



Government Gazette

OF THE STATE OF
NEW SOUTH WALES

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SPECIAL SUPPLEMENT



New South Wales

Proclamation

under the

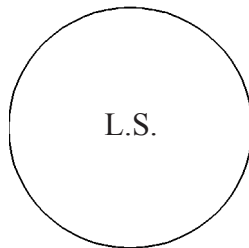
Surveying Act 2002 No 83

MARIE BASHIR, Governor

I, Professor Marie Bashir AC, Governor of the State of New South Wales, with the advice of the Executive Council, and in pursuance of section 2 of the *Surveying Act 2002*, do, by this my Proclamation, appoint 25 June 2003 as the day on which that Act commences.

Signed and sealed at Sydney, this 25th day of June 2003.

By Her Excellency's Command,



L.S.

ANTHONY KELLY, M.L.C.,
Minister Assisting the Minister for
Natural Resources (Lands)

GOD SAVE THE QUEEN!



Surveying (Practice) Amendment Regulation 2003

under the

Surveying Act 2002

Her Excellency the Governor, with the advice of the Executive Council, has made the following Regulation under the *Surveying Act 2002*.

ANTHONY KELLY, M.L.C.,
Minister Assisting the Minister for Natural Resources (Lands)

Explanatory note

The object of this Regulation is to amend the *Surveyors (Practice) Regulation 2001*, so as to insert new provisions, omit obsolete provisions and amend other provisions in connection with the commencement of the *Surveying Act 2002* and the consequent repeal of the *Surveyors Act 1929*, the *Survey Co-ordination Act 1949*, the *Survey Marks Act 1902* and the *Survey (Geocentric Datum of Australia) Act 1999*.

This Regulation also renames the *Surveyors (Practice) Regulation 2001* as the *Surveying Regulation 2001*, repeals the *Survey Co-ordination Regulation 1998* and replicates its provisions in the renamed Regulation.

This Regulation is made under the *Surveying Act 2002*, including section 36 (the general power to make regulations) and sections 3, 4, 5, 10, 15, 19, 26, 27 and 30.

Clause 1 Surveying (Practice) Amendment Regulation 2003

Surveying (Practice) Amendment Regulation 2003

under the

Surveying Act 2002

1 Name of Regulation

This Regulation is the *Surveying (Practice) Amendment Regulation 2003*.

2 Commencement

This Regulation commences on 25 June 2003.

3 Amendment of Surveyors (Practice) Regulation 2001

The *Surveyors (Practice) Regulation 2001* is amended as set out in Schedule 1.

4 Repeal of Survey Co-ordination Regulation 1998

The *Survey Co-ordination Regulation 1998* is repealed.

Surveying (Practice) Amendment Regulation 2003

Amendments

Schedule 1

Schedule 1 Amendments

(Clause 3)

[1] Clause 1

Omit the clause. Insert instead:

1 Name of Regulation

This Regulation is the *Surveying Regulation 2001*.

[2] Clauses 3 and 3A

Omit clause 3. Insert instead:

3 Application of Regulation

- (1) This Regulation applies to all land surveys, and to all surveys referred to in section 4 or 5 of the Act, but does not apply to any mining surveys except to the extent to which the other provisions of this Regulation expressly provide and to the extent provided by an order in force under clause 3A.
- (2) This Regulation applies to the registration of both land surveyors and mining surveyors.

3A Mining surveys

- (1) The Surveyor-General may, by order published in the Gazette, give directions with respect to the conduct of mining surveys.
- (2) Such an order may only be made on the recommendation of the Board.
- (3) The document entitled *Survey and Drafting Directions for Mine Surveyors*, published in March 2000 by the Department of Mineral Resources, is taken to be an order under this clause with respect to mining surveys carried out for the purposes of the *Coal Mines Regulation Act 1982*, and may be amended and repealed accordingly.
- (4) The document entitled *Survey and Drafting Directions for Mining Surveyors*, published in December 2001 by the Department of Mineral Resources, is taken to be an order under this clause with respect to mining surveys carried out for the purposes of the *Mines Inspection Act 1901*, and may be amended and repealed accordingly.

Surveying (Practice) Amendment Regulation 2003

Schedule 1 Amendments

[3] Clause 4 Interpretation

Omit the definitions of *AHD*, *established permanent mark*, *reference mark*, *rural survey* and *the Act* from clause 4 (1). Insert instead:

AHD means Australian Height Datum, as defined in section 3 (1) of the Act.

established permanent survey mark means a survey mark the horizontal position of which is determined to be Class C or better as specified in Standards & Practices for Control Surveys and that is identified in the register of public surveys, in such manner as the Surveyor-General may determine, as being an established permanent survey mark.

reference mark means permanent survey mark or a mark of the kind referred to in Schedule 3.

rural survey means a land survey that is not an urban survey.

the Act means the *Surveying Act 2002*.

[4] Clause 4 (1)

Insert in alphabetical order:

Board examination means an examination (whether oral or written, or both oral and written) approved by the Board for the purposes of this definition, as set out in a formal Board determination.

boundary mark means a mark of the kind referred to in Schedule 2.

continuing professional development requirements means professional development requirements approved by the Board for the purposes of this definition, as set out in a formal Board determination.

formal Board determination means a determination that has been made and published by the Board under clause 4C.

lockspit means a mark described as a lockspit in Schedule 2.

recognised practical experience, in relation to an applicant for registration as a surveyor, means experience in which:

- (a) the applicant has been employed as a full-time surveyor's assistant, whether in New South Wales or elsewhere, for one or more periods totalling at least 2

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Schedule 1

years (in the case of an application for registration as a land surveyor), or at least 3 years (in the case of registration as a mining surveyor), during the 5 year period immediately preceding the application, and

- (b) while so employed, the applicant has obtained practical experience for a continuous period of one year or more in:
- (i) all aspects of the conduct of land surveys, or
 - (ii) all aspects of the conduct of mining surveys,
- as the case requires.

recognised professional training agreement means a training agreement approved by the Board for the purposes of this definition, as set out in a formal Board determination.

recognised qualification means any qualification that the Board recognises to be an appropriate qualification for the purposes of this definition, as set out in a formal Board determination.

Standards & Practices for Control Surveys means the publication entitled *Standards & Practices for Control Surveys (SPI)* published by the Inter-Governmental Committee on Surveying and Mapping, as that publication is amended from time to time.

student of surveying means a person who is enrolled in a course of studies that leads to a recognised qualification.

survey drafter means a person who has such abilities and experience as the Board considers appropriate to qualify the person to be a survey drafter, as set out in a formal Board determination.

surveyor's assistant means a person who has such abilities and experience as the Board considers appropriate to qualify the person to be a surveyor's assistant, as set out in a formal Board determination.

[5] Clause 4 (1), definition of "MGA"

Omit "(within the meaning of the *Survey (Geocentric Datum of Australia) Act 1999*)".

Surveying (Practice) Amendment Regulation 2003

Schedule 1 Amendments

[6] Clause 4 (1), definition of “urban survey”

Omit “means a survey”. Insert instead “means a land survey”.

[7] Clause 4 (1), definitions of “chisel mark”, “permanent mark”, “plan of survey”, “State Control Survey” and “survey mark”

Omit the definitions.

[8] Part 1A

Insert after Part 1:

Part 1A Administration**Division 1 Constitution of Board****4A Constitution of Board: section 27**

- (1) The Institution of Surveyors NSW Incorporated is prescribed as the professional association of land surveyors to nominate persons for appointment to the Board under section 27 (2) (c) of the Act.
- (2) AIMS—Australian Institute of Mine Surveyors Limited is prescribed as the professional association of mining surveyors to nominate persons for appointment to the Board under section 27 (2) (d) of the Act.
- (3) The Australasian Urban and Regional Information Systems Association is prescribed as the professional association of persons involved in the spatial information industry to nominate persons for appointment to the Board under section 27 (2) (e) of the Act.

4B Committees

- (1) This clause applies to any committee established under section 30 of the Act.
- (2) A committee must have at least 3 members.
- (3) The chairperson and deputy chairperson of a committee are to be nominated by the Board, and may (but need not) be members of the Board.

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Schedule 1

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- (4) Committee meetings are to be held at the times and places determined by the chairperson of the committee.
 - (5) The procedures for convening committee meetings and for the conduct of business at committee meetings are to be determined by the chairperson of the committee.
 - (6) At a committee meeting, a majority of the committee members constitutes a quorum.
 - (7) The chairperson of a committee (or, in the absence of the chairperson, the deputy chairperson of the committee) is to preside at committee meetings.
 - (8) A decision supported by a majority of the votes cast at a committee meeting at which a quorum is present constitutes a decision of the committee.
 - (9) In the event of an equality of votes, the chairperson of the committee has a second, or casting, vote.
 - (10) The chairperson of a committee is to report all decisions of the committee to the next Board meeting.

Division 2 Formal Board determinations

4C Formal Board determinations

- (1) The Board may, by resolution, make the following kinds of determination:
 - (a) a determination approving an examination for the purposes of the definition of *Board examination* in clause 4 (1),
 - (b) a determination approving requirements for the purposes of the definition of *continuing professional development requirements* in clause 4 (1),
 - (c) a determination approving a training agreement for the purposes of the definition of *recognised professional training agreement* in clause 4 (1),
 - (d) a determination recognising a qualification for the purposes of the definition of *recognised qualification* in clause 4 (1),

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- (e) a determination recognising abilities and experience (whether for a person or a class of persons) for the purposes of the definition of *survey drafter* in clause 4 (1),
 - (f) a determination recognising abilities and experience (whether for a person or a class of persons) for the purposes of the definition of *surveyor's assistant* in clause 4 (1).
- (2) The Board is to ensure that copies of each determination made under this clause are published on its internet site and made available for inspection at each of its offices.

Division 3 Registration of surveyors**4D Qualifications for registration**

A person is eligible to be registered as a surveyor if the person:

- (a) holds a recognised qualification, and
- (b) has recognised practical experience, and
- (c) has either passed the Board's examination or fulfilled the requirements of a recognised professional training agreement, and
- (d) is of good character.

4E Board examinations

Board examinations are to be conducted at such times and places as the Board may determine.

4F Provision of further information and supporting evidence

Without limiting section 43 (1) of the *Licensing and Registration (Uniform Procedures) Act 2002*, the Board may require an applicant for registration as a surveyor to furnish the following documents:

- (a) documentary evidence that the applicant holds a recognised qualification,
- (b) documentary evidence that the applicant has recognised practical experience,

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-
- (c) documentary evidence that the applicant has passed the relevant Board examination or fulfilled the requirements of a recognised professional training agreement,
 - (d) one or more character references given in relation to the applicant within the previous 2 years.

4G Continuing professional development

- (1) A registered surveyor must comply with the continuing professional development requirements.
- (2) Compliance with the requirements of this clause is a condition of registration as a surveyor.

4H Conditions of registration

Registration as a mining surveyor may be granted subject to a condition restricting the mining surveyor to the conduct of mining surveys in relation to open cut mines.

4I Surveyor to report position etc of permanent survey marks

- (1) As soon as practicable after a registered surveyor carrying out a survey:
 - (a) places a new permanent survey mark, or
 - (b) becomes aware that an existing permanent survey mark has been removed, damaged, destroyed, displaced, obliterated or defaced, or is in a state of disrepair,

the registered surveyor must notify the Surveyor-General of that fact and of the number and location of the permanent survey mark.

- (2) Compliance with the requirements of this clause is a condition of registration as a surveyor.

4J Register of surveyors

- (1) The following particulars are to be recorded in the register of surveyors, in relation to each registered surveyor, in addition to those required by section 49 (1) of the *Licensing and Registration (Uniform Procedures) Act 2002*:
 - (a) the qualifications pursuant to which the surveyor was registered,

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- (b) in the case of a registered mining surveyor whose registration is subject to a condition restricting the mining surveyor to the conduct of mining surveys in relation to open cut mines, a statement to that effect,
 - (c) in the case of a mining surveyor who was originally registered or licensed interstate, the State or Territory in which the surveyor was originally registered or licensed,
 - (d) the surveyor's address for service of notices,
 - (e) particulars of any action that the Board has taken in relation to the surveyor under section 12 or 13 of the Act, together with the date on which the action was taken.
- (2) The register of surveyors may be maintained in written or electronic form.

4K Certificates of meritorious service

The Board may issue a certificate of meritorious service to any person who surrenders his or her certificate of registration, as referred to in section 50 (7) of the *Licensing and Registration (Uniform Procedures) Act 2002*, if satisfied that it is appropriate to do so in recognition of the person's contribution to surveying in New South Wales.

Division 4 Fees**4L Fees**

The fees set out in Schedule 6 are payable in relation to the various matters referred to in that Schedule.

[9] Clause 6

Omit the clause.

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[10] Clauses 7 (e), 8, 9, 10 (1), 16 (2), 18 (2) and (6), 19 (2), 20 (4), 21 (2), 24 (2), 30 (4) and (5), 32, 33 (7), 34 (2) and (3), 36 (3) and (5), 37 (6), 38, 40 (1) and (2), 41 (1)–(4), 46 (1) and (4), 47 (2), 48 (3) (a), 49, 54, 55 (2), (3) and (5), 56 (5), 57 (2) (b), 59 (2) and (3), 60 (3) (b) and 61 (2)

Omit “plan of survey” wherever occurring.

Insert instead “survey plan”.

[11] Section 9 Surveyor to record nature of boundaries

Insert “or fence” after “substantial structure” in clause 9 (1) (c).

[12] Clauses 11 and 11A

Omit clause 11. Insert instead:

11 Notice of proposed entry to land: section 19

The notice referred to in section 19 (1) of the Act (for the conduct of both land surveys and mining surveys) must be given, in the form set out in Form 2:

- (a) by delivering it to any person who is apparently over the age of 16 years and is apparently residing on, or in occupation of, the land to be entered, or
- (b) if there is no person available to give the notice to as referred to in paragraph (a), by affixing it in a conspicuous place at the main point of entry to the land, at the main point of entry to a building situated on the land or to some other conspicuous object situated on the land.

11A Certificate of authority: section 26

- (1) A certificate of authority referred to in section 26 of the Act, whether for a land surveyor or a mining surveyor, must be issued by the Surveyor-General in the form of Form 2A.
- (2) Despite subclause (1), an identity card issued to a surveyor by the former Board of Surveyors under the *Surveyors Act 1929* is taken to be such a certificate.

[13] Clause 13 Surveyor to obtain information

Insert “and to connect the survey to the State control survey in accordance with Parts 4 and 5” after “land to be surveyed”.

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[14] Clause 18 Surveys for easements and restrictions on use

Omit clause 18 (1). Insert instead:

- (1) If a survey is carried out for the purpose of defining an easement or restriction on use (referred to in this clause as a **restriction**), the surveyor must connect the site of the easement or restriction by measurement to relevant monuments.

[15] Clause 18 (2) and (4) (a)

Insert “or restriction” and “or restrictions” after “easement” and “easements” respectively, wherever occurring.

[16] Clause 18 (3)

Omit the subclause.

[17] Clause 18 (4) (b)

Omit the paragraph. Insert instead:

- (b) show on the survey plan by bearing and distance the essential dimensions of the site and note the site on the plan as “easement” or “restriction on use of land”, or “proposed easement” or “proposed restriction on use of land”, as appropriate, and

[18] Clause 23 Surveys using global positioning system (GPS)

Omit “an accuracy of Class ‘B’ or better as specified in the *Standards & Practices for Control Surveys (SP1)—Version 1.4* published in November 2000 by the Inter-Governmental Advisory Committee on Surveying and Mapping” from clause 23 (1).

Insert instead “the level of accuracy appropriate to the type of survey being undertaken, as specified in *Standards & Practices for Control Surveys*”.

[19] Clauses 25 (2) (c), 30 (2)–(4), 32 (2), 33 (2)–(10), 41 (1) (c), 43 (1) (a) and 47 (3) and (4)

Omit “permanent mark” and “permanent marks” wherever occurring.

Insert instead “permanent survey mark” and “permanent survey marks”, respectively.

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[20] Clause 28 Identification or re-marking surveys

Omit clause 28 (3). Insert instead:

- (3) This clause and clauses 3, 4, 5, 7 (a), (b) and (d), 11, 13, 14, 19, 23, 27, 30 (1), 31, 39 and 48–53 apply to a survey referred to in subclause (1) or (2).

[21] Clause 29 Surveys not requiring strict accuracy

Omit clause 29 (4). Insert instead:

- (4) This clause and clauses 3, 4, 5, 7 (d), 11, 13, 30 (1), 31, 39 and 48–53 apply to a survey referred to in subclause (1).

[22] Clause 30 Procedure for adopting datum line

Insert after clause 30 (2):

- (2A) The MGA co-ordinates used to determine the orientation of the survey must be obtained from the register of public surveys within 6 months before the date of completion of the survey as recorded in the survey certificate.

[23] Clause 32 Method of recording datum line on survey plan

Omit “accuracy” from clause 32 (2).

[24] Clause 33 Connection of surveys and marks

Omit clause 33 (1). Insert instead:

- (1) This clause applies to any survey that is carried out for the purpose of lodging a survey plan with a public authority.
- (1A) An urban survey must be connected by measurement to at least 2 permanent survey marks and, for land having an area of more than 10 hectares, to at least 2 more permanent survey marks for each 10 hectares (or part thereof) by which the area of land being surveyed exceeds 10 hectares.
- (1B) A rural survey must be connected by measurement to at least 2 permanent survey marks and, for land having an area of more than 10 hectares, to at least 2 more permanent survey marks for each 100 hectares (or part thereof) by which the area of land being surveyed exceeds 10 hectares.
- (1C) The distance between a survey mark and a permanent survey mark referred to in subclause (1A) or (1B) must not exceed:

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- (a) 300 metres, in the case of an urban survey, or
 - (b) 1,000 metres, in the case of a rural survey.

[25] Clause 33 (2)

Omit “subclause (1) (a) or (b)”. Insert instead “subclause (1C)”.

[26] Clause 33 (4)

Omit “subclause (1) (a) or (b)”. Insert instead “subclause (1A) or (1B)”.

[27] Clause 33 (8)

Omit “subclause (1) (a)”. Insert instead “subclause (1A)”.

[28] Clause 33 (8) (a)

Omit “(SPI)—Version 1.4 published in November 2000 by the Inter-Governmental Advisory Committee on Surveying and Mapping”.

[29] Clause 34 Placement of pegs or marks

Omit clause 34 (1). Insert instead:

- (1) Except in the case of a survey referred to in clause 18, 28 (1) or 29, each corner of the land being surveyed (including the corners of each parcel of land in a subdivision) must be marked with a boundary mark.

[30] Clause 34 (2)

Omit “such a peg or mark”. Insert instead “a boundary mark”.

[31] Clause 35 Urban surveys

Insert at the end of the section:

- (2) Subclause (1) (a) does not require the placement of a reference mark at any extremity of the land if some other reference mark is already placed within 10 metres of that extremity and that reference mark is referenced to that extremity on the survey plan.

[32] Clause 36 Rural surveys

Omit “a peg or mark of the type prescribed by clause 42” from clause 36 (1).

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Insert instead “a boundary mark”.

[33] Clause 37 Placement of reference marks for roads

Omit “is of the type prescribed by clause 43 (1) (e) (ie a drill hole and wing)” from clause 37 (4).

Insert instead “consists of a drill hole and wing”.

[34] Clause 41 Surveyor to note nature and position of survey marks etc

Insert after clause 41 (2):

- (2A) Except as allowed under clause 35 (2), a reference mark may be connected to only one point on a survey plan, and may not be connected to that point if it is more than 30 metres from that point.

[35] Clause 42

Omit clause 42. Insert instead:

42 Marking of survey boundaries

- (1) The marking of surveyed boundaries of land must be done with boundary marks so that the boundaries are readily and unambiguously discernible on the ground.
- (2) If drill holes, chisel marks or similar marks are to be placed in an ornamental wall, ornamental path or similar structure, the size of the mark placed may be reduced at the discretion of the surveyor to avoid undue damage to the wall, path or other structure being marked, but only if the marking is durable and readily and unambiguously discernible.

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[36] Clause 43

Omit the clause. Insert instead:

43 Survey marks and permanent survey marks

- (1) The forms and styles of marks described in Schedule 4 are declared to be the forms and styles for *permanent survey marks* under the Act.
Note. Schedule 4 lists permanent survey marks by Type number, using the same Type numbers as have been allocated by previous regulations. Type numbers 3 and 5 are now obsolete, and so do not appear in the Schedule.
- (2) The forms and styles of marks described in Schedules 2, 3 and 4 (boundary marks, reference marks and permanent survey marks) are declared to be the forms and styles for *survey marks* under the Act.
- (3) Survey marks must be placed and used in accordance with any requirements specified in Schedules 2, 3 and 4.
- (4) When a reference mark is required to be placed for the purposes of a survey, the form and style of reference mark to be used is to be chosen according to an order of preference that is the order in which they are listed in Schedule 3.

[37] Clause 45

Omit the clause. Insert instead:

45 Use of broad arrows

A broad arrow may be used on a survey mark only in relation to a survey referred to in section 4 or 5 of the Act.

[38] Clause 46 Datum used for levelling

Omit “(SPI)—Version 1.4 published in November 2000 by the Inter-Governmental Advisory Committee on Surveying and Mapping” from clause 46 (3).

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[39] Clause 47A

Insert after clause 47:

**47A Placement of permanent survey marks by non-surveyors:
section 25**

For the purposes of section 25 of the Act, a person is authorised to place a permanent survey mark at any location if, and only if:

- (a) the mark is placed in accordance with any requirements specified in Schedule 4, and
- (b) the location of the permanent survey mark is indicated on a locality sketch plan that is in a form acceptable to the Surveyor-General, and
- (c) that locality sketch map is given to the Surveyor-General within 2 months after the permanent survey mark is placed.

[40] Clause 55 Location and relocation of mean high-water mark boundary

Insert at the end of the section:

Note. In certain locations, the operation of this clause may be affected by Part 4B (Modification of doctrine of erosion and accretion) of the *Coastal Protection Act 1979*.

[41] Clause 56 Location and relocation of banks of non-tidal streams or lakes

Insert after clause 56 (6):

- (6A) If the middle line of a stream is the boundary of land and has not previously been defined by survey, or if the middle line of a stream is otherwise required to be determined, then both banks of the stream must be surveyed and shown on the survey plan together with the determination of the middle line.

[42] Clause 59 Calculation of areas of land abutting a natural feature

Omit clause 59 (3). Insert instead:

- (3) The bearings and distances between the end points of the radiations or offsets used to determine the location of the natural feature, and the area of the land being surveyed, are to be shown on the survey plan for that land.

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[43] Part 7A

Insert after Part 7:

Part 7A Public surveys**59A Standards of measurement and accuracy of public surveys: sections 4 and 5**

- (1) A survey referred to in section 4 or 5 of the Act must be carried out:
 - (a) in accordance with the standards set out in *Standards & Practices for Control Surveys* in relation to that kind of survey, or
 - (b) if the Surveyor-General intends to use the survey for the State control survey, in accordance with such of the standards set out in *Standards & Practices for Control Surveys* as the Surveyor-General may direct in relation to the survey, subject to such variations in those standards as the Surveyor-General may direct.
- (2) In any survey referred to in section 5 of the Act, all measuring equipment used in the survey must comply with the requirements of Part 3.

59B Field notes

The field notes prepared in relation to a survey referred to in section 5, including any electronic field data:

- (a) must be referenced and indexed in an approved manner, and
- (b) must be produced to the Surveyor-General if the Surveyor-General so requests.

59C Conventional symbols and signs on plans

In the preparation of any survey plan, the symbols and signs set out in Schedule 5 must be used to indicate the matters to which they are referred by that Schedule.

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[44] Clause 60 Deferment of placement of survey marks

Omit clause 60 (2) (b). Insert instead:

- (b) deposit with the Surveyor-General the amount specified in Schedule 6 in that regard, and

[45] Clause 62 Effect of contravention

Omit “section 14 of the Act (Power of board to deal with offences)”.

Insert instead “section 13 of the Act (Professional misconduct)”.

[46] Clause 62A

Insert after clause 62:

62A Removal etc of survey marks

- (1) An application for an authorisation referred to in section 24 (1) of the Act must be made to the Surveyor-General at least 14 days before the date on which the applicant intends to remove, damage, destroy, obliterate or deface the survey mark in respect of which the authorisation is sought.
- (2) Subclause (1) applies only to permanent survey marks and reference marks.

[47] Schedules 1–6

Omit Schedule 1. Insert instead:

Schedule 1 Forms

(Clause 4 (2))

Form 1 Survey certificate

(Surveying Regulation 2001—Clause 10)

I, *[Insert Name]* of *[Insert Address]*, a surveyor registered under the *Surveying Act 2002*, certify that the survey represented in this plan is accurate, has been made in accordance with the *Surveying Regulation 2001* and was completed on: *[Insert date of completion of survey]*.

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The survey relates to: *[Specify the land actually surveyed, or specify any land shown in the plan that is not the subject of the survey]*

Dated:

(Signature)

Form 2 Notice of entry

(Surveying Regulation 2001—Clause 11)

To the occupier of: *[Insert reference to land proposed to be entered]*

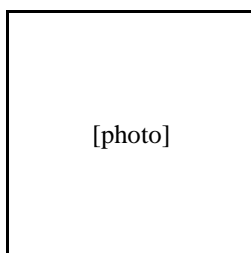
I, *[Insert Name]* of *[Insert Address]*, in my capacity as *[Insert capacity of person concerned, such as “a surveyor” or “an authorised person”]*, give notice under section 19 of the *Surveying Act 2002* that I intend to enter the land referred to above on: *[Insert dates of proposed entry]* together with my assistants for purposes relating to the making of a survey.

Dated:

(Signature)

Form 2A Certificate of authority

(Surveying Regulation 2001—Clause 11A)

Board of Surveying and Spatial Information

I certify that:

[Name of person]

Identification number:

is *[Insert capacity of cardholder, such as “a surveyor” or “an authorised person”]* and is authorised to exercise the powers of entry conferred by Part 4 of the *Surveying Act 2002*

Date of issue

DD/MM/YY

Surveyor-General

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Form 3 Certificate as to survey not requiring strict accuracy

(Surveying Regulation 2001—Clause 29)

I, *[Insert Name]* of *[Insert Address]*, a surveyor registered under the *Surveying Act 2002*, certify that the survey represented in this plan (or sketch) was made in accordance with clause 29 of the *Surveying Regulation 2001* and *[is/is not]** a survey to be lodged on public record as referred to in that clause.

(Signature)

Surveyor registered under
the *Surveying Act 2002*

* Strike out inappropriate words.

Schedule 2 Boundary marks

(Clause 43)

Mark	Form or style of mark	Requirements for placement and use of mark
Peg	<p>Peg of sound durable hardwood or white cypress pine pointed for about two-thirds of its length.</p> <p>Rural surveys— At least 450mm long and not less than 75mm by 75mm nominal section at the top end,</p> <p>Urban surveys— At least 350mm long and not less than 75mm by 35mm nominal section at the top end.</p>	<ul style="list-style-type: none"> The centre of the top of a peg must represent the survey point except that, if conditions prevent the correct centring of a peg, the survey point may be represented by a non-corrodible tack or nail driven into the peg. Peg must be placed upright in the ground, point downwards, so that its top is not more than 80mm above the ground level. The earth surrounding it must be securely compacted.

Surveying (Practice) Amendment Regulation 2003

Schedule 1 Amendments

Mark	Form or style of mark	Requirements for placement and use of mark
Drill hole	Drill hole of not less than 6mm in diameter and not less than 10mm deep.	<ul style="list-style-type: none"> • If a peg projecting above the surface of the ground could be hazardous or inconvenient to the public the peg may, at the discretion of the surveyor, be placed flush with the surface of the ground. If that is done, the fact must be noted on the plan of survey. • When the depth of soil is insufficient to permit the conventional placement of a peg, then: <ul style="list-style-type: none"> (a) if there is sound rock, a drill hole and wing or chiselled wings must be placed in the rock, or (b) if there is no sound rock, a cairn of rocks must be built around the peg above the surface of the soil.
Non-corrodible nail	Non-corrodible nail at least 80mm long.	<ul style="list-style-type: none"> • Drilled into rock, concrete or substantial structure. • If practicable, a chiselled wing must be cut and directed to the mark. • Driven completely into fixed timber. • If practicable, a chiselled wing must be cut and directed to the mark.

Surveying (Practice) Amendment Regulation 2003

Amendments

Schedule 1

Mark	Form or style of mark	Requirements for placement and use of mark
Non-corrodible rod or spike	Non-corrodible rod or spike at least 150mm long.	<ul style="list-style-type: none"> • Only to be used if the placement of a peg is not practicable. • Driven flush to the surface.
Broad arrow	Broad arrow at least 80mm long, 20mm wide and 10 mm deep at the base, pointed at one end.	<ul style="list-style-type: none"> • Cut in rock, concrete, substantial structure or fixed timber.
Lockspit	A trench, or line of packed stones, not less than one metre long, 200mm wide, 150mm deep and commencing 300mm from each boundary mark.	<ul style="list-style-type: none"> • Dug or placed in the direction of the boundary lines. • If the type of soil renders trenches ineffective, direction stakes not less than 50mm by 30mm by 450mm may be placed in the direction of the boundary lines 4 metres distant from the corner.
Chiselled wing	Chiselled wing at least 80mm long, 20mm wide and 10 mm deep at the base, pointed at one end.	<ul style="list-style-type: none"> • Cut in rock, concrete, substantial structure or fixed timber. • Not to be used by itself as a boundary mark.
Approved mark	A mark of a durable character approved for specific terrain.	<ul style="list-style-type: none"> • As approved by the Surveyor General.

Surveying (Practice) Amendment Regulation 2003

Schedule 1 Amendments

Schedule 3 Reference marks

(Clause 43)

Mark	Form or style of mark	Requirements for placement and use of mark
Permanent Survey Mark	As for the Permanent Survey Marks described in Schedule 4.	<ul style="list-style-type: none"> As specified in Schedule 4.
Drill hole	Drill hole not less than 6mm in diameter and not less than 10mm deep.	<ul style="list-style-type: none"> Drilled into rock, concrete or substantial structure. A chiselled wing must be cut and directed to the mark.
Chiselled wing	Chiselled wing at least 80mm long, 20mm wide and 10 mm deep at the base, pointed at one end.	<ul style="list-style-type: none"> Cut in a substantial structure, fixed timber or the sound wood of a suitable tree. The point of the chiselled wing being the reference point, the chiselled wing to face towards the relevant corner. Placed at a convenient height above ground level.
Broad arrow	Broad arrow comprising of three chiselled wings at least 80mm long, 20mm wide and 10 mm deep at the base, pointed at one end.	<ul style="list-style-type: none"> Cut in rock, concrete, substantial structure, fixed timber or the sound wood of a suitable tree. The point of the chiselled wing being the reference point. Faced towards the relevant corner.

Surveying (Practice) Amendment Regulation 2003

Amendments

Schedule 1

Mark	Form or style of mark	Requirements for placement and use of mark
Metal spike or galvanised iron pipe	Metal spike at least 300mm long. If a solid metal spike, an external diameter of at least 20 mm. If a pipe, an internal diameter of at least 20mm and a rim wall thickness of at least 3mm.	<ul style="list-style-type: none"> • Placed at a convenient height above ground level. • Placed vertically and at least 80mm below the surface of the ground, or deeper if placed below where fencing is likely to be erected.
Specific point	A specific point, on a permanent or substantial structure.	<ul style="list-style-type: none"> • The specific point must be adequately described. • If practicable, a chiselled wing must be cut and directed to the mark.
Galvanised star picket	Galvanised star picket at least 450mm in length.	<ul style="list-style-type: none"> • Placed vertically and at least 80mm below the surface of the ground, or deeper if placed below where fencing is likely to be erected.
Non-corrodible nail	Non-corrodible nail at least 80mm long.	<ul style="list-style-type: none"> • Driven completely into fixed timber. • If practicable, a chiselled wing must be cut and directed to the mark.
PVC pipe	PVC pipe at least one metre in length and 20mm in internal diameter, made of material with a thickness of at least 3mm.	<ul style="list-style-type: none"> • For use in swampy or marsh areas. • Placed vertically.

Surveying (Practice) Amendment Regulation 2003

Schedule 1 Amendments

Mark	Form or style of mark	Requirements for placement and use of mark
Glass bottle	Glass bottle filled with sand, soil, cement or other similar material and at least 200mm in length and 30mm in neck diameter.	<ul style="list-style-type: none"> Placed vertically and at least 80mm below the surface of the ground, or deeper if placed below where fencing is likely to be erected.
Reinforced concrete block	Reinforced concrete block in the form of a truncated pyramid 400mm long, 150mm square (at the lower end) and 100mm square (at the upper end) into the top of which a non-corrodible nail or plug not less than 80mm long has been inserted at least 75mm deep.	<ul style="list-style-type: none"> Placed vertically and at least 80mm below the surface of the ground, or deeper if placed below where fencing is likely to be erected.
Approved mark	A mark of a durable character approved for specific terrain.	<ul style="list-style-type: none"> As approved by the Surveyor General.

Surveying (Practice) Amendment Regulation 2003

Amendments

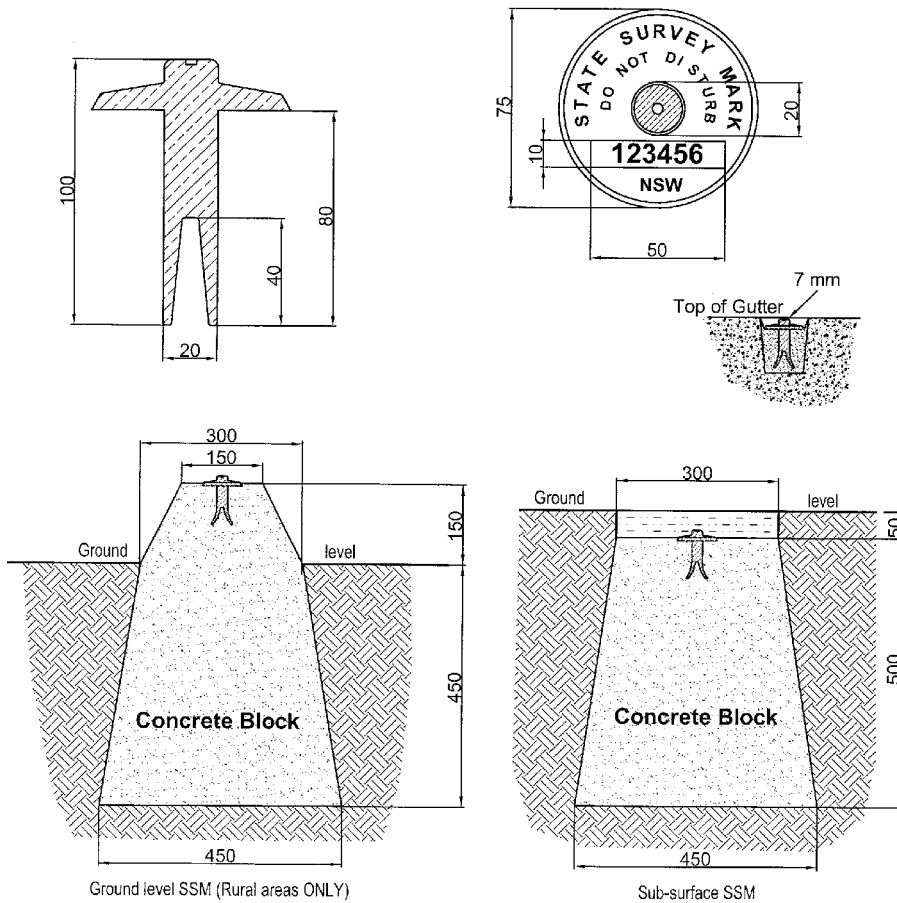
Schedule 1

Schedule 4 Permanent survey marks

(Clause 43)

Type 1 (State Survey Mark)

Dimensions are in millimetres



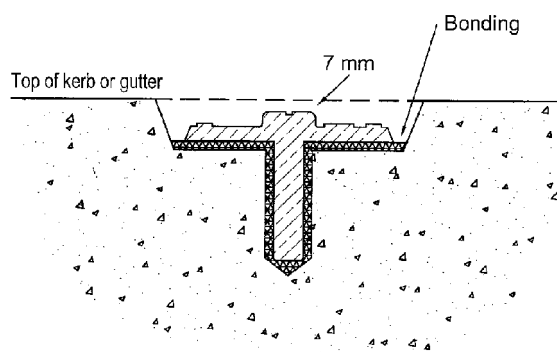
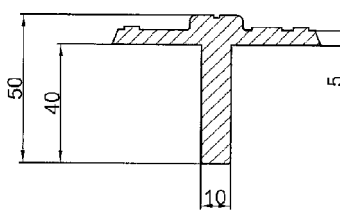
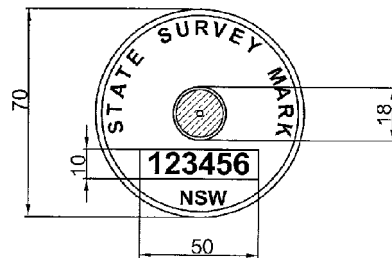
NOTE: Where an existing structure or solid rock is unavailable the mark is to be placed in the top of a concrete block and cast in situ. The block must have a volume of concrete of at least 0.07 cubic metres and shaped as indicated above

Surveying (Practice) Amendment Regulation 2003

Schedule 1 Amendments

Type 2 (State Survey Mark)

Dimensions are in millimetres



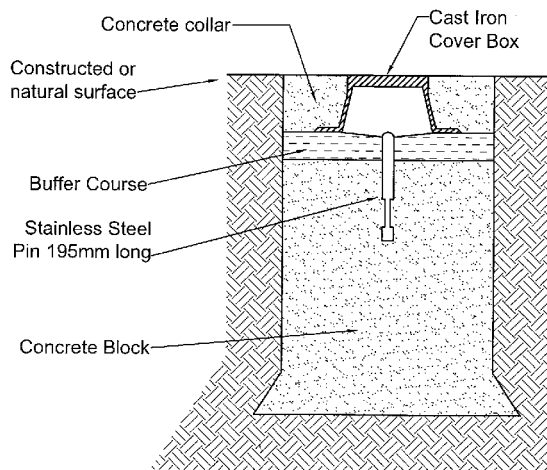
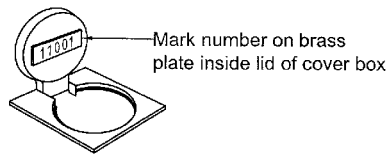
Fixation is by drilling and bonding with a suitable epoxy-resin compound

Surveying (Practice) Amendment Regulation 2003

Amendments

Schedule 1

Type 4 (Urban Type)



Minimum size of concrete 460mm deep by 380mm square and enlarged at the bottom. Where solid rock is met the depth may be varied.

In localities where the ground is unstable the dimensions must be increased.

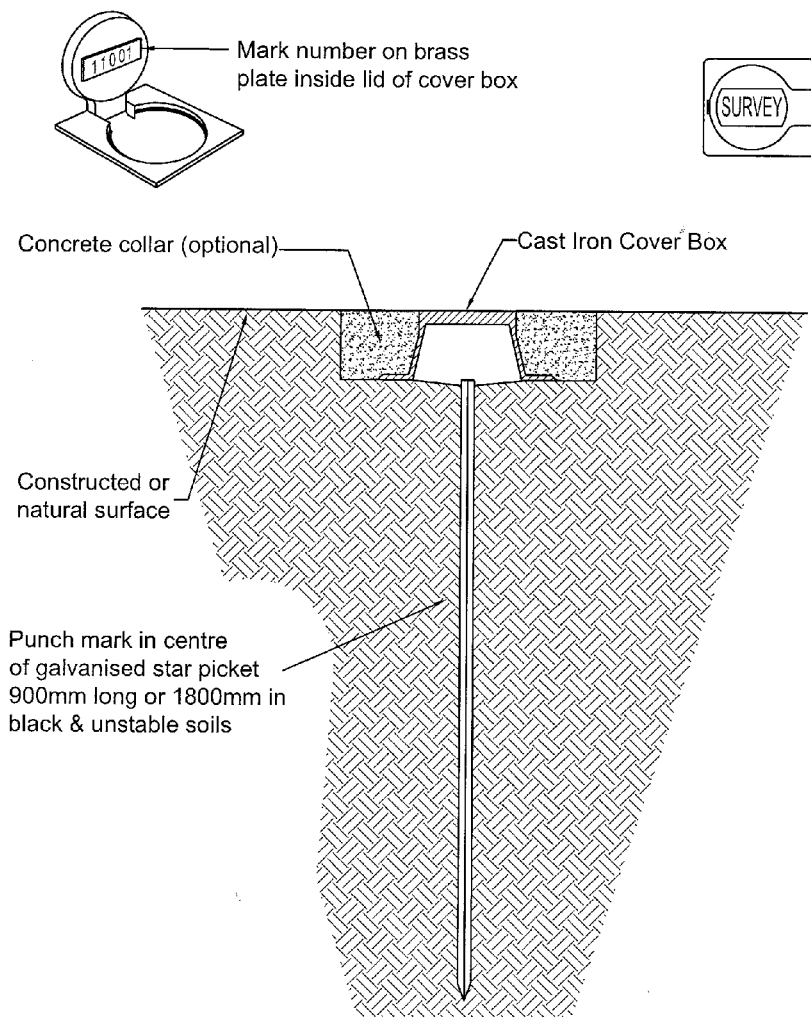
The stainless steel pin is to protrude 50mm above the surface of the concrete block.

The buffer course is to be a 50mm layer of crushed brick, gravel or coarse sand.

Surveying (Practice) Amendment Regulation 2003

Schedule 1 Amendments

Type 6 (Non Urban Type)



NOTE:- The above are minimum specifications. It is preferable that a concrete collar be added.

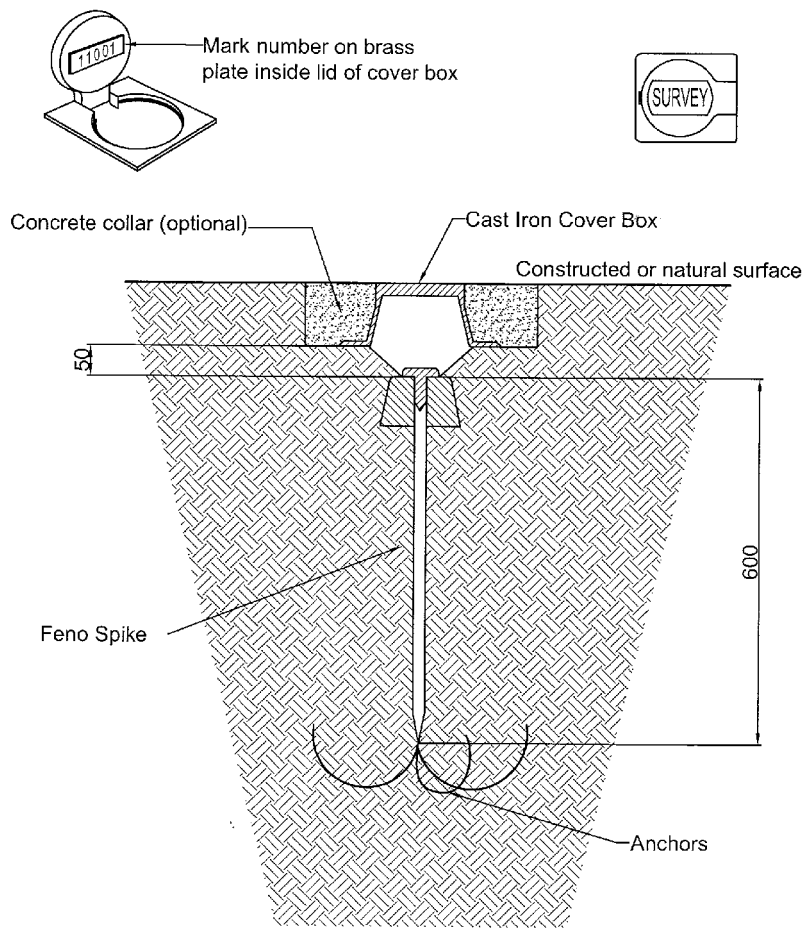
Surveying (Practice) Amendment Regulation 2003

Amendments

Schedule 1

Type 7 (Feno Spike with Cover Box)

Dimensions are in millimetres



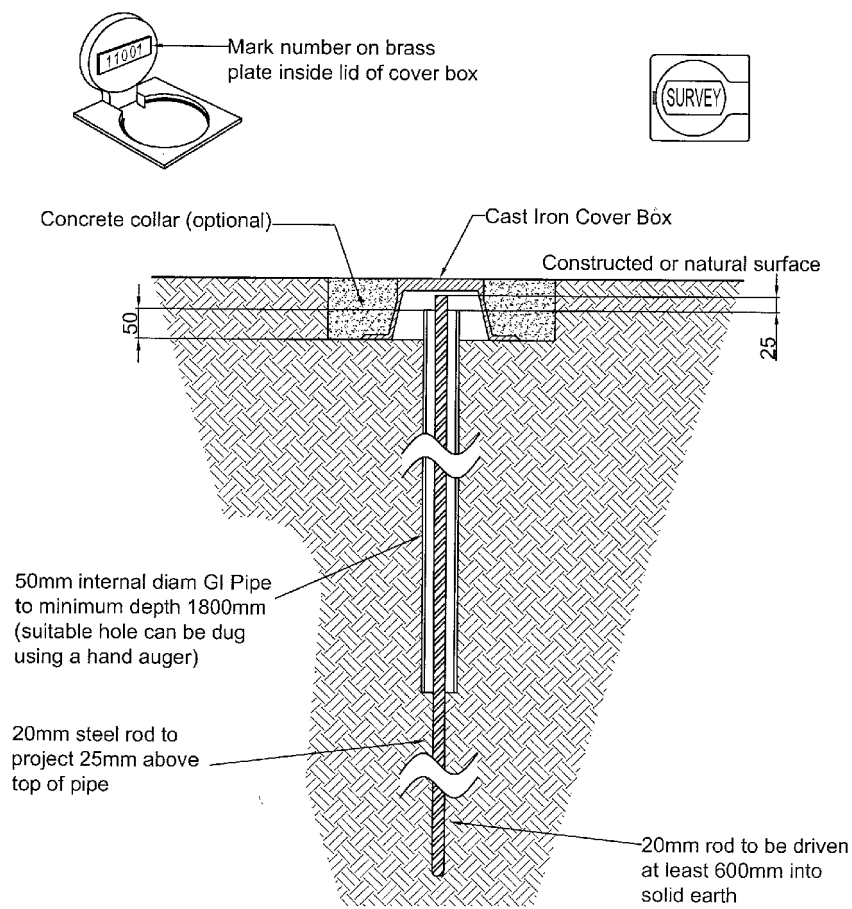
NOTE:- The above are minimum specifications.
It is preferable that a concrete collar be added.

Surveying (Practice) Amendment Regulation 2003

Schedule 1 Amendments

Type 8 (D.W.R. "C-Type" Mark)

Dimensions are in millimetres



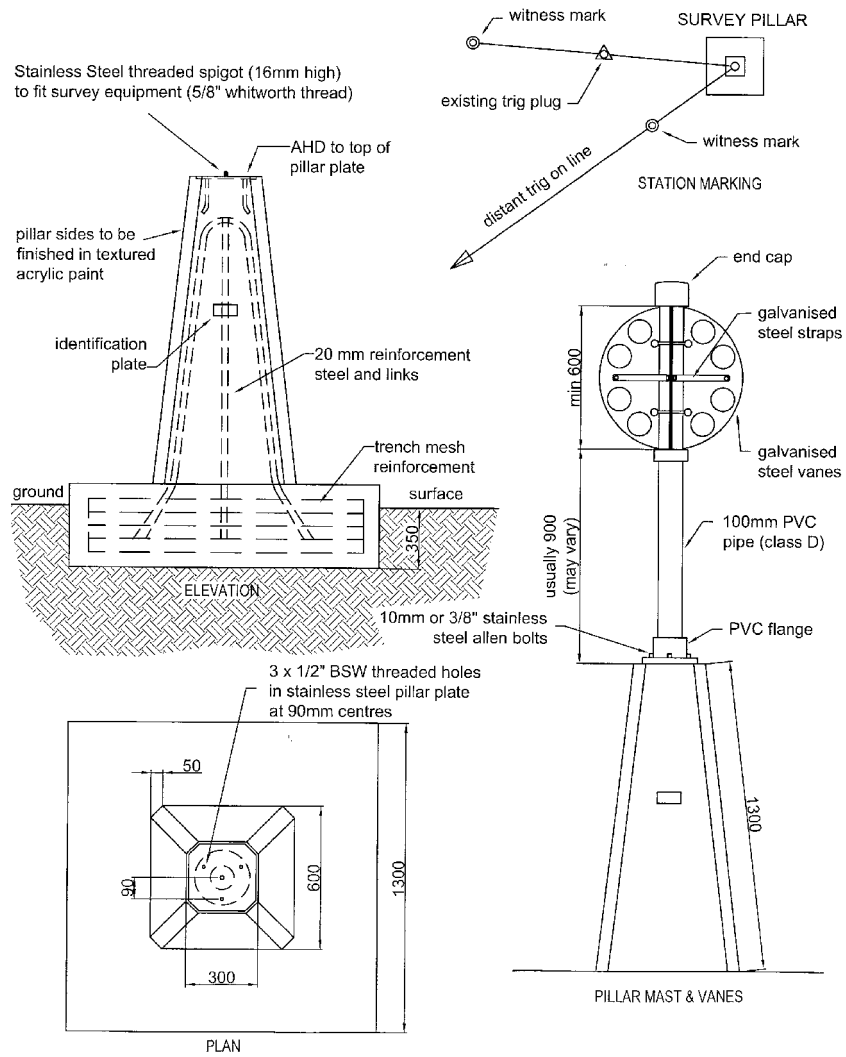
Surveying (Practice) Amendment Regulation 2003

Amendments

Schedule 1

Type 9 (Trigonometrical Station)

Dimensions are in millimetres

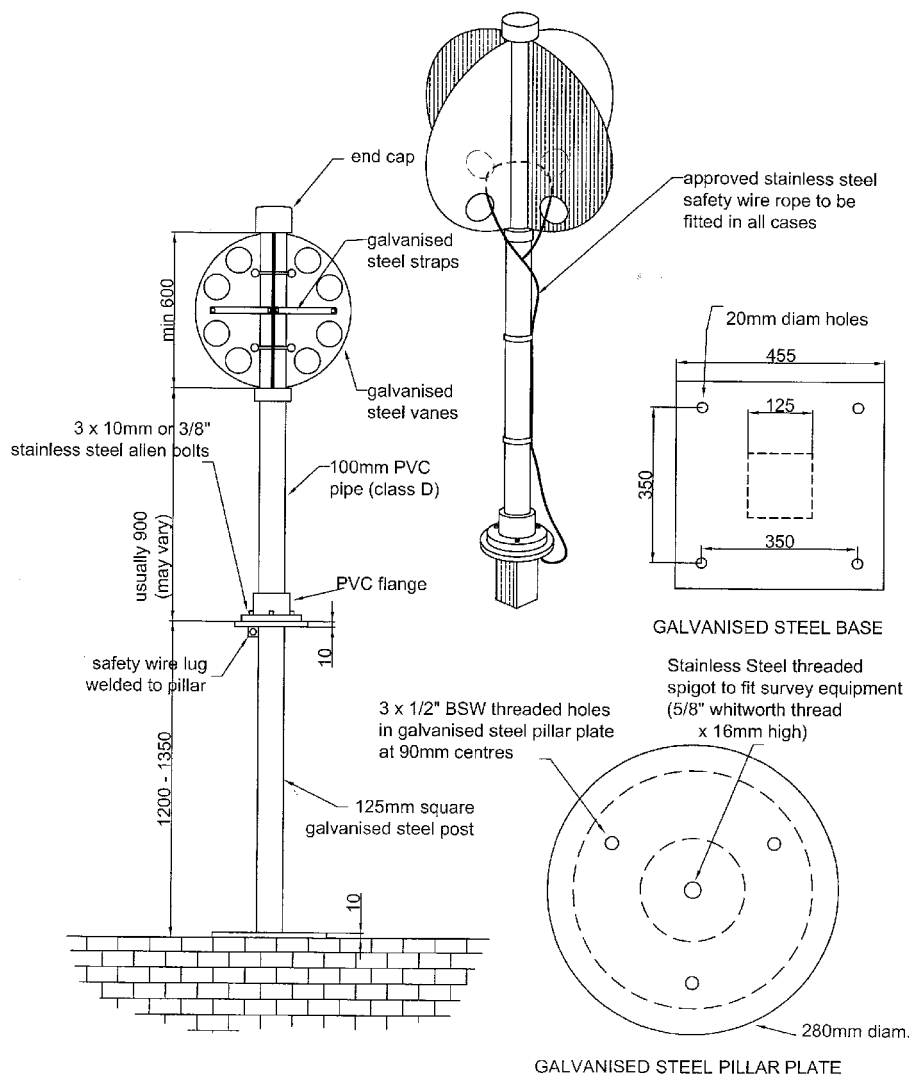


Surveying (Practice) Amendment Regulation 2003

Schedule 1 Amendments

Type 10 (Rooftop Pillar)

Dimensions are in millimetres



Surveying (Practice) Amendment Regulation 2003

Amendments

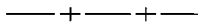


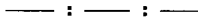
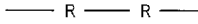

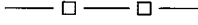
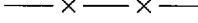
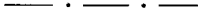
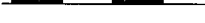
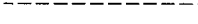
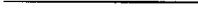
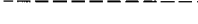


Schedule 1

Schedule 5 Conventional symbols and signs





(Clause 59C)

Conventional Signs and Symbols to be used on Plans

(Boundaries)

State	
Territorial Division	
Local Government Area	
State Forest	
State Recreational Area	
National park, nature reserve or regional park	
State Coal Mine	
County	
Parish	
Public Road	
Surveyed Reserved Road	
Railway	
Track	
Fence on the boundary	
Fence not on the boundary	

(Symbols)

Boundary mark	
Reference mark	
Permanent Survey Mark	
Trigonometrical Station	

Surveying (Practice) Amendment Regulation 2003

Schedule 1 Amendments

Schedule 6 Fees and deposits

(Clause 4K)

Column 1	Column 2	Column 3
Item	Matter for which fee or deposit payable	Fee
1	Application to sit for Board examination	\$250 per subject
2	Application to enrol in recognised professional training agreement	\$60
3	Relodgment of application to enrol in recognised professional training agreement	\$30
4	Variation of application to enrol in recognised professional training agreement	\$30
5	Submission of recognised professional training agreement report	\$200 per report
6	Resubmission of recognised professional training agreement report	\$100
7	Final interview (recognised professional training agreement report)	\$200
8	Application for granting of registration	\$60
9	Application for restoration of registration	\$150
10	Application for replacement of certificate of registration	\$60
11	Annual administration fee	\$360 or, in the case of registration as both a land surveyor and mining surveyor, \$240 in respect of each registration
12	Application to inspect register of public surveys	\$25

Surveying (Practice) Amendment Regulation 2003

Amendments

Schedule 1

Column 1	Column 2	Column 3
Item	Matter for which fee or deposit payable	Fee
13	Extract from register of public surveys (per entry)	\$4
14	Extract from register of surveyors (per entry)	\$4
15	Application for certificate of authority	\$80
16	Deposit payable for deferred placement of survey marks	\$750, or \$250 per survey mark, whichever is the greater
17	Application for Board's determination that a person's abilities and experience qualify the person to be a survey drafter or surveyor's assistant	\$80
18	Application to be a student of surveying, survey drafter or surveyor's assistant	\$80
19	Supply of evidentiary certificate under section 55 of the <i>Licensing and Registration (Uniform Procedures) Act 2002</i>	\$60

COAL MINES REGULATION ACT 1982

PURSUANT to the Coal Mines (General) Regulation 1999, Clause 64, the following amendments to the "Survey and Drafting Directions for Mine Surveyors, 2000" are issued with the concurrence of the Surveyor General.

These amendments to the Directions commence on the date of publication.

ROBERT REGAN, Chief Inspector of Coal Mines

COAL MINES (GENERAL) REGULATION 1999**Clause 64****Survey and Drafting Directions for Mine Surveyors 2000****SECTION 1 – GENERAL**

Replace Clauses 1.1, 1.2.3, 1.3.1 and 1.4 with the following:

1.1 Preparation

These Directions provide for the digital recording, storage and preparation of the Mine Workings Plan and Mine Record Tracing. Collieries operating at the date of gazettal of these Directions which cannot conform with this requirement will prepare the Mine Workings Plan and Mine Record Tracing as detailed in Section 8.

1.2.3 All plans should be regarded with suspicion until their accuracy has been verified, and every effort should be made to obtain all existing information about old workings.

1.3.1 This clause has been removed as it is no longer relevant as the two year time period for transferring to MGA94 has now elapsed and likewise with the time for applying for an exemption to comply with the transfer to MGA94.

1.4 Symbols

The technical symbols, sign conventions and definitions for strata to be shown on the Mine Workings Plan and the Mine Record Tracing shall be in accordance with these Directions, and shall conform to those illustrated in the Australian Standard for Mine Symbols (AS-4368), the Australian Standard for Geological Symbols (AS-2916) and Geoscience Australia. If a symbol is not provided for in (AS-4368), (AS-2916) or Geoscience Australia the Mine Surveyor may create a suitable symbol to be shown in the legend.

SECTION 2 – DEFINITIONS

Replace Clause 2.21 with

2.21 Mine Record Tracing

Plan required to be prepared under Part 7 of the Coal Mines (General) Regulation

1999 as a copy of the Mine Workings Plan.

(a) Digital

A digital image file or files containing Mine Workings Plan data in accordance with Annexure "C" of these Directions.

(b) Hard Copy

A copy of the Mine Workings Plan plotted on the appropriate medium in accordance with Annexures 'A' and 'B' of these Directions.

SECTION 3 – SURVEY PROCEDURES

Replace Clauses 3.1.4, 3.4.1 and 3.9 with the following:

3.1.4 Each end of the Mine Baseline should be assigned an AHD Reduced Level surveyed to Class LD spirit levelling (ICSM, SP1) or Class B from Trigonometric or GPS heighting.

3.4.1 Accuracy: Each underground control and subsidiary survey shall, where possible, be closed to the standard of accuracy as prescribed in ICSM, SP1 Class D. If closure is not practical, survey techniques recommended for achieving Class D or better should be employed.

3.9 Surface Movement and Subsidence

3.9.1 Where the Chief Inspector directs, a survey is to be undertaken to record surface movement, including subsidence induced mining.

3.9.2 The survey shall be carried out in accordance with the standards set out in these Directions, or as otherwise directed by the Chief Inspector.

3.9.3 Such surveys shall be carried out under the supervision of, and certified by, a Registered Mining Surveyor.

3.9.4 All subsidence data including field notes is to be kept at the mine in accordance with Clause 3.7 of these Directions.

SECTION 4 – MINE WORKINGS PLAN

Add subclauses (u) and (v) to Clause 4.2.1 Themes

(u) Void

(v) Void contour

Replace subclause (a) of Clause 4.6.1 with

a) in the case of the hard copy, in the Certification of Accuracy schedule after the most recent 3 monthly period has been charted and

Add a new Clause 4.7

4.7 Certification History

The Mine Workings Plan sheets, produced from the digital form, shall have recorded digitally in the Certification of Accuracy schedule the certification details for each 3 monthly period charted since the commencement of these Directions.

SECTION 5 – MINE RECORD TRACINGS

Replace Section 5 with

5. MINE RECORD TRACING

This section refers to the preparation, composition and supply of the Mine Record Tracing from a digital Mine Workings Plan.

5.1 General

5.1.1 Authorisation

The Mine Record Tracing is required by part 7, Clause 67 of the Coal Mines (General) Regulation 1999.

5.1.2 Preparation

The Mine Record Tracing shall be prepared by or under the supervision of the Mine Surveyor within 3 months of the commencement of mining operations.

5.1.3 Composition

The Mine Record Tracing shall be prepared in the following formats:

(a) Digital File

A digital image file of the Mine Workings Plan in accordance with Annexure “C” of these Directions, and

(b) Hard Copy

A copy of the Mine Workings Plan plotted on the appropriate medium in accordance with Annexures ‘A’ and ‘B’ of these Directions.

5.2 Supply of Mine Record Tracing

5.2.1 Supply of Mine Record Tracing Data as a Digital File

The Digital File shall be in the form of Annexure ‘C’

5.2.1.1 The Digital File shall be submitted to the Director General at the end of each 3 monthly reporting period. In the case of a new mine the Digital File shall be supplied to the Director General 3 months after the commencement of mining operations.

5.2.1.2 The Mine Manager or the Mine Surveyor shall advise the Director General that the digital file has been sent from the mine.

5.2.1.3 On receipt of a digital file from the mine, the Director General shall advise the Mine Manager or the Mine Surveyor within 7 days of receipt that the digital file has been received and is able to be read.

5.2.1.4 The Chief Inspector may from time to time vary, amend or replace, in the form of Annexure ‘C’, requirements for the lodgement of digital Mine Record Tracings.

5.2.2 Supply of Mine Record Tracing in Hard Copy

The Hard Copy shall be in the form of Annexures ‘A’ and ‘B’

- 5.2.2.1 The Mine Record Tracing shall be supplied in hard copy form on an appropriate medium, every six months.
- 5.2.2.2 The Mine Manager or Mine Surveyor shall advise the Director General that the hard copy Mine Record Tracing has been sent from the mine and by what means of transport.
- 5.2.2.3 On receipt of the hard copy from the mine the Director General shall advise the Mine Manager or the Mine Surveyor within 7 days of receipt that the Mine Record Tracing has been received and has been accepted.
- 5.2.2.4 The Director General, on receipt of the Mine Record Tracing shall archive the current copy. Redundant copies may be removed from the archive at the discretion of the Director General.

5.3 Exemption

The Manager of a mine, where the life expectancy of the mine is less than 5 years from the date of gazettal of these Directions, may apply to the Chief Inspector for an exemption from the requirement to supply the Mine Record Tracing in accordance with Annexure 'C' of these Directions.

5.4 Extension of Time

The Chief Inspector may, should the circumstances so warrant, grant an extension of time for the preparation and supply of the hard copy of the Mine Record Tracing or the supply of the Digital File.

5.5 Catalogue Number

The Mine Record Tracing cataloguing system shall continue for each mine according to a unique number identification system prefixed by the letters RT.

SECTION 6 – CLOSING PLANS

Replace Clauses 6.3.3 and 6.4.2 with the following:

- 6.3.3 The note "Charted to date of Discontinuance Only or Abandonment" as the case may be is to be shown in the "Schedule of Certification of Accuracy" above the date and the Mine Surveyor's signature.
- 6.4.2 The note 'Charted to date of Cessation of duties of the Mine Surveyor' is to be shown in the 'Schedule of Accuracy' above the date and the Mine Surveyors signature.

SECTION 7 – OTHER PLANS REQUIRED

Replace Clause 7.6 with

7.6 Mines Rescue Plan (Underground Mines)

A plan shall be kept at the mine for the purpose of mines rescue. The Mines Rescue Plan shall be of a scale of not less than 1:10000. An up to date copy is to be retained at the nearest responding Rescue Station for the mine. Symbols used will be in accordance with AS 4368 and AS 2916.

This plan shall show main access roads, the means of egress from each part of the mine to the surface, the positions of First Aid Stations, underground telephone stations, stoppings, trapdoors, regulators, seals, prepared seal sites, overcasts, air crossings, ventilation doors, booster fans, belt conveyors, main electric supply cables, fixed electrical apparatus, the direction of ventilation in the roadways, pipe mains, hydrants, isolation valves, fire substations and where fire depots are situated, air reading stations with quantity, gas monitoring points together with the route of such monitoring and any gas drainage mains and branches, known falls, accumulations of water, stowage identified as passable and non passable and any information identified as necessary for the dealing with an emergency at the mine.

This plan is to be updated monthly.

SECTION 8 – NON DIGITAL PLANS

Include a clause under the heading 8. NON DIGITAL PLANS

8. NON DIGITAL PLANS

This section refers to the preparation and composition of the non digital Mine Workings Plan and Mine Record Tracing, and the supply of the non digital Mine Record Tracing

Replace the whole of Clause 8.5 with

8.5 Supply of Mine Record Tracing

Electronic messages (E mail) as a notice for the issue and receipt of Mine Record Tracings is acceptable.

- 8.5.1 The Mine Record Tracing shall be forwarded to the Chief Inspector within three months after the commencement of mining operations.
- 8.5.2 The Mine Manager or the Mine Surveyor shall forward a notice to the Director General advising the date the Mine Record Tracing has been sent from the mine and by what means of transport.
- 8.5.3 On receipt of a Mine Record Tracing from the Mine, the Director General shall notify the Mine Manager or the Mine Surveyor, in writing within 7 days of receipt that the Mine Record Tracing has been received.
- 8.5.4 The Director General shall forward a notice to the Mine Manager or Mine Surveyor advising the date the Mine Record Tracing has been forwarded to the mine quoting the address to which was sent and by what means of transport.
- 8.5.5 On receipt of a Mine Record Tracing from the Department of Mineral Resources, the Mine Manager or the Mine Surveyor shall notify the Director General, in writing within 7 days of receipt that the Mine Record Tracing has been received.
- 8.5.6 The Mine Manager or the Mine Surveyor shall notify the Director General in writing within at least 7 days prior to the scheduled return/lodgement date of the Mine Record Tracing if an extension of time is required to update the Mine Record Tracing.

ANNEXURE A

Replace Clauses A6.3.2 (d) and (h), A7.1.1, A7.1.4, A7.2.3, A7.2.4 (d), A7.2.5, A7.2.7, A7.2.8, and A7.3.2 with the following:

A6.3.2

- (d) The position of all boreholes within that sheet or
 - (i) Where it is not practical to show all boreholes on the seam workings sheet, a separate "Borehole Plan", which shall become part of the Mine Workings Plan, shall be produced as an overlay.
 - (ii) A reference on the seam workings sheet is required to indicate the existence of the borehole overlay sheet.
 - (iii) All boreholes should be identified as to type and name and their current status (eg. open, sealed, capped).
 - (iv) Where boreholes are drilled in adjacent strata sufficient reduced levels should be shown to indicate their position.
 - (v) Any borehole which is removed by the mining process is not required to be shown. Remnant stubs of these holes however, which may present a hazard to future mining operations must be shown.

- (h) Contour lines of the floor of the working section at each one metre, two metre or five metre interval whichever predominantly provides contour representation on the seam workings sheet of horizontal distance not exceeding 5cm.

A7.1.1 The name of the Colliery eg **Acme Colliery**.

A7.1.4 The name of the seams being worked and the names of other seams known to have been worked in that sheet area, together with the RT numbers of the Collieries that worked or works in those seams.

A7.2.3 A schedule of symbols (refer to AS-4368, AS-2916 and Geoscience Australia) used on the particular sheet,

A7.2.4

- (d) An outline of the Voids

A7.2.5 A section of the stratum from the surface to the basal seam in the sheet appropriately symbolised and coordinated with seams named.

A7.2.7 A schedule of approvals granted .

A7.2.8 A statement certifying the accuracy of the sheet,

A7.3.2 The following detail will be shown :-

- (a) Cadastral information in background line type.
- (b) Contour lines at 5 metre intervals of the void.
- (c) Outline of limit of highwall mining and auguring.

MINES INSPECTION ACT 1901

As an adjunct to General Rule 2000 under the Mines Inspection Act 1901, the following amendments to the Survey and Drafting Directions for Mining Surveyors 2001 are issued with the concurrence of the Surveyor General.

These amendments to the Directions commence on the date of gazettal.

GRAHAM TERREY, Chief Inspector of Mines

GENERAL RULE 2000

MINES INSPECTION ACT

Survey and Drafting Directions for Mining Surveyors, 2001

SECTION 1 – GENERAL

Replace Clauses 1.2, 1.4.4, 1.5.1 and 1.5.2 with the following:

1.2 Preparation

These Directions provide for both the digital and non digital recording, storage and preparation of a Mine Workings Plan. Mines operating at the date of gazettal of these Directions which cannot conform with this requirement will prepare the Mine Workings Plan as detailed in Section 4.

Section 5 lists the details required for both the digital and non digital plans.

1.4.4 Should the workings referred to in clause 1.4.2 become active, or are used for access in an area previously shown in outline the survey of the workings shall be transferred in full to the new Mine Workings Plan.

1.5.1 The technical symbols, sign conventions and definitions for strata to be shown on the Mine Workings Plan shall be in accordance with these Directions, and shall conform, as appropriate, to those illustrated in the Australian Standard for Mine Symbols (AS-4368), the Australian Standard for Geological Symbols (AS-2916) and Geoscience Australia 'Symbols Used on Geological Maps'.

1.5.2 If a symbol is not provided for in these publications, the mining surveyor may create a suitable symbol to be shown in the legend. Any such created symbol shall carry a full explanation on the sheet of the Mine Workings Plan.

SECTION 2 – DEFINITIONS AND ABBREVIATIONS

Replace the definition in the appropriate place in the alphabetical sequence:

Agso Geoscience Australia

Was formerly the Australian Geological Survey Organisation and previously known as the Bureau of Mineral Resources (BMR)

With;

Geoscience Australia

Was formerly the Australian Geological Survey Organisation and previously known as the Bureau of Mineral Resources (BMR)

SECTION 3 – SURVEY STANDARDS AND PROCEDURES

3.4 Underground Baseline

Replace clause 3.7.1.1 and 3.7.1.2 with the following:

3.7.1.1 Heights should be referred to the Australian Height Datum (AHD) + 10,000 metres as the datum for heights. This will avoid negative levels on mine plans.

3.7.1.2 A period of two years from the date of gazettal of these Directions is provided for the transfer of the Mine Workings Plan to the AHD + 10,000 metres datum. The general manager of a mine, where the life expectancy of the mine is less than two years from the date of gazettal of these Directions, may apply to the Chief Inspector for an exemption from this requirement.

Replace clauses 3.8.7, 3.8.10 and 3.8.11 as follows:

3.8.7 The Mine Workings Plan must be revised if necessary, every three months to show any changes in respect of the workings that have been carried out, or the workings that are proposed to be carried out, at the mine.

3.8.10 Upon discontinuance of mining operations a copy of the Mine Workings Plan shall be submitted to the Director General for retention. The Mine Workings Plan shall be forwarded to the Department within 28 days of the abandonment of a mine.

3.8.11 Upon abandonment of a mine all survey records relevant to the preparation of the Mine Workings Plan shall be forwarded to Director

General for retention. The survey records shall be forwarded within 28 days of the abandonment of a mine.

Replace section 3.10 as follows:

3.10 Surface Movement and Subsidence

3.10.1 Where the Chief Inspector directs, a survey is to be undertaken to record surface movement, including subsidence induced mining.

3.10.2 The survey shall be carried out in accordance with the standards set out in these Directions, or as otherwise directed by the Chief Inspector.

3.10.3 Such surveys shall be carried out under the supervision of, and certified by, a Registered Mining Surveyor.

3.10.4 All subsidence data including field notes is to be kept at the mine in accordance with Clause 3.7 of these Directions.

SECTION 4 – MINE WORKINGS PLAN

Replace clauses 4.4.2.2 and 4.7.4 as follows:

4.4.2.2 The plan sheets and section sheets (as the case may be) on which workings occurred during the previous three monthly survey revision period will be produced on paper. The previous copies may be archived or destroyed on preparation of the updated copy.

4.7.4 The mining surveyor shall, by signing and dating the Certification of Accuracy schedule and by signing and dating the Compact Disc with a permanent marking pen, declare for the most recent 3 monthly period that:

- i. the Mine Workings Plan has been prepared in accordance with these Directions, and,
- ii. the surveys shown on the Mine Workings Plan have been completed to an accuracy as prescribed in these Directions.

Include a new clause 4.7.6 as follows:

4.7.6 The Mine Workings Plan sheets, produced from the digital form, shall have recorded digitally in the Certification of Accuracy schedule the certification details for each 3 monthly period charted since the commencement of these Directions.

Include new section 4.13 Supply of copy of the Mine Workings Plan as follows:

4.13 Supply of copy of the Mine Workings Plan

- 4.13.1 Electronic messages (Email) as a notice for the issue and receipt of the copy of Mine Workings Plans is acceptable.
- 4.13.2 The copy of the Mines Workings Plan shall be sent to the Director General, Department of Mineral Resources unless otherwise advised.
- 4.13.3 The Mine Manager or the Mine Surveyor shall forward a notice to the Director General advising the date the copy of the Mines Workings Plan has been sent from the mine and by what means of transport.
- 4.13.4 On receipt of the copy of the Mines Workings Plan from the Mine, the Director General shall notify the Mine Manager or the Mine Surveyor, in writing within 7 days of receipt that the copy of the Mines Workings Plan has been received.
- 4.13.5 The Mine Manager or the Mine Surveyor shall notify the Director General in writing within at least 7 days prior to the scheduled return/lodgement date of the Mines Workings Plan if an extension of time is required to update the Mines Workings Plan.

SECTION 5 – MINE WORKINGS PLAN & INFORMATION

Replace clause 5.2.1.3 as follows:

- 5.2.1.3 Where applicable, the standard for Mine Workings Plan symbols shall be to Australian Standard AS4368 and AS1100. Geological symbols shall be to the Australian Standard for Geological Symbols (AS-2916) and AGSO 'Symbols used on Geological Maps'. If no symbol is available for a data theme, then a non-standard symbol may be used and an appropriate explanation shown on the Plan sheet.

COAL MINES REGULATION ACT 1982

Pursuant to the Coal Mines (General) Regulation 1999, Clause 64, the following amendments to Annexure 'C' of the "Survey and Drafting Directions for Mine Surveyors, 2000" are issued.

These amendments to the Directions commence on the date of publication.

ROBERT REGAN, Chief Inspector of Coal Mines

COAL MINES (GENERAL) REGULATION 1999

Clause 64

Survey and Drafting Directions for Mine Surveyors, 2000

Annexure 'C' is to be replaced with:

ANNEXURE 'C'

Digital Mine Record Tracings

Concept

The model for the supply of Digital Record Tracings (DRT) is that it will eventually save the Mine Surveyor time in not having to prepare hard copy record tracings for submission to the Department every reporting period. The Department will catalogue and file the digital copy as supplied by the mine surveyor. At the same time copies of some of the themes supplied will be down loaded into the Department's GIS to record the extent of mining and to carry out visual examination of the plan of workings. The themes down loaded will be restricted to viewing by officers authorised by the Chief Inspector.

Of essence the DRT should be able to be loaded into the Department's GIS without being modified or edited by Departmental officers. Notwithstanding this, the surveyor's responsibilities under the Survey and Drafting Directions (S&DD) end with the signing off (certification) on the front of the Compact Disk (CD). The Department will be responsible for updating the certified CD to new versions of the Department's software.

The attached entity forms set out the attributes the Department would expect to receive under each theme name within a DRT.

Please also note that the surveyor is not limited to the data themes so identified nor the attribute fields so listed these, these themes and attributes are considered as a minimum.

The theme 'Endorsements', (s) of Clause 4.2.1 S&DD has been omitted and included as an attribute under the relevant themes. Instead of using the theme 'Certificates', (t) S&DD, The certification should appear on the face of the compact disc.

The Departments GIS is ArcInfo

ArcInfo can accept its own export files (*.e00). This format is available in AutoCAD Map2000 and MapInfo

ArcInfo can convert ArcView shape files to coverages.

A number of software companies that supply specific software suites to the mining industry are developing packages to convert and annotate data held in their software to ArcView shape files. See software suppliers for their current position.

There is a later version of AutoCAD that assigns a unique number to each line. This unique number might be used within a spreadsheet to record attributes listed in the following theme attribute tables against that line. On uploading the AutoCAD digital exchange file (*.dxf) into an Arc coverage, the spreadsheet information could be joined to the lines using the unique number as the link.

The compact Disk submitted as a DRT should be labeled with the Colliery name and the reporting period e.g. ACME0601 (Acme Colliery June 2001). The disk would then contain a number of files as per the theme tables, one of which would be work_wng. This consists of the workings in the Wongawilli seam.

By convention all theme names and attribute names will be in lower case.

Rationale

A data dictionary is a description of fields for each feature type in a database. A spatial database may be described as a theme, coverage, layer or shape file. In the ESRI suite of GIS software the terms used are coverage (ArcInfo) and shape file (ArcView). A spatial theme is a set of spatial objects, which may be depicted as points, arcs or polygons.

In this data dictionary a description of all the themes to be created is given. Some of the themes in this data dictionary may have associated look-up tables. Look-up tables store an additional array of attributes that are linked to the primary attribute table of a theme. Theme names, optionalality, format, length, attribute names, rules and comments (notes) are given in the following sheets.

Maintenance

This document is subject to periodic updates. Requests to include new themes and or attributes into the data dictionary should be submitted to the Manager Systems and Projects, Titles Branch by e-mailing to s&dd@minerals.nsw.gov.au.

Field Formats

Format may be only one of the following:

character (c), with a maximum number characters alpha and numeric.

integer (i), with a maximum length field.

date (d) is stored in form yyyyymmdd, it is entered as mm/dd/yy (8 characters) and displayed as mm/dd/yyyy (10 characters).

number (n) with maximum length including digits after the decimal point eg 11,3 indicating three digits after the decimal point and seven digits preceding, the decimal point is included in the character count

General Rules

Theme is a set of spatial objects - a coverage in ArcInfo or ArcView, a shape file in ArcView.

All fields in each theme defined in this document must be listed in the order specified.

Other themes may be included at the surveyor's discretion.

All themes must be in double precision. Single precision is limited to one byte (eight characters) whereas double precision allocates 2 bytes

By convention all theme names and attribute names will be lower case. Attribute values may be upper and lower case

Survey and Drafting Directions Section 4.2.1(a) Colliery Holding boundary.

Theme	Digital Record Tracing - Colliery Holding	Description	Sub Type of	Records	Application	DRT	
					75	Growth (%pa) 5% pa	
Attributes							
Name	Opt. (Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Colliery_Holding_name	N		Character	50	Name of Colliery Holding		
Mine_Name	Y		Character	50	Mine Name		
Seam_name	Y		Character	50	May be used to delimit overlying Colliery Holdings		
RT_No	N		Character	10	Record Tracing number		
Source	N		Character	10 0	DCDB, Survey-own, keyed original bearing distance, coordinate entry		
Coord_System	Y		Character	50	Coordinate System used eg Mapping Grid of Australia (MGA)		
Endorsements	Y		Character	200	Comments, remarks or endorsements		
Disk_name	N		Character	30	Colliery name month year Acme 1201		
File_name	N		Character	20	In form holdingmmyy eg holding1201		

Notes:

1. There may be a single mine or a number of mines operating within a Colliery Holding.
2. The internal boundary between mines should be shown.

Survey and Drafting Directions Section 4.2.1(b) Mining Lease boundaries.

Theme	Digital Record Tracing -Titles		Sub Type of	Records	Application		DRT
	Description				Growth (%pa)	5% pa	
	Details of the Mining Titles and Freehold/leasehold land recorded within a colliery holding. Naming convention titlemmyy				75		
Attributes							
Name	Opt. (Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Colliery_Holding_name	N		Character	50	Name of Colliery Holding		
Mine_Name	Y		Character	50	Mine Name		
Seam_name	Y		Character	50	May be used to delimit overlying Colliery Holdings		
RT_No	N		Character	10	Record Tracing number		
Portion_no	N		Character	25	Mines portion No or Lot/dp ML 6 1/750320		
Title_name	N		Character	25	Mining Lease identifier or Folio identifier ML 2314 1992 15/823123		
Plan_catalogue_no	Y		Character	25	Survey plan catalogue		
Source	N		Character	10 0	DCDB, Survey-own, keyed original bearing distance, coordinate entry		
Endorsements	Y		Character	200	Comments, remarks or endorsements		
Disk_name	N		Character	30	Colliery name month year Acme1201		
File_name	N		Character	20	In form title mmyy title1201		

Notes:

- 1: This theme identifies the Mining titles and the freehold land which make up the title to the Colliery Holding. Mining titles and freehold land may extend outside the Colliery Holding.
- 2: Naming conventions for mining titles
- 3: Naming conventions for folio identifiers

Survey and Drafting Directions Section 4.2.1(c), (d), (e), (o) and (p) Workings.

Theme	Digital Record Tracing - Workings	Description	Sub Type of	Records	Application	DRT	
		Details of the workings of a seam of an underground colliery or bench worked of an open cut. Naming convention Must be in the form work_seam abbreviation			75	Growth (%pa) 5% pa	
Attributes							
Name	Opt. (Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Seam_name	N		Character	50	Name of Seam being worked		
Date_worked	Y		Date	8/10	Date worked		
Work	Y		Character	5	1 st Workings U/G (1 st); 2 nd Workings U/G (2 nd); Auger/ Highwall Mining (Hwall).		
Status	N		Character	1	Working, Discontinued or Abandoned (W, D or A)		
Initials	N		Character	3	Initials of Mining Surveyor		
Endorsement	Y		Character	200	Additional reference about workings		
Disk_name	N		Character	30	Name of colliery month year Acme0902		
File_name	N		Character	20	Work_seam abbreviation		

Notes:

1. For open cut workings work field should be left blank
2. Goaf areas should be represented by a polygon and either shaded or hatched to represent the void
3. Adjacent workings in the same seam must be shown.
4. Adjacent workings in different seams are subject to a further theme.

Survey and Drafting Directions Section 4.2.1(f) Survey stations.

Theme	Digital Record Tracing - Survey	Description	Sub Type of	Records	Application	DRT	
		Details of the survey stations of a mine. Naming convention Must be in the form survey			75	Growth (%pa) 5% pa	
Attributes							
Name	Opt. (Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Seam_name	Y		Character	30	Name of Seam or "Surface" or "Drift"		
Charted_date	Y		Date	8/10	Charted date. Date workings charted to		
Station_id	N		Character	25	Name of Survey station SSM1234 TP987		
Station_type	N		Character	4	Code of symbol refer to AS 4368		
Easting	N		Number	6.3	Easting (10)		
Northing	N		Number	7.3	Northing (11)		
Height	N		Number	4.3	Height = RL + 10000 (unless exemption granted)		
Field_note	N		Character	25	Reference to Field Book folio, Electronic record etc		
Adjustment	N		Character	25	Reference to Calculation sheet folio or electronic adjustment file		
Survey_date	Y		Date	8/10	Date of survey		
Endorsement	Y		Character	200	Additional information		
Disk_name	N		Character	30	Colliery name month year Acme0902		
File_name	N		Character	20	Survey		

Notes:

1. The details of the mine or colliery baseline must be included.
2. Open cut mines need only record control stations, where they are permanent in nature and form part of a control network within the open cut operations.
3. The height of a station is the RL + 10000. eg the station is 195 meters below AHD the height is -195 + 10000 = 9805.
4. The attribute Adjustment may refer to a separate spreadsheet, which records adjustment, calculations etc.

Survey and Drafting Directions Section 4.2.1(g) Geology

Theme	Digital Record Tracing - Geology	Description	Sub Type of	Records	Application	DRT	
		Details of the geology of seam or section workings of a mine Naming convention Must be in the form geology_seam abbreviation			75	Growth (%pa) 5% pa	
Attributes							
Name	Opt. (Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Seam_name	N		Character	30	Name of Seam being worked		
Charted_date	Y		Date	8/10	Charted date. Date workings charted to		
Code_no	N		Character	12	Code of symbol. Refer to AS 2916 and AS 4368		
Feature_width	Y		Character	10	Displacement or width of geological feature in metres		
Endorsement	Y		Character	200	Additional information		
Disk_name	N		Character	30	Colliery name month year Acme0902		
File_name	N		Character	20	Geology_seam abbreviation		

Notes:

1. The 'teeth' of a dyke or similar feature must indicate the downside.

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Survey and Drafting Directions Section 4.2.1(h) Cadastral parcels.

Theme	Digital Record Tracing - Local Cadastre	Description	Sub Type of	Records	Application	DRT	
		Details of the local cadastre of a colliery			75	Growth (%pa) 5% pa	
Naming convention Must be in the form lcl_cadastre							
Attributes							
Name	Opt.(Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Feature_type	Y		Character	10	Road, Parcel, Drainage, Railway etc		
Descriptor	Y		Character	50	No of the lot or portion /section number or letter/plan number.		
Endorsement	Y		Character	200	Additional information		
Source	N		Character	20	DCDB, Survey, Compilation from original plans		
Disk_name	N		Character	30	Colliery name month year Acme0902		
File_name	N		Character	20	Lcl_cadastre		

Notes:

1. Descriptor consists of the lot number/section number/deposited plan number. 75//750735 refers to Portion 75 Parish of Bligh County of Bligh. In this case the section number is not used.
2. Although the cadastral theme may be an untouched copy of the Land and Property Information's DCDB, the theme should be copied to the Compact Disk to ensure that the Digital Record Tracing contains the complete series of themes.

Survey and Drafting Directions Section 4.2.1(i) Mining approvals.

Theme	Digital Record Tracing - Approvals	Description	Sub Type of	Records	Application	DRT	
		Details of the Second working approvals or Section 138 approvals of a colliery Naming convention Must be in the form approval_seam abbreviation			75	Growth (%pa) 5% pa	
Attributes							
Name	Opt.(Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Seam_name	Y		Character	50	Name of Seam approval restricted to; if not restricted, insert all		
Approval_date	N		Date	8/10	Date of approval or acceptance		
End_date	Y		Date	8/10	End date of approval		
DMR_file_no	N		Character	10	File number CM86/0366		
Endorsements	Y		Character	200	Summary of conditions imposed on approval or acceptance of mine operations plan		
Disk_name	N		Character	30	Colliery name month year Acme0902		
File_name	N		Character	20	approval_seam abbreviation		

Notes:

1. To be used to record Section 138 CMR Act approvals and acceptance of Mining Operation Plans.
2. Where the approval is not restricted to a seam or seams the file name should be approval_all

Survey and Drafting Directions Section 4.2.1(j) Contours of the floor of the working section.

Theme	Digital Record Tracing - Contours	Sub Type of		Records	Application	DRT	
	Description				75	Growth (%pa) 5% pa	
Details of the contours of the working section of a mine or colliery Naming convention Must be in the form contour_seam abbreviation							
Attributes Name	Opt. (Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Seam_name	N		Character	30	Name of Seam being worked		
Charted_date	Y		Date	8/10	Charted date. Date workings charted to		
Height	N		Integer	4	Height of floor of working section. Height = RL+10000		
Endorsement	Y		Character	200	Additional information		
Disk_name	N		Character	30	Colliery name month year Acme0902		
File_name	N		Character	20	Contour_seam abbreviation		

Notes:

1. The contour depicts the floor of the working section NOT the bottom of the seam worked.
2. Contour interval to be selected by the surveyor, with due regard to rate of dip and plan scale representation.
3. The Height field is rl+10000 eg the floor is 195m below AHD Height = -195+10000 = 9805 (unless an exemption has been given)

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Survey and Drafting Directions Section 4.2.1(k) Potential Sources of Inrush

Theme	Digital Record Tracing - Inrush	Description	Sub Type of	Application Records	DRT Growth (%pa)	5% pa	
Details of potential sources of inrush Naming convention Must be in the form pot_inrush.							
Attributes							
Name	Opt. (Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Name	N		Character	50	Name to identify potential inrush		
Seam_name	Y		Character	30	Name of seam or surface where potential inrush is sourced		
Endorsement	Y		Character	200	Particulars to identify potential source of inrush.		
Disk_name	N		Character	30	Name of disc Acme1201		
File_name	N		Character	20	Pot_inrush		

Notes:

1. This theme will include workings which have the potential to flood.
2. This theme will also include the area defining surface dams and reservoirs, unconsolidated deposits and boreholes suspected of containing water.

Survey and Drafting Directions Section 4.2.1(1) Boreholes.

Theme	Digital Record Tracing - Boreholes	Description	Sub Type of	Records	Application	DRT	
		Details of boreholes within a colliery holding Naming convention Must be in the form boreholes.			75	Growth (%pa) 5% pa	
Attributes							
Name	Opt.(Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Colliery_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Borehole_name	N		Character	30	Name of borehole		
Borehole_diam	N		Character	30	Diameter of borehole in millimetres.		
Code_no	N		Character	4	Code of symbol refer to AS 2916 and AS 4368		
Easting	N		Number	6.3	Easting of Collar		
Northing	N		Number	7.3	Northing of Collar		
Collar_rl	N		Number	4.3	1234.123		
Depth	N		Number	4.3	Depth or finish RL		
Azimuth	Y		Number	3.3	Not used if borehole vertical		
Dip	Y		Number	3.3	Decimal degrees,0 horizontal, 90 up -90 down		
Borehole_status	N		Character	200	Descriptive text purpose, open, sealed with 20m concrete etc		
Disk_name	N		Character	30	Name of disc Acme1201		
File_name	N		Character	20	boreholes		

Notes:

1. Boreholes which have been 'mined out' should not be shown.
2. Remnant boreholes should be shown.
3. Boreholes that carry utilities should be included in both the 'minnfra' and 'borehole' themes.

Survey and Drafting Directions Section 4.2.1(m) Mineshafts staple shafts and drifts (Mining Infrastructure)

Theme	Digital Record Tracing - Minfra	Description	Sub Type of	Records	Application	DRT	
		Details of mining infrastructure within a colliery holding Naming convention Must be in the form minfra			75	Growth (%pa) 5% pa	
Attributes							
Name	Opt. (Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Name	N		Character	30	Name of shaft or drift		
Dimension	N		Character	30	Diameter in metres or length X width in metres		
Code_no	N		Character	4	Code of symbol refer to AS 2916 and AS 4368		
Easting	N		Number	6.3	Easting of centre of shaft or drift		
Northing	N		Number	7.3	Northing of centre of shaft or drift		
Collar_rl	N		Number	4.3	Reduced level of centre of shaft or drift		
Depth	N		Number	4.3	Depth or finish RL of shaft or drift		
Azimuth	Y		Number	3.3	Not used if shaft is vertical		
Dip	Y		Number	3.3	Decimal degrees, 0 horizontal, 90 up -90 down		
Status	N		Character	200	Descriptive text purpose, open, sealed with 20m concrete from seam to seam etc		
Disk_name	N		Character	30	Name of disc Acme1201		
File_name	N		Character	20	Minfra		

Notes:

- Boreholes that carry electricity, water, air etc should be included in both the 'minfra' and 'borehole' themes.

Survey and Drafting Directions Section 4.2.1(n) Grid lines

Theme	Digital Record Tracing - Grid lines	Description	Sub Type of the Survey Grid	Records	Application	DRT	
		Details of the Survey Grid File naming convention Must be in the form grid_mga zone number			75	Growth (%pa) 5% pa	
Attributes							
Name	Opt. (Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Colliery_Holding_name	N		Character	50	Name of Colliery or mine		
Mine_Name	Y		Character	50	Mine Name		
RT_No	N		Character	10	Record Tracing number		
Coord_System	Y		Character	50	Coordinate System used eg Mapping Grid of Australia (MGA)		
Easting	N		Numeric	6.3	Easting See note 2		
Northing	N		Numeric	7.3	Northing See note 2		
Endorsements	Y		Character	200	Comments, remarks or endorsements		
Disk_name	N		Character	30	Colliery name month year Acme 1201		
File_name	N		Character	20	In form grid_mgazone (see note 2)		

Notes:

1. Although this theme can be created 'on the fly' to produce hard copy prints from digital data, the theme should be copied to the Compact Disc to ensure that the Digital Record Tracing contains the complete series of themes.
2. If the grid line denotes a line of northing the easting is left blank, conversely if it is a line of easting, the northing is left blank.
3. Name of file should be in form of grid_mapping gid of Australia zone eg grid_m56

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Survey and Drafting Directions Section 4.2.1(q) datelines.

Name	Digital Record Tracing - Datelines	Sub Type of	Records	Application	DRT			
				75	Growth (%pa) 5% pa			
<p>Details of quarterly datelines showing extent of mining during a reporting period. Naming convention Must be in the form dateline_seam abbreviation</p>								
Attributes								
Name	Opt.(Y/N)	Domain	Description	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N			Character	50	Name of Colliery		
RT_No	N			Character	10	Record Tracing number		
Seam_name	Y			Character	50	Name of Seam		
Dateline	N			Date	8/10	Date of workings		
Surveyor	N			Character	50	Name of Surveyor ie family name given names Nerk Fred Charles		
Surveyor_init	N			Character	3	Surveyor's initials nfc		
Registratiobn_no	N			Integer	5	Mine Surveyor's registration number or certification number		
Disk_name	N			Character	30	Colliery name month year Acme0902		
File_name	N			Character	20	Dateline_bul		

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Survey and Drafting Directions Section 4.2.1(r) Barriers and restricted zones.

Theme	Digital Record Tracing - Barriers	Description	Sub_Type of	Records	Application	DRT	
		Details of the barriers provided by a colliery			75	Growth (%pa) 5% pa	
Naming convention Must be in the form barrier_seam abbreviation							
Attributes							
Name	Opt.(Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Seam_name	N		Character	30	Name of Seam being worked		
Barrier_type	N		Character	50	Type of Barrier eg external, adjacent workings foreshore protection zone, special, angle of draw zone, protective,		
Charted_date	Y		Date	8/10	Charted date.		
Approval_date	N		Date	8/10	Date of approval if other than external		
DMR_file_no	Y		Character	10	File number		
Endorsements	Y		Character	300	Conditions imposed on approval		
Disk_name	N		Character	30	Colliery name month year Acme0902		
File_name	N		Character	20	Barrier_bul.e00		

Survey and Drafting Directions Section 4.2.1(u) Void.

Theme	Digital Record Tracing - Void	Description	Sub Type of	Records	Application	DRT	
		Details of the workings void of an open cut. Naming convention Must be in the form work_void			75	Growth (%pa) 5% pa	
Attributes							
Name	Opt.(Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Seam_name	N		Character	50	Name of the lowest seam worked.		
Date_worked	Y		Date	8/10	Date worked		
Work	Y		Character	5	Used to describe top of highwall, the lowest surface in the void, areas disturbed etc. See Note 2		
Status	N		Character	1	Working, Discontinued or Abandoned (W, D or A)		
Initials	N		Character	3	Initials of Mining Surveyor		
Endorsement	Y		Character	200	Additional reference about the void		
Disk_name	Y		Character	30	Name of colliery month year Acme0902		
File_name	Y		Character	20	Work_void		

Notes:

1. This theme is to show the position of all excavations, ramps, disturbed areas and highwall mining within an opencut. The theme is based on the 'Workings' theme as it embraces all workings.
2. 'Top' denotes the top of the highwall, 'Toe' defines the lowest surface area in the void, (could be a combination of the toes of the highwall, spoil, bench or the bottom seam etc.) 'Distb' defines areas disturbed by shotfiring, topsoil removal, vegetation clearing, spoil/rehab extent etc, 'Hwall' defines highwall or auger mining. Details should be included in the attribute endorsement.

Survey and Drafting Directions Section 4.2.1(v) Void contours

Name	Digital Record Tracing - Contours_void	Description	Sub Type of	Records	Application	DRT	
		Details of the contours of the working section of a mine or colliery Naming convention Must be in the void_cont			75	Growth (%pa) 5% pa	
Attributes							
Name	Opt. (Y/N)	Domain	Format	Max Lgth	Notes	Full Defn(✓)	Unique Id(✓)
Mine_name	N		Character	50	Name of Colliery or mine		
RT_No	N		Character	10	Record Tracing number		
Seam_name	N		Character	30	Seam_name = 'Void'		
Charted_date	Y		Date	8/10	Charted date. Date workings charted to		
Height	N		Integer	4	Height of floor of working section. Datum = RL+10000		
Endorsement	Y		Character	200	Additional information		
Disk_name	N		Character	30	Colliery name month year Acme0902		
File_name	N		Character	20	Void_cont		

Notes:

1. The contour depicts the floor of the working section NOT the bottom of the seam worked.
2. Contour interval to be selected by the surveyor, with due regard to rate of dip and plan scale representation.
3. The Height field is rl+10000 eg the floor is 195m below AHD Height = -195+10000 = 9805 (unless an exemption has been given)

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SEAM NAME ABBREVIATIONS
(as recognised in the Department)

SEAM NAME	SEAM NAME	SEAM NAME	SEAM NAME	SEAM NAME	SEAM NAME	SEAM NAME	SEAM NAME	SEAM NAME	SEAM NAME
ARROWFIELD	afd	EDINGLASSIE	edg	LEWIS LOWER	llw	TURRILL	llw	tur	
ARTIES	art	ELWELLS CREEK	elw	LEWIS UPPER	ulw	ULAN	ulw	uln	
ARTIES LOWER	lat	FASSIFERN	fas	MELVILLE LOWER	lmv	VAUX	lmv	vux	
ARTIES UPPER	uat	FLEMING	fmg	MELVILLE UPPER	umv	WALLARAH	umv	wal	
ASHFORD	ash	GLEN MUNRO	gmn	MIDDLE RIVER	mrv	WAMBO	mrv	wbo	
BALGOWNIE	bge	GOULBURN	gbn	MOOLARBEN	moo	WARKWORTH	moo	wkh	
BALMORAL	bml	GRASSTREES	grs	MOUNT ARTHUR	mta	WEST BOREHOLE	mta	wbh	
BARRETT	bar	GREAT NORTHERN	grn	MOUNT BRACE	mtb	WHITESCREEK	mtb	wck	
BAYSWATER	bay	GUNDANGAROO	gdo	MUSWELLBROOK	mbk	WHYBROW	mbk	wyb	
BENGALLA	ben	GUNNEDAH	gun	PELTON	pel	WHYNOT	pel	whn	
BIG BEN	bbn	HALLETT	hal	PIERCEFIELD	pid	WOLGAN	pid	wol	
BLAKEFIELD	blk	HEBDEN	heb	PIERCEFIELD LOWER	lpf	WONGAWILLI	lpf	wng	
BOREHOLE	bhe	HILLTOP	hil	PIERCEFIELD UPPER	upf	WOODFORD	upf	wfd	
BOWFIELD	bfd	HOSKINSONNS	hsk	PIKES GULLY	pky	WOODLANDS HILL	pky	whl	
BROONIE	bri	IRONDALE	ird	PIKES GULLY LOWER	lpg	WYNN	lpg	wyn	
BROUGHAM	brm	KATOOMBA	kat	PIKESGULLY UPPER	upg	YOUNG WALLSEND	upg	ywl	
BULLI	bul	KAYUGA	kay	PUXTREES	pux		pux		
BUNGABA	bga	LEMINGTON	lem	RAMROD CREEK	rek		rek		
CAPERTEE	cap	LENNOX	lnx	RATHLUBA	rat		rat		
CLANRICARD	clr	LIDDELL LOWER	ull	RAVENSWORTH	rav		rav		
COGGAN	cgn	LIDDELL MIDDLE	mll	REDBANK CREEK	rdk		rdk		
COOLAN	cln	LIDDELL UPPER	ull	SAINT HELIERS	sth		sth		
DONALDSON	don	LIDSDALE	lsd	TANGORIN	tan		tan		
DUDLEY	dud	LITHGOW	lgw	THEISS	tss		tss	all	
EDDERTON	edd	LODER	lod	TONGARRA	ton		ton	sur	

This schedule standardises seam names to a three-letter abbreviation for theme naming conventions.

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