MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

COVERSHEET

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Information redacted **YES**

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The appendix *Occupational regulation for engineers* has not been included as it has already been published on MBIE's website.

Some information has been withheld to protect the confidentiality of advice tendered by ministers and officials.

In Confidence

Office of the Minister for Building and Construction

Cabinet Economic Development Committee

Occupational regulation of engineers: Release of discussion document

Proposal

1 This paper seeks agreement to undertake public consultation on proposed changes to the occupational regulation of engineers.

Executive Summary

2 New Zealand engineers can opt into one of two regulatory regimes: the Chartered Professional Engineers of New Zealand (CPEng) or the self-regulation approach run by Engineering New Zealand for its members. Both regimes are voluntary.

3 While large numbers of professional engineers belong to one or both schemes, many engineers practice outside of a voluntary occupational regulatory regime. This means there are no checks on their competence and professionalism, no ability to complain about their work or their behaviour, and no means to restrict who can practice in high risk engineering disciplines.

4 New Zealand's regulatory system for engineers is not adequately holding engineers to account if their standards slip. If an engineer is particularly incompetent, there is no means to prevent them from practising. While engineering failures are rare, the consequences can be catastrophic.

5 Occupational regulation of the engineering profession is needed to reduce the risk of significant harm to the public from substandard work. I propose to consult on a new two-tier regulatory regime, with a new regulator to oversee it. The proposed new regulatory model will require:

5.1 *Registration for all professional engineers.* A mandatory registration scheme will ensure all professional engineers are subject to a base level of regulation.

5.2 *Licensing for engineers practising in identified high risk practice fields.* A new licensing regime will restrict work in practice fields where there is a demonstrable higher risk of harm to the public, such as structural or fire safety engineering.

6 For the purposes of the discussion document, a working definition of 'professional engineer' has been used to mean any person who provides professional engineering services.

7 A new regulator and board would oversee the new registration and licensing regime. The regulator would be responsible for running the registration and licensing regime, proposing new rules for Ministerial approval, and monitoring compliance. A board will be established to hear appeals and hold hearings into disciplinary matters, as well as providing governance for the regime.

8 Stakeholder feedback to date has been generally positive, with universal support for a licensing regime. However, the proposal for mandatory registration is not universally supported. The Mechanical Engineers Group argue that many elements of mechanical engineering are not 'safety critical' and do not warrant mandatory registration.

9 The proposed public consultation will test the proposed changes and identify any refinements that could strengthen the proposed regulatory model. Consultation will also be used to understand the costs and impacts of the proposals. It will be for a minimum of six weeks. I intend to seek Cabinet agreement to the final policy proposals Confidential advice to Government

Background

10 New Zealand engineers can opt into one of two regulatory regimes: the CPEng or the self-regulation approach run by Engineering New Zealand for its members. The schemes are almost identical – members must abide by a code of ethical conduct, demonstrate a commitment to continued professional development, and are subject to a complaints and disciplinary process. The CPEng regime is backed by legislation whereas the scheme run by Engineering New Zealand is not.

11 The current regulatory system for adequately holding engineers to account is not fit-for-purpose. Both regimes are voluntary, and while large numbers of professional engineers belong to one or both schemes, many do not and operate outside of a regulatory regime. They have no checks on their professionalism, qualifications or competence, and there are no means to hold these engineers to account should their standards slip.

12 There is a considerable degree of uncertainty about how many engineers sit outside of an occupational regulatory regime, with estimates ranging from 14,000 to 50,000.[1]

13 New Zealand's approach also places few restrictions on who can practice in specialised fields, particularly those fields that pose a higher risk of harm. Examples of such practice fields include structural, fire safety, or geotechnical engineering. While CPEng and Engineering New Zealand members have a professional obligation, through a code of conduct, to only work within their areas of expertise, this is only enforced following a complaint.

[1] 'Engineer' is not a protected title in New Zealand and has widespread use, including outside traditional engineering disciplines. The Ministry of Business, Innovation and Employment estimates the number of engineers working outside of a regulatory scheme based on self-reported occupations for the 2018 Census and the current number of Engineering New Zealand members as 14,000. A report commissioned for Engineering New Zealand, and similarly subtracting the number of Engineering New Zealand members, estimates around 50,000 engineers sit outside of a regulatory system.

14 There are also no means to preventing a particularly incompetent engineer from practising, be they CPEng, an Engineering New Zealand member, or neither. The burden falls on the consumer to uncover if there are issues with an engineer's competence.

15 New Zealand's approach to occupational regulation of engineers increases the risk of serious harm to the public and consumers. For a profession that deals with complex machines and structures, which can risk significant harm to the public, this approach is not consistent with best practice or with comparable professions. Occupational regulation of engineers is undertaken by the profession, with weak sanctions for poor performance or behaviour. It is a voluntary regime that many professional engineers elect not to be part of.

16 Since the building failures of the Canterbury earthquakes, there have been other high profile engineering failures in New Zealand, with many occurring outside of the building and construction area. In 2016, over 5000 people were sickened from the contamination of Havelock North's drinking water supply, a third of the township's population. An inquiry into the contamination found poor monitoring and inspection by engineers.[2]

The government has previously consulted on proposals to regulate engineers

17 In 2014, the government sought feedback on issues with the current regulatory system and proposed greater checks and balances on the CPEng regime. Most submitters agreed there were problems with the current system, and very few were totally opposed to reform at all. However, for various reasons, work on reforms was not progressed.

18 In 2019, public consultation was undertaken again with a different proposal:

18.1 A new voluntary certification that would act as a mark of quality for professional engineers.

18.2 Mandatory licensing for engineers working on commercial buildings with specified parameters.

18.3 A new regulator and board to oversee the regime.

19 While licensing was supported by most submitters, certification was not. The majority of submitters saw it as unnecessary, of little value, and duplicated the CPEng regime.

20 Many submitters used the opportunity to tell the government that the focus on building safety was too narrow, and that other engineering disciplines can harm public health and safety. Examples of risk were given in almost all engineering disciplines.

[2] *Report of the Havelock North Drinking Water Inquiry: Stage 1*. May 2017. Available at https://www.dia.govt.nz/Government-Inquiry-into-Havelock-North-Drinking-Water.

Wider context

21 The proposals in this paper are being progressed as part of the Building System Legislative Reform Programme (the Reform Programme), which is a series of reforms to building laws to lift the efficiency and quality of building work, and provide fairer outcomes if things go wrong.

22 The reforms are progressing in three phases:

22.1 *Phase One* is progressing as the Building (Building Products and Methods, Modular Components, and Other Matters) Amendment Bill, and is currently before the House.

22.2 *Phase Three* will investigate options to address the lack of a building warranty insurance market and risk allocation in the building and construction sector.

23 The proposals in this paper are part of Phase Two of the Reform Programme, which focuses on the professionals in the sector. Phase Two will progress reforms to occupational regulation of engineers and practitioners in the building and construction sector, so that people can have more confidence in these professions and their work. It will respond to issues identified by the Ministry of Business, Innovation and Employment (MBIE), members of the building sector and others in the building system, as well as the Canterbury Earthquakes Royal Commission.

24 Implementing decisions from Phase Two will require amendments to primary legislation. I have sought a position on the 2021 Legislation Programme for a Building and Construction Sector Occupational Regulation Bill. This would be an omnibus bill with the single broad policy of ensuring people have confidence in engineers and regulated building practitioners, and their work.

The two-tier regulatory regime proposed for all engineers

25 I propose to consult on a new two-tiered regulatory system that will require:

25.1 All persons who provide professional engineering services to be registered.

25.2 All persons to be licensed if practising in high risk practice fields.

26 A new regulator would be created to oversee the regime.

27 For the purposes of the discussion document, a working definition of ‘professional engineer’ is any person who provides professional engineering services. The definition of these services will capture the intellectual activities of engineering, the application of engineering principles and judgement, and societal interests.

28 While many aspects of my proposal are substantially similar to what was proposed in 2019, as the scope has increased significantly, I consider it prudent to consult again.

29 MBIE consulted with the CTV Families Group, Engineering New Zealand, the Chartered Professional Engineers Council, the Engineering Associates Registration Board, the Structural Engineers Association, the Electrical Engineering Group, Electricity Engineers Association, and the Mechanical Engineering Group when developing these new proposals.

30 The CTV Families Group support the proposal. They support clear independence by the new regulator from the profession, noting Engineering New Zealand's conflict of interest.

31 All groups support the proposal for a licensing regime. However, the proposal for mandatory registration has received a mixed reception, with the Mechanical Engineers Group arguing that many elements of mechanical engineering are not 'safety critical' and do not warrant mandatory registration.

32 Occupational regulation of a profession is about ensuring public health and wellbeing, which can include economic interests and the risks of adverse environmental effects. There are many elements of mechanical engineering that can harm the public, and it can be difficult to distinguish between what is low risk mechanical engineering, and what is higher risk without being overly prescriptive. Nevertheless, the discussion document asks whether there are grounds for excluding certain engineers from regulation and why.

Mandatory registration for all professional engineers

33 The discussion document proposes that all persons who provide professional engineering services be registered. Registration means all engineers would become subject to a code of conduct, continued professional development obligations, and a complaints and disciplinary process.

34 In light of the feedback received in 2019, officials considered whether the risks to the public from engineers working outside of the building and construction sector were such that they justified wider regulation.

35 All facets of engineering have the potential to risk significant harm to the public. Havelock North's drinking water contamination was at least partially attributed to an engineering failure. Around 5000 people were sickened and four people died. A mechanical engineer's failure to properly certify tuk-tuks led to five people being injured when a tuk-tuk rolled on Mount Victoria, Wellington, in 2016.

36 Overseas, fatalities have occurred due to chemical engineering failures, while electrical engineering failures have caused widespread disruptions and economic losses.

37 I do not consider it acceptable to regulate one part of the engineering profession while leaving the public exposed to risks in others. I therefore wish to consult on a new proposal that would affect all persons who provide professional engineering services.

38 Registration would lift the professionalism of all engineers and provide an avenue for substandard performance and behaviour to be addressed. Under this proposal, the regulator could suspend or revoke an engineer's registration, or place conditions on how they are able to practice.

39 It would become an offence to provide professional engineering services without being registered.

40 Eligibility for registration would be set at a level that ensures professional engineers at all levels of their career are able to become part of the regime. The discussion document proposes an engineering qualification (such as a four-year degree), but will ask whether competence and experience should also be required. It also asks about providing for other pathways to engineering (such as by way of an apprenticeship).

41 Certain engineers could be deemed to be registered as part of transitional arrangements. For example, current CPEng and Engineering New Zealand members have already had their professional qualification verified as part of their membership.

Licensing for practitioners working in high risk practice fields

42 The discussion document also proposes setting up a licensing framework.

43 While all engineering work carries an inherent risk of significant harm, there are some speciality fields that pose a higher risk of significant harm to the public. Examples include structural, geotechnical, and fire safety work.

44 While some practice fields are restricted under other regimes (such as heavy vehicle or amusement device certifiers), generally there is no restriction on who can practice in high risk fields. There are no checks on whether an engineer has sufficient knowledge, skills, and experience to competently practice in a high risk field.

45 In the absence of a comprehensive regulatory regime for engineers, other regulators have developed their own checks for engineers working in their areas. Waka Kotahi New Zealand Transport Authority regulates mechanical engineers certified to work on heavy vehicles. There are similar restrictions for some electrical engineers operating under the Electricity Act 1992, recreational safety engineers, and design verifiers (for pressure equipment, cranes, and passenger ropeways).

46 The 2019 consultation proposed a new framework for licensing for safety-critical work, focussed on structural, geotechnical, and fire safety engineering work within the building sector. The majority (74 per cent) of submitters supported the proposed licensing framework.

47 However, submitters expressed concerns about the 2019 proposal to specify the 'trigger' for licensing in primary legislation. Structural engineers shared examples of recently built commercial buildings that would not trigger the

need for a licensed engineer, but were designed poorly and unlikely to withstand a significant earthquake.

48 I propose providing for greater flexibility when developing licensing classes than what was proposed in 2019. Future licensing classes, their trigger, and eligibility would be identified through secondary legislation.

49 Future licensing classes would be prioritised based on the practice field's risk profile and its readiness to be implemented. Based on these criteria, I anticipate structural engineering would be one of the first licensing classes to be developed.

50 Obtaining a licence would be harder than registration. An engineer would need to demonstrate specialist knowledge, competence, and experience in the field. Overseas, this can involve passing an exam or having randomly selected work audited. What this looks like will depend on each licensing class, with the regulator having the flexibility to develop bespoke eligibility criteria.

51 The Minister for Building and Construction would be able to delegate licensing functions to entities other than the regulator where appropriate. For example, WorkSafe could administer the licensing function for recreational safety engineers should this become a future licensing field.

New governance arrangements

52 The draft discussion document proposes to establish a new regulatory board to oversee the registration and licensing regime. The day-to-date services of the regulator would be provided by a regulatory service provider.

53 Under the Chartered Professional Engineers of New Zealand Act 2002, Engineering New Zealand acts as the Registration Authority for CPEng and is responsible for core regulatory functions. They are the body that holds the decision-making power related to registration and discipline.

54 However, Engineering New Zealand has a potential conflict of interest between its role as Registration Authority and its role as a representative and advocate for its members.

55 As a private organisation, the responsible Minister has no influence over Engineering New Zealand's Board. Engineering New Zealand also lacks accountability measures, such as not being subject to the Official Information Act 1982 or the Ombudsmen Act 1974.

56 There is some oversight of Engineering New Zealand's performance as the Registration Authority through the Chartered Professional Engineers Council, a statutory body established under the Chartered Professional Engineers of New Zealand Act 2002.

57 However, at least half of the Chartered Professional Engineers Council Board is comprised of members nominated by Engineering New Zealand and the

Association of Consulting Engineers of New Zealand. This creates the perception that there is not enough independence between the Chartered Professional Engineers Council and Engineering New Zealand to minimise potential conflicts of interest and ensure Engineering New Zealand are held accountable for their decisions.

58 This lack of clear separation between the Registration Authority and the engineering profession has been raised as an issue, particularly by the representatives of the CTV Families Group and by some within the profession.

59 Regulators need to be seen to make informed, objective, impartial, and consistent decisions, which help maintain the confidence and trust of the profession and the general public. This, in turn, supports compliance, which is key to achieving good outcomes.

60 Under this proposal, the current Chartered Professional Engineers Council would be disbanded and Engineering New Zealand would not be given a formal role in the new regime through legislation.

61 An independent regulatory board would be the final decision maker on registration and licencing, and provide governance for the regime. The responsible Minister would recommend a regulatory service provider, which would provide regulatory services to the board.

62 The regulatory service provider would be responsible for running the registration and licensing regime, proposing new rules, and monitoring compliance. The compliance function would include investigating on alleged breaches of the regime. This would be independent from the board. The board would the final decision maker on complaints recommended for prosecution by the provider.

63 This recommended regulatory service provider could be Engineering New Zealand. Engineering New Zealand has considerable expertise in running the register for CPEng, and it would be simpler and more efficient to take advantage of their expertise than requiring the regulator to recruit staff before establishing the regime.

64 Alternatives including appointing MBIE as the regulatory service provider in a manner similar to the Licensed Building Practitioners regime.

65 This approach also allows the Minister for Building and Construction to revoke the designation of a provider if it became apparent that the provider was not performing adequately.

66 Views from key stakeholders about who the regulatory service provider could be have been mixed. The CTV Families Group and the Chartered Professional Engineers Council see a conflict of interest and the potential to undermine public credibility of the new regime if it is assigned to Engineering New Zealand.

67 Engineering New Zealand and some of its technical groups are of the view that Engineering New Zealand should provide services because of the experience and infrastructure already in place.

Proposed Approach for Public Consultation

68 I seek your agreement to undertake public consultation on the proposed changes. Public consultation will be used to test these proposals and identify refinements. It will also be used to understand the costs and impacts of the proposals.

Next Steps

69 Public consultation on the proposed changes will be for a minimum of six weeks.

70 Following consultation, MBIE will analyse the submissions and refine the proposals. I intend to seek Cabinet agreement to final policy proposals [redacted] Confidential advice to Government

71 The legislative changes are expected to take up to six years to be fully implemented. Establishing the registration scheme will take priority over licensing.

Financial Implications

72 There are no financial implications from the proposal to consult.

73 The discussion document proposes to establish a new regulator. There will be one-off costs for its establishment, which would be subject to a separate Budget bid. Ongoing costs of running the regime would be funded through a mix of fees and levies. The actual costs would depend on final policy decisions.

Legislative Implications

74 There are no immediate legislative implications from the proposal to consult. Legislation will be required to implement Cabinet's policy decisions.

75 I intend for these amendments to progress alongside other occupational reforms under Phase Two of the Reform Programme, including proposals to strengthen the Licensed Building Practitioners scheme and amendments to the Plumbers, Gasfitters, and Drainlayers Act 2006.

76 I have requested a position on the 2021 Legislation Programme for an omnibus Building Sector Occupational Regulation Reform Bill, [redacted] Confidential advice to Government

Impact Analysis

Regulatory Impact Statement

77 The RIA panel at MBIE has reviewed and confirmed that the discussion document substitutes for a Regulatory Impact Statement. The discussion document is likely to lead to effective consultation and support the delivery of a quality Regulatory Impact Statement.

Climate Implications of Policy Assessment

78 The Climate Implications of Policy Assessment (CIPA) team has been consulted and confirms that the CIPA requirements do not apply to this proposal as the threshold for significance is not met.

Population Implications

79 The proposals in this paper are not expected to have significant implications for population groups.

Human Rights

80 This paper has no implications under the New Zealand Bill of Rights Act 1990 or the Human Rights Act 1993. There are no gender or disability implications arising from this paper.

Consultation

81 The following agencies have been consulted on this paper and the draft discussion document: Accident Compensation Corporation, Department of Internal Affairs, Department of Prime Minister and Cabinet, Kāinga Ora, Ministry of Education, Ministry of Health, Ministry of Housing and Urban Development, Ministry of Justice, Te Puni Kōkiri, Treasury, Waka Kohati NZ Transport Agency, and Worksafe New Zealand.

82 The CTV Families Group, Engineering New Zealand, the Chartered Professional Engineers Council, and the Engineering Associates Registration Board have also been consulted on the draft discussion document.

Communications

83 A media statement will be issued accompanying the release of the discussion document. The discussion document and summary documents will be made publicly available on MBIE's website.

Proactive Release

84 This Cabinet paper and associated minute will be published on MBIE's website, subject to any necessary redactions.

Recommendations

The Minister for Building and Construction recommends that the Committee:

1 **note** that the regulatory regime for engineers in New Zealand is not fit-for-purpose and risks significant harm to the public or individual consumers;

2 **note** that a proposed two-tiered regulatory regime would ensure all professional engineers practice under an occupational regulatory regime;

3 **note** that mandatory registration would lift the professionalism of the engineering occupation and provide an avenue for substandard performance and behaviour to be addressed;

4 **note** that licensing would restrict practice in high risk engineering disciplines to engineers who have demonstrated competence and expertise in that area;

5 **note** a new regulator would be established to oversee the regime;

6 **agree** to release the attached discussion document as a basis for public consultation on the proposed changes;

7 **authorise** the Minister for Building and Construction to make minor amendments and refinements to the discussion document before it is released;

8 **note** that the Minister for Building and Construction will report back to Cabinet Confidential advice to Government on the outcome of the consultation and seek agreement to policy decisions.

Authorised for lodgement

Hon Poto Williams

Minister for Building and Construction