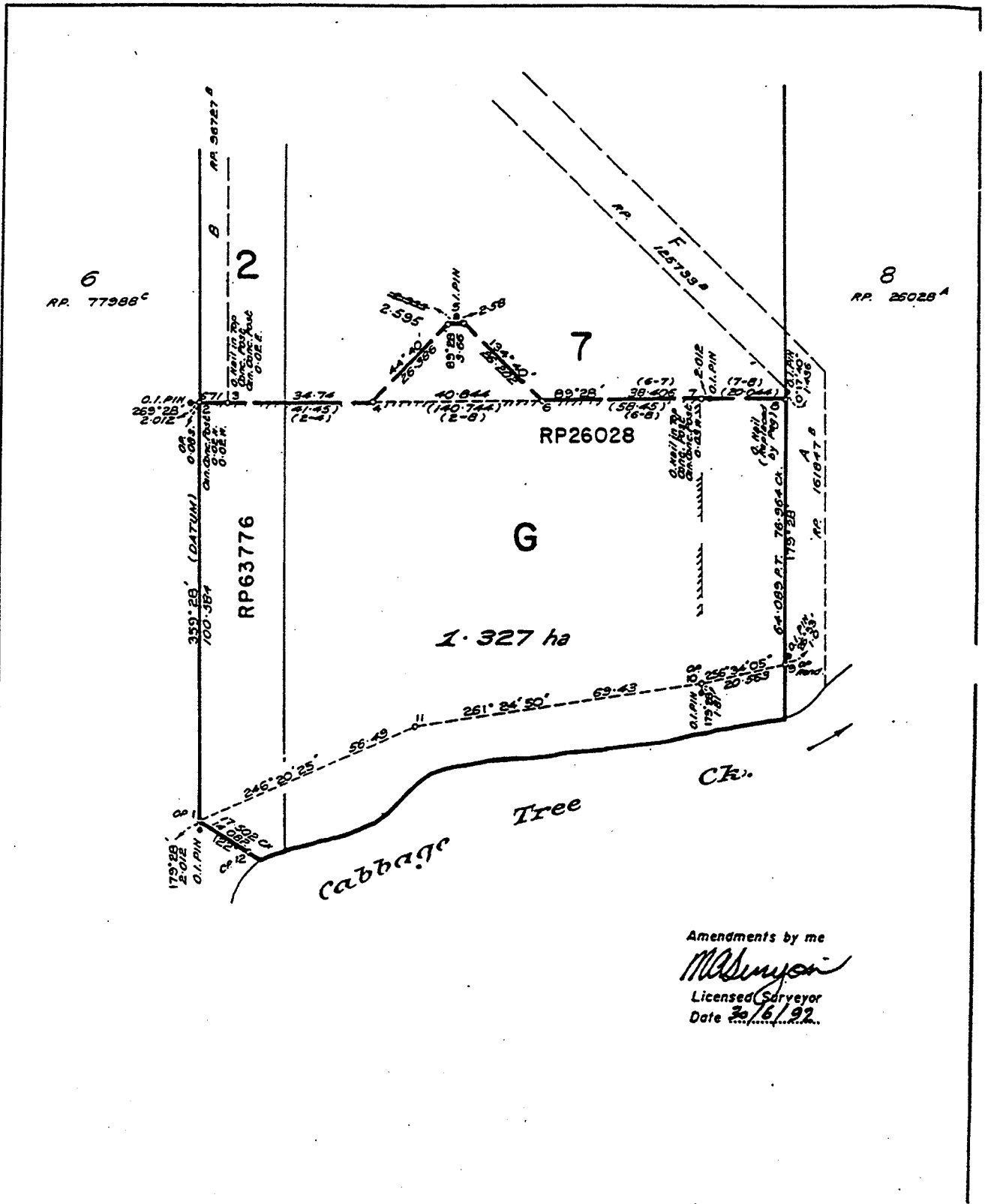
[Handwritten Signature]

Shire Clerk
Town

Council of the Shire of Albert

EXAMPLE 19

Lease on Registered Plan Form (In Freehold Land)

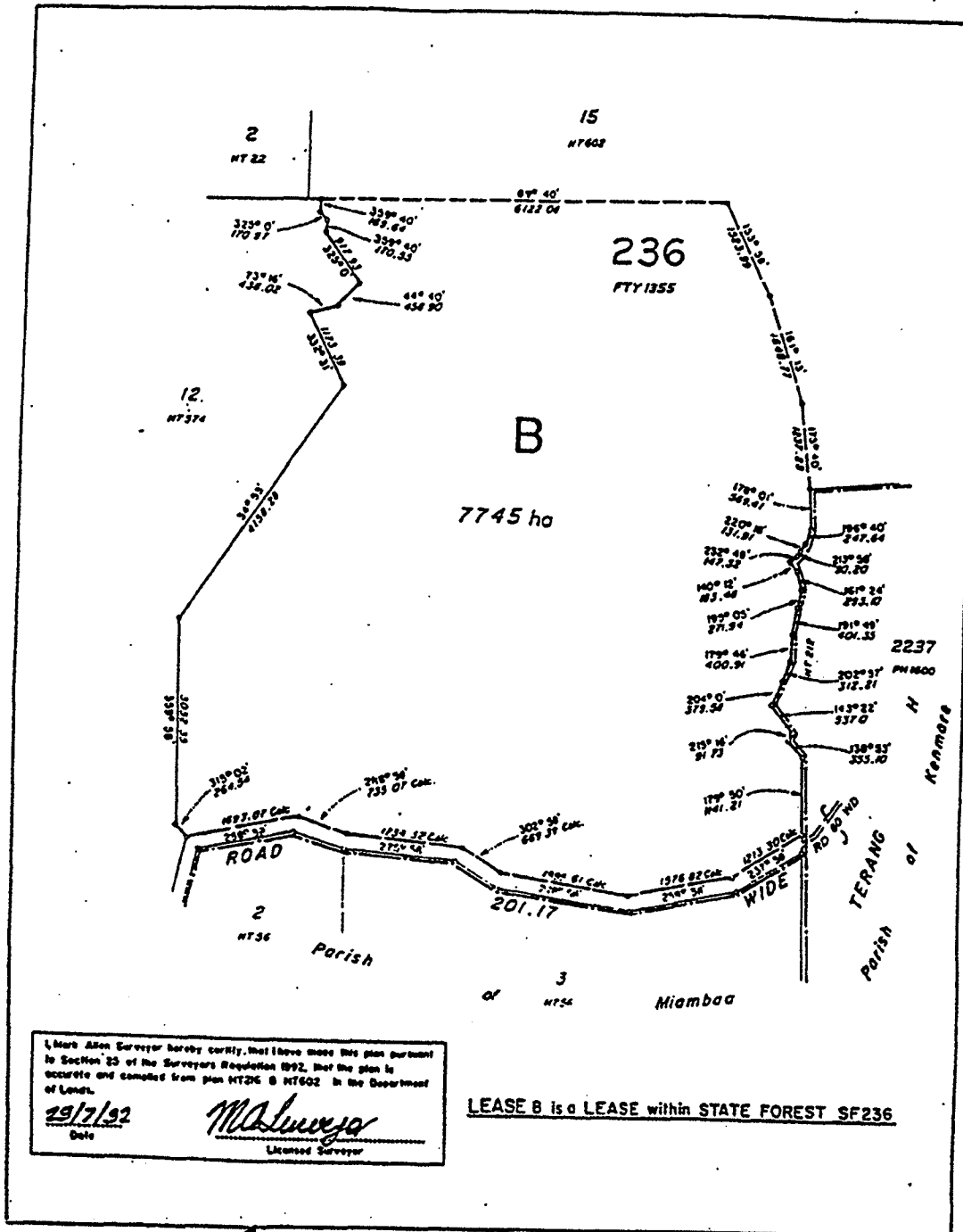


Amendments by me
M. Staley
 Licensed Surveyor
 Date 20/6/92

I, Mark Allen Surveyor hereby certify that I/the Company have surveyed the land comprised in this plan (unless otherwise stated). That the plan is accurate, that the land survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the land survey was completed on 5/2/92. <i>M. Staley</i> Licensed Surveyor/ Director Drawn Date 16/2/92		PLAN OF Lease G in Lot 7 on RP26028 and in Lot 2 on RP63776.		PARISH KEDRON COUNTY Staley TOWN/LOCALITY SANDGAT LOCAL AUTHORITY BRISBANE LAND ACQUISITION DISTRICT	
ORIGINAL PORTION 22		THE SURVEY RECORDS DEPOSITED		OTHER FIELD	
MERIDIAN of RP77988	MAP REF CC24	SCALE 1: 000	FILE REF	ENDORSED REGISTERING DIST BRISBANE	EXAMPLE 20

Leases

(In State Reserves e.g. State Forest)



I, Mark Allen Surveyor hereby certify, that I have made this plan pursuant to Section 23 of the Surveyors Regulation 1992, that the plan is accurate and compiled from plan NT236 & NT602 in the Department of Lands.
 19/7/92
 Date
 M. Allen
 Licensed Surveyor

LEASE B is a LEASE within STATE FOREST SF236

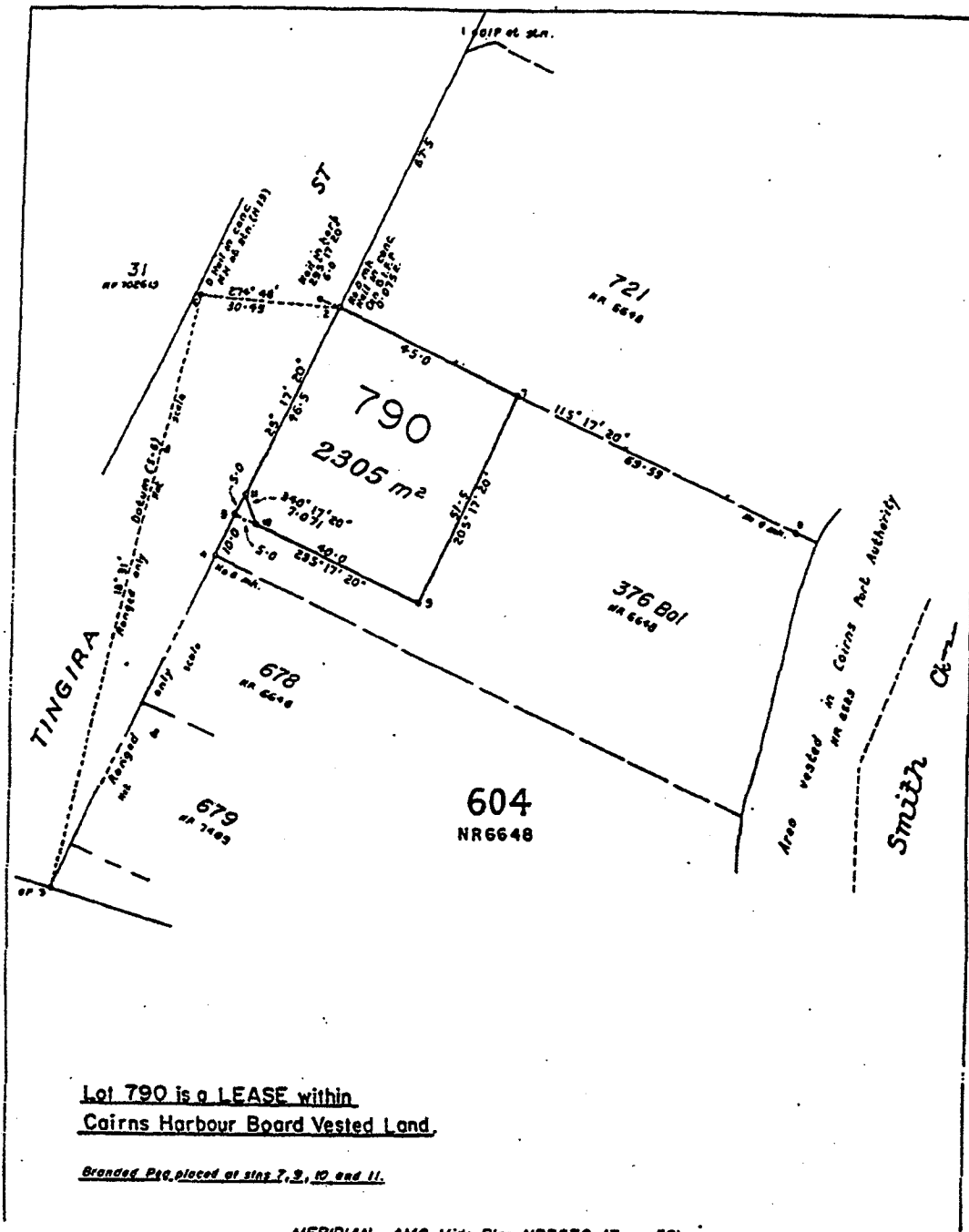
<p>Surveyor certifies that this plan is accurate and that the plan is correct and complete in accordance with the Surveyors Regulation 1992 and that the plan is correct and complete in accordance with the Surveyors Regulation 1992 and that the plan is correct and complete in accordance with the Surveyors Regulation 1992.</p>	<p>PLAN OF Lease B in Lot 236 on plan FTY1355</p>		<p>PARISH GALGATHAA COUNTY Humboldt MUNICIPALITY MT. WILBUR LOCAL GOVT. EMERALD CC.</p>	
	<p>ORIGINAL PORTION 14</p>	<p>MAP REF 6650</p>	<p>SCALE 1: 600</p>	<p>FILE REF SL3/462</p>

EXAMPLE 21

- NOTES:
1. Lease B is a Special Lease within a State Forest described as Lot 236 on plan FTY1355, issued under Section 32 of the Land Act and Section 35(2) of the Forestry Act.
 2. The wording in the Title Block and the full description shown on the face of the plan in subject style.
 3. Boundaries are shown broken in subject style (similar to Easements) except where they are co-incident with surveyed Cadastral boundaries.
 4. Alpha descriptions should not be repeated in any one parcel.

Leases

(In vested areas e.g. Harbour Boards)

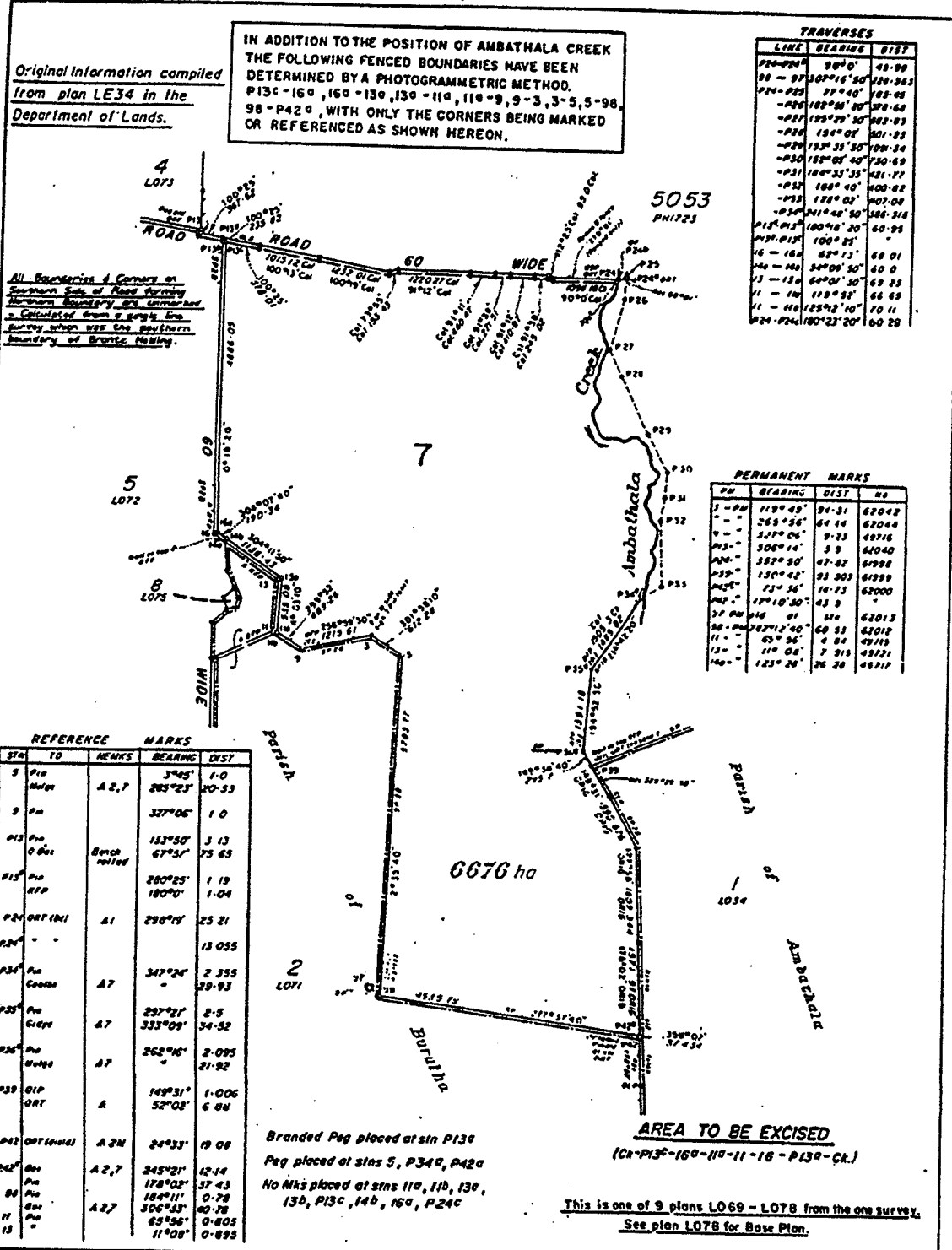


<p>I, Mark Alan Surveys Surveyor, being the person who has surveyed the land contained in this plan (either personally or not).</p> <p>and that the plan is correct, and that the land shown was surveyed in accordance with the Surveyors Act and the Surveyors Regulations and that the plan is correct.</p> <p><i>Mark Alan Surveys</i> Surveyor Date: 15/12/92</p>		<p>PLAN OF Lot 790</p> <p>ORIGINAL PORTION 604</p>		<p>PARISH <u>CAIRNS</u> COUNTY <u>NEVER</u> LOCAL GOVERNMENT <u>CITY OF CAIRNS</u> LOCAL GOVERNMENT <u>CAIRNS C.C.</u></p>	
<p>MEMORANDUM AS SHOWN</p>	<p>MAP REF. <u>City of Cairns Sh 1</u></p>	<p>SCALE <u>1: 000</u></p>	<p>FILE REF.</p>	<p>FILE SURVEY RECORDS DEPOSITED</p>	<p>ENDORSED REGISTERING DIST. <u>BRISBANE</u></p>
<p>EXAMPLE 22</p>					

NOTES:

1. Plans for Leases in Harbours Corporation are to be submitted to the Department of Transport for approval prior to lodgement.
2. The statement describing Lot 790 that is shown on the face of the plan.
3. Description of Vested Area (Lot 604 on plan NR6648) within which the Lease is located, is also shown in subject style.
4. Any additional requirements should be obtained from the relevant Harbour Board/Port Authority concerned.

Photogrammetric Survey



J. Mark Allan, Surveyor

PLAN OF **Lot 7**
Cancelling Lot 4871 on plan PH2249.

PARISH **MORUGA**
COUNTY **Langlo**
LOCAL AUTHORITY **CHARLEVILLE C.C.**

ORIGINAL **RUN 4871**

MERIDIAN **CALM 1956** MAP REF **9543 - 43** SCALE **1: 000** FILE REF **EN005D** REGISTERING DIST **BRISBANE**

Director Date **16/2/92**

EXAMPLE 23

- NOTES**
- For advice on this method of survey contact the Dept. A District Surveyor
 - Features (Fences, Creeks etc.) identifiable on photography are adopted as boundaries.
 - Boundaries determined by a photogrammetric method must be stated and identified on face.
 - Statements on face of plan.

Railway in State Land

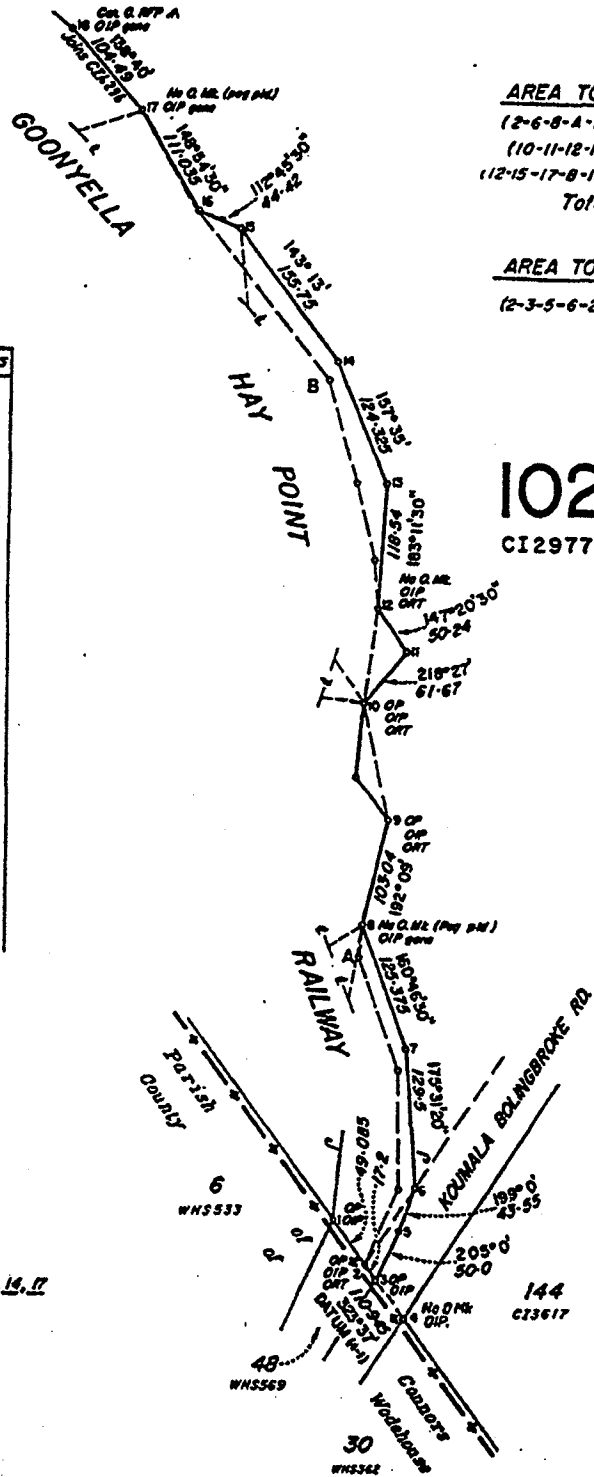
TRAVERSES ETC

LINE	BEARING	DIST.
3-4	143°37'	44.66
2-6	32°04'	65.725
3-10	348°05'30"	114.18

REFERENCE MARKS

STN	TO	BEARING	DIST	REMARKS
1	OIP	143°37'	1.005	
2	OIP	32°04'	1.005	
3	G. Woodland	179°57'	25.86	
4	OIP	32°04'	0.335	
5	Con. old RFP	0°03'	0.046	
6	OIP	32°04'	1.0	
7	Pin	25°0'	1.0	
8	Pin	19°0'	1.0	
9	Pin	35°04'	1.0	
10	Pin	22°04'	1.0	
11	OIP (para)	128°04'	1.005	
12	Tangent Pt. Reg	23°04'	37.7	E. Ry.
13	Tangent Pt. Reg	169°18'	72.77	E. Ry.
14	OIP	138°08'	1.155	
15	G. Scrub	34°14'	7.333	
16	OIP	27°04'	1.005	
17	G. Scrub	78°06'	26.713	
18	Tangent Pt. Reg	27°18'30"	39.35	E. Ry.
19	Tangent Pt. Reg	32°04'30"	49.833	E. Ry.
20	Pin	23°0'	0.78	
21	OIP	167°04'	1.005	
22	G. Scrub	34°31'	39.45	
23	Pin	203°20'	0.78	
24	Pin	249°40'	1.0	
25	Pin	218°0'	1.0	
26	Tangent Pt. Reg	174°02'	74.66	E. Ry.
27	Pin	183°40'	0.5	
28	Pin	279°10'	2.05	
29	OIP (para)	231°40'	0.845	
30	Tangent Pt. Reg	251°43'	64.67	E. Ry.
31	Pin	193°0'	0.79	
32	OIP (para)	236°0'	1.005	

Pin (A) placed at Stations 5, 6, 7, 8, 11, 2, 13, 14, 17
 Con. RFP A. at Stations 4, 5, 6



AREA TO BE EXCISED
 (2-6-8-4-2).....3312
 (10-11-12-10).....1466 m²
 (12-15-17-8-12).....6917 m²
 Total.....11695 ha

AREA TO BE ADDED
 (2-3-5-6-2).....800m²

102
 CI2977

MERIDIAN : Subtract 0° 04' for CAM Vide plan CI2859.

<p>I, Mark Allen Surveyor hereby certify that I/the Company have surveyed the land comprised in this plan in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 6/2/92.</p> <p><i>Mark Allen</i> Licensed Surveyor/ Director</p>		<p>PLAN OF RAILWAY IN LOT 102 on plan CI2977.</p>		<p>PARISH.....KELVIN COUNTY.....Carlisle LOCAL AUTHORITY.....HAY POINT LOCAL AUTHORITY.....SARINA S.C. LAND ACQUISITION DISTRICT.....</p>	
<p>ORIGINAL PORTION 102</p>		<p>YES SURVEY RECORDS DEPOSITED</p>		<p>BRISBANE</p>	
<p>MERIDIAN As Shown</p>	<p>MAP REF 8754 - 42</p>	<p>SCALE 1: 000</p>	<p>FILE REF SL30793</p>	<p>ENDORSED</p>	<p>REGISTERING DIST</p>
					<p>EXAMPLE 24</p>

NOTES

1. Wording of Action Statements.
2. In this particular case, a Section 25 Compiled Plan is required for the balance of Lot 102.
3. If Railway area is already resumed prior to survey, Action Statement will be titled "AREA EXCISED".
4. For Railway in Freehold Tenure, a subdivisional survey plan is prepared.

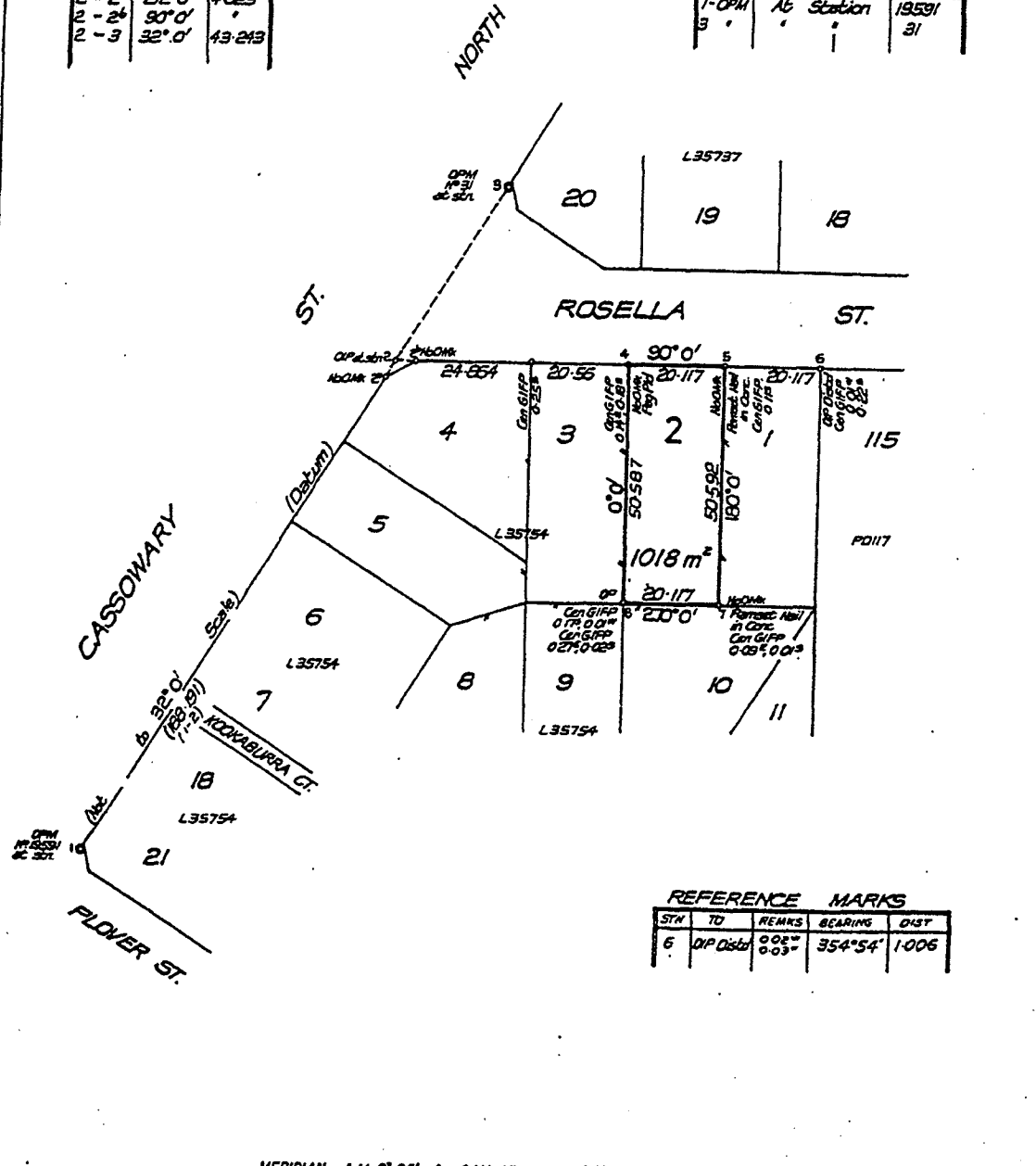
Resurvey

TRAVERSES ETC.

LINE	BEARING	DIST
2-2 ^a	212° 0'	4.023
2-2 ^b	90° 0'	"
2-3	32° 0'	43.213

PERMANENT MARKS

PK	BEARING	DIST.	HP
1-OPM	At Station		1953/1
3	"	"	31



REFERENCE MARKS

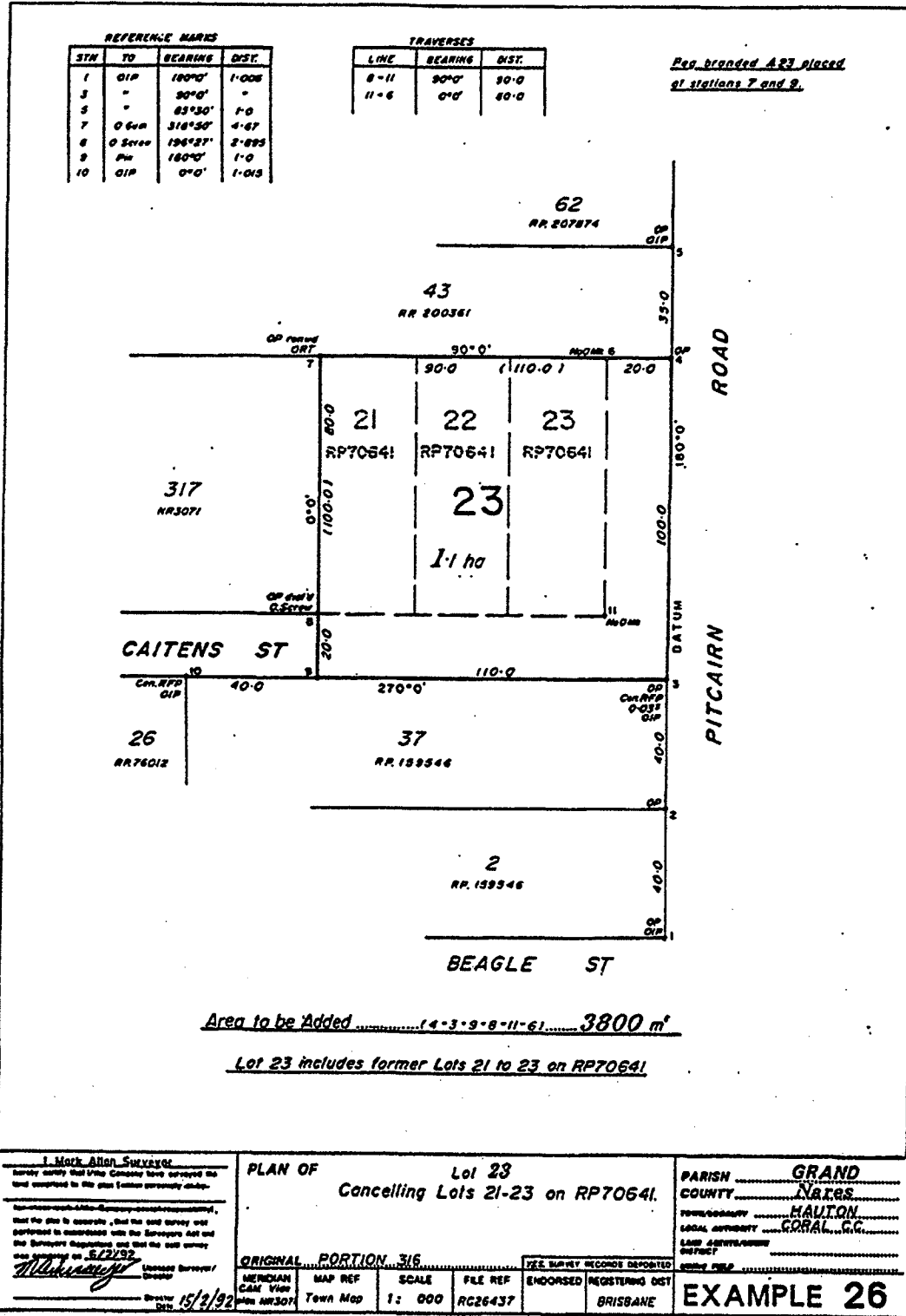
STK	TO	REMARKS	BEARING	DIST
6	DIP Dist	0° 02' 00"	354° 54'	1.006

MERIDIAN : Add 0° 06' for G.A.M. Vide plan L35754.

<p>I, Mark Allan, Surveyor, hereby certify that I/the Company have surveyed the land comprised in this plan (either personally or by-whoever-the-Company-accepts-responsibility), that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 5/2/92.</p> <p><i>Mark Allan</i> Licensee Surveyor/ Director Date 16/1/92</p>	<p>PLAN OF Lot 2 being Resurvey of Lot 2 on plan L35754 cancelling Lot 2 on plan L35754.</p>	<p>PARISH <u>LONGREACH</u>..... COUNTY <u>Portland</u>..... TOWN/CITY <u>LONGREACH</u>..... LOCAL AUTHORITY <u>LONGREACH, S.C.</u>..... LAND ADJUTS/NEIGH DISTRICT</p>											
	<p>ORIGINAL</p> <table border="1"> <thead> <tr> <th>MERIDIAN AS SHOWN</th> <th>MAP REF.</th> <th>SCALE</th> <th>FILE REF.</th> <th>ENDORSED</th> <th>REGISTERING DIST.</th> </tr> </thead> <tbody> <tr> <td></td> <td>9543 - 43</td> <td>1 : 000</td> <td></td> <td></td> <td>BRISBANE</td> </tr> </tbody> </table>	MERIDIAN AS SHOWN	MAP REF.	SCALE	FILE REF.	ENDORSED	REGISTERING DIST.		9543 - 43	1 : 000			BRISBANE
MERIDIAN AS SHOWN	MAP REF.	SCALE	FILE REF.	ENDORSED	REGISTERING DIST.								
	9543 - 43	1 : 000			BRISBANE								

- NOTES**
1. Prepare and lodge plan as a normal survey.
 2. Show Area on subject Lot.
 3. Wording of Plan Title.
 4. This plan can be used for future land transactions.
 5. Parcel retains its previous numerical identifier as the new description for the amended Lot.

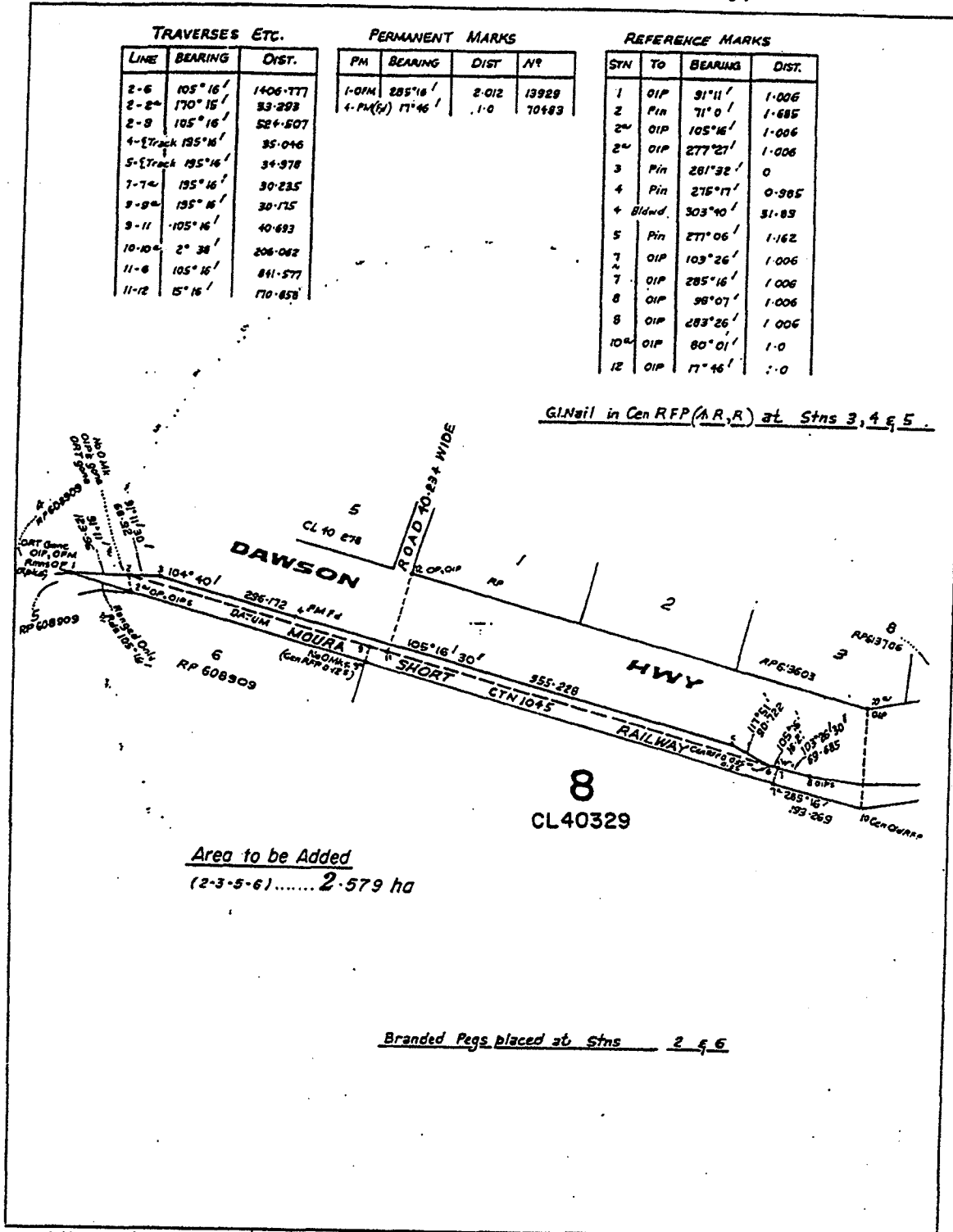
Road Closure (Addition to and Amalgamation of Freehold Tenure) (Vide Sec. 358 and 98 of Land Act)



NOTES

1. Lots 21, 22 and 23 on RP70641 are individual parcels held as a Consolidated Title to which it is proposed to add an area of "ROAD TO BE CLOSED" (4-3-9-8-11-6). Dept. A approvals have stipulated amalgamation into one Lot due to removal of access. The Land Act (Sec. 358 and 98) permits these Actions to be affected on the one plan.
2. The Actions statements on the face of the plan required for this Action.
3. The description of the new Title will adopt one of the previous numerical identifiers.
4. The description of the lapsed parcels may be shown in dotted style where space permits.

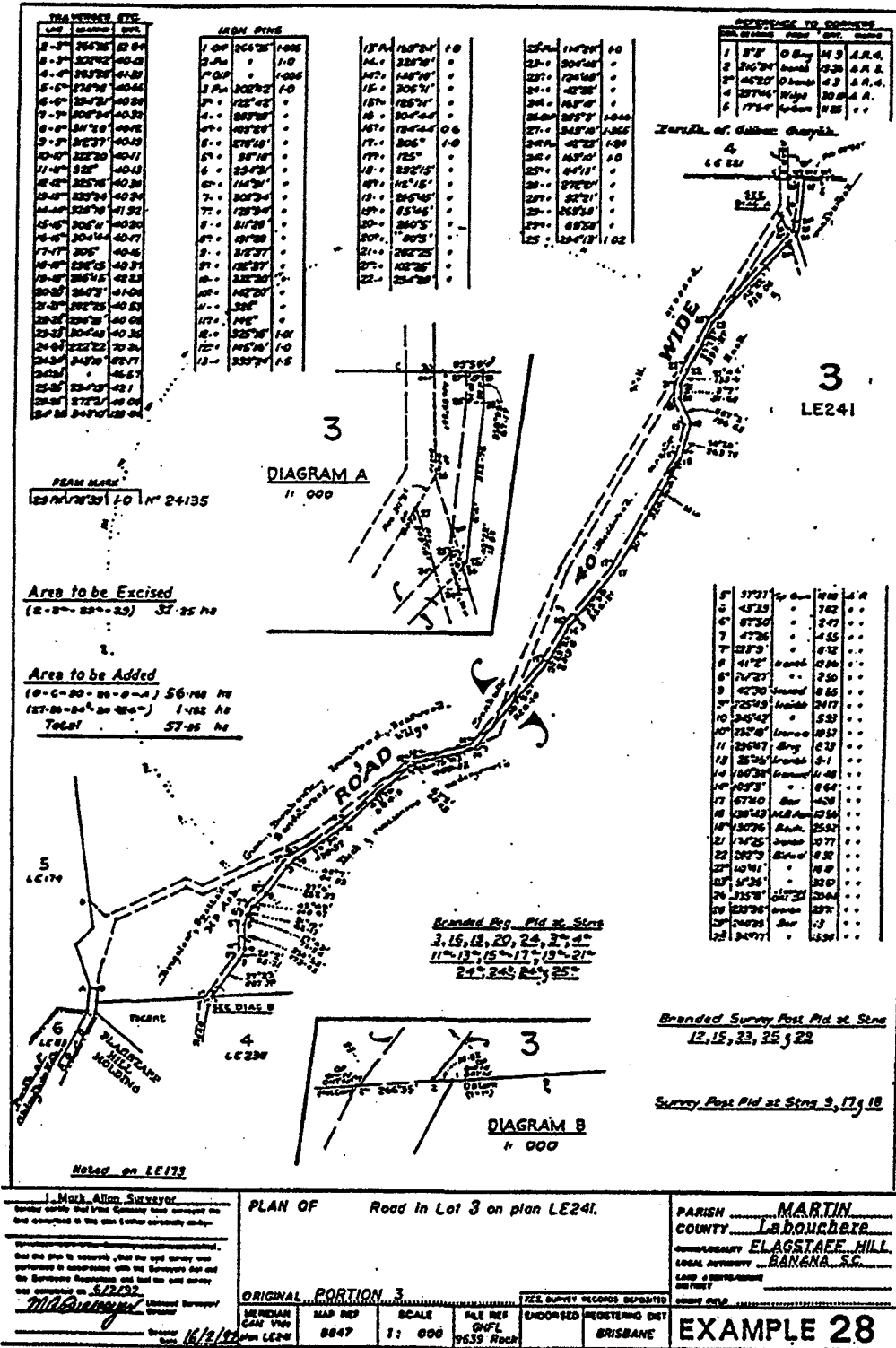
Road Closure (Addition to undescribed Railway)



<p>I, Mark Allen Surveyor do hereby certify that I/the Company have surveyed the land comprised in this plan (either personally or by- for-please-note-I/the-Company-accept-responsibility), that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 5/12/92.</p> <p><i>Mark Allen</i> Licenced Surveyor/ Director Date 5/12/92</p>	<p>PLAN OF AREA REQUIRED FOR RAILWAY PURPOSES FROM ROAD ADJACENT TO LOT 8 on plan CL40329.</p> <p>ORIGINAL PORTION 8</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>MERIDIAN</td> <td>MAP REF</td> <td>SCALE</td> <td>FILE REF</td> <td>YES SURVEY RECORDS DEPOSITED</td> </tr> <tr> <td>CYHO43</td> <td>9149 - 44 9150 - 33</td> <td>1: 000</td> <td>RC13139</td> <td>ENDORSED REGISTERING DIST BRISBANE</td> </tr> </table>	MERIDIAN	MAP REF	SCALE	FILE REF	YES SURVEY RECORDS DEPOSITED	CYHO43	9149 - 44 9150 - 33	1: 000	RC13139	ENDORSED REGISTERING DIST BRISBANE	<p>PARISH CLINTON COUNTY Gladstone LOCAL AUTHORITY GLADSTONE...C.C. LAND AGENTS/MINING DISTRICT</p> <p style="text-align: right; font-size: 24pt; font-weight: bold;">EXAMPLE 27</p>
MERIDIAN	MAP REF	SCALE	FILE REF	YES SURVEY RECORDS DEPOSITED								
CYHO43	9149 - 44 9150 - 33	1: 000	RC13139	ENDORSED REGISTERING DIST BRISBANE								

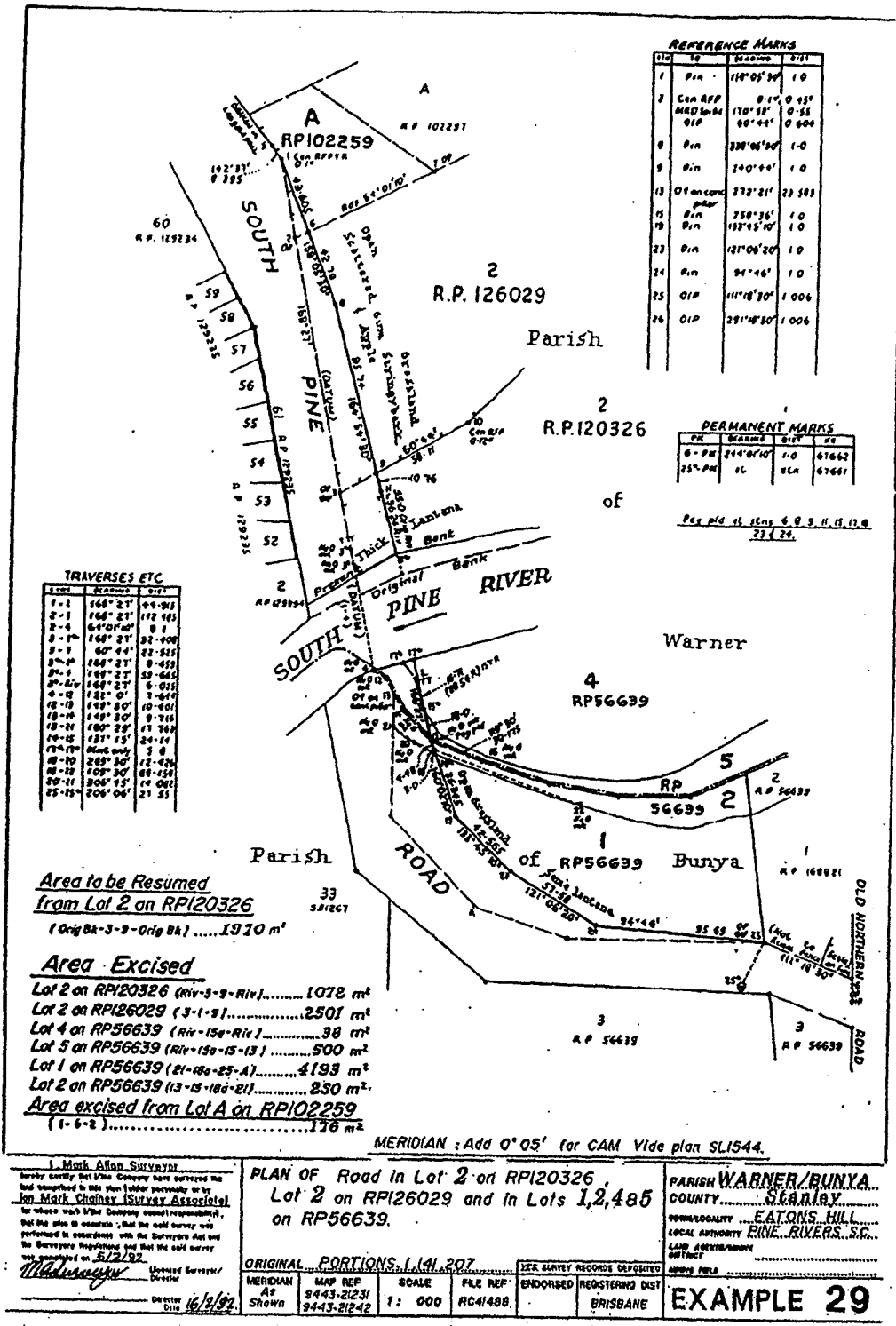
- NOTES:**
- As Railway has no Property Description, an adjoining "Lot on Plan" description must appear on the plan and in the Title block in subject style to aid location and enable survey to be recorded in the Computerised Inventory of Survey Plans (CISP).
 - A plan of the amended Railway Area is not required for this type of case.

Road Closure (For complicated cases) Involving criss-crossing of old and new roads



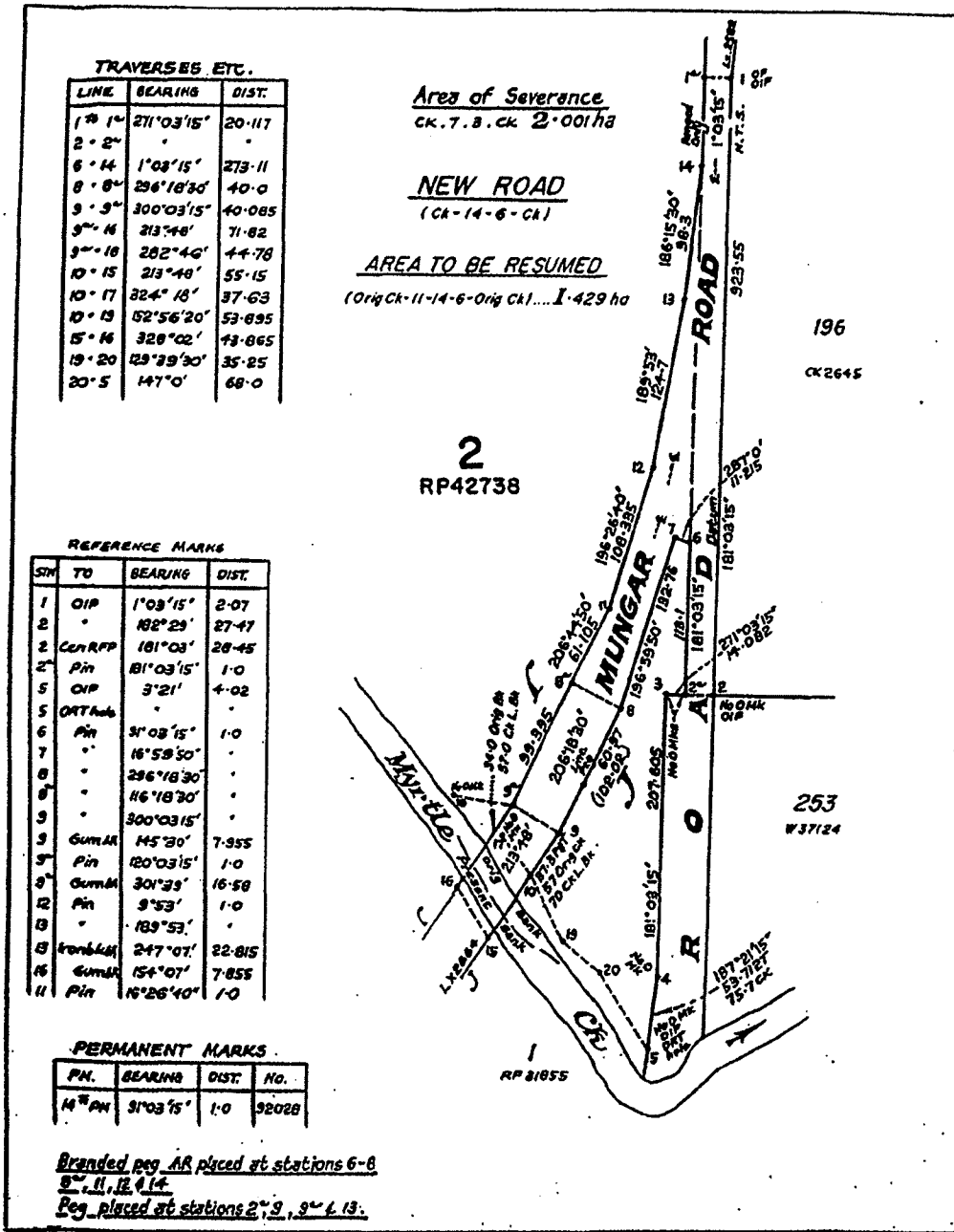
- NOTES:**
1. New and Old Road to be included in the Action Statements on face of plan.
 2. Survey and calculations of internal road intersections and severance areas are not necessary unless stipulated in Dept. A advices
 3. In State Lands the Lessee is required to "Surrender" lands from his/her Lease to enable road actions to proceed, these lands will need to be identified on the face of the plan. Action Statements ie. "Area to be Surrendered" with qualifying station numbers will need to be shown. Areas should be calculated.
 4. Section 25 compiled plan to be drafted as necessary for the amended Lot. (Amended Lot can be completed on plan of survey if scale permits).

Road Opening (MRD Resumption where noticeable erosion in water-course boundaries noted)



- NOTES**
1. The special Action Statement necessary for this case.
 2. The method depicting data on face of plan for location of "present" and "original" river banks.
 3. An area for the New Road in the affected parcel (Lot 2 on RP120326) need not be shown.
 4. Cases for accretion are treated in a similar manner. See Example Plan - Page 120.
 5. In addition to the local street and road names, the declared Main Road Name should be shown eg. BRUCE HIGHWAY, TEWANTIN NOOSA ROAD, etc.
 6. Plans of the balances of the affected Lots can be prepared provided prior knowledge is available from Main Roads as to whether Section 25 compiled plans are required.
 7. Resumption in Freehold land treat as normal plan of subdivision. 8. See also Ambulatory Boundaries Dept. A Requirements E3 1.10.

Road Opening (MRD Resumption where noticeable accretion in water-course boundaries is noted)



I, Mark Allen Surveyor, do hereby certify that the Company last surveyed and laid out in this plan (either previously or by Plan, Plan, or Plan) is correct and true for all purposes and that the plan is correct, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was made on 12/2/92.

Mark Allen
Surveyor
Date 12/2/92

PLAN OF Road in Lot 2 on RP42738

PARISH DENISON
COUNTY LARROCK
LOCAL AUTHORITY HANTON TIAO S.C.
LAND ACQUISITION DISTRICT

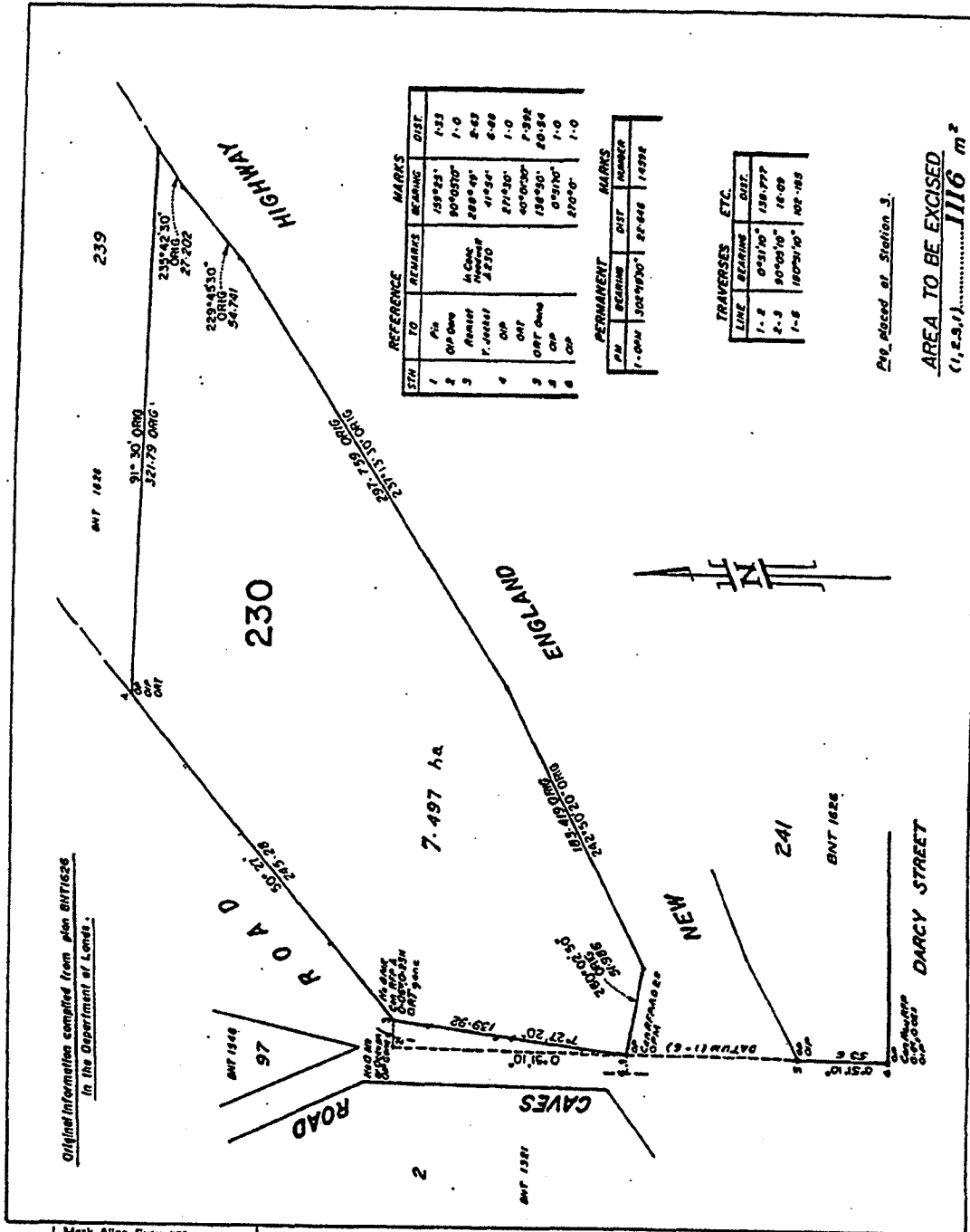
ORIGINAL PORTION 197

MERIDIAN CAN. Y.M. 1982	MAP REF 9446-43	SCALE 1: 000	FILE REF LAB5583	TYPE SURVEY RECORDS DEPOSITED ENCLOSED	REGISTERING DIST BRISBANE
-------------------------	-----------------	--------------	------------------	--	---------------------------

EXAMPLE 30

- NOTES:**
1. The special Action Statements necessary for this case.
 2. The method of depicting data on face for location of "present" and "original" Creek banks.
 3. Cases for Erosion are treated in a similar manner. See Example Plan - Page 119
 4. Plans of the balances of the affected Lots can be prepared, provided prior knowledge from Main Roads is available as to whether Section 25 compiled plans are required.
 5. In addition to local Street and Road names, the declared Main Roads name should also be shown eg. BRUCE HIGHWAY, TEWANTIN NOOSA ROAD etc.
 6. An area need not be shown in the "New Road" Statement.
 7. Resumption in F/hold land treat as a normal plan of subdivision.
 8. See also Ambulatory Boundaries Dept. A Requirements E3

Road Opening (Main Roads Resumption in State Tenure)



STN	TO	REMARKS	MARKS	BEARING	DIST.
1	2	OP ON	139°23'	139°23'	1-33
2	3	OP ON	90°03'50"	1-0	1-0
3	4	OP ON	289°49'	2-83	2-83
4	5	OP ON	41°24'	6-08	6-08
5	6	OP ON	27°30'	1-0	1-0
6	1	OP ON	40°03'30"	1-392	1-392
7	8	OP ON	139°23'	20-54	20-54
8	7	OP ON	0°51'10"	1-0	1-0
9	8	OP ON	270°0'	1-0	1-0

PERMANENT MARKS	BEARING	DIST.	NUMBER
1-OPW	130°19'30"	2-646	14292

TRAVERSES ETC.	LINE	BEARING	DIST.
1-2	0°51'10"	139-777	16-09
2-3	90°03'50"	16-09	16-09
1-8	110°23'10"	102-189	102-189

240. Area of Station 3.
AREA TO BE EXCISED 1116 m²
 (1,2,3,4)

I, Mark Allen Surveyor
 hereby certify that the Company have approved the
 and contained in the plan (other than necessary notes).

PLAN OF **Lot 230**
 Cancelling Lot 230 on plan BNT1626.

PARISH **STANTHORPE**
 COUNTY **Bentleigh**
 TOWN/SHIRE **APPLETHORPE**
 LOCAL AUTHORITY **STANTHORPE, S.C.**
 LAND ACQUISITION ACT
 DISTRICT

ORIGINAL PORTION 230

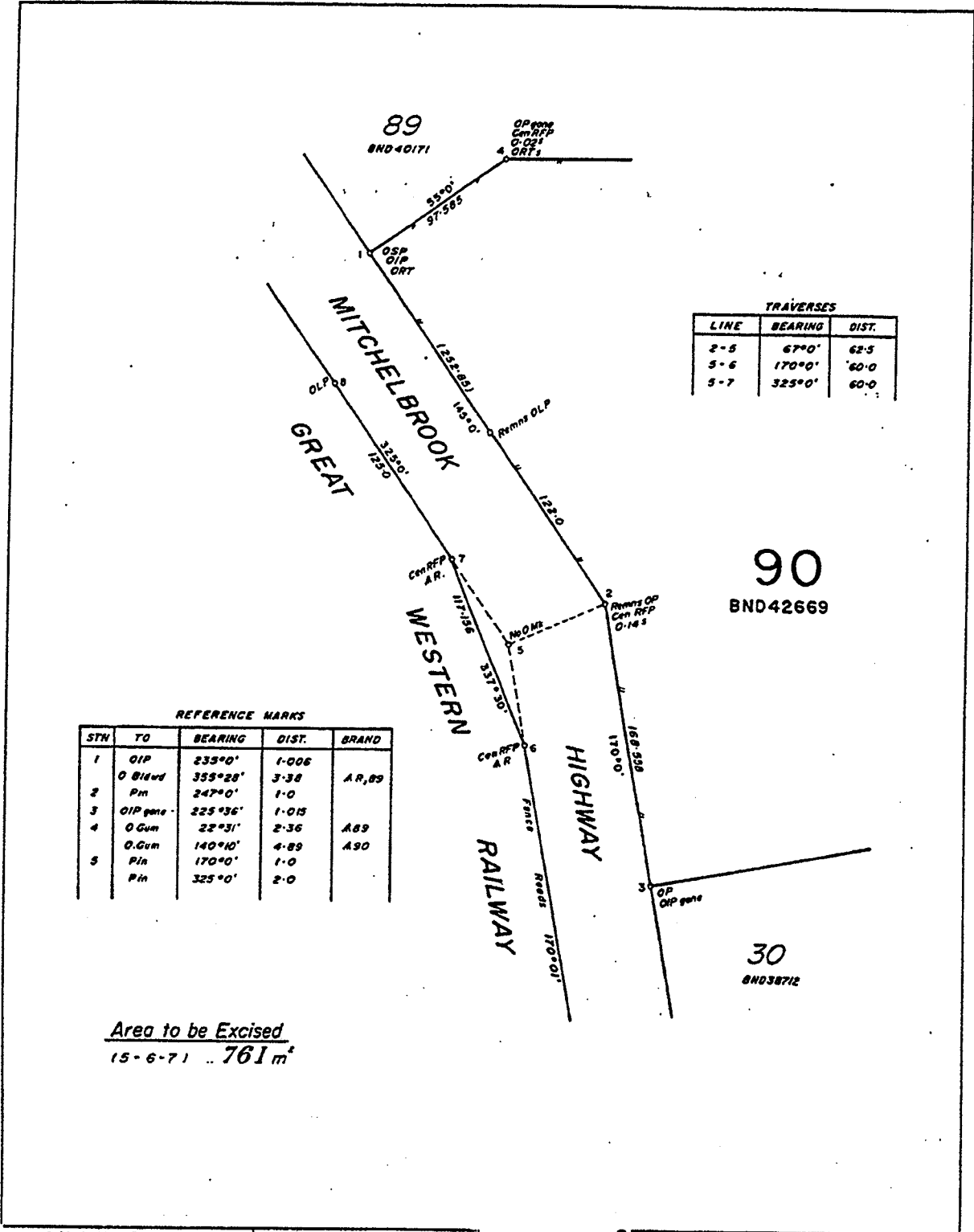
MERIDIAN CAN 1966 BNT1626	MAP REF Town Map	SCALE 1: 000	FILE REF Res209/5	72E SURVEY RECORDS DEPOSITED ENDORSED REGISTERING DIST BRISBANE
---------------------------------	---------------------	-----------------	----------------------	---

15/2/92
 Director
 Date

EXAMPLE 31

- NOTES:**
1. Where scale of plan will accommodate both the Survey Action and the Balance of the Leasehold Land, it is advantageous to combine both Actions on the one plan - provided clarity of the plan can be retained upon reproduction at a reduced scale.
 2. Parcel retains its previous numerical identifier as the new description for the amended Lot.

Road Opening (Main Roads requirements in Undescribed Railway)



I, Mark Allen Surveyor
 hereby certify that I/the Company have surveyed the
 land comprised in this plan (either personally or by
 Pgm Susan Martin (Surveying Graduate))
 for whose work I/the Company accept responsibility,
 that the plan is accurate, that the said survey was
 performed in accordance with the Surveyors Act and
 the Surveyors Regulations and that the said survey
 was completed on 5/12/92.
Mark Allen (Licensed Surveyor/
 Director
 Date 15/4/92

PLAN OF Road in Railway Property adjacent to Lot 90 on plan BND42669.

PARISH.....ALEXANDER.....
 COUNTY.....Banderia.....
 LOCAL AUTHORITY.....HAULTON.....
 LOCAL AUTHORITY.....CLAYTONS S.C.....
 LAND ADJACENT/ADJOINING DISTRICT.....
 BOUNDARY FIELD.....

ORIGINAL PORTION 90		1/25 SURVEY RECORDS DEPOSITED	
MERIDIAN CAN View plan BND42669	MAP REF 6143-3	SCALE 1: 000	FILE REF LAB63148
		ENDORSED	REGISTERING DIST BRISBANE

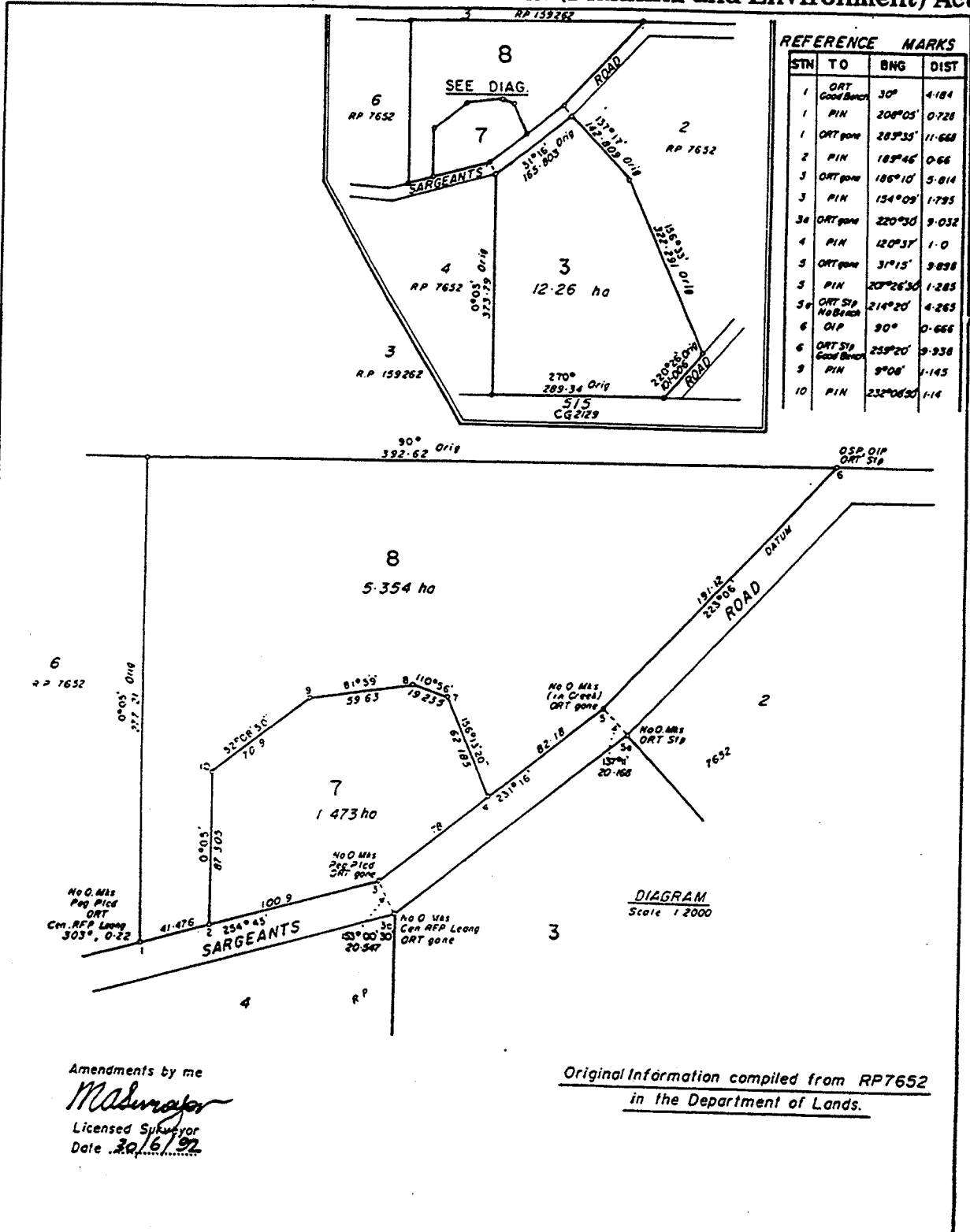
EXAMPLE 32

NOTES:

- Title of plan includes reference to an adjoining "Lot on Plan" to help locate the survey, and facilitate the enrolment of the survey in the Computerised Inventory of Survey Plans (CISP).
- A plan of the amended Railway area is not required in this instance.

Section 5.8.3 Agreements

(Local Government (Planning and Environment) Act)



Amendments by me
Maduray
Licensed Surveyor
Date 20/6/92

Original Information compiled from RP7652
in the Department of Lands.

I, Mark Allan Surveyor
do hereby certify that I and my Company have surveyed the land comprised in this plan in accordance with the provisions of the Survey Act 1981 and that the plan is accurate, that the said survey was performed in accordance with the Survey Act and the Survey Regulations and that the said survey was completed on 5/2/92.

Maduray Licensed Surveyor/Director
Date 15/2/92

PLAN OF **Lots 3, 7 & 8**
Cancelling Lots 3 & 7 on RP7652

ORIGINAL PORTION 17V

PARISH **BEERWAH**
COUNTY **Canning**
LOCAL AUTHORITY **HAUTON**
LOCAL AUTHORITY **CALOUNDRA C.C.**

MERIDIAN	MAP REF	SCALE	FILE REF	ENDORSED	REGISTERING DIST
	9543 - 43	1: 000			BRISBANE

NOTES:

- Plan fulfills requirements of Section 5.8.3 of Local Government (Planning & Environment) Act 1990. (Lots 3 & 7 are linked)
- Both (or all) Lots which are the subject of the proposed agreement are to be shown on the one plan form on a common meridian and with connections (surveyed or original) between the Lots.

Council of the _____ of _____ certifies that all the requirements of this Council, the Local Government Acts and all By-Laws have been complied with and approves this Plan of Subdivision

Dated this _____ day of _____ 19 _____
 Mayor or Chairman
 Town or Shire Clerk

Previous Title
 C/T 1592 - 19 Lot 3 RP 7652
 C/T 1592 - 20 Lot 7 RP 7652

L661355K Request to register an Agreement under Sect 5.8.3. Local Govt (Planning & Environment) Act 1990, Lots 3 & 7 to 1 held in same ownership.

C/T ALLOCATION

Volume	Folio	Lots
1592	19	3
1592	20	7 & 8

UWe _____
 (Names in full)

- as Proprietor/s of this land.
- as Lessee/s of Miner's Homestead

agree to this plan and dedicate the new road as shown hereon to public use.

Signature of • Proprietor/s • Lessee/s

- Rule out which is inapplicable.

This survey has been examined and may be used for land dealings.

Surveyor General

Date

Lot	Vol.	Fol.	Lot	Vol.	Fol.	Lot	Vol.	Fol.

Lodged by _____

Received
 Registrar of Titles

Fees Payable

- Postal fee and postage
- Log. Exam. & Ass.
- New Title
- Entd. on Deeds
- Photo Fee
- Total
- Short Fees Paid

File Ref.

Deposited / /

Audited / /

Passed / /

Survey Records: File/Field Notes

Charted / /

Original Grant

Particulars entered in Register Book

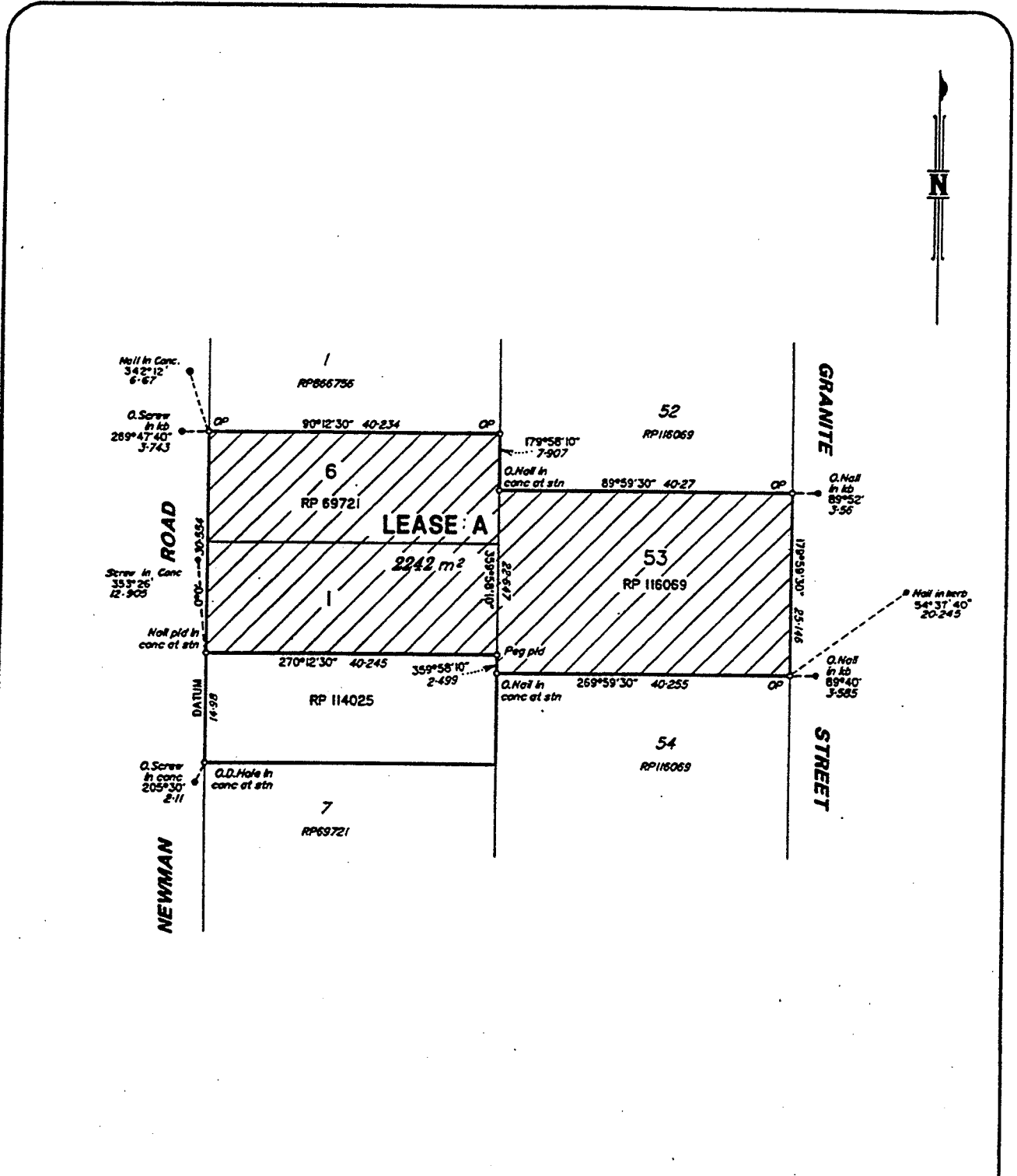
Vol. _____ Folio _____

at _____

REGISTRAR OF TITLES

EXAMPLE 33

Sketch of Lease of Part of a Lot

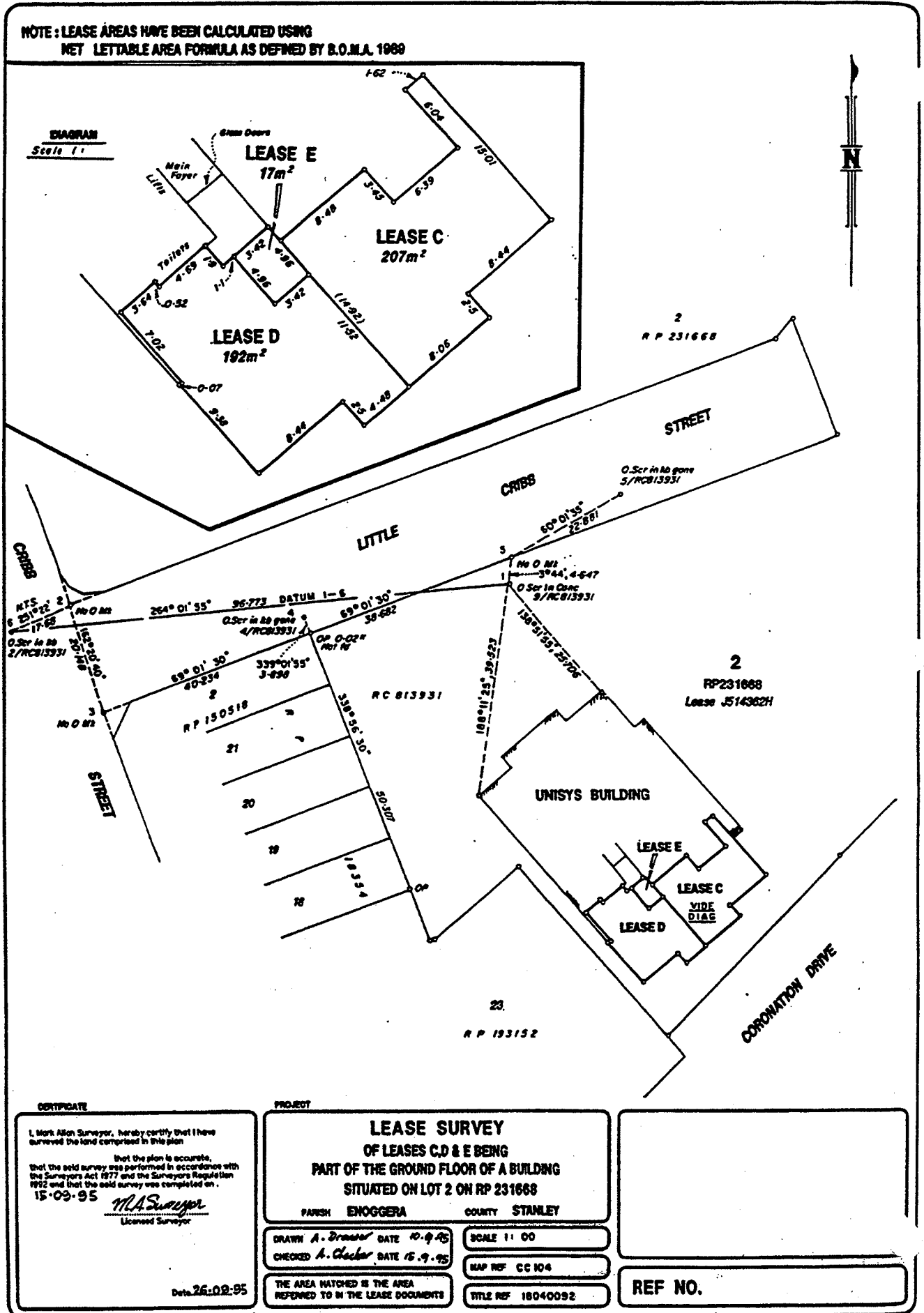


EXAMPLE No. 34

<p>CERTIFICATE</p> <p>I, Mark Allan Surveyor, hereby certify that I have surveyed the land comprised in this plan</p> <p>that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act 1977 and the Surveyors Regulation 1982 and that the said survey was completed on:</p> <p>17-03-95</p> <p><i>M.A. Surveyor</i> Licensed Surveyor</p> <p>Date: 17-03-95</p>	<p>PROJECT</p> <p>LEASE SURVEY over LOT 6 ON RP69721, LOT 53 ON RP116069 and part of LOT 1 ON RP114025</p> <p>PARISH: KEDRON COUNTY: Stanley</p> <p>DRAWN: A. Dwyer DATE: 10.3.95 SCALE: 1: 00</p> <p>CHECKED: A. Checker DATE: 14.3.95 MAP REF: CC 25</p> <p>THE AREA HATCHED IS THE AREA REFERRED TO IN THE LEASE DOCUMENTS TITLE REF:</p>	<p>REF. NO.</p>
--	--	-----------------

1. Two cadastral connections to the Lot boundaries should be made for Leases located within the Lot and not abutting Lot boundaries.

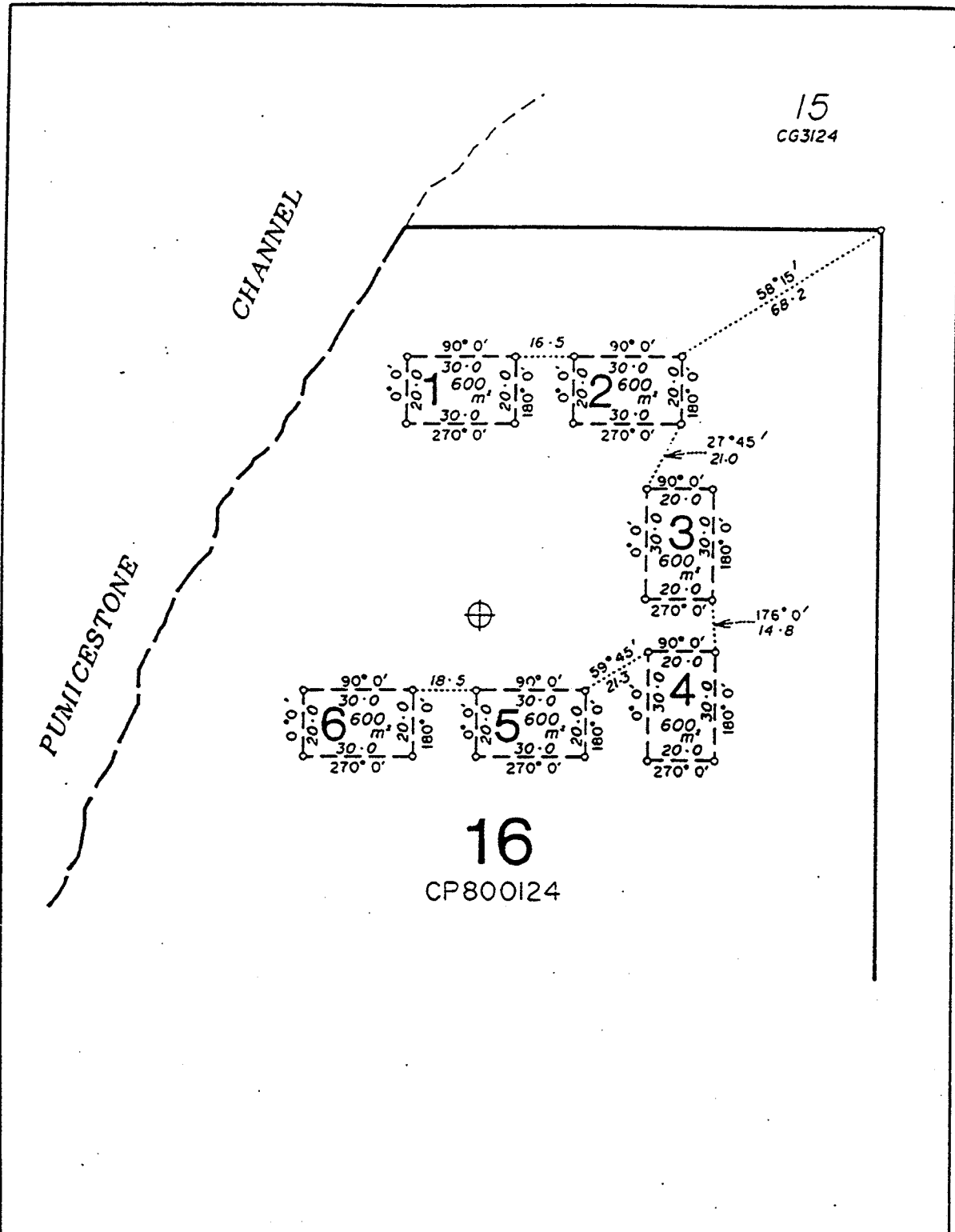
Sketch of Lease of part of a Building



EXAMPLE No. 35

Sub-Lease in State Leasehold

(At the instance of the lessee e.g. Holiday Units)



<p>I, Mark Allan Surveyor</p> <p>do hereby certify that if the Company have surveyed the land contained in this plan (unless otherwise stated) that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 6/2/92</p> <p>Mark Allan Licensed Surveyor/ Director</p> <p>Director Date</p>	<p>PLAN OF Lots 1 - 6 (Sub Leases in Lot 16 on plan CP800124)</p>		<p>PARISH WOORIM</p> <p>COUNTY CARRING</p> <p>TERRITORY BANKSIA BEACH</p> <p>LEGAL AUTHORITY CABOOLTURE, S.C.</p> <p>LAND ACQUISITION DISTRICT</p>	
	<p>ORIGINAL PORTION 16</p>		<p>YES SURVEY RECORDS DEPOSITED</p>	
<p>MERIDIAN of plan CP800124</p>	<p>MAP REF TM</p>	<p>SCALE 1: 000</p>	<p>FILE REF SL 43267</p>	<p>ENDORSED REGISTERING DIST BRISBANE</p>

EXAMPLE 36

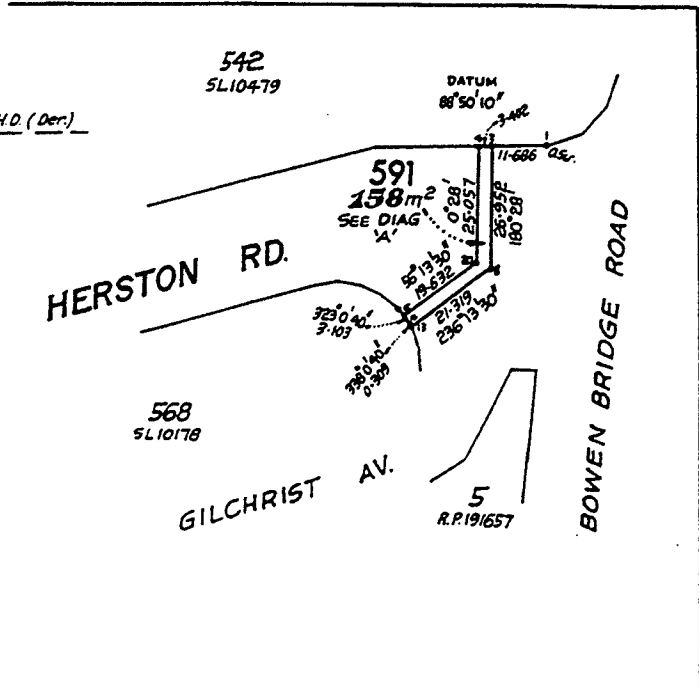
NOTES:

1. A further breakdown of the Sub Lease need only refer back one generation eg. a subdivision of Lot 2 above- New plan title would read Lots 3 & 4 (Sub Leases in Lot 2 on plan EP800000) and not Lots 3 & 4 (Sub Leases in Lot 2 on plan EP800000 in Lot 16 on plan CP800124)
2. The original parent description, ie. Lot 16 on plan CP800124 must be shown on the face of all succeeding plans
3. 2 connections to Lot boundaries should be made for leases not abutting the Lot boundaries.

Tenure in Strata

LINE	BEARING	DIST.
2-3	268°50'10"	0.3
4-5	"	"
13-36	158°0'40"	0.307
15-35	323°0'40"	0.3
23-25	180°28'	0.8
24-26	"	"
27-29	236°13'30"	"
28-30	"	"
31-33	"	"
32-34	"	"

B.M.
P.M. N° 94159 RL 15.733 A.H.D. (Der.)



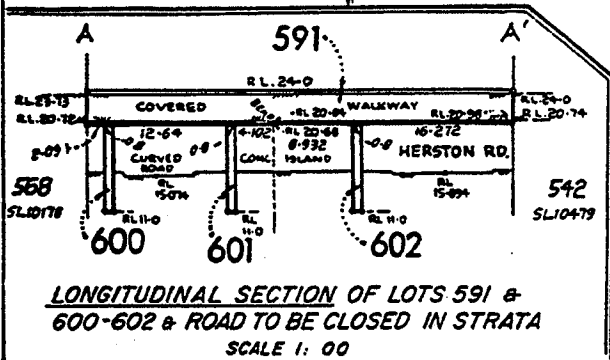
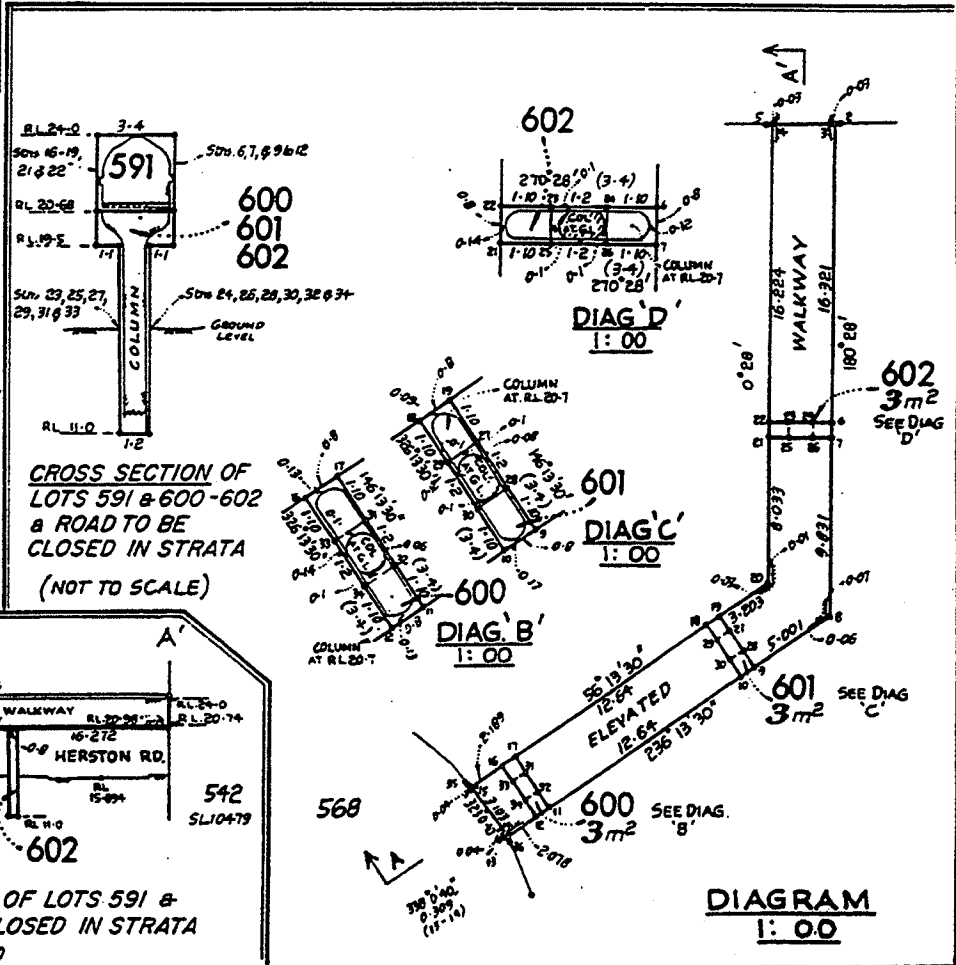
0. Screws at Sols 2, 5, 35 & 36
No Marks at Sols 6, 7, 9-12, 16-19, 21 & 22
Drill Hole in Concrete at Sols 3, 4, 8, 20 & 23-34
Drill Hole in Brick at Sols 14 & 15

REFERENCE MARKS

STN	TO	BEARING	DIST.
6	0. Screw	41°53'	0.453
7	"	161°14'	0.911
8	"	118°21'	0.34
9	"	82°48'	0.671
10	"	209°40'	"
11	"	82°48'	"
12	"	209°40'	"
16	"	262°48'	"
17	"	29°40'	"
18	"	262°48'	"
19	"	29°40'	"
20	"	298°21'	0.34
21	"	199°42'	0.911
22	"	319°03'	0.453

AREA TO BE ADDED IN STRATA

- Lot 591 (3, 8-13-14-15-20-4) 158m²
- Lot 600 (11-12-16-17) 3m²
- Lot 601 (9-10-18-19) 3m²
- Lot 602 (6-7-21-22) 3m²
- TOTAL LEASE AREA...167m²



I, Mark Allan Surveyor
do hereby certify that I/the Company have surveyed the land comprised in this plan (either personally or by-
for whose work I/the Company accept responsibility),
that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 6/2/92.
Mark Allan
Licensed Surveyor/
Director
Date 6/2/92

PLAN OF Lots 591, 600-602 in Strata

ORIGINAL PORTIONS 542 & 568

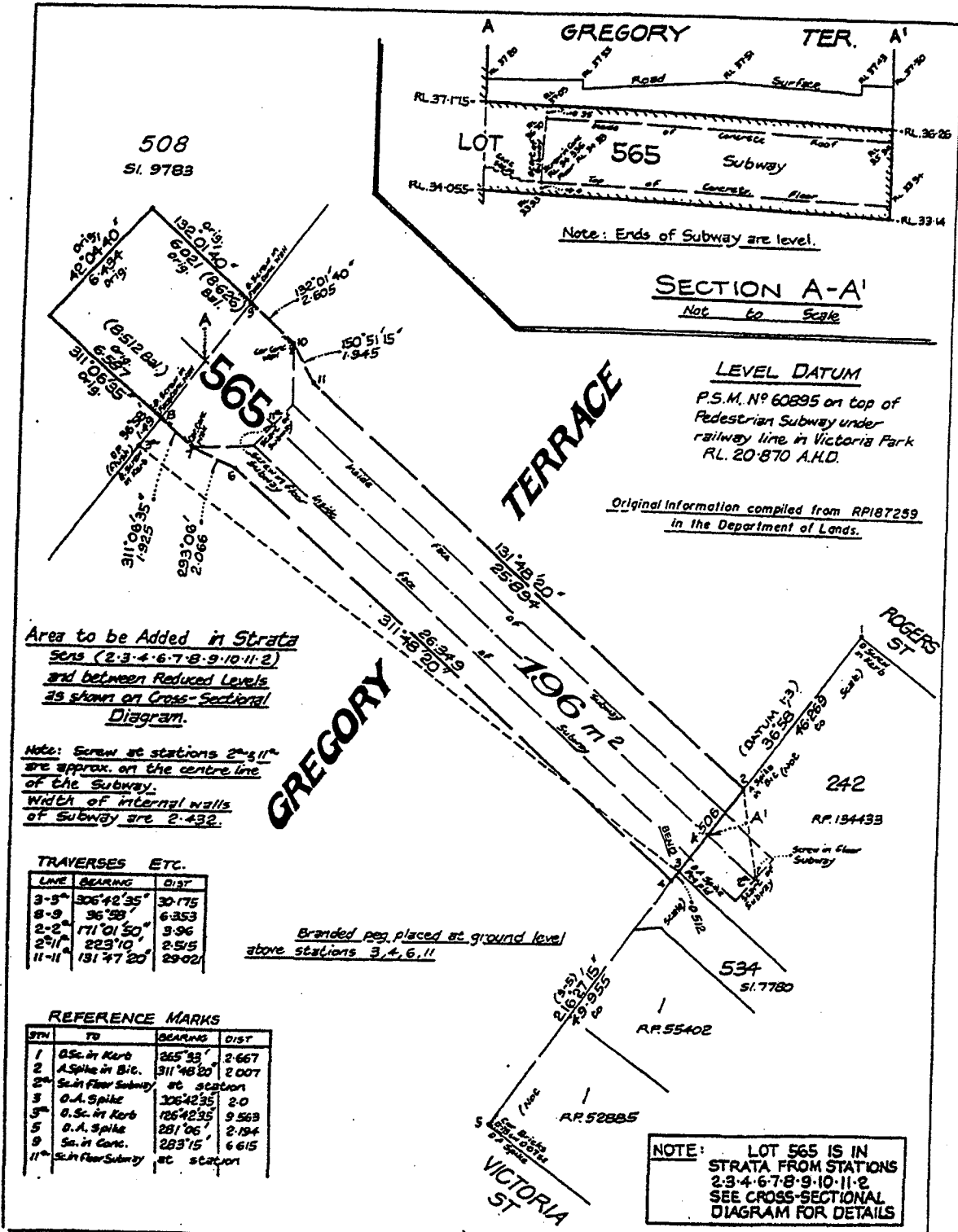
MERIDIAN CAN Vids plan SL10478	MAP REF C.C.78	SCALE 1: 000	FILE REF Res 86-20	YES SURVEY RECORDS DEPOSITED	ENDORSED REGISTERING DIST BRISBANE
---	-------------------	-----------------	-----------------------	------------------------------	---------------------------------------

PARISH NORTH BRISBANE
COUNTY Stanley
LOCALITY HERSTON
LOCAL AUTHORITY BRISBANE C.C.
LAND ACQUISITION DISTRICT
MUNICIPALITY

EXAMPLE 37

- NOTES:**
- Special Statement on face to indicate Level Datum - referenced to A.H.D.
 - Wording of Action Statement for Road to be Closed.
 - Subterranean boundaries shown by broken lines (similar to Easements).

Tenure in Strata



PLAN OF Lot 565 in Strata
Cancelling Lot 1 on RPI87259.

PARISH NORTH BRISBANE COUNTY STANLEY
LOCAL AUTHORITY SPRING HILL
LOCAL AUTHORITY BRISBANE C.C.

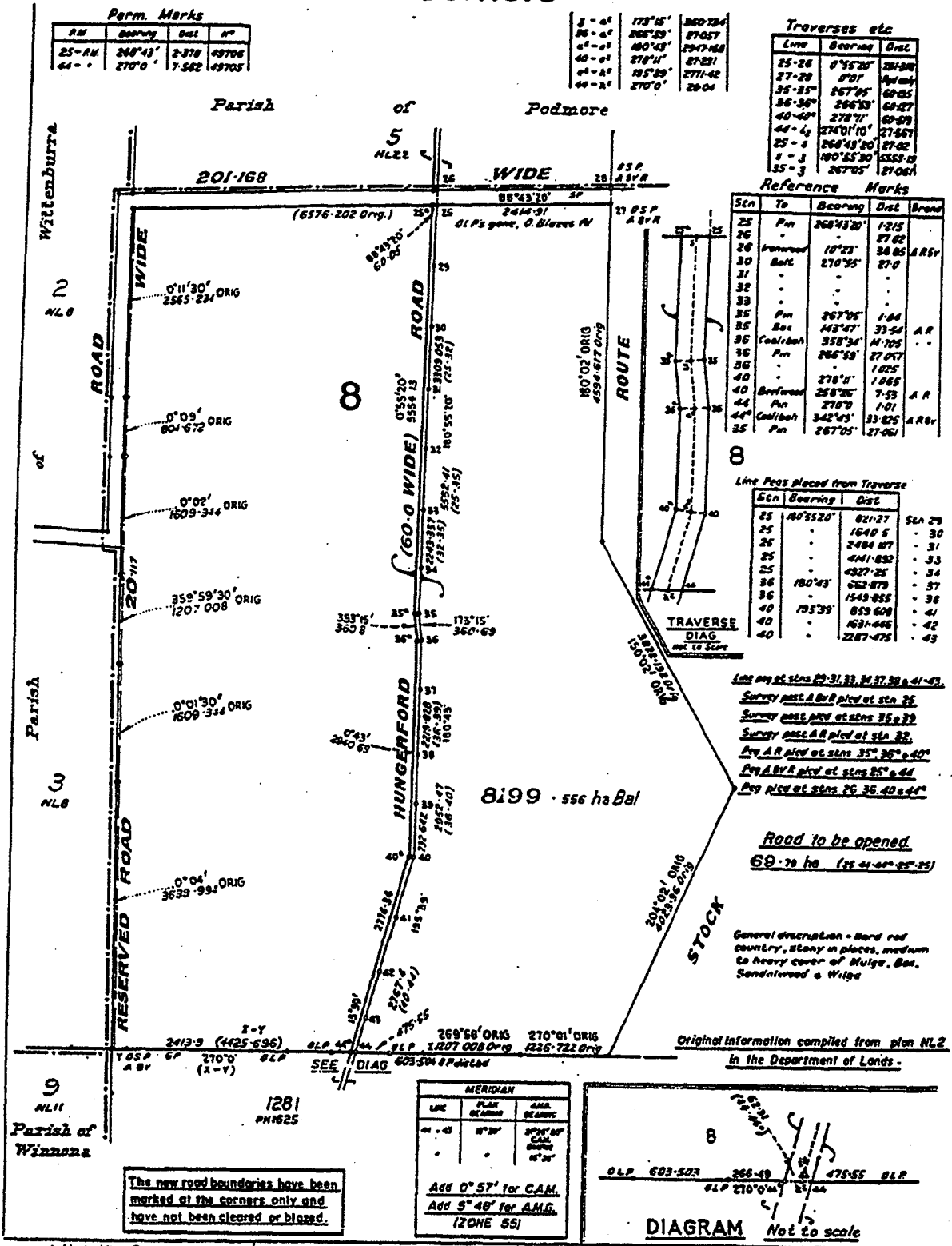
ORIGINAL PORTION 508

MERIDIAN CAN Vics SL 9783	MAP REF C.C.91	SCALE 1: 000	FILE REF RC41891	YES SURVEY RECORDS DEPOSITED	ENDORSED BRISBANE	REGISTERING DIST BRISBANE	AMEND FIELD
---------------------------------	-------------------	-----------------	---------------------	------------------------------	----------------------	------------------------------	-------------

EXAMPLE 38

- NOTES:**
- The method of representing Cross Sectional diagrams, etc
 - Road Closure in Strata is limited by RLs based on registered Bench Mark referenced to AHD
 - For additional information refer to Dept. A Document No. DYQ/810/000
 - For Restricted Titles (Subdivisions in Strata), enquiries should be made with the Dept. A District Office.

Unmarked Lines and Corners



L. Mark Allen Surveyor
I, Mark Allen Surveyor, do hereby certify that I and my Company have surveyed the land described in this plan (either personally or by-
agents) and that the plan is correct, and that the said survey was performed in accordance with the Surveyors Act and the Surveyors Regulations and that the said survey was completed on 16/2/92.
L. Mark Allen
Licensed Surveyor
Director

PLAN OF Lot 8
Cancelling Lot 8 on plan NL2.

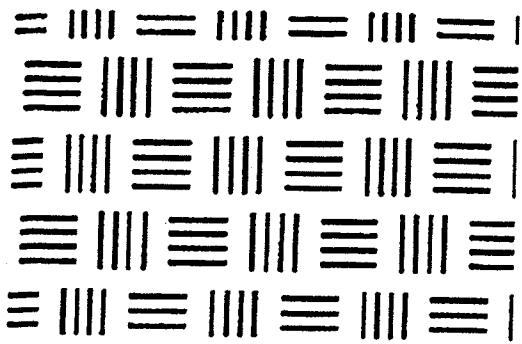
ORIGINAL PORTION BY

MERIDIAN	MAP REF	SCALE	FILE REF	DATE SURVEY RECORDS DEPOSITED	ENDORSED	REGISTERING DIST
AS SHOWN	SH 55-1	1: 000	RC37758			BRISBANE

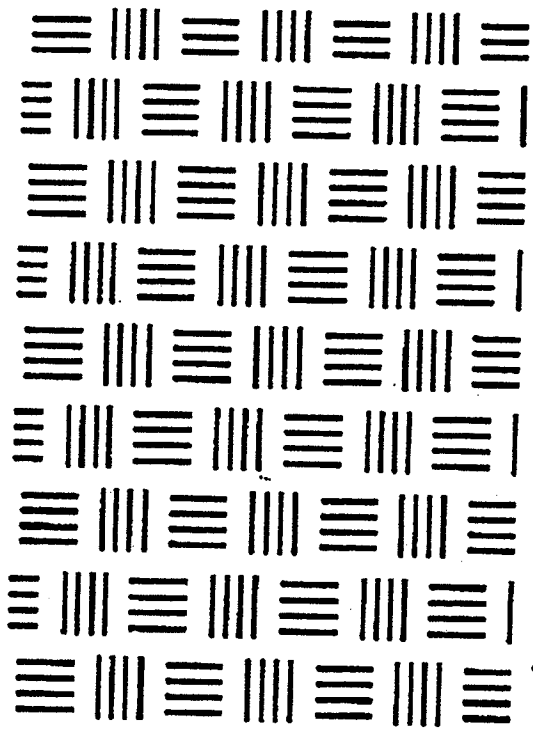
PARISH NUMALLA
COUNTY CUNNAMULLA
MUNICIPALITY HUNGEREORD
LOCAL AUTHORITY CUNNAMULLA S.C.
LAND AUTHORITY/DISTRICT
SHIRI FIELD

- NOTES:**
1. Refer to Direction 9 of the Directions to Surveyors 1992.
 2. In this Example, Road boundaries are projected lines derived from a surveyed traverse.
 3. Lines have not been cleared or blazed, however corners have been marked.
 4. The bordered statement prominently shown indicating the status of the new survey work.

EXAMPLE 39

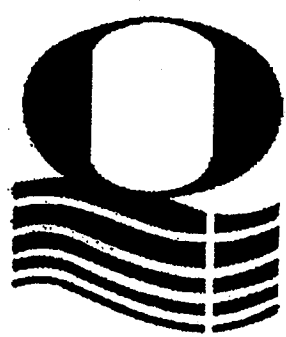


Requirements of the Department of Mines & Energy



Outlining the requirements as set down by
the Department of Mines and Energy

Specimen and Example Plans.



Department of Mines & Energy

**GPO BOX 194
BRISBANE Q 4001**

Phone: (07) 3237 1601

Fax: (07) 3237 1634

Att: Chief Surveyor

A plan of survey of a Mining Lease may be lodged subject to the Surveyor complying with the Mineral Resources Act 1989 - 1990 and the Mineral Resources Regulations 1990.

Specimen Plans indicate as far as possible most requirements of the Department. However specific actions would be detailed by the Chief Surveyor in the survey instructions.

If doubt exists, the Chief Surveyor Department of Mines & Energy should be contacted.

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GENERAL NOTE

Type and Line Styles should be standardised appropriate for industry standard electronic (computer) production of plans.

3.1 Areas

Areas are computed in accordance with General Requirements 1.8

Should a "three line" area be involved, the exclusion may be shown by statement and providing all bearings and dimensions are shown -- or may be inferred by a reference to a previous plan, the Nett area only is shown on the plan.

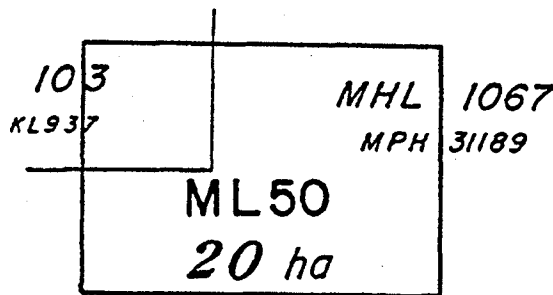
See also "ROADS IN MINING LEASES" 3.16

Where more than one previous plan is involved, to avoid ambiguity in Datum and dimensional differences, the subject plan should be fully dimensioned.

3.2 Background Tenures

3.2.1 Where a Mining Tenement covers lands held under other tenures, all boundaries and descriptions of those lands are to be shown on the plan. The boundaries of the subject block are to be distinguished by heavier lines. Show underlying descriptions in light block as follows:

Sample



3.2.2 When surface rights exist severances and connections are required. See- E4-17

3.3 Certificates

3.3.1 Certificate Required For Mineral Resources Plan

-----hereby certify that I/the Company have surveyed the land shown in this plan (either personally or by -----for whose work I/the Company accept responsibility), that the plan is accurate, that the survey was performed in accordance with the Mineral Resources Act 1989 and the Regulations made thereunder, and that the survey was completed on-----

Approved Surveyor

Date

3.3.2 Certificate Required For Petroleum Well Location Plan

(*) _____ hereby certify that I/the Company have surveyed the location of the petroleum well shown in this plan, that the plan is accurate, that the survey was performed in accordance with the Petroleum Act 1923-1988 and the Petroleum Regulations (Land) 1966 and that the survey was completed on _____

Signature of Approved Person

Date

(*) Insert full name of Approved Person

3.4 Claims And Areas

Claims and Areas as defined by the Mineral Resources Act are registered by the Mining Registrar and generally are not surveyed subject to Section 407 of the Mineral Resources Act. Where surveyed, show as for Mining Lease requirements.

3.5 Compiled Plans (Plans Without Field Survey)

3.5.1 Prior approval of the Chief Surveyor must be obtained for all compiled plans.

3.5.2 Information may be compiled from examined Department of Mines & Energy, and Department of Natural Resources plans only. Dimensions are not qualified by the word "Orig." Station Nos. or letters are shown only when required to describe specific actions (ie. Additions etc.)

3.5.3 If a compiled surround closes within the allowable limits of error, a calculated area should be used. If not, a compiled area is to be used and labelled where applicable "Bal"

3.5.4 Compiled Plans Involving Existing ML's

Compiled plans involving actions on existing ML's must bear the following statement :

*Copied and compiled from (Plan No/s). in the
Department of Mines & Energy, Brisbane

(*) Substitute or add "Department of Natural Resources" where

Sample

applicable.

3.5.5 Compiled Plans Involving Unsurveyed ML's

- 3.5.5.1 Compiled plans involving new ML's must bear a Section 25 certificate to which should be added:

Sample

and that the Datum Post was found by inspection to agree with the Lease Application as shown hereon.

.....
Licensed Surveyor

- 3.5.5.2 Compiled plans of ML's must show "Datum Post" on the face of the plan, with a connection from the appropriate lease corner tabulated as per the reference shown on the application.

An accurately measured connection is not required.
See also E4-20.

- 3.5.6 Where the compilation of plans cannot meet the requirements of 3.5.2 directions from the Chief Surveyor should be sought.
- 3.5.7 For private compiled plans the "DRAWN" box should be amended to "COMPILED BY"
- 3.5.8 Plans compiled by the Department of Mines & Energy should be labelled "OFFICE COMPILATION" in the "DRAWN" BOX.
- 3.5.9 The title of the plan is the same as if it were a survey.

3.6 Consolidated Leases

See E4-20.

3.7 Exploration Permit

- 3.7.1 On plans showing a point, line or area of an EP, the sub-block corners of which are described by geographic co-ordinates, the datum of the co-ordinates should be stated on the face of the plan as follows :

Sample

Geographic Go-ordinates on
Australian Geodetic Datum
eg. AGD 84

- 3.7.2 All bearings should be referred to the True Meridian.
- 3.7.3 When bearings are given, both forward and reverse azimuths must be shown where applicable.

- 3.7.4** If geodetic points are not available in the district at the time of survey, and an EP corner is determined by astronomical observations, a certificate signed by the holder and all adjoining EP holders, agreeing to accept the boundaries as located, must appear on the plan.
- 3.7.5** Plans of EP surveys should show connections to cadastral boundaries and comparison of meridians where practicable. Where observations are taken, a meridian table should be shown, vide "MERIDIAN" 1.42
- 3.7.6** In the Title Block a full Tenure description is applicable.
- Exploration Permit - Mineral No 123 (On face "EPM" may be used)
 - Exploration Permit - Coal No 123 (On face "EPC" may be used)
 - Authority to Prospect - Petroleum No 12 (On face "APP" may be used)

3.8 Field Notes

Complete statement on plan form as follows:

eg. (a)

NO FIELD NOTES LODGED

eg. (b)

FIELD NOTES LODGED 26.1.88

See also E4-32.

3.9 Handbook For Resource Industries Surveys

Guidelines for survey requirements for actions effected under the Acts administered by the Department of Mines & Energy are reproduced as Part E4.

3.10 Identification Survey

- 3.10.1** Plan requirements for boundary identification survey of all or part of any existing mining tenement are the same as the plan requirements for a survey of that tenement: except that the plan title should be headed:

Sample

IDENTIFICATON SURVEY OF

- 3.10.2** Identification Surveys to be drawn on Department of Mines & Energy plan forms.

3.11 Lapsed Boundaries

3.11.1 Lapsed boundaries are previously cancelled boundaries or boundaries of dead leases.

They are generally only shown when used for survey reinstatement. Measured bearings and distances are shown on face of plan. Former description of the expired lease when required is shown in dotted hairline.

See also "LINEWORK" E2--46 1.38

3.12 Mining Lease

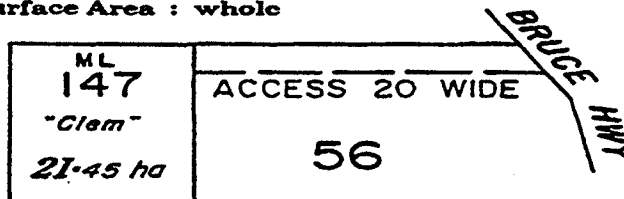
3.12.1 New Mining Lease

3.12.1.1 A plan of a new Mining Lease must show the external boundaries of the Lease, the area held under Surface Rights, any background tenures, and the Access to the Lease when applicable.

3.12.1.2 When Surface Rights exist, severance and connections to the background tenures are required.

Sample

Surface Area : whole



Title : *ML 147 AND ACCESS*

3.12.1.3 For details regarding Surface Area see 3.12.2.

See also "BACKGROUND TENURES" 3.2

3.12.1.4 For details regarding Access see "RIGHT OF WAY / ACCESS" E2--143 3.15

3.12.2 Surface Areas

3.12.2.1 The Surface Area (whether whole, part, or nil) is shown on the plan by statement, but must accord with the application description.

Samples

eg.

SURFACE AREA WHOLE

OR

SURFACE AREA 25.75 ha /Stn Nos to be used)

OR

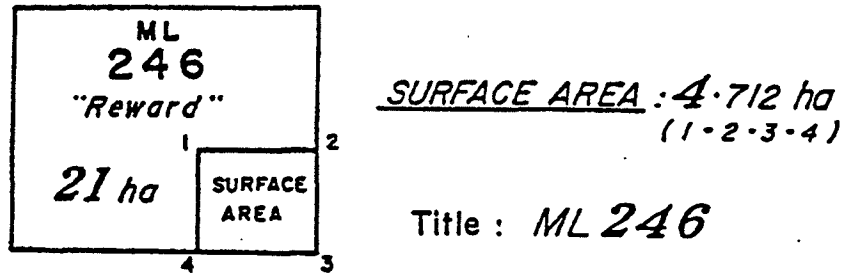
SURFACE AREA N/L

3.12.2.2 When more than one Surface Area is contained within the one Lease, describe as Surface Area No.1 etc. A calculated area is shown for each and the areas of the total surface by statement.

When a past description has been described only as "Surface Area" a subsequent area should be described as Surface Area No.2 - See 3.12.2.3.

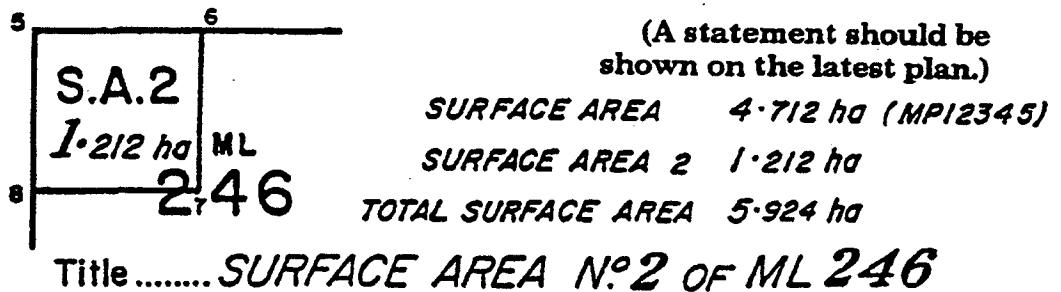
3.12.2.3 Shown on plan as follows: :

Sample



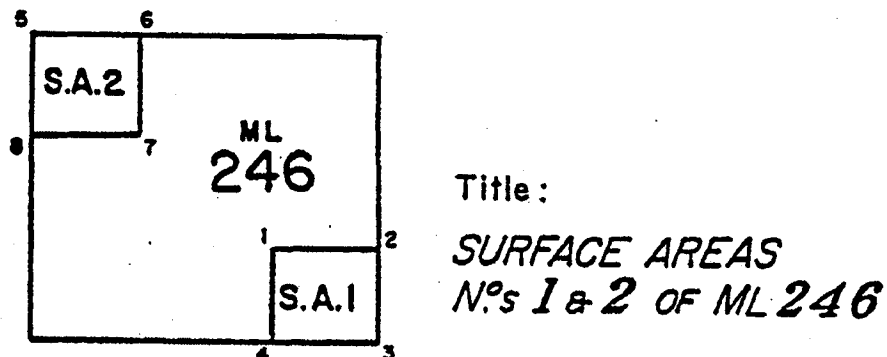
3.12.2.4 Surface Area is referred to in title when the plan is of the Surface Area only. When the Surface Areas are not contiguous, number new areas consecutively. See Also 3.12.2.5

Sample



3.12.2.5 A compiled plan may be requested to show the Surface Area actions progressive.

Sample



3.12.3 Application Posts

Show Connections to Applications Posts and the markings thereon, either on the face of the plan or tabulate.

3.12.4 Datum Post

All plans of Mining Leases, surveyed or compiled, may describe the position of the applicant's Datum Post and the marking thereon either on the face of the plan or tabulate.

Application Posts should be included in the same tabulation.

See also "COMPILED PLANS" 3.5.5.2

3.12.5 Depth Restrictions

On plans of Mining Leases which are restricted in depth, the plan should be endorsed with a suitable statement.

Sample

M.L. 69 7 exists only below the depth of 15.24 m beneath the surface except for Lot 83 where it exists on and beneath the surface.

3.12.6 Name Of Lease

The name of the Mining Lease is shown within the subject block as illustrated by diagrams in 3.12.1.2 and 3.12.2.3 above.

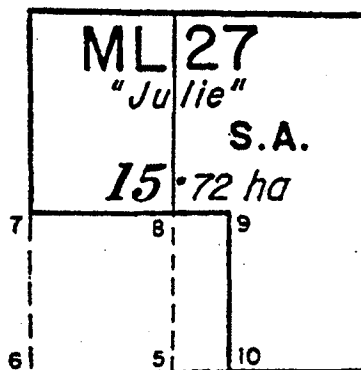
3.12.7 Surrender From Mining Lease

The plan is drawn as if the action were completed (original dimensions and cancelled boundaries if required).

Each Severance Area being surrendered from the Lease and Surface Area, as well as the Total Area surrendered are to be shown on the plan.

For Balance Areas see "UNDESCRIBED BALANCE" E2--146 3.20

Sample



AREA TO BE SURRENDERED FROM SURFACE AREA OF ML 27

(5-8-9-10) **1.674 ha**

AREA TO BE SURRENDERED FROM ML27

(6-7-9-10) **5.023 ha**

Title : **ML 27**

SURFACE AREA : 10.72 ha

3.12.8 Resumption From Surface Area Of Mining Lease

Treat in a similar manner to Surrenders - stating purpose.

Sample

On face eg.

AREA TO BE RESUMED FROM ML50...(stn Ns)..2.745ha

Title eg.

ML 50

The statement must clearly show whether the resumption is from the Lease (Surface and Underground) or from the Surface Area Only.

3.12.9 Mining Lease Encroaching On Mining Homesteads

The severance areas of any prior MHPL (and MHL) covered by the ML are to be stated on the plan, and shown as follows :

Sample

Area of ML in MHPL ...(Stn NP's)... 2.345 ha

3.12.10 Mining Lease Location Surveys

Specifications for plans of Datum Post Location Surveys are available from the Chief Surveyor on request.

3.12.11 Any Mine workings, structures or improvements on or adjacent to boundaries must be noted in the field book and shown on the plan. Care should also be taken to comply with further Department of Minerals & Energy Instructions.

See also "ROADS IN MINING LEASES" E2--144 3.16

3.12.12 Mineral Development Licence

Mineral Development Licences as defined by the Mineral Resources Act may be lodged at the office of the Director General, Brisbane. When surveyed, generally shown as for Mining Lease requirements.

3.13 Petroleum Permits, Leases & Licenses

Whether for the purposes of the Petroleum Act 1923 - 1988, or the Petroleum (Submerged Lands) Act 1967 - 1982, it is necessary to determine the position on the surface of the earth of a point, line or area. Such a position shall be determined by reference to the Australian Geodetic Datum, and any plan depicting such position should be endorsed :

Eg. Australian Geodetic Datum 1984

Where bearings are given, both forward and reverse azimuths must be shown where applicable.

3.14 Petroleum Well Location Surveys

See E4-58

3.15 Right Of Way (Petroleum Act) Access (Mineral Resources Act)

3.15.1 "Access" is defined as access to any Mining Tenement.

3.15.2 Normally not surveyed (only when instructed by the Warden or Director-General).

3.15.3 Treat generally as for an Easement Survey.

Show width of Access and secants.

Generally no area is required.

3.15.4 If only one side is run show the surveyed boundary by a full line and the opposite side in a broken line.

3.15.5 Shown on plan as follows :

Sample On Face

eg. ACCESS 20 WIDE

Title (as the case dictates).

eg. ML 53 and ACCESS

or ML 's 52, 53 and ACCESS (ML53)

or ACCESS (ML 53)

- 3.15.6** A "Right of Way" showed access to a mining tenement on private land and after 1st August 1982, also to a mining tenement on Crown Land.

Prior to 1st August 1982, access to a mining tenement on Crown Land was described as "Right of Access".

3.16 Roads In Mining Leases

- 3.16.1** There are four methods of showing areas of Dedicated Roads and/or other exclusions or reservations through ML's on a plan, depending upon the form of the ML Application.

- 3.16.1.1** The road may be included in the surface area of an ML if compensation requirements to disturb the surface have been satisfied.

See also E4-44.

Sample

120.5 ha

The road boundaries are shown in light lines.

- 3.16.1.2** The road may be excluded from the ML in the terms of the lease.

Sample

120.5 ha

2.746 ha Rd (show by statement with Stn No.s)

117.8 ha (only Area shown on face of plan)

The road boundaries are shown in heavy lines.

Join the severances with a vinculum. See 3.21.1

- 3.16.1.3** The road may be excluded only from the surface area of the ML in the terms of the lease.

Sample

Within Lease On Face

120.5 ha

by Statement

SURFACE AREA: 70.5 ha

2.746 ha Rd

67.954 ha

The road boundaries are shown in medium lines.

The surface area is shown by statement.

- 3.16.1.4** Where no surface area is required for the ML, the area of the road is not shown, only the area of the ML.

Sample

120.5 ha

The road boundaries are shown in light lines.

See also "AREAS" 3.1

- 3.16.2 In all cases the surveyed road boundaries should be plotted on the plan.
Full dimensions of the road are required in cases 3.16.1.2 and 3.16.1.3 above.

3.17 Status Of Tenure Table

Plans drawn for the purpose of a grant must show a tenure table. To avoid confusion over the status of a grant, the description of a plan must not be qualified by the term "A" or "Application". The tenure table will be completed by the Department at date of grant.

Sample

STATUS OF TENURE

TENURE No.	DATE OF GRANT
ML 4059	

3.18 Statutory Mine Working Plans

- 3.18.1 Drawing requirements for Statutory Mine Working Plans will be made available from the Chief Surveyor on request.
- 3.18.2 Plans must be drawn on official Department of Mines & Energy Statutory Mine Working Plan sheets, obtainable from the Chief Surveyor.

3.19 Title

- 3.19.1 Should be shown on plan as follows :-

(a) PLAN OF *ML 1275*
For further details refer to respective tenure.

(b) PARISH *GYMPIE*

(c) COUNTY *March*

(d) MINING DISTRICT..... *Mareeba*

See also "STYLES" 1.62

See also "SPECIMEN MINING RESOURCES PLAN" No I

3.20 Undescribed Balance

In the case of an excision from a Surface Area or Mining Lease the Balance must be shown on the plan where possible. The Balance may be left as an Undescribed Balance and omitted from the plan only with the prior approval of the Chief Surveyor.

3.21 Vinculum

A Vinculum symbol binding Severances of tenements across intervening boundaries, or over other lands, are to be shown on face of plan thus:

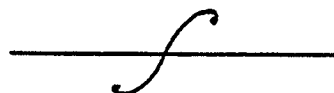
3.21.1 For Subject Land



3.21.2 For Surface Areas, Sub Lease Etc. Over The Subject Land.



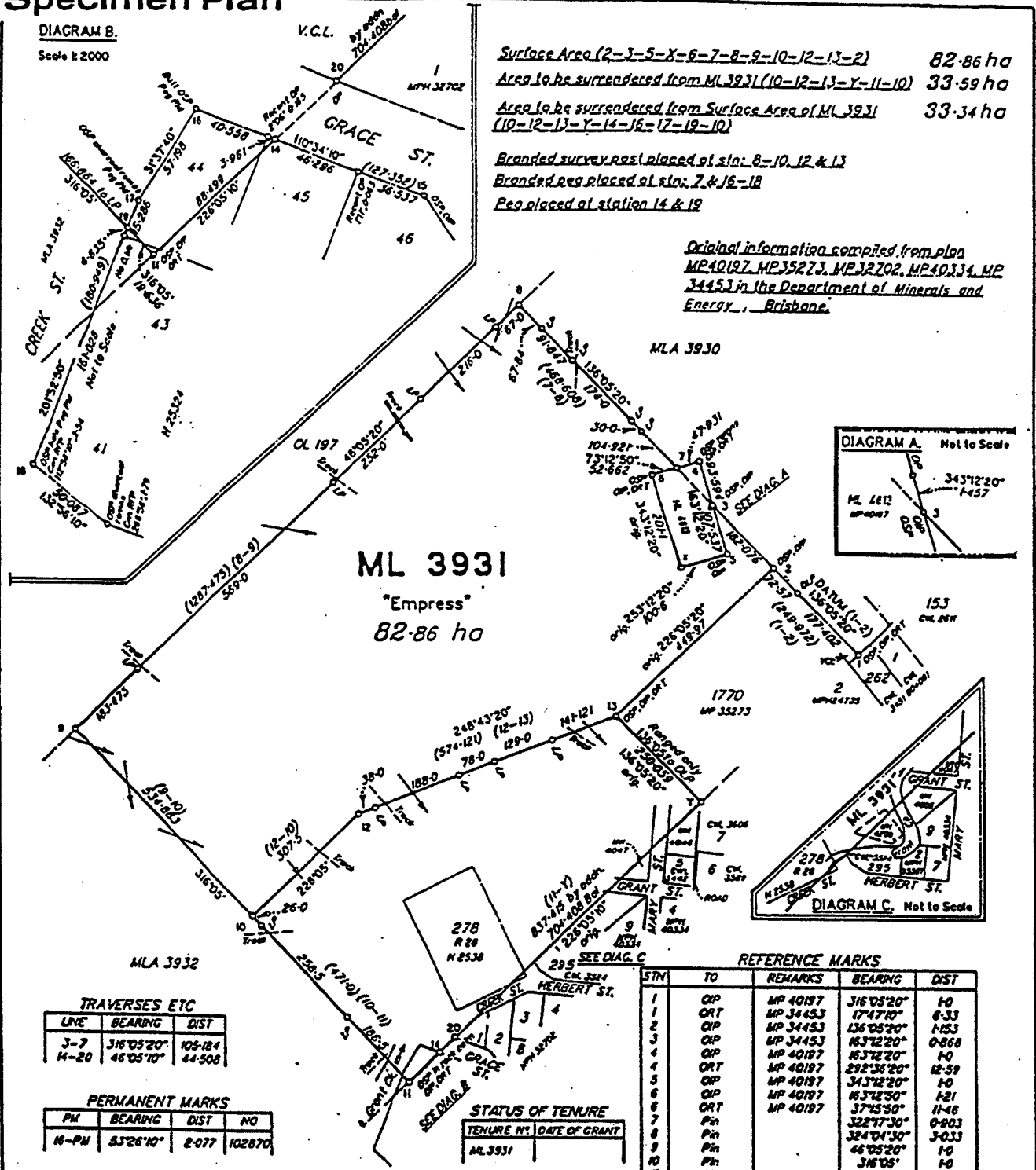
3.21.3 For Background Descriptions Underlying The Subject Lease And For Adjoining Descriptions.



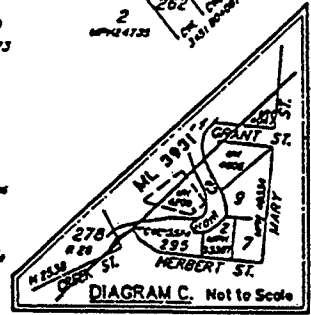
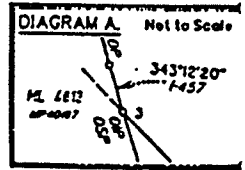
Specimen Plan

DIAGRAM B.

Scale 1:2000



Original information compiled from plan
 MP 40187, MP 34453, MP 32702, MP 40134, MP
 34453 in the Department of Minerals and
 Energy, Brisbane.



TRAVERSES ETC

LINE	BEARING	DIST
3-7	316°05'20"	103.184
14-20	46°05'10"	44.508

PERMANENT MARKS

PK	BEARING	DIST	NO
16-PK	53°26'10"	2.077	102870

DATUM POSTS

STN	BEARING	DIST	REMARKS
1-Post	at	stn	(See MP 40187)

LEASE POSTS

POST	BEARING	DIST
8-Post	4°11'	6.175

STATUS OF TENURE

TENURE NO.	DATE OF GRANT
ML 3931	

MERIDIAN

LINE	PLAN BEARING	A.M.G. BEARING
3-2	136°05'20"	136°0'320"

Subtract 5'45" for CAM - ZONE 55

I, Mark Allen Surveyor

I hereby certify that this Survey has been surveyed and that the plan is accurate and that the survey was performed in accordance with the Mining Resources Act 1989 and the Regulations made thereunder, and that the survey was completed on

Approved Surveyor _____ Date _____

LOCALITY
 LAT. S 17 22 05
 LONG. E 145 22 55
 FILED NOTES (1/19/96)

MINING RESOURCES PLAN
 of ML 3931 (formerly ML 5246, Herberton)...

PARISH HERBERTON
 COUNTY Cardwell
 MINING DISTRICT MAREEBA

MINIMUM SEE TABULATION
 SCALE 1:000
 SPECIMEN I

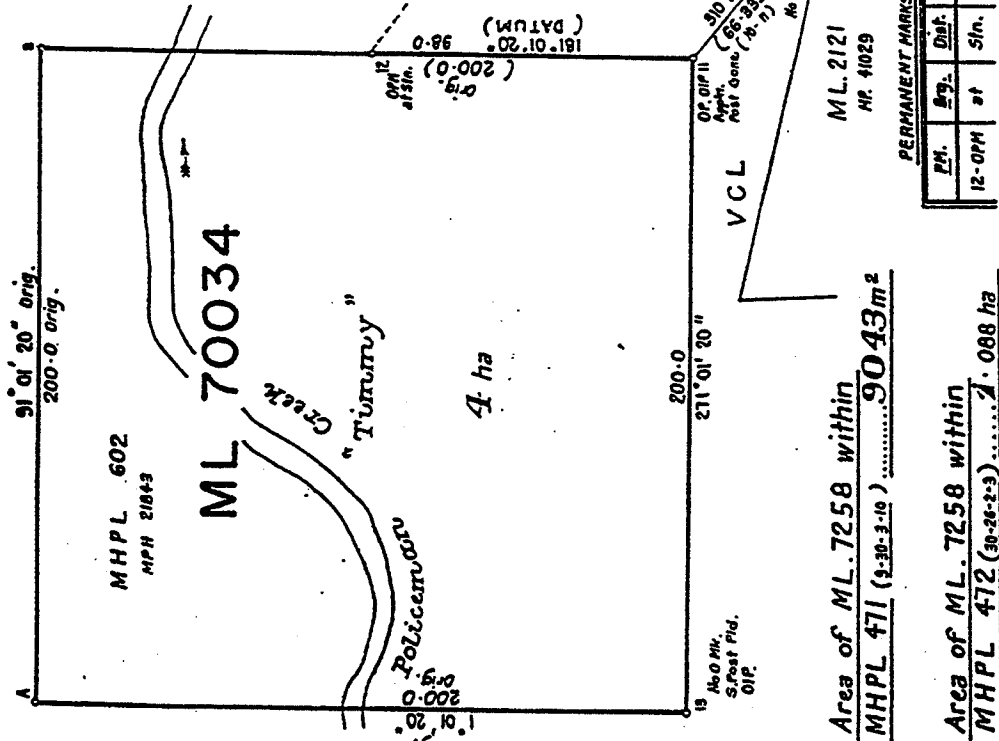
Specimen Plan

REFERENCE MARKS

Stn.	To	Brg.	Dist.	Remarks
2	OIP	179° 39' 30"	5.777	
4	Pin	at	67m	
5	OIP	310° 09' 40"	5.733	
6	OIP	3° 06' 20"	0.528	
7		9° 47' 30"	1.0	
8		at	Sin.	
9		306° 46'	0.61	
10	Pin	131° 26' 30"	1.225	
11	OIP	1° 01' 20"	1.0	
13		1° 28' 30"	3.635	
10		116° 21'	1.52	
7	Traizee	35° 01'	4.28	
4	Pin	at	4130	

TRAVERSES ETC.

Line	Brg.	Dist.
4-4	278° 3' 40"	23.98
4-8	276° 13' 40"	64.612
6-4	299° 37' 40"	1.002
8-4	268° 10' 45"	13.363
8-8	275° 43' 30"	1.055
9-30	88° 40' 45"	83.832
4-4	188° 43' 30"	1.745
10-31	262° 51' 30"	12.46
9-12	306° 19'	68.29
7-1	3° 06' 20"	2.815
1-4	278° 3' 40"	16.27



Area of ML 70034 within MHPL 602 (22-18-2-1) **1.201 ha**

SURFACE AREAS - WHOLE

Not Marked
E/Vols 26-9-90
Buried
Not Marked
+287
E/Vols ML 70034-112-91

LEASE POSTS

Post	Brg.	Dist.
6-Post	350° 40' 30"	1.57
6 "	359° 0' 30"	1.75
9 "	88° 40' 45"	0.25
8 "	165° 0' 30"	0.35
8 "	122° 0' 30"	0.35
13-Post 1	51° 30' 30"	0.22

PERMANENT MARKS

PH.	Brg.	Dist.	RE
12-OPM	at	Sin.	93434

I, Mark Allen Surveyor
hereby certify that I and my assistants have surveyed the land shown in this plan (either personally or by duly qualified assistants) and that the plan is accurate, that the survey was performed in accordance with the Mineral Resources Act 1989 and the Regulations made thereunder, and that the survey was completed on _____

Approved Surveyor _____ Date _____

CATALOGUED APPROVED REGISTERED

Chief Surveyor

PWL SURVEYED BY _____

LOCALITY _____
LAT. S 23° 25' 19"
LONG. E 158° 42' 19"
FIELD NOTES LOGGED _____

FILE REF _____ DRAWN _____

MINING RESOURCES PLAN
ML 70034 & ML 7258
(Formerly ML 3094 Clermont)

PARISH **KETTLE**
COUNTY **Clermont**
MINING DISTRICT **Emerald**

MERIDIAN Zone 55
Scale of MP. 41054
Add 7' 14" for AMG.
Subtract 0' 0" for CAM

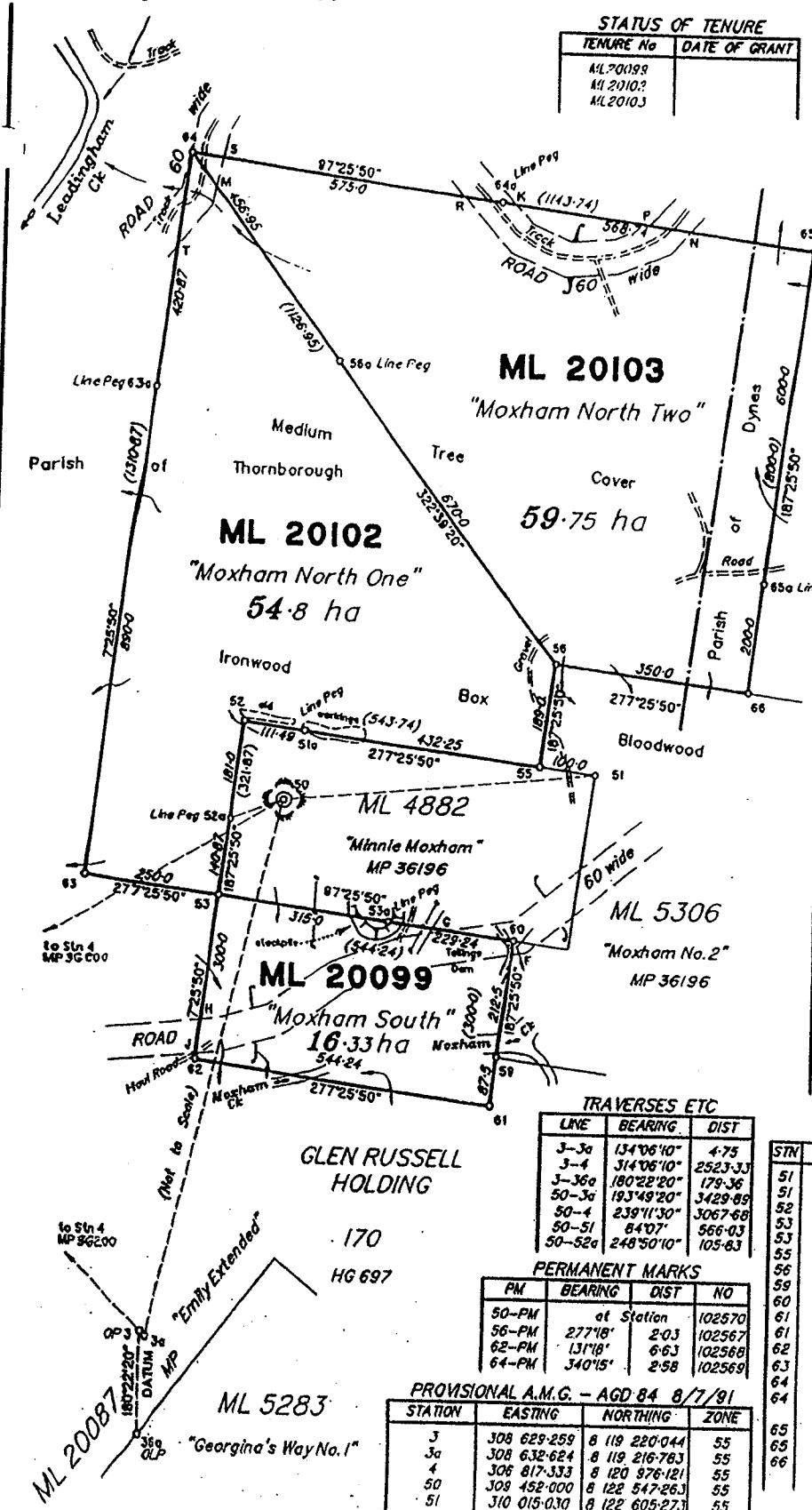
SCALE
1 : 00

SPECIMEN 2

STATUS OF TENURE	
TENURE No	DATE OF GRANT
ML 20099	
ML 20102	
ML 20103	

NOTES

1. Branded Survey Post placed at stations 51-53, 55, 56, 59-66.
2. Steel Star Picket placed at stations 3a, 51a, 52a, 53a, 56a, 63a, 64a & 65a.
3. Refer field notes for old workings.
4. SURFACE AREA ML20099 - WHOLE
5. SURFACE AREA ML20102 (Excludes Road in 8 below) Abt 54.27 ha
6. SURFACE AREA ML20103 (Excludes Road in 9 below) Abt 57.25 ha
7. Area of Road within ML 20099 (G-60-F-J-H-G) Abt 3.47 ha
8. Area of Road within ML 20102 (64-M-T-64) Abt 0.53 ha
9. Area of Road within ML 20103 (64-S-M-64) Abt 0.25 ha
(R-K-P-N-R1) Abt 2.25 ha } 2.5 ha
10. This is one of two plans (Catalogue Nos. MP36196 & MP36197 from the one survey).



DATUM POSTS

LINE	BEARING	DIST	BRAND
51-Post	277°25'50"	0.2	(MAM 10/12/87)
56-Post	298°0'	0.45	(NICL 6/8/91)
58-Post	310°0'	0.5	(NICL 6/8/91)
60-Post	325°	30.65	(NICL 6/8/91)

LEASE POSTS

LINE	BEARING	DIST	BRAND
52-Post	277°25'50"	5.7	(NICL 6/8/91)
53-Post	352°10'	21.45	(NICL 6/8/91)
53-Post	352°10'	21.55	(NICL 6/8/91)
55-Post	292°30'	0.3	(MAM 10/12/87)
55-Post	299°30'	0.5	(NICL 6/8/91)
56-Post	277°25'50"	0.25	(MAM 10/12/87)
59-Post	277°25'50"	0.3	(MAM 10/12/87)
60-Post hole	277°25'50"	0.24	(MAM 10/12/87)
61-Post	8°0'	27.2	(NICL 6/8/91)
62-Post	8°40'	21.8	(NICL 2/8/91)
63-Post	17°0'	5.25	(NICL 6/8/91)
64-Post	232°10'	17.65	(NICL 6/8/91)
64-Post	232°20'	17.75	(NICL 6/8/91)
65-Post	8°20'	6.15	(NICL 6/8/91)
66-Post	82°50'	8.8	(NICL 6/8/91)

TRAVERSES ETC

LINE	BEARING	DIST
J-3a	134°06'40"	4.75
J-4	314°06'40"	2523.33
J-36a	180°22'20"	179.36
50-3a	193°49'20"	3429.89
50-4	239°11'30"	3067.68
50-51	84°07'	566.03
50-52a	248°50'10"	105.83

PERMANENT MARKS

PM	BEARING	DIST	NO
50-PM	at Station		102570
56-PM	277°18'	2.03	102567
62-PM	131°18'	6.63	102568
64-PM	340°15'	2.58	102569

PROVISIONAL A.M.G. - AGD 84 8/7/91

STATION	EASTING	NORTHING	ZONE
J	308 629.259	8 119 220.044	55
3a	308 632.624	8 119 216.783	55
4	306 817.333	8 120 976.121	55
50	309 452.000	8 122 547.263	55
51	310 015.030	8 122 605.273	55

REFERENCE MARKS

STN	TO	REMARKS	BEARING	DIST
51	Pin		95°15'	1.675
51	Box	A ML 4882	181°27'	22.95
52	Pin		97°25'50"	1.0
53	Pin		97°25'50"	1.1
53	Box	A ML 4882	186°0'	20.26
55	Pin		72°5'50"	2.0
56	Pin		204°41'	1.15
59	Pin		270°55'	1.44
60	Pin		97°25'50"	4.6
61	Pin		38°50'	1.22
61	P'bank	A ML 20099	136°15'	9.71
62	Pin		187°25'50"	2.025
63	Pin		97°25'50"	1.66
64	Pin		121°10'	0.97
64	Box	A ML 20102/20103	231°55'	7.63
65	Pin		358°43'	2.02
65	Blwd' Pin	A ML 20103	168°20'	5.75
66	Pin		95°14'	8.77

I, Mark Allen Surveyor
 hereby certify that this Company have surveyed the land shown in this plan (either personally or by
 whose work is the Company's responsibility), that the plan is accurate, that the survey was performed in accordance with the Mineral Resources Act 1988 and the Regulations made thereunder, and that the survey was completed on _____

APPROVED SURVEYOR: _____ DATE: _____

LOCALITY: 51° LAT. S 16° 58' 21" 51° LONG. E 145° 12' 56"

FIELD NOTES LOANED

MINING RESOURCES PLAN of ML 20099, ML 20102 & ML 20103

PARISH: THORNBOROUGH/DYNE'S
 COUNTY: Hodgkinson
 MINING DISTRICT: MAREEBA

MEASUREMENT: METRIC
 SCALE: 1:000

CATALOGUED: _____ APPROVED: _____ REGISTERED: _____

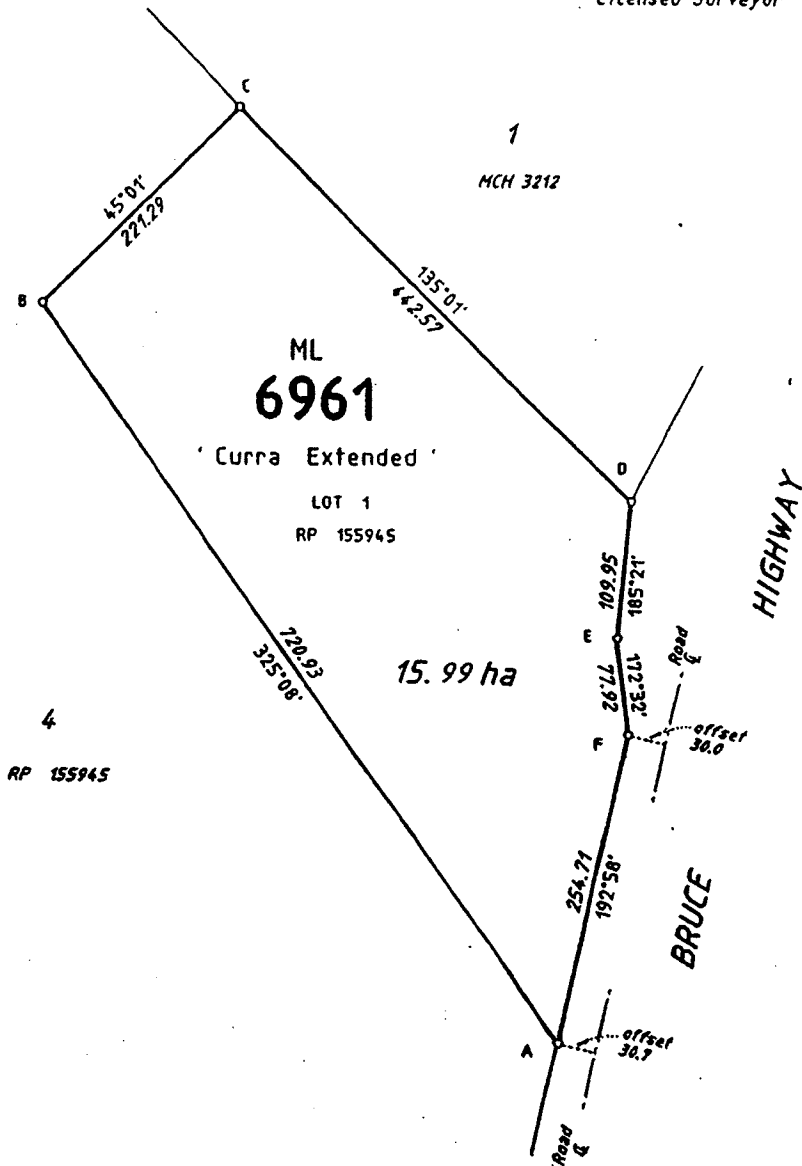
FILE REF: _____ DRAWN: _____

EXAMPLE 1

STATUS OF TENURE	
TENURE	DATE OF GRANT
ML 6961	

Datum Post was found by inspection to agree with the Lease Application as shown hereon.

Licensed Surveyor



I, Mark Allen Surveyor hereby certify that I have made this plan pursuant to Section 25 of the Surveyors Regulation 1992, that the plan is accurate and compiled from plan RP155945 in the Department of Lands.

27/7/92
Date

Mark Allen
Licensed Surveyor

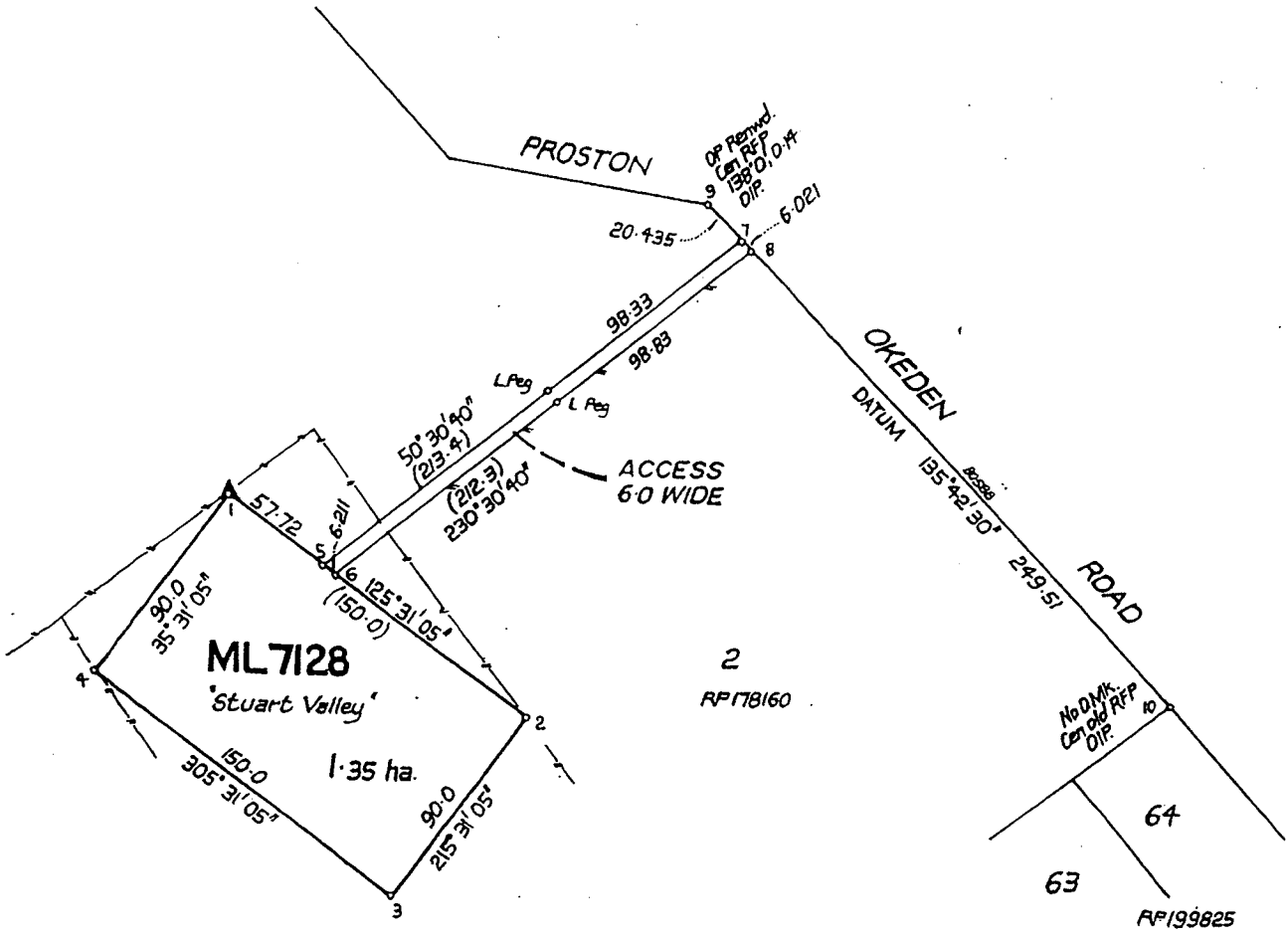
DATUM			POSTS
POST	BRG	DIST	RMKS
A-Post	295°0'	0.23	TLPL 31/10/89 IML9281

SURFACE AREA WHOLE

hereby certify that I/the company have surveyed the land shown in this plan (either partially or by)		MINING RESOURCES PLAN	
for whose work I/the company accept responsibility, that the plan is accurate, that the survey was performed in accordance with the Mineral Resources Act 1989 and the Regulations made thereunder, and that the survey was completed on		ML 6961 PARISH CURRA COUNTY March MINING DISTRICT Brisbane	
Approved Surveyor _____ Date _____		LOCALITY LAT. S 26° 06' 10" LONG. E 152° 34' 20" FIELD NOTES LOCATED	
CATALOGUED	APPROVED	REGISTERED	FILED
			DRAWN
		MERIDIAN Vide RP 155945	
		SCALE 1: 000	
		EXAMPLE 2	

LEASE POSTS

Post	Bearing	Dist	
1-Post	164° 57'	0.33	"V. Knopke 11.6.1990"
3-Post	136° 17'	1.16	"V. Knopke 11.6.1990"
4-Post	130° 05'	2.18	"V. Knopke 11.6.1990"



PERMANENT MARKS

PM.	Bearing	Dist	Number
1-PM	205° 16'	1.522	79822
2-PM	230° 52'	1.397	79823

SURFACE AREA - WHOLE

DATUM POST

Post	Bearing	Dist	
2-Post	219° 49'	0.23	"V. Knopke 11.6.1990"

STATUS OF TENURE

Tenure No	Date of Grant
ML 7128	12/12/91

Peg placed at stations 5-9
Survey Posts placed at stations 1-4

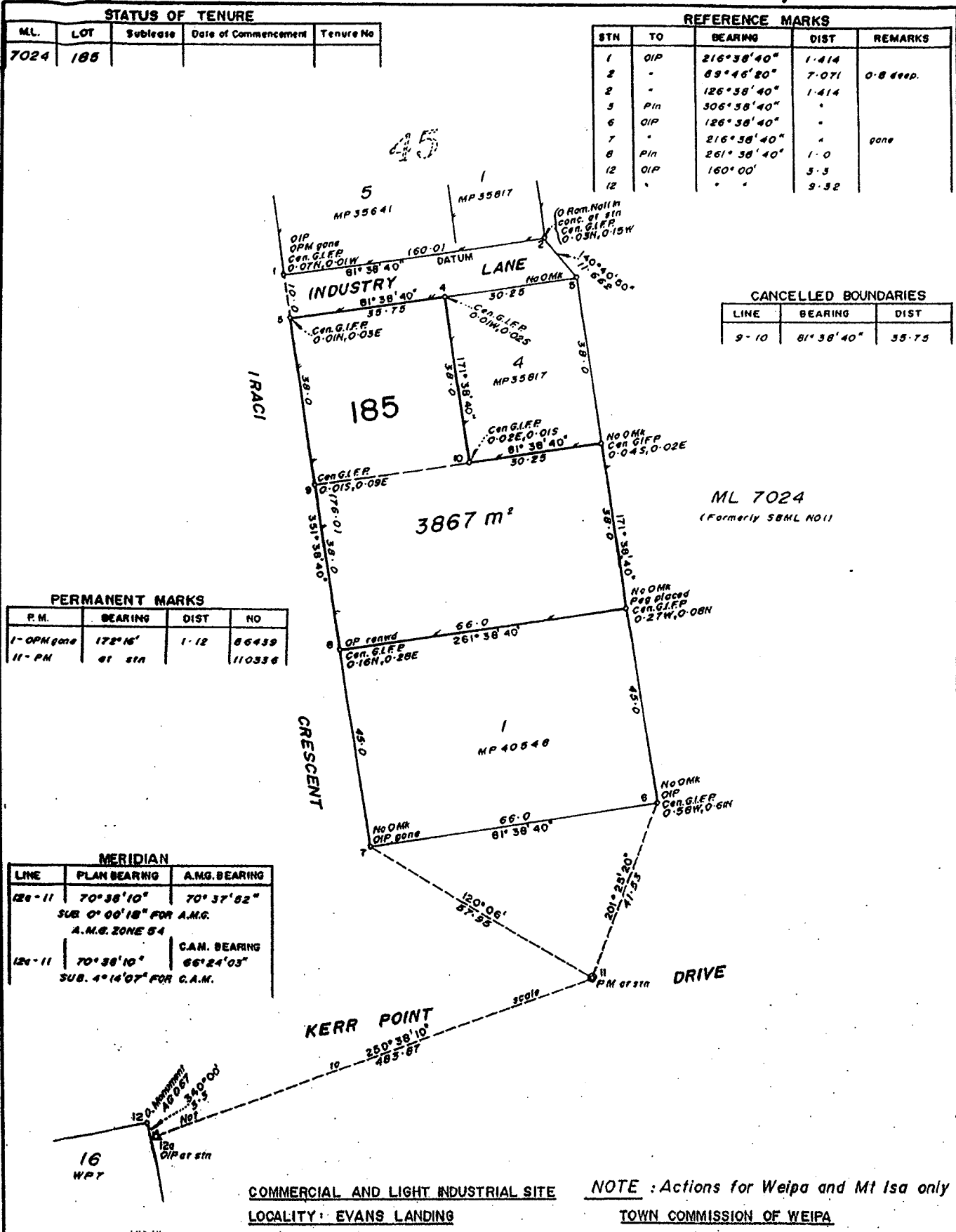
REFERENCE MARKS

Stn	To	Remark	Bearing	Dist.
1	Pin		305° 31' 05"	0.723
2	Pin		305° 31' 05"	0.95
3	Pin		305° 31' 05"	0.95
4	Pin		305° 31' 05"	0.723
5	Pin		125° 31' 05"	3.106
7	Pin		163° 25' 45"	3.256
9	OIP		515° 42' 30"	1.0
10	OIP		135° 42' 30"	1.0

MERIDIAN

Line	Plan Brg.	AMG Brg.
1-2	125° 31' 05"	125° 31' 05"
AMG		
Subtract 7° 23' 05" for CAM ZONE 56		

<p>I, Mark Allen Surveyor</p> <p>herby certify that I/the Company have surveyed the land shown in this plan (either personally or by...)</p> <p>for whose work I/the Company accept responsibility, that the plan is accurate, that the survey was performed in accordance with the Mineral Resources Act 1989 and the Regulations made thereunder, and that the survey was completed on _____</p> <p>Approved Surveyor: _____ Date: _____</p>		<p>PWL SURVEYED BY _____</p> <p>LOCALITY LAT. S <u>28° 02' 00"</u> LONG. E <u>151° 25' 00"</u></p> <p>FIELD NOTES LODGED _____</p>		<p>MINING RESOURCES PLAN ML 7128 and ACCESS</p> <p>PARISH <u>PROSTON</u> COUNTY <u>Boondooma</u> MINING DISTRICT <u>Brisbane</u></p> <p>MERIDIAN <u>AMG</u> SCALE <u>1: 000</u></p>	
<p>CATALOGUED</p>	<p>APPROVED</p>	<p>REGISTERED</p>	<p>FILE REF</p>	<p>DRAWN</p>	<p>EXAMPLE 3</p>



<p>I, Mark Allen Surveyor</p> <p>herby certify that I have surveyed the land shown in this plan (either personally or by)</p> <p>for whose work I have accepted responsibility, that the plan is accurate, that the survey was performed in accordance with the Mineral Resources Act 1989 and the Regulations made thereunder, and that the survey was completed on</p> <p>Approved Surveyor _____ Date _____</p>		<p>(PVI SURVEYED BY)</p> <p>LOCALITY: _____</p> <p>LAT. S 12°39'40"</p> <p>LONG. E 141°51'10"</p> <p>FIELD NOTES I (CHART) _____</p>		<p>MINING RESOURCES PLAN</p> <p>LOT 185</p> <p>.....Cancelling.....Lots 2 and 3 on MP 40548</p> <p>PARISH <u>FIFE</u></p> <p>COUNTY <u>Weipa</u></p> <p>MINING DISTRICT <u>Calras</u></p>	
<p>CATALOGUED APPROVED REGISTERED</p> <p>Chief Surveyor</p>		<p>FILE REF DRAWN</p> <p>See Tabulation</p>		<p>SCALE</p> <p>1:00</p>	
EXAMPLE 4					

Survey Requirements of the Department of Natural Resources

Note to Surveyors:

This document has been prepared based on the requirements of the Department as at the date of publication. Should the Land Title Act be substantially amended as is currently proposed, this document will require amendment concurrently to reflect the new requirements of the amended Act. This will affect, in particular, dealings with land "in strata" and balance parcels.

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Department of Natural Resources Office Addresses

The offices listed below are only those offices where there is a surveying function that is associated with the Department's plan registration process.

DEPARTMENT OF NATURAL RESOURCES

Landcentre

Cnr Main and Vulture Streets,
Woolloongabba

Postal Address

Locked Bag 40
Coorparoo Delivery Centre
Qld 4151

Ph: (07) 3896 3177

Fax: (07) 3896 3562

■ Beenleigh

108 George Street
Beenleigh 4207

P.O. Box 1164

Ph: (07) 3826 0020

Fax: (07) 3826 0079

■ Brisbane

State Government Building
Cnr Adelaide and Edward Streets
Brisbane 4000

P.O. Box 1401

Ph: (07) 3227 6626

Fax: (07) 3227 8758

■ Bundaberg

Queensland Government Offices
46 Quay St. Bundaberg 4670

P.O. Box 1167

Ph: (071) 538 101

Fax: (071) 531 307

■ Bundall

1st Floor West Tower
Waterside Office Park
Holden Place Bundall 4217

P.O. Box 5096

Ph: (07) 588 5100

Fax: (07) 588 5133

■ Caboolture

Level 5

Caboolture Park Shopping Centre
King Street Caboolture 4510

P.O. Box 1080

Ph: (074) 953 499

Fax: (074) 900 019

■ Cairns

Ground Floor National Mutual Tower
15 Lake Street Cairns 4870

P.O. Box 937

Ph: (070) 523 431

Fax: (070) 510 851

■ Ipswich

Hayden Commonwealth Centre
Cnr East and South Sts.

Ipswich 4305

P.O. Box 864

Ph: (07) 812 2026

Fax: (07) 810 0069

■ Mackay

1st Floor 32 - 36 Wood Street
Mackay 4740

P.O. Box 63

Ph: (079) 518 755

Fax: (079) 574 005

■ Maryborough

Floor 1 Horsburgh Place
314-318 Kent St. Maryborough 4650

P.O. Box 212

Ph: (071) 237 729

Fax: (071) 224 007

■ Nambour

Ground Floor
Centenary Square Building
52 - 64 Currie St. Nambour 4560

P.O. Box 573

Ph: (074) 300 900

Fax: (074) 417 473

■ Rockhampton

209 Bolshover Street
Rockhampton 4700

P.O. Box 1762

Ph: (079) 319 815

Fax: (079) 314 198

■ Roma

31 McDowall Street Roma 4455

P.O. Box 350

Ph: (076) 221 355

Fax: (076) 201 059

■ Toowoomba

QTV Place
Cnr Hume and Clopton Streets

Toowoomba 4350

P.O. Box 962

Ph: (076) 319 149

Fax: (076) 326 627

■ Townsville

3rd Floor State Gov't Bld.
Cnr Stanley and Walker Streets

Townsville 4810

P.O. Box 5318

Ph: (077) 221 201

Fax: (077) 221 125

DEPARTMENT OF NATURAL RESOURCES

Office: Postal Address: Ausdoc:

Landcentre

Cnr Main & Vulture Sts

Woolloongabba Q 4102

Locked Bag 40

Coorparoo Delivery Centre

Coorparoo Q 4151

DX229

Brisbane



2nd April 1996

To the Reader,

The Survey Requirements of the Department of Natural Resources is a compendium of requirements, based on the legislation, policy and procedures affecting cadastral surveys in Queensland.

The document distinguishes between mandatory requirements, usually based on legislation or departmental policy, from those other provisions which provide guidance subject to the professional judgement of surveyors.

It has been prepared to provide cadastral surveyors with a guide to the requirements of the Department of Natural Resources in its role as a survey plan registering authority in Queensland.

I commend the document to you.



T Fenwick
Director General

1. Requirements of the Department of Natural Resources

Authority for Requirements

Section 5 of the Surveyors' Regulation 1992 empowers the Surveyors Board to issue Directions to Surveyors which are binding on them. The Board has issued Direction 1.0 requiring that lodgement of plans must conform with the requirements of Registering Authorities. This document itemises the mandatory requirements of the Department of Natural Resources and the legislative requirements of other Departments.

These have been derived from legislation, Land Title, Land Use and Land Boundaries Notifications, Registrar's Requirements, Departmental Policies and long standing professional practice. Where appropriate, the relevant legislation has been identified throughout the document.

This document has been prepared by officers of the Department of Natural Resources (DNR) and is to be used in conjunction with relevant Acts, Regulations, Directions and Policies issued by the Department of Natural Resources, the Surveyors Board of Queensland, and other Departments.

The requirements contained in this document, outline the majority of procedures necessary to ensure that survey plans deposited for registration are suitable for:

- ◆ the purpose of the survey;
- ◆ the proposed land dealing;
- ◆ the issue of resultant tenure documents;
- ◆ speedy data entry into the Department's strategic data bases.

The document consists of:

- ◆ mandatory requirements of the DNR and the legislative requirements of other Departments necessary for the preparation and registration of plans indicated by **M**
- ◆ general advice indicated by **A**
- ◆ information on DNR systems indicated by **S**
- ◆ background/historical information indicated by **H**

Notwithstanding anything contained in these requirements:

- ◆ The DNR reserves the right to reject any plan that is not correct for registration; and
- ◆ no responsibility is accepted by the DNR for any actions taken by persons external to the DNR pursuant to these requirements.

General

The copies of plans on pages E2-84 to E2-130 are examples of actions necessitating lodgement of survey plans with the Department of Natural Resources.

The majority of the examples are copies of original plans held in the Department of Natural Resources, which have been suitably adapted to represent specific actions. As such these examples may not necessarily conform in every respect to all of the requirements stated in this manual. For Department of Natural Resources Specimen Plans, see pages E2-81 to E2-92.

The Senior Surveyor of a local Department of Natural Resources office should be contacted for inquiries concerning surveys that may not be included in the following examples. See E3-iii for District Office addresses.

Update Process

This document is a dynamic document that will change over time in response to changes in legislation, departmental policies and procedures and other factors that influence the surveying profession. Proposed changes to the document should be referred to the Senior Surveyor of a local Department of Natural Resources office.

Note: Hereinafter in this document a Senior Surveyor of a local DNR office will be referred to as "the local Senior Surveyor"

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1.1 Access Restriction Lots (Strips)

See also 1.71 Undescribed Balances (Page 40)

- M** New lots for access restriction purposes must be the subject of a transfer to the relevant Local Government as trustees for Town Planning purposes. The only exceptions are where the land is owned by a Local Government within its own statutory area (See Section 8.1(2)(b) LG(P&E) Act), and where the State is the Registered Owner.
- M** If part, or all of an access restriction lot is to be dedicated as new road on a future plan, the area of the access restriction lot that is to be dedicated as new road must be included in the total area of new road and the description of the access restriction lot must appear in the cancelling clause. The plan must also be signed by the Local Government as registered owner/trustee. (LT Act)
- A** The width of access restriction lots is determined by the relevant Local Laws of the Local Government.
- Note: "Local Laws of the Local Government" were previously called "Local Government By-Laws".

1.2 Acquisition of Land

See also 1.3.1 Notice of Intention to Resume (NIR) (Page 2), 1.12.3 Three Line Areas (Page 10).

This section deals with Acquisitions of Land under the AoFL Act.

1.2.1 Freehold Land

Plans under the AoFL Act:

- M** • must deal only with the action being implemented by the resumption;
 - M** • must show all resumed areas are to be shown as lots or easements, as appropriate;
 - M** • cannot dedicate new road;
 - M** • are registered under the provisions of the LT Act;
 - M** • must be signed by the resuming authority as Constructing Authority, and;
 - A** • do not require Local Government consent.
- M** Encumbrances affecting land being resumed (but not including a resumption for easement purposes only) are automatically cancelled by Section 12(5) of the AoFL Act, and must not be shown on the plan in the lot to be resumed.
- M** Where a resumption affects a lot such that a "three line area" is required for the remainder of the lot affected the area must be shown in accordance with Sections 1.12.3 Three Line Areas (Page 10) and 1.74 Vincula (Page 41)
- A** The purposes for which land may be taken and by whom are set out in Section 5 of the AoFL Act. Land acquired under the AoFL Act may be taken for multiple purposes.
- S** When a resumption plan is recorded in ATS an indefeasible title is created for the resumed lot or lots, internal to the ATS system but this title is not issued. This title is then used to record subsequent action against the resumption lot(s) eg road dedication, vesting, etc.
- M** Where a subdivision of a balance parcel is required as part of a compensation agreement, the subdivision plan must follow the resumption plan. The subdivision plan is subject to the same requirements as any other plan of subdivision. Since the subdivision plan must follow the resumption plan, it will be necessary for it to show the resumed area with the status it will have when the resumption action is completed, eg Road.

1.2.2 Resumptions for Road and Transport Corridors

- M** If land is taken by the Department for "road purposes and vested in the State", it becomes a road at the time of the initial proclamation. However, if land is taken by the Department for a transport corridor, tenure issues in the name of the State of Queensland with Queensland Transport as the administering department. (TI(Road) Act)
- M** The land that is to be taken by a resumption must be shown as a lot on the plan. A resumption document is required for recording the resumption in the register. (AofL Act)

1.2.3 Resumptions for Other Authorities

See also 1.22 Commonwealth Titles (Page 13)

- A** If land is by an other Authority other than the State, the land vests in that Authority in fee simple. If the land is taken for road purposes it requires a dedication document in order to become road.

1.2.4 Resumptions from Non-freehold Land

- M** The resumed land must be shown in a form that is consistent with the purpose for which the land is being resumed. That is, where the resumption is for road purposes the land being resumed should be shown as "Road" on the plan.
- Resumptions for a Constructing Authority are subject to Section 5(3) of the AofL Act and must be resumed for a specified purpose.

1.3 Administrative Advices

- S** An Administrative Advice is a noting, placed on a file attached to the Register, of a present or future action or condition, affecting the subject title, to alert interested parties searching the Register, of such action or condition. The administrative advice is usually authorised by statute, but is not a registrable estate or interest in, or charge on the subject land.
- S** The objective of administrative advices is to provide the mechanism to alert registered owners and other interested parties to the existence of matters affecting land under the provisions of:
- ◆ Queensland legislation including:
 - The Acquisition of Land Act;
 - The Contaminated Land Act;
 - The Land Title Act;
 - The Land Act and
 - The Queensland Building Service Authority Act;
 - ◆ Other determinations by Government.
 - ◆ Other determinations by interested parties.
- S** While these Advices do not encumber the title of the land they may prevent the registration of a dealing.
- S** Interested parties are to be alerted to any advice of an administrative nature by a noting in the register.
- S** Where a Certificate of Title is found to be in error due to incorrect survey information, the Registrar may enter an Administrative Advice over the title and notify the registered owner that a survey plan will be required to register future dealings.
- S** Further information relating to these advices should be obtained from the relevant authority.

1.3a Administrative Boundaries - County, Parish and Local Government

- A** Administrative boundaries require gazettal for any change to their location. If an administrative boundary coincides with a lot boundary, the location of which is subsequently changed, the administrative boundary does not change and must therefore retain its original location.

1.3.1 Notice of Intention to Resume (NIR)

See also 1.2 Acquisition of Land (page 1)

- A** Refer to Sections 7(4)(a) and 7(4)(b) of the Acquisition of Land Act

- A** An ATS search will reveal any Notices of Intention to Resume recorded in the Land Registry.
- A** Notices of Intention to Resume lapse if the application to the appropriate Minister to take the land has not been made within twelve months of issue of Notice of Intention to Resume or, in the case of the Brisbane City Council if the Notification of Resumption has not been published in the Gazette within twelve months after the date of the Notice of Intention to Resume.

Note: There is no mechanism in place to verify that an NIR has lapsed and the NIR will remain an Advice on the Title until action is taken to remove it.

1.4 Adverse Possession

- A** Adverse possession cannot be claimed against State Land. (Section 6(4) Limitation of Actions Act 1974)
- A** For adverse possession of freehold land see Part 6 Division 5 of the LT Act.
- A** A Right of Way may be subject to an application for Adverse Possession.

1.5 Agreements

See 1.48 Local Government (Page 26)

1.6 Allocations

1.6.1 Lot Allocations

M Where there is more than one original lot cancelled by a plan the new lots, easements and/or new roads that plan of survey must be allocated to the underlying original lots that this plan is cancelling.

M The allocation table is created by extending the Title Reference table. The Title Reference is shown in its column on the back of the plan as normal, under the "Title Reference" heading. The lot description of the land being dealt with on the plan is shown under the "Description" heading. If there is more than one lot in the title, also being dealt with on the plan, this is set out in column form, again under "Description".

A column should be then created for any or all of Lots, Road or Easements as required for a particular plan. Lots, New Road and/or Easements being created on the new plan are then listed in these column/columns on the line of the original lot it derives from. It is acceptable to have a series of new lots, ie 1-10, together with a single original lot.

Note: A new lot may be linked to more than one original lot.

EXAMPLE:

Title Reference	Description	New Lots	Road	Emts
12349083	Lot 1 on RP123987	1 - 3	New Rd	A, B
	Lot 5 on RP813965	3 - 5	New Rd	A, B
	Lot 6 on RP813965	4 - 7		
18672223	Lot 2 on RP230965	5, 6		C
15692213	Lot 1 on SL2398	4 - 8	New Rd	
	Lot 5 on RP873943	8		
17693211	Lot 999 on RP829123		New Rd	

Table 1 Lot Allocation

1.6.2 Portion Allocations

See also 1.52 Original Portions (Page 29)

- M** Where there is more than one new lot on a plan AND more than one original Portion being affected by the survey, an allocation must be made of each new lot (only) into each portion. If there is more than one parish, the parish must also be noted against the Portion number.

M The allocation of new lots to original portions should be based on the original portions shown in ATS. That is, there is generally no requirement for the surveyor to search any further than ATS in preparing the allocation table.

Note: Original Grant references are not required to be shown on the reverse of the plan.

M Where the lot or lots of a new survey affects more than one original Portion, the original portion boundaries must be accurately plotted on the plan in a black ink as broken hairline line where they are not co-incidental with a boundary. The original Portion numbers shall be noted in a fine dotted style in ink.

M As portion allocations are only required for allocation to new lots, it is not necessary to show original portions on the face of an easement plan, or to allocate new easements to portions. However, the original portion should still be noted on the Original Portion line.

Note: Where the original portion number contains an alpha character, such as 98A, and the number has been converted (ie the number has been converted to another number that does not contain an alpha character), the portion number to be used is the original number, not the converted number.

The format for the allocation table is:

PORTION ALLOCATION		
LOTS	ORIG POR	PARISH
1	36, 80	(Only if necessary)
2	36, 80	
100	36, 80	

Table 2 Portion Allocation

Note: Title and Portion allocation tables must not be combined.

1.6.3 Existing Mortgage Allocations

A Where a mortgage affects part only of the land being subdivided, it is necessary to note which new lots are fully or partially encumbered by that mortgage so that the mortgage can be carried forward on to the new titles.

A table similar to the one below is required to allocate these encumbrances:

Mortgage	Lots Fully Encumbered	Lots Partially Encumbered
<Dealing No>	1 - 4 & 9 - 11	5 - 8

Table 3 Mortgage Allocation

1.6.4 Existing Easement Allocations

M Existing easements within lots, that is encumbrance easements, are required to be allocated to new lots. There are occasions where easements, external to lots provide benefit to a lot or part of a lot, that is benefit easements. In order to carry the benefit forward to the new titles the benefit needs to be allocated to the benefited lots. The following section provides information for the preparation of the relevant allocation table.

1.6.4.1 Benefit Easements

M Where a registered benefit easement benefits part only of a lot being subdivided, it is necessary to note which new lots are fully or partially benefited by the easement, so that the benefit can be carried forward on to the new titles.

A table similar to the one below is required to allocate these benefit easements:

Easement	Lots Fully Benefited	Lots Partially Benefited
<Dealing No>	1 - 4 & 9 11	5 - 8

Table 4 Benefit Easement Allocation

1.6.4.2 Encumbrance Easements

M Where a registered encumbrance easement exists over a lot being subdivided into more than one new lot, the new lots shall be noted with the encumbrance in the following manner:

Easement	Lots to be Encumbered
<Dealing No>	1 - 4 & 9 - 11

Table 5 Encumbrance Easement Allocation

Before making this allocation, surveyors must ensure that:

- ◆ the easement is registered; and
- ◆ the easement is not to be surrendered to precede the lodgement of the plan.

Note: The dealing number for the benefit or encumbrance easement to be allocated should be available from the plan being cancelled. The Dealing Number is used as the reference in preference to the "lot on plan" description (eg. Emt A in Lot 2 on RP432567) since an individual easement description may have a number of different easements registered over the same physical space. The unique identifier for the interest being allocated is the Dealing Number.

1.6.5 Existing Leases (LT Act) next page.

1.7 Alternative Methods of Survey

A Surveyors wanting to carry out surveys by non-traditional methods should ensure the following criteria are met:

- ◆ The method of survey is approved by the Surveyors Board in terms of Section 5.(1) of the Surveyors Regulation;
- ◆ The public interest and the interest of current and future owners are not prejudiced by the method of survey or boundary marking, which is to be clearly indicated on the plan.

1.8 Alterations/Additions/Amendments

See 1.53 Patent Error (Page 29) and 1.68 Surveyor's Book (Page 37)

1.8.1 General

M Where an amendment certificate is required to be shown on the plan it must be in the following form:

EXAMPLE:

Amendments by me (Natural Person) or "Name" (Body Corporate)..... (Date)
Licensed Surveyor (and Director)

M Where the surveyor is a body corporate the amendment certificate must be signed by a licensed surveyor who is a director. In which case the certificate must specify "Licensed Surveyor and Director". The company seal is not required.

M Amendments to the surveyor's certificate (eg Form 13) are covered by the amendment certificate. No part of the surveyor's certificate may be deleted. If necessary a new surveyor's

1.6.5 Existing Leases (LT Act)

M Where a registered lease over land exists in a lot being subdivided into more than one new lot, the new lots shall be noted with the encumbrance in the following manner:

Lease	Lots to be Encumbered
<Dealing No>	1 - 4 & 9 - 11

Table 6 Lease Allocation

Before making this allocation, surveyors must ensure that:

- the lease is registered; and
- the lease is not to be surrendered to precede the lodgement of the plan.

Note: The dealing number for the lease to be allocated is available from the title reference of the lot being cancelled. The Dealing Number is used as the reference in preference to the "lot on plan" description (eg. Lease A in Lot 2 on RP432567).

certificate should be shown on the face of the plan immediately above the original certificate. If space does not permit the new certificate may be shown on the back of the plan.

1.8.2 Freehold Action Plans

1.8.2.1 Original Plans Prior to Lodgement

- M Original plans may be corrected by erasure and addition without the need for an amendment certificate.

1.8.2.2 After Lodgement but Prior to Registration

- M Following lodgement but prior to the plan being registered alterations and additions must be in black ink and must be effected by strike out and addition.
- M A certificate of amendment must be shown on the plan and signed by the surveyor in black ink.

1.8.2.3 After Registration

- M Following registration of the plan, any alteration or addition must be in red ink. These alterations require the submission of a statutory declaration from the surveyor as to the error, and will be affected by an officer of the DNR with a delegation to make such corrections.

1.8.3 Building Unit and Group Title Plans

- M All amendments to plans under the BUGT Act 1980 both before and after lodgement must be made by crossing out and amendment in black ink and an amendment certificate is required.

1.8.4 Crown Action Plans

1.8.4.1 Original Plans Prior to Deposit

- M Original plans may be corrected by erasure and addition without the need for an amendment certificate.

1.8.4.2 After Deposit but Prior to Endorsement

- M Following deposit but prior to the plan being endorsed alterations and additions must be in black ink and must be effected by strike out and addition.
- M A certificate of amendment must be shown on the plan and signed by the surveyor in black ink.

1.8.4.3 After Endorsement

- M Following the endorsement of the plan, any alteration or addition must be in red ink. These alteration require the written approval of the surveyor and will be affected by an officer of the DNR with a delegation to make such corrections.

1.8.4.4 Identification Plans

- M All amendments to identification survey plans that have been deposited with the DNR must be effected by strikeouts and addition. Such alterations must be accompanied by an amendment certificate. The plan will then be reimaged.

1.9 Amalgamations

- M Local Government consent is required for the amalgamation of freehold lots. See Section 5.11 LG(P&E) Act.

- M** Local Government approval and a new survey plan is required to re-create lots that were previously amalgamated by survey. (LG(P&E) Act)
- A** Where parcels have previously been amalgamated they may be re-created by a compiled plan. See Section 25 of the Surveyors Regulation.

1.9.1 Amalgamated Titles

See also 1.27 Consolidated Titles (Page 16)

- A** Amalgamated Titles are those in which multiple parcels of land are compulsorily held in one title by virtue of a condition in a Local Government consent to a plan. In the past a Request to Amalgamate the lots into one title was lodged with a plan containing such a condition.
- M** The parcels must remain in the same title until the condition is waived or varied by the Local Government by way of a letter to the Registrar under seal.
- A** Amalgamated titles have been replaced by plans of amalgamation or by Registered Agreements under Section 4.17 & 5.8(3) of the LG(P&E) Act.

1.10 Ambulatory Boundaries

See also 1.42 High Water Mark (Page 25), Survey Plan Guidelines 1.69 Watercourses and Policy PBO/900/019 Ambulatory Boundaries

1.10.1 Non Boundary Watercourses

The beds and banks of non boundary watercourses are usually included within the original grant. The control of the flow of the water rests with the Department of Primary Industries (Water Resources).

- M** When a parcel of freehold land with an internal watercourse is subdivided and the watercourse (or part of the watercourse) is adopted as the boundary of the new lots (ie. the watercourse is not included within any of the new lots), then that watercourse (or part thereof) may be given a lot number and noted as Public Use Land or the creek may be absolutely surrendered to the State.

1.10.2 Boundary Watercourses

See also 1.67 Survey Records (Page 37), Guidelines for Preparation of Survey Plans 1.53 Reserved Esplanades (Page E2-54) and 1.69 Watercourses (Page E2-63)

- A** The direction of flow of a non-tidal boundary watercourse must be clearly indicated by an arrow pointing in the direction of the flow (ie downstream). Where it is necessary to indicate the left or right bank of the watercourse, this will be taken in relation to the direction of flow.
- H** Section 6 of the RWWCU Act changed boundaries from the centre thread of a stream (ad medium filum) to its banks.
When locating the position of the bank of a watercourse, surveyors should consider the definitions contained in the WR Act for "Bed" and "Bank".
A check of the original Deed of Grant should also be made to ascertain the actual description of the ambulatory boundary.
- A** Where a bank of a watercourse has disappeared (eg. by filling) and where the previous watercourse traverse is not re-run, but the traverse and offsets are used to calculate the area, the original traverse dimensions should be shown as original in a traverse column on the face of the plan together with a note stating that the original offsets which come from the field notes of the original survey have been used to calculate the area.
If, in the above case, the previous survey records cannot be located, the position of the watercourse may be determined by scaling off the original plan.

Where the previous watercourse traverse is re-run and the original offsets are used to calculate the area, survey records may be required to be lodged with the plan.

- A** Where an ambulatory boundary deviates significantly from the position determined in an original survey, each case will be decided on the basis of the relevant legislation, case law, present evidence on the ground, previous legal opinions and the original survey to ensure that interests of the State and the registered owner are protected.

It is the responsibility of a Licensed Surveyor to reinstate any boundary after considering all the facts (evidence) which may influence that decision. This includes riparian boundaries.

In a strict legal sense, the limit of land bounded by a river or stream is the bed and banks of the watercourse, and not necessarily the position where the surveyor thinks or describes those limits to be. That is to say, at a point in time, the owner of land bounded by a watercourse will hold the same land, no matter which plan is the relevant registered plan or what feature has been adopted by the surveyor. In the last resort should the matter result in a legal dispute a court will decide the boundary position.

- A** If by extending original boundaries to intersect the new ambulatory boundary, the rights and interests of adjoining owners are affected, or may in the future be affected, the extension of the original boundary should be at made right angles to the centre thread of the stream.

- M** To assist in the examination of plans of survey that purport to "redefine" an ambulatory boundary, regardless of what caused the necessity for the redefinition, the DNR requires the following information to be deposited with the plan, regardless of whether the surveyor is accredited or not:

- ◆ Substantial report addressing;
 - location as determined by original surveyor and any subsequent surveys;
 - extant evidence of determination by previous surveyor(s);
 - stability and permanency of the feature(s);
 - application of statute to the new determination;
 - relevant photographs demonstrating case; and
 - a specific statement as to whether the movement is significant or not significant. (see below)
- ◆ Evidence that the new boundary does not affect or encroach onto the property on the opposite side;
- ◆ Copy of subject plan showing, plotted on the face, the boundary position as determined by previous surveyors;
- ◆ For cases of significant movement or difference, a report on the investigation undertaken to establish that such movement has satisfied the doctrine of accretion (or erosion). If this doctrine can not be satisfied, then on what basis is the additional land claimed; and
- ◆ Such other evidence as is considered appropriate.

The word significant is used above. The following is part of an opinion by the Principal Legal Officer in the DNR where he notes the presence of the word "significantly" in Section 358(2) of the L Act and states:

¹"In my opinion, the presence of the word 'significantly' in paragraph (b) is important."

"The word 'significant' is defined by the Shorter Oxford English Dictionary to mean, among other things, 'important' or 'notable', while the Macquarie Dictionary gives its meaning as 'important' or 'of consequence'."

"Thus in the context of the question (whether Section 358(2) must be used to adjust an ambulatory boundary that has had slow and imperceptible movement, either erosion or accretion), the provisions of Section 358(2) need not be implemented unless it can be shown that the change in the boundary has been significant. As to what is a significant change in any particular case will be a question of fact to be answered by appropriately qualified persons by reference to all of the relevant circumstances affecting that case."

¹ Principal Legal Officer, Department of Natural Resources 1995
Department of Natural Resources

In dealing with movement of ambulatory boundaries, a surveyor should provide sufficient information in his report to justify his determination as to whether the movement of such a boundary is significant or not significant. In making his determination, the following factors should be considered:

- ◆ The location, value, zoning and size of the parcel affected by the ambulatory boundary;
- ◆ The extent of the change;
- ◆ The age, accuracy and scale of the original determination; and
- ◆ The regulations in force at the time of that determination.

In general, the DNR would consider movement to be not significant where the differences can be explained by:

- ◆ differences in measurements caused by differences in measurement techniques;
- ◆ errors in scaling off an old plan;
- ◆ an obviously erroneous location of a watercourse boundary;
- ◆ minor differences in location;

The DNR reserves the right to carry out its own investigation and inspection of any ambulatory boundary that has moved and to make its own assessment as to whether the movement is slow and imperceptible, and or significant or not significant.

1.10.3 Title Amendment for Riparian Boundaries

- ◆ Title Amendment where the movement, whether accretion or erosion, is slow and imperceptible and not significant:

A Where it is found upon resurvey of a freehold riparian boundary that, according to the interpretations of the laws in place at the time of resurvey, the watercourse or high water mark boundary has moved by slow and imperceptible means, and that the difference is not significant, the riparian boundary may be adjusted to the new determination by the lodgement and registration of a freehold plan of resurvey. (Section 150, LT Act)

- ◆ Title Amendment where the movement, whether accretion or erosion, is slow and imperceptible and significant:

M Where it is found upon resurvey of a freehold riparian boundary that, according to the interpretations of the laws in place at the time of resurvey, the watercourse or high water mark boundary has moved by slow and imperceptible means, and that the difference is significant, the riparian boundary may be adjusted to the new determination by the lodgement of a crown plan of resurvey, and the surrender of the land and regrant of a new deed under the provisions of Section 358(2) of the L Act.

- ◆ Where the movement, whether addition or loss, is not slow and imperceptible:

M Where it is found upon resurvey of a freehold riparian boundary that the watercourse or high water mark boundary has moved by other than slow and imperceptible means, including by reclamation or dredging, the riparian boundary may be adjusted to the new determination by the lodgement of a crown plan of resurvey, and the surrender of the land and regrant of a new deed under the provisions of Section 358(1) of the L Act. (See also Section 9(2), L Act)

In the case of addition, arrangements must be made with the DNR to purchase the additional land. (See also Section 10, L Act)

A In certain cases, some of the land abutting a riparian boundary may, on investigation, be considered to be by accretion while the balance may be deemed to be reclaimed. The land that is deemed to be accreted, is included at no cost, while the reclaimed land has to be purchased from the State. The different areas shall be delineated on the plan, given an area and covered by appropriate action statements.

A In the case of loss, ie by dredging, it may be possible to deal with the amendment of the riparian boundary by the lodgement and registration of a freehold plan of survey subdividing the lost land off into a lot for transfer to the State. Application should be made to the DNR to ensure they will accept the transfer. If this approach is adopted,

the boundary between the land retained and the land to be transferred, although shown as a curvilinear boundary is not considered to be an ambulatory boundary. Generally, this method of dealing with a loss is not recommended.

- ◆ Where the movement is due to a mis-interpretation of the boundary feature:

A Where it is found upon resurvey of a freehold riparian boundary that, according to the interpretations of the laws in place at the time of resurvey, the watercourse or high water mark boundary is located in a different position and, where it is clear that the doctrine of accretion and erosion does not affect the case, the riparian boundary may be adjusted to the new determination by the lodgement and registration of a freehold plan of resurvey.

1.11 A.M.G. Connections

- M** Whenever any survey has been connected to the survey control network AMG coordinates must be computed in accordance with The Australian Geodetic Datum Technical Manual — Special Publication Number 10.

1.12 Areas

See also Survey Plan Guidelines 1.8 Areas

1.12.1 Calculated Areas

- A** A calculated area is preferred where lots close within prescribed limits.
- M** Lots which show a calculated area must be deduced by closure and adjustment of the misclosure by the Bowditch method and shown:
 - ◆ in hectares to four significant figures where the area exceeds one hectare;
 - ◆ in square metres to the nearest square metre where the area is less than one hectare;
 - ◆ in square metres to the nearest 0.1 of a square metre where the area is less than one square metre and the land is of high value.

1.12.2 Balance Areas

- A** In the case of balance lots, a balance area is acceptable if that lot does not close within the prescribed limits.
- M** Where a balance area may be adopted, the new nett area is determined by adding or subtracting the new calculated areas (rounded as appropriate) from the existing nett area of the parcel or parcels.

Note: There is no rounding off of this resulting area. However, the resulting area must not be shown to less than one square metre.
- M** Balance or approximate areas must be qualified as such on the face of the plan.

For areas obtained by indirect means See RP203179.

1.12.3 Three Line Areas

See also 1.74 Vincula (Page 41)

- M** The only cases where a three line area is required is where a Section 23 (L Act) Reservation is involved. This includes a Forestry Entitlement Area, and any other similar area where a fixed area is involved, but which is not in a fixed location.

In all other cases, the only area to be shown is the true nett area of the lot, regardless of other lots whether fully surrounded or not, or included roads etc.

1.13 Barrier Fences

- A** Under Section 180 of the RLP Act the Minister may issue an order for the establishment and maintenance of barrier fences. Section 202 provides for the establishment of a ring fence by an Order in Council. These orders are endorsed on the title to which they relate.
- A** For an order under the BF Act See RP165728.
- Note:** The BF Act has been repealed by the RLP Act.
- A** In general orders under the RLP Act are no longer enforced since the DNR or the local government undertake the maintenance of these fences.
- M** When lots which are subject to an order under the RLP Act are subdivided, the plan of subdivision shall be submitted to the local District Office of the Department of Natural Resources. The District Office will refer the plan to the Land Sustainability Program to enable certification by the Minister's delegate that all of the new lots are no longer subject to the order. This eliminates propagation of orders which are no longer enforced.

1.14 Beach Protection Authority

See Section 45(1) & (3) BP Act

- M** Where a subdivision is wholly or partially within a Coastal Management Control District (CMCD), the approval of the Beach Protection Authority (BPA) to a subdivision is required after the Local Government consent. In a CMCD, the Registrar must not record a plan of subdivision without the plan bearing a certificate by the Secretary, Beach Protection Authority stating the necessary consent has been given by the Governor-in-Council.
- M** In a CMCD the Local Government approval to subdivide has no force or affect in law WITHOUT the subsequent consent of the Governor-in-Council. If consent is refused any approval by a Local Government is void. There is no time limit on the approval nor are there any area limits.
- A** Plans which do not require Local Government consent do not require BPA consent.
- A** Plans of amalgamation do not require BPA consent.
- M** On Group Title Plans within CMCD's, consent of the BPA should be endorsed on the sheet containing the Local Government consent. (BUGT Act 1980) or within Item 10 (BUGT Act 1994)

1.15 Border Surveys

See also Policy PBO/900/004 Surveys in Areas Adjacent to State Borders.

- M** All surveys in areas adjoining State borders shall be undertaken in collaboration with the organisation responsible for surveying in the adjoining State.
- A** Where a survey is adjacent to a State border the local Senior Surveyor should be contacted for advice and coordination of the survey activity with the adjoining jurisdiction.

1.16 Borrowing out of Plans

- A** Section 143 of the LT Act allows the Registrar to permit an unregistered instrument or other unregistered documents to be borrowed out.
- A** The Section sets out those who may borrow out as:
- ◆ a person who lodged an instrument, or;
 - ◆ a person on whose behalf an instrument was lodged, or;
 - ◆ the agent of a person mentioned above.

1.17 Canals

1.17.1 General

- M** Canals are given lot numbers and the word "(CANAL)", in brackets, is shown on the face of the plan but not in the description.
- M** On subsequent plans, canals are described with the Lot/Plan description and the word "(CANAL)" is shown in brackets on the face of the plan.

1.17.2 Freehold Land

See also 1.70 Transfers to the State (Page 39)

- M** Under Section 9(d) of the Canal Act, canals can only be created by a Freehold Action plan which is endorsed with the details of the relevant Executive Minute. The date that the Clerk of the Executive Council signs the plan must follow the date of the Local Government consent. There is no time limit on the Executive Minute.
- A** The canal must be transferred to the State. Registration of the plan will be delayed until the transfer to the State is also capable of registration.
- M** If encumbrances exist, these must be surrendered before the transfer to the State.

1.17.3 State Land

- M** For canals created on State Land Development Leases, show the word "CANAL" as appropriate.

1.18 Cancelling Clauses

See also 1.31 Description (Page 17)

- M** It is imperative that the "CANCELLING CLAUSE" be correctly completed in the Title block. This will enable plans to be entered and correctly cross referenced in CISP and facilitate the update of the DCDB.
- M** For plans of freehold and non-freehold tenures, the plan must cancel the whole or part of a lot on a plan from which the current tenure is issued.

1.19 Catchment Areas

- M** Lots in Proclaimed Catchment Areas with areas under 16ha. require the approval of the Director General, Department of Natural Resources (Director General, DNR) prior to the Local Government consent. (WR Act)
- A** The approval of the Director General, DNR remains in force for six months.

1.20 Channel/Drain Areas

See also 1.35 Encumbrances (Page 23) and 1.70 Transfers to the State (Page 39)

- M** Channel and drain areas must be given lot numbers and the words "(CHANNEL AREA/DRAIN AREA)" shown in brackets on the face of the plan but not in the description.
- M** Unless the plan is signed by the Director General, DNR or his delegate as registered owner, the plan must be endorsed by the Director General, DNR to precede Local Government consent and a transfer to the State must be lodged. There is no time limit on the approval of the Director General, DNR.
- M** On subsequent plans, the channel/drain area must be described with the Lot/Plan description and "(CHANNEL/DRAINAGE AREA)" must be shown in brackets on the face of the plan.

- A Vincula are allowed across channel areas.
- A A channel or drain area, adjoining a road does not deny legal access to the road under Sections 127(7) & 128(3) of the WR Act. However, the channel or drain area in itself does not constitute legal access to a lot that is remote from a road or other legal access.

1.21 Close Limits

- M See Surveyors Regulation Sec 31. — Survey Accuracy

1.22 Commonwealth Titles

1.22.1 Background

- H See The Real Property (Commonwealth Titles) Act of 1924.

Lands such as 'Post & Telegraph Reserves' and some 'Rifle Range Reserves' were not part of the 'Old System Register' as they were never alienated from the State.

They were lands that vested in the State (Crown) prior to the formation of the Commonwealth. Pursuant to the Constitution, (Sec 85) these lands were passed to the Commonwealth. A list of them was drawn up in 1908 and certain arrangements made for payment, but the Commonwealth did not necessarily take a title out over them.

The above Act enabled the Commonwealth to apply to the Registrar to have these lands registered under the RP Act.

When the Commonwealth wished to deal with these lands, a survey was required if a subdivision was involved. A request to bring the land under the RP Act required a freehold plan. Dimensions came from the original plan of the land.

1.22.2 Previous Procedures

- H A plan was required for the land that was subject to a Commonwealth application.
- H The Surveyor General certified that "... at the time of transfer to the Commonwealth, no deed of grant had issued for this land".
- The plan, together with the application documents was lodged by the Australian Government Solicitor and relevant fees were charged.
- The plan and application were examined by the Master of Titles and the plan was then examined and passed by the Surveyor in charge.
- Because the Act made no provision for Registration by either of the Local District Registrars, the plan was processed differently depending in which District the plan was located.
- A. For a Brisbane Registry Plan:**
- The plan was stamped on the back. The Registrar signed this stamp under seal.
- B. For Rockhampton or Townsville Registry Plans:**
- The application and plan was lodged, examined and subsequently registered in Brisbane.
- When the application etc. had satisfied the Registrar, a photocopy of the plan was made. This photocopy (called 'the original') was then stamped and signed as previously described. This 'original' (ie. the photocopy) was then kept in Brisbane.
- The plan (called 'the copy') was also stamped, but the Registrar did not sign it under seal. The words 'signed Registrar of Titles' and a circle with the letters 'L.S.' were added.
- This plan was then sent to the relevant District Office where the Brisbane plan number was ruled through (but not made illegible) and its own District plan number was added.
- H Finally a Certificate of Title issued for the land in the name of the Commonwealth from the particular District Registrar.

1.22.3 Current Procedures

- A** Under the LT Act, the Real Property (Commonwealth Titles) Act was repealed.
- A** Any Commonwealth acquired land can now be brought under the LT Act by lodgement of an application by the Commonwealth Government Solicitor.
- M** If no freehold plan of the land exists, a freehold plan is required to be lodged accompanying the application. An indefeasible title is created in the name of the Commonwealth on registration of the plan and application. (LT Act)
- A** This process applies to any Commonwealth acquired land whether it was acquired as Commonwealth Transferred land in 1901 or has been acquired subsequently through resumption.
- A** State Crown leasehold land can be acquired and brought under the Land Titles Act by this process.

1.23 Compiled Plans

See also Survey Plan Guidelines 1.47 Original Dimensions

- M** The compilation certificate on the face of the plan must be in accordance with Section 25 (Form 18) of the Surveyors Regulation.
- M** A compiled plan must not be utilised where there is evidence of building encroachments that affect the subject land
- M** Compiled plans are subject to the following:
- ◆ Where the land is in a fully surveyed state all corners must have been previously marked;
 - ◆ Dimensions of the boundaries may be compiled from any source that is part of a public record in accordance with Section 24.(5) and 25 of the Surveyors Regulations where this information provides a satisfactory closure for the subject lot;
 - ◆ Where the lot closes within prescribed limits a calculated area is preferred;
 - ◆ Where the lot does not close within prescribed limits the original areas must be added (the result is not rounded off). If the original areas are imperial, the areas must be added together first and then converted to the nearest square metre.

1.23.1 Amalgamation by Compiled Plan

See also 1.9 Amalgamations (Page 6)

- M** Local Government consent is required. (LG(P&E) Act)

1.23.2 Subdivision by Compiled Plan

See also 1.71 Unsurveyed and/or Calculated Boundaries (Page 40)

- M** Local Government consent is required. One lot may be left as a balance. Calculated internal road boundaries may be used as new lot boundaries if the secants were originally surveyed and marked. (LG(P&E) Act)

1.23.3 Compiled Plans for Resumptions Affecting Consolidated Titles

See also 1.27 Consolidated Titles (Page 16) for current requirements.

- A** Where an existing consolidated title:
- ◆ was affected by a resumption action and;
 - ◆ the resultant crown plan did not contain complete dimensions and areas for the affected parcels and;
 - ◆ the owner is unable to obtain a certificate of title for the individual lots;
- a request for the correction of the resumption plan should be lodged with the local Senior Surveyor. The local Senior Surveyor will arrange for the appropriate action to correct the plan, in accordance with Policy PBO/900/010, at no cost to the applicant.

1.23.4 Compiled Plan of a Previously Undescribed Balance

See also 1.70 Undescribed Balances (Page 40)

1.23.5 Compiled Plan of an Unsurveyed Parcel

The dimensions of the parcel should reflect the accuracy of the base information from which the dimensions were determined.

- A** When a lot is surveyed off an unsurveyed lot, the balance lot may be shown on the same plan as the plan of survey. In these cases the provisions of Sections 24.(5) and 25 of the Surveyors Regulation apply.

The following scale may be used as a guideline for approximating dimensions:

BEARINGS	Nearest 0° 15
DISTANCES	(According to Scale of Plans)
UP to 1:1250	Nearest 0.5 metre
1:1500 to 1:2500	Nearest 1 metre
1:3000 to 1:8000	Nearest 2 metres
1:10000 to 1:25000	Nearest 10 metres
1:30000 to 1:80000	Nearest 20 metres
1:100000 and above	Nearest 50 metres

Table 6 Rounding Dimensions for Unsurveyed Boundaries (Compiled Plans)

- M** The accuracy for closure of unsurveyed lots must not be less than 1 part in 2000.
- M** The "About" area must be shown to three significant figures only.
- M** The Form 18 surveyor's certificate must include all of the information sources used in the process of compiling the plan and include such items as maps, aerial photography, sketches, reports, etc.

1.24 Conditional Consent

See also 1.48 Local Government (Page 26)

1.25 Confused Boundaries

- A** Where a surveyor identifies a survey problem that is of such a nature that it affects a local community and a single client could not reasonably be expected pay for the rectification of the problem, a confused boundary area may exist. This does not apply to areas where the reinstatement of boundaries is merely difficult.
- A** If the surveyor believes that a confused boundary area exists, it should be referred to the local District Office of the DNR for investigation and the client advised accordingly.

1.26 Consents

- A** Plans may require the consent of the following:
- ◆ Department of Environment for subdivisions in Coastal Management Control Districts;
 - See also 1.14 Beach Protection Authority (Page 11)
 - Canal areas. See also 1.17 Canals (Page 12)
 - ◆ DNR for subdivisions in:
 - Catchment Areas; See 1.19 Catchment Areas (Page 12)
 - Channel/Drain Areas; See 1.20 Channel/Drain Areas (Page 12)
 - Irrigation Areas; See 1.44 Irrigation Areas (Page 25)
 - ◆ Department of Local Government & Planning. See 1.48 Local Government (Page 26)

1.27 Consolidated Titles

See also 1.23.3 Compiled Plans for Resumptions Affecting Consolidated Titles (Page 14) and 1.65 Section 358 (L Act) Actions (Page 37)

- M** Where a lot/lots that is contained within a consolidated title is/are adjusted using Section 358 of the L Act only, the dimensions and area of the affected lot/lots only is/are required to be shown on a plan. The plan must bear a statement of the Total Deed area of the consolidated title as well as a list of the lots contained within the consolidated title. This information is required for the preparation of the Deed of Grant.

EXAMPLE:

<p>TOTAL DEED AREA 144.2523 Lots 1 & 2 on RP432167 and Lots 5 - 7 on SL32114</p>

- A** A single Title for two or more lots that have the same registered owner may be created under Section 39 of the LT Act if the Registrar so permits.
- A** Separate Titles may be issued for each of the lots in an existing single Title if:
- ◆ the description in the existing single Title indicates that there is more than one Lot;
 - ◆ each of the lots is described on either a freehold or crown action plan and each lot is fully dimensioned and has an area; and
 - ◆ if there is no conditional consent noted on the plan or plans of the lots to the contrary.

Note: Where Workers Homes Perpetual Town Leases and State Housing Perpetual Town Leases were freeholded, it is not uncommon to find that the description in the Deed of Grant consists of two separate lots that are separate identities on an original Registered Plan. It is also noted in the Deed of Grant that it was granted under the Workers Homes Corporation Act or the State Housing Act. Whether or not separate titles may issue is a matter for determination by the Registrar.

1.27.1 Conditional Consent

- A** Separate Titles may not be issued from an existing single Title if the plan on which the lots were created is the subject of a conditional consent from the Local Government, which requires that the lots under investigation be "amalgamated" "consolidated", "held in one title" or other similar wording.
- A** In this case, separate Titles may be issued if the appropriate Local Government grants approval to removal of the conditional consent and submits this decision in writing to the Registrar under the Seal of the Local Government.

1.28 Creeks

See 1.10 Ambulatory Boundaries (Page 7)

1.29 Curved Boundaries

- A** Curved boundaries will be accepted by the DNR for new lot boundaries where the boundary is readily and unambiguously discernible on the ground at the completion of the survey as is required by Section 27(a) of the Surveyors Regulation 1992.
- A** By way of example a curved boundary may be used where it coincides with a curved feature such as a canal wall.
- M** Where a curved boundary is permitted, the boundary must be defined. For example a circular boundary must be defined by:
- ◆ tangent points of the curve; and
 - ◆ bearing and distance of the chord between the tangent points; and
 - ◆ radius; and

- ♦ arc length.

1.30 Depth Restrictions

See 1.69 Surveys in Strata (Page 38)

1.31 Description

1.31.1 General

See also Survey Plan Guidelines 1.40 Lots

- M Each lot on a plan must have a unique identifying number (LT Act). In order to promote clearer parcel identification, it is preferable for Surveyors to minimise the use of the numeral "1" in plans containing one lot only.
- M The description of a survey including the cancelling clause must refer to a lot on plan description.
- M All parcels of land must have a lot on plan description. This includes canal, channel and drain areas.

1.31.2 Town/Locality

- A The "TOWN/LOCALITY" segment in the title block of plan forms should state the name of the City, Town, Suburb or District or describe the location of the survey in relation to a permanent feature or a published map.

1.31.3 Easements

See 1.33.7 Easement Descriptions (Page 19)

1.31.4 Resurveys

See also Survey Plan Guidelines 1.55 Resurvey

- M A full description is required.

EXAMPLE:

*Lot 1 being a Resurvey of Lot 1 on RP123456,
Cancelling Lot 1 on RP123456*

1.31.5 Old System Resurvey

- H Where the plan is of an area not previously surveyed and shown on a prior plan, use the description as given in Lot conversion on Certificate of Title.

1.32 Dimensions

See also Survey Plan Guidelines 1.27 Dimensions, 1.28 Distances and 1.47 Original Dimensions

- M Complete dimensions, including the total "through" distance for every lot or easement boundary, must be shown on the face of the plan for each lot or easement on that plan.
- M Distances shown on plans must be corrected so that they are a horizontal distance at the mean terrain height of the line.
- M This provision applies also to internal roads, lots, etc., except in cases where a lot with intricate detail is concerned, where this requirement may be relaxed. In the latter case full information must be shown adjacent to the internal road, lot, etc., noting the plans on which the dimensions may be found.

1.33 Easements

See also 1.72.2 Deemed Tramline Easements (Page 40)

1.33.1 General

- M** Where an easement is to be created that affects multiple parcels, a separate easement is required for each parcel of land. (LT Act)
- M** Overlapping Easements are permitted. The plan of a new easement must show any registered intersecting easements, but it is not necessary to mark their intersections. Other existing registered easements should be shown if they are located adjacent to the new easement or would otherwise be required as adjoining information.
- A** Easements may be created which are restricted vertically. (See also 1.33.14, Easements Restricted Vertically)
- A** An Easement "in gross", that is an easement where there is no dominant tenement lot, may be created by a Statutory Authority for a public purpose such as drainage.
- A** An easement may be surrendered, amended, merged, absorbed or extinguished.
- M** An acceptable severance closure between the easement and lot boundaries in accordance with the Surveyors Regulations is required. Where a satisfactory close cannot be obtained, sufficient check measurements should be shown in the survey records to ensure the integrity of the surveyors own work.
- A** Where an easement affects a lease that has been registered under the provisions of the LT Act, the

1.33.2 Creation of Easements by the Registration of an Instrument

- M** An easement must be created by first registering a plan delineating a proposed easement, followed by the lodgement of an instrument of easement. Note that the description of the easement on the plan must contain the word "Proposed". (LT Act)
- A** The registration of a plan of easement does not create the easement and is not evidence of a present intention to create an easement.

1.33.3 Creation of Easements by the Registration of a Plan

- M** An easement may be created by registration of a plan subject to:
- ♦ the provisions of Section 95 of the LT Act; and
 - the limitations of Section 96 of the LT Act;
- Section 97 of the LT Act sets out the rights created on registration of a plan and instrument.
- The plan must be a plan of subdivision and clearly show the purpose and location of the easement. The easement must not be designated "proposed" on the face of the plan and in the title.

1.33.4 Easement Areas by Balance

- A** The area of an easement may be deduced as a balance area in the same way that a balance area is deduced for a lot.

1.33.5 Easements by Court Order over Encroachments

- A** An order of the Supreme Court may require the creation of a benefit easement to cover encroachments of a building on to adjoining land. For a Court Order under the PL Act see RP838974.

1.33.6 Easements by Resumption

See 1.2 Acquisition of Land (Page 1)

1.33.7 Easement Descriptions

- M** Letters used to describe easements should not be repeated either within the one plan or within the one lot. This also applies to previous easements within the lot or lots on the plan irrespective of whether the easements are registered or not.
- M** Where more than one easement is surveyed on the one plan, they should be named consecutively.
- A** Letters "I", "O", & "Q" are misleading and should not be used in describing easements.. When the alphabet has been exhausted to Z, easements may be described as AA, AB etc. "Emt" represents an acceptable abbreviation for "Easement" when used in the title block or on the face of survey plans.
- M** Both freehold and state land, easements should be described as Proposed Easement (Alpha) in Lot (Numeric), subject to exceptions described in 1.33.3. above.
Where an easement is to be created in an existing lot:
Proposed Emt A in Lot 1 on RP123456
- M** Subdivisions with Easements in the new lots should be described as:
*Lots 1 to 5 and Proposed
Emts B, J & E in Lots
3, 4 & 5 respectively
Cancelling Lot 1 on RP123456*
subject to exceptions described in 1.33.3. above.
- M** Subdivisions with Easements created in adjoining Lots should be described as:
*Lots 1 and 2
Cancelling Lot 1 on RP123456 and of
Proposed Emt G in Lot 2 on RP45678*
subject to exceptions described in 1.33.3. above.
- M** Resurveys with an Easement in the same parcel should be described as:
*Lot 24 being a Resurvey of Lot 24 on RP123456
and of Proposed Emt E in Lot 24
Cancelling Lot 24 on RP123456*
- M** Resurveys with an Easement in an adjoining Lot should be shown as:
*Lot 217 being a Resurvey of Lot 217 on RP123456
Cancelling Lot 217 on RP123456
and of Proposed Emt G in Lot 218 on RP123456*

1.33.8 Easements in Lots or Common Property on a BUP and GTP

- M** All easements created within a BUP or GTP shall be shown on a common plan form, and be described as being within a lot or common property on the plan number of the BUP/GTP. This also applies to easements to a dominant tenement outside the BUP/GTP, or to a public utility.
- M** Where an easement in a lot or common property is to be restricted vertically, normal requirements for an easement so restricted shall apply. (See also 1.33.14 Easement Restricted Vertically). This requirement applies also to an easement in common property within a level on a BUP, where it is not sufficient to merely refer to the particular level to define the easement. However, reference shall be made to the affected level of the BUP on the face of the plan.
- A** Easements to or from lots within a BUP/GTP must be surrendered prior to the extinguishment of the BUP/GTP. This includes any easements that may be created for public utility purposes. If the public utility still requires the easement, it would be necessary for them to make

reinstatement of the easement on the issue of a new title a condition of their agreeing to the surrender.

- A** Easements created on common property to a dominant tenant outside the BUP/GTP or to a public utility will be automatically carried forward onto the new title to be issued on extinguishment.

1.33.9 Easements in Favour of Leases

- A** Where a lease is registered over freehold land and an Easement is granted by the Lessor to the Lessee to access the lease, such an easement is therefore part of the lease and is automatically cancelled when the lease expires.

1.33.10 Easements over State Land

- A** Easements over State Land are dealt with in a similar manner to other easements, (See also 1.33.1 Easements—General Page 18) and are governed by Chapter 6 Part 4 Division 8 of the L Act.
- M** Easements over State Land ie non-freehold land (including State Leases, Public Use Land and Unallocated State Land) are shown on a Crown Plan, and require the consent of the DNR. They must be prefixed with the word "Proposed". (L Act)
- A** Where land is to be freeholded and is encumbered by an easement defined on a Crown Plan, the Crown Plan will be acceptable to describe the easement on the freehold title if the easement is fully dimensioned and marked. This applies although the Crown Plan of easement does not comply with current standards, including metric standards. In cases of doubt, the local Senior Surveyor should be consulted. If acceptable, a copy of the Crown Plan is included as part of the easement document, and no other plan of the easement is required.

1.33.10.1 Easements over Reserves

- A** Easements may be created over any reserve dedicated under the L Act. However, there are no provisions in legislation that allow for the resumption of an easement over a reserve dedicated under the L Act.
- A** Where a reserve dedicated under the L Act has an easement registered against it, and a lease under the L Act has been applied for which will affect the existing easement, it shall be a requirement that the applicant arrange for the creation of a new easement over the new lease and for the subsequent surrender of that part of the easement covered by the lease.

Note: Under the provisions of *Chapter 5, Part 3 Division 1 Resumption of a lease or easement* — of the L Act, the extinguishment of an easement over unallocated State land or a reserve is a resumption.

1.33.10.2 Easements in Leases over Reserves for State Forest or National Park

- A** State Forests and National Parks are not reserves dedicated under the L Act.
- M** Easements cannot be created within State Forest or National Park either by resumption or by agreement.
- A** Where a lease issued under the L Act exists over any Reserve, including State Forest, National Park or Park and Recreation, etc, an easement may be created within the lease. An easement may be resumed from the lease. The easement is extinguished at the expiration of the term of the lease.
- M** The easement must be described as:

Easement <alpha> in Lease <alpha> on <plan that created the lease>

1.33.11 Easements over State Land in Favour of Freehold Land and Vice Versa

- A** In instances where freehold and non-freehold are the servient and dominant tenements of an easement or vice versa the documents for the easements must be lodged in duplicate for recording in both registers.

1.33.12 Easements over Undescribed Balances

See also note regarding the future of Undescribed Balances in 1.71 Undescribed Balances (Page 40)

- M** Easements over undescribed balances must be described as Proposed Easement A in Lot 1 on RP121345, where Lot 1 on RP 121345 is the original parcel.

1.33.13 Easements over the Whole of a Lot

- M** Where an easement is over the whole of a lot, a plan of the easement is not required. In subsequent plans it is shown as an encumbrance on the plan in the normal manner with the description "Lot 1 RP123456 (Easement), <Dealing Number>". Note that if the easement covers the whole of the lot in area, but is in strata, a plan of the easement is required in the normal manner.

1.33.14 Easements Restricted Vertically

M An easement restricted vertically in both height and depth, or an easement within a volumetric lot, shall be dealt with as directed in Section

3 Registrar of Titles Requirements for Registration of Volumetric Plans.

M An easement restricted in either height or depth in other than a volumetric lot is not considered to be "volumetric" and shall be dealt with

by:

- showing it in plan view;
- qualifying it in the description as "Restricted", ie. Easement A (Restricted) in Lot 2;
- detailed the vertical extent on the face of the plan with reference to the Australian Height Datum, together with the details of the Permanent Survey Mark on which this is based;
- the vertical extent may be described by a bounding surface that may be a flat plane or any surface that can be mathematically generated

and sufficiently defined and shown on a plan such that there is no possibility of ambiguity

1.33.15 Easement Titles

- A** In rare cases, titles for Easements have been issued. See Title 10967023 or Title 11685016/17 and RP50663.

1.33.16 Local Government Consent

- A** Local Government consent is only required for an instrument of easement which is for access purposes to a road. See LG(P&E) Act Sec 5.12. Where Local Government consent is required, this is contained in a Consent (Form 18) which is lodged with the instrument of easement. However, if the provision of an access easement is part of a conditional consent on a plan, this constitutes the Local Government consent to the easement and a specific consent is not required to be attached to the easement document.

- A** While it is not necessary for Local Government consent to be endorsed on an easement only plan, if the Local Government elects to endorse an easement plan, any condition in that consent must be complied with, subject to the usual restrictions on conditions. If the consent is out of date, it must be resealed or the original consent deleted by the Local Government.

1.33.17 Long Line Utility Easements

- M** The intersection of easement boundaries with surveyed lot boundaries must be reinstated and appropriately marked.

- A** Long line utility easements may be accepted with calculated side boundaries.

- M** Easements with calculated boundaries must conform with the following criteria:
- ◆ There must be a visible feature or a proposed visible feature that is an integral component of the easement;
 - ◆ Connections to structures within the easements and the description and identification numbers of the structures must be recorded;
 - ◆ The centreline or an offset from the centreline of the easement must be traversed;
 - ◆ Where an engineering survey has been carried out along the easement, sufficient connections must be made to relate the two surveys to each other;
 - ◆ The traverse should close with original boundaries. Where a satisfactory close cannot be obtained, sufficient check measurements should be shown in the survey records to ensure the integrity of the surveyor's own work.;
 - ◆ Each bend is marked; and
 - ◆ The easement boundary dimensions must be shown as calculated but line pegs are not required to be placed on the calculated lines.

1.33.18 New Boundaries Intersecting Existing Easements

- M** Plans of lots are required to show the intersection of new lot boundaries with registered easements. Sufficient information must be shown on the plan to position the intersections of easements with new lot boundaries. This information may be calculated. It is not necessary to dimension the boundaries of registered easements within the new lot/lots. While a calculated intersection (between new lots and existing registered easements) is acceptable it is still the surveyors responsibility to ensure that easement encumbrances are correctly carried forward to affected lots.
- M** Existing easements that are affected by new lots on a BUP are not required to show information on the intersections between the lots and the easement.
- A** The intersections of new lot boundaries with existing registered easements are not required to be marked on the ground.

1.33.19 Road Dedications over Easements

- A** Where a road is dedicated over a registered easement (other than an easement of Right of Way or an easement for Local Government purposes to the Local Government consenting to the plan) by plan or by document, the consent of the grantee of the easement is required.
- A** Where the grantee is a Public Utility, the approval should be on a Consent (Form 18), properly executed. A Local Government approval should be under seal.
- M** A notation must be made on the reverse of the plan that:

"Ent A on RP<number that created the easement> partially/fully absorbed by new road."

1.33.20 Subsequent Plans over Surveyed Easements

See also 1.33.7 Easement Descriptions (Page 19)

- A** Where a plan has been registered cancelling a lot over which an easement has been surveyed, that easement, if unregistered, may proceed to registration. If the easement is registered it may be the subject of another easement, at a later date. These dealings, above, may only occur if the boundaries of the easement have not been altered or amended in any way, or have not been intersected by a boundary of a new lot on any subsequent plan of subdivision.
- A** Unregistered easements shall not be shown on any subsequent plan unless and until they become registered.
- M** Registered easements shall be shown on all plans subsequent to their registration.
- M** Registered easements shall be shown on all plans subsequent to the registration of the easement together with sufficient information to unambiguously locate it within any new lot.

- M** The requirement that easement letters should not be duplicated within any lot or plan applies equally to unregistered easements as to registered easements.

1.33.21 Creation of New Easements on Land being Transferred to the State

- M** Following registration of a plan transferring land to the State, future easements may only be created on a Crown Plan using the provisions of the L Act.

1.33.21.1 Creation Prior to Transfer

- A** Where new easements for public utility purposes are required on land that is to be transferred to the State on registration of a plan, the easements should preferably be registered prior to the registration of the plan. Once registered the easements can be dealt with as noted in 1.70 Transfers to the State (Page 39).

1.33.21.2 Creation Following the Transfer

- A** An easement may be shown as a proposed easement on a plan which transfers land to the State. In this case, the easement may not be registered on the freehold title. The easement may only be registered after transfer to the State under the provisions of the Land Act.
- A** If a Local Government makes the registration of a Public Utility easement over land to be transferred to the State a condition in the consent. The condition cannot be satisfied by the use of the above sub-clause, since the easement cannot be registered at the time of registration of the plan. In this case, the easement must be registered prior to the transfer. See also 1.33.21.1 Creation Prior to Transfer (above).

1.34 Encroachment

See also Survey Plan Guidelines 1.10 Buildings, Policy Document PUX/901/286 Roads Awnings and Verandahs — Trespass and PUX/901/285 Roads — Outdoor Restaurants — Trespass

- M** If an encroachment from an adjoining parcel is shown on the subject land, OR if there is encroachment from the subject parcel onto an adjoining parcel, evidence should be retained by the surveyor that Section 26(2) of the Surveyors Regulation has been complied with.
- M** Encroachments affecting State Land (including Public Use Land, Road, etc ...) must be referred to the DNR as the adjoining owner.

1.35 Encumbrances

See also 1.70 Transfers to the State (Page 39)

- M** All encumbrances shown on the title for the lot or lots being dealt with must either be:
- ♦ shown on the plan, or
 - ♦ otherwise accounted for by surrender, or by being merged in the fee simple or absorbed within new road. In the case of surrender or merger, the documents must be lodged to precede the plan.

1.36 Endorsements

1.36.1 By the Department of Environment

See 1.14 Beach Protection Authority (Page 11)

1.36.2 By the Department of Natural Resources

See 1.19 Catchment Areas (Page 12), 1.20 Channel/Drain Areas (Page 12) and 1.44 Irrigation Areas (Page 25)

1.36.3 Erosion

See 1.10 Ambulatory Boundaries (Page 7)

1.37 Esplanades

See also 1.64 Roads (Page 34) and Survey Plan Guidelines 1.53 Reserved Esplanades

- A If upon alienation, an area of esplanade is set aside at a defined width from HWM along the sea coast or navigable rivers and creeks, the landward boundary of the esplanade is curvilinear and is parallel to HWM.
- A The landward boundary of the esplanade is fixed at the time of alienation, irrespective of when the feature was surveyed, and is not subject to accretion or erosion. (*McGrath v. Williams NSW Law Reports 1912 Vol XII.*)
- A The seaward boundary of the esplanade is subject to accretion and erosion.
- A To convert the landward boundary of an esplanade from a curvilinear boundary to a right line boundary, adopt lines between the offsets to HWM so as to substantially replicate the curvilinear boundary on the ground.

1.38 Exclusions

See 1.12.3 Three Line Areas (Page 10) and Survey Plan Guidelines Compiled Plan of Large Unsurveyed Parcel (Page E2-92)

1.39 Field Notes

See 1.67 Survey Records (Page 37)

1.40 Forest Entitlement Areas

See also Policy PUX/901/340 Tenure Creation — Access to Forest Entitlement Areas (FEA)

- H Forest Entitlement Areas (FEAs) were first introduced into the Land Act 1962 in 1974. FEAs applied to leases under the Land Act that could be converted to a freeholding tenure such as GHPLs and GHFLs. (See Glossary of Terms for a definition of Forestry Entitlement Areas)

When first introduced the leases were issued over the gross area of the lease without any adjustment for the FEA reservation. This occurred since in most cases there were no surveyed dimensions available for the FEA and areas were not known with any degree of certainty.

While FEAs appear on plans held by the DNR and show calculated areas they are not cadastral surveys in terms of the S Act. In general FEAs were surveyed by surveyors of the Department of Primary Industries who are not endorsed to perform cadastral surveys.
- A Since an FEA is a reservation in title no dedicated access to the FEA is required.
- M State Leases that are subject to an FEA must show the FEA as a reservation in title. If the FEA is surveyed, the extent of the FEA must be shown on the face of the plan in hairline. The area of the lot must show a multiple line with an exclusion for the FEA.

1.41 Fully Withdrawn Plans

See 1.76 Withdrawn Plans (Page 42)

1.42 High Water Mark

See also 1.10 Ambulatory Boundaries (Page 7) and Division 2 of the Surveyors Regulations

- M** High Water Mark shall be the feature to be adopted as the boundary where land abuts tidal waters and is described as being bounded by, for example, HWM, Ocean, Coral Sea etc.
- A** The construction of a retaining wall outside the line of natural High Water Mark does not, in itself, alter the boundaries of a lot. Any change in the location of a HWM boundary must be justified in accordance with the doctrine of "slow and imperceptible" movement.

See also Schedule 6 of the L Act for the definition of High Water Mark and Sections 8—13 of the L Act.

1.43 Identification Surveys

See also Survey Plan Guidelines 1.33 Identification Surveys

- M** A copy of the plan must be certified by the surveyor under a Form 13 certificate of the Surveyors Regulation.
- A** Identification surveys should be presented in common plan format on A3 size paper. Sufficient space should be allowed on the plan for the addition of a unique plan number, preferably in the bottom righthand corner of the form.
- A** Identification surveys are not generally examined or registered. However, if a surveyor requires it an identification survey will be examined, on payment of an examination fee, and if in order will be endorsed by the DNR. Details of identification surveys are recorded in CISP.

1.44 Irrigation Areas

- M** A Local Government may not approve a plan of subdivision in an Irrigation Area unless the plan has first been approved by notation thereon by the Director General, DNR.
- M** The approval of the Local Government must be applied for not later than twelve months after the date of notation by the Director General, DNR. Schedule Part 1 Clause 31A.(7) of the WR Act.
- M** A plan by a Constructing Authority is not a subdivision for the purposes of Section 31.A of the WR Act and does not require the approval of the Director General, DNR.

1.45 Lakes

See Section 5.10 of the LG(P&E) Act

1.46 Leases (L Act)

- A** Land below HWM may be leased under the L Act

1.46.1 Sublease of a Lease or a Trust Lease of a Reserve

- M** Subleases of a Lease or a Trust Lease of a Reserve (eg Park) require the approval of the Minister responsible for administering the Land Act. A State Forest or National Park is not a reserve under the L Act.
- A** The Minister may require either a sketch plan or a normal plan of survey to be used to describe the sublease, or Trust Lease of a Reserve.
- M** The sublease must be described as:

Lease <alpha> in Lot 243 on <plan>

1.46.2 Leases over the Whole of the Land

See also 1.33.10.1 Easements over Reserves (Page 20) and 1.33.10.2 Easements in Leases over Reserves for State Forest or National Park (Page 20)

- M** Where a lease is over the whole of a lot, a plan of the lease is not required. In subsequent plans it is shown as an encumbrance on the face of the plan by a statement such as: "Lot 1 on SL12345 is subject to Lease A on CP896532."

1.47 Leases (LT Act)

1.47.1 General

- M** All registered leases over part of the land must be shown on the face of the plan with the appropriate identifier (eg Lease (alpha) <Dealing Number>).
- M** All subsequent plans must show all currently registered leases over the land plotted on the face in hairline.

1.47.2 Leases by Sketch Plan

M Section 65(2) of the LT Act states the requirements for an instrument of lease of part of a lot or part of a building.

See also Land Titles Notification No 153.

M Where it is desired to restrict a lease vertically, it shall be dealt with as directed in Section 3 Registrar of

1.47.3 Leases by Registered Plan

- M** Leases drawn on a common plan form lodged for registration must comply with all the requirements of a normal plan of subdivision.

Some examples are:

- ◆ Jjoba Farms. See RP198963;
- ◆ Toowong Railway Station. See RP211469
- ◆
- ◆ Toowoomba Airport. See RP194742;
- ◆ Brisbane Markets Trust. See RP209279
- ◆ Lease of Building on Registered Plan. See RP176225
- ◆ Lease with height restriction on Registered Plan.

1.47.4 Leases over the Whole of the Land

See also 1.69 Surveys in Strata (Page 38)

- M** Where a lease is over the whole of a lot, a plan of the lease is not required. In subsequent plans it is shown as an encumbrance on the plan in the normal manner with the description "Lot 1 RP123456 (Lease), <Dealing Number>".
- M** If the lease covers the whole of a lot in area, and it is desired to restrict it vertically, it shall be dealt with as directed in Section 3 Registrar of Titles Requirements for Registration of Volumetric Plans.

1.47.5 New Boundaries Intersecting Existing Leases next page.

1.48 Local Government

1.48.1 Local Government Boundary

See also Survey Plan Guidelines Example 6 (Page E2-93)

- M** If land represented on a plan falls within more than one Local Government, the consent of each Local Government is required. If a lot is within more than one local government, an allocation of that part of the area of the lot falling within each Local Government shall be shown on the face of the plan.

1.47.5 New Boundaries Intersecting Existing Leases

- M** Plans of lots are required to show the intersection of new lot boundaries with existing registered leases. Sufficient information must be shown on the plan to position the intersections of leases with new lot boundaries. This information may be calculated. It is not necessary to dimension the boundaries of registered leases within the new lot/lots. While a calculated intersection (between new lots and existing registered leases) is acceptable it is still the surveyors responsibility to ensure that lease encumbrances are correctly carried forward to affected lots.

- A** The intersections of new lot boundaries with existing registered leases are not required to be marked on the ground.

- M** Registered leases shall be shown on all plans subsequent to the registration of the lease together with sufficient information to unambiguously locate it within any new lot.

1.48.2 Agreements — LG(P&E) Act

1.48.2.1 General

- A** The LG(P&E) Act allows agreements to be registered between the Local Government and the registered owner to the effect that parcels of land separated by a transport corridor, river or creek must be held in the same ownership.
- M** When a plan of subdivision has been approved by a Local Government with a condition that certain specified Lots must not be disposed of separately, registration of the plan and the Agreement must be made concurrently.

1.48.2.1.1 Land Under Same Use—Section 4.17 LG(P&E) Act

- A** Section 4.17 of the LG(P&E) Act deals with land to be held conjointly because the two parcels of land are to be used for the same purpose. eg. a hotel and car park separated by road. The parcels may be on separate plans, but must be within 500 metres.

1.48.2.1.2 Land Under Minimum Area—Section 5.8(3)(c) LG(P&E) Act

See also 1.74 Vincula (Page 41)

- M** Section 5.8(3)(c) of the LG(P&E) Act deals with land to be held conjointly because one parcel of land is below the minimum area allowed by the Local Government. The parcels must be on the one plan and adjacent across a transport corridor or watercourse. (Surveyors should note that as vincula are now permitted, it would be preferable to use vincula instead of an Agreement if the Local Government so consents)

1.48.2.1.3 Cancellation of Agreements

- A** Agreements are cancelled by a Request to Cancel Agreement (Form 14).
- M** Where land affected by an Agreement is subdivided, the Agreement must be fully or partially cancelled by a Request to Cancel Agreement (Form 14).
- M** A Consent by the Local Government under seal on Form 18 must be attached to the Request To Cancel.

1.48.3 Local Government Conditional Consent

- A** A Local Government consent may be conditional. An example of a conditional consent is: "Subject to the registration of an application to register an agreement in accordance with Section....(insert appropriate section)....of the LG(P&E) Act and subject to Lots being held in the same ownership."
- A** The only conditions allowed are those which are capable of being implemented by the DNR in conjunction with that survey. Consequently a conditional consent on one plan cannot apply a condition to a lot on another plan.

1.48.4 Local Government Consent

See also 1.33.16 Local Government Consent (Page 21) and 1.24 Conditional Consent (Page 15)

- M** Local Government Consent is required for all subdivisions and plans of amalgamation of freehold land whether by compilation or survey except:
- ◆ Resumptions;
 - ◆ Plans lodged for and on behalf of the State Section 5.3.12 LG(P&E) Act;
 - ◆ Subdivisions under the PL Act Part XI Section 185 (1)(b). Order of Supreme Court for relief in respect of encroachment;
 - ◆ Easement Plans;
 - ◆ Plans of resurvey only; and

♦ Actions by the Port of Brisbane Corporation.

Some Local Governments have interpreted Section 5.3.(1A) of the LG(P&E) Act as meaning they are not required to seal plans submitted under this Sub-Section. However, a Statutory Declaration signed by the Registered Owner is required to be lodged with the plan, indicating that Section 5.3.1(b) of the LG(P&E) Act applies.

Note: Easements which provide access to a public road require Local Government approval to be deposited with the instrument of easement.

M Plans are to be lodged within 6 months of Local Government consent or a fresh consent obtained. Section 5.3.6 and Section 7,8 & 9 of the LG(P&E) Act

Note: Withdrawal and relodgement under Section 53 and 144(6) of the LT Act does not affect the lodgement date for Local Government consent.

A Where a Local Government has consented to an Easement plan and the consent has lapsed, it must be resealed or the original consent deleted by the Local Government.

H Plans of amalgamation outside the Brisbane City Council lodged prior to 25th May 1985 did not require Local Government consent.

1.48.5 Existing Conditions of Amalgamation

M Amalgamation conditions in a Local Government consent must be waived or varied when one of the parcels involved is being subdivided. A letter under seal from the Local Government should be forwarded to the DNR.

1.48.6 Minimum Areas

M Where there is no planning scheme in force over land being subdivided, the minimum area permitted by the LG(P&E) Act is 400m², unless a lot with less than that area is "to be transferred to the Local Government or to the State or is to be used for public utilities." (Section 5(8)(2))

1.48.7 Transfer to the State

See 1.70 Transfers to the State (Page 39)

1.49 Meridian

See also Recommended Practice 105.0 Meridian Determination and Survey Plan Guidelines 1.24 Datum and 1.42 Meridian.

M On all developments/subdivisions of 10 lots or more, excluding lots on a Building Unit Plan, and on all surveys within a PSA, the meridian shall be on the azimuth of the Australian Map Grid. The surveyor may determine the meridian by the most economical method which shall be noted in the meridian box on the plan. Where connections to coordinated PSM's are used, full details (including the AMG co-ordinates at the date of the survey) of these PSM's, and the direct bearing and distance between them, shall be noted on the face of the plan, as well as a direct connection from at least one station of the survey to at least one of the PSM's.

A While it is desirable for surveys of less than 10 lots to be on the meridian of AMG, it may not be economically viable to do so. In such cases another meridian may be adopted.

M For all other surveys where a meridian other than AMG is used, the origin of the meridian used shall be noted in the meridian box on the face of the plan.

M On any lot where some of the boundaries are surveyed and the remainder are compiled the meridian of the compiled information must be on a meridian that is common with the surveyed component.

A As the concept of "datum" is now outmoded, it is no longer necessary to note any line on the plan as "datum".

1.50 Natural Features as Boundaries

See also Section 24.(2) of the Surveyors Regulation.

For an example of a cliff boundary See RP97503.

1.51 New Boundaries

See also Section 24 of the Surveyors Regulation

- A** For surveys of non-freehold land that are based on a design of the proposed boundaries, it is the responsibility of the surveyor to maintain the intention of the design as evidenced by occupation (buildings, fences, etc), topography, natural features, dimensions, etc.
- A** Where any major divergence from the design is necessary or where there are incompatible design specifications, approval of the relevant authority must be obtained for the changes.

1.52 Original Portions

See also 1.6.2 Portion Allocations (Page 3)

- M** The Original Portion box on the front of the plan must contain the Original Portion number or numbers, or in the case of allotments of Sections, the Original Allotment and Section number or numbers. Portion numbers must be obtained by a current Title Search from ATS.
- A** Surveyors should note that an "original portion" can be:
- ◆ an Allotment of Section;
 - ◆ a Suburban Portion;
 - ◆ a Suburban Allotment;
 - ◆ a Lot on Plan (in which case the lot on plan must be shown in full); or,
 - ◆ any of the many other types of old descriptions.
- A** Where confusion is caused by a new deed of grant, the main point to remember is that the reason for the "portion" allocation is to enable the allocation of any original reservations to be made to the new titles. These reservations are contained within the current (as shown in ATS) deed of grant of the land, except in the case of a Section 358 of the L Act (previously Section 9, Land Act 1962) deed of grant, where the reservations are contained in the original D/G for the land.
- A** Where the current D/G covers old "portions", and is not a Section 358 D/G, these old portions are of no interest, as the reservations they originally had are now superseded by the reservations in the new D/G. In these cases, the original "portion" is the latest description ("lot on plan" if it is shown that way), and there is no need to make any mention of old superseded portions on the plan.

Where there is confusion, advice may be sought from the local Senior Surveyor.

1.53 Patent Error

See also 1.8 Alterations/Additions/Amendments (Page 5) and 1.68 Surveyor's Book (Page 37)

- M** Patent error corrections may only occur prior to the registration of a plan lodged for registration under the LT Act.

Patent error corrections may be used for:

- ◆ information which is patently incorrect or incomplete;
- ◆ compiled original information;
- ◆ balance areas.

Patent error corrections cannot be used for:

- ◆ survey information which affects the reinstatement of original boundaries;
- ◆ survey information for new lots;
- ◆ calculated areas.

1.54 Permanent Survey Marks

See also Section 29 Surveyors Regulations, Recommended Practice 106.0 Permanent Marks

- M** Developments/subdivisions of 10 lots or more, excluding lots on a Building Unit Plan, must be connected to at least two existing or placed permanent survey marks. When permanent survey marks are placed, a sketch plan must be deposited with the DNR for archiving and recording in departmental systems. An updated sketch plan is required for existing PSM's that have been connected to if the existing sketch plan is inadequate.
- A** Where new permanent survey marks are placed in accordance with the above paragraph, they shall where practicable:
- ◆ be placed such that they are intervisible, and likely to remain so;
 - ◆ be a minimum distance of 200 metres apart;
 - ◆ have a bearing and distance shown directly between them on the plan;
 - ◆ be positioned to take into account future coordination issues eg. GPS.
- A** Permanent survey marks may be standard brass plaques set in concrete, or other alternative marks set in concrete such that they have a reasonable expectation of remaining undisturbed, and can be marked with the allocated PSM number. Where unnumbered PSM's are used, a PSM number must be obtained from the DNR.

1.55 Plans

See Survey Plan Guidelines 1.49 Plan Forms

1.55.1 General

All plans are now archived at the Landcentre.

- A** The common plan form (from 800000) was introduced in 1989 and is used for both freehold action and crown action surveys.
- A** Within the DNR plans pass through various stages before the action depicted on the plan can occur. During these stages, the plan status is indicated by the following terms. (See following page)

Note: The terms used to identify the status of plans are dependent on whether the plan is for a freehold or a crown action.

Stage	Plan Process Stages	
	Freehold	Crown
Copy of Plan for Pre-examination	Deposited (DP)	Deposited (CP)
Original Plan for Registration	Lodged (RP)	Lodged (CP)
Original Plan or Copy of Plan assessed as being correct for Survey Content only	Passed (RP)	Passed (CP)
Plan correct in all respects for the issue of tenure	Passed/Endorsed (RP)	Registered (CP)
Tenure Issued or other action from the plan has occurred	Registered (RP)	Charted (CP)

Table 7 Plan Process Stages

Prefixes for the various types of plans are as follows:

Prefix	Type of Plan	Freehold Action Plans	
			Other Information
RP	Registered Plan		Common Plan Form
BUP	Building Units Plan		
GTP	Group Titles Plan		
PGT	Pre-examined GTP		
RC	Copy only		Common Plan Form
EP	Endorsed Plan		Common Plan Form

Table 8 Freehold Action Plan Types

Prefix	Type of Plan	Mixed Use Development Act Plans	
			Other Information
MCP	Mixed Community Plan		
MPP	Mixed Precinct Plan		
MSP	Mixed Stratum Plan		

Table 9 Mixed Use Development Act Plan Types

Prefix	Type of Plan	Crown Action Plans	
			Other Information
CP	Crown Plan		Common Plan Form
MPH	Mining Plan (Homestead Tenure)		No more plans being added to this series
SF	State Forest (Tenure description)		Dept of Primary Industries
NPW	National Parks & Wildlife		Dept of Environment and Heritage Plan
FTY	Forestry Plan		Dept of Primary Industries
RA	Road Action Plan		Department of Natural Resources
RX	Road Excision Plan		Department of Natural Resources

Table 10 Crown Action Plan Types

Prefix	Type of Plan	Freehold Plan/Crown Action Plan	
			Other Information
DP	Deposited Plan		Common Plan Form
IS	Identification Survey		Common Plan Format

Table 11 Plan Types that are common to both Freehold and Crown Action Plans

- A** CISP may be used to check on the location or archival office of a plan.

1.55.2 Freehold Action Plans

- A** An instrument, as defined under Section 4 of the LT Act, includes a plan of survey.
- M** In order to conform with statutory requirements under the LT Act the surveyors certificate must have been executed in accordance with the following timeframe:-
- ◆ Plans numbered 191500 to < 800000 executed by 30 June 1990

- ♦ Plans numbered 800000 to 863500 executed by 30 June 1994
- ♦ Plans numbered 863500 to 869500 executed by 31 March 1995

H The Custodian for plans numbered between 1 and 799999 was as follows:

- ♦ Southern (Brisbane) 1 to 299999
- ♦ Central (Rockhampton) 600000 to 699999
- ♦ Northern (Townsville) 700000 to 799999

1.55.3 Crown Action Plans

A In 1992, the County prefix for all Crown Action Plans was removed and replaced with the initials CP — Crown Plan.

H While the "County prefix" is no longer used for Crown Action Plans the plan archive contains many plans that are catalogued in accordance with the historical "County" prefix.

1.55.4 Redrawn Plans

A A plan may be redrawn using the same plan number. It is the surveyors responsibility that duplicate plans are not released for general circulation.

1.55.5 Multiple Sheet Plans

See also Survey Plan Guidelines 1.49.4 Surveys Involving Several Plan Forms

M There are cases where multiple sheet plan may be used. Surveyors are cautioned however, that plans that do not comply with the Department's requirements in regard to multiple sheet plans, may be rejected.

1.55.5.1 Survey of a Large Lot or a Lot with Intricate Detail

See Survey Plan Guidelines 1.49.4 Surveys Involving Several Plan Forms

Note: The provisions of this clause may not be used for surveys of several lots. Plans for such surveys must be broken along convenient lot boundaries and the provisions of clause 1.55.5.2 below shall apply.

1.55.5.2 A Survey involving a Large Number of New Lots

See also Survey Plan Guidelines 1.49.4.3 A Survey Involving a Large Number of New

A In accordance with 1.49.4.3 these plans shall be autonomous, including all reference marks and traverses relevant to each particular plan and are not suitable for multiple sheet use.

1.56 Proclaimed Survey Areas

See also 1.49 Meridian (Page 28) and 1.54 Permanent Survey Marks (Page 30)

A PSA's are established under Section 12 of the Survey Co-ordination Act.

M Surveys within or adjoining a PSA must connect to at least two established permanent survey marks. The PSA number must be shown on the face of the plan as near as practicable to the title block. (SCo Act)

A The meridian of the survey should be AMG.

A The bearings and distances between the PSM's used shall be computed from the surveyor's own work. The results obtained are to be compared with the dimensions obtained from the coordinates of the PSM's, having applied relevant geodetic corrections.

Proclaimed Survey Areas are located at:

- ♦ PSA 1 Toowoomba (Middle Ridge)
- ♦ PSA 2 Boonah

- ◆ PSA 3 Beenleigh
- ◆ PSA 4 Port of Brisbane
- ◆ PSA 5 Drayton (Toowoomba)
- ◆ PSA 6 Mount Isa

1.57 Railways

See also 1.72.3 Unsurveyed Railway Boundaries (Page 40)

- A In some leases in western Queensland the lease contained six (6) chain reserves for "Road and Railway". By agreement with Queensland Railways the land contained within the railway fence was deemed to be railway and the balance of the reserve was deemed to be road.

1.58 Rejected Plans

- A The Registrar may reject a lodged plan under Section 142 of the LT Act. A rejected plan may be relodged but will be regarded as a new plan in all respects.

1.59 Requisitions

See also 1.8 Alterations/Additions/Amendments (Page 5), 1.53 Patent Error (Page 29), 1.68 Surveyor's Book (Page 37) and Policy PBO/900/009 Survey Examination.

- A Where errors are detected on plans a requisition may be issued to the surveyor.
- A Surveyors may appeal against any Requisition, firstly, to the local Senior Surveyor. If agreement regarding the requisition cannot be reached, Section 23 of the Surveyors Regulations 1992 may apply.
- Pursuant to Section 76A (4) of the S Act a Licensed Surveyor may authorise another Licensed Surveyor to attend to requisitions provided the responsible surveyor advises the DNR in writing giving details of:
- ◆ the name of the other Licensed Surveyor being authorised to attend to requisitions;
 - ◆ the period of such authority;
 - ◆ any conditions on the Authority; and
 - ◆ the acceptance of the authorised Surveyor, to attend to the requisitions.
- A The Registrar may also issue requisitions to the lodger on matters of title on the plan or associated documentation.

1.60 Reservations in Title

See also 1.64.9 Road Reservation (Page 36) and Policy PUX/901/111 Reservation in Title — Sale of Unrequired Reservation.

- M When a lot that is the subject to a reservation in title is subdivided, the reservation must be dealt with by:
- ◆ purchase of the reservation by the registered owner without competition; or
 - ◆ allocation of the reservation to one or more of the subdivision lots. (L Act)
- M In both of the above cases an application must be lodged with a District Office of the DNR. However, it is Departmental policy to extinguish unwanted reservations wherever possible.
- A Since lots that are subject to reservations in title must have action taken to deal with the reservation, early application should be made to the DNR so that the necessary formalities can be completed without unduly delaying the registration of the survey plan. Reservations may be allocated using the subdivisional design plan. In most cases the DNR will prefer the applicant to purchase the reservation.
- M The Department will advise the applicant of its requirements in relation to the allocation of the reservation and the form of the allocation certificate that must appear on the plan. The

allocation certificate must be signed by the DNR delegate prior to the lodgement of the plan with the Registrar of Titles.

- M** If the reservation is not the sole exclusion from the title and the purchase of the reservation in title is not associated with a subdivision, a compiled plan of the lot is required for the issue of a deed of grant.

1.61 Resurveys

See also 1.31.4 Resurveys (Page 17)

- A** Resurveys do not require Local Government consent.
- A** It is preferable to use the original description as the new lot number.
- A** There can be more than one resurvey on the one plan or a resurvey and new easement etc.

1.61.1 BUP and GTP Plan Differences

- M** Where a Building Unit or Group Title covers more than one lot, an amalgamation of the lots must precede the Building Unit and Group Title plan.
- A** Where a survey for Building Units Plan or Group Title Plan discloses a difference with the underlying freehold lot, a plan of resurvey of the underlying freehold is not required to precede the Building Units and Group Title plan. Action may be taken to formalise the boundaries of the underlying lot following the extinguishment of the Building Unit or Group Title.

1.62 Rights of Way

- A** Rights of Way were created on plans prior to 1890 and are a type of private road or easement which created to provide alternative access to the parcels created on the same subdivisional plan.
- A** In most cases, investigation of departmental records shows that they are still contained in the original title. If their status has been investigated, a note will appear in the notings section of the plan. If in doubt as to their status, contact the local Senior Surveyor.
- A** Their status is only important if they are adjoining or give access to the subject land of the plan.

1.63 River Improvement Trust

- A** For an example of a plan subject to the River Improvement Trust See RP167212 and Lot 2 on RP116442. Title 15515100.

1.64 Roads

See also 1.37 Esplanades (Page 24), 1.57 Railways (Page 33), and Survey Plan Guidelines 1.57 Roads

1.64.1 General

See also Appendix A Glossary of Terms (Page 63) for a definition of "Reserved Road" and "Road Reservation"

- A** A road provides dedicated access to land.

1.64.2 Alignments

See also Survey Plan Guidelines 1.5 Alignment Offsets

1.64.2.1 Declared Alignments

- H Declared Alignments become boundaries. The declaration was made by the Minister for Local Government under Section 35(8)(7) of the LG Act 1936
- H The provisions referred to above were repealed under the Local Government Act 1993.
- S These plans are recorded in Departmental systems with a plan prefix of DA.

1.64.2.2 Official Alignments

- H An Official Alignment, not being a Declared Alignment indicates a building line only, which may or may not coincide with the property boundary.

1.64.2.3 Notice of Realignment

- A Under Section 498 of the LG Act, a Local Government may cause any road to be realigned in order to widen the road.
- A Section 498(5) of the Act states "The Local Government must lodge a copy of the notice of realignment with the Registrar of Titles for the registration on the instrument of title to the land."
- A A search of ATS will reveal any Notice of Realignment.
When a Local Government does not proceed with a Realignment, Section 507 of the LG Act provides for the removal of a Notice of Realignment.

1.64.3 New Road

1.64.3.1 Freehold Action Plan

- M Any plan of freehold land must contain at least one (1) new lot as the plan cannot contain new road only. A plan containing new road only with an undescrbed balance is not permitted. (LT Act)
- M The total area of new road must be shown
- A The dedication of new road takes place when the plan is registered. See the LG(P&E) Act, Section 5.3.11.

1.64.3.2 Crown Action Plan

- A An area may be excised for road purposes and opened as road by gazettal. The plan must bear an action statement indicating the area to be excised for each affected lot on the face to the plan.
For State Land, the dedication is by way of gazettal.

1.64.4 Reservations

See 1.64.9 Road Reservation (Page 36)

1.64.5 (Area) Reserved for Road Purposes

See 1.64.9 Road Reservation (Page 36)

1.64.6 Reserved Roads and Esplanades

See also Part 2 Division 1 of the L Act.

- A** Reserved Roads and Esplanades,, either surveyed or unsurveyed, are shown on the face of a plan in a specific location and are also shown as being excluded from the parcel on the face of the plan. A reserved road may or may not be dedicated to public use as a road, and if it is planned to be used for access, its status should be referred to DNR for clarification before use. If the area is deemed to be road and is required for road, the area must be surveyed in its defined location and dedicated as road on that plan.

Reserved Roads and Esplanades do not require an allocation when a parcel is subdivided.

In the case of a survey which abuts or intersects a Reserved Road or Esplanade, all evidence, including physical evidence, should be provided by the Surveyor to justify its position. Reserved Roads and Esplanades cannot be burdened by an easement or lease. For easements through lots containing Reserved Road See RP194504.

If there is any doubt as to the position of the Reserved Road or Esplanade this should be brought to the attention of the local Senior Surveyor. See RP194504.

For a Reserved road used to form a new Lot See RP200018 and WD1943.

1.64.7 Road Closure

See also 1.27 Consolidated Titles (Page 16)

- A** It is normal practice for the DNR to require a closed road to be incorporated with adjoining land by action under the L Act.
- A** However, provisions exit in the L Act to deal with a closed road, which becomes unallocated State land as a separate parcel of land.
- H** Where a separate deed of grant was issued for closed road, past practice was to obtain an undertaking to amalgamate the closed road with adjoining land.

1.64.8 Road Names

- A** The Local Government is the street naming authority. Most plans pass through the Local Government process and are sealed by the Local Government, thus ensuring the correctness of road names..

1.64.9 Road Reservation

See also 1.60 Reservations in Title (Page 33)

- A** A Road Reservation does not have a specific location within a lot and is State Land reserved from the title. Note that on some older plans, a Road Reservation is referred to as "Reserved for Road Purposes".

Areas shall be shown on plans as follows:

36.635	ha
3.075	ha Rd Resn
33.56	ha

The title issues for the Nett area of the lot only.

1.64.10 Road Opening and Closure

- A** Where a road is being repositioned by a simultaneous road opening and road closure it is not essential that the intersection of a new road and the road to be closed be surveyed, provided that the surveyed status of the amended road system and any affected land is maintained.

- A** Under section 109 of the L Act, severances that are created as the result of a simultaneous opening and closure may be incorporated in the deed of grant provided that the adjoining titles are held by the same registered owner.

1.65 Section 358 (L Act) Actions

See also 1.27 Consolidated Titles (Page 16)

- A** Section 358 of the L Act actions, are those where an owner of freehold land surrenders his land to the State to enable the addition or excision of land, or to have boundary dimensions corrected. The land is restored to him by way of a deed of grant, which must leave him in the same position as he was prior to the surrender, other than for the amendments that necessitated the action.

A Section 358 action is implemented on a Crown Plan, which must:

- ◆ show the boundaries of the lot in their final amended form;
- ◆ show appropriate action statements; and
- ◆ show all the encumbrances which affected the original lot, unless these were surrendered prior to the surrender of the freehold title;

New proposed easements may be shown on this plan, but they are created by registration of an instrument lodged to follow the issue of the deed of grant. That is, they are created by registration of the instrument under the LT Act, and not the L Act. A copy of the Crown Plan must be attached to the instrument of easement when it is lodged.

1.66 Selective Quality Sampling

See quality document PBO/014/000 Performance Reporting, PBO/015/000 Plan Processing and Pre-Lodgement Advice

1.67 Survey Records

- M** Survey records must be lodged where information cannot be conveniently shown on the plan. The survey records would include information such as reinstatement reports, creek traverses etc. Survey records for lodgement must be contained in a field note cover and must include a completed Form 12 certificate in accordance with Section 33 of the Surveyors Regulation.
- M** Sufficient survey records must be deposited with the plan of survey to ensure that a complete record of the survey is available to the DNR.
- A** Surveyors should examine the original plans in their search for forward notings which may not be covered by CISP. These notings may be for Certificates of Alignment (CA) and Survey Records (Field Notes) for which no plan has been lodged. Such notings will normally be in the form "Resub 68 See CA 1234" or "Subs 1-3 of Resubs 113-115 See FN H 167", where H is the first letter of the surveyor's name. If in doubt regarding a noting or reference contact DNR, Geodetic Data Section, Landcentre, Woolloongabba.

1.68 Surveyor's Book

See also 1.53 Patent Error (Page 29), 1.59 Requisitions (Page 33) and 1.8 Alterations/-Additions/Amendments (Page 5)

- A** As a general rule, patent error correction should be used in preference to a Surveyor's Book correction.

For Surveyor's Book corrections, a plan may only be corrected with the prior approval of the licensed surveyor who signed the Surveyor's Certificate.

Surveyor's Book corrections will not relate to:

- ◆ any survey information for New Lots;
- ◆ any calculated areas for New Lots; and

- ◆ any survey information which places the establishment or position of the subject parcels in doubt.

Any corrections made are to be made in a manner such that the original information is not erased or rendered illegible and the amendment is clear and unambiguous.

Departmental surveyors will discuss such matters with the Surveyor by phone and, if the Surveyor agrees, endorse the plan with the appropriate statement.

The Surveyor's Book in CISP should also be updated.

In making any correction to a plan, the Departmental surveyor should have due regard to:

- ◆ the purpose of the instrument; and
- ◆ the plan as a survey record.

This facility can only be extended to Surveyors who apply in writing and are prepared to attend the appropriate DNR registry office on a regular basis to sign amendments.

Any Surveyor who fails to attend the appropriate DNR registry office within four (4) weeks, or such greater time as may be granted, to sign the amendments to the Plan, may have the facility withdrawn. Applications for extension of time must be made in writing prior to the expiration of the signing period.

Where reference marks have not been fully placed at the date of deposit of a plan and the surveyor wishes to use the surveyors book to add additional reference marks at a later date, the following procedure shall be used:

- ◆ A removable grade red sticker shall be placed on the plan outside the margin at the bottom right hand corner of the front of the plan. This must not cover the plan number, or intrude into the space into which the REGISTERED stamp is placed. This must be done before any photocopies are taken.
- ◆ A prominent note shall be placed on the original plan in pencil and also on the deposited copy noting that additional reference marks will be added at a later date. Any information on the plan must not be made illegible by this note.

Note:

- ◆ If the above procedure is not followed, it will not be possible to add reference marks to the original plan, and an identification survey plan must be lodged.
- ◆ It is the surveyors responsibility to attend the registering office to add this information.

1.69 Surveys of Parcels Restricted Vertically

See also 3 Subdivision of Land in Strata (Page 49), Survey Plan Guidelines 1.64 Surveys in Strata and Section 14 of the L Act

- A Section 3 Registrar of Titles Requirements for Registration of Volumetric Plans (Page 49) lays out the requirements for surveys of lots and leases that are restricted vertically.
- A For easements that are restricted vertically, see 1.33.4 Easements Restricted Vertically (Page 21).

1.70 Transfers to the State

See also Land Titles Notification No 133, Land Use Policy PUX/900/001B and Land Use Notification PUX/952/018

- A** Land may be transferred to the State:
 - ◆ as a normal transfer following a plan of subdivision, or
 - ◆ A Local Government may require the transfer of land to the State for public use purposes as part of a subdivision approval. This must be endorsed on a plan as a condition in the Local Government consent, and is transferred on registration of the plan to the State without the lodgement of any further instrument. (See Section 50, LT Act).

- A** An acceptable format for the Local Government condition is:

"That Lot ... be transferred to the State for purposes under the control of the Local Government as Trustee".

- M** A requirement of Section 50 of the LT Act is that land that is to be transferred to the State as public use land is clearly identified on the face of the plan. The method of presentation is as follows:

"Lot		1	OR	"Lot	1
Public	Use	Land		(Park)"	
(Park)"				(if there is insufficient	
				space within the lot.)	

- A** All registered easements and other encumbrances shall be shown on the plan to ensure that the appropriate documents are lodged to deal with them as required:
 - ◆ Public Utility easements may be carried forward under the provisions of Section 372 of the Land Act and Section 85 of the Land Title Act. As this requires Ministerial approval, application should be made to the DNR, and the approval letter lodged with the plan. (Note: Only existing easements may be carried forward. See also 1.33.21 Creation of New Easements on Land being Transferred to the State (Page 23), for public utility easements that may be required following the transfer)

- ♦ All other easements must be surrendered with the surrenders being lodged to follow the plan.
 - ♦ All other encumbrances must be surrendered, with the surrenders being lodged in conjunction with the plan.
- S** An indefeasible title is created for the subject lot in ATS against which surrender documents and an internally created Request (Form 14) is registered.
- M** Once the land has been transferred to the State, future surveys affecting that land may only be effected by the lodgement of an appropriate Crown Action Plan. (L Act)

1.71 Undescribed Balances

Note: Surveyors are advised that, as from the date of the proposed amendments to the Land Title Act, undescribed balances will no longer be permitted.

1.71.1 Development in Stages

- M** Any plan of an undescribed balance requires Local Government's consent whether the plan is compiled or surveyed as, under the LG(P&E) Act, it is deemed to be a subdivision.
- The description will be "*Lot cancelling balance of Lot ... on RP.....*".

1.71.2 Other Undescribed Balances

- A** Other undescribed balances such as access restriction lots (eg 3 link reserves) and Rights-of-Way have now been given Lot numbers in the Lot conversion process although not necessarily new titles.

1.72 Unsurveyed and/or Calculated Boundaries

See also Survey Plan Guidelines 1.11 Calculated Lines

Unsurveyed and calculated boundaries may be used as lot boundaries in the following circumstances.

1.72.1 Opposite Side of Road Unsurveyed

- M** Where a road boundary is unsurveyed, but all its secant points on the unsurveyed side have previously been marked, the unsurveyed side may be used as a boundary. The distance on the unsurveyed side must be shown either as original, if available on the original plan, or as calculated if not. In each case the boundary must be shown in full lines.

1.72.2 Deemed Tramline Easements

- M** The centreline of the tramline line must be located relative to the lot boundaries. There is no requirement to mark the easement boundaries or their intersection with the lot boundaries
- M** Recovery marks must be placed near the intersection of the centreline with the lot boundaries as well as at the tangent points and traverse points on curves.
- M** The plan must show the dimensions of straights and chords, the radii of curves, areas of the easement and the recovery marks placed.

1.72.3 Unsurveyed Railway Boundaries

- A** Prior to 1914, railway land was not normally surveyed unless the land was being resumed from a surveyed parcel of land. Section 92(1)(3) of the Railway Act 1914 vested in the Commissioner of Railways, all land within railway fences. It is generally accepted that this section only applied to land fenced prior to 1914.



- M** Where unsurveyed railway land is being surveyed the fence should be adopted if it was erected prior to 1914. (R Act)

1.72.4 Other Unsurveyed boundaries

See also Survey Plan Guidelines 1.11 Calculated Lines

- A** In general, the boundaries of a freehold parcel must be fully surveyed. However, small sections of boundary that can be calculated from other plans may be accepted in isolated areas.
- A** Where lengthy sections of boundaries have never been surveyed, for example in extremely rough and broken terrain, they may be accepted in a balance parcel.
- M** The boundary must be shown as a full line, with a statement on the plan advising that specified lines on the plan have not been surveyed and that future actions (dealings) may require that these unsurveyed boundaries be fully surveyed. The dimensions shall be compiled from the original plan of the land, and a balance area determined.

EXAMPLE:

Lines ... have not been fully surveyed and future dealings may require these boundaries to be surveyed.

In cases of doubt, the local Senior Surveyor should be contacted for advice.

1.73 Unusual Cases

- A** For instances of unusual cases refer to the following plans:
- ◆ Centre of creek as boundary — see RP153117.
 - ◆ Balance area for easement — see RP201663
 - ◆ Balances suburban lot — see RP208685.
 - ◆ Area by indirect means — see RP203179.

1.74 Vincula

See also 1.48.2 Agreements — LG(P&E) Act (Page 27) and Survey Plan Guidelines 1.68 Vinculum

- A** Vincula may be used to bind several parts of the same lot where the land is severed by:
- ◆ a watercourse;
 - ◆ a road;
 - ◆ a railway;
 - ◆ a stock route;
 - ◆ a channel/drain;
 - ◆ a reserve;
 - ◆ any other Transport Infrastructure corridor; or
 - ◆ any combination of the above features;
- provided that the Local Government approves the subdivision.
- M** A vincula cannot be used to bind together parts of land that are severed by lot(s) that do not form part of a Transport Infrastructure corridor.
- Where vincula are created:
- ◆ The parts of the land being bound must be adjacent across the dividing feature, for at least part of their frontages to the feature.
 - ◆ The area of the lot may be calculated from the sum of the areas of each individual part, or be obtained by calculating the total area enclosed within the outer boundaries and subtracting the area of any enclosed feature. In either case, only the nett area is shown. A three (or more) line area is not to be shown, unless there are Section 23 (L Act) exclusions. (See also 1.12.3 Three Line Areas Page 10)

Where one or more of the parts of a new lot is fully or partly surveyed along the dividing feature on the plan creating that lot, the relationship of those parts of the lot to each other such part must be clearly shown by surveyed connections.

Where one or more of the parts of a lot is compiled along the dividing feature, it is not necessary to show surveyed connections, but it must be possible to accurately plot the relative location of the parts of the lot from the relationships shown on previous maps or plans, or from other information acceptable to the Department (For example GPS connections). The meridian used must be common to all parts of the lot.

1.75 Withdrawal and Re-lodgement of Plans

- A** To ensure that a plan is registered in the correct sequence such that the plan and associated documentation will give effect to the intention expressed, the Registrar under Section 144 of the LT Act:
- ◆ may withdraw the instrument (ie plan) and re-lodge the instrument to follow the lodgement of some other instrument; or
 - ◆ may, if it is an instrument that should not have been lodged, permit the instrument to be withdrawn and on receiving a written application, the Registrar may re-lodge the instrument.
- A** Withdrawal and relodgement does not affect the period of validity for Local Government consent, the date for which remains at the date of original lodgement.

1.76 Withdrawn Plans

- A** Plans may be withdrawn from the registration process on request. The request must be in writing by the lodger or registered owner (under seal if a company).
- S** A copy of the plan is imaged in DISP and the original returned to the lodger.
- A** A withdrawn plan may be relodged for registration. When a withdrawn plan is relodged, it is regarded as a new plan in all respects.

2. Mixed Use Development Act

2.1 Introduction

Approvals given under the provisions of the Mixed Use Development Act may cover two different categories of land, the designations of which are defined in the Act:

- ◆ The Site of a mixed use scheme consists of land within the boundaries of the area that has been fully approved for development. It is only within a Site that surveys under the Act may proceed.
- ◆ To allow for future development, an area may be identified on the overall master plan as a Future Development Area. Future Development Areas may not be subdivided under the Act and cannot be described as such on a Community Plan of Subdivision (See 2.2.1).

Before a development containing a Site and a Future Development Area can proceed, a normal Land Title Act plan must be prepared for the two different areas, with separate titles being created under the LT Act.

2.2 Plans

2.2.1 General

Three main types of plans are referred to in the Act:

- ◆ Community Plan;
- ◆ Precinct Plan; and
- ◆ Stratum Plan.

A Community Plan divides the site into Community Property Lots and Community Development Lots and is the first plan required. It can also leave a "balance" Community Development Lot that can be later subdivided. Lots created on a Community Plan may be amalgamated or subdivided into further Community Title or Community Property lots by Community Plans of Amalgamation and Subdivision.

A Precinct Plan subdivides a Community Development Lot into Precinct Development Lots and Precinct Property Lots. It can also leave a "balance" Precinct Development Lot that may be later subdivided. Lots created on a Precinct Plan may be amalgamated or subdivided into further Precinct Community Lots or Precinct Property lots by Precinct Plans of Amalgamation and Subdivision.

Note: The word "Balance" is used in the context of a lot that is intended for future subdivision, and as defined in the Act. It may not be a Balance lot as is current Land Title Act practice. (See 2.3 Community and Precinct Plans Page 45 and 2.4 Stratum Plans Page 45).

A Stratum Plan subdivides Community Development Lots, Precinct Development Lots, or balance Precinct Development Lots into Community or Precinct Stratum lots. There appears to be no provision to subdivide a "balance" Community Development Lot into Community Stratum Lots, nor is there any provision to create Stratum Property Lots. Lots created on a Stratum Plan may be amalgamated or subdivided into further Stratum Lots of the same type by Stratum Plans of Amalgamation and Subdivision.

A By Section 63, all land within the "site" must be dealt with in the Community Plan, and by Section 86, all land within a Community Development Lot must be dealt with by a Precinct Plan. The Act is not so clear with regard to Stratum Plans, but there is no doubt, taking several sections into account, that a Stratum Plan must deal with the whole of a lot of whichever type that it subdivides.

A Another plan type is a Boundary Adjustment Plan. They only apply to "minor amendments" that are "necessary to resolve a problem in relation to the management, development or subdivision of the site...". The definition of "minor" is the responsibility of the Local Government concerned.

With the exception of community and precinct property lots, all lots created under the above plans may be further subdivided by plans under the Building Units and Group Titles Act, excepting that a stratum lot may only be subdivided by a Building Units Plan. These subdivisions follow the provisions laid out in the Building Units and Group Titles Act and Regulations.

- M** A survey shown on all plans must be carried out under the provisions of the Surveyors Act 1977 and a standard Surveyors Certificate under the Surveyors Regulation must be placed in the bottom left hand corner of the face of the Form 26. A certificate is not required on any additional Form 27's that may be necessary.

2.2.2 Plan Forms

See also 2.6 Amendment Plans (Page 45)

- A** The same Forms will be used for all of the above Plans, with slight modifications for identification as noted below. Community Plans will have the prefix MCP, Precinct Plans MPP and Stratum Plans MSP. Plans that amend, amalgamate or subdivide lots into lots of the same type (referred to as amendment plans in this document) will use the plan type applicable to those lots.
- M** All plans under the Act that require survey must consist of a single Form 26, and as many additional sheets of Form 27 as may be required.
- On the front of a Form 26 is shown:
- ◆ Plan type, Community, Precinct or Stratum as applicable;
 - ◆ Reference to sheets contained in the plan;
 - ◆ Survey Details;
 - ◆ Description of the new lot(s) in the plan and the description of the lot(s) cancelled;
 - ◆ The surveyors certificate.
- M** The surveyor must insert the plan type, and complete the reference to sheets, as well as the normal survey requirements.
- M** On the reverse of the form are contained all the relevant certificates and administrative information required to process the plan. The surveyor must complete at least Item 7, the original grant and portion, and where applicable, item 5.
- A** Form 27 may be used:
- ◆ for additional sheets of survey information; or
 - ◆ as expanded panels of Form 26.
- M** Each sheet must be numbered sequentially commencing with 1 on Form 26 and the total number of sheets in the plan must be noted in the top right hand corner of each sheet.
- M** A scale must be shown for each sheet. Where a diagram is drawn to a different scale from that shown on the sheet, a scale must be shown adjacent to that diagram. Generally, north should be to the top of the Form, however it may be rotated to no more than 90 degrees from north. Where there is no compass rose on a sheet, or where the north point has been rotated, a North Point must be shown.
- A** Where differences from the plan of the preceding Land Title Act lot are disclosed by a plan under this Act, no action is required to produce a plan of resurvey to precede the MUD Act plan. These differences will be dealt with on extinguishment. (See also 2.9 Extinguishment Page 47)
- M** The surveyor is responsible for placing:
- ◆ the words "Mixed Community" or "Mixed Precinct", or "Mixed Stratum" as the case may be, to precede the word "PLAN" in the plan number box at the bottom right hand corner of each sheet of the plan, and on the reverse of the Form 1;
 - ◆ the plan number in the space provided for the plan number on each sheet in the plan in the case of an amendment plan. In addition, the plan number must be placed vertically outside

- the margin at the top left and right hand corners of each sheet of the plan, including the reverse of the Form 1;
- ♦ the CISP number in the appropriate location. (See also 2.8 CISP Page 46)

2.3 Community and Precinct Plans

- M A community or precinct plan must deal with the whole of the lot it is cancelling. Balance lots are not permitted. Where a "balance" lot as defined in the Act is required, it must be fully described, given a standard lot number of the correct type, and qualified on the face of the plan with a note "<Type> Development Lot is a Balance <Type> Development Lot".

2.4 Stratum Plans

See also 3 Subdivision of Land in Strata (Page 49)

- M A stratum plan must deal with the whole of the lot it is cancelling. Balance lots are not permitted. The air space above, unlimited by height, and the ground space below, unlimited by depth (or to the limit in the original Land Title Act allotment), must be included in a lot or lots, unless an existing Stratum Lot is being dealt with.
- M Stratum lots shall be surveyed as directed for volumetric lots in accordance with the provisions of Section 3 Registrar of Titles Requirements for Registration of Volumetric Plans (Page 49), modified as necessary to accord with the provisions of the Mixed Use Development Act. In cases of doubt, the Department should be contacted for advice.
- M Stratum Lot names are derived from the lot type they are subdividing. If a Community Development Lot is being subdivided by a Stratum Plan, it creates "Community Stratum Lots". If a Precinct Development Lot is being subdivided, it creates "Precinct Stratum Lots".

2.5 Lots

- M Where a lot consists of several parts, each separate part must not be contiguous with any other part. An area for each part must be shown and a total area must be shown in one of the parts which is a mathematical sum of the areas of the parts.
- M Development Lots and Property Lots in a Plan must be numbered consecutively commencing from 1. If the plan contains a lot or lots that are intended for future subdivision, these must be given a higher number than there are lots in a plan. Surveyors should consider any possible redesign of later stages of the project when selecting this number. The number used must not be repeated in later amendment plans.
- M Lot numbers within the completed development must be a continuous sequential series, commencing from 1 with no omissions.
- M Each lot must bear a description of its type, ie Community Development Lot, Precinct Property Lot etc.
- A Where space is insufficient, lot descriptors may be abbreviated to their capital initials. For example, CDL, CPL, CSL, PDL, PPL, PSL.

2.6 Amendment Plans

- A For the purposes of this document, an Amendment Plan includes Plans of Amalgamation, Boundary Adjustment Plans and Plans of Subdivision where the plan is creating lots of the same type. Plans of amendment create lots of the same type as the parent lot.
- M An Amendment Plan takes the same number as the plan it is amending.
- M Sheet numbering must commence with the next number in the series, and the total number of sheets must be the total number of sheets in the whole plan, including any previous sheets.
- M The description of an amendment plan must be "<Type> Plan of Boundary Adjustment of", "<Type> Plan of Amalgamation of" or "<Type> Plan of Subdivision of" as the case may be.

- M** Lots on an amendment plan must be numbered consecutively from the highest number on the plan, other than a lot intended for further subdivision. Note that <Type> Property Lots must be numbered under the MUD Act, but there is no requirement that they be numbered in any particular order.

2.7 Descriptions

- A** Descriptions for plans under the MUD Act are, of necessity, somewhat different to those under the Land Title Act and the BUGT Act.
- M** The Description of the plan must be "<Type> Plan of", where the <Type> is replaced by the type of plan, ie Community, Precinct or Stratum.

Examples

An initial Community Plan:

Community Plan of Community Development Lots 1 to 10 and 100 and Community Property Lots 11 to 13

cancelling Lot 1 on RPI23456

Note: Lot 100 is intended for further subdivision. (See also 2.3 Community and Precinct Plans Page 45 and 2.4 Stratum Plans Page 45)

Plan of amendment:

Community Plan of Subdivision of Community Development Lots 11, 12 and 101

Cancelling Community Development Lot 100

Precinct Plan subdividing a Community Development Lot:

Precinct Plan of Precinct Development Lots 1 to 5 and Precinct Property Lots 6 and 7

Cancelling Community Development Lot 2 on MCP123456

A Precinct Stratum plan subdividing a Precinct Development lot into Precinct Stratum Lots:

Precinct Stratum Plan of Precinct Stratum Lots 1, 2 and 3

Cancelling Precinct Development Lot 4

Stratum Boundary Adjustment Plan:

Stratum Boundary Adjustment Plan of <Type> Stratum Lots 22 and 23

Cancelling <Type> Stratum Lots 4 and 5

2.8 CISP

- A** Because of some difficulties caused by using the same number for amendment plans as the original, it will be necessary to deal with plans under the MUD Act in a different manner from what has been the practice in the past, and what is the current system with other plans.

MUD plans have two additional boxes beneath the description area. These are headed "CISP" and "V".

Where:

- ◆ "CISP" is an internal number that will be used by CISP (the database) to deal with the problems noted above. This number depends on whether the plan is a version 0 or if it is a higher number.
- ◆ "V" is a version number, with version 0 as the original plan. Subsequent amendment plans receive version numbers commencing with 1 and continuing up. It is the surveyor's responsibility to insert this number.

In the case of a version 0 plan, the "CISP" number is the same as the plan number, and it is surveyor's responsibility to insert this number.

In the case of higher version numbers, the "CISP" number is generated by CISP, and will bear no relationship to the actual plan number. This number will be used for pre-examination, and also will be the reference in CISP for additional lots that may be created on amendment plans. To implement this feature, the existing description for the original plan will be amended automatically to include the "CISP" number on registration of an amendment plan.

The internal CISP number will be available to surveyors singly or in blocks on request, or will be allocated on deposit for pre-examination or, if not pre-examined, on lodgement for registration. If this number is available to the surveyor prior to deposit or lodgement, it will be his responsibility to insert the number.

2.9 Extinguishment

- A** Under the current Act, extinguishment of MUD plans will be very difficult, if not impossible. If extinguished, the comatose title will be reactivated, and becomes the title for the land.
- M** If the dimensions on the plan defining the lot contained in the comatose title differ from the dimensions on the extinguished plan, a plan of resurvey is required to immediately follow the extinguishment. A new indefeasible title will be created off that plan. This plan may be compiled from the extinguished plan, subject to the normal requirements for compiled plans.

2.10 Miscellaneous

- M** All plans are subject to consent by various government agencies if in a controlled zone. eg Coastal Management Control District, Channel Area, Drainage Area etc.

2.11 Definitions

Balance

The word "Balance" is used in the context of a lot that is intended for future subdivision, and as defined in the Act. It may not be a Balance lot as is current Land Title Act practice. (See also 2.3 Community and Precinct Plans Page 45 and 2.4 Stratum Plans Page 45)

Community Development Lot (MUD Act)

A lot on a community plan that is not a community property lot.

Community Plan (MUD Act)

A Community Plan divides the site into Community Property Lots and Community Development Lots and is the first plan required. It can also leave a "balance" Community Development Lot that can be later subdivided. Lots created on a Community Plan may be amalgamated or subdivided into further Community Title or Community Property lots by Community Plans of Amalgamation and Subdivision.

Community Property Lot (MUD Act)

A Community Property Lot is in effect "common property" on a MUD Act Community Plan.

Precinct Development Lot (MUD Act)

A lot on a Precinct Plan that is not a precinct property lot.

Precinct Plan (MUD Act)

A Precinct Plan subdivides a Community Development Lot into Precinct Development Lots and Precinct Property Lots. It can also leave a "balance" Precinct Development Lot that may be later subdivided. Lots created on a Precinct Plan may be amalgamated or subdivided into further Precinct Community Lots or Precinct Property lots by Precinct Plans of Amalgamation and Subdivision.

Precinct Property Lot (MUD Act)

A Precinct Property Lot is in effect "common property" on a MUD Act Precinct Plan.

Stratum Lot (MUD & SBC)

A lot on a stratum plan that is limited wholly or partly in height or depth or both.

Stratum Plan (MUD & SBC)

A Stratum Plan subdivides Community Development Lots, Precinct Development Lots, or balance Precinct Development Lots into Community or Precinct Stratum lots. There appears to be no provision to subdivide a "balance" Community Development Lot into Community Stratum Lots, nor is there any provision to create Stratum Property Lots. Lots created on a Stratum Plan may be amalgamated or subdivided into further Stratum Lots of the same type by Stratum Plans of Amalgamation and Subdivision.

3. Registrar of Titles Requirements for Registration of Volumetric Plans

Acknowledgment

This section of the Department of Natural Resources Requirements has been adapted, with permission, from a publication of the New South Wales Land Titles Office, dated February 1988.

(Insert Registrar of Titles Requirements for Registration Volumetric Plans)



REGISTRAR OF TITLES REQUIREMENTS FOR REGISTRATION OF VOLUMETRIC PLANS



**QUEENSLAND
GOVERNMENT**

3.1 What is a Volumetric Survey?

Traditionally the majority of surveys have been defined on the surface plane of a lot. Exceptions comprising a restriction in height or depth have arisen in some instances.

Survey of volumetric lots allow registered owners to utilise the full potential of the lot.

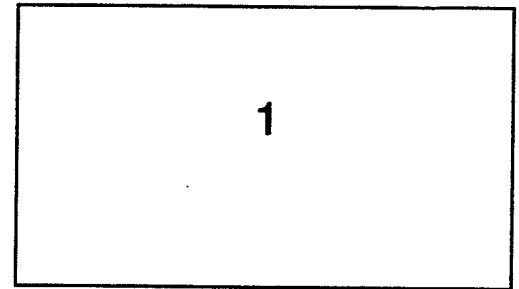
Before you can accept the concept of volumetric survey it is important to understand its principles by comparing it with the current survey of surface parcels.

If you have one block of land (Figure 1)

which is surveyed into two parcels (Figure 2)

there is no difficulty in accepting the proposition that Lot 2 is not part of or affects Lot 3.

However, a registered owners interest in a lot is deemed as extending from the sky to centre of the earth unless a restriction is shown.

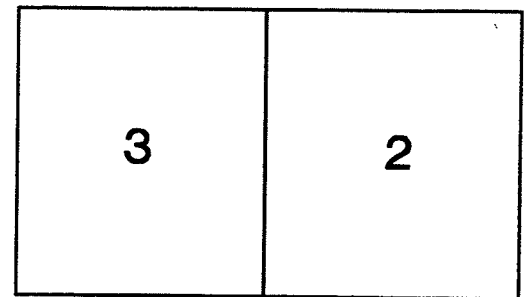


Original Lot

Figure 1

A Volumetric survey (Figure 3) allows the registered owner to survey a lot in a parcel other than on the surface plane.

The indefeasible titles that are created from this type of survey will reflect the identity of lots which are fully enclosed with no part unlimited in depth or height as volumetric eg. Volumetric Lot 4 on RP 1234 and the balance of the lot without limitation will simply be described as Lot 5 on RP 1234.



Standard Subdivision

3.2 Where can a volumetric lot be surveyed?

A volumetric parcel can exist above, below or within specified height limitations above and below the surface. Subdivisions that establish volumetric lots are sufficient for the creation of an indefeasible title.

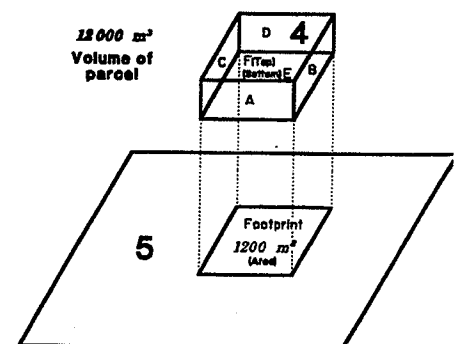
Figure 2

A - F Bounding Surfaces

3.3 What use is volumetric subdivision?

Volumetric subdivision allows the creation of volumetric lots for sale lease or resumption which would not be practical in survey on the surface plane eg:

- underground railway stations or tunnels
- subdivision of air space above a lot for commercial development
- subdivision envelope for a building prior to a Building Unit development
- leasing of air space above a lot



Volumetric Subdivision

Figure 3

3.4 Is there a specific plan form for this type of survey?

The Plan (Form 21) will be used for volumetric survey. Directions governing the drafting of such surveys are contained in these Requirements.

3.5 Will dealing with a volumetric lot be different from a standard lot?

An owner of an indefeasible title by lodgement of a Volumetric Survey Plan can create one or more volumetric lots and obtain indefeasible titles for them.

The Volumetric Lot/s created by the plan shall devolve and may be transferred, leased, mortgaged or otherwise dealt with in the same manner as any other Standard Lot.

Volumetric Lots can only be resubdivided into Volumetric Lots. However they can be amalgamated with the base lot to extinguish them.

Access to Volumetric Lots may be by way of easement created by a Survey Plan.

3.6 What is the language of volumetric subdivision?

The following definitions of terms will be helpful when dealing with volumetric subdivision :

Bounding surface: means the limiting feature of a volumetric parcel. This may be a flat plane or any surface that can be mathematically generated and sufficiently defined and shown on a plan such that there is no possibility of ambiguity.

Dimension: means to place bearings and distances on the boundaries of a parcel, in accordance with the requirements of the Surveyor's Act 1977, the Surveyors Regulation 1992 and any Direction made by the Registrar.

Footprint: means the vertical projection of the outermost bounds of a volumetric parcel onto a horizontal plane approximately at ground level. Where a volumetric lot consists of several different levels, each with a different horizontal dimension, each level shall have its own footprint

Parcel: means a lot, easement or lease.

Remainder: when applied to lot indicates that that lot is the remainder of a standard lot after a volumetric lot has been subdivided out of it.

Restricted: when applied to an easement indicates that that easement is restricted in either height or depth by a horizontal plane or, in the case of a volumetric easement, where it is not shown on the plan as a three dimensional diagram.

Standard: when applied to a parcel indicates that that parcel is unlimited in height and depth.

Volumetric: when applied to a parcel indicates that that parcel is fully limited by bounding surfaces.

See Figure 3 (Page 51) for illustration of some of these terms.

The following sections lay out the Requirements for volumetric surveys.

3.7 General:

This Direction deals with the creation of volumetric parcels by reference to levels related to a fixed datum as distinct from similar division by reference to floors, walls and ceilings pursuant to the Building Units and Group Titles Act 1980.

A volumetric parcel must be bounded in all dimensions. Parcels that are currently described as "In Strata", and are only restricted in one direction, i.e. "to the depth of 10m" or "below 10m", are not volumetric. Until these lots are further subdivided, they

may continue to be referred to as "in strata", but when subdivided, they shall not be further qualified by the term "in strata".

With the promulgation of this Direction, the use of terms that refer to "Strata" or "In Strata" shall be no longer used in any context in any document, including plans, other than as required by the Mixed Use Development Act, and as noted above.

Creation of lots or leases with restrictions in either height or depth only will not be permitted. However, easements with restrictions in either height or depth only will be accepted.

Volumetric subdivisions create lots that:

- a) are fully enclosed by bounding surfaces.
- b) are above or below or partly above and partly below the surface of the ground.

While these requirements lay out specifications for dealing with volumetric parcels, it is accepted that there will be unusual cases that require special treatment. Surveyors are encouraged to discuss these cases with the Department at an early stage in the development process.

Plans of volumetric parcels are specifically excluded from the accreditation process, and will be subject to survey examination on lodgement.

3.8 Volumetric Parcels:

- a) Plans creating volumetric parcels shall comply with the general requirements of:
 - i) the Local Government (Planning and Environment) Act, 1990, Land Titles Act, 1994 and the Survey Co-ordination Act 1952;
 - ii) the Surveyors Act 1977 and the Surveyors Regulation 1992;
 - iii) established practice as formulated from time to time in the Requirements of the Department.
- b) Each volumetric parcel shall be fully defined by bounding surfaces, which may be other than vertical or horizontal.

It is unacceptable to specify "above or below a depth from the surface" for new boundaries since this is subject to change and not capable of mathematical definition. No objection will be taken to showing a reference to the natural ground surface or to a structural feature from new boundaries, provided the information is incidental only and all bounding surfaces are defined as directed herein.
- c) Each volumetric parcel (other than easements as noted below) shall be clearly and unambiguously defined and fully dimensioned in a three dimensional isometric diagram drawn to scale, together with elevations referred to a defined datum. (see 3.13 Plans: Page 54).
- d) Each volumetric parcel shall be given an area which is the area of the footprint. In the case of multiple levels of different horizontal dimensions, each footprint shall be given a separate area.
- e) Each volumetric parcel shall be given a volume in cubic metres.
 - i) For volumes less than 100,000 cubic metres, the volume shall be shown to the nearest cubic metre with any fractions of a cubic metre discarded.
 - ii) For volumes 100,000 cubic metres and above, the volume shall be shown in exponential notation with the mantissa taken to 5 significant figures.
- f) Where a standard lot is subdivided by a plan which creates a volumetric lot or lots, the whole of that lot must be dealt with, and undescribed balances or remainders are not permitted. The remainder lot, which contains those parts of

the original lot that are unrestricted in height or depth, and which contains part or all of a volumetric lot, is not a volumetric lot. This is the case although the footprint of the volumetric lot may coincide with the outer boundaries of the original lot.

3.9 Volumetric Easements:

A volumetric easement that is fully bounded by horizontal and vertical planes may be defined by a plan of the footprint, together with the levels of the planes that bound the easement in height and depth, without the necessity for a three dimensional diagram. Where the provisions of this paragraph are utilised, the easement shall be qualified in the plan description only as "Restricted".

Nothing in this paragraph prohibits the use of a three dimensional diagram if necessary to unambiguously define the easement. However, if a three dimensional diagram is used, the reference to "Restricted" would not be used.

3.10 Volumetric Leases:

- a) Leases generally shall continue to be dealt with in accordance with Land Title Notification No. 153. In particular, a lease that is "within a building" is not normally to be considered a volumetric lease unless there is an unusual restriction in height contained in the covenants. In this latter case, the requirements noted in the next paragraph shall apply.
- b) Where a lease is of part of land, and is to be volumetric, the normal requirements of Land Title Notification No. 153 shall continue to apply. However, in addition, the provisions of these requirements dealing with volumetric lots shall apply to any plan or sketch plan produced.

3.11 Descriptions:

When referring to lots in a plan description or canceling clause, the reference shall include the word "Volumetric" as required. i.e.

Lots 1 (Volumetric) and 2 canceling Lot 10 on RP123456.

Lease A (Volumetric) in Lot 10 on RP123456

When referring to Easements in a plan description, the reference shall not include the word "Volumetric", but may include the word "Restricted" as noted in paragraph 9. above.

Unless specifically directed, lots, easements or leases shall not otherwise be qualified on any plan or document by the adjectives "Volumetric" or "Restricted".

The word "Standard" or "Remainder" shall not be used to qualify any parcel in any context other than in this document.

3.12 Marking of Volumetric Lots:

Marking of volumetric lots shall comply with the normal provisions of survey marking where this is possible. However, in most cases, it will not be practical to mark volumetric parcels, and every opportunity should be taken to reference corners to existing structures, or to marks inserted therein.

3.13 Plans:

- a) A plan of volumetric parcels:
 - i) may consist of more than one sheet;

- ii) shall satisfy normal survey requirements, including reinstatement of the outer boundaries of the subject parcel, if such is necessary; and
 - iii) shall, in addition, satisfy these requirements.
- b) On all plans, the main plan shall be a plan view to scale, showing:
 - i) the outer boundaries, fully dimensioned, of the lot or lots being dealt with;
 - ii) any necessary reinstatement information;
 - iii) the footprint, or footprints, of any volumetric parcels being created on that plan;
 - iv) reference to any diagram that may be necessary to illustrate any part of the main plan.

Where the plan consists of more than one sheet, the main plan shall always be on the first sheet.
- c) Unless otherwise permitted in the case of easements, a plan shall show a three dimensional isometric representation of the parcel or parcels the subject of the plan, and drawn to scale and in such a manner which will allow all details and notations to be clearly and unambiguously shown.
- d)
 - i) The boundaries of a parcel shall be defined by polar dimensions, and levels on the Australian Height Datum.

Where the bounding surfaces defining the horizontal limits of the parcel are vertical planes, it will be sufficient to define the horizontal dimensions of the parcel by the dimensions of the footprint, provided that, by doing so, no ambiguity is introduced into the definition of the parcel.
 - ii) The Permanent Survey Mark used for the datum of the Australian Height Datum levels shown on the plan shall be noted on the face of the main plan.
- e) Where Australian Height Datum is not available in the immediate area of the survey, and it would not be economically practical to transfer Australian Height Datum, another datum in general use in the area may be used provided that:
 - i) prior approval of the examining authority for surveys in the area of the survey has been obtained;
 - ii) full details of the datum adopted are noted on the main plan; and
 - iii) reduced levels for at least two Permanent Survey Marks outside the confines of the survey are shown on the plan together with, where possible, at least one additional Permanent Survey Mark fixed to a building within the confines of the plan.
- f) The plan may, in addition, also include co-ordinate dimensions, if such would increase the clarity of the definition of the parcels.

Where the definition of a parcel includes co-ordinate dimensions:

 - i) The origin of and the co-ordinate system used must be clearly shown on the face of the main plan;
 - ii) The co-ordinates of each point of the parcel must be shown either on the face of the plan or in a tabulation;
 - iii) Where the co-ordinate system is the Australian Map Grid, the co-ordinates of at least one Permanent Survey Mark adjacent to the survey, and the co-ordinates of the Permanent Survey Mark used for the datum of the Australian Map Grid Co-ordinates, shall be shown on the main plan.

Co-ordinates on the Australian Map Grid may be truncated by subtracting from every northing value on the plan a fixed even offset, and from every easting value on the plan a fixed even offset. The adopted offsets shall be prominently noted on the main plan.

- iv) Where the co-ordinate system is other than the Australian Map Grid, the co-ordinates of at least two Permanent Survey Marks outside the confines of the survey shall be shown on the plan together with, where possible, at least one additional Permanent Survey Mark fixed to a building within the confines of the plan.
- v) The Permanent Survey Mark adjacent to the survey noted in (iii) above, and those noted in (iv) above shall, in addition, be given levels on the level datum used in the survey.

- g) Where a plan creates a parcel within a standard lot, reduced levels of the existing ground surface at the major corners of that lot shall be shown on the face of the plan or in a tabulation.

In the case of a plan of a volumetric parcel which includes co-ordinates, the dimensions of the base lot shall be shown both in polar dimensions and co-ordinates

- h) Where a parcel created on a volumetric plan is located above or below the ground surface of another lot, the footprint shall be shown and fully dimensioned. Reduced levels of the existing ground surface at the corners of the footprint on the surface, shall be shown on the face of the plan or in a tabulation.

In the case of a volumetric parcel defined by polar dimensions only, at least two corners of the footprint shall each be independently connected to at least one corners of the base lot by direct connection.

In the case of a plan of a volumetric parcel which includes co-ordinates, the footprint shall, in addition, be defined by co-ordinates.

Where a parcel created on a volumetric plan consists of multiple levels of different horizontal dimensions, the provisions of this paragraph shall apply to each level.

- i) Where a volumetric lot intersects the ground surface of another lot, the boundaries on the surface so intersected shall be marked as required by the Surveyors Act 1977 and the Surveyors Regulation 1992 and fully dimensioned. Reduced levels of the existing ground surface at the corners so marked, shall be shown on the face of the plan or in a tabulation.

In the case of a volumetric lot defined by polar dimensions only, at least two corners of the intersecting figure shall each be independently connected to at least one corner of the base lot by direct connection.

In the case of a plan of a volumetric lot which includes co-ordinates, the corners of the intersecting figure shall, in addition, be defined by co-ordinates.

- j) Generally, the orientation of any diagram shall be the same as the main plan. However, if it is necessary to show a diagram with a different orientation, the diagram shall be clearly noted to that effect.

- k) Where a remainder lot is being dealt with on a subsequent plan:

- i) where the volumetric lot is wholly above or wholly below the surface area of the land, reference to that volumetric lot shall not be made on the main plan, but the footprint shall be plotted on a diagram to the main plan, and the volumetric lot referenced by lot and plan number

- ii) where the volumetric lot is partially above and partially below the surface area of the land, the location of the volumetric lot shall be plotted on the main plan, and the volumetric lot referenced by lot and plan number.
- iii) where a volumetric easement has been registered to give access to a volumetric parcel over the remainder parcel, the footprint of the volumetric easement shall be plotted on the main plan, and the easement referenced by easement letter and plan number.

3.14 Example plans:

The following plans are intended only to illustrate the basic principles of preparing plans of volumetric lots, and are not a definitive guide to plan preparation in general. Reference should be made to the Department's Survey Requirements in addition to these Requirements for full details.

Figure 4: Illustrates a basic subdivision of a volumetric parcel and a remainder lot, where the main part of the plan shows the outer boundaries of the original lot, and the footprint of the volumetric lot, and the diagram is a three dimensional representation of the volumetric lot. Although the volumetric lot is fully dimensioned, in this case it would have been sufficient to have the footprint dimensioned, and to omit the dimensions on the actual volumetric parcel.

Figure 5: Illustrates the same plan but using co-ordinates to define each corner. A simple plan such as this would not normally justify the use of co-ordinates.

Figure 6: Illustrates the same plan, but with the addition of an easement. This is only to illustrate the easement, and should not be taken that easements for access must be supplied for all volumetric lots. This is a matter for the Local Government.

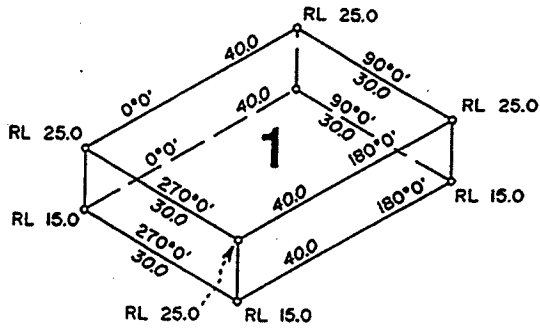
Figure 7: Illustrates a further subdivision of the remainder lot.

Figure 8: Illustrates a plan that creates a volumetric lot of the same horizontal dimensions as the original lot, and is below the general surface of the ground.

See also plans RP 899451 and RP 899455.

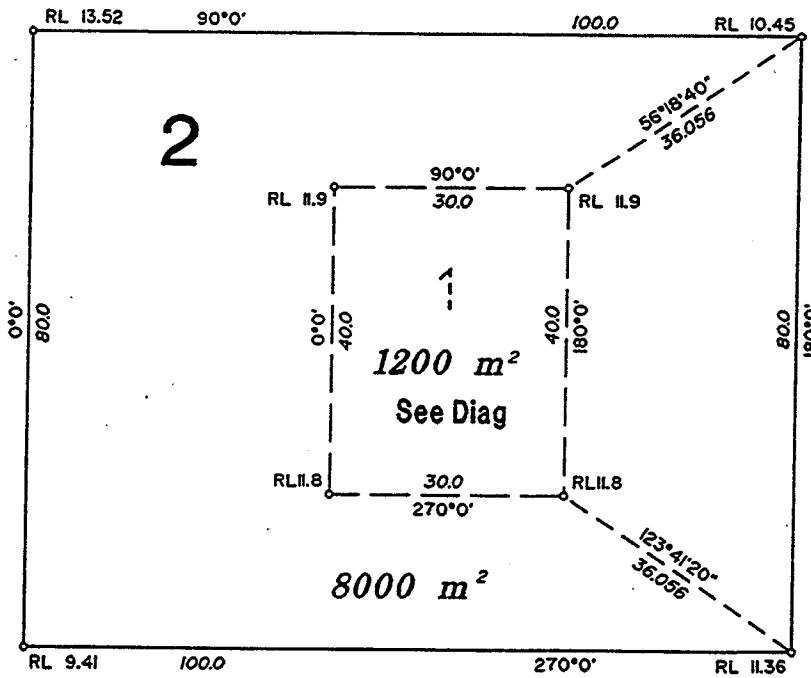
Loren R Leader

Registrar of Titles



Lot 1
12000 m³

DIAGRAM



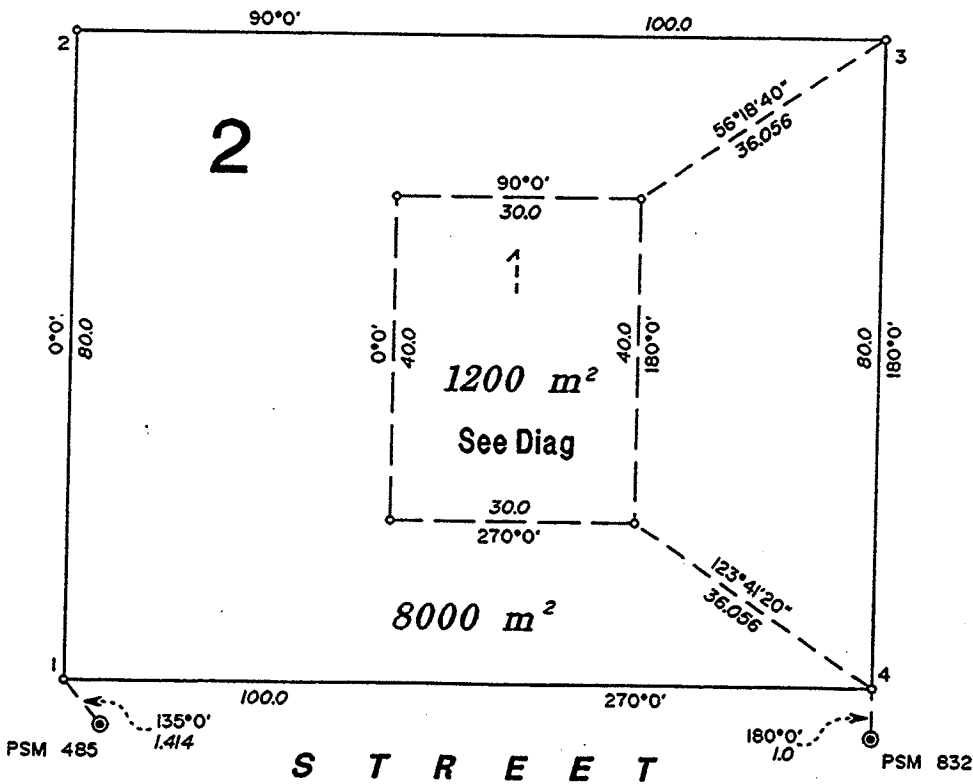
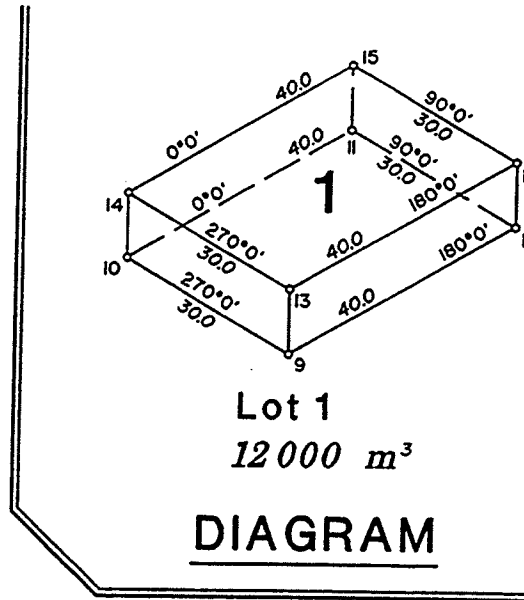
S T R E E T

Datum for AHD: PSM 123 - RL 8.465

Plan of Lot 1 (Volumetric) and Lot 2
cancelling Lot 10 on RP123456

FIGURE 4

STN	EASTING	NORTHING	RL
1	100.000	100.000	9.410
2	100.000	180.000	13.520
3	200.000	180.000	10.450
4	200.000	100.000	11.360
5	140.000	120.000	11.180
6	170.000	120.000	11.800
7	170.000	160.000	11.900
8	140.000	160.000	11.900
9	170.000	120.000	15.000
10	140.000	120.000	15.000
11	140.000	160.000	15.000
12	170.000	160.000	15.000
13	170.000	120.000	25.000
14	140.000	120.000	25.000
15	140.000	160.000	25.000
16	170.000	160.000	25.000
PSM485	101.000	99.000	9.120
PSM832	200.000	99.000	11.000

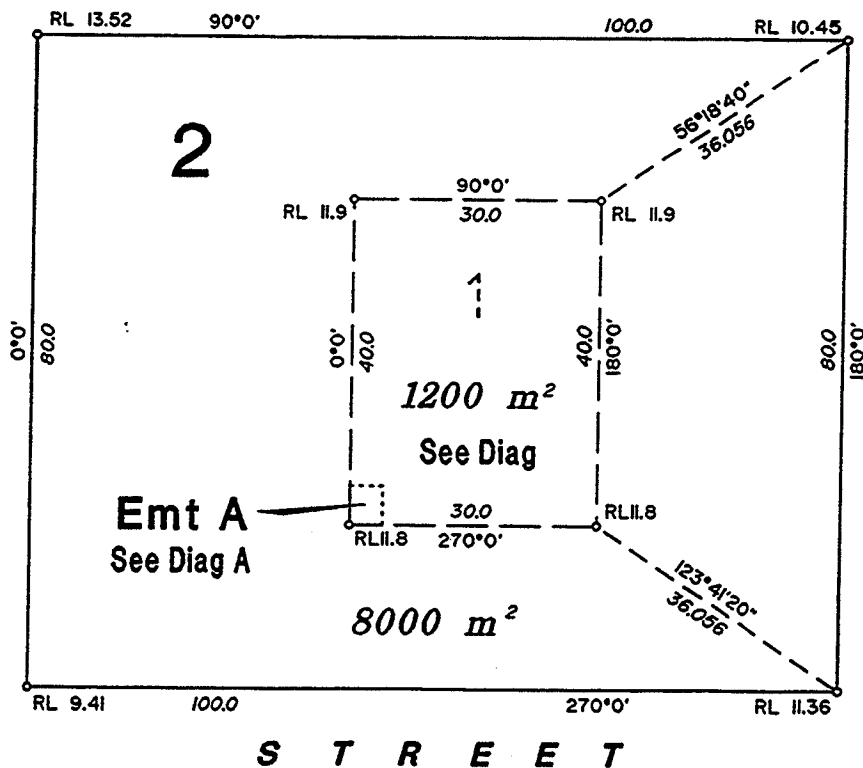
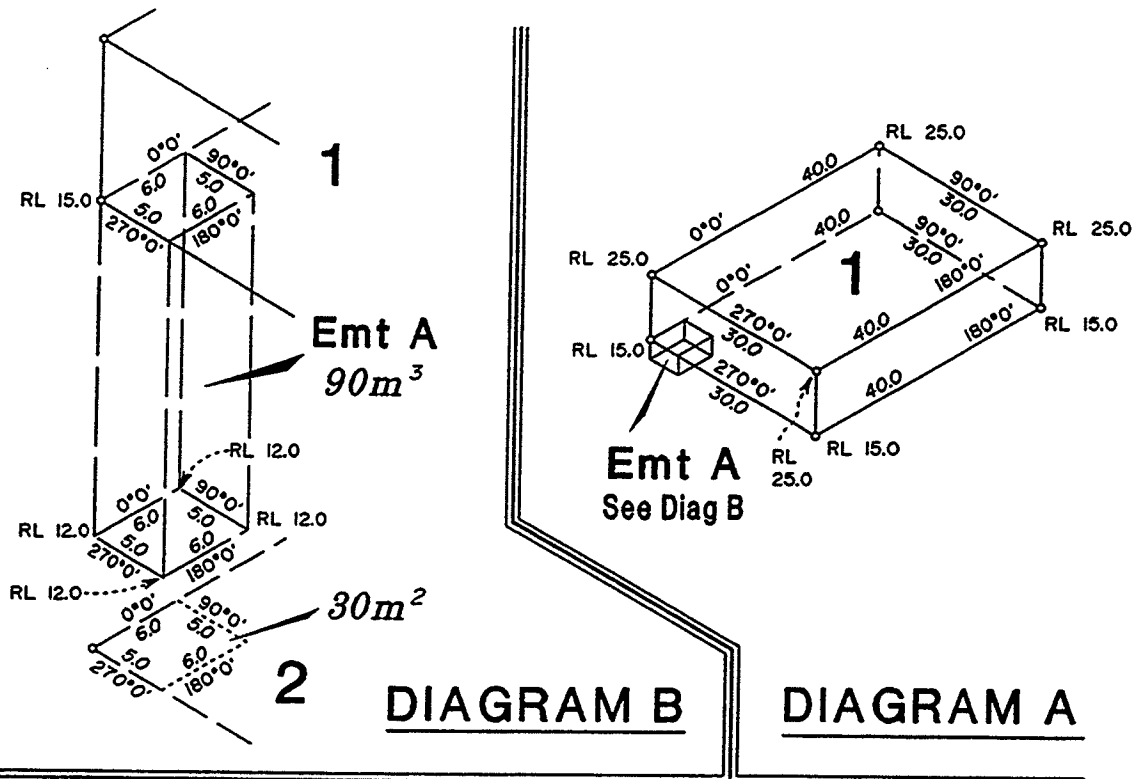


Datum for AHD: PSM 123 - RL 8.465

Co-Ordinate System: Plane, Origin Stn 1 100.000 E , 100.000 N

Plan of Lot 1 (Volumetric) and Lot 2
cancelling Lot 10 on RP123456

FIGURE 5

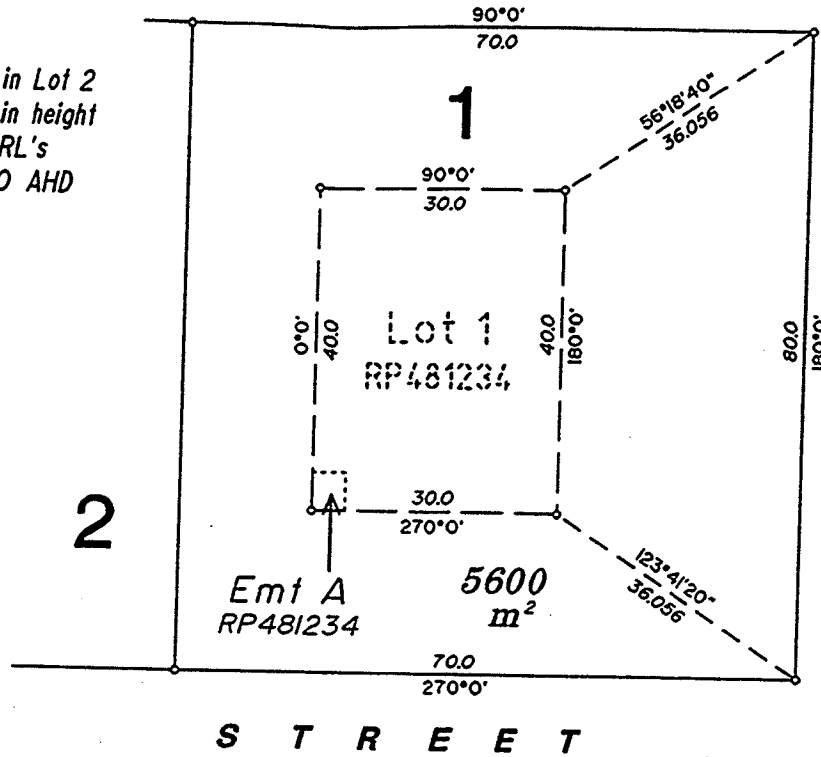


Datum for AHD: PSM 123 - RL 8.465

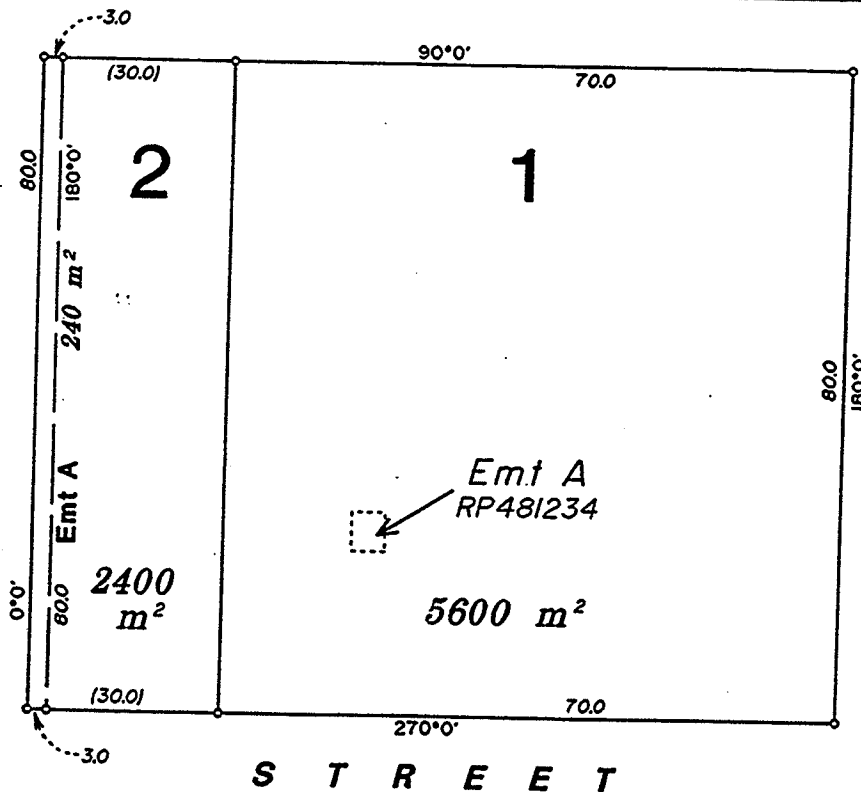
Plan of Lot 1 (Volumetric) and Lot 2 and Easement
A in Lot 2 cancelling Lot 10 on RP123456

FIGURE 6

Easement A in Lot 2
is restricted in height
between RL's
8.0 and 15.0 AHD



DIAGRAM



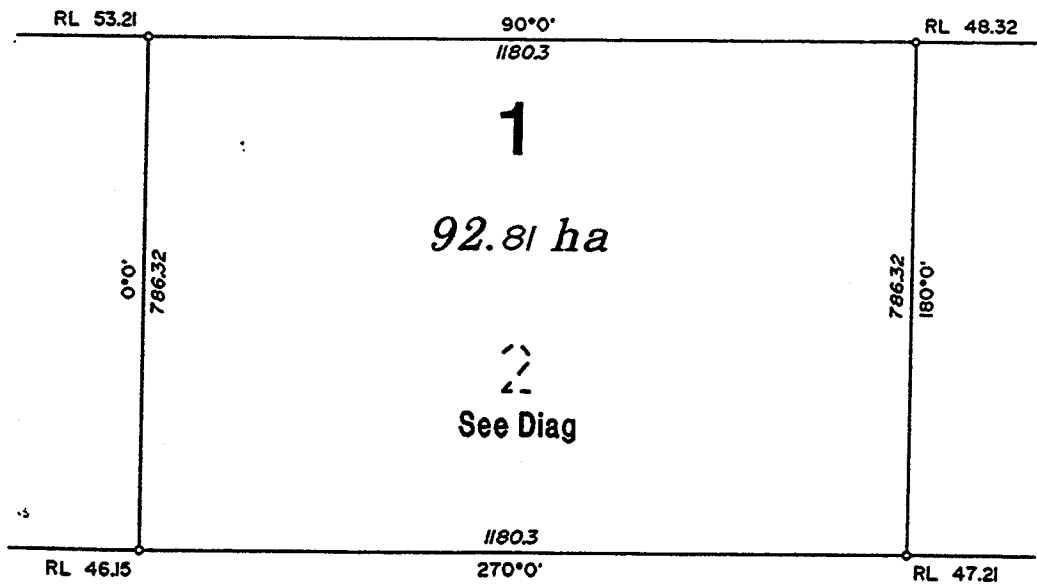
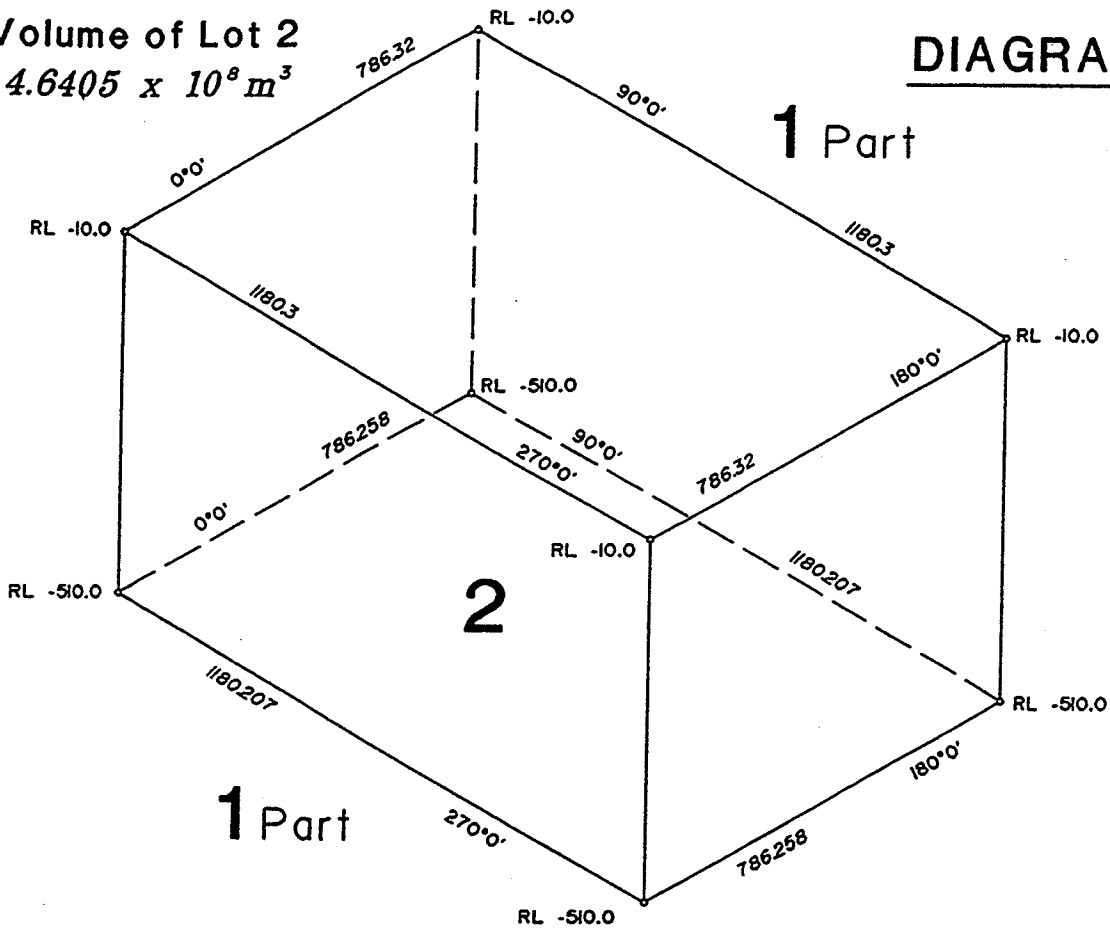
Datum for AHD: PSM 123 - RL 8.465

Plan of Lot 1 and Lot 2 and Easement A (Restricted)
in Lot 2 cancelling Lot 2 on RP481234

FIGURE 7

Volume of Lot 2
 $4.6405 \times 10^8 \text{ m}^3$

DIAGRAM



S T R E E T

Datum for AHD: PSM 4824 - RL 38.36

*Plan of Lot 1 and Lot 2 (Volumetric)
cancelling Lot 1 on RP384321*

FIGURE 8

Appendix A. Glossary of Terms

This Glossary of some of the most commonly used terms is intended to assist the user in understanding DNR Requirements. It is to be used in association with specific legislation.

Access

See also **Dedicated Access**

Under the LG(P&E) Act "access" is defined as a "practical" means of entry. However, practical means of entry does not always guarantee "dedicated access".

Access Restriction Lots

An access restriction lot is a separate lot in a subdivision. They may also be called buffer strips and are a town planning requirement of Local Government to restrict access from roads to adjacent land.

Administrative Advice

A document which is deposited by a local, commonwealth or state government authority or other authorised parties to record an interest in the lot in ATS. (eg. Notice of Intention to Resume)

Allocation

Interests in land are carried forward from one title to the next through the allocation of the interests of old lots to the new lots. These interests may include easements, portions, mortgages, etc.

Associated Documents

Associated documents are instruments which are lodged in the DNR with the plan. eg. Easements, Leases, Mortgages, Nomination of Trustees, Transfers etc.

ATS

ATS (Automated Titles System) is the computerisation of the Torrens Title System of registration for all Freehold and Leasehold dealings in land in Queensland.

Blind Roads

Blind roads are roads which have no access from a contiguous road system and are no longer of concern to the Registrar of Titles, being a matter for the Local Government.

Borrowing out of plans

Any unregistered survey plan lodged in the DNR may be borrowed out by the lodger for correction by the Surveyor. The amended plan must be returned to the DNR by the lodger.

Calc Book

A numbered, linen bound book formerly held by each examiner. The book contained an index of all plans examined by that examiner. This has been replaced by CISP.

Caveat

A notice to the Registrar by a person claiming an interest in land. It prevents the registration of any instrument affecting such land until the caveat is withdrawn, removed or lapses. Caveats are recorded in ATS.

Certificate of Title

A certificate that may be issued by the Registrar that provides evidence of the ownership of a freehold interest in a parcel of land.

CISP

CISP (Computer Inventory of Survey Plans) is a textual data base of all survey plans in the DNR.

Comatose Title

This is the title to the underlying parcel of land over which a Building Unit Plan or Group Title Plan has been registered. Upon extinguishment of a BUP or GTP any dealing with the parcel will originate from this title.

Court Order

An order of the Supreme Court regarding the transfer of land or the creation of a benefit easement where an encroachment exists. No Local Government consent is required for the associated survey plan.

Crown land (Land Act 1962)

See State land.

Crown lease

A lease that is issued under the L Act.

Dealing

An action relating to a parcel of land, such as a transfer of interest.

Dealing Number

A unique number allocated to each document and freehold survey plan when lodged in the DNR. It determines the priority of registration of plans and associated documents in relation to a title.

Dedicated access

See also Access

A dedicated road formed or unformed, surveyed or unsurveyed providing legal access to a lot, reserve or State land. See also Access LG(P&E) Act.

Deed of Grant

Means land granted in fee simple by the State or, the document evidencing the grant, including an indefeasible title under the LT Act. The deed is enrolled in the freehold registry and the registered owner's indefeasible title is created.

Deed of Grant in Trust

Means land granted in fee simple in trust by the State or, the document evidencing the grant, including an indefeasible title under the LT Act.

Deemed Tramline Easements

These easements are defined by law and were originally created by Section 41 of the Sugar Experiment Station Act 1900 and subsequently preserved by Section 84 of the Regulation of Sugar Cane Prices Act No 45 of 1962. The easement rights are now preserved under Section 203 of the Sugar Industries Act No 20 of 1991.

Defeasance

A condition relating to a title that can void the title if performed. Such conditions are contained in a separate instrument (not the title itself).

Deposited Plan

A plan or copy of a plan deposited with the DNR for the purposes of endorsement as being correct in respect of survey content. It includes:

- ◆ plans deposited for pre-examination and endorsement;
- ◆ original Crown Plans deposited for passing and recording;
- ◆ copies of plans endorsed by accredited surveyors, and;
- ◆ plans that have been lodged for registration but are marked "No Further Action";
- ◆ plans deposited pursuant to Section 30(1) of the Surveyors Regulation.

See also Red Cat Plan

Development Lot (IRD)**Development Lot (SC)**

DISP

Document Imaging of Survey Plans is the name given to the electronic record of the DNR's plan library.

Easement

A right enjoyed over the lands of a registered owner. The Dominant Tenement is the land to which a right is granted. The Servient Tenement is the land that is burdened by the granting of a right to another parcel of land. For Easements in Gross there is no dominant/servient relationship.

Endorsed Plan

A plan which has passed survey examination and has been officially endorsed as being correct in survey content only for the intended action.

Fee simple

An estate of inheritance in land which is absolute and without limitation to inheritance. It implies full ownership in land, a tenure of which is called freehold.

Forest Entitlement Area

A reservation of commercial timber, and the land on which it stands, to the State in a deed of grant or freeholding lease to enable the State to undertake long term management of timber.

Freehold

Land which has been alienated from the State.

Freehold Title

An estate in fee simple created by a Deed of Grant when land is granted by the State or, an indefeasible title created on registration of subsequent dealings.

Fully Withdrawn Plan

A lodged plan that is no longer required to be registered by the interested parties. The consent of the Registered Owner or the lodger is required prior to withdrawal.

Geodetic Control Point

Positions established and marked on the ground which are coordinated in a geodetic coordinate system.

Geodetic datum

A set of constants used for defining the coordinate reference system for geodetic control surveys.

Holding

State Land held by any lessee. A "pastoral holding" is a State lease used for grazing purposes. (Land Act 1962) There is no definition of "Holding" in the Land Act 1994.

Indefeasible Title

The indefeasible title for a lot is created on the recording of the particulars of the lot in the freehold land register.

Identification Survey/Plan

A survey for the purpose of remarking existing boundaries. No interests are created or altered as a result of these surveys/plans. In general the survey content of these plans has not been examined.

Instrument

Instrument includes:

- ◆ a deed of grant or certificate of title; and
- ◆ a will, grant of representation, or exemplification of a will, that may be used to deal with a lot; and

- ◆ a deed that relates to or may be used to deal with a lot; and
- ◆ a power of attorney that may be used to deal with a lot; and
- ◆ a request, application or other document that deals with a lot and may be registered under the Land Title Act; and
- ◆ a map or plan of survey that may be lodged.

Interest in land

Rights, duties, liabilities connected with the land. The extent of the rights depending on the level of interest held; eg. leasehold interest, freehold interest, joint interest, interest in common.

Lease (LT Act)

A lease is an instrument creating an interest in land for a fixed period, usually in consideration of the payment of rent. It is a requirement of a lease that there must be a Lessor, a Lessee, a demised premise or demised area and a term granted.

Leasehold

State land leased to a person or company, for a term of years or in perpetuity.

Lodged Plan

A plan which has been lodged with the DNR for the purpose of registration as an instrument to give effect to a dealing(s) and is recorded in ATS.

Lodgement

The act of acceptance for registration purposes, by a registering authority of a registrable instrument such as a certificate of title.

Lot (LT Act)

Means a separate, distinct parcel of land created on:

- ◆ the registration of a plan of survey; or
- ◆ the recording of particulars of a deed of grant.

Lot on Plan

Lot on Plan is the conversion of the historical description (eg. Sub 1 of Resub 1 of Por 1) to a Lot on Plan description (eg. Lot 1 on RP123456)

Notice of Intention to Resume (NIR)

A notice lodged in the DNR by a Statutory Authority of their intention to resume. It is noted in ATS as an Administrative Advice.

Nomination of Trustees

See Transfer to Trustees

Original Grant

The original Deed of Grant for any parcel of land issued by the State detailing therein the reservation of rights to the State.

Patent Error

A minor error on a survey plan which can be corrected by the Registrar pursuant to Section 140.(1) of the LT Act prior to registration.

Proclaimed Survey Area (PSA)

When in the opinion of the Chief Executive of DNR, the state control survey has been sufficiently developed within any area, and permanent marks have been established over such area, the Governor-in-Council may declare such area to be a proclaimed survey area.

Public Use Land (LT Act)

Includes roads and other lots that are to be dedicated for public use on registration of a freehold plan of survey.

Red Cat Plan (Redundant Catalogue Plan)

A copy of a survey plan lodged pursuant to Section 30(1) of the Surveyors Regulation. The copy is held as a record of survey data only and as soon as the original survey plan is lodged the copy is no longer accessible. Derived from the term "Redundant Catalogue Plan Number" which was given to such a copy.

Register (noun)

A record of information about land maintained by the Registrar, under the authority of the LT Act ie the freehold land register.

Register (verb)

The recording of the particulars of a lot, interest, instrument or other thing in the freehold land register.

Registered Plan

A lodged plan which has proceeded to registration with or without accompanying documentation and is now recorded within the Land Titles Register.

Rejected Plan

A lodged plan that is prevented from proceeding to registration and is rejected by the Registrar. The original plan is returned to the lodger.

Requisition

A formal notification that a document has defects and those defects should be clarified or corrected before the document may be passed for registration.

Reservation in a deed or lease

A clause in a deed or lease where the grantor (the State) reserves something to itself, for instance gold and petroleum, or a certain amount of land within the lease or deed.

Reservation in title

Reservations in Title are areas of land set aside in Deeds of Grant for the express use of the State (Crown) in the process of the closer settlement of Queensland. They are non-delineated areas of land within the external boundaries of a lot (or other parcel of land). Reservations in Title are mainly for road purposes but can be for railway, telegraph, or other defined purposes.

Reserve

A parcel of land that has been set aside, through the provisions of the Land Act, for a community purpose; for example, for park and recreation purposes.

Reserved Road

A Reserved Road, either surveyed or unsurveyed, is shown on a plan in a specific location and reserved from the title. This may or may not be dedicated as a road, and if it is planned to be used for access, its status should be referred to DNR for clarification before use.

Resumption

The procedure under which an authority, empowered by the State Government, compulsorily acquires land for a specific purpose.

Road Action Plan

A sketch plan drawn for the purpose of road opening and/or closure under the Land Act.

Road Excision Plan

A sketch plan drawn for the purpose of excising an area of land from a Land Act lease for the purpose of dedicating the area as road.

Road Reservation

A Road Reservation does not have a specific location within a lot but is reserved from the title. Note that on some older plans, a Road Reservation is referred to as "Reserved for Road Purposes".

State Land (Land Act 1994)

All land in Queensland, except land which is, for the time being:

- ◆ granted or contracted to be granted in fee simple by the State; or
- ◆ reserved for or dedicated to public purposes; or
- ◆ subject to any lease or licence lawfully granted by the State (land held under an occupation licence is deemed to be State land).

Statutory Area

An area of land wherein either:

- ◆ another Statutory Authority, in addition to the Local Government, must consent to the plan eg. within a Coastal Management Control District; or
- ◆ some extra condition must be complied with eg. connect to permanent Survey marks in a Proclaimed Survey Area.

Statutory Authority

An authority that is created through an act of Parliament.

Strata

Layers above or below a defined level that is related to the Australian Height Datum (AHD).

Strata title

Title which is based on the horizontal subdivision of layers of air space, for example title to a dwelling on a particular level of a multi-story building.

Surrender

To surrender an interest in land (eg. a lease) is to give it back to the person or body (eg. the State) from whom it was granted.

Survey

The act or process of determining the form, contour, position, area, height, depth or any other similar particulars of the earth's surface, whether on land or water, or of any natural or artificial features on, below or above any part of that surface. It also refers to planning the position or the length and direction of the bounding lines of any part of that surface, or of any natural or artificial features, and includes the making or obtaining of a plan or plans.

Tenure

The form in which property is held or set aside, for example, freehold. Tenure is also used to describe an interest in land that has a term eg. leasehold as opposed to freehold.

Transfer and Request to Amalgamate

The Transfer and Request to Amalgamate are documents used to resolve cases of joint ownership created by the movement of title boundaries by survey when two or more different registered owners are involved.

Transfer to Trustees (Formerly Nomination of Trustees)

This is the document which is often used in dealing with access restriction lots as it transfers the land to the relevant Local Government in trust usually for Town Planning Purposes.

Unallocated State Land

State land, as previously defined, but excluding land under occupation licence or some other interest.

Unregistered Dealing

An instrument which has been lodged with the Registrar but not yet registered.

Vacant Crown land

See Unallocated State Land.

Vested Land

State Land the control of which has been ceded to a Statutory Authority. eg. Port of Brisbane.

Appendix B. Abbreviations

a. General

Title	Abbreviation
Automated Titles System	ATS
Australian Height Datum	AHD
Australian Map Grid	AMG
Building Unit Plan	BUP
Certificate of Title	C/T
Computer Inventory of Survey Plans	CISP
Contaminated Land	C/L
Crown Action Plan	CP
Digital Cadastral Data Base	DCDB
Deed of Grant	D/G
Deposited Plan	DP
Document Imaging of Survey Plans	DISP
Department of Natural Resources	DNR
Easement	Emt
Global Positioning System	GPS
Forest Entitlement Area	FEA
Freehold Action Plan	RP
Group Title Plan	GTP
Permanent Survey Mark	PSM
Proclaimed Survey Area	PSA
Resumption	Resump
Vegetation Protection Order	VPO

b. Crown Tenures — Land Act 1962

FREEHOLDING TENURES	Abbr	LEASEHOLD TENURES	Abbr
Agricultural Farm	AF	Grazing Homestead Perpetual Lease	GHPL
Auction Perpetual Lease	APL	Non Competitive Lease	NCL
Auction Purchase Freehold	APF	Pastoral Development Holding	PDH
Development Lease	DL	Pastoral Holding	PH
Freeholding Sale	F	Perpetual Country Lease	PCL
Grazing Homestead Freeholding Lease	GHFL	Perpetual Suburban Lease	PSL
Perpetual Country Lease Converted	PCL(C)	Perpetual Town Lease	PTL
Perpetual Lease Selection	PLS	Preferential Pastoral Holding	PPH
Perpetual Suburban Lease Converted	PSL(C)	Special Lease	SL
Perpetual Town Lease Converted	PTL(C)	Stud Holding	SH
Special Lease Purchase Freehold	SLPF		
Special Purchase	SP		
 OCCUPATIONS	 Abbr		
Occupation Licence	OL		
Permit to Occupy	PO		
Road Licence	RL		

c. State Tenures — Land Act 1994

FREEHOLDING TENURES	Abbr	LEASEHOLD TENURES	Abbr
Freeholding Sale	F	Term Lease	TL
Grazing Homestead Freeholding Lease	GHFL	Perpetual Lease	PPL
Freeholding Lease	FL		
PERMITS	Abbr		
Permit to Occupy	PO		
Road Licence	RL		

d. Department of Housing, Local Government & Planning

LEASEHOLD TENURES	Abbr
State Housing Freeholding Lease	SHFL
State Housing Perpetual Town Lease	SHPTL
Workers Homes Perpetual Town Lease	WHPTL

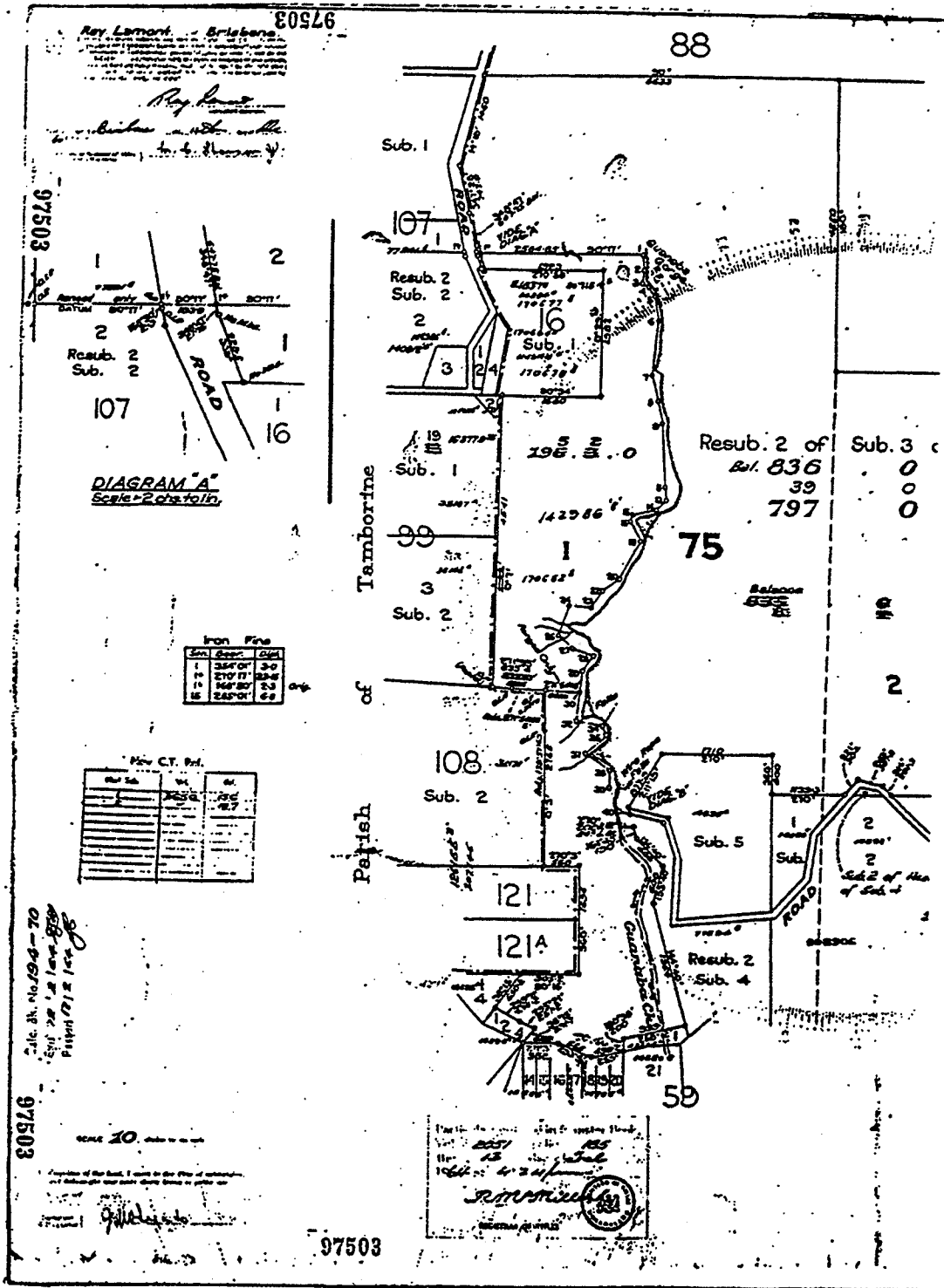
e. Acts and Regulations & their Abbreviations

The Acts and Regulations cited herein may not be a comprehensive list of legislation that affect the survey aspects of land transactions.

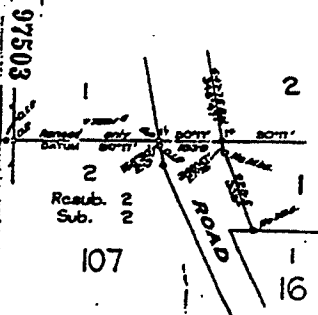
Title	Abbreviation
Acquisition of Land Act 1967	AoL
Beach Protection Act 1968 and Regulations	BP
Building Units and Group Titles Act 1980 and Regulations	BUGT
Canals Act 1958 and Regulation 1992	C
City of Brisbane Act 1924	CofB
Contaminated Land Act 1991 and Regulations	CL
Dividing Fences Act 1953	DF
Harbours Act 1955 (Repealed) and Regulations	H
Integrated Resort Development Act 1987	IRD
Land Act 1994 and Regulations	L
Land Title Act 1994 and Regulations	LT
Local Government Act 1993	LG
Local Government (Planning & Environment) Act 1990 and Regulations	LG(P&E)
Main Roads Act 1920 (Repealed)	MR
Miners Homestead Leases Act 1913	MHL
Mining Titles Freeholding Act 1980	MTF
Mixed Use Development Act 1993	MUD
Property Law Act 1974	PL
Railways Act 1914	R
Real Property Act 1861	RP
Real Property Commonwealth Titles Act	RPCT
Registration of Plans (HSP [Nominees] Pty Ltd) Enabling Act 1980	RPHSP
Rights in Water & Water Conservation & Utilisation Act 1910 (Repealed)	RWWCU
River Improvement Trust Act 1940 and Regulations	RIT
Rural Lands Protection Act 1985	RLP
Southbank Corporation Act 1989 and Regulation 1992	SC
State Housing Act 1945	SH
Survey Co-Ordination Act 1952	SCo
Surveyors Act 1977 and Regulation	S
Transport Infrastructure Act 1994	TI
Transport Infrastructure (Railways) Act 1991 and Regulations	TI(Rail)
Transport Infrastructure (Roads) Act 1991 and Regulations	TI(Road)
Water Act 1926 (Repealed) and Regulations	W
Water Resources Act 1989	WR
Workers Homes Act (Repealed)	WHC

Appendix C. Reference Plans

The plans on the following pages are referred to in the text of these requirements. These reference plans are used to demonstrate specific requirements and should not be considered as being correct in all respects.



Rev. Lamont - Erlanger
 97503
 88

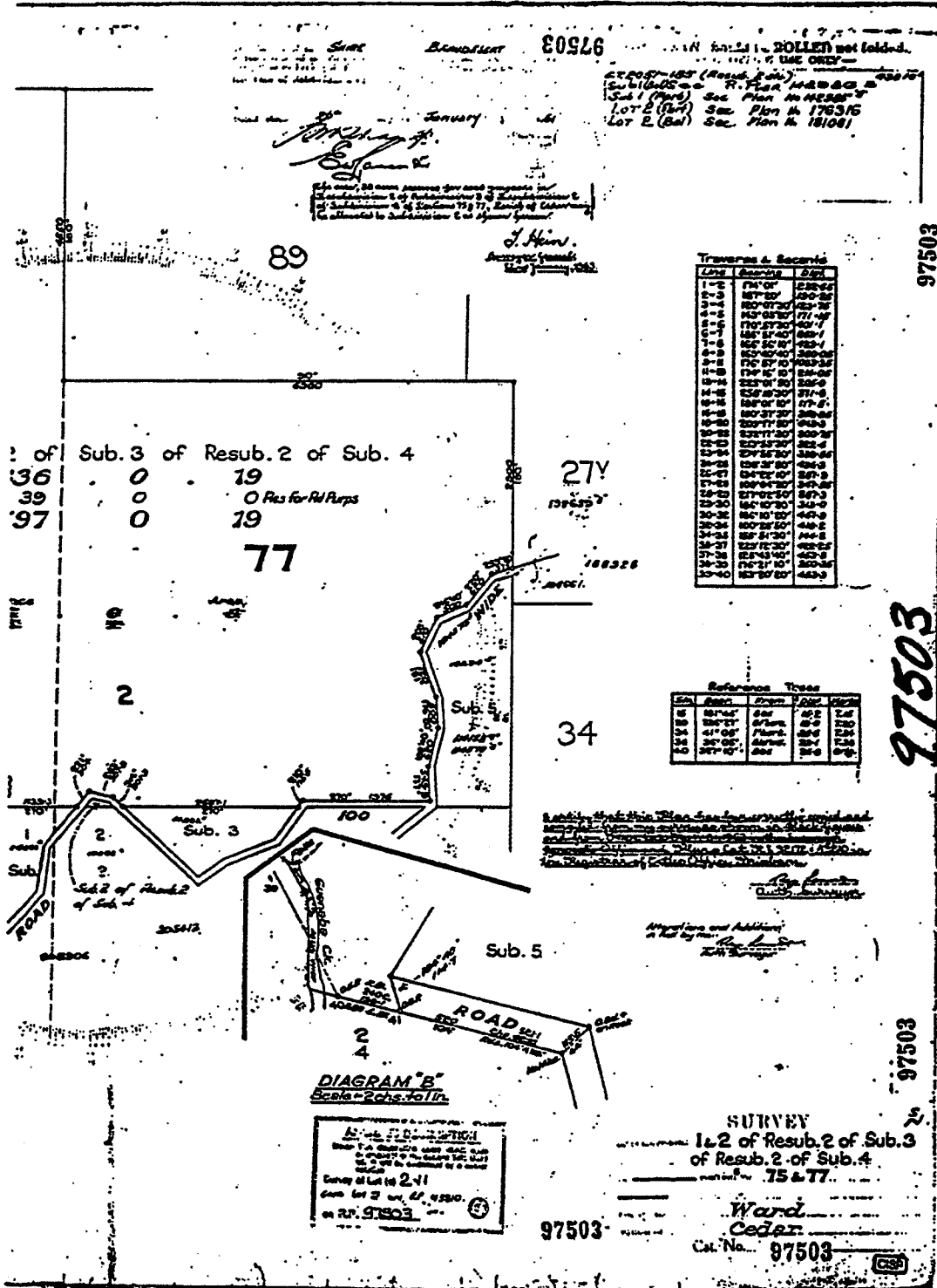


Iron Pipe		
Size	Quantity	Notes
1 1/2"	30	
2"	20	
3"	10	
4"	5	

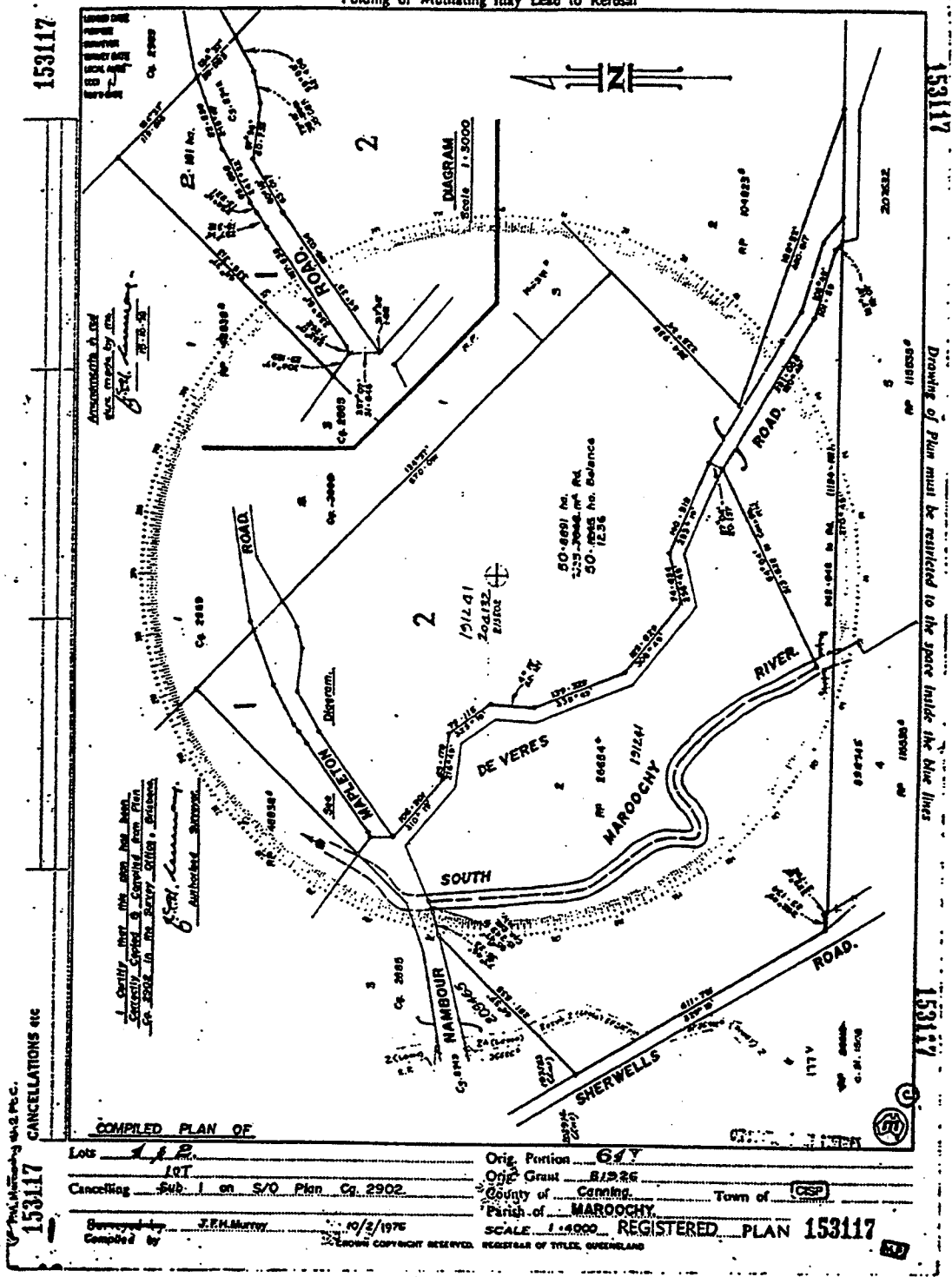
New CT. Plat.		
Lot No.	Area	Remarks
1	1.23	
2	1.23	
3	1.23	
4	1.23	
5	1.23	
6	1.23	
7	1.23	
8	1.23	
9	1.23	
10	1.23	

Plat. No. 97503-70
 97503

Surveyed by
 97503



Folding or Mutilating may Lead to Refusal



153117

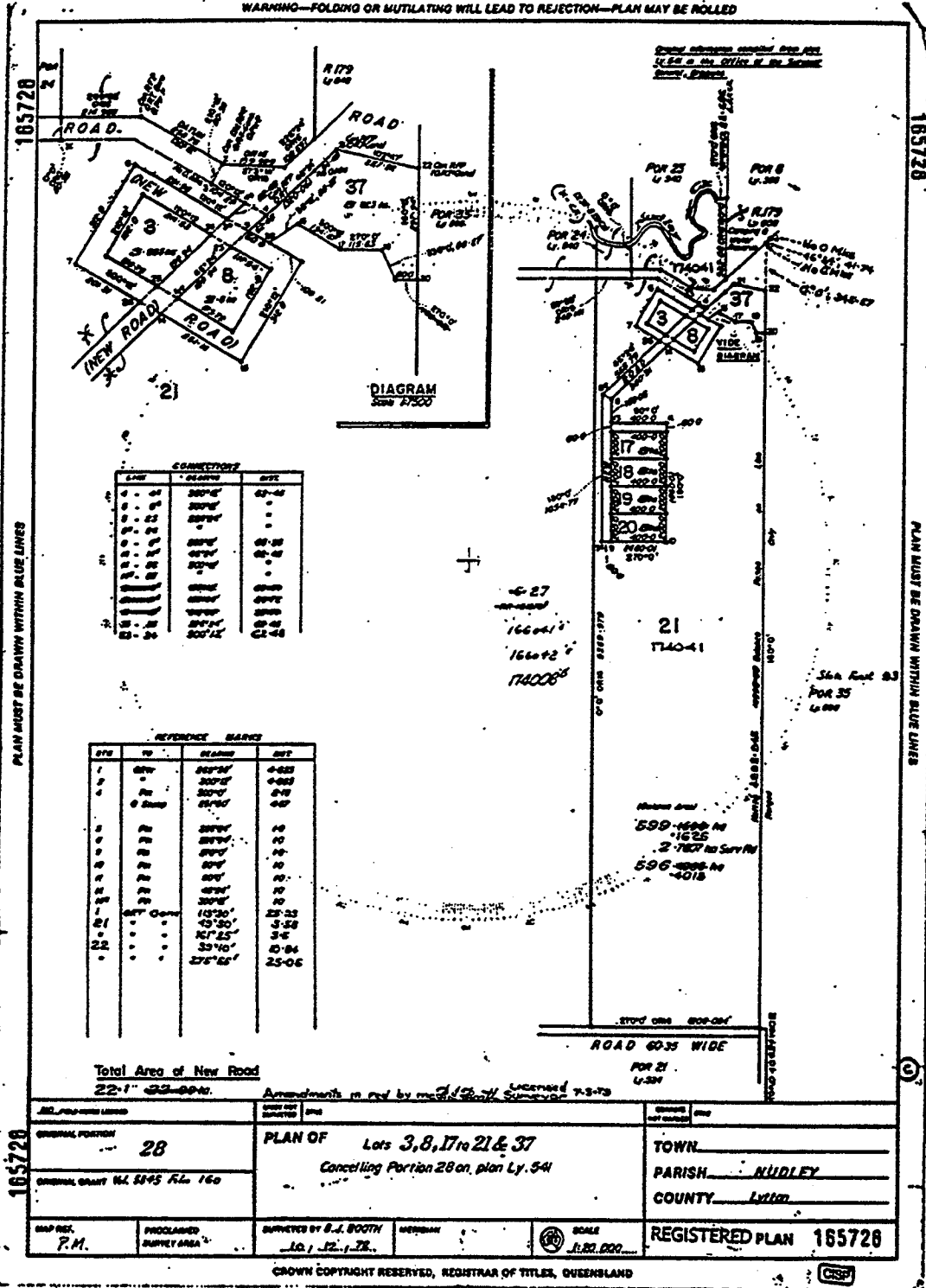
153117

Drawing of Plan must be retained to the space inside the blue lines

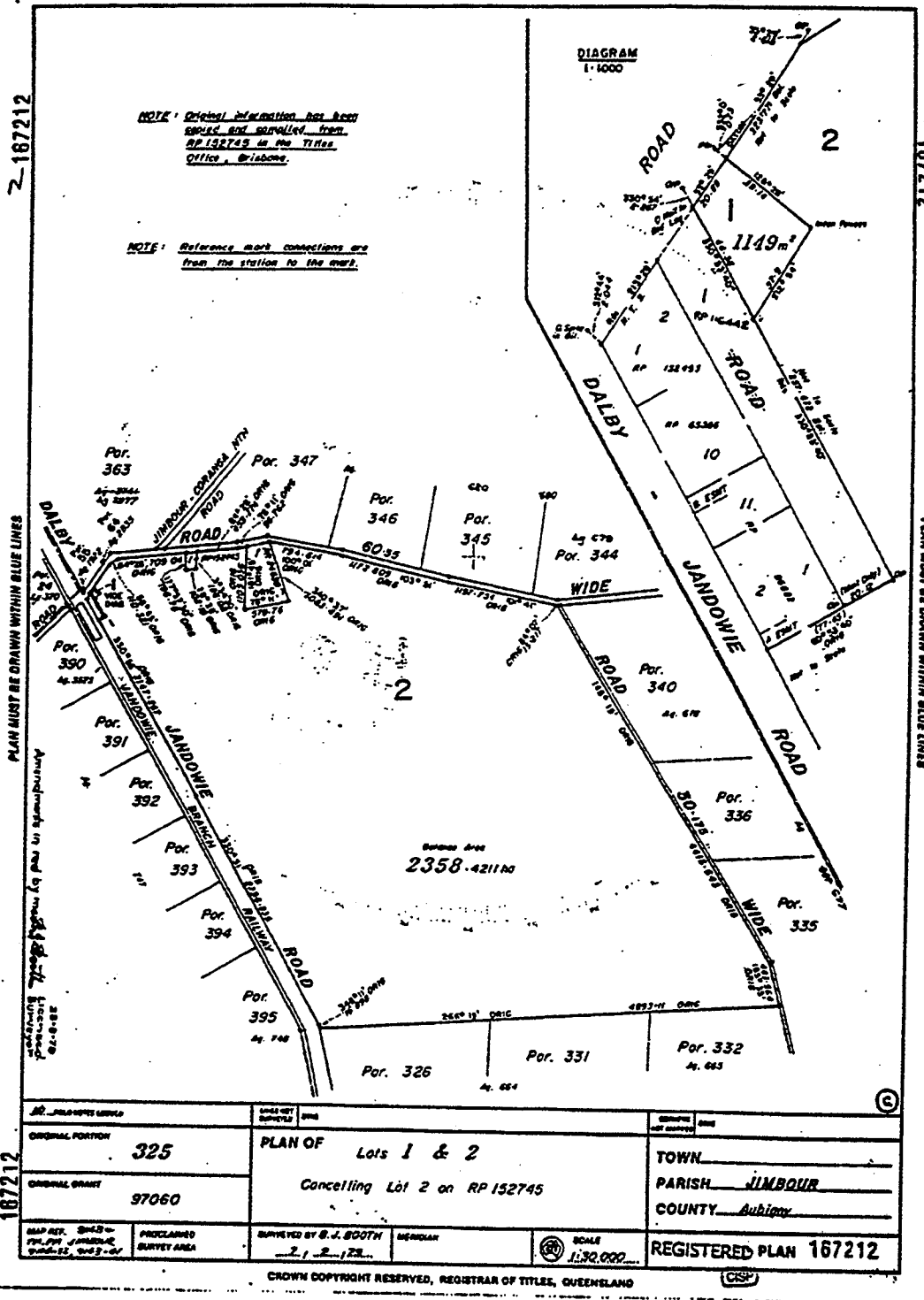
153117 CANCELLATIONS 41C

153117

WARNING—FOLDING OR MUTILATING WILL LEAD TO REJECTION—PLAN MAY BE ROLLED



WARNING—FOLDING OR MUTILATING WILL LEAD TO REJECTION—PLAN MAY BE ROLLED



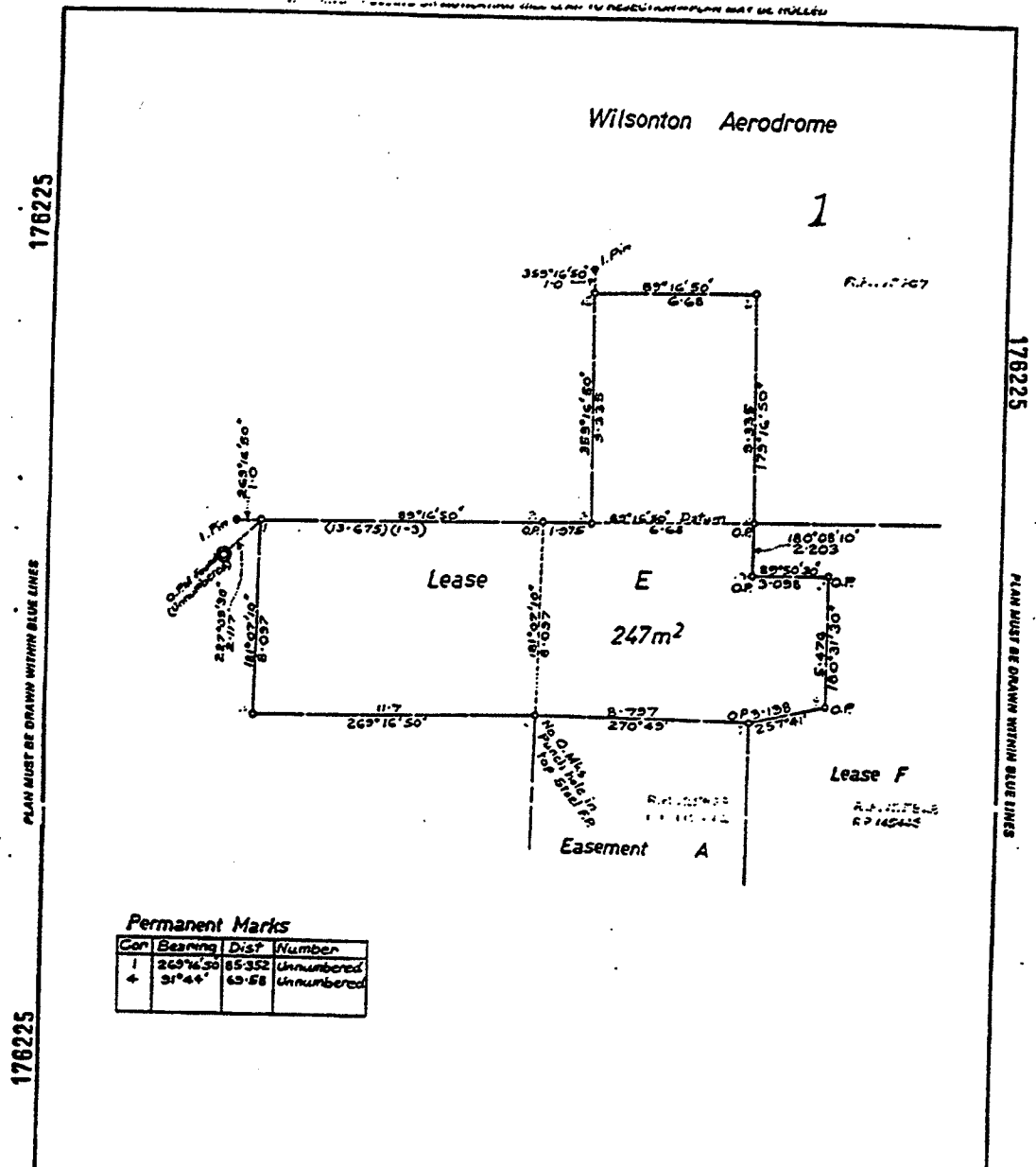
187212

PLAN MUST BE DRAWN WITHIN BLUE LINES

187212

187212

PLAN MUST BE DRAWN WITHIN BLUE LINES



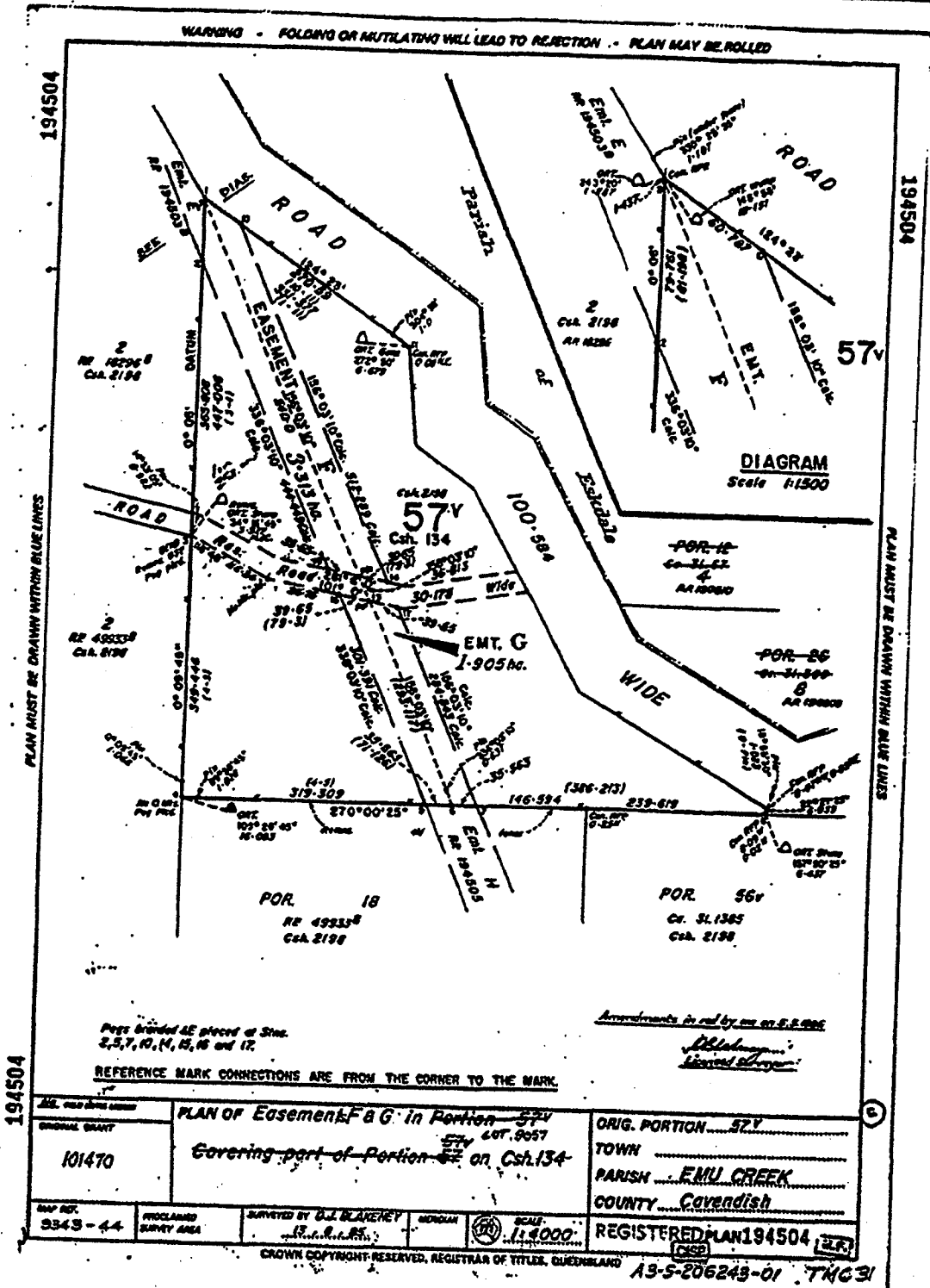
Permanent Marks

Cor	Bearing	Dist	Number
1	265°16'50"	85.352	Unnumbered
4	31°44'	65.558	Unnumbered

NO. 456	PLAN OF Lease E in Lot 1 on R.P.145407, Covering part of Lot 1 on R.P.145407	TOWN _____
ORIGINAL PORTION		PARISH <u>Drayton</u>
ORIGINAL GRANT		COUNTY <u>Aubigny</u>
MAP REF. <u>Wilsonton 24</u>	ENCLOSURE SURVEY AREA	SURVEYED BY <u>J.R. Cook</u> 15. .A., 1981
		SCALE 1:125
		PLAN 176225

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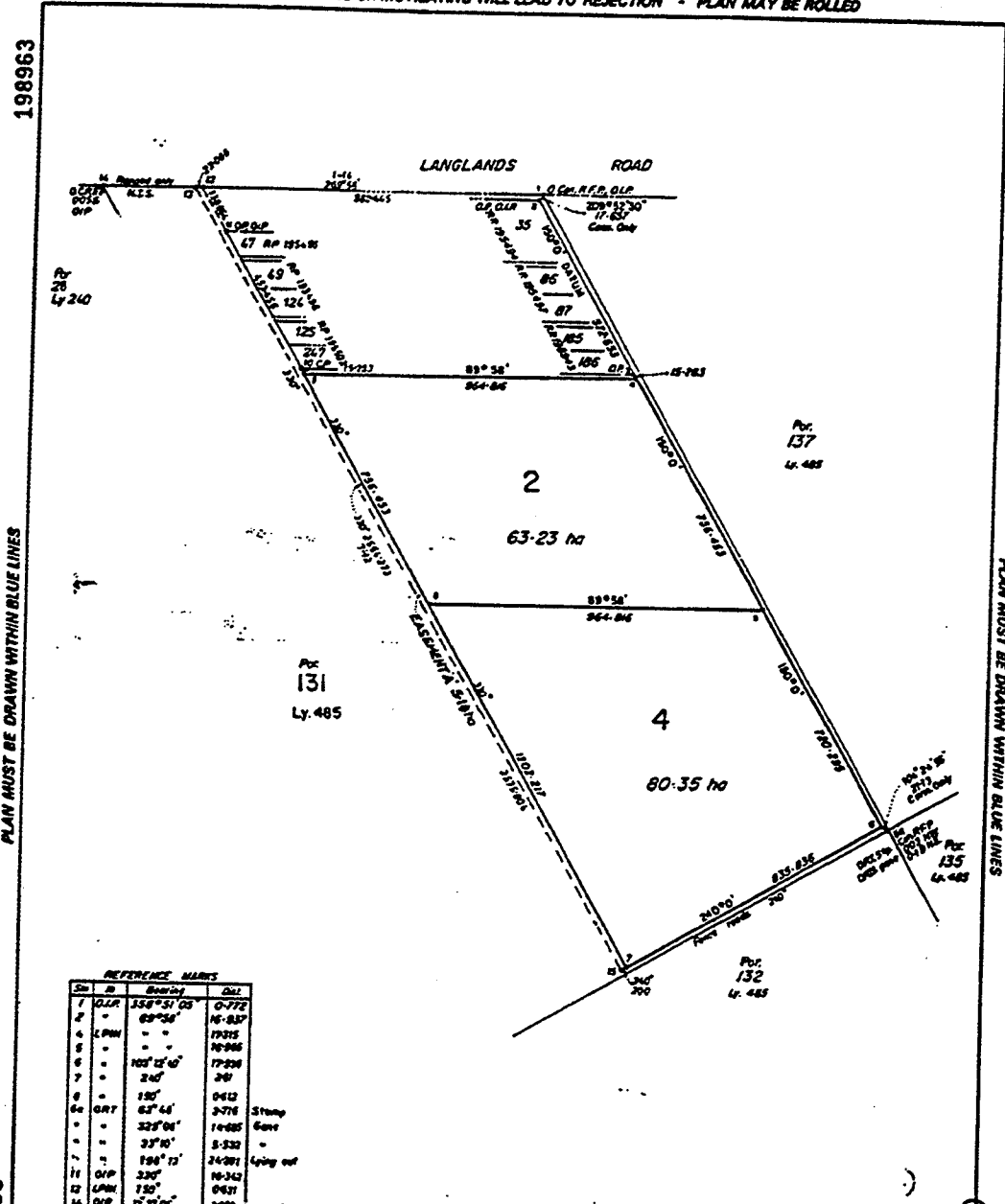


ALL THIS SURVEY	PLAN OF Easement F & G in Portion 57V	ORIG. PORTION 57V
ORIGINAL DRAFT	covering part of Portion 57V on Csh. 134	TOWN
101470		PARISH EMU CREEK
		COUNTY Cavendish
MAP NO. 2343-44	SURVEYED BY D.J. BLARENEY	REGISTERED PLAN 194504
PROCLAIMED SURVEY AREA	SCALE 1:1,000	
	MONDRIAN	

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19-5-206243-01 TNG31

WARNING - FOLDING OR MUTILATING WILL LEAD TO REJECTION - PLAN MAY BE ROLLED



198963

198963

PLAN MUST BE DRAWN WITHIN BLUE LINES

PLAN MUST BE DRAWN WITHIN BLUE LINES

Sta	ID	Bearing	Dist
1	OLR	158° 51' 00"	0.772
2	"	09° 58'	16.837
4	LPM	"	17025
5	"	"	18086
6	"	103° 12' 10"	17026
7	"	240'	26'
8	"	150'	0412
6a	ORT	62° 44'	2-716 Stamp
"	"	32° 04'	14-085 Gate
"	"	33° 10'	3-530 "
7	"	194° 12'	24-981 Lying out
11	O/P	230'	10-342
12	LPM	150'	0421
14	O/P	15 27' 05"	7082

198963

ORIGINAL GRANT Vol 4459-215		PLAN OF LEASES 2 and 4 and EASEMENT A in Part 131 on Ly 485 Governing part of Part 131 on Ly 485	ORIG. PORTION ... 131 TOWN PARISH ... CANARA COUNTY ... Lyttelton
MAP REF. 3144-43	UNDECLARED SURVEY AREA	SURVEYED BY MICHELLE PARTNERS SURVEYS PTY. LTD. ... 22.1.10. r. 81...	REGISTERED PLAN 198963 SCALE 1:10,000

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177

B4 ki/240 WARNING - FOLDING OR MUTILATING WILL LEAD TO REJECTION - PLAN MAY BE ROLLED 61 7/9

200018

PLAN MUST BE DRAWN WITHIN BLUE LINES

200018

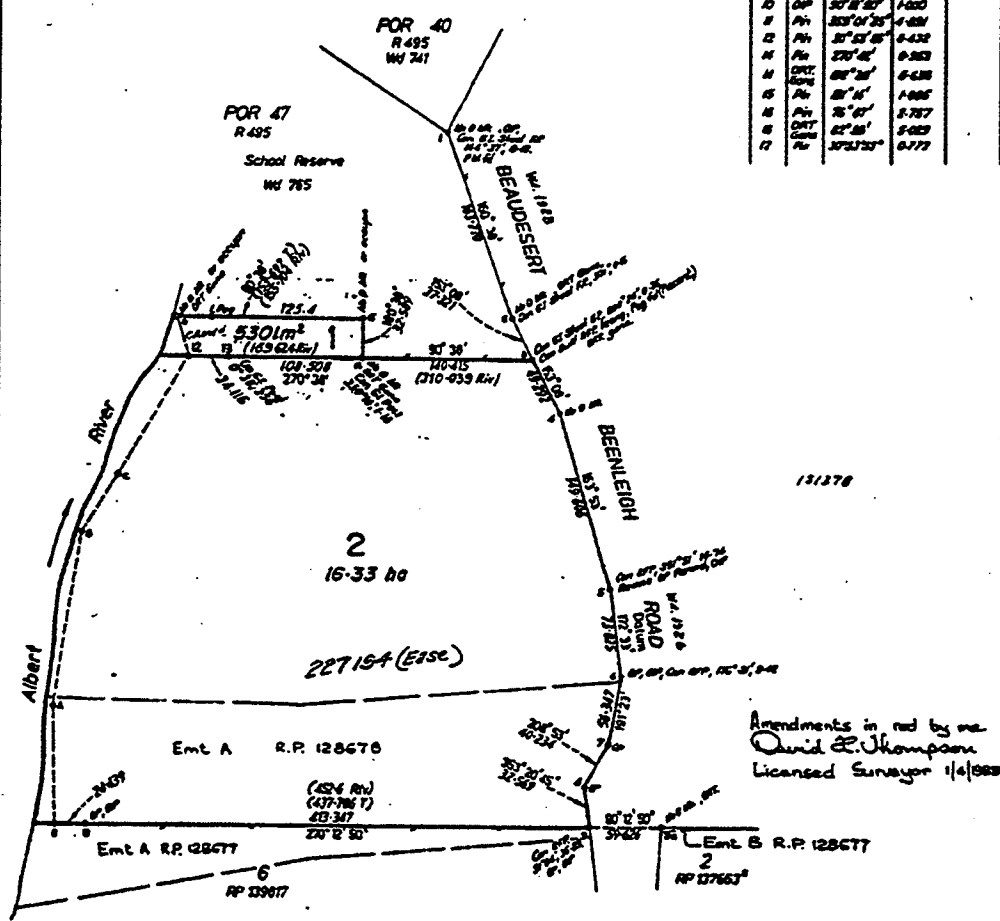
200018

PLAN MUST BE DRAWN WITHIN BLUE LINES

PERMANENT MARKS			
PN	BEARING	DIST	NUMBER
1 - PM	81° 22' 15"	37.54	60902
9 - PM	354° 07'	1.324	91908

TRAVERSES ETC		
LINE	BEARING	DIST
A-A	107° 01' 35"	36.234
A-B	8° 34' 25"	45.080
B-C	31° 06' 35"	35.477
C-E	37° 53' 35"	43.030
E-H	34° 52' 25"	34.418

REFERENCE MARKS				
STN	TO	BEARING	DIST	MARK
1	OP	200° 46'	1.606	
2	OP	200° 36'	4.070	
3	PM	105° 17'	1.405	
4	OP	105° 06'	4.424	
5	OP	127° 35'	1.005	
6	OP	327° 25'	1.005	
7	PM	80° 25'	1.405	
8	PM	24° 46'	1.405	
9	OP	170° 18'	1.00	
10	PM	80° 52' 25"	27.770	
11	OP	88° 51'	0.170	A.A.M.A
12	OP	327° 25'	1.000	
13	PM	323° 01' 35"	4.424	
14	PM	31° 03' 35"	4.432	
15	OP	270° 46'	0.203	
16	OP	88° 38'	6.688	
17	PM	80° 25'	1.405	
18	PM	75° 07'	3.787	
19	OP	62° 28'	5.023	
20	PM	307° 23'	0.777	



<p>FIELD BOOK NUMBER 200018</p> <p>ORIGINAL GRANT 37671</p>	<p>PLAN OF LOTS 1 & 2 Concilling Portion 55A on Wd 1943 LOT 551</p>	<p>ORIG. PORTION 55A</p> <p>TOWN</p> <p>PARISH DARLINGTON</p> <p>COUNTY Ward</p>
<p>MAP REF. Oxbridge Bridge</p> <p>PROCLAIMED SURVEY AREA</p>	<p>SURVEYED BY G.L. THOMPSON</p> <p>..22..10..1..88..</p>	<p>SCALE 1:3000</p> <p>REGISTERED PLAN 200018</p>

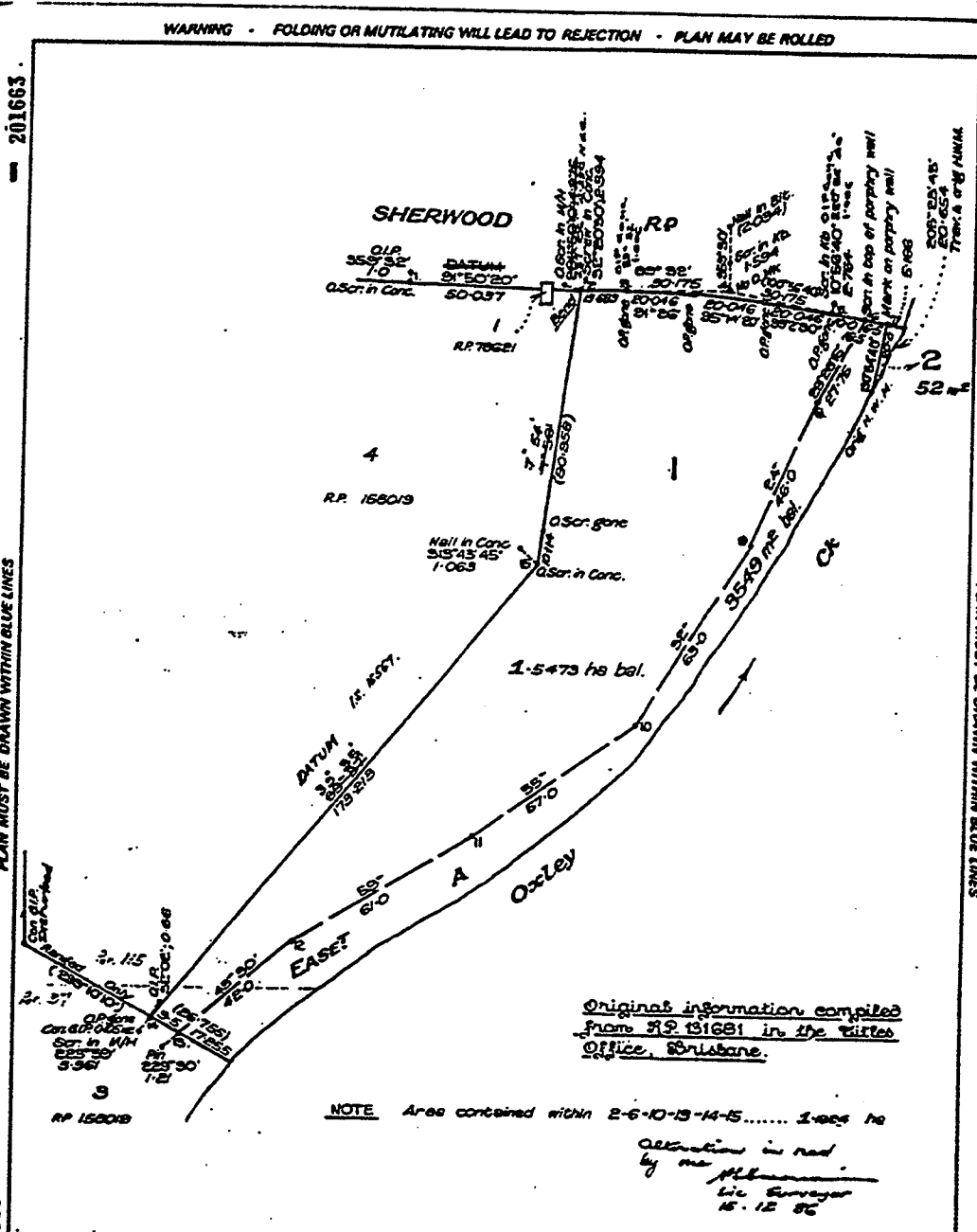
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201663

PLAN MUST BE DRAWN WITHIN BLUE LINES

201663



201663

PLAN MUST BE DRAWN WITHIN BLUE LINES

REG. FILE NO. 201663 ORIGINAL GRANT 3821 (A. 97). 3828 (A. 98).		PLAN OF Lots 1 & 2 & Esset A in Lot 1. CANCELLING - Lot 1 on R.P. 131681		ORIG. PORTION 97 & 115 TOWN PARISH Oxley COUNTY Stanley	
MAP NO. C.C. 152	PROCLAIMED SURVEY AREA	SURVEYED BY R.G. HOFFISON J.R.A.S.I.C.E.	MARGIN	SCALE 1:1000	REGISTERED PLAN = 201663

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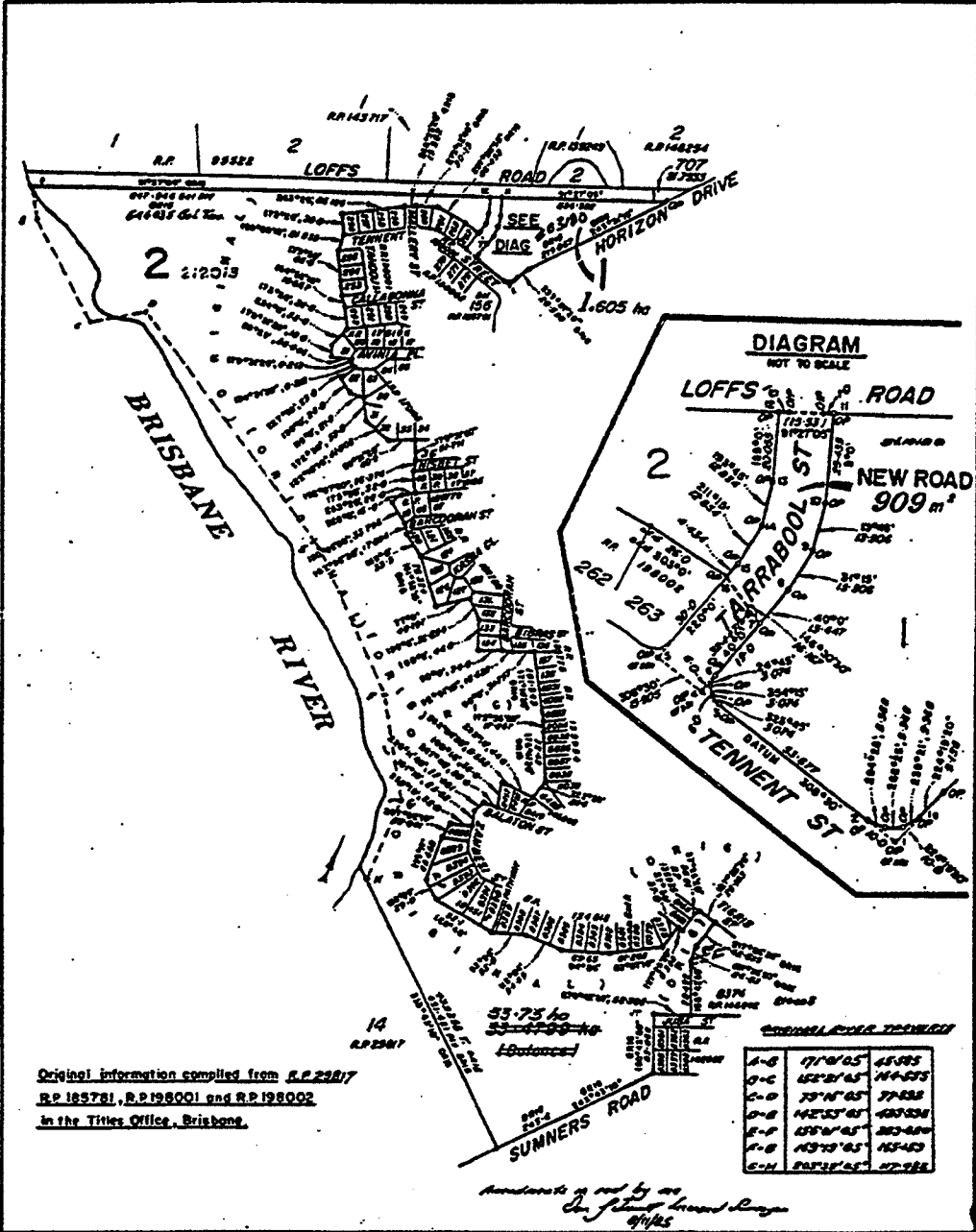
WARNING - FOLDING OR MUTILATING WILL LEAD TO REJECTION - PLAN MAY BE ROLLED

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203179

PLAN MUST BE DRAWN WITHIN BLUE LINES

203179



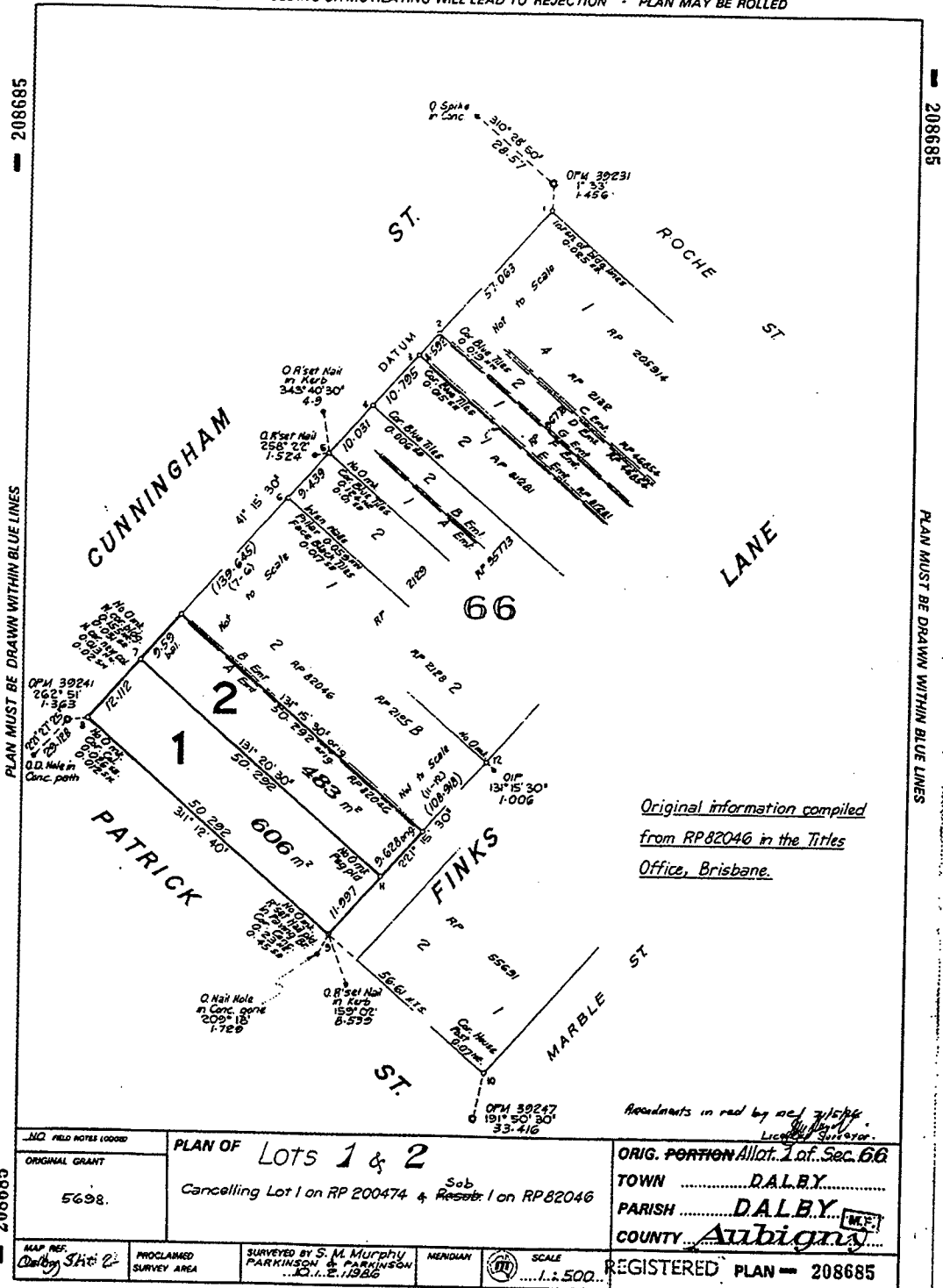
203179

PLAN MUST BE DRAWN WITHIN BLUE LINES

J.C. HOLD OVER LINES		PLAN OF Lots 1 & 2		ORIG. PORTION 345	
ORIGINAL GRANT 30408		Cancelling Part of Lot 156 on R.P. 185781		TOWN OXLEY	
				PARISH OXLEY	
				COUNTY STARBUCK	
MAP NO. C.C. 161.	PROCLAIMED SURVEY AREA	SURVEYED BY G.G. TRENT	MEASURER	SCALE 1:5000	REGISTERED PLAN 203179

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WARNING · FOLDING OR MUTILATING WILL LEAD TO REJECTION · PLAN MAY BE ROLLED



208685

208685

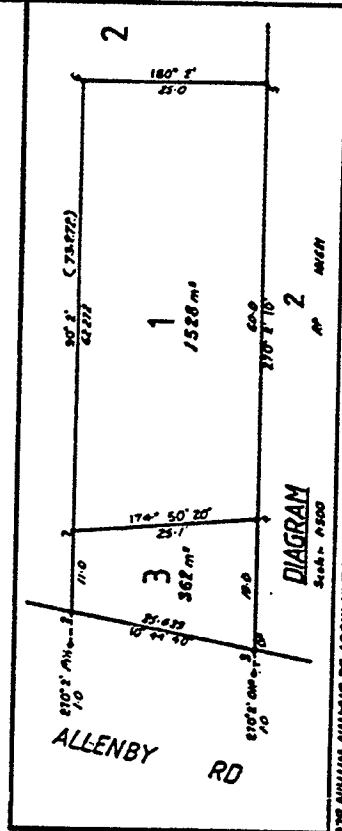
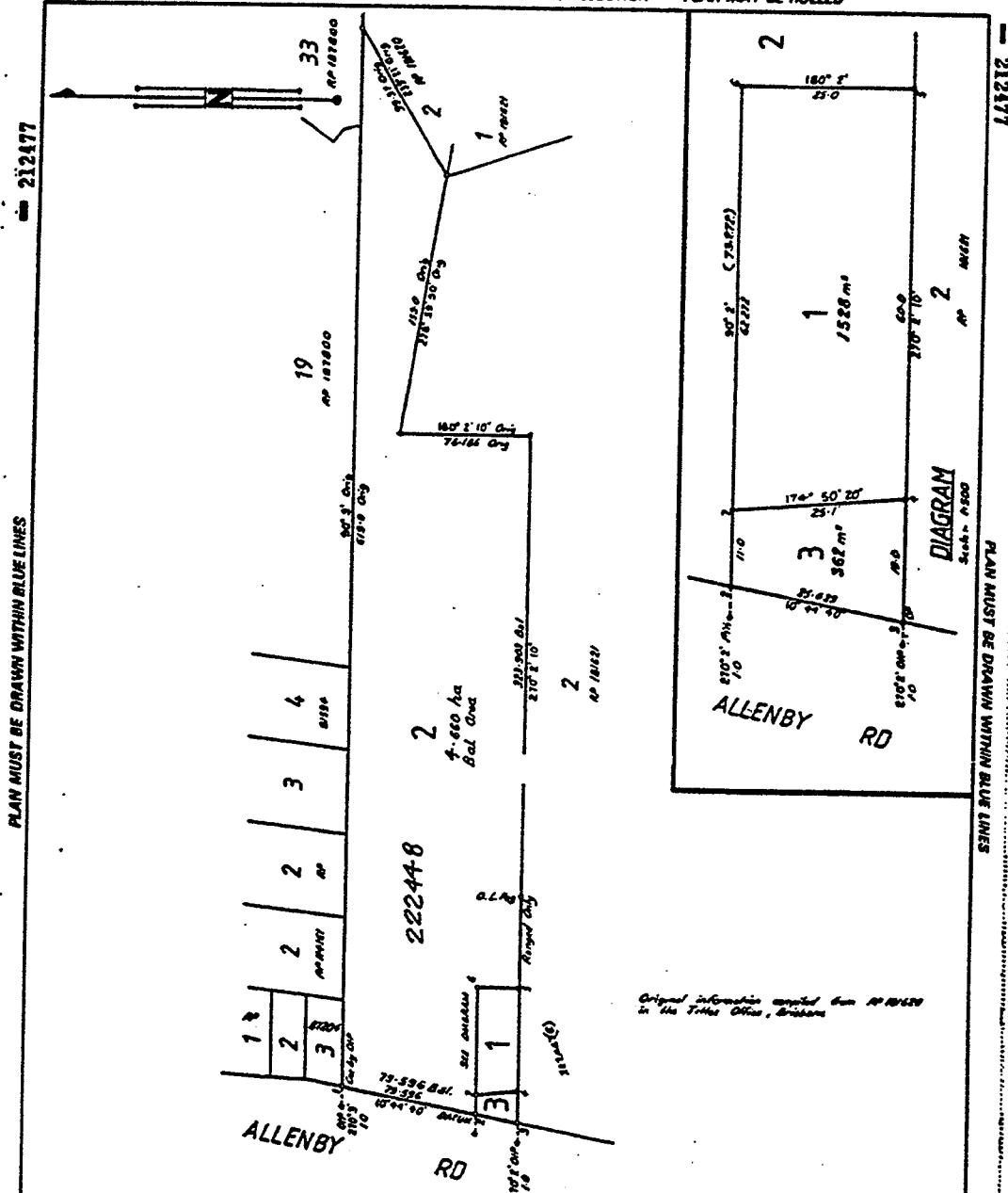
PLAN MUST BE DRAWN WITHIN BLUE LINES

PLAN MUST BE DRAWN WITHIN BLUE LINES

Original information compiled from RP 82046 in the Titles Office, Brisbane.

Amendments in red by 22/1/86
S. M. Murphy
Licensed Surveyor.

WARNING - FOLDING OR MUTILATING WILL LEAD TO REJECTION - PLAN MAY BE ROLLED



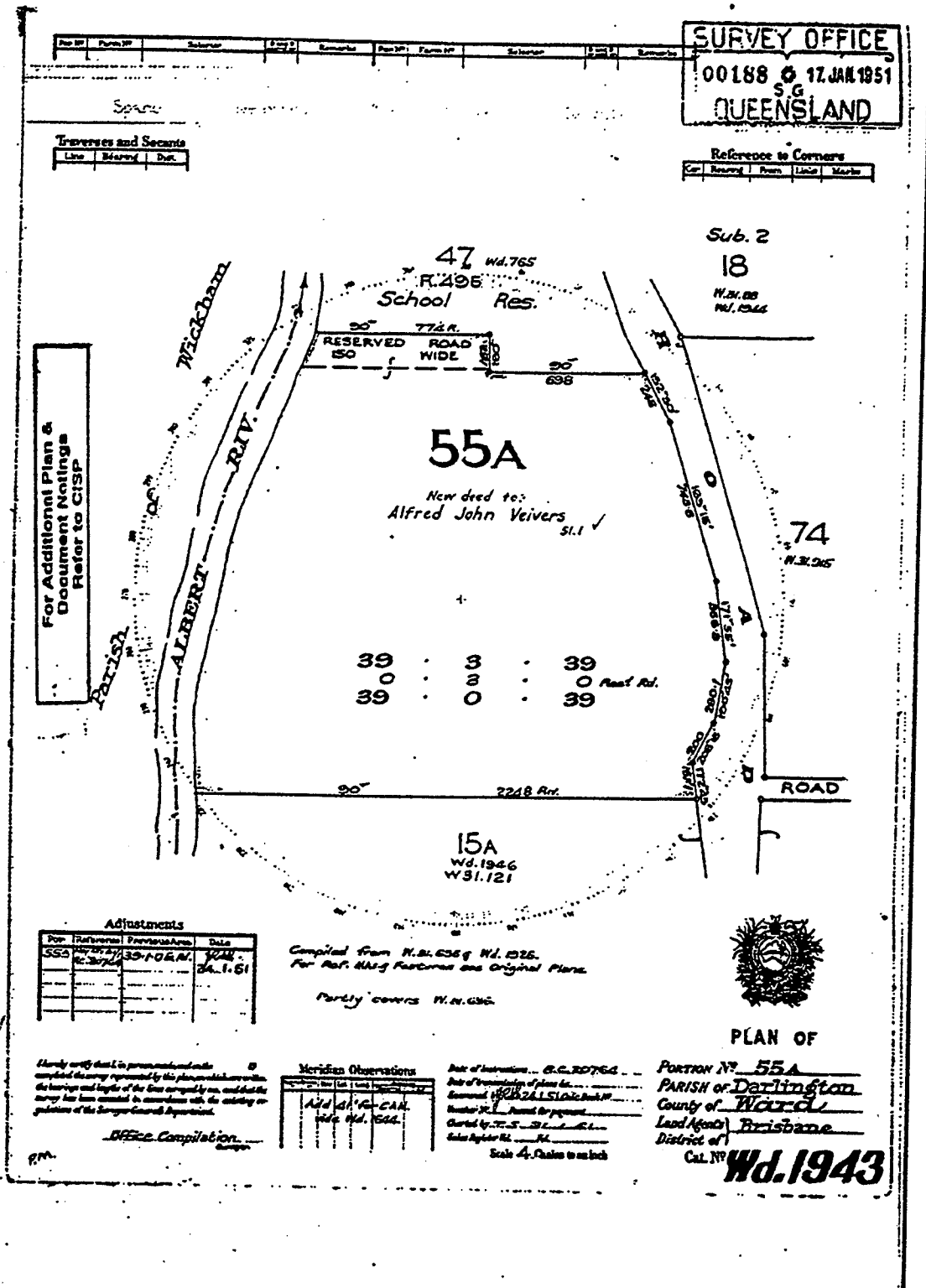
PLAN MUST BE DRAWN WITHIN BLUE LINES

PLAN MUST BE DRAWN WITHIN BLUE LINES

Original information supplied from RP 181620 in the Titles Office, Brisbane

No. 212477 ORIGINAL CHART 50/103.1	PLAN OF Lots 1-3 Cancelling Lot 1 on RP 181620	ORIG. PORTION 19 TOWN PARISH <u>CAPALABA</u> COUNTY <u>Stanley</u>
	MAP NO. 212 Proclamation SLA 3	SURVEYED BY <u>RJ Blain & Associates Pty Ltd</u> REGISTERED PLAN - 212477

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SURVEY OFFICE
 00188 & 17 JAN 1951
 S.G.
QUEENSLAND

No. of	Form No.	Suburban	City	Remarks	Form No.	Form No.	Suburban	City	Remarks

Spans

Traverses and Sections		
Line	Bearing	Dist.

Reference to Corners				
Cor.	Bearing	From	Line	Marker

For Additional Plan & Document Notings Refer to C1SP

Sub. 2
 18
 N.S. 658
 N.S. 126

55A
 New deed to:
 Alfred John Veivers
 S.L.I. ✓

39 : 3 : 39
 0 : 3 : 39
 39 : 0 : 39
 0 : 3 : 39

o Road Ad.

Pos.	Reference	Previous Area	Date
SSS	1035-1042 N.	1042	24.1.51

Compiled from N.S. 658 & N.S. 126.
 For Ref. Map Portion 55A Original Plans.
 Partly covers N.S. 658.



PLAN OF
 PORTION No. 55A
 PARISH of Darlington
 County of Ward
 Lead Agents Brisbane
 District of
 Cal. No. **Wd. 1943**

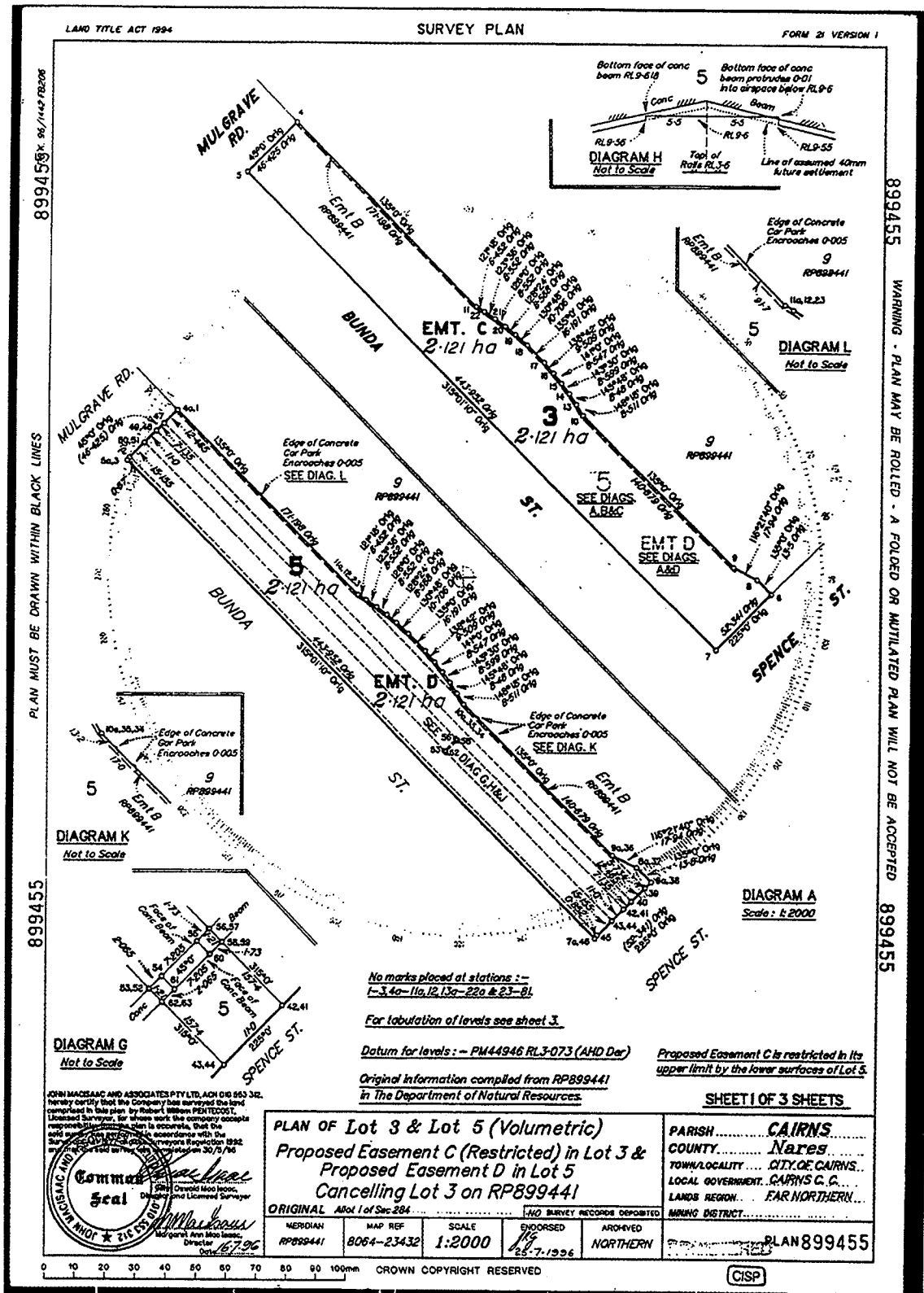
I hereby certify that I, in person, made and made
 completed the survey represented by this plan, and that I
 the bearings and lengths of the lines surveyed by me, and that the
 survey has been conducted in accordance with the existing re-
 gulations of the Survey-General Department.

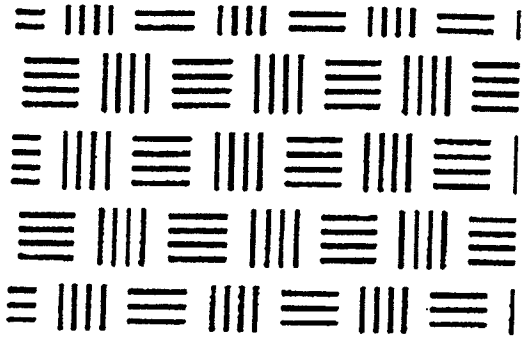
Office Compilation

Meridian Observations	
Station	Time

Date of Instrument... G.C. 20764
 Date of Presentation of plan to...
 Examined by...
 Checked by...
 Scale 4 inches to 1 mile

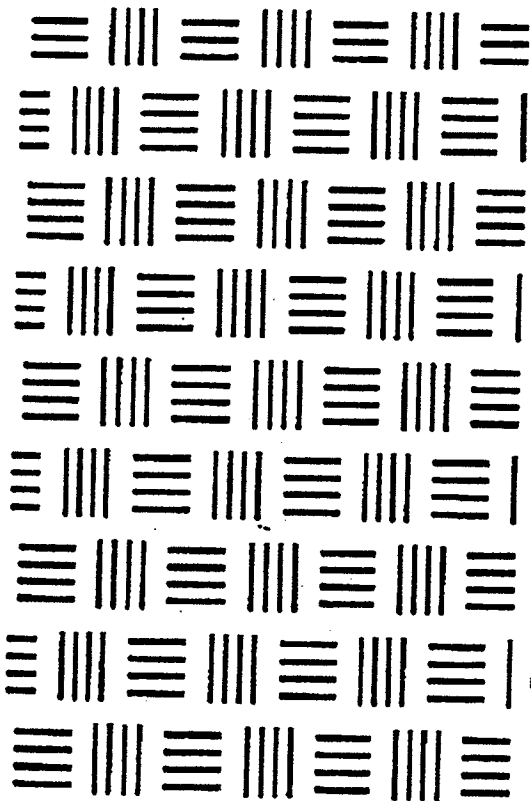
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Part E4

Department of Mines and Energy Requirements



Outlining the requirements as set down by
the Department of Mines and Energy.

Department of Mines & Energy

**G.P.O. BOX 194
BRISBANE QLD 4001**

Phone: 3237 1601

Fax: 3237 1634

Att: Chief Surveyor

IMPORTANT NOTE

Should a conflict arise between these Guidelines and various Acts and Regulations referred to, then the provisions of those Acts and Regulations will prevail. The Guidelines shall not be taken as a substitute for detailed professional advice.

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Guidelines

Mines and Energy Surveys

The following guidelines are produced by the Survey Group of the Department of Mines and Energy as a guide to the survey requirements *for actions* effected under Acts administered by the Department.

Should a conflict arise between these Guidelines and the Mineral Resources Act 1989 and Regulations 1990 or the Petroleum Act 1923 and Petroleum Regulations (Land) 1966 or other mining legislation then the provisions of those Acts and Regulations will prevail.

TERMS

The abbreviations of the more common references are shown hereunder:

The Act:	Mineral Resources Act 1989
Regulations:	The Mineral Resources Regulations 1990
Section Sec. or Part:	Section or Part in the Mineral Resources
Act 1989	
Surveyors Act:	The Surveyors Act 1977
Surveyors Regulations:	The Surveyors Regulations 1992
Petroleum Act:	The Petroleum Act 1923 with the Petroleum
Regulations (Land) 1966.	
S.O.M.	The Queensland Surveyors Operations
Manual	

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INTRODUCTION

OBJECTIVES

The objectives of the Queensland Department of Minerals and Energy are to ensure that Queensland's Mineral and Energy resources are assessed, developed and utilised to the maximum extent practicable, consistent with sound economic and land use management.

By working through a system of permits, licences, leases and miscellaneous tenures issued under Acts of Parliament, the Department is responsible on behalf of the State Government for the supervision necessary to see that the stated objectives are met.

Survey Group of the Tenures Unit plays an integral role in attaining these objectives by providing services to other parts of the Department and by providing advice and services to private industry.

The Guidelines has therefore been produced to efficiently and effectively manage the Unit resources, to enable fast tracking of surveys and plan registration and to stimulate and improve public awareness and communication. It is also hoped that consequently the private survey industry will be better positioned to satisfy the mining industry's needs expeditiously.

PERFORMANCE

The text should clarify issues which are to be determined when effecting a survey for the Department. The ensuing survey plans should be prepared in accordance with the current Queensland Surveyors Operations Manual.

Surveys of exploration permits, mineral development licences, mining claims and mining leases are to be effected subject to the Mineral Resources Act, 1989 and the Regulations made thereunder. These surveys do not define the boundary limits of an interest in land but rather the limits of:

- (i) a right to search for or mine a specified mineral or minerals, or
- (ii) a right to carry out activities associated with exploration or mining

Where surveys are carried out under other Acts administered by the Department those Acts shall be addressed by their full title. A list of those titles and a brief reference to their content is shown at Pages 51-57. Surveys are not required for Prospecting Permits and seldom for Exploration Permits and Mineral Development Licences. Remarks generally apply therefore to Mining Claims and Mining Leases except where indicated.

References in the text are confined to surveys carried out by a surveyor licensed pursuant to the Surveyors Act 1977, in a way approved by the Minister, and by a surveyor approved pursuant to the Petroleum Regulations (Land) 1966.

PART A

GENERAL REQUIREMENTS

ABANDONMENT

An area of land being the whole or part of an application which is relinquished by the applicant at any time before grant is described as an abandonment.

The Act does not specify that a survey plan is required for a partial abandonment whereas a survey plan *is* required for the balance and a partial surrender of a surveyed lease. However, under Sec 407 the Minister may request a survey for part of a mining claim, exploration permit, mineral development licence or mining lease, or part of an application therefor.

Should a partial abandonment including a description by metes and bounds and/or sketch not be lodged, a survey plan prepared for the grant of the lease should show the abandonment by an action statement on the face of the plan.

Should part of an application be required for statutory or official purposes, a survey of the area to be abandoned should be effected, in which case the plan would be cited in an ensuing proclamation.

If the datum post was placed at a corner of a lease and that corner is coincident with a corner of a subsequent abandonment, then the post should not be relocated to a corner of the balance of the lease but should be maintained in its original position until the date of survey. The new application corners created by the abandonment should also be marked in the prescribed manner.

See Sec.108 for the abandonment of the whole of a mining claim. See also Variation: p 49.

See Sec.159 for the abandonment of an application for an exploration permit.

See Sec.189 for the abandonment of an application for a mineral development licence.

See Sec. 307 for the abandonment of an application for the whole or part of a mining lease.

ABBREVIATIONS

The list shows past and present tenures most likely to be found in records and plans. Those marked with an asterisk are no longer issued by the Department whilst MHLs and MHPL's are now administered by the Lands Department. R of A (Right of Access), and R of W (Right of Way) are descriptive terms only.

The Second Schedule of the Act should be referred to for further details.

* A.M.C.	Alluvial Mining Claim
* A to P	Authority to Prospect
* B.A.	Business Area (D.O.L.)
* C.M.L.	Coal Mining Lease
* C.P.A.	Coal Prospecting Area
* D.A.	Departmental Area
* D.C.	Dredging Claim
* D.L.	Dredging Lease
* E.A.T.C.	Extended Alluvial Tin Claim
E.P.	Exploration Permit
* G.A.	Garden Area
* G.M.L.	Gold Mining Lease
* G.F.H.L.	Gold Field Homestead Lease
* M.A.	Machine Area
M.C.	Mining Claim
M.D.L.	Mineral Development Licence
* M.G.A.	Market Garden Area
* M.H.L.	Miners Homestead Lease (D.O.L.)
* M.H.P.L.	Miners Homestead Perpetual Lease
M.L.	Mining Lease
P.L.	Petroleum Lease
P.Lic	Pipeline Licence
P.A.	Prospecting Area
P.P.	Prospecting Permit
* R.A.	Residential Area (D.O.L.)
R.A.	Restricted Area
* R.M.C.	Restricted Mining Claim
* R.M.P.C.	Restricted Mining Purposes Claim
* R of A	Right of Access
R of W	Right of Way
* S.B.M.L.	Special Bauxite Mining Lease
* S.M.L.	Special Mining Lease
* S.P.M.P.L.	Special Perpetual Mining Purposes Lease (D.O.L.)
* S.G.C.	Special Gem Claim
S.A.	Surface Area
* T.A.	Tailings Area
* W.R.	Water Right

ACCESS

The relevant access provisions under the Act are:

	<u>Application Section</u>	<u>Description Section</u>
Prospecting Permit	20	
Mining Claim	61(1)(f) and (g) & 125	62
Mineral Development Licence	181(7), (8), 183(i) & 231	184
Mining Lease	245(d), (e), (f) & (j), & 317	246

An owner of land affected by an access requirement must be notified Upon lodgement of the application. Subsequently, if the application is recommended for grant by the Warden, access will only be surveyed if directed as it is anticipated that the owner and applicant should settle upon a practical route and suitable compensation without the need for definition.

Where access to a mining lease is to be gained by way of an abutting road, shown on an office chart or topographical map, then an access description is not required. A description is required when the proposed access departs from the road before it crosses the lease boundary. It is imperative that the actual route to be used is clearly described in the application.

Further, an unsurveyed road or track, through a pastoral holding or occupation license which is shown as a dotted line on a map or plan published by the Department of Lands, may be sufficiently dedicated as a public road under Section 362 of the Land Act 1962. Roads may also be dedicated pursuant to Section 96 of the Land Act 1994.

An application for the variation of access should be lodged where the terminal point or the actual route of a surveyed access digresses from that granted.

Where a surveyor finds that the access if surveyed, deviates from the application route or where a terminal point does not fall on an acceptable access route or where access should be extended past the nominated terminal point to a more viable access, the surveyor should request further advice from the mining registrar.

There is no provision within the Act which precludes the granting of a mineral development licence over a reserve. However, note that Sec. 181(4)(b) does prevent access by the holder of a mineral development licence for authorised purposes without the consent of the owner of the reserve.

If access to a mining lease is surveyed the description on a survey plan should read "ML _____ and access".

See also Rights of Way at E4-44.

ADDITIONS

In general, land cannot be added to a mining lease. However, provision exists where land may be added to an ML or MLA by variations in certain franchise agreements. See Sec.295(1)(b) which also provides for exchange of areas on the common boundary of contiguous leases.

But certain provisions for addition apply upon consolidation. See Consolidation at p.20.

However additional area could be acquired by:

- (i) A new application over an adjoining area
- (ii) A surrender of whole or part of a mining lease and a fresh application lodged for that area and an additional adjoining area.
- (iii) By the addition to an exploration permit upon the termination of a granted mining claim or lease or the rejection or abandonment of an application for a mining claim, mineral development licence or mining lease. See Secs. 132 and 189.

Additional *surface areas* to leases may be applied for pursuant to Sec. 275 of the Act, but only over land where a lease already exists.

No provision exists whereby an addition to a surface area may be made to a mining claim. A mining claim should include the whole of the surface, Sec.48(2).

AGENT

There is provision in the Act for a person authorised in writing to lodge an application on the behalf of the applicant. But Sec 408 expressly prohibits a surveyor from having an interest in a mining claim, exploration permit, mineral development licence, or mining lease or application therefore which he surveys. Sec. 53 of the Surveyors Act also forbids a surveyor from having an interest directly or indirectly in a mining tenement which he has surveyed.

Many boundary anomalies could be eliminated if a surveyor were to manage an *application for an M.L. or MDL* but the survey prohibitions above should be noted.

APPLICATION

The Act outlines the first step in obtaining title to the rights to explore or mine land. The grant of a claim, licence, permit or lease subsequent to an application does not create an estate or interest in the land subject to the application (Sec. 10).

The construction of the application should consider:

Subject Matter

Definition of Minerals	Sec. 5
Ownership of Minerals	Sec. 8
Exclusive Right of Crown to Grant Minerals	Sec. 9

Identification of Land

Land	Sec. 5
Owner of Land	Sec. 5
Occupied Land	Sec. 5
Reserve	Sec. 5
Road	Sec. 5
Contaminated Land	Sec. 6

Availability of Land

Priority	p.41
Exclusions	p.30
Subject to Survey	p.45

Title Requirement

Prospecting	Part 3
Exploration	Part 5
Mining	Parts 4 & 7
Associated Purpose	Secs. 232, 234, & Schedule Sec. 6
Development	Part 6

Qualification of Applicant

Eligibility	Secs. 5, 7, 48, 180, 233.
Acceptability	Secs. 24, 137(1)(b), 137(4).

Application Requirements

Details Required	Secs. 21, 61, 133, 183, 245.
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Application Process for Mining Lease

Selection of Land	
Obtain Prospecting Permit (Access purposes), Exploration Permit or Mineral Development Licence	
Marking Out of Land	
Application to Mining Registrar	
Certificate of Application Issued	
Mining Register may reject application	
Abandonment of Application in whole or part any time until Grant	
Inform owners of land of Issue of Certificate	

Conference between applicant and landowner may be convened
 Date set for hearing if required
 Minister may reject application or require an E.I.S. before applications close
 Warden's recommendation to Minister after hearing
 Lease conditions offered to applicant
 Acceptance of Conditions and payment of security
 Compensation finalised
 Survey at Ministers discretion
 Appraisal and Registration of Survey Plan
 Governor in Council grants lease
 Lessee advised of grant
 Mining may commence after acceptance of Plan of Operations.

Survey Interest in Application

The application indicates the description of the lease and or surface area. The Certificate of Application signed by the applicant is deemed to contain the correct particulars including description and marking details which may or may not conform with the particulars set forth in the application. Sec 252(4).

Rejection by the mining registrar or Minister should be verified. Secs. 266 and 267, 269(5).

The description and area in the certificate could be amended subsequent to the Warden's hearing. Sec. 269.

A lease area requiring survey could also have been reduced by the lodgement of a partial surrender, or a partial abandonment in the case of an application. Departmental Instructions to surveyors stress the necessity of verifying application details.

AREAS

Permits, Claims, Licences, Leases:

Excess areas of claims, see Sec. 53(4) and p.14 and Determination of Boundaries p.25

Limit of area see Secs. 14,15, 53, 55, 127, 186 and 245(1)(i).

Restriction on lease areas see Sec. 239 and 391.

Restriction on Grants (including areas) see Sec. 391.

See Entitlements p.30

See Exclusions p.30

Administrative areas:

See also areas which may be defined in the "Mining (Fossicking) Act", and references to additional Acts at p.51-57.

Areas on plan:

For the treatment of areas on survey plans generally see S.O.M. E2-18 (1.8).

For the treatment of specific areas for the preparation of Minerals and Energy survey plans see also

Right of Way,	S.O.M. E4-44
Road Area,	S.O.M. E4-44
Surface Area,	S.O.M. E4-45
Vinculum,	S.O.M. E2-145 (3.12)

ASSESSMENT OF PLANS

A survey plan prepared for the Department should satisfy the following requirements:

- Describe the subject land unambiguously on an approved Department of Minerals and Energy plan form.
- Be suitable for annexure to a lease document.
- Provide the lessee and others with evidence of the physical marking of the boundaries.
- See also S.O.M. E2-3.

When assessing whether the survey plan is suitable for the Department's needs the following factors are to be considered:

(Factors marked with an * may not concern the Surveyor)

- a) The presentation on the approved plan form is:
 - consistent with the S.O.M.
 - The survey reinstatement and information is acceptable.
 - The surveyors certificate has been correctly attested.
 - Supplementary attachments to the survey report have been lodged.

- b) Applicant's metes and bounds description including abutments.
 - Applicant's sketch.
 - If Applicant's description stated as being identical to a previous lease.
 - Minerals or purpose applied for.
 - Surface Area required.
 - Areas of MLAs or MLs covering background tenures.
 - Application on occupied or unoccupied land.
 - Application amendments.
 - Application abandonments or resumption of part thereof.
 - Application variations subsequent to Wardens hearing.
 - Date of receipt of Application in mining registrar's office and priority of other claims, exploration permits and leases subject to order of lodgement dates and times.
 - Roads and reserves to be included or excluded from the lease or surface area.
 - Unavailable areas to be excluded.
 - Access.
 - Shape and Area variations approved.
 - Tidal and watercourse boundaries.
 - Position of Datum Post and application posts with respect to the land applied for.

- * Compensation Agreements over affected background tenures to be lodged.
Recommendations of Warden.
Minister may recommend to Governor grant of part only
- c) Subsequent to grant, the following information may also be relevant:
 - * Minister's recommendation for Grant.
 - * Executive minute of grant.
 - * An Instrument of Lease issued subject to survey.
A surrender or resumption of part of the surface area or lease.
Addition to the surface area.

BACKGROUND TENURES

The presentation of background tenure is described in the S.O.M. E2-135 (3.2).

The general requirement is that all existing cadastral background information should be shown. Care should be taken where the background tenure has a depth restriction which may not be defined by numerical description. A description term such as "to the depth of the coal seam" is sometimes used.

When the background tenure has separate strata titles in depth, the description of the surface strata should be shown where the mining lease has surface rights. It may be necessary to show a table listing descriptions and plan numbers of the sub-surface tenures.

The sub-surface tenure may also be shown on the face of the plan where the mining lease has no surface areas.

Variations to the conditions to surface areas or leases may occur where certain actions take place on background tenures subsequent to the survey of the lease.

- See
- a) Easements p.29
 - b) Resumption p.43
 - c) Roads p.44
 - d) Reserve p.42

In the cases of b, c and d, a survey plan should also be lodged in the Department of Minerals and Energy showing the effect on the lease and/or surface area.

Since easements cannot be granted over a mining lease a survey plan showing that easement over a mining lease should not be lodged. However, since an easement bestows some physical benefit on the grantee it is assumed that the grantee will also negotiate with the mining lessee.

Changes to the background tenure subsequent to the grant should not affect the circumstances applying at the date of application. A survey plan however will show the background tenure existing at the date of survey.

BOUNDARY MARKS

Boundary marks when mentioned in the Act refer to the marks placed by the applicant on a mining claim or lease. These marks are further described under:

Datum Post p.21
Marking p.35

Boundary marks in the survey context are referred to in Clause 13 of the Instructions. But the Act points out that boundary marks shall be maintained until the date of survey when the survey marks at least must be maintained. See Secs. 81(1)(m), 90, 274 and 276(1)(k).

CALCULATED LINES

Lines on a survey of a mining claim, mining lease, mineral development licence or exploration permit shown calculated or unsurveyed on a survey plan may be lines adopted from the application or grant. The plan is not suitable for issue of a lease and may be subject to amendment, since availability will depend upon a field survey of the lease / application boundaries. Such lines should not be confused with calculated lines derived from survey information as described in the S.O.M. E2-21 (1.11).

The certificate of compilation should clarify the origin of information.

CERTIFICATES

Certificates in relation to mining but not relevant to surveys are not discussed. Relevant Certificates are signed by the surveyor in accordance with the Mineral Resources Act 1989, Surveyors Act 1977 and the Petroleum Act 1923 and the Petroleum Regulations, (Land) 1966.

Certificate of Application see Application, p.11

Certificate for Petroleum Well location surveys. See S.O.M. E2-136 (3.2.2).

Certificate for Compiled Plan for unsurveyed Mining Lease See S.O.M. E2-137 (3.5.5).

Certificate for Mine Surveyor. See p.37

CLAIMS

Surveys of claims may follow:

Request by applicant or holder

Request by the Minister under Sec. 407.

Investigation of illegal mining; or most likely:

Surveys of adjoining mining claims, mining leases, mineral development licences or exploration permits to determine priority.

The rationale for the survey of mining leases may be followed in the survey of mining claims but with the following qualifications and subject always to Part 4 of the Mineral Resources Act.

Prescribed Areas or less

Should the area not conform in shape (Sec.53), the direction of the applicant or claim holder and/or mining registrar should be sought. Non-conformity of shape may be acceptable if availability is determined by adjoining areas.

The description of the survey plan should read "Mining Claim". However where approval to a non conforming shape has not been obtained the claim should be surveyed claim post to claim post, reference marks placed and the description on the plan should read "Area occupied as Mining Claim".

Excess Areas

Claims should be surveyed claim post to claim post, reference marks placed adjacent to the posts and referenced to the posts.

Where an area (found upon survey) exceeds the prescribed area a survey sketch should be prepared describing the area as "Survey of Area Occupied as Mining Claim ..." and a copy forwarded to the District mining registrar whence the status of the mining claim may be determined under Sec. 53(4). A variation to the mining claim may be endorsed under Sec. 82(1)(3).

If the local registrar does not have the services of a regional surveyor a copy of the survey sketch should also be forwarded to the Chief Surveyor.

When the excess area has been determined and the applicant has moved his posts (excluding the datum post) to the approved positions, a survey plan, which must show the original reference marks, should be lodged.

Excess areas disclosed in adjoining claims during the survey of applications or grants should also be referred to the mining registrar. However a plan prepared for applications or grants, may include in the survey and plan description an adjoining mining claim where an excess area has been resolved by the registrar.

Mining claims restricted to an area of 1 hectare or less, may nevertheless be restricted to a smaller area which is gazetted under Section 391. See also Sec. 53(3).

COMPASS SURVEYS

Compass surveys are not normally acceptable for the definition of a mining boundary at the survey plan stage. However the Act does permit compass bearings to be used at the application stage. Secs. 62, 184 and 246.

The surveyor should verify the meridian cited at the application stage and show a comparison to the meridian of the survey plan by recording a compass reading if necessary.

COMPILED PLANS

The S.O.M. E2-136 (3.5) discusses presentation of compiled plans. But the surveyor should note, that to minimise costs, compilation may be allowed in certain cases. However the surveyor should be satisfied that the posting is adequate and occupation reasonably defines the boundaries. The definition must be sufficiently clear so that the M.L. boundaries are distinguishable from other boundaries.

The datum post must be shown on the plan.

CONSOLIDATION

Two or more contiguous leases may be cancelled and an amalgamated lease granted by the Governor in Council following the lodgement of an application by the lessee, Sec 299. Under the Act this is termed consolidation.

If there is insufficient survey information to compile the dimensions of the new boundaries of the consolidated lease then a survey will be required.

In any case where sufficient information exists the applicant will be required to lodge a compiled plan for registration embracing the new lease.

The surveyor should be aware that gaps may occur between granted leases and which may have not been obvious until the survey is carried out. Fresh applications are required over the gaps and consolidation cannot take place until the applications are granted. Note that Secs. 48, 179 and 232 require an applicant to hold prior titles.

Two survey plans will be required. The first plan will disclose the position of all the leases including the gaps. The second plan will show the exterior boundary of the consolidated lease.

However Sec.299(6) enables gaps to be included in a consolidated title by the Governor-in-Council. Contact the Chief Surveyor before including any land that is not in the M.L. application.

Notwithstanding the above provision the surveyor shall lodge the location information with the Chief Surveyor. The survey plan *will only be drawn* when any gaps are included pursuant to the above provision. Otherwise two plans will be required as described above.

CORNER INFORMATION

The Act requires all mining lease and mining claim application corners to be posted and marked or obtain the mining registrar's acceptance of alternative procedures. See Sec. 57, 58, 241 and 242.

See also: Datum Post p.21
Marking p.35

For survey information and presentation see S.O.M. E2-29 (1.21) and Departmental Instructions.

DATUM POST

One of the application corner posts is selected as the Datum Post to mark a claim or a lease and from which a description and survey must commence. Sec. 57(4) and 241(4).

These sections also prescribe:

- The type and size of posts to be used.
- The marking of the posts.
- Alternative marking.
- Alternative procedures should posting be impossible.
(Secs. 58 and 242 require consent to alternative marking.)

The datum post of the claim or lease shall be appropriately numbered within 7 days of the issue of the Certificate of Application. Secs. 64(6) and 252(7).

The remainder of the application posts shall be appropriately numbered within 7 days of the grant of the claim or lease unless the claim or lease has been surveyed. Secs. 90 and 274.

The application posts shall be maintained until survey. Secs. 90 and 274.

After survey the survey posts and pegs at least shall be maintained. Secs. 81(1)(m) and 276(1)(k).

Moving of a datum post by an *applicant only* is allowed under Regulations 16 and 40. The datum post of a granted lease cannot be moved. Field Notes/survey report should show both the old and new positions of a datum post. Since a survey shall commence at the datum post (Secs. 57 and 241) and the datum post maintained until the completion of the survey (Secs. 90 and 274), actions of abandonments or surrenders necessarily rely on the determination of the original application.

The Mining Acts of 1898 and 1968 contained similar provisions in that only the *applicant* and not the lessee could move the datum post. Likewise leases granted pursuant to those Acts cannot be relocated.

Unavailability resulting from encroachment and subsequently revealed by a survey would not permit the relocation of the datum post from an encroaching position. However, removal of applications posts would be possible after completion of the survey, especially since survey marks are statutorily protected by Secs. 81(1)(m), 276(1)(k), and Regulation 65 of the Surveyors Act.

Depending upon the location of the lease it may be prudent not to disturb the application posts after survey to substantiate identification of the lease. In any case the survey is not complete until the plan is drawn. Posts should not be removed until the plan has been lodged and registered. Datum Post location surveys are effected to cadastral standards pursuant to the provisions of the Surveyors Regulations, to assist the following purposes:

- Location updates
- Resolution of location disputes
- Identification of survey problem areas
- Reference point locations for mining claim and lease application connections
- Survey control

Note that Departmental policy requires that the preparation of plan and field records for Datum Post location surveys comply with the specifications for a mining lease survey.

The S.O.M. at E2-136 describes the procedure when a compiled plan of an unsurveyed mining lease is drawn and how reference shall be made to the datum post.

Details of datum posts recorded in the Field Notes should show:

- Location
- Description of post
- Markings
- Remarks on unusual aspects

The prescribed methods of posting for a mining lease application follow in chronological order with new applications subject to the Mineral Resources Act 1989.

**Marking For a Mining Lease Application
Prior to 31 August 1990**

Date of Application	Reg or Sec	Datum	Post	Application	Posts
		Location	Marking	Required	Marking
Up to 31/12/71	Reg 91	At corner	Initials	No	N/A
From 1/1/72	Reg 32	1 to 10 yds of corner	Initials	Yes	None
From 28/10/76			Initials, Surname		
From 20/1/77		1 to 10 m of corner	Date of Marking		
From 22/7/79	Sec21(6)(c & Reg 19(1))	At corner	Initials, Surname		
From 1/8/82	Sec21 (2Ac)		Date of Marking & ML no.	Yes, except on Crown Land without Surface Area	

Introduction of Mineral Resources Act 1989

Date of Application	Reg or Sec	Datum	Post	Application	Posts
		Location	Marking	Required	Marking
From 1/9/90	Sec 57 Sec 241	At corner	Initials, Surname	Yes	Initials, Surname or Company Name
Note: Includes Claims	Sec 240 S64(6)(b) S252(7)(b)) Sec 90 Sec 274		Company Name		Initials
		Initials	Date of Marking	Date of Marking	
			Claim no.		Claim no
			ML no.		ML no.

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intentionally left blank.

DETERMINATION OF BOUNDARIES

The fixation of a cadastral boundary that is not suitably monumented is governed by the intention of the original surveyor, supported by physical, behavioural or documentary evidence.

Intention is also of the essence in the positioning of boundaries for the grant of a mining lease. However, since the originating party at application stage need not be a licensed surveyor, the setting out of those boundaries could be more uncertain.

Therefore in the positional assessment of a mining lease boundary supportive evidence to verify intention should include the following considerations:

Calls

The list is not prioritised nor exhaustive.

Abuttals -Where possible abuttals should be included in the description at the application stage in support of, but not in substitution of, stated bearings and distances.

Adjudication i.e. A Warden's or Supreme Court ruling unless the registrar has approved an alternative method of description (Sec. 246)

Applicant's description

Applicant's intention

Applicant's posting

Applicant's sketch

Areas

Availability (Subject to Exclusions and Priority)

Exclusions p 30

Metes

Statutory Requirements

Monumented lines and corners

Natural features - though the Act requires accurately measured bearings and distances to be used in a description, provision exists under Section 62, 184 and 246 for alternative methods to be used.

Priority p.41

Physical mining evidence.

Marking

The Survey Instructions require the surveyor to have the applicant point out the datum post and application posts. Adjoining lessees and applicants are required to do likewise if encroachments are likely to exist and therefore entitlements jeopardised. The survey report should be clear on the presentation of this evidence in support of information shown on a survey plan.

Applicants must maintain marking. Secs. 81(1)(m), 90, 274, 276(1)(k). Surveyors should not proceed unless these marks exist except where consent not to mark has been granted under Secs. 58 and 242. Details concerning non-maintenance of marks should be forwarded to the relevant mining registrar for resolution and also to the Chief Surveyor.

Marking of Watercourses

With applications following natural features such as creeks and watercourses, providing consent under Secs. 58 or 242 was obtained, the following procedure for marking out an application for a mining lease shall be adopted:

- The terminal limits of the application shall be marked;
- The terminal limits on branch creeks flowing into the creek the subject of the application shall be marked;
- The terminal limits shall be marked by two posts, one on either side of the creek;
- A bearing and distance shall be shown between each pair of terminal posts;
- Bearings and distances shall be shown to a reference tree or mark from at least one of each pair of terminal posts;
- The corners from which reference marks are placed may be numbered on the sketch and the reference marks tabulated at the completion of the description;
- The preferred alternative is to show the information on the sketch as illustrated in the diagram on p.24;
- Reference marks should be easily identifiable and/or well marked objects or features but may also be previously marked and identifiable corners;
- The diagram on p.24 indicates markings and their possible descriptions.

The application description should follow either of the following examples:

- (a) The land, the subject of the application, may be included within lines described by bearings and distances, as illustrated by the diagram on p.24.

or

- (b) As per "a" but with an added qualification expressly stated eg. "Commencing at the datum post and proceeding 880 for 92m, ----- 780 for 60m, to the point of commencement. The described lines lie 10 metres more or less and to the west of the right bank of Hopeful Ck, 6 metres more or less and to the west of the right bank of Branch Ck, 8 metres more or less and to the east of the left bank of Branch Ck and 12 metres more or less and to the east of Hopeful Ck."

If the consent of the mining registrar is not obtained under the provisions of Secs. 58 or 242, then the applicant must mark all corners, but the sample descriptions in either "a" or "b" would still be used.

The above processes are not to be adopted for the survey of a mining lease. Any proposal to survey only part of the boundaries of a mining lease should be put to the Chief Surveyor.

Cadastral boundaries

An application may rely on or refer to or abut on previously fixed cadastral boundaries for the fixation of the lease boundaries. Therefore, the surveyor could then rely on a normal "fixed-boundary" approach in the first instance with the subsequent positioning of the lease in the second instance.

However note the status of the datum post in Secs. 57(4),241(4).

However where a cadastral boundary has not previously been determined, eg. a Pastoral Holding boundary, the surveyor must verify its determination with the Department of Lands.

The intersection of a cadastral boundary with a M.L. should be pegged and the allocated areas of the surface area/lease shown on the plan. There can be no compromise if the cadastral boundary limits the extent of the mining lease since an encroachment over the cadastral boundary could involve compensation with further background tenures holders. Compensation must be settled before the grant of a lease.

A mining lease could extend beyond a cadastral boundary but compensation may not be payable if the surface area were confined by the cadastral boundary. But note that in the latter case if longwall mining were involved compensation could still be claimed. See Sec.280.

Orientation

Reference should be made in the application to the origin of the meridian. Frequently none is stated. Four alternatives exist: magnetic, County Arbitrary Meridian (C.A.M.), Australian Map Grid (A.M.G.), and True. An attempt should be made to define the original meridian at the application stage and record a comparison at the survey stage.

Fixing orientation by meridian would only be done in very rare cases. Where the orientation of a lease is not fixed by meridian, or the direction of adjoining boundaries, or other evidence, policy requires that the direction be fixed which adopts the datum post and one of the other application posts to best accommodate the applicant's intention. In many cases the datum post and the application post on the first line of the description are adopted excepting where the first line is so short that a distorted orientation would result.

Dimensions

Every case must be treated on its own merits but the surveyed dimensions of a granted lease should not exceed the dimensions in the certificate of application. However the dimensions and area should usually be less than those granted if a survey reveals unavailable land. The area may be limited by Order in Council, such as in the Anakie Restricted Area. If a survey reveals a reduction in area to that shown on the application and it is not due to calculation differences, an abandonment or surrender should be lodged over the area excluded with the survey report. The exclusion should be shown by action statement on the plan.

Since dimensions rely on qualitative measurement, all evidence should be considered before assuming their acceptance.

Co-ordinates

The geographical or geodetic co-ordinates are frequently quoted as the origin position of the datum post. On some larger leases, mineral development licences and especially exploration permits, boundaries are quoted as one minute segments of parallels of latitude and longitude. The determination of the boundaries devolves into a survey task only, providing the datum post was correctly placed for the lease application. The standard of survey required is nominated in the instructions. The monumentation of the boundaries eliminates future interpretation.

When co-ordinates are not used at the application stage, their substitution for original boundary descriptions at the survey stage is only acceptable if the co-ordinated values are determined for previously monumented survey corners of the application, or coincide with the original described corners, including the datum post. See S.O.M. E2-27 (1.20).

Previous Descriptions

Frequently an application quotes the present description as coincident with the description of a dead mining lease or application. Departmental records may reveal valuable evidence as to the location of the new application despite contradictory evidence in the present description. If the applicant intends the new application to cover a prior lease or claim now dead the new description should include "covering previous ML.... or MC....", and care should be taken with marking out to see that the application truly covers the original tenement.

Statutory Considerations

Should surveys be effected relevant to Acts administered by the Department and which are listed at pages 51-57, the surveyor should refer to the particular Act where boundaries may be prescribed; eg, Commonwealth Aluminium Corporation Pty Limited Agreement Act (Sec 60).

The Mineral Resources Act also defines areas where leases and or surface areas may not be granted without the consent of the owners, which, in effect, could mean that lease and or surface area boundaries could be determined by prescribed conditions. See Secs. 14, 51, 129(1), 129(3), 181(6), 181(8) and 238.

Interpretation

Ultimately the position of a mining boundary is a legal matter. However provided the surveyor amasses the suggested evidence his interpretation of that evidence to prove the original intention could be the best available, particularly if supported by a letter or signed statement of acceptance of the boundaries by the applicant.

EASEMENT

No provision exists under the Mineral Resources Act to register an easement over a mining claim or lease.

An existing easement should be shown as background tenure on a survey plan for a mining application. Whether the application includes or excludes the easement from the surface area or lease should be clearly shown. If the easement is included special conditions may apply to the mining lease, depending upon the purpose of the easement. Generally, a variation to conditions may occur upon renewal of the mining lease or mining claim, if an easement has been created since the grant of the lease.

Should an easement be created after the grant of the mining lease the lessee should reach agreement with the dominant tenement or grantee regarding easement conditions imposed which may affect the mining lease. The dominant tenement may also require a formal deed of agreement with the lessee of the mining lease to further protect the former's interests in the easement.

Easements created for access purposes on background tenures should not be confused with access required to mining leases under the Act, the treatment of which for survey purposes is shown in the S.O.M. E2-143, 3.16.

See also Access p.12.

Provisions under Section 31 of the Petroleum Act ensure protection for the lessee upon construction of improvements including pipelines.

A lessee may enter into easement agreements with the holder of the background tenure but there is no process for endorsement of these easements on the petroleum lease. Under Section 44 a provision to endorse easements on a Petroleum Lease is reserved to the Crown only.

Pipeline licences usually contain provisions to provide evidence of registered easements. See Part C.

A pipeline license extends between nominated terminal points and no provision for severance is made whereas easements may be discontinued, for example, at road crossings.

Where land is common to both a lease and license the easement provisions of the license will prevail.

A lesser agreement than an easement may be made with the holder of the background tenure but a survey plan would be required for an easement. However this plan need not be lodged in this Department. But if a survey plan is prepared for a petroleum lease the surveyed easement should be shown as background tenure.

ENTITLEMENT

The Act outlines the rights of the holder and the rights of use and associated purposes over the area of the land the subject of the grant.

See	Prospecting Permits	Sec.18
	Mining Claims	Sec.50
	Exploration Permits	Sec.129
	Mineral Development Licences	Sec.181
	Mining Leases	Sec.235

ENTRY

A surveyor may obtain right of entry under Sec. 67 of the Surveyors Act to carry out survey work.

However, entry may also be attained under provisions in the following sections:

Prospecting Permits	Sec. 18,19 & 20
Exploration Permits	Sec. 129
Mining Claims	Sec. 50(1)(b)(i)
Mineral Development Licence	Sec 181(4)(b)
Mining Leases	Sec. 235(1)(a)
Minister may require Survey	Sec. 407

Entry could also be effected subject to the Minister's authorisation under Sec.342(1)(e)(i).

EXCLUSIONS

Availability of land defines the balance area remaining after the proposed application area has been reduced by prior entitlements. The balance may still be subject to legal appeal and qualification by grant.

In general a reduction of the land area in a proposed application may be called an exclusion which would include the following but when marked with an * may include a relief from the exclusion.

Note: Availability of a grant may also be determined pursuant to prior legislation under which that grant was made.

No	Exclusion	Section	Grant Affected
1	Abandonment(Part)	307	ML
2 *	Entitlement (Reserves, Buildings)	19	PP
	Entitlement (Reserves, Buildings)	51(2), 54	MC
	Entitlement (Reserves, Buildings)	129	EP
	Entitlement (Reserves, Buildings)	181	MDL
	Entitlement (Reserves, Buildings)	238	ML
3*	Excess Area	53(4)	MC
	Excess Area	127	EP
4*	Exclusion of Prior MC, ML, MDL	16	PP
	Exclusion of Prior MC, ML, MDL	51	MC
	Exclusion of Prior MC, ML, MDL	132	EP
	Exclusion of Prior MC, ML	182	MDL
5*	Exempt Land	135	EP
	Exempt Land	226	MDL
	Exempt Land (except Coal or Specified Mineral)	239	ML
	Franchise Areas		
7	Protected Areas	3	ALL
8*	Priority: Claims	63	MC
	Exploration Permits	131	EP
	Mineral Development	185	MDL
	Licence		
	Leases	251	ML
	Competing Applications	390	MC,EP,ML
9	Restriction on Grants	391	ALL
10	Restriction on grant of ML where no surface area or adjoining ML	273	ALL
11*	Railways	Regs. 15 39	MC, ML

*Relief from Exclusions

2. Consent of owners may be obtained
3. Mining registrar and holder, or Wardens Court may decide where excess lies in mining claim.
Minister may approve excess (to EPs)
5. Moratorium period of 2 months upon expiration of an exploration permit.
5. Minister may determine availability of land for a mineral development licence.
Exclusion does not include applications for coal
5. Moratorium period of 2 months on limited areas for a mining lease application upon expiration of an exploration permit.
8. Exploration may be granted for different minerals over the same sub-block
11. Mining near railway lines is restricted. An election could be made to exclude the restricted area from the application.

Encroachment

Encroachments upon land not properly excluded may be eliminated by enforcement of the provisions of the Act.

Encroachments upon unavailable land for other reasons should be resolved by the known facts. In whichever case, the extent of the encroachment should be resolved by survey.

EXPLORATION PERMIT SURVEYS

Surveys are not normally required but when commissioned for these purposes should satisfy the following:

Settlement of disputes with adjoining claim, lease, licence and permit holders by defining the common boundaries.

Marking of boundaries to define the equivalent or coincidental ensuing mining lease or mineral development licence boundaries.

Marking of boundaries to comply with a statutory requirement.

See S.O.M. PART E2-137 (3.7) and exploration permit or mineral development licence grant and file for survey details which may be enumerated.

FEES

Survey fees are not payable upon lodgement of any application for a mining tenure.

Survey fees will be refunded on existing applications not determined at the commencement of the Act. Survey fees associated with unsurveyed granted mining leases may be refunded upon approval of a plan of survey.

Plan lodgement fee as prescribed shall be payable upon lodgement. Reg.74.

FIELD NOTES

Field Notes may be required with the cadastral survey plan. Field Notes for surveys effected under Departmental contract instructions for other than cadastral purposes may also be required.

It is expected that information shown on the plan will be available in the Field Notes.

The following guidelines may be used to prepare Field Notes for the Department:

- a) Covers used to enclose Field Notes should be in a standard Department of Minerals and Energy format.

- b) Field Notes may be recorded in any recognised style providing all necessary information is clearly unambiguously described. Photocopies of plans are not acceptable as Field Notes.
- c) Title page of the Field Notes could show, subject to (b):
 - Surveyors name or company;
 - Commencement and Completion date;
 - Description of Datum;
 - Meridian reference;
 - Origin of AMG Co-ordinates.
- d) Information
 - Generally the information required pursuant to Sec. 33 of the Surveyors Regulation 1992 should include:
 - Details as requested in the Departmental Survey Instructions
 - Calculations
 - Meridian Observations
 - Report
 - Signed Certificate in accordance with Form 12 of the Surveyors Regulations
- e) Certified copies of field notes may be lodged but the original notes made in the field must be reserved and produced if requested.

GPS

Control by GPS should comply with the standards and specifications referred to in the current draft of the "Inter-Governmental Advisory Committee on Surveying and Mapping, Standards and Specifications for Control Surveys".

However apart from the above standards *note* that the Department has its own guidelines which must be observed for *all* surveys carried out by the Department.

The guidelines stress that *unclosed survey methods are not acceptable*.

GRANT

An unsurveyed mining lease and issue of the instrument of lease shall not be avoided due to deficiencies in the description. (See Sec. 289).

Therefore a survey need not necessarily be governed by the metes and bounds of the lease when disclosed evidence proves them to be inappropriate, in which case provision exists under Sec.295 to vary the lease. See also Dimensions at p.28.

Different legislative requirements govern progress for the various grants. But for the surveyor's guidance the general steps towards the grant of a mining lease follow the application progress described in "Application" at p.14.

HIGH WATER MARK

No specific provision exists in the Act to describe the boundaries of a mining claim or lease by natural features. (The Act actually prescribes that accurate bearings and distances be used in the description).

When a boundary in an application is described by reference to the High Water Mark the survey of that boundary for the grant of a mining claim or lease shall consist of a series of right lines which may be coincident with or abut the High Water Mark. The descriptive boundary "High Water Mark" adjacent to the lease boundary, should also be shown on the survey plan. See S.O.M.E2-45 (1.32).

The application description could be in the form:

Thence following HWM, 100m on a bearing of 90 degrees, for 200m on a bearing of 135 degrees, 250m on a bearing of 190 degrees, 500m on a bearing of 245 degrees, and thence (departing from HWM) for 1000m on a bearing of 270 degrees along the boundary fence between Lots 1 and 2 on RP 123456, thence to the point of commencement.

When a tidal reference plane other than High Water Mark is adopted then that reference plane should be suitably described.

See also natural features under "calls" at p.25.

If the contentious term *High Water Mark* only is used for a boundary description the surveyor should demonstrate how the H.W.M. was determined since it may not coincide with a cadastral determination and give rise to land not being covered by compensation agreements.

IMPROVED LAND

No definition exists under the Act to describe improved land. However certain improvements on land constitute an exclusion (p.30). These exclusions from an application, unless the consent of an owner is obtained, are described at Sections 19, 51(2), 129(1)(a), 129(3), 181(4)(b), 181(8), and 238.

INSTRUCTIONS

Instructions for the cadastral surveys of mining applications or grants could issue in the following ways:

1. Instructions to a Department of Minerals and Energy Surveyor.
2. Instructions to a Licensed Surveyor in private practice to effect surveys for the Department under contract.
3. Instructions from an applicant or holder to a Licensed Surveyor in private practice.

4. Instruction from an applicant or holder to a Licensed Surveyor in private practise following the Minister's direction under Sec. 407.
5. Instructions from a Warden made for any survey purpose to aid in the determination of proceedings before the Court. Sec 380.

For Surveys under (2) above Departmental Contract Requirements shall be issued.

For Surveys under (3) to (5) Departmental Instructions at PART D shall apply.

Special requirements affecting surveys in individual circumstances under (2) to (5) may be added to the Departmental Instructions or Contract Requirements. See also PART D.

JURISDICTION

Surveyor's Responsibilities

The surveyor is an expert witness who gathers and interprets the evidence to enable a survey plan to be drawn which represents the mining lease boundaries to be registered. The position of the boundaries is a matter of mining law. The procedures for managing disputations are defined generally in Part 10, Division 2, Sections 344 to 385 and more particularly Sections 363, 370, 376, 379 and 380.

MARKING

The term refers to the procedure for:

Placing posts or alternative marks at the corners of mining or mining lease applications, See Secs. 57, 241.

Marking or suitably engraving the datum post. See Secs 64(6) and 252(7).

Marking or suitably engraving the boundary posts within 7 days of claims the grant. See Secs 90 and 274.

Marking in the survey context refers to marks or pegs placed in accordance with the Surveyor's Act and Survey Instructions issued pursuant to the provisions of the Mineral Resources Act.

A surveyor may mark an application when authorised by an eligible person. That marking shall be in accordance with Sec. 240 and 241.

Following lodgement of the application and after the Wardens hearing a formal survey may be required.

Survey marking is referred to in the instructions in Page E4--68.

MERLIN

MERLIN -(Minerals and Energy Resource Location and Information Network -a data base).

Merlin supports the mining tenure administration. A network of computer linked district offices with Brisbane head office, supports the regional operation in Queensland.

The data base is a combination of attribute and graphical functions which will provide information on all mining tenures relevant to:

- Land availability, subject to confirmation by survey.
- Processing of applications, variations, transactions and dealings.
- General enquires.
- Individual charts will be eliminated but the graphics will provide a single map co-ordinated display with a cadastral and/or topographical background.

MINING

These guidelines outline matters involving boundaries and related surveys. Part 1 of the Act and particularly the terms in Sec.5 introduce this involvement.

Surveys related to physical mining are not commented upon. However, qualifications required for surveys related to physical mining are referred to at "Mine Surveyor's Certificate" p.37.

Surveys related to petroleum mining are commented on in Parts B and C.

MINERAL SELECTION

A Mineral Selection or Mineral Freehold is a Lands Department tenure issued under one of the following Acts:

The Crown Lands Alienation Act of 1860, Sec.22.

The Crown Lands Alienation Act of 1868, Sec.32.

The Mineral Lands Act of 1872, Sec.21.

Providing the Deed of Grant was issued, thus indicating that the conditions for freeholding were met, then a record of that freehold should be available in the Lands Department.

The deed of purchase would reserve specified mineral rights to the grantee. But note Sec.9 whereby the Crown has an exclusive right to grant mining leases etc, irrespective of the ownership of the minerals.

Grantees of Mineral Selections can:

- i) Sell surface rights and retain mineral rights

- ii) Sell mineral rights and retain surface rights
- iii) Sell both rights.

Note: They may sell the sub-surface land as well as the mineral rights.

The owner of a mineral selection had prior application rights over any other application within the prescribed period, which has now expired. See Second Schedule Clause 9.

The Crown's property in minerals is defined in Sec. 8.

MINE SURVEYOR'S CERTIFICATE

A person may apply for:

- a) A Mine Surveyor's Certificate which applies to all types or classes of mines.
- b) A Mine Surveyor's Certificate limited to Open Cut mines.

Further, the Board of Examiners, Queensland Department of Minerals and Energy may grant a Mine Surveyor's Certificate with such other limitations and conditions as it deems proper.

A licensed surveyor may satisfy the academic requirements of the Board.

In the list of Acts at pages 51-57 references to certificates are made in the relevant Acts.

A licensed surveyor does not require Departmental approval to carry out surveys in a metalliferous mine (Section 51 of the Mines Regulation Act 1964-1983) but would be subject to the control of a mine manager (Section 27 of the Mines Regulation Act 1964-1983).

The Board of Examiners, Department of Minerals and Energy should be contacted for detailed information required for certificates or additional requirements for other than metalliferous mine surveys. In the case of metalliferous mines it would be prudent to contact the local Inspectorate of Mines.

NATIVE LAND TITLE

When a surveyor lodges a survey plan of a lease application, an application for additional surface, or a renewal, then evidence of extinguishment of native title must be lodged. This evidence may have been collated previously by the applicant or lessee.

A survey of a granted lease (with the possible exception of a renewal) would be exempt from the above requirement.

The surveyor should verify with the mining registrar whether a search has been carried out. The registrar can clarify the procedure required. The Department of Lands may also clarify their procedure.

NUMBERING OF LEASES

A state wide numbering system eliminating duplicate numbers in different districts has been introduced for mining leases. When dealing with a mining lease, the new number should be referred to and may be qualified by the statement "Formerly ML _____" where necessary.

The State wide number allotted to a mining lease shall be used by the surveyor. See Marking p.35 and the Survey Instructions at PART D.

OBJECTIONS

Objections which may be lodged to the grant of an application:

Mining Claim	Sec. 71
Mining Lease	Sec. 260

Mining Registrar may convene conference with owner.

Mining Claim	Sec. 65
Mining Lease	Sec. 254

Mining Registrar may reject claim at any time

Secs. 61(5) & 73

Minister or mining registrar may reject mining lease application

Sec. 250, 266 & 267

Wardens Court's determination of hearing of objections on claims

Sec. 78

Wardens' recommendation on hearing of mining lease application

Sec. 269

Minister's recommendation on grant of mining leases

Sec. 271

OCCUPIER

The following definition in the Local Government Act may assist clarification of the term in the Mineral Resources Act.

"The person in actual occupation of any land, or if there is no person in actual occupation the person entitled to possession thereof: in the case of a gold field or mineral field the term includes any person in actual occupation of any land comprised within any gold mining lease or mineral lease or miners' homestead lease under any form of tenancy from or by the consent or with the leave and license of the lessee."

Note definition of occupied land in Sec.5.

OWNER

See Sec 5.

The definition in the Local Government Act may also be relevant when assessing rateable land.

"The person other than Her Majesty who for the time being is entitled to receive the rent of any land or who if the same were let to a tenant at a rack rent, would be entitled to receive the rent thereof: The term includes a lessee from the Crown...

the holder of a mining tenement under or within the meaning of the Mineral Resources Act.

PERMANENT MARKS

See S.O.M. E2-27 (1.20.2).

See Departmental Survey Instructions at PART D.

Records of Permanent Marks and Geodetic Information should be searched in the Survey Records Sub-program, Division of Information, Department of Lands.

PETROLEUM PERMITS, LEASES AND LICENSES

It is unlikely that surveys will be required for a permit or lease, the description of which follows the sub-block format. See exploration permit survey at p.32. Provision does exist however, under Sections 14(3) and 28(4) and 29A(5) of the Petroleum Act 1923 to request a survey of a permit and lease respectively, and Sec 37(iii) for the survey of surface areas.

Survey plans for permits and leases shall be presented as required in the S.O.M. on Departmental plan forms.

There are no provisions that require a survey of a "permission" to build an oil refinery. (A "permission" is an actual grant by the Governor-in-Council).

Survey requirements for a pipeline licence under the Petroleum Act are described in Part C.

PHOTOGRAMMETRIC SURVEYS

Mining lease boundaries are not usually defined by this survey method. However in remote localities where connections to a cadastral or geodetic point are not possible it may be permissible to connect a lease boundary to a clearly identifiable air photo point. In this case the additional survey directions would be explicit, but it is likely that the use of G.P.S. would be the preferred option.

PLAN

All surveys should be drawn on approved plan forms only available from, and at a cost set by, the Chief Executive, Department of Minerals and Energy.

Plan forms are available in two sizes, A2 and A3.

A number of sheets may be lodged for the one survey. All sheets must be the same size.

Plan information should not only comply with the general requirements of the S.O.M. but also with the Departmental Survey Instructions.

If the survey plan is not drawn in accordance with the Mineral Resources Act and Regulations it may be rejected. Presentation of plans representing surveys for mining grants see S.O.M. E2-131. See also Regulation 74.

Surveys of two or more leases may not be drawn on the one plan form unless each parcel is physically connected to the other by survey.

Presentation of plans for pipeline licences, see Part C.

The presentation windows marked with a bold outline at the foot of the plan, shall be completed by the Department. The co-ordinates shown shall be those at the centre of the plan face and shall have no meaning other than for location purposes. However if coordinates are determined accurately at a station, then that station number may be quoted.

Where there is more than one sheet per plan, to avoid confusion, co-ordinates shall be shown on and for the first sheet only. P.W.L. plans which show co-ordinates for survey points need not comply with this requirement.

In keeping with the concept of unique identifiers, land surveyed for mining purposes *other than claims, exploration permits, mineral development licences or mining leases* may be allocated a lot on plan description but the purpose should be described in tabular form on the face of the plan.

eg.

LOT	PURPOSE
1	Restricted Area No. 79

Plans drawn for the purpose of a grant must show a tenure table. To avoid confusion over the status of a grant, the description of a plan must not be qualified by the term "A" or "Application". The tenure table will be completed by the Department at date of grant or by the surveyor if the lease has been granted.

eg.

STATUS OF TENURE

TENURE	DATE OF GRANT
ML4059	

PLANNING PROVISIONS

The authorised use of land for a specified purpose under the Act shall, during the term of the lease, be deemed to be a permitted use of that land. Sec. 319.

Rezoning of the land therefore, is not a prerequisite for mining purposes.

Rezoning of land, subject to a mining lease, for other purposes shall be submitted to the Minister for his written views, Sec.319. Details of claim, licence or lease may be searched at the relevant mining registrar's Office whilst details of a mineral development licence may be requested through the Chief Executive, Sec. 319.

POSTS

The term refers to marks to be placed as required by the Act and mentioned at "Marking", p.35 and not to survey posts as required by the Departmental Instructions.

See also datum post p.21 and removal of posts p.42.

PRIORITY

Priority is referred to as one of the calls which effects the determination of boundaries at p.25 and is one of the considerations which effects the availability of land the subject of an application at p.14.

The details of priority have been listed under exclusions p.30 where clause 4 refers to the exclusion of prior applications or grants and clause 8 to the priority of lodgement of applications.

Priority of applications is set out in Secs. 63, 131, 185 & 251.

Priority (time) for registration of a document is outlined in Reg. 75.

REGISTRATION

Registration means the recording in the appropriate register of any transaction or dealing relating to a mining application or grant. See Regs. 13, 24, 30, 36.

The type of registers to be maintained are described in Section 387.

Registration of a survey plan refers to the acceptance of the plan and enrolment in the Departmental registrar for use in subsequent actions or dealings.

REMOVAL OF POSTS

If an application for a mining claim or lease is not made, or is rejected or abandoned any posts or alternative marks placed shall be removed. See Sec 60 and 244. If the land has been surveyed then the posts or alternative marks need not be maintained but survey marks must be left undisturbed. See Secs. 81(1)(m), 90, 274 and 276(1)(k).

The Mining Registrar may remove unwanted posts or alternative marks. Sec 342(1)(e)(ii).

The wilful removal or destruction of marks, alternative marks or posts shall be an offence. Reg. 65 and Sec.68 of the Surveyors Act.

See also datum post p.21 and posts p.41.

REPORT

The surveyor should disclose and report on:

- a) survey content
- b) survey irregularities
- c) relevant details of lease boundary irregularities, including reasons for departure from applicant's description/markings and/or major differences from original dimensions
- d) Any other circumstances which properly explained would help expedite the registration of the plan.
- e) Location of mine workings and installations as they may assist with positioning of the lease or claim.

The attachments required for Departmental Instructions could be lodged with the survey plan (and field notes if requested) and may form part of the report.

RESERVE

See Interpretation, Sec 5. The definition of owner relative to reserves should also be read.

An application shall not be granted over a reserve without the consent of the owner. See Exclusions Clause 2 p.30.

However, if the owner of a reserve refuses or withdraws consent to disturb the surface the Governor in Council may grant consent. Secs. 79(2), 129(10), 181(15) and 238(1).

A survey plan shall show by statement the proposed surface area within a reserve.

A road is classified as a reserve under the Act. Refer to *Road* at p.44.

RESTRICTED AREAS

The whole State or parts thereof described as Restricted Areas may be restricted in use by Regulation under Sec.391 of the Act. The restrictions enable the Department to set parameters to supplement the statutory provisions for mining within specified areas or to prohibit mining totally within those areas so that the land is reserved for Departmental, Government or other public or utilitarian purposes.

Restrictions may apply to applications, grants, terms, numbers held, areas and purposes of permits, licences, claims and leases.

Restricted Areas will appear on Merlin. Reference should be made to the Schedules in the Mineral Resources Regulation 1990 and Subordinate Legislation to the Mineral Resources Act for descriptions of Restricted Areas. The survey plan number may be quoted if applicable. Large Restricted Areas may conform to the sub-block descriptive method.

RESTRICTED LAND

Section 5 qualifies the definition of land for which an owner is required pursuant to Secs. 34, 51(2), 129(3), 181(8) and 238.

RESUMPTION

It is essential as part of the surveyor's search program that the state of the resumption be ascertained and shown accordingly in the action statement on the survey plan i.e. "Resumed" or "to be Resumed." The survey report should include the details of gazettal, where necessary. The action statement on the survey plan should also show the purpose of the resumption e.g. "Resumed for Railway purposes."

When a mining claim or mining lease is involved, a survey plan must be lodged in the Department of Minerals and Energy. It is not sufficient where a resumption is involved that a plan be lodged with D.O.L. dealing with the background tenure only.

The Department plan should clearly show by presentation and action statement if necessary, whether roads, railways and other reserves have been resumed from the Surface Area or lease.

No provisions have been made for the resumption of land for the purposes of the Mineral Resources Act.

See also S.O.M. PART E2-142 (3.12.8).

RIGHT OF WAY

The S.O.M. at E2-143 (3.15) describes the methods which deal with rights of access for survey purposes under past legislation.

Refer to "Access" at p.12 for present requirements.

ROAD

Interpretation Sec. 5. For the purposes of the Act a road is also included under a reserve, but see also the definitions of occupied land and owner under the Act.

It is not possible to open or close roads on a plan of a mining survey. Such actions take place on the background tenures. However, whether by agreement or resumption such actions should also be shown on a survey plan lodged in the Department showing the effects on the surface area or lease.

Roads should be excluded from an application for, or a renewal of, a mining claim, or surface areas of a mining lease unless the consent of (a) the owner to include the surface of a reserve has been obtained or (b) the consent of the Governor in Council has been obtained, Secs. 54, and 238(1), and a compensation agreement lodged, Secs.85 and 279.

Where there is no surface area roads may be included or excluded from a lease but where they are included, then the roads are shown on the background tenure only. (D.M.E. Example No.1, M.L. 20099 shows a road as background tenure.)

Roads affecting surface areas:

Existing surveyed roads on the background tenure should be pegged at the intersections with the lease boundaries. Unsurveyed roads need not be pegged at the intersections excepting where doubt exists as to whether the unsurveyed road lies wholly or partly within the mining lease. The survey instructions will usually contain specific requirements in this regard.

Should more than one background tenure be involved, or where the whole of the surface is not required, a surveyed road should be pegged at all intersections and fully dimensioned using part compilation if necessary. In these circumstances an unsurveyed road should be fully surveyed, as is the case when a road either surveyed or unsurveyed is excluded from the surface area or the lease.

Where a road has been included in a surface area but not surveyed when the mining lease is surveyed, the area of the road(an about area if necessary) within the lease should be shown by statement on the plan.

For presentation of roads on mining lease plans See S.O.M. E2-144 (3.16).

See also Background tenures at p.17. and E2 -135 (3.2).

See also Access at p.12.

SEARCH

Clause 7(a) and (b) of Departmental Survey Instructions should be particularly noted. As a guide to information required, the following data may be obtained from the applicant, mining registrar's office, Department of Minerals and Energy or other plan or survey data registering authority, where appropriate.

- Certificate of Application
- Applicant's description
- Applicant's sketch or diagram
- Surface Area description and amendments
- Details of abandonment and or surrenders
- Departmental Lease File Information such as depth restrictions (through the mining registrar)
- Departmental Merlin print-outs (includes Exploration Permits and Proformas)
- Departmental Archival Charts
- Departmental Plans and Field Notes
- Cadastral Plans and Field Notes (DOL)
- Mining Claims, Specific Areas, Water Rights
- Permanent Mark and Geodetic Search

SUBJECT TO SURVEY

The term means "subject to the land being found to be available upon survey." See Exclusions p.30 and Priority p.41 which determine availability.

A certificate of application is normally granted subject to survey. Unless a prior survey has been effected a grant is made subject to survey and if issued, a lease is subject to a similar qualification. Provision exists under Sec 295(1)(a) to vary the boundaries and areas of a lease when survey information is subsequently provided.

SUBLEASE

A sublease may be approved by the Minister and a survey of the whole or part of the lease may be required. Sec. 300(5).

Apart from specific requests in the Departmental Instructions, surveys shall comply in all other respects with the Act and usual Departmental requirements.

SURFACE AREAS

Metalliferous and Coal

Certain areas are not available for Surface Areas without consent. These areas are defined in the Act and summarised under clause 2 of the exclusions at p.30.

A surface area being part only of a mining lease application need not be marked for application purposes, Sec. 240(2). It should be marked in the normal manner on survey of the lease.

The surface area of a mining lease application shall be identified, Sec. 245(1)(f) and described Sec. 246(c).

Note also that the description of the surface access within the mining lease boundaries shall include its abuttal to a surface area within the lease boundaries. Sec. 246(d).

The Warden's recommendation shall also consider the appropriate size and shape of the surface area. Sec. 269(4)(d).

An application for an addition to a surface area may be made at any time. Sec. 275.

An application for additional surface area not determined prior to the commencement of the Act, may be determined under the provisions of this Act. Schedule, Clause 3(13).

An application for a mining claim shall include the whole of the surface. Sec. 48(2).

Access via an adjoining lease held by the same person is necessary, if a surface area is not included in the application for a lease, Sec. 273. A survey may be necessary to prove the adjoinder.

A survey plan should be lodged for the partial surrender of a surface area and/or a mining lease, Sec. 309(2)(b), unless exemption is given by the Minister.

A survey plan may be required to show the balance of the land after a partial abandonment of a surface area of an application when a partial abandonment sketch has not preceded the lodgement of the plan prepared for the issue of the lease.

Notice in writing to abandon the whole or part of an application is required. Sec.307.

For the preparation of survey plans for surface areas in general, see S.O.M. E2-139 (3.12).

Petroleum and Gas

For surveys under Sec.37(iii) of the Petroleum Act the Chief Surveyor should be contacted.

SURRENDER

A total surrender may be lodged over:

Prospecting Permit	Sec. 37
Mining Claim	Sec. 107
Exploration Permit	Sec. 161

A total or partial surrender may be lodged over:

Mineral Development Licence	Sec. 210
Mining Lease	Sec. 309

But note that an EP may have to be reduced in area, Sec. 140.

A survey plan for a partial surrender of a mineral development licence may be requested by the Director-General. A survey plan for a partial surrender of a surveyed lease or an M.D.L. showing the balance area shall be lodged.

Unless directed under Section 407, a holder may lodge a request for exemption from the survey requirement in Sec.309(2)(b) where the lease is unsurveyed and a partial surrender is intended. However, in cases of alterations to unsurveyed leases, a survey of the lease and alterations is desirable to show the current situation.

The description and action statement on the survey plan should indicate whether a partial surrender effects the lease or surface area. The surveyor should verify the action with the lessee, since a surrender from the surface area does not mean a surrender from the lease.

A partial surrender of a mining claim may take effect in practice if an application for a new mining claim or lease is granted over part of an original claim over which a total surrender was lodged Sec. 107(6).

The preparation of survey plans for surrender actions is shown in the S.O.M. at E2-141 (3.12.7).

SURVEY

A survey is defined in the Surveyors Act 1977 and the Survey Co-ordination Act 1952.

A cadastral survey is also defined in the Surveyors Act 1977.

Surveys which comply with the above definition and which may be requested for the purposes of the Act are provided for at:

Section 299	Consolidation of Leases
Section 300(5)	Sublease
Section 309(2)(b)	Partial Surrender

Section 380	Warden's Court Order
Section 407	Minister's Request
Schedule, Clause 3(10)	ML granted under the Mining Act

Surveys which have been requested may have further effects under the provisions of:

Section 53(4)	Claim surplus area
Section 206	More accurate area defined for Mineral Development License
Section 210(2)(b)	Partial Surrender of MDL
Section 295	Variation to ML

Survey information which may be required to satisfy application provisions:

Section 14(1)	PP limits of application
Section 15	PP area
Section 51(1)	MC limits of application
Section 61(1)(d),(e),(f)&(g)	MC Application
Section 62	MC description
Section 129(3)(a)	EP limits of Application
Section 133(d)	EP Identification of Land
Section 181(8)	MDL limits of application
Section 183(d)(e)&(h)	MDL Application
Section 184	MDL Description
Section 238	ML limits of Application
Section 245(1)(d)(e)(f)(h)&(j)	ML Application
Section 246	ML Description

Renewal Surveys (as for mining leases) shall be effected by Licensed Surveyors in the way approved by the Minister. Sec.407.

Surveys for Petroleum Well Location. PART B.

Surveys for Pipeline Licence Locations. PART C.

Surveys for Departmental Purposes can include:

Datum Post locations. See datum post p.21
 Restricted Areas
 Investigation surveys
 Special requirements for miscellaneous surveys shall be outlined in Departmental Instructions

TENEMENTS

The Act no longer defines the term. A definition of mining tenement may be found in Sec. 7.1. of the Mining Act 1968, for the purposes of that Act.

For general tenure information, reference may be made to:

Abbreviations p.11

Interpretation Sec. 5 of the Act - "Act relating to mining"

Schedule, Clause 2(1), 3(1)(a).

TITLES

Further details in the relevant Acts should be checked for the following titles issued by the Department.

Prospecting Permit:	No survey plan required
Mining Claim:	Survey plan only required if requested by applicant, grantee or the Minister
Exploration Permit:	No survey plan required unless requested by the Minister
Mineral Development Licence:	No survey plan required unless requested by the Minister
Mining Lease:	Survey plan could be required
Petroleum Lease: (Surface Area Only)	Survey plan required Sec 37(iii) Petroleum Act
Pipeline Licence:	Survey plans required (See PART B)

UNLODGED SURVEY PLAN

Should a survey plan not be lodged within the prescribed period of 60 days of the completion of the survey, a surveyor shall lodge a copy of the survey plan in the Department of Minerals and Energy, (Surveyors Regulations 28(2)).

The copy is enrolled as a Red Catalogue Numbered plan (Red Cat.). The Red Cat will be replaced by the survey plan when lodged.

A Red Cat is available for searching as a record of unexamined survey information only.

VARIATION

The surveyor should note that:

Provisions exist to vary a mining claim. Secs. 53(4) and 82.
Conditions and boundaries may be varied on a mining lease. Secs. 294 and 295.

Access may be varied under Secs. 125, 231 and 317.

Variations to a Mining District under Part 2 could affect the surveyor

- (a) by administrative change to the point of lodgement.
- (b) by descriptive changes to the title block on a survey plan.

Variations to agreements in other Acts may affect boundaries or titles. Sections of those Acts referring to variations have been listed at pages 51-57.

WATER RIGHT

A water right, was a right to use the surface of the land for the purposes of water storage, conveyance and usage, pursuant to Part IV of the Regulations under the Mining Act 1898. The right is no longer issued by the Department, but may be perpetuated by franchise agreements. Old Water Rights may have influenced the land available to some existing mining lease or surface areas.

A search in the mining registrar's office or physical evidence on the ground may indicate whether a provision should still be made for water use by excluding an area from the surface area or lease or by setting special conditions over the lease.

Present usage diversion and appropriation of water is subject to the Water Act administered by the Water Commercial, Department of Primary Industries (WRC).

The preferred option to obtain water and/or other services may be obtained by application for a mining lease for carriage through or over land under Sec. 316.

In any case, queries relating to water rights should be referred to the Chief Surveyor.

Water Commercial issues a Water Works licence to draw water from a watercourse. The licence may be issued over adjoining lands upon production of a written agreement between the applicant for the licence and the land holder. (Details may be obtained from the Client Services Division, Commercial)

Note: Pursuant to Sec. 316 of the Act a lessee may apply for an adjoining lease for purposes other than, but associated with mining.

ADDITIONAL ACTS ADMINISTERED BY OR PERTAINING TO SURVEYS FOR THE DEPARTMENT OF MINERALS AND ENERGY

Knowledge of the following Acts may be required by the surveyor when undertaking survey work affected by the relevant act. The tabulation shows the act, the section and notes pertinent to that section which may be relevant to survey. When effecting surveys under a particular act, notwithstanding that instructions may be issued to effect surveys, the surveyor should familiarise himself with the whole of the particular act as sections and notes may not be tabulated.

The Acquisition of Lands Act and the Transport Infrastructure (Railways) Act have been included, as actions frequently carried out on background or adjoining tenures affect either conditions appertaining to mining or rights attached to surface areas or the whole of leases.

ACQUISITION OF LAND ACT 1967-1969.

Sec.4 Part I	Meaning of Terms
Sec.5(1)(a)PartII	Purposes for which land may be taken
Sec.5(2) Part II	Land required for incidental purposes
Sec.6 Part II	Easements
Sec.7 Part II	Notice of Intention to Resume
Sec.12 Part II	Effect of Proclamation
Sec.13 Part II	Action on small severance
Sec.14 Part II	Title dealing of affected land by resumption
Sec.15 Part II	Taking by agreement
Sec.36 Part V	Powers of Entry
Sec.41 Part V	Disposal of Land
Sec.43 Part V	Publication of Proclamation
Second Schedule	Purposes for which land may be taken

ALCAN QUEENSLAND PTY LIMITED AGREEMENT ACT.

Sec.1	Meaning of Terms
Sec.3	Variation of Agreement
Sec.4(2)(d)	Surveys
Sec.8	Term of Lease
Sec.9	Purposes of Lease
Sec.10	Form of Lease
Sec.11	Renewal of Lease
Sec.12	Number of Leases
Sec.17(d)	Areas of regeneration
Sec.22	Leases other than for designated Minerals
Sec.24	Special Perpetual Mining Purposes Leases
Sec.25	Other leases granted to Company
Sec.27	Surveys

Sec.33(a)	Exclusion from Local Authority Area
Sec.34	Separate Local Authority
Sec.35	Local Authority Provisions
Sec.36	Town Commission
Sec.43	Dedication of Roads
Sec.44	Additional Special Bauxite Mining Lease
Sec.46	Right of Access
Sec.47	Surrenders
Sec.55	Term of Lease
First Schedule	Description of Lease
Second Schedule	Conditions of Lease
Third Schedule Nos.1 & 2	Special Perpetual Mining Purposes Leases

AURUKUN ASSOCIATES AGREEMENT ACT 1975.

Sec.2 Part I	Interpretation
Sec.9 Part III	Surveys
Sec.19(2) Part III	limit of unrestored mining area
Sec.20 Part III	Surface rights to others
Sec.21 Part III	Mines Regulation Act to apply
Sec.23 Part III	Mining Lease for Coal
Sec.24 Part III	Renewal of Lease for Coal
Sec.26 Part III	Other Mining Leases
Sec.27 Part III	Special Mining Purposes Lease
Sec.3 Part V	Survey and Construction (Harbour Works)
Part VI	Town planning provisions including survey
Sec.8,9 Part VII	Land and Survey Provisions
Sec.10 Part VII	Road Dedication
Sec.10 Part VIII	Surrender
Second Schedule	Description

CENTRAL QUEENSLAND COAL ASSOCIATES AGREEMENT ACT 1968.

First Schedule	Description
Second Schedule Clause 3	Marking
Second Schedule Clause 4	Survey
Sec.1(5) and 1(6) Part III	Additions and Surrenders
Sec.2 Part III	Limit of number of leases
Sec.6,11 Part III	Surveys
Sec.25 Part III	Grant of lease
Part VIII	Provisions relating to land
Sec.2(2) Part IX	Acquisition by Minister
Sec.4 Part IX	Acquisition by Company
Sec.5(3) Part IX	Grant of leases
Sec.13 Part IX	Zoning

COAL MINING ACT 1925 AND PRINCIPAL RULES 1985

Sec.46	Drainage Plans
Sec.57	Certificates
Sec.57D 57E	Mine Surveyors Certificate
Rule 6	Surveying Experience
Rule 8	Certificate Application
Rule 9	Examination requirement
Rule 10	Examination exemption
Rule 11	Recognition of qualifications

COMMONWEALTH ALUMINIUM CORPORATION PTY LIMITED
AGREEMENT ACT OF 1957.(References below are to the Schedule)

Sec.1	Meaning of Terms
Sec.4(2)(b)	Investigations Surveys
Sec.8(a) & 8(b)	Term of Lease
Sec.9(a) & 9(b)	Area of Lease
Sec.10	Purposes of Lease
Sec.13	Areas of Lease
Sec.16(b)	Surrenders
Sec.19	Restoration of Surface Area
Sec.25	Title for other minerals
Sec.27	Special Perpetual Mining Purposes Lease
Sec.28	Grant of other leases
Sec.30	Survey Requirements
Sec.31	Resumption for inundation
Sec.37	Harbour Survey
Sec.43	Areas to be set aside
Sec.44	Constitution of separate Local Authority
Sec.45	Local Authority constraints
Sec.46	Construction of Local Authority
Sec.53	Dedication of Land
Sec.54	Application for lease elsewhere in field
Sec.56(a)	Right of Access
Sec.56(b)	Use of Roads
Sec.57	Surrenders
Sec.58(a)(vi)	Neglects to Surrender
Sec.60	Reference to Tribunal
First and Second Schedules	Descriptions of Leases
Fifth Schedule Nos.1 & 2	Special Perpetual Mining Purposes Lease

GREENVALE AGREEMENT ACT 1970

Sec.2	Meaning of Terms
Part III	Special Minerals Leases
Part VII	Provisions Relating to lands
Sec.4 Part VIII	Value of Lands
Sec.7 Part VIII	Provision of Services
Sec.10 Part VIII	Zoning
First Schedule	Special Mineral Lease
Third Schedule	Railway Route
Fourth Schedule	Water Use Boundaries

GENERAL RULES FOR UNDERGROUND COAL MINES 1983

Sec.54.1	Mines Working (Not Cadastral) Plans
Sec.54.2	Mines Working (Not Cadastral) Plans

METALLIFEROUS MINING REGULATIONS 1985

Sec.13.10	Certificate qualification
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MINERAL (SUBMERGED LAND) ACT 1981 (Commonwealth)**MINES REGULATION ACT OF 1964**

Sec.5 Part I	Meaning of Terms
Sec.6(1)	Application of Act
Sec.9(3) Part III	Board of Examiners
Sec.11(8) Part III	Mine Survey Certificate
Sec.13 Part III	Fences
Sec.15(2) Part IV	Inspection of Mines
Sec.45 Part IV	Action against Certificate holder
Sec.51 Part IV	Survey of Underground workings
Sec.52 Part IV	Viewing of Survey Plans
Sec.53 Part IV	Applications to Warden to enter a mine
Sec.54(1)(k) Part V	Regulations
Sec.121-128 Part VI	Signals
Part XI	Certificates

MINING (FOSSICKING) ACT 1985**MOUNT ISA MINES LIMITED AGREEMENT ACT 1985**

Sec.2 Part I	Meaning of Terms
Sec.2 Part II	Mining Lease Provisions
Schedules AtoG	Descriptions and Agreements

OPEN CUT COAL MINE SPECIAL RULES

Rules 66-70

Duties of Surveyor

PETROLEUM ACT 1923-1988

Sec.3 Part I	Interpretation of Terms
Sec.6 Part II	Reservations in Crown Grants
Sec.8 Part II	Land may be resumed
Sec.9 Part III	Grant of permits and leases and excluded area
Sec.9A (2) Part III	Survey Fee
Sec.14(3) Part IV	Plan for Application for permit Unsurveyed land may be surveyed
Sec.19 Par IV	Marking the land
Sec.28 Part V	Grant of Leases
Sec.29A Part V	Grant of Leases to others than holders of A to P or permit
Sec.31 Part V	Form and Term of Lease
Sec.37(i) Part V	Use and occupation of mining
Sec.37(iii) Par V	Survey of surface area
Sec.38	Surrender of lease
Sec.44(a) Part VI	Rights reserved easements and rights of way
Sec.45(2) Part VI	Permission to enter lands
Sec.45(3)(a) Part VI	Grant of licence
Sec.45(4) Part VI	Consent to deal with land granted or licensed
Sec.45A(2) Part VI	Grant of easement over Crown Land
Sec.45A(4) Part VI	Use of pipeline without rights to land
Sec.45B Part VI	Acquisition of land and compensation
Sec.45C Part VI	Rights of license
Sec.45D Part VI	Crossing of railways roads etc
Sec.45E Part VI	Registration and effect of easements
Sec.45F Part VI	Petroleum Product Pipelines
Sec.48 Part VI	Restriction on location of drills
Sec.54A Part VI	Powers of "The Secretary for Mines"
Sec.56 Part VI	Right to mine for other minerals
Sec.59 Part VI	Compensation
Sec.60 Part VI	Power to agree to Compensation
Sec.61 Part VI	Measure of Compensation
Sec.61(A) Part VI	Union of Leases
Sec.62(A) Part VII	Reference to Geodetic Datum

PETROLEUM REGULATIONS (LAND) 1966

Regulation 5	Meaning of Terms
Regulation 117	Location Survey
Regulation 128	Adjacent sub-surface mine connections
Regulation 129	Adjacent Boundary Connections

PETROLEUM (SUBMERGED LANDS) ACT 1982.

Sec.8	A.G.D. for reference point
Sec.17	Graticulation (block description)
Sec.38	Adjacent blocks
Sec.64	Pipeline Licence Application
Sec.65	Pipeline Licence Grant or Refusal
Sec.100	Drilling proximity to boundaries
Sec.121	Survey of wells

QUEENSLAND CEMENT AND LIME COMPANY LIMITED AGREEMENT ACT 1977.

Schedule A	Description
Schedule B	Freehold Description
Schedule C	Pipeline Route

SURVEY CO-ORDINATION ACT 1952**THE MINERAL RESOURCES (ADJACENT SUBMARINE AREAS) ACT OF 1964.**

This Act reasserts the application of The Coal Mining Acts and The Petroleum Act with respect to the exploration of the sea- bed and sub-soil.

Sec.6 Exemptions or amendments to land by Orders in Council**THIESS PEABODY MITSUI COAL PTY LTD AGREEMENT ACTS 1962-1965**

Sec.2 Part I	Interpretation
Sec.4 Part I	Variation of Agreement
Sec.7 Part II	Right to Prospect for Coal
Sec.8 Part II	Surrender of Portion of Lands
Sec.9 Part II	Variation of Lands in First Schedule
Sec.15 Part II	Conditions re prospecting on Private Land
Sec.18 Part III	Grant of Special Coal Mining Lease
Sec.19 Part III	Purposes of Coal Mining Lease
Sec.21 Part III	Conditions re Private Land
Sec.23 Part III	Term of Special Coal Mining Lease
Sec.26 Part III	Surveys
Sec.31(d) Part III	Area of affected land
Sec.32 Part IV	Survey of Railway Route
Sec.33 Part IV	Company to make Railway
Sec.35 Part IV	Railway Route Plans
Sec.37(4-8) Part I	Company Rights to Railway Lands
Sec.40 Part IV	Width of land for Railway
Sec.42(2)(3) Part IV	Substituted Road Widths
First Schedule	Description of Area

TRANSPORT INFRASTRUCTURE (RAILWAYS) ACT 1991

Sec. 6.5	Accommodation Works
Sec. 6.6	Land may be taken
Sec. 6.7	Small parcels of land
Sec. 6.8	Land vests in Qld. Railways
Sec. 6.9	Taking Crown Land
Sec. 6.10	Title under repealed Act
Sec. 6.14	Railway may be road or reserve
Sec. 6.15	Width of roads
Sec. 6.16	Closure of roads
Sec. 6.18	Extension of certain roads
Sec. 6.21	Construction works on Qld. Rly. land

TRANSPORT INFRASTRUCTURE ACT 1994

**TRANSPORT OPERATIONS (ROAD USE MANAGEMENT) ACT
1995**

PART B

REQUIREMENTS ASSOCIATED WITH THE PETROLEUM ACT 1923 AND PETROLEUM REGULATIONS (LAND) 1966

PETROLEUM WELL LOCATION

ACCURACY

(a) Horizontal Control (R.117)

The connection to horizontal control will not exceed an equivalent accuracy of 1 in 4000 for a closed traverse. Unclosed traverses should be noted by the surveyor in the Field notes or report, as having been check measured, and be supported by a sufficient explanation of the survey methodology to demonstrate that the accuracy specification has been met.

(b) Vertical Control (R.117)

The difference in two level runs by spirit or trig. levelling shall not exceed $0.12 \sqrt{K}$ metres where K is the distance in kilometres from the well to the established bench mark.

APPROVAL

(a) Alternative Survey Methods, Control Points.

Where doubt exists as to the acceptability of a proposed survey method or a proposed survey control point, the Chief Surveyor, Department of Minerals and Energy should be contacted in writing setting out all the relevant details for his approval or otherwise.

(b) To Carry out Petroleum Well Location Surveys.

Regulation 117(1) of the Petroleum Regulations (Land) 1966, requires that the location and elevation of a well be determined by survey by a person approved by the Minister.

Persons seeking approval to perform Petroleum Well Location Surveys should apply in writing to the Chief Surveyor, Department of Minerals and Energy. The application should outline the applicant's qualifications and experience. Approval is then at the discretion of the Minister.

Approval is generally consistent with registration of the applicant by the Surveyors Board of Queensland or in some cases its interstate equivalent. In cases where it is planned to use cadastral boundaries for location of a Petroleum Well, proof of cadastral experience may be required.

BENCH MARKS - (R.117(1)(d))

A vertical connection should be made from the well to a new suitable permanent bench mark established within 200m of the well. A suitable horizontal Reference Mark may be used as the bench mark. The accuracy should comply with that stated above.

BOUNDARIES - (R.129)

A relationship to any adjacent Petroleum Title Boundary within 1.61 kilometres (1 mile) of a well is required.

Sec.48 A relationship is required to any boundary on a Petroleum Prospecting Permit, Petroleum Lease or Authority to Prospect (administered as Petroleum Exploration Permit) on which the well is situated and which is within 60m of that boundary.

In most cases these boundaries are defined by unmarked parallels of latitudes and longitudes only, and a calculated connection may be made.

CADASTRAL CONNECTION - (R.117)

The location of a Petroleum Well may be effected by connection to the cadastral network (See Approval - To carry out Petroleum Well Location Survey p.56) and the co-ordinates of the well then scaled from an approved map (See Co-ordinates below).

CERTIFICATE - Surveyors

The new Minerals and Energy plan form provides the appropriate certificate on the reverse side. The relevant window on the face of the plan should also be completed. The old plan forms may be used until stocks are exhausted. See example in S.O.M. E2-136 (3.3.2).

CO-ORDINATES - (S.61)**a) General**

Geographic and A.M.G. co-ordinates of the Well are required for all Petroleum Well Locations.

Co-ordinates should be shown in accordance with the current S.O.M. and clearly labelled AMG-84(66), AGD-84(66) as appropriate.

b) Methods

(i) **Calculation:** Although Petroleum Well Location Surveys may be of the accuracy referred to on p.56, the aim is to generate the best possible co-ordinates from the available data. To achieve this, calculations should be performed in accordance with the National Mapping Council Special Publication 10, "The Australian Geodetic Datum, Technical Manual". Formulae from other sources may be used, but should be included in the field notes with the calculations.

(ii) **Scaled:** When co-ordinates are obtained by scaling from an approved map *by a cadastral connection* they should be shown to plotting accuracy, that is, the nearest 0.5 seconds in latitude and longitude and the nearest 10 metres in A.M.G. A statement should be shown on the face of the plan stating that the co-ordinates have been obtained by scaling from a map (show the approved map name and scale).

- (iii) Transformation: Only one set of co-ordinates may be scaled per plan with any other co-ordinates being derived mathematically from that set.
- (iv) Translocated: When co-ordinates are derived by an approved translocation technique using satellite surveying methods, a statement to that effect giving a description of the origin of the translocation should be shown on the face of the plan.

The co-ordinates and description of the origin used are to be shown on the plan in cases (i) and (iii).

DATUM

Datum should be clearly shown where a cadastral connection is used. For other cases see Origin p.62 and Meridian p.62.

DESCRIPTION - Property (see Tenure) p.63.

DISTANCE

Where a location is carried out by means of a connection to a Geodetic Network, it should be clearly stated whether distances are reduced to spheroid at Terrain Height, or at some other specific elevation.

DOCUMENTATION - (R.117)

The Regulations require that a plan and field notes be lodged with the Department within 3 months of the completion of the survey. An Oil Well Location Reference Marks Sketch Plan is also required to be lodged.

The plan is to be drawn on a standard Department of Minerals and Energy plan form showing all relevant horizontal location information. The old plan forms may be used until stocks are exhausted.

Complete field notes containing horizontal and vertical location information, meridian observations, details of origins (horizontal and vertical) and reports or comments by the surveyor on the survey are required. The field notes should be unambiguous in the co-ordinate datum used and nominate co-ordinate transformation parameters used.

An "Oil Well Location Reference Marks Sketch Plan" (blank forms available from the Chief Surveyor) is required to show all elevation details including the level of the Well and Bench Marks placed, a description of the mark used for level datum and its value, the method used to determine the height and the location of reference and Bench marks placed at the Well.

If a permanent mark is placed during the course of the survey, it is the surveyor's responsibility to lodge a permanent mark sketch plan (Form 6) (under the Survey Co-ordination Regulations) with the Department of Lands. A copy only should be lodged with the Department of Minerals and Energy.

DOPPLER

See Satellite Surveying Methods p.63.

DRAFTING

All plans should be drawn in accordance with the procedures outlined in the current Survey Plan Guidelines. Additional information which may be shown is available on example plans, copies of which are obtainable from the Chief Surveyor.

ELEVATION - (R.117)

- (a) The elevation of a well is to be related to A.H.D. and may be derived in a number of ways.
 - (i) Spirit levelling
 - (ii) Trigonometric levelling using reciprocal vertical angles and E.D.M.
 - (iii) Satellite derived methods (See Satellite Surveying Methods p.63).
 - (iv) Barometric Heighting - previously, when no established control was located within 80 kilometres of a well, a surveyor could apply to the Chief Surveyor for approval to establish the elevation of a well by Barometer. However, since the introduction of satellite surveying technology and a more extensive network of control available, approval for barometric heighting is no longer given.
- (b) Accuracy - See Accuracy (b) Vertical Control p.58.

All details of the levelling for the well are recorded either in the field notes or on the Oil Well Location Reference Marks Sketch Plan (see Documentation p.60).

FEES

A lodgement fee as determined from time to time shall be paid with the lodgement of each plan.

FIELD NOTES - See Documentation p.60.

G.P.S. - See Satellite Surveying Methods p.63.

HEIGHT - See Elevation p.61.

INTERPRETATION OF TERMS. Reg.5 Part 1.

LEGISLATION

Provisions of the Petroleum Act 1923-1988 and the Petroleum Regulations (Land) 1966 state the survey requirements for the location of a well.

LOCATION

- (a) **General:**
To show the general location of a Well, a locality sketch and/or speedo traverse should be shown on the plan. This is not necessary if connections to cadastral boundaries, occupation and other distinctive features in the vicinity of the Well are shown.
- (b) **Surveyed: R(117)**
A connection to the cadastral or geodetic network by traverse, other terrestrial survey methods, Doppler or G.P.S. translocation is acceptable if it can be shown to meet the specified accuracy standards. (See Satellite Surveying Methods p.63).

MAP REFERENCE - See Co-ordinates (scaled) p.59.

MERIDIAN - (R.117)

The meridian of the survey is to be shown in the appropriate box in the Title Block and should be related to A.M.G. However the meridian adopted from connections to cadastral boundaries may be acceptable.

MINES - (R.128(3))

A horizontal connection to known subsurface mine workings within 3.2 kilometres of the well is required.

NAME OF WELL

The name of the well is the primary identifier of the well recorded and therefore it is paramount that it be shown correctly on all documentation.

OCCUPATION AND IMPROVEMENTS - (Reg.117(2))

A connection to all other wells, roads, railways, fences, public utility services, building or structures within 200m of the well is required.

Reg.128(1)

Limitations to the drilling of wells near improvements is stated. Therefore connections in accordance with Reg. 117(2) are required.

OIL WELL LOCATION REFERENCE MARKS SKETCH PLAN - (R.117) - See Documentation p.60.**ORIGIN**

For the calculation of co-ordinates the descriptions and values of the points from which these co-ordinates were derived should be shown on the plan.

PETROLEUM TITLE BOUNDARIES - See Boundaries p59.**PLANS - See Documentation p.60.**

POINT POSITIONING

Single point positioning by Satellite Surveying is not an acceptable method of location. *That is, all connections must be closed.*

PROPERTY DESCRIPTIONS - See Tenure p.63.

REFERENCE MARKS - (R.117 (1)C)

The well shall be tied for horizontal control to two suitable permanent reference marks within 200m (10 chains) of the well. One or both of these marks may be utilised as a Bench Mark for elevation control if suitable.

REGULATIONS - See Legislation p.61.

RELATIVE POSITIONING - See Satellite Surveying Methods p.63.

REPORT

The surveyor may include with the field notes a report on the location, as well as any other aspects, clarification of which would expedite the registration of the plan.

REQUISITIONS

The Department may request further information from a surveyor to satisfy the requirements of Reg.117.

SATELLITE SURVEYING METHODS

Horizontal and vertical control by G.P.S. or Doppler should comply with the standards and specifications referred to in the current draft of the "Inter-Governmental Advisory Committee on Surveying and Mapping, Standards and Specifications for Control Surveys" at a standard necessary to achieve the accuracy referred to on p.58.

If Satellite Surveying Methods other than GPS are used to provide Co-ordinates, and an acceptable A.H.D. height is available at the horizontal control station used as the Co-ordinate datum, then the level derived for that well by a translocation process may be used for height determination, providing no established bench mark exists within 8 kilometres of the well.

See also GPS at p.33.

TENURE

All current tenures, particularly any Authority to Prospect or Petroleum Lease, over the property on which the well is located, should be shown on the documentation. (see also S.O.M, Exploration Permit E2-137)

TIME LIMITATIONS - (R.117)

Regulation 117 requires that as soon as practicable and not later than 6 months of the spudding of a well the location and elevation of the well be determined by survey by a person approved by the Minister (see Approval, p.58). Further, the regulation also requires that as soon as practicable and not later than 3 months after the completion of the survey for location and elevation of a well, the operator shall submit to the Chief Surveyor a plan (see Documentation p.60) certified as to the accuracy by the person who made the survey.

WELL - For meaning of term see Reg.5(1)

PART C

PIPELINE LICENSE LOCATIONS

Pipeline License Location (PPL) Plans are usually required by the provisions of a Pipeline License granted under S. 45(3) of the Petroleum Act 1923-1988. The land is acquired and the pipeline constructed and operated under Secs. 45A to 45F. To determine what types of plans are specified for a particular license it is necessary to refer to the clauses of the actual pipeline license document.

Generally the pipeline license documents describe a set of plans for each license, made up of 3 series of plans, as follows:

(a) Key Plan

The Key Plan serves as a reference map and may be:

one or more sheets, based on published small-scale cadastral mapping at appropriate scale or scales, bound loose-leaf in series into a suitable cover, and should show:

the undimensioned boundaries of the "route of pipeline" as granted and described in the Schedule to the License in relation to the cadastre, within which the pipeline is to be constructed,

the plotted position of the full extent of the pipeline, as laid, between "terminal points",

the name or description of the terminal points,

plan catalogue numbers for all of the plans of lands (freehold or Crown leasehold) held by the licensee for the purposes of the Pipeline License

RP and/or DOL plan catalogue numbers for all of the pipeline easement plans,

a drawing reference number for all plans of "pipeline crossings" over roads, railways, watercourses, foreshores, Unallocated State Land, etc. (i.e. all public lands crossed by the pipeline not covered by a registered easement),

Reference to the drawing numbers of the As-Constructed Engineering Plans,

Provisional AMG Co-ordinates of terminal points and at each major change of direction in the horizontal alignment of the centreline of the pipeline

An endorsement to the effect that the Pipeline License is reduced to the corridor width shown on the plans of lands, easements and pipeline crossings in the Pipeline Location Book upon the Minister's acceptance of those plans and their registration in the Department of Minerals and Energy.

The Key Plan usually requires the approval of the Chief Surveyor, under the terms of the License.

(b) Pipeline Location Book

The Pipeline Location Book is essentially a cadastral survey record of the pipeline location, and should consist of:

copies of registered easement plans for all private land and Crown land subject to the Pipeline License, together with proof of registration of the easement documents,

copies of registered plans of any other lands acquired for the purpose of, and covered by the Pipeline License, together with proof that such lands are held by the licensee,

copies of drawings to the same standard as easement plans for surveys of all pipeline crossings, as defined in the License, certified as to their accuracy by a Licensed Surveyor,

copies of all Permanent Mark Sketch Plans (Forms 6) prepared in connection with the License,

and should show:

the surveyed and dimensioned location of the centreline of the pipeline, as laid, with respect to property boundaries, continuously between terminal points,

provisional AMG Co-ordinates for at least two points on each plan.

All plans in the Pipeline Location Book are to be suitably indexed and bound in the series.

The series of plans in the Pipeline Location Book is usually required in the terms of the License to be accepted by the Minister and registered by the Department.

All plans in the Pipeline Location Book are to be suitably indexed and bound in the series.

(c) As-Constructed Engineering Plans

The As-Constructed Engineering Plans become a public record of the actual pipe location with respect to surface and underground physical features, and should consist of:

a plan (or plans) to a convenient scale approved by the State Mining Engineer of the horizontal alignment of the position of the pipeline, as constructed, in relation to road and railway formations, rivers and streams, fences, underground pipelines and cables, electricity transmission lines and other structures adjacent to the pipeline, together with the location of all valves, pumping stations, storage tanks and other facilities being part of, or in connection with the pipeline. An orthophoto map or air photo mosaic would be an acceptable base for the plan.

a longitudinal section, preferably to the same horizontal scale as the horizontal alignment plan, with an exaggerated vertical scale, showing the vertical alignment of the as-constructed pipeline in relation to the same points of detail as required for the horizontal alignment plan.

In addition:

depth of cover over the pipeline must be able to be determined,

provisional AMG Co-ordinates are required for the terminal points and each major change of horizontal direction of the pipeline,

heights are to be related to AHD,

the horizontal and vertical alignments may be shown on the same sheets,

the sheets may also show, in separate longitudinal rows, other relevant administrative, geographic or construction details as may be required by the licensee,

the sheets are to be bound, loose-leaf, in series.

It is also noted that Sec.62A of the Act (inserted 1967) provides that, where the position of any point, line or area is required for the purposes of the Act it shall be referred to the AMG.

PURPOSE OF PLANS

The purpose of the prescribed plans would appear to be to provide, (and, in the public interest, should provide) ready public access to information regarding:

- (a) the location of the Pipeline License boundaries,
- (b) references to the tenure by which the lands the subject of the License are held, and
- (c) the accurate location of the pipe.

PART D

SURVEY INSTRUCTIONS

The following instructions are an example of standard instructions issued pursuant to Sec.407 of the Act. They may be altered without notice.

In a particular instance, specific instructions may be included apart from the standard instructions 1-18.

Dear Sir,

Re: Survey of Mining Lease No.* Named "*" "
Mining District of *

In response to your letter of * you are advised that the following instructions 1-18 are issued for the survey of the above lease.

Surveys are to be effected in accordance with the provisions of the, Mineral Resources Act 1989 and Mineral Resources Regulations 1990. In particular, attention is drawn to Regulation 74.

The survey is to be carried out personally by, or under the direct personal supervision of, the approved surveyor to whom these instructions are issued.

SURVEY

1. All requisitions on survey are to be attended to promptly by the surveyor.
2. The meridian and location of the lease surveys shall be related by closed traverse connections to the boundaries of all background tenures involved. Severed areas of any lease must be provided where a lease straddles a background boundary. Where previous mining leases are connected to and have been tied into background boundaries then the Surveyor is required to supply any details in his report.
3. The meridian is to be related to A.M.G. Details should be shown in accordance with the current S.O.M. The survey shall be/ need not be connected to recognised A.M.G. co-ordinated stations.
4. Where apparent installations such as pipelines, power lines and Telecom facilities on the subject land, or so situated as likely to be disturbed by mining operations, are to be located and shown. Where natural features and improvements such as creeks, tracks and fences are intersected by the lease boundaries they should be shown.

5. Details of any unique features of historical significance could be located and documented in the survey report. e.g. chimney stacks, crushing mills etc.
6. Alternative methods of survey such as photo point identification may be used only with prior permission.
7. The surveyor shall ensure that all relevant details are known so that the survey may be properly effected.
 - (a) The surveyor shall be responsible for the search information, a copy of which may be forwarded directly to the Department of Minerals and Energy Brisbane to expedite the registration of the plan. The search information will be returned to the surveyor upon his written advice.
 - (b) Upon receipt of these written instructions the surveyor shall ensure that the application description, sketch, and details of surface area, abandonments or surrenders are obtained from the applicant or lessee and the district mining registrar's office.

BOUNDARY CONSIDERATIONS

8. **Priority of Application.** Attention must be given to the chronological priority of all mining claims, mining leases, mineral development licences, exploration permits and applications in the locality to determine the availability of land for each application under survey.
9. **Encroachment of Claims.** Reference should be made to Page E4-18 to determine how a mining claim may be dealt with under the provisions of the Mineral Resources Act. Should the determination of a surface area or boundary of the mining claim, mining lease, mineral development license, exploration permit, the subject of these directions, await a decision of the district mining registrar or warden under those provisions, immediate action should be taken as recommended.

A statement of findings in the registrar's office and evidence located on the ground should be included in the survey report. A copy of any relevant mining claim, application, description, or sketch should be included in the search information at 7(a).

10. Every endeavour must be made to contact the applicant/lessee (or authorised person) of the mining claim, mining lease, mineral development licence, exploration permit or application under survey and have that person point out the datum post and/or commencement point and application posts. Where encroachments or disputes could possibly arise the surveyor must also contact all applicants, holders and land owners affected in order to clarify applications and grants.

All landholders affected by the survey are to be contacted and made aware of the requirements necessary to effect the survey.

11. The location of datum posts and application posts of the subject and adjacent leases and claims and the markings thereon are to be recorded.

Chronological order of marking that can be expected under the various Acts is shown at Page E4--23.

Should the applicant of an adjacent claim or lease be entitled to shift his datum post under the provisions of the Mineral Resources Regulations 16 and 40 the surveyor should notify the district mining registrar of the adjacent claims or leases so entitled.

12. Evidence to support the location of the claim, lease, permit, licence or application (for example, old shafts or mine workings) should be recorded in the survey records.
13. Any surveys of a mining claim or mining lease carried out prior to a Warden's Court Hearing will be subject to his findings.
14. Mining claims, mining leases, mineral development licences, exploration permits and applications are to be marked with survey posts or *equivalent marks* where survey posts are unable to be placed. *Equivalent marks* would be a cairn of rocks, painted star picket in concrete or other similarly prominent mark. Corner reference trees are to be taken wherever possible at each corner in conjunction with other reference marks. Shields are to be chiselled with the appropriate Minerals and Energy description. Where reference trees are not available survey posts should be likewise permanently and clearly branded. *Equivalent Marks* should also be suitably marked.
15. Where Permanent Marks are required to be placed on this survey, Forms 6 are to be prepared by the surveyor as required by the Survey Co-Ordination Act 1952. Copies only should be forwarded to the Department.

PLANS

16. Plans are to be drawn in accordance with the general requirements of the S.O.M. Refer also to Page E4--40.
17. Once the survey plan has been passed correct, arrangements could be made to refund outstanding survey fees lodged under prior legislation to the M.R.A.

LODGEMENT

18. Plan(s), field notes, report, calculation sheets, Survey Record sheets and copies of Form 6's are to be forwarded to the Chief Surveyor, Department of Minerals and Energy Brisbane or the respective mining registrar's office and be accompanied by the appropriate lodgement fee.

Yours faithfully,

J. D. Bell
Chief Surveyor
Survey Unit
Tenures & Mineral Development Branch

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PART E

MINERAL DEVELOPMENT LICENCE SURVEYS

CAUTION

The survey of an MDL or an application for an MDL is not to be treated as an extraordinary survey. Part A, General Requirements, and Part D, Survey Instructions, should be read as well as Part 6 of the *Mineral Resources Act 1989*. An MDL is to be done to the same standards of marking, measurement and reinstatement as a mining lease.

OUTLINE

Unless otherwise approved by the Minister pursuant to section 226(3), a mineral development licence in respect of a mineral occurrence may be applied for by an eligible person in respect of land which, at the time the application is made, is comprised in -

- a) an exploration permit; or
- b) a mineral development licence (Sec. 179)

Note also Sections 182, 183 and 184.

The purpose of the licence is to allow activities to be carried out to evaluate the economic development of an ore body. The term is usually short, but the grant is renewable. An application for an MDL does not have to be surveyed, but the applicant, the holder, or the Minister pursuant to section 407 of the Act, may request a survey.

An MDL must sit within the prerequisite EP or pre-existing MDL. Similarly, any subsequent mining lease that arises out of the subject MDL must sit within the MDL boundaries. If either the MDL or the ML overlap the available land (ie. the pre-requisite tenure), the overlap at least is not available, even after grant. At the worst, the whole grant may be at risk.

MARKING

No ground marking of an MDL application is required by the Act. If ground marking, such as a datum post, is placed, its legal significance is not certain. If it is placed accurately by a licensed surveyor and referred to survey marks, it could come under the alternative description provisions of section 184 of the Act. See also E4--35.

DESCRIPTION

Section 184(b) of the Act says "the boundaries of the mineral development licence shall be described by accurately measured distances and compass bearings or other method acceptable to the chief executive". 184(A), (c) and (d) have similar provisions.

The meridian of MDL boundaries is critical. Since MDLs are fixed by description, a small swing in a long boundary could shift parts of the MDL off the desired land. This can be very expensive if mineralised land is excluded. The use of a compass over long distances may produce unusable results.

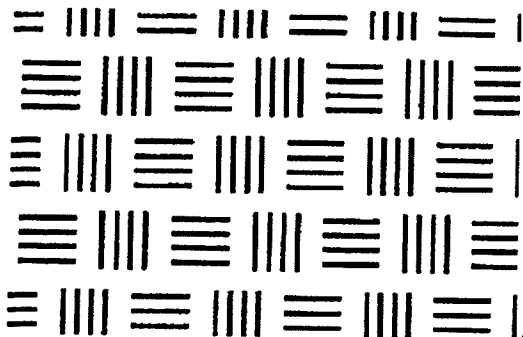
Using theodolite, chain, EDM or GPS are acceptable alternative methods of measurement. If the meridian is not magnetic, it should be on a recognised system such as AMG, and a conversion factor to magnetic meridian must be supplied.

For an alternative method of description to be acceptable, the boundaries must be capable of being reproduced unambiguously at some time in the future.

Adopting a surveyed boundary of a cadastral parcel that is shown on a registered plan is one example of an acceptable alternative description. Another is the adoption of geographical or Australian Map Grid coordinates. In this case, the bearings and distances between the corners must also be provided.

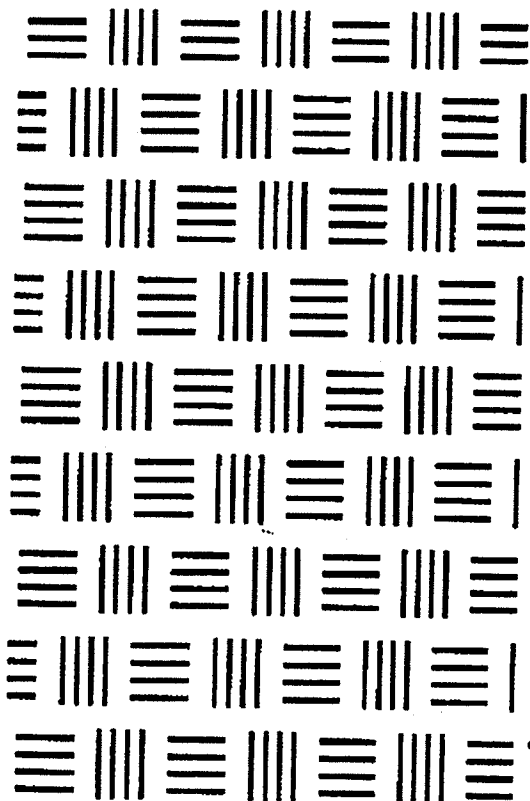
Care should be taken when both cadastral boundaries and coordinates are used to describe the same MDL. Background mapping should be carefully checked before it is used, as many Queensland maps do not have a good relationship between the cadastre and the latitude and longitude.

Note also that scaling from maps is not an acceptable alternative method of description.



Part E5

Survey Requirements of the Department of Main Roads



Department of Main Roads

**G.P.O. BOX 1412
BRISBANE QLD 4001**

Phone: 3834 2474

Fax: 3834 2998

Att: Principal Surveyor

IMPORTANT NOTE

Should a conflict arise between these Guidelines and various Acts and Regulations referred to, then the provisions of those Acts and Regulations will prevail. The Guidelines shall not be taken as a substitute for detailed professional advice.

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DEPARTMENT OF MAIN ROADS:

ENGINEERING SURVEYS ON STATE CONTROLLED ROADS

Engagement of Surveyors

Surveyors are engaged

- ◆ by the Department of Main Roads in accordance with the State Purchasing Policy,

OR

- ◆ by private sector Project Managers/Contractors acting on behalf of the Department,

to undertake engineering surveys on State Controlled Roads.

Specifications

The Department of Main Roads provides detailed specifications when it issues a brief for engineering surveys. The specifications cover the technical and safety aspects of engineering surveying on State Controlled Roads and other associated matters such as entry on to private land.

The technical requirements for each project vary and the specifications are customised to accommodate these variations.

Stringent safety requirements apply to all Main Roads Department projects. These must be observed whenever work is being undertaken on State Controlled Roads even if such work is being undertaken as a subcontractor.

Departmental safety requirements vary between engineering districts and according to classifications of the road and the traffic conditions. It is essential that the appropriate District Safety Officer be contacted prior to entering upon a State Controlled Road to undertake survey work. Any special requirements for the section of road, which is the subject of the survey, can then be established and implemented.

Work Place Health and Safety Requirements

The Department's requirements in Workplace Health and Safety are set out in the following extract from the Engineering Survey Specifications and these should be observed at all times.

4.0 Workplace Health and Safety

Main Roads, its staff and its agents have an obligation to comply with all applicable statutory legislation.

A failure to comply with the safety standards required is considered unacceptable to the Department, and grounds for the termination of the Contract. All costs associated with the safe operations of both the public and the survey personnel, for the duration of the project, is to be met by the surveyor. No additional payments will be considered for costs associated with safety issues.

4.1 General Requirements

In relation to survey work, attention is drawn to the following Acts, Regulations and Codes:

- ◆ The current Workplace Health and Safety Act, its Regulations or their successors.
- ◆ The current Codes of Practice, “approved” under the Workplace Health and Safety Act or their successors.
- ◆ The current Transport Infrastructure Act 1994, its Regulations or their successors.
- ◆ The current Traffic Act, its Regulations or their successors.
- ◆ The current Workers’ Compensation Act, its Regulations or their successors.

Following the commissioning of the project, and prior to the commencement of survey work, the surveyor shall have approved, a Quality Plan for the traffic management of the project. Such approval shall be given by the District Safety Officer. This approval in no way exempts the surveyor from his responsibility in relation to the above legislation.

The project area is defined as that area enclosed by the signage and covers the entire width of the road reserve not just the pavement surface.

No signage is to be left displayed when inappropriate, such as lunch breaks and outside normal working hours. At other times, evidence of work in progress must always be visible to the travelling public.

Access to carriageways may be restricted during times of heavy public use. The surveyor is to ensure that all work is carried out in accordance with these restrictions. Advice on these operating times may be provided by the District officer responsible for such advice.

Personnel engaged in work within the project area are to wear the necessary personal safety equipment, at all times.

Where the brief required information to be collected within a Railway Reserve, or land under the control of Queensland Rail, personnel involved in the collection of the information must have completed the Queensland Rail Safety Induction Course, prior to entry upon the land. Evidence of the course completion must be carried by the survey personnel at all times.

Prior to entry onto land under the control of Queensland Rail, the surveyor must advise Queensland Rail and conform to any requirements they may have regarding working conditions, times of operation and safety issues.

Any object placed in the project area should be within the boundary of the signage and if left un-attended, for any period, additionally identified by the use of "witches hats".

Sharp pointed objects, such as pickets, should not be placed on footpaths or in any other pedestrian area.

In order to reduce conflict with pedestrians, survey marks, either instrument stations or recoveries, should be driven "flush" or below the surface.

Personnel using power assisted equipment must have been instructed in, certified to use, or being immediately directed in the safe use of such equipment.

4.2 Roadworks Signing

The "peak" document in the State of Queensland for the placement of signage on the road reserve is the Manual of Uniform Traffic Control Devices Queensland (MUTCD). Copies of the Manual can be obtained from the Main Roads Department.

4.3 Use of Traffic Control

Where the presence of the survey party is sufficient to seriously impede or endanger the public or endanger the survey personnel themselves, arrangements should be made with the Department for the employment of traffic control personnel. In all cases where people, other than Police Officers, are to be used for traffic control, then the surveyor is to ensure that the person having the traffic control responsibility has been certified by the Transport Department as a "Certified Traffic Controller" as required under the Transport Infrastructure Act, 1994.

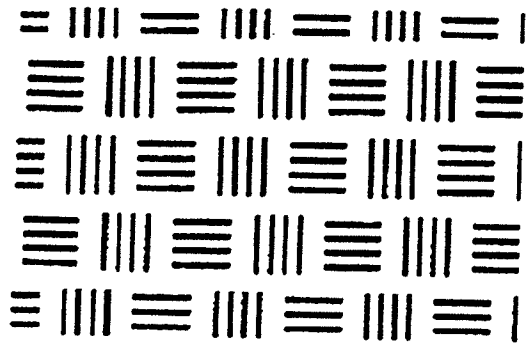
4.4 Regulatory Signs – Temporary

Despite the use of adequate warning signs and personal safety equipment, survey personnel may be at risk due to the time taken for the motorist to implement preventative action. This situation may exist in rural areas with open speed limits and poor visibility.

In such circumstances, the surveyor may make application to the District Director to install temporary speed restriction signs, for the duration of the project. Such application must be made on Form F994. If approval is granted, the surveyor must maintain details of the location, relocation and times of erection and removal of the regulatory signs, for the duration of the project.

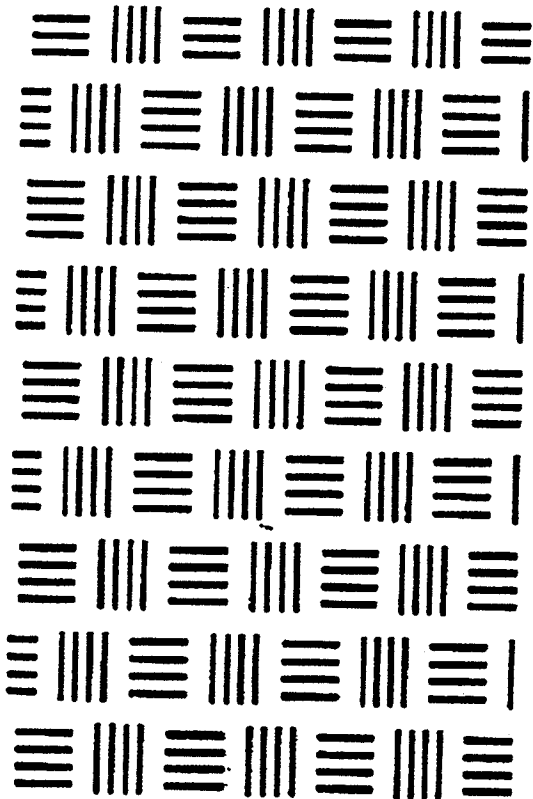
4.5 Unsafe Situations

Should an on-site work situation occur or an on-site work procedure be adopted, either of which, in the judgement of the District Safety Officer, constitutes an unsafe situation, the surveyor shall, upon being advised of it, take immediate action to rectify the situation. If the situation continues un-resolved, the District Safety Officer shall terminate the Contract.



Part F

Disciplinary Procedures



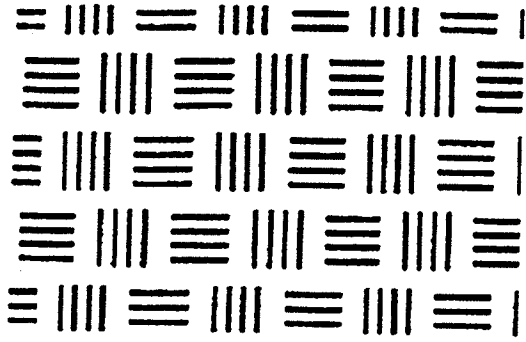
F1

Complaints Procedure

F2

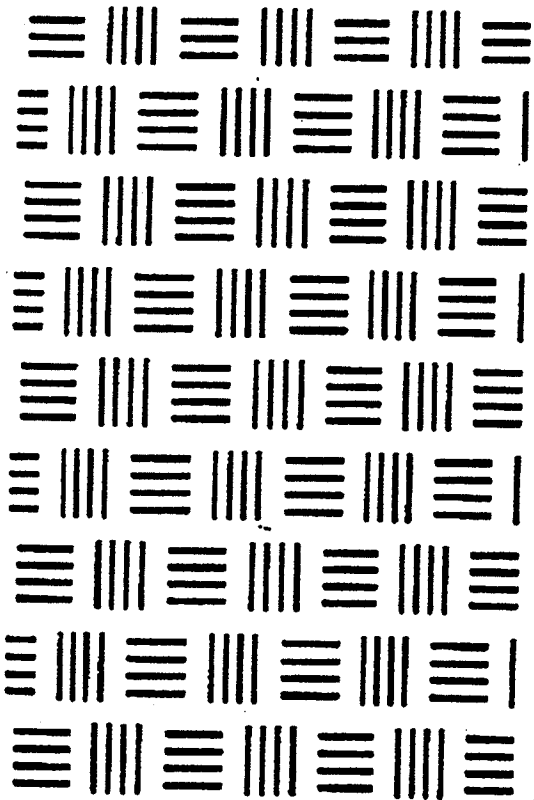
Investigation and Finalisation

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Part F1

Complaints Procedure



How a complaint can arise

and

How it may be lodged

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Complaint Receipt

1.0 Introduction

The Surveyors Act 1977 [Section 17(f)] provides for the Board to receive and investigate reports and complaints concerning the competence of surveyors, surveying graduates and surveying associates and the accuracy of their work.

Part V (Section 53A to 65) of the Act provides for the investigation of complaints and discipline of registered persons.

2.0 Background

The Complaints Committee of the Surveyors Board of Queensland was initially formed in November 1989. Due to the confidential nature of complaints, it was deemed essential that only Board Members be on this committee.

Prior to the 1990 amendments to the Act, formal disciplinary proceedings against a registered person required prosecution through a "Surveyors Disciplinary Committee", comprising a District Court Judge and two Registered Surveyors.

The 1990 amendments to the Surveyors Act (Sections 65A, 65B and 65C) provides the Board with a "Second Tier" disciplinary procedure, where in the opinion of the Board, the degree of misconduct does not warrant an appearance before the Surveyors Disciplinary Committee. The Board prepares misconduct particulars (charges), but advises the Surveyor in question that it intends to deal with the misconduct under the "Second Tier".

If the Surveyor accepts the "Second Tier", the Board's decision is final, but the degree of punishment is far less than that available to a Surveyors Disciplinary Committee. The Board would either issue a reprimand and/or a fine and/or a payment of the Board's investigative, legal, hearing and administrative costs.

3.0 Assessment of Complaint

On receipt of a complaint, the Complaints Committee determines whether or not a complaint made to the Board is frivolous or vexatious. Hence, all complaints require some degree of investigation. Under Section 53B of the Act, the Board may appoint a surveyor to carry out an investigation on behalf of the Board.

All surveyors should be aware of the cost to the Board in carrying out an investigation. For example, a complaint which does not result in any disciplinary action, yet requires some degree of investigation, could cost from \$3,000 to \$5,000 to process.

Many complaints can be avoided, in particular Surveyor to Surveyor complaints. The parties to a dispute should attempt to resolve the matter in question prior to lodging a formal complaint with the Board.

4.0 Complaints Committee – Terms of Reference

Terms of reference of the Committee were endorsed by the February 1993 Board Meeting.

4.1 Terms of Reference

- Make an initial assessment of each complaint and recommend an appropriate course of action to the Board.
- Seek appropriate advice on the complaint and associated matters and take action to bring the matter of the complaint to a conclusion in a timely manner.
- To encourage participants to a complaint to use conciliation in the first instance to resolve the complaint.
- Endeavour, where possible, to use local Town Group involvement in the resolution process, in conjunction with the Board. Where an investigator is to be appointed, brief that investigator in all aspects of their task.
- Review and consider the investigators report and make recommendation thereon to the Board.
- Provide a report to the Board on all aspects of the complaint and recommend on how the matter is to be finalised including appropriate action in cases where an offence has been committed.

5.0 Source and Detail of a Complaint

A complaint of any kind must be in writing and addressed to the Board.

5.1 Detail

Complainants are to provide sufficient detail and where available, plans and associated documentation. This will assist the Board in determining whether the complaint is within its jurisdiction.

5.2 Sources

A complaint could be sourced from a:-

- (a) Member of the public;
- (b) Fellow surveyor;
- (c) Registering authority; and
- (d) The Board itself.

5.3 Complaint by a Surveyor Against a Surveyor

Guidelines have been prepared for surveyors lodging a complaint about a fellow surveyor.

The complainant is requested to, where appropriate:

- Meet with the registered person, or representatives of the registered entity, where this is appropriate, who is the subject of the complaint and conduct meaningful discussions with a view to resolving the matter in the best interests of the profession and the parties concerned.
- Involve where appropriate, office bearers of the ISA Town Group at the location, if this may assist in resolving a surveyor to surveyor disagreement.
- Provide the following information to the Board in the event that the matter cannot be resolved by discussion:-
 - The complainant's name, address, telephone and facsimile numbers, qualifications and experience, occupation and place of employment.
 - The name of the registered person or entity who is the subject of the complaint and state their address, telephone and facsimile numbers, qualifications, occupation and place of employment if known.
 - A brief succinct and factual statement of the complaint.
 - A background history to the complaint and an outline of the steps that have been taken so far in order to resolve the matter. Full details to substantiate the complaint.
 - A statement of any deemed non-compliance with the Surveyors Act and Regulation, setting out the appropriate Sections which may apply and the grounds relied upon by the complainant.
 - Details of any previous complaint lodged by the complainant.
 - A supporting statement from any person who is able to substantiate the validity of the complaint, where this is appropriate.
 - Copies of all relevant reports and plans and any other evidence which relates to the complaint.

6.0 Administration

Where an enquiry or verbal complaint is received, at the Board's office, staff would request the party to commit the matter in writing to the Board.

Upon the receipt of a written complaint the Administration Officer:

- acknowledges receipt of the complaint.
- advises the Executive Officer.
- refers the complaint to the next meeting of the Complaints Committee.

The Board reviews the material and places a categorisation on the complaint based on the information available to it. It endeavours to establish whether a complaint is frivolous or has substance. Further, it attempts to determine the type of allegation, whether it relates to Negligence and/or Incompetence and/or Unprofessional conduct and/or Breach of Contract and/or a vexatious allegation or simply a notification of an event that has occurred or some appropriate allegation in terms of the Act.

If the matter is considered as requiring urgent action, a flying minute is prepared setting out a summary of the complaint and the recommended action to be taken.

The Committee at its meeting:-

- Considers the complaint and associated report.
- Determines the nature of the complaint.
- Establishes if the matter is assessed as not constituting a complaint.
- Determines the likely impact on third parties or the public interest.
- Recommends an appropriate action to the Board:
 - able to be resolved by a discussion/meeting,
 - seek further information from the
 - complainant
 - accused,
 - appoint an investigator and determine the type of investigation, eg. field, interview or both,
 - other action.

7.0 Board's Disciplinary and Arbitration Role

Allegations of an error, a misunderstanding between parties or a breach of contract will not necessarily constitute grounds for a complaint under the Act. Grounds may exist for matters to be rectified and for aggrieved parties to be compensated, but these are not necessarily for the Board to determine or to be involved in. If the registered person's conduct following these events is allegedly unsatisfactory, the Board then has a duty to consider that conduct.

7.1 Vexatious Complaint

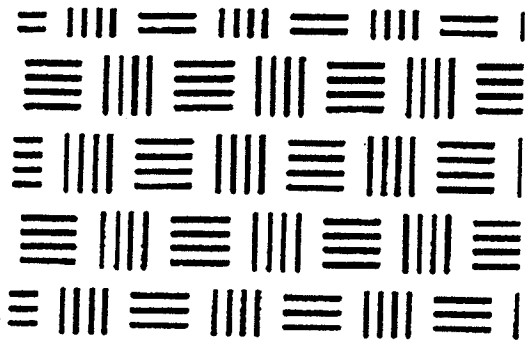
The Board takes care to identify matters of a vexatious or mischievous nature, and that appropriate action is taken on these. The reason for a complaint being lodged would be sought. If negligence, incompetence or misconduct are not alleged, what grounds could one surveyor have for complaining about another, especially if the complainant has not contacted that surveyor in an effort to have the matter rectified?

7.2 Arbitration

Arbitration probably only applies to complaints by surveyors against surveyors or by the Registering Authority against a surveyor. The Board would generally not involve itself in disputes between members of the public and surveyors and where litigation is possible.

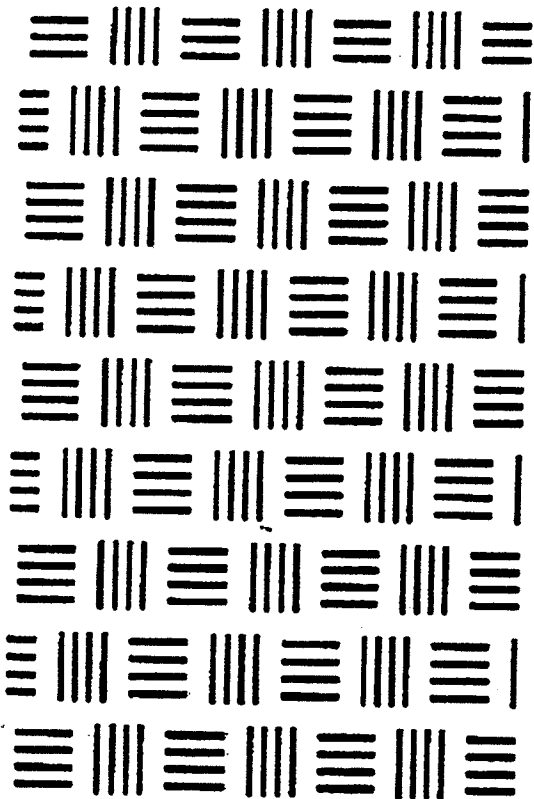
Where surveyors are in dispute over matters other than of a technical nature, the Board considers that surveyors should consider seeking assistance from an arbitrator.

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Part F2

Investigation and Finalisation



**Avenues of gathering
information on a complaint**

and

**How a complaint may be
finalised**

INDEX

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Investigation

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Investigation

1.0 Investigations

The Board, having determined the type of and seriousness of a complaint, would then establish a course of action to deal with the matter. In respect of matters of negligence, dishonesty, incompetence and/or unprofessional conduct, the Board has a duty under the Act to deal with those complaints.

There is however no requirement for the Board to proceed in matters of breach of contract, a vexatious or mischievous allegation, matters of misunderstanding and procedures which may involve claims against professional indemnity insurance.

After considering the nature of the complaint, the Board may determine that it requires further information or evidence. This may then be gathered in a number of ways as set out earlier. Where an investigator is appointed under Section 53B, the powers of the investigator are set out in Sections 53C, 53D and 53E of the Act.

An investigator, before accepting an appointment, should be aware that he/she may be required to assist in the drafting of charges against a fellow surveyor where required and may be called upon to give evidence before a Surveyors Disciplinary Committee or a Civil Court.

2.0 Investigation and Disciplinary Action where Civil Action is Possible

The Board has a duty to administer the Act and it would not be deterred because civil proceedings may take place in another jurisdiction. If a complainant (plaintiff) requests that the Board await the outcome of other actions, legal advice would normally be sought.

The Board would proceed in the normal manner with an investigation and the assessment of evidence and type of action to be taken, even though it is aware that a civil action is proceeding.

3.0 Notification of Investigation

The Board, when appointing an investigator, would determine how the person under investigation is to be advised. The following is taken into consideration:-

- Courtesy to the registered person being investigated.
- Appropriate timing to ensure that the investigating surveyor's role is facilitated.

- Where it is established that a field investigation is not required, the registered person would be advised of the investigators appointment by the Board, at the same time that the Board appoints the investigator.
- Where the Board determines in its preliminary assessment of the file that field evidence should be obtained, or where it requests the investigator to confirm that he may need to obtain field data, then the investigator would advise the registered person of the investigation in a timely manner, but no later than when the field investigation is commenced.

Finalisation

4.0 Courses of Action on an Investigators Report

The Board has a number of courses of action available to it on receipt of an investigators report. (Those complaints not requiring an outside investigator will have been dealt with and finalised). These courses are:

- 4.1** Report indicates no breach of Act and/or Regulation and this is confirmed by the Board.

Brief written response to complainant and defendant. Board file closed.

- 4.2** Report indicates a breach of Act and/or Regulation. The Board confirms this and determines the breach is of a minor nature. The Board may proceed in two ways:-

4.2.1 Report indicates minor breach, which the registered person under investigation has acknowledged to the investigator. On the basis of the report, the Board resolves to note the surveyors file and advises the person of the action.

4.2.2 Report indicates minor breach, which may or may not be acknowledged by the surveyor. The Registered person is required to appear before the Board. After his/her appearance, the Board resolves its action on the matter, and advises the Registered person of this at his/her appearance and confirms this in writing.

The Board does not intend to deal with the matter under Section 65A, (2nd tier) and as such, a reprimand only can be instituted.

4.3 Report indicates a breach which is either of concern or of a serious nature. The breaches warrant the drawing up of misconduct particulars (charges). The misconduct particulars may be dealt with by the Board (S65) or the Surveyors Disciplinary Committee (S53).

The gravity of the offence would determine whether the registered person is offered the option of coming before the Board or whether the matter should proceed to the Surveyors Disciplinary Committee.

4.3.1 Where the Board elects to proceed via Section 65A (2nd tier), the provisions of Section 65B would be implemented.

The person under investigation is advised of the charges, and is given the option of having the misconduct particulars (charges) dealt with by the Board. If this offer is not accepted, then the charges must be dealt with by the Surveyors Disciplinary Committee.

The plaintiff can answer the misconduct particulars in writing and may also appear before the Board. Questioning of the person would usually be limited to seeking clarification on the matters set out in the misconduct particulars.

4.3.2 Where the breaches are of a serious nature, or the plaintiff elects not to appear before the Board, the misconduct particulars become charges and are dealt with by the Surveyors Disciplinary Committee.

The Surveyors Disciplinary Committee is comprised of a Judge of the District Court and two appropriately qualified Registered Surveyors.

5.0 Penalties

The Board may take disciplinary action where misconduct particulars are found proven by imposing a fine, admonish or reprimand the person or adjourn the matter. The Board can also order a person charged with misconduct, to pay to the Board costs associated with the investigation, for its legal advice and the hearing and administration of an action.

The Surveyors Disciplinary Committee has wide powers under Section 61 and where it finds a charge proven, it may do one or more of the following, reprimand, fine, correct defective work, order payment for the cost of correcting work, restrict the persons' practice to a particular category of surveying for a period of time, suspend the persons' registration, cancel the registration and/or endorsement of the person, and make orders as to costs, including investigation, legal, administrative and hearing costs.

6.0 Appeals

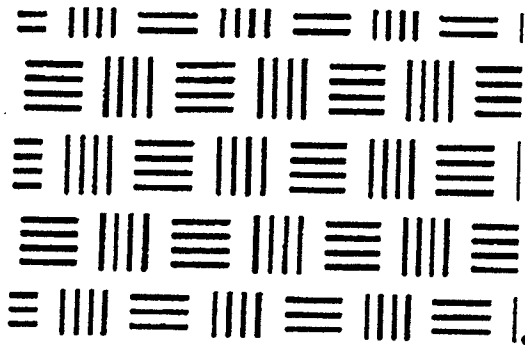
A person may only appeal against a decision of a Surveyors Disciplinary Committee on a point of law, (Section 65(2)).

There is no mechanism for appeal under Section 65A.

7.0 Publication by the Board

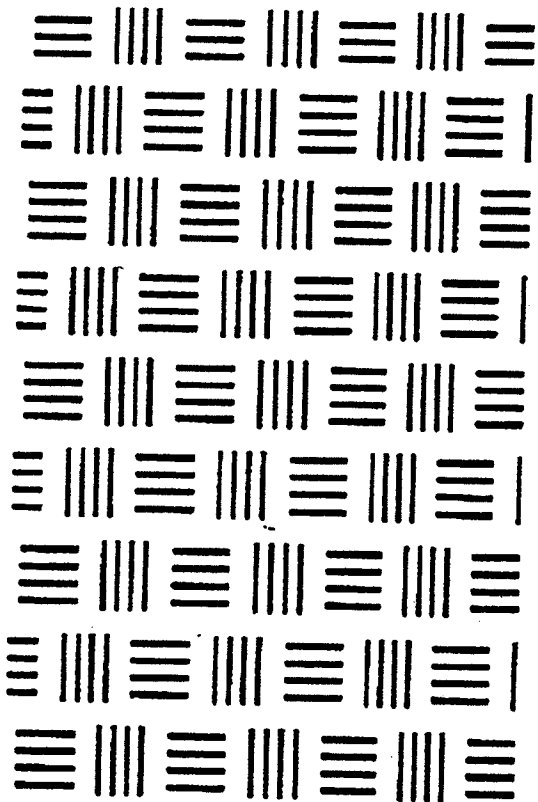
Decisions of a Surveyors Disciplinary Committee (Section 61) where the decision includes an action which amends the registration of a registered person, are to be published in the Government Gazette. All other decisions of a Surveyors Disciplinary Committee shall be published in the Board's Annual Report and may be published in the Queensland Surveyors Bulletin.

Decisions of the Board, under a Section 65A hearing, and where the misconduct particulars are upheld (found proven) shall be published in the Board's Annual Report and may be published in the Queensland Surveyors Bulletin.



Part G

Surveyors Board Forms



**Specimen copies of all forms
used by the Surveyors Board
and approved by the Board
under the Surveyors
Regulation 1992**

**Persons requiring forms
should contact the Board's
office for originals**

Forms

The Forms set out in this Part, being Nos 1 to 19, shall be used for the purposes for which they are respectively applicable.

A Form as approved by the Board shall be completed in full or as so stated on the Form.

The Board, under the Surveyors Regulations 1992, Section 3, has duly considered the format of the attached Forms Nos 1 to 19 and adopted the use of such forms.

The implementation date for the Forms is as notated on each Form and the Index.



EC Cottrell President
Surveyors Board Of Queensland

Note:

**The Board Forms included in this Manual are Specimen Copies Only.
Persons requiring forms should contact the Board's office**

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Form 1	Effective Date From
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Application for Registration as a Surveyor by a Body Corporate - Solicitors Certificate	September, 1995

Form 11**Effective Date
From**

Application for Renewal of Registration as a Surveyor by a
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Form 12

Certificate for Survey Records September, 1995

Form 13

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Form 14

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Form 15

Certificate of Registration as a Surveying Graduate..... September, 1995

Form 16

Certificate of Registration as a Licensed Surveyor or
Surveyor September, 1995

Form 17

Recertification of Cadastral Plan..... August, 1993

Form 18

Certificate for Cadastral Plans - Compiled August, 1993

Form 19

Certificate of Endorsement..... September, 1995

Form 1
QUEENSLAND

Surveyors Act 1977 (Ss. 38A and 39)
Surveyors Regulation 1992 (Section 6)

APPLICATION FOR REGISTRATION AS A SURVEYING ASSOCIATE

To: The Secretary,
Surveyors Board of Queensland.

I, _____ of
(Full Name)

Residential Address: _____
Postal Address: _____
Date of Birth: _____
Telephone No. (Business) _____ Fax No. _____
Name & Address of Employer: _____

_____ hereby apply
for registration under this Act as a Surveying Associate. In support of my application, I enclose the
following documentary evidence:- +

Checklist

<input type="checkbox"/>	application fees;	<input type="checkbox"/>
<input type="checkbox"/>	copy of diploma or other certificates;	<input type="checkbox"/>
<input type="checkbox"/>	statement of practical experience;	<input type="checkbox"/>
<input type="checkbox"/>	supporting statements from employer/supervisor;	<input type="checkbox"/>
<input type="checkbox"/>	two references to good fame and character (dated within last 12 months);	<input type="checkbox"/>

Date: _____

Signature of Applicant

* Insert residential and postal address, and telephone and facsimile numbers.

+ Copies of diplomas and other relevant certificates, copies of references as to good fame and character, and copies of documents showing particulars of the practical experience relied on by the applicant for the purposes of registration.

September 1995

<i>Office Use Only</i>
FEE:
DATE:
REC NO:

Form 2
QUEENSLAND

Surveyors Act 1977 (Ss. 38 and 39)
Surveyors Regulation 1992 (Section 7)

APPLICATION FOR REGISTRATION AS A SURVEYING GRADUATE

To: The Secretary,
Surveyors Board of Queensland.

I, _____, of
(Full Name)

Date of Birth:

* Residential Address:

Postal Address:

Telephone No. (Business) _____ Fax No _____

Name & Address of Employer:

_____ hereby apply for
registration under this Act as a Surveying Graduate. In support of my application, I enclose the following
documentary evidence:- +

Checklist

- | | | |
|--------------------------|---|--------------------------|
| <input type="checkbox"/> | application fees; | <input type="checkbox"/> |
| <input type="checkbox"/> | copy of degree or other certificates ; | <input type="checkbox"/> |
| <input type="checkbox"/> | two recent references to good fame and character (dated within last 12 months); | <input type="checkbox"/> |

Date: _____

Signature of Applicant

- * Insert residential and postal address, and telephone and facsimile numbers.
- + Copies of degrees, diplomas and other relevant certificates, and copies of references as to good fame and character.

September 1995

Office Use Only
FEE:
DATE:
REC NO:

Form 3
QUEENSLAND

Surveyors Act 1977 (Ss. 37, 39 and 40)
Surveyors Regulation 1992 (Section 8 and 11)

APPLICATION FOR REGISTRATION AS A SURVEYOR

To: The Secretary,
Surveyors Board of Queensland.

I, _____ of _____
(Full Name)

Date of Birth: _____

* Residential Address: _____

Postal Address: _____

Telephone No. (Business) _____ Fax No. _____

Name & Address of Employer: _____

hereby apply for registration under this Act as a Surveyor. In support of my application, I enclose the following documentary evidence: +

Checklist

<input type="checkbox"/>	application fees;	<input type="checkbox"/>
<input type="checkbox"/>	copy of degree or other certificates;	<input type="checkbox"/>
<input type="checkbox"/>	two recent references to good fame and character (within last 12 months);	<input type="checkbox"/>

Date: _____

Signature of Applicant

- * Insert residential and postal address or, in the case of a body corporate, the address of its registered office and postal address, and telephone and facsimile numbers.
- + Copies of degrees, diplomas and other relevant certificates, and copies of references as to good fame and character in the case of a natural person or, in the case of a body corporate, copies of the documentary evidence required to comply with Section 11 of the Surveyors Regulation 1992.
- # To be signed by the applicant in the case of an individual or, in the case of a body corporate, by a director who is a Registered Surveyor.

September 1995

<p><i>Office Use Only</i></p> <p>FEE:</p> <p>DATE:</p> <p>REC NO:</p>

Form 4
QUEENSLAND

Surveyors Act 1977 (Ss. 40 and 42)
Surveyors Regulation 1992 (Section 9 and 14)

APPLICATION FOR ENDORSEMENT TO PERFORM CADASTRAL SURVEYS

To: The Secretary,
Surveyors Board of Queensland.

I, _____, of
(Full Name)

Date of Birth: _____ *

Residential Address:

Postal Address:

Telephone No. (Business) _____ Fax No.

Name & Address of Employer:

hereby apply to have my registration in the Register of Surveyors endorsed to the effect that I may perform cadastral surveys. In support of my application, I enclose the following documentary evidence:—

Checklist

- | | | |
|--------------------------|---|--------------------------|
| <input type="checkbox"/> | application fees; | <input type="checkbox"/> |
| <input type="checkbox"/> | copy of degree or other certificates; | <input type="checkbox"/> |
| <input type="checkbox"/> | two recent references to good fame and character (dated within the last 12 months); | <input type="checkbox"/> |

Date: _____

Signature of Applicant

- * Insert residential and postal address or, in the case of a body corporate, the address of its registered office and postal address, and telephone and facsimile numbers.
- + Copies of degrees, diplomas and other relevant certificates in the case of a natural person or, in the case of a body corporate, copies of the documentary evidence required to comply with Section 14 of the Surveyors Regulation 1992.
- # To be signed by the applicant in the case of an individual or, in the case of a body corporate, by a director who is a Licensed Surveyor.

September 1995

<i>Office Use Only</i> FEE: DATE: REC NO:

Form 5
QUEENSLAND

Checked By:	
-------------	--

Surveyors Act 1977 (S. 42A)
Surveyors Regulation 1992 (Section 10)

APPLICATION FOR ENDORSEMENT AS A CONSULTING SURVEYOR

To: The Secretary,
Surveyors Board of Queensland.

I, _____ of
(Full Name)

Date of Birth:

Residential Address:

Postal Address:

Telephone No. (Business) _____ Fax No. _____

hereby apply to have my registration in the Register of Surveyors endorsed to the effect that I am a Consulting Surveyor. I certify that I provide or intend to provide survey services to the public for a fee. In support of my application, I provide the following information:-

1. Under what name or as a part of what entity do you intend to practise?

2. Are you at present rendering survey services to the public for a fee?

3. Do you have an office out of which you presently consult to the public?

4. If the answer to (3) is yes, what is the address?

5. If the answer to (3) is no, do you intend to establish an office and if so at what address?

6. Section 10(2) of the Surveyors Regulation 1992 requires that applicants take out and maintain Professional indemnity Insurance. Please advise the following details:-

- (a) The name of the Insurance Company
- (b) Your policy number
- (c) The amount insured (min \$100,000)

A copy of the insurance certificate is to be lodged with this application.

Check List

7. Section 10(2) of the Surveyors Regulation 1992 requires that applicants take out and maintain Public Liability Insurance. Please advise the following details:-

- (a) The name of the Insurance Company _____
- (b) Your policy number
- (c) The amount insured (min \$500,000)

A copy of the insurance certificate is to be lodged with this application.

8. Do you have or are you in the process of implementing a Quality Assurance program?

9. Do you take part in Continuing Professional Development (CPD) programs and if so to what extent?

10. Please provide the Board with the following information by attaching same to this application form -

- (a) a copy of the letterhead under which you practise;
- (b) a copy of the form of invoice on which you bill clients;
- (e) application fees.

11. Bodies Corporate, please also provide the Board with the following and attach same to this application form -

- (a) completed Form 10;
- (b) list of all employees, their qualifications and registered status.

Specimen Only

Date: _____

Signature of Applicant

‡ Body Corporate MUST include ACN.

* Insert residential and postal address or in the case of a body corporate, the address of its registered office and post address, and telephone and facsimile numbers.

To be signed by the applicant in the case of an individual, or, in the case of a Body Corporate, by a Director who is a Registered Surveyor.

<p><i>Office Use Only</i></p> <p>FEE:</p> <p>DATE:</p> <p>REC NO:</p>

September 1995

Form 6
QUEENSLAND
 Surveyors Act 1977 (S. 37)
REPORT OF PRACTICAL EXPERIENCE

To: The Secretary, Surveyors Board of Queensland.

I, _____
 (Full Name)

of _____

Postal Address: _____

a Licensed Surveyor/Surveyor registered under this Act, certify that _____ a Surveying Graduate has gained practical experience in surveys under my direction and supervision for a period of _____ weeks.

He/she has performed the following work as specified:-

REPORTING PERIOD: _____ TO: _____

+ Type Of Survey	Description Of Work	Minimum Required For Surveyor Registration	Number of Weeks
<i>Cadastral (Urban)</i>		6 months	
<i>Cadastral (Rural)</i>		6 months	
<i>Engineering Survey & Design</i>		6 months	
<i>Topographic</i>		Plus 6 months in another field of surveying.	
<i>Geodetic/Astronomy</i>			
<i>Design (Urban &/or Rural)</i>			
<i>Other (Please Specify)</i>			

His/Her performance was as follows:-* _____

Date: _____

 Signature of Licensed Surveyor/Surveyor

* report should state clearly the level of performance achieved by the Surveying graduate/student in all aspects (ethical, administrative and technical) of the practice of surveying.

September, 1995

Form 7
QUEENSLAND
Surveyors Act 1977 (S. 37)

APPLICATION FOR ACCEPTANCE OF PROJECTS

To: The Secretary
Surveyors Board of Queensland.

PART A

I hereby certify that + _____
has completed the projects listed hereunder, which are equivalent to those prescribed by the Surveyors Board of Queensland, and that the projects have been performed at an appropriate level of responsibility. I recommend that such projects be accepted by the Board.

*List of projects:-

Date: _____

Signature of Head of Surveying School,
(Name of Education Institution)

PART B

I + _____ of
(Full Name)

Residential Address:

Postal Address:

Telephone No. (Business) _____ Fax No.

hereby certify that all field and office observations and notes, computations, plans and reports in relation to the projects listed hereunder were made by me personally with such assistance as was necessary in each operation and that the projects were not copied.

* List of projects:-

Date: _____

Signature of Surveying Graduate/Student

- * Describe each project and state its date of commencement and date of completion.
If the space is insufficient, attach a schedule.
- + Insert full name of surveying graduate/student.

September 1995

Office Use Only
FEE:
DATE:
REC NO:

Form 8
QUEENSLAND

Surveyors Act 1977 (S. 37)

APPLICATION FOR APPROVAL OF A PROPOSED PROFESSIONAL
ASSESSMENT PROJECT

To: The Secretary,
Surveyors Board of Queensland.

I _____ of
(Full Name)

* Residential Address:

Postal Address:

Telephone No. (Business) _____ Fax No. _____

Nomination of Assistant Examiner:

Name & Address of Employer:

A Surveying Graduate hereby apply for approval of a proposed Professional Assessment Project.

Nature of project proposed:-

Details of the project are attached.

Date: _____

Signature of Applicant

* Insert residential and postal address and telephone and facsimile numbers.

Office Use Only
FEE:
DATE:
REC NO:

September 1995

Form 9A
QUEENSLAND
 Surveyors Act 1977 (Ss. 40, 41 and 42)

**APPLICATION FOR RENEWAL OF REGISTRATION AS A
 SURVEYOR, LICENSED SURVEYOR,
 SURVEYING GRADUATE OR SURVEYING ASSOCIATE**

To: The Secretary
 Surveyors Board of Queensland

I _____ of
 (Full Christian and Surname's)

Residential Address: _____

Postal Address: _____

§ Employer: _____

Telephone No: (Business) _____ Fax No: _____

hereby apply for renewal of my registration under this Act as a +

<input type="checkbox"/> Surveying Associate	#	<input type="checkbox"/> Surveying Graduate	#
- Completed Form 9A	<input type="checkbox"/>	- Completed Form 9A	<input type="checkbox"/>
- Full renewal fees	<input type="checkbox"/>	- Completed Form 6	<input type="checkbox"/>
		- Full renewal fees	<input type="checkbox"/>
<input type="checkbox"/> Surveyor	#	<input type="checkbox"/> Emeritus Certificate (Retired) Surveyor	
- Completed Form 9A	<input type="checkbox"/>	- Completed Form 9A	<input type="checkbox"/>
- Full renewal fees	<input type="checkbox"/>	- Proof of age	<input type="checkbox"/>
		- Signed statement	<input type="checkbox"/>
		- Full 'Emeritus' fee	<input type="checkbox"/>

AND for endorsement to the effect that I may perform cadastral surveys for the year ending on
 31 December, 19__.

- Completed Form 9A

- Full renewal fees

Date: _____

 Signature of Applicant

- * Insert residential and postal address or in the case of a body corporate, the address of its registered office and post address, and telephone and facsimile numbers.
- § Name of Government Dept, Local Council, Body Corporate or Sole Trader.
- + Indicate (✓) category(s) of registration for which renewal is sought.
- # Check boxes provided for applicants to check off that ALL material is attached.

September, 1995

<p><i>Office Use Only</i></p> <p>FEE:</p> <p>DATE:</p> <p>REC NO:</p>

Forms 9B
QUEENSLAND

Surveyors Act 1977 (Ss. 40, 41 and 42)

APPLICATION FOR RENEWAL OF REGISTRATION AS A
CONSULTING SURVEYOR

To: The Secretary, Surveyors Board of Queensland.

† I, _____ of
(Full Christian and Surname's)

* Residential Address:

Postal Address:

§ Employer:

Telephone No: (Business) _____ Fax No: _____

hereby apply for renewal of my registration as a surveyor under this Act and for the following endorsements:- +

- 1. to the effect that I may perform cadastral surveys
- 2. to the effect that I am a consulting surveyor

Check
List

The following information is provided in support of my application:

1. Under what name or as a part of what entity do you intend to practise?

2. Are you at present rendering survey services to the public for a fee?

3. Do you have an office out of which you presently consult to the public?

4. If the answer to (3) is yes, what is the address?

5. If the answer to (3) is no, do you intend to establish an office and if so at what address?

6. Section 10(2) of the Surveyors Regulation 1992 requires that applicants take out and maintain Professional indemnity Insurance. Please advise the following details:-

- (a) The name of the Insurance Company
- (b) Your policy number
- (c) The amount insured (min \$100,000)

A copy of the annual renewal certificate showing the amount insured and the term of currency of the policy is to be enclosed with this application.

7. Section 10(2) of the Surveyors Regulation 1992 requires that applicants take out and maintain Public Liability Insurance. Please advise the following details:-

- (a) The name of the Insurance Company
- (b) Your policy number
- (c) The amount insured (min \$500,000)

A copy of the annual renewal certificate showing the amount insured is to be lodged with this application.

8. Do you have or are you in the process of implementing a Quality Assurance program?

9. Do you take part in Continuing Professional Development (CPD) programs and if so to what extent?

10. Please provide the Board with the following information by attaching same to this application form -

- (a) a copy of the letterhead under which you practise;
- (b) a copy of the form of invoice on which you bill clients;
- (c) full renewal fees

11. Bodies Corporate, please also provide the Board with the following and attach same to this application form -

- (a) completed Form 11;
- (b) list of all employees, their qualifications and registered status.

Date: _____

Signature of Applicant

- ‡ Body Corporate MUST include ACN.
- * Insert residential and postal address or in the case of a body corporate, the address of its registered office and post address, and telephone and facsimile numbers.
- § To be completed by the Individual - name of Government Dept, Local Council, Body Corporate or Sole Trader.
- # To be signed by the applicant in the case of an individual or, in the case of a body corporate, by a director who is a Registered Surveyor
- + Indicate (✓) category(s) of endorsement for which renewal is sought.

Office Use Only
FEE:
DATE:
REC NO:

September, 1995

Form 10
QUEENSLAND

Surveyors Act 1977 (Section 40)
Surveyors Regulation 1992 (Section 12)

APPLICATION FOR REGISTRATION AS A SURVEYOR BY A BODY
CORPORATE

SOLICITORS CERTIFICATE

To: The Secretary,
Surveyors Board of Queensland.

I, _____ Solicitor,

of

_____ hereby certify that the Memorandum and Articles of

Association of the Body Corporate _____ Pty Ltd

incorporated in the State of Queensland on _____ complies

with the following sections of Surveyors Regulation 1992.

Surveyors Regulation 1992

Section 11(c)(i)

- " 11(c)(ii)
- " 11(c)(iii)
- " 11(c)(iv)
- " 11(c)(v)
- " 11(c)(vi)
- " 14(2)(b)

Date: _____

Signature

* Section 14(2)(b) should be deleted if not applicable.

September 1995

Form 11
QUEENSLAND

Surveyors Act 1977 (Section 40)
Surveyors Regulation 1992 (Section 13)

APPLICATION FOR RENEWAL OF REGISTRATION AS A SURVEYOR BY A
BODY CORPORATE

DIRECTORS' CERTIFICATE

To: Secretary,
Surveyors Board of Queensland

We, _____, the Directors

hereby certify that the Memorandum and Articles of Association of the Body Corporate

_____ Pty Ltd

comply with the following sections of Surveyors Regulation 1992.

Surveyors Regulation 1992

Section 11(c)(i)

" 11(c)(ii)
" 11(c)(iii)
" 11(c)(iv)
" 11(c)(v)
" 11(c)(vi)
" 14(2)(b)

Date: _____

(All the Directors to sign)

* Section 14(2)(b) should be deleted if not applicable.

September, 1995

Form 12
QUEENSLAND

Surveyors Act 1977
Surveyors Regulation 1992 (S 33)

CERTIFICATE FOR SURVEY RECORDS

I * _____ hereby certify that the survey records +
_____ are accurate records of the survey performed by myself
personally/the company or by # _____ for those work I/the company
accept responsibility.

+ Signature of Licensed Surveyor

Date: _____

- * Insert full name of Licensed Surveyor or, as the case may be, the name of the company.
- + Insert sufficient particulars to properly identify the surveys records being certified.
- # Insert full name of the person and his qualifications + .
- * Or, in the case of a company, execution under the Common Seal in the manner referred to in Section 11 of the Surveyors Regulation 1992.

May, 1992

Form 14

Reg No. _____

Certificate of Registration as a Surveying Associate

This is to Certify that

was registered under this Act as a

Surveying Associate

on the _____ of _____, 19__.

Registration under this Act remains in force subject to
renewal from year to year and otherwise subject to the
provisions of this Act.

Sealed with the Common Seal of the Board, this

_____ of _____, 19__.

.....
President

.....
Secretary

Form 15

Reg No. _____

Certificate of Registration as a Surveying Graduate

This is to Certify that

was registered under this Act as a

Surveying Graduate

on the _____ of _____, 19____.

Registration under this Act remains in force subject to
renewal from year to year and otherwise subject to the
provisions of this Act.

Sealed with the Common Seal of the Board, this

_____ of _____, 19____.

.....
President

.....
Secretary

Form 16

Reg No. _____

Certificate of Registration as a Licensed Surveyor/Surveyor

This is to Certify that

was registered under this Act as a

Surveyor

on the _____ of _____, 19____.

This registration was endorsed on the Eighth day of September, 1995

to the effect that he may perform cadastral surveys.

Registration under this Act remains in force subject to renewal from year to year and otherwise subject to this Act.

Sealed with the Common Seal of the Board, this

_____ of _____, 19____.

.....
President

.....
Secretary

Form 17
QUEENSLAND

Surveyors Act 1977 (Section 76)

RECERTIFICATION OF CADASTRAL PLAN

1 _____ hereby certify this plan is accurate at this date of re-certification.

2 _____

Licensed Surveyor (Sign)

2/3 _____

Director & Licensed (Sign)
Surveyor

Date: _____

2/3 _____

Director (Sign)

-
1. - I, (full name of Licensed Surveyor or
- Name of Company endorsed as Licensed Surveyor)
 2. - Signature
 3. - Company must execute under Common Seal, see Regulation 11(c)(vi)

The implementation date of the Form is 1/8/93.

August 1993

Form 18
QUEENSLAND

Surveyors Act 1977
Surveyors Regulation 1992 (Section 25)

CERTIFICATE FOR CADASTRAL PLANS - COMPILED

1 _____ hereby certify that 2 _____ made this plan pursuant to Section 25 of the Surveyors Regulation 1992 and that the plan is accurate, and compiled from _____ in the Department of

3 _____

4 _____

Licensed Surveyor (Sign)

4/5 _____
Director & Licensed (Sign)
Surveyor

Date: _____

4/5 _____
Director (Sign)

1. - I, (full name of Licensed Surveyor or
- Name of Company endorsed as Licensed Surveyor)
2. - I have, or
- the Company has, or
- Full name and qualification of registered person has
3. - Department of Lands and/or Minerals & Energy or other source.
4. - Signature
5. - Company must execute under Common Seal, see Regulation 11(c)(vi)

April, 1993

Form 19

Reg No. _____

Certificate of Endorsement as a Consulting Surveyor

This is to Certify that

_____ is registered under this Act as a

Surveyor.

This registration was endorsed on the _____ day of _____, 19__

to the effect that he may consult to the public for a fee.

Registration under this Act remains in force subject to
renewal from year to year and otherwise subject to this Act.

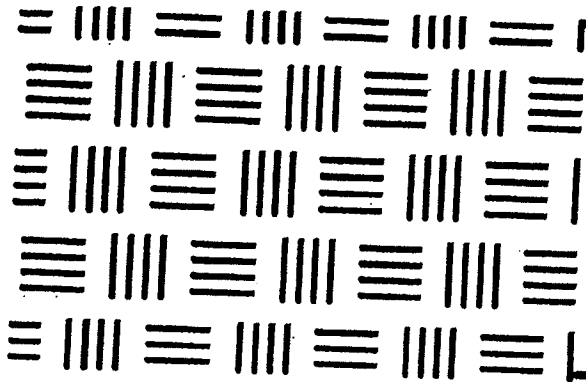
Sealed with the Common Seal of the Board, this

_____ day of _____, 19__

.....
President

.....
Secretary

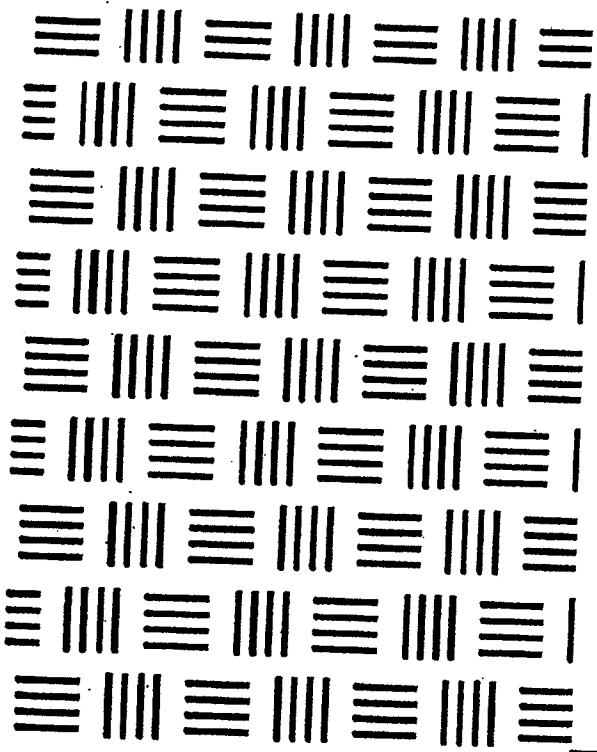
September, 1995



Part

Y

**Surveyors
Act**



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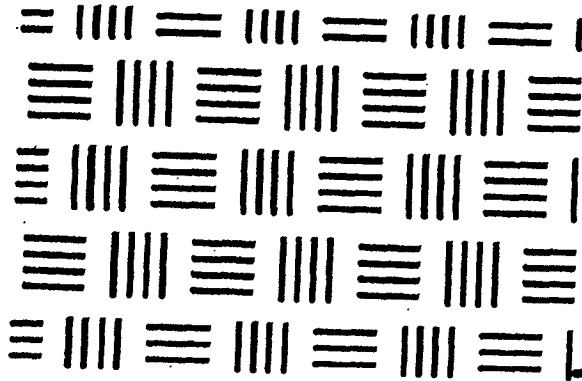
Surveyors Board of Queensland
PO Box 810
SPRING HILL QLD 4004

Phone: (07) 3839-7744
Fax: (07) 3839-8341

Surveyors Act

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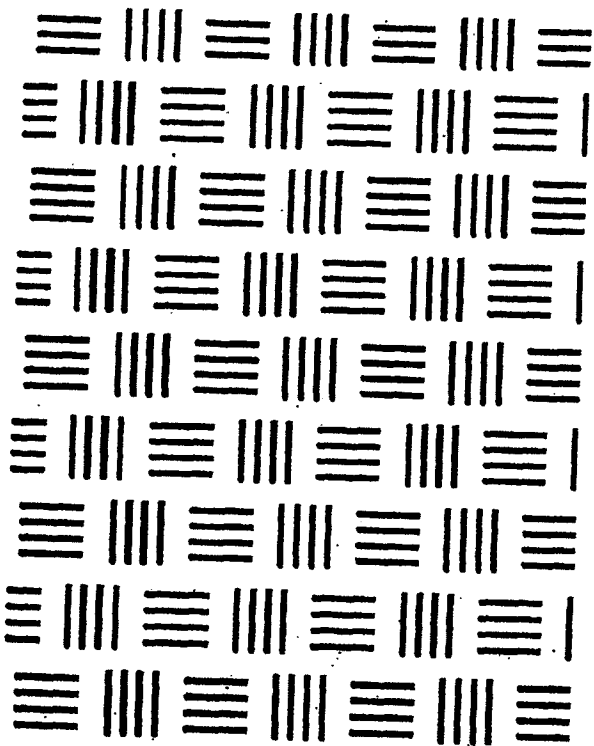
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