

Now that you have your building consent



A Guide to the Inspection Process once your Building Consent has been Issued

December 2009



Contents

1. <i>Now that I have my Consent, What Happens?</i>	3
2. <i>Purpose Behind the Inspection Process</i>	3
3. <i>Alterations/Amendments During Construction</i>	3
4. <i>The Inspection Process</i>	4
5. <i>What We Will be Looking for During Each Specific Inspection</i> ..	4
6. <i>The Certification Process</i>	11
7. <i>Other Considerations</i>	12

1. Now that I have my Consent, What Happens?

Now that you have your consent, there are some important things that you, your builder or contractor need to know.

Under the Building Act 2004 there are some statutory time frames which impact on your building project.

- A building consent lapses if work has not started within 12 months
- If no application for a code compliance certificate is made by the owner before the expiry of 2 years from the date the building consent was granted, the building consent authority must decide whether to issue the code compliance certificate.(refer to section 6 of this guide)

Please note these dates and if you cannot meet them you need to apply to the Building Consent Authority for an agreed extension of time - provided it is prior to the lapse date.

Your building consent will detail inspections that are required to be carried out during construction. You must ensure that they do occur as failure to do so may cause significant problems at the completion of your building project and create difficulties in obtaining a Code Compliance Certificate.

To arrange for these inspections phone on (04) 570-6754 between the hours of 8.00am and 5.00pm. Monday to Friday. (Bookings after 4.00pm are unlikely to be carried out the next day)



Please give as much notice as possible. A minimum of 24 hours is required and although we will endeavour to provide a next day service, that may not always be possible due to work load, available resources and travel distances.

When booking inspections, basic information is required such as:

- Building consent number
- Site address
- Type of inspection (foundation, pre-slab, pre-line etc)
- Contact phone number
- Name of person making booking

2. Purpose behind the Inspection Process

A building consent authority needs to undertake inspections during construction.

The required inspections will be identified during the building consent approval process and clearly indicated on the consent documents.

It is important that the identified inspections are requested and undertaken, as a failure could result in difficulties obtaining a Code Compliance Certificate at the end of the project.

The fundamental principal behind the inspection process is to provide sufficient information to enable the Building Consent Authority to issue a Code Compliance Certificate at the completion of the building project.



To enable this decision to be made the Building Consent Authority must be satisfied, on reasonable grounds, that the completed building project complies with the building consent which includes the consented plans, specifications and any amendments approved during the process.

3. Alterations / Amendments during Construction

The Building Act 2004 requires work to be carried out in accordance with the building consent.

However changes often occur during construction either to the design or materials or proprietary systems which require an amendment to the building consent.

There are two ways that these amendments can be dealt with;

1. For minor amendments / changes the Hutt City Building Inspection Officers may simply note the plans, record their decision for acceptance and work can carry on.

Some examples of minor work could be;

- a change to window/door positioning which does not affect the wall bracing
- a change in insulation to a higher R value
- a change in timber treatment to a higher level

- For major amendments / changes you will be required to apply to the BCA, Building Consents, for an amendment. This may result in work being held up until the amendment has been approved and issued. This may not necessarily require the entire building project to stop, but it will certainly stop work on the area covered by the amendment
- Additional costs may be associated with the amendment process – please discuss this with Building Consents.

Examples of major work could include;

- a change to the siting of the building
- any change to the footprint of the building
- a change to foundation details
- any structural changes including trusses
- a change to interior/exterior wall cladding
- a change in roofing material
- a change to service room layouts
- a change to wall bracing

This is not an exhaustive list. It is recommended that regardless of the change, you discuss this with the Building Inspections Officer so that agreement can be reached on the best way of dealing with them.

4. The Inspection Process

Whenever possible someone who has the authority to make decisions or act on behalf of the consent holder, should be on-site during the inspection process.

Your approved plans and supporting documents must be on-site and available at the time of inspection.

Depending on the scope of your building project, a number of inspections will be carried out during construction and could include, but is not limited to, the following:

Site

Foundation

Piles

Pre-slab plumbing (concrete slab)



Pre-slab building (concrete slab)

Sub-floor (timber suspended floor)

Drainage

Pre-wrap

Pre-clad

Post-clad

Pre-stucco

Pre-line (plumbing)

Pre-line (building)

Wet area membranes, decks, roofs and shower area

Post-line

Block

Brick Veneer

Retaining wall

Final

Free-standing Solid Fuel Heater

In-Built Solid Fuel Heater

Engineer – Civil / Structural / Fire / Geotechnical

Site safety is the responsibility of the project manager or contractor. If our Building Inspections Officers do not feel safe, they will not enter the site. The consequence will be a new booking time and additional inspection cost.

Dogs on site and loud music can be disruptive during the inspection process. Please ensure dogs are secured and radios turned down.

5. What We Will Be Looking for During Each Specific Inspection?

What we will be looking for during the inspection, what you need to do in preparation and when you need to call for the inspection.

a. Site Inspection

When to call for inspection

- When the building set-out has been completed, footings have been excavated and reinforcement is in place.

What we will look at

- site location
- visible boundary markers (note: if boundaries are not identified a Registered Surveyor may be required to establish or confirm the set-out)
- site contours are in accordance with the submitted plans
- check that submitted plans reflect extent of proposed work (alterations, additions)
- preliminary check of ground conditions

What you should do

- This is an opportunity to meet the Building Inspections Officer, discuss the project overview and confirm the next required inspection.

b. Foundation

When to call for inspection

- When all form-work (boxing) has been completed, footings have been excavated and reinforcement is in place.

What we will look at

- Check that the siting of the building conforms to the building consent site plan. Boundaries must be identified by location of boundary pegs or by survey. With building projects that are critical in respect to distance from boundaries, height or day lighting requirements, building set out must be confirmed by survey.
- footings are appropriate size and excavated to solid
- reinforcing is in place (size, spacing, laps and cover) adequately tied and secured and conform with consent documents
- for ring foundations; sub-floor vents
- that minimum floor levels/ground clearances can be achieved against datum
- advise on next inspection

What you should do

- This is an opportunity to meet the Building Inspections Officer, discuss the project overview and confirm the next required inspection.
- ensure that boundaries are adequately defined
- ensure that building set out complies with consent documents
- if required, a surveyor's report is available
- approved plans and supporting documents are on site

- don't put us and the contractor under pressure by ordering concrete until after the inspection has been carried out

c. Piles

When to call for inspection

- When all holes are excavated prior to installation of piles.
- In the case of driven piles this inspection should be coordinated with the design engineer (NB Building Consent Authority Building Inspections Officers are still required to be present)

What we will look at

- The siting of the building conforms to the building consent site plan.
Boundaries must be identified by location of boundary pegs or by survey.
With building projects that are critical in respect to distance from boundaries, height or daylighting requirements, building set out must be confirmed by survey.
- pile holes are correct size and depth and to solid
- piles are on site and meet the required treatment level
- check or advise that no cut ends of piles are to be inground
- that minimum floor levels/ground clearances can be achieved against datum
- advise on next inspection

What you should do

- ensure that boundaries are adequately defined and work set out against datum
- ensure that building set out complies with consent documents
- if required a surveyors report is available
- approved plans and supporting documents are on site
- if required the design engineer has been advised

d. Pre-Slab Plumbing (concrete slab)

When to call for inspection

- when all plumbing and drainage pipes have been installed, prior to backfilling installation of Damp Proof Membrane and reinforcing mesh

What we will look at

- positioning of wastes, drains and heating pipes; fall and separation/protection through concrete

What you should do

- provide safe access to site
- ensure plumber / drain layer is suitably qualified and licensed or supervised and preferably on-site
- approved plans and supporting documents are available on site

e. Pre-Slab building (concrete slab)



When to call for inspection

- When the Damp Proof Membrane (DPM) has been placed with all laps and penetrations sealed, reinforcing in place and in position with chairs as appropriate.

What we will look at

- ground clearance; allow for future site works around and ground drains away from building
- DPM, sand blinding, taping of laps and penetrations
- reinforcing steel/mesh; size, spacing, laps, cover and support
- rebates for veneers and joinery/weathering
- cast in connection, bottom plate fixings
- slab thickenings under load bearing elements
- that minimum floor levels/ground clearances can be achieved against datum
- advise on next inspection

What you should do

- If required the design engineer has been advised and is on site or previously inspected (if so have report available).

- Provide safe access to site
- ensure approved plans and supporting documents are available on site

f. Sub-Floor (timber suspended floor)



When to call for inspection

- When all sub-floor connections, joists and required blocking, and any suspended plumbing pipe work have been completed, but before any flooring or base boards have been fitted. Relocated dwellings require a sub-floor inspection prior to the base boards being fitted.

What we will look at

- pile height, pile connections, crawl space and DPM
- cut pile ends sealed
- bracing connections; strength and durability
- sub-floor framing; treatment, layout related to load-bearing elements supported
- insulation and protection
- advise on next inspection

What you should do

- If required the design engineer has been advised and is on-site or previously inspected (if so have report available).
- provide safe access to site
- ensure approved plans and supporting documents are available on site

g. Drainage

When to call for inspection

- When all drainage works is completed and drain is under test. If the drains have been laid greater than + or – 300mm from the approved drainage plan then an as-laid drainage plan is required at time of inspection

What we will look at

- The drains are to be left uncovered during this inspection
- Trench size, support and bedding material
- Trench / foundation relationship
- Material, connections, junctions, fall and network connection

What you should do

- ensure approved plans and supporting documents are on-site and available
- drainlayer must provide an as-built drainage plan if deviation greater than tolerance allowed.
- ensure that drains are under test at time of inspection
- with onsite effluent disposal systems, the design engineers certification must be available

h. Pre-Wrap



When to call for inspection

- when all roof and wall framing is complete, including any exterior sheet bracing, but before building wrap (building paper) has been installed

What we will look at

- inspect all structural framing including roof structure

- timber; treatment, member sizes and spacings
- sub-linings; wind barriers, exterior wall bracing
- connections; structure and durability
- waterproof rebate for masonry/brick veneer
- check window/door opening sizes and location
- advise next required inspection

What you should do

- provide access to site if required
- ensure approved plans and supporting documents are on site

i. Pre-Clad



When to call for inspection

- when building wrap (building paper) and window and door flexible flashing tape has been installed, cavity battens (cavity systems), cavity closers and all flashing systems are in place, but before joinery has been installed

What we will look at

- building wrap and roofing underlays; absorbency; laps and support
- cavity, closed at top and closed off from subfloor and attic spaces
- cavity battens; size, treatment and layout (generally no horizontal obstructions)
- check building wrap for correct installation and type
- check installation of flashing tape around all openings
- check other flashings
- check cavity battens and closers if cavity system being used
- advise next inspection

What you should do

- provide access to site
- ensure approved plans and supporting documents are on site

j. Weathertightness (monolithic cladding systems)

When to call for inspection

- when exterior cladding has been installed, flashings in place, air seals fitted to openings, but before any coating system have been applied

What we will look at

- EIFS/Fibre cement sheet, fixing, layout, control joints, joint reinforcement, moldings (edges, corners, around penetrations)
- cladding around clearances; note re future landscaping
- flashings; inter-storey and around all penetrations
- advise next inspection

What you should do

- provide access to site
- approved plans and supporting documents are on site

k. Pre-Stucco

When to call for inspection

- after the post-wrap inspection and when all the reinforcing and flashings are in place

What we will look at

- cavity battens and closers
- control joints
- backing, mesh, spacers, proposed curing
- advise next inspection

Note: If proprietary control jointing systems are not being used, an additional inspection will be required after the first scratch coat when control joints have been formed.

What you should do

- provide access to site
- approved plans and supporting documents are on site

l. Pre-line (plumbing)

When to call for inspection

- the completed plumbing work must be subjected to the standard pressure test by an appropriately qualified person using a recognised and calibrated testing equipment

What you should do

- ensure plumbing work is carried out by appropriately qualified and licensed plumbers

m. Pre-line (building)



When to call for inspection

- when the exterior of the building is weather-tight, all structural components (including bracing) have been completed and wall insulation in place.

What we will look at

- building closed in; penetrations weathertight (flashings, scribes etc)
- cladding ground clearance; note re future landscaping
- joinery; standard appropriate for site exposure, cover with cladding achieved
- glazing; human impact, opening sizes
- framing; size, spacing, treatment, cut out for services
- connections; bracing, number, size, durability
- moisture content
- insulation; material and installation workmanship
- air sealing around penetrations
- plumbing pipework installed in framing; material, support, pressure test, connection to approved supply
- advise next inspection

What you should do

- provide safe access to site
- ensure approved plans and supporting documents are on site and available

n. Wet Area Membranes (decks, roofs, shower areas)

When to call for inspection

- pre-application (before membrane is applied) of wet area membrane, when all outlets and flashings have been installed, ready for membrane installation
- post application (after application of membrane) of wet area membrane

What we will look at

- substrate material, fixing, joint preparation
- finished membrane installation
- advise next inspection

What you should do

- provide access to site
- ensure approved plans and supporting documents are on site
- ensure membrane is applied by approved applicator (approved by manufacturer or supplier)
- obtain product and installation warrantee for membrane

o. Post-line

When to call for inspection

- when all interior linings have been installed, but before fitting of skirting, scotia or plastering stopping

What we will look at

- fixing of wall linings
- installation details of wall bracing elements and wall linings in general
- correct installation of any fire rated and wet area wall linings
- advise next inspection

What you should do

- provide access to site
- ensure approved plans and supporting documents are on site

p. Concrete Block Walls, including retaining walls

When to call for inspection

- when all masonry block work is completed to the pour height, reinforcing in place and exposed washout openings in place

What we will look at

- reinforcing is as detailed, lapped correctly and securely tied
- block cavities washed out and clean
- joints cleanly struck
- washouts
- advise next inspection

What you should do

- block work carried out by registered mason
- ensure approved plans and supporting documents are on-site and available

q. Brick Veneer

When to call for inspection

- when veneer is at half height and all flashings are in place

What we will look at

- washouts being utilised
- joints cleanly struck
- brick ties in place and screw fixed
- appropriate type of brick tie used
- cavity correct width
- cavity clear of mortar
- cavity clear of services
- all flashings in place
- advise next inspection

What you should do

- ensure approved plans and supporting documents are on site

r. Retaining Wall (concrete or block)

When to call for inspection

- pre-application of waterproof membrane system
- post application of waterproof membrane system
- protection installed for membrane system and installation of perforated drainage system before back-filling

What we will look at

- check as for concrete block inspection
- subsoil drain; below slab level, protected with geotech fabric, fall to trapped outfall
- waterproof membrane including junction with any floor slab DPM
- membrane, protected and backfilled with appropriate drainage material

What you should do

- ensure block work is carried out by registered mason
- ensure approved plans and supporting documents are on-site and available

s. Final Inspection



When to call for inspection

- Final inspections are carried out at the completion of the project and once the Application for Code Compliance Certificate (Form 278) and associated relevant certificates and warranties have been received. It may also include the entire project, plumbing, drainage and storm water. The Code Compliance Certificate is issued if the building work complies with the approved building consent.

What we will look at

- that the work complies with the building consent plans and specifications
- follow-up; any outstanding items noted at previous inspections
- cladding; roof, decks (slip resistance) and walls, flashings, sub-floor ventilation, brick cavity vents, ground clearance measured / noted
- downpipe; size support, spreaders, termination to gully / interception, deck and internal gutter overflows
- drainage; trenches backfilled, site fall away from building and to sumps, gully rims above surrounding ground
- stairs; dimensions, slip resistance, handrails
- safety barriers; fixings, gaps, fencing of swimming pools
- wet area surfaces; impervious and easy clean
- HWC; seismically restrained, valves, overflow drain, temperature (measure / record at sanitary fixtures)
- waste venting; terminations, AAVs
- plumbing; taps, stop-valves, cistern overflows
- check installation and location of smoke detectors
- location and security of gas cylinders

What you should do

- ensure approved plans and supporting documents are on site and available
- provide safe access to site
- ensure power and or gas is turned on to allow for checking of water temperature
- ensure that development impact levies have been paid

t. Free Standing Solid Fuel Heater

When to call for inspection

- when installation is complete
- final inspection required only

What we will look at

- clearances; hearth requirement, linings, framing at ceiling and roof
- seismic restraint
- flue internal; ceiling collar, shield requirement?

- flue external; weatherproof flue penetration, termination position relative to roof line and openings
- smoke detectors

What you should do

- provide safe access to site
- ensure smoke detectors are in place and working
- ensure ceiling plate is loose to enable flue clearance to be checked

u. In-Built Solid Fuel Heater

When to call for inspection (First Inspection)

- Inspection required before installation **and** after installation

What we will look at

- initially to check condition of flue opening and chimney

Once the fire has been installed (Second Inspection)

- clearances; hearth requirement
- seismic restraint
- flue external; weatherproof flue penetration, termination position relative to roof line and openings
- smoke detectors

What you should do

- provide safe access to site
- ensure smoke detectors are in place and working

v. Multi Residential/ Commercial/Industrial

There are additional inspections required for multi residential / commercial / industrial buildings. These inspections will be identified in your building consent. It is recommended that you discuss these inspections early in the building project with the Building Inspections Officer.

w. Specific Inspections by ‘Engineer’

Many building projects have specific engineer design aspects and these are required to be undertaken by the design engineer or his / her delegated representative.

These elements may include

- structural design
- fire design
- mechanical
- geotechnical

When any of these inspections are undertaken, the design engineer must provide a Statement of Expert Opinion supported by site inspection notes detailing the type, position, and extent of inspection. This will also need to match the inspection schedule provided and agreed to by the Building Consent Authority before the consent has been issued. These reports are to be provided as reasonably as practicable after the inspection (not at the conclusion of the project)

Note: Inspections carried out by engineers do not avoid the requirement for the Building Consent Authority to inspect. It is helpful for these inspections to be coordinated. To assist with this advance notice is required.

It is your responsibility to arrange these inspections and they are identified on consent documents.

6. The Certification Process

The certification process is the final act in the building consent process.

To commence this process the owner must apply to the Building Consent Authority for a Code Compliance Certificate using the prescribed form (ECB-FORM-278).

This application must be received by the Building Consent Authority prior to the 24 month anniversary of the building consent being granted [a reminder will be sent at approximately 4 months before the expiry date].

Once received a final inspection as detailed above will be carried out and providing the building project complies with the building consent, a Code Compliance Certificate will be issued.

The Council has 20 working days to either issue or refuse to issue, the Code Compliance Certificate.

If during the final inspection the Council discovers non-complying aspects, the application for code compliance certificate will be suspended pending a remedy to this non-compliance. A Notice-to-Fix can also be issued which will detail the work and associated timeframe for completion.

Once the specified work is completed the Building Consent Authority will re-inspect and if reasonably satisfied the Code Compliance Certificate may be issued.

7. Other Considerations - Site Management

Often by-products of the construction process create complaints to the Territorial Authority which can take up a considerable amount of time.

We appreciate that your focus is generally concentrated on the physical construction of the building project; however many of the complaints a Territorial Authority receives could be avoided if some simple steps were taken prior to commencement of the work.

If we are responding to a reasonable justifiable complaint relating to something that should have been done, the Territorial Authority reserves the right to recover the cost of the inspection.

Site Water, Erosion and Sediment Management

The erosion of topsoil from vegetation clearance and earthworks on building sites can develop into a problem. Effective control is based on the following principles

- Good forward planning
- Minimize clean water running onto your site
- Restrict soil erosion on your site
- Capture and treat dirty water running off your site
- Check to ensure your control measures remain effective.

Further technical guidance can be found in the following documents

- *Erosion and Sediment Control Guidelines* (see web site at <http://www.gw.govt.nz/story3017cfm?PubID=569>)
- *On-site Stormwater Management Guideline* – (see web site at <http://www.nzwerf.org.nz/publications.html>)

Wind Blown Dust and Dirt

Building sites within the District especially in beach areas are predominantly sand which can cause problems once the grass cover is disturbed.

The resulting loose sand can be a significant nuisance to neighboring properties and if not contained quickly drifts onto roads and blocks stormwater systems.

This is particularly prevalent during the summer period and the use of water to dampen loose sand is, due to water restriction, not an option.

Restrict the removal of vegetation to the immediate footprint of the building and cover any loose or stock piled sand with scrim or polythene.

Vibration or shaking

The use of driven timber piles is a common method used for establishing foundations in the Hutt Valley.

The physical driving of the piles can and often has caused a considerable amount of concern and stress to adjoining property owners due to the significant vibration and ground shaking as the piles are driven.

Often the first the Territorial Authority hears of this occurring is through a call from a distressed neighbour complaining that his or her home is being damaged as a result.

A simple early discussion with the neighbours advising of the intent to drive piles and a simple explanation of the resulting effect could avoid a potential confrontation.

Noise

The Council is often contacted over noise concerns on building sites which generally fall into two categories.

- construction noise
- music

Construction noise complaints are normally generated as a result of construction starting or finishing outside the normal “working hours”.

Noise limits are controlled under the Resource Management Act 1991 and Hutt City uses New Zealand Standard 6803:1999 as an acceptable benchmark. Refer to Section 7 of this Standard for the permitted noise levels.

The Council may grant permission for construction work to occur outside these times or levels, if **emergency** works are necessary, or work cannot be completed during normal working hours because of public safety or traffic hazards.

If you have special permission to work outside the permitted hours, it is advisable to notify any residents who may be affected by noise, about the times and days of operation and give them an on site contact phone number.

Music on site is very common and if kept to a reasonable level will not be objectionable. However there are occasions when levels are unacceptable generating complaints.

All noise generated on a building site whether from a radio or other sources are subject to the same limits. All it takes is some common courtesy and consideration to neighbours.

Dogs

It is our view that dogs don't belong on buildings sites and we would remind you that if you choose to have your dog with you, they must be under control at all times.

If they wander or cause a nuisance to passers-by or neighbours, you run the risk of being taken to task by the Council Dog Control.

The dog must also be restrained when a Building Inspections Officer attends an inspection.

Toilets

Please provide suitable toilet facilities on site for the duration of the contract. You would be surprised at the number of complaints received by the Territorial Authority for inappropriate 'toilet habits' of contractors on building sites, particularly in built up residential areas.

This guidance document has been produced to assist you in successfully completing the Inspection process, meeting your obligations under the Building Act 2004 and obtaining the Code Compliance Certificate.

In conclusion, this Building Consent Authority wishes you all the best with your building project and the associated inspections.

Telephone (04) 570 6754 for booking your project inspections.