1 GENERAL

1.1 CROSS REFERENCES

1.1.1 General

Refer Building Plan for location and type of apartments.

Refer Drawings from Jardine Architects Pty Ltd provided with the Body Corporate letter of approval for shutters, for examples of balcony shutter layouts approved for use at the location.

Refer to the Shop Drawings provided by Supplier during installation.

1.1.2 Interpretation

The term Proprietor shall mean the Lot Owner of the Lot, at Stradbroke Tower and Villas, 2 Goodwin Street, Kangaroo Point, on which the shutters are being installed.

The term Body Corporate shall mean the Body Corporate for Stradbroke Tower and Villas CTS 16502 The Term Supplier shall mean the company contracted to design, manufacture, supply and install the shutter system.

The term Engineer shall mean a Registered Professional Structural Engineer (RPEQ) in Queensland.

1.1.3 Installation Certification

Refer to the certificates required under Section 1.8 of this Specification.

1.2 STANDARDS

1.2.1 Windows/Shutters

Selection and installation: To AS 2047.

AS 1231 2000 Aluminium and aluminium alloys - Anodic oxidation coatings

AS/NZS 1866 1997 Aluminium and aluminium alloys - Extruded rod, bar, solid and hollow shapes

AS/NZS 1170 Structural design actions

AS/NZS 1170.2 2002 Wind actions

1.3 LOCAL AUTHORITY APPROVALS

The Proprietor is responsible to determine what Local Authority approvals, if any, are required and to obtain these.

1.4 BODY CORPORATE RESPONSIBILITY

The Body Corporate shall be excluded from any responsibility for installation or ongoing security and maintenance of the shutters.

1.5 BODY CORPORATE REQUIREMENTS

Body Corporate requirements for site works are:

- The Proprietor is to provide to the Building Manager:
 - o 24 hours notice of commencement of installation work.
 - Contact details of the Supplier, including a mobile telephone number for the person in charge of the installation.
- Work Time all works, including the movement of materials, shall be carried out between 8.30am and 5.00pm, on Monday to Friday only. No work shall occur on Public Holidays.
- Contractors and Tradesmen shall not use the Front Entrance to the main foyer of the building.
- Contact the Building Manager to make arrangements for the exclusive use of a lift for movement of materials. The lift shall be protected against damage.
- At the end of each working day, all equipment and materials, on site, shall be stored out of sight, in a location approved by the Building Manager.
- Carry out the cleaning of common property areas daily.
- All surplus materials to the installation shall be removed form site by the Contractor / Supplier / Tradesman.
- After consultation with the Building Manager, erect barriers to prevent access to areas where there is a potential for materials, equipment and the like to fall from above during the installation.
- The Supplier shall comply with the Body Corporate Safety Instructions for work on site

1.6 BODY CORPORATE APPROVAL

The Supplier shall, prior to finalising quotation and commencing the installation, obtain from the Proprietor a copy of shutter approval documentation from the Body Corporate for the specific apartment, verify panel numbers and the layout plan option required and supply to these plan details.

Prior to commencing manufacture of the shutters, the Supplier shall provide layout drawings to the Proprietor who is to obtain written approval from the Building Manager that the proposed installation complies with the Body Corporate's requirements. Alternatively the Supplier can provide a letter affirming that the design complies in every respect with the specification and standard design drawings.

1.7 INSURANCE

Prior to the commencement of the work, the Supplier shall provide to the Proprietor, who is to supply copies to the Building Manager, Certificates of Currency for:

- All-risks work and public liability insurance to a minimum value of \$5 million for each.
- Worker's compensation and employer's liability insurance in accordance with the statutory worker's compensation scheme that applies for this work until the completion of the work.

1.8 DESIGN, MANUFACTURE AND INSTALLATION CERTIFICATION

The Supplier shall provide to the Proprietor a Certificate signed by a registered Structural Engineer (RPEQ) that the design, manufacture and fixing details comply with the relevant Australian structural standards for the wind and other loadings expected at the relevant level of Stradbroke Tower & Villas.

On completion of the installation, the Proprietor shall supply to the Building Manager:

- the certificate by the Supplier referred to above
- a certificate from a registered Structural Engineer (RPEQ) certifying that the shutter has been installed in accordance with the drawings and fixing details provided by the Supplier.

2 QUALITY

2.1 INSPECTION

2.1.1 Design Approval and Witness points

The Supplier shall comply with all design approval and manufacture witness point requirements set by their Engineer to enable the Engineers certification of the design and installation.

2.1.2 Warranties

The Supplier shall provide to the Proprietor a warranty for manufacture, materials and installation for 10 years from the date of completion of the installation.

Where the Supplier relies on warranties for materials supplied to them by others they must retain copies of warranties delivered with components and equipment.

Where the Supplier subcontracts installation they must warrant the work by their subcontractor.

3 MATERIALS

3.1 MATERIALS AND COMPONENTS

3.1.1 Panels and Layout

Confirm layout, panel number and stacking locations with Proprietor.

3.1.2 Shutter Components

The following components shall be used in the fabrication of the shutter panel and track assembly,

Panel Top and Bottom Rails	75 x 40 or 75 x 45
Panel Side Rails	50 x 50 Side Frame, - 50 x 50 Stacking Side Frame with or without
	interlocking contacting reveal.
Transom	85 x 12 or 88 x 15 ellipse blade to receive louver blades to top and
	underside of transom, fixed at balustrade height.
Adjustable Louvre Blades	85 x 12 or 88 x 15 ellipse blade. Preferably with weather seal but
	acceptable without.
	2 off side-opening link bars per opening blade set. Louvre blades below
	the height of the balustrade rail shall be fixed in the closed position.
Top Channel Track Cover	47x 47 where incorporated in system design
Top Track	42 x 50, or 40 x 40, fixed to balcony soffit at 500crs with 12g x 50mm SS
	screws, or such sizes and fixings as the engineer specifies.
Top Track Glide	Roller Glide with 10mm x 65 hexangular head stainless steel bolt
Bottom Track	27 x 31, or 40 x 40, fixed to Bottom Support Brackets.
Bottom Track Glide	Roller Glide with 10mm stainless steel bolt.
Bottom Support Brackets	50 x 50 x 50 Stainless Steel Angle fixed at 500crs with 12g x 50mm SS
	screws, or such additional fixings as the engineer specifies.
Bi-folding Hinges	Offset hinges to enable greater than 180 degree positioning of the
	adjoining panels. Powder coat finish to match panels or Satin Black.
	Silver anodised hinges are NOT acceptable. Provide 3 off per pair of
	shutter panels.
Locking Bolt	Flush bolt minimum 600mm long throw to each panel.
Note: Preferably the installation shall provide top and bottom support tracks sufficient to enable the	

Note: Preferably the installation shall provide top and bottom support tracks sufficient to enable the shutters to be stored adjacent to a wall on the balcony however if the installation does not provide storage adjacent to a wall there must be provision to lock the shutters in position at the location where they are stacked..

The Supplier may marginally vary the sizes of the components contingent upon the Notification to the Proprietor, in writing at the time of the submission of the quotation, and with the written approval of the Body Corporate which is to be obtained by the Proprietor.

3.1.3 Fixings

Materials: Provide fixings, which are corrosion resistant, compatible with the other materials in the installation, and coated to match adjacent surfaces.

3.1.4 Flashings

Materials: Provide flashings and weatherings, which are corrosion resistant, compatible with the other materials in the installation, and coated with a non-staining compound where necessary.

4 EXECUTION

4.1 CONSTRUCTION

4.1.1 General

Nuisance: Supplier shall carry out the work so as to minimise nuisance to other residents during the period of installation.

Body Corporate Regulations: Supplier shall adhere to Body Corporate requirements listed in Section 1.5 above.

Workplace Health and Safety Regulations: Adhere to Workplace Health and Safety Regulations. Provide and use safety harnesses, and secure tools, materials and the like from falling.

4.1.2 Installation

Install shutters so that the frames:

- are plumb, level, straight and true within acceptable building tolerances;
- are adequately fixed or anchored to the building structure; and
- will not carry any building loads, including loads caused by structural deflection or shortening.

4.1.3 Limitations

Membranes: Do not penetrate membrane elements including damp-proof courses, waterproofing membranes and roof coverings without Body Corporate approval. If approval is given to penetrate membranes, provide a waterproof seal between the membrane and the penetrating component. Balcony Drainage: Do not position tracks to block balcony drainage.

4.1.4 Joints

General: Make accurately fitted tight joints so that neither fasteners nor fixing devices such as pins, screws, adhesives and pressure indentations are visible on exposed surfaces.

Sealants: If priming is recommended, prime surfaces in contact with jointing materials.

4.1.5 Operation

Ensure moving parts operate freely and smoothly, without binding or sticking, at correct tensions or operating forces and that they are lubricated where appropriate.

Do not use oil for lubrication.

Do not mark the building with any products used in the installation.

Include notes on approved lubricate in Maintenance Manual.

4.1.6 Protection

Temporary measures: Plastic covering, buffer material in high traffic areas.

Removal: Remove temporary protection measures from the following:

- · Contact mating surfaces before joining up.
- Exposed surfaces.

4.1.7 Trim

General: Install to make neat and clean junctions between tracks and the adjoining building surfaces.

4.1.8 Fixing

Packing: Pack behind fixing points with durable full width packing.

Fasteners: Conceal fasteners.

4.1.9 Powder Coating

Powder coat finish shall be Dulux Duratec with Gloss finish, colour Berry Grey.

4.1.10 Existing Light Fittings

Existing light fittings on balcony areas shall remain in place.

Where shutter panels are located adjacent the light fitting, provide 150 x 50 spacer box section at side of light fitting to allow stacking of panel to the front of the light fitting.

4.2 TRAINING

4.2.1 Operation

Immediately after completion, explain and demonstrate to the Proprietor the purpose, function and operation of the installations. Provide instruction with regard to stacking and securing.

4.2.2 Maintenance

Immediately after completion, explain and demonstrate to the Proprietor the purpose, function and maintenance of the installation.

4.3 OPERATION AND MAINTENANCE MANUAL

4.3.1 General

The Supplier is to provide operation and maintenance manuals for installations.

4.3.2 Contents

The Operating and Maintenance manual is to include the following:

- Drawings and technical data: As necessary for the efficient operation and maintenance of the installation
- Equipment descriptions: Name, address and telephone and facsimile numbers of the manufacturer.
- Maintenance procedures: Safe trouble-shooting, disassembly, repair and reassembly, cleaning, alignment and adjustment, balancing and checking procedures. Provide logical step-by-step sequence of instructions for each procedure.
- Drawings: Record drawings, full size.

5.0 SHUTTER COLOUR SCHEDULE

All Apartments & Villas DULUX Powder Coat -Duratec Berry Grey Gloss

6.0 COMPLETION

6.1 Trade clean on completion

Method: Clean with soft clean cloths and clean water, finishing with a clean cloth.

Do not use abrasive or alkaline materials.

Extent: All frames and surfaces inside and out.