

# ***Abbotsford***

## **Abbotsford Road, Picton**

### **STABILISATION WORKS Specification**

**Prepared for  
The Abbotsford Group**

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**Abbotsford**  
**Abbotsford Road, Picton**  
**STABILISATION WORKS SPECIFICATION**

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<b>1.0</b>	<b>PRELIMINARIES</b>
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**1 General**

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**1.1 Precedence**

**Precedence**

General: Requirements of subsequent worksections of the specification override conflicting requirements in this worksection.

**1.2 Cross references**

**Common requirements**

Associated worksections:

Conform to the following:

- Roofing.
- Brickwork.
- Stone repair.
- Jointing and pointing.

**1.3 Referenced documents**

**Contractual relationships**

General: Responsibilities and duties of the principal, contractor and contract administrator are not altered by requirements in the documents referenced in this specification.

**Current editions**

General: Use referenced documents which are the editions, with amendments, current 3 months before the closing date for tenders, except where other editions or amendments are required by statutory authorities.

**1.4 Interpretation**

**Definitions**

General: For the purposes of this worksection the definitions given below apply.

- Attendance: 'Attendance', 'provide attendance' and similar expressions mean 'give assistance for examination and testing'.
- Contract administrator: 'Contract administrator' has the same meaning as 'architect' or 'superintendent' and is the person appointed by the 'owner' or 'principal' under the contract.
- Design life: The period of time for which it is assumed, in the design, that an asset will be able to perform its intended purpose with only anticipated maintenance but no major repair or replacement being necessary.
- Geotechnical site investigation: The process of evaluating the geotechnical characteristics of the site in the context of existing or proposed construction.
- Give notice: 'Give notice', 'submit', 'advise', 'inform' and similar expressions mean 'give notice (submit, advise, inform) in writing to the contract administrator'.
- Hold point: The activity cannot proceed without the approval of the contract administrator.
- Maintenance period: Synonymous with 'Defects liability period'.
- Obtain: 'Obtain', 'seek' and similar expressions mean 'obtain (seek) in writing from the contract administrator'.
- Professional engineer: A person who is listed on the National Professional Engineers Register (NPER) in the relevant discipline at the relevant time.
- Metallic-coated steel: Includes zinc-coated steel, zinc/iron alloy-coated steel, and aluminium/zinc-coated steel.
- Principal: 'Principal' has the same meaning as 'owner', 'client' and 'proprietor' and is the party to whom the Contractor is legally bound to construct the works.

- Proprietary: 'Proprietary' mean identifiable by naming manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.
- Provide: 'Provide' and similar expressions mean 'supply and install'. Installation shall include development of the design beyond that documented.

Production tests: Tests carried out on a purchased item, before delivery to the site.

- Tolerance: Difference between the upper limit of dimension and the lower limit of dimension.
- Required: Means required by the documents, the local council or statutory authorities.
- If required: A conditional specification term for work which may be shown in the documents or be a legislative requirement.
- Samples: Includes samples, prototypes and sample panels.
- Supply: 'Supply', 'furnish' and similar expressions mean 'supply only'.
- Verification: Provision of evidence or proof that a performance requirement has been met or a default exists.
- Witness points: Provides an opportunity to attend an activity but does not involve an obligation. The activity can proceed without approval from the contract administrator.

## 2 Products

### 2.1 Materials and components

#### Consistency

General: For each material or product use the same manufacturer or source and provide consistent type, size, quality and appearance.

#### Corrosion resistance

General: Conform to the following corrosivity category with regard to work section corrosion resistance tables.

Corrosivity category: Medium

### 2.2 Building the works

#### Surveys

Setting out: Existing work - verify the dimensions of the existing work before proceeding and notify discrepancies.

Levels - spot levels shall take precedence over contour lines and ground profile lines.

#### Clearing Work Site

The works site is an archaeological item listed on the State Heritage Register and the Wollondilly Local Environmental Plan. No excavation is permitted in the site.

All of the trees growing within the walls and footprint of the verandahs, and within 1m of the homestead are to be cut down. Cut down these trees branch by branch to prevent trees falling onto the remaining walls. Cut branches into small enough pieces so they can be carried out without damage to remaining building fabric. The final cut is to be horizontal across the trunk, shortly above ground. Within 30 seconds of making the final cut, pour several millilitres of glyphosate 450 onto the cut. Trees and branches growing within 1.5m of the Maid's Quarters and Smoke House may be pruned or removed as needed.

Fallen bricks are to be reused in these works. Move as many fallen bricks as are needed and leave the remaining bricks as found. Do not remove found built fabric in situ, or fabric fallen from the buildings and lying on the site as found when the builder takes possession of the site.

Do not remove any fallen timbers from the site, or remove timbers remaining in the brickwork of the homestead.

#### Safety

Accidents: Promptly notify the architect of the occurrence of the following:

- Accidents involving death or personal injury.
- Accidents involving loss of time.
- Incidents with accident potential such as equipment failure, slides and cave-ins.

Accident reports: Submit reports of accidents.

- Purpose of submission: Information only.



**Contractor's representative**

General: Must be accessible, and fluent in English and technical terminology.

**Items supplied by owner**

General: Materials and other items scheduled to be re-inserted into the buildings will be supplied free of charge to the contractor for installation in the execution of the works.

**Scaffolding**

General: The Contractor shall provide all scaffolding as required for the construction of the works and include the scaffolding specified in the structural drawings. All scaffolding etc shall be in accordance with the provisions of the relevant authority.

**Stabilising Roof of Maid's Quarters**

The rear (south) wall and east-facing wall return are to be rebuilt as contemporary timber stud wall, clad on the outside with fibre cement sheet as shown. The fibre cement is to be fixed drain water beyond the building footprint. A simple contemporary door for external use is to be placed within the south façade as shown. Use existing footings as far as possible. Make minimal interference with collapsed brick walls here.

Protect original windows from further damage.

Make best efforts to prop up collapsed rear skillion roof using existing roof timbers and roofing steel sheet. Where required, add new roofing timbers of minimum matching dimensions to similar design to support roof and make the building water tight.

Prop up east side of hip roof using additional timbers of minimum matching dimensions to similar design. Leave redundant existing timber on site under cover in the Maid's Quarters.

Fix new corrugated sheet steel of profile matching existing to ensure that the roof sheds rainwater beyond the footprint of the original dwelling. New guttering is not required.

**2.3 Completion of the works****Final cleaning**

General: clean down completed new brickwork. Leave surplus found materials on site. Builder's own rubbish or material brought to the site is to be removed from the site.

Detergents or solvent are not to be used without the prior approval.

**2.0 BRICK RECONSTRUCTION****1 General****1.1 Cross references****General**

Requirement: Conform to the following worksection(s):

- *General requirements.*
- *Schedule of repairs*

**1.2 Standards****General**

Materials and construction: To AS 3700.

**2 Products****2.1 Durability****General**

Exposure environment: Moderate

**2.2 Materials****Brick units**

Selections: reuse existing fallen bricks on site. Select existing half bricks in preference to cutting existing bricks.

Clean any remaining mortar and rinse each brick to be reused.

**Mortar materials**

Mortar class: To AS 3700 Table 5.1.

Lime: To AS 1672.1.

Sand: Fine aggregate with a low clay content and free from efflorescing salts, selected for colour and grading.

Water: Clean and free from any deleterious matter.

Admixtures: Do not provide admixtures.

**2.3 Lime**

To AS 1672. The lime shall be prepared for adding the mortar mix in the form of a putty and may be either,

Slaked fresh rock lime run and sieved or;

Hydrated lime from a reliable source.

Prepare lime for incorporation into the mix to AS A123, Clause 1.4. Store lime on site in accordance with requirements of AS 1672.

HYDRATED LIME PREPARATION: Purchase prepared mixture, OR:

Thoroughly mix with water by adding the lime to water contained in a clean container and stirring it to a thick creamy consistency. The contents are then allowed to stand undisturbed in a container for not less than 16 hours.

The container shall be properly sealed with an airtight lid in an approved manner. At the end of 16 hours the lime mixture should be achieved, through evaporation, a consistency of very thick cream. If excess water is present, it shall be siphoned or poured off in accordance with code requirements.

Consistency of lime: Particular attention shall be given to the proportion of lime in the mix of one part of lime and water to slaked lime mix. The proportion is critical at the time of mixing the lime into the bedding and pointing mortar mixes. This proportion will be known as the consistency of lime.

Storage: The Contractor shall store slaked lime on site in airtight containers suitable for this purpose.

Additives: Do not use additives unless specified or unless prior approval has been obtained from the Superintendent.

## **2.4 Mortar Mix**

To AS 3700. Mix by weight or volume. Particular attention shall be paid to the exact measurement of mortar contents and the mixing procedure. Use suitable batching boxes for mixing of mortar by volume. Machine mix.

Bedding and Jointing Mortar:

To be one part lime and three parts sand.

Pointing sand:

To be one part lime and three parts sand.

Grouting:

To be one part lime and three parts sand.

## **2.5 Built-in components**

### **General**

Durability class of built-in components: To AS 3700 Table 5.1.

### **Reinforcement**

Standard: To AS/NZS 4671.

Corrosion protection: To AS 3700 clause 5.9.

Minimum cover: To AS 3700 Table 5.1.

### **Connectors and accessories**

Standard: To AS/NZS 2699.2.

Corrosion protection: To AS/NZS 2699.2.

Design criteria for flexible masonry ties: To AS 3700.

### **Flashings**

Use 300x300 terra cotta floor tiles of natural colour and flat shape to wall tops.

## **3 Execution**

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### **3.1 General**

#### **Mortar mixing**

General: Measure volumes accurately to the documented proportions. Machine mix for at least six minutes.

#### **Bond**

##### **Building in**

Embedded items: Build in accessories as the construction proceeds.

##### **Mortar joints**

Solid units: Lay on a full bed of lime mortar. Fill perpends solid. Cut mortar flush to match existing.

Finish: Conform to the following:

- Externally: Tool to give a dense water-shedding finish.
- Thickness: 10 mm or to match existing.

Cutting: Set out masonry with joints of uniform width.

#### **Stabilisation of eroded masonry and Mortar Pointing**

Fill eroded holes in brickworks with fallen brick units where a whole or half brick can be inserted to match the brick bond of the wall. Mortar in brick units with lime mortar: one part lime and three parts sand.

Fill eroded holes smaller than a half brick with lime mortar flush to match existing. Cut mortar so water drains out of the wall.

#### **Protection**

General: Cover the top surface of brickwork to prevent the entry of rainwater and contaminants



during the works.

All walls of the homestead that are marked as being full-height currently, or are to be reconstructed to full height, are to be left protected by terra cotta floor tiles mortared onto the top of the walls.

Apply a separation layer on top of the finished wall. Use mortar of 1 part lime to three parts sand over the separation layer to hold tiles. Arrange the terra cotta floor tiles in a gable form to shed rain water away from the walls.

Where brick flat arches are in any danger of collapse, prop the arch with hardwood or treated pine frame using timber sections of minimum 60x120 dimensions.

#### **Re-pointing**

General: repoint eroded gaps in brick walls and mortar deeper than 30mm with lime mortar. Cut mortar so water drains out of the wall.

#### **Temporary support**

General: If the final stability of the masonry is dependent on construction of (structural) elements after the brickwork is completed, provide proposals for temporary support or bracing.

### **3.2 Facework**

#### **Cleaning**

General: Clean progressively as the work proceeds to remove mortar smears, stains and discolouration. Do not erode joints if using pressure spraying.

Acid solution: Do not use.

#### **Colour mixing**

Distribution: In facework, distribute the colour range of units evenly to prevent colour concentrations and banding.

#### **Double face walls**

Selection: Select face units for uniform width and double-face qualities.

#### **Sills and thresholds**

General: Solidly bed sills and thresholds and lay them with the top surfaces draining away from the building. Use found sandstone sills of appropriate width in preference. Where a sandstone sill of appropriate width is not found, do not cut other found sandstone, use full bricks arranged on edge.

### **3.3 Brickwork bed joint reinforcement**

#### **Location**

General: Locate as follows:

- In 2 bed joints below and above head and sill flashings to openings.
- In 2 bed joints above openings.
- In third bed joint above bottom of wall.
- In second bed joint below top of wall.
- Maximum vertical intervals: 500 mm.
- In every sixth brick course at the junctions where a return wall is constructed to stabilise an existing wall.

#### **Reinforcement**

Material: Galvanized welded wire mesh.

Width: Equal to the width of the brick wall, less 15 mm cover from each exposed surface of the mortar joint.