

11 January , 2021

Attention: Build & Construction Policy Team

New South Wales Government
Design and Building Practitioners Regulation 2020
Policy and Strategy, Better Regulation Division
Department of Customer Service
Locked Bag 2906
LISAROW NSW 2252

Subject: Jacobs Submission on the Design and Building Practitioners Regulation 2020

Dear Sirs,

In light of the New South Wales (NSW) Government passing of the Design and Building Practitioners Act in June 2020, with the associated opportunity for consultation on the related proposed Design and Building Practitioners Regulation, please find below Jacobs view points on the specific Schedule 2 Section 17, related directly to the definition of "Design Professional - Geotechnical Engineering". Jacobs supports the intention of the regulation in relation to Geotechnical Engineers, however the geotechnical design profession of Engineering Geology has not been included in Regulation 2020 and Jacobs seeks inclusion of this profession in the regulation.

1. Introduction

Jacobs welcomes the opportunity to provide this submission on the Draft Design and Building Practitioner Regulation 2020. Our contribution is designed to assist the New South Wales Government, in finalising this important piece of regulation.

Jacobs agrees with the overall intention of the reform and believes that it will make an important contribution to enhancing public safety and consumer protection.

In this submission, Jacobs propose that the provisions of the draft Regulation be amended to recognize the important contribution of our staff members who are experienced professional engineering geologist involved in geotechnical design. Engineering geologists provide an important role in the planning, design and construction of our buildings and civil infrastructure. Jacobs believe amendment of the regulation to include professional engineering geologists and the scope of work performed by this profession is already covered by the regulation.

2. About Jacobs

With over 55,000 employees globally, 3,200 in Australia and 650 staff in NSW, Jacobs is one of the leading professional engineering firms globally. In terms of ground engineering professionals,

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Jacobs has approximately 850 employees globally, including 100 in ANZ and 30 in NSW. The Company provides both geotechnical, tunnelling and engineering geology services for the design of major infrastructure and building projects across NSW including rail, road, power, building, marine & airport commissions.

Jacobs actively encourages our staff to obtain professional accreditation. Professional accreditation is also a company requirement for both engineering geologists and geotechnical engineers for promotion to positions of authority and management within the company. The purpose of this requirement is to ensure the requisite level of professional conduct, knowledge and expertise in specific fields over which individuals provide control on behalf of the Company.

3. Contact details

Jacobs recognizes and supports the Australian Geomechanics Society (AGS) as the peak professional body that represents our engineering geologist and geotechnical engineering employees.

4. Jacobs proposed amendment

In its current form, Jacobs believes that the regulation will unnecessarily restrict the work that professional engineering geologists currently carryout in the building/construction industry. The types of design work, which currently may be performed by engineering geologists, are covered by the role defined as "Design Practitioner – Geotechnical Engineering" in Schedule 1.

However, Schedule 2 Part 3 requires that Design Practitioner – Geotechnical Engineering must be qualified as a registered professional engineer in the class of geotechnical engineering. This class of registration is currently closed to most engineering geologists who do not hold an undergraduate or postgraduate engineering degree, recognition or registration as a professional engineer by a professional body of engineers.

To avoid this unnecessary restriction on some of our employees, Jacobs would like to suggest two alternative amendments:

- Option 1

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Amend Design practitioner – geotechnical engineering to include a pathway for professionally accredited engineering geologists; or

- Option 2

Add a new class of design practitioner covering professionally accredited engineering geologists.

Jacobs preference would be for Option 1.

5. Precedents for the proposed amendment

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.

6. Ground engineering in the NSW building industry

All types of building work cause a change of stress on the ground, either by applying a load for example from a new building, or by removing soil and rock for a building basement. The understanding of the nature, behavior and performance of soil and rock under changes in stress, and the prediction of potential failure mechanisms that must be taken into account in engineering analysis and design, require skills and experience in geology and engineering. The more complex the geology of the project site, the higher the level of geological skills required to design a successful outcome.

This specialist area of the building/construction industry is serviced by both geotechnical engineers and engineering geologists.

7. The role of engineering geologists

In NSW, engineering geologist currently carry out a broad range of building/infrastructure related work spanning the design and implementation of geotechnical investigations, definition of ground models and engineering design parameters, earthworks and the design of excavation support measures, definition of construction materials, inputs in terms of rock mass assessments and rock behavior for tunnels and foundations, the supervision and approval of construction of foundations to site classification for building developments. These engineering geologists may work independently or as part of multi-disciplinary teams where they work closely with geotechnical engineers and other engineering professionals.

Engineering geologists are the only professionals in the building/construction industry with the in-depth education and training in geology that is required to fully understand the ground and its implications for design. Whilst some undergraduate degrees in civil engineering and most post-graduate geotechnical degrees include some classes in geology, these are generally insufficient to provide adequate geological understanding for sound geotechnical design.

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Professional accreditation as an engineering geologist in Australia currently requires an undergraduate degree in geology with either a post-graduate degree in engineering geology or significant practical engineering experience working in the geotechnical industry.

8. Professional accreditation for engineering geologists

There are currently three professional bodies in Australia that provide accreditation for our engineering geologists. These are:

- The Geological Society of Australia (GSA), through their Accredited Geologist program (Ac.Geo).
- The Australian Institute of Geoscientists, through their Registered Professional Geologist program (RPGeo), and
- The Australian Institute of Mining and Metallurgy, through their Chartered Professional Geologist program (CPGeo).

Many of our employees are also accredited through international programs such as the UK's Chartered Engineering Geologist and Registered Ground Engineering programs. However, typically these professional qualifications are not recognized by regulatory authorities within the construction/building industry.

Jacobs firmly believes that maintaining accreditation is dependent on strict adherence to the Society's Code of Ethics and Continuing Professional Development. It is a requirement of these accreditation schemes that its members only practice within their areas of experience and expertise. Failure to comply with this important element of the code of ethics risks the withdrawal of accreditation.

9. Closing

In closing, Jacobs believes that professional engineering geologists should be recognized by the proposed NSW reforms, in order that they may continue to grow their careers and provide their important contribution to the building industry in New South Wales. Jacobs would urge the New South Wales Government to consult with the Australian Geomechanics Society in refining the regulation.

Yours sincerely

Graeme Jardine

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