



Government of **Western Australia**
Department of **Mines, Industry Regulation and Safety**

Submission templates - Work Health and Safety Regulations for Western Australia

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WHS Regulations submission coversheet

Section 1: Submission details

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| Size of workplace | <input checked="" type="checkbox"/> Small (0-9) | <input type="checkbox"/> Medium (20-199) | <input type="checkbox"/> Large (200+) |
| Please indicate in what capacity you are making this submission (select one of the following categories) | <input type="checkbox"/> Individual <input type="checkbox"/> Business <input type="checkbox"/> Community organisation <input type="checkbox"/> Employer organisation <input type="checkbox"/> Other (enter details) | <input checked="" type="checkbox"/> Industry representative <input type="checkbox"/> Academic <input type="checkbox"/> Government representative <input type="checkbox"/> Professional | |
| Which industry sector do you operate in? | Engineering and Mining Surveying | | |
| Your type of job or business (if applicable) | | | |

Section 1: Permission details

Internet publication

Public submissions may be published in full on the website, including any personal information of authors and/or other third parties **contained in the submission**.

Please tick this box if you wish for your input to remain confidential (that is, you **do not consent** to having your input published on the internet)

Anonymity

Please tick this box if you wish for your input to be treated as anonymous (that is, you **do not consent** to having your name, or the name of your organisation, published on the internet with your input)

Third party personal information

Please tick this box **if your input contains personal information of third party individuals**, and strike out the statement that is not applicable in the following sentence:

The third party **consents / does not consent** to the publication of their information.

WHS Regulations submission comments

Enter your comments on specific regulations in the table below. You may add new rows at the end of the table if you wish to include comments on other aspects of the national model WHS regulations.

When making your submission, please consider providing specific responses to the following issue:

1. What is the benefit to workplace participants of a proposal?
2. What is the likely cost for you, your business and the Regulator to implement a specific proposal?
3. Is a specific recommendation likely to be effective in achieving healthier and safer workplaces?
4. Are there any unintended consequences of adopting individual regulations in the model WHS regulations?
5. If a new requirement is proposed by the model WHS regulations, what are the costs and benefits?

This template can be used for providing your views concerning:

- National Model Work Health and Safety Regulations
- Demolition licensing under the OSH regulations
- Commercial driver fatigue under the OSH regulations
- Protection from tobacco smoke under the OSH regulations
- Proposed deletions in Western Australia to remove overlap with the *Dangerous Goods Safety Act 2004*

Section 2: Feedback

Track-changed document submission

- Which consultation document(s) are you providing feedback on?
- Differences between the national model WHS regulations and the OSH regulations 1996
 - Consultation document WHS (Mines) Regulations for WA
 - Consultation document WHS (Petroleum and Geothermal Energy Operations) Regulations for WA
 - Proposed deletions in WA to remove overlap with the Dangerous Goods Safety Act 2004*
 - Commercial vehicle drivers: Hours of work – Work Health and Safety Regulations for WA
 - Protection from tobacco smoke – Work Health and Safety Regulations for WA
 - Demolition work: Licence – Work Health and Safety Regulations for WA

Number of pages in
your submission

Does this submission contain a **track-changed version** of the
draft proposal?

Yes

No

If yes, submit as a Microsoft Word compatible document (.docx)*

General comments

The Surveying and Spatial Sciences Institute (SSSI) WA welcomes the opportunity to provide feedback on the consultation document WHS (Mines) Regulations for WA.

The SSSI is Australia's peak body representing the interests of surveying and spatial science professionals, combining the disciplines of land surveying, engineering & mining surveying, cartography, hydrography, remote sensing and spatial information science.

SSSI in partnership with the Australian Institute of Mine Surveyors (AIMS) has consulted widely with our membership base and stakeholders. SSSI fully supports the submission provided AIMS and would like to reiterate the following points:

The necessity of Certification

SSSI strongly recommends that the WHS (Mines) Regulations for WA maintains and strengthens the current certification process to ensure the health and safety of all professionals working in the mining industry. The certification process needs to include:

- CPD reporting requirements. This cannot be too onerous but could align with current licensed surveyors practicing requirement of 15 points (1 point equates to 1 hour CPD) per year.
- Annual registration requirements based on suitable Continued Professional Development (CPD) for Grade 1 and Grade 2 authorisation.
- Fee structure - a fee charged to undergo the certification process plus annual review of CPD reporting. Currently the WALSLB charges \$152.50 for an annual application for recertification as a Practising Licensed Surveyor.

It is suggested the Land Surveying Licensing Board (LSLB), with the assistance from the Mine Surveying industry, manages the certification process. However, this needs to be further budgeted and reviewed. If Mine Surveyor certification is accepted by LSLB, then the Licensed Surveyors Act 1909 will need to be amended and the WA Regulations that define the Mine Surveying Board can then be repealed.

Industry would also see it beneficial if the Regulations outline the obligations of the Mine Operator to supply the time and resources for mine surveyors to fill their CPD requirements for practising certification.

Increase Grade 2 experience

In the new Proposal, under Chapter 8 Mine Survey Plans, a distinct separation of underground plans being prepared by or under the supervision of a Grade 1, and quarry being prepared by or under the supervision of a Grade 2 has been presented.

SSSI recommends an increase to a minimum of 2 years practical experience before applying for Grade 2 Certificate of competency.

In summary:

- For Grade 1 (2yr) to get Grade 2 an additional 1yr and examination for open cut competency is suggested.

- For Grade 2 (2yr) to get Grade 1 an additional 2yrs and examination for Underground competency is suggested

It is also recommended that with a separation of Grade 1 and Grade 2 that a Grandfather clause be available for existing Grade 1 holders to apply for a Grade 2 authorisation.

The Certification process is rigorous enough to ensure an applicant has covered all important training requirements in that time, otherwise they will advise what further work needs to be addressed.

Mine Survey Code of Practise

SSSI strongly recommends that the Regulations clearly define the link to Mine Survey Code of Practise and the ability of the Mine Survey Board to amend the code as required.

Educational Requirements

SSSI recommends that the academic requirements be maintained for Authorisation based on a recognised Australian Qualifications Framework level 6 (AQF6) survey award (TAFE Advanced Diploma) as a minimum. The required academic qualifications should also include the provision of 2 mining engineering units and a geology unit for Grade 1 Authorisation and one open pit mining engineering unit for Grade 2 Authorisation.

Fatality Accident Plans

The requirement for an accident (fatality) plan has been removed from the new proposed regulations. SSSI believes this should remain in the regulations with the responsibility of the survey tied to the appropriate Authorisation.

Survey Plans to be Provided

All mining workings of a large scale nature and spanning a lengthy mine life should provide plans to the department on a regular basis. This is for both the open pit and underground situations and should be a minimum of every 2 years. In addition it is felt that that a digital database model of the mine also be submitted along with a plan in a pdf format.

For reference, also attached (as Attachment A on page 9) is SSSI WA's submission 'The Consultation Regulatory Statement on Proposed Work Health and Safety (Resources and Major Hazard) Regulations'.

Thank you once again for the opportunity to comment. If you have any comments regarding this submission, please contact:

Johanna Gastevich
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Detailed comments

If commenting on specific content, you may wish to use the table below.

| Reference to specific model WHS / OSH reg no. | Comment |
|---|---|
| M132 (a). | Given that the instrumentation and survey practices have improved quite dramatically over recent decades, it is felt that accuracies of 1:10000 are quite achievable in the mining sector and provide a better guarantee on positional accuracy on a mine site. |
| M132 (5) | The current Map Grid of Australia 1994 has now been replaced by the Map Grid of Australia 2020 (Geodetic datum of Australia 2020). This has been necessary due to the movement of the Australian plate. The MGA2020 coordinate system has now been adopted by West Australia and will be officially implemented in July 2020. It is recommended that the regulation be updated to reflect this change and any future changes. |

ATTACHMENT A

Surveying and Spatial Science Institute (SSSI) Engineering and Mine Surveying Regional Commission Response to: 'The Consultation Regulatory Statement on Proposed Work Health and Safety (Resources and Major Hazard) Regulations'.

Introduction

Mine Surveying is a critical activity on any mine site. In an early 1990's study carried out by the De Beer's Mining Group to determine improvements in mining efficiencies, it was found that the mine surveying component of any operation was a key contributing factor. By having mine surveying adequately resourced and supported on a mine site this ensured that the subsequent mining activities were carried out in the designed areas and of course grades maintained.

However by far the most important contribution accurate Mine Surveying provides is in terms of mine safety. In the Review of the Mines Safety and Inspection Act 1994 carried out by Commissioner Kenner in 2009 he stated that "*Mine Surveying is a specialised and important profession, which discharges important responsibilities in a hazardous industry*". Commissioner Kenner also referred to the Gretley mine tragedy in New South Wales, where 4 miners died in November 1996, as an example of the importance of "*proper mine surveying*". Certainly in this example it was found at the inquiry that the main contributors to the disaster (Judge Staunton) included incomplete plans of the adjacent abandoned colliery and inadequate analysis of these plans by the Gretley mine surveyor. Interestingly enough the NSW Mines Department was also found at fault in relation to two subsequent plan sheets they produced of the abandon colliery from the original plan.

The accurate location of mine openings and infrastructure are an important part of ensuring a safe mining environment while in production. However reliable mine plans play an even more important role in terms of future mining development or public risk long after a mining operation has been suspended or abandoned. Very often the only information available after a mine closure are the final closure plans that are signed off, currently, by a suitably qualified mine surveying authorised by the Department to carry out this duty. By signing this plan the mine surveyor is also taking on the responsibility to its accuracy and suitability for the purpose provided. The advantage to the Department, in this case, is that they have ensured, through regulation, that only the appropriate people with the required academic qualifications and experience are allowed to prepare and sign such a plan. In addition, the Department also holds a register of Authorised Mine Surveyors and so each and every plan can be verified to have been prepared by a suitable authorised person. This then provides some level of confidence for the general public and other mining companies, carrying out development over or adjacent to old workings. For a mining company opening up any old workings the original closure plan is vitally important as this may contain the only survey information still in existence that shows the location of all openings and stoped areas.

Proposed Work Health and Safety (Resources) Bill

The SSSI recognises that a proposed Bill, titled Work Health and safety (Resources) 2015 has undergone consultation and is ready for submittal to Parliament. It is noted that this proposed Bill is a consolidation of 6 current acts associated with the minerals industry that moves from prescriptive OH&S to an outcomes based OH&S System designed to meet the needs and peculiarities of the each individual site.

We also note that all reference to the following items associated with mine surveying have been removed from the proposed Bill:

- 1 The Mine Survey Board.
- 2 The definition of Mine Surveying Authorisations and power to examine qualifications and experience.
- 3 The reference to mine plans.
- 4 The reference of record books.

However it is noted that the proposed Bill does deal with authorisations, prescribed qualifications and penalties in sections 43 and 44. The bill also moves defining the type of authorisations required on a mine site to the regulations. It is noted that under the proposed Regulations for the Bill, released for initial consultation, that the activity of Mine Surveying will be defined as an authorised activity requiring prescribed qualifications.

A major strength we see as a professional body in the proposed Bill is that the definition of authorisation now talks about the work carried out – mine surveying in our case. The current Act only talks about plans and preparation of plans and so anyone can carry out mine surveying work, they just cannot prepare and sign a mine plan or make changes to a current plan. Our interpretation of the proposed Bill for mine survey work will (under the Regulations) now be defined as an authorised work which can only be carried out by a person with prescribed qualifications or under their direct supervision.

Proposed Work Health and Safety (Resources) Regulations key to Mine Surveying

The proposed regulations, currently subject to consultation (C-RIS), that are pertinent to mine surveyors can to be summarised as follows:

- 1 Qualifications and Experience of people carrying out authorised work will remain the same for the mine surveyor in terms of Open Pit and Underground Surveying.
- 2 There will no longer be a requirement that a mine surveyor have any academic mining or geology education.
- 3 A statutory certificates based on qualifications and experience will not be issued by the Department. A person will only need to prove that he has obtained the prescribed qualifications and experience to the relevant Mine Manger.
- 4 A suitable authorised Mine Surveyor is to be appointed by the Mine Manger
- 5 The Department will no longer register or provide a register of Authorised Grade 1 or Grade 2 Mine Surveyors.
- 6 All defined position holders (mine Surveying will still remain so) will need to complete an approved Health and Safety Risk Management course.
- 7 The Authorised Mine Surveyor's name to be recorded in the Mine Record Book. There is consideration in using an Electronic Mine Record Book.
- 8 A Mine Surveyor must have the prescribed qualifications and experience to conduct or supervise mine survey work and the subsequent preparation of plans. All Plans must be certified by the approved Mine Surveyor.
- 9 Under the Bill there are penalties for employing or working without the prescribed qualifications and experience to carry out mine surveying.
- 10 Survey Plans to be maintained and made available on request by a Department inspector as required. Plans are to be submitted to the Department when a mining operation is either suspended or closed.
- 11 The Code of Practice (Mine Surveying) will be admissible in court proceedings where it is related to evidence associated with hazards, risks and control of risks.
- 12 MIAC accredited agencies will be able to approve qualifications.

Industry Feedback

The SSSI Engineering and Mine Surveying (EMSRC) Regional Commission has consulted with its nominees to the Mine Surveying Board, Mine surveying members and other non-members from the WA mining Industry. It was quickly realised by the Regional EMSRC that consultation was required to include the whole industry and so had involve WA members from Australian Institute of Mine Surveyors (AIMS) and of course non-members of either institutions. To this end a joint working party of SSSI EMSRC and AIMS members was set up to contact mine surveyors across WA using membership lists and contacts through various mining companies.

The joint committee organised a questionnaire around the proposed changes flagged by the C-RIS and organised an Industry Mine Surveying meeting for the 19th December. The survey had approximately 130 responses and the Industry meeting had approximately 80 attending Mine Surveyors. The majority of attending Mine Surveyors had either a Grade 1 or Grade 2 Authorisation.

The meeting was attended by Mr Anil Atri, from the Department of Minerals and Petroleum, who addressed the attendees in terms of the proposed new regulations and answered questions. This presentation was followed by an AIMS Mine Surveyor from a Queensland and an AIMS Surveying Member from NSW regarding the existing legislation around mine surveying in these two States.

From a Queensland perspective the main comments detailed the negative impact deregulation had on mine surveying in terms of confusion surrounding an authorisation process and who could subsequently sign mine plans. It has been evident for the past 15 years that the only people able to still sign mine plans have been the people who had been authorised under their old legislation. It has taken the Mine Surveyors of Queensland (AIMS) over 15 years of active agitation to have made changes in the Regulations that will now rectify this situation for the future.

The last part of the Industry meeting was an open forum panel used to answer and discuss issues associated with the proposed Regulations for Mine Surveyors. In summary the issues and feelings of the participants can be summarised as follows:

- Mine Surveying Must be an authorised activity, requiring prescribed qualifications to carry out mine surveying and produce mine plans.
- The overwhelming decision of the meeting was that there should remain some sort of authorisation process should continue and defined as such in the regulations.
- The registration of Authorisation Mine Surveyors should remain with the Department of Minerals and Petroleum and a registration list of Authorised Mine Surveyors maintained.
- The Mine Survey Board should in the first instance be maintained to provide a unified authorisation process and oversee industry mine surveying standards and the Code of Practice (Mine Surveying).
- Following from above discussions, the view of the participants was that the selection of a person who should be authorised to act as an Authorised Mine Surveyor on a mine site should not be left to the Mine Manager or other company management in the first instance. The work of the Mine Surveyor is too important to get wrong and the participants felt that non-mine surveyors would not have the necessary experience or knowledge to make sound choices.
- The unanimous feeling of the meeting was that Authorisation should be tied to defined experience signed off by an Authorised Surveyor and an examination process. The meeting felt that the oral examination process now being conducted by the Mine Survey Board should be continued and even expanded to include a written exam and defined mine surveying project

work. The participants felt were unanimous in that they want to have a professional process akin to the NSW process.

- A renewal system should be put in place for Authorisation based on experience in the Industry and Continued professional Development (CPD). This could be a yearly or two yearly process.
- CPD should be recognised by Mine Management as a legitimate and necessary process for mine surveyors.
- Possible look at the Licensing Board to take over the Authorisation process.
- Mine Plans should be more frequent than merely a shutdown plan. Large operations should be required to provide plans on a regular basis, while small operations only at the end of the mine life.
- The education qualifications should remain as they are now to include suitable mining and Geology units for Authorisation Grade 1 and Grade 2.
- Participants felt that mutual recognition or reciprocal rights between the other major mining states, Queensland and NSW, with WA was an important consideration. It was recognised by the meeting that if Regulations did not confer an authorisation tied to a suitable examination process then reciprocity with these States would no longer be possible.

Mine Surveying Findings – Commissioner Kenner 2009

Commissioner Kenner in his review of the current Act and Regulations in 2009 interviewed a number of mine surveyors and members from the professional institute (SSSI EMSRC) in relation to mine surveying and future requirements. His final document had a number of key findings in relation to mine surveying and its future which by and large has been accepted by Mine Surveying. These key recommendations as applied to the Mine Survey Board (recommendation 78) were as follows:

Recommendation 51 – That in the short term the Board mechanism be retained for the purpose of the grant of the existing certificates of competency, with a view to the ultimate adoption of a competency based system, administered by a professional mining Industry body or tertiary institution.

Recommendation 53 – That in the event of the ultimate outsourcing of the function of the Board the State retain the role in competency assessment, including the setting of standards and the issuance of certificates of competency.

Recommendation 55 – That the Board have additional Functions.

Recommendation 57 – That the Board be required to provide to the responsible Minister an annual report which is to be tabled in Both Houses of parliament.

Recommendation 59 – that consistent with Recommendations 55 to 58 the Board and the MSB keep the existing educational requirements for the various certificates of competency under review.

Recommendation 61 – That overall the number of years of practical experience requirements for the various certificates of competency under the Regulations be confirmed as appropriate.

Recommendation 68 – That the concept of “Applicable training” or a form of CPD presently conducted by a mining industry professional body be adopted as a part of ongoing requirements for the holders of certificate of competency in this State.

Recommendation 79 – That the regs 3.50-3.53 be updated where necessary to ensure consistency with the Mine Survey Code of Practice 2005 and sound mines survey practice.

Recommendation 77 – That the MSB introduce a requirement for an oral examination or at least the interview of candidates for Authorised Mine Surveyor’s certificate.

By and large the SSSI EMSRC and members generally supported the Kenner recommendations above. The Institute had concerns with recommendation 51 at the time but would support this case as long as recommendation 53 was also implemented.

SSSI Engineering and Mine Surveying Regional Commission Recommendations (EMSRC)

The EMSRC and Mine Surveying members have a number of concerns with the proposed Regulations as they currently stand. These concerns mirror the concerns expressed at the Mine Surveying Industry meeting of the 19th August.

Of key concern to the Institute is the proposal to disband the Mine Survey Board and the cessation of issuing certificates of Authorisation. The view of the EMSRC is that the Mine Survey Board should be kept in its current role and expanded to include the Kenner recommendation 55.

However the Institute notes that recommendation 51 actually contradicts recommendation 55, but also notes that recommendation 53 states that the “*State should retain the role in competency assessment and the issuing of certificates of competency*” (Kenner, 2009). If the Mine Survey Board was to be disbanded then the Institute and its members would support a process where an assessment is carried out by a Professional body under the guidance of a suitable government body/person, who would issue a suitable certificate of Authorisation and maintain a Register.

The Institute notes the problems with the current deregulated Queensland mining legislation in the early 2000’s. This has resulted in immense confusion concerning who could legally sign mining plans. For many years, until changes lobbied by AIMS were implemented, the only people able to sign mine plans appeared to be existing Queensland authorised surveyors under the previous Regulations, or other mine surveyors from other States where mutual recognition was accepted. Over the recent past many Queensland Mine Surveyors have acquired a WA authorisation so they could be recognised in Queensland.

This highlights an important concern that the EMSRC have in relation to signing of mine survey plans. Currently all plans submitted to the Department of Minerals and Petroleum are signed by the appropriate Grade1 or Grade 2 Authorised Mine Surveyor. This surveyor, not the mining company, is taking responsibility for the accuracy and completeness of the work. This, while an onerous responsibility for the Mine Surveyor, is the State’s guarantee that the work carried out has been conducted by a suitable qualified person judged by his peers (Mine Surveying Board) and registered as such. If the current proposal is enacted it will make it virtually impossible for the State to have any reliance on any future submitted mine plans. If there is no Government Register of Authorised Mine Surveyors then there is no ability to ensure that a plan is signed off by a suitably qualified person. Given that future safety of adjacent public and mining activities is dependent upon accurate mine plans provided by the Department, any lessening of mine surveying standards and subsequent errors will increase the liability risk to the State in the future.

Another major area of concern the EMSRC have with the proposed Regulations is the authentication process of validating required experience. Currently all mine surveying experience has to be carried out under the supervision of a suitably authorised Grade 1 or Grade 2 Mine Surveyor. The authorised Mine Surveyor must state that the claimed experience is true and correct and state that in his opinion “the person has the necessary experience and skill” to be an Authorised Mine Surveyor at the particular Grade being applied for. Unless this letter is signed off by a duly Authorised Mine Surveyor, having the correct Grade, the application fails at the Mine Survey Board stage. Again if there is no register of Authorised Mine Surveyors then a Mine Manger or employer has no way to ascertain whether the experience and training have been carried out to the standards required under the Code of Practice (Mine Surveying).

The Institute and the profession feel that Continued Professional Development (CPD) is an important tool in maintaining the professional skills of a Mine Surveyor. The surveying profession is very much driven by changing technologies (disruptive technology in some cases), that in some sense drive how survey work is carried out on a mine site. Examples of this are UAV's used for pit and dump mapping and volumes, while automated total stations have changed the way underground survey control is located and used (wall stations). It can be argued that CPD is extremely important, especially for Mine Surveyors who work in isolated locations on the same mine site for many years. In these cases CPD is the only way that these professionals can keep in touch with changing technology.

One major problem with CPD in the Mining Industry is that there is no regulatory requirement that a Mine Surveyor take any CPD in the course of his working career. This has the result that it is not seen as an important issue or supported financially by management. This means that very few Mine Surveyors in the WA industry have any management support to attend Conferences or other CPD activities made available through their professional bodies. In most cases Mine Surveyors attending any form of CPD generally take this in their own time and at their own expense. Certainly making CPD mandatory, as part of the Authorisation process, would ensure there is more support from management in attending such educational events.

Currently, once Authorised, there is no registration process based on a yearly or two yearly cycle as is the case in NSW. The Institute and the Profession feel that Authorisation should be based on a renewal process tied to an acceptable combination of CPD, industry experience or industry participation. Currently the WA Land Surveyors Licensing Board have an easily run administered certification process based on CPD and experience.

There has been some suggestions from amongst Mine Surveying members that the WA Land Licensing Board could take over the role of administering the Mine Surveying Authorisation Process and maintenance of Survey standards. This has been successfully accomplished in NSW through the formation of Board of Surveying and Spatial Information. This Board membership has been expanded from the original Licensed Surveying orientated membership to now include members from the Mine Surveying Industry and the Spatial Information Industry. This could certainly be done here in WA but would require the Licensed Surveyors Act and Regulations to be amended to include an expanded membership and authority to examine, award and maintain a register of Authorised Mine Surveyors.

As indicated from the Industry Survey and Industry meeting conducted in conjunction with AIMS the issue of reciprocity with NSW and Queensland is an important consideration. Many Mine Surveyors work for large National or International Mining Companies and they can have opportunities to work in other States. Having this reciprocity agreement makes this process a lot simpler. Again the only reason why reciprocity exists between the three states is that the Department of Mines and Petroleum maintain a Register of Authorised Mine Surveyors and the Mines Survey Board examine applicants. If this changes from the current situation then reciprocity will no longer be available to WA Mine Surveyors.

In summary the EMSRC makes the following recommendations for consideration for the reasons explained above:

1. That Mine Surveying Authorisation Grade 1 and Grade 2 be retained and a Register maintained under the Regulations.
2. In the first instance the Mine Survey Board be retained to administer the authorisation process, maintain mine surveying standards and advise the Minister as required on these matters.
3. If the Mine survey Board is to be disbanded then the Regulations specify:

- a. An appropriate person, State Mine Engineer for example, to issue certificates of Authorisation and maintain a Register.
 - b. To empower a suitable person or body to appoint a suitable representative professional body to carry out a suitable examination process to allow recommendations to be made to the appropriate person for Registration.
 - c. All disciplinary issues associated with an activity of a Mine Surveyor be handled through the State Arbitration Tribunal (SAT). The Departmental representative or nominee would have to be tasked to receive complaints and forward to SAT.
 - d. A process and timelines to review the Code of Practice (Mine Surveys).
4. That all mine survey work and preparation of plans be carried out by a registered Authorised Mine Surveyor, of the correct Grade, or under their direct supervision.
 5. That suitable CPD be a mandatory requirement for maintaining Authorisation as a Mine Surveyor.
 6. That a Mine Surveying Authorisation be renewed on a yearly on two yearly cycle. The renewal to be linked to appropriate CPD, appropriate industry involvement and/or experience. The appropriate examining Professional body could be tasked to carry this out with recommendations going to the appropriate person tasked to maintain the Register.
 7. That reciprocity procedures from other States having Registered Mine Surveyors be defined.
 8. That current regulation requiring for suitable Mine Engineering units and a Geology unit be maintained as an academic requirement for Authorisation.

The SSSI and their Accreditation Processes.

The Surveying and Spatial Science Institute (SSSI) is a National organisation that was formed in 2004 by a number of existing Institutes involved with the Spatial Industry. Today the SSSI represents Mine Surveyors, Engineering Surveyors, Cadastral Surveyors, Photogrammetrists, Hydrographic Surveyors and Geographical Information (Spatial) Scientists. Within the Institute each of these areas are divided into a National Commission and each commission is further subdivided into Regions. For the case of Mine Surveyors they are members of the Engineering and Mine Surveying Commission. This body has a committee at the Regional level (State) that deals with local issues that answers to the a National Commission and the Regional Management committee.

The SSSI is a national organisation that has a number of national certifications that it offers its members and non-members in the various professional areas covered by the Institute. Each of these certifications are based academic achievement, verified industry experience and a requirement to participate in suitable CPD. The certifications currently offered by the SSSI are as follows:

1. Geographic Information Systems Professional Asia Pacific (GIS-P) Certification. This certification has renewal process based on a 5 year period.
2. Engineering Survey Professional (Australasia Pacific) Certification. This is based on 2 yearly renewal system.
3. Australasian Hydrographic Surveyors Certification (AHSCP). This certification is jointly sponsored by the New Zealand Institute of Surveyors and meets the FIG/IHO/ICA standards.
4. Remote Sensing and Photogrammetry Certification.

Further details of these certifications can be found on the SSSI website (<http://www.sssi.org.au/>), along with the relevant application documentation and professionals who are currently certified across Australia.

Up to now the SSSI has not included a Cadastral Certification or Mine Surveying certification because both of these professions are defined by regulation and administered by the appropriate boards in

Australia. In the case of Mine Surveying WA, NSW and Queensland are the only three States currently regulating Mine Surveying. These three States are by far the most important mining areas in the country and as such have fought to maintain the regulation of Mine Surveying.

If the proposed regulations for mine surveying are to be changed so that Authorisation is no longer going to be available then the SSSI would introduce a Mine Surveying certification process similar to the above mentioned schemes. The SSSI also has an MOU in place with the Australian Institute of Surveyors (AIMS) to share certain resources and CPD events for Mine Surveyors across the country. It is therefore envisaged that any certification process developed by SSSI would be a joint development with AIMS and administered jointly by both Institutes.

References

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3. Kenner S. J., March 2009. Review of the Mines Safety and Inspection Act 1994.
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4. Gretley Inquiry Summary. Report of Formal Investigation under Section 98 of the Coal Mines Regulation Act 1982 by His Honour Acting Judge J.H Staunton.
http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0004/87160/Gretley-Inquiry-summary.pdf

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