

Design and Building Practitioners Regulation 2020

This template has been designed to help you make a written submission as part of the public consultation on the Design and Building Practitioners Regulation 2020.

The template contains three sections to guide stakeholders to providing feedback on:

- [Regulatory Impact Statement](#)
- [Draft Design and Building Practitioners Regulation 2020](#)
- [Draft Continuing Professional Development Guidelines for Prescribed Practitioners](#)
- [Draft Continuing Professional Development Guidelines for Professional Engineers](#).

You don't have to give feedback on all sections and can feel free to choose which questions or fields that would like to fill in.

Submissions close 5:00pm 11 January 2021

Your Name: Jules Darras

Organisation Name: [REDACTED]

Date: 11-01-2021

About you

I am a Certified Engineering Geologist and Registered Geologist with 35 years of interstate and international experience in the geotechnical industry. My expertise includes slope and excavation stability, landslide risk and remediation, coastal seacliff stability, coastal processes, geohazard risk, paleoseismicity, terrain analysis, geological mapping, structural modelling and earthworks.

I am a member of the Australian Geomechanics Society (AGS). The AGS is a technical society of Engineers Australia (EA), created to promote and advance the theory and practice of geomechanics in Australia. The membership of the AGS comprises Geotechnical Engineers and Engineering Geologists, with the two disciplines having significant cross over. I suggest that the AGS are well placed to provide further information to the NSW government on the roles of these two disciplines in the building industry.

As an engineering geologist, I am of the opinion that understanding the geology and ground conditions is a vital part of ground engineering. Engineering geologists are uniquely qualified to develop geotechnical ground models that form the basis for foundation engineering.

I believe there should be a requirement for input from a qualified registered engineering geologist on all structures, particularly critical structures such as multi-storey or public buildings such as schools, hospitals.

There should be a registration scheme under AGS / NSW for engineering geologists. Input from registered engineering geologists should be required for all critical structures. I am a Certified Engineering Geologist (CEG-California) and a

Registered Geologist (RG - California). A similar registration scheme should be required in NSW.

Regulatory Impact Statement (RIS)

Please use this section to provide feedback on the RIS. The questions from the RIS have been reproduced here for convenience. Page numbers in brackets refer to the section in the RIS.

Scope of reforms (page 15)

1. Do you think the reforms should be expanded to other types of buildings over time? Why/Why not? If so, which types of buildings do you think should be next? Yes, these should apply to high occupancy buildings or critical structures such as schools, hospitals, bridges
2. Do you agree that the reforms should only apply to existing arrangements where the Complying Development Certificate or Construction Certificate has been applied for on or after 1 July 2021? Why/Why not? Should apply to all applicable structures after July 2021

Regulated design (page 17)

3. Are the proposed exclusions from 'building work' appropriate? Why/Why not? yes
4. Are there other works that should be exempted? Please provide the basis for the exemption and when the exemption should be effective (for example, a description of the works or threshold of the value including the reason for that value). Any structure on ground sloping greater than 15 degrees should require the input of an **Engineering Geologist**.

Registration of Compliance Declaration practitioners (page 23)

5. Do you support the proposed classes of Design Practitioner? Why or why not?

An additional category of Design Practitioner is proposed: **Design Practitioner – Engineering Geologist** to cater for Engineering Geologists who are currently design practitioners for class 2 buildings (refer to the answer to Question 7).

6. Other than qualifications, skills, knowledge and experience requirements, are there any other eligibility criteria that applicants should meet to be eligible for registration?

Engineering Geologists input should be required for all critical structures and on any structure constructed on ground sloping greater than 15 degrees.

7. Are there other types of Design Practitioners that should be included or any that should be removed? If so, what are they and why?

Yes. The Regulations omit an essential type of Design Practitioner: Engineering Geologists.

Engineering Geologists investigate and interpret the natural and built environment subsurface to manage ground risks at planning, design and construction stage. They use their geological skills to enhance engineering practice in such fields as site investigation, slope stability analysis, mapping of geological and geotechnical hazards, foundation and earthworks design, and underground construction and excavation supervision. Engineering Geologists are therefore key Design Practitioners for residential apartment buildings class 2 and as such should be included in these Regulations.

The important role played by professional engineering geologists is already recognized by the NSW Department of Infrastructure, Planning and Natural Resources in their Geotechnical Policy Kosciuszko Alpine Resorts. This policy is applicable for building work covered by State Environmental Planning Policy No. 73 Kosciuszko National Park - Alpine Resorts) 2007. Professional engineering geologists with RPGeo or CPGeo are recognised by this Policy.

Poor characterisation and understanding of the soil or rock mass can severely impact class 2 buildings in NSW. Examples of geological hazards affecting NSW Class 2 buildings are provided in the table below. The damage to these class 2 buildings could have been avoided with an assessment of ground conditions by an Engineering Geologist.






Photo: James D Morgan / Getty Images

Erosion (Newcastle - 2020);

Source:

<https://www.theguardian.com/australia-news/2020/jul/18/nsw-central-coast-houses-partially-collapse-after-beach-erosion-caused-by-swells>

 <p>Photo: Tim Hunter. Source: News Corp Australia</p>	<p>Differential settlement (Jordan Springs East - 2020).</p> <p>This issue led to a Contractor buying back 841 homes (source: https://www.theguardian.com/australia-news/2020/dec/15/western-sydney-lendlease-to-buy-back-up-to-841-homes-at-jordan-springs-east-site).</p>
 <p>Photo: Sydney Morning Herald</p>	<p>Slope instability (Thredbo - 1997);</p> <p>This event led to the loss of 17 lives on Wednesday July 30, 1997.</p>
 <p>Photo: Newcastle Star</p>	<p>Subsidence due to mine tunnel collapse (Swansea Heads - 2014).</p> <p>Source: https://www.newcastlestar.com.au/story/2386272/mine-subsidence-damage-compensation-payouts-rise/</p>

The current Regulations do not cater for Engineering Geologists and changes are required in the definitions of Design Practitioners.

Following two approaches are proposed for to cater for Engineering Geologists within the Regulations:

- Group Engineering Geologists with the Design Practitioner - Geotechnical Engineers in a new design practitioner type called Design Practitioner - Ground Engineering Specialist (Alternative 1), or:
- **PREFERRED: Add a new design practitioner type called Design Practitioner - Engineering Geologist (Alternative 2).**

8. Do you support the proposed qualification, skills, knowledge and experience requirements for each class of practitioner? Why or why not? Please make suggestions for additional or alternative requirements.

As described in the answer to Question 7, there are two approaches for the Regulations to cater for Engineering Geologists:

- Group Engineering Geologists with the Design Practitioner - Geotechnical Engineers in a new design practitioner type called Design Practitioner - Ground Engineering Specialist (Alternative 1), or:
- **Preferred:** Add a new design practitioner type called Design Practitioner - Engineering Geologists (Alternative 2).

ALTERNATIVE 1

For alternative 1, the possible change would be to rename the qualification matching the renamed type of design practitioner:

- Schedule 2, Part 3 Section 17
Design practitioner - ~~geotechnical~~ **ground** engineering

(1) Qualification

Must be registered as a professional engineer in the class of professional engineer — geotechnical engineering under the Act, **or**

Must be registered as a professional engineering geologist in an area of ground engineering by a professional body of engineers or engineering geologist that—

- (i) **operates with a professional standards scheme, and**
- (ii) **requires the successful completion of a qualification relevant to carrying out professional engineering work in accordance with the professional standards scheme.**

Preferred ALTERNATIVE 2

For alternative 2, the possible change would be to add the new qualification/knowledge and skills matching the new proposed type of design practitioner:

- Schedule 2, Part 3

20 Design practitioner— engineering geologist

(1) Qualification

At least one of the following—

- (a) an accredited 3 year full-time or equivalent part-time undergraduate bachelor degree in engineering geology**
- (b) an accredited postgraduate masters degree in engineering geology,**
- (c) a non-accredited qualification that has been assessed as being equivalent to an accredited qualification in paragraph (a) or (b)—**
 - (i) for a qualification that was conferred by an Australian university or tertiary institution—**

by an Australian signatory to the Washington Accord,
or

(ii) for a qualification that was conferred by a foreign university or tertiary institution—by an assessing authority for the skilled occupation of engineering geologist.

(2) Knowledge

Must know and understand the knowledge referred to in clause 17(2) of this Schedule.

(3) Skills

In addition to the skills referred to in clause 17(3) of this Schedule, must be able to:

- Demonstrate they can assess the nature of the ground in activities requiring specialist and in-depth engineering geological knowledge.
- Demonstrate they can work closely with other engineering professionals to solve (identify, investigate, assess and communicate) complex engineering geological problems.
- Demonstrate they can work closely with other engineering professionals to convey engineering geological context.

(4) In this clause— accredited, assessing authority, skilled occupation and Washington Accord have the same meanings as in clause 21 of this Schedule.

9. Do you agree that practitioners should be required to have 5 years of recent and relevant practical experience? Yes
10. Some classes of practitioner have been proposed with authority to work on low and medium rise buildings? Do you support this approach? yes

Registration of Professional Engineers (page 29)

11. Are there any other areas of engineering that should be captured for the purposes of designing or constructing a class 2 building, or a building containing a class 2 part?

Engineering geologists operate in the area of geotechnical engineering as currently defined in the Regulations (“an area of engineering that involves the mechanics of soil and rock and the application of the mechanics to the design and construction of foundations, retaining structures, shoring excavations, and ground bearing structures for buildings and other systems constructed of, or supported by, soil or rock”).

Mechanics of soils and rock depend on material and mass properties, which the professional engineering geologist is particularly well-suited to characterise. The engineering geologist fulfils a key role in the identification of any required changes to design assumptions during construction of foundations, particularly retaining structures, shoring excavations, and ground bearing structures and elements for Class 2 buildings which are constructed of, or supported by, soil or rock.

The important role played by professional engineering geologists is already recognized by the NSW Department of Infrastructure, Planning and Natural Resources in their

Geotechnical Policy Kosciuszko Alpine Resorts. This policy is applicable for building work covered by State Environmental Planning Policy No. 73 Kosciuszko National Park - Alpine Resorts) 2007. Professional engineering geologists with RPGeo or CPGeo are recognised by this Policy.

ALTERNATIVE 1

For alternative 1 (as provided in the answer to Question 7 - Design Practitioner - Ground Engineering Specialist), the only required change would be to rename the area of geotechnical engineering to area of ground engineering without further changes to the definition provided in the Regulations.

Preferred ALTERNATIVE 2

For alternative 2, an additional (or change to) area of engineering is not required to cater for the new proposed type of design practitioner: Design Practitioner - Engineering Geologist as both practice areas can refer to the provided geotechnical engineering definition in the Regulations.

12. Do you support a co-regulatory approach for the registration of engineers? yes
13. Pathway 1 will require an engineer to satisfy certain qualifications, skills, knowledge and experience requirements. Are there any other eligibility criteria that engineers should meet before being registered? Practical Examination
14. The Regulation proposes recognition of Washington Accord accredited qualifications. Do you think this is appropriate? If not, what alternative approach do you suggest? Should recognise equivalent interstate or international qualifications
15. Under Pathway 2 what criteria do you think the professional engineering body should satisfy to be eligible to perform their function? Qualifications, Peer Review and Examination
16. Would you be supportive of professional bodies developing a PSS for Pathway 3 to be available? Yes, with government oversight.

I would support Pathway 2 or 3 in the near future to cater for engineering geologists.

There are three Australian professional bodies which could provide professional accreditation for engineering geologists in the near future: the Geological Society of Australia (GSA), the Australian Institute of Geoscientists (AIG) and AusIMM (Australasian Institute of Mining and Metallurgy).

17. Do you agree that Professional Engineers should be required to have 5 years of recent and relevant practical experience? yes

Yes, I do agree that in both proposed alternatives (refer to the answer to Question 7) the 5 years of recent and relevant practical experience should be required.

18. Do you support the proposed generic list of skills and knowledge requirements for all classes of engineering (excluding fire safety)? If not, please outline what you think the specific skills and knowledge for each class of engineer should be. Engineering geologists should have appropriate qualifications. Engineers should not practice geology

Compliance Declaration Scheme: practitioner requirements (page 38)

19. Do you support the proposal that all construction issued regulated designs must be lodged before any building work can commence? Yes Why or why not? This gives opportunity for peer review if required by regulatory agency prior to construction

20. Do you support the Building Practitioner being primarily responsible for lodging regulated designs on the NSW Planning Portal? Why or why not? If not, who do you think should be responsible at the different lodgement points? Please explain your answer.
Lodgement could be done by the developer provided the lodgement includes appropriate documentation from various classes of engineer and engineering geologist i.e. signed reports by registered practitioners.

21. Do you support the matters covered in the Design Compliance Declaration? Why or why not?

22. Do you consider any other matters should be included in the Design Compliance Declaration?

23. Do you support the proposed title block? Are there any other matters that should be included in the title block?

- 24.** Do you support the title block being available in a .dwg format?
- 25.** Do you support the proposal that varied regulated designs be lodged within 1 day of the building work being commenced? Why or why not?
- 26.** Do you support the proposal that the Building Compliance Declaration, regulated designs and variation statements be lodged prior to the application for the Occupation Certificate? Why or why not?
- 27.** Are there further matters that should be included in the Building Compliance Declaration? If so, what are they?
- 28.** Are there further matters that should be included in the Principal Compliance Declaration? If so, what are they?

Insurance (page 51)

- 29.** Do you support the approach proposed for insurance requirements for Design Practitioners and Professional Engineers? Why or why not?
- 30.** Do you consider additional insurance requirements should be prescribed for Design Practitioners and Professional Engineers? If so, what?
- 31.** Do you support the proposed transitional arrangements that exempt Building Practitioners from being insured for issuing Building Compliance Declarations? Why or why not?

Continuing professional development (CPD) (page 54)

32. Do you support the proposed CPD requirements for Design and Building Practitioners?

Why or why not? yes

33. What types of training, education or topic areas would be relevant for the functions carried out by Design and Building Practitioners?

34. Do you support the proposed CPD requirements for engineers under pathway 1?

35. Do you support the mandatory CPD topic areas? Why/why not? Please make any suggestions for amendments and explain why they are necessary.

Penalty notice offences (page 57)

36. Do you support the proposed penalty notice offences and amounts proposed in Appendix 1? Why or why not?

37. Do you think the proposed penalty notice offences and amounts are fair and reasonable?

Fees (page 59)

38. Do you support the reasons for the proposed fees? Why or why not?

39. What do you think NSW Fair Trading should consider in determining the fees?

40. Are you interested in being involved in targeted stakeholder consultation on fees? Yes