# Compliance statement policy

## Part 1 for land development and subdivision works

September 2017

www.watercare.co.nz

Watercare
An Auckland Council Organisation

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## Definitions

| Term | Definition |
|---|---|
| Compliance statement (Watercare) | A document prepared by a subject matter professional accredited with a recognised accreditation body for the purpose of confirming that design services or construction works have been completed in accordance with Watercare standards. |
| IPENZ producer statement | "A producer statement is a document prepared by a Chartered Professional Engineer confirming his or her professional opinion. This opinion is based on stated reasonable grounds that aspects of the design of a building achieve compliance with the Building Code, or that elements of construction have been completed in accordance with the approved building consent". IPENZ, The Institution of Professional Engineers New Zealand Inc. Version 3, January 2014. |
| SQEP | A suitably qualified and experienced person for the task at hand. Watercare's construction standards specify the minimum qualifications for certain activities such as welder certification or NZQA disinfection certification, equipping the practitioner with knowledge and experience to complete a task to the required standard. |
| Accreditation body | A New Zealand association for a professional industry or occupation providing oversight and control of appropriate practice, to safeguard public interest. |
| Author | The person completing and certifying the compliance statement. The Author must be suitably accredited. |
| Non-compliant statement | A compliance statement that has not been completed by an appropriate Author, or is incomplete, or contains false or inaccurate information. |
| Watercare requirements | A reference to "Watercare requirements" is a reference to the codes of practice and standards as provided in the Watercare Engineering Standards Framework. |
| Development Unit Equivalent (DUE) | A unit of water demand of 220 kilolitres per year on average, or, where a wastewater meter is installed, a unit of wastewater discharge of 209 kilolitres per year on average. The number of DUE's is based on the additional demand for water and/or wastewater at the property and will be rounded to the nearest whole number. |
| A reference to "us" or "our" in this document is a reference to Watercare. | |

# 1 Policy overview

This policy is part of Watercare's Engineering Standards Framework. Its purpose is to explain the reasons for Watercare's requirement that compliance statements be completed by engineers and contractors when work and services are delivered on infrastructure to be vested to Auckland Council and Watercare through land development or subdivision. It also explains the requirements of compliance statements and how they will be used by Watercare in its Risk and Assurance Framework and conditions of asset acceptance.

Compliance statements are deliverables under Watercare requirements to demonstrate compliance in relation to the Auckland Council Water Supply and Wastewater Network Bylaw 2015 (the Bylaw) that is pursuant to the Local Government Act 2002 and the Local Government (Auckland Council) Act 2009.

The compliance statements are pursuant to clause 6 subclauses (3), (4) and (5)(b) and clause 9 of the Bylaw:

*"6 Connection, disconnection and other works*

> *(3) Watercare may grant approval to such connection, disconnection or other works, as the case may be, and may impose conditions which must be complied with in the exercise of the approval.*
> *(4) Without limiting subclause (3), a condition imposed under that subclause may require that the connection, disconnection or works comply with any relevant code of practice.*
> *(5) Watercare may refuse an application for approval to connect to a network where:*
> > *(b) Watercare has a documented record of the applicant's non-compliance with this bylaw or any previous water supply or wastewater bylaws, codes of practice, or approvals granted under such bylaws or codes of practice*

*9 Standard of water supply or wastewater infrastructure*

> *(1) Any person responsible for the construction of water supply or wastewater infrastructure which is to vest in Watercare and become part of the water supply or wastewater network (whether on the deposit or approval of a survey plan or at any other time) must comply with all relevant codes of practice and standards relating to such infrastructure.*
> *(2) Any person responsible for the construction of water supply or wastewater infrastructure which is to connect to the water supply or wastewater network must comply with all relevant codes of practice and standards relating to the connection.*

*Explanatory note: the relevant standard as at the date this bylaw is made is Watercare Services Limited's Water and Wastewater Code of Practice for Land Development and Subdivision 2015.*

> *(3) To avoid doubt, Watercare is not required to accept the vesting of water supply or wastewater infrastructure, or a connection to the water supply or wastewater network, which does not comply with subclauses (1) or (2)."*

Watercare infrastructure consists of assets and systems that enable us to supply our customers with treated water that complies with the New Zealand Drinking Water Standards and responsibly return treated wastewater to the environment. These assets must be safe, reliable and cost effective. It is therefore important that Watercare applies effective management and controls to ensure the infrastructure performs to our standards.

The requirement to provide compliance statements will be a mandatory part of Watercare's quality assurance processes and applies to all new land development and subdivision work entered into on or after 10 July 2017. The information and supporting documentation supplied with compliance statements will be relied upon by Watercare as part of making good asset management decisions using a risk assessment based approach. They will also encourage and establish accountability by the developer and the consultants and contractors it engages to deliver the assets.

Watercare's Engineering Standards Framework includes codes of practice (codes) and standards for material supply and construction activities. All extensions to our water and wastewater systems must be designed and

constructed in accordance with this framework. The standards and codes apply to water, wastewater, asset information, electrical and control systems.

Authors of compliance statements must be familiar with this policy and Watercare's standards and codes when completing a statement.

Watercare's Engineering Standards Framework can be accessed from our website and may be amended from time to time.

Watercare may amend this policy from time to time at its sole discretion.

## 2 Disclaimer

The Watercare compliance statements relate to compliance with Watercare's own codes and standards. They do not replace or negate any requirement for IPENZ producer statements and must not be used to demonstrate compliance with the Building Act, the Building Code or any building consent.

# 3 About compliance statements

## 3.1 What is a compliance statement?

A compliance statement is a certification that the design or construction of water or wastewater assets (or any component) complies with Watercare's standards and codes.

## 3.2 Purpose of compliance statements

The statement is a mechanism to provide Watercare with reasonable assurance that work delivered is to a minimum level of quality that meets the provisions of our standards and codes.

As part of its Engineering Standards Framework, Watercare may use the statements as evidence of grounds to reject work that does not comply with Watercare's requirements.

## 3.3 Types of statements

There are two categories of compliance statements: design and construction.

Within each category, two statements are used. Table 1 sets out the categories and compliance statement types:

**Table 1. Compliance statement categories and forms**

| Category | Statement Form | Description |
|---|---|---|
| **Design** | Design - CS1 | Provided by:<br>• Chartered Professional Engineer who completed the design<br>• Registered Professional Surveyor who completed the design |
| | Design review – CS2 | Provided by the Chartered Professional Engineer who peer reviewed the design work completed by others and exercised independent judgement on the design. |
| | | |
| **Construction** | Construction works - CS3 | Provided by the suitably qualified and experienced person (SQEP) who completed the construction work.<br><br>Works covered by this statement must be completed by qualified and experienced tradespeople. The works may have been completed by a number of people directly supervised by the Author who takes responsibility for the work produced by others. |
| | Construction monitoring - CS4 | Provided by:<br>• Chartered Professional Engineer who monitored the construction works<br>• Registered Professional Surveyor who completed the works monitoring |

## 3.4 Engineering disciplines covered by compliance statements

Compliance statements are required for all fields of engineering related to the design and construction of works.

The Author who certifies the work must only sign for work they can attest to that is within their limits of technical competence. Authors may rely on other suitably qualified and competent practitioners within their organisation

for large and complex works and provide a single compliance statement for either design or construction works provided that they have made due enquiries and take full ownership of the compliance statement.

### 3.5 When compliance statements are to be submitted

The statements are hold points between design, construction and handover. It may be necessary to complete certain sections before others, such as staged commissioning works, where it is prudent to provide statements as the works progress.

The minimum stages where compliance statements are required are listed below:

- At completion of the final design (CS1 and CS2).
- At completion of construction works, but before any livening or assets being placed into operation (CS3 and CS4). The CS4 form will only be required where construction monitoring has been identified as being required.
- At completion of final commissioning or connection works (CS3 and CS4).
- A CS3 will always be required for any construction works.

CS1, CS2 and CS4 are not required for a subdivision of up to four Development Unit Equivalent's where:

- The dwellings will be serviced by a single manhole and wastewater line designed in accordance with Chapter 5 of the Auckland Code of Practice for Land Development and Subdivision.
- Water meters connections will be to an existing watermain designed in accordance with Chapter 6 of the Auckland Code of Practice for Land Development and Subdivision.

## 4 Qualifying as an Author to submit statements

### 4.1 Accreditation to complete statement forms

The compliance statement Author must:

- work within their field of expertise and have recognised accreditation, or
- have their work peer reviewed by an Author with suitable competency and accreditation.

Refer to section 4.2 for accreditation requirements.

Table 2 shows the relationship of sign-off between design and construction in relation to the Author's accreditation status.

**Table 2. The four statements and who can submit them**

| Category | Statement form | Accreditation status | | | | |
|---|---|---|---|---|---|---|
| | | **Chartered Professional Engineer** | **Registered Professional Surveyor with 5 years land development experience** | **Non-chartered designer / engineer** | **Accredited contractor** | **Non-accredited contractor** |
| **Design** | CS1 | Yes | Networks limited to:<br>• Water ≤150mm DN<br>• Wastewater ≤225mm DN<br><br>Excludes pump stations, rising mains and PWC systems | Yes - but must have an accompanying CS2 from a Chartered Professional Engineer | N/A | N/A |
| **Design review** | CS2 | Yes - to peer review design by a non-chartered engineer or by specific request | No | No | N/A | N/A |
| **Construction** | CS3 | N/A | | N/A | Yes | No – an accredited contractor must oversee the works and submit certification |
| **Construction monitoring** | CS4 | Yes | As per design limitations | No | N/A | N/A |

**Accredited designers/engineers**

A design professional accredited by a recognised accreditation body (see section 4.2) within the relevant field of competence can:

- submit a statement certifying design work (CS1), or
- peer review (excluding Registered Professional Surveyors) a non-accredited professional's design work, or complete peer review work on request (CS2), or
- monitor construction works (CS4).

CS4 is not required for a simple subdivision of up to four dwelling units as discussed in clause 3.5 above.

**Non-accredited designers/engineers**

A design professional that is not accredited must submit:

- a statement certifying their own work (CS1), and

- a design review (CS2) from an accredited member with suitable accreditation.

**Accredited contractors**

A contractor can submit a statement certifying construction work (CS3) if:

- they are suitably qualified and experienced, and
- have suitable accreditation

**Non-accredited contractors**

Contractors who do not have a recognised accreditation cannot submit a compliance statement but may still be able to complete work. The work of these contractors must be completed under the supervision of, and certified by, an accredited contractor. This scenario applies specifically to a contractor with apprentice staff or a team leader taking responsibility for the work that their team delivers.

## 4.2 Competency of Authors

An Author must demonstrate current competency in the relevant field at the required level with a recognised accreditation body. Where relevant, Authors must be duly authorised to sign the compliance statement on behalf of their employer.

The recognised accreditation bodies that Watercare has selected are based on:

- upholding industry best practice
- supporting members with continual development
- holding members to a strict code of ethics.

Board or organisation members must be selected by assessing their qualifications and experience in a specific field of practice.

**Design:** Authors must be a Chartered Professional member within a suitable field of practice from:

CPEC – Chartered Professional Engineers Council, or

Accredited Chartered Professional Engineers belonging to associations under international engineers' alliance agreements, the International Professional Engineers Agreement (IPEA) and that are APEC signatories.

**Note:** Engineers with an international accreditation whose service relates directly to New Zealand legislative requirements must have either practised engineering in New Zealand for a minimum of two years or have their work reviewed by an engineer with sufficient local experience and suitable NZ accreditation. For example, the design of a treatment plant structure to meet New Zealand earthquake standards would require local experience sign-off, whereas a new treatment process, where the subject matter expert has international accreditation, would not.

Registered Professional Surveyors with the New Zealand Institute of Surveyors and five years land development experience may provide limited design work as described in Table 2.

**Construction:** Authors must be certified suitably qualified and experienced (SQEP) within an appropriate field of practice from:

CCNZ – Civil Contractors New Zealand (Full membership only), or

HERA – Heavy Engineering Research Association (Ordinary membership only), or

PGDB – Plumbers, Gasfitters and Drainlayers Board, or

EWRB – Electrical Workers Registration Board, or

CBIP – Certification Board of Inspection Personnel, or

NZRMCA – New Zealand Ready Mixed Concrete Association (Full membership only), or

The Watercare construction standards specify the minimum qualifications for certain activities such as welder certification or NZQA disinfection certification, equipping the practitioner with knowledge and experience to complete a task to the required standard.

**Construction monitoring:** Same as design category.

# 5 Conditions for accepting compliance statements

The Author is responsible for the content of any compliance statement submitted to Watercare. Watercare will rely on the Author's expertise and on the internal quality assurance processes within the company they represent.

Authors must not misrepresent themselves or their experience.

If an Author becomes aware of circumstances that may render the issued compliance statement inaccurate or in any way misleading they are responsible for notifying Watercare of the issue so that corrective steps can be taken.

The compliance statement Author acts as the developer's agent and as an employee of the organisation they represent. Acceptance of a compliance statement by Watercare does not relieve the Author of responsibility for the subject works or services.

Only a Watercare compliance statement form shall be accepted for stating compliance with Watercare requirements.

All sections must be fully and accurately completed. The forms are divided into four main sections:

- The Author's details
- Description of the works stating the location
- Record of supporting documents and quality control evidence
- The Author's declaration

Any action which is likely to result in non-compliance with a Watercare approval and/or relevant standards may result in Watercare taking appropriate action to ensure the works comply. The decision to accept any compliance statement is at the sole discretion of Watercare.

Watercare may refuse to accept a compliance statement when, but not limited to:

- The Author is not suitably qualified
- The Author does not hold current registration with the nominated accreditation body
- The Author's accreditation is not to the relevant practice area
- The Author is under investigation for fraud, negligence or other ethical misconduct
- The supporting evidence does not match the description of the works
- The supporting evidence is deemed incomplete or insufficient, see section 5
- The supporting evidence is not supplied with version numbers and dates

- The insurance is outdated or deemed insufficient to cover the risk associated with the work
- The Author is deemed unsuitable by reputation.

**Note:** Watercare may in its discretion carry out additional construction audits at random, or request a design to be peer reviewed that is the subject of a compliance statement. Any additional auditing by Watercare will not relieve the Author of their responsibility to properly and accurately complete a compliance statement.

# 6 Insurance

Watercare accepts insurance held by the Author's employer in lieu of personal insurance. The works and services must be covered by appropriate and adequate insurance. Upon request Watercare will be provided with reasonable evidence that the insurance cover is appropriate and adequate.

# 7 The compliance statements

This section provides detailed descriptions of the individual compliance statements and their application.

## 7.1 Design statements CS1 and CS2

A CS1 and/or CS2 statement must be submitted with the supporting design documentation as evidence of compliance. Refer to section 9 for a breakdown of the supporting evidence that must be submitted with the statements.

**Table 4. Details of the design compliance statement - CS1**

| **Design: CS1** | |
|---|---|
| **Submission purpose** | • Certification that the design work complies with Watercare requirements and is appropriate for the scope of work.<br>• Propose suitable construction monitoring requirements. Refer to section 8 |
| **When used** | • Accompanying the final design, before construction work may commence |
| **Acceptable Authors** | • Chartered Professional Engineers within appropriate practice area, or<br>• The non-accredited professional who has completed the design **and** provides a design review (CS2) from a suitable Chartered Professional Engineer. See Table 5.<br>• Registered Professional Surveyor with 5 years land development experience as limited in Table 2. |

**Table 5. Details of the design review compliance statement - CS2**

| **Design review: CS2** | |
|---|---|
| **Submission purpose** | To confirm that the design elements reviewed complies with Watercare's requirements and are appropriate for the scope of work. |
| **When used** | • To confirm compliance of the design that has been completed by a non-accredited design professional.<br>• On request by Watercare to confirm an opinion on a design submitted by another Chartered Professional Engineer or Registered Professional Surveyor.<br>• Accompanying the final design, before construction work commences. |
| **Acceptable Authors** | Chartered Professional Engineers within appropriate practice area. |

### 7.1.1 Measuring compliance with Watercare standards and codes of practice

The Author must be familiar with Watercare's requirements as set out in the Engineering Standards Framework.

In the event of non-compliance, such as a designer nominating an innovative design solution outside of Watercare's requirements, the non-compliance must be brought to Watercare's attention. Watercare reserves the right to accept or reject the non-compliance.

#### 7.1.2 Designer recommendations for construction monitoring

Watercare's construction standards list a number of minimum quality checks that must be completed. The Author will make a recommendation to Watercare on the level of construction monitoring that is required during the construction works to ensure that the quality controls and design defined construction checks are followed. Construction monitoring is based on two models. Refer to section 8.

### 7.2 Construction statements CS3 and CS4

The CS3 and CS4 statements as described below must be submitted with supporting evidence to demonstrate compliance. Refer to section 9 for a breakdown of the supporting evidence that must be submitted with the statements.

Compliance must be demonstrated throughout the construction works and planned as part of the works quality assurance planning. Watercare may complete inspections as deemed necessary and request demonstration of the quality plan being followed.

**Table 6. Details of the construction works compliance statement - CS3**

| **Construction works: CS3** | |
|---|---|
| **Submission purpose** | To certify that the construction works comply with Watercare's standards and any additional requirements that may be specific to the design output |
| **When used** | • Required for all construction works<br>• May be used as a standalone certification where no design work is required<br>• Completed as construction works progress. Must be completed before components that require commissioning are livened.<br>• Where the construction of a connecting manhole and stub is required ahead of the subdivision works. In this case the CS3 is provided immediately following the manhole construction. |
| **Acceptable Authors** | An accredited contractor |

**Table 7. Details of the construction monitoring compliance statement - CS4**

| **Construction monitoring: CS4** | |
|---|---|
| **Submission purpose** | • Certification that the monitored works have been completed in accordance with the design and Watercare's requirements.<br>• Confirm that the construction monitoring activities were completed as specified. Refer to section 8. |
| **When used** | All works that required engineering design input must be monitored during the construction works at the frequency determined at the design phase. |
| **Acceptable Authors** | • Chartered Professional Engineers with appropriate practice area<br>• Registered Professional Surveyor with 5 years land development experience as limited in Table 2. |

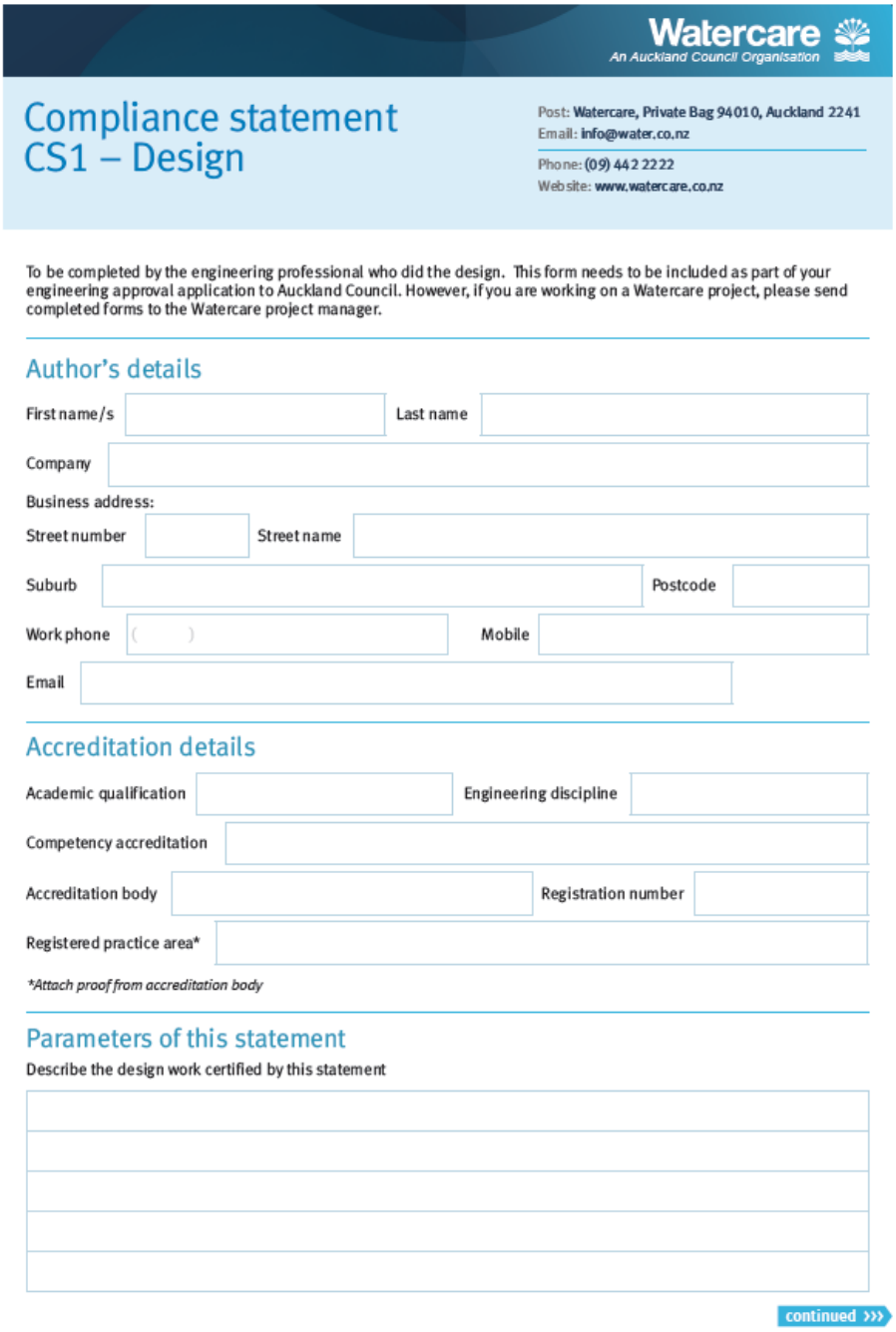
#### 7.2.1 Measuring compliance with Watercare standards and codes of practice

Construction compliance is measured by collecting and submitting evidence of checks and testing as the construction works progress. Watercare's construction standards list a number of minimum checks that must be completed for specific work components. The designer may add to these minimum requirements based on the specific design.

### 7.3 Information provided on the forms

The four forms are structured to follow a similar layout. There are minor differences between the design and construction categories relating to supporting documentation.

Figures 1, 2 and 3 outline the information provided in the section of a typical compliance statement.



Watercare
An Auckland Council Organisation

Compliance statement
CS1 – Design

Post: Watercare, Private Bag 94010, Auckland 2241
Email: info@water.co.nz
Phone: (09) 442 2222
Website: www.watercare.co.nz

To be completed by the engineering professional who did the design. This form needs to be included as part of your engineering approval application to Auckland Council. However, if you are working on a Watercare project, please send completed forms to the Watercare project manager.

Author's details

First name/s | Last name
Company
Business address:
Street number | Street name
Suburb | Postcode
Work phone | Mobile
Email

Accreditation details

Academic qualification | Engineering discipline
Competency accreditation
Accreditation body | Registration number
Registered practice area*

*Attach proof from accreditation body

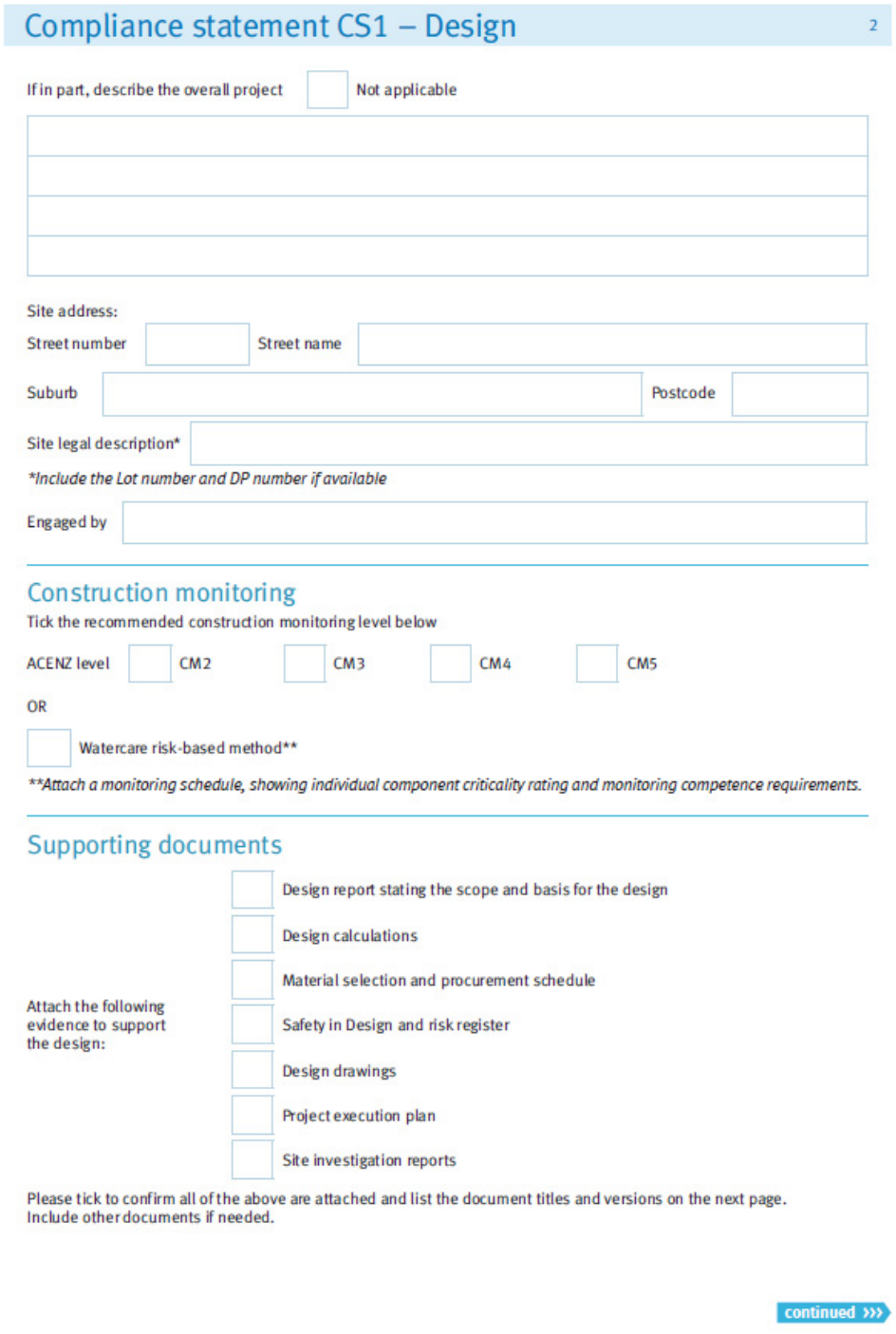
Parameters of this statement

Describe the design work certified by this statement

continued >>>



*Figure 1, typical page 1 of a compliance statement*



## Compliance statement CS1 – Design

2

If in part, describe the overall project ☐ Not applicable

Site address:

Street number ☐ Street name ☐

Suburb ☐ Postcode ☐

Site legal description* ☐

**Include the Lot number and DP number if available*

Engaged by ☐

### Construction monitoring

Tick the recommended construction monitoring level below

ACENZ level ☐ CM2 ☐ CM3 ☐ CM4 ☐ CM5

OR

☐ Watercare risk-based method**

***Attach a monitoring schedule, showing individual component criticality rating and monitoring competence requirements.*

### Supporting documents

Attach the following evidence to support the design:

- ☐ Design report stating the scope and basis for the design
- ☐ Design calculations
- ☐ Material selection and procurement schedule
- ☐ Safety in Design and risk register
- ☐ Design drawings
- ☐ Project execution plan
- ☐ Site investigation reports

Please tick to confirm all of the above are attached and list the document titles and versions on the next page. Include other documents if needed.

continued >>>

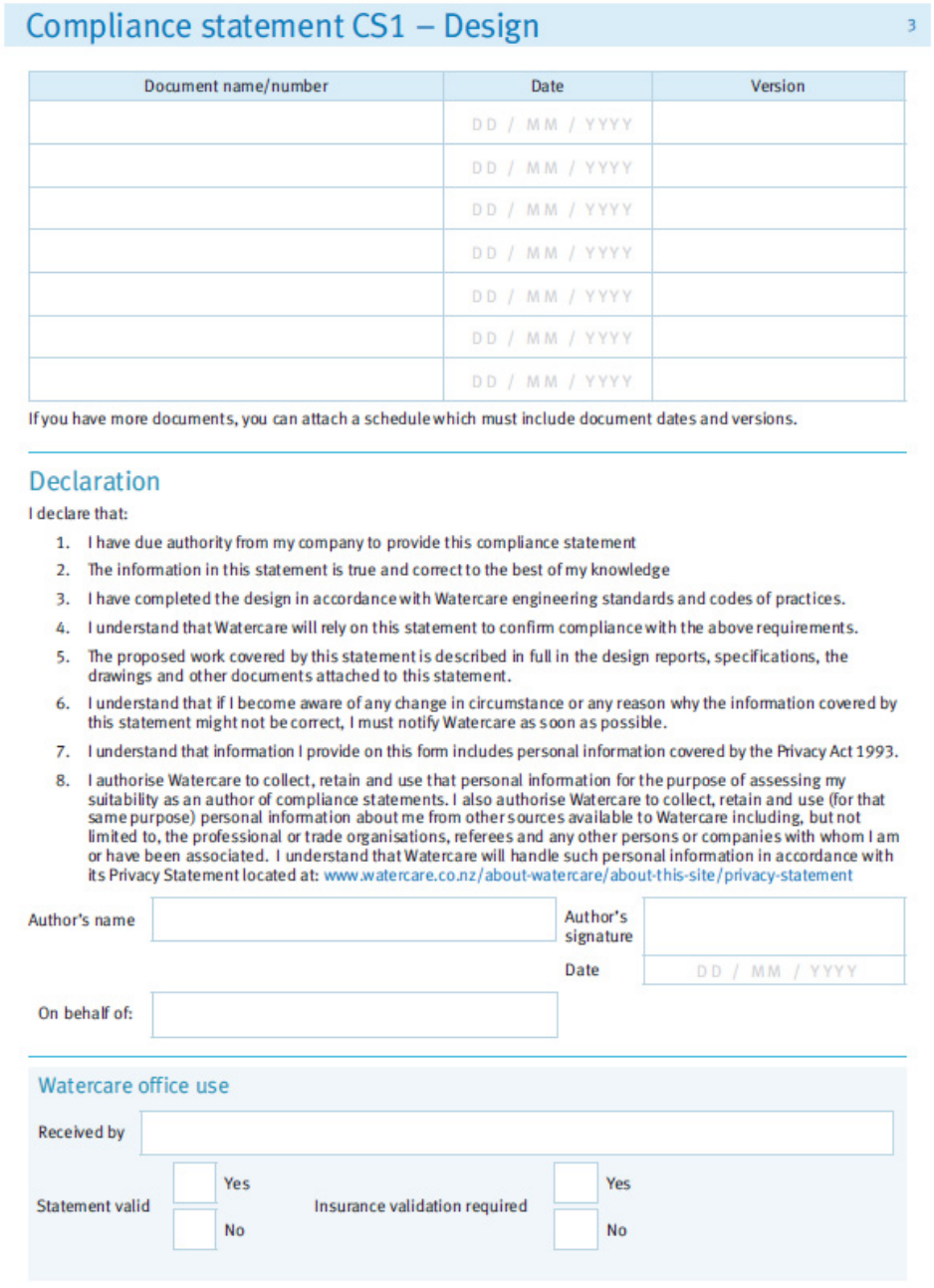
The description of the work should correlate with the competency of the author

Some works relate to a legal description such as a lot number. Watercare also needs to know who commissioned the work

The construction monitoring must be agreed with Watercare. If nothing is specified, ACENZ CM2 is the default minimum.

The listed supporting documents are the minimum. The list aids as a reminder of the supporting documents that are required.

*Figure 2, typical page 2 of a compliance statement*



## Compliance statement CS1 – Design

3

| Document name/number | Date | Version |
|---|---|---|
| | DD / MM / YYYY | |
| | DD / MM / YYYY | |
| | DD / MM / YYYY | |
| | DD / MM / YYYY | |
| | DD / MM / YYYY | |
| | DD / MM / YYYY | |
| | DD / MM / YYYY | |

If you have more documents, you can attach a schedule which must include document dates and versions.

### Declaration

I declare that:

1. I have due authority from my company to provide this compliance statement
2. The information in this statement is true and correct to the best of my knowledge
3. I have completed the design in accordance with Watercare engineering standards and codes of practices.
4. I understand that Watercare will rely on this statement to confirm compliance with the above requirements.
5. The proposed work covered by this statement is described in full in the design reports, specifications, the drawings and other documents attached to this statement.
6. I understand that if I become aware of any change in circumstance or any reason why the information covered by this statement might not be correct, I must notify Watercare as soon as possible.
7. I understand that information I provide on this form includes personal information covered by the Privacy Act 1993.
8. I authorise Watercare to collect, retain and use that personal information for the purpose of assessing my suitability as an author of compliance statements. I also authorise Watercare to collect, retain and use (for that same purpose) personal information about me from other sources available to Watercare including, but not limited to, the professional or trade organisations, referees and any other persons or companies with whom I am or have been associated. I understand that Watercare will handle such personal information in accordance with its Privacy Statement located at: www.watercare.co.nz/about-watercare/about-this-site/privacy-statement

Author's name | Author's signature | Date DD / MM / YYYY

On behalf of:

### Watercare office use

Received by

Statement valid ☐ Yes ☐ No

Insurance validation required ☐ Yes ☐ No

Sometimes the documents are provided in separate volumes or more than there is space available to list - reference a traceable cover sheet instead.

With the declaration, the author accepts responsibility and allows Watercare to access information about the author to authenticate the submitted information

This section is completed by Watercare. The validity is based on the criteria stated in this policy

*Figure 3, typical page 3 of a compliance statement*

# 8 Construction monitoring methods

The level of monitoring must be recommended to Watercare based on the factors of project size, complexity, infrastructure importance and experience of the nominated contractor. Watercare uses two construction monitoring methods:

- ACENZ/IPENZ Construction monitoring services guidelines
- Watercare risk-based construction monitoring framework

Both methods require that the professional monitoring the works have appropriate competence. The difference between the two approaches is that under the Watercare framework, large or complex projects are tailored in order to be more cost effective.

## 8.1 ACENZ/IPENZ monitoring method

This method is generally used for simple construction monitoring levels or projects with a single level of complexity. This typically includes linear assets associated with sub-developments. The minimum level of construction monitoring for any work under this method shall be CM2.

Construction monitoring levels are based on the levels of monitoring service described by ACENZ/IPENZ.

- ACENZ monitoring guidelines: https://www.ipenz.nz/home/professional-standards/practice-notes-and-guidelines

## 8.2 Watercare risk-based monitoring framework

For development works the risk-based monitoring framework method is only considered for pump station works where there is a variety of disciplines.

This method divides the construction activities into the specific actions or components and is evaluated according to a risk matrix.

- See Watercare risk-based construction monitoring framework on our website.

# 9 Supporting evidence

This section describes the evidence that must be submitted with the compliance statements. The evidence forms part of the as-built requirements for the constructed assets.

## 9.1 Design and design review evidence (submitted with CS1 and CS2 forms)

- Design reports include but are not limited to:
    - Design statement of the intent of the project
    - Design calculations and tabulated results
    - Material selection and procurement schedule (available from Watercare material supply standard) of specific requirements as per the design that may be additional to Watercare's minimum material standard
    - Identification of exceptions or innovations that are outside Watercare's normal requirements
    - Identification of special construction techniques that must be used during construction and any specific commissioning considerations
    - Functional description (i.e. for pump stations)
    - Safety in Design philosophy and risk register
- Project execution plan. This plan demonstrates a proposed sequencing of the works and construction methodology assumptions that were used as part of any design considerations.
- Site investigation reports such as soil contamination reports or geotechnical interpretive reports.

- Design drawings: Where the design incorporates a large number of design drawings, the Author must provide a schedule listing the drawings. The schedule must include reference to the drawing including a drawing number, revision number and description of the design elements.
- The recommended level of construction monitoring.

All documents and reports must be version controlled, dated and the Author identified.

## 9.2 Construction works evidence (submitted with CS3 forms)

Watercare construction standards are provided with minimum quality checks for the individual sections in the documents. A number of templates are included to facilitate tracking of these tests and must be returned completed as evidence of compliance. Some of these checks must be witnessed by an engineer.

During design, specific testing requirements may be added to the standard check requirements as determined by the designer.

The contractor prepares, as part of his construction and environmental plans, the project specific quality management plan and shall include the minimum testing criteria from Watercare's requirements as well as any additional tests that have been specified by the designer. The following evidence shall be documented throughout construction and provided as evidence attached to the compliance statements:

- Completed and certified quality control checklists demonstrating compliance with the quality assurance procedures for the work. These may generally include tested componentry such as pipe pressure testing or continued construction logs such as soil compaction tests.
- Test certificates of materials installed (such as reinforcing steel) and current certificates of conformity for type tests (e.g. ISO Type 5). These certificates must comply with the requirements listed in Watercare's material supply standards.
- Commissioning reports.
- The designer specified construction tests and audits.
- As built drawings.

All documents and reports must be version controlled, dated and the Author identified.

## 9.3 Construction monitoring evidence (submitted with CS4 forms)

For demonstrating compliance with the pre-determined construction monitoring level, the engineer's site observation records must be appended. These records must include:

- Site activity log reports that describe the monitoring concluded per inspection and any action or directives given.
- The monitoring schedule.

During the design, specific testing requirements may be added to the standard check requirements as determined by the design engineer.