

AFL Architects

NMGH -MULTI STOREY CAR PARK

20200-AFL-MSCP-ZZ-SP-A-0908 P1

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P1

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20200 - NMGH -MULTI STOREY CAR PARK – NMGH -MULTI STOREY CAR PARK
Client:

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H31 Metal profiled/ flat sheet cladding/ covering	1
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B Status - With Comments (FOR INFORMATION)

H31**Metal profiled/ flat sheet cladding/ covering****Clauses - Not Used****Types of cladding/ covering system****112A Ex 1a mesh cladding system - Ground Floor Material**

1. Manufacturer: Maple
2. Tel: 07585 965 815
3. Email: Robert@maplesunscreening.co.uk
4. Panel Material: Anodizing Bronze Mesh
Dark - 63% free area
5. Thickness: AA25
6. Colour Ref: To be confirmed
7. Panel Size: TBC
8. Support structure: TBC
9. Brackets: Brackets are to be manufactured from mild steel, with galvanized finish. Brackets to a maximum length of 300mm projection are to be installed direct to concrete – using M10 chemical anchors.
10. Note:: · All orthographic projections are in third angle
· Stainless steel fixings cannot be painted due to lack of adhesion · All set screws to be hex head c/w nylo nuts U.N.O.
· Anodised components from different sources/ alloys may exhibit colour variation
· Tolerance is 1mm U.N.O.
· Penetrations in building envelope to be weathered by others.
· Maximum tolerance of other trades:
- Brick/block & steel 10mm
- Concrete 15mm
11. Accessories: Including fixing accessories.

112B Ex 1b mesh cladding system - Upper Floor Material

1. Manufacturer: Maple
2. Tel: 07585 965 815
3. Email: Robert@maplesunscreening.co.uk
4. Panel Material: Main North & South: Anodised Brass 3D Mesh 63% free Area

Part North: Anodised Brass 3D Mesh with 15 degree rotated panels - 63% free area (rotated feathered)

South: Anodised Brass 3D Mesh with 15 degree rotated panels - 63% free area (rotated zig zag)
5. Thickness: AA25
6. Colour Ref: To be confirmed
7. Panel Size: TBC
8. Support structure: TBC
9. Brackets: Brackets are to be manufactured from mild steel, with galvanized finish. Brackets to a maximum length of 300mm projection are to be installed direct to concrete – using M10 chemical anchors.
10. Note:: · All orthographic projections are in third angle
· Stainless steel fixings cannot be painted due to lack of adhesion · All set screws to be hex head

c/w nylo nuts U.N.O.

- Anodised components from different sources/ alloys may exhibit colour variation
- Tolerance is 1mm U.N.O.
- Penetrations in building envelope to be weathered by others.
- Maximum tolerance of other trades:
 - Brick/block & steel 10mm
 - Concrete 15mm

11. Accessories: Including fixing accessories.

112C Ex 1c mesh cladding system - Upper Floor Material

1. Manufacturer: Maple
2. Tel: 07585 965 815
3. Email: Robert@maplesunscreening.co.uk
4. Panel Material: West & East/Part North & South - Anodised Brass Panel with Perforations 25% free area.

West & East/Part North & South - Anodised Brass panel with Perforations with solid staircore wall behind

5. Thickness: AA25
6. Colour Ref: To be confirmed
7. Panel Size: TBC
8. Support structure: TBC
9. Brackets: Brackets are to be manufactured from mild steel, with galvanized finish. Brackets to a maximum length of 300mm projection are to be installed direct to concrete – using M10 chemical anchors.
10. Note::
 - All orthographic projections are in third angle
 - Stainless steel fixings cannot be painted due to lack of adhesion · All set screws to be hex head c/w nylo nuts U.N.O.
 - Anodised components from different sources/ alloys may exhibit colour variation
 - Tolerance is 1mm U.N.O.
 - Penetrations in building envelope to be weathered by others.
 - Maximum tolerance of other trades:
 - Brick/block & steel 10mm
 - Concrete 15mm

11. Accessories: Including fixing accessories.

General requirements

167 Completion of design

1. Requirement: Complete the detailed design to satisfy specified performance criteria and coordinate with the detailed design of related and adjacent work.
 - 1.1. Design standard: In accordance with BS 5427-1.
2. Structural requirements: As section B50.

169 Structural design provided

1. Requirements
 - 1.1. Generally: As section B50.
 - 1.2. Additional requirements: None

172 Thermal performance/ Bridging

1. **Requirement:** Complete the thermal design of the cladding/ covering system to avoid excessive thermal bridging.
 - 1.1. **Standard:** MCRMA Technical Paper 14, MCRMA Technical Paper 17 with MCRMA Technical Bulletin 14 and BRE Information Paper 1/06.

176 Fastener samples

1. **General:** During detailed design, submit labelled samples of each type of fastener.

Design/ performance requirements**185 Performance compliance**

1. **Verification:** Before commencing fabrication, submit evidence based on laboratory testing or computer modelling.
 - 1.1. **Verifying authority:** The [United Kingdom Accreditation Service \(UKAS\)](#)

187 Deflection of metal cladding/ roof covering

1. **Roof covering:** Maximum permitted deflection under distributed loads as a multiple of span and due to:
 - 1.1. **Dead load:** As [BS 5427](#)
 - 1.2. **Dead and imposed loads:** As [BS 5427](#)
 - 1.3. **Dead and wind loads:** As [BS 5427](#)
2. **Wall cladding:** Maximum permitted deflection under distributed loads as a multiple of span and due to:
 - 2.1. **Dead and wind loads:**

192 Sound transmittance of cladding/ roof covering system – weighted

1. **Location:** Through
2. **Requirement:** Measure within 100 to 3150 Hz frequency range to BS 5821-3.

194 Internal sound absorption of cladding/ roof covering system

1. **Requirement:** Measure to BS EN ISO 354.

198 Water penetration

1. **Requirement:** Under site exposure conditions, moisture must not penetrate onto internal surfaces, or into cavities not designed to be wetted.

200 Avoidance of interstitial condensation

1. **Requirement:** Determine interstitial condensation risk of cladding/ covering system using the method described in BS 5250, Annex D. If necessary, provide a vapour control layer to ensure that damage and nuisance from interstitial condensation does not occur.
2. **Outdoor psychrometric conditions (notional):** To BS 6229, table A.1 as follows:
 - 2.1. **Temperature:** Winter -5°C, summer 18°C.
 - 2.2. **Relative humidity:** Winter 90%, summer 65%.
 - 2.3. **Vapour pressure:** Winter 0.36 kPa, summer 1.34 kPa.

202 Avoidance of surface condensation

1. **Requirement:** Determine surface condensation risk of cladding/ covering system using the method described in BS EN ISO 13788. If necessary, revise thermal insulation to provide

satisfactory temperature factor (f_{min}). Ensure that damage and nuisance from surface condensation does not occur.

Fixing cladding/ roof covering

215 Painting structure

1. **Sequence:** Paint outer surface of supporting structure before fixing cladding/ covering.

219 Fasteners

1. **Unspecified fasteners:** Recommended for the purpose by the cladding/ covering manufacturer.

221 Fittings and accessories

1. **Unspecified fittings and accessories:** Recommended for the purpose by the cladding/ covering manufacturer.

223 Prevention of electrolytic action

1. **Isolating tape:** Type recommended by cladding/ covering manufacturer.
 - 1.1. **Location:** To contact surfaces of supports and sheets of dissimilar metals.

234 Gutters

1. **Description:**
2. **Manufacturer:**
 - 2.1. **Product reference:**
3. **Sizes:**
4. **Material:**
 - 4.1. **Gauge/ Thickness:**
 - 4.2. **External finish:**
5. **Insulation:**
6. **Internal liner sheet:**
7. **Jointing method:**
8. **Fixing method:**
9. **Accessories:**

240 Lining

1. **Material:** Galvanized steel to BS EN 10346, grade S220GD+Z with designation 275 coating.
2. **Profile:**
3. **Thickness (minimum)/ gauge:** 0.4 mm inclusive of protective coating.
4. **Cover width:**
5. **Finish/ Colour:**
6. **Primary sheet fasteners:**
7. **End laps size (minimum):** Not less than 40 mm.
8. **Deflection of installed lining in any direction (maximum):** 1/120 of distance between supports.
9. **Joint sealing:**

241 Lining

1. **Manufacturer:**
 - 1.1. **Product reference:**

2. Finish/ Colour:
3. Primary sheet fasteners:
4. End laps size (minimum):
5. End and side lap sealing:

254 Acoustic insulation

1. Manufacturer:
 - 1.1. Product reference:
2. Recycled content:

261 Air and vapour control membrane

1. Material:
 - 1.1. Vapour resistance (minimum):
2. Continuity: No breaks and with the minimum of joints.
 - 2.1. Penetrations and abutments: Seal to vapour control membrane with tape. Achieve full bond.
 - 2.2. Laps: Not less than 150 mm, seal with tape. Achieve full bond.
3. Tape: Double sided sealant with vapour resistivity not less than the vapour control membrane.
 - 3.1. Size (width and thickness):
4. Repairs and punctures: Seal with lapped patch of vapour control membrane and continuous band of sealant tape along edges.

270 Mineral wool thermal insulation

1. Standard: To BS EN 13162.
2. Material:
3. - Thermal conductivity (maximum):
4. Recycled content:
5. Installation: Continuous and not compressed between outer and lining sheets. Secure to prevent future movement or dislodgement.

271 Mineral wool thermal insulation

1. Standard: To BS EN 13162.
2. Manufacturer:
 - 2.1. Product reference:
3. Thickness (minimum):
4. Recycled content:
5. Installation: Continuous and not compressed between outer and lining sheets. Secure to prevent future movement or dislodgement.

280 Breather membrane

1. Standard:
2. Manufacturer:
 - 2.1. Product reference:
3. Continuity: No breaks. Minimize joints.
 - 3.1. Penetrations and abutments: Attach to breather membrane with tape. Achieve full bond.
 - 3.2. Laps: Not less than 150 mm, bond with tape. Achieve full bond.
4. Tape: As recommended by breather membrane manufacturer.

5. **Repairs:** Lapped patch of breather membrane material secured with continuous band of tape on edges.
6. Junctions at flashings, sills, gutters etc. Overlap and allow free drainage to exterior.

300 Profile fillers generally

1. **Material:**
2. **Manufacturer:**
 - 2.1. **Product references:**
3. **Colour:**
4. **Thickness:**
5. **Fixing method:**
 - 5.1. **Requirement:** To close cavities/ regulate air paths within the external envelope. Tight fit with no unintended gaps.

305 Fire-resisting profile fillers

1. **Types:** To accurately match sheet profile.
2. **Fixing method:** Adhesive recommended by profile filler manufacturer.

310 Purpose-made cold-formed metal accessories

1. **Material:**
 - 1.1. **Thickness/ Gauge:**
 - 1.2. **Finish/ Colour:**
2. **Fasteners**
 - 2.1. **Type:**
 - 2.2. **Location:**
 - 2.3. **Fixing centres:**

410 Fixing sheets generally

1. **Cut edges:** Clean true lines.
2. **Penetrations:** Openings to minimum size necessary.
 - 2.1. **Edge reinforcement:**
3. **Sheet orientation:** Exposed joints of side laps away from prevailing wind unless shown otherwise on drawings.
4. **Sheet ends, laps and raking cut edges:** Fully supported and with fixings at top of lap.
5. **Fasteners:** Drill holes. Position at regular intervals in straight lines, centred on support bearings.
 - 5.1. **Position of fasteners in oversized drilled holes:** Central.
 - 5.2. **Fasteners torque:** Sufficient to correctly compress washers.
6. **Debris:** Remove dust and other foreign matter before finally fixing sheets.
7. **Completion:** Check fixings to ensure watertightness and that sheets are secure.
8. **Cut edges:** Paint to match face finish.

419 Fixing plastics sheets

1. **Crown fixing:** For sheets with a profile depth greater than 20 mm, support crowns at primary fasteners with profile fillers.
2. **Fastener holes:** Sized in accordance with sheet manufacturer's recommendations.
3. **End laps between plastics sheets:** Use two strips of sealant tape, one along each edge of lap.

435 Plastics multiple-skin construction

1. Inaccessible surfaces: Clean before fixing.
2. Sheet fixing: Progressively fix from one end of sheet to avoid distortion.
3. Fixing sequence: Install spacers and outer sheets immediately after lining sheet installation.
4. Inner and outer sheet laps: Seal.

460 Accommodation of thermal movement

1. Sheet type/ location:
2. Method:

470 Structural movement joints

1. Type: Cover flashing fixed on one side over gap between sheets.
2. Location: Coincident with structural movement joint.
3. Width of gap: To match structural movement joint requirements.
4. Requirement: Weathertight.

480 Flashings/ trims generally

1. Lap joint treatment
 - 1.1. Vertical and sloping flashings/ trims: End laps to be same as for adjacent sheeting.
 - 1.2. Horizontal flashings/ trims: End laps to be 150 mm, sealed and where possible arranged with laps away from prevailing wind.
2. Method of fixing: To structure in conjunction with adjacent sheeting. Otherwise to sheeting.
 - 2.1. Fasteners:

481 Flashings/ trims

1. Locations:
2. Fasteners:

482 Butt-jointed flashings/ trims

1. Locations:
2. Butt straps: 300 mm wide and made from sheet of same material and finish.
3. Butt joints: Seal.

540 Abutments

1. Junctions with flashings: Weathertight and neatly dressed down.

550 Sealing laps on external sheets

1. Sealant tape: Types recommended by sheet manufacturer.
 - 1.1. Position: Below fixing positions in straight unbroken lines, parallel to and slightly back from edge of sheet.
2. Seal quality: Effective, continuous and not overcompressed.
3. End laps: Sealant tape positions:
 - 3.1. Single line tape: Immediately below line of fasteners.
 - 3.2. Second line tape (where specified): Slightly set back from edge of external sheet.
4. Side laps: Sealant tape positions:
 - 4.1. Single line tape: Outside line of fasteners.

- 4.2. Second line tape (where specified): On other side of fasteners.

554 Water vapour sealing at laps and penetrations in metal linings – sealant tape

1. Sealant tape:
 - 1.1. Position: Below fixing positions in straight unbroken lines, parallel to and slightly back from edge of sheet.
2. Seal quality: Effective, continuous and not overcompressed.

555 Water vapour sealing at laps and penetrations in metal linings – aluminium tape

1. Aluminium foil tape:
 - 1.1. Position: Centrally and parallel to edge of oversheet in straight unbroken lines.
 - 1.2. Joints in tape: Minimum overlap of 50 mm.
2. Seal and adhesion quality: Effective and continuous.

560 Safety signs

1. Fixing locations of signs:
2. Manufacturer:
 - 2.1. Product reference:
3. Material:
4. Signs description:
 - 4.1. Warning sign to BS EN ISO 7010, code W001 with supplementary text sign warning, 'DANGER fragile roof'.
 - 4.2. General mandatory action sign to BS EN ISO 7010, code M001 with supplementary text sign instruction, 'Use crawling boards'.

Ω End of Section

B Status - With Comments (FOR INFORMATION)



Specification created using NBS Chorus