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This guide was prepared by the Department of Building and Housing (the Department) as guidance information in accordance with section 175 of the Building Act 2004. It is not a substitute for professional or legal advice, and should not be relied on as establishing compliance with the New Zealand Building Code. It is not an Acceptable Solution under the Building Act, and may be updated from time to time.


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Cover illustration by Geoff Walker Architecture Ltd, Blenheim.
About this guide

AIM OF THE GUIDE
Getting the planning, design and documentation right is the first step in ensuring a building is built right, first time. To build well and achieve a good outcome, all parts of the building process need to work – from the initial design and consent approval process, through to construction, inspection, final sign-off and ongoing maintenance of the finished building.

The building consent is the foundation document for any significant building project. The building consent allows the owner, or owner’s agent, to carry out building work in accordance with the plans and specifications approved by the building consent authority. The building consent also provides formal recognition that the plans and specifications meet the requirements of the New Zealand Building Code. Building work carried out in accordance with the approved plans and specifications will meet minimum performance standards. You and your designer may, of course, aim for higher standards.

The basic requirements for a building consent and for meeting the performance standards under the Building Code are generally the same around New Zealand. However, different building consent authorities may process applications differently.

Uncertainty for owners and their contractors can be frustrating, inefficient and costly. This guide therefore aims to bring more consistency and standardisation to the sector, and set minimum expectations for owners and building consent authorities on the form, content and quality of building consent documentation.

This guide covers building consent applications for residential buildings, such as new dwellings. However, the principles can be applied to all building consent applications, including those for commercial projects.

WHO SHOULD READ THIS GUIDE?
If you are a building practitioner (designer, builder, developer, engineer, architect) and you are planning a building consent application for a residential building, such as a new dwelling, or completing an application on behalf of the owner, this guide is for you.

This guide will help consent applicants prepare plans, specifications and documentation for a building consent application by explaining the minimum information requirements.

The information in this guide may also be useful to people in the construction sector (eg, product manufacturers, suppliers, retailers and subcontractors) and providers of specialist technical services (eg, building consultants, building surveyors, and property managers).

It is also expected that the information provided will prove beneficial to building consent authorities by providing them with a guide for an acceptable minimum standard of consent application documentation.

Because readers are expected to have a reasonable level of knowledge of the Building Code, construction processes and building control systems, this guide is not intended for homeowner (DIY) consent applicants.
Introduction

Section 45 of the Building Act 2004 (the Building Act) sets out in broad terms how to apply for a building consent, but does not detail all the information needed to support an application.

This guide recommends the appropriate form and minimum content (including its quality) for a building consent application. This includes the drawings, specifications and other documents (eg, engineering calculations and design reports). The guide discusses associated issues, such as the role of manufacturers’ technical data, alternative design, engineering and design calculations, product appraisals, and other technical statements, warranties or opinions.

Some building consent authorities have specific requirements for building consent documentation, including:

- the specific size, form and scale of drawings and their elements
- requirements for certain line types or thicknesses, and/or fonts.

Often these requirements arise from the building consent authority’s process for storing and retrieving building consent information (eg, digital storage).

Although these requirements are not related to the Building Code or Building Act, it is useful to ask the BCA about any specific requirements they have before lodging a building consent application.

This guide focuses on information a building consent authority needs to assess compliance with the Building Code. However, information on tendering, contractual issues, project management and construction processes, and on those parts of a building project not relating directly to Building Code compliance, can be included as well. Having a single set of documents suitable both for consent and for construction allows everyone to work off a ‘buildable design’ set of documentation.

The documentation even for a simple new building project passes through many hands, including designers, builders, plumbers, drainlayers, homeowners or developers and, within the building consent authority, their administration, consent processing, inspection, engineering and town planning staff.

Good planning and proper preparation of consent documentation provides a solid foundation for everyone involved in the building process to make well-informed, efficient and cost-effective decisions. A complete and accurate consent application should help speed up consent processing and approval time. It should also provide an accurate historical record that can be used later when further building work, alteration, repair or maintenance is needed, or the property is sold to a new owner.

Complete, accurate and good quality consent documentation helps everyone involved in a building project play their part in ensuring the work is carried out and built right, first time. This can help avoid costly time delays and rework.

It is important to understand that building consent authorities verify compliance with the Building Code. They do not design or correct insufficient consent documentation. They do not ensure quality and aesthetic requirements are met, unless compliance with the Building Code is affected.
1.0 The building consent process

A building project starts during the planning and design stage, not on site after a building consent has been issued and construction begins. It ends when the building work is completed and the building consent authority issues a code compliance certificate (CCC).

1.1 PRE-LODGEMENT OF BUILDING CONSENT APPLICATION

Early consultation with the building consent authority helps reduce misunderstandings at the time of consent application and processing, and helps ensure the application is as complete as possible prior to lodgement. Specific documentation requirements of the building consent authority can be taken into account at the planning stage.

Compliance with other requirements (e.g., council bylaws or district planning rules) may be critical to the design of the project, even though not part of the building consent process. Therefore, you should consider these requirements early in your project management and preliminary design work.

The project information memorandum (PIM) is a very useful tool for this, particularly if obtained early in the design phase of a significant project such as a new residential dwelling, as it can help you identify other compliance requirements, and so avoid costly delays during the consent process.

1.2 PROJECT INFORMATION MEMORANDUM (PIM)

An owner, or their agent on their behalf, may apply for a PIM if they are considering carrying out building work.

A territorial authority (your local city or district council) issues a PIM.

A PIM provides information about the land on which you plan to carry out building work and any other land likely to affect or be affected by the building work. This information might include special features such as natural hazards (e.g., erosion, subsidence, falling debris, inundation or slippage), corrosion issues, high wind zones, or the likely presence of hazardous contaminants.

A PIM also provides information about legislative or regulatory requirements, including other authorisations that could be relevant to the proposed building work such as a resource consent required under the Resource Management Act 1991, or whether the territorial authority needs to notify the New Zealand Historic Places Trust. It is important to know about and plan for these as early as possible in the design process.

Understanding potential site issues and designing to accommodate them can also help speed up the building consent process. The building consent review process is then likely to face fewer requirements for further information, and so can be processed more quickly and cost effectively.

As at 31 January 2010, you can choose whether or not to apply for a PIM when considering carrying out building work that requires a building consent.

For significant projects, such as a new residential dwelling, it is highly recommended to obtain a PIM early on in the design phase and well in advance of applying for a building consent.
PIM content

Section 35 of the Building Act provides for the content of a PIM, which will include information about:

- any heritage status of the building
- whether the territorial authority considers that notification to the New Zealand Historic Places Trust is likely to be required
- any special feature of the land
- relevant information that another statutory authority has notified to the territorial authority in terms of any other Act
- details of stormwater or wastewater utility systems/services that relate to the proposed building work
- details of any authorisations required by the territorial authority or on behalf of a network utility operator, including any conditions
- whether the territorial authority considers a fire evacuation scheme is required
- whether section 75 of the Building Act applies (construction of a building on two or more allotments).

PIM application

The territorial authority provides the application form (you should be able to download one from your local council’s website). Information required includes applicant details, the location of the building project, and a description of the building project outlining:

- any change of building use
- the intended life of the building
- previous consents
- the estimated value of building work
- matters involved in the proposed project, for example:
  - subdivision
  - land contour alteration
  - new/ altered public utility connections
  - changes to building locations or dimensions
  - changes to vehicle access
  - work over or adjacent to roads or public places
  - disposal of stormwater or wastewater
  - building work over drains or sewers, or near wells or water mains
  - any other matters that may require territorial authority authorisation.

Your PIM application should include enough information to help the territorial authority determine if there are any associated planning issues under the Resource Management Act. For example, you should include information such as land contours and drawings showing the sunlight access plane height in relation to boundary lines.

You should include preliminary design plans with the PIM application, but do not need to include the comprehensive, technically detailed drawings and specifications required for building consent applications. Normally, a good site plan, floor plan and elevation drawings are sufficient. You must pay the fees set by the territorial authority when you apply for the PIM.

The territorial authority must issue the PIM within 20 working days of receiving your application. However, they can suspend this period if they require further information from you about any authorisations or requirements (eg, intended use, location and dimensions, vehicle access and roading, stormwater and wastewater disposal, proximity to drains, or proposed connections to public utilities).

For more information on PIMs, visit www.dbh.govt.nz/project-information-memoranda
1.3 LODGING A BUILDING CONSENT APPLICATION

When applying for a building consent, you will need to complete an application form. The building consent authority will provide you with one. You might also be able to download one from their website. Your building consent application must:

- be in the prescribed form
- include plans and specifications
- include any other information the building consent authority reasonably requires
- include the applicable building consent lodgement fee.

Information required on the application form includes a brief description of how your project will comply with the Building Code. Including a design summary will help explain your choice of a particular means of compliance. See section 3.0 of this document for more information.

You can find much of the property information you need from a rates demand, lease agreement, the certificate of title held by Land Information New Zealand, or from local council property archives. Charges may apply if you seek information from local council records separately or in your PIM application.

The description of the proposed work should be clear and precise. For example:

- ‘Addition of lounge, kitchen alterations and new conservatory’ rather than ‘Additions and alterations’
- ‘New 100 m² dwelling with two-car garaging, associated earthworks, retaining walls and swimming pool’, rather than ‘New dwelling.’

Rules covering restricted building work are expected to start in March 2012.

A building consent application for restricted building work will need to include the names of the licensed building practitioners carrying out or supervising that work. See section 45(1)(e) of the Building Act and 7.6 of this document. Also refer to www.dbh.govt.nz/lbp

As part of good practice, applicants are encouraged to start providing details of practitioners involved in the project now.

1.4 PROCESSING A BUILDING CONSENT APPLICATION

The building consent authority checks that the documents you submit show the building work would comply with the Building Code, if properly completed in accordance with the plans and specifications included. See section 49(1) of the Building Act.

You will help the assessment process greatly if you ensure your building consent documentation:

- includes a clear summary or report, such as a design summary (see section 3.0) explaining how compliance with each relevant clause of the Building Code will be achieved, including any waiver or modification sought
- differentiates between items relating to Building Code requirements and those relating to contractual matters (eg, conditions of contract, tender documents, dispute resolution)
- includes a schedule or schedules of the materials, products and systems (and their maintenance requirements) to be used in constructing the building
- provides the details (including licence numbers) of which practitioners have been engaged to carry out building work.
1.6 GRANT OR REFUSAL OF BUILDING CONSENT

Once the building consent authority is satisfied that Building Code compliance is verified, and you have paid all associated fees and levies, the building consent authority must grant the building consent. The building consent authority may refuse or decline to approve your application if the consent documentation does not adequately demonstrate compliance with the Building Code. The building consent authority has 20 working days in which to refuse or approve a building consent application.

1.7 ISSUING A BUILDING CONSENT

The building consent is issued in the prescribed form and may have the following attachments:

- a PIM (if applied for)
- a development contribution notice issued by a territorial authority under section 36 of the Building Act (if any)
- a certificate providing information on resource consent requirements (if any).

1.8 AMENDMENTS TO BUILDING CONSENTS

If you wish to formally amend an approved building consent, which must be done when considering significant changes to the work previously approved, your application must be made in the prescribed form provided by your building consent authority, and should include details of what was originally approved, and how it will change. Your application must also demonstrate that the new proposal complies with the Building Code and will not affect the Building Code compliance of other work.

All amendments to a building project that relate to the Building Code must be notified to the building consent authority so they can approve and record them. Your application for amendments must be made and approved before the change takes place.

Note: Building consent authorities have 20 working days in which to refuse or approve formal amendments to building consents.
Minor variations to building consents

A minor variation is a minor modification, addition or change to consented building work that does not deviate significantly from the approved plans and specifications to which the building consent relates.

Section 45A of the Building Act enables a building consent authority to grant a minor variation prior to or during construction without having to go through the formal process of issuing an amendment to the building consent. However, the building consent authority must record the granting of the minor variation in writing.

Minor variations only apply to issued building consents, where the code compliance certificate (CCC) has not been issued. In addition, minor variations must neither adversely affect compliance with the Building Code nor the granting of a CCC.

Note: To avoid doubt, a minor variation does not include any building work in respect of which compliance with the Building Code is not required by the Building Act. For example, changing water taps from chrome to gold plated is not considered a minor variation as the tap finish does not need to comply with the Building Code. These types of changes can just happen during construction as of right. See section 9.0 Glossary of terms for more information.

If the building consent authority does not record or approve the changes, they could issue a notice to fix for the amendment, and may also refuse to issue the CCC upon completion of the work because they cannot establish compliance with the building consent.

Defining a change on site during construction as a minor variation is at the building consent authority’s discretion. Building consent authorities determine what are minor variations and what are formal amendments to the consent. Practitioners are encouraged to engage early and have a conversation with building consent authority staff as soon as possible to clarify these issues as they arise.

1.9 INSPECTION OF CONSENTED BUILDING WORK

The approved building consent will inform you of any inspections the building consent authority needs to undertake during construction, based on their evaluation of the plans, specifications and other information. These may include inspections by your nominated engineer. Inspections allow the building consent authority to be satisfied on reasonable grounds that the building work complies with the building consent and Building Code. Building consent authorities do not verify the quality of the building work beyond checking it complies with the Building Code. Issues such as aesthetics and quality of workmanship fall outside the building consent authority’s jurisdiction.

Building consent authority inspection requirements will vary with the size and complexity of each project.
Common inspections by building consent authorities for residential dwellings can include:

- pre-pour (before concrete is poured, for example, for piles, footings, slabs, in situ walls or blockwork infill)
- tanking/waterproofing (before back-filling retaining walls, covering membranes on decks or laying tiles in wet areas such as showers)
- pre-clad (before wrapping the building in building paper or building wrap and installing the cladding)
- post-clad (before applying coatings to fibre cement or polystyrene systems, possibly including inspections during plastering)
- pre-line (with insulation installed but before installing internal linings. This inspection may include checking the plumbing installation under pressure test)
- drainage (before filling in trenches and covering the in-ground pipework). Pipework should be under test for this inspection. Drainage testing can include smoke, air or water testing
- final inspection for plumbing, building and drainage work (once the work described in the building consent is complete).

Make sure you understand what inspections are needed and when. Talk with the building consent authority to discuss the sequence of inspections. Missed inspections may prevent the building consent authority from being able to establish compliance with the building consent, and therefore prevent them from issuing the CCC. This can have significant consequences for the owner and contractors.

You must request inspections once the building work specified in an inspection list is ready.

Provide information about the type of inspection required, a contact name, phone number, building consent number, and a clear project address. If the property is isolated or hard to find, give directions.

When booking an inspection, try to give the building consent authority as much notice as possible. Many building consent authorities can take inspection bookings for the next day.

When on site, a building inspector will need copies of the approved building consent documentation and other approvals and relevant information. Ensure the site is clean, tidy and safe, and that someone with adequate knowledge of the project is on site to answer any questions. This is usually the relevant contractor who is undertaking the building work.

Note: Building consent authorities may refuse to undertake an inspection if a copy of the approved building consent documentation is not on site during the inspection. These should always be on site anyway to be used as the ‘building plans’ by practitioners.
1.10 CODE COMPLIANCE CERTIFICATE (CCC)

An application for a CCC must be complete, precise and an accurate record of what was actually built on the site. A building consent authority will normally require:

- energy work certificates for any electrical or gas work carried out
- an as-built services plan (eg, plumbing and drainage)
- roof truss installation certificate and plan
- other installation certificates (eg, cladding, waterproofing, tanking)
- producer statements (eg, from a Chartered Professional Engineer for some specific design or construction elements).

The owner must apply for a CCC as soon as practicable after the building work described in the building consent, with any subsequent approved amendments, has been completed. See section 92 of the Building Act.

The building consent authority must issue a CCC when it is satisfied that the building work complies with the approved building consent. They have 20 working days from receipt of the application to do this.

Even if the owner has not applied for a CCC, the building consent authority must decide whether to issue a CCC within two years of granting building consent or any further period agreed between the owner and the building consent authority. If the building consent authority is not satisfied that compliance with the consented documents has been achieved, they must refuse to issue the CCC.

The BCA must provide the reason for the refusal to the owner in writing. However, we recommend that building consent authorities give applicants the opportunity to resolve any non-compliance issues first. The building consent authority’s refusal to issue a CCC does not prevent an applicant from applying for one at a later stage after addressing issues of non-compliance.

Sale by a residential property developer

Under section 364 of the Building Act, residential property developers (anyone building, or arranging to have built, a household unit for the purpose of selling it) must get a CCC before completing the sale, or allowing a purchaser to take possession of the household unit. An exception applies when the property developer and buyer sign Form 1 of the Building (Forms) Regulations 2004 (Agreement between residential property developer and purchaser).
2.0 Plans and specifications

2.1 INTRODUCTION
Plans and specifications show how you intend to construct, alter, demolish or remove a building.
Most building consent authorities provide guidance on any additional documentation they require with a building consent application (eg, check sheets).
The Building Act provides for ‘other documents’, along with plans and specifications. These include:
- design calculations (eg, for some specifically engineered design element)
- manufacturers’ data
- technical opinions or appraisals
- codes of practice.
See section 6.0 for more information.

2.2 BUILDING CONSENT INFORMATION
Information in the plans and specifications should be project-specific.
General phrases, such as ‘refer to manufacturer’s specification and/or requirements’ or ‘installed in accordance with best trade practice’ are insufficient. Manufacturers’ specifications can change, and views on ‘best trade practice’ vary between practitioners.

References to Standards and Compliance Documents should be specific. Some Standards are cited (in whole or in part) in the Acceptable Solutions, while other Standards offer advice only. Some Standards contain several options.
References to other industry guides, such as BRANZ publications, should also be specific.
References need to:
- uniquely identify documents with titles and dates
- be specific about the paragraphs/clauses/sections to be followed.

Note: The Government is looking to change the term ‘Compliance Documents’ as part of the Review of the Building Act 2004. The proposed new terms are ‘Acceptable Solutions’ and ‘Verification Methods’.

Compliance Documents and Acceptable Solutions
The Building Code is performance-based, and so requires a certain level of performance to be achieved in buildings.
Unlike prescriptive bylaws that existed before the Building Act 1991, the Building Code allows more than one way to achieve performance. The Acceptable Solutions in the Compliance Documents show you one way of complying with the Building Code. A building consent authority must accept plans that are based on a Compliance Document as demonstrating compliance with the clause(s) of the Building Code to which that Compliance Document relates.
Compliance Documents automatically comply with the Building Code. Designers can provide an alternative solution, as long as they demonstrate to the BCA that the proposal will comply with the Building Code.
For more information, visit www.dbh.govt.nz/blc-compliance-documents and read the following Department guidance on alternative solutions at: www.dbh.govt.nz/UserFiles/File/Publications/Building/Guidance-information/pdf/alternative-solutions.pdf
2.3 DRAWINGS
All drawings should contain a drawing number and title, the designer’s and owner’s name and the job address, and be dated for version control. Drawing conventions (line types and widths, lettering type and size, symbols for building features and elements, designation of spaces, representation of materials and cross-referencing conventions) should generally conform to AS/NZS 1100 Technical Drawing. Hand-drawn or CAD (computer-aided design) drawings are acceptable.

Drawing sizes vary, usually ranging from A0 to A4. The size of drawing sheets should be consistent within a single set of project drawings. Sometimes drawings or diagrams of components and construction details are provided in A4 and bound in with specification data (eg, a specific engineering construction detail).

2.4 DRAWING RANGE
The size and complexity of the project determines the detail needed, and extent of associated structural and building services-related documents. See section 6.0 for information on the form and content of drawings.

2.5 DIMENSIONS
AS/NZS 1100.301 sets out conventions for dimensions on drawings. Where a finished dimension is critical for compliance or construction, identify it clearly in the relevant drawing or specification. Timber size should be identified by its actual finished size.

2.6 SPECIFICATION STRUCTURE
A good project-specific specification has a logical structure and navigation. The default standard classification system for New Zealand is Coordinated Building Information (CBI), recognised by the four-digit numbers used to classify each work section (ie, chapter) of the specification. There should be ‘Preliminaries’ and ‘General’ sections, followed by a series of technical work sections. Each work section or chapter should be laid out in a consistent pattern (such as ‘General’, ‘Products’, ‘Execution’, ‘Selections’), and a consistent clause numbering system should be used.

2.7 SPECIFICATION CONTENT
Keep tender, contract and project management matters separate from technical matters, and from the proposed product and material selections. You can describe product and material selections in each work section, grouped together in a single schedule, or list them on the drawings. A mix of trade-based, material-based, process-based and element-based sections or chapters is acceptable.

Specifications must be project-specific and not include unrelated generic information. Generic specifications with irrelevant information will prove frustrating for building consent authorities and practitioners and can cause delays to consent processing.

Specifications have typically been based on proprietary model documents, or assembled by individual designers in a modified trade-based format. Specification sections have a long history of subdivision by trade (traditional and influenced by NZS 4202: 1995 Standard Method of Measurement of Building Works or work sections (CBI based)).
2.8 SPECIFICATIONS AND DRAWINGS

Your specification should complement the drawings, and not contain erroneous information or contradict itself or associated documents. Information on drawings need not be repeated in the specification and vice versa. Repeating information can lead to contradiction and confusion, but may be useful for key points.

You can decide how information is presented and where it is located, but building consent authorities are entitled to ask for reasonable information in relation to a building consent.

Consider whether information, for example project selections (e.g., sanitary fittings or door hardware), is best placed on the drawings alongside details of cabinetwork, kitchen or bathroom fixtures, or in the specifications.

You can also include drawings in a specification, such as standard details of a catch pit, or gully trap, a series of standard reinforcing details, or items for off-site fabrication.

Including the specification data on the drawings will help the BCA and contractors on minor projects.

Wherever you provide specifications and drawings in the documentation, they should be clear, correct and complete.

Electronic document lodging

Many designers produce, deliver, store and retrieve documents electronically. Some BCAs can also receive, process and store documents electronically. If you have suitable technology, you should ask the BCA if your application can be lodged electronically. This can reduce the cost and inconvenience of producing and exchanging hard copy information, and prevent problems with accessing and interpreting hard copy or scanned documents. Using electronic material only will also help reduce the impact on the environment by cutting down on the amount of paper being produced.
3.0 Design summary

During the design process for any building project, designers make decisions on how compliance with the Building Code will be achieved. A design summary is a tabulated list of how you propose to comply with each of the relevant Building Code clauses. Design summaries are extremely helpful in explaining to the building consent authority the particular choices that were made to achieve compliance and why. A design summary, while not mandatory, has several benefits and is becoming industry best practice.

A design summary can:

- help the designer (during the design phase) and the building consent authority (during the building consent processing phase) by providing a checklist on how compliance with the Building Code is achieved
- confirm which parts of the project are compliance-related (or only construction- or contract-related)
- provide references to location of design documentation and details
- provide a checklist during construction, clarifying which changes will require a variation, amendment or a new building consent

- provide a useful checklist for the building consent authority to consider Building Code compliance after the project is complete
- help reduce the consent processing time and avoid costly delays.

How extensive the plans, specifications and related information are depends on the complexity and size of the project, and how closely the design conforms with Acceptable Solutions or Verification Methods under the Building Code.

See section 4.0 for an example of a completed design summary.

### How much information is needed?

The purpose of building consent documentation is to demonstrate, to the satisfaction of the building consent authority, that all relevant performance requirements of the Building Code are met. In some cases, you will need to describe how Building Code compliance is achieved for individual building elements where the element must comply with a variety of Building Code clauses (eg, a boundary wall that is fire-rated, provides bracing, has sound-control properties and is located in a wet area).

3.1 COMPLIANCE WITH BUILDING CODE CLAUSES

Make sure all relevant clauses of the Building Code are correctly identified and considered during the design process. The clauses need to be identified on the building consent application form. If you use a design summary, which you are encouraged to do, you could reference the relevant clauses of the Building Code.

The relevant Building Code clauses for residential buildings are described below. However, always consult the Building Code to check that the relevant performance criteria have been met.

BUILDING CODE CLAUSES

B1 Structure – demonstrating how the building withstands likely loads, including wind, earthquake, live and dead loads (people and building contents).

B2 Durability – confirming the use of materials that will remain functional for the minimum periods specified (five, 15 or 50 years).

C1–C4 Fire Safety – addressing outbreak of fire, demonstrating means of escape and boundary separations.

D1 Access Routes – the safety of entry/exit to the building and the safety of any internal or external stairs and slip resistance.

E1 Surface Water – the method of disposal of, for example, rainwater from external surfaces, and confirmation that surface water cannot enter the building.

E2 External Moisture – confirming that the design and detailing of all external roof and wall claddings and external openings will prevent external moisture from causing undue dampness or damage.

E3 Internal Moisture – confirming that surfaces in wet areas are durable enough, easily cleaned and designed to resist moisture, and that ventilation and the space temperature are sufficient to avoid the excessive build-up of moisture.

F1 Hazardous Agents on Site – identifying and neutralising any hazardous agents or other contamination of the building site.

F2 Hazardous Building Materials – confirming the appropriate selection of glass and glazing methods to ensure the safety of building users. F2 also considers building materials that give off noxious fumes.

F3 Safety from Falling – confirming the safe design of all barriers (including handrails and balustrades) inside and outside the building (includes the design of swimming pool fences under the Fencing of Swimming Pools Act 1987).

F4 Construction and Demolition Hazards – confirming protection of people and other property during construction or demolition.

F5 Warning Systems – confirming provision of early warning systems to alert people to an emergency.

G1 Personal Hygiene – providing sufficient sanitary fixtures (toilets, showers and basins) for cleanliness.

G2 Laundering – providing sufficient laundry facilities.

G3 Food Preparation and Prevention of Contamination – providing sufficient safe and hygienic facilities for food storage and preparation.

G4 Ventilation – confirming required natural or forced ventilation to all occupied spaces.

G7 Natural Light – confirming that sufficient natural light is provided to occupied spaces and providing appropriate visual awareness for the occupants.

G9 Electricity – confirming the safe distribution and use of electricity.

G10 Piped Services – confirming the safe distribution of gas.

G11 Gas as an Energy Source – confirming the safe installation of gas-powered appliances.

G12 Water Supplies – confirming the safe supply (avoidance of scalding and backflow), storage, reticulation and, where needed, heating of potable water.
G13 Foul Water – confirming the safe and sanitary collection and disposal of foul water and the prevention of foul air from entering the building.

H1 Energy Efficiency – confirming the provision of a warm, dry interior environment through insulation and controlling air movement, and the efficient use of energy.

3.2 GENERAL COMPLIANCE ISSUES

Simply stating that a project complies with the Building Code or a particular Standard cited in an Acceptable Solution is insufficient. You need to show how the building work will comply. For example, for a residential building the performance requirements of Building Code Clauses B1 (Structure) and B2 (Durability) can be achieved by demonstrating compliance with NZS 3604: Timber Framed Buildings and NZS 3602: Timber and Wood Based Products for use in Building, referenced in the Acceptable Solutions B1/AS1 and B2/AS1. Because Standards provide several different options, you should always reference the relevant sections, clauses, figures and tables within the particular Standard that you are applying to make it clear which particular solution is being proposed. Referencing Building Code clauses and Standards only is insufficient.

The drawings and construction details must be specific to the project. You should clearly identify in the specification the particular materials and/or systems you intend to use. Do not include information on building products, methods or construction details not relevant to the particular design.

If an element of the design does not comply with a particular Acceptable Solution or Verification Method, you need to demonstrate how that particular element or part element complies with the Building Code using other means of compliance, such as an alternative solution. Your plans and specifications need to clearly demonstrate compliance.

Where a building product or system is not necessary to achieve compliance with the Building Code, you may be able to describe it generically, for example, built-in shelving, storage units or kitchen and bathroom joinery carcasses.

For more information on waivers and modifications see www.dbh.govt.nz/UserFiles/File/Publications/Building/BCA/BCA-Update-April-2010.pdf

Manufacturers should, as good practice, ensure their information is dated and includes relevant technical data. Some materials and products contain mixed technical and marketing/promotional information. (Refer to AS/NZS 1388 Guidelines for Technical Information for Building and Construction Products.)

The Acceptable Solutions and Verification Methods under the Building Code do not refer to specific branded products or systems. However, you can propose brand-specific products and systems to demonstrate compliance with the Building Code. Once the building consent has been issued, the building consent authority must approve any changes to the specific products or systems named in the application (where these affect Building Code compliance). The building consent authority may treat these changes as minor variations. See section 1.8.
## 4.0 Design summary check sheet

An example of a completed design summary follows. It is a useful guide to completing a consent application.

<table>
<thead>
<tr>
<th>DESIGN SUMMARY CHECK SHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BCA use</strong></td>
</tr>
</tbody>
</table>
| **Project information:**    | **Owner’s or agent’s name:** Joe Public  
 **Contact details:** Ph 021 969 496  
 **Designer’s name(s):** Cool Design Ltd, Greendale  
 **Contact details:** Ph 021 007 007  
 **Site address:** 71 Magellan Road, Greendale  
 **Site legal description:** Lot 10, DP 100902 |
| **Site data:**              | **Ground bearing** Good ground (refer NZS 3604, clause 3.1.3) and confirmed by subdivision geotechnical report ref # 010124.  
 **Exposure/corrosion zone** Zone 1 (5.5m from coast by GIS ie 12m outside sea spray zone)  
 **Wind zone** High, derived from NZS 3604, section 5.  
 **Earthquake zone** A (NZS 3604, Figure 5.4)  
 **Climate zone** 2 (NZS 4218:2004) |
| **Building data:**          | **Building category** IV/ Domestic (NZS 3604, table 1.1)  
 **Floor live loads** 1.5 kPa (NZS 3604, table 1.2)  
 **Overall height of building** 3850mm (NZS 3604) |
<table>
<thead>
<tr>
<th>BCA USE</th>
<th>KEY ASPECT/BUILDING COMPONENT</th>
<th>IDENTIFY NOMINATED MEANS OF COMPLIANCE</th>
<th>LOCATION OF DETAILS IN CONSENT APPLICATION</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation</td>
<td>Concrete slab as per NZS 3604:1999, Fig. 7.13 (B) and Fig. 7.16 (B)</td>
<td>Foundation plan (Sheet A03) Details 01, 01A, 02 on Sheet A09</td>
<td>Also refer to note 1 on Sheet A20 and notes 2, 3 Sheet A20</td>
<td></td>
</tr>
<tr>
<td>Wall framing</td>
<td>NZS 3604:1999, 90x45 MSG8 treated to H1.2, lintels to table 8.9, cast-in-bolt bottom plate fixings.</td>
<td></td>
<td>Notes 9, 12 Sheet A20</td>
<td></td>
</tr>
<tr>
<td>Roof framing</td>
<td>NZS 3604:1999, Table 10.2 and SED trusses</td>
<td>Roof plan (Sheet A06)</td>
<td>Trusses generally/lrafters to raked ceiling of lounge only</td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td>E2/AS1, Table 11</td>
<td>Roof plan (Sheet A06)</td>
<td>Longrun corrugated galvanised metal sheet (note 22, Sheet A20)</td>
<td></td>
</tr>
<tr>
<td>Cladding</td>
<td>E2/AS1, clause 9.5</td>
<td>Sheet A10-18, Risk matrix, Sheet A19</td>
<td>Fibre cement, weatherboard on a cavity – see notes 10, 10A on Sheet A20</td>
<td></td>
</tr>
<tr>
<td>Bracing</td>
<td>NZS 3604:1999</td>
<td>Bracing plan, Sheet A05, A08</td>
<td>See separate bracing calculation sheet</td>
<td></td>
</tr>
<tr>
<td>Insulation</td>
<td>Roof: H1/AS1, Table 2(a) Walls: H1/AS1, Table 2(a)</td>
<td>Sections A, B Sheet A09</td>
<td>Foundation: 200mm perimeter insulation of 40 thick poly = R value &gt; 1.3 (Schedule method)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Roof: R 3.2 (wool), see note 19, Sheet A20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Walls: R 2.2 (wool), Schedule method – see note 20, Sheet A20</td>
<td></td>
</tr>
<tr>
<td>Internal linings</td>
<td>E3/AS1, clause 3.1</td>
<td>Sheet A19</td>
<td>Walls: Plasterboard – see notes 9, 12 on Sheet A20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Floors: Vinyl to wet areas, carpet elsewhere</td>
<td></td>
</tr>
<tr>
<td>BCA USE</td>
<td>KEY ASPECT/BUILDING COMPONENT</td>
<td>IDENTIFY NOMINATED MEANS OF COMPLIANCE</td>
<td>LOCATION OF DETAILS IN CONSENT APPLICATION</td>
<td>COMMENTS</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------</td>
<td>----------------------------------------</td>
<td>--------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Bathrooms</td>
<td>G1/AS1, Table 1</td>
<td>See bathroom plan, Sheet A08</td>
<td>Bathroom and separate ensuite</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acrylic shower unit, waste water to gully</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>trap, ventilation via opening window</td>
<td></td>
</tr>
<tr>
<td>Plumbing</td>
<td>Electric mains HWC as per</td>
<td>Drainage layout A06, specification p.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NZS 4606</td>
<td></td>
<td>Foul water to council main, storm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Water supply as per AS/NZ 3500.2</td>
<td></td>
<td>water to kerb and channel, wc to</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>drain</td>
<td></td>
</tr>
<tr>
<td>Drainage</td>
<td>AS/NZ 3500.2</td>
<td>Refer to site plan A02</td>
<td>Feedal water to council main, storm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>water to kerb and channel, wc to</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>drain</td>
<td></td>
</tr>
<tr>
<td>Laundry</td>
<td>G2/AS1, clause 1</td>
<td>Sheet A03</td>
<td>Tub and washing machine in garage</td>
<td></td>
</tr>
<tr>
<td>Kitchen</td>
<td>G3/AS1, clause 1</td>
<td>Sheet A03 and specification p.20</td>
<td>Electric oven, range hood, stainless</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>steel bench, fridge/freezer, dishwasher</td>
<td></td>
</tr>
<tr>
<td>Smoke alarms</td>
<td>F4/AS1, clause 3.1</td>
<td>Electrical Plan, Sheet A07</td>
<td>1 in hallway, 1 in lounge</td>
<td></td>
</tr>
<tr>
<td>Natural light</td>
<td>G7/AS1, clause 1.0</td>
<td></td>
<td>Natural light via glazing &gt; 10% floor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>area (see door/window schedule)</td>
<td></td>
</tr>
<tr>
<td>Heating</td>
<td>G9/AS1</td>
<td></td>
<td>Heat pump</td>
<td></td>
</tr>
<tr>
<td>Access</td>
<td>D1/AS1, Table 6</td>
<td>Door/window schedule A09</td>
<td>Front entrance steps as per main</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>private stairway</td>
<td></td>
</tr>
</tbody>
</table>

Note: If someone else besides the building consent authority (eg, a chartered professional engineer) needs to inspect any aspect of work, note it in the relevant comment section.
5.0 Drawings

This section gives examples and brief explanations of consent drawings. Please note these are examples only.

- Site plan
- Location plan
- Foundation plan
- Floor plan
- Roof framing plan
- Exterior elevation
- Sections
- Construction details
- Door/window schedule
- Plumbing layout/schematic plan
- Electrical plan
- Wet area details

Guidance is provided on the quality, content, form and type of information each drawing should include. The descriptions are not exhaustive but are typical of the information that should be shown.

Some of the recommended information is unrelated to the Building Code but will help the building consent authority determine whether the work complies or needs approval under other legislation, such as local bylaws or district plan requirements under the Resource Management Act. Such additional information, as well as Building Code related information, is shown in text boxes like this.
5.1 Site plan

The purpose of a site plan is to show the location of the proposed building work on the site in relation to adjoining properties.

<table>
<thead>
<tr>
<th>DRAWING TYPE</th>
<th>RECOMMENDED SCALE</th>
<th>MINIMUM RECOMMENDED DETAIL (NOTE 2)</th>
</tr>
</thead>
</table>
| Site plan (Note 3) | 1:200 (Note 4) | Legal description, legal boundaries and easements  
Building location, including dimensions in metres to boundaries, and boundary fire ratings  
Spot levels or contours and site datum  
Location of existing and new services (water, power, gas, stormwater, foul water) and method of disposal/discharge  
Connection between services and network utility operators’ systems  
Proposed/actual driveway, site finishes (hard and soft) with levels and falls  
Excavation details (cut and fill) and retaining walls  
Existing buildings and site features  
Identify known natural hazards  
Identify vehicle crossings |

Additional information

When preparing the plan, check with the building consent authority and network utility operators for information on the location of existing services both to and across the site. Including calculations for site coverage on the site plan will help the territorial authority determine compliance with district plan requirements.

Table notes

Note 1  Drawings may be combined.
Note 2  Requirements may differ where the building project is an alteration or addition to an existing building.
Note 3  For rural and/or larger sites a 1:500 (or 1:1000) location plan may be needed to confirm the site location. This is especially relevant where the distance to boundaries cannot be shown on the site plan due to the size of the property.
Note 4  A scale of 1:500 or 1:100 may be adequate.
Site plan – sample only

PROPOSED NEW DWELLING
ABC STREET
City field empty

NOTE: Block boundary wall to Garage is 20mm off boundary.

Proposed Garage
Finished slab level 10700

Timber retaining wall
125x125 posts H4 treated and
200x50 retaining wall H4 treated
Post hole to be at depth equal to
height of retaining wall.

100 dia sewer stack goes up wall and vents through roof

Site Area 506m²
Ground Floor Area 135.5m²
Accessory Building Area 52m²
Area Ground Floor 187.5m²
Area First Floor 100m²
Total Area of Building 287.5m²
Site Coverage 26.8%

Proposed House
Finished slab level 10700

NOTE: existing ground levels shown thus

Site plan – sample only
5.2 Location plan

A location plan is a high-level ‘bird’s eye view’ of the area surrounding the proposed building work. It shows the location of the proposed work in relation to adjoining streets or properties. These plans are particularly useful in rural or remote locations, or multi-unit residential complexes.

<table>
<thead>
<tr>
<th>DRAWING TYPE (NOTE 1)</th>
<th>RECOMMENDED SCALE</th>
<th>MINIMUM RECOMMENDED DETAIL (NOTE 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location plan</td>
<td>1:500 (Note 3)</td>
<td>Legal description, legal boundaries and easements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>North point</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Existing buildings and site features</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identify known natural hazards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identify vehicle crossings</td>
</tr>
</tbody>
</table>

Additional information
Where the property is located in a flood zone, confirm the relationship between the site datum and the minimum occupied floor level set by the territorial authority in the district plan.

The distance to relevant boundaries can be added to the location plan, where this cannot be shown on the site plan, due to the size of the property.

Table notes
Note 1 Drawings may be combined.
Note 2 Requirements may differ where the building project is an alteration or addition to an existing building.
Note 3 For rural and/or larger sites, a scale of 1:1000 or smaller may be needed to confirm the site location.
Location Plan – sample only
5.3 Foundation plan

The foundation plan illustrates to the building consent authority and your building practitioners the foundation design you propose, and details its specific dimensions and construction requirements.

<table>
<thead>
<tr>
<th>DRAWING TYPE (NOTE 1)</th>
<th>RECOMMENDED SCALE</th>
<th>MINIMUM RECOMMENDED DETAIL (NOTE 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation plan</td>
<td>1:100 (Note 3)</td>
<td>Concrete slab dimensions and thickenings (where applicable)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concrete slab reinforcing details and construction joints</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Foundation walls</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pile layout with dimensions, pile type bearer sizes (including decks and pergolas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Finished floor heights in relation to site datum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sub-floor bracing layout</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sub-floor ventilation (or show on elevations)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Floor framing layout (optional) (Note 4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specific design foundations</td>
</tr>
</tbody>
</table>

Additional information

Where the property is located in a flood zone, confirm the relationship between the site datum and the minimum occupied floor level set by the territorial authority in the district plan.

If a registered engineer has designed the foundations, provide supporting information, including calculations, design assumptions (eg, soil bearing) and possibly a producer statement for design. Identify details of inspections and tests to be carried out by the design engineer on the building consent application form under the heading ‘Proposed owner inspections’.

Table notes

Note 1 Drawings may be combined.

Note 2 Requirements may differ where the building project is an alteration or addition to an existing building.

Note 3 A scale of 1:50 may be needed where foundations are relatively complex.

Note 4 Provided it is clear as to what is required, it may not be necessary to show each and every floor joist.
Foundation plan – sample only
The roof framing plan shows the building consent authority and your building practitioners the proposed roof design and type of construction, whether it is a framed roof using rafters or a trussed roof. It can include:

- a plan layout of roof framing members and seating of trusses and beams
- drawings of timber trusses, and proprietary timber and timber/steel members.

<table>
<thead>
<tr>
<th>DRAWING TYPE (NOTE 1)</th>
<th>RECOMMENDED SCALE</th>
<th>MINIMUM RECOMMENDED DETAIL (NOTE 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof framing plan</td>
<td>1:100 (Note 3)</td>
<td>Structural roof members identified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sizes of timber (framed rafters) and timber species (eg Douglas fir, radiata pine)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hold down and fixing details for structural roof members (also for lintels and trimmer studs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plane bracing and space bracing details</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Point loads</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Complex junctions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note on the plan whether purlins or battens are used. Include:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- sizes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- spans</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- spacings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- connections (for wind zone)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- type of timber</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- roofing material</td>
</tr>
</tbody>
</table>

Additional information
Where roof framing is designed by a registered engineer, supporting information should be provided, including design calculations, design assumptions and possibly a producer statement design.

Identify details of inspections to be carried out by the design engineer on the building consent application under the heading ‘Proposed owner inspections’.

If using a trussed roof, it is unnecessary to provide truss design calculations produced by truss manufacturers’ truss design programmes. See section 8.3 for more information.

Table notes
Note 1 Drawings may be combined.
Note 2 Requirements may differ where the building project is an alteration or addition to an existing building.
Note 3 A scale of 1:50 may be needed where roof forms are relatively complex.
Roof Framing Plan

NOTES:
- Windzone: XXXX
- Roof Cladding: XXXX
- Roof Framing Plan
- Roof space diagonal bracing (where required) as per Fig 10.12 NZS 3604.
- Engineered timber trusses @ 900crs. To be installed as per manufacturers instructions.
- Fixings to be as rafter fixings, NZS 3604.

Roof Cladding:
- Note: Not shown on plans for clarity.
- Purlins shall be 70 x 45, maximum span 450 with maximum spacing of 1200 mm.
- Purlin fixings to be 2/100 x 3.75 skewed nails plus one wiredog.

Tile Battens:
- Note: Not shown on plans for clarity.
- Tile battens shall be 50 x 40, maximum span 900 with maximum spacing of 400 mm.
- Tile batten spacings shall be as required by roof cladding manufacturer.

Rafter fixings to be as Table 10.1, NZS 3604.

Purlins:
- Note: Not shown on plans for clarity.
- Purlins shall be sized as Tables 10.10 and 10.11, NZS 3604.
- Purlin fixings to be as Tables 10.10 and 10.11, NZS 3604.
- Purlin spacings shall be as required by roof cladding manufacturer.

Roof Bracing:
- Roof bracing as per Table 10.16 NZS 3604.
- Roof space diagonal bracing beams required as per Fig 10.16 NZS 3604.

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5.5 Floor plans

Floor plans provide details of room types and sizes, the layout and location of external and internal elements, and the location of all fixtures and fittings.

<table>
<thead>
<tr>
<th>DRAWING TYPE (NOTE 1)</th>
<th>RECOMMENDED SCALE</th>
<th>MINIMUM RECOMMENDED DETAIL (NOTE 2)</th>
</tr>
</thead>
</table>
| Floor plan(s)         | 1:50 (Note 3)     | Floor levels relative to the site datum  
                         |                                 | Overall dimensions of walls and other structural elements  
                         |                                 | Internal dimensions of rooms and room identification  
                         |                                 | Bracing layout or reference to a schedule elsewhere  
                         |                                 | Lintel sizes or reference to a schedule elsewhere  
                         |                                 | Window and door locations, door/window numbers and plan dimensions  
                         |                                 | Special wall constructions (sound, fire, moisture control)  
                         |                                 | Room layouts and location of all internal fixtures and fittings  
                         |                                 | Position of sanitary fixtures and appliances  
                         |                                 | Type of hot water system proposed  
                         |                                 | Staircase layouts  
                         |                                 | Cross-section references  
                         |                                 | References to detailed drawings  
                         |                                 | Outline of roof, or pergola overhangs  

**Additional information**

If floor plans are complex, use a separate key plan with the critical structural information, such as bracing elements and lintels, to avoid cluttering the floor plans.

Show any installations related to the building consent, such as smoke alarms.

If the building work is an addition or alteration to an existing building, the floor plan should clearly distinguish between the proposed new and the existing building work.

**Table notes:**

- **Note 1** Drawings may be combined.
- **Note 2** Requirements may differ where the building project is an alteration or addition to an existing building.
- **Note 3** A scale of 1:100 may be adequate for a simple project. A separate plan must be provided for each building level. If the lower floor is timber framed, use a foundation plan to clarify the foundation layout. See section 5.3.
Floor plans – sample only

---

PROPOSED NEW DWELLING

ABC STREET

FLOOR PLANS

---

GROUND FLOOR PLAN

FIRST FLOOR PLAN

---

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5.6 Exterior elevations

Exterior elevations show the overall shape, form and size of the proposed building in relation to any adjoining boundaries.

<table>
<thead>
<tr>
<th>DRAWING TYPE (NOTE 1)</th>
<th>RECOMMENDED SCALE</th>
<th>MINIMUM RECOMMENDED DETAIL (NOTE 2)</th>
</tr>
</thead>
</table>
| Elevations            | 1:100 (Note 3)     | All exterior elevations of the building
Relative levels, overall height of dwelling
Windows, doors and other openings, indicating opening type and direction
Cladding types
Roofing types, roof shapes and overhangs
Exterior decks, stairs, balustrades
Skylights, chimneys and other openings through walls and roof
Gutter, downpipe and vent locations
Location of construction joints in claddings
References to detailed drawings
Reference to risk matrix (Note 4) |

Additional information
Extending ground lines through to adjacent boundaries, showing maximum height to boundary angles (sunlight access planes), will help the territorial authority confirm compliance with planning requirements.

Table notes
Note 1 Drawings may be combined.
Note 2 Requirements may differ where the building project is an alteration or addition to an existing building.
Note 3 Increase to 1:50 minimum scale where exterior openings are not scheduled elsewhere.
Note 4 For more information on using the risk matrix, visit www.dbh.govt.nz/UserFiles/File/Publications/WHRS/pdf/e2-riskmatrix.pdf
Elevations – sample only

EAST ELEVATION

NORTH ELEVATION

WEST ELEVATION

SOUTH ELEVATION
5.7 Sections

Sections show all vertical and horizontal building elements and their relationship to the ground, floors, ceilings and roofs. They also detail structural framing and other construction elements.

<table>
<thead>
<tr>
<th>DRAWING TYPE (NOTE 1)</th>
<th>RECOMMENDED SCALE</th>
<th>MINIMUM RECOMMENDED DETAIL (NOTE 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-sections (Note 3)</td>
<td>1:50 (Note 4)</td>
<td>Ground levels and levels relative to site datum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wall heights</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Window and door height dimensions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Framing sizes and treatments (or in the specification) (Note 5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construction details (eg, wall and floor linings)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Roof and ceiling pitches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Location of staircases, decks and balustrades</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Floor slopes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Location of details</td>
</tr>
</tbody>
</table>

Additional information
Sections and details can be combined on the same drawing. This can improve clarity, especially if details are shown in their relative position to an accompanying cross-section.

Table notes
Note 1 Drawings may be combined.
Note 2 Requirements may differ where the building project is an alteration or addition to an existing building.
Note 3 Cross-sections must show all vertical relationships. Location of cross-sections should be shown on floor plans.
Note 4 A scale of 1:20 may be used.
Note 5 Timber grades may be identified on the drawings or in the specification.
5.8 Construction details

Construction details fully describe junctions and interfaces between and within all major building elements.

<table>
<thead>
<tr>
<th>DRAWING TYPE (NOTE 1)</th>
<th>RECOMMENDED SCALE</th>
<th>MINIMUM RECOMMENDED DETAIL (NOTE 2)</th>
</tr>
</thead>
</table>
| Details               | 1:5 (Note 3)      | Structural elements, junctions and fixings  
Penetrations through exterior walls and roofs  
Window and door head/sill/jamb  
Cladding junctions (horizontal and vertical)  
Expansion and movement joints  
Wall/roof junctions  
Bottom plate/cladding overhang  
Soffit and parapet details  
Retaining wall details  
Tanking and damp-proofing, cross-sections and details  
Deck or pergola connections to main structure  
Stairs showing rise/going/pitch/handrails  
Deck balustrades and handrails, layouts and fixings  
Fire separation junction and penetration details  
Weatherproofing details |

Additional information

You can combine sections and details on the same drawing. This can improve clarity, especially if details are shown in their relative position to an accompanying cross-section.

Scales from 1:10 to 1:2 may be applicable, depending on the complexity of the material relationships within the element being described. The detail should identify critical dimensions such as width, thickness, cover, and clearance. It is sensible to group the details of common materials on the same drawing, such as all exterior window and door details.

The extent and number of details will vary significantly with the size and complexity of the building design.

Table notes

- **Note 1** Drawings may be combined.
- **Note 2** Requirements may differ where the building project is an alteration or addition to an existing building.
- **Note 3** Larger or smaller scales may be appropriate to show sufficient detail.
Construction details – sample only
5.9 Door/window schedule

A door/window schedule is needed when door and window are not clearly shown on the wall elevations.

<table>
<thead>
<tr>
<th>DRAWING TYPE</th>
<th>RECOMMENDED SCALE</th>
<th>MINIMUM RECOMMENDED DETAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door/window schedule (Note 1)</td>
<td>1:00 (Note 3)</td>
<td>Dimensions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Height above floor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Door/Window opening type</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Glazing type</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Type of reveals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Finish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Door leafs</td>
</tr>
</tbody>
</table>

### Additional information

You can combine door/window elevations and details on the same drawing. This can improve clarity, especially if details are shown in their relative position to an accompanying cross-section.

Scales from 1:50 to 1:100 may be applicable. The detail needs to identify critical dimensions.

It is sensible to group the details of common materials on the same drawing.

### Table notes

- **Note 1**  Drawings may be combined.
- **Note 2**  Requirements may differ where the building project is an alteration or addition to an existing building.
- **Note 3**  Larger or smaller scales may be justified.
Door/window schedule – sample only

Building paper dressed into opening.
Selected proprietary edge seal flashing.
Opening with detail tape to sill.
Framing upstands at each end.
Folded colorsteel head flashing.
With detail tape to corners.
Proprietary uPVC starter strip.

20mm drained & ventilated cavity.
Plasterboard & insulated with R2.8 insulation.

Selected building paper over 90x45 H1.2 VSG8
Building paper dressed into opening.

Folded colorsteel sill flashing.
To window frame with continuous sealant bead.
Selected fibrecement weatherboards over
Pinus Radiata wall framing. Lined with 10mm plasterboard & insulated with R2.8 insulation.

20x45 H3.1 Pinus Radiata vertical battens
Selected plastered panel system over
Insulated with R2.8 insulation.

Selected building paper over 90x45
Detail tape dressed over
Selected building paper over 90x45 H1.2 VSG8

Powdercoated, double glazed aluminium window
Joinery with H3.1 Pinus Radiata reveals.

Extrusion Sectional Garage Door
Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W1.01

Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W1.02

Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W1.03

Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W1.04

Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W1.05

Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W1.06

Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W0.01

Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W0.02

Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W0.03

Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W0.04

Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W0.05

Reveal Plasterboard Return
Glazing Type Clear Double Glazing (as per NZS 4223)
Finish Selected Powdercoating
Extrusion W0.06
A plumbing layout or schematic illustrates the proposed method for disposal of soil and waste water from individual sanitary fixtures and appliances within the building (e.g., sizes and falls for pipe work).

<table>
<thead>
<tr>
<th>DRAWING TYPE (NOTE 1)</th>
<th>RECOMMENDED SCALE</th>
<th>RECOMMENDED DETAIL (NOTE 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plumbing schematic</td>
<td>1:100 (Note 3)</td>
<td>The extent of the detail will vary with the size and complexity of the plumbing design. However, the following might constitute minimum requirements: Structural elements, junctions and fixings Size, venting (if required) and gradient of soil and discharge pipes Pipe materials Type of sanitary fixtures Penetrations through exterior walls and roofs Information on hot water anti scalding device</td>
</tr>
</tbody>
</table>

### Additional Information
Identify what system the layout relates to (e.g., AS/NZ 3500.2:2003 Above-ground (Elevated) Piping using Drainage Principles).

Note the direction pipes run (e.g., parallel to floor joists or through floor joists) and whether a bulk head is provided.

### Table notes
- **Note 1** Drawings may be combined.
- **Note 2** Requirements may differ where the building project is an alteration or addition to an existing building.
- **Note 3** A scale of 1:50 may be used.
Plumbing layout – sample only

DRAINAGE NOTES:

All "above ground" waste water to comply with AS/NZS 3500.2
All "below ground" drainage to comply with AS/NZS 3500.2

Sink: 40Ø @ 1:40 grad.
Shower: 40Ø @ 1:40 grad.
WC: 100Ø @ 1:60 grad.
Tub: 40Ø @ 1:40 grad.
Vanity: 40Ø @ 1:40 grad.
Bath: 40Ø @ 1:40 grad.

NOTE
First floor fittings are shown dashed,
First floor wastes & soil pipes are to run parallel to floor joists where possible.
Where pipes are to cut through floor joists refer to NZS 3604 Section 7 or manufacturers literature for position & size or allowable holes in floor joists.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE.
5.11 Electrical plan

An electrical plan provides information on electrical fittings and power outlets, and locations of switch/meter boards and extractor fans, fan heaters or heated towel rails. It may not be necessary to produce a separate electrical plan if the information is already in the written specification or on the floor plan.

### Additional information
You must obtain an energy work certificate on completion of any electrical work, as required by the Electricity Act 1992. When you submit an application for a CCC, you must also include any energy work certificate.

A common practice is to mark any smoke detectors on the plan.

### Table notes
- **Note 1** Drawings may be combined.
- **Note 2** Requirements may differ where the building project is an alteration or addition to an existing building.
- **Note 3** A scale of 1:50 may be used.

<table>
<thead>
<tr>
<th>DRAWING TYPE (NOTE 1)</th>
<th>RECOMMENDED SCALE</th>
<th>RECOMMENDED DETAIL (NOTE 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical plan</td>
<td>1:100 (Note 3)</td>
<td>Electrical legend</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fittings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lights</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Power outlets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appliances</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Smoke detectors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note on the plan to allow for wiring and installation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rating of recessed downlights</td>
</tr>
</tbody>
</table>
Electrical plan – sample only

Electrical Layout

**ELECTRICAL LEGEND**

- Switching
- Halogen
- Selected walllight
- Double fluorescent fitting
- Double power outlet switched
- All outlets controlled by RCD circuit breaker
- Television
- Smoke Detector (with hush button)
- Dimmer Switch
- Heated towel Rail
- Selected 150 extract
- Meter board
- Switch board

**NOTE:** All recessed downlights are to be **CA Rated**.

All outlets to be protected by surge device at switch board.

- Separate switching is not shown for:
  - Hot water cylinders
  - Kitchen fittings (cook top, wall oven, dishwasher & microwave outlets)

**ALLOW TO WIRE FOR & INSTALL**

---

**PROPOSED NEW DWELLING**

**ABC STREET**

---

**ELECTRICAL LAYOUT**

---

**SCALE** 1:100

**DATE** 31 May 2010

**DRAWN**

---

**DRAWING No.**

---

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5.12 Wet area details

Wet area details illustrate junctions and interfaces between wall and floor linings and provide information on finishes for walls and floors in wet areas, such as kitchens, bathrooms or laundries.

<table>
<thead>
<tr>
<th>DRAWING TYPE (NOTE 1)</th>
<th>RECOMMENDED SCALE</th>
<th>RECOMMENDED DETAIL (NOTE 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet area details</td>
<td>1:10 (Note 3)</td>
<td>Wall junctions to bath, basin, tub, sink and shower (including bath and shower screens)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shower internal corners</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plumbing penetrations (e.g., shower mixer/rose, taps)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Floor/wall junctions to shower</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shower internal corner</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wall/floor linings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wall lining joints</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Type of shower/bath (proprietary, steel tray, level entry)</td>
</tr>
</tbody>
</table>

Additional information

Provide full details on shower floor falls for level entry showers.

The Building Code requires water from accidental overflow from sanitary fixtures or sanitary appliances to be disposed of in a way that avoids damage to the household or other property.

Floor and wall surfaces to any space containing sanitary fixtures or sanitary appliances must be impervious and easily cleaned.

Water must not penetrate into concealed spaces or behind linings (e.g., space below bath tub, behind shower lining).

Table notes

Note 1  Drawings may be combined.

Note 2  Requirements may differ where the building project is an alteration or addition to an existing building.

Note 3  A scale of 1:5 may be used.
Wet area details – sample only

Silicone sealant relief joint.

Shower Internal Corner

Silicone sealant relief joint.

Shower Floor/Wall Junction

9mm compressed sheet over 90x45 timber framing.

Reinforced mat embedded in waterproof membrane.

Silicone sealant relief joint.

Vertical fixed 32x32x0.55 galv. steel angle.

Bathroom Internal Corner

Selected tiles over selected waterproofing membrane. Refer to manufacturers literature.

Silicone sealant relief joint.

Selected tiles.

Tap body.

Silicone sealant.

Selected acrylic shower lining.

Plumbing penetration

Bath/Wall Junction

Selected acrylic shower lining.

100mm concrete slab

Silicone sealant relief joint.

Selected proprietary shower tray

PROPOSED NEW DWELLING
ABC STREET

WET WALL DETAILS

Rough
07 May 2010
JOB No. 07123

Wet Wall Details
5.13 Additional drawings

You may not always be able to describe or show the detail required on the drawings discussed in sections 5.1 to 5.12. You may need to provide additional drawings, such as the following.

FLOOR FRAMING PLAN
A floor framing plan is required when floor joists do not follow a regular pattern, or specific structural requirements need to be shown to illustrate compliance. The plan can include:

- floor beam and joist layouts and sizes, including blocking, trimmer joists and boundary joists
- drawings of specialty engineered timber and timber/steel products (if these are detailed, include calculations and data sheets in the consent documentation).

PROTECTION OF ADJOINING PROPERTIES
The building consent authority may require information on how adjoining properties will be protected from the work undertaken on site (eg, surface water control, temporary earth retaining wall, site hoarding or fencing).

DETAILS OF SPECIALIST INSTALLATIONS
Specialist installation details may include:

- proprietary installations, such as suspended concrete floors, precast concrete panels, timber trusses, engineered timber products and steel bracing frames
- drainage and plumbing schematics for buildings more than one storey or complicated plumbing designs.

DEMOLITION PLANS
A demolition plan is required to identify the parts of an existing house or building to be demolished/dismantled. The plan can provide information on:

- demolition of foundations
- disconnection of services from public utilities
- demolition of various building components (eg, walls, floors, roofing, cladding)
- remedial work on site after the demolition, including clearing building material.

ROOF PLAN
A roof plan is often required for complex roof designs, or where several different roofing types are used. The plan can include:

- details of roof falls (direction and slope)
- location and size of rainwater heads, scuppers, internal gutters, spouting and downpipes (including calculations).
6.0 Related building consent application matters

6.1 APPRAISALS, INDEPENDENT ASSESSMENT, PRODUCT CERTIFICATION, WARRANTIES AND GUARANTEEES

A building consent authority may consider several ways to help verify the performance of a building product, material or building system against the Building Code. These can include the following.

Product technical information

The building consent authority may consider product information supplied by the manufacturer or supplier. Such information differs from advertising brochures and other marketing material, including product warranties, as it focuses on technical detail and sometimes specifically refers to Building Code compliance.

Product information can include information on quality assurance systems used in the manufacture or testing of the product, product specifications, scope of use, installation requirements and environmental limitations. It can help designers and builders correctly specify and install a product. Ideally, information on maintenance requirements is included. Product information might also include test results.

Product technical statement (PTS)

A PTS is a statement that a manufacturer can create to accompany technical information. The following information provided in a PTS may assist a building consent authority to accept a product.

- A statement of Building Code clauses that relate to a product
- The product’s scope of use, including any conditions or limitations on its use
- Consenting instructions to help a building consent authority assess Building Code compliance of building work that uses a particular product or system

Independent assessment

An independent assessment can be a review or verification of the technical information provided by the manufacturer. A suitably competent and qualified person or organisation (e.g., a Chartered Professional Engineer or recognised and accredited testing laboratory) should carry out the assessment. The assessor should be independent from the product manufacturer or supplier.

Industry schemes

Industry schemes are voluntary, and can apply to families of products. Manufacturers belonging to these schemes are responsible for ensuring their products comply with the requirements of the scheme, as assessed by the industry organisation. You should be aware that not all industry schemes are of the same standard or provide the same level of assurance.

Appraisals

An appraisal is a technical opinion about a building product or building system’s fitness for purpose. An independent accredited testing laboratory usually performs an appraisal, and assesses a product against many performance factors. These include:

- the requirements of the Building Code
- performance under test conditions
- in-service performance
- New Zealand Standards specifications
- accuracy of the product’s technical information (including its scope of use)
- manufacturing procedures
- quality control systems
- installation maintenance requirements
- limitations of use.
The above options may support building consent applications, but a building consent authority does not have to accept the evidence of compliance you supply. Acceptance is at the building consent authority’s discretion, and you must provide enough information to establish compliance.

**Product certification (CodeMark)**

Product certification for building products in New Zealand was established by the Building Act, and is administered by the Department of Building and Housing. The Building (Product Certification) Regulations 2008 set out the rules for product certification in New Zealand.

Product certification was jointly developed with the Australian Building Codes Board. This voluntary scheme operates under the brand name of ‘CodeMark’, which is recognised in Australia and New Zealand.

The scheme aims to provide an easily understood, robust and cost-effective way to demonstrate that a building product or method meets the requirements of the Building Code.

The scheme relies on a Product Certification Body, which issues a product certificate once product conformity has been determined.

That may include assessing samples of the product as used or installed, and factory and/or site visits by the Product Certification Body. The product certificate provides independent confirmation that a building product complies with the Building Code. Its legal status is equivalent to that of a Compliance Document. Information in the product certificate provides clear guidance about how to specify and install the building product or system to ensure it complies with the Building Code clauses for which compliance is claimed.

Following certification, the Product Certification Body will carry out annual audits to ensure Building Code compliance is being achieved and can be maintained.

Product certification will streamline and speed up the building consent and inspection process by avoiding repeated assessment of products that have proven Building Code compliance.

All building consent authorities must accept product certification as evidence of Building Code compliance if the product is being used in accordance with the certification certificate and its instructions, scope and limitations.

For more information, visit [www.dbh.govt.nz/product-cert-q-a](http://www.dbh.govt.nz/product-cert-q-a)

**Product warranties**

The manufacturer or seller of a product often provides a product warranty. This guarantees the replacement or repair of a faulty product, for a specified period and often subject to conditions.

The building consent authority may request copies of product warranties and guarantees provided by accredited or licensed installers and manufacturers to further satisfy themselves that compliance with the Building Code will be achieved. However, the building consent authority should consider the significance and relevance of product warranties and how much weight is given to them when assessing compliance with the Building Code.

You and the building consent authority may choose to rely on some or all of these mechanisms to support or confirm compliance. The building consent authority should not require a particular approach to, or a particular means of, verifying your proposed design over another. All the approaches to confirming compliance, or to supporting an alternative solution proposal, described above, can be valid.
6.2 CALCULATIONS/SPECIFIC ENGINEERING DESIGN (SED)

The performance of a particular building element may need to be calculated (e.g., structural beams and lintels, insulation or flow rates for mechanical ventilation systems). These calculations must be included with the building consent application documents (even when supplied with a producer statement), as they form part of the design plans and specifications. Calculations help the building consent authority understand which design assumptions were made, especially when assessing proposals that are subject to SED. They can also be useful in future when further additions and alterations are being considered for the same building.

Note: Calculations should only be included for one-off designs requiring specialist input as opposed to calculations for trusses or other mass-produced engineering designs.

6.3 FACTORY-MANUFACTURED BUILDING ELEMENTS (ROOF TRUSSES AND FLOOR FRAMING SYSTEMS)

Before the current Building Act, councils often issued a building consent based on outline information for proposed factory-manufactured building elements (e.g., roof trusses and floor framing systems).

The Building Act 2004 places greater emphasis on the complete “for construction” documentation being supplied with a building consent application.

In the past, designs for factory-manufactured building elements were only supplied to the builder with the delivery of the goods. This is no longer considered acceptable practice, as truss or roof framing plans are required to help establish Building Code compliance during the consent processing stage, particularly Clauses B1 Structure and B2 Durability.
Building consent application

Before lodging a building consent application, you should obtain a buildable design from the fabricator for the proposed building elements. Attach the design to the building consent application. Buildable designs show:

- the proposed building elements
- proposed layout
- site-specific conditions (e.g., wind zone, roof type, cladding type)
- where load-bearing walls and foundation thickenings are required
- spans
- any specific lintel/beam requirements
- the timber grade (strength)
- the timber treatment (durability)
- fixings.

Buildable designs are often based on industry-accepted computer engineering design programs based on relevant standards. The information should also include information about the fabricator and the design program and version used.

Construction

During construction, the fabricator is likely to visit the site to check relevant measurements to manufacture the trusses or floor framing system. The manufacturer will produce ‘shop drawings’, which are highly detailed drawings for the person who makes the trusses or floor framing system. They will also produce on-site installation instructions, and a layout plan for the person erecting the building elements.

Once the installation is complete, the as-built truss information or floor framing plan should be supplied to the building consent authority for their inspection and records. The building consent authority may place an advisory note about this on the building consent.

6.4 MANUFACTURERS’ DATA

Much information from product manufacturers is general promotional or marketing literature. Only provide the building consent authority with relevant technical literature that is sufficient to show compliance with the Building Code.

The building consent authority may request specific technical data from the product manufacturer, accompanied by an independent appraisal or verification that the product will meet Building Code requirements.

6.5 WEATHERTIGHTNESS RISK ASSESSMENT

A risk matrix provides a process to assess the weathertightness risk of a building project, and to select appropriate wall cladding systems as required by the Acceptable Solution E2/AS1 for Clause E2 (External Moisture) of the Building Code.

A table provided in E2/AS1 helps you calculate a risk score by allocating and summing scores for design and location factors. Submitting this information with the consent application enables the building consent authority to assess compliance with Building Code Clause E2.

For more information, visit www.dbh.govt.nz/UserFiles/File/Publications/WHRS/pdf/e2-riskmatrix.pdf
6.6 WATER SUPPLY AND FOUL WATER DISPOSAL

The Building Code requires sanitary fixtures and sanitary appliances to be provided with a safe and adequate water supply, and an adequate plumbing and drainage system.

At the time of the building consent application, the building consent authority will require certain information on the water supply system and the foul water and surface water (stormwater) disposal systems. They will also require documented assurance that an adequate water supply is available and that there are adequate means of disposal of foul water and stormwater.

The foul water disposal, potable water supply, and surface water disposal systems are typically connected to a local council or network utility operator’s system. Where these connections are not available, information on the facilities for the storage, treatment, and disposal of foul water must be provided. Similarly, verification is needed on how the potable water system will be protected from contamination, and how surface water will be disposed of.

How a water supply, or a waste or foul water disposal system, will exactly be laid out may not be apparent when you apply for a building consent. However, you should provide the location and specification of all fixtures and fittings, together with a diagrammatic layout of foul and surface water (stormwater) drainage.

When the project is finished, the building consent authority will require an as-built drainage plan for its records.

Note: On-site disposal systems may require additional approvals under the Resource Management Act.

6.7 SMOKE ALARMS

All residential dwellings require appropriate means of detection and warning for fire under Building Code Clause F7 (Warning Systems). The minimum requirement is for a battery-powered device, such as a smoke alarm with a silence and test button, within three metres of every bedroom and on the escape route for dwellings exceeding one storey. This requirement also applies when carrying out alterations to existing dwellings.

6.8 SOLID-FUEL HEATERS

If solid-fuel heaters are proposed in the building work, the plans and specifications need to identify the:

- appliance by brand and model (to allow the building consent authority to verify that the appliance meets the national environmental standards)
- flue type
- location, flashing and installation details
- height of the top of the flue relative to ridge lines and windows
- installation specifications.

7.0 Related Building Act matters

7.1 AMENDMENT ACTS
Acts amending the Building Act have introduced changes to the building consent process. (For a copy of an Act, visit www.legislation.govt.nz)

The Building Amendment Act 2009 introduced initiatives to reduce compliance costs and improve the efficiency of the building consent process. The initiatives include:

- the National Multiple-Use Approvals (MultiProof) design pre-approval. (see section 7.7)
- minor variations to building consents (see www.dbh.govt.nz/minor-variations-to-building-consents)
- voluntary project information memoranda (see www.dbh.govt.nz/project-information-memoranda).

The Building Amendment Act 2010 amended provisions under the Building Act around:

- determinations
- product certification
- Compliance Documents
- hot water storage heaters provided for under Schedule 1.

7.2 BUILDING CONSENT AUTHORITY ACCREDITATION
Building consent authorities must be accredited under the Building Act. Accreditation is a process of formal assessment that recognises how building consent authorities meet various business and performance standards for their building control functions.

Accreditation is about helping ensure building consent authorities have:

- well-documented and effective business systems and processes
- robust quality assurance practices
- competent staff and contractors.

Accreditation performance standards are being introduced in three phases over a six-year transition period. These phases are:

- Phase 1: Standards for internal business systems and processes, capacity, technical competencies, and record-keeping which had to be met by March 2009
- Phase 2: Standards for externally (customer) focused quality assurance requirements to be in place by November 2010
- Phase 3: Technical qualifications for building consent authority staff to be in place or actively working towards by November 2013.

Accreditation helps ensure building consent authorities continue to improve the delivery of their building control services, become more consistent, and achieve better quality outcomes more efficiently. It is an ongoing programme that requires building consent authorities to meet standards and review and alter their practices over time to ensure continuous improvement. A building consent authority must be accredited before the Department will register it under the Building Act.

Accreditation assessments are carried out by International Accreditation New Zealand (IANZ), an internationally recognised, independent accreditation body appointed by the Department. If a building consent authority does not maintain its accreditation standards, IANZ may revoke its accreditation. To maintain accreditation, building consent authorities must be assessed by IANZ and prove their ongoing compliance with the accreditation standards at least once every 24 months.

For more information, visit www.dbh.govt.nz/bofficials-bca
7.3 DETERMINATIONS
A determination is a binding decision made by the Department. It provides a way of solving disputes or questions about the rules that apply to buildings, how buildings are used, building accessibility, health and safety and other Building Code compliance requirements.

For more information, visit www.dbh.govt.nz/determinations

7.4 FENCING OF SWIMMING POOLS
If building work includes constructing a swimming pool (as defined by the Fencing of Swimming Pools Act 1987), the pool must be fenced to comply with the requirements of Clause F4 (Safety from Falling) of the Building Code. Fencing and pool construction details establishing compliance with the Building Code must be included with the consent documentation.

The Fencing of Swimming Pools Act requires pools and spa pools (including those with lockable lids) to be fenced.

For more information, visit www.dbh.govt.nz/fospa-index

7.5 LICENSED BUILDING PRACTITIONER SCHEME
The Licensed Building Practitioner (LBP) Scheme is a Building Act initiative that encourages better building design and construction.

Licensing promotes, recognises and supports professional skills and behaviour in the building industry. The LBP Scheme covers building practitioners from designers, site supervisors and tradespeople (eg, carpenters, roofers, plasterers, brick and blocklayers, and foundations workers).

Licence classes were introduced in 2007, and the Government has recently rationalised and streamlined the scheme. To become licensed, practitioners must meet the competency standard for the licence class they apply for.

The names of LBPs are listed on a public register. Anyone can view this register and use it to choose competent building practitioners who have demonstrated they meet the national standards. To view the LBP register, visit www.dbh.govt.nz/lbp-register

The LBP Scheme is currently competency based. Over time, the emphasis on education and training, along with better career pathways, will increase. From 2015, licensing is expected to also be qualifications-based.

For more information, visit www.dbh.govt/lbp
7.6 RESTRICTED BUILDING WORK
From March 2012, it is expected that only LBPs will be allowed to carry out or supervise ‘restricted building work’ (design work that is critical to the integrity of a house or small-medium sized apartment building). Appropriately licensed LBPs will be responsible for plans and specifications used in a consent application for restricted building work. See section 45(2)-(4) of the Building Act. Also, from March 2012 a consent application for restricted building work will need to include the names of LBPs carrying out or supervising that work. See section 45(1)(e) of the Building Act.

7.7 NATIONAL MULTIPLE-USE APPROVALS (MULTIPROOF)
Volume builders can obtain a MultiProof for standardised building designs that are intended to be replicated 10 or more times in a two-year period. The Department issues MultiProof approvals. A MultiProof is a design pre-approval stating that a specific set of building plans and specifications complies with the Building Code. Building consent authorities must accept a MultiProof as evidence of Building Code compliance.

A building consent will still be needed. The building consent authority will:

- approve site-specific details, including foundations (if excluded from the MultiProof) and utilities/on-site services
- ensure any MultiProof conditions have been met
- undertake normal inspections during construction.

MultiProof approvals will create time and cost savings for volume builders by removing the need for the same or substantially similar building designs to be assessed repeatedly for Building Code compliance.

The building consent authority has 10 working days to fulfil this role instead of the normal 20.

For more information, visit www.dbh.govt.nz/multiproof
8.0 Project planning

8.1 RESOURCE MANAGEMENT AND OTHER NON-BUILDING ACT REQUIREMENTS

A building consent shows compliance with the Building Code. However, you may need to comply with other legal requirements, such as a district plan requirement under the Resource Management Act, before your building work may start.

During the planning and design phase of the project, you should contact your territorial authority and discuss any relevant rules and resource consent or other requirements. Pay particular attention to site coverage, building height and other bulk and location requirements. You may be able to alter your design to comply with the Resource Management Act.

The earlier you are aware of this the better. Other matters you can discuss with the territorial authority include approvals for connections to local council services (eg, stormwater, sewer).

You need to give special consideration to the requirements of other Acts such as the Resource Management Act when building:

- on steep slopes
- on waterfront or river-side locations
- close to adjoining properties
- close to the front boundary beside a legal road
- over territorial authority services or network utility operators’ systems (eg, drains)
- under overhead transmission lines
- close to airports or ports
- driveways close to street corners
- driveways off busy main roads
- where no drive-on access is available
- on sites requiring trees to be cleared
- in heritage or character precincts
- on land that may be contaminated
- on land subject to a natural hazard (identify these on the site or location plan if you know about them before applying for your building consent).

You may find it useful to apply for a PIM before developing fully detailed building consent drawings. See section 1.2. The PIM gives early notice of special requirements, including any development contributions that you may need to pay. A building consent authority may withhold the CCC if you have not paid any development contributions.

The PIM provides other useful information that will help you comply with the Building Code, such as:

- natural hazards
- wind/earthquake/corrosion zone
- existing stormwater or wastewater systems/services.

You will normally request your project manager or designer to handle these matters.
8.2 PRODUCT MANUFACTURERS’ INFORMATION

Guidance for product manufacturers on the recommended form and content of information on branded products is set out in AS/NZS 1388 Guidelines for Technical Information for Building and Construction Products.

8.3 ROOF TRUSS DESIGN

When seeking a buildable roof truss design from a fabricator, the designer should provide the following information so the truss detailer can understand what the roof will look like and how it will be supported:

- dimensioned drawings showing elevations, floor plans, cross-sections and foundation plans
- details of barge, fascia and soffit construction
- ceiling form and construction (e.g., plasterboard on timber battens)
- wind zone, corrosion zone, earthquake zone and snow loads
- additional loads that may be imposed on the roof structure (e.g., ventilation systems, solar water heaters, storage in the roof space, large light fittings, or lifting cradles for people with disabilities)
- proposed connectors from trusses to the framing top plate
- any point loads
- information from the specification on the type of roof cladding (e.g., pressed steel tiles are light and clay tiles are heavy) and its support (e.g., purlins or sarking)
- roof pitch.

A truss detailer consulted early in the design process can provide an easily built design. They may also provide suggestions for a simpler and cheaper roof, and clarify any downstream effects on walls and foundations.
9.0 Glossary of terms

ACCEPTABLE SOLUTION
See section 7 of the Building Act.
For more information, visit www.dbh.govt.nz/building-about-compliance

ALTERNATIVE SOLUTION
A method, other than an Acceptable Solution or Verification Method, that meets the performance measures in the Building Code.

BUILDING ACT 2004 (BUILDING ACT)
The main legislation regulating building work in New Zealand, which provides for the establishment of a licensing regime for building practitioners, and the setting of performance standards for buildings.
See section 3 of the Building Act.
To read the Building Act online, visit www.legislation.govt.nz

BUILDING CODE
Regulations under the Building Act that prescribe:
- functional requirements for buildings
- the performance criteria that buildings must comply with in their intended use.
For more information, visit www.dbh.govt.nz/blc-building-code-and-review

BUILDING CONSENT
Formal approval granted by a building consent authority to an owner to carry out specified building work.
See section 49 of the Building Act.
For more information, visit www.dbh.govt.nz/blc-building-consentinspect-process

BUILDING CONSENT APPLICATION
An application for a building consent made in the format of Form 2, which is prescribed in the Building (Forms) Regulations 2004. For a copy of the form, visit www.dbh.govt.nz/forms-building-forms

BUILDING CONSENT ACCREDITATION BODY
A person appointed by the Chief Executive of the Department of Building and Housing to accredit building consent authorities.
The Chief Executive has appointed International Accreditation New Zealand (IANZ) as a building consent accreditation body.
See section 248 of the Building Act.

BUILDING CONSENT AUTHORITY (BCA)
An authority (eg, a territorial authority) accredited and registered to assess and approve building consents.
See section 192 of the Building Act.
For more information, visit www.dbh.govt.nz/bofficials-bca

BUILDING REGULATIONS
Regulations made under the Building Act, including the Building Code.
For more information, visit www.dbh.govt.nz/building-regulations
BUILDING WORK
Work relating to the construction, alteration, demolition or removal of a building.
See section 7 of the Building Act.

CERTIFICATE OF TITLE
A legal document describing an area of land, ownership of the land and any legal rights over the land.
See part 4 of the Land Transfer Act 1952.
For more information, visit www.linz.govt.nz/survey-titles/land-titles-plans/index.aspx

CODE COMPLIANCE CERTIFICATE (CCC)
A certificate issued by a building consent authority once it is satisfied that building work complies with the building consent.
See section 94 of the Building Act.
For more information, visit www.dbh.govt.nz/bofficials-code-compliance-cert

COMPLIANCE DOCUMENT
A document issued by the Chief Executive of the Department of Building and Housing that, when complied with, shows compliance with the provisions of the Building Code to which the Compliance Document relates.
See section 22 of the Building Act.
For more information, visit www.dbh.govt.nz/building-about-compliance

DEPARTMENT OF BUILDING AND HOUSING (THE DEPARTMENT)
The central government agency that administers the Building Act and regulates the Building and Construction industry.
For more information, visit www.dbh.govt.nz

DEVELOPMENT CONTRIBUTION
A contribution charged by a territorial authority when land is subdivided or otherwise developed. The contribution helps to pay for public infrastructure and reserves.
For more information, visit the website of your territorial authority.

DRAWING
A pictorial presentation of a building.
To purchase a Standard, visit www.standards.co.nz

FORM 1
The prescribed form for an agreement between a residential property developer and a purchaser.
See schedule to Building (Forms) Regulations 2004 (SR 2004/385).
To download Form 1, visit www.dbh.govt.nz/forms-building-forms
FORM 2
The prescribed form for an application for a project information memorandum and/or building consent.
See schedule to Building (Forms) Regulations 2004 (SR 2004/385).
To download Form 2, visit www.dbh.govt.nz/forms-building-forms

FORM 5
The prescribed form for a building consent.
See schedule to Building (Forms) Regulations 2004 (SR 2004/385).
To download Form 5, visit www.dbh.govt.nz/forms-building-forms

GUIDANCE INFORMATION
Information published by the Chief Executive of the Department of Building and Housing for guidance purposes only to aid compliance with the Building Act.
See section 175 of the Building Act.

LICENSED BUILDING PRACTITIONER (LBP)
A person recorded in the register of LBPs because they have satisfied the Registrar of LBPs that they meet the standards for their licence class.
See section 286 of the Building Act.
For more information, visit www.dbh.govt.nz/lbp

LOCAL GOVERNMENT ACT 2002
The main legislation that establishes the scope and purposes of local authorities.

MINOR VARIATION
A minor change to a building consent allowed under the Building (Minor Variations) Regulations 2009.
See section 45A of the Building Act.
For more information, visit www.dbh.govt.nz/minor-variations-to-building-consents

NATIONAL MULTIPLE-USE APPROVAL (MULTIPROOF)
A statement by the Chief Executive of the Department of Building and Housing that a set of building plans and specifications for multiple use complies with the Building Code.
See section 30F of the Building Act.
For more information, visit www.dbh.govt.nz/multiproof

NETWORK UTILITY OPERATOR
A person who distributes utilities (eg, gas or electricity) through pipelines or networks.
See section 7 of the Building Act.

NEW ZEALAND STANDARDS
Standards issued by Standards New Zealand that may be incorporated into Acceptable Solutions or Verification Methods.
For more information, visit www.dbh.govt.nz/blc-nzstandards
NOTICE TO FIX
A notice issued by a responsible authority (eg, a building consent authority), ordering a person (eg, an owner who has carried out building work without a building consent) to comply with the Building Act.
See section 164 of the Building Act.
For more information, visit www.dbh.govt.nz/bofficials-notices-to-fix

PLAN
‘Anything drawn or represented on a horizontal plane, as a map or the horizontal section of a building.’
To purchase a standard, visit www.standards.co.nz

PROJECT INFORMATION MEMORANDUM (PIM)
A document issued by a territorial authority that provides information on land and lists any requirements under legislation other than the Building Act.

RESOURCE CONSENT
Permission granted by a consent authority (eg, a territorial authority) to an owner under the Resource Management Act to use land in a particular way (eg, subdivide land).
See section 87 of the Resource Management Act.

RESOURCE MANAGEMENT ACT 1991
The main legislation that promotes the sustainable management of New Zealand’s natural and physical resources.
See section 5 of the Resource Management Act.

RESTRICTED BUILDING WORK
Building work critical to the integrity of a building (eg, its envelope and structure) that must be carried out by an LBP.
See section 7 of the Building Act.
For further information, visit www.dbh.govt.nz/lbp

TERRITORIAL AUTHORITY
A city or district council with duties under the Local Government Act to control planning and development.

VERIFICATION METHOD
A test procedure that verifies a building complies with the Building Code.
See section 7 of the Building Act.
For further information, visit www.dbh.govt.nz/building-about-compliance

TECHNICAL TERMS
For a basic glossary of technical building terms, visit www.dbh.govt.nz/building-az-index
Standards New Zealand produces a comprehensive Glossary of Building Terms. To buy this book, visit www.standards.co.nz