

Northern Sydney Local Health
District (NSLHD)
Mona Vale Hospital
Specification for Facade Repairs

Issue 03 j August 2011

Contract No: HSSN_HC11_076NSY
Mona Vale District Hospital Facade
Remediation Project

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This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 220788-01

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Document Verification

ARUP

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1 PRELIMINARIES & GENERAL CONDITIONS

1.1 Project Participants & Agreement

1.1.1 The Project

Name: Mona Vale Hospital - Facade Repair Works
Nature: Stabilise and repair selected facade elements of the Mona Vale Hospital
Location: Mona Vale Hospital, Coronation St, Mona Vale NSW 2103

1.1.2 Principal

Northern Sydney Local Health District (NSLHD)

1.1.3 Authorised Person

The Authorised Person is: Erek Sudhakar
Title: Project Manager
Telephone number: (02) 9887 5670
Facsimile number: (02) 8877 5164
e-mail address: esudhakar@nscchahs.health.nsw.gov.au

1.1.4 Senior Executive

The Senior Executive is: Director, Capital Works and Asset Management

Office address:

(for delivery by hand) Capital Works and Asset Management
Level 1, Wallace Wurth Building
Macquarie Hospital
Wicks Road, North Ryde
NSW 2113

Postal address:

(for delivery by post) PO Box 169

North Ryde

NSW 1670

Telephone number: (02) 9887 5060

Facsimile number: (02) 8877 5164

e-mail address: dgreen@nscchahs.health.nsw.gov.au

1.1.5 Facade Consultant

Arup Facade Engineering

Level 10, 201 Kent Street

Sydney NSW 2000

PO Box 76 Millers Point

Sydney NSW 2000

Attn: Felipe Flores

Telephone number: (02) 9320 9643

1.1.6 Plant and Operations Manager

Mona Vale Hospital

Coronation St

Mona Vale NSW 2103

Attn: Christopher Bull

Telephone number: (02) 9998 0332

1.1.7 Site Manager

Director of Nursing & Midwifery

Mona Vale Hospital

Coronation St

Mona Vale NSW 2103

Attn: Jacqueline Edgeley

Telephone number: (02) 9998 0881

1.1.8 Principal Contractor

The Contractor is appointed the Principal Contractor for the construction work being carried out by or on behalf of the Principal, and is authorised by the Principal to exercise such authority of the Principal as is necessary to enable to the Principal Contractor to discharge the responsibilities imposed on a Principal Contractor by the NSW Occupational Health and Safety Regulation 2001.

1.1.9 General Terms of Agreement:

The General Terms of Agreement between the Principal and Contractor are as contained in Contract No: HSSN_HC11_076NSY as issued by Northern Sydney Local Health District (NSLHD).

1.2 Project Particulars

1.2.1 The Site

Mona Vale Hospital together with Manly Hospital forms the Northern Beaches Health Service. The main building provides acute care services, including orthopaedic, medical, surgical, paediatric and emergency care to the local region and will remain operational throughout the works under contract.

Mona Vale Hospital

The main building is split into four main wings and a main central tower set out in a cruciform arrangement. In this Specification they will be referred to as the north, south, east and west wings.

It is apparent that the eastern and southern wings were added to the hospital in recent years.

The building structure consists of a reinforced concrete frame, using concrete slabs and columns.

The building facade consists of the following main components:

Brick Walls & Infill Panels

The majority of the brick infill panels consist of cavity brickwork incorporating a metal flashing at the base. Some areas of the building are continuously in-filled from slab to slab with cavity brickwork also.

Glazing & Fixed Louvers

The glazing generally consists of fixed panes and single glazed windows. Window types include hinged, casement, awning, hopper and pivot windows. The different window systems include aluminium sub-sills, sub-heads formed of paired angles, and jambs. Aluminium framed windows are fixed to the concrete slabs, columns and brick infill panels.

All louvered panels are integrated to the aluminium system and also fixed to the concrete columns and slab.

It is apparent that some glazed areas on the eastern elevation of the northern wing were replaced with a completely new window system in recent years.

Sunshades

A series of aluminium framed sunshade blades are fixed to the western elevation of the northern wing. The aluminium frame supporting aluminium blades are fixed to the concrete slab and brick infill panels.

1.2.2 The Works

The purpose of the Works is to repair, stabilise and conserve the facade components of the Mona Vale Hospital. Refer to contract drawings TD 01 to TD 05.

The Works generally consists of:

Stage 1 - Immediate Works (highlighted in red in drawings TD 01 to TD 05)

- Undertake a full visual and map survey/dilapidation audit of all windows to identify components requiring immediate or imminent repairs
- Demolition and rebuilding of brickwork panels, including installation of new wall ties
- Re-securing and resealing of windows
- Installation of new window hardware to restore operability
- Securing of sunshades and louvres
- Localised render repairs
- Treatment of steel corrosion on existing beams to tower plant room
- Replacing and fixing of steel mesh to tower plant room
- Overcladding of tiled areas to tower plant room
- Breakout and patching of reinforced concrete to car park retaining wall
- Coating of concrete surfaces to car park retaining wall
- Removal of existing steel balustrade infill and replacement with galvanised steel balustrade panels
- Miscellaneous works (reinstallation of missing fascia and A/C units, replacement of downpipes etc.)
- Inspections and follow-up maintenance

Optional Additional Works:**Stage 2 - Imminent Works (highlighted in yellow in drawings TD 01 to TD 05)**

- Re-pointing of brickwork panels, including installation of new ties
- Removal and replacement of roof capping
- 850m² of torch-applied membrane to roof areas (north wing)
- 235m² of torch-applied membrane to roof areas (north wing)
- Inspections and follow-up maintenance

Note: The Contractor shall provide costs for Stages 1 and 2 with the tender submission.

Clarification should also be given as to what would be the cost saving if Stages 1 and 2 are carried out at the same time.

1.2.3 The Specification

This document is a part prescriptive, part performance specification written in the directive style. Where an obligation is given and it is not stated who is to undertake these obligations, they are to be undertaken by the Contractor.

Generally, the following items are prescribed:

- Materials
- Engineering matters
- Generally, the required performance of the following items is stated:
- Matters regarding Occupational Health and Safety
- Access to and protection of the Site and Works
- Quality of Work
- Construction techniques (by implication)

The specification consists of the following sections and attachments:

Section 1 Preliminaries and General Conditions

Section 2 Technical Specification

2.1: Survey

2.2: Brickwork

2.3 Windows

2.4 External Sunshades

2.5 Coatings

2.6 Built-up Membrane

2.7 Render

2.8 Concrete

2.9 Steel

2.10 Sealants

2.11 Miscellaneous

2.12 Cleaning

Attachment 1: Sample, Inspection and Testing Requirements

Attachment 2: Form of Warranty

1.3 Site/Project Specific Requirements

SITE CONSTRAINTS

1.3.1 Occupied Premises

The building will remain operational as a hospital and health care facility during the Works.

Observe specific special site constraints as stated in 1.3 & 1.9

Carry out the Works without undue inconvenience and nuisance and without danger to occupants and users.

Keep entrances, exits and other access ways clear of obstructions. If in order to carry out the Works it is necessary to obstruct any access ways provide adequate signage and/or alternative routes as appropriate.

1.3.2 Site Induction

All contractor staff (employees and subcontractors) must be site inducted prior to commencing work on site. Site induction to be arranged by the Authorised Person.

1.3.3 House Rules

Comply with all requirements of the Mona Vale Hospital District Hospital Rules at all times. A copy is available from the Plant & Operations Manager, and is held in the Engineering Office.

1.3.4 Working Hours

The site will normally be available from 7.00am to 3.00pm Monday to Friday. Give notice of work on Saturday to allow access to be arranged by the Authorised Person.

Sunday or public holiday working may be permitted by prior arrangement.

Hours worked shall be in accordance with statutory and local authority requirements

1.3.5 Noisy Work

Noisy work as defined in Section 1.8.2 may be conducted between 7.00am and 3.00pm Monday to Friday provided local authority regulations are not breached.

SITE FACILITIES

1.3.6 Power

Existing power outlets available for use during the works are to be specifically approved for use by the Plant & Operations Manager

1.3.7 Water

Existing water outlets available for use during the works are to be specifically approved for use by the Plant & Operations Manager

1.3.8 Lifts

An independent goods lift is not available in the building. However, any movement through existing service lift and passenger lifts shall be negotiated with the Authorised Person.

1.3.9 Site Storage

Contractor's site storage is not available and secure temporary storage needs to be arranged by the contractor.

1.3.10 Sanitary Facilities

Use of onsite sanitary facilities shall be negotiated between the successful tenderer and the Authorised Person.

1.3.11 Parking

Limited parking for vehicles is available on site but shall be negotiated with the site management prior to start of works.

The parking space is located outside the Engineers' office compound.

1.4 Special Requirements

1.4.1 Security

The contractor needs to sign in every day at the Engineers Office, display appropriate labelling and keep records of staff and sub contractors on site on a daily basis.

1.4.2 Access

Contractors to access only approved site areas. Any other access requirements for this project shall be negotiated with the Authorised Person.

1.4.3 Special Site Constraints

All remediation works within the hospital operational areas (internal and external) shall be pre-approved by the NSLHD Authorised Person in the weekly meetings.

1.4.4 Specific Work Sequence

Ensure that work methods and sequencing will not adversely affect previous work or work in adjacent work locations.

It is anticipated that the works will be carried out in the following general order:

- Survey as Section 2.1
- Repair of selected facade components as Sections 2.2 to 2.12

Windows

- Repair or refix window sashes frames in-situ
- Remove operable window sashes and install new hinges to make windows operable if required
- Replace required window mechanisms
- Screw window sashes shut where required
- Provide temporary weather protection to window opening if sashes are removed for more than a day
- Allow to replace all seals and/or gaskets to weather-proof windows.

Sunshades

- Allow the Authorised Person to inspect each louvre to assess opportunity to re-instate operability of louvre blades
- Screw sunshades fix by providing a bracket to the underside of each sunshade at either end as Section 2.4.2
- Refix or reinstate lose or missing louvre blades on top of each sunshade bank as Section 2.4.1

Note: This sequence is indicative only. The Contractor should determine the appropriate sequence of works to satisfy the requirements of the specification.

1.4.5 Hazardous Materials Register

A hazardous materials register is held by the Plant and Operations Manager and is available upon request.

1.4.6 Hazardous Materials Management Plan

If hazardous materials are being used by the Principal Contractor for this project, a separate plan shall be provided.

1.4.7 Asbestos Register

An asbestos register is available in the Site Engineers Office. The Contractor must check the register prior to commencement of works..

1.4.8 Asbestos Remediation Plan

It is the responsibility of the Contractor to review the Hazardous Materials Register and identify all associated hazardous materials risks involved in the scope of works. The Contractor must then develop and implement an Asbestos Remediation Plan prior to the commencement of works. The Asbestos Remediation Plan shall include and address, but is not limited to the following facade materials and areas of the building:

- Vermiculite to ceiling spaces and window heads
- Mastic sealants around window framing and external brickwork
- Compressed fibre cement sheeting to fascias
- Nuralite membrane to North Wing roof

Noel Arnold & Associates Pty Ltd will act on behalf of NSCCH to review and evaluate the successful Tenderer's ARP and follow up with inspections.

1.5 Provision, Content & Use Of Documents

DEFINITIONS & INTERPRETATIONS

1.5.1 In Writing

When required to notify, inform, instruct, agree, confirm, obtain information, obtain approval or obtain instructions do so in writing.

1.5.2 Approval (And Words Derived Therefrom)

The approval in writing of the Authorised Person unless specified otherwise.

1.5.3 Submit (And Words Derived Therefrom)

Means to the Authorised Person unless otherwise instructed.

1.5.4 Authorised Person

Authorised Person shall mean the Authorised Person of the Contract, or any other Agent of the Principal as advised by the Principal to the Contractor in writing.

1.5.5 Plant and Operations Manager

Plant and Operations Manager shall mean the tenant's representative and manager of the building nominated in Section 1.1.6, or any other agent of the Plant and Operations Manager as advised by the Plant and Operations Manager to the Authorised Person in writing.

1.5.6 Referenced Documents

Where and to the extent that this specification conflicts with referenced documents, this specification prevails.

1.5.7 Substitution of Products

Inform the Authorised Person of the reasons for the proposed substitution. When requested, submit for verification documentary evidence that the alternative product is equivalent in respect of material, safety, reliability, function, compatibility with adjacent construction, availability of compatible accessories and, where relevant, appearance.

Any proposal for use of an alternative product must also include proposals for substitution of compatible accessory products and variation of details as necessary, with evidence of equivalent durability, function and appearance of the construction as a whole.

If such substitution is approved, and before ordering products, provide revised drawings, specification and manufacturer's guarantees.

1.5.8 Equivalent Products

Wherever products are specified by proprietary name and the phrase 'or equivalent' is not included, it is to be deemed included unless specifically noted otherwise and subject to approval as Clause 1.5.7.

1.5.9 Currency of Documents

References to type, approval certificates, catalogues, codes of practice and the like are to the editions, revisions, versions and amendments current one month before tender issue.

References to Australian Standards documents are to the versions and amendments listed in the Australian Standards Catalogue, including updates, current at date of tender issue.

1.5.10 Supply & Fix

Unless stated otherwise all items given in the schedule of work and/or on the drawings are to be supplied and fixed complete.

TERMS USED IN REFURBISHMENT / ALTERATION

1.5.11 Remove

Means disconnect, dismantle as necessary and remove the stated element, work or component and all associated accessories, fastenings, supports, linings and bedding materials, and dispose of unwanted materials. It does not include removing associated pipe work, wiring, ductwork or other services.

1.5.12 Keep For Re-Use

Means:

- During removal prevent damage to the stated components or materials, and clean off bedding and jointing materials.
- Stack neatly, adequately protect and store until required by the Principal or for use in the WORKS as instructed.

1.5.13 Replace

Means:

- Remove the stated existing components, features and finishes.
- Provide and fit in lieu new components, features or finishes which, unless specified otherwise, must match those which have been removed.
- Make good as necessary.

1.5.14 Repair

Means carry out local remedial work to components, features and finishes as found in the existing building, resecure or refix as necessary and leave in a sound and neat condition.

It does not include:

- Replacement of components or parts of components.
- Redecoration.

1.5.15 Make Good

Means carry out local remedial work to components, features and finishes which have been disturbed by other previous work under this Contract and leave in a sound and neat condition.

It does not include:

- Replacement of components or parts of components.
- Redecoration. The meaning of the term shall not be limited by this definition where used in connection with the defects liability provisions of the Contract.

1.5.16 Ease

Means make minor adjustments to moving parts of the stated component to achieve good fit in both open and closed positions and ensure free movement in relation to fixed surrounds.

Make good as necessary.

1.5.17 To Match Existing

Means use products, materials and methods to match closely all visual characteristics and features of the existing work, with joints between existing and new work as inconspicuous as possible, all to approval of appearance.

1.5.18 Allow

Means allow in the Contract Sum for the work described.

1.5.19 Provide

Means supply, fit and/or fix items or elements as scheduled, specified, shown and detailed.

1.5.20 Provisional Allowances

The Contract includes work subject to payment as a Provisional Allowance.

Refer to General Conditions of Contract Clause - Payment and Retention and Sub-Clause - Provisional Sums in Conditions of Tendering Clause - Provisional Allowances.

DOCUMENTS PROVIDED ON BEHALF OF PRINCIPAL

1.5.21 The Specification

All sections of the specification must be read in conjunction with Main Contract Preliminaries/General conditions.

DOCUMENTS PROVIDED BY CONTRACTOR

1.5.22 Technical Literature

Retain copies of the following on site, readily accessible for reference by all supervisory personnel:

- Manufacturers' current technical literature relating to all products to be used in the Works.
- Any other documentation required by statutory regulations.

1.5.23 Maintenance Instructions & Guarantees

Retain copies delivered with components and equipment (failing which, obtain), register with manufacturer as necessary and hand over to Authorised Person on or before Practical Completion.

1.6 Management of The Works

1.6.1 Dilapidation Survey

Prior to starting work on site undertake an inspection of the building and the following adjacent properties that may be affected by the works to produce a record, including photographs, drawings and written statements, of existing conditions including but not limited to:

- Access roadways immediately outside the building and in areas used to access the buildings
- Whole Northern, Southern, Eastern, and Western façades externally and internally
- Pathways, roads and pavements below and adjacent to access stairs
- Parking spaces nominated for the contractor and their immediate surrounds
- Nominated sanitary facilities
- Any other location on a route that may be used to gain access to any part of the Works

Submit four copies to the Authorised Person who will endorse them, forward one to the Principal, one to the Plant and Operations Manager, return one to the Contractor, and retain the fourth.

Unless shown to be pre-existent by the dilapidation record or attributable to the actions of those outside the control of the Contractor, any damage subsequent to the commencement of the WORKS will be attributed to the Contractor.

1.6.2 Ownership

Materials arising from the alteration and demolition work are to become the property of the Contractor except where otherwise stated. Remove from site as work proceeds.

1.6.3 Programme

As soon as possible and before starting work on site, prepare in bar chart or other approved form a programme for the WORKS, which must make allowance for all:

- Planning and mobilisation by the Contractor
- Subcontractor's work (if applicable)
- Estimation of work resulting from instructions issued in regard to the expenditure of provisional Allowances
- Trial works
- Hold points and Authorised Person's inspections
- Notice periods required, such as for shut down of antennae

Submit two copies to Authorised Person. The programme will become a contract document.

1.6.4 Authorised Person's Site Meetings

The Authorised Person will hold site meetings to review progress and other matters.

Meetings will normally be held weekly, or as the WORKS requires.

The Authorised Person will chair the meetings and take and distribute minutes.

1.6.5 Site Inspections

The Authorised Person will carry out site inspections to monitor the general quality of work.

Site visits will be conducted as required witnessing hold points, samples, general progress and the like.

Provide access to the Authorised Person and the Authorised Person's nominated representatives as required.

Inspections will normally be made at the following stages but the Authorised Person may inspect the works at any other reasonable time:

Survey:

- Following completion of the Contractor's survey to confirm repair areas

Facade Repairs:

- Following preparation of the substrate (brickwork panels, windows, concrete structure, etc)
- Following installation of new brickwork panels, balustrades, fascia, roof membrane and capping
- Following repair of windows
- Following re-pointing of brickwork
- Following immobilisation or repairs to external sunshades
- Following completion of concrete and render repairs

Give at least 48 hours notice to the Authorised Person of the above stages being reached.

1.6.6 Notice of Completion

Give the Authorised Person at least one week notice of the anticipated dates of Completion of the whole or parts of the WORKS.

1.6.7 Warranty

In addition to providing manufacturers product warranties as required by the specification, execute the form of warranty in Attachment 2 and submit at the time of Completion.

1.7 Quality Standards / Control

MATERIALS & WORKS GENERALLY

1.7.1 Good Practice

Where and to the extent that materials, products and workmanship are not fully detailed or specified they are to be:

- Of a standard appropriate to the Works and suitable for the functions stated in or reasonably to be inferred from the project documents, and
- In accordance with relevant good building practice.

1.7.2 General Quality of Products

Products are to be new unless otherwise specified.

For products specified to an Australian Standard, obtain certificates of compliance from manufacturers when requested.

Where a choice of manufacturer or source is allowed for any particular product, the whole quantity required must be of the same type, manufacture and/or source unless otherwise approved. Produce written evidence of sources of supply when requested.

Ensure that the whole quantity of each product required is of consistent kind, size, quality and overall appearance.

Where consistency of appearance is desirable ensure consistency of supply from the same source. Do not use different colour batches where they can be seen together.

If products are prone to deterioration or have a limited shelf life, order in suitable quantities to a suitable programme and use in appropriate sequence. Do not use if there are any signs of deterioration, setting or other unsatisfactory condition.

1.7.3 Proprietary Products

Handle, store, prepare and use or fix each product in accordance with its manufacturer's current recommendations. Inform the Authorised Person if these conflict with any other specified requirement. Submit copies when requested.

Ancillary products and accessories are to be of a type recommended by the main product manufacturer, unless otherwise specified.

The tender will be deemed to be based on the products specified and recommendations on their use given in the manufacturers' literature current at the date of tender.

1.7.4 Checking Compliance of Products

Check all documentation and the products themselves to ensure compliance with the project documents. Where different types of any product are specified, check to ensure that the correct type is being used in each location. In particular, check that:

- The sources, types, qualities, finishes and colours are correct, and match any approved samples.
- All accessories and fixings which should be supplied with the products have been supplied.
- Sizes are correct. Where tolerances are critical, measure a sufficient quantity to ensure compliance.
- The delivered quantities are correct, to ensure that shortages do not cause delays in the work.
- The products are clean, undamaged and in good condition.
- Products which have a limited shelf life are not out of date.

1.7.5 Protection of Products

Prevent over-stressing, distortion and other damage.

Keep clean and free from contamination. Prevent staining, chipping, scratching or other disfigurement, particularly of products exposed to view in the finished work. Keep dry to prevent premature setting, moisture movement and similar defects. Where appropriate, store off the ground and allow free air movement between stored products.

Prevent excessively high or low temperatures and rapid changes of temperature in the products.

Protect adequately from rain, damp, sun and other elements as appropriate. Ensure that products are at a suitable temperature and moisture content at time of use.

Ensure that sheds and covers are of ample size, in good weatherproof condition and well secured.

Keep different types and grades of products separately and adequately identified.

Ensure that protective measures are fully compatible with and not prejudicial to the products/materials.

1.7.6 General Quality of Workmanship

Operatives must be appropriately skilled and experienced for the type and quality of work. Submit evidence of training to Authorised Person on request.

Take all necessary precautions to prevent damage to the work from rain and other hazards.

Inspect components and products carefully before fixing or using and reject any that are defective.

Fix or lay securely, accurately and in alignment.

Where not specified otherwise, select fixing and jointing methods and types, sizes and spacings of fastenings in compliance with good practice.

Provide suitable packings at screwed and bolted fixings to take up tolerances and prevent distortion. Do not over tighten.

Adjust location and fixing of components and products so that joints that are open to view are even and regular.

Ensure that all moving parts operate properly and freely. Do not cut, grind or plane prefinished components and products to remedy binding or poor fit without approval.

1.7.7 Samples

Where approval of a product is specified the requirement for approval relates to a sample of the product and not to the product as used in the Works.

Submit a sample or other evidence of suitability. Do not confirm orders or use the product until approval of the sample has been obtained.

Retain approved sample in good, clean condition on site. Ensure that the product used in the Works matches the approved sample.

A schedule of required samples is contained in Attachment 1.

ACCURACY / SETTING OUT GENERALLY

1.7.8 Appearance & Fit

Arrange the setting out, erection, position of components and application of finishes to ensure satisfactory fit at junctions, no practically or visually unacceptable changes in plane, line or level and a true, regular finished appearance.

Wherever satisfactory accuracy, fit and/or appearance of the work are likely to be critical or difficult to achieve obtain approval of proposals or of the appearance of the relevant aspects of the partially finished work as early as possible.

SUPERVISION / INSPECTION / DEFECTIVE WORK

1.7.9 Defects in Existing Construction

Report defects to the Authorised Person without delay. Obtain instructions before proceeding with work that may:

- Cover up or otherwise hinder access to the defective construction, or
- Be rendered abortive by the carrying out of remedial work.

1.7.10 Latent Conditions

Notify the Authorised Person of any latent conditions which will have a negative impact on the work, increase the Contract Sum, duration of the Contract or create a safety issue.

1.7.11 Timing of Tests & Inspections

Agree dates and times of tests and inspections with Authorised Person at least 48hrs in advance, to enable the Authorised Person and other affected parties to be present.

On the previous working day to each such test or inspection confirm that the work or sample in question will be ready or, if not ready, agree a new date and time.

A schedule of required tests and inspections is contained in Attachment 1.

1.7.12 Proposals For Rectification Of Non-conforming Work / Products

As soon as possible after any part(s) of the work or any products are known to be not in accordance with the Contract, or appear that they may not be in accordance, submit proposals to the Authorised Person for opening up, inspection, testing, making good, adjustment of the Contract Sum, or removal and re-execution.

Such proposals may be unacceptable to the Authorised Person, and contrary instructions may be issued.

Comply with any direction of the Authorised Person to:

- Uncover and recover work; or
- Carry out additional testing or re-testing.

Compliance with the direction is at the Contractor's cost unless the work uncovered, recovered, tested or re-tested is in conformity with the Contract, in which case reasonable costs as determined by the Authorised Person will be payable to the Contractor by the Principal.

WORK AT OR AFTER COMPLETION

1.7.13 Generally

Make good all damage consequent upon the work.

Remove all temporary markings and protective coverings.

Clean the works thoroughly inside and out including all accessible ducts and voids, remove all splashes, deposits, efflorescence, rubbish and surplus materials.

Cleaning materials and methods to be as recommended by manufacturers of products being cleaned, and to be such that there is no damage or disfigurement to other materials.

Obtain data sheets for all materials used for cleaning and ensure they are used only as recommended by their manufacturers.

Touch up minor faults in newly painted/repainted work, carefully matching colour. Repaint badly marked areas back to suitable breaks or changes in direction

1.7.14 Making Good of Non-conforming Work

Make arrangements with the Principal and give reasonable notice of the precise dates for access to the various parts of the Works for purposes of making good defects. Inform Authorised Person when remedial works to the various parts of the Works are completed.

1.8 Security & Protection

GENERALLY

1.8.1 Security

Adequately safeguard the site, the Works, products, materials, plant, and any existing buildings affected by the Works from damage and theft. Take all reasonable precautions to prevent unauthorised access to the site, the Works and adjoining property. Products, plant and materials delivered and stored on site will be done so at Contractor's own risk.

PROTECT AGAINST THE FOLLOWING:

1.8.2 Noise

Take all reasonable measures to minimise noise.

Comply with all relevant Statutory Authority regulations and guidelines.

Limit noise levels from tools plant and operations.

Noisy works will include:

- Use of mechanical hammers and breakers
- Impact drills
- Grinders
- Pneumatic sealant cutters against aluminium, steel or concrete

Do not undertake noisy work during the times specified in 1.3.5 without the written consent of the Authorised Person.

The Authorised Person will determine "noisy work" prior to the commencement of any new activity.

Do not use or permit employees to use radios or other audio equipment in ways or at times which may cause nuisance.

1.8.3 Nuisance

Take all necessary precautions to prevent nuisance from smoke, dust, rubbish, vermin and other causes.

1.8.4 Fire Prevention

Smoking is not permitted on the site, including on the roof areas.

1.8.5 Hot Works

A hot work permit must be obtained from Plant and Operations Manager before undertaking any hot work.

Any disruption to services affecting the Hospital Building must be arranged between the Contractor and Plant & Operations Manager; the Permit to Work Procedures forms is to be requested and filled in by the Contractor and approved by the Plant and Operations Manager.

Authorised Signatories Completion of Permit-to-Work procedures is to be signed for by the Plant and Operations Manager, as indicated on the Pennit-to-Enter form.

Cancellation is to be performed by the original signatory.

PERMIT TO WORK PROCEDURE

No. 1 HOT WORK PERMIT

No.2 ELECTRICAL ISOLATION

No.3 MEDICAL GAS ISOLATION

No.4 STEAM ISOLATION

No.5 WORKING IN ZONES WITH ASBESTOS

No.6 ISOLATION OF FIRE ALARMS

No.7 COMPRESSED AIR ISOLATION

No. 8 WORKING WITHIN A PLANT ROOM

No.9 CONFINED SPACES

No. 10 HYDRAULIC ISOLATION

1.8.6 Moisture

Prevent the work from becoming wet or damp where this may cause damage. Dry out the Works thoroughly. Control the drying out and humidity of the Works and the application of heat to prevent:

- Blistering and failure of adhesion.
- Damage due to trapped moisture.
- Excessive movement.

Temporarily protect open joints and freshly applied sealants against rainfall to ensure water does not penetrate the building.

1.8.7 Waste

Remove rubbish, debris, surplus material and spoil regularly and keep the site and Works clean and tidy.

Remove all rubbish, dirt and residues from voids and cavities in the construction before closing in.

Remove all surplus hazardous materials and their containers regularly for disposal off site in a safe and competent manner and in accordance with relevant regulations.

PROTECT THE FOLLOWING:

1.8.8 Work In AH Sections

Adequately protect all types of work and all parts of the Works, including parts of the Works carried out by others, throughout the Contract. Wherever work is of an especially vulnerable nature or is exposed to abnormal risks provide special protection to ensure that damage does not occur. Provide adequate dust control that might be carried to internal areas by foot or air.

1.8.9 Roads & Footpaths

Adequately maintain roads, stairs and footpaths within and adjacent to the site and keep clear of mud and debris. Any damage to roads, stairs and footpaths caused by site traffic or otherwise consequent upon the Works must be made good to the satisfaction of the Local Authority or other owners. Bear any costs arising.

1.8.10 Existing Features

Prevent damage to existing buildings (including adjacent buildings), fences, gates, walls, roads, paved areas and all other site features which are to remain in position during the execution of the Works.

1.8.11 Existing Work

Prevent damage to existing property and make good to match existing any damage so caused. Remove existing work the minimum necessary and with care to reduce the amount of making good to a minimum.

1.8.12 Existing Furniture, Fittings & Equipment

Prevent damage to any furniture, fittings or equipment left in the existing property. If required, move as necessary to enable the WORKS to be executed, cover and protect as necessary and replace in original positions. Seek approval from the Authorised Person prior to moving any equipment in the existing property.

1.8.13 Adjoining Property

Prevent trespass of workpeople. Take all reasonable precautions to prevent damage to adjoining property. Clear away and make good on completion or when directed. Bear the cost of repairing any damage arising from execution of the Work.

1.9 Facilities, Temporary Work & Services

1.9.1 Assess Requirements

Assess requirements and allow for all required temporary works. Inform the Authorised Person of the intended sitting of all temporary works, site huts and services.

1.9.2 Temporary Fences / Hoardings

Hoardings and/or pedestrian management may be required on parts of or the entire site. Assess the site to determine hoarding requirements, including for protection of both pedestrian and vehicles. Hoardings must meet the requirements of the relevant statutory authorities (Type A and/or B as appropriate) and Work Cover requirements, which include but are not limited to:

- Meet the full loading as required for the hoarding type as required.
- Meet height and width dimensions as required.
- Include for temporary removal and re-installation of signage and lighting as necessary.
- Include for traffic/ pedestrian management for the installation and dismantling if required.
- Include engineering certification as required for both the hoarding and any supporting structures (including the existing building).

Provide unimpeded access to the entry to the building entries and fire exits including any existing disabled access.

Obtain all necessary permits and approvals and pay any associated fees and charges for access systems and hoardings.

1.9.3 Temporary Works For Mast Climbers

If mast climbers are utilised for the work undertake an assessment of the structural capacity of all bases, footings, temporary supporting steelwork, tie backs to the building for structural adequacy as required by the following codes, including the capacity of existing structures and the mast climber installation:

- AS2550.1 'Cranes, Hoists and Winches: Safe Use - General Requirements'
- AS2550.16 'Cranes: Safe Use - Mast Climbing Work Platforms'
- AS 1418.1 'Cranes, Hoists and Winches: General Requirements'
- AS1418.16 'Cranes (Including Hoists and Winches): Mast Climbing Work Platforms'
- All other statutory requirements including Work Cover NSW Codes of Practice

Provide certification of all mast installations, including temporary works and existing structures, by a Chartered Professional Structural Engineer (MIEAust CPEng NPER status).

1.9.4 Temporary Works For Scaffolds (Fixed & Suspended Swing Stages)

If scaffolds are utilised for the work (including suspended scaffolds/swing stages) undertake an assessment of the structural capacity of all bases, footings, temporary supporting steelwork, and tie backs to the building for structural adequacy as required by the following codes, including the capacity of existing structures and the scaffold installation as appropriate:

- AS/NZS 4576 'Guidelines for Scaffolds'
- All other statutory requirements including WorkCover NSW Codes of Practice

Provide certification of all fixed and suspended scaffold installations by an appropriately qualified person.

1.9.5 Temporary Fixings

No temporary fixings are to be installed without prior approval.

All temporary fixings are to be:

- Stainless steel, and/or
- Removed upon completion of the Works and the substrate made good
- as directed by the Authorised Person

Bear all costs associated with the installation and removal of temporary fixings and the reinstatement of the substrate.

1.9.6 Power For The Works

Electricity supply from the Principal's mains may be used for the works free of cost to the contractor. Shutdown of electricity supply will not be permitted without prior approval of the Plant and Operations Manager and the Authorised Person.

The Principal will not be held liable for the effects of any failure or restriction in supply.

Existing connections to the power supply are available from locations nominated in Section 1.3.6.

Assess power requirements for the works and allow for the provision of additional power as required.

Connections and R.C.D protection to be made in accordance with the latest AS Electrical Safety Standards, BCA and relevant statutory authorities including WorkCover Codes of Practice.

Remove any temporary supplies on completion and leave all distribution boards, outlet fixing positions and the like in the same condition as they were prior to commencement of works.

1.9.7 Water

Water for the Works will be supplied free of cost to the Contractor.

Existing connections to the water supply are available from locations nominated in Section 1.3.7.

Assess water requirements for the works and allow for the provision of additional water as required.

The Principal will not be held liable for the effects of any failure or restriction in supply.

Make any necessary extensions to the water supply pipe work. Remove and make good on completion.

Obtain and bear cost of all approvals for use of water to wash the building

1.9.8 Site Storage

Site storage is not available as stated in Section 1.3.9.

Assess storage requirements and provide security enclosures as required.

Maintain site storage areas in a clean and tidy state throughout the Works.

Remove any such enclosure on completion and leave area in a clean and tidy state.

Products, plant and materials delivered and stored on site will be done so at Contractor's own risk.

1.9.9 Sanitary Facilities

Toilet facilities are available on the site, and are located as stated in Section 1.3.10.

Leave toilets in clean and tidy condition after each use.

1.9.10 Parking

Parking is available as stated in Section 1.3.11.

Do not block access for other uses of the general parking area. Do not use the available parking space for purposes other than parking (such as storage).

1.10 Occupational And Environmental Safety, & Insurances

1.10.1 Documentation

Prior to commencing work, submit:

- A site specific safety management plan
- Site specific risk assessments and safe work method statements that address these risks

Maintain a register of:

- Building industry OH&S induction training (i.e. NSW Green Card)
- Site safety inductions.
- Evidence of 'toolbox' meetings taking place on a daily basis (workplace meetings for people to sit down and talk about safety)

During the Works maintain and submit to the Authorised Person when requested:

- Minutes of occupational health and safety meetings, including registers of attendance at 'toolbox' talks
- Accident and incident reports
- Summary of OH&S inspections and tests carried out.

1.10.2 Heritage Induction

Not applicable.

1.10.3 Occupational Health & Safety Legislation and Standards

The principal Occupational Health and Safety (OH&S) legislation in New South Wales applicable to construction activities are the *Occupational Health & Safety Act (2000)* and *Regulation (2001)*. Be familiar with, and at all times comply with the relevant requirements of the *Occupational Health & Safety Act (2000)* and *Regulation (2001)*.

Be familiar with, and at all times comply with relevant Codes of Practice and Australian Standards, which may apply to the works, for example;

- Code of Practice Safe Work on Roofs - Work Cover Authority of NSW.
- Code of Practice Safe Working at Heights - Work Cover Authority of NSW.
- Code of Practice Overhead Protective Structures - Work Cover Authority of NSW.
- Code of Practice OH&S Induction Training for Construction Work - Work Cover Authority of NSW.
- AS/NZS 1891.4: 2000 Industrial Fall-Arrest Systems & Devices.

1*10.4 Training & Experience

Site staff responsible for supervision and control of the work is to be experienced in the assessment of the risks involved and trained in the methods to be used. Provide evidence when requested.

1.10.5 Occupational Health & Safety Reporting

Provide the Authorised Person with evidence of occupational health and safety compliance during the course of the works, generally through minutes of Contractors meetings as follows:

- Maintenance of the Contractor's approved site safety management plan
- Contractor occupational health and safety meetings
- Contractor 'toolbox' meetings
- Contractor Accident and Incident reports inclusive of corrective and preventive actions.

Bring the above (up to date) documents to each Authorised Persons site meeting.

Any exceptional matters shall be brought to the notice of the Authorised Person as soon as practicable.

The Authorised Person may undertake audits and/or surveillance of the occupational health and safety compliance of the Contractor as required at any time, appraising adherence to the requirements of this clause.

1.10.6 Breach of OH&S Obligations

Should the Contractor breach its Occupational and Environmental Safety obligations under this Contract or any statutory regulations the Authorised Person may suspend all or part of the work until such time that the breach has been remedied to the Authorised Person's satisfaction and approval has been given to recommence work. No costs will be awarded for suspension of work due to safety concerns.

The Authorised Person may also suspend work if it suspects a breach under this clause has occurred. Should investigation of the suspected breach reveal no breach has occurred; the Contractor may be awarded reasonable costs as determined by the Authorised Person.

1.10.7 Insurances

Before starting work on site submit documentary evidence and/or policies and receipts for the insurances required by the General Conditions of Contract.

1.10.8 Insurance Claims

If any event occurs which may give rise to any claim or proceeding in respect of loss or damage to the Works or injury or damage to persons or property arising out of the Works, forthwith give notice in writing to the Principal, the Authorised Person and the Insurers. Indemnify the Principal against any loss that may be caused by failure to give such notice.

1.10.9 Hazardous Substances

'Hazardous Substance'⁵ means a substance that is listed in the document entitled "List of Designated Hazardous Substances" published by Worksafe Australia; or a substance that fits the criteria for a hazardous substance set out in the document entitled "Approved Criteria for Classifying Hazardous Substances" published by Worksafe Australia.

Asbestos, material containing asbestos, polychlorinated biphenyl (PCB) and lead based paints are recognised as hazardous substances. Other substances in certain situations are also considered hazardous and therefore require controlled handling. Examples are glues, solvents, cleaning agents, paints, and water treatment chemicals.

Work involving stone, rock, concrete, masonry and such materials containing silica, is work under the Contract whether explicitly identified in the Specification or not. The Contractor is responsible for the control of any hazard which may arise from the presence of silica.

If any hazardous substance is discovered on the Site suspend all work which may result in disturbance of or exposure to such hazardous substance.

Notify the Authorised Person immediately of the type of substance and its location, and propose methods for safe removal or encapsulation including air monitoring.

1.10.10 Fire Prevention

Take all necessary precautions to prevent personal injury, death, and damage to the Works or other property from fire.

1.10.11 Pollution

Take all reasonable precautions to prevent pollution of the site, the Works and the general environment including drains and waterways.

1.10.12 Security of Equipment

Secure all tools to the access system by appropriate lanyards when working within the access system or at heights generally.

2 TECHNICAL SPECIFICATION

2.1 Survey

To be read in conjunction with the Preliminaries and General Conditions.

GENERAL REQUIREMENTS

2.1.1 Records & Measurement:

The quantities given in the schedule of rates are estimates based on previous inspections.

A clean set of elevation drawings will be provided to the Contractor. As work progresses identify each repair made and cross-reference it to a schedule recording its type and size. The completed drawing and schedule will be used as the basis for payment.

Concrete repair work will be subject to re-measurement, generally in accordance with procedures described in 'ACRA's standard method of measurement of concrete repair, July 2004'. Payment will not be made for unnecessary or excessive breaking out. Spall repairs will be measured by multiplying the length by the average width by the depth. Payment will not normally be made for breaking out more than 30mm beyond reinforcement.

Other parts of the Work will generally be subject to re-measurement, with materials being paid for based on actual material quantities used based on rates as nominated in the Schedule of Rates.

2.1.2 Survey

Undertake a full visual, tap and map survey of each facade bay to identify areas requiring immediate or imminent repair as work progresses.

Clearly identify on the building or facade drawings the extent of the area requiring repair.

Record all additional areas of repair on a clean set of elevation drawings and cross-reference it to a schedule recording its type and size.

Where appropriate, clearly identify on the building the extent of the area requiring repair.

Submit survey drawings and schedule to the Authorised Person for review and approval.

If any urgent defects not detailed in this specification are uncovered, advise the Authorised Person immediately.

2.1.3 Windows

To be read in conjunction with the Preliminaries and General Conditions.

2.1.3.1 Generally

Undertake a full visual and map survey/dilapidation audit of all windows to identify components requiring immediate or imminent repairs.

Record all additional areas of repair on a clean set of elevation drawings and cross-reference it to a schedule recording its type and size.

Survey drawings shall be accompanied by a description of the methodology proposed for repair of each type of window and/or component including cost for each item to be expended under the Provisional Allowances.

Details to be included in the survey are as follows:

1. Location
 - Wing
 - Level
 - Bay
 - Room No

2. Type of Window
 - Hinged
 - Casement
 - Pivot
 - Sliding
 - Other

3. Condition/Risk Assessment
 - High
 - Medium
 - Low

4. Recommendation

5. Flyscreens

6. Security Grills
7. Comments
8. Date Commenced
Work Completed by (Company name)
Date

Submit survey/ dilapidation audit to the Authorised Person for approval.

An assessment of the resulting survey/ dilapidation audit and cost shall be made by the Authorised Person to confirm scope and extent of subsequent repairs.

2.1.3.2 North Wing

Undertake a full visual and map survey/dilapidation audit of all the small non-pivot windows at Level 5 and Level 6.

Record all areas of repair on a clean set of elevation drawings and cross-reference it to a schedule recording its type and size.

Survey drawings shall be accompanied by a description of the methodology proposed for repair and restoration of operability of each type of window and/or component with cross-references to the Schedule of Rates for costing review purposes.

An assessment of the resulting audit and Schedule of Rates shall be made by the Authorised Person to confirm scope and extent of subsequent repairs.

2.1.3.3 South Wing

Undertake a full visual and map survey/dilapidation audit of all windows on the South Wing.

Record all areas of repair on a clean set of elevation drawings and cross-reference it to a schedule recording its type and size.

Survey drawings shall be accompanied by a description of the methodology proposed for repair of each type of window and/or component with cross-references to the Schedule of Rates for costing review purposes.

An assessment of the resulting audit and Schedule of Rates shall be made by the Authorised Person to confirm scope and extent of subsequent repairs.

2.2 Brick Re-pointing & Repairs

To be read in conjunction with the Preliminaries and General Conditions.



2.2.1 Brick Repairs

Location:	Northern, southern, eastern and western elevations. Refer to drawings TD-01 to TD-05
Brick:	Brick salvaged during deconstruction or New brick to match existing
Bedding & Pointing Mortar:	
Cement:	Portland cement to AS 2349, AS 2350.
Admixture(s):	SikaTop 77
Mix proportions:	1:3 (masonry cement: sand)
Admixture proportions:	1:1.5 (SikaTop 77: water)
Tie system in reconstructed panels:	Proprietary Ancon tie system. SPB Stainless Steel at 600mm c/c max. Size to be confirmed depending on existing cavity width.
Tie system in re-pointed panels:	Proprietary Helical DryFix tie system. 8mm Stainless Steel at 450mm c/c max.

Special requirements:	In accordance with manufacturer's instructions and AS3600
	Install wall ties as recommended by manufacturer.
	Carefully deconstruct outer skin to avoid disturbance to services/piping that may be located in wall cavity.

GENERAL REQUIREMENTS

2.2.2 Protection

Prevent damage to all masonry, particularly arises, projecting features and delicate, friable surfaces. Protect with suitable non-staining slats, boards, etc. which must be removed at Practical Completion.

Prevent mortar/grout splashes and other staining and marking of masonry.

2.2.3 Structural Stability

Ensure that the stability of the masonry is maintained throughout the work. Report to the Authorised Person any defects, including signs of movement that are exposed or become apparent during the repairs of masonry.

2.2.4 Disturbance to Existing Masonry

Ensure that retained masonry in the vicinity of repair works is disturbed as little as possible.

Do not cut or adjust existing retained masonry to accommodate new or reused units without approval.

Prop or wedge retained loose masonry units or those that are vulnerable to movement during repair works, so that they are firmly and correctly positioned.

2.2.5 Operatives

Use operatives who are skilled and experienced with the materials and procedures required for the types of repairs specified. Provide evidence of their training and previous experience to the Authorised Person on request.

2.2.6 Adverse Weather

Protect areas of masonry repairs against rain by covering when precipitation occurs and at all times when work is not proceeding.

METHODOLOGY

2.2.7 Reconstruction of Brickwork Panels

Complete brickwork panels requiring reconstruction due to absence, severe erosion, and loss of existing mortars combined with the corrosion of the cavity ties.

Provide a written method statement identifying procedures for brick reconstruction. Provide statement following completion of trials but prior to commencing work on site.

Ensure scaffold restraints are retained during works

Ensure that medical piping is not present within the cavity. If medical piping is present, seek instructions from Authorised Person.

Progressively deconstruct the loose external brick panel areas of the outer skin only

Maintain stability of surrounding brick facade finishes during deconstruction

Retain, clean and prepare bricks for reinstatement

Incorporate cavity ties into new brickwork panels as Clause 2.2.1

Ensure mortar beds and perpends are of similar dimensions to the original with minimal variations between the adjoining panels and the new.

Use a mortar profile to match adjoining pointing profile. Note that the existing profiles vary between different facade areas.

Authorised Person may request inspection of breakouts to ensure adequate engagement of the new cavity tie in to the inner brick skin as noted in Attachment 1.

Allow for breaking out and making good up to one location. If breaking out reveals defective work, then the Authorised Person may direct further breaking out at the Contractor's own cost.

2.2.8 Brick Re-pointing

Protect adjacent areas to prevent contamination from over-run or other material contamination.

Provide a written method statement (preferably in point form) identifying procedures for repointing. Provide statement following completion of trials but prior to commencing work on site.

Rake out existing pointing to a minimum depth of 20mm. Do not use electrical or pneumatic tools unless specifically approved by Authorised Person.

Allow to rake out joints by hand using plugging chisels or other modified methods.

Remove pointing so as not to damage brick arrises.

If electrical or pneumatic tools are approved, develop procedures to prevent overcutting end of joint into adjoining units.

Ensure joints are clean, dry and free of loose material.

Tape joints with non-staining masking tape prior to installation of pointing.
Remove tape immediately after completion of sealant installation. Alternatively,
immediately wash excess pointing material from brick faces after application.

Use a profile to match adjoining pointing profile. Note that the existing profiles
vary between different facade areas.

Notify the Authorised Person and/or Façade Consultant of the repair programme.
The Authorised Person and/or Façade Consultant may carry out spot checks of the
repair work as noted in Attachment 1.

2.2.9 Brick Pinning

Rake out joint to remove loose material, dirt and debris.

Saw cut as required to produce straight, consistent edge to seal to.

Drill holes for ties carefully and accurately to suit type(s) and lengths of ties

Prevent damage to adjacent masonry during drilling. Keep cavities behind any
facings free from debris.

Clean fixing holes thoroughly to remove drilling dust and debris.

Install ties securely using methods recommended by the tie manufacturer to form
an effective repair. Ensure that expansion type anchor fixings are set to the correct
torque and that bonded ties are thoroughly grouted.

Keep ends of ties back from face of masonry to allow for making good.

Keep exposed faces clean and free from grout/mortar stains.

2.2.10 Brick Replacement

Provide a written method statement identifying procedures for brick
reconstruction. Provide statement following completion of trials but prior to
commencing work on site.

Rake out existing pointing and perpend around effected brick to external skin.

Do not use electrical or pneumatic tools unless specifically approved by the
Authorised Person. Allow to rake out joints by hand using plugging chisels or
other modified methods.

Remove brick from the facade and dispose of.

Wet brick to saturate surface.

Bed a new clean salvaged brick into same location

Ensure joints are clean, dry and free of loose material.

If necessary, tape joints with non-staining masking tape prior to installation of
pointing. Alternatively, immediately wash excess pointing material from brick
faces after application.

Use a profile to match adjoining pointing profile. Note that the existing profiles
vary between different facade areas.

2.3 Window Repairs

To be read in conjunction with the Preliminaries and General Conditions.

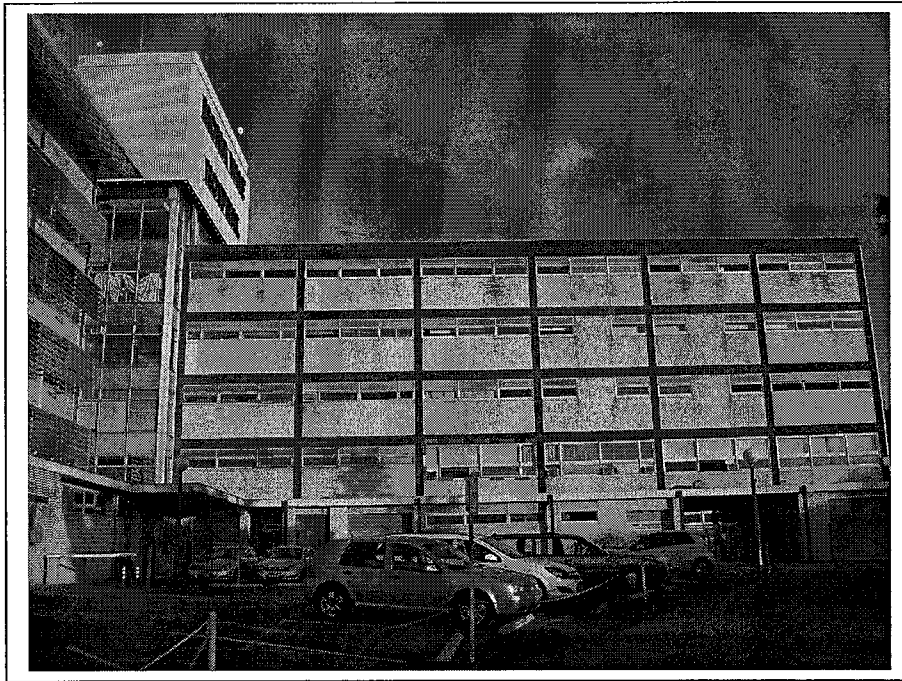


Provisional Sums have been allowed for the repairs to each set of windows per elevation. The Authorised Person will request unit rates for the necessary repairs to each set of windows (i.e. replacement of hinges, chain winders, stays, etc.) so that expenditure against the Provisional Sum allowed per set of windows can be closely monitored.

Allow to access all windows both internally and extyemally as required to carry out necessary repairs toe each set of windows.

Note that repairs to louvres above each set of windows are included in a separate Provisional Sum.

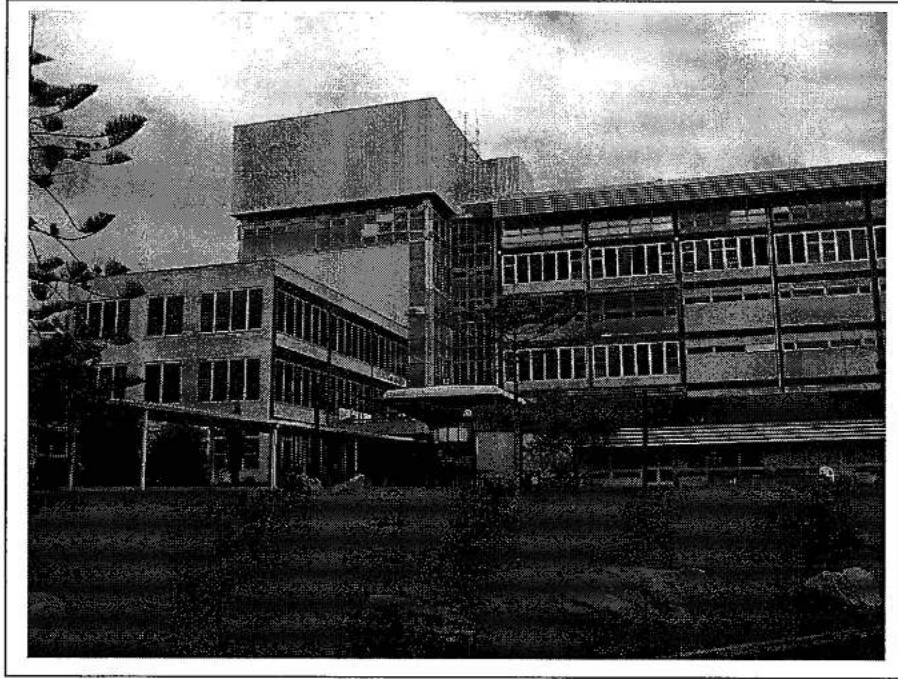
The following photographs illustrate a different sets of windows per elevation:



Northern elevation including tower windows



Southern elevation including tower windows



Eastern elevation including tower windows



Eastern elevation



Western elevation



South Wing

SCOPE OF WORK

Generally

Undertake a survey/dilapidation audit of all windows and provide cost to undertake necessary repairs as per Clause 2.1.3.1.

Access to all windows

Repair aluminium framed windows and louvres as scheduled, including loose window flashings, sill and head cover plates and all other specific defects as per Clause 2.3.4 & 2.3.5

Location: Northern, southern, eastern and western elevations.

Refer to drawings TD-01 to TD-05

North Wing

Undertake full survey/dilapidation audit of all small non-pivot windows on Level 5 and Level 6 and provide cost to undertake necessary repairs as per Clause 2.1.3.2

Repair and restore operability to small aluminium framed windows to Clause 2.3.3.

Location: Eastern and Western elevations.

Refer to drawings TD-03 to TD-04

South Wing

Undertake full survey/dilapidation audit of all windows and provide cost to undertake necessary repairs as per Clause 2.1.3.3

Repair aluminium framed windows as scheduled, including loose window flashings, sill and head cover plates to Clause 2.3.3 and Clause 2.3.4

Location: Southern, Eastern and Western elevations.

Refer to drawings TD-05

2.3.1 Generally

Only commence repairs to windows that can be completed within a shift. Do not leave windows unsecured. Do not remove windows from site.

Scope and extent of all works to windows must be approved by the Authorised Person prior to commencement of works.

2.3.2 Fixtures

Not Applicable.

2.3.3 Restore Operability

Replace all hinges and other existing hardware with Grade 316 stainless steel components to match existing. Allow for two stainless steel hinges per sash.

Isolate hinge plates from aluminium framing with over-sized isolating packers to prevent water beading between hinge plate and aluminium frame. Coat screws with isolating sealer as recommended by screw manufacturer prior to installing into aluminium framing.

Ease and lubricate all components to reinstate operability. Window types include hinged, casement, awning, hopper and pivot windows.

Fill in redundant screw holes by preparing hole with a countersink bit, and installing a countersunk blind aluminium rivet of an a size to match the hole.

Provide and install new flyscreens on windows where operability has been restored.



Replace all chain winders (actuators) with new components compatible with existing (Winco or equal).

Seek instruction regarding replacement of any other damaged hardware.

2.3.4 Fixing Shut

Screw fix aluminium sashes to frames with 8 No. Grade 316 stainless steel 12 gauge screws. Coat screws with isolating sealer as recommended by screw manufacturer prior to installing into aluminium framing.

Install proprietary wind draft seals (i.e. Raven or similar) around window.

Alternatively, seal around window sashes to avoid drafts as Clause 2.10.1

All windows fixed shut need to be labelled and have internal fly screens/holder removed and disposed of.

2.3.5 Specific Defects

The following is a list of specific defects noted during preliminary investigations.

Section	Location				Description
	Bay	Level	Elevation	Wing	
2.3.5.3	H	3	North	West	Cracked Glazing
2.3.5.3	A	6	North	Tower	Cracked Glazing
2.3.5.2	i.i	4 & 5	West	West	Curtain Wall failure
2.3.5.1	ii	6	East	North	Exposed/Corroded Frame Fixing
2.3.5.1	8	1	East	North	Exposed/Corroded Frame Fixing

It shall be noted that this list is not exhaustive and the Contractor is to provide a progressive list of specific defects following surveys of all windows as per Clause 2.1.3

2.3.5.1 Corroded Fixings



SCOPE OF WORK

Repair / stabilise failed /corroding fixings to existing windows as scheduled.

Location: Refer to drawings TD03, Bay 11, Levels 5 & 6

- Remove aluminium cover plate to ascertain the existing window fixing method.
- Remove damaged bricks and assess condition
- Reinststate brickwork following repair as Clause 2.2.10.
- Seek instruction regarding repair methodology from Authorised Person.

2.3.5.2 Curtain Wall Stabilisation



SCOPE OF WORK

Repair / stabilise failed /corroding fixings to existing windows as scheduled.

Location: Refer to drawings TD04, Bay 1.1, Level 5

- Open up area adjacent to area of unstable curtain wall to assess condition.
- Seek instruction regarding repair methodology from Authorised Person.
- Reinststate finishes following repair.

2.3.5.3 Cracked Glazing

Remove cracked glass.

Remove existing gaskets / sealant to allow glass replacement

Replace glass to match existing. Lay glass onto the glazing channels in existing aluminium frames.

Refix gaskets or insert sealant and glazing beads.

2,3.6 External Window Bars



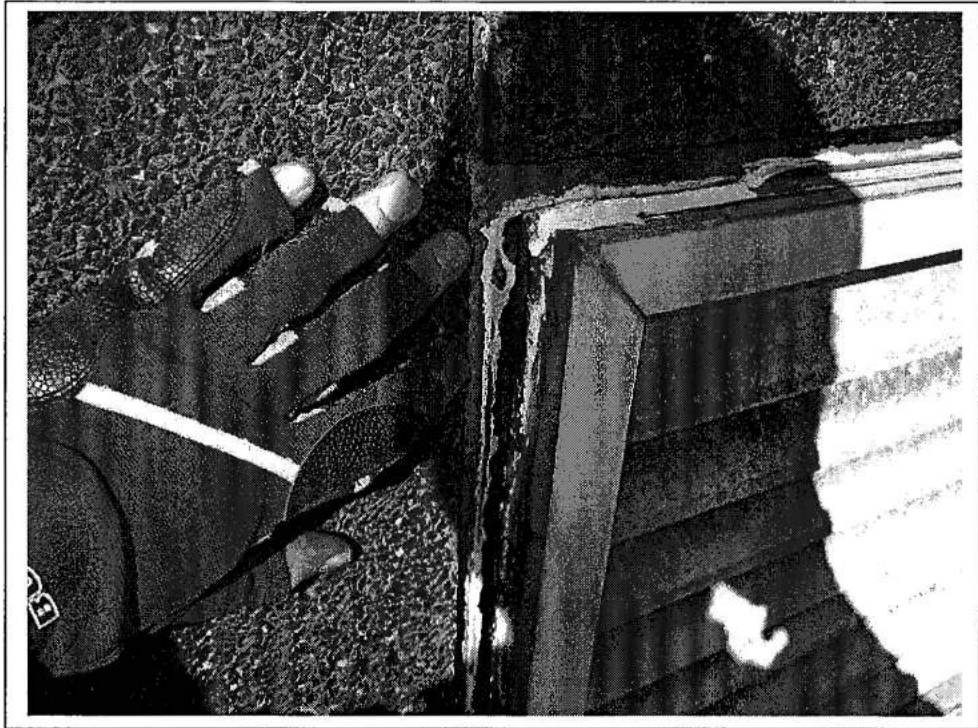
SCOPE OF WORK

Replace damaged external window bars to existing windows as scheduled. New external window bars to match existing.

Location: Refer to drawings TD03, Bays 4 to 11, Level, 2, 3 &5

- Inspect all external window bars to assess their current condition.
- Unscrew sub-frame to remove existing window bars
- Replace damaged bars as required.

2.3.7 Louvre Panels



SCOPE OF WORK

Repair unstable louvred panels within existing windows as scheduled.

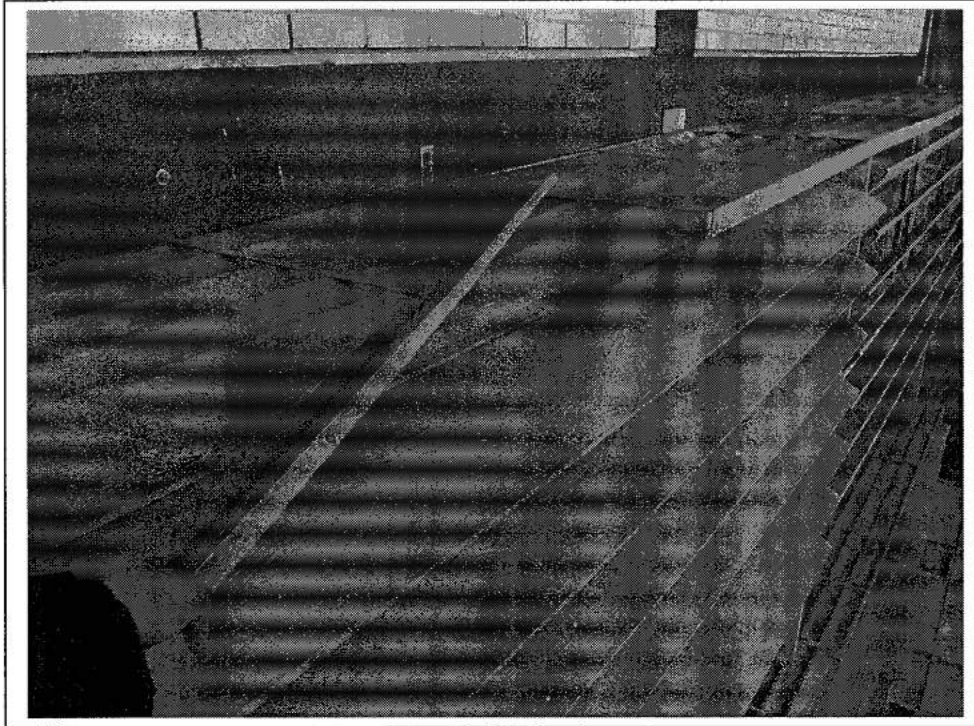
Location: Refer to drawings TD01, Bay C to H, Levels 1 to 5

- Inspect all louvre panels to assess their current condition.
- Open up area adjacent to area of unstable louvred panels to assess condition.
- Seek instruction regarding repair methodology from Authorised Person.
- Reinstate finishes following repair.

2.4 External Sunshades

To be read in conjunction with the Preliminaries and General Conditions.

2.4.1 Horizontal Louvres at Top of Sunshades



SCOPE OF WORK

Remove loose trims and features and refix existing or new components to match existing.

Location: Refer to drawings TD03, Bay 4 to 10, Level 2 to 5
 Refer to drawings TD04, Bay 4 to 5, Level 3

- Inspect all horizontal louvres including front trim as shown on photograph above at top of sunshades to assess their current condition.
- Refix loose blades to existing aluminium framing with aluminium pop rivets of suitable diameter. Allow for 54 No. fixings (9 rows of 6 fixings) per set of sunshades.

2.4.2 Sunshade Blades Immobilisation

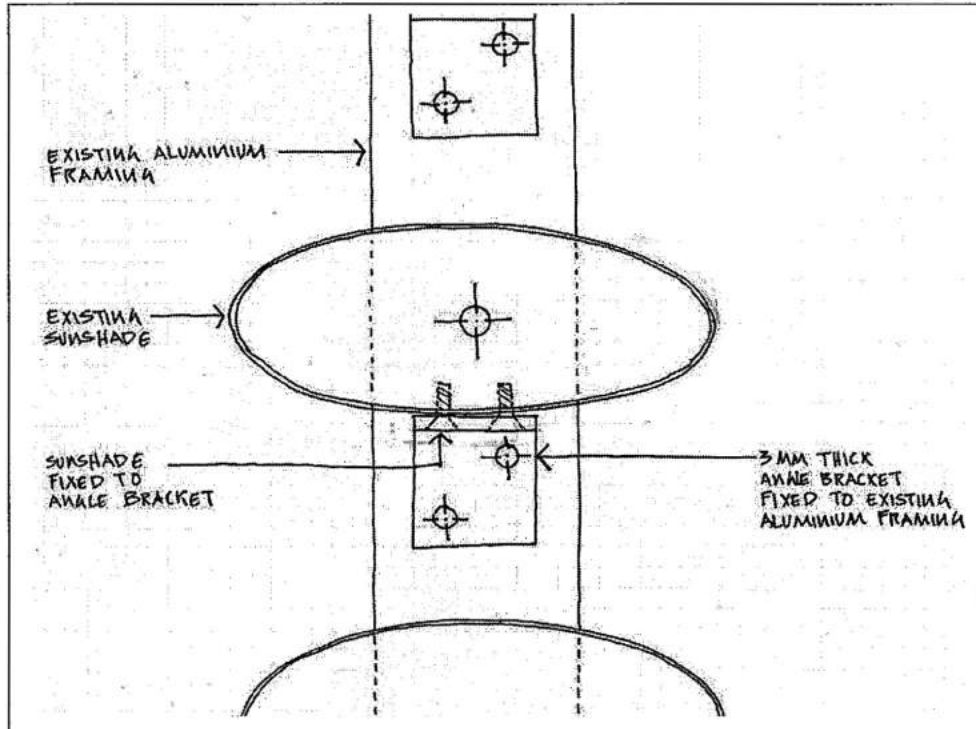


SCOPE OF WORK

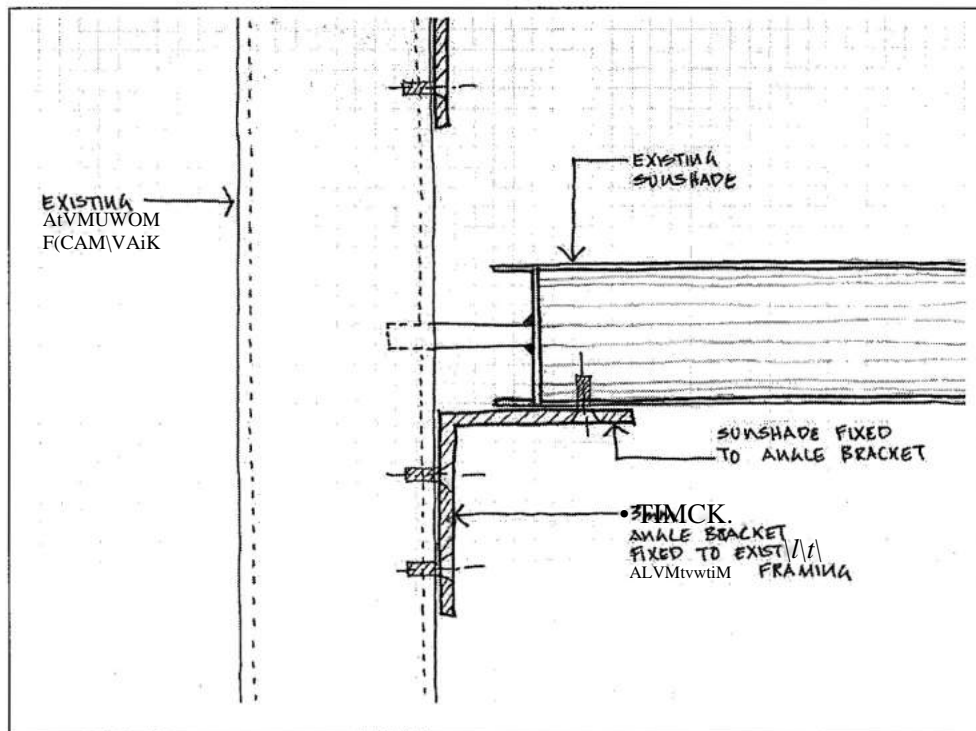
Immobilise existing aluminium sunshade blade as scheduled to secure in position as per the sketch below.

Location: Refer to drawings TD03, Bay 4 to 10, Level 2 to 5
 Refer to drawings TD04, Bay 4 to 5, Level 3

- Allow the Authorised Person to inspect each louvre to assess opportunity to re-instate operability of louvre blades.
- Disconnect and remove redundant operable mechanisms as instructed by the Authorised Person.
- Allow to remove all existing mechanisms and make good of internal areas affected by the removal of redundant operable mechanisms.
- If reinstating operability is not feasible as determined by the Authorised Person and the Facade Consultant, secure blades in horizontal position using 3mm thick aluminium angle brackets to the underside of the louvre blade as shown in sketch below. Allow for 28 No. angle brackets (7 louvre blades, 4 brackets / louvre blade) per set of sunshades and 4 No. 12 gauge self-tapping screws per angle bracket.



Proposed Solution (side view)



Proposed Solution (front view)

2.5 Coatings

To be read with Preliminaries/General Conditions.

COATING SYSTEMS

2.5.1 Not Used

2.5.2 Previously Painted Steel

Preparation:	As Clause 2.5.12
Bridge coat:	Dulux Luxaprime UMP ZP (between finishing coats and existing paint).
Dry film thickness:	170 micron.
Finishing coats:	Two coats Dulux Weathermax HBR.
Dry film thickness:	140 micron total in two coats.
Colour:	To match existing, pending approval of trial application.

2.5.3 Unpainted/Corroded Steel

Preparation:	As Clause 2.5.12
Initial coat(s):	Dulux Durepon FRX.
Dry film thickness:	75 micron.
Finishing coats:	Two coats Dulux Weathermax HBR.
Dry film thickness:	170 micron total in two coats.
Colour:	To match existing, pending approval of trial application.

2.5.4 Galvanised Steel

Preparation:	As Clause 2.5.12
Initial coat(s):	Dulux Luxaprime Zinc Phosphate.
Dry film thickness:	Apply at coverage rates recommended by manufacturer.
Finishing coats:	Two coats Dulux Weathershield XI0 Low sheen Acrylic.
Dry film thickness:	140 micron total in two coats.
Colour:	To match existing, pending approval of trial application.

2.5.5 Render & Concrete

Preparation: As Clause 2.5.12

Initial coat(s): Dulux water based primer.

Dry film thickness: Apply at coverage rates recommended by manufacturer.

Finishing coats: Two coats Dulux Weathershield XI0 Low sheen Acrylic.

Dry film thickness: 140 micron total in two coats.

Colour: To match existing, pending approval of trial application.

GENERALLY

2.5.6 Coating Materials

To be obtained from the specified manufacturers unless noted otherwise.

Inform the Authorised Person of selected manufacturer before commencement of any coating work.

2.5.7 Delivery / Storage

Coating materials must be delivered in sealed containers, each clearly labelled with the brand name, type of material and manufacturer's batch number.

Wherever possible, materials must be from one manufacturing batch. Inform the Authorised Person if materials from more than one batch are to be used, store separately and allocate to distinct parts or areas of the work.

Store materials in accordance with manufacturer's recommendations. Use in order of delivery and before expiry of any shelf life date.

2.5.8 Compatibility

Check that all materials to be used are recommended by their manufacturers for the particular surface and conditions of exposure, and that they are compatible with each other.

Where new coatings are to be applied to prepared existing coatings conduct a compatibility test on control samples prior to completing remaining work.

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

Inform the Authorised Person of any discrepancy in specification of coatings and obtain instructions before proceeding with application.

2.5.9 Protection

Adequately protect internal and external surfaces, fixtures and fittings which are not to be coated, by covering with dust sheets, masking or other suitable materials.

Exhibit 'Wet paint' signs and provide barriers where necessary to protect other operatives and the general public, and to prevent damage to freshly applied coatings.

2.5.10 Control Samples

Prepare sample areas of the finished work, including preparation, in advance of the remainder as set out in Attachment 1. Obtain approval of appearance before proceeding.

2.5.11 Inspection of work

Permit coating manufacturers to inspect the work in progress and take samples of their products from site if requested.

PREPARATION

2.5.12 Preparation Generally

To AS/NZS 2311

Materials used in preparation must be types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.

Prevent or control exposure of operatives to dust, vapour and fumes exceeding occupational exposure standards set in the current Regulations

Substrates must be sufficiently dry in depth to suit the coating to be applied.

Remove efflorescence salts from surfaces. Repeat removal if efflorescence recurs.

Clean off dirt, grease and oil from surfaces. If contamination of surfaces/substrates has occurred, obtain instructions before proceeding.

Smooth surface irregularities. Fill joints, cracks, holes and other depressions with stoppers/fillers worked well in and finished off flush with surface. Abrade to a smooth finish.

Apply oil based stoppers/fillers after priming. Apply water based stoppers/fillers before priming unless recommended otherwise by manufacturer. Patch prime water based stoppers/fillers when applied after priming.

Remove dust and particles from dry abrasive preparation of surfaces.

Remove residues from wet preparation of surfaces by rinsing with clean water, wiping and allowing to dry.

Ensure that doors, opening windows, etc, are eased as necessary before coating. Prime any resulting bare areas.

Advise Authorised Person if hazardous materials are found.

2.5.13 Suitability of Surfaces & Conditions

Application of coatings will be taken as joint acceptance by the Contractor of the suitability of surfaces and conditions within any given area to receive the specified coatings.

2.5.14 Previously Painted Steel

Prepare in accordance with AS/NZS 2311. When removing or partially removing coatings, use methods which will not damage the substrate or adjacent surfaces or adversely affect subsequent coatings.

Carefully remove all loose, flaking or otherwise defective areas to a firm edge.

Completely remove alkali affected coatings.

Where significant rot, corrosion or other degradation of substrates is revealed, obtain instructions before proceeding.

Thoroughly clean retained coatings with appropriate detergent solutions or solvents to remove all dirt, grease and contaminants. Abrade gloss coated surfaces when still wet to provide a key.

Apply additional preparatory coats to areas of partial removal to restore original coating thicknesses. Abrade junctions to give a flush surface.

Where coatings are completely removed, prepare surfaces as specified for uncoated surfaces.

2.5.15 Corroding Steel

Abrade corrosion and loose scale back to bare metal in accordance with Clause 4.2.3 Power tool cleaning of AS/NZS 2312 Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings.

Treat any residual rust with a proprietary removal solution. Prime as soon as possible.

2.5.16 Galvanized, Sherardised & Electroplated Steel

To receive lead free primer: Pre-treat with 4T wash /mordant solution to achieve blackening of the whole surface or apply pre-treatment etching primer where recommended by the coating system manufacturer.

2.5.17 Unpainted Steel

Remove oil and grease.

Abrade to remove corrosion, loose scale, welding slag and spatter.

Treat any residual rust with a proprietary removal solution. Prime as soon as possible.

2.5.18 Unpainted Masonry /Rendering

Remove loose and flaking material with a stiff brush.

2.5.19 Organic Growths

Remove all loose growths and infected coatings/decorations.

Apply appropriate biocidal solution to growth areas and surrounding surfaces.

Scrape or brush off all dead growth. Remove infected materials immediately to ensure that no other areas become infected.

Apply appropriate residual effect biocidal solution to inhibit re-establishment of growths.

APPLICATION

2.5.20 Unsuitable Conditions

Take all necessary precautions including restrictions on working hours, providing temporary protection and allowing extra drying time, to ensure that coatings are not adversely affected by climatic conditions during and after application.

Unless it is specifically permitted by the coating manufacturer, do not apply coatings:

- To surfaces affected by moisture, or airborne dust.
- When the relative humidity is above 80%.
- When heat is likely to cause blistering or wrinkling.

2.5.21 Coating Generally

To As/NZS 2311.

Do not use materials which show any bittiness, or other defects when applied. Do not thin or intermix unless specified or recommended otherwise.

Apply priming coats as soon as possible on the same day as preparation is completed. They must be of adequate thickness and suit surface porosity.

Apply coatings by brush or roller unless otherwise specified or approved.

Keep brushes and equipment in a clean condition. Dispose safely of cleaning and waste materials; do not pour into sanitary appliances or drains.

Subsequent coats of the same pigmented material must be of a different tint to ensure that each coat provides complete coverage.

Apply coatings to clean, dry surfaces in accordance with the manufacturer's recommended intervals between coats.

Apply coatings evenly to give a smooth finish of uniform colour, free from brush marks, sags, runs and other defects. Cut in neatly and cleanly. Do not splash or mark adjacent surfaces.

Adequately protect drying and completed work from damage.

2.5.22 Concealed Steel Surfaces

Apply Dulux Luxaprime Zinc Phosphate to surfaces of components which will be concealed when fixed in place.

2.5.23 Uniformity of Colour & Texture

Once samples of coatings have been approved do not change type or proportion of constituent materials. Ensure that supplies of materials are sufficient to give consistent and uniform colour and texture. Obtain each material from one source and mix different loads if necessary.

INSPECTION & TESTING

2.5.24 Inspection & Testing

Record the WFT of each coat. These results shall be made available to the Authorised Person at the end of each day.

Check coverage rates by ensuring the correct volume of coating is applied to a given area. The volume of coating used over a surface area shall be recorded by the Contractor at the end of each day of application for inspection by the Authorised Person.

Undertake adhesion testing according to AS1580.408.2 (the 'knife' test) and/or AS 1580.408.4 (the 'crosscut' test) to verify adhesion when directed by the Authorised Person, and as a minimum at a rate of at least one test per 10 windows. Record results of tests and submit to the Authorised Person.

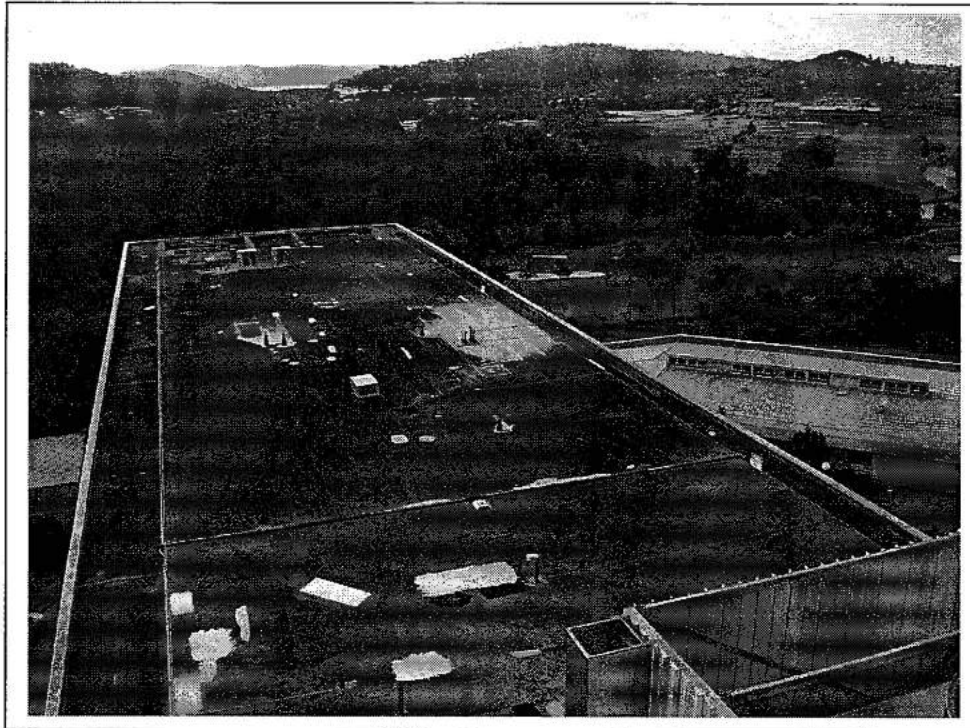
Permit coating manufacturers to inspect the work in progress and take samples of their products from site if requested.

2.5.25 Completion:

Ensure that opening lights and other moving parts move freely. Remove all masking tape and temporary coverings.

2.6 Built-up Waterproof Membrane

To be read with Preliminaries/General conditions.



2.6.1 Waterproof Covering To Roof

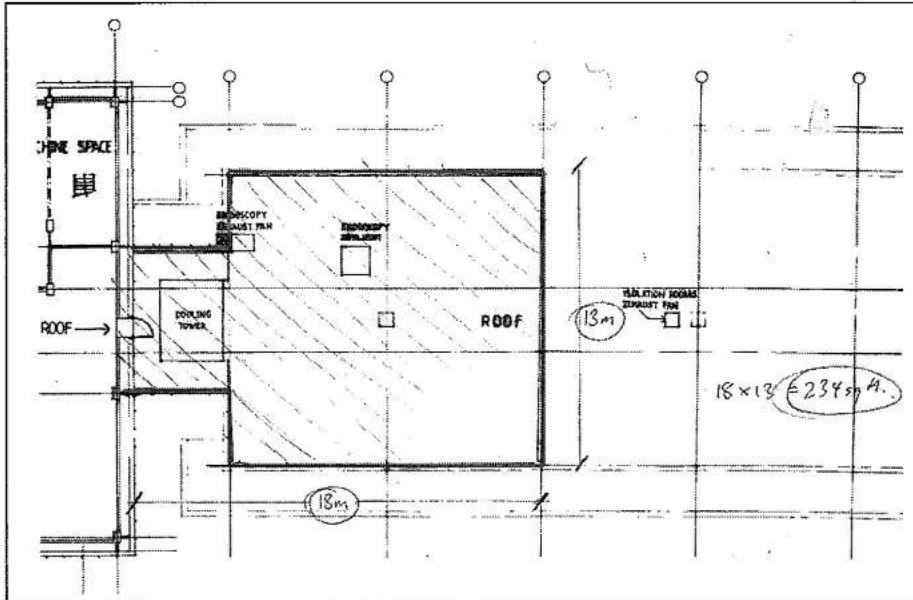
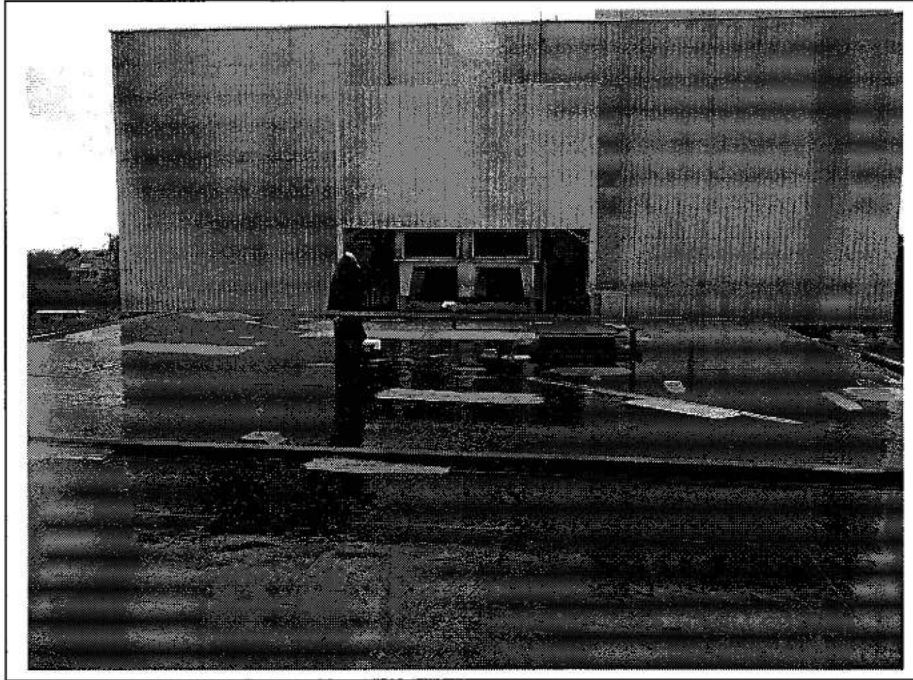
Location:	Northern wing roof
Base:	Existing Nuralite membrane
Preparation:	Remove existing Nuralite membrane following specific Asbestos Removal Management Plan
Waterproof covering:	Three layer side and surface vented membrane system
Manufacturer:	Parchem
Laying:	As clause 2.6.8
First layer:	Rollbase polyester fabric backed base sheet
Attachment:	Spot bonded with 40% coverage using adhesive recommended for the purpose by the manufacturer.
Second layer:	Index Fidia membrane
Attachment:	Fully bonded as Clause 2.6.10
Third layer:	Index Testudo Mineral 4mm
Attachment:	Fully bonded as Clause 2.6.10

SPECIAL REQUIREMENTS

Imminent works: Replace 235m² of Nuralite membrane laid on ply substrate.

Replace 850m² of nuralite is laid on concrete substrate.

Refer to the photographs below for location of immediate works.



GENERAL TECHNICAL REQUIREMENTS

2.6.2 Waterproof Membrane Generally

Unless specified otherwise, lay waterproof covering in accordance with manufacturer's recommendations to provide a secure, free draining and completely weather-tight slab.

Ancillary products and accessories, where not specified, to be types recommended for the purpose by the membrane manufacturer.

Use operatives trained in the application of torch on membranes and who have passed a recognised training scheme. Submit evidence of training to Authorised Person on request.

2.6.3 Adverse Weather

Provide temporary covers and drainage as required to keep unfinished areas of the substrate dry.

Submit proposed methodology for temporary waterproofing for approval.

Undertake replacement of waterproofing in stages to minimise area of exposure and consequent risks of water ingress during the Works.

Suspend work in severe or continuously wet weather unless an effective temporary roof is provided over the working area.

If unavoidable wetting of the construction does occur, take prompt action to minimise and make good of any damaged areas.

2.6.4 Protection

Ensure that from installation of the slab membrane until Practical Completion:

- No petroleum based solvents or other chemicals harmful to the membrane are allowed to come into contact with the membrane surface.
- No building materials are stored on the membrane unless approved by the Authorised Person.
- Finished slab areas are adequately protected from damage by subsequent building operations.
- Temporarily protect from water ingress throughout the duration of the membrane replacement period.

2.6.5 Primer/Preparation For Roofs

Remove existing Nuralite covering. Covering contains asbestos and removal must be undertaken by a licensed contractor.

Assess quality of existing ply substrate and provide replacement ply boards where required.

Seek approval prior to replacing substrate.

BASE

2.6.6 Suitability of Base

Before installing membrane ensure that:

- Surfaces to be covered are firmly fixed, clean, dry, smooth, free of contaminants, voids and protrusions.

WATERPROOF COVERINGS/ACCESSORIES

2.6.7 Movement Joint(s)

If joints are found in the slab following removal of existing covering advise the Authorised Person and seek instructions.

2.6.8 Laying Membrane Generally

Where practicable start at lowest point of the slab and unroll the membrane up the slope with laps no less than recommended by the manufacturer, ensuring that water will drain over and not into laps.

Break bond between layers with side laps staggered by one half sheet width.

Apply successive layers with minimum delay, ensuring that moisture is not trapped.

2.6.9 End Joints of Base Roll

Form end joints in backed base sheet by butt jointing and torching on a 150mm wide strip of Index Fidia membrane.

2.6.10 Torch-on Bonding

Lay torch-on sheets using equipment and methods recommended by the membrane manufacturer.

Ensure that there is a full bond over the whole surface, with no air pockets.

Leave a continuous bead of compound at head and side laps of top layers.

2.6.11 Details Generally

All detailing of the membrane system shall be carried out in accordance with the manufacturer's requirements.

The membrane shall be turned up and sealed. All exposed perimeter edges must be mechanically fixed or terminated under a flashing.

All penetrations, pipes, or other protrusions shall be detailed and sealed as required.

Form details with adequate overlapping, staggering of laps and full bonding of successive layers so that they are waterproof. Strips of membrane required for 'linear' details to be cut from the length of the roll rather than the width.

2.6.12 Roof Ventilators

Manufacturer and reference: Index Vent Stack (one way air vent)

Position evenly over roof area at not more than 5m centres and set in 1m from roof edges.

Do not prime or apply bonding compound to base below vents.

Prime skirt of vents before felting if recommended by manufacturer.

2.6.13 Pressure Seals

Manufacturer and reference: Index pressure seal (K flashing) to AS 4654

Position as shown on the drawings and fix with stainless steel screws at no greater than 500mm spacing.

Prime and seal with. Dow Corning 791 -N Silicone building sealant.

2.6.14 Perimeter Flashings

Material: Architectural grade aluminium alloy 6060T5

Thickness: 1.6mm

Length: Not greater than 3 m in any one section

Comers: Mitred internal and external comers

Finish: Clear anodised 25 micrometres thick. Anodised after folding

Profile: As shown on the drawings

Fixings: Stainless steel screws at no greater than 500mm spacing

Accessories: Jointing sections as shown on the drawings

Sealant: Dow Corning 791 -N Silicone building sealant.

SURFACING/COMPLETION

2.6.15 Flood Test To Roof

Prior to testing, thoroughly check that all necessary waterproofing work is complete and obvious defects have been remedied.

Externally cover and seal all outlets and protect against damage from water pressure with temporary kerbs. Do not use plugs to seal outlets.

Give 2 days notice to Authorised Person prior to flooding.

Carefully flood to levels agreed with Authorised Person, but in no case higher than existing kerb levels, and leave for a period of 2 days. Regularly inspect for leaks.

Take care to avoid slip and trip hazards.

Ensure electrical equipment is clear of deck and electrical connections are disconnected and adequately protected.

On completion of testing, slowly drain slabs ensuring that outlets do not overload or flood.

Where leaks have occurred, submit to Authorised Person detailed proposals for remedial measures.

2.6.16 Completion

Ensure that:

- Slab areas are left clean with all outlets clear
- Finished slab areas are adequately protected from damage by subsequent building operations
- Defects are repaired without delay to minimise damage and nuisance

2.6.17 Warranty

Before practical completion submit the manufacturer's product warranty for the waterproofing system. Minimum warranty period 20 years.

2.7 Render Repairs

To be read with Preliminaries/General Conditions.



2.7.1 Cement Sand Render

Location:	<p>External concrete columns north, south, east and west elevations</p> <p>Refer to drawings TD01, Bay D, Level 2 and Bay E, Level 5</p> <p>Refer to drawings TD02, Bay E, Level 4</p> <p>Refer to drawings TD03, Bay 7 & 11, Level 3</p> <p>Refer to drawings TD04, Bay 11, Level 5 and Bay LI, Level 1 and Level 4</p> <p>Refer to drawings TD05, Bay 12, Level 1</p>
Preparation:	As Clause 2.7.8 to 2.7.11
Reinforcement:	<p>Helifix 8mm helical stainless steel pins or approved equivalent embedded 30mm minimum into concrete substrate, at not greater than 250mm centres in each direction. Pins to finish 2mm below surface of render.</p>

Key Coat:

Cement:	Portland cement to AS 2349, AS 2350
Admixture(s):	SikaTop-77
Mix proportions:	1:1 (masonry cement: sand)
Admixture proportions:	1:1 by volume (SikaTop 77: water)

Render Coat(s):

Cement:	Portland cement to AS 2349, AS 2350.
Admixture(s):	SikaTop 77
Mix proportions:	1:4 (masonry cement: sand)
Admixture proportions:	1:1.5 (SikaTop 77: water)
Thickness (excl dubbing out):	2 coats, to match existing alignment of finishes (approximately 18 to 20mm)
Finish:	To match existing finish in colour, texture, level and plane via colour matched cement/render and appropriate aggregate. If pigments are used, pigments must comply with BS1014 and must not exceed 10% of cement by weight. Ensure existing joint and edge lines are retained. All required coatings shall be to Clause 2.5.5

GENERAL REQUIREMENTS**2.7.2 Uniformity of Colour & Texture**

Once samples of rendered coatings have been approved do not change type or proportion of constituent materials. Ensure that supplies of materials are sufficient to give consistent and uniform colour and texture. Obtain each material from one source and mix different loads if necessary.

2.7.3 Admixtures

Do not use admixtures unless specified or approved.

2.7.4 Mixing

Measure materials accurately by volume using clean gauge boxes. Proportions of specified mortar mixes are for damp sand. Adjust proportions if dry sand is used.

Mix materials thoroughly to a uniform consistency and appearance using suitable mechanical or manual means or, for proprietary mixes, as recommended by the manufacturer.

2.7.5 Contamination

Do not allow contamination of one type of material by another, or by any set material.

2.7.6 Initial Set

Do not use mixes after initial set has taken place. Do not retemper or reconstitute mixes, unless permitted by the manufacturer of proprietary mixes.

2.7.7 Cleanliness

Protect thoroughly all existing work and approaches using suitable boards, sheets, etc. clean off all droppings on to finished work immediately.

PREPARING BACKGROUNDS

2.7.8 Acceptance of Backgrounds

Before preparation or application of rendered coatings ensure that:

- Backgrounds are secure, adequately true and level to achieve specified tolerances, free from contamination and loose areas, reasonably dry and in a suitable condition to receive specified coatings.
- All concrete repair, cutting, chasing, fixing of concealed conduits, service outlets and the like, and making good of the background, is completed.

2.7.9 Preparation Generally

Remove efflorescence, dust and other loose material by thoroughly dry brushing.

Remove all traces of paint, grease, dirt and other materials incompatible with coating by scrubbing with water containing detergent and washing off with plenty of clean water. Allow to dry before applying coatings unless specified otherwise.

Scabble smooth concrete surfaces with a needle gun or similar to achieve a rough surface suitable for render application.

2.7.10 Smooth Concrete Surfaces

Apply key coat mix to appropriately prepared surfaces before rendering.

2.7.11 Movement Joints

Do not render across joints in substrates. Seek direction if substrate conditions are such that this may be necessary.

Allow to apply render to coincide with movement joints in background leaving space for the joint. Ensure that joints extend through coating to background.

RENDERING

2.7.12 Application Generally

Apply each rendered coating firmly to achieve good adhesion and in one continuous operation between angles and joints.

All coatings to be not less than the thickness specified, firmly bonded, of even and consistent appearance, free from rippling, hollows and ridges.

Finish surfaces to a true plane, to correct line and level, with all angles and comers to a right angle unless specified otherwise, and with walls and reveals plumb and square.

Prevent excessively rapid or localised drying out.

2.7.13 Dubbing Out

If necessary to correct background inaccuracies dub out in thicknesses of not more than 13 mm in same mix as undercoat. Total thickness of dubbing must not exceed 25 mm unless approved otherwise.

In areas where thickness of dubbing will exceed 20 mm, first apply an approved keying/bonding treatment.

Comb surface of each dubbing out coat. Allow each coat to set but not dry before the next is applied.

2.7.14 Undercoats Generally

Apply first undercoat or dubbing out coat by throwing from a trowel.

Allow to stiffen and comb to provide a key for the next coat. Comb to produce evenly spaced wavy horizontal lines, approximately 20 mm apart and 5 mm deep. Do not penetrate through the coat.

Brush down each undercoat to remove dust and loose particles and dampen to control suction before applying next coat.

SURFACING AND COMPLETION

2.7.15 Final Coat - Plain Floated Finish:

Finish with wood or other suitably faced float to give an even, open texture to match surrounding limestone.

Do not apply water while working up. Do not draw excessive laitance to surface (either by overworking or by use of steel trowel).

Finish edges true and straight to match joint and corner profiles of existing limestone panels.

2.7.16 Drying:

Work in the shade and out of drying winds whenever possible.

Keep each undercoat and final coat damp for the first 3-4 days by covering with polyethylene sheet and/or spraying with water. Hang sheeting clear of the final coat where it is the final finish. Thereafter prevent from drying out too rapidly.

Allow each coat to dry out thoroughly to ensure that drying shrinkage is substantially complete before applying next coat.

2.7.17 PROTECTION:

Adequately protect newly applied external coatings against rain for the first 48 hours using polyethylene sheet hung clear of the face, or other approved method.

SAMPLES, INSPECTION & TESTING

2.7.18 Trial Work

Complete sample area of replacement panel material at base of southern facade of the building. Prepare trial consisting of one complete panel.

2.7.19 Inspection

The in-situ repairs shall be tested for soundness of repairs by sounding with a hand-held hammer. Any areas sounding hollow shall be condemned, cut out and replaced.

2.8 Concrete Repairs

To be read with Preliminaries/General Conditions.



2.8.1 Concrete Patch Repairs:

Repair spalling concrete retaining wall to southern car park.

Location:	Refer to drawings TD02, Bay C to H, Level 1
Preparation:	As Clause 2.8.4 to 2.8.5
Concrete Repair Mortar:	Sika Monotop 615HB.
Manufacturer:	Sika Australia Pty Ltd.
Primer reference:	Sika Monotop 610.
Bonding Bridge:	Sika Monotop 610.
Application:	In accordance with manufacturer's instructions.
Reinforcement:	N10 if deemed necessary by Authorised Person.
Finish:	As Clause 2.5.5
Colouring agent:	If required, coloured oxide to suit existing that satisfies the requirements of AS1478.1 and approved by the repair mortar manufacturer for use with their product.

2.8.2 Concrete Bar Tip Repairs

Repair exposed bar tips and minor spalls caused by exposed reinforcement bar tips.

Preparation: As Clause 2.8.4

Repair material: As Clause 2.8.1

GENERAL REQUIREMENTS

2.8.3 Protection

Protect adjacent areas to prevent contamination from over-run or other material contamination.

Prior to breaking out concrete ensure that panel thickness is sufficient that breakthrough will not occur. If breakthrough is considered likely, inform Authorised Person and Plant and Operations Manager to arrange internal access to provide suitable internal protection.

2.8.4 Suitability of Base - Patch Repairs

Before applying primer/bonding bridge/concrete repair mortar ensure that the perimeter of each repair (including any existing applied render) is cut as a series of straight lines at right angles to the surface to a nominal depth of 10 mm using a disc cutter or similar. No reinforcement is to be damaged and the disc cut surface is to be roughened prior to reinstatement. Feather edges to repair patches will not be permitted.

Where inspection of the breakout indicates that the surrounding concrete is not sound, enlarge the repair area as directed by the Authorised Person.

Any exposed bar tips, tying wire, nails or other metallic components on or near the surface of the concrete, and the concrete surrounding the metallic component, are to be removed and the metallic component cut back a minimum of 25 mm behind the original profile.

Where embedded metalwork, including reinforcement steel, is encountered, remove the concrete from around the steel for a minimum distance of 25 mm measured radially from the surface of the steel and the length of breakout along the reinforcing bar shall be such that a continuous length of 50 mm of bar free from active corrosion is exposed at both ends of the repair area.

The exact size of the breakout shall be recorded on all drawings and shall be used for the purposes of recording and measuring the work.

Prepare all concrete surfaces that are to receive concrete repairs by removing loose or weak concrete, surface laitance and other contaminants. Produce a surface suitable to ensure that the bond of the repaired concrete to the substrate can satisfy the manufacturer's recommendations. Take care to ensure that the method of preparation does not cause weakness of the interface due to fracture of aggregate or loosening of its bond.

Clean all exposed reinforcing steel by mechanical wire brush or wet abrasive blasting using potable water to completely remove loose mill scale, corrosion

products and foreign matter. Achieve a standard equal to AS 1627.9 C Sa2 or D Sa2.5 as appropriate.

Chemical treatments, including rust converters, are not to be used.

Where there is no reinforcement present in the breakout area Helifix 'Dryfix' 8mm helical stainless steel pins shall be used. They shall be placed in a 100mm orthogonal grid, with each tie anchored to a depth of no less than 40mm and at sufficient depth to provide 10mm cover to the tie end.

Inspect exposed reinforcement. If corrosion has reduced the cross sectional area of reinforcement by 10% or greater, seek instructions from the Authorised Person before proceeding. If the bar is of significant structural importance, instructions will be given to lap or weld supplementary reinforcement to the affected bar. If the bar is of minor importance instructions will be given to clean the bar and provide no supplementary reinforcement.

Allow to:

- Weld additional reinforcement on one side by a single lap splice in accordance with AS 1554. The weld thickness shall be half the new bar diameter, with a minimum weld length of 150mm, connecting the new bar to a length of existing bar with no visible defects or loss of section. The electrodes shall be type E48XX, or
- Provide additional reinforcement by a single lap splice. Minimum lap length to be 30 x bar diameter.

Additional concrete removal may be required to expose a suitable length of bar for lap purposes. A provisional quantity of supplementary reinforcement is given in the schedule of rates.

Do not cut reinforcement without written approval of the Authorised Person.

Notify the Authorised Person of the repair programme. The Authorised Person may carry out spot checks of the repair work as noted in Attachment 1.

2.8.5 Adverse Weather

Concrete repairs must not be applied in wet conditions or at temperatures below 5°C, unless otherwise permitted by the material manufacturer.

Suspend work in severe or continuously wet weather unless effective protection is provided over the working area.

APPLYING CONCRETE REPAIRS

2.8.6 Priming

Prime reinforcement within 24 hours of exposing and cleaning metalwork. Ensure that complete cover is obtained (multiple coats may be necessary). As a minimum apply the number of coats recommended by the manufacturer.

Apply and cure in accordance with manufacturer's instructions.

2.8.7 Bonding Bridge

When primer has cured, pre-wet the concrete repair interface to achieve saturated surface dry conditions. Apply bonding bridge approximately 1mm thick to exposed and primed reinforcement, and to concrete repair interface. Work material well into irregularities of the concrete surface.

2.8.8 Application of Concrete Repair Mortar

Use operatives trained in concrete repair techniques. Submit evidence of training to PR on request.

All materials shall comply with the relevant codes and shall be applied in accordance with manufacturer's specifications.

All materials which are visible in the finished works shall match the colour and texture of the existing materials.

Re-form arises and comers straight and true, using formwork where necessary.

Apply repair mortar in multiple coats if required. Apply whilst bonding bridge is still tacky. If bonding bridge dries prior to mortar application, reapply as Part 2.8.7.

Apply repair mortar to repair area to the level of the original surface.

Ensure cover is greater than 10mm. Seek instruction from the Authorised Person if this is not achievable.

Fully compact repair mortar, including behind and between reinforcement, to eliminate voids.

For repairs greater than 80mm apply repair mortar in two stages. Allow 24hrs curing of first stage. Scratch repair surface to provide a mechanical key and pre-wet repair area prior to application of second stage, and apply additional bond coat over full area as Part 2.8.7.

SURFACING & COMPLETION

2.8.9 Surface / Finish

Match the repair with the existing concrete with respect to profile, level, finish, colour and texture unless local thickening has occurred to ensure adequate cover to reinforcement.

After placing of repair, provide adequate curing protection. Place heavy-duty polyethylene sheeting in contact with the repair surface and overlap the existing concrete so as to encapsulate the repair area. Securely fasten and seal all edges of the sheeting to prevent water and contaminant ingress and also to limit air circulation.

Alternatively, subject to the approval of the Authorised Person, a curing compound may be used. The contractor shall demonstrate that the curing compound is compatible with the repair material and any subsequent coatings and does not leave a staining or remnant material that detracts from the appearance.

INSPECTION & TESTING

2.8.10 Inspection

Inspect the repairs for cracking due to thermal and/or shrinkage. Cracks with widths in excess of 0.2mm in the repair, crazing/cracking covering significant areas of repair or any cracking between the old concrete and the repair are to be cut out and replaced.

The in-situ repairs shall be tested for soundness of repairs by sounding with a hand-held hammer. Any areas sounding hollow shall be condemned, cut out and replaced.

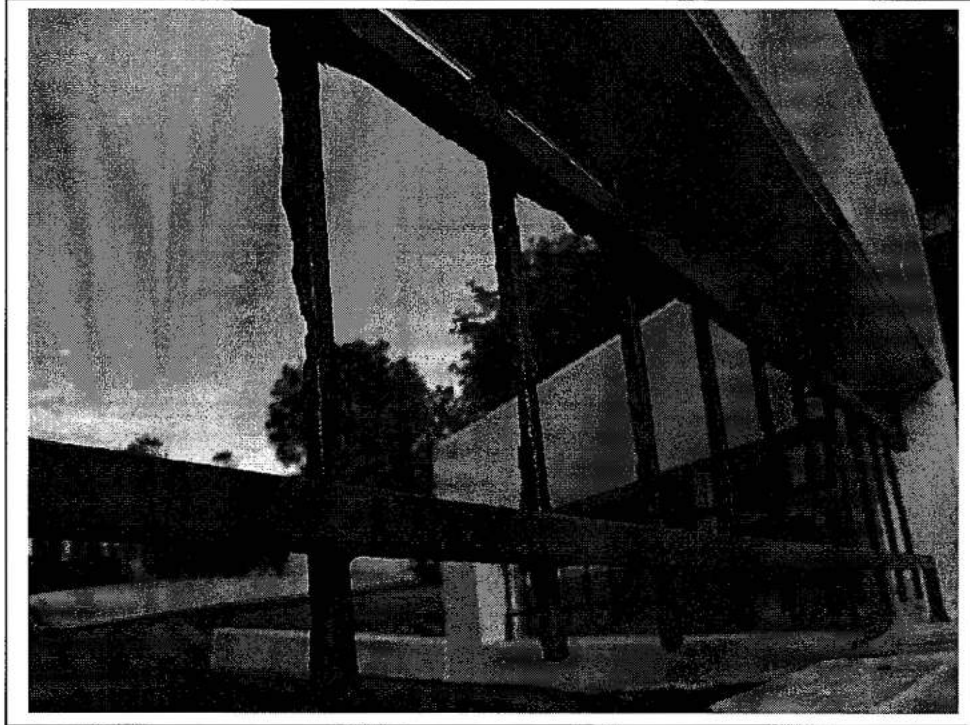
Where directed by the Authorised Person, undertake Limpet Pull-off tests. Testing shall be from 50mm cores retrieved with a minimum of 15mm of substrate concrete intact.

Where directed by the Authorised Person, break out repairs to permit inspection of the construction. Allow for breaking out and making good up to 10 repairs. If breaking out reveals defective work, then the Authorised Person may direct further breaking out which will be at the Contractor's own cost.

2.9 Steel Balustrade

To be read with Preliminaries/General Conditions.

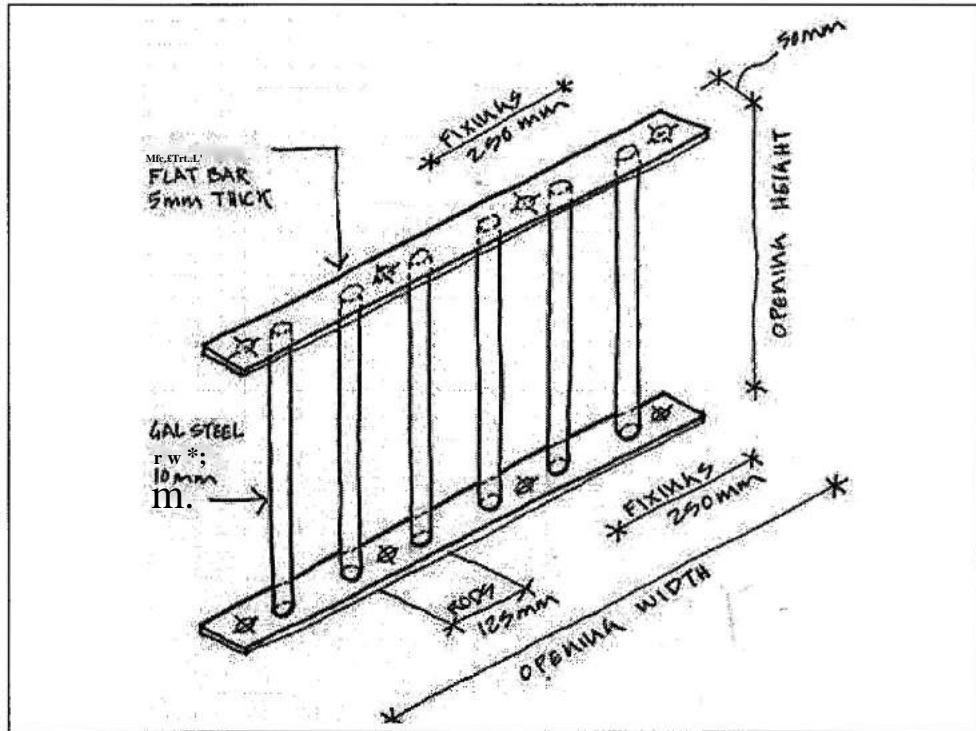
2.9.1 Steel Balustrade



SCOPE OF WORK

Replace steel balustrade with galvanised steel balustrade panels comprising horizontal flat bars at top and bottom and vertical rods at 125mm centres max.

Location:	Openings to retaining wall to southern car park Refer to drawings TD02, Bay C to H, Level 1
Material:	Galvanised mild steel flat bars (50mm) and rods
Thickness:	Flat bar 5mm. Rods: 10mm dia.
Fixings:	Galvanised anchor bolts to concrete at 250mm centres (top and bottom)
Preparation:	As Clause 2.9.2.1
Finish:	As Clause 2.5.4



Proposed Solution

2.9.1.1 Preparation

Carefully cut out corroding metal members and fixings, causing the least possible disturbance to surrounding masonry.

Remove associated rust debris.

Measure up each opening to manufacture balustrade panels to suit.

2.9.1.2 Fixings

Submit details of proposed fixings to the Authorised Person.

Install the correct type, size, strength and number necessary to resist all loads and lateral displacement likely to occur during the life of the building.

2.9.1.3 Handling and Transportation of New Balustrade Panels

Protect paintwork from damage during transport and handling. Do not handle or transport steel members until the paintwork is dry.

No balustrades panels shall be fixed with the surface coatings damaged or defective.

Inspect balustrade panels immediately prior to erection. Coatings which are found on the Site to be damaged or defective shall be promptly repaired as follows:

- Carefully abrade area around damage to give smooth feathered edges to all paint layers affected.
- Apply full protective system, overlapping surrounding area by 25mm minimum.

All damage to galvanising shall be repaired using two coats of a two-pack epoxy polyamide zinc-rich paint containing a minimum of 92% zinc dust in the dry film which shall be built up to an equivalent zinc coating in mass/m².

All remedial works shall be subject to trials. The Authorised Person shall keep the approved trial sample as a control sample.

2.9.1.4 Completion

Install new galvanised steel panels to existing openings to retain wall A/C unit onto new support bracket.

Provide new aluminium infill frame and panel around A/C unit to enclose window opening (where applicable)

Weather seal between A/C unit, sub-frame and surrounding facade components as required with approved sealant as Clause 2.10.1

2.10 Sealants

To be read with Preliminaries/General Conditions.

2.10.1 Sealant Types:

To polished or coarse concrete surfaces:

Material:	Sikaflex Pro polyurethane.
Manufacturer:	Sika Australia Pty Ltd
Primer:	Sika Primer SP3N
Preparation:	As Part T6.4

To brick surfaces:

Material:	Sikaflex Pro polyurethane.
Manufacturer:	Sika Australia Pty Ltd
Concrete primer:	Sika Primer SP3N
Preparation:	As Part T6.4

To anodised aluminium surfaces:

Material:	Sikaflex Pro polyurethane.
Manufacturer:	Sika Australia Pty Ltd
Primer:	Sika Primer SB-SA/205
Preparation:	As Part T6.4

Final preparation: Lightly abrade surface with 600 grade sandpaper. Do not remove anodised coating. Clean with Sika Colma

GENERAL REQUIREMENTS

2.10.2 Suitability of Joints

Before commencing, check that:

- Joint dimensions are within limits specified for the sealant by the manufacturer.
- Surfaces are smooth and undamaged.
- Preparatory work that must be done before assembly of the joint, including concrete repairs, has been carried out.

Inform Authorised Person if joints are not suitable to receive sealant and submit proposals for rectification.

2.10.3 Compatibility

Check that all materials to be used are recommended by their manufacturers for the particular surface and conditions of exposure, and that they are compatible with each other.

Inform the Authorised Person of any discrepancy in specification of coatings and obtain instructions before proceeding with application.

PREPARATION

2.10.4 Preparing Joints

Where necessary, remove and keep for re-use cappings, covers and the like that may be covering areas of sealant to be replaced. Replace any such materials that are damaged during removal.

Remove all existing sealants and backing rods.

Clean surfaces to which sealant must adhere using methods and materials recommended by sealant manufacturer.

Remove all temporary coatings, tapes, loosely adhering material, dust, oil, grease and other contaminants that may affect bond.

Keep joints clean and protect from damage until sealant is applied.

Use backing rod or bond breaker types that are recommended for the purpose by the sealant manufacturer.

Insert backing rods and/or bond breaker tape into joint leaving no gaps.

Use open cell foam backing rods unless noted otherwise.

Cover adjacent surfaces with masking tape to prevent staining and protect surfaces that would be difficult to clean if smeared with primer or sealant.

APPLICATION

2.10.5 Applying Sealants

Ensure that operatives observe manufacturers and statutory requirements for the storage and safe usage of sealants.

Use equipment and methods recommended by the sealant manufacturer. Apply within the recommended application life of primer and sealant, and the recommended air and substrate temperature ranges.

Do not apply to damp surfaces (unless recommended otherwise) or during inclement weather. Do not heat joints to dry them or raise the temperature.

Fill joints completely, leaving no gaps, excluding all air and ensuring firm adhesion of sealant to required joint surfaces. Tool the sealant to a neat, slightly concave profile unless specified otherwise.

Protect until cured.

INSPECTION & TESTING

2.10.6 Testing

Where directed by the Authorised Person, break out sealant joints to permit inspection and adhesion testing (the 'peel test'). If removing sealant reveals defective work, then the Authorised Person may direct further removal, which will be at the Contractor's own cost.

2.10.7 Water Testing

Allow complete curing of sealants

Water-test all new joints when cured by hose spraying sealed joints continuously for five minutes. Monitor for water ingress internally. Cease spraying if water ingress is apparent. Rectify any defective joints.

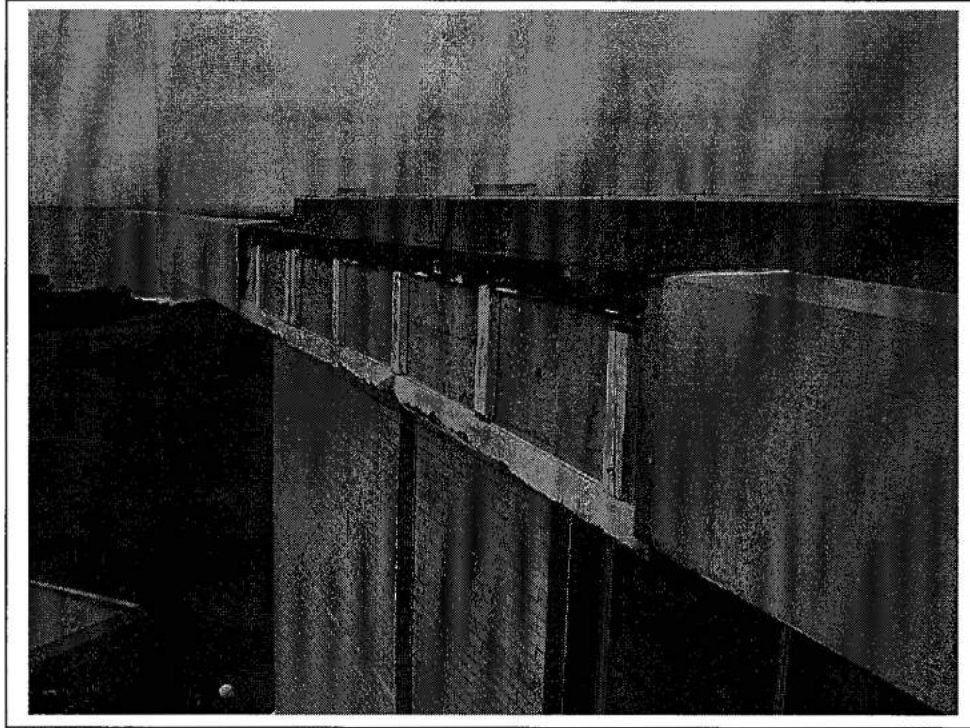
Water testing is to be carried out outside of normal Working Hours as stated in Clause 1.3.4.

Notify the Authorised Person of the proposed timing of the water tests.

2.11 Miscellaneous

To be read with Preliminaries/General Conditions.

2.11.1 Fascia Repair



SCOPE OF WORK

Replace missing fascia as scheduled.

Location: Missing fascia panel to northern elevation at roof level

Refer to drawings TD01, Bay B1, Level PR

Material: Folded zincalume sheet to match existing

Preparation: As Clause 2.11.1.1

Repair: As Clause 2.11.1.2&2.11.1.3

2.11.1.1 Preparation

Cut back existing fascia to provide clean interfaces.

Remove exposed existing timber sub-framing from concrete substrate.

2.11.1.2 Framing

Assess the condition of the existing timber framing supporting fascias.

Replace rotting timber battens with approved galvanised steel top hat framing to suit fascia.

2.11.1.3 Completion

Pre-form to required shapes where possible. Notch, scribe, flute or dress down as necessary to follow the profile of adjacent surfaces.

Fix new purpose made galvanised steel fascia to timber battens or new galvanised steel top hat framing.

Flash roof junctions, upstands, abutments and projections through the roof if required

Weather seal new fascia with approved sealant to Clause 2.10.1

2.11.2 A/C Unit Supports



SCOPE OF WORK

Repair/replace air conditioning unit support brackets as scheduled.

Location:	Refer to drawings TD03, Bay 10, Level 6 Refer to drawings TD04, Bay 3, Level 4 Refer to drawings TD05, Bay 6 and 8, Level 3 and Bay 12, Level 2
Preparation:	As Clause 2.11.2.1
Finish:	As Clause 2.11.2.4

2.11.2.1 Preparation

Some A/C units are in poor condition and are likely to fail while removing or reinstalling. Identify A/C units at risk of failing in the dilapidation report and notify the Authorised Person.

Based on dilapidation report findings, seek instructions from the Authorised Person. The Contractor is not responsible for A/C units deemed to be in poor condition.

Disconnect and remove A/C unit and keep for reuse.

Remove existing operable window sash (where applicable)

Remove existing A/C unit support brackets / sub-frame.

Remove existing support brackets and fixings.

2.11.2.2 Support Brackets

Replace existing brackets with new aluminium support brackets.

Refix new support brackets via stainless steel fixings to sound structure or substrate.

2.11.2.3 Fixings

Submit details of proposed fixings to the Authorised Person.

Install the correct type, size, strength and number necessary to resist all loads and lateral displacement likely to occur during the life of the building.

2.11.2.4 Completion

Reinstall A/C unit onto new support bracket.

Provide new aluminium infill frame and panel around A/C unit to enclose window opening (where applicable)

Weather seal between A/C unit, sub-frame and surrounding facade components as required with approved sealant as Clause 2.10.1.

2.11.3 Downpipes



SCOPE OF WORK

Repair/replace downpipes and bracketry as scheduled.

Location: Where Applicable

2.11.3.1 Downpipes

Material: Zinalume or similar

Size: To match existing

2.11.3.2 Brackets for Downpipes

Material: Zinalume or similar

Size: To match existing.

2.11.3.3 Preparation

Remove damaged downpipes to awning structure / roof structures.

2.11.3.4 Downpipes

Provide downpipes to the required section and shape where possible. Connect gutter outlets to new downpipes and, if applicable, connect feet to rainwater drains.

Submit details of proposed fixings to Authorised Person.

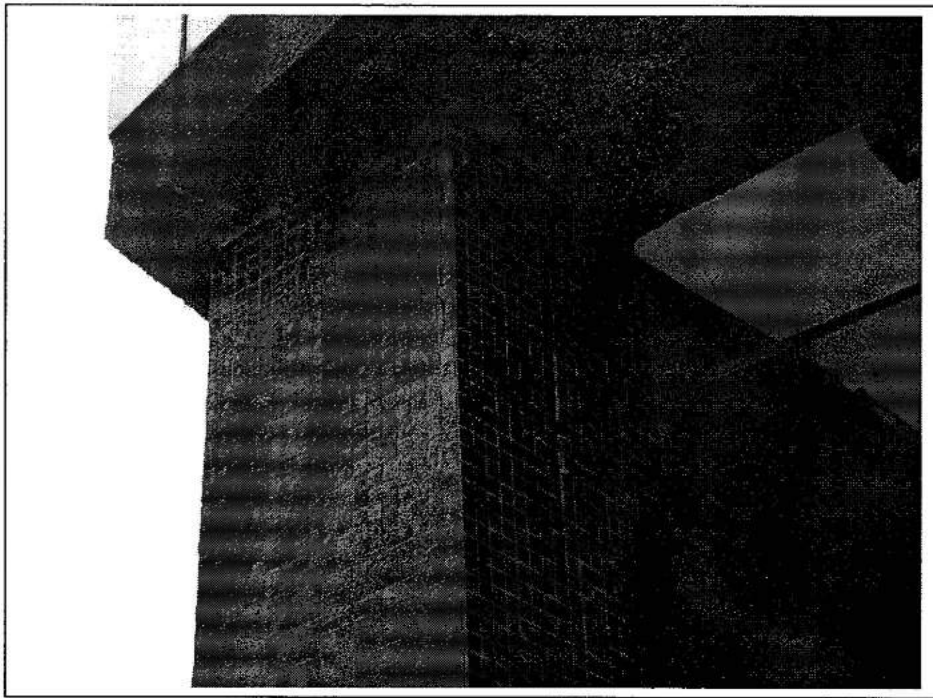
Provide supports and fixings for downpipes as Clause 2.11.3.2

2.11.3.5 Fixings

Submit details of proposed fixings to the Authorised Person.

Install the correct type, size, strength and number necessary to resist all loads likely to occur during the life of the building, and to prevent any lateral displacement.

2.11.4 Cracked Tiles



SCOPE OF WORK

Repair/replace cracked mosaic tiling as scheduled.

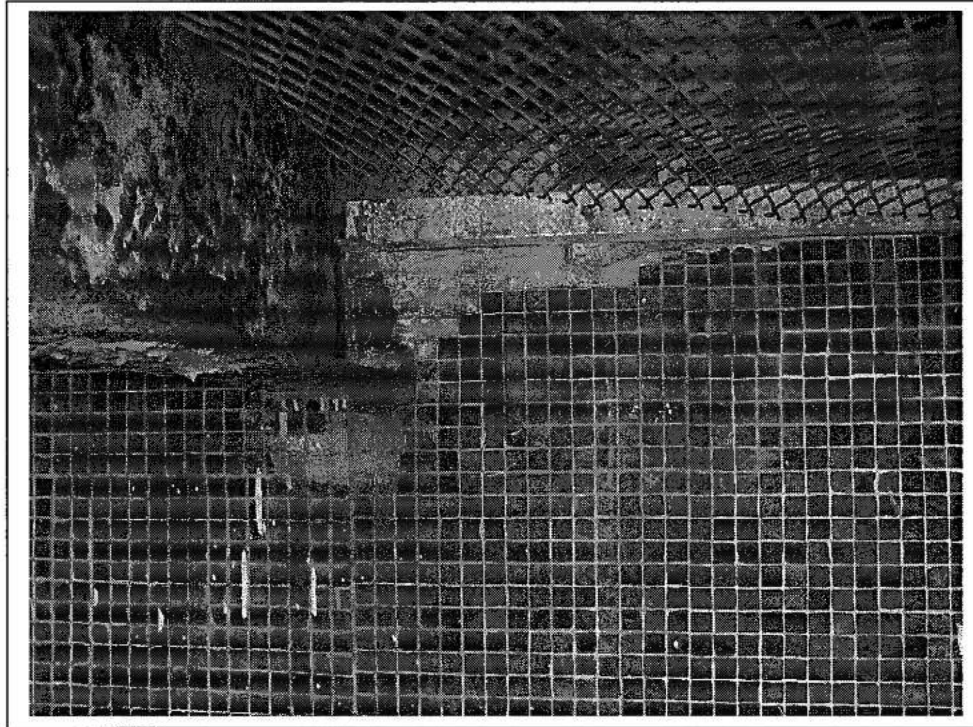
Location: Tiled columns at southern car park

Refer to drawings TD02, Bay E to H, Level 2

- Remove cracked / loose tiles to sound and square cut tiles around column
- Re-lay new tiles to areas where tiles have been removed. New tiles to match existing
- Allow for a 1 Omm sealant joint (movement joint) at the interface with edge beam at top of column

2.12 Metal Cladding

To be read with Preliminaries/General Conditions.



SCOPE OF WORK

Installation of corrugated metal panel fixed to masonry substrate by galvanised steel “top hat” sections or furrings. A stainless steel mesh is fixed between the substrate and the “top hat” sections to contain potential tile detachments.

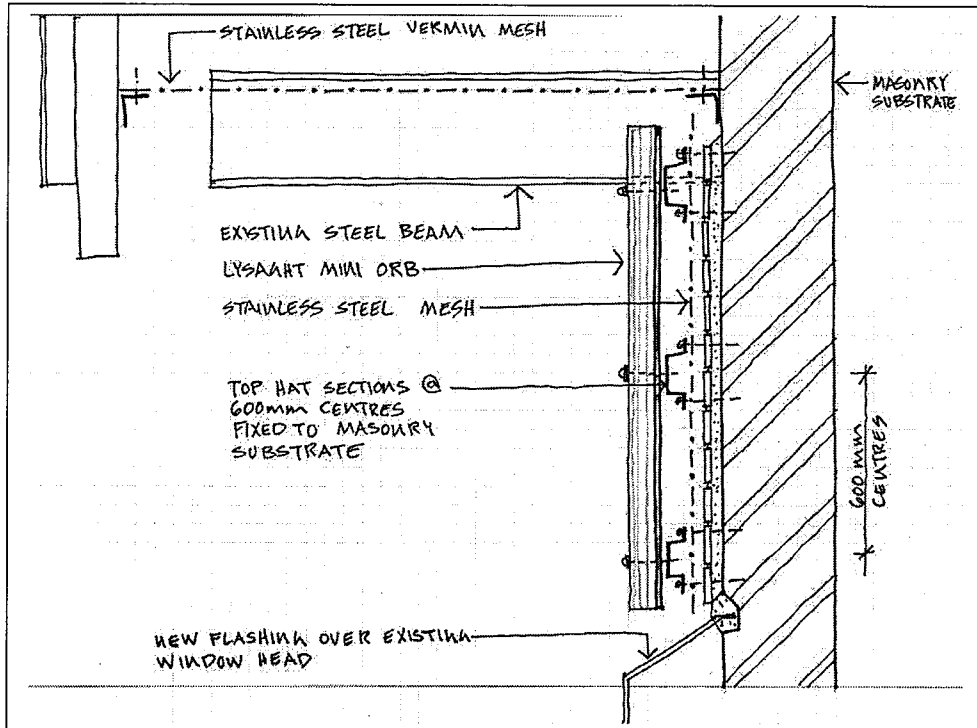
Refer to sketch below.

Location: External tiled areas to tower plant room at all elevations
Refer to drawings TD01 to TD04, Level 6/PR

Substrate: Masonry

Extra requirements: Provide new vertical stainless steel mesh fixed between substrate and galvanised steel framing. Maximum mesh opening to be 20mm x 20mm. Provide adequate separation between galvanised steel framing and stainless steel mesh to avoid bimetallic corrosion.

Provide new horizontal stainless steel vermin mesh fixed via aluminium angles in between existing steel beams.
Provide adequate separation between aluminium angles and stainless steel mesh to avoid bimetallic corrosion.



Proposed Solution

2.12.1 Cladding System

Cladding Panels

Manufacturer:	Lysaght
Product:	Mini Orb
Finish:	Metallic Steel
Colour:	Façade

Framing

Furrings:	Hot dipped galvanised top hat sections 50mm x 35mm at 600 centres. Minimum thickness 1.5mm with a minimum coating of 35 micron coating for galvanising.
Fixings to masonry:	8mm dia. stainless steel sleeve anchors. Length as recommended by manufacturer. Example: Ramset Dyna Bolt. Alternatively, use 6mm dia. masonry nails
Fixings to panels:	12g-stainless steel self drilling and self tapping screws with 10mm bonded washer. Length as recommended by manufacturer.

GENERAL REQUIREMENTS

2.12.2 Preparation Generally

Use all materials, components and details in accordance with manufacturer's recommendations.

Unless specified otherwise, install insulated wall system in accordance with manufacturer's recommendations. If discrepancies arise, obtain instructions from the Authorised Person.

Ancillary products and accessories, where not specified, to be types recommended for the purpose by the manufacturer.

Use operatives familiar with the installation of wall cladding systems and approved by the manufacturer.

Where not specified otherwise, fixing and jointing materials and accessories to be as recommended by the cladding panel manufacturer.

Fix cladding panels only in areas where stainless steel mesh has been fixed to the substrate.

2.12.3 Storage & Handling

Handle cladding panels and associated components with care to reduce risk of damage and in accordance with manufacturer's recommendations.

Do not use damaged cladding panels.

Store cladding panels and associated components in dry areas free from dirt, oil and airborne contaminants.

Use "top hat" sections or furrings as soon as possible after site delivery to prevent damage.

2.12.4 Substrate

Before installing insulation and vapour barrier system ensure that:

- Ensure that masonry surfaces to be covered are sound, clean, dry, smooth, free of contaminants, and protrusions.
- Prepare in accordance with manufacturer's recommendations.

2.12.5 Product Samples

Before fixing cladding panels, submit samples of the following:

- Cladding sheet
- Cold formed top hat sections
- Fastener types

FIXING CLADDING PANELS

2.12.6 Metal Furrings to Substrate

Install using components, accessories and methods recommended by the manufacturer.

Determine panel layout and set out the centre point of each furring (top hat section) at 600mm centres horizontally.

Mark out the centre point of each furring on the substrate.

Position the furrings according to predetermined and marked spacings and ensure that they are aligned to a true vertical plane by using a spirit level.

Fix the furrings to substrate using horse shoe packers and appropriate direct fixing masonry nails at 450mm centres.

Ensure that both flanges of the furring are fixed to the masonry substrate.

Install additional furrings where necessary to accept junctions with substrate, comers, horizontal vermin mesh, etc.

2.12.7 Cladding Panels to Metal Furrings

Determine location of fixings in relation to the position of furrings.

Mark out the centre point of each fixing on the cladding panels.

Cut out sections of cladding panels as necessary to accommodate existing steel beams. Follow cutting out methods and use appropriate tools as recommended by the manufacturer.

Fix cladding panels with self drilling / tapping screws at previously marked fixing locations.

Fix securely to all supports, working from the centre of the cladding panel using proprietary screws at the specified centres.

Do not fix screws less than 30mm from the edge of cladding panel.

2.12.8 Completion

Ensure that areas around cladding panels are clean, dry, free of dust, and contaminants.

Ensure that finished areas are left clean.

Repair defects without delay to minimise damage.

Ensure that finished areas are adequately protected from damage.

Provide 15 year Manufacturer's Warranty for cladding wall panels (to be confirmed by manufacturer).

If required, arrange for inspections by the manufacturer as required to achieve this.

2.13 Facade Cleaning

To be read in conjunction with the Preliminaries and General Conditions.

2.13.1 Scope of Works

Undertake a trade clean of all facades of the Mona Vale Hospital. The work in this section includes cleaning of:

- Brick face / masonry on facades
- Windows and window frames

The project duration shall take into consideration the cleaning of all elevations.

2.13.2 Protection

Provide and maintain throughout the cleaning works, reasonable protection and sealing to prevent:

- Ingress of water, cleaning agents, debris and dust into the building via windows, doors, vents and other openings. Monitor interior of building and seek instructions when any signs of damp appear internally.
- Damage to any part of the facade, windows or adjacent surfaces.
- Staining of surfaces from contact with acid or aggressive cleaning agents.

Do not let wash water build up at outlets or anywhere where there is risk of it penetrating and causing damage to the building fabric.

All debris removed from the facade shall be properly contained or managed to ensure the roadway and any associated drainage/stormwater system is not polluted by the works.

2.13.3 Approvals

Obtain approval from the relevant Authority for the safe disposal of wash water from cleaning operations if required.

Manage and dispose of wash water in accordance with relevant legislation.

Bare the cost of any associated permits and fees.

2.13.4 Materials

All materials shall comply with the relevant codes and shall be applied in accordance with manufacturer's specifications.

All materials used in cleaning must be compatible with repair materials.

WORKMANSHIP GENERALLY

2.13.5 Cleaning Generally

Confine cleaning to designated area(s)/surfaces. Do not allow cleaning agents or residues to stray onto adjacent or protected surfaces.

2.13.6 Monitoring

Regularly monitor effects of each cleaning procedure. Seek instructions immediately, wherever:

- Disruption to the surface occurs.
- Discolouration or stains are revealed by cleaning.

Do not modify cleaning procedures or materials without approval from the Authorised Person.

2.13.7 Cleaning Precautions

Do not use cleaners containing trisodium phosphate, phosphoric acid, hydrochloric acid, hydrofluoric, fluorides or similar compounds on anodised aluminium surfaces.

Clean surfaces when shaded if possible.

Apply cleaning solution to an area that can be conveniently cleaned without changing position. Thoroughly rinse the surface with clean water before applying cleaner. Minimise cleaner rundown over lower portions of the facade and rinse such areas as soon as practicable.

Clean windows/glazing with water or mild detergents.

Do not use excessive abrasive rubbing to remove stains that results in an undesirable appearance or adversely affects the existing finish.

2.13.8 Completion

Obtain final approval from Authorised Person after completion of each elevation.