



**Ministry of Business,
Innovation & Employment**

MBIE EAG Update

Canterbury Technical Forum

11 June 2013

Guidance on the use of Certificates of Work, Producer Statements, and Design Features Reports by Chartered Professional Engineers under the new Restricted Building Work regime



Purpose of Guidance

- Providing clarity around the proper use of CoWs, Producer Statements, and Design Features Reports
- Noting that while the guidance applies nationally, there are specific examples that relate to the Canterbury rebuild
- Supplements earlier RBW guidance, refer:
<http://www.dbh.govt.nz/UserFiles/File/Publications/Building/rbw/builditright-designers.pdf>



RBW Design Memorandum:





Example for TC1 foundation EQ repair in Canterbury

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and section 30C, Building Act 2004

Please fill in the form as fully and correctly as possible.
If there is insufficient room on the form for requested details, please continue on another sheet
and attach the additional sheet(s) to this form.

THE BUILDING	
Street address: 27 Rangers Way	
Suburb: Linwood	
Town/City: Christchurch	
	Postcode: 8062

THE OWNER	
Name(s): Rex Smith	
Mailing address: 32 Lighthouse Avenue	
Suburb: Island Bay	
Town/City: Wellington	
Phone number: 04 213 7777	PO Box/Private Bag:
	Postcode: 8023
	Email address: rex1@that.com

BASIS FOR PROVIDING THIS MEMORANDUM

I am providing this memorandum in my role as the: Please tick the option that applies (✓)

()	sole designer of all of the RBW design outlined in this memorandum – I carried out all of the RBW design myself – no other person will be providing any additional memoranda for the project
()	lead designer who carried out some of the RBW design myself but also supervised other designers – this memorandum covers their RBW design work as well as mine, and no other person will be providing any additional memoranda for the project
(✓)	lead designer for all but specific elements of RBW – this memorandum only covers the RBW design work that I carried out some of and the other designers will provide their own memoranda relating to their specific RBW design
()	specialist designer who carried out specific elements of RBW design work as outlined in this memorandum – other designers will be providing a memorandum covering the remaining RBW design work

IDENTIFICATION OF DESIGN WORK THAT IS RESTRICTED BUILDING WORK (RBW)

I, Patrick Firth, carried out / supervised the following design work that is restricted building work:

S1 – DESIGN
(on the reverse side)

Building Code Clause(s) B1, B2

DP _____ \$0 _____

WAFFLE SLAB DESIGN

_____ of the Building Code for

_____ of the proposed building work.

4BER 4012 (approved method / alternative action) _____ or

101 _____

_____ of the drawings titled WAFFLE SLAB _____

_____ of this statement.

_____ing conditions required, _____

_____ the drawings, specifications, and other _____

Int provisions of the Building Code _____ #

7/CPEN 173329 _____

Reg Arch _____

B.E. _____

_____ only insurance no less than \$200,000*.

JUNGATIONS LTD (company name)

ve. Liability under this statement accrues to _____

Internat and all other statements _____

cc, tort or otherwise (including negligence), _____

a application of a Building Consent.

May 2007

- Why the need for memorandum?
- How do they interface with producer statements/engineering signoff?
- How are the two processes best dealt with?

Restricted Building Work

- RBW applies to:
 - Houses and small to medium size apartments
 - Certain design work relating to the primary structure, external moisture management system, or fire-safety system
 - Work requiring a building consent



Restricted Building Work (2)

- RBW is carried out or supervised by a Licensed Building Practitioner
- On site monitoring of work by engineers is not RBW



RBW Design Memorandum:



- Design memorandum (CoW, Form 2A) must be supplied with a building consent application
- Form 2A should contain clear references to documents which the design is based upon (e.g., MBIE guidance, geotech reports)
- Producer statements and DFRs may be appended
- May include proposals for construction monitoring



Points to Note for Engineers Providing CoWs

- A CoW is not required for geotechnical investigations, as subsurface evaluations are not RBW
 - But a CoW is required for the foundation design (hence usually by structural engineer)
- For houses where minor structural details are drawn up by Architects/ Arch Designers and reviewed by the engineer, the CPEng can submit a CoW as having supervised the engineering elements of the design



RBW Design Memorandum: 'The Canterbury Context cont'



PRIMARY STRUCTURE: B1			
Design work that is restricted building work	Description	Carried out/ supervised	Reference to plans and specifications
Tick (✓) if included Cross (X) if excluded	[If appropriate, provide details of the restricted building work]	[Specify whether you carried out this design work or supervised someone else carrying out this design work]	[If appropriate, specify references]
PRIMARY STRUCTURE			
All RBW Design work relating to B1 (✓)	Particulars detailed below	(✓) Carried out (✓) Supervised	
Foundations and subfloor framing (✓)	New timber pile and sub-floor and reconnection to existing super-structure	(✓) Carried out (✓) Supervised	REFER TO: <ul style="list-style-type: none"> • Project specification and foundation plan on sheets numbered A01-A09. • Design in accordance with MBIE's Dec 2012 section 15.4 (Type 1 surface structure concept) • Engineer's PS1-design and site verification/ Inspection schedule appended to this form • Geotechnical report ref-C1345 dated 08.08.12.
Walls (✓)	Repairs to EQ damaged wall framing	() Carried out (✓) Supervised	<ul style="list-style-type: none"> • Project specification and sheets numbered A09 & A12 In accordance with sec 7.0 of MBIE's Dec 2012 guidance.
Roof ()		() Carried out () Supervised	
Columns and beams ()		() Carried out () Supervised	
Bracing (✓)	Reinstating sheet bracing capacity where EQ damaged	() Carried out (✓) Supervised	<ul style="list-style-type: none"> • Bracing plan sheet A14 • Bracing calculations and design in accordance with sec 7.0 of MBIE's Dec 2012 guidance.
Other ()		() Carried out () Supervised	

Important: references to design documents should be clear and appropriate...



RBW Design Memorandum:

'The **Canterbury** Context' cont.



REFER TO:

- Project specification and foundation plan on sheets numbered A01-A09.
- Design in accordance with MBIE's Dec 2012 section 15.4 (Type 1 surface structure concept)
- Engineer's PS1-design and site verification/ inspection schedule appended to this form
- Geotechnical report ref- C1345 dated 08.08.12.

- Project specification and sheets numbered A09 & A12 in accordance with sec 7.0 of MBIE's Dec 2012 guidance.

- Bracing plan sheet A14
- Bracing calculations and design in accordance with sec 7.0 of MBIE's Dec 2012 guidance.

Producer Statements

*ref: **Codewords 24** - December 2007*

- ... can give BCA “**reasonable grounds**” to be satisfied that the specified building work complies with the NZBC.
- ...have **no specific status** under the Building Act 2004.
- Anyone accepting these statements needs to be confident of their **reliability**. Their consideration by BCAs is **discretionary**.



<http://www.dbh.govt.nz/codewords-24-18>



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Content of Producer Statements

- Identification of the person (and organisation) issuing the statement, and their professional credentials
- Date of issue
- Location of building work
- Clauses of the Building Code that the Producer Statement covers
- Means of compliance (e.g. Compliance Document, MBIE Guidance, and/or specific engineered design)
- References to relevant plans and specifications



How do CoWs and Producer Statements Interface?

- CoWs are a legal requirement and in a prescribed format
- It is good practice to 'call-up' relevant Producer Statements and append them to the CoW, and specifically reference other relevant reports
 - e.g. Geotechnical reports and/or Design Features Reports



Supporting Documentation - TC1

Building Work	Scope of Engineering Input	CoW (Form 2A) by	Producer Statement (PS1)	Engineer's Sign-off Wording in Producer Statements and Shallow Geotech Investigation Reports
Repairs	No specific engineering input	LBP - Designer	N/A	N/A
	Specific engineering input	LBP-CPEng	Yes	<i>Normal wording for an Alternative Solution, making specific reference to the MBIE Guidance</i>
Rebuilds	No specific eng. input (as per NZS3604)	LBP - Designer	N/A	N/A
	Specific engineering input (can be in the form of sketches incorporated within design documentation)	LBP-CPEng	Yes	<i>Wording that either points to Verification Methods or Acceptable Solutions, or other documents if it is an Alternative Solution</i>



Supporting Documentation – TC2

Building Work	Scope of Engineering Input	CoW (Form 2A) by	Producer Statement (PS1)	Engineer's Sign-off Wording in Producer Statements and Shallow Geotech Investigation Reports
Repairs	No specific engineering input (i.e. minor/clear cut repairs from Tables 2.2 and 2.3 and appendices in the MBIE guidance)	LBP – CPEng and/or Designer	Optional*	CPEng signing Shallow Geotech Investigation Report confirming the technician's work and that TC2 foundation repair option is appropriate
	Specific engineering input	LBP – CPEng	Yes	<i>Normal wording for an Alternative Solution, making specific reference to the MBIE Guidance (relevant pages)</i>
Rebuilds	Straightforward/ non-specific design - CPEng oversight of at least the selection of TC2 foundation type	LBP – CPEng and/or Designer	Optional*	CPEng signing Shallow Geotech Investigation Report confirming the technician's work and that TC2 foundations are appropriate
	Specific engineering design following MBIE Guidance	LBP – CPEng	Yes	<i>Normal wording for an Alternative Solution, making specific reference to the MBIE Guidance (relevant pages)</i>
	Specific engineering design outside scope of MBIE Guidance	LBP – CPEng	Yes	<i>Wording that either points to Verification Methods or Acceptable Solutions, or other documents if it is an Alternative Solution. <u>Need to highlight where the departure from the MBIE Guidance occurs</u></i>

Supporting Documentation – TC3

Building Work	Scope of Engineering Input	CoW (Form 2A) by	Producer Statement (PS1)	Engineer's Sign-off Wording in Producer Statements and Shallow Geotech Investigation Reports
Repairs	Case 1 – local repairs	LBP - CPEng	Yes	<i>Normal wording for an Alternative Solution, making specific reference to the MBIE Guidance</i>
	Case 2 – re-level	LBP - CPEng	Yes	
Rebuilds	Surface Structures Type 1 or 2	LBP – CPEng	Yes	<i>Normal wording for an Alternative Solution, making specific reference to the MBIE Guidance</i>
	Ground improvement	LBP - CPEng	Yes	
	Specific engineering design using MBIE Guidance (e.g. Deep piles or S/S Type 3)	LBP – CPEng	Yes	



Design Features Report

- Purpose
 - A concise overview of the structure and its design
 - to facilitate the consenting process
 - for future owners and engineers working on the property
- SESOC template
- Recap on the basic elements
 1. Description
 2. Geotechnical investigation and results
 3. Structural design
 4. Recommended Construction Monitoring



Design Features Report

1. Description

- No. of storeys; area; roof and cladding weights; floor construction; foundation system and structural system
- Basis of design and compliance – the Verification Methods, Acceptable Solutions and Guidance followed (including any areas of departure from Guidance)
- Ground floor level (incl. flood risk requirements, where applicable)
- Technical Category (designated and confirmed)



Design Features Report

2. Geotechnical Investigation and Results

- Investigation methods, and other data drawn upon
- Soil profile, including basic foundation bearing capacities, groundwater levels and subsoil class
- Global Lateral Movement and/ or Stretch at SLS and ULS
- Vertical Land Settlement at SLS and ULS

3. Structural Design

- Key loadings: seismic, wind, snow, floor loadings
- Lateral resistance
- Other design assumptions

4. Recommended Construction Monitoring

- Critical elements and stages to be inspected during construction





Information Sheet for Homeowners

- IPENZ/ ACENZ information sheet for engineers to give to homeowners
 - Managing homeowner expectations
 - To communicate to homeowners the scope and limitations of engineering involvement and output
 - To highlight the range of future possible performance outcomes
 - To accompany engineering reports and consent documentation