INTERNATIONAL ASSOCIATION FOR ENGINEERING GEOLOGY AND THE ENVIRONMENT'S SUBMISSION ON THE DESIGN AND BUILDING PRACTITIONERS REGULATION 2020

Introduction

The International Association for Engineering Geology and the Environment (IAEG) 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.

The IAEG 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 we propose that the provisions of the draft Regulation be amended to recognize the important contribution of our members who are professional engineering geologist. Engineering geologists currently play an important role working alongside engineers and environmental scientist in the planning, design and construction of our buildings and civil infrastructure. Amendment of the regulation is required to ensure that these engineering geologists can continue to make their important contribution to NSW society.

About IAEG

The IAEG was established in 1964 with the aim of promoting and encouraging advancement in engineering geology through technological activities and research. In Australia we are closely affiliated with the Australian Geomechanics Society. Our Australian group has 323 members around the country and 107 members in New South Wales.

Contact details

IAEG's proposed amendment

In its current form, the IAEG believe that the regulation will unnecessarily restrict the work that some professional engineering geologists currently carryout in the building industry. The kinds 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 geologist who do not have either 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 members, GSA would like to suggest two alternative amendments.

Option 1

Amend Design practitioner – geotechnical engineering to include a pathway for professionally accredited and suitably qualified engineering geologists.

Option 2

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

IAEG's preference would be for option 1.

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.

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. These works also impact groundwater and have effects beyond site boundaries. The understanding of the nature, behavior and performance of soil and rock under changes is stress, and the prediction of potential failure mechanisms and groundwater impacts that must be considered 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.

The role of engineering geologists

In NSW, engineering geologist currently carry out a broad range of building related work spanning the design and implementation of geotechnical investigations, the design of excavation support measures, 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 at large companies where they work closely with geotechnical engineers and other engineering professionals.

Engineering geologists are the only professionals in the building industry with the in-depth education and training in geology and groundwater that is required to fully understand the ground and its implications. 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. The level of geological training provided to engineers is to enable them to understand and work with engineering geologist rather than do the work of engineering geologist whos primary role on most sites is to build and understand the ground on which infra structure is to be build so that engineers can then design for the right ground conditions.

Professional accreditation as an engineering geologist typically 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.

Professional accreditation

While IAEG do not provide accreditation, we recognize that 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 members are accredited through these bodies or with other international programs such as the UK's Chartered Engineering Geologist and Registered Ground Engineering programs.

Closing

In closing, the IAEG believe that professional engineering geologists should be recognized by the proposed reforms in order that they may continue to provide their important contribution to the building industry in New South Wales. There is also risk that this omission could lead to greater engineering geological work being received by less skilled and experienced engineering practitioners. IAEG would welcome the opportunity of assisting the New South Wales Government in refining the regulation either directly with our Australian representative or through the Australian Geomechanics Society.