Plumbers, Gasfitters, and Drainlayers (Registration and Licensing) Notice 2025

Pursuant to sections 28 and 30 of the Plumbers, Gasfitters, and Drainlayers Act 2006, the Plumbers, Gasfitters, and Drainlayers Board designates the following classes of registration for sanitary plumbing, gasfitting, and drainlaying and prescribes the following matters relating to registration and licensing for plumbers, gasfitters, and drainlayers.

Notice

Title

1. This notice is the Plumbers, Gasfitters, and Drainlayers (Registration and Licensing) Notice 2025.

Commencement

2. This notice comes into force on **1 August 2025**.

Revocation

3. This notice revokes the following notices:

(a) Plumbers, Gasfitters, and Drainlayers Board (Plumbing Registration and Licensing) Notice 2016 (published in the *New Zealand Gazette*, 27 October 2016, Issue No. 97, Notice No. 2016-gs6011)

(b) Plumbers, Gasfitters, and Drainlayers Board (Gasfitting Registration and Licensing) Notice 2016 (published in the *New Zealand Gazette*, 27 October 2016, Issue No. 97, Notice No. 2016-gs6012)

(c) Plumbers, Gasfitters, and Drainlayers Board (Drainlaying Registration and Licensing) Notice 2016 (published in the *New Zealand Gazette*, 27 October 2016, Issue No. 97, Notice No. 2016-gs6013).

Definitions

4. In this notice:

(a) **Act** means the Plumbers, Gasfitters, and Drainlayers Act 2006

(b) **authorisation** card means the card issued annually by the Board to every licensed registered person, exempt person, provisional licence holder, and trainee

(c) **Board** means the Plumbers, Gasfitters, and Drainlayers Board

(d) **certifying practitioner** means a person registered as a Certifying Plumber, Certifying Gasfitter, or Certifying Drainlayer

(e) **exempt person** means a person authorised to carry out sanitary plumbing under section 19 of the Act, gasfitting under section 21 of the Act, or drainlaying under section 25 of the Act

(f) **nominated person** means a currently licensed certifying practitioner or practitioner nominated to carry out supervision on behalf of the supervisor

(g) **practitioner** means a person registered as a Plumber, Gasfitter, or Drainlayer

(h) **provisional licence holder** means a person authorised to do sanitary plumbing, gasfitting, or drainlaying under section 38 of the Act

(i) **registered person** means a person who is registered as plumber, gasfitter, or drainlayer in any class of registration

(j) **restricted practitioner** means a person registered as a Restricted Plumber, Restricted Gasfitter, or Restricted Drainlayer

(k) **restricted work** means sanitary plumbing as defined in section 6 of the Act, gasfitting as defined in section 5 of the Act, or drainlaying as defined in section 4 of the Act

(l) **supervisee** means any person who must carry out restricted work under supervision

(m) **supervisor** means a licensed certifying practitioner who supervises another person carrying out restricted work

(n) **trainee** means a person holding a limited certificate as a trainee plumber, trainee gasfitter, or trainee drainlayer

(o) **trade** means sanitary plumbing, gasfitting, or drainlaying.

Classes of registration

5. The Board designates the following classes of registration:

(a) Certifying Plumber, Certifying Gasfitter, Certifying Drainlayer

(b) Plumber, Gasfitter, Drainlayer

(c) Restricted Plumber, Restricted Gasfitter, Restricted Drainlayer.

Registered person must hold practising licence

6. In order to carry out restricted work, a registered person must hold a current annual practising licence in their trade issued by the Board.

Authorised work

7. A licensed certifying practitioner is authorised to:

(a) carry out restricted work

(b) supervise restricted work carried out by the following people:

(i) practitioners

(ii) restricted practitioners

(iii) provisional licence holders

(iv) trainees

(v) exempt people

(c) test restricted work

(d) verify or certify restricted work where verification or certification is required.

8. A licensed practitioner is authorised to:

(a) carry out restricted work under the supervision of a licensed certifying practitioner

(b) physically supervise restricted work carried out by a supervisee when nominated by that person's supervisor

(c) test restricted work.

9. A licensed restricted practitioner is authorised to:

(a) carry out restricted work under the supervision of a licensed certifying practitioner

(b) test restricted work.

Minimum standards for registration as a certifying practitioner

10. To apply to be registered as a certifying practitioner in a trade, a person must have:

(a) held a licence as a practitioner in the trade for a combined period of 24 months under the supervision of a certifying practitioner, and

(b) passed the Board's certifying registration exam in the trade.

11. To apply to be registered as a certifying practitioner on the basis of an overseas qualification in the trade, a person must:

(a) submit a completed pre-registration application form to the Board which includes all of the following documentation:

(i) an assessment report from an individual or organisation approved by the Board concluding that the person's trade qualification is equivalent to, or greater than level 4 on the National Qualifications Framework

(ii) if the person has not been granted New Zealand residence, police certificates that are no older than 6 months from both:

A. their country of citizenship (unless they can provide satisfactory evidence they have never lived there), and

B. any country they have lived in for 12 months or more (whether in one visit or intermittently) in the last 10 years

(iii) evidence that the applicant has worked full-time in the trade for 6 years or more, and

(b) pass the Board's advanced proficiency assessment in the trade (this assessment must be undertaken in New Zealand).

12. The certifying registration exam will test the certifying competencies for the trade specified in Schedule 1.

Minimum standards for registration as practitioner

13. To apply to be registered as a practitioner in a trade, a person must have:

(a) obtained the New Zealand Certificate in the trade, or

(b) obtained the National Certificate in the trade and passed the Board's practitioner registration exam.

14. To apply to be registered as a practitioner on the basis of an overseas qualification in the trade, a person must:

(a) submit a completed pre-registration application form to the Board that includes all of the following documentation:

(i) an assessment report from an individual or organisation approved by the Board concluding that the applicant's trade qualification is equivalent to, or greater than level 4 on the National Qualifications Framework

(ii) if the person has not been granted New Zealand residence, police certificates that are no older than 6 months from both:

A. their country of citizenship (unless they can provide satisfactory evidence they have never lived there), and

B. any country they have lived in for 12 months or more (whether in one visit or intermittently) in the last 10 years

(iii) evidence that the applicant has worked full-time in the trade for 4 years or more, and

(b) pass the Board's practitioner registration exam (which can be sat in the person's home country by arrangement with the Board).

15. The practitioner registration exam will test the practitioner competencies for the trade specified in Schedule 2.

Minimum standards for registration as restricted practitioner

16. To apply to be registered as a restricted practitioner, a person must have successfully completed one of the following:

(a) the National Certificate in the trade

(b) the third stage block course in the trade

(c) the practice trade certificate in the trade.

Terms and conditions of registration

17. A registered person must pay any monies owing to the Board as they become due, subject to any exceptions agreed by the Board.

18. A registered person must provide the Board with all information required for the public register.

Terms and conditions of practising licence

19. A registered person must complete any required continuing professional development training that applies to them in order to renew their annual practising licence in a trade.

20. All licensed registered people are issued with an authorisation card which they must carry with them at all times when carrying out restricted work and must be able to produce on request.

21. A practitioner or restricted practitioner must work at all times under the supervision of a certifying practitioner.

22. A practitioner or restricted practitioner must notify the Board of the name and registration number of their supervisor.

23. A supervisor of an exempt person must pay the prescribed fee for the exempt person and provide the Board with the person's name, address, and telephone number.

24. A supervisor must notify the Board in writing if their supervision of any person ends.

25. A supervisor remains responsible for all restricted work carried out by their supervisee until the Board has received written notification that they are no longer supervising that person.

26. A supervisor must ensure that all restricted work carried out by their supervisee:

(a) is performed competently

(b) is subject to appropriate safety measures

(c) complies with the requirements of all relevant regulations, including regulations made under the Building Act 2004 if it is sanitary plumbing or drainlaying, or regulations made under the Gas Act 1992 if it is gasfitting.

27. A supervisor must ensure that their supervisee:

(a) is competent to perform the tasks they carry out

(b) is adequately and appropriately supervised while carrying out restricted work

(c) complies with all relevant regulations, including regulations made under the Building Act 2004 and the Gas Act 1992 as applicable

(d) carries their authorisation card with them at all times when carrying out restricted work and can produce it on request

(e) if the supervisee is an exempt person, does not carry out gasfitting while connected to the gas supply.

28. A supervisor can nominate another currently licensed certifying practitioner or practitioner to supervise their supervisee on their behalf.

29. A supervisor who has nominated another person to carry out supervision on their behalf still remains responsible for all aspects of any restricted work carried out by their supervisee.

30. A nominated person must promptly notify the supervisor of any concerns they have about the work done by the supervisee or the safety measures in place in respect of that work.

31. A supervisor must ensure a trainee under their supervision works at all times in their presence or in the presence

of a nominated person for their first 12 months while carrying out restricted work.

32. A supervisor must ensure an exempt person under their supervision works at all times in their presence or in the presence of a nominated person for their first 24 months while carrying out restricted work.

Licence period

33. The licence period is from 1 April to 31 March of the following year.

34. All licences are issued for a maximum period of one licensing year only.

35. Subject to section 50(3) of the Act, all licences and authorisations expire on 31 March irrespective of when they were issued.

36. A licence issued after 1 April is valid only from the date on which it is issued.

Application forms

37. The Board provides the following forms:

(a) application for pre-registration

(b) application for registration

(c) application for a practising licence.

Issued at Wellington this 20th day of June 2025.

ALEYNA HALL, Registrar, Plumbers, Gasfitters, and Drainlayers Board.

Schedule 1 – Certifier competencies

1. Certifying plumber

(1) The examination a person must pass in order to register as a certifying plumber is examination 9195 set by the Board.

(2) Examination 9195 will test an applicant’s knowledge, experience, and practical understanding in the following competencies as they relate to the design, the management of the installation of, identification, and verification of sanitary plumbing systems:

(a) Trade calculations and trade science including, but not limited to—

(i) application of formulae

(ii) corrosion protection

(iii) density

(iv) energy transfer

(v) estimation, measurement, and calculation

(vi) hydraulic principles

(vii) laws of physics

(viii) noise transfer

(ix) thermal expansion

(x) water quality.

(b) Selection of products and materials including, but not limited to—

(i) their applications, properties, and uses

(ii) their compatibility, testing, limitations, and commissioning procedures

(iii) alternative products or materials, approval regimes, and protection of products or materials.

(c) Tools and equipment.

(d) Jointing methods.

(e) Designs, drawings, and specifications including, but not limited to—

(i) as-built plans

(ii) compliance documentation

(iii) materials lists

(iv) patterns

(v) plans, schematics, design calculations, and specifications.

(f) Water services including, but not limited to—

(i) alternative water supplies

(ii) backflow prevention

(iii) domestic fire sprinkler systems

(iv) heating systems for sanitary plumbing including hot water systems, solar water heating, and alternative water heating systems

(v) hot and cold water reticulation systems

(vi) noise transmission prevention

(vii) on-site water filtration and treatment

(viii) pipe sizing

(ix) pumped systems

(x) rain water harvesting

(xi) sanitary appliances and fixtures

(xii) seismic and geostability considerations

(xiii) subsidiary systems connected to water services

(xiv) water storage systems.

(g) Foul water systems including, but not limited to—

(i) discharge stack systems

(ii) noise transmission prevention

(iii) pumped systems

(iv) sanitary appliances and fixtures

(v) seismic and geostability considerations

(vi) sizing and venting for foul water plumbing systems

(vii) vacuum drainage systems.

(h) Integrity of structures including, but not limited to—

(i) coordination with other building services

(ii) fire protection

(iii) positioning and protection of services

(iv) preservation of structural integrity

(v) prevention of damage to structure including weather tightness.

(i) Efficient use of natural resources (sustainability practices) including, but not limited to—

(i) best environmental practice

(ii) energy efficiency

(iii) water efficiency

(iv) water recycling

(v) waste minimisation.

(j) Compliance documentation including, but not limited to—

(i) Acts

(ii) regulations

(iii) acceptable solutions and verification methods

(iv) alternative solutions

(v) standards

(vi) codes of practice

(vii) guidance

(viii) manufacturers' instructions

(ix) the hierarchy and relationships between the forms of documentation.

(k) Health and safety including, but not limited to—

(i) personal and public safety

(ii) site safety

(iii) electrical safety

(iv) environmental considerations in relation to personal safety

(v) environmental impacts

(vi) preparation of safety plans.

(l) Sanitary plumbing as a regulated occupation including, but not limited to—

(i) limitations around who can do or assist in doing sanitary plumbing

(ii) requirements around carrying out sanitary plumbing

(iii) responsibilities that apply to registered practitioners

(iv) supervising people doing sanitary plumbing

(v) understanding of regulatory environment.

2. Certifying gasfitter

(1) The examination a person must pass to register as a certifying gasfitter is examination 9196 set by the Board.

(2) Examination 9196 will test an applicant's knowledge, experience and practical understanding in the following competencies as they relate to the design, management of installation of, identification, and verification/certification of gasfitting systems:

(a) Trade calculations and trade science including, but not limited to—

(i) application of formulae

(ii) combustion and ventilation

(iii) estimation, measurement, and calculation

(iv) condensate

(v) corrosion

(vi) flame characteristics

(vii) fluing

(viii) flue-sizing principles

(ix) gas properties

(x) gas rating

(xi) hydraulic principles as they relate to gas-fired water heaters

(xii) input/output efficiency calculations

(xiii) laws of physics

(xiv) pipe sizing

(xv) thermal expansion.

(b) Selection of products and materials including, but not limited to—

(i) their applications, properties, and uses

(ii) their compatibility, testing, limitations, and commissioning procedures

(iii) alternative products or materials, approval regimes, and protection of products or materials.

(c) Tools and equipment.

(d) Jointing methods.

(e) Designs, drawings, and specifications including, but not limited to—

(i) as-built plans

(ii) compliance documentation

(iii) materials lists

(iv) plans, schematics, design calculations, and specifications.

(f) Gas installations, including but not limited to—

(i) domestic appliances

(ii) commercial appliances

(iii) gas supply pipework, service lines, meters, and regulator systems

(iv) industrial appliances

(v) non-propulsive gasfitting in ships, boats, caravans and vehicles

(vi) pressure and flow controls

(vii) safety devices.

(g) Integrity of structures including, but not limited to—

(i) coordination with other building services

(ii) fire protection

(iii) preservation of structural integrity

(iv) prevention of damage to property including weather tightness.

(h) Efficient use of natural resources (sustainability practices) including, but not limited to—

(i) best environmental practice

(ii) energy efficiency

(iii) waste minimisation.

(i) Compliance documentation including, but not limited to—

(i) Acts

(ii) regulations

(iii) acceptable solutions and verification methods

(iv) alternative solutions

(v) standards

(vi) codes of practice

(vii) guidance

(viii) manufacturers' instructions

(ix) the hierarchy and relationship between the forms of documentation

(x) certification of gasfitting work.

(j) Health and safety including, not limited to—

(i) personal and public safety

(ii) site safety

(iii) environmental considerations relating to personal safety

(iv) environmental impacts

(v) preparation of safety plans.

(k) Gasfitting as a regulated occupation, including but not limited to

(i) limitations on who can do or assist in doing gasfitting

(ii) requirements around carrying out gasfitting

(iii) responsibilities that apply to registered gasfitters

(iv) understanding the regulatory environment

(v) supervising people doing gasfitting

(vi) certification of gasfitting work.

3. Certifying drainlayer

(1) The examination a person must pass to register as a certifying drainlayer is examination 9198 set by the Board.

(2) Examination 9198 will test the applicant's knowledge, experience, and practical understanding in the following competencies as they relate to the design, management of the installation of, identification, and verification of drainage systems:

(a) Trade calculations and trade science including, but not limited to—

(i) application of formulae

(ii) corrosion protection

(iii) estimation, measurement, and calculation

(iv) geotechnical considerations

(v) hydraulic principles

(vi) laws of physics

(vii) thermal expansion

(viii) waste water composition.

(b) Selection of products and materials including, but not limited to—

(i) their applications, properties, and uses

(ii) their compatibility, testing, limitations, and commissioning procedures

(iii) alternative products or materials, approval regimes, and protection of products or materials.

(c) Tools and equipment.

(d) Jointing methods.

(e) Designs, drawings, and specifications including, but not limited to—

(i) as-built plans

(ii) compliance documentation

(iii) materials lists

(iv) patterns

(v) plans, schematics, design calculations, and specifications.

(f) Foul water and stormwater drainage systems including, but not limited to—

(i) foul water systems

(ii) on-site liquid trade waste systems

(iii) on-site waste water and effluent treatment and disposal systems

(iv) on-site stormwater handling and disposal systems

(v) pumped systems

(vi) seismic and geostability considerations

(vii) stormwater systems

(viii) testing and commission.

(e) Integrity of structures including, but not limited to,—

(i) coordination with other below ground services

(ii) positioning and protection of services

(iii) preservation of structural integrity

(iv) prevention of damage to property.

(f) Efficient use of natural resources (sustainability practices) including, but not limited to,—

(i) best environmental practice

(ii) water efficiency

(iii) water recycling

(iv) waste minimisation.

(g) Compliance documentation including, but not limited to—

(i) Acts

(ii) regulations

(iii) acceptable solutions and verification methods

(iv) alternative solutions

(v) standards

(vi) codes of practice

(vii) guidance

(viii) manufacturers' instructions

(ix) the hierarchy and relationship between the forms of documentation.

(h) Health and safety including, but not limited to—

(i) personal and public safety

(ii) site safety

(iii) environmental consideration in relation to personal safety

(iv) environmental impacts

(v) preparation of safety plans.

(i) Drainlaying as a regulated occupation, including but not limited to—

(i) limitation on who can do or assist in doing drainlaying

(ii) requirements around carrying out drainlaying

(iii) responsibilities that apply to registered practitioners

(iv) understanding of regulatory environment

(v) supervising people doing drainlaying.

Schedule 2 – Practitioner competencies

1. Plumber

(1) The examination a person must pass in order to register as a plumber is examination 9192 set by the Board.

(2) Examination 9192 will test an applicant's knowledge, experience, and practical understanding in the following competencies as they relate to the installation, identification, testing, commissioning, fault-finding, and maintenance of sanitary plumbing systems:

(a) Trade calculations and trade sciences including, but not limited to—

(i) application of formulae

(ii) corrosion protection

(iii) density

(iv) energy transfer

(v) estimation, measurement, and calculation

(vi) hydraulic principles

(vii) laws of physics

(viii) noise transfer

(ix) thermal expansion

(x) water quality.

(b) Use and limitations of products and materials including, but not limited to—

(i) acrylonitrile butadiene styrene (ABS)

(ii) asbestos

(iii) brass/bronze

(iv) cast iron (grey cast iron)

(v) composite pipe including multilayer (MLP)

(vi) copper

(vii) copper alloy

(viii) cross-linked polyethylene (PE-X)

(ix) ductile steel

(x) fibreglass

(xi) galvanised steel

(xii) glass

(xiii) lead

(xiv) mild steel

(xv) polybutylene (PB)

(xvi) polyethylene (PE)

(xvii) polypropylene (PP)

(xviii) polyvinylchloride (PVC)

(xix) sheet metal

(xx) stainless steel.

(c) Tools and equipment.

(d) Jointing methods.

(e) Drawings and specifications including, but not limited to—

(i) as-built plans

(ii) materials lists

(iii) patterns

(iv) plans, schematics, and specifications.

(f) Water services including, but not limited to—

(i) alternative water supplies

(ii) backflow prevention

(iii) domestic fire sprinkler systems

(iv) heating systems for sanitary plumbing including hot water systems, solar water heating, and alternative water heating systems

(v) hot and cold water reticulation systems

(vi) noise transmission prevention

(vii) on-site water filtration and treatment

(viii) pipe sizing

(ix) pumped systems

(x) rain water harvesting

(xi) sanitary appliances and fixtures

(xii) seismic and geostability considerations

(xiii) subsidiary systems connected to water services

(xiv) water storage systems.

(g) Foul water systems including, but not limited to—

(i) alternative foul water disposal systems

(ii) discharge stack systems

(iii) noise transmission prevention

(iv) pumped systems

(v) sanitary appliances and fixtures

(vi) sizing and venting for foul water systems.

(h) Integrity of structures including, but not limited to—

(i) coordination with other building services

(ii) fire protection

(iii) positioning and protection of services

(iv) preservation of structural integrity

(v) prevention of damage to structure, including weather tightness.

(i) Efficient use of natural resources (sustainability practices) including, but not limited to—

(i) best environmental practice

(ii) energy efficiency

(iii) water efficiency

(iv) water recycling

(v) waste minimisation.

(j) Compliance documentation including, but not limited to—

(i) Acts

(ii) regulations

(iii) acceptable solutions and verification methods

(iv) alternative solutions

(v) standards

(vi) codes of practice

(vii) guidance

(viii) manufacturers’ instructions

(ix) the hierarchy and relationships between the forms of documentation.

(k) Health and safety including, but not limited to—

(i) personal and public safety

(ii) site safety

(iii) electrical safety

(iv) environmental considerations in relation to personal safety

(v) environmental impacts

(vi) preparation of safety plans.

(l) Sanitary plumbing as a regulated occupation including, but not limited to—

(i) limitations around who can do or assist in doing sanitary plumbing

(ii) requirements around carrying out sanitary plumbing

(iii) responsibilities that apply to registered practitioners

(iv) understanding of regulatory environment.

2. Gasfitter

(1) The examination a person must pass to register as a gasfitter is examination 9193 set by the Board.

(2) Examination 9193 will test an applicant's knowledge, experience and practical understanding in the following competencies as they relate to the installation, identification, testing, commissioning, fault-finding, and maintenance of gasfitting systems:

(a) Trade calculations and trade sciences including, but not limited to—

(i) application of formulae

(ii) condensate

(iii) combustion and ventilation

(iv) corrosion

(v) estimation, measurement, and calculation

(vi) flammability limits

(vii) flame characteristics

(viii) fluing

(ix) gas properties

(x) gas rating

(xi) hydraulic principles as they relate to gas fired water heaters

(xii) input/output efficiency calculations

(xiii) laws of physics

(xiv) pipe sizing.

(b) Uses and limitations of products and materials including, but not limited to—

(i) aluminium

(ii) asbestos

(iii) black steel

(iv) brass/bronze

(v) cast iron

(vi) copper and copper alloys

(vii) cross-linked polyethylene (X-PE)

(viii) fire resistant materials

(ix) galvanised steel

(x) mild steel

(xi) polyamide

(xii) polyethylene (PE)

(xiii) polypropylene (PP)

(xiv) polyvinylchloride (PVC)

(xv) stainless steel.

(c) Tools and equipment.

(d) Jointing methods.

(e) Drawings and specifications, including but not limited to—

(i) as-built plans

(ii) materials lists

(iii) plans, schematics, and specifications

(iv) patterns.

(f) Gas installations including, but not limited to—

(i) appliances

(ii) equipment

(iii) fluing

(iv) gas reticulation

(v) pipe sizing and pipework

(vi) seismic considerations

(vii) ventilation.

(g) Handling of fuel gases including, but not limited to—

(i) characteristics

(ii) composition

(iii) liquid petroleum gas (LPG), butane, propane, general product

(iv) manufactured gas

(v) natural gas

(vi) safe storage

(vii) safe handling

(viii) types of gases

(ix) uses.

(h) Space and water heating including, but are not limited to—

(i) direct and indirect heating and ventilation

(ii) gas boosted systems

(iii) hydronic systems

(iv) warm air systems.

(i) Electrical and electronics work relating to gas installations.

(j) Integrity of structures including, but not limited to—

(i) coordination with other building services

(ii) fire protection

(iii) preservation of structural integrity

(iv) prevention of damage to property including weather tightness.

(k) Efficient use of natural resources (sustainability practices) including, but not limited to—

(i) best environmental practice

(ii) energy efficiency

(iii) waste minimisation.

(l) Compliance documentation including, but not limited to—

(i) Acts

(i) regulations

(ii) acceptable solutions and verification methods

(iii) alternative solutions

(iv) standards

(v) codes of practice

(vi) guidance

(vii) manufacturers’ instructions

(viii) the hierarchy and relationship between the forms of documentation

(ix) certification of gasfitting work.

(m) Health and safety including, but not limited to—

(i) personal and public safety

(ii) site safety

(iii) electrical safety

(iv) environmental considerations relating to personal safety

(v) environmental impacts.

(n) Gasfitting as a regulation occupation including, but not limited to—

(i) limitations on who can do or assist in doing gasfitting

(ii) requirements and limitations around carrying out gasfitting

(iii) responsibilities that apply to registered gasfitters

(iv) understanding the regulatory environment.

3. Drainlayer

(1) The examination a person must pass to register as a drainlayer is examination 9197 set by the Board.

(2) Examination 9197 will test the applicant’s knowledge experience, and practical understanding in the following competencies as they relate to the installation, identification, testing, commissioning, fault-finding, and maintenance of drainage systems:

(a) Trade calculations and trade science including, but not limited to—

(i) application of formulae

(ii) corrosion protection

(iii) estimation, measurement, and calculation

(iv) geotechnical considerations

(v) hydraulic principles

(vi) laws of physics

(vii) thermal expansion

(viii) waste water composition.

(b) Use and limitations of products and materials including, but not limited to—

(i) acrylonitrile butadiene styrene (ABS)

(ii) asbestos

(iii) bedding materials and backfill

(iv) cast iron

(v) concrete

(vi) copper and copper alloys

(vii) ductile iron

(viii) earthenware

(ix) fibreglass

(x) polyethylene (PE)

(xi) polypropylene (PP)

(xii) polyvinylchloride (PVC)

(xiii) stainless steel.

(c) Tools and equipment.

(d) Jointing methods.

(e) Drawings and specifications including, but not limited to—

(i) as-built plans

(ii) materials lists

(iii) plans, schematics, and specifications.

(f) Foul water and stormwater systems including, but not limited to—

(i) foul water systems

(ii) on-site liquid trade waste systems

(iii) on-site waste water and effluent treatment and disposal systems

(iv) on-site stormwater handling and disposal systems

(v) pumped systems

(vi) seismic and geostability considerations

(vii) stormwater systems

(viii) trade waste systems.

(g) Integrity of structures including, but not limited to—

(i) coordination with other building services

(ii) positioning and protection of services

(iii) preservation of structural integrity

(iv) prevention of damage to property.

(h) Efficient use of natural resources (sustainability practices) including, but not limited to—

(i) best environmental practice

(ii) water efficiency

(iii) water recycling

(iv) waste minimisation.

(i) Compliance documentation including, but not limited to—

(i) Acts

(ii) regulations

(iii) acceptable solutions and verification methods

(iv) alternative solutions

(v) standards

(vi) codes of practice

(vii) guidance

(viii) manufacturers' instructions

(ix) the hierarchy and relationship between the forms of documentation.

(j) Health and safety including, but not limited to—

(i) personal and public safety

(ii) site safety

(iii) environmental consideration in relation to personal safety

(iv) environmental impacts

(v) preparation of safety plans.

(k) Drainlaying as a regulated occupation including, but not limited to—

(i) limitations on who can do and assist in doing drainlaying

(ii) requirements around carrying out drainlaying

(iii) responsibilities that apply to registered practitioners

(iv) understanding of the regulatory environment.