

Project No. 150457

Client: Council of the Isles of Scilly

Tender Issue 10/11/2017

STRIDE TREGLOWN
ARCHITECTURE

Carn Gwavel School

10 November 2017

This document includes:

Code	Section	Revision	Dated
G20	Carpentry/ timber framing/ first fixing		

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GENERAL

105 TIMBER PROCUREMENT

- Timber (including timber for wood based products): Obtained from well managed forests/ plantations in accordance with:
 - The laws governing forest management in the producer country or countries.
 - International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
- Documentation: Provide either:
 - Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied, or
 - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.

150 STRENGTH GRADING OF TIMBER

- Grader: A company currently registered under a third party quality assurance scheme operated by a certification body approved by the UK Timber Grading Committee.

160 GRADING AND MARKING OF SOFTWOOD

- Timber of a target/ finished thickness less than 100 mm and not specified for wet exposure: Graded at an average moisture content not exceeding 20% with no reading being in excess of 24% and clearly marked as 'DRY' or 'KD' (kiln dried).
- Timber graded undried (green) and specified for installation at higher moisture contents: Clearly marked as 'WET' or 'GRN'.
- Structural timber members cut from large graded sections: Regraded to approval and marked accordingly.

PRODUCTS

210 STRUCTURAL SOFTWOOD (GRADED DIRECT TO STRENGTH CLASS) FOR STRUCTURAL USE GENERALLY

- Grading standard: To BS 4978, BS EN 14081-1, or other national equivalent and so marked.
- Strength class to BS EN 338: C16.
- Treatment:
 - Preservative treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8.
Design service life: Not applicable.
 - Fire retardant treatment: None required.

260A EXTERNAL POST To External Canopy

- Manufacturer: NORclad Ltd. 21 C&D Somerset Square, Nailsea, Bristol, BS48 1RQ. T: 01275 810475. W: www.timbercladdingsolutions.co.uk
- Species: NORclad Canadian Western Red Cedar - Grade 2 Clear & Better, or similar.
- Grading standard: To the appropriate standard or rules for the specified grade and so marked.
 - Grade: To manufacturers recommendations.
- Profile: 150mm dia (45x145mm Finishing), or similar
- Surface finish: Planed all round.
- Moisture content at time of fixing: Approx. 18 - 22%
- Treatment: [Koppers MicroShades "Brunnea" - 30 years warranty against rot and fungal decay (out of ground contact) NO OTHER COATING REQUIRED
- Type: Copper-organic
- Method of fixing to each support: Each joist fixed back to steel canopy structure, fixings to be contractor designed and agreed with Contract Administrator prior to fixing.
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270 UNGRADED SOFTWOOD FOR INTERNAL NONSTRUCTURAL USE

- Quality of timber: Free from decay, insect attack (except pinhole borers) and with no knots wider than half the width of the section.
- Surface finish: Regularized.
- Treatment:
 - Preservative treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8.
 - Design service life: 40 years.
 - Fire retardant treatment: None required.

311 NON-STRUCTURAL PLYWOOD AS FIXING BACKGROUNDS FOR STUD PARTITIONS

- Standard: To an approved national standard.
- Thickness: 15mm min..
- Appearance class to BS EN 635: E.
- Use class to BS EN 335: Use class 2.
- Bonding quality to BS EN 314-2: Class 3.
- Finish: Unsanded.
- Edges: Square.
- Treatment:
 - Preservative treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C11.
 - Design service life: 40 years.
 - Fire retardant treatment: None required.

- 312 NON-STRUCTURAL PLYWOOD Over Roof Joists, Parapet Upstands and Layboard on existing rafters
- Standard: To an approved national standard.
 - Thickness: 18mm.
 - Appearance class to BS EN 635: E.
 - Use class to BS EN 335: Sub class 3.1.
 - Bonding quality to BS EN 314-2: Class 3.
 - Finish: Unsanded.
 - Edges: Square.
 - Treatment:
 - Preservative treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C11.
Design service life: 40 years.
 - Fire retardant treatment: None required.
- 312A NON-STRUCTURAL PLYWOOD Over insulation for GRP roof finish refer to Section J42
- Standard: To an approved national standard.
 - Thickness: 18mm.
 - Appearance class to BS EN 635: E.
 - Use class to BS EN 335: Sub class 3.1.
 - Bonding quality to BS EN 314-2: Class 3.
 - Finish: Unsanded.
 - Edges: Square.
 - Treatment:
 - Preservative treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C11.
Design service life: 40 years.
 - Fire retardant treatment: None required.
- 315 MOISTURE RESISTANT NON-STRUCTURAL OSB3 SHEATHING To Timber frame External Walls - refer to SE specification
- Manufacturer: Norbord Europe Ltd, Web: www.norbord.co.uk/
 - Product: Sterling OSB3
 - Thickness: 9.5mm..
 - Certification FSC
 - Use class to BS EN 335: Use class 2.
 - Bonding quality to BS EN 314-2: As per manufacturers standard..
 - Finish: Unsanded.
 - Edges: Square.
 - Treatment:
 - Preservative treatment: To manufacturers standard. Moisture resistant..
Design service life: n/a.
 - Fire retardant treatment: None required.

WORKMANSHIP GENERALLY

- 401 CROSS SECTION DIMENSIONS OF STRUCTURAL SOFTWOOD AND HARDWOOD
- Dimensions: Dimensions in this specification and shown on drawings are target sizes as defined in BS EN 336.
 - Tolerances: The tolerance indicators (T1) and (T2) specify the maximum permitted deviations from target sizes as stated in BS EN 336, clause 4.3:
 - Tolerance class 1 (T1) for sawn surfaces.
 - Tolerance class 2 (T2) for further processed surfaces.
- 402 CROSS SECTION DIMENSIONS OF NONSTRUCTURAL SOFTWOOD
- Dimensions: Dimensions in this specification and shown on drawings are finished sizes.
 - Maximum permitted deviations from finished sizes: As stated in BS EN 1313-1, clause 6 for sawn sections.
- 403 CROSS SECTION DIMENSIONS OF NONSTRUCTURAL HARDWOOD
- Dimensions: Dimensions in this specification and shown on drawings are finished sizes.
 - Maximum permitted deviations from finished sizes: As stated in BS EN 1313-2:
 - Clause 6 for sawn sections.
 - Clause NA.3 for further processed sections.
- 420 WARPING OF TIMBER
- Bow, spring, twist and cup: Not greater than the limits set down in BS 4978 or BS EN 14081-1 for softwood, or BS 5756 for hardwood.
- 430 SELECTION AND USE OF TIMBER
- Timber members damaged, crushed or split beyond the limits permitted by their grading: Do not use.
- 435 NOTCHES, HOLES AND JOINTS IN TIMBER
- Notches and holes:
 - General: Avoid if possible.
 - Sizes: Minimum needed to accommodate services.
 - Position: Do not locate near knots or other defects.
 - In same joist: Minimum 100 mm apart horizontally.
 - Notches in joists:
 - Position: Locate at top. Form by sawing down to a drilled hole.
 - Depth (maximum): 0.15 x joist depth.
 - Distance from supports: Between 0.1 and 0.2 x span.
 - Holes in joists:
 - Position: Locate on neutral axis.
 - Diameter (maximum): 0.25 x joist depth.
 - Centres (minimum): 3 x diameter of largest hole.
 - Distance from supports: Between 0.25 and 0.4 of span.
 - Notches in roof rafters, struts and truss members: Not permitted.
 - Holes in struts and columns: Locate on neutral axis.
 - Diameter (maximum): 0.25 x minimum width of member.
 - Centres (minimum): 3 x diameter of largest hole.
 - Distance from ends: Between 0.25 and 0.4 of span.
 - Scarf joints, finger joints and splice plates: Do not use without approval.

440 PROCESSING TREATED TIMBER

- Cutting and machining: Carry out as much as possible before treatment.
- Extensively processed timber: Retreat timber sawn lengthways, thickened, planed, ploughed, etc.
- Surfaces exposed by minor cutting/ drilling: Treat with two flood coats of a solution recommended by main treatment solution manufacturer.

450 MOISTURE CONTENT

- Moisture content of wood and wood based products at time of installation: Not more than:
 - Covered in generally unheated spaces: 24%.
 - Covered in generally heated spaces: 20%.
 - Internal in continuously heated spaces: 20%.

451 MOISTURE CONTENT TESTING

- Procedure: When instructed, test timber sections with an approved electrical moisture meter.
- Test sample: Test 5% but not less than 10 lengths of each cross-section in the centre of the length.
- Test results: 90% of values obtained to be within the specified range. Provide records of all tests.

510 PROTECTION

- Generally: Keep timber dry and do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing.
- Timber and components: Store under cover, clear of the ground and with good ventilation. Support on regularly spaced, level bearers on a dry, firm base. Open pile to ensure free movement of air through the stack.
- Trussed rafters: Keep vertical during handling and storage.

JOINTING TIMBER

570 JOINTING/ FIXING GENERALLY

- Generally: Where not specified precisely, select methods of jointing and fixing and types, sizes and spacings of fasteners in compliance with section Z20.

630 BOLTED JOINTS

- Bolt spacings (minimum): To BS EN 1995-1-1, section 8.5.
- Holes for bolts: Located accurately and drilled to diameters as close as practical to the nominal bolt diameter and not more than 2 mm larger.
- Washers: Placed under bolt heads and nuts that would otherwise bear directly on timber. Use spring washers in locations which will be hidden or inaccessible in the completed building.
- Bolt tightening: So that washers just bite the surface of the timber. Ensure that at least one complete thread protrudes from the nut.
 - Checking: At agreed regular intervals up to Completion. Tighten as necessary.

670 ANTI-CORROSION FINISHES FOR FASTENERS

- Galvanizing: To BS 7371-6, with internal threads tapped and lightly oiled following treatment.
- Sherardizing: To BS 7371-8, Class 1.
- Zinc plating: To BS EN ISO 4042 and passivated.

ERECTION AND INSTALLATION

740 PRE-ERECTION CHECKING

- Timing: Not less than 10 days before proposed erection start date.
- Checklist:
 - Foundations and other structures to which timber structure will be attached: Check for accuracy of setting out.
 - Holding down bolts: Check for position, protruding length, condition and slackness.
- Inaccuracies and defects: Report without delay.
- Erection: Obtain permission to commence.

750 MODIFICATIONS/REPAIRS

- Defects due to detailing or fabrication errors: Report without delay.
- Methods of rectification: Obtain approval of proposals before starting modification or remedial work.
- Defective/damaged components: Timber members/ components may be rejected if the nature and/or number of defects would result in an excessive amount of site repair.

760 TEMPORARY BRACING

- Provision: As necessary to maintain structural timber components in position and to ensure complete stability during construction.

770 ADDITIONAL SUPPORTS

- Provision: Position and fix additional studs, noggings and/ or battens to support edges of sheets materials, and wall/ floor/ ceiling mounted appliances, fixtures, etc. shown on drawings
- Material properties: Additional studs, noggings and battens to be of adequate size and have the same treatment, if any, as adjacent timber supports.

775 BEARINGS

- Timber surfaces which are to transmit loads: Finished to ensure close contact over the whole of the designed bearing area.
- Packings: Where provided, to cover the whole of the designed bearing area.
 - Crushing strength: Not less than timber being supported.
 - In external or inaccessible locations: Rot and corrosion proof.

850 INSPECTION GENERALLY

- Structural timber-work: Give reasonable notice before covering up.

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Signed Off **Tender Issue 10/11/2017**

950 FASCIAS/ BARGES/ SOFFITS FASCIA

- Manufacturer: NORclad Ltd. 21 C&D Somerset Square, Nailsea, Bristol, BS48 1RQ. T: 01275 810475. W: www.timbercladdingsolutions.co.uk.
 - Product reference: 0.
- Material: NORclad Canadian Western Red Cedar.
- Finish: - Grade 2 Clear & Better, or similar.
- Colour: -.
- Nominal depth: 225.
- Edge profile: Square.
- Accessories: -.
- Other requirements: -.
- Support: 50 x 38 mm preservative treated softwood - refe to SE details for joist centres.
 - Provide additional support at joints.
- Fixings: 65mm Polytop stainless steel nails.
- Installer: A contractor approved by the system manufacturer.