

# Architectural Specification

Work to be done and materials to be used in carrying out the works shown on the accompanying drawings.

## RPNYC - Seismic and Interior Upgrade

### Project Address

103 Oriental Parade, Wellington, New Zealand

### Prepared for

Royal Port Nicholson Yacht Club

### Issued for

DRAFT Building Consent

Project No. 18138

Date: Thursday, Nov 29, 2018

**MCKENZIE  
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# 1220 PROJECT

## 1 GENERAL

This general section describes the project including:

- A description of the work
- Design construction safety
- Principal's Health & Safety matters
- Site description, features and restrictions
- Design parameters for design by contractor
- Archaeological discovery

### 1.1 READ ALL SECTIONS TOGETHER

Read all general sections together with all other sections.

### 1.2 DESCRIPTION OF THE WORK

Updating men and women's changing rooms with new linings and fixture layouts. New floor finishes. New bracing and portal frame as per engineers drawings.

### 1.3 RESTRICTED BUILDING WORK

This project includes Restricted Building Work.

#### **Design Construction Safety**

### 1.4 DESIGN CONSTRUCTION SAFETY

The project designers are unaware of unusual or atypical features, which a reasonably experienced contractor may not be aware of, that may present a hazard or risk during a typical construction process. The Contractor is still required to undertake its own assessment, to determine if they consider there are any further safety matters and provide for these in carrying out the construction of the work.

#### **Site**

### 1.5 SITE

The site consists of: Existing building adjacent to waterfront  
As shown on drawing: 000 Cover & Location Plan

### 1.6 LEGAL DESCRIPTION

The site of the works, the street address and the legal description are shown on the drawings.

### 1.7 EXISTING BUILDINGS

Existing buildings      Existing two storey yacht club  
consist of:  
Refer drawing(s):      101 Existing & Demo Lower Ground Floor Plan

### 1.8 EXISTING SERVICES

The following are the network utility services:  
Electrical:              Existing, confirm on site  
Communications:      Existing, confirm on site  
Water:                    Existing, confirm on site  
Stormwater:            Existing, confirm on site  
Foul water:              Existing, confirm on site

Agree any changes to existing services on site as required by alterations, make good existing. Refer drawings

### 1.9 SITE FEATURES

Building is adjacent to the waterfront, connects to the pedestrian pathway on the street side which is offset from the road by landscaping.

#### **Site environment - Durability**

1.10 EXPOSURE ZONE

The exposure zone is to [NZS 3604](#), Section 4 Durability, 4.2 Exposure zones and [NZBC E2/AS1](#).  
The site zone is: D

**Site environment - Wind**

1.11 WIND DESIGN PARAMETERS - NON SPECIFIC DESIGN

The design wind pressures are to [NZS 3604](#), Table 5.4 Determination of wind zone, up to and including Extra High Wind Zone.

Building wind zone Extra High (refer to [NZS 3604](#), table 5.4)

**Site environment - Seismic**

1.12 EARTHQUAKE ZONE - NON SPECIFIC DESIGN

The zone is to [NZS 3604](#), Section 5 Bracing design, 5.3 Earthquake bracing demand.

The earthquake zone 3  
is:

**Archaeological discovery**

1.13 REPORT FINDING ANY ANTIQUITIES AND ITEMS OF VALUE

Report the finding of any fossils, antiquities and other items of value, to the Contract Administrator. All to remain undisturbed until approval is given for removal.

Pre-1900, items or evidence of human activity on the site, come under the [Heritage New Zealand Pouhere Taonga Act 2014](#). If such items or evidence is discovered work must stop immediately and the Contract Administrator must be notified immediately. The site may be classified as an Archaeological Site under the Act, and the Contract Administrator or Owner must contact the Heritage New Zealand for authority to proceed.

Post-1900 items remain the property of the owner, pre-1900 items may remain the property of the owner or the Crown subject to what is found.

# 1222 PROJECT PERSONNEL

## 1 GENERAL

This general section provides a list of the parties who are involved with the project. Communications to these personnel are to be sent to them at the address as listed. Refer to the construction contract for:

- the roles that they have under the contract; and
- address details for notices being given under the contract.

### Principal

#### 1.1 PRINCIPAL

Name: Royal Port Nicholson Yacht Club  
 Street: 103 Oriental Parade,  
 Wellington  
 Represented by: Jason Reid  
 Phone: 04 939 7043  
 Email: admin@rpnyc.org.nz

### Contractor

#### 1.2 COMPANY

Name: Hutt City Builders  
 Street: 32B Redvers Drive, Belmont, Lower Hutt 5010  
 Telephone: 021 316 133  
 Represented by: Regan Powell  
 Email: info@huttcitybuilders.co.nz

#### 1.3 CONTRACT MANAGER

Person:  
 Mobile:  
 Telephone:  
 Email:

#### 1.4 SITE FOREMAN

Person:  
 Mobile:  
 Telephone:  
 Email:

### Consultants

#### 1.5 CONTRACT ADMINISTRATOR

Name: Royal Port Nicholson Yacht Club  
 Represented by: Jason Reid  
 Phone: 04 939 7043  
 Email: admin@rpnyc.org.nz

## 1.6 ARCHITECT

Practice: McKenzie Higham Architects  
 Postal: PO Box 9792,  
 Marion Square,  
 Wellington 6141  
 Street: Level 1,  
 171 Vivian Street,  
 Te Aro, Wellington  
 Telephone: 04 384 8192  
 Represented by: Mark Ansell  
 Mobile: 04 903 4976  
 Email: Mark.Ansell@mckenzie-higham.co.nz

## 1.7 STRUCTURAL ENGINEER

Practice: Dunning Thornton Consultants  
 Postal: PO Box 27-153,  
 Wellington 6141  
 Street: Level 9, 94 Dixon Street, Wellington 6011  
 Telephone: 04 385 0019  
 Represented by: Paul Brimer

## 1.8 FIRE ENGINEER

Practice: Vishnu Fire Safety  
 Telephone: 0508 108 108  
 Represented by: Nirav Patel  
 Mobile: 021 104 3334  
 Email: nirav@vishnufiresafety.co.nz

**Territorial Authority**

## 1.9 BUILDING CONSENT AUTHORITY

Name: Wellington City Council  
 Postal: PO Box 2199,  
 Wellington 6140  
 Street: 101 Wakefield Street,  
 Wellington 6011  
 Telephone: 04 801 4311  
 Email: bcc@wcc.govt.nz

# 1232 INTERPRETATION & DEFINITIONS

## 1 GENERAL

This general section relates to definitions and interpretation that are used in this specification.

### Definitions

#### 1.1 DEFINITIONS

Hold point:	A stage of the construction where the contract administrator and any other nominated person requires notice to be given that particular work is to be carried out. Work may not proceed on that particular part until the contract administrator and any other nominated person has advised that work can continue. A notice period of 2 Working Days is required unless stated otherwise.
Notification point:	A stage of the construction where the contract administrator and any other nominated person requires notice to be given that particular work is to be carried out. Work may continue and the contract administrator and any other nominated person may choose whether or not they wish to witness the particular work being carried out. A notice period of 2 Working Days is required unless stated otherwise.
Product:	A thing or substance produced by natural process or manufacture.
Proprietary:	Identifiable by naming the manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.
Provide and fix:	"Provide" or "fix" or "supply" or "fix" if used separately mean provide and fix unless explicitly stated otherwise.
Required:	Required by the documents, the <a href="#">New Zealand Building Code</a> or by a statutory authority.
Review:	Review by the contract administrator and other consultants is for general compliance only. Review does not remove the need for the contractor to comply with the stated requirements, details and specifications of the manufacturers and suppliers of individual components, materials and finishes. Neither can the review be construed as authorising departures from the contract documents.
Working day:	Working day means a calendar day other than any Saturday, Sunday, public holiday or any day falling within the period from 24 December to 5 January, both days inclusive, irrespective of the days on which work is actually carried out.
Workplace:	Workplace means the place where work is being carried out, or is customarily carried out, for a business or undertaking including any place where a worker goes, or is likely to be, while at work (under <a href="#">Health and Safety at Work Act 2015</a> ).

#### 1.2 PERSONNEL

Principal:	The person defined as "Principal" in the conditions of contract.
Contractor:	The person contracted by the principal to carry out the contract.
Contract administrator:	The person appointed by the principal to administer the contract on the principal's behalf. Where no person has been appointed by the principal, it means the principal or the principal's representative.

### 1.3 ABBREVIATIONS

The following abbreviations are used throughout the specification:

AAMA	American Architectural Manufacturers Association
AS	Australian Standard
AS/NZS	Joint Australian/New Zealand Standard
ASTM	American Society for Testing and Materials
AWCINZ	Association of Wall and Ceiling Industries of New Zealand Inc.
BCA	Building Consent Authority
BRANZ	Building Research Association of New Zealand
BS	British Standard
COP	Code of practice
CSIRO	Commonwealth Scientific and Industrial Research Organisation
HERA	Heavy Engineering Research Association
LBP	Licensed Building Practitioner
MBIE	Ministry of Business, Innovation and Employment
MPNZA	Master Painters New Zealand Association Inc
NZBC	<a href="#">New Zealand Building Code</a>
NZS	New Zealand Standard
NZS/AS	Joint New Zealand/Australian Standard
NZTA	New Zealand Transport Agency
NUO	Network Utility Operator
OSH	Occupational Safety and Health
PCBU	Person Conducting a Business or Undertaking (under <a href="#">Health and Safety at Work Act 2015</a> )
RBW	Restricted Building Work
SARNZ	Scaffolding and Rigging New Zealand Inc
SED	Specific Engineering Design
TA	Territorial Authority
TNZ	Transit New Zealand (Transit New Zealand is now New Zealand Transport Agency NZTA - some specifications are still prefixed TNZ)

### 1.4 DEFINED WORDS

Words defined in the conditions of contract, New Zealand Standards, or other reference documents, to have the same interpretation and meaning when used in their lower case, title case or upper case form in the specification text.

### 1.5 WORDS IMPORTING PLURAL AND SINGULAR

Where the context requires, words importing singular only, also include plural and vice versa.

# 1232S1 EXPLANATION OF SCHEDULE SECTIONS

## 1 GENERAL

This General section provides an explanation of Schedule sections and their relationship to General sections and Work sections. Specific Schedule sections contained within this specification are also identified.

### 1.1 EXPLANATION OF SCHEDULE SECTIONS

A schedule section identifies Work sections that contain common requirements, as identified in the title of the Schedule section. For example 1235S1 SCHEDULE OF SHOP DRAWINGS identifies Work sections that have requirements for shop drawings. Details of the requirements are contained in the identified Work sections with additional requirements contained in the General section 1235 SHOP DRAWINGS.

A Schedule section is identified by the 4 digit CBI (Co-ordinated Building Information) number of the General section that it relates to, followed by the letter "S" followed by a numeral (1-9). The numeral allows for multiple schedule sections to be associated with the same General section.

### 1.2 SCHEDULE SECTIONS

The following Schedule sections are contained within the specification:

1237S1	Schedule of Warranties
1238S1	Schedule of As Built Documentation
1239S1	Schedule of Operation & Maintenance Info
1270S2	Schedule of Spares & Maintenance Products

# 1233 REFERENCED DOCUMENTS

## 1 GENERAL

### 1.1 REFERENCED DOCUMENTS

Throughout this specification, reference is made to various [New Zealand Building Code](#) Compliance Documents (NZBC \_\_\_), acceptable solutions (\_\_\_ AS\_) and verification methods (\_\_\_ VM\_) for criteria and/or methods used to establish compliance with the [New Zealand Building Code](#).

Reference is also made to various standards produced by Standards New Zealand (NZS, AS/NZS, NZS/AS), overseas standards and to listed Acts, Regulations and various industry codes of practice and practice guides. The latest edition (including amendments and provisional editions) at the date of this specification applies unless stated otherwise.

It is the responsibility of the contractor to be familiar with the materials and expert in the techniques quoted in these publications.

Documents cited both directly and within other cited publications are deemed to form part of this specification. However, this specification takes precedence in the event of it being at variance with the cited documents.

### 1.2 DOCUMENTS

Documents referred to in the GENERAL sections are:

<a href="#">NZBC F5/AS1</a>	Construction and demolition hazards
<a href="#">AS/NZS 1170.2</a>	Structural design actions - Wind loads
<a href="#">NZS 1170.5</a>	Structural design actions - Earthquake actions - New Zealand
<a href="#">AS/NZS 3012</a>	Electrical installations - Construction and demolition sites
<a href="#">NZS 3109</a>	Concrete construction
<a href="#">NZS 3114</a>	Specification for concrete surface finishes
<a href="#">NZS 3602</a>	Timber and wood-based products for use in building
<a href="#">NZS 3604</a>	Timber-framed buildings
<a href="#">NZS 4210</a>	Masonry construction: Materials and workmanship
<a href="#">AS/NZS 5131</a>	Structural steelwork - Fabrication and erection
<a href="#">NZS 6803</a>	Acoustics - Construction Noise
<a href="#">Building Act 2004</a>	
<a href="#">Building Regulations 1992</a>	
<a href="#">Health and Safety at Work Act 2015</a>	
<a href="#">Health and Safety at Work (General Risk and Workplace Management) Regulations 2016</a>	
<a href="#">Health and Safety at Work (Hazardous Substances) Regulations 2017</a>	
<a href="#">Health and Safety in Employment Regulations 1995</a>	
<a href="#">New Zealand Building Code</a>	
<a href="#">Heritage New Zealand Pouhere Taonga Act 2014</a>	
<a href="#">Resource Management Act 1991</a>	
<a href="#">Smoke-free Environments Act 1990</a>	
WorkSafe NZ	<a href="#">Guidelines for the provision of facilities and general safety in the construction industry</a>
WorkSafe NZ	<a href="#">Good Practice Guidelines - Excavation Safety</a>
WorkSafe NZ	<a href="#">Scaffolding in New Zealand - Good Practice Guidelines</a>

# 1234 DOCUMENTATION

## 1 GENERAL

This general section relates to documentation required by the Territorial Authority / Building Consent Authority for compliance with the [New Zealand Building Code](#). It also includes documentation relating to:

- Substitutions
- Manufacturers' documents
- Branded work sections
- Care of construction documents
- Confidentiality of documents
- Receipt of construction documents

### **Building Consent Authority documentation**

#### 1.1 BUILDING CONSENT

Obtain the original building consent forms and documents from the owner and keep them on site, preserve the condition of consent forms and documents. Liaise with the building consent authority for all notices to be given and all inspections required during construction to ensure compliance. Return the consent form and documents to the owner on completion.

#### 1.2 BUILDING CONSENT COMPLIANCE

It is an offence under the [Building Act 2004](#)

- to carry out any work not in accordance with the building consent.
- to carry out Restricted Building Work by anyone other than a Licensed Building Practitioner licensed for that type of work.

The resolution of matters concerning building code compliance to be referred to the contract administrator for a direction and then if required to the BCA for consent.

Where any alteration is requested by the territorial authority or any other authority, do not undertake such alteration until the matter has been referred to the contract administrator for direction.

#### 1.3 PROJECT PERSONNEL

Provide names and contact details of the contractor's key personnel and tradespersons who are involved with the project. Review the list once a month and reissue it if changes have been made.

### **Compliance information**

#### 1.4 DOCUMENTATION REQUIRED FOR CODE COMPLIANCE

Information may be required either as a condition of the contract documents or as a condition of the building consent. It may include the following:

- Applicators approval certificate from the manufacturer / supplier
- Manufacturer's / supplier's warranty
- Installer / applicator's warranty
- Producer Statement (PS1) - Design
- Producer Statement (PS3) - Construction from the applicator / installer
- Producer Statement (PS4) - Construction review from an acceptable suitably qualified person

Refer to the general sections for the requirements for compliance information to be provided by the contractor.

Refer to the building consent for the requirements for compliance information to be provided by the contractor.

Obtain required documents from the relevant parties for delivery to the contract administrator after the final inspection has been carried out by the BCA.

#### 1.5 PRODUCER STATEMENTS

When producer statements verifying construction are required, provide copies to both the Building Consent Authority and the Contract Administrator. Provide producer statements in the form required by the BCA.

## Substitutions

### 1.6 ACCEPTABLE PRODUCT/MATERIAL SUPPLIERS

Where a product or material supplier is named in SELECTIONS, the product/material must be provided by the named supplier. Where more than one named supplier, any one of the named suppliers will be acceptable.

### 1.7 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified products and systems listed in a section unless specified otherwise. If a product is not available then immediately contact the contract administrator for direction.

### 1.8 PROPOSED SUBSTITUTIONS

Substitution of products or systems contained within branded work sections is not allowed. The contractor may propose substitutions to products within non branded work sections, when the contractor has determined that the proposed substitution is an alternative to the specified product. The Contract administrator is not bound to accept any substitutions. Submit a draft proposal detailing the substitution to the contract administrator before proceeding with full notification.

### 1.9 NOTIFICATION OF SUBSTITUTIONS

Notify the contract administrator of proposed substitution of specified products. Notification to include but not be limited to:

- Product identification
- Manufacturer's name, address, telephone number, website and email address
- Detailed comparison between the properties and characteristics of the specified product and the proposed substitution
- Statement of NZBC compliance including durability
- Details of manufacturer warranties

Plus an assessment of:

- Any changes required to the programme including any extension of time required
- Any consequential effects of the proposed substitution
- Any effect the substitution may have on Health & Safety requirements
- Allowance for time and cost for re-design and documentation (if applicable)
- Allowance for time and cost for obtaining an amendment to the Building Consent (if applicable)
- Any change in cost associated with the proposed substitution

and if requested:

- All current manufacturer's literature on the product
- Accreditations and appraisals available
- Reference standards
- Product limitations
- Samples
- List of existing installations in the vicinity of the project

### 1.10 ACCEPTANCE OF SUBSTITUTIONS

Acceptance of any proposed substitutions will be given in writing by the contract administrator.

## Amendments to issued Building Consent

### 1.11 CONTRACTOR AMENDMENTS TO BUILDING CONSENT

Where the contractor has sought acceptance of a substitution or a variation which is for the contractor's own convenience and the substitution or variation requires an amendment to the Building Consent, the contractor must apply for and obtain the required amendment.

The contractor must:

- Obtain approval for substitutions from the contract administrator.
- Prepare and provide to the BCA all documentation required for the amendment.
- Pay all fees and other costs associated with this amendment.
- Where the amendment affects other approved plans, also amend those plans.

**1.12 PRINCIPAL AMENDMENTS TO BUILDING CONSENT**

Where the principal is proposing a substitution or a variation which requires an amendment to the Building Consent, the contractor must provide to the principal information that the contractor has that is required for the amendment.

The principal will:

- Prepare and provide to the BCA all documentation required for the amendment.
- Pay all fees and other costs associated with this amendment.
- Where the amendment affects other approved plans, also amend those plans.

**Manufacturer's documents****1.13 MANUFACTURER'S AND SUPPLIER'S INSTALLATION REQUIREMENTS**

Manufacturer's and supplier's requirements, instructions, specifications or details mean those issued by them for their particular product, material or component and are the latest edition.

**1.14 CONTRACTOR TO OBTAIN CURRENT DOCUMENTATION**

Where manufacturer's installation, application and execution requirements are referred to in this specification, the Contractor must ensure they are fully aware of this documentation. Whenever necessary obtain and keep on site the relevant latest version of such documentation and make it available to workers carrying out that part of the work.

**1.15 DOCUMENTATION PROVIDED FOR BUILDING CONSENT**

Documentation including manufacturer's installation instructions, specification data sheets, producer statements, BRANZ and similar appraisals may be included in the issued Building Consent. These documents have been provided only to demonstrate compliance with the NZBC.

**Branded work sections****1.16 BRANDED PRODUCTS / SYSTEMS**

Where branded products and systems are specified, all products and components of the system must be as per the specification.

**1.17 CROSS REFERENCED WORK SECTIONS**

If any related work is cross referenced to a generic work section, but only the equivalent branded section is included in the specification, use that branded section. Confirm with the contract administrator if there is any doubt.

**Care of construction documents****1.18 CONSTRUCTION ISSUE**

Take receipt of the plans, specifications and other documents issued "for construction". Keep at least one copy on site available for use by all on site workers. Keep a record of copies provided to others including subcontractors. Protect the documents as appropriate. Obtain replacement copies for documents that have become damaged.

**1.19 REVISIONS TO CONSTRUCTION ISSUE**

Where revised plans and other documents are issued ensure that superseded documents are deleted from the working sets. Ensure that subcontractors are provided with amended documents. Delete superseded documents by either:

- removing them from the working copy of the construction issue; or
- marking them as superseded

**1.20 RETURN DOCUMENTS ISSUED FOR CONSTRUCTION**

On completion of the contract works:

- Keep such copies of the plans, specification and other documents as reasonably required for contractor's record purposes.
- Retrieve all other copies no longer required by parties.
- Agree method of disposal of such documents with the Contract Administrator.

The Contract Administrator will advise whether such documents shall be:

- delivered to the Contract Administrator/Owner; or
- disposed of by normal waste disposal methods; or
- disposed of by secure document disposal methods.

## **Confidentiality of documents**

### 1.21 CONFIDENTIALITY OF DOCUMENTS

Documents shall not be given or copied to others who do not require them for carrying out services required for the construction of the works. Documents are only to be used for the contract. Maintain confidentiality of documents.

## **2 SELECTIONS**

### **Receipt of construction documents**

#### 2.1 INITIAL ISSUE & REVISIONS - HARD COPIES

Initial issue: 1 at full size  
Revisions: 1 at full size

#### 2.2 DOCUMENT RECEIPT - HARD COPIES

Hard copies of plans, specifications and other documents issued for construction shall be agreed with contractor.

#### 2.3 DOCUMENT RECEIPT - ELECTRONIC DOCUMENTS

Electronic documents issued for construction shall be agreed with contractor.

# 1237 WARRANTIES

## 1 GENERAL

This general section refers to the requirements for warranties/guarantees, referred to within this specification and referred to within separate specifications/documents relating to this project. It includes:

- Warranties for parts of the work required by the principal in a required form
- Installer/applicator warranties for parts of the work in the installer's/applicator's standard form
- Manufacturer/supplier warranties provided with products, appliances and the like in the manufacturer's/supplier's standard form
- Guarantees provided by contractor in the contractor's standard form

These guarantees/warranties are in addition to any warranties, implied warranties, or guarantees that are required by the Building Act, the Building Regulations, or the building consent.

### 1.1 SCHEDULE SECTION

Refer to 1237S1 SCHEDULE OF WARRANTIES for work sections contained in this specification that have requirements for warranties.

#### **Warranties**

### 1.2 PROVIDE WARRANTIES

Provide executed warranties in favour of the principal in respect of, but not limited to, materials, components, service, application, installation and finishing called for in that specified section of work. The terms and conditions of the warranty in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability under the terms of the warranty called for in that specified section of work.

- Conform to the WARRANTY AGREEMENT form included in the specification/conditions of contract.
- Commence warranties from the date of practical completion of the contract works (unless otherwise stated).
- Maintain their effectiveness for the times stated.
- Provide executed warranties prior to practical completion.

### 1.3 WARRANTIES - INSTALLER/APPLICATOR

Where installer/applicator warranties are offered covering execution and materials of proprietary products or complete installations, provide such warranties to the contract administrator. These warranties may be provided in lieu of the warranties that are otherwise required provided that these warranties are subject to similar conditions and periods.

Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

### 1.4 WARRANTIES - MANUFACTURER/SUPPLIER

Where warranties are offered covering materials, equipment, appliances or proprietary products, provide all such warranties to the contract administrator.

Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

#### **Submission**

### 1.5 REVIEW BY CONTRACTOR

Obtain the warranties from the installers, applicators, manufacturers and suppliers at the earliest possible date and review to ensure that they are correctly filled out and executed. Where warranties are executed as a deed, ensure that a duplicate copy is provided for execution by the owner/principal. Keep safe and secure until required for submission.

**1.6 WARRANTIES - REQUIRED BY BUILDING CONSENT AUTHORITY**

Obtain copies of warranties required as a condition of the building consent in the form required for submission to the BCA. Keep safe and secure until required at the time of the BCA final inspection and Code Compliance Certificate.

**1.7 WARRANTIES - REQUIRED BY CONTRACT**

Obtain copies of warranties listed in the contract documents. Provide all warranties at the same time. If the project has an operations and maintenance documentation provision, present the warranties with the operations and maintenance information. If no operations and maintenance documentation provision exists, present the warranties to the contract administrator in a loose-leaf binder with a contents index suitably labelled and including the project name and details. Provide a title on the binder edge "Warranties for (project name)"

**1.8 WARRANTIES - SUBMISSION MASTERBUILD CONTRACT**

Refer to the contract conditions for any requirement relating to the time for submission for warranties and guarantees. Submit all warranties to the architect no later than the date of the contractor's advice of achieving practical completion.

**2 SELECTIONS****Project warranties / guarantees****Weathertightness and watertightness warranty****2.1 WEATHERTIGHTNESS AND WATERTIGHTNESS WARRANTY**

A warranty is required from the contractor for a minimum period of 2 years, covering the weathertightness of the complete building envelope and the watertightness of all liquid supply and disposal systems and fittings. This general warranty is in addition to any specific warranties required.

Provide this warranty in favour of the principal. The terms and conditions of this warranty in no case negate the minimum remedies available under common law as if no warranty had been offered.

Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

- Conform to the standard form WARRANTY AGREEMENT included in the contract documents.
- Commence the warranty from the date of Practical Completion.
- Maintain its effectiveness for the time stated.

# 1237S1 SCHEDULE OF WARRANTIES

## 1 GENERAL

This schedule section identifies work sections in the specification that have requirements for warranties.

### 1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- 1237 WARRANTIES
- Identified Work Sections

#### **Warranties**

### 1.2 WARRANTIES

Refer to the following sections:

5133S	Seratone Panel Linings
5214HP	Hale Manufacturing Toilet & Shower Partitions
6221	Tiling Systems
6411FV	Forbo Vinyl Floor & Wall Surfacing
6512IC	Interface Carpet Tiles
6700R	Resene Painting General
7701	Electrical Basic

### 1.3 PROJECT WARRANTIES

Refer to section 1237 WARRANTIES for project warranties.

### 1.4 WARRANTIES - ADDITIONAL ITEMS

Refer to separate documentation for warranties not contained within this specification.

# 1238 AS BUILT DOCUMENTATION

## 1 GENERAL

This general section relates to common requirements for the preparation, submission and review of as built documentation referred to within this specification and referred to within separate specifications/documents relating to this project. Detailed requirements for as built documentation for particular parts of the work may be included in specific work sections.

### 1.1 SCHEDULE SECTION

Refer to 1238S1 SCHEDULE OF AS BUILT DOCUMENTATION for work sections contained in this specification that have requirements for as built documentation.

### 1.2 AS BUILT DOCUMENT REQUIREMENTS

Where requirements for the as built documents and records are not stated in a specific section, they shall include:

As built drawings recording:

- The actual positions as constructed of all sewer, stormwater, sanitary plumbing, piped and ducted services, electrical and mechanical services.
- Inverts and locations of services at key points within the building and at the property lines.
- Dimension services in relation to the structure and building grid lines.
- Ductwork, piping, conduit and equipment, including such items provided for future use.
- Depth of various elements of foundations in relationship to the ground floor level
- Field changes of dimensions
- Other significant deviations and changes which are concealed in construction and cannot be identified by visual inspection
- Access doors and panels

Records of:

- Products and materials selected for alternatives specified
- Approved substitutions and accepted alternatives
- Other approved changes and deviations to items specified.

### 1.3 PROVISIONAL AS BUILT DOCUMENTS

Prior to practical completion provide provisional/draft as built documents in sufficient detail to allow the principal to operate, maintain, adjust and re-assemble the contract works and to allow for review by the reviewer. Where no named reviewer has been nominated, submit the as built documentation to the contract administrator. Submit in hard copy and electronic form.

### 1.4 AS BUILT DOCUMENT REVIEW

As built document review indicates only that the reviewer is satisfied that the documents are legible. The review is not a check of the accuracy or completeness of the documents, however the reviewer may comment on any aspect of the documentation and require the documents to be revised and resubmitted. Review of as built documents does not relieve the contractor of responsibility for their correctness.

Where no time is stated in a specific section, allow 10 working days for review by the reviewer.

Where a large amount of documentation is involved more time will be necessary.

### 1.5 COMPLETE AS BUILT DOCUMENTS

Prior to the end of the defects notification/liability period, provide complete as built documents reflecting any review requirements, with all information of good quality and properly titled, numbered, cross-referenced and dated. Provide documents in sufficient detail to allow the principal to operate, maintain, adjust and re-assemble the contract works. Submit in hard copy and electronic form to the contract administrator.

### 1.6 AS BUILT DOCUMENTS - ELECTRONIC COPY

Provide an electronic copy of the as built documents in the following format:

Drawings: PDF format (in addition provide DWG files if available)  
 Other documents: PDF format

# 1238S1 SCHEDULE OF AS BUILT DOCUMENTATION

## 1 GENERAL

This schedule section identifies work sections in the specification that have requirements for the submission of as built documentation.

### 1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- 1238 AS BUILT DOCUMENTATION
- Identified Work Sections

#### **As built documents**

### 1.2 AS BUILT DOCUMENTS

There are no work section requirements.

### 1.3 AS BUILT DOCUMENTS - ADDITIONAL ITEMS

Refer to separate documentation for as built documentation requirements not contained within this specification.

# 1239 OPERATION & MAINTENANCE

## 1 GENERAL

This general section relates to operation and maintenance (O&M) documentation referred to within this specification and referred to within separate specifications/documents relating to this project.

This documentation is required by the principal so that they can operate and maintain the contract works.

### 1.1 SCHEDULE SECTION

Refer to 1239S1 SCHEDULE OF OPERATION & MAINTENANCE INFO for work sections contained in this specification that have requirements for:

- Information for operation and maintenance
- Operation and maintenance manuals
- Maintenance contract proposals

#### **Operation and maintenance documents**

### 1.2 OPERATION AND MAINTENANCE INFORMATION

Provide operation and maintenance documentation necessary to operate and maintain the works.

This documentation is to include:

- Contractors name and contact details.
- A complete list of subcontractors' names, addresses and telephone numbers noting which portions of the contract each provided.
- A complete list of equipment and appliances including serial numbers, manufacturers' names and sources of supply.
- Copies of all manufacturers' and suppliers' product literature containing maintenance requirements/instructions, for any products in the building work.
- Information for operation and maintenance as required by work sections.
- Operation and maintenance manuals as required by work sections.
- Maintenance contract proposals as required by work sections.
- Final as built documents.
- Originals of all warranties and guarantees properly executed.
- Other information listed or referred to in this general section.
- Operation and maintenance information required by other project documents.

### 1.3 MAINTENANCE REQUIREMENTS

Provide details of any maintenance requirements required by the Building Act. In addition provide maintenance requirements for items including:

- Details of suggested building washing programme.
- Details of suggested re-painting programme.
- Location of flushing points for sub soil drainage systems.
- Location of surface water filter systems requiring regular cleaning.
- Overflow relief gully location and means of keeping charged.

### 1.4 EQUIPMENT AND APPLIANCE MANUALS AND OPERATING INSTRUCTIONS

Provide equipment and appliance manuals and operating information including details of all isolating valves and switches.

### 1.5 SELECTIONS INFORMATION

Provide details of actual selections used in the construction of the works including:

- Tapware type and supplier details.
- Sanitary ware including accessories type and supplier details.
- Light fitting type and supplier details.
- Door hardware type and supplier details.
- Carpet type and colour including underlay and the supplier details.
- Vinyl flooring type and colour including supplier details.
- Overlay timber floor type and supplier details.
- Tile type and supplier details.
- Fire supplier details.
- Aluminium joinery system and finish.
- Paint type and colours used.

Include brochures and other information included with the items supplied.

## 1.6 SELECTIONS INFORMATION - SUBSTITUTIONS

Provide details of any selections used in the construction of the works that are different from what was specified.

### **Documentation format**

## 1.7 O&M DOCUMENTATION FORMAT

Unless otherwise specified in a work section,

- Provide O&M drawings at scales appropriate to the detail to enable good legibility.
- Provide manufacturers documentation at the original scale.
- Provide written text generally in A4 format using a font not less than 10 point.

Submit O&M documentation in both hard copy and as electronic portable document format (PDF) files.

### **Submission and review**

## 1.8 O&M DOCUMENTATION SUBMISSION & REVIEW

Unless otherwise specified in a work section, provide draft O&M documentation no later than the date of practical completion or the date on which the principal takes occupation of the works, whichever occurs first.

Submit O&M documentation to the named reviewer for review.

- Where no time is stated in a specific section, allow 10 working days for review by the reviewer. Where a large amount of documentation is involved more time will be necessary.
- Where no person is named in a specific section as the reviewer, submit the O&M documents to the contract administrator.
- Submit a proposed index system (as required for final documentation) to the contract administrator for review.

O&M review indicates only that the reviewer is satisfied that the documents are legible. The review is not a check of the accuracy of the documents, however the reviewer may comment on any aspect of the documentation and require the documents to be revised and resubmitted. Review of operation and maintenance documentation does not relieve the contractor of responsibility for the correctness of the documentation.

The reviewer may advise that:

- The O&M documentation has been reviewed and has been accepted without the need for further modification. The information can be included in the final documentation; or
- The O&M documentation has been reviewed and the information can be included in the final documentation subject to revision required by notes, annotations or comments provided; or
- The O&M documentation has been reviewed and is not acceptable, refer to notes, annotations or comments provided. Resubmit corrected/altered documentation for review.

Amalgamate the reviewed accepted and corrected O&M documentation into the final O&M documentation

### **Final documentation**

## 1.9 SUBMISSION OF FINAL DOCUMENTATION

Prior to the end of the defects notification/liability period, provide complete O&M documentation in both hardcopy and electronic form.

**1.10 FINAL O&M DOCUMENTATION - HARDCOPY**

Provide the hard copy version of the O&M documentation in a loose-leaf binder with a contents index identifying operation and maintenance documents, requirements, manuals, operating instructions and selections. In addition include the project name, contractor's name and the date of practical completion on the index page.

Include indexed sections to identify all operation and maintenance manuals that are not contained within the binder. Provide a copy of the front cover or other identifying feature of the manual within the section with a note stating "this manual has been provided separately".

Provide a title on the binder edge "Operation and maintenance instructions for (project name)". If more than one binder is required identify each binder by number and ranking (e.g. Volume 2 of 3) and group information logically between the binders for ease of reference.

Provide operation and maintenance manuals clearly and neatly marked on the spine or front cover so as to identify the project name. Where operation and maintenance manuals are a collection of loose leaf documentation, provide documentation in a loose-leaf binder as described above.

**1.11 FINAL O&M INFORMATION - ELECTRONIC COPY**

Provide a copy of all hardcopy information in PDF format arranged in logical named folders. In addition provide DWG files of documentation if available.

**1.12 REVIEW OF FINAL DOCUMENTATION**

The contract administrator may review the final documentation and require alteration and resubmission.

**2 SELECTIONS****O&M Documentation****2.1 FINAL DOCUMENTATION - INFORMATION FOR OPERATION AND MAINTENANCE**

Provide a complete electronic copy to the contract administrator.

Provide two hardcopy sets of completed O&M documentation to the contract administrator. At least one set is to contain all available original documentation. The contractor is to retain a third hardcopy set for their records.

Provide any documentation (including required original documentation) as required to the relevant territorial authority.

**2.2 FINAL DOCUMENTATION - OPERATION AND MAINTENANCE MANUALS**

Provide a complete electronic copy to the contract administrator.

Provide two hardcopy sets of completed maintenance manuals to the contract administrator. At least one set is to contain all available original documentation. The contractor is to retain a third hardcopy set for their records.

Provide any documentation (including required original documentation) as required to the relevant territorial authority.

**Maintenance contract proposals****2.3 MAINTENANCE CONTRACT PROPOSALS**

Unless otherwise specified in a work section, provide maintenance contract proposals to the contract administrator no later than the date of Practical Completion. Provide in electronic and hardcopy form.

# 1239S1 SCHEDULE OF OPERATION & MAINTENANCE INFO

## 1 GENERAL

This schedule section identifies work sections in the specification that have requirements for the submission of:

- Information for operation and maintenance
- Operation and maintenance manuals
- Maintenance contract proposals

### 1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- 1239 OPERATION & MAINTENANCE
- Identified Work Sections

#### **Information for operation and maintenance**

### 1.2 INFORMATION FOR OPERATION AND MAINTENANCE

Refer to the following sections:

6512IC      Interface Carpet Tiles  
6700R      Resene Painting General

#### **Operation and maintenance manuals**

### 1.3 OPERATION AND MAINTENANCE MANUALS

Refer to the following sections:

7421      Sanitary Systems

#### **Maintenance contract proposals**

### 1.4 MAINTENANCE CONTRACT PROPOSALS

There are no work section requirements.

#### **Additional Items**

### 1.5 ADDITIONAL ITEMS

Refer to separate documentation for the submission of operation and maintenance requirements not contained within this specification.

# 1240 ESTABLISHMENT

## 1 GENERAL

This general section relates to site establishment including:

- Notices and approvals
- Inspections
- Site preparation
- Temporary construction

### Notices and approvals

#### 1.1 STATUTORY OBLIGATIONS

Comply with all statutory obligations and regulations of regulatory bodies controlling the execution of the works.

#### 1.2 BUILDING CONSENT AUTHORITY AND NETWORK UTILITY APPROVALS

Attend on building consent authority officers, statutory and network utility inspectors, as necessary to obtain approvals, including those required for the completion of the works.

#### 1.3 NOTIFY NETWORK UTILITY OPERATORS

Notify all network utility operators of proposed works before commencing site operations. Ascertain location of services or confirm that none exist in the vicinity of the works. Take all necessary precautions to avoid damage to existing services.

### Site preparation

#### 1.4 SITE ACCESS

Access to the site is limited to: The stairs around the sides of the building, no entry through the upper floor tenancy.

#### 1.5 WORKING AREA

Limited to the following designated working areas on the site: Lower floor internal envelope of the existing building. Work to be isolated to this area.

#### 1.6 SITE AND SOIL SURVEYS

Carry out all investigations necessary and peruse all information available to determine ground conditions and likely ground performance both on the site and adjacent to it. Also refer to the territorial authority project information memorandum (PIM).

### Existing buildings

#### 1.7 ALTERATIONS

Control access and working areas within existing buildings. Liaise with building owner to establish site limitations.

#### 1.8 TEMPORARY ACCESS

Liaise with the building owner to arrange access to areas of the existing building which are not normally part of the contract.

#### 1.9 USE OF STAIRS

External staircases are for use by the contractor for worker access and where necessary for goods deliveries. Do not leave goods in the stairway as these must remain available for emergency egress. Do not wedge or hold open fire doors or smoke control doors.

### Temporary construction

#### 1.10 SITE - SAFETY SIGNAGE

Provide hazard board and other safety signage as required.

1.11 SITE - PROJECT SIGN

Obtain approval for, provide and erect a timber framed sign board fully painted and displaying:

- Title of contract
- Principal's name
- Contractor's name
- Consultants as listed in general section 1222 PROJECT PERSONNEL
- If the contractor wishes, names of subcontractors.

**First aid**

1.12 FIRST AID EQUIPMENT

Provide first aid equipment.

# 1250 TEMPORARY WORKS & SERVICES

## 1 GENERAL

This general section relates to temporary works and services required for the construction of the contract works. It includes

- Temporary works and services including temporary fencing and hoardings
- Scaffolding
- General care and protection
- Rubbish removal

### Temporary works

#### 1.1 COSTS RELATING TO TEMPORARY WORKS

Pay all rates/fees in respect of temporary works.

#### 1.2 MAINTENANCE OF TEMPORARY WORKS

Maintain alter, adapt and move temporary works and services as necessary. Clear away when no longer required and make good.

#### 1.3 SAFEGUARD THE SITE, THE WORKS AND MATERIALS

Take reasonable precautions to prevent unauthorised access, including access outside working hours, to the site, the works and adjoining property. Safeguard the site, the works, materials and plant from damage and theft.

#### 1.4 PROVIDE SEDIMENT AND SILT RUN OFF PROTECTION

Provide appropriate measures to prevent or minimise sediment generation and silt run off. Comply with territorial and other authority requirements relating to carrying out earthworks.

Prevent silt run off by:

- exposing only as much ground as required at any time
- providing run off channels, contour drains or earth bunds to divert clean water away from the site on to stable sealed or grassed ground
- capture silt by the use of silt fences, vegetation buffer strips, sediment ponds or earth bunds.

Provide sediment control by:

- earth bunds constructed across the slope to control and detain run off
- silt fences constructed using filter fabric stretched between posts at a maximum of 1 metre spacing.

Pump water from trenches and other areas of the site using methods to prevent sediment entering any drain or watercourse. Filter dirty water before discharging into drainage system.

## 1.5 PROVIDE CONCRETE WASHWATER RUN OFF PROTECTION

Provide appropriate measures to prevent cement/concrete washwater or slurry run off to; drains or waterways, landscaped areas new or remaining and adjoining public or private properties. Comply with territorial and other authority requirements relating to cement/concrete washwater.

Control run off from:

- Cement/concrete based material production, placing and finishing.
- Hosing down and cleaning of, tools and equipment, fresh material, and spilt or surplus material, pumps and mixers etc.
- Wet cutting or grinding.
- Slab watering etc.
- Water cleaning of new concrete elements, fresh used formwork etc.

Large project and those without suitable ground area - prevent run off by:

- plan and implement washwater control measures based on the expected volumes, allow for the timely removal and safe disposal of liquids and solids.
- Limit the volume of water used for washing down to the extent required.
- Control the flow of washwater so that it is directed to proper catchments.
- providing watertight bunds, pits or tanks, filtered washwater is not to be discharged to drains.

Spilt or surplus material:

- if possible allow to set and either use or dispose of as hardfill.
- pre-made concrete items, either use or dispose of as hardfill.

Pump washwater away from drains, waterways and adjoining property.

## 1.6 EXCAVATION SAFETY

To the [Health and Safety at Work Act 2015](#).

Carry out excavation to WorkSafe NZ, [Good Practice Guidelines - Excavation Safety](#). This may include deep excavation, trenching, and areas behind unfilled retaining walls. Carry out excavation using plant and equipment suitable for the purpose.

### **Temporary works - Existing Buildings**

## 1.7 OCCUPIED BUILDINGS

Buildings which remain occupied during the construction must have temporary works agreed with the occupier/owner in advance.

## 1.8 PARTITIONS

Lock existing double doors into lobby staircase to isolate working area on lower level from above.

### **Temporary services**

## 1.9 WATER

Provide clean, fresh water for the works and make arrangements for distributing about the site.

## 1.10 ELECTRICITY

To AS/NZS 3012.

Nominate the person to install and be responsible for the complete temporary electrical installation.

The name and designation of the person responsible is to be displayed prominently and close to the main switch or circuit breaker.

Inspect and overhaul the installation at such intervals as are prescribed by the network utility operator but not exceeding three monthly intervals.

## 1.11 TELEPHONE

Provide on-site temporary telephone facilities.

## 1.12 COMPUTER FACILITIES

Provide on-site temporary computer facilities complete with an email and internet connection capable of sending, receiving and printing site communications.

## 1.13 PRINTER

Provide on-site temporary printing facilities capable of printing A4 and A3 colour prints.

## 1.14 IMAGING

Keep available devices able to take and send quality printable digital photographs.

**Care and protection - existing buildings**

## 1.15 PROTECT EXISTING BUILDINGS

Protect existing buildings and other designated features which are to remain in position during the execution of the works.

## 1.16 PROTECT ACCESS ROUTES

Protect access routes through the building and areas adjacent to the work area that are to remain in place. These include lifts and stairs. Comply with all fire egress requirements at all times.

## 1.17 EXISTING FIRE SYSTEMS

Maintain the integrity of the systems at all times. If work requires de-activation of a system, give notice to the relevant fire service. Follow their instructions and reinstate the system to their requirements.

## 1.18 MAKE GOOD - EXISTING BUILDINGS

Make good all damage to existing buildings caused in carrying out the contract works.

**Care and protection - Site**

## 1.19 LOCATE EXISTING SERVICES

Review information provided relating to underground and above ground services. Physically locate the position of all such services. Arrange with the network utility operator for all necessary exploratory work, location, protection, isolation, off-setting, reinstatement or alterations required. Record any alterations made to such utilities.

## 1.20 PROTECT EXISTING SERVICES

Protect existing services and parts of service systems, whether indicated or not, that are to remain in place during the execution of the works. Provide temporary caps or covers to prevent the ingress of dust and other contaminants into the systems, ducts, pipes etc. Reinstate where required and repair any damage resulting from carrying out the contract works.

## 1.21 PROTECT EXISTING LANDSCAPE ELEMENTS

Protect existing trees, fences, gates, walls, gardens and other designated landscape features which are to remain in position during the execution of the works. Construct a temporary fence at the outer edge of the drip line of trees to be protected. Comply with territorial authority requirements.

Maintain existing pedestrian walkways around existing building.

## 1.22 MAKE GOOD - SITE

Make good all damage to existing roads, footpaths, grounds, services, landscape elements and site features caused in carrying out the contract works.

**Care and protection - Project**

## 1.23 TEMPORARY PROTECTION

Provide and maintain temporary protection as required to protect products during transport, storage and handling. Provide temporary protection as required to protect the work in progress and the finished work. Refer to 1270 CONSTRUCTION for removal of protection.

## 1.24 SPECIAL PROTECTION GENERAL

Refer to individual work sections for any special protection requirements.

**Care and protection - miscellaneous**

## 1.25 CONSTRUCTION KEYING AND SECURITY

Provide locksets with temporary keying, or install with the cylinders removed.

## 1.26 TEMPORARY STORAGE

Provide temporary storage areas and protective covers and screens to meet the requirements of the products to be stored.

**Rubbish removal**

1.27 PERIODIC RUBBISH REMOVAL

Maintain on site appropriate means for the storage and removal of construction waste material. Where required or appropriate provide for the separate storage of recyclable waste and other materials requiring special disposal.

# 1260 PROJECT MANAGEMENT

## 1 GENERAL

This general section relates to project management requirements including:

- Meetings
- Reporting
- Cost control
- Communicating and records
- Confidentiality
- Programming
- Hold points and notification points
- Working hours
- Health and safety

### Site Meetings

#### 1.1 PURPOSE OF SITE MEETINGS

The purpose of site meetings is to:

- Ensure that the Contractor has all information required to construct the work
- To address and clarify aspects of construction of the work including quality
- To address issues relating to project delivery including, site progress and cost.

#### 1.2 SITE MEETING ATTENDANCE

The following persons to attend:

- Principal
- Contract administrator
- Contractor
- Architect
- Engineer
- Services consultants when needed
- Subcontractors when needed (contractor to inform them)

#### 1.3 REPORTING

The following reports are required to be presented at site meetings:

Contractor: A detailed status report

#### 1.4 SITE MEETING MINUTES

The contract administrator is to keep full minutes of all site meetings and arrange distribution to all those involved within 3 working days.

The minutes are to record

- Documentation and information issued and required
- Directions and variations issued
- Confirmation of contract insurances
- Programme items
- General business
- Site health and safety
- Payment claim processing including costing variations

### Reporting

## 1.5 CONTRACTORS DETAILED STATUS REPORT

A contractor's detailed status report is to address the following:

- Progress performance, addressing actual progress against the programme and any variance from the programme.
- Procurement progress on parts of the work being undertaken under a monetary allowance including the time by which direction must be given on monetary allowances to conform to the programme.
- Details of measures being taken to get work back on programme where there has been a delay and details of any future events that will or are likely to affect compliance with the programme.
- Compliance with the issued Building Consent and notification of any work or inspections that have not been passed by the BCA inspector.
- Compliance with the issued Resource Consent and any compliance issues.
- Site health and safety including any notifiable incidents.
- Details of any discrepancies in the contract documents that require clarification or determination
- A list of information requests by the contractor, the date when they were made, the person who they were directed to and the date by which a response is required.
- A variation report including progress on agreed variations, variations to be agreed and anticipated variations and the time implication of variations.
- Variation costing and the adjusted contract price including an assessment of the cost of known and potential variations.
- Review of sums not yet directed for expenditure.

### **Cash flow estimates**

## 1.6 CASH FLOW ESTIMATES

The contractor is required to submit to the contract administrator a detailed cash flow estimate of all payments to which the contractor considers they will be entitled to under the contract. Where no time is stated in the conditions of contract, provide the cash flow estimate within 20 working days of the date of award of the contract. The contractor shall subsequently submit such revised cash flow estimates at 3 month intervals.

### **Cost control**

## 1.7 MEASUREMENT

Give reasonable notice to the contract administrator before covering up work which requires to be measured.

## 1.8 DAYWORK VOUCHERS

To be signed by the contractor's representative as confirming the labour, times and materials used, before being supplied to the contract administrator.

### **Communicating and records**

## 1.9 MEANS OF COMMUNICATION

Communications between the parties shall be as follows: -

Directions:	In writing delivered by email with a copy by post or hand
Meeting minutes:	In writing delivered by email
RFI's:	(Requests for information) by email or in writing to the contract administrator

## 1.10 DELIVERY OF COMMUNICATIONS

Deliver communications to the addresses listed in the contract agreement by means as allowed. Where such addresses are not included in the contract agreement:

- deliver to the addressee by hand; or
- post to the postal address stated in the project directory; or
- deliver to the street address as stated in the Project Directory; or
- send by email to the email address stated in the Project Directory; or
- where agreed, deliver via a file hosting service or an electronic project management system.

## 1.11 SERVICE OF NOTICES

Serve notices to the addresses listed in the contract agreement by means as allowed.

**1.12 CHANGE OF ADDRESS**

The principal, contractor and the contract administrator must notify the others if they change their address for delivery or transmission of communications.

**1.13 RECORDS**

Ensure all records specified are kept, held and collated on site in a form that makes the information easily accessible when it is needed. Distribute copies as and when necessary to those persons entitled under the contract to that information.

**Confidentiality****1.14 CONFIDENTIALITY - PUBLICITY**

Unless specifically agreed photographs and other images of the work are not to be used by the contractor, subcontractors, material suppliers and others involved in the construction of the works.

Photographs taken for record purposes may be kept but must not be passed to other persons.

**1.15 CONFIDENTIALITY AGREEMENT**

Where required as a condition of the contract arrange for workers to provide a confidentiality agreement. Workers who have not provided such an agreement shall be excluded from the site.

**Programming****1.16 PROGRAMME**

Include the proposed sequence of all significant on-site and off-site activities, including any intermediate key dates mentioned in the contract. Identify the critical path. Provide a tabulated schedule of information for each activity in order of:

- brief description
- duration in suitable time unit
- earliest start and latest finish time
- total float
- key dates for the supply of information or materials by others.

Identify the dates by which particular information, material or plant need to be supplied or arranged by the contract administrator. Also identify any constraints which may have been imposed by the programme.

Supply copies of the programme to the following:

Contract administrator	1
Architect	1
Designer	1
Principal	1
Quantity surveyor	1
Site supervisor	1

Monitor the programme by:

- recording progress regularly on the site chart
- informing the contract administrator promptly of any circumstances affecting any part of the programme structure and timing
- reviewing the programme once a month making alterations as needed and agreed to and re-issuing the required copies.

**Working hours****1.17 WORKING HOURS**

Work on site is not restricted, be mindful of peak operating hours in the restaurant above. Liase with tenants for any restricted times. Comply with territorial authority consent conditions and noise and nuisance controls.

**Health and safety**

### 1.18 HEALTH AND SAFETY LEGISLATION

Refer to the requirements of the [Health and Safety at Work Act 2015](#). Comply also with all other relevant New Zealand safety legislation.

The Contractor will ensure, so far as is reasonably practicable, that, each subcontractor they engage and each separate contractor is aware of and complies with its obligations under health and safety-related law.

For the purpose of health and safety-related law, the contract administrator and others involved in contract administration and observation and construction monitoring will not at any time have management or control of the Workplace.

### 1.19 HEALTH AND SAFETY REGULATIONS, CODES AND GUIDES

Comply with:

- Relevant New Zealand safety legislation including, Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, also [Health and Safety in Employment Regulations 1995](#) as amended by that Regulation and the appropriate Health and Safety at Work Regulations.
- WorkSafe NZ publications including "Guidelines for the provision of facilities for general safety in the construction industry".
- Relevant codes of practice, guides, guidelines and standards.

Until further regulations are made under the [Health and Safety at Work Act 2015](#) to cover them, the transitional provisions of the Act continue in force until revoked or amended.

### 1.20 HEALTH AND SAFETY IMPLEMENTATION

Take all practical steps to make the site and the contract works safe and to provide and maintain a safe working environment. Ensure that all those working on or visiting the site are aware of the rules governing site safety, are properly supervised and are not unnecessarily exposed to hazards and risks.

Co-operate, consult and co-ordinate health and safety matters with each PCBU including all subcontractors, suppliers, separate contractors, others engaged on the project and others who may be affected by the construction of the works.

Identify any significant hazards and risks.

Maintain proper procedures for dealing with any emergencies that may arise. Immediately investigate accidents, identify their cause and maintain a register of accidents and serious harm.

Provide a copy of any report which the contractor is required to make to a public authority on any accident which is associated with carrying out the contract works and results in serious harm to any person.

Refer to individual work sections for detailed requirements on this project.

### 1.21 SUSPENSION OF HAZARDOUS WORK

On the request of the contract administrator, acting on reasonable grounds, suspend any identified hazardous activities and proceed to eliminate, isolate or minimise them in order to comply with the Act, without prejudice to any other rights of the principal under the contract.

### 1.22 SITE SAFETY PERSON

Appoint a suitably qualified site safety person to co-ordinate site safety and to attend all site meetings.

**1.23 HEALTH AND SAFETY PLAN**

Prepare and submit a health and safety plan to the contract administrator before commencing work on site. Include in that plan all people on site and the general public, as well as the following items and any other necessary items:

- identification of existing and potential construction hazards and risks
- Any design construction safety matters identified in section 1220 PROJECT and/or any separate project design construction safety report.
- safety procedures to eliminate, isolate or minimise construction hazards and risks
- the equipment to be used to minimise the hazards and risks
- the maintenance of a register of hazards and risks for the site
- the name and qualifications of the site safety person
- emergency procedures
- first aid facilities and safety equipment
- the methodology for notifying, recording and investigating accidents and injuries.

Advise the contract administrator of unusual or atypical features in the Plan in addition to any features already identified in section 1220 PROJECT and/or any separate project design construction safety report. Keep a copy of the plan in the site office.

**1.24 MAINTAIN HEALTH AND SAFETY PLAN**

Maintain health and safety plan and alter to accommodate changing situations and /or substitutions. Advise contract administrator of changes.

**1.25 COMPLY WITH SITE SAFETY PLAN**

Carry out all construction operations in accordance with the submitted health and safety plan.

**1.26 INFORM WORKERS OF HAZARDS AND RISKS**

Inform workers and others on the site of:

- hazards and risks they may be exposed to while working or other legitimate activities
- hazards and risks they may create while working which could harm others
- how these hazards and risks may be minimised
- emergency procedures
- the location of first aid facilities and safety equipment.

**1.27 EXPLOSIVES**

Do not use explosives except with the written approval of the territorial authority/WorkSafe NZ. Comply with their safety requirements and use construction blasters holding a current, appropriate Approved Handler Certificate and Controlled Substance Licence issued by WorkSafe NZ, to the Health and Safety at Work (Hazardous Substances) Regulations.

**1.28 POWDER-ACTUATED FASTENING TOOLS**

Comply with the requirements of WorkSafe NZ and the [Health and Safety at Work Act 2015](#). Powder-actuated fastening tool operators to have the appropriate current Certificate and/or Licence and tools to have the appropriate certificate of fitness if necessary.

**2 SELECTIONS****Meetings****2.1 SITE MEETINGS**

To be confirmed.

# 1270 CONSTRUCTION

## 1 GENERAL

This GENERAL section relates to common requirements for construction issues including:

- Quality control and assurance
- Noise and nuisance
- Set-out and tolerances
- Common execution requirements
- Qualifications
- Common product requirements
- Cleaning during the works
- Removal of protection
- Completion requirements
- Commissioning
- Practical completion submission
- Defects period submissions
- Completion submissions

### Quality control and assurance

#### 1.1 QUALITY ASSURANCE

Carry out and record regular checks of material quality and accuracy, including:

- Concrete quality and finish.
- Dimensional accuracy of structural column locations (following completion of foundations).
- All perimeter columns and frames for plumb.
- Levels of all floors relative to the site datum.
- Framing timber moisture content.

Where any material, quality or dimension falls outside specified or required tolerances, obtain written direction from the contract administrator. Where building consent approval is affected, confirm remedial action with the Building Consent Authority.

Provide all materials, plant, attendances, supervision, inspections and programming to ensure the required quality standards are met by all project personnel.

#### 1.2 NOTICE

Give notice to the contract administrator and any other nominated person of hold points and notification points. Refer to work sections and 1260 PROJECT MANAGEMENT for hold points and notification points required.

#### 1.3 NOTIFIABLE WORK

Lodge notice of the intention to commence any notifiable work and any work that will at any time include any notifiable work, in accordance with [Health and Safety in Employment Regulations 1995](#).

### Noise and nuisance

#### 1.4 LIMIT CONSTRUCTION NOISE

Minimise the effects of noise generation by including in the planning of the work such factors as placing of plant, programming the sequence of operations and other management functions. Limit construction noise to comply with the requirements of [NZS 6803](#), the requirements of the Resource Management Act sections 326, 327 and 328 and the [Health and Safety in Employment Regulations 1995](#) clause 11.

#### 1.5 ACCEPTABLE NOISE LEVELS

Refer to [NZS 6803](#) Tables 2 and 3 for the upper limits of construction work noise received in residential zones, dwellings in rural areas, industrial areas and commercial areas, note also the allowed adjustments. Do not exceed these limits or any limits imposed by regional councils or territorial authorities.

## 1.6 PROVIDE INFORMATION TO NEIGHBOURS

Provide information to neighbours of any noise generation from the site liable to constitute a problem. Explain to them the means being used to minimise excessive noise and establish with them the timings most suitable for the noise generating work to be carried on.

Discuss with any complainant the measures being used to minimise noise. Where possible modify these measures to accommodate particular circumstances. Finally, determine the sound level at the location under discussion using methods and observation reporting as laid down in [NZS 6803](#). If the noise level is above the upper limits of [NZS 6803](#), table 2 and table 3, cease the noise generating operation and remedy the problem.

## 1.7 INCONVENIENCE TO OTHERS

When the works are to be carried out in or around occupied premises, ascertain the nature and times of occupation and use. Carry out the works in a manner to minimise inconvenience, nuisance and danger to occupants and users.

## 1.8 ROADWAY AND FOOTPATH

Keep the adjacent footpath and road clear at all times. Where work must be carried out in the roadway or footpath, obtain required consents from the territorial authority. Where temporary use is made of the footpath or roadway for deliveries and the like ensure that public safety is protected and the goods and materials moved as soon as practicable. Sweep, wash and otherwise clean the roadway/footpath and restore it to its previous condition.

## 1.9 VEHICLE CROSSING

Make good damage that has occurred as a result of carrying out the contract works. Where there has been significant damage, contact the territorial authority and obtain instructions for making good. Pay the territorial authority costs associated with making good.

## 1.10 DIRT AND DROPPINGS

Remove dirt and droppings deposited on public or private thoroughfares from vehicles servicing the site to the satisfaction of the appropriate authorities and the contract administrator.

## 1.11 DAMAGE AND NUISANCE

Take precautions to prevent damage and nuisance from water, fire, smoke, dust, rubbish and all other causes resulting from the construction works.

## 1.12 SMOKE FREE REQUIREMENTS

In accordance with the Smoke Free Environments Act 1990 smoking is not allowed on site.

## 1.13 RESTRICTIONS

Do not:

- light rubbish fires on the site.
- bring dogs on to or near the site.
- bring radios/audio players on to the site.

### **Set-out and tolerances**

## 1.14 SURVEY INFORMATION

Locate and verify survey marks and datum points required to set out the works. Where these do not exist or cannot be located advise the contract administrator who will arrange for the required points to be established.

Record and maintain their position. Re-establish and replace disturbed or obliterated marks.

## 1.15 SET-OUT

Set out the work to conform with the drawings.

## 1.16 USE OF SET-OUT INSTRUMENTS

Permit without charge, the use of instruments already on site for checking, setting out and levels.

## 1.17 CHECK DIMENSIONS

Check all dimensions both on drawings and site, particularly the correlation between components and work in place. Take all dimensions on drawings to be between structural elements before linings or finishes, unless clearly stated otherwise.

## 1.18 TOLERANCES

All work to be level, plumb, and true to line and face. Unless otherwise specified in specific work sections of this specification, tolerances for structural work shall comply with the following:

Concrete construction:	To <a href="#">NZS 3109</a> Concrete construction Clause 3.9 Tolerances for reinforcement Table 5.1 Tolerance for precast components Table 5.2 Tolerance for in situ construction To <a href="#">NZS 3114</a> Concrete surface finishes
Structural steelwork:	To <a href="#">NZS 3404.1:1997</a> Steel structures standard Section 14.4 Tolerances (after fabrication) Section 15.3 Tolerances (erection)
Timber framing:	To <a href="#">NZS 3604</a> Timber-framed buildings Clause 2.2 Tolerances Table 2.1 Timber framing tolerances

Refer to work sections for tolerance requirements for finishes.

### Execution

#### 1.19 EXAMINE PREVIOUS WORK

Before commencing any part of the work carefully examine the previous work on which it depends, to ensure it is of the required standard.

#### 1.20 REPORT DEFECTIVE PREVIOUS WORK

Refer defects to the contractor to be remedied, if the remedy is outside the scope of the contract documents the contractor shall obtain direction from the contract administrator. Do not carry out work over previous work that is defective and will affect the required standard.

#### 1.21 EXECUTION GENERALLY

Construct the work in accordance with the documents issued for construction including any direction that may have been given by the contract administrator that varies the construction document.

#### 1.22 EXECUTION - NO DETAIL IS PROVIDED

The documents issued for construction will not include all details relating to every material, junction and interface with other materials.

Where the detail provided is of a general nature, or where no detail is provided, refer to the manufacturer's documents for information relating to installation and execution of that part of the work.

Where there is more than one method or detail appropriate to the part of the work in question, refer the options to the Contract Administrator for direction as to which detail or method to use.

#### 1.23 EXECUTION - ACCEPTABLE SOLUTION IS REFERRED TO

Where a NZBC Acceptable Solution is referred to in the specification but not shown on the plans, obtain a copy of that Acceptable Solution and make it available to the workers carrying out that part of the work.

#### 1.24 MINIMISE DELAYS DUE TO WEATHER

Use appropriate techniques and methods to prevent damage and minimise delays due to weather.

### Defective or damaged work

#### 1.25 DEFECTIVE OR DAMAGED WORK

Repair defective, damaged and marked elements, or replace them where repair is not possible or will not be acceptable. Adjust operation of equipment and moving parts not working correctly. Refer to individual work sections for any special requirements.

### Qualifications

**1.26 QUALIFICATIONS GENERALLY**

The work is to be carried out by workers (trades people, installers and applicators) who are experienced, competent and familiar with the materials and the techniques specified. Workers must also be familiar with the manufacturers' and suppliers' installation and application instructions and standard details provided by them in relation to the use of the products for this project. If requested provide evidence of qualification / experience.

**1.27 QUALIFICATIONS – RESTRICTED BUILDING WORK**

Where restricted building work forms part of the contract works, workers, or supervisors of that work must be licensed building practitioners holding current licenses for the particular restricted building work.

**1.28 QUALIFICATIONS – APPROVED/LICENSED APPLICATORS/INSTALLERS**

Where required by a manufacturer or supplier, applicators/installers must be specifically trained /approved / accredited / registered / licensed / certified by them. Refer to individual work sections for details.

**1.29 QUALIFICATIONS – WORKERS LICENSED UNDER STATUTE**

Where workers or supervisors of work are required to be licensed, registered or similar under legislation, they must have a current license before they start the work and maintain currency until their part of the work has been completed and all documentation that is required has been provided.

**1.30 QUALIFICATIONS – PRODUCER STATEMENTS**

Where producer statements are required for parts of the work, ensure that person is suitably qualified and authorized to issue such producer statements.

**1.31 REPLACEMENT OF PERSON**

Should it be necessary to replace a person, ensure that records of work, producer statements, warranties and the like required for the part of the work they have carried out are obtained.

Ensure that the replacement person takes responsibility for the work they carry out and that they are able to provide such records of work, producer statements, warranties and the like required as a condition of the contract and the building consent.

**Products****1.32 NEW PRODUCTS**

Products to be new unless stated otherwise, of the specified standard, and complying with all cited documents.

**1.33 COMPATIBILITY OF PRODUCTS**

Ensure all parts of a construction or finish are compatible and their individual use approved by the manufacturers and suppliers of other parts of the system. Source all parts of a system from a single manufacturer or supplier.

**1.34 DELIVERY, STORAGE & HANDLING OF PRODUCTS**

Protect products during transit and delivery on site and / or off site. Reject and replace goods that are defective or damaged or will not provide the required finish.

Handle products carefully to avoid damage and distortion and in accordance with codes of practice and the manufacturer's or supplier's requirements. Avoid any contact with potentially damaging surfaces or conditions.

Store products to avoid visual damage, environmental damage, mechanical damage and distortion. Store in accordance with codes of practice and the product manufacturer's or supplier's requirements. Maintain the proper condition of any protective packaging, wrapping and support.

Refer to individual work sections for any special requirements.

**1.35 SUBSTRATE CONDITIONS**

Ensure substrate conditions are within the manufacturer's or supplier's stated guidelines both before and during the installation of any material, product or system. Obtain written instructions on the necessary action to rectify unsatisfactory conditions.

**1.36 INSTALLING PRODUCTS**

Install in accordance with the manufacturer's or supplier's technical literature. Ensure that all installers are familiar with the required substrate conditions and the manufacturer's or supplier's specified preparation, fixing and finishing techniques.

**1.37 COMPLY WITH STANDARDS**

Comply with the relevant and/or cited Standard for any material or component. Obtain certificates of compliance when requested by the contract administrator.

**1.38 CONDITION OF PRODUCTS**

To be in perfect condition when incorporated into the work.

**1.39 INCOMPATIBLE PRODUCTS**

Separate incompatible materials and metals with separation layers, sleeves or gaskets of plastic film, bituminous felt or mastic or paint coatings, installed so that none are visible on exposed surfaces.

**Spares & maintenance products****1.40 SPARES & MAINTENANCE PRODUCTS**

Collect, protect, package, label and store safely all spares and maintenance products specified in the work sections. Give the contract administrator an inventory of all spares and maintenance products.

If no instruction is given within a work section for the location of spares and maintenance products, then deliver to the owner.

If no instruction is given within a work section for timing in relation to the provision of spares and maintenance products, then provide at practical completion.

Refer to SPARES & MAINTENANCE PRODUCTS clauses in work sections for further detail.

**Cleaning during the works****1.41 PERIODIC SITE CLEANING**

Carry out periodic site cleaning during the contract period. Place waste material in appropriate storage pending removal from the site. Keep food waste separate from construction waste.

**1.42 TRADE CLEANING**

Keep the work area clean, remove of all debris, unused and temporary materials and elements from the site as work progresses and on completion. Refer to individual work sections for any specific requirements.

**Remove protection****1.43 REMOVE PROTECTION**

Remove all temporary markings, labels, packaging and coverings to products unless instructed otherwise, or where they are required for protection.

Maintain temporary protection until removal is required by the manufacturer/supplier, the execution of the work or the requirements of individual work sections. Re-establish protection as necessary.

Remove temporary protection and special protection immediately prior to practical completion or before when there is no further risk of damage.

Refer to individual work sections for any special removal requirements.

**Completion****1.44 SPECIAL REQUIREMENTS**

Refer to individual work sections for any special completion requirements.

**1.45 LEAVE WORK**

Leave work to the standard required for the following procedures.

**1.46 COMPLETION - TESTS & CERTIFICATION**

Carry out tests as detailed in the work sections. If testing identifies a failure to meet performance requirements, notify the contract administrator and any nominated recipient, identify and correct the cause of failure and repeat the test. Submit test results and certification documentation to the contract administrator and any nominated recipient.

**1.47 REMOVE CONSTRUCTION WASTE**

Remove all debris, unused materials and the like from the site. Arrange for material to be recycled to be collected or delivered to the recycler.

**1.48 COMPLETE ALL SERVICES**

Ensure all services are complete and operational, with all temporary labelling removed, required labelling fixed and service instructions provided.

**1.49 CLEANING BY CONTRACTOR**

Clear the contract works of all construction materials, waste, dirt and debris. Clean the contract works including:

- Wipe all surfaces to remove construction dust.
- Clean out service ducts and accessible concealed spaces.
- Clean out all gutters and rainwater heads.
- Wipe dust from both sides of glass. Take particular care when removing paint or cementitious materials to not damage the glass. Do not use metal scrapers that may damage the glass.
- Remove adhesive residue left by labels and other temporary protection/markings.
- Clean out the interior of all cabinetry.
- Wash down external concrete including driveways and concrete masonry. Take care when waterblasting to not cause damage to the surface or allow water to enter the building.
- Remove rubbish and building material from the area immediately adjacent to the contract works.

**Commissioning****1.50 SPECIAL REQUIREMENTS**

Refer to individual work sections for any special commissioning requirements.

**1.51 MOVING PARTS**

Adjust, ease and lubricate all doors, windows, drawers, hardware, appliances, controls and all moving parts to give easy and efficient operation.

**1.52 COMMISSIONING - TESTS & CERTIFICATION**

Carry out tests as detailed in the work sections. If testing identifies a failure to meet performance requirements, notify the contract administrator and any nominated recipient, identify and correct the cause of failure and repeat the test. Submit test results and certification documentation to the contract administrator and any nominated recipient.

**1.53 INSTRUCTION AND DEMONSTRATION**

Provide instruction and demonstration to the owner/occupier to the extent that is listed below and as required for them to reasonably occupy and use the building. This is to include at least the following:

- Location and isolation of all services connections.
- Operation of all emergency systems.
- Locking and security arrangements.
- Operation of basic building services including lighting, heating, mechanical ventilation, air conditioning and security.
- Special cleaning requirements and procedures.
- Any other features that the owner/occupier needs to know about.

**1.54 SECURITY AT COMPLETION**

Remove any temporary lock cylinders and complete final keying prior to handing over keys to the principal on completion of the works. Leave the works secure with all accesses locked. Account for all keys/cards/codes and hand to the principal along with an itemised schedule, retaining a duplicate schedule signed by the principal as a receipt.

**Practical completion submission**

1.55 ADDITIONAL PRACTICAL COMPLETION INFORMATION

In addition to requirements in the contract and contained elsewhere in the specification provide the following information submissions for practical completion:

- All documents which the contractor has obtained on behalf of the owner/occupier.
- Information required by the owner/occupier to be able to use the building.
- Advice that NUO accounts in the contractor's name have been closed and as appropriate changed to be in the name of the owner/occupier.
- A list of persons to be contacted to carry out any emergency or remedial work including 24 hour/7 day contact details.

**Defects period submissions**

1.56 DEFECTS REMEDIATION - SUBMISSIONS

Provide the following at periods required by the contract administrator, where no period is stated, provide this information monthly:

- A copy of the contractor's check list identifying remaining defects and omissions to be completed recording progress made in completing and correcting the items.
- A copy of lists issued by the principal/employer identifying omissions and defects recording progress made in completing and correcting the items.
- A copy of lists issued by the contract administrator identifying omissions and minor defects recording progress made in completing and correcting the items.

**Completion submissions**

1.57 FINAL COMPLETION - SUBMISSIONS

In addition to requirements in the contract and contained elsewhere in the specification provide:

- Contractors advice that all defects have been corrected and omissions and deferred work completed.
- All documents which the contractor has obtained on behalf of the owner/occupier.

# 1270S2 SCHEDULE OF SPARES & MAINTENANCE PRODUCTS

## 1 GENERAL

This schedule section identifies work sections in the specification that have requirements for spares and maintenance products.

### 1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- 1270 CONSTRUCTION
- Identified Work Sections

#### **Spares & maintenance products**

### 1.2 SPARES & MAINTENANCE PRODUCTS

There are no work section requirements.

### 1.3 SPARES & MAINTENANCE PRODUCTS - ADDITIONAL ITEMS

Refer to separate documentation for sample requirements not contained within this specification.

# 2112 PARTIAL DEMOLITION

## 1 GENERAL

This section relates to the partial demolition of existing buildings and structures, to the extent necessary to carry out the contract works.

### Documents

#### 1.1 DOCUMENTS REFERRED TO

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

[NZBC F5/AS1](#) Construction and demolition hazards  
[NZDAA](#) Best practice guidelines for demolition in New Zealand  
[Health and Safety at Work Act 2015](#)

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

### Requirements

#### 1.2 QUALIFICATIONS

Carry out demolition

- only under the supervision of a suitably experienced person, using only operators and drivers trained for this work
- using only experienced certified/licensed construction blasters for explosives demolition
- calling upon engineering expertise in those areas of demolition required by the NZDAA Best practice guidelines for demolition in New Zealand.

#### 1.3 HEALTH AND SAFETY

Comply with the [Health and Safety at Work Act 2015](#) in general, [NZBC F5/AS1](#) and NZDAA Best practice guidelines for demolition in New Zealand, Section 5 Demolition safety

#### 1.4 FIRE SAFETY SYSTEMS

Existing fire safety systems must be maintained and appropriate parts progressively deactivated and removed as demolition advances.

#### 1.5 DEMOLITION WORKING TIMES

Times during which demolition may be carried out is not restricted. Liase with upstairs restaurant tenants for any demolition time restrictions, be mindful of peak operating times. Comply with territorial authority consent conditions and noise and nuisance controls.

## 2 PRODUCTS

### Materials

#### 2.1 ELEMENTS FOR SALVAGE

Carefully dismantle, remove and store on site where directed. Protect from damage and weather.

#### 2.2 ELEMENTS FOR RE-USE

Carefully dismantle, remove and store on site where directed. Protect from damage and weather until required.

#### 2.3 REMAINING ELEMENTS

Store all elements not scheduled for salvage or re-use on site until convenient for removal.

#### 2.4 MATERIAL AND ELEMENTS FOR DISPOSAL

Remove demolished material and elements continually from the site through the period of the demolition.

## 3 EXECUTION

**Conditions****3.1 EXISTING SERVICES**

Disconnect and seal off services before work commences. Protect services adjacent to the area being demolished.  
Maintain services to occupied areas of the building, particularly fire services.

**3.2 SITE INSPECTION**

Visit and check the site, the building or structural work being demolished and any contents for likely hazards.

**3.3 PLANS AND DESCRIPTIONS**

Carefully examine all available plans of the building, including those of the territorial authority and the network utility operators, all descriptions and past uses, and become totally familiar with the past and present condition and use of the building and its services.

**3.4 EXAMINE STRUCTURE**

Examine roofs, walls, cantilevered structures and basements as required by the NZDAA Best practice guidelines for demolition in New Zealand and follow their requirements.

**3.5 PROTECTION**

Erect approved temporary screens and shelter to protect from weather and damage, and to prevent dust and dirt penetrating those parts of the existing building, other buildings and the remainder of the site being retained in their present condition.

**3.6 SAFETY DURING DEMOLITION**

Refer to [NZBC F5/AS1](#) and NZDAA Best practice guidelines for demolition in New Zealand. Carry out the requirements laid down in Section 5 Demolition safety in respect of:

- instability
- supervision
- plant, tools and equipment
- personal protective equipment
- protection of the public
- unauthorised access to site.

**3.7 DEMOLITION PROCEDURES**

Refer to the NZDAA Best practice guidelines for demolition in New Zealand. Carry out the requirements laid down in section 6 Methods of demolition including:

- scaffolding
- health
- disposal of debris and waste material
- fire protection.

**Application****3.8 CARRY OUT DEMOLITION**

Carry out all demolition to the requirements of NZDAA Best practice guidelines for demolition in New Zealand.

**Completion****3.9 REINSTATE**

Reinstate where any damage is caused by this demolition to those parts of the existing building, other buildings and the remainder of the site being retained.

**3.10 LEAVE**

Leave work to the standard required by following procedures.

**3.11 TAKE AWAY**

Take away from the site all plant, tools and equipment, temporary access works, and demolished materials and elements, to leave the site completely clean and tidy.

**4 SELECTIONS**

4.1 ELEMENTS FOR DEMOLITION AND DISPOSAL OR RE-USE  
Refer Drawings

# 3821 TIMBER FRAMING

## 1 GENERAL

This section relates to the supply and erection of timber framing, as a framed structure, or as part of a partitioning system.

### 1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:  
SG Structural grade to [NZS 3604](#), 1.3 **Definitions**

#### Documents

### 1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

<a href="#">NZBC B2/AS1</a>	Durability
<a href="#">AS/NZS 2904</a>	Damp-proof courses and flashings
<a href="#">NZS 3602</a>	Timber and wood-based products for use in building
<a href="#">NZS 3603</a>	Timber structures standard
<a href="#">NZS 3604</a>	Timber-framed buildings
<a href="#">NZS 3622</a>	Verification of timber properties
<a href="#">NZS 3631</a>	New Zealand timber grading rules
<a href="#">NZS 3640</a>	Chemical preservation of round and sawn timber
WorkSafe NZ	<a href="#">Guidelines for the provision of facilities and general safety in the construction industry.</a>
BRANZ BU 582	Structurally fixed cavity battens
<b>*A copy of <a href="#">NZS 3604</a> Timber-framed building, must be held on site.</b>	

## 2 PRODUCTS

#### Materials

### 2.1 TIMBER FRAMING, TREATED

Species, grade and in service moisture content to [NZS 3602](#), [NZBC B2/AS1](#) and treatment to [NZS 3640](#), [NZBC B2/AS1](#). Structural grade (SG) to [NZS 3604](#), [NZS 3622](#) with properties to [NZS 3603](#).

### 2.2 APPEARANCE TIMBERS

Graded to [NZS 3631](#), treated where required by [NZBC B2/AS1](#), [NZS 3602](#), table 1, and treatment to [NZS 3640](#).

### 2.3 STRAPPING

Treated to [NZBC B2/AS1](#), [NZS 3602](#), table 1 and to [NZS 3640](#), clause 6.3.1.

Species:	Radiata pine
Grade:	SG6
Size:	70mm x 45mm, 45mm x 45mm or 45mm x 19mm

### 2.4 DPC

Refer to 4161 UNDERLAYS, FOIL AND DPC section

#### Components

### 2.5 NAILS

Type to [NZS 3604](#), section 4, **Durability**, and of the size and number for each particular types of joint as laid down in the nailing schedules of [NZS 3604](#), sections 6-10.

## 2.6 BOLTS AND SCREWS

Bolts and screws of engineering and/or coach type complete with washers, to the requirements of [NZS 3604](#), section 4, **Durability**, and of the number and form required for each particular junction to [NZS 3604](#), sections 6-10.

## 2.7 THREADED RODS

Use stainless steel threaded rods of the required length, with washers and nuts at both ends, when stainless steel bolts of the required length are not available.

## 2.8 TIMBER CONNECTORS AND FIXINGS

Supply for each particular joint the connectors and fixings as noted on the drawings. Comply with the requirements of the manufacturer, [NZS 3604](#), section 4, **Durability**, and of the number and form required for each particular junction to [NZS 3604](#), sections 6-10.

## 2.9 POWDER ACTUATED FASTENERS

To type, size and charge required by the powder actuated tool manufacturer for each particular member and the substrate.

## 2.10 CORROSION RISKS

For interior timber, treated with copper-based timber preservatives (H3.2 or higher), use a minimum of hot-dipped galvanized steel fixings and fasteners.

For exterior timber, timber in damp areas and timber subject to occasional wetting, use only stainless steel (or equivalent) fixings and connectors, when the timber is treated with; Copper Azole (CuAz, Preservative code 58), Alkaline Copper Quaternary (ACQ, Preservative code 90), Micronise Copper Azole (code 88) or Micronised Copper Quaternary (code 89).

# 3 EXECUTION

## Conditions

### 3.1 PROTECT TIMBER

Protect all timber against damage and from inclement weather. Ensure that any variation in moisture content is kept to a minimum, before and after erection and before enclosure.

### 3.2 EXECUTION

Execution to comply with [NZS 3604](#), except as varied in this specification. Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

### 3.3 SEPARATION

Separate all timber framing timbers from concrete, masonry and brick by: -

- a full length polyethylene damp-proof membrane overlapping timber by at least 6mm; or
- a 12mm minimum free draining air space

### 3.4 FRAMING MOISTURE CONTENT

Maximum allowable equilibrium moisture content (EMC) for non air-conditioned or centrally heated buildings, for framing to which linings are attached.

- At erection: 24% EMC maximum
- At enclosure: 20% EMC maximum
- At lining: 16% EMC maximum

### 3.5 TOLERANCES

Permissible deviations from established lines, grades and dimensions equal to or less than the following. Multiples of given limits are not cumulative.

- Deviation in plan, up to 10 metres, 5mm
- Deviation in plan, over 10 metres, 10mm total
  
- Deviation from horizontal, up to 10 metres, 5mm
- Deviation from horizontal, over 10 metres, 10mm total
  
- Deviation from vertical position per 3 metres, 3mm
  
- Deviation from horizontal and vertical, within openings, 3mm.

#### Application

### 3.6 SET-OUT

Set-out framing generally in accordance with the requirements of [NZS 3604](#), to carry superimposed loads and as required to support sheet linings and claddings. When necessary provide framing to suit any required cladding/lining control joints. Set back nogs 12.5mm from face of studs where required for back-blocking of plasterboard non-tapered ends or edges.

### 3.7 SET TIMBERS

Set timbers true to required lines and levels with mitres, butt joints, laps and housings cut accurately to provide full and even contact over the whole of the bearing surface.

### 3.8 TIMBER CUTTING

Select and cut spanning members to minimise allowable defects and avoiding knots and short grain on edges in the middle third, and shakes, splits and checks at mid-span and close to ends.

### 3.9 TIMBER PLATES AND FURRING

Fix to steelwork with bolts and washers or approved proprietary fastenings at 1 metre maximum spacing and not less than 2 fixings to each member, or to engineering specific design.

### 3.10 HOLES AND NOTCHES

Limit holes and notches, checks and half-housing for the structure to those allowable in [NZS 3604](#). Neatly form holes and notches for services without lessening the structural integrity of the member.

### 3.11 CUTTING

Cutting for straightening to comply with [NZS 3604](#), 8.5.3, **Straightening studs**.

### 3.12 EXPOSED TIMBER CONNECTORS AND FIXINGS

Do not use steel timber connectors and fixings on any structural framing exposed to view unless detailed on the drawings.

### 3.13 POWDER-ACTUATED FASTENING TOOLS

Comply with the requirements of WorkSafe NZ and the [Health and Safety at Work Act 2015](#). Powder-actuated fastening tool operators to have the appropriate current Certificate and/or Licence and tools to have the appropriate certificate of fitness if necessary.

### 3.14 ADDITIONAL FRAMING

Position and fix all necessary members for the fixing of all services, fittings, fixtures, edges of linings or claddings, and to provide lateral support to load carrying framing.

### 3.15 FORM NAILED JOINTS

Fully drive nails in all structural joints with the number and location for each particular joint, to the requirements of the nailing schedules of [NZS 3604](#). Where splitting could occur, pre-drill to 80% of nail diameter.

### 3.16 FORM BOLTED JOINTS

Drill for and set bolts to ensure full bearing and development of the joint strength, with tension to just set the washers into timber or to engineering specific design.

**3.17 FIT CONNECTORS AND FIXINGS**

Fit connectors and fixings to obtain full bearing over all contact surfaces and full development of the required loading capacity for that particular joint and in accordance with the manufacturer's requirements or to engineering specific design.

**3.18 FIT BRACING**

Fit and fix subfloor, wall and roof bracing elements to the requirements of the manufacturer or to [NZS 3604](#), to develop the full number of bracing units required.

**3.19 DPC TO LOSP TREATED TIMBER**

Refer to 4161 UNDERLAYS, FOIL AND DPC section

**3.20 DPC TO TIMBER**

Refer to 4161 UNDERLAYS, FOIL AND DPC section

**Completion****3.21 CLEAN UP**

Clean up timber framing as the work proceeds so no offcuts, chips, sawdust or any other matter or items remain behind the claddings or linings.

**3.22 LEAVE**

Leave work to the standard required by following procedures.

**3.23 REMOVE**

Remove debris, unused materials and elements from the site.

**4 SELECTIONS****4.1 FLOOR FRAMING - RADIATA PINE**

Member	Species	Grade	Treatment
Mid floor joists:	Radiata pine	SG8	H1.2
Boundary joists:	Radiata pine	SG8	H1.2

**4.2 EXTERIOR WALL FRAMING - RADIATA PINE**

Member	Species	Grade	Treatment
Exterior walls:	Radiata pine	SG8	H1.2

**4.3 INTERIOR WALL FRAMING - RADIATA PINE**

Member	Species	Grade	Treatment
Non structural walls:	Radiata pine	SG8	H1.2
Structural and braced walls:	Radiata pine	SG8	H1.2

**4.4 DPC**

Refer to 4161 UNDERLAYS, FOIL AND DPC section

# 4161 UNDERLAYS, FOIL AND DPC

## 1 GENERAL

This section relates to the application of:

- DPC/DPM
- wall underlays includes Kraft based and synthetic wall underlays
- roofing underlays includes kraft based and synthetic roof underlays
- foils
- vapour barriers
- accessories

### 1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

NZMRM	New Zealand Metal Roofing Manufacturers Inc.
W2	Wall underlay Kraft/bituminous based Heavy grade
W3	Wall underlay Synthetic based non-absorbent
W4	Wall underlay Synthetic based absorbent
R1	Roof underlay Kraft/bituminous based Heavy grade
R2	Roof underlay Kraft/bituminous based Self-supporting
R3	Roof underlay Synthetic based Heavy grade
R4	Roof underlay Synthetic based Self-supporting

The following definitions apply specifically to this section:

Wall underlay	the same meaning as defined in <a href="#">NZBC E2/AS1</a> , covering kraft based and synthetic wall underlays, sometimes called, wall wraps, building wraps or building papers.
---------------	--

### Documents

### 1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

<a href="#">NZBC E2/AS1</a>	External moisture
<a href="#">NZS/AS 1530.2</a>	Methods for fire tests on building materials, components and structures - Test for flammability of materials
<a href="#">NZS 2295</a>	Pliable, permeable building underlays
<a href="#">AS/NZS 2904</a>	Damp-proof courses and flashings
<a href="#">NZS 3604</a>	Timber-framed buildings
<a href="#">AS/NZS 4200.1</a>	Pliable building membranes and underlays
<a href="#">AS/NZS 4347.0</a>	Damp-proof courses and flashings - Methods of test - General introduction, list of methods and test specimen requirements
<a href="#">AS/NZS 4389</a>	Roof safety mesh
<a href="#">AS/NZS 4534</a>	Zinc and zinc/aluminium-alloy coatings on steel wire
<a href="#">NZMRM CoP</a>	NZ metal roof and wall cladding Code of Practice

### Requirements

### 1.3 INSTALLATION SKILL LEVELS

Installers to be familiar with the manufacturer's technical literature and the [NZMRM CoP](#) NZ metal roof and wall cladding Code of Practice.

## 2 PRODUCTS

### Materials

### DPC

**2.1 POLYETHYLENE DPC**

Polyethylene film to [AS/NZS 2904](#) and to the appropriate test methods set out in [AS/NZS 4347.0](#). Thickness 500 microns minimum, manufactured for use as a damp-proof course and concealed flashings to doors and windows.

**DPM****2.2 DAMP PROOF MEMBRANE - CONCRETE FLOOR**

Polyethylene sheet with minimum thickness of 0.25mm to [NZS 3604](#), 7.5.6, **Polyethelene (polythene) sheet damp-proof membranes.**

**Wall Underlays****2.3 ABSORBENT SYNTHETIC WALL UNDERLAY - POLYOLEFIN - FIRE (W4)**

Absorbent, breathable, fire retardant polyolefin (polyethylene) woven into sheet form with micro sized pores that allow the membrane to breathe with a fire retardant flammability index of 1, tested to [NZS/AS 1530.2](#).

**Accessories****2.4 WINDOW DOOR SEALING SYSTEM**

Proprietary window and door flashing tape and accessories to E2/AS1, paragraph 4.3.11, **Flexible flashing tape**, paragraph 9.1.5, **Wall underlays to wall openings.**

**2.5 ADHESIVE TAPE**

Adhesive tapes to compliment the underlay. Pressure sensitive tapes for joining foil insulation and vapour barriers.

**3 EXECUTION****Conditions****3.1 GENERAL REQUIREMENTS**

To [NZBC E2/AS1](#) Table 23 Properties of Roof Underlays and Wall Underlays; and manufacturers technical literature.

Note: Care should be taken not to expose the underlay to continuous wet and windy conditions.

**3.2 STORAGE**

Store wall and roofing underlays and accessory materials, under conditions that ensure no deterioration or damage. Store rolls in an upright position on a smooth floor and protected from sunlight, UV radiation and moisture.

**3.3 INSPECTION**

Before starting work, check that the framing will allow work of the required standard. Carry out remedial work identified before laying underlay.

**Application - DPC****3.4 POLYETHYLENE DPC TO TIMBER**

Lay polyethylene DPC under treated and untreated timber, including LOSP treated timber, of all timber framed walls on concrete and concrete masonry, in a single layer with 50mm overlaps at joints to provide a waterproof barrier.

**3.5 DPC BETWEEN DISSIMILAR MATERIALS**

Lay DPC between dissimilar materials where required.

**Application - DPM****3.6 DPM TO CONCRETE FLOOR**

Lay DPM under concrete floor substrate over sand binding, in a single layer with 150mm overlaps at joints to provide a waterproof barrier.

**Application - Wall Underlay**

3.7 WALL UNDERLAY

Fix horizontally to outside face of substrate in true alignment, with succeeding sheets overlapping 150mm to NZBC E2/AS1, clause 9.1.7, **Wall underlay** and refer to manufacturer for requirement for fastenings. Fix to manufacturers requirements. Scribe neatly around penetrations and openings to leave no gaps. Tape all penetrations. Keep clean, undamaged and without visible weather deterioration until closed in.

3.8 METAL CLADDING ON TIMBER CAVITY BATTENS

Fix strip of underlay to face of batten before fixing the metal cladding.

**Completion**

3.9 CLEAN UP

Clean up as the work proceeds.

3.10 LEAVE

Leave work to the standard required by following procedures.

3.11 REMOVE

Remove debris, unused materials and elements from the site.

**4 SELECTIONS**

4.1 DPC

Brand / type: Thermakraft Supercourse 500 / polyethylene DPC

4.2 DPM - CONCRETE FLOOR

Brand / type: Thermakraft Thermathene Orange / polyethylene DPM

4.3 WALL UNDERLAY

Brand / type: Thermakraft Watergate Plus / flexible synthetic wall underlay

# 4221 TIMBER BOARD CLADDING

## 1 GENERAL

This section relates to the supply and fixing of timber cladding:

- weatherboards

### Documents

#### 1.1 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

<a href="#">NZBC E2/AS1</a>	External Moisture
<a href="#">NZS 3602</a>	Timber and wood-based products for use in building
<a href="#">NZS 3604</a>	Timber-framed buildings
<a href="#">NZS 3617</a>	Profiles of weatherboards, fascia boards and flooring
<a href="#">NZS 3631</a>	New Zealand timber grading rules

### Performance

#### 1.2 FIXINGS, WIND

Design and use the fixings appropriate for the wind zone (R) and topographical classification (T) of this site and building height; as required by [NZS 3604](#).

#### 1.3 PERFORMANCE

Accept responsibility for the weather-tight performance of the completed cladding system, including all penetrations.

## 2 PRODUCTS

### Materials

#### 2.1 UNDERLAYS

Refer to 4161 UNDERLAYS, FOIL AND DPC section

#### 2.2 WEATHERBOARDS

Profile (unless detailed otherwise) to [NZS 3617](#), species and grading to [NZS 3602](#), [NZS 3631](#), minimum treatment to [NZS 3602](#), table 2, reference 2A.1, Requirements for wood-based building components to achieve a 15-year durability performance. Weatherboards in long lengths, with all knots excluded.

#### 2.3 COVER BOARDS, BOXED CORNERS AND SCRIBERS

To profiles as detailed, with species and grading to [NZS 3602](#), [NZS 3631](#), but with all knots excluded. To [NZS 3602](#), table 2, reference 2A.3, Requirements for wood-based building components to achieve a 15-year durability performance.

### Components

#### 2.4 NAILS, STAINLESS STEEL

60mm x 2.8mm and 75mm x 3.15mm stainless steel.

#### 2.5 FLASHINGS

Material, grade and colour as detailed and scheduled and to [NZBC E2/AS1](#); Table 21: Compatibility of materials in contact and Table 22: Compatibility of materials subject to run-off. Ensure that materials used for flashings are compatible with the window frame materials and fixings and cladding materials and fixings.

### Finishes

## 2.6 SEMI-TRANSPARENT STAIN

Water borne acrylic stain, solvent borne semi-transparent oil stain, or solvent-borne semi-transparent oil-alkyd stain to suit the timber.

## 3 EXECUTION

### Conditions

#### 3.1 GENERALLY

Execution to [NZBC E2/AS1](#): 3.0 Weathertightness risk factors, and 9.0 Wall claddings, 9.1.8 Drained cavities.

#### 3.2 STORAGE

Take delivery of timber, dry, unmarked and undamaged. Store on site, laid flat and true under cover.

#### 3.3 SUBSTRATE

Before starting fixing ensure that the substrate conforms with [NZS 3604](#), section 2, table 2.1, **Timber framing tolerances** and the requirements of [NZS 3604](#), section 6, **Foundation and subfloor framing** and [NZBC E2/AS1](#), governing support for timber board cladding.

#### 3.4 MOISTURE CONTENT

Immediately before starting fixing, test the moisture content of the boards. Use an electrical moisture meter to test 5% of boards, but not less than 10 boards in the centre of the length. Do not start fixing until 90% of the values obtained are within the range in [NZS 3602](#) table 4, Allowable moisture content (%) at time of installation or in the case of framing timber at time of enclosure.

### Application - preparation

#### 3.5 FIX UNDERLAYS

Refer to 4161 UNDERLAYS, FOIL AND DPC section

#### 3.6 PENETRATIONS

Confirm that exterior wall openings have been prepared ready for the installation of all window and door frames and other penetrations through the cladding. Required preparatory work includes the following:

- wall underlay/building wrap to openings finished and dressed off ready for the installation of window and door frames and other penetrations
- claddings neatly finished off to all sides of openings
- installation of flashings (those required to be installed prior to installation of penetrating elements).

#### 3.7 SET-OUT

Using laser or mechanical devices set-out the overlap boards to ensure dimension to exposed face in line of weather is constant and that boards remain horizontal/vertical. Use a string line to set out all nailing that will be visible in the finished work. Align all nailing accurately in straight lines.

### Application - fixing

#### 3.8 FIXING, CLEAR FINISH

Coat all cut ends before fixing. Drill all fixings located within 25mm of board ends. Finish fixings flush.

#### 3.9 FIXING RUSTICATED WEATHERBOARDS

Adjust vertical set-out to provide a 2mm expansion gap between successive boards. Nail weatherboards to every fixing point with one nail just clear of the lap. Butt end joints and fit nailed soakers under each end joint. Random stagger butt joints on adjacent boards. Scribe and back flash internal corners. Fit cover boards and scribes to all openings. Mitre external corners and fit nailed soakers under each corner. Fit corner boxes and scribes to external corners.

#### 3.10 INSTALL FLASHINGS

Install flashings, covers and soakers as detailed on the drawings and to [NZBC E2/AS1](#)

- 3.11 COMPLETE  
Ensure the work is complete with all flashings, finishings and trim properly installed so the cladding system is completely weathertight.

**Completion**

- 3.12 REPLACE  
Replace all damaged or marked elements.
- 3.13 LEAVE  
Leave work to the standard required for following procedures.
- 3.14 REMOVE  
Remove all debris, unused materials and elements from the site.

**4 SELECTIONS**

- 4.1 BUILDING WRAPS/UNDERLAYS  
Refer to 4161 UNDERLAYS, FOIL AND DPC section
- 4.2 WEATHERBOARDS  
To match existing
- 4.3 COVER BOARDS, BOXED CORNERS AND SCRIBERS  
To match existing

# 5113G GIB® PLASTERBOARD LININGS

## 1 GENERAL

This section relates to the supply, fixing and jointing of GIB® plasterboard linings and accessories to timber and steel framed walls and ceilings to form:

- standard systems
- wet area systems

### 1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

AWCINZ Association of Wall and Ceiling Industries New Zealand

#### Documents

### 1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS2-AS6	Protection from fire
NZBC E2/AS1	External moisture
AS 1397	Continuous hot-dip metallic coated steel sheet and strip - Coatings of zinc and zinc alloyed with aluminium and magnesium
AS/NZS 2588	Gypsum plasterboard
AS/NZS 2589	Gypsum linings - Application and finishing
NZS 3604	Timber-framed buildings
AS/NZS 4600:2005	Cold-formed steel structures
ISO 5660.1	Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 1: Heat release rate (cone calorimeter method)
ISO 5660.2	Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 2: Smoke production rate (dynamic measurement)
BRANZ Technical Paper P21	BRANZ Technical Paper P21: A wall bracing test and evaluation procedure (2010)
NASH	Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria

### 1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:

- GIB® Site Guide (September 2018)
- GIB® Noise Control Systems (September 2017)
- GIB® Fire Rated Systems (October 2018)
- GIB Aqualine® Wet Area Systems (March 2007)
- GIB Toughline® Aqua (July 2018)
- GIB® Ezybrace® Systems (2016)
- GIB Ezybrace® Bracing Software (2016)
- GIB Ezybrace® Systems (June 2011), with amendments (December 2014)
- GIB Ezybrace® for Steel Frame Housing (NASH) Software (2011)
- GIBFix® Framing System (2016)
- GIB® Rondo® Metal Ceiling Batten Systems
- GIB-Cove®
- GIB® RocTape®
- GIB® Goldline™ Platinum Tape-on Trims (January 2006)
- GIB® UltraFlex® high impact corner mould (September 2004)
- GIB® Tough Systems (Nov 2014)

[BRANZ Appraisal 294](#) (2011) - GIB Ezybrace® Systems

[BRANZ Appraisal 427](#) (2007) - GIB Aqualine® Wet Area Systems

[BRANZ Appraisal 928](#) (2016) - GIB Ezybrace® Systems 2016

GreenTag Certification [WWLCG001-001-A-2015](#) - GreenTag™ GreenRate/Level B for:

- GIB® Standard (10mm & 13mm)
- GIB Fyreline®(10mm, 13mm, 16mm &19mm)
- GIB Braceline® (10mm & 13mm)
- GIB® Noiseline® (10mm & 13mm)
- GIB Toughline® (13mm)
- GIB Wideline® (10mm & 13mm)

Copies of the above literature are available at

Company: Winstone Wallboards

Web: [www.gib.co.nz](http://www.gib.co.nz)

Telephone: 0800 100 442

#### Requirements

### 1.4 NO SUBSTITUTIONS

Substitutions are not permitted to any specified GIB® systems, GIB® system components, GIB® plasterboard, associated GIB® products or GIB® accessories.

### 1.5 INSTALLER WORK SKILLS AND QUALIFICATIONS

GIB® plasterboard fixers and plasterers to be experienced competent workers, familiar with GIB® plasterboard lining systems installation and finishing techniques. Submit evidence of experience on request. For example:

- National Certificate of Interior Systems; or
- Certified Business member of AWCINZ.

#### Performance

### 1.6 INSPECTIONS AND ACCEPTANCE

Allow for inspection of the finished plasterboard surface:

- before applying sealer and
- before applying finish coatings or decorative papers,

so that after assessment of the type and/or angle of illumination and its effect on the completed decorative treatment, group approval and acceptance of the surface can be given.

### 1.7 SURFACE FIRE PROPERTIES - UNFINISHED BOARD

All GIB® unfinished plasterboard sheet materials achieve a Group Classification of, Group 1-S to [NZBC C/AS2-AS6](#), Table 4.1, following testing in accordance with ISO 5660.1 and ISO 5660.2.

## 2 PRODUCTS

#### Materials

**2.1 GIB® PLASTERBOARD**

Gypsum plaster core encased in a face and backing paper formed for standard and water resistance use to [AS/NZS 2588](#). Refer to SELECTIONS for location, type, thickness and finish.

GIB® Standard plasterboard

GIB Aqualine® wet area plasterboard

**Components****2.2 SCREWS**

GIB® Grabber® drywall type screws as follows:

<b>Grabber® type</b>	<b>Used for fixing:</b>
High Thread	GIB Ezybrace® or Standard systems to timber
Self Tapping	Standard systems to light gauge steel or timber
Dual Thread Screws	GIBFix®, GIB Ezybrace®, or Standard systems, to light gauge steel or timber
Wafer Head Needle Tip	Light gauge metal to timber not directly under plasterboard
Pancake Head Drill Tip	Light gauge metal to light gauge metal directly under plasterboard

Refer to GIB® requirements for appropriate details.

**2.3 TAPE ON TRIMS AND EDGES**

GIB® Goldline™ tape-on trims

**Accessories****2.4 ADHESIVE**

Timber frame:

GIBFix® One ultra low VOC water based wallboard adhesive

GIBFix® All-Bond solvent based wallboard adhesive

**2.5 JOINTING COMPOUND**

Bedding compound:	GIB Tradeset®, GIB Lite Blue®, GIB MaxSet®, GIB ProMix® All Purpose, GIB Plus 4®
Finishing compound:	GIB ProMix® All Purpose, GIB® Trade Finish®, GIB® Trade Finish® Lite, GIB ProMix® Lite, GIB® U-Mix, GIB Plus 4®, GIB Trade Finish® Multi
Cove:	GIB-Cove® Bond

**2.6 JOINTING TAPE**

GIB® jointing tape.

**2.7 GAP FILLER**

GIB® Gap Filler ultra low VOC multi-purpose acrylic flexible filler

**3 EXECUTION****Conditions****3.1 STORAGE**

Store GIB® plasterboard sheets and accessories in dry conditions stored indoors out of direct sunlight in neat flat stacks on either an impervious plastic sheet or clear of the floor with no sagging and avoiding damage to ends, edges and surfaces. Reject damaged material. Refer to GIB® Site Guide (September 2018).

**3.2 LEVELS OF PLASTERBOARD FINISH**

Provide the selected plasterboard surfaces to the pre decorative levels of finish specified in [AS/NZS 2589](#).

### 3.3 CONFIRM LEVELS OF PLASTERBOARD FINISH ACCEPTANCE

Before commencing work, agree in writing upon the surface finish assessment procedure towards ensuring that the quality of finish expectations are reasonable and are subsequently obtained and acceptable.

**Do not apply decorative treatment until it is agreed in writing by the contractor, subcontractors and decorator that the specified plasterboard Level of Finish has been achieved.**

"Levels of plasterboard finish" is a tool for specifying the required quality of finish when installing and flush stopping GIB® plasterboard **prior** to the application of a range of decorative finishes under various lighting conditions. Refer to **AS/NZS 2589**.

### 3.4 SUBSTRATE

Do not commence work until the substrate is plumb, level and to the standard required by the sheet manufacturer's requirements. Refer to GIB® Site Guide (September 2018).

### 3.5 TIMBER FRAME MOISTURE CONTENT

Maximum allowable moisture content to [AS/NZS 2589](#) for timber framing at lining: 18% or less for plasterboard linings. Refer to [NZBC E2/AS1](#) and GIB® Site Guide (Sept 2018).

### 3.6 PROTECTION

Protect surfaces; cabinetwork, fittings, equipment and finishes already in place from the possibility of water staining and stopping damage. Refer to GIB® Site Guide (Sept 2018).

#### **Application**

### 3.7 LINING WALLS AND CEILINGS GENERALLY

Form to GIB® Site Guide (September 2018). Ensure bulk insulation thickness shall not exceed that of the wall framing.

### 3.8 BOARD ORIENTATION

Minimise joints by careful sheet layout using the largest sheet sizes possible, and generally fixing horizontally. Where part sheets are required for various stud heights they should be positioned so the cut sheet is as low as possible to keep joints below eye level.

### 3.9 FORM WET AREA SYSTEMS

Form to GIB Aqualine® Wet Area Systems requirements.

### 3.10 FORM CONTROL JOINTS

Form control joints to GIB® Site Guide (September 2018) requirements.

### 3.11 INSTALL TAPE-ON TRIMS

Install to GIB® Goldline™ Tape-on trims literature and/or GIB® Ultraflex high impact corner mould literature.

#### **Finishing**

### 3.12 FINISHING GENERALLY

To GIB® Site Guide (September 2018) and [AS/NZS 2589](#).

#### **Completion**

### 3.13 REPLACE

Replace damaged sheets or elements.

### 3.14 CLEAN DOWN

Clean down completed surfaces to remove irregularities and finally sand down with fine paper to the sheet manufacturer's requirements, to leave completely smooth and clean.

### 3.15 REMOVE

Remove debris, unused materials and elements from the site.

## 3.16 LEAVE

Leave work to the standard required by following procedures.

## 4 SELECTIONS

### Plasterboard

#### 4.1 GIB® STANDARD SYSTEMS WALLS

Location	Plasterboard type / Lining requirements	Thickness	Finish Level
Refer Drawings	GIB® Standard plasterboard	10mm	4

#### 4.2 GIB® WATER RESISTANT SYSTEMS WALLS

Location	Plasterboard type / Lining requirements	Thickness	Finish Level
Refer Drawings	GIB Aqualine® plasterboard	10mm	4

#### 4.3 GIB® STANDARD SYSTEMS CEILINGS

Location	Plasterboard type / Lining requirements	Thickness	Finish Level
Refer Drawings	GIB® Standard plasterboard	13mm	4

# 5133S SERATONE® PANEL LININGS

## 1 GENERAL

This section relates to the supply and fixing of **Laminex New Zealand** prefinished Seratone® wall or ceiling linings:

It includes:

- Life (dry, wet and hygiene areas)

### Documents

#### 1.1 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

<a href="#">NZBC C/AS1-AS7</a>	Protection from fire
<a href="#">NZBC C/VM2</a>	Protection from fire
ISO 5660.1	Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 1: Heat release rate (cone calorimeter method)

#### 1.2 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:

Laminex New Zealand publication: Seratone® technical information

[BRANZ Appraisal 790](#) - Seratone Wall and Ceiling Linings

This literature gives in depth details of design and installation methods referred to in this specification. For specific design applications contact Laminex New Zealand customer services.

Manufacturer/supplier contact details

Company:	<b>Laminex New Zealand Ltd</b>
Web:	<a href="http://www.laminexnewzealand.co.nz">www.laminexnewzealand.co.nz</a>
Email:	<a href="mailto:info@laminex.co.nz">info@laminex.co.nz</a>
Telephone:	0800 303 606

### Warranties

#### 1.3 WARRANTY - MANUFACTURER/SUPPLIER

Provide a Laminex New Zealand material warranty:

5 years: For materials

- Provide this warranty on Laminex New Zealand Ltd standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

### Requirements

#### 1.4 NO SUBSTITUTIONS

No substitutions to be made to any specified Laminex New Zealand panel linings, or associated products, components or accessories.

### Performance

#### 1.5 SURFACE FIRE PROPERTIES

Seratone® Life and Seratone® Escape have been tested to ISO 5660.1 and achieve a Group Number Classification of 3 to [NZBC C/AS2-AS6](#), table 4.1, as determined in accordance with [NZBC C/VM2](#) Appendix A.

## 2 PRODUCTS

### Materials

**2.1 DAMP-PROOF COURSE**

Heavy kraft paper strip laminate saturated and coated with bitumen.

**2.2 SERATONE LIFE AND SERATONE ESCAPE PANELS**

For dry, wet and hygiene applications - Seratone® Life and Seratone® Escape 4.5mm thick, lightweight high density oil-tempered fibreboard panel coated with a multi-layered paint system.

**Components****2.3 SERATONE STANDARD ALUMINIUM JOINTERS**

For dry and wet applications - Seratone® Standard aluminium jointers, colour matched to Seratone® Life and Seratone® Escape colours.

**Accessories****2.4 CONSTRUCTION ADHESIVE**

Type: Sika; Showerbond or Nailbond Premium  
 HB Fuller Maxbond  
 Bostik Shower Grip  
 Holdfast; FixAll 220LM or Nailpower Shower Grab

**3 EXECUTION****Conditions****3.1 HANDLING AND STORAGE**

Store panels in dry conditions and stack flat on full width gluts at 550mm centres. Take care to avoid breakage, damage to edges and corners and scratching of surfaces. Always lift without sliding.

**3.2 SUBSTRATE**

Ensure the building is completely enclosed before starting this work. Timber framing must be straight and properly aligned. Timber moisture content must not exceed 18% and all other adjacent materials free from dampness. Studs at 600mm centres maximum for 1200mm wide sheets and 450mm centres maximum for 900mm wide sheets. Nogs at 600mm centres. Where walls are lined, ensure that linings are flat sound and properly fixed.

**3.3 PRECONDITIONING**

Precondition panels by separating and open stacking, for at least 48 hours, in the space where they are to be installed. Remove edge tape from the panels packaged in pairs taking care not to damage the protective film.

**3.4 TECHNIQUE**

Before beginning this work obtain confirmation of the proposed layout of jointers and other visual considerations of the finished work. Ensure that panel batch numbers are the same for each installation, to maintain colour consistency.

**Application - preparation****3.5 CUTTING OF PANELS**

Where required cut panels with a laminate cutter, router, table saw, circular saw or hand saw taking care to protect edges. Where Professional jointers are specified cut accurately to ensure a high quality finished edge is achieved.

**3.6 CUT PANELS IN WET AREAS**

Where cuts are made in panels for wet areas, apply polyurethane or priming paint to all cut edges and to the rear of the panel to provide a 75mm band around penetrations and edges. Keep the silverseal band to the bottom. Run a bead of silicone around any fittings on the face of the panel before fitting face plates and tap flanges.

**Application - fixing of panels**

NOTE: When fixing direct to the steel framing the steel surface should be abraded with Scotch-Brite then de-greased (using Sika Cleaner 205 or similar), then wiped with a clean dry cloth before any of the following fixing operations are carried out.

**3.7 ADHESIVE FIXING TO STUDS/LINING MATERIAL**

For dry, wet and hygiene areas:

- Apply adhesive, in 10mm continuous beads without blobs to the face of the lining material at 400mm centres or to the face of all the framing.
- Align panel and push onto the adhesive.
- Provide temporary support to panel until the adhesive cures.

**Application - jointing method****3.8 SERATONE STANDARD ALUMINIUM JOINTERS AND PVC MOULDINGS**

For dry and wet applications - Fix PVC mouldings in position with flat head nails at 300mm centres. Fix aluminium jointers in position with countersunk screws at 300mm centres. Alternatively, fix mouldings or jointers with adhesive. In wet areas, apply a bead of antifungal silicone into the moulding or jointer before inserting the panel. Refer to the Seratone® Technical Information for diagrammatic views of this operation.

**Completion****3.9 REMOVE**

On completion, remove protective film from all panels and remove debris, unused materials and elements from the site.

**4 SELECTIONS**

For further details on selections go to [www.laminexnewzealand.co.nz](http://www.laminexnewzealand.co.nz). Substitutions are not permitted to the following, unless stated otherwise.

**Materials****4.1 SERATONE LIFE PANELS**

Location:	Refer Drawings
Manufacturer:	Laminex New Zealand
Colour:	Polar
Finish:	TBC
Panel size:	2400x1200mm
Panel thickness:	4.5mm

**Components****4.2 SERATONE STANDARD ALUMINIUM JOINTERS**

Manufacturer:	Laminex New Zealand
Colour:	To match Seratone® lining

# 5214HP HALE MANUFACTURING TOILET & SHOWER PARTITIONS

## 1 GENERAL

This section relates to the supply and installation of **Hale** partitioning systems using proprietary, prefabricated toilet partitions and screens.

It includes;

- Hale Quintrex 18 Partition System

### Documents

#### 1.1 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

**NZBC C/AS1-AS7** Protection from fire  
**JIS Z 2801** Antibacterial products - Test for antibacterial activity and efficacy

#### 1.2 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:  
 Hale Quintrex 18 Partition System

Fire Test Report 7-598692-CV, Group Classification 3 for 13mm Laminex Compact Laminate (Laminex New Zealand)

Fire Test Report 7191054407-MEC 13/3-LGJ, Group Classification 1-S for 13mm Compact Laminate (Hale In-House Greenlam)

Fire Test Report 15-000776, Group Classification 3 for Structural MR Board (Laminex New Zealand)

Fire Test Report 7-598418-CV, Group Classification 3 for MDF with High Pressure Laminate (Laminex New Zealand)

Fire Test Report FH 5026, Group Classification 3 for MDF with Low Pressure Laminate (Laminex New Zealand)

Fire Test Report 7-598692-CV, Group Classification 3 for Compact Laminate (Laminex New Zealand)

Hale Manufacturing Colour Brochure

Manufacturer/supplier contact details

Company: **Hale Manufacturing Ltd**

Web: [www.haleman.co.nz](http://www.haleman.co.nz)

Auckland:

Email: [haleak@haleman.co.nz](mailto:haleak@haleman.co.nz)

Telephone: 09 573 5999

Wellington:

Email: [alan@haleman.co.nz](mailto:alan@haleman.co.nz)

Telephone: 04 570 5888

Christchurch

Email: [info@propertyservicesltd.co.nz](mailto:info@propertyservicesltd.co.nz)

Telephone: 03 981 7442

### Warranties

#### 1.3 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

7 years Panel integrity for 18mm, Structural MR Board

- Provide this warranty on the manufacturer/supplier standard form.
- Commence the warranty from the date of Practical Completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

**1.4 WARRANTY - INSTALLER/APPLICATOR**

Provide an installer/applicator warranty:

2 years For installation by Hale Manufacturing Installation Team

- Provide this warranty on the installer/applicator standard form.
- Commence the warranty from the date of Practical Completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

**Requirements****1.5 QUALIFICATIONS**

Installers to be experienced, competent trades people familiar with the materials and installation techniques specified.

**1.6 NO SUBSTITUTIONS**

Substitutions are not permitted to any of the specified **Hale** systems, components and/or associated product listed in this section.

**Performance****1.7 SURFACE FIRE PROPERTIES**

Group Number to [NZBC C/AS2-AS7](#), table 4.1. Refer to SELECTIONS for partition system Group Number.

**2 PRODUCTS****Materials - Hale Quintrex 18 Partition System****2.1 CHANNELS, RAILS AND BRACKETS**

U-shaped square edge anodised aluminium channel head-rail. Full wall channel fixing.

**2.2 PANELS – STRUCTURAL MR BOARD**

18m Laminex Structural MR board panels featuring a high moisture resistant MDF core faced with high impact resistant (HIR) laminate. 2mm ABS edging, matching colour of panel face.

**2.3 DOORS**

To match the panels and pre-drilled for hardware.

**Components - Hale Quintrex 18****2.4 HINGES**

Concealed-fix gravity hold-open hinge. Outward-opening doors to hold closed. Hinges are lift off type for entry into cubicle in case of emergency. Three hinges per door.

Type: Avanti or Wave gravity hinge, satin chrome finish

**2.5 PEDESTALS**

Anodised aluminium box section, blade-mount pedestal.

**2.6 INDICATOR BOLT AND KEEPER**

Concealed-fix Avanti or Wave Indicator bolt and keeper with Avanti or Wave Indicator, satin chrome finish.

**2.7 HINGES**

Concealed-fix gravity hold-open hinge. Outward-opening doors to hold closed. Hinges are lift off type for entry into cubicle in case of emergency. Three hinges per door.

Type: Avanti or Wave gravity hinge, satin chrome finish

**3 EXECUTION****Conditions**

**3.1 DELIVERY, STORAGE AND HANDLING**

Take delivery, handle and store tracks, studs, panels and accessories on site on a level floor and cover.

Protect finished surfaces, edges and corners from damage.

Move/handle goods in accordance with manufacturer's requirements.

Reject and replace goods that are damaged or will not provide the required finish.

**3.2 PRE-INSTALLATION REQUIREMENTS**

Check work previously carried out and confirm it is of the required standard for this part of the work.

Ensure substrate plumb, level and in true alignment.

**Application****3.3 INSTALL SCREENS**

Carry out the fixing, erection and fitting to finish rigid, plumb, true to line and face and square, to the Hale Manufacturing Ltd requirements.

**3.4 INSTALL COMPONENTS**

Hang doors and fit hardware to the Hale Manufacturing Ltd requirements.

**Completion****3.5 ROUTINE CLEANING**

Carry out routine trade cleaning of this part of the work including periodic removal of all debris, unused and temporary materials and elements from the site.

**3.6 DEFECTIVE OR DAMAGED WORK**

Repair damaged or marked elements. Replace damaged or marked elements where repair is not possible or will not be acceptable. Leave work with parts fully and freely working to the standard required for following procedures.

**4 SELECTIONS**

For further details on selections go to [www.haleman.co.nz](http://www.haleman.co.nz).

Substitutions are not permitted to the following, unless stated otherwise.

**Materials - partition system****4.1 HALE QUINTREX 18 PARTITION SYSTEM**

Location:	Changing rooms - refer drawings
Manufacturer:	Hale Manufacturing Ltd
Brand:	Quintrex 18 Partition System
Panel type:	18mm Laminex panel
Panel laminate:	18mm Laminex Structural MR board core (MDF)
Std panel height	1800mm
Panel colour:	TBC
Trim colour:	Natural silver anodised
Pedestal/height:	Aluminium blade foot
Pedestal colour:	Natural silver anodised
Hardware:	Satin chrome finish
Toilet roll holder:	TBC

# 6221 TILING SYSTEMS

## 1 GENERAL

This section relates to the supply and installation of interior wall tiles.

It includes:

- Underlays
- Screeds and levelling compounds
- Primers
- Waterproofing systems
- Tile adhesives
- Grouts and sealants
- Tiles
- All other required components and accessories necessary to complete installation

### Documents

#### 1.1 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC D1/AS1	Access routes
NZBC E3/AS1	Internal moisture
AS 3740	Waterproofing of wet areas within residential buildings
AS 3958.1	Ceramic tiles - Guide to the installation of ceramic tiles
NZS 4121	Design for access and mobility - Buildings and associated facilities
AS/NZS 4586	Slip resistance classification of new pedestrian surface materials
AS/NZS 4671	Steel reinforcing materials
AS ISO 13007.1	Ceramic tiles - Grouts and adhesives: Terms, definitions and specifications for adhesives
AS ISO 13007.3	Ceramic tiles - Grouts and adhesives: Terms, definitions and specifications for grouts
BRANZ	Good practice guide: Tiling

### Warranties

#### 1.2 WARRANTY - INSTALLER/APPLICATOR - FOR TILING SYSTEMS

Provide an installer/applicator warranty:

2 years: For installation of tiling systems

- Provide this warranty on the installer/applicator standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

#### 1.3 WARRANTY - INSTALLER/APPLICATOR - FOR WATERPROOFING SYSTEMS

Provide an installer/applicator warranty:

5 years: For installation of waterproofing systems

- Provide this warranty on the installer/applicator standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

### Requirements

#### 1.4 QUALIFICATIONS - TILING SYSTEMS

Tilers to be experienced, competent trades people familiar with the materials and techniques specified.

**1.5 QUALIFICATIONS - WATERPROOFING SYSTEMS**

Waterproofers to be experienced, competent trades people familiar with the materials and techniques specified.

**1.6 NO SUBSTITUTIONS**

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

**1.7 ADHESIVES COMPATIBILITY**

Adhesives selected for use on proprietary substrates or waterproof membranes to have documented compatibility approval from the respective manufacturers.

**1.8 INTERNAL / EXTERNAL MOISTURE**

Wet area membranes under tiled areas to AS 3740, [NZBC E2/AS1](#) (exterior), [NZBC E3/AS1](#) (interior) and to BRANZ Good Practice Guide: Tiling.

**2 PRODUCTS****Materials****2.1 TILES**

Refer to SELECTIONS for product selection.

**Materials - waterproofing****2.2 SHEET WATERPROOFING MEMBRANE**

Proprietary sheet waterproofing system. Refer to SELECTIONS for details.

**Materials - adhesive and grout****2.3 TILE ADHESIVE**

To AS ISO 13007.1.

**2.4 SAND AND CEMENT GROUT**

1 part Portland cement to 2-3 parts fine, washed sand, mixed to a paste consistency with a minimum of clean, potable water.

**2.5 PROPRIETARY GROUT**

Cement based, compressible and to suit particular location/use. To AS ISO 13007.3.

**Components****2.6 MOVEMENT JOINT SEALANT**

To BRANZ Good practice guide: Tiling, section 5.0.

- Neutral cured sealant for areas where waterproof membranes are used or where used against aluminium.
- Acid cured sealant except for areas where waterproof membranes are used or where used against aluminium.

Note: Check compatibility of membrane and sealant, use bond breaking tape to separate them if required.

**Accessories****2.7 TILE EDGE TRIMS**

Refer to SELECTIONS for product selection

**3 EXECUTION****3.1 DELIVERY, STORAGE AND HANDLING**

Take delivery of materials and goods and store on site and protect from damage.  
Protect finished surfaces, edges and corners from damage.  
Move/handle goods in accordance with manufacturer's requirements.  
Reject and replace goods that are damaged or will not provide the required finish

**3.2 CHECK TILES**

Check tiles to ensure that they are as specified, from the same batch, of a consistent colour and pattern and sufficient to complete the work. Reject tiles that vary widely in colour or pattern. Reject tiles that are damaged.

**3.3 CONFIRM LAYOUT**

Before commencing work confirm the proposed layout of tiles and expansion joints and other visual considerations of the finished work.

**3.4 SETTING OUT**

Before commencing the setting out confirm the number and location of cut tiles. Minimise in number with no cut tiles less than half size and only at the perimeter of the work.

**3.5 GENERALLY**

Prepare surface and complete tiling work in accordance with AS 3958.1, as modified by BRANZ Good practice guide: Tiling.

**Conditions****3.6 INSPECT BACKGROUND CONDITIONS**

Ensure that all services and accessories are in place and located to suit the tile layout, and that the substrate, background and adjoining surfaces (with the preparation called for in this section) are of the quality necessary to allow tiling of the required standard.

Inspect background and substrate materials for any conditions unsuitable for tiling over. Substrate material must be even and true with a maximum variation in plane of no greater than 4mm in every 2m, in accordance with AS 3958.1, section 4.

Do not commence work until the affected area is rectified. Commencement of installation constitutes acceptance of site conditions.

**3.7 SUBSTRATE TEMPERATURE**

Do not carry out tiling where the substrate temperature is below 5°C or above 40°C.

**3.8 MOISTURE CONTENT**

Ensure concrete floors & concrete and/or concrete block walls are cured and dry. Ensure moisture content is such that shrinkage is complete and thermal movement has been accommodated.

If in doubt check for moisture content by hygrometer. Do not proceed with tiling work until readings for the whole area show 75% relative humidity or less.

**3.9 LIGHTING**

Light the tile work as closely and clearly as possible to that of the finished lighting, to ensure that differences in plane surface are highlighted during installation.

**Application - preparation****3.10 PREPARE SUBSTRATES**

Prepare backgrounds as described in AS 3958.1, Section 4 as modified by BRANZ Good practice guide: Tiling. All surfaces to be structurally sound, dry, clean and free from movement, dirt, dust, oil, grease, wax, curing compounds, release agents and any other loose or contaminating materials.

Ensure surfaces are flat and true to a tolerance of  $\pm 4$ mm in 2 metres from the required plane. Remove projections, unevenness and loose material to leave a clean dust and dirt free surface.

Suitably prepare backgrounds and substrates in accordance with the manufacturer's instructions of the tiling installation products for the relevant substrate type.

**3.11 PRIME SUBSTRATES**

Surfaces should be primed as per manufacturer's instructions for the selected products and substrate types. Refer to SELECTIONS.

**Application - movement joints**

### 3.12 FORM MOVEMENT AND EXPANSION JOINTS

Install movement joints to go right through the tile and bed to the background, maintaining any waterproofing. Ensure any slip layer backing (bond breaker) required, is installed.

Joint width minimums:

- 4-6mm interior tiles on concrete (with low moisture content)
- 6-8mm interior tiles on dry timber structure
- 8-10mm exterior tiles on concrete (with low moisture content)
- 10-12mm exterior tiles on dry timber structure
- To match grout width, if equal/larger than above
- Larger to suit joint infill requirements (preformed jointers)

In wall tiling provide joints at; internal vertical corners, as well as joints at, floors, columns/beams, nibs, hobs and similar. Provide joints around sanitary fixtures, around fixtures interrupting the tile surface, at junctions with joinery fixtures, including window and door frames and built in cupboards, and at changes in substrate or background. In large area wall tiling provide vertical joints at not more than 3.6 metres spacing along the length of a wall and horizontal joints at each storey rise in the height of a wall, and over all existing substrate expansion joints.

In large areas of floor tiling provide joints at not more than 4 metres spacing in both directions and 3.6 metres externally. Provide expansion joints, at the perimeter of tile floors, at changes of level or slope, around structural features, changes in substrate, around sanitary fixtures and other fixtures interrupting the tile surface, and over all existing substrate expansion joints.

### 3.13 MOVEMENT AND EXPANSION JOINTS, INSTALL COMPOUND/SEALANT FILL

Carefully clean out the joint, insert the backing rod if required and fill with compound/sealant placed by gun. After the correct interval, finish the surface off smooth, and flush on flat areas or concave in corners, to the compound/sealant manufacturer's requirements.

#### **Application - waterproofing**

### 3.14 INSTALL WATERPROOFING MEMBRANE - INTERIOR WET AREAS

Install waterproofing membrane to manufacturers requirements and in accordance with AS3740 and BRANZ Good Practice Guide, Tiling 6.0 Wet area tiling and 7.0 Waterproofing interior wet areas.

Reinforce all junctions of the waterproofing membrane to BRANZ Good practice guide: Tiling; 7.0 Waterproofing interior wet areas. Unless otherwise specified or shown on the drawings, install minimum areas of waterproof membrane as follows:

Enclosed shower cubicle

- Up wall to 300mm above fixed shower rose or to ceiling for flexible rose, must be at least 1800mm above base.
- Along all tiled walls and sealed to shower screens.
- To tiled shower base and hobs (upstands).

Unenclosed shower cubicle

- Up wall to 300mm above fixed shower rose or to ceiling for flexible rose, must be at least 1800mm above base.
- Along walls at least 1500mm from fixed shower rose and plus hose length for flexible rose.
- To the floor within 1500mm of fixed shower rose and plus hose length for flexible rose.

Bath with a shower over

- Up wall to 300mm above fixed shower rose or to ceiling for flexible rose, must be at least 1800mm above floor.
- Along walls the greater of, bath length plus 300mm, or 1500mm from fixed shower rose, and 1500mm plus hose length for flexible rose.
- To the floor, waterproof under the bath and match the extent of the wall waterproofing..

Bath (no shower over)

- Around the bath to 300mm away from the bath in all directions, also waterproof under the bath.

Splashback to a vanity

- Up wall from floor and behind the vanity, to 150mm above and beyond each side of vanity.
- To floor under the vanity to match wall waterproofing and at least 600mm from wall.

#### **Application –tile installation generally**

### 3.15 FITTING TILES

Setting out, cutting and fitting of tiles to be as described in AS 3958.1. Ensure cut edges are smooth and installed without jagged or flaked edges. Always use whole tiles or if tiles have to be cut the largest portion of a cut tile possible. Maintain the heights of wall tile work in full courses to the nearest dimension. Within allowed tolerances, ensure corners of tiles are flush and level with corners of adjacent tiles. Keep joint lines, including mitres, straight and of an even width. Fully bed trim units, moulded or shaped pieces and other accessories with an appropriate bedding material.

Fix accessories level, plumb and true to the designated projection at detailed locations and heights.

### 3.16 TILE FINISH AND JOINTS

Ensure finished surfaces are flat and true to a tolerance of  $\pm 4\text{mm}$  in 2 metres from the required plane. Clean surplus bedding material from joint spaces and tile surface. Ensure joint widths are consistent throughout the installation, measured at the tile face. Ensure joint alignment is consistent throughout the installation and to a tolerance of  $\pm 4\text{mm}$  in 2 metres from the detailed joint alignment.

### 3.17 ADHESIVE APPLICATION

Apply and float thick or thin bed of modified cement based adhesive to bed thickness to the adhesive manufacturer's requirements. Ensure that the whole of the back of the tile is in good contact with the adhesive with no voids. Remove a tile periodically during installation to ensure correct coverage. Do not fix tiles over skinned adhesive. If required, mix adhesive to manufacturer's instructions.

Notched trowel method

- Adhesive application to be as described in AS 3958.1, clause 5.6.2(a). Notched trowel sizes shall be 4.5mm x 4.5mm x 4.5mm (mosaics) 6mm x 6mm x 6mm, 10mm x 10mm x 10mm, 12mm x 12mm x 12mm. Use an appropriately notched trowel to achieve full coverage.

Buttering method

- Adhesive application to be as described in AS 3958.1, Clause 5.6.2(c).

Tiles in awkward locations

- The buttering method may be required, or fixing might be necessary to achieve full bedding, even though the notched trowel method is used generally.

### 3.18 INSTALL TRIMS

Accurately locate and fully bed edge trim units, dividing strips, moulded or shaped pieces and other accessories with an appropriate bedding material. Fix accessories level, plumb and true to the designated projection at detailed locations and heights.

#### **Application - grouting**

### 3.19 APPLY GROUTING

Grout tiling to AS 3958.1, clause 5.7. Remove spacers. Apply grouting mix to as large an area as can be worked before setting commences. Work with a grouting tool back and forth until joints are completely filled with no adhesive showing. Avoid damage to the surface of tiles, using masking tape where necessary. Finish to depth of cushion and flush with surface to cushion edge and square-edge tiles. Remove surplus grout with a damp sponge and tool the joints to finish the grout uniform in colour, smooth and without voids, pinholes or low spots.

### 3.20 APPLY PROPRIETARY GROUTING

Remove spacers. Prepare joints, mix and apply grout and finish off to the grout manufacturer's requirements, to finish the grout uniform in colour, smooth and without voids, pinholes or low spots.

#### **Application - sealing**

### 3.21 SEALING

Apply selected sealer to tiling in accordance with manufacturer's requirements.

#### **Cleaning**

### 3.22 CLEAN TILES

Upon completion of setting and grouting, thoroughly sponge and wash the tiles to leave them completely clean and without blemish. Finally polish glazed tiles with a clean dry cloth.

## **Completion**

### **3.23 ROUTINE CLEANING**

Carry out routine trade cleaning of this part of the work including periodic removal all debris, unused and temporary materials and elements from the site.

### **3.24 DEFECTIVE OR DAMAGED WORK**

Repair damaged or marked tiles. Replace damaged or marked tiles where repair is not possible or will not be acceptable. Leave work to the standard required for following procedures. Ensure tiles are not disturbed by foot traffic for at least 24 hours after laying and after grouting.

### **3.25 PROTECTION**

Provide the following temporary protection of the finished work:

Provide protection to floor tiles by laying sheet material such as insulating board for the period between completion of laying and completion of the contract works.

## **4 SELECTIONS**

Substitutions are not permitted to the following, unless stated otherwise.

### **Materials - Tiles**

#### **4.1 SELECTIONS - TBC**

# 6411FV FORBO® VINYL FLOOR & WALL SURFACING

## 1 GENERAL

This section relates to the supply and installation of **Forbo®** vinyl floor and wall resilient surfacing, complete with skirtings, nosings, trims and edgings and static control sheet to floors. It includes:

- Safety Vinyl Flooring (Safestep, Surestep & Solidstep)

### Documents

#### 1.1 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

<a href="#">NZBC C/AS2-AS7</a>	Protection from fire
<a href="#">NZBC D1/AS1</a>	Access routes
<a href="#">NZS/AS 1884</a>	Floor coverings - Resilient sheet and tiles - Installation practices
AS 4586	Slip resistance classification of new pedestrian surface materials
EN 1081	Resilient Floor Coverings - Determination of the Electrical Resistance
IEC 61340.4.1	Electrostatics - Part 4.1: Standard test methods for specific applications - Electrical resistance of floor coverings and installed floors

Manual of practices and conditions for the NZ flooring industry: Resilient flooring

#### 1.2 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:  
Forbo® technical information manual

Manufacturer/supplier contact details

Company: **INZIDE Commercial Ltd**  
 Web: [www.inzide.co.nz](http://www.inzide.co.nz)  
 Email: [sales@inzide.co.nz](mailto:sales@inzide.co.nz)  
 Telephone: 09 441 9850, 0800 800 656

### Warranties

#### 1.3 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

15 years: For materials, under normal environmental and use conditions.

- Provide this warranty on the Forbo & INZIDE Commercial warranty form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

#### 1.4 WARRANTY - INSTALLER/APPLICATOR

Provide an installer/applicator warranty:

1 year: For execution, under normal environmental and use conditions.

- Provide the warranty in the standard form in the general section 1237WA WARRANTY AGREEMENT
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

### Requirements

#### 1.5 NO SUBSTITUTIONS

Substitutions are not permitted to any specified system, or associated components and products.

## 1.6 QUALIFICATIONS

Vinyl installation to be carried out by competent, experienced layers familiar with the materials and techniques specified.

### **Performance**

## 1.7 SLIP RESISTANCE - SURFACES EXEMPT FROM TESTING

Slip resistance for walking surfaces comply with [NZBC D1/AS1](#), Table 2.

## 1.8 SURFACE FIRE PERFORMANCE - FLOORS

Forbo® flooring is tested and achieved the minimum Critical Radiant Flux requirements of [NZBC C/AS2-AS6](#), Table 4.2. INZIDE Commercial is able to provide CRF certificates to verify that all Forbo products comply.

# 2 PRODUCTS

### **Materials - sheet flooring**

## 2.1 VINYL SHEET, SAFETY FLOORING

Forbo® Surestep, Solidstep and Safestep heterogeneous high vinyl content glass fibre reinforced flexible PVC sheet flooring incorporating quartz crystals, aluminium oxide and silicon carbide particles.

## 2.2 COVINGS

Commercial:	Pencil cove or fillet cove as specified with butterfly mitres to all external and internal corners. Fillet cove for safety flooring.
Domestic:	Pencil or fillet cove method.

### **Accessories**

## 2.3 VINYL EDGING

Tapered vinyl edging as required to complete the work.

## 2.4 TRIMS AND ACCESSORIES

PVC as required to complete the work.

## 2.5 GENERAL VINYL ADHESIVE

Uzin KE 2000S or Ardex AF2365 low VOC acrylic and waterproof adhesive to suit the material and substrate and to the vinyl manufacturer's requirements.

## 2.6 PRIMER

To the adhesive manufacturer's requirements for the particular substrate.

## 2.7 THERMOWELDING

Forbo® supplied colour matched weld rod.

# 3 EXECUTION

### **Conditions**

## 3.1 GENERALLY

To manufacturer's requirements and [NZS/AS 1884](#).

## 3.2 STORAGE

Accept rolls of sheet, packages of tiles and accessories undamaged and dry. Store rolls upright with other material on level surfaces in non-traffic, non-work areas that are enclosed, clean and dry.

## 3.3 HANDLING

Avoid distortion, stretching, marking and damage to edges while shifting unrolling and handling sheet, tiles and accessories.

### 3.4 PREPARATION

Check each individual colour supplied is from the same batch. Follow Forbo® requirements for preparatory conditioning of rolls and working temperatures and conditions before, during and after laying the selected vinyl. Protect work from solar heat gain. Switch off under-floor heating during and for 48 hours either side of the work period.

### 3.5 DO NOT START

Do not start work before the building is enclosed, all wet work is complete, doors are hung and lockable, finishes and trim complete and good lighting is available.

### 3.6 INSPECT

Inspect the substrate to ensure it is a suitable finish.

### 3.7 PROTECTION

Protect adjoining work surfaces and finishes during the vinyl installation.

### 3.8 LAYING GENERALLY

Carry out the whole of this work to [NZS/AS 1884](#), the Manual of practices and conditions for the NZ flooring industry: Resilient flooring and the flooring manufacturer's requirements.

### 3.9 TECHNIQUE

Before beginning the installation confirm the proposed layout of material, location of seams and other visual considerations of the finished work.

#### **Substrate preparation**

### 3.10 PREPARING EXISTING CONCRETE

Ensure concrete is dry. Check moisture content to [NZS/AS 1884](#), Appendix A and do not commence laying vinyl until readings for the whole area show 75% relative humidity or less.

Strip off existing floor coverings, adhesive and surface contaminants. Carry out minor repairs using a cement-based levelling compound, carefully feathered out at perimeters of repaired areas. Grind level, then vacuum to remove dust.

Prime if required.

### 3.11 APPLY PRIMER

Prime porous plaster, concrete and timber substrates to the adhesive manufacturer's requirements.

#### **Installation sheet**

### 3.12 APPLICATION OF ADHESIVE

Apply approved adhesive either by trowel and/or "wetted" roller as required by the vinyl manufacturer and without trowel marks after setting. Follow requirements for open time, taking note of the substrate porosity, ambient temperature and relative humidity. Remove excess adhesive as the work proceeds using required techniques.

### 3.13 LAYING FLOOR SHEET

Roll out, cut, leave to condition and install sheet vinyl to manufacturer's requirements. Ensure there are no air bubbles or twisting and that the seams are kept clear of adhesive. Immediately sheet is adhered roll with a 45 kg roller.

### 3.14 CROSS JOINS

Plan and allow cuts to avoid cross joins. Review position before proceeding if cross joins are unavoidable. Cross joins are not acceptable in wet areas.

### 3.15 COVING VINYL

Pencil cove or fillet cove flooring to the specified height and finish off as detailed. Fillet cove for safety floors.

### 3.16 COMPLETE MITRES

Perform butterfly method to internal and external mitres, allowing to thermoweld mitres.

#### **Welding seams**

**3.17 THERMOWELDING VINYL**

After grooving, thermoweld seams, heating the sheet and weld rod to a sufficient temperature to melt and fuse them together in a single mass. Trim and glaze the weld to leave a smooth, flush surface with the flooring. The width of the weld to be 2.66mm.

**Installation skirting, edging and accessories****3.18 FIT VINYL EDGING**

Fit tapered vinyl edging to all borders, except where abutting carpet.

**3.19 INSTALLING ACCESSORIES**

Scribe fit, adhere or otherwise fix true to line and face to Forbo® requirements for each particular location.

**Completion****3.20 REPLACE**

Replace damaged or marked elements.

**3.21 CLEAN AND POLISH**

Vacuum off, damp mop with a low foam neutral detergent, with a pH level of 7 to 8. Allow to dry and finally buff with a rotary machine using suitable pads at 300 rpm. Leave vinyl flooring surfaces free of adhesive, dirt and debris and to the standard required by following procedures.

**Important Note: Do not strip and polish or seal vinyl flooring.**

All Forbo® vinyls (and marmoleums) are manufactured with a polyurethane coating wear layer, for easy clean and protection. Refer to the manufacturer's literature for requirements and recommendations for care and maintenance.

**3.22 REMOVE**

Remove debris, unused materials and elements from the site.

**3.23 PROTECT**

Protect completed work from damage for the period between completion of laying and completion of the contract works.

**4 SELECTIONS**

For further details on selections go to [www.inzide.co.nz](http://www.inzide.co.nz).

Substitutions are not permitted to the following, unless stated otherwise.

**Vinyl Sheet****4.1 FORBO® VINYL SHEET SAFETY FLOORING**

Location:	Changing Rooms
Manufacturer:	Forbo Floorcoverings Pty Ltd
Distributor:	INZIDE Commercial Ltd
Type:	Surestep R10
Gauge:	2mm
Colour/number:	TBC

**4.2 COVING**

Location:	Changing Rooms
Vinyl type:	To match floor
Colour/number:	To match floor
Height:	150 mm

# 6512IC INTERFACE CARPET TILES

## 1 GENERAL

This section relates to the supply and installation of **Interface®** modular carpet tiles.

### 1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section

NRC                                      noise reduction coefficient

#### Documents

### 1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

[NZBC C/AS2-AS7](#)              Protection from fire

[AS/NZS 2455.1](#)              Textile floor coverings - installation practice - General

[AS/NZS 2455.2](#)              Textile floor coverings - installation practice - Carpet tiles

### 1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:

Interface® Installation Manual

Carpet Tile Installation Methods

TacTile™ Installation Guide

InterTac+™ Adhesive Summary Data Sheet

Interface® Carpet Care and Maintenance Instructions

Manufacturer/supplier contact details

Company:                      **Inzide Commercial Ltd**

Web:                              [www.inzide.co.nz](http://www.inzide.co.nz)

Email:                              [sales@inzide.co.nz](mailto:sales@inzide.co.nz)

Telephone:                      0800 800 656, 09 441 9850

#### Warranties

### 1.4 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

15 years:                      For materials

20 years:                      For materials in education sector

- Provide this warranty on the manufacturer/supplier standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

### 1.5 WARRANTY - INSTALLER/APPLICATOR

Provide an installer/applicator warranty:

1 year:                              For execution

- Provide this warranty on the installer/applicator standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

#### Requirements

### 1.6 NO SUBSTITUTIONS

Substitutions are not permitted to any specified system, or associated components and products.

## 1.7 QUALIFICATIONS

Carpet tile layers to be experienced, competent trades people familiar with the materials and techniques specified.

## 1.8 INFORMATION FOR OPERATION AND MAINTENANCE

Refer to the Interface® Carpet Care and Maintenance Instructions.

### Performance

## 1.9 SURFACE FIRE PERFORMANCE

Flooring to meet the fire performance requirements of [NZBC C/AS2-AS7](#), 4.17.3, by:  
Either,

Flooring is tested and achieved the minimum Critical Radiant Flux requirements of [NZBC C/AS2-AS6](#), Table 4.2. Provide certificates or other evidence that the flooring will comply.

or,

Critical Radiant Flux not required if area of non-conforming products have an aggregate surface area of not greater than 5m<sup>2</sup> within a firecell, to [NZBC C/AS2-AS7](#), 4.17.6.a.

Copies of fire test reports / certificates are available from: [www.interface.com/APAC/en-AU/about/modular-carpet-tile/Fire-Tests-en\\_AU](http://www.interface.com/APAC/en-AU/about/modular-carpet-tile/Fire-Tests-en_AU)  
or refer to INZIDE Commercial.

## 2 PRODUCTS

### Materials

### 2.1 INTERFACE CARPET TILES

All Interface® carpet tiles are manufactured with solution-dyed recycled nylon fibre.

Five types of backing systems are available:

Backing Type:

Composition:

GlasBac®

Highly recycled vinyl backing with fibreglass reinforcing mesh built into the backing to guarantee dimensional stability.

GlasBac®RE

100% post-consumer recycled vinyl backing.

CushionBacRE™

100% post-consumer recycled polyester backing with fibreglass reinforcing mesh built into the backing to guarantee dimensional stability.

Graphlar™ /

Graphlex™

Fibreglass reinforced carbon composite backing.

CircuitBac Green

100% bio-based backing with fibreglass reinforcing mesh.

### 2.2 ADHESIVE

InterTac+™ is a water based pressure sensitive adhesive. Low VOC and antimicrobial, manufactured for the installation of Interface® products.

## 3 EXECUTION

### Conditions

### 3.1 INSPECTION

Before starting work inspect the substrate to ensure that it will allow work of the required standard and that fittings and fixtures, around which the carpet is to be scribed, are in place.

### 3.2 PROTECTION

Protect adjoining work surfaces and finishes during the carpet installation.

### 3.3 LAYOUT

Plan the general layout to:

- to conform with any special pattern requirements as detailed
- to maximise perimeter and cut module sizes and
- subject to any specific design instructions, to ensure that tiles are laid parallel to the longest wall.

**3.4 TEMPERATURE**

Floor temperature: Minimum 16°C.  
 Concrete pH: No more than 10.0.  
 Carpet tiles: Conditioned at 16°C for a minimum of 24 hours prior to installation.

**3.5 HANDLE AND STORE**

Keep carpet tiles dry. Protect from damage.

**Application - substrate preparation****3.6 PREPARING NEW WOOD PRODUCT FLOOR**

To be level, sanded smooth and dry with loose material and dust removed. Check for moisture content and do not commence laying until readings for the whole area show a moisture content of:  
 8 - 12% for air conditioned buildings  
 10 - 14% for intermittently heated buildings  
 12 - 16% for unheated buildings  
 Refer to 6192 FLOORING SUBSTRATE PREPARATION.

**3.7 PREPARING EXISTING TIMBER OR WOOD PRODUCT FLOOR**

Remove existing coverings completely including tacks, adhesives, bituminous materials, waxes and paints. Check for soundness, replace any substandard boards or panels and nail down loose boards. Sand smooth and remove loose material and dust. Refer to 6192 FLOORING SUBSTRATE PREPARATION.

**3.8 UNDERLAYS FOR EXISTING TIMBER OR WOOD PRODUCT FLOORS**

Refer to 6192 FLOORING SUBSTRATE PREPARATION.

**Application - carpet tile laying****3.9 LAYING GENERALLY**

Lay in accordance with [AS/NZS 2455.1](#), [AS/NZS 2455.2](#) and the Interface® Installation Manual.

**3.10 LAYING DIRECTION**

Lay in a mono direction, except where specifically instructed otherwise.

**3.11 CUTTING OF TILES**

Cut tiles from the back, using the carpet tile manufacturer's required cutting technique. Return offcuts to Interface for recycling.

**3.12 ADHESIVE INSTALLATION**

Apply InterTac+ modular carpet tile adhesive in accordance with manufacturer's instructions.

**Completion****3.13 ROUTINE CLEANING**

Carry out routine trade cleaning of this part of the work including periodic removal all debris, unused and temporary materials and elements from the site.

**3.14 DEFECTIVE OR DAMAGED WORK**

Repair damaged or marked elements. Replace damaged or marked elements where repair is not possible or will not be acceptable. Leave work to the standard required for following procedures.

**4 SELECTIONS**

Substitutions are not permitted to the following.

**Materials**

4.1 CARPET TILES

Location Refer drawings  
Brand: Interface®  
Distributor: INZIDE Commercial Ltd  
Collection: Net Effect  
Design: TBC  
Colour: TBC  
Backing: TBC  
Size: 500x500mm tile

4.2 ADHESIVE

Brand: Interface®  
Type: InterTac+™ pressure sensitive adhesive

**Accessories**

4.3 METAL EDGE TRANSITIONS

Location Lobby in carpet to vinyl in WC/Changing Rooms  
Brand/Transition/Style/Colour/Finish/Size: TBC

# 6700R RESENE PAINTING GENERAL

## 1 GENERAL

This section relates to the general matters related to **Resene** painting work.

### 1.1 RELATED WORK

Refer to 6721R RESENE PAINTING INTERIOR

### 1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

MPNZA	Master Painters New Zealand Association Inc.
SIPDS	Surface Information & Preparation Data Sheets

### Documents

### 1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

[Health and Safety at Work Act 2015](#)

[AS/NZS ISO 9001](#) Quality management systems - Requirements

MPNZA Health and Safety Programme

### 1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents related to this section are:

Resene	Surface Information & Preparation Data Sheets (SIPDS) (hard copy or at <a href="http://www.resene.co.nz">www.resene.co.nz</a> )
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Resene	Product Data Sheets (hard copy or at <a href="http://www.resene.co.nz">www.resene.co.nz</a> )
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Resene	Putting your safety first
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Copies of the above literature are available from Resene

Telephone: 0800 RESENE (0800 737 363)

### Warranties

### 1.5 WARRANTY - MANUFACTURER/SUPPLIER

Warrant this work under normal conditions of use against failure referring to the Resene Promise of Quality in the Resene One-Line specifications and product data manual.

### Requirements

This painting specification is written based on information available at the time of writing.

### 1.6 NO SUBSTITUTIONS

Substitutions are not permitted to any specified Resene coating system, or associated components and products. Do not combine paints from different manufacturers in a paint system.

If in the applicator's own expertise and judgement an amendment to this specification is required, or where a substrate preparation, or required painting system is not covered in this specification, this shall be brought to the attention of the contract administrator and any amendment agreed before work proceeds any further.

## 1.7 QUALIFICATIONS

Painters to be experienced competent workers, familiar with the materials and the techniques specified and with the Resene coating systems and be members of the Master Painters New Zealand Association Inc.

The applicator is to have the necessary skill, experience and equipment to undertake the work. The applicator remains responsible for ensuring proper completion of the work.

Painters to be selected from the Resene Eco.Decorator programme. The Resene Eco.Decorator programme is designed to recognise a nationwide network of environmentally responsible, quality focussed painting contractors.

Refer to [www.resene.co.nz/ecodecorator.htm](http://www.resene.co.nz/ecodecorator.htm) for a list of Eco.Decorators in your area.

## 1.8 PRIOR TO WORK COMMENCING

Before any work commences painters should verify, with Architects or specifying authority, that their paint matches a previously supplied standard card or panel. Differently coloured paints will vary in price, opacity and durability. Resene normally only specify two coats of colour but with certain colours, such as yellows and oranges, three coats may be needed. Refer to SELECTIONS for location and type.

## 1.9 INFORMATION FOR OPERATION AND MAINTENANCE

Refer to the general section 1239 OPERATION & MAINTENANCE for provision of the following general operation and maintenance information as electronic PDF format documents:

Maintenance guide for Resene paint finishes [www.resene.co.nz/comn/services/maintenance.htm](http://www.resene.co.nz/comn/services/maintenance.htm).

Provide this information prior to practical completion.

## 1.10 HEALTH AND SAFETY

Refer to and comply with the requirements of the [Health and Safety at Work Act 2015](#) including the obligation to:

- Eliminate hazards and if hazards cannot be eliminated or isolated, then minimise the hazards in this work by using the proper equipment and techniques as required by the MPNZA Health and Safety Programme.
- Supply protective clothing and equipment.
- Inform the contractor as well as the employees and others on site of those hazards and put in place procedures for dealing with emergencies.

## 1.11 SAFETY DATA SHEETS

Obtain from Resene (phone 0800 RESENE, or [www.resene.co.nz](http://www.resene.co.nz)) the safety data sheet for each product used and comply with the required safety procedures. Keep sheets on site.

### **Performance**

## 1.12 RESENE INSPECTION

Permit representatives of Resene to inspect the work in progress and to take samples of their products from site if requested. Resene will take care when inspecting the work, but does not accept any responsibility for the proper completion of the work before or after such inspection.

## 1.13 INSPECTION OF THE WORK

Inspection of the whole of the work at each of the stages set out in SELECTIONS may be made.

Agree on a programme that will facilitate such inspection, including notification when each part and stage of the work is ready for inspection.

# 2 PRODUCTS

### **Materials**

## 2.1 MATERIALS GENERALLY

Do not combine paints from different manufacturers in a paint system.

Use only Resene products (which are guaranteed for consistency and performance under [AS/NZS ISO 9001](#) and APAS) prepared, mixed and applied as directed in the Resene One-Line Specifications and Product Data Manual. This specification has been written using where practical and available both low/no VOC and Environmental Choice approved products.

## 2.2 DARK COLOURS

Darker colours in areas of high sun exposure place significant stress on the coating and substrate. Resene 'CoolColour' technology reduces heat absorption of a wide range of colours. Contact your local Resene Representative or visit [www.resene.co.nz](http://www.resene.co.nz) for more information or visit [www.resene.co.nz/coolcolour](http://www.resene.co.nz/coolcolour). View a list of Resene colours that can be made using Resene CoolColour technology at [www.resene.co.nz/colourlibrary](http://www.resene.co.nz/colourlibrary).

## 2.3 THINNERS/ADDITIVES

Use only if and when expressly directed by Resene for their particular product in a particular application. Always wear gloves when handling any solvents including turpentine as harmful chemicals may be absorbed into the body through the skin.

### Accessories

## 2.4 ACCESSORIES

Contact your local Resene ColorShop for a full range of accessories and usage advice.

# 3 EXECUTION

### Conditions

## 3.1 EXECUTION

To conform to required trade practice, which shall be deemed to include those methods, practices and techniques contained in the Master Painters New Zealand Association Inc. Specification manual.

## 3.2 TREATED SURFACES

Where surfaces have been treated with preservatives or fire retardants, check with the treatment manufacturer that coating materials are compatible with the treatment and do not inhibit its performance. If they are not compatible, obtain instructions before proceeding.

## 3.3 BACK PAINTING

Co-ordinate with cladding and/or lining installer as to who will do the work and timing.

### Exterior

For exterior cladding and trim that require on site finishing, paint the back and exposed bottom edges at the base of the cladding (generally, bottom plate overhang and horizontal flashings) to the manufacturer's requirements, but at least to 150mm up from base. Coating to match front finish, generally apply 2 coats or 1 coat if pre-primed.

Refer to appropriate exterior paint sections SELECTION clauses for claddings to be back painted.

### Interior

For lining and trim that require on site finishing and/or back painting (usually wet areas), paint the back and exposed bottom edges at the base of the lining, to the manufacturer's requirements, but at least to 150mm up from base. Coating to match front finish, generally apply 2 coats or 1 coat if pre-primed, or if no front finish, seal to manufacturer's requirements.

Refer to appropriate interior paint sections SELECTION clauses for linings to be back painted.

## 3.4 ANCILLARY SURFACES

The descriptions of areas in schedules and elsewhere are of necessity simplified. Coat ancillary exposed surfaces to match similar or adjacent materials or areas, except where a fair-faced natural finish is required or items are completely prefinished. In cases of doubt obtain written instructions before proceeding.

## 3.5 HARDWARE

Do not paint hinges or hardware that cannot be removed. Before commencing work carefully remove hardware, fixtures and fittings, set aside where they cannot be damaged or misplaced and replace on completion. Refer to SELECTIONS for hardware, fixtures and fittings for removal.

## 3.6 PROTECTION

Supply, lay and fix drop sheets, coverings and masking necessary to protect adjoining, fixtures, fittings and spaces from paint drops, spots, spray and damage.

### Application - preparatory work

**3.7 SURFACE PREPARATION**

Refer to the Resene Surface Information & Preparation Data Sheets (SIPDS) and product data manual for surface preparation sheets (or obtain them by phoning 0800 RESENE, or at [www.resene.co.nz](http://www.resene.co.nz)) listed in the materials systems schedule clauses. Carry out the preparatory work required by them for each of the substrates.

**3.8 SHARP EDGES, CRACKS AND HOLES**

Remove and/or repair sharp edges, cracks and holes if present, as outlined in the preamble of the Resene One-Line specifications and product data manual.

Elastomeric sealants, if used, should not be painted. The paint film will not match the flexibility of the sealant and may severely limit its effectiveness.

**3.9 REMEDIAL WORK**

If any substrate or surface, that even with the preparation work called for in this section, cannot be brought up to a standard that will allow painting or clear finishing of the required standard then do not proceed until remedial work is carried out.

**3.10 GAP FILLING**

Make good cracks, holes, indented and damaged surfaces. Use suitable gap fillers to match the surface being prepared. Any special priming requirements of the fillers must be satisfied. Allow to dry or set before sanding back level with the surface. Prime or seal timber before using putty.

Exterior and wet areas: Use only Portland cement base or water-insoluble organic base gap fillers.

**3.11 OFF-SITE WORK**

Carry out this work under cover in a suitable environment with suitable lighting. Store items, both before and after coating, in a clean, dry area protected from the weather and mechanical damage, properly stacked and spaced to allow air circulation and to prevent sticking. Specific instructions for transport to site to avoid damage to the factory applied paint system may be required particularly for metallic top coat paints.

**3.12 PRIMING JOINERY**

Pre-treat any cut surfaces of preservative treated timber before priming. Ensure L.O.S.P. treated joinery has dried sufficiently to lose solvent odour. Pre-treat bare timber with Resene TimberLock (see Data Sheet D48) to improve the durability of subsequent coats.

Liberally coat end grain, allow to soak in and then recoat.

**3.13 CONCEALED JOINERY SURFACES**

Where off-site coatings are specified they must be applied to surfaces including those concealed when incorporated into the building.

**3.14 CONCEALED METAL SURFACES**

Apply primer to suit the coating system to surfaces which will be concealed when incorporated into the building.

**3.15 EXTERNAL DOORS**

Prime or seal and paint bottom edges before hanging.

**3.16 BEAD GLAZING**

Stained, varnished, or painted joinery to have the first two coats of a suitable primer and one undercoat, applied to rebates and beads before glazing.

**3.17 PUTTY FRONTING - LINSEED GLAZING PUTTIES**

According to the putty manufacturer's instructions allow putty to set, then prime with Resene Wood Primer (see Data Sheet D40) or Resene Enamel Undercoat (see Data Sheet D44). Fully protect the putty by completing the Resene coating system as soon as it is sufficiently firm.

Glazing putties not based on linseed oil to be over coated according to the putty manufacturer's instruction.

**Application - generally**

### 3.18 PAINTING GENERALLY

Comply with the Resene SIPDS Surface Information & Preparation Data Sheets or Resene One-Line specifications and product data manual data sheets and the additional requirements of this work section.

Ensure large wall areas that require more than one container of paint per coat, have enough paint boxed (mixed) together to complete the final coat. This will not apply if a single factory batch of paint, rather than shop tinted paint, is applied.

### 3.19 MIXING

Although generally supplied ready to use, all paints must be thoroughly mixed to lift any settled pigment and ensure the paint is homogeneous.

### 3.20 ENVIRONMENT

Defer painting of exterior surfaces until weather conditions are favourable - warm dry days without frost or heavy dews. Avoid painting in direct sunlight any surfaces that absorb heat excessively. As far as possible apply paint in the temperature range 15°C to 25°C. If temperatures fall outside the range of 10°C and 35°C do not paint unless paints with the necessary temperature tolerance have been specified. Resene Hot Weather Additive can be added to most Resene waterborne top coats to extend open time when application is undertaken at elevated temperatures or conditions that will cause rapid loss of water from the applied wet film. Do not apply solvent borne paint if moisture is present on the surface.

### 3.21 SEQUENCE OF OPERATIONS

Painting work to generally follow the following sequences:

- Back painting and pre-installation painting, then post-installation exposed-face painting
- Complete surface preparation before commencing painting.
- Apply primers, sealers, stains, undercoats, paints and clear coatings in the sequences laid down by Resene.
- Allow the full drying time between coats laid down by Resene.
- Do not expose primers, undercoats and intermediate coats beyond Resene's recommendations before applying the next coat.
- Finish broad areas before painting trim.
- Ensure batch numbers of tins are matched for whole areas.
- Internally, paint ceilings before walls and walls before joinery, trim and other items.

### 3.22 APPLICATION

Select brush, roller, or pad and apply coatings to the requirements of Resene to obtain a smooth, even coating of the specified thickness, uniform gloss and colour.

### 3.23 LIGHTLY SAND

Lightly sand primers, sealers, undercoats and intermediate coats to remove dust pick-up, protruding fibres and coarse particles. A more thorough sanding to provide a mechanical key for the new paint system may be required depending upon the condition or age of the existing paint system..

### 3.24 DEFECTIVE WORK

Correct defective work immediately and recoat as required, following precisely the Resene system being applied. The same applies to transportation damage to site of factory painted items.

### 3.25 EACH COAT

Each coat of paint and the completed paint system to have the following qualities and properties:

- Uniform finish, colour, texture, sheen and hiding power and the proper number of coats applied.
- No blemishes such as runs, sags, crinkling, fat edges, entrained paint skins, hairs, dust, bare or starved patches, cracks, significant brush marks, ladder marks and blistering.
- Proper covering of corners, crannies, thin edges, cracks, end grain and other difficult places of application.

### **Completion**

### 3.26 CLEAN

Clean adjoining surfaces, glass and fittings of any paint contamination. Clean off glass indicators at the completion of the building works. Clean glass inside and out to a shining finish. Use the Resene Washwise on site 'paint equipment clean-up water' reclamation system to minimise the environmental impact of cleaning paint application tools.

**3.27 LEAVE**

Leave the whole of this work uniform in gloss and colour, of correct thickness, free from painting defects, clean and unmarked and to the standard required by following procedures.

**3.28 REMOVE**

Remove drop sheets, coverings and masking to leave surrounding surfaces and areas clean, tidy and undamaged. Remove debris, unused materials and elements from the site.

**3.29 REPLACE**

Replace hardware without damage to it or the adjoining surface and leave hardware properly fitted and in working order.

**3.30 DISPOSAL OF PAINTS AND THINNERS**

Note: The use and disposal of paint and thinners represents a significant environmental hazard. Ensure all paint and thinners are disposed of in the following manner:

- When requested hand over part used paint containers to client for maintenance touch ups.
- Recycle leftover paint at a Resene ColorShop as part of the Resene "Paintwise programme". Contact your local Resene ColorShop for details or view information online at [www.resene.co.nz/paintwise.htm](http://www.resene.co.nz/paintwise.htm).
- Donate left over paint to local community groups.
- Solvent based paints, paint thinners, turpentine, mineral spirits and solvents require special disposal procedures. Do not pour down sewer or stormwater drains, sinks or into the ground. If they cannot be recycled they must be disposed of in a refuse dump licensed to take toxic waste.

**3.31 MAINTENANCE**

Good maintenance of coating systems involves a routine of regular cleaning as well as regular inspections. Regular inspections of the coating systems are recommended to identify breakdown, accidental damage to or undesirable deterioration of the paint. Wash down of exterior coatings should be undertaken on an annual basis using Resene Paint Prep and Housewash (see Data Sheet D812).

Refer the Resene Caring for your paint finish brochure and the Resene website, [www.resene.co.nz/comn/services/maintenance.htm](http://www.resene.co.nz/comn/services/maintenance.htm).

**4 SELECTIONS****4.1 SELECTIONS**

Refer to 6721R RESENE PAINTING INTERIOR for selections.

# 6721R RESENE PAINTING INTERIOR

## 1 GENERAL

This section relates to the surface preparation, painting and clear finishing of new and existing interior substrates using **Resene** architectural and decorative coating systems.

### Related work

#### 1.1 RELATED WORK

Refer to 6700R RESENE PAINTING GENERAL for general matters related to painting work.

## 2 PRODUCTS

### Materials

#### 2.1 PAINT TYPES GENERALLY/ THINNERS AND ADDITIVES

Refer to 6700R RESENE PAINTING GENERAL for product clauses.

## 3 EXECUTION

### Conditions

#### 3.1 EXECUTION

Refer to 6700R RESENE PAINTING GENERAL for execution clauses.

## 4 SELECTIONS

Substitutions are not permitted to the following, unless stated otherwise.

### Resene interior paint systems

#### Plasterboard - new

#### 4.1 RESENE NEW INTERIOR PLASTERBOARD, WALLS - DRY AREAS (LEVEL 4 FINISH)

Surface Prep:	Resene SIPDS No1 and Spec Sheet 1: 1/1
Fire rating:	Group 1-S. Test Report FH4967
1st coat:	Resene Broadwall D403, Waterborne Wallboard Sealer
2nd coat:	Resene Zylone Sheen D302, Waterborne Low Sheen
3rd coat:	Resene Zylone Sheen D302, Waterborne Low Sheen

#### 4.2 RESENE NEW INTERIOR PLASTERBOARD, WALLS - WET AREAS

Surface Prep:	Resene SIPDS No1 and Spec Sheet 1A: 1/1
Fire rating:	Group 1-S. Test Report 7-593235-CO
1st coat:	Resene Sureseal D42, solvent-borne Pigmented Sealer (NEC)
2nd coat:	Resene SpaceCote Low Sheen Kitchen & Bathroom D311K Waterborne Enamel
3rd coat:	Resene SpaceCote Low Sheen Kitchen & Bathroom D311K Waterborne Enamel

#### 4.3 RESENE NEW INTERIOR PLASTERBOARD, CEILINGS - WET AREAS

Surface Prep:	Resene SIPDS No1 and Spec Sheet 1A: 1/1
Fire rating:	Group 1-S, Test Report 7-593235-CO
1st coat:	Resene Sureseal D42, solvent-borne Pigmented Sealer (NEC)
2nd coat:	Resene SpaceCote Flat Kitchen & Bathroom D314K, Waterborne Enamel
3rd coat:	Resene SpaceCote Flat Kitchen & Bathroom D314K, Waterborne Enamel

#### Plasterboard - existing

4.4 RESENE EXISTING INTERIOR PLASTERBOARD, WALLS - DRY AREAS

Surface Prep:	Resene SIPDS No1 and Spec Sheet 1: 1/3
Spot Prime:	Resene Broadwall D403, Waterborne Wallboard Sealer
1st coat:	Resene Zylone Sheen D302, Waterborne Low Sheen
2nd coat:	Resene Zylone Sheen D302, Waterborne Low Sheen

# 7151 SANITARY FIXTURES, TAPWARE & ACCESSORIES

## 1 GENERAL

This section relates to the supply and installation of sanitary fixtures, tapware and sanitary accessories.

### 1.1 RELATED WORK

Refer to 7421 SANITARY SYSTEMS for the supply and fitting of waste disposal pipework  
Refer to the electrical section/s for electrical connection of accessories.

#### Documents

### 1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

<a href="#">NZBC E3/AS1</a>	Internal moisture
<a href="#">NZBC F2/AS1</a>	Hazardous building materials
<a href="#">NZBC G1/AS1</a>	Personal hygiene
<a href="#">NZBC G12/VM1</a>	Water supplies
<a href="#">NZBC G12/AS1</a>	Water supplies
<a href="#">NZBC G13/AS1</a>	Foul water
<a href="#">NZBC G13/AS3</a>	Plumbing and drainage
<a href="#">AS/NZS 1730</a>	Washbasins
<a href="#">AS/NZS 2023</a>	Baths for ablutionary purposes
<a href="#">AS/NZS 3500.1:2015</a>	Plumbing and drainage - water services
<a href="#">AS/NZS 3500.2:2015</a>	Plumbing and drainage - sanitary plumbing and drainage
<a href="#">AS/NZS 3662</a>	Performance of showers for bathing
<a href="#">NZS 4223.3</a>	Glazing in buildings - Human impact safety requirements
<a href="#">Plumbers, Gasfitters and Drainlayers Act 2006</a>	

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

#### Requirements

### 1.3 QUALIFICATIONS

Plumbers to be experienced competent workers, familiar with the materials and the techniques specified. Carry out all work under the direct supervision of a Certifying Plumber under the [Plumbers, Gasfitters and Drainlayers Act 2006](#).

### 1.4 SUPPLIER

A specialist in the supply of tapware, and employing experienced architectural representatives available to assist during the course of the installation.

## 2 PRODUCTS

### 2.1 SANITARY FIXTURES

Refer to SELECTIONS for product selection.

### 2.2 TAPWARE

Refer to SELECTIONS for product selection.

### 2.3 SANITARY ACCESSORIES

Refer to SELECTIONS for product selection.

## 3 EXECUTION

**Conditions - sanitary fixtures****3.1 DELIVERY**

Only deliver to the site fixtures or fittings that can be immediately unloaded into suitable storage or be placed for direct installation.

**3.2 STORAGE AND HANDLING**

Take delivery of and store components complete with protective casings and coverings in areas that are enclosed, clean and dry and where no work is being done. Remove protection only to the extent that will allow installation.

**3.3 QUALITY STANDARDS INCLUDING NZBC G13/AS1**

Installation work to comply with [NZBC G1/AS1](#), [NZBC G12/VM1](#), [NZBC G12/AS1](#), [NZBC G13/AS1](#) and the fixture manufacturer's requirements.

**3.4 SUBSTRATE**

Ensure substrate and fixings will allow work of the specified standard.

**3.5 CO-ORDINATION**

Do not proceed if the points of supply and drainage services do not match the points of the fixtures without force or distortion.

**3.6 INSTALLATION REQUIREMENTS INCLUDING NZBC G13/AS1**

Install to [NZBC G1/AS1](#), [NZBC G12/VM1](#), [NZBC G12/AS1](#), [NZBC G13/AS1](#), [NZBC E3/AS1](#) and to the fixture manufacturer's installation requirements for each component. Carry out preparatory and assembly work, including connections to supply and drainage services and the application of slurries and sealants in sequence.

Seal between all sanitary fixtures and wall linings, fixtures and the tops they are in, the tops and wall linings, to [NZBC E3/AS1](#), 3.2.2. Fixtures include baths, basins, tubs or sinks. Tops include, vanities, bath surrounds, sink benches, etc, and there upstands.

**3.7 PROVIDE SUPPORT**

Confirm fixing points needed for each unit and provide solid blocking at each fixing bracket location.

**Conditions - tapware****3.8 RETAIN**

Retain tapware in the manufacturer's original packaging and ensure that units are complete with fixings and installation instructions. Label each unit separately with its fitting name and space number.

**3.9 STORE**

Store tapware packages in a shelved, dry and securely locked area. Provide supervision when the secure area is unlocked and packages and cartons are being distributed; signing off each package from the schedule as released.

**Conditions - sanitary accessories****3.10 RETAIN**

Retain fixtures, fittings and hardware in the manufacturer's original packaging and ensure that units are complete with associated fixings and installation instructions. Label each unit separately to match the submitted and approved schedule.

**3.11 PACKAGE**

Package fixtures, fittings and hardware units required in clear plastic and label each to match the drawings and the submitted schedule. Place packages in cartons selected for 'level', 'location', and/or 'sector' and label the packages and the cartons similarly.

**3.12 STORE**

Store items in a shelved, dry and securely locked area. Provide supervision when the secure area is unlocked and packages and cartons are being distributed; signing off each package from the schedule as released.

**3.13 INSPECTION**

Before starting the installation of proprietary items, check relevant spaces and wall and floor finishes for any condition that would not allow the proper installation of any unit. Do not proceed until such conditions have been remedied.

**Installation - sanitary fixtures****3.14 INSTALLING TOILET PAN**

Carry out preparatory and assembly work, including connections to supply and drainage services and the application of slurries/bedding and sealants in sequence. Fit the toilet pan in position, plumb, level, flush and rigid without stressing the attachment points of the component. Fixings to be corrosive resistant. Fit seat.

**3.15 INSTALLING CISTERNS**

Fit firmly in place and connect the specified cisterns from the supply services through the flush pipes to the relative fixtures in the positions as detailed all plumb and level.

**3.16 INSTALLING URINALS - WALL HUNG**

Carry out preparatory and assembly work, including connections to supply and drainage services and the application of sealants in sequence. Fit and fix the urinal in position plumb, level, flush and rigid without stressing the attachment points of the component. Connect units to drainage pipework through trap and complete screw fixing of units to wall. Fixings to be corrosive resistant. Seal perimeter of each unit to wall surface, using a compatible silicone sealant.

**Installation - Basins****3.17 INSTALLING WASHBASINS**

Install to [NZBC G1/AS1](#), [AS/NZS 1730](#). Set basins firmly to walls or vanities as detailed and to comply with [NZBC E3/AS1](#). Connect to supply and drains through trap to the drainage system.

**Installation - Miscellaneous****3.18 INSTALLING STAINLESS STEEL FIXTURES**

Carry out preparatory work and fit elements in position plumb, level, flush and rigid without stressing the attachment points in sequence. Connect to supply and drainage services.

**3.19 INSTALLING SANITARY FIXTURES & ACCESSORIES - PEOPLE WITH DISABILITIES**

Install fixtures to [NZBC G1/AS1](#): Part 3 and Part 4 and to comply with the relevant layouts shown in Figures 5,6,7,8 and 9. Provide number of facilities in accordance with [NZBC G1/AS1](#) tables 1, and 2.

**Application - tapware****3.20 GENERAL**

To [AS/NZS 3500.1](#) and in accordance with the manufacturer's requirements. Maintain safe water temperatures to comply with [NZBC G12/AS1](#).

**Application - sanitary accessories****3.21 INSTALLING ACCESSORIES**

Fit specified fittings firmly in place at required dimensions relative to floor and adjoining sanitaryware fittings, all plumb and level.

**3.22 LOCATE**

Locate units at heights and/or locations shown on the drawings, or as required to comply with [NZBC G1/AS1](#). For any dimension not shown or known, request direction before proceeding.

**3.23 CUTTING AND FITTING**

Where cutting and fitting of the substrate is necessary for installing any unit, carry out this work before the painting or finishing of that surface. Remove any hardware when required for painting, placing it in the packaging or carton originally supplied and returning it to the secure store until ready for re-installation.

3.24 **INSTALLING UNITS**

Install each unit in accordance with the proprietary fixture manufacturer's requirements, using the templates and tools supplied or recommended by them. Set units level, plumb and true to line and required location, with moving parts and actions freely and easily operating. Do not make any modifications to supplied units.

**Completion**

3.25 **REPLACE**

Replace damaged or marked elements.

3.26 **PROTECTIVE COVERINGS**

Leave fixtures, fittings and accessories clean and unblemished with stickers and protective coverings removed, with supply and drainage connections and all parts fully operating and working. Leave the whole of this work free of blemishes, undamaged and to the standard of finish required for following work.

3.27 **REMOVE**

Remove debris, unused materials and elements from the site.

**4 SELECTIONS**

4.1 **REFER DRAWINGS**

# 7421 SANITARY SYSTEMS

## 1 GENERAL

This section relates to above ground gravity flow sanitary systems;

- for foul water
- from sanitary fixtures to first underground drain connection
- including system wastes, floor wastes, floor waste gullies, traps, vents and valves
- with associated components and accessories to make the system work

### 1.1 RELATED SECTIONS

Refer to 7151 SANITARY FIXTURES, TAPWARE & ACCESSORIES for sanitary fixtures.

#### Documents

### 1.2 DOCUMENTS REFERRED TO

Documents referred to in this section are:

<a href="#">NZBC G1/AS1</a>	Personal hygiene
<a href="#">NZBC G12/AS1</a>	Water supplies
<a href="#">NZBC G13/AS1</a>	Foul water - Sanitary plumbing
<a href="#">NZBC G13/AS3</a>	Foul water - Plumbing and drainage
AS 2887	Plastic waste fittings
<a href="#">AS/NZS 1260</a>	PVC-U pipes and fittings for drain, waste and vent applications
<a href="#">AS/NZS 2032</a>	Installation of PVC pipe systems
<a href="#">AS/NZS 3500.2:2015</a>	Plumbing and drainage - Sanitary plumbing and drainage
BS EN 12524	Corrosion protection of metals. Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and copper plus nickel plus chromium

[Plumbers, Gasfitters and Drainlayers Act 2006](#)

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

#### Requirements

### 1.3 QUALIFICATIONS

Plumbers to be experienced competent workers, familiar with the materials and the techniques specified. Carry out all work under the direct supervision of a certifying plumber under the [Plumbers, Gasfitters and Drainlayers Act 2006](#).

### 1.4 OPERATION AND MAINTENANCE MANUALS

Supply maintenance manual information to requirements set out in the 1239 OPERATION & MAINTENANCE section.

#### Performance

### 1.5 TESTING

Confirm timing before carrying out any tests. Supply potable water and apparatus needed. Seal openings below the section being tested and slowly raise the water level to a minimum of 3 metres above the highest point of the section. Do not exceed 6 metres of head above the lowest point. Carry out and record a visual inspection that each joint showed no evidence of leaks.

## 2 PRODUCTS

#### Materials

### 2.1 COPPER PIPES AND TRAPS

Pipes complete with copper-alloy compression fittings and/or crox type joints and seal ring compression joints. Traps complete with screwed access ports. Exposed traps and wastes, complete with matching ferrules at penetration location, satin chrome plated to BS EN 12524.

## Components

### 2.2 PROTECTIVE TAPE

Plasticised PVC tape system with primer, mastic fixing and outer coating.

## 3 EXECUTION

### Conditions

#### 3.1 EXECUTION GENERALLY - AS/NZS 3500.2

Carry out this work and complete all tests to [NZBC G1/AS1: 2.0, 3.0](#) and [AS/NZS 3500.2](#), as modified by [NZBC G13/AS3](#).

#### 3.2 ELECTROLYTIC ACTION

Avoid electrolytic action by eliminating actual contact or continuity of water between dissimilar metals.

#### 3.3 HANDLE AND STORE

Handle and store pipes, fittings and accessories to avoid damage. Store on site under cover on a clean level area, stacked to eliminate movement and away from work in progress.

#### 3.4 SETTING OUT

Set out location of all stacks, discharge pipes, fittings and vent pipes and the completeness of their discharge into the drainage system.

#### 3.5 CORE HOLES AND SLEEVES

Fit core holes and sleeves as needed throughout the structure in conjunction with the boxing, reinforcing and placing of concrete. Sleeve diameter to be 25mm larger than outside diameter of pipe accommodated. Strip core holes and make good after installation of pipework.

#### 3.6 PIPE ACCESS

Fit and fix stacks, wastes and pipes in ducts independent of all other services so they are easily replaceable for their full length. Wrap or tape pipes buried in concrete.

#### 3.7 FITTINGS ACCESS

Fit and fix traps and wastes to enable access for cleaning and for maintaining the total system.

#### 3.8 CONFIRM LOCATIONS

Unless the location and height are clearly delineated on the drawings, confirm installation height and plan locations of sanitary fittings before commencing the piping installation.

#### 3.9 TRAPS AND WASTES

Conceal traps and wastes in the fabric of the building unless detailed otherwise. Fit and fix satin chrome plated exposed pipes, traps and wastes unless detailed otherwise.

Refer to 7151 SANITARY FIXTURES, TAPWARE & ACCESSORIES for locations and types of traps.

#### 3.10 CORROSION

Separate metals subject to electrolytic action from each other and from treated timber, concrete and other lime substances by space, painting of surfaces, taping, or separator strips.

### Application - jointing

#### 3.11 JOINTING COPPER PIPE - AS/NZS 3500.2

Braze pipe, fit alloy compression fittings, crox type joints and seal ring compression joints to [AS/NZS 3500.2](#), section 2.6 **Joints**.

### Application - fixing

#### 3.12 THERMAL MOVEMENT

Accommodate longitudinal movement in pipes resulting from temperature changes. Incorporate expansion joints in copper and PVC-U pipes. Install PVC pipes to [AS/NZS 2032](#). Take particular care to allow for movement at horizontal take-off locations from stacks.

**3.13 TRAPS AND FIXTURE DISCHARGE PIPES - AS/NZS 3500.2**

Size traps and pipes as required for each fixture or appliance. Establish the developed length of waste pipes. Vent and allow access for cleaning as required. Follow the most direct line with the least number of bends to AS/NZS 3500.2, table 3.3.1, for fixture loading and AS/NZS 3500.2, table 10.2.1, distance between supports.

**3.14 DISCHARGE STACKS AND VENTS - AS/NZS 3500.2**

Size stacks and vents to AS/NZS 3500.2, table 6.2(A), for fixture discharge pipe sizes and discharge units and AS/NZS 3500.2, table 3.9.3.1, vent pipe sizes. Extend up past the highest branch to form a discharge stack vent terminating to AS/NZS 3500.2, section 6.8 **Vents**, and finishing at the base with a 45 degree bend. Support system to AS/NZS 3500.2, table 10.2.1, for distances between supports.

**Completion****3.15 REPLACE**

Replace damaged or marked elements.

**3.16 LEAVE**

Leave the whole of this work free of blemishes, undamaged and to the standard of finish required for following procedures.

**3.17 REMOVE**

Remove debris, unused materials and elements from site.

**4 SELECTIONS****4.1 SANITARY SYSTEMS - COPPER PIPES AND TRAPS**

Refer Drawings

# 7701 ELECTRICAL BASIC

## 1 GENERAL

This section relates to the wiring for domestic and small scale commercial installations, including:

- lighting

### 1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

CFL	compact fluorescent lamp
ELV	extra low voltage
GLS	general lighting service
IP	international (ingress) protection classification
LCD	liquid crystal display
LED	light emitting diode
MCB	miniature circuit breaker
NUO	Network Utility Operator
PCB	printed circuit board
PIR	passive infrared
RCBO	residual current-operated circuit breaker with over current protection
RCCB	residual current-operated circuit breakers
RCD	residual current device
SIA	security integration architecture
TPS	tough plastic sheathed
TCF	Telecommunications Carriers' Forum

### Documents

## 1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

<a href="#">NZBC E2/AS1</a>	External moisture
<a href="#">NZBC F6/AS1</a>	Visibility in escape routes
<a href="#">NZBC F7/AS1</a>	Warning systems
<a href="#">NZBC G4/AS1</a>	Ventilation
<a href="#">AS/NZS 1125</a>	Conductors in insulated electric cables and flexible cord
<a href="#">AS/NZS 1768</a>	Lightning protection
<a href="#">AS/NZS 2201.1</a>	Intruder alarm systems - Client's premises - Design, installation, commissioning and maintenance
<a href="#">AS 2293.1:2005</a>	Emergency escape lighting and exit signs for buildings - System design, installation and operation
<a href="#">AS 2293.3:2005</a>	Emergency escape lighting and exit signs for buildings - Emergency escape luminaires and exit signs
<a href="#">AS/NZS 3000</a>	Electrical installations (known as the Australian/New Zealand Wiring Rules)
<a href="#">AS/NZS 3008.1.2</a>	Electrical installations - Selection of cables - Cables for alternating voltages up to and including 0.6/1 kV - Typical New Zealand installation conditions
<a href="#">AS/NZS 3100</a>	Approval and test specification-general requirements for electrical equipment
<a href="#">AS/NZS 3112</a>	Approval and test specification - Plugs and socket-outlets
<a href="#">AS/NZS 3113</a>	Approval and test specification - Ceiling roses
<a href="#">AS/NZS 3190</a>	Approval and test specification - Residual current devices (current-operated earth-leakage devices)
<a href="#">AS/NZS 3439.3</a>	Low-voltage switchgear and controlgear assemblies - Particular requirements for low-voltage switchgear and controlgear assemblies intended to be installed in places where unskilled persons have access for their use - Distribution boards
<a href="#">AS 3786</a>	Smoke alarms
<a href="#">NZS 4514</a>	Interconnected smoke alarms for houses
<a href="#">AS/NZS 5000.2</a>	Electric cables - Polymeric insulated - for working voltages up to and including 450/750v
<a href="#">AS/NZS 60335.1</a>	Household and similar electrical appliances - Safety - General requirements
<a href="#">AS/NZS 60598.2.2:2001</a>	Luminaires - Particular requirements - Recessed luminaires
<a href="#">IEC 61643</a>	Components for low voltage surge protection devices
<a href="#">Electricity (Safety) Regulations 2010</a>	(Reprint as at 4 April 2016)
<a href="#">TCF Premises Wiring Code of Practice 2011</a>	

### Warranties

## 1.3 WARRANTY

Warrant the complete electrical installation under normal environmental and use conditions against failure of materials and execution.

1 year: Warranty period

Refer to the general section for the required form of 1237WA WARRANTY AGREEMENT and details of when completed warranty must be submitted.

### Requirements

## 1.4 COMPLY

Comply with the Electricity (Safety) Regulations 2010, [AS/NZS 3000](#), [AS/NZS 3008.1.2](#) and [TCF Premises Wiring Code of Practice](#) for listed and prescribed work and with the utility network operator's requirements. Apply for the service connection. Arrange for the required inspections of listed work. Pay all fees.

## 1.5 QUALIFICATIONS

Carry out work under the supervision of an electrical licensed supervisor.

**1.6 SAFETY OF INSTALLATION - DESIGN BY ELECTRICIAN**

Before installation work commences provide a Certified Design. The Certified Design is to comply with the Electrical (Safety) Regulations (2010), regulations 58. It must be signed by the designer of the installation.

**1.7 ELECTRICAL CERTIFICATE OF COMPLIANCE**

Supply a certificate of compliance (CoC) to the owner, and if required the NUO, as required by the Electricity (Safety) Regulations (2010), prior to connection.

- Arrange for the NUO to inspect before the meter installation, listed work inspection, polarity check and supply becoming live.
- Arrange for an inspector to inspect as required by regulation 70.

**1.8 ELECTRICAL SAFETY CERTIFICATE**

Provide an Electrical Safety Certificate (ESC), as required by the Electrical (Safety) Regulations 2010, to the owner and when required the BCA. To be provided no later than 20 working days after connection and prior to Practical Completion.

**2 PRODUCTS****2.1 CABLES**

Tough plastic sheathed copper conductors to [AS/NZS 5000.2](#), stranded above 1.0mm<sup>2</sup>, and to [AS/NZS 3008.1.2](#). Minimum sizes as below. Increase sizes if the method of installation, thermal insulation, cable length or load will reduce the cable rating below that of the MCB rating, or produce an excessive voltage drop.

Lighting circuits:	Domestic: 1.5mm <sup>2</sup> on 10 amp MCBs
Lighting circuits:	Commercial: 1.5mm <sup>2</sup> on 16 amp MCBs
Power circuits:	2.5mm <sup>2</sup> on 16 amp MCBs for domestic and unenclosed or unfilled cavity construction
	2.5mm <sup>2</sup> on 16 amp MCBs for domestic insulated construction, or filled cavity
	2.5mm <sup>2</sup> on 20 amp MCBs for unenclosed or unfilled cavity construction
	2.5mm <sup>2</sup> on 16 amp MCBs for insulated construction, or filled cavity, or lengths over 30 metres
Hot water cylinder circuits:	Single phase: 2.5mm <sup>2</sup> on 20 amp MCBs
Range/oven/hob circuits:	Single phase: 6mm <sup>2</sup> on 32 amp MCBs

Heat resistant cable for final connections to all heated appliances, and high temperature cable in ambient conditions that may be above 35°C.

**2.2 SWITCH UNITS**

Single pole switches to be 16 amp minimum rated, double pole or intermediate to be 16 amp minimum rated. All switches to be 230 volt a.c. polycarbonate flushplate units. Refer to drawings/schedules for number of switches per unit, dimmer units, neon (indicator or toggle) units and 2 way units.

**2.3 LIGHT FITTINGS**

Fluorescent and High Intensity Discharge fittings with low loss control gear and power factor corrected to 0.95 minimum. Control gear suitable for dimming if this is required. All fittings complete with lamps; Incandescent GLS lamps pearl, coiled-coil 230v rated, bayonet cap; Fluorescent triphosphor 2700K; CFL; halogen ELV 12v dichroic reflector with cover glass unless detailed otherwise; integral/non-integral LEDs, reflectors, lenses, heatsinks and drivers - 3,000K to 4,000K, CRI >80, L70.

**2.4 EXHAUST FANS**

Ceiling, wall or duct mounted exhaust fans for ventilation to [NZBC G4/AS1](#), and compliant with [AS/NZS 60335.1](#).

**3 EXECUTION****3.1 EARTH BONDS**

Bond together and to earth all plumbing fittings not adequately isolated, to [AS/NZS 3000](#), the Electricity (Safety) Regulations 2010 and the fitting manufacturer's requirements.

### 3.2 SET-OUT

The position of outlets and equipment shown on drawings is indicative of requirements. Confirm documents and site conditions are not in conflict with other services or features. Resolve conflicts and discrepancies before proceeding with work affected. Confirm on site the exact location, disposition and mounting heights of all outlets, fittings, equipment, penetrations, and use of exposed wiring. Fix outlet items level, plumb and in line.

### 3.3 CABLING

Install wiring systems to [AS/NZS 3000](#). All cabling run concealed. No TPS cable laid directly in concrete. Locate holes in timber framing for the passage of cables at the centre line of the timber member. Install cable in conduits where required to pass through concrete or underground. In walls run cabling horizontally and vertically in straight lines. In ceilings either run cabling along ceiling framing or attached to catenary wires. Clip cabling to ceiling framing/catenary wires.

### 3.4 CABLING CIRCUITS

Install all circuits with the appropriately rated cable and circuit protection. Install with a maximum of 8 light switch units or 4 double or single switched socket units on any circuit. Minimum 2 lighting circuits per floor. Separate circuits for all electric heating appliances. Kitchen sockets to be on at least two different circuits.

### 3.5 LIGHT FITTINGS

Install light fittings in locations and at heights specified and confirmed by the owner, in accordance with the fitting manufacturer's requirements.

### 3.6 ELECTRIC POWERED FITTINGS AND EQUIPMENT

Install and wire fittings and equipment to individual fittings and equipment manufacturer's requirements. Refer to the drawings for required layouts and locations for equipment. Refer to SELECTIONS for schedules of fittings.

### 3.7 BATHROOM ELECTRICAL FIXTURES

Install all electrical fixtures. Connect the following bathroom and toilet electrical items:

- Exhaust fans: Install exhaust fans to manufacturer requirements. Installed in accordance with [AS/NZS 3000](#) and [NZBC G4/AS1](#).

### 3.8 LABELLING

Include label under each controller, switch and circuit breaker on distribution boards. Include a warning notice if light dimmers are used in the installation. List the rating of each circuit.

#### **Fire rated sealers and liners**

### 3.9 SEAL ALL PENETRATIONS

Seal all penetrations, including in and around conduits and sleeves, in accordance with manufacturer's instructions. For fire and/or acoustic rated elements, maintain the rating with the seal systems.

### 3.10 PROVIDE CABLE SLEEVES

Provide PVC sleeves formed from pipe sections, unless fire and/or acoustic systems require sleeves for other building elements and/or different material for the sleeve.

#### **Fire rated accessories**

### 3.11 INSTALL WALL BOXES AND SWITCH UNITS - FIRE RATED

Install proprietary fire rated wall boxes and switch units in accordance with manufacturer's instructions.

#### **Completion**

### 3.12 COMPLETION

Leave installation operating correctly, with equipment clean and operational.

## 4 SELECTIONS

### **Materials**

4.1 SELECTIONS - TBC

Confirm selections of all outlet fittings and hardware with the owner in writing before ordering.