



**20:20 House  
Skinner Lane  
Leeds  
LS7 1BB**

## **SCOPE OF REMEDIAL WORKS**


**19-UK-1001  
27/11/2019**


## REPORT CONTROL

<b>Document:</b>	Scope of Remedial Works	<b>Job Number:</b>	19-UK-1001
<b>Project:</b>	20:20 House Skinner Lane Leeds LS7 1BB	<b>Client</b>	AOCA UK

### Document Checking:

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Issue	Date	Status	Checked for Issue
0	27/11/2019	Issued to Client	AO'C
1			
2			

This Scope of Works is based on a visual inspection and cannot take into account any part of the property covered up and not readily accessible to visual inspection. The Scope of Works therefore, cannot be construed to guarantee the standards of structural elements and services installations. Services have not been tested by the undersigned.

## Table of Contents

INTRODUCTION .....	4
DESCRIPTION OF PROPERTY .....	4
GENERAL INTRODUCTION .....	7
ENABLING WORKS .....	8
REMOVAL WORKS – ACM CLADDING .....	9
NEW CLADDING .....	10
SITE WORKS .....	11
MECHANICAL & ELECTRICAL .....	11
INSPECTION OF WORKS .....	12
COST CONTROL .....	12
HEALTH AND SAFETY .....	12
VARIATIONS .....	12
REINSTATEMENT .....	13
APPENDIX A-	
H72 ALUMINIUM FLASHINGS .....	13
H92 RAINSCREEN CLADDING .....	15
P10 FIRE BARRIER PROOFING WORKS .....	23
Z11 PURPOSE MADE METALWORK .....	24
Z20 FIXINGS AND ADHESIVE .....	29
Z22 SEALANTS .....	32
Z31 POWDER COATING .....	33
APPENDIX B - AOCA DRAWINGS	
APPENDIX C - H92 RAINSCREEN CLADDING (GENIUS LTD)	
APPENDIX D - CAVITY BARRIER - SIDERISE	
APPENDIX E - EXTERNAL INSULATION (RAINScreens DUO-SLAB)	

## **INTRODUCTION**

This Scope of Works was commissioned at the request of Mr Chris Kerrigan, Sedgwick, Merrion Hall, Strand Road, Dublin 4, Ireland and relates to the property known as 20:20 House, Skinner Lane, Leeds, LS7 1BB (hereinafter referred to as the Insured Property).

This scope of works should be read in conjunction with AOCA UK Engineering Inspection Report 1 dated 8<sup>th</sup> March 2019, Ref: 19-UK-1001

## **DESCRIPTION OF PROPERTY**

The Insured's property consists of a seven storey multi-unit flat complex located on Skinner Lane, Leeds, LS7 1BB. See Ref: 2-1 below.



**Ref 2-1: 20-20 House, Aerial photo**

The main area of concern is the 7<sup>th</sup> Floor of the buildings known as Block B. See Ref 2.1 above indicating this.



**Ref 2-2: 20-20 House, Front Elevation**

In general, the overall exterior of the property has multiple finishes as noted below:

1. Curtain walling to the ground floor commercial units which are now gradually being converted to residential units.
2. Brickwork from the 1st floor to the top of the 6th Floor. Some ACM panelling has been used to create vertical divisions within glazing on the front elevation. See Ref 2.3. These are very limited in size and coverage but need full replacement regardless.
3. The 7th floor has a mixture of glazing and ACM panels present between the 7th floor concrete slab and the roof overhang. See Ref 2.4.





**Ref 2-3: 20-20 House, Front Elevation, ACM division panels**



**Ref 2-4: Internal Courtyard Elevation, ACM panels & Glazing**

## GENERAL INTRODUCTION

- 3.1 The Insured Property is a large 7 storey apartment block. Remedial works are required to this property due as a result of the Intrusive survey carried out by AOCA UK as detailed within the Engineering Inspection Report 19-UK-1001.
- 3.2 The appointed contractor is to engage in no works outside those instructed by the Certifying Engineer / Surveyor.
- 3.3 The works are generally described below however the Contractor is required to inspect the site, **measure the works** and understand site conditions/constraints prior to commencement of works. Any measurements given are indicative and the Contractor is expected to allow for everything necessary to properly complete the works.
- 3.4 All works noted as being provisional are to be instructed by the Certifying Engineer / Surveyor.
- 3.5 The Contractor is to provide the following project specific documentation prior to commencement: -
  - a) Safety Statement
  - b) Method Statements
  - c) Works Programme
- 3.6 The Contractor must visit site and familiarise themselves with the site and provide fully annotated drawings to show how they intend to set up site and still provide full and safe access for the residents and other users of the building whilst the works are carried out.
- 3.7 The Contractor is to ensure that no damage is to result to the existing site, services or adjoining neighbouring property throughout the course of the works. Where damaged, the contractor is, at his own expense, to repair any damage or to offer costs to the value of the works necessitated by the damage that has been caused as a result of his works.
- 3.8 All of the remedial works to this property must be carried out in accordance with the applicable Building Regulations, Preliminary Health & Safety Plan and the NBS specifications (Refer to the product data appended to this document).

- 4.1 A full photographic and plan mark-up dilapidation survey, of the entire property, is to be undertaken prior to commencement of the works by the Contractor. This is to include the footpaths, grassed areas, communal areas, lift, stairs, individual units etc. and shall be submitted to the Certifying Engineer / Surveyor on commencement of works.
- 4.2 The contractor to undertake a detailed survey / inspection to locate and protect as necessary, all services including water, electricity, gas, telephone, cable/satellite tv, water, telecommunications and drainage to prevent accidental damage through the course of the works.
- 4.3 The contractor to assess all areas to determine Mobile Elevated Work Platform (MEWP) access and health and safety measures required where necessary. This access will require permission to enter adjoining properties to 20:20 House. Refer to drawing 19-UK-1001-001 for MEWP marked areas.
- 4.4 The contractor to assess all pedestrian accessed areas regarding safe workspace and health and safety measures required where necessary. Refer to drawing 19-UK-1001-001 for pedestrian marked areas.
- 4.5 The contractor to allow for all works in connection with the temporary relocation of services which conflict with the Contract Works. Ensure services are reinstated upon completion of works and fully operational.
- 4.6 The contractor to allow for the provision of temporary power and if necessary, lighting to enable the works to proceed for the duration of the Contract Works.
- 4.7 Securely partition, fence off or protect any parts of the property which is not affected by the works. Ensure the property and adjacent footpaths are made secure and that no unauthorised access is possible.
- 4.8 Ensure all external work areas, material storage and spoil heap areas, etc. required for the duration of the works are made secure and that no unauthorised access is possible.
- 4.9 Ensure that full use of adjacent roadway is maintained for the safety of neighbouring properties and the general public. If required, a Traffic Management Plan shall be provided by the Contractor for the Works.
- 4.10 Allow for bringing to, maintaining on site and removing from site on completion of the contract works all plant required for the works
- 4.11 Allow for all liaison generally and where described with all nominated or specified suppliers and sub-contractors, building control etc.
- 4.12 Allow for the full protection of premises and adjoining properties to ensure no disturbance of an excessive nature arises during the course of the works



- 4.13 The contractor must provide all temporary protections to the structure at the end of each working day in the event that the external fabric is left open to the elements. Windows should also be protected as and when required.
- 4.14 The contractor is to allow for the refund of monies arising from salvage.
- 4.15 Due to the nature and location of the works the contractor must take all necessary precautions to supply, secure store skips and to remove all debris from site at the end of each working day.
- 4.16 Contractor to make allowance for provision of temporary toilet and staff welfare facilities for full duration of the contract works
- 4.17 Upon completion of the works leave all external areas clean, free from debris and surface material in good working order to the Contractor Administrator's (CA) satisfaction.
- 4.18 The contractor to allow for all works in connection with undertaking a detailed measured survey of all cladding types and panels to record their dimensions prior to stripping.
- 4.19 The contractor to allow for close liaison with the Managing Agents to notify the residents of forthcoming works and timings etc.
- 4.20 The contractors return is to be a guaranteed lump sum, no additional costs will be paid for items missed.
- 4.21 The contractor is to ensure £10M PI insurance is in place and held for a period of 12 years after works are completed.
- 4.22 The contractor is to ensure they are self-sufficient, no welfare or power etc. within the building is to be used by the contractor.
- 4.23 If the contractor is to utilise scaffolding for accessing the works, the scaffolding is to be shrink wrapped and fully alarmed.
- 4.24 The contractor to allow for all works in connection with completing the full design of the works and liaising with building control and planning to get full sign off of works, all labours complete.

## ***REMOVAL WORKS – ACM CLADDING***

- 5.1 The Contractor is to carefully remove and dispose of the following, as per drawings contained within Appendix B.
  - i. ACM panels
  - ii. Vertical 'U' Fixing Box-Rail
  - iii. Rollbatt Insulation

- iv. Fire barriers (install new as appropriate). This is a provisional item as it is currently unknown to what extent Fire barriers may be missing. This will only become evident upon full strip of all the existing ACM cladding.
- v. Cavity barriers (replaced for new as appropriate). This is a provisional item as it is currently unknown to what extent Fire barriers may be missing. This will only become evident upon full strip of all the existing ACM cladding.

5.2 The Contractor to carefully remove and set aside for re-use the following:

- i. Flashings & Trims to
  - 1. Window / Door Jamb (Where necessary)
  - 2. Window / Door Head (Where necessary)
  - 3. Base detail (Where necessary)
  - 4. Roof Canopy Soffit Panels
- ii. Boiler Flues
- iii. Extract vents / grilles

5.3 The Contractor is to carefully disconnect, remove, relocate and commission, the following, including for any additional cabling as required.

- i. CCTV
- ii. Light fittings
- iii. Any other services.

## **NEW CLADDING**

- 6.1 Please refer to Appendix C, Appendix D and Appendix E for the **NBS** Specifications referred to within this section.
- 6.2 The contractor to allow for all works in connection with the supply and installation of Rockwool Rainscreen Duo-Slab insulation. Insulation to be fitted in strict accordance with manufacturer's published instructions. Include for the provision of any necessary supports, as **H92**.
- 6.3 The contractor to allow for all works in connection with the supply and installation of new Genius 5251 structural 'tophat' & 'Z', as **H92** and Appendix C.
- 6.4 The contractor to allow for all works in connection with the supply and installation of new Genius 'Prime' aluminium cladding system, as **H92** and Appendix C.

- 6.5 The contractor to allow for all works in connection with the supply and installation of vertical and horizontal cavity barriers. Cavity barriers to be fitted in strict accordance with manufacturer's published instructions including foil taping all joints and utilising installation brackets, as **P10** and Appendix D.
- 6.6 The contractor to allow for all works in connection with the installation of previously set aside aluminium flashing, trims and copings.
- 6.7 The contractor to allow a provisional sum for new / replacement flashings, trim, copings where those removed are not reusable.
- 6.8 The contractor to reinstate previously set aside boiler flue cowls within cladding. Ensure flue is fully operational upon completion of works
- 6.9 The contractor to reinstate previously set aside mechanical extract grilles within cladding. Ensure flue is fully operational upon completion of works
- 6.10 The contractor to allow for reinstatement of CCTV cameras to original positions and ensure fully operational
- 6.11 The contractor to allow for re-fixing temporarily relocated light fittings upon completion of works and ensure fully operational
- 6.12 The contractor to allow for the reinstating any other services removed from the cladding and ensuring fully operational, all labours complete

## ***SITE WORKS***

- 7.1 Clean tarmacadam road, concrete footpaths and car parking areas following completion of the works.
- 7.2 Make good all grassed / lawn areas around the building following completion of the works & removal of welfare facilities.

## ***MECHANICAL & ELECTRICAL***

- 8.1 All works are to comply with applicable codes, standards and regulations including:-
  - Applicable Building Regulations and Planning Conditions;
  - Applicable fire regulations and fire consultants/officers requirements;
  - Applicable sound insulation regulations;
  - Current Safety, Health and Welfare at Work Standards, Regulations.

Any Standard, Regulation or Code of Practice required to execute the design and construction of the works shall be held to be the latest edition published up to and including the completion of the construction.

## ***INSPECTION OF WORKS***

- 9.1 The Engineer shall be informed 72 hours prior to carrying out the works, to permit inspections to be carried out.
- 9.2 On completion, the Contractor shall notify the Engineer who will carry out a final inspection prior to the issue of the Certificate of Practical Completion. A further inspection shall be carried out at the expiry of the defects liability period.

## ***COST CONTROL***

- 10.1 The works shall be carried out in accordance with the drawings and specifications and shall be valued in accordance with the terms of the contract. If in the Contractor's opinion, the nature or the scope of any works is likely to attract additional costs, the variation must be sanctioned by the Engineer prior to execution of the works concerned.
- 10.2 If any additional quantities of material are used, the physical measurements must be agreed on site prior to the works being covered up.
- 10.3 The Engineer's agreement to additional quantities does not necessarily imply an agreement to additional payment, since all works must be valued in accordance with the contract.

## ***HEALTH AND SAFETY***

- 11.1 The Contractor shall comply with all enactments, regulations, and working rules relating to the safety, health and welfare of workpeople and other persons authorised to be on the site.
- 11.2 The site shall be kept tidy and clean at all times and P.P.E. shall be provided for the use of all visitors.
- 11.3 Contractor shall ensure that no damage beyond fair wear and tear is caused to public or private roads and footpaths by site traffic and that they shall be kept clean.

## ***VARIATIONS***

- 12.1 All variations are to be instructed by the engineer and agreed in advance of the works proceeding. The Contractor is responsible for submitting details of any variations in a timely manner so as not to affect progress of the works.

- 13.1 Reconnect, test and commission all services disconnected to facilitate the works. All relevant certification of re-commissioned services to be provided by the Contractor to the Engineer.
- 13.2 A full clean of the property to be carried out prior to hand over. The property must be handed back in immaculate condition.
- 13.3 Handover to the property owner.

## **APPENDIX A**

### ***H72 ALUMINIUM FLASHINGS***

#### **H72 Aluminium strip/ sheet coverings/ flashings**

To be read with Preliminaries/ General conditions.

#### **TYPES OF ALUMINIUM WORK**

##### **420 COVER FLASHINGS ALUMINIUM FLASHINGS**

- As **Z11** unless otherwise stated
- Aluminium: Coated sheet/ strip.
- Alloy designation: Designation system, chemical composition and forms: To BS EN 573-1, -2, -3 and -5.- Temper: Temper designations: To BS EN 515.
- Finish: As existing. PPC RAL 9007.
- Thickness: 2mm.
- Fixing: Self drilling self-tapping stainless steel Irius head Tec screw with integrated neoprene washer, colour to match aluminium flashings.
- Clean: Clean existing Polyester Powder Coated finish as Z31/120

#### **GENERAL REQUIREMENTS/ PREPARATORY WORK**

##### **510X WORKMANSHIP GENERALLY**

- Standard: Generally to CP 143-15.
- Fabrication and fixing: To provide a secure, free draining and completely weathertight installation.
- Operatives: Trained in the application of aluminium coverings/ flashings. Submit records of experience on request.



- Measuring, marking, cutting and forming: Prior to assembly wherever possible.
- Marking out: With pencil, chalk or crayon. Do not use scribes or other sharp instruments without approval.
- Folding: With mechanical or manual presses to give straight, regular and tight bends, leaving panels free from ripples, kinks, buckling and cracks. Use hand tools only for folding details that cannot be pressed.
- Use in situ welding only with approval and subject to completion of a 'hot work permit' and compliance with its conditions.
  - Surface protection: Fully coat surfaces to be embedded in concrete or mortar with high build bitumen based paint, after folding.
  - Sharp metal edges: Fold under or remove as work proceeds.
  - Joints: Do not use sealants to attain waterproofing.
  - Finished aluminium work: Fully supported, adequately fixed to resist wind uplift and able to accommodate thermal movement without distortion or stress.
  - Protection: Prevent staining, discolouration and damage by subsequent works.

## **516 WELDING**

- In situ welding: Permitted subject to completion of a 'hot work permit' form and compliance with its requirements.

## **525 COATED ALUMINIUM STRIP/ SHEET**

- Manufacturer: Contractor's choice.
- Product reference: Contractor's choice.

## **530 INTEGRITY OF ALUMINIUM**

- Requirement: Design coverings/ flashings and methods of attachment to prevent loss of weather tightness and permanent deformation due to wind pressure or suction.
- Structural requirements:
  - Wind loads: To be calculated.

## **550A LIGHTNING PROTECTION**

- Aluminium coverings: Attach the following to a lightning protection system To M&E details.
- Electrical continuity: Provide between aluminium strips/ sheets via welting of joints.

## **555 LAYOUT**

- Setting out of longitudinal and cross joints: Submit proposals.

## **610 SUITABILITY OF SUBSTRATES**

- Condition: Dry and free of dust, debris, grease and other deleterious matter.

## **JOINTING**

### **810 FORMING DETAILS**

- Folds and welts: Form without thinning or splitting the strip/ sheet.
- Thermal movement: Form details with appropriate allowance for movement, without impairment of security at full expansion or contraction.

## **H92 RAINSCREEN CLADDING**

### ***(REFER TO APPENDIX C FOR FURTHER INFORMATION)***

To be read with Preliminaries/General conditions.

### **SURVEY OF STRUCTURAL SUBSTRATE**

- Timing: Before starting work covered in this section.
- Objective: To confirm suitability for application of external wall insulation system.
- Survey report: Submit, covering:
  - The form and condition of the structural substrate (with particular regard to line / straightness).
  - A schedule of repairs and/ or additional works necessary to render the substrate suitable to receive the system.
  - A schedule of services, fixtures and fittings requiring removal to facilitate installation of the system.
  - A schedule of areas where the maximum adhesive requirements of the standard system is likely to be exceeded, and adjustment of either the substrate or the finished facade will be required.
  - Proposals for treatment of cold bridges that may occur as a result of installing the system, e.g. at door and window reveals, concrete floor edges, movement joints.

- Any other relevant information.

## **REMEDIAL WORK**

- Remedial work shown to be necessary by survey: Forms part of this Contract and should be included for as a provisional sum with tender inclusions.

## **STRUCTURAL SUBSTRATE**

- Description:
  1. Existing trapezoidal corrugated sheeting backing wall supported by a reinforced steel studded frame structure with an internal finish consisting of 2 layers of 12.5mm plasterboard with skim finish.
  2. Existing 175mm thick rigid insulation between a steel studded frame structure
  3. Existing Horizontal 'Z' rail to support the new vertical box rail specified by Genius Facades.

## **TYPE(S) OF RAINSCREEN CLADDING**

### **110 Flat Aluminium Cladding System**

- Primary support structure: Existing steel studded frame structure. All fixings to support the new cladding system are to be fixed into the horizontal 'Z' rail which is supported by the steel studded frame structure. Engineering calculations are to be provided to confirm adequacy of fixings to withstand all wind loads including pull out load capacities of same.
- Rainscreen cladding system:
  - Type: Drained and back ventilated
  - Requirement: Include products, fixings and interfaces necessary to complete the fabrication and installation. Performance criteria to comply with Design/ Performance Requirements and Testing subsections.
- Rainscreen panel;
  - Manufacturer: Genius Facades Ltd
    - Genius Facades Limited
    - Lambert Works, Colliery Road, Wolverhampton, WV1 2RD
    - 01922 716245
    - enquiries@geniusfacades.com
  - Product Reference: Genius Prime
  - Type: Cassette Panel
  - Material: Aluminium
  - Thickness: 3 mm.

- Finish/ Colour: PPC to match existing ACM cladding, RAL tbc
- Fasteners: As required by manufacturer
- Joints Type: Labyrinth/Baffled
- Joint width: 20mm Standard
- Other panel requirements: -.
- Fixing system: Vertical rails to manufacturer's details.
- Air gap: Not less than 50 mm.
- Secondary support/ framing system:
  - Manufacturer: Genius Facades Ltd
  - Type: Vertical 5251 structural 'tophat' & 'Z'. Contractor to supply full confirmation of adequacy of the fixings into the horizontal rail to withstand all wind loads for this building.
  - Number and location: To suit wind loadings and as per manufacturers requirements
- Panel Layout: Contractor to submit proposal with tender return.
- Backing structure: Existing trapezoidal corrugated sheeting backing wall supported by a reinforced steel studded frame structure with an internal 2 layers of 12.5mm plasterboard with skim finish.
  - Thermal insulation: As Clause **H92:776**. Existing 175mm Rigid Insulation to remain behind the trapezoidal corrugated sheeting.
- Accessories: Existing aluminium flashings and additional 2mm polyester powder coated aluminium closers as necessary to complete installation to manufacturer's recommendations.
- Incorporated components:
  - Fire stopping and fire cavity barriers as **P10/440X** and **P10/441X**
  - Rainscreen Insulation as **H92/776X**
  - Cill/reveal/head closers and copings as **H72/420**
  - Insect/vermin mesh.

## **210 DESIGN**

- Complete the detailed design of the system and associated features shown on the drawings to meet the requirements of this specification

## **220 SPECIFICATION**

- Compliance standards: The Centre for Window and Cladding Technology (CWCT) 'Standard for systemised building envelopes'.

- Reference information: For the duration of the contract, keep available at the design office, workshop and on site copies of:
  - The Centre for Window and Cladding Technology (CWCT) 'Standard for systemised building envelopes'.
  - Publications invoked by the CWCT 'Standard for systemised building envelopes'.

### **232X QUALITY PLAN**

- Requirement: Submit prior to commencement of work on site.
- Content: In accordance with BS EN ISO 9001 and including the following:
  - Name of the quality manager.
  - Quality assessment procedures.
  - Inspection procedures to be adopted in checking the work.
  - Stages at which check lists will be used and samples of the lists.
  - List of work procedures on the correct use of materials or components, both off site and on site.
  - List of product information with latest revisions.
  - Subcontractors involved in the work.
  - Subcontractor's quality plans.
  - Storage, handling, transport and protection procedures.
  - Procedure for registering and reporting non compliances.
  - Maintenance procedures and calibration records.
  - Certification that completed work complies with specification.
  - Check list register to ensure all items have been inspected and non-compliances discharged.

### **233 METHOD STATEMENT**

- Requirement: Submit prior to commencement of work on site. Provide adequate time for Design Team to review
- Content: Method Statements

A method statement is to be provided. These method statements should contain a clear description of the proposed works, including, but not limited to:

1. A clear description of the access methods proposed
2. The methodology and sequencing of the removal of the existing cladding finishes
3. The inspection / testing regime to be undertaken to identify any defects to existing cladding elements that are intended to be reinstated



4. The methodology for identifying and removal of defective materials
  5. The method of rectification to allow for the safe reuse of the existing system
  6. Methodology for cleaning existing cladding finishes that are to be reinstated
  7. The storage methods employed to ensure that cladding elements that are taken down for reinstatement are labelled, sorted and stored safely until their reinstatement
  8. The methodology and sequencing of the installation of the reinstated / new cladding finishes including how cladding elements are reinstated to the same position as existing
- The method statement should identify the quality control procedures that will be implemented by the contractor to ensure the cladding works are carried out to meet the project requirements and to the standard identified within the contract documents.

### **235 INFORMATION TO BE PROVIDED BEFORE COMMENCEMENT OF WORKS ON SITE**

- Submit the following cladding particulars:
  - Detailed drawings to fully describe fabrication of any replacement components and installation.
  - Project specific fabrication, handling and installation method statements.
  - Certification for incorporated components manufactured by others confirming their suitability for proposed locations in the rainscreen cladding.
  - Recommendations for spare parts for future repairs or replacements.
  - Recommendations for safe dismantling and recycling or disposal of products.

### **240X PRODUCT SAMPLES**

- General: Before commencing on site, submit labelled samples of: All proposed replacement components.

### **250X SAMPLES OF FIXINGS**

- General: Before commencement of work on site, submit labelled samples of each type of fixing, together with manufacturers' recommended torque figures.

### **260X FABRICATION SAMPLES**

- General: Before commencement of work on site, submit samples of: All proposed replacement fabricated components.

Obtain approval before proceeding.

### **270 MOCK-UP**

- General: Construct first of each cladding type in an agreed location. Satisfy purpose and obtain approval of appearance and quality of installation before proceeding. Retain undisturbed until completion of cladding installation.
- Extent: 2000 x 2000 mm panel.
- Purpose: Approval.

### **490 CAVITY FIRE BARRIERS TO BS 476-20**

- Requirement: To resist the passage of flame and smoke for not less than 30 min. integrity, 15 min, insulation .

### **497 LIGHTNING PROTECTION SYSTEM**

- Rainscreen components used as part of lightning protection system: To be reviewed during removal of existing cladding systems, if current cladding framework / system is used the replacement system / framework must be used to ensure continuity of system

## **TESTING**

### **530 TESTING AUTHORITY**

- Requirement: Project testing must be carried out by a United Kingdom Accreditation Service (UKAS) approved independent laboratory.

### **672 SITE TESTING OF FIXINGS**

- Requirement: To CWCT 'Standard for systemised building envelope', 'Standard test methods for building envelopes' Section 19.
- Type of test: Pull out test

### **680 SITE SPRAY BAR TEST**

- Requirement: To CWCT 'Standard for systemised building envelopes', 'Standard test methods for building envelopes' Section 10.
  - Area to be tested: All windows / curtain walling junctions
  - Pressure difference across rainscreen wall: NA.

### **685 SITE HOSE TEST**

- Requirement: To CWCT 'Standard for systemised building envelopes', 'Standard test methods for building envelopes' Section 9.
  - Joints to be tested: To be agreed but an allowance of 2 full days.

## **PRODUCTS**

### **710 ALUMINIUM ALLOY FRAMING SECTIONS**

- Standards: To BS EN 755 alloy EN AW-6063 and suitable for the specified finish.
- Structural members: To comply with BS EN 1999-1-1, -3 and -4.

### **712 ALUMINIUM ALLOY SHEET**

- Standards: To BS EN 485, BS EN 515 and BS EN 573.
- Alloy, temper and thickness: Suitable for the application and specified finish.

### **720 STAINLESS STEEL SHEET**

- Standards: To the relevant parts of BS EN 10029, BS EN 10048, BS EN 10051, BS EN 10095 and BS EN ISO 9445-1 and -2.
- Grade: To BS EN 10088-2, -4, -5, austenitic 1.4301 (304) generally, 1.4301 (316) when used externally or in severely corrosive environments.
- Thickness: Suitable for the application.

### **730X MECHANICAL FIXINGS - MATERIAL REQUIREMENTS**

- Stainless steel: To BS EN ISO 3506 grade A4 only.
- Aluminium: To BS EN 755.

### **735 FIXINGS AND FASTENERS**

- Type and use: Reviewed and approved by manufacturers. Submit confirmatory information on request.
- Dimensions: Not less than recommended by their manufacturers.
- Adjustment capability: Sufficient in three dimensions to accommodate primary support structure and rainscreen cladding fabrication/ installation tolerances.

### **776X THERMAL INSULATION**

#### **(REFER TO APPENDIX E FOR FURTHER INFORMATION)**

- Material: Mineral wool to BS EN 13162.
- Manufacturer: Rockwool.
  - Product reference: Rainscreen Duo Slab.
- Thickness: 75 mm.
- Recycled content: Not applicable.
- Fixing: As per manufacturers requirements

## **FINISHES**

### **830 POWDER COATING**

- Requirement: As section **Z31**.

## **FABRICATION AND INSTALLATION**

### **910 GENERALLY**

- Electrolytic corrosion: Take necessary measures to prevent.
- Identification of products: Mark or tag to facilitate identification during assembly, handling, storage and installation. Do not mark surfaces visible in the complete installation.

### **912 METALWORK**

- Requirement: As section Z11, unless specified otherwise in this section.

### **922 FIXINGS/ ADHESIVES APPLICATION**

- Requirement: As section Z20, unless specified otherwise in this section.

### **925 SEALANT APPLICATION**

- Requirement: As section Z22, unless specified otherwise in this section.

### **930 ASSEMBLY**

- Location: Carry out as much assembly as possible in the workshop.
- Joints: Other than movement joints and designed open joints, must be rigidly secured, reinforced where necessary and fixed with hairline abutments.
- Displacement of components in assembled units: Submit proposals for reassembly on site.

### **960 PRELIMINARY RAINSCREEN CLADDING INSTALLATION**

- Requirement: Complete an area of cladding as set out below for inspection and approval of appearance.

### **970 RAINSCREEN CLADDING INSTALLATION**

- Tightening mechanical fasteners: To manufacturer's recommended torque figures. Do not overtighten fasteners intended to permit differential movement.
- Protective coverings: Remove only where necessary to facilitate installation and from surfaces which will be inaccessible on completion.

### **980 INTERFACES**

- Installation: Locate flashings, closers etc. correctly and neatly overlap cladding to form a weathertight junction.

### **985 DAMAGE**

- Repairs: Do not repair cladding without approval.
  - Approval: Will not be given where the proposed repair will impair performance or appearance.

- Record of repairs: Prepare schedule or record on drawings for inclusion in the maintenance manual.

### **995 MAINTENANCE**

- Maintenance manual: Incorporate details within the Building Manual in accordance with CWCT 'Standard for systemised building envelopes', clause 7.6.1.
- Materials certification and test reports to be included: All new replacement materials and components.

## **P10 FIRE BARRIER PROOFING WORKS**

### **SUNDRY INSULATION/ PROOFING WORK**

To be read with Preliminaries/ General conditions.

#### **TYPES OF INSULATION**

**(REFER TO APPENDIX D FOR FURTHER INFORMATION)**

#### **440X FIRE PROTECTION**

- Manufacturer: Siderise.
  - Product reference: SIDERISE RH 'Open State' horizontal cavity barrier RH50(G/S).
- Material: non-combustible stone wool lamella core.
- Thickness: To suit cladding cavity.
- Fire resistance rating: To BS 476-21, 30/15 integrity/ insulation.
- Number of layers: -.
- Installation requirements: Continuous, with minimum joints.
  - Fasteners: To manufacturer's recommendations.
- Other requirements:
  - Any gaps or imperfections of the barrier to be sealed with the Siderise fire and acoustic sealant.

#### **441X FIRE PROTECTION**

- Manufacturer: Siderise.
  - Product reference: SIDERISE RV vertical cavity barriers.
- Material: non-combustible stone wool lamella core.
- Thickness: To suit cavity.
- Fire resistance rating: To BS 476-21, 30/15 integrity/ insulation.
- Number of layers: -.



- Installation requirements: Continuous, with minimum joints.
  - Fasteners: To manufacturer's recommendations.
- Other requirements:
  - Any gaps or imperfections of the barrier to be sealed with the Siderise fire and acoustic sealant.

## **Z11 PURPOSE MADE METALWORK**

To be read with Preliminaries/ General Conditions.

### **310 MATERIALS GENERALLY**

- Grades of metals, section dimensions and properties: To appropriate British Standards. When not specified, select grades and sections appropriate for the purpose.
- Prefinished metal: May be used if methods of fabrication do not damage or alter appearance of finish, and finish is adequately protected.
- Fasteners: To appropriate British Standards and, unless specified otherwise, of same metal as component being fastened, with matching coating or finish.

### **320 STEEL LONG AND FLAT PRODUCTS**

- Hot rolled structural steels (excluding structural hollow sections and tubes): To BS EN 10025-1.
- Fine grain steels, including special steels: To BS EN 10025-3 and -4.
- Steels with improved atmospheric corrosion resistance: To BS EN 10025-5.

### **330 STEEL PLATE, SHEET AND STRIP**

- Plates and wide flats, high yield strength steel: To BS EN 10025-6.

### **340 HOT ROLLED STEEL PLATE, SHEET AND STRIP**

- Flat products, high yield strength for cold forming: To BS EN 10149-1, -2 and -3.
- Carbon steel sheet and strip for cold forming: To BS EN 10111.
- Narrow strip, formable steel and steel for general engineering purposes: To BS 1449-1.8 and BS 449-1.14.350 COLD

### **ROLLED STEEL PLATE, SHEET AND STRIP**

- Steel sections: To BS EN 10162.
- Flat products, high yield strength micro-alloyed steels for cold forming: To BS EN 10268.
- Carbon steel flat products for cold forming: To BS EN 10130 and BS EN 10131.

- Uncoated carbon steel narrow strip for cold forming: To BS EN 10139 and BS EN 10140.
- Narrow strip steel for general engineering purposes: To BS EN 10132-1, -2, and -3.
- Carbon steel flat products for vitreous enamelling: To BS EN 10209.

### **360 COATED STEEL FLAT PRODUCTS**

- Hot dip zinc coated carbon steel sheet and strip for cold forming: To BS EN 10346 and BS EN 10143.
- Hot dip zinc coated structural steel sheet and strip: To BS EN 10143 and BS EN 10346.
- Hot dip zinc-aluminium (za) coated sheet and strip: To BS EN 10346.
- Hot dip aluminium-zinc (az) coated sheet and strip: To BS EN 10346.
- Organic coated flat products: To BS EN 10169.

### **370 STEEL STRUCTURAL HOLLOW SECTIONS (SHS)**

- Non alloy and fine grain steels, hot finished: To BS EN 10210-1 and -2.
- Non-alloy and fine grain steels, cold formed welded: To BS EN 10219-2.
- Weather resistant steels, hot finished: To BS 7668.

### **380 OTHER STEEL SECTIONS**

- Equal flange tees: To BS EN 10055.
- Equal and unequal angles: To BS EN 10056-1 and -2.
- Wire, carbon steel for general engineering purposes: To BS 1052.
- Wire and wire products, general: To BS EN 10218-2.
- Tubes:
  - Seamless circular: To BS EN 10297-1.
  - Seamless cold drawn: To BS EN 10305-1.
  - Welded and cold sized square and rectangular: To BS EN 10305-5.
  - Welded circular: To BS EN 10296-1.
  - Welded cold drawn: To BS EN 10305-2.
  - Welded cold sized: To BS EN 10305-3.

### **400 STAINLESS STEEL PRODUCTS**

- Chemical composition and physical properties: To BS EN 10088-1.
- Sheet, strip and plate: To BS EN 10088-2.
- Semi-finished products bars, rods and sections: To BS EN 10088-3.
- Wire: To BS EN 1088-3.

- Tubes:
  - Welded circular: To BS EN 10296-2.
  - Seamless circular: To BS EN 10297-2.

#### **410 ALUMINIUM ALLOY PRODUCTS**

- Designations:
  - Designation system, chemical composition and forms: To BS EN 573-1, -2, -3 and -5.
  - Temper designations: To BS EN 515.
- Sheet, strip and plate: To BS EN 485-1 to -4.
- Cold drawn rods, bars and tubes: To BS EN 754-1 and -2.
- Extruded rods, bars, tubes and profiles: To BS EN 755-1 and -2.
- Drawn wire: To BS EN 1301-1, -2 and -3.
- Rivet, bolt and screw stock: To BS 1473.
- Structural sections: To BS 1161.

#### **FABRICATION**

##### **515 FABRICATION GENERALLY**

- Contact between dissimilar metals in components: Avoid.
- Finished components: Rigid and free from distortion, cracks, burrs and sharp arrises.
  - Moving parts: Free moving without binding.
- Corner junctions of identical sections: Mitre.

##### **520 COLD FORMED WORK**

- Profiles: Accurate, with straight arises.

##### **525 ADHESIVE BONDING**

- Preparation of surfaces of metals to receive adhesives:
  - Degrease.
  - Abrade mechanically or chemically etch.
  - Prime: To suit adhesive.
- Adhesive bond: Form under pressure.

##### **527 WELDING GENERALLY.**

- Welding procedures:
  - Method and standard: TIG welding to BS EN 1011-3.
  - Welding Procedure Specification (WPS): Submit copies before commencement of welding.

- Preparation:
  - Joint preparation: Clean thoroughly.
  - Surfaces of materials that will be self-finished and visible in the completed work: protect from weld splatter.
- Jointing:
  - Joints: Fully bond parent and filler metal throughout with no inclusions, holes, porosity or cracks.
  - Dissimilar metals: Filler metal grade to be approved by a qualified metallurgist.
  - Strength requirements: Welds to achieve design loads.
  - Heat straightening: Not permitted.
  - Complex assemblies: Agree priority for welding members to minimize distortion caused by subsequent welds.
  - Tack welds: Use only for temporary attachment.
  - Jigs: Provide to support and restrain members during welding.
  - Filler plates: Not permitted.
  - Lap joints: Minimum 5 x metal thickness or 25 mm, whichever is greater.
  - Weld terminations: Clean and sound.

### **530 STAINLESS STEEL FABRICATION**

- Guillotining or punching: Do not use for metal thicknesses greater than 10 mm.
- Thermal cutting:
  - Carbonation in the heat affected zone: Remove, after cutting.
- Bending:
  - Plates or bars: Cold bending radius not less than material thickness.
  - Tubes: Cold bending radius not less than 2 x tube diameter.
- Welding: In addition to general welding requirements:
  - Protect adjacent surfaces from weld spatter.
  - Pickle all welds before post fabrication treatments.
- Protection: Provide protection to fabricated components during transit and on site.

### **555 BRAZING**

- Standard: To BS EN 14324.
- Testing:
  - Destructive testing: To BS EN 12797.
  - Non-destructive testing: To BS EN 12799.

## **FINISHING**

### **710 FINISHING WELDED AND BRAZED JOINTS VISIBLE IN COMPLETE WORK**

- Standard: To BS EN ISO 8501-3.
  - Preparation grade: as required.
- Butt joints: Smooth, and flush with adjacent surfaces.
- Fillet joints: Neat.
- Grinding: Grind smooth where indicated on drawings.

### **745 PREPARATION FOR APPLICATION OF COATINGS**

- General: Complete fabrication, and drill fixing holes before applying coatings.
- Paint, grease, flux, rust, burrs and sharp arrises: Remove

### **750 LIQUID ORGANIC COATING FOR ALUMINIUM ALLOY COMPONENTS**

- Standard: To BS 4842.

### **760 ZINC AND CADMIUM PLATING OF IRON AND STEEL SURFACES**

- Zinc plating: To BS EN ISO 2081.
- Cadmium plating: To BS EN ISO 2082.

### **770 CHROMIUM PLATING**

- Standard: To BS EN ISO 1456.

### **780 GALVANIZING**

- Standard: To BS EN ISO 1461.
- Preparation:
  - Vent and drain holes: Provide in accordance with BS EN ISO 14713-1 and -2. Seal after sections have been drained and cooled.
  - Components subjected to cold working stresses: Heat treat to relieve stresses before galvanizing.
  - Welding slag: Remove.
  - Component cleaning: To BS EN ISO 8501-3.
  - Grade: St 2.

## **COMPLETION**

### **910 DOCUMENTATION**

- Submit:



- Manufacturer's maintenance instructions.
- Guarantees, warranties, test certificates, record schedules and log books.

## **920 COMPLETION**

- Protection: Remove.
- Cleaning and maintenance: Carry out in accordance with procedures detailed in fabricators' guarantees.

## ***Z20 FIXINGS AND ADHESIVE***

To be read with Preliminaries/ General Conditions.

### **PRODUCTS**

#### **310 FASTENERS GENERALLY**

- Materials: To have:
  - Bimetallic corrosion resistance appropriate to items being fixed.
  - Atmospheric corrosion resistance appropriate to fixing location.
- Appearance: Submit samples on request.

#### **320 PACKINGS**

- Materials: Non-compressible, corrosion proof.
- Area of packings: Sufficient to transfer loads.

#### **330 NAILED TIMBER FASTENERS**

- Nails:
  - Steel: To BS 1202-1 or BS EN 10230-1.
  - Copper: To BS EN 1202-2.
  - Aluminium: To BS 1202-3.

#### **340 MASONRY FIXINGS**

- Light duty: Plugs and screws.
- Heavy duty: Expansion anchors or chemical anchors.

#### **350 PLUGS**

- Type: Proprietary types to suit substrate, loads to be supported and conditions expected in use.

#### **360 ANCHORS**

- Types:

- Expansion: For use in substrate strong enough to resist forces generated by expansion of anchor.
- Adhesive or chemical:
  - For use in substrate where expansion of anchor would fracture substrate.
  - For use in irregular substrate where expansion anchors cannot transfer load on anchor.
- Cavity: For use where the anchor is retained by toggles of the plug locking onto the inside face of the cavity.

### **370 WOOD SCREWS**

- Type:
  - Wood screws (traditional pattern).
- Standard: To BS 1210.
  - Wood screws.
  - Pattern: Parallel, fully threaded shank or twin thread types.
- Washers and screw cups: Where required are to be of same material as screw.

### **380 MISCELLANEOUS SCREWS**

- Type: To suit the fixing requirement of the components and substrate.
  - Pattern: Self-tapping, metallic drive screws, or power driven screws.
- Washers and screw cups: Where required to be of same material as screw.

### **390 ADHESIVES GENERALLY**

- Standards:
  - Hot-setting phenolic and aminoplastic: To BS 1203.
  - Thermosetting wood adhesives: To BS EN 12765.
  - Thermoplastic adhesives: To BS EN 204.

### **410 POWDER ACTUATED FIXING SYSTEMS**

- Types of fastener, accessories and consumables: As recommended by tool manufacturer.

## **EXECUTION**

### **610 FIXING GENERALLY**

- Integrity of supported components: Select types, sizes, quantities and spacings of fixings, fasteners and packings to retain supported components without distortion or loss of support.
- Components, substrates, fixings and fasteners of dissimilar metals: Isolate with washers/sleeves to avoid bimetallic corrosion.

- Appearance: Fixings to be in straight lines at regular centres.

### **620 FIXING THROUGH FINISHES**

- Penetration of fasteners and plugs into substrate: To achieve a secure fixing.

### **630 FIXING PACKINGS**

- Function: To take up tolerances and prevent distortion of materials and components.
- Limits: Do not use packings beyond thicknesses recommended by fixings and fasteners manufacturer.
- Locations: Not within zones to be filled with sealant.

### **640 FIXING CRAMPS**

- Cramp positions: Maximum 150 mm from each end of frame sections and at 600 mm maximum centres.
- Fasteners: Fix cramps to frames with screws of same material as cramps.
- Fixings in masonry work: Fully bed in mortar.

### **650 NAILED TIMBER FIXING**

- Penetration: Drive fully in without splitting or crushing timber.
- Surfaces visible in completed work: Punch nail heads below work surfaces.
- Nailed timber joints: Two nails per joint (minimum), opposed skew driven.

### **660 SCREW FIXING**

- Finished level of countersunk screw heads:
  - Exposed: Flush with timber surface.
  - Concealed (holes filled or stopped): Sink minimum 2 mm below surface.

### **670 PELLETTED COUNTERSUNK SCREW FIXING**

- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
- Pellets: Cut from matching timber, match grain and glue in to full depth of hole.
- Finished level of pellets: Flush with surface.

### **680 PLUGGED COUNTERSUNK SCREW FIXING**

- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
- Plugs: Glue in to full depth of hole.
- Finished level of plugs: Projecting above surface.

### **690 USING POWDER ACTUATED FIXING SYSTEMS**

- Powder actuated fixing tools: To BS 4078-2 and Kitemark certified.

- Operatives: Trained and certified as competent by tool manufacturer.

### **700 APPLYING ADHESIVES**

- Surfaces: Clean. Adjust regularity and texture to suit bonding and gap filling characteristics of adhesive.
- Support and clamping during setting: Provide as necessary. Do not mark surfaces of or distort components being fixed.
- Finished adhesive joints: Fully bonded. Free of surplus adhesive.

### **Z22 SEALANTS**

To be read with Preliminaries/General conditions.

#### **PRODUCTS**

##### **310 JOINTS**

- Manufacturer: Adshead Ratcliffe
- Product: to suit application as recommended by manufacturer
- Primer, backing strip, bond breaker: Types recommended by sealant manufacturer.
- Area to be prepared to manufacturers details to receive sealant.
- Sample to be provided to architect for approval.

#### **EXECUTION**

##### **610 SUITABILITY OF JOINTS**

- Pre-sealing checks:
  - Joint dimensions: Within limits specified for the sealant.
  - Substrate quality: Surfaces regular, undamaged and stable.
- Joints not fit to receive sealant: Seek instructions from CA.

##### **620 PREPARING JOINTS**

- Surfaces to which sealant must adhere:
  - Remove temporary coatings, tapes, loosely adhering material, dust, oil, grease, surface water and contaminants that may affect bond.
  - Clean using materials and methods recommended by sealant manufacturer.
- Vulnerable surfaces adjacent to joints: Mask to prevent staining or smearing with primer or sealant.
- Backing strip and/ or bond breaker installation: Insert into joint to correct depth, without stretching or twisting, leaving no gaps.

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

### **630 APPLYING SEALANTS**

- Substrate: Dry (unless recommended otherwise) and unaffected by frost, ice or snow.
- Environmental conditions: Do not dry or raise temperature of joints by heating.
- Sealant application: Fill joints completely and neatly, ensuring firm adhesion to substrates.
- Sealant profiles:
  - Butt and lap joints: Slightly concave.
  - Fillet joints: Flat or slightly convex.
- Protection: Protect finished joints from contamination or damage until sealant has cured.

## **Z31 POWDER COATING**

To be read with Preliminaries/ General conditions.

### **120 POWDER COATING MATERIALS**

- Manufacturer: Obtain from one only of the following: Akzo Nobel and Syntha Pulvin.
- Selected manufacturer: Submit details before commencement of powder coating including:
  - Name and contact details.
  - Details of accreditation schemes.
  - Technical data of product including current Agrément certificates.
- Existing PPC finishes: Existing coatings to be cleaned using a solution of warm water and non-abrasive, pH neutral detergent solution. Rinse the surfaces after cleaning to remove all residues using a soft cloth, sponge or a soft natural bristle brush. Sample of aluminium cassette and aluminium channel to be provided for approval.

### **210 WORKING PROCEDURES**

- Comply with the follow following standards.
  - Aluminium components: To BS 6496 or BS EN 12206-1.
  - Steel components: To BS EN 13438.
  - Safety standards: To British Coatings Federation 'Code of safe practice - Application of thermosetting powder coatings by electrostatic spraying'.

### **220 POWDER COATING APPLICATORS**

- Applicator requirements:
  - Approved by powder coating manufacturer.
  - Currently certified to BS EN ISO 9001.

- Comply with quality procedures, guarantee conditions, standards and tests required by powder coating manufacturer.
- Applicator to use only one plant.
- Selected applicator: Submit details before commencement of powder coating including:
  - Name and contact details.
  - Details of accreditation schemes.

## **225 GUARANTEES**

- Powder coating manufacturer and applicator guarantees:
  - Submit sample copies before commencement of powder coating.
  - Submit signed project specific copies on completion of work.

## **230 CONTROL SAMPLES**

- Sequence: Prior to ordering materials for the works, obtain approval of appearance for:
  - Powder coated samples: Of various grades and forms of background metal to be used, showing any colour, texture and gloss variation.
  - Fabrication samples: Showing joint assembly, how powder coating is affected and how any cut metal edges are finished and protected.
- Samples to include the following information:
  - Product reference.
  - Colour.
  - Reference number.
  - Name.
  - Gloss level.

## **240 QUALITY ASSURANCE SYSTEM**

- Requirement: Powder and coating application to the following designated components is to be tested and approved in accordance with the Qualicoat system.
  - Designated components: All polyester powder components.

## **250 COMPONENT DESIGN**

- Condition of components to be powder coated:
  - To comply with relevant recommendations of BS 4479-1, -3, and -4.
  - Of suitable size to fit plant capacity.
  - Of suitable thickness to withstand oven curing.

## **310 PRE-TREATMENT OF ALUMINIUM COMPONENTS**

- Condition of components to be pre-treated:

- Free from corrosion and damage.
  - All welding and jointing completed and finish off as specified.
  - Free from impurities including soil, grease, oil.
  - Suitable for and compatible with the pre-treatment process.
- Conversion coating requirements:
  - Chromate system: To BS 6496 or BS EN 12206-1.
  - Chromate-free system: To BS EN 12206-1. Submit details before using.
- Rinsing requirements: Use demineralized water. Drain and dry.

### **430 EXTENT OF POWDER COATINGS**

- Application: To visible component surfaces, and concealed surfaces requiring protection.  
Coated surfaces will be deemed 'significant surfaces' for relevant BS 6496 or BS EN 13438 performance requirements.

### **435 APPLICATION OF POWDER COATINGS**

- Surfaces to receive powder coatings: Free from dust or powder deposits.
- Powder colours: Obtain from one batch of one manufacturer.
- Commencement of powder coating: To be continuous from pre-treatment.
- Jig points: Not visible on coated components.
- Curing: Controlled to attain metal temperatures and hold periods recommended by powder coating manufacturer.
- Stripping and recoating of components: Only acceptable by prior agreement of powder coating manufacturer. Stripping, pre-treatment and powder coating are to be in accordance with manufacturer's requirements.
- Over coating of components: Not acceptable.

### **440 PERFORMANCE AND APPEARANCE OF POWDER COATINGS**

- For aluminium components:
  - Standard: To BS 6496 or BS EN 12206-1.
- For steel components:
  - Standard: To BS EN 13438.
- Visual inspection after powder coating: Significant surface viewing distances to be as specified in the relevant Standard, unless specified otherwise.
- Colour and gloss levels: To conform with approved samples.



## **450 ALUMINIUM ALLOY FABRICATIONS**

- Units may be assembled:
  - Before powder coating.
  - From components powder coated after cutting to size.
  - Where approved, from components powder coated before cutting to size.
- Exposure of uncoated background metal: Not acceptable.
- Assembly sealants: Compatible with powder coatings. Obtain approval of colour if sealants are visible after fabrication.

## **470 FIXINGS**

- Exposed metal fixings: Powder coat together with components, or coat with matching repair paint system applied in accordance with the powder coating manufacturer's recommendations.

## **480 DAMAGED COMPONENTS - REPAIR/ REPLACEMENT**

- Before delivery to site: Check all components for damage to powder coatings. Replace damaged components.
- Site damage: Submit proposals for repair or replacement.

## **510 PROTECTION**

- Powder coated surfaces of components: Protect from damage during handling and installation, or by subsequent site operations.
- Protective coverings: Must be:
  - Resistant to weather conditions.
  - Partially removable to suit building in and access to fixing points.
- Protective tapes in contact with powder coatings: Must be:
  - Low tack, self-adhesive and light in colour.
  - Applied and removed in accordance with tape and powder coating manufacturers' recommendations. Do not use solvents to remove residues as these are detrimental to the coating.
- Inspection of protection: Carry out monthly. Promptly repair any deterioration or deficiency.

## **535 DOCUMENTATION**

- Submit the following information for each batch of powder coated components:
  - Supplier.
  - Trade name.
  - Colour.
  - Type of powder.

- Method of application.
- Batch and reference number.
- Statutory requirements.
- Test certificates.
- Maintenance instructions.

#### **540 COMPLETION**

- Protection: Remove.
- Cleaning and maintenance of powder coatings: Carry out in accordance with procedures detailed in powder coating manufacturer and applicator guarantees.