

Section T – FINISHINGS

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BUILDING CONTROL

T.0 Compliance with the Building Regulations

WALL, FLOOR AND CEILING FINISHES

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T.0 **Compliance with Materials and Workmanship with the Building Regulations**

In order to demonstrate conformity with the Building Regulations (Part D; Materials and workmanship), and with the Construction Products Regulation (Regulation (EU) No.305/2011) as set out in national rules for Ireland (S.I. No.225 of 2013), the Contractor shall provide proof (a Declaration of Performance (DoP)) and (where applicable) a CE marking for all building products to be placed in the works.

The Contractor shall ensure that the product to be incorporated in the works, while complying with CPR, is fit for the use for which it is intended. The Contractor may be required to demonstrate this by means of manufacturer's confirmation, or independent testing certificate.

WALL, FLOOR AND CEILING FINISHES

T.1 **Gypsum plasterboard**

Gypsum plasterboard shall be baseboard, lath or wallboard complying with IS EN 520:2005+A1:2009.

Baseboard and lath shall be round edged greyboard and wallboard shall be either tapered or square edged with one ivory face.

Where a vapour check or insulating grade is required the plasterboard shall be supplied with a veneer of Metalized Polyester film.

T.2 **Moisture Resistant Gypsum Plasterboard**

Moisture resistant gypsum plasterboard shall be either tapered or square edged wall board complying with IS EN 520:2005+A1:2009 - Type H.

T.3 **Composite Laminate Insulating Plasterboard**

Composite laminate insulating plasterboard, for use under ceilings to pitched roof spaces, shall be as Clause N106. The plasterboard to be in accordance with Clauses T1 or T2 above as required.

T.4

to **Nil**

T.6

T.7 **Pre-mixed gypsum undercoat plaster**

Pre-mixed gypsum undercoat plaster shall be a high impact resistant basecoat plaster manufactured from naturally occurring gypsum complying with IS EN 13279-1:2008, type B4/20/2 & C3/20.

T.8 **Pre-mixed gypsum finishing coat plaster**

Pre-mixed gypsum finishing coat plaster shall be manufactured from naturally occurring gypsum and shall comply with IS EN 13279-1:2008, type B1/20/2.

T.9 **Nil**

T.10 **Pre-mixed gypsum board finish plaster**

Pre-mixed gypsum board finish plaster shall be manufactured from naturally occurring gypsum and shall comply with IS EN 13279-1:2008, type B1/20/2.

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- T.11
to
T.12 **Nil**
- T.13 **Cement**
Normal Portland cement shall be in accordance with Clause F.5.
White Portland cement shall comply with IS EN 197-1:2011.
- T.14 **Lime**
Lime shall be in accordance with Clause G.14.
- T.15 **Sand**
Sand for cement and lime mixes shall comply with the requirements of IS EN 998-1:2010.
Sand for use with white Portland cement shall be silver sand.
- T.16 **Coarse Aggregates**
Coarse aggregates shall be in accordance with IS EN 12620:2013 unless otherwise described or to match existing aggregates for roughcast finish shall 10mm single-sized aggregate and for dry dash finish shall be 10mm graded aggregate of white spar or other selected aggregate to match approved sample.
- T.17 **Ready Mixed Lime : Sand for Mortar**
Ready mixed lime : sand for mortar for plastering and rendering shall be in accordance with IS EN 998-1:2010.
- T.18 **Plasticisers**
The use of mortar plasticisers in cement rendering is not permitted.
- T.19 **Colouring Agents**
Colouring agents shall be in accordance with Clause G.12.
- T.20 **Water**
Water shall be from the mains in accordance with Clause F.7 and kept free from any impurities.
- T.21 **Waterproofers**
Waterproofers shall be integral waterproofers and shall have a current Agrèament certificate.
Waterproofers shall be used strictly in accordance with the manufacturer's written instructions.
- T.22 **Bonding Agents**
Bonding agents for internal use shall be P.V.A. (Polyvinyl Acetate) emulsion complying with BS 5270-1:1989 and used in accordance with IS EN 13914-2:2005 and BS 8481:2006 and the manufacturer's instructions.

Unless otherwise specified bonding agents for external use shall be either waterproof E.V.A (Ethylene/Vinyl Acetate) or S.B.R. (Styrene butadiene rubber) or acrylic emulsions complying with the requirements of IS EN 13914-1:2005 and used in accordance with the manufacturers written instructions.

S.B.R. bonding agents shall only be used with the prior written approval of the Architect.
- T.23 **Nil**

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T.24 **Angle and Stop Beads**

Angle and stop beads for internal gypsum plastering and dry lining shall be of galvanised steel complying with IS EN 13658-1:2005

Angle and stop beads for external plastering and internal cement based plastering shall be manufactured from stainless steel complying with IS EN 13658-2:2005

Movement joint beads for external plastering shall be manufactured from stainless steel beads with a white P.V.C. extrusion cover strip complying with IS EN 13658-2:2005.

T.25 **Nil**

T.26 **Fixings**

Nails for fixing plasterboard shall be 2.65 mm diameter galvanized steel clout nails with a 7.5mm head diameter and complying with the requirements of BS 8212:1995. Nails shall be 30mm long for 9.5mm boards and 40mm long for 12.7 mm boards and shall be supplied by the plasterboard manufacturer.

Screws for fixing wallboard to metal firing shall be 25mm long self drilling and tapping bugle headed pozidriv screws supplied by the plasterboard manufacturer.

Fixings for composite laminate as Clause T.3 shall be in accordance with the manufacturer's recommendations.

T.27 to T.28 **Nil**

T.29 **Plastering Generally**

Internal plastering shall generally be carried out in accordance with IS EN 13914-2:2005 and BS 8481:2006.

Dry lining and partitioning using gypsum plasterboard shall generally be carried out in accordance with BS 8212:1995.

External plastering shall generally be carried out in accordance with IS EN 13914-1:2005

T.30 **Storage of Materials**

Plasters, plasterboards, lime and cement shall be kept dry. Plasters, lime and cement shall be stored separately and used in rotation of deliveries, and no plaster shall be used after three months from its date of manufacture unless tested and approved. All sands shall be stored separately, according to type, on clean hard, dry standings and shall be protected from contamination.

T.31 **Testing**

Samples of all materials, as directed shall be taken from time to time for testing as required by the architect. All defective materials shall be removed from the site forthwith at the Contractor's expense.

T.32 **Frosty Weather**

Plastering shall not be started or continued when the air temperature falls below 3° unless precautions are taken, with the Architect's agreement, to raise and maintain the temperature of the air, materials and structure at not less than the above temperature until completion of hydration.

Plastering shall be protected from the frost, extreme drying conditions and continued dampness.

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T.33 **Sample Panel**

Where textured or wet or dry dash finishes are specified a sample panel 1 metre x 1 metre shall be executed by the Contractor for approval of the Architect before the work proceeds.

The sample panel shall not unless otherwise agreed with the Architect form part of any finished work but shall be maintained until completion of the contract.

T.34 **Preparation of Surface**

Surfaces to receive plastering shall be dry brushed to remove all loose particles, dust, laitence, efflorescence, etc., and any projecting fins on concrete surfaces shall be hacked off. All traces of mould oil shall be removed from concrete surfaces by scrubbing with water containing detergent and rinsing with fresh water.

Organic growths (algae, fungi, etc.) shall be killed by treatment with a proprietary toxic wash and brushing off when dry.

Surfaces shall be wetted and re-wetted as required to equalise suction before first coat of plaster is applied. Where wetting is unsuitable or inappropriate to ensure adequate adhesion apply a bonding agent as Clause T.22 Do not wet plasterboards before plastering.

T.35 **Nil**

T.36 **Scudding**

Scudding shall consist of a mixture of one volume of Portland cement and two volumes of clean, sharp, coarse sand prepared as a thick slurry and shall be hand thrown to a thickness of 3 to 6mm. It shall be left as thrown but wetted with a fine spray when necessary to ensure proper setting.

T.37 **Dubbing Out**

Dubbing out shall be in the same mix as the subsequent coat and shall not exceed 10mm in thickness in one application.

T.38 to T.39 **Nil**

T.40 **Fixing metal furring channels (To external walls)**

Metal furring channel systems for drylining shall be supplied by the plasterboard manufacturer and shall be installed in accordance with his instructions.

The firrings shall be fixed to masonry walls at 600mm horizontal centres with the manufacturers approved bonding adhesive, all carefully plumbed and aligned and left ready for plasterboard.

Horizontal firrings at floor and ceilings shall be fixed continuously as should firrings around openings.

T.41 **Fixing Plasterboard Generally**

Store, cut and handle plasterboard in accordance with the manufacturers written instructions.

Faces of supports (joists, firrings, studs etc) to receive plasterboard shall be accurately aligned, plumb and level and at the correct centres. Prices shall include for any necessary packing.

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To ensure support to the edge of plasterboard at the perimeter of wall or ceiling provide softwood noggins (44mm x 50mm minimum) fixed between the joists or studs and parallel to the joists and studs where these are more than 50mm from the perimeter.

Fix plasterboard to ceilings before fixing to walls or partitions. Before fixing dry-lining ensure that all electrical wiring conduits are in place.

T.42 Fixing Plasterboard to Timber Supports (To locations other than external walls)

Ensure supports are spaced at centres not exceeding 450mm for 9.5mm board and 600mm for 12.7mm board.

Fix plasterboard to supports with nails, as Clause T.26, at 150mm maximum centres. The nails, which should be not less than 13mm from board edges, shall be inserted at right angles to face of board and driven home without fracturing the paper surface. Nails along the edges of adjacent boards shall be opposite one another and not staggered.

T.43 Nil

T.44 Fixing Gypsum Wallboard

Fix gypsum wallboard with joints centered over supports and with end joints staggered. Bound edges of boards shall be lightly butted together at joints and cut edges shall be tightly butted together.

Wallboard to ceilings shall be fixed with bound edges at right angles to joists.

Where required provide noggins at unsupported joints to ensure that the wallboard is fully supported on all four edges.

T.45 Fixing gypsum wallboard to metal furring channels

Fix 12.7mm gypsum wallboard to metal furring channels with screws, as Clause T.26, spaced at 300mm maximum centres and located not more than 10mm from board edges. Screws shall be driven home until heads are slightly below but without fracturing, the paper surface. Screws along edges of adjacent boards shall be opposite one another and not staggered.

T.46 Fixing Composite Laminate

Fixing composite laminate as Clause T.3 shall be in accordance with the manufacturer's recommendations.

T.47 Nil

T.48 Jointing and Finishing Wallboard with Taped Joints

Ivory faced tapered edge wallboard, unless otherwise specified (see clause T.49), shall be finished as follows and all in accordance with the manufacturer's instructions:

Bed jointing tape into tapered edge joints and finish with board surface with jointing compound. Fill cut edge joints, bed jointing tape tight to board surface and feather out to a level surface with jointing compound.

Fill nail or screw indentations not covered by jointing with joint filler and finish flush with surface.

Reinforce external angles with metal angle beads, as clause T.24, bedded in jointing compound with outer edges touching plasterboard. Apply two coats jointing compound finished flush with board surface.

Apply a slurry of jointing compound to entire surface of wallboard on completion of jointing.

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T.49 **Jointing wallboard to receive veneer finish**

Jointing to ivory faced tapered edge gypsum wallboard, where gypsum plaster veneer finish as Clause T.10 is specified, shall be as follows and all in accordance with the manufacturer's instructions:

Bed and finish, with jointing compound, all joints to tapered board including cut ends and internal angles.

Fill nail or screw indentations not covered by jointing with joint filler and finish flush with surface.

Reinforce external angles with metal angle beads, as Clause T.24, bedded in jointing compound with outer edges touching plasterboard.

T.50 **Nil**

T.51 **Mixing of Materials**

All materials shall be thoroughly mixed in the proportions described and in accordance with the manufacturer's instructions. No mixes of plasters other than those described shall be used without written approval of the Architect.

Bankers and gauge boxes shall be thoroughly cleaned after each mix and due care and attention shall be given at all times to their cleanliness.

T.52 **Re-Tempering Etc.**

Cement-lime-sand plasters shall be used within two hours of the gauging with cement.

Gypsum plasters shall be used within one hour of the addition of water.

Plasters shall not be re-tempered and the use of a water brush shall be kept to a minimum. All tools shall be kept clean and fresh plaster shall not be contaminated with set plaster.

T.53 **Angles to gypsum plastered walls**

Before plastering, fix metal angle beads, as Clause T.24, to all external angles with plaster dabs at 600mm centres. Ensure that nose of bead is plumb and square and set to give the correct thickness of plaster.

Avoid damage to galvanised coating due to excessive trowelling or scraping.

Scrim all internal angles to walls and ceilings with 100 mm jute scrim cloth bedded in the undercoat.

T.54 **Application of gypsum plaster undercoats**

Gypsum plaster undercoats shall be applied in accordance with the manufacturer's instructions. The plaster shall be built out to the required thickness, ruled to a true and level surface and properly scratched to form a key for subsequent coats.

T.55 **Application of gypsum plaster finishing coats**

Gypsum plaster finishing coats shall be applied in accordance with the manufacturer's instructions. The plaster shall be applied to the required thickness to a true and level plane. Unless otherwise specified, finish final coat to a smooth surface with a steel trowel.

In two or three coat work the finishing coat shall be applied as soon as the undercoat has set and has developed reasonable suction.

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Where applying veneer finish, (as Clause T.10) do not apply an excessive thickness and avoid over trowelling.

T.56
to
T.58

Nil

T.59 **Curing and Protection of Cement Based Plasters**

All wall surfaces to be well wetted before each operation. Each coat, including scud coat, should be kept damp for three days and then allowed to dry out thoroughly to permit most of the initial shrinkage to take place before application of subsequent coat. Each coat shall also be protected from rain and frost for the first 48 hours after application. Any protection shall be kept clear of the final coat to avoid damage or discoloration.

T.60 **Angle and Stop Beads to Cement Based Plasters**

Before plastering fix metal angles and stop beads, as Clause T.24, to walls with stainless steel or galvanised nails. Ensure that the nose of the beads are plumb and square and are of the correct depth for the finish thickness of plaster.

T.61 **Application of Cement Based Plaster Undercoats**

Unless otherwise specified two undercoats of cement: lime: sand plaster shall be applied to external renderings.

The floating undercoat shall be nominally 10mm thick and in any event not less than 8mm, or more than 16mm in any part. When the undercoat has begun to stiffen it shall be combed or scratched to about 5mm deep to provide a key for the subsequent coat.

Before applying second undercoat brush down to remove dust and loose particles and damp down if necessary.

The second undercoat shall be 10mm thick and be applied and finished as the floating coat. Where the finishing coat is specified as machine applied the second undercoat shall be finished with a wood float and not combed or scratched.

T.62 **Application of Cement Based Plaster Final Coat to External Walls - Smooth**

Smooth (Nap) finishing coats of cement-lime-sand plaster to external walls shall be of a finished thickness of not less than 6mm, or more than 10mm. The final coat shall be applied with a laying trowel and finished with a wood or other suitably faced float. A steel trowel should not be used and overworking should be avoided. If an area is too extensive to complete in one operation, finish to an approved line.

T.63 **Application of Cement Based Plaster Final Coat to Internal Walls - Smooth**

Smooth finishing coats of cement : lime : sand plaster to internal walls shall be as clause T.62 except finishing shall be with a steel trowel float.

T.64 **Application of Cement Based Plaster Final Coat -Roughcast Finish**

Roughcast finish to cement-lime-sand plaster shall contain aggregates in accordance with Clause T.16.

Apply the roughcast mix while wet by throwing on with a trowel or scoop to give a wide even spread to procure a consistent texture.

If an area is too extensive to complete in one operation, finish to an approved line.

T.65 **Application of Cement Based Plaster Final Coat - Dry-Dash Finish**

Dry-dash finish to cement-line-sand plaster shall be carried out with graded aggregates in accordance with Clause T.16.

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The second undercoat (butter coat), as clause T.61, which is to receive the aggregate shall be prepared with white cement or mixed with coloured pigment as Clause T.19. The butter coat shall be drawn to a true and regular surface with a straight edge and while still plastic and soft, throw on washed wet aggregate with a wide and even spread to produce a consistent texture. Lightly press aggregate into surface with a wood float to ensure uniform adhesion over the whole surface.

If an area is too extensive to complete in one operation, finish to an approved line.

An approved waterproofer in accordance with Clause T.21 shall be added to the floating coat.

T.66
to
T.68

Nil

T.69

Use of Bonding Agents

On backgrounds where wetting is insufficient to ensure adequate adhesion or where recommended by the plaster manufacturer apply compatible bonding agent in accordance with Clause T.22.

Where an additional key to dense/strong or weak/permeable backgrounds is required apply a stipple coat comprising of a bonding agent, as Clause T.22, gauged with cement and sand, mixed and applied in accordance with the manufacturer's instructions.

T. 70
to
T. 74

Nil

T.75

Table of Plastering/Rendering Systems

The proportions stated in the following table shall be by volume. The thickness stated, unless otherwise indicated, is the overall finished thickness exclusive of any key, scudding, adhesive grout, pricking-up or dubbing out.

TABLE OF PLASTERING/RENDERING SYSTEMS			
Sys. Ref.	System	Thickness	Background

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A1	Veneer Finish Plaster as Clause T 10	2mm	Gypsum Wallboard or Composite Laminate (T3) (Internal Ceilings)
B1	Undercoat - Basecoat plaster as Clause T.7 Finishing - Lightweight Coat Finishing Plaster Type b.1 as Clause T.7	12.6mm	Brickwork and Blockwork (Internal)
C1	Scud - as Clause T.36 Floating - Cement/Lime/Sand 1:1:6 Or Cement/Readymix Lime - sand - 1:6 Finishing Coat - as floating coat Note - Ready mix lime-sand - 1:6	15mm	Brickwork and Blockwork (Internal)
C2	Scud - as Clause T.36 Floating - as C1 Finishing Coat - as C1	20mm	Brickwork and Blockwork (Internal)
	Scud - as Clause T.36 Floating - Cement/Lime/Sand 1:½:4½ OR Cement/lime-sand - 1:4½ Readymix 2 nd Undercoat - as floating coat Roughcast - Cement/Lime/Stone aggregate-1:½:3 Finish Coat Note - Readymix lime-sand - 1:9	20mm for under-coat	Blockwork Walls (External)
	Scud - as Clause T.36 Floating - as C3 but gauged with waterproofer added in accordance with manufacturers instructions Buttercoat-Cement/Lime/Sand - 1:1:5 OR Cement/Readymix lime-sand - 1:5 Dry dash Stone aggregate as Clause T.16, Finish thrown on Note: Readymix lime-sand - 1:6	20mm for under-coat	Blockwork Walls (External)

T.76
to
T.100

Nil

Section T – FINISHINGS

TILE, SLAB AND BLOCK FINISHINGS

T.101 **Generally**

All tiling shall generally comply with the following:-

- (i) Internal wall tiling to BS 5385-1:2009.
- (ii) Tile and slab flooring to BS 5385-3:2007.
- (iii) Wall and Floor tiling to Shower and Bath areas to BS 5385-4:2009.

T.102 **Preparation**

All screeds and backgrounds to receive finishings shall be dry throughout. A minimum period of 4 weeks shall elapse after the end of curing before finishings are fixed or laid on new concrete and a minimum of 2 weeks after the end of curing before finishings are fixed or laid on new cement and sand screeds or rendering. When glazed ceramic tiles are to be fixed to gypsum plaster backgrounds a minimum period of 4 weeks shall elapse between completion of plastering and commencement of tiling.

Gypsum plaster, and other backgrounds if necessary, shall be primed with a primer recommended by the adhesive manufacturer.

All surfaces to receive finishings shall be thoroughly cleaned and those to receive finishings directly bedded in cement and sand mortar shall be wetted sufficiently to prevent excessive absorption of water from the bedding.

T.103 **Nil**

T.104 **Samples**

The Contractor shall submit samples of all tile, slab and block finishings for the Architect's approval before ordering unless otherwise instructed. The approved samples shall be retained on site as the standard for subsequent deliveries.

T.105 **Nil**

T.106 **Bedding systems – Wall tiling**

Unless otherwise described tile finishings for walls shall be bedded in adhesive complying with IS EN 12004:2007 (+A1:2012) using the thin bed method in accordance with the manufacturer's instructions.

Bedding shall not exceed 3 mm total thickness for thin bed. The adhesive shall be applied to the background and ribbed with a notched trowel. Tiles shall be pressed firmly into position on the background and tapped back to achieve maximum contact and produce a flat, true surface with regular joints as described.

T.107 **Bedding Systems - Floor Finishings**

Unless otherwise described tile flooring shall be bedded in a cement based adhesive (thin bed method) bonded to the base.

Cement based adhesive shall comply with IS EN 12004:2007 (+A1:2012) and be used in accordance with the manufacturer's instructions. Thickness of the bed shall not exceed 5mm. The adhesive may be spread onto the dry base or buttered onto the backs of the tiles. Tiles shall be laid and firmly tamped down to ensure complete adhesion to the base with a level surface and joints as described.

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T.108 Filling of Joints

Joints shall be in accordance with the appropriate clause. Unless otherwise described filling of joints shall be as follows:-

Sawdust shall not be used as protection to floors before joints are filled and set.

Filling of joints shall be carried out as soon as the finishings are properly set. Joints shall be clean and free from deleterious matter. Joints to finishings bedded in mortar and to be filled with a cement and sand mix may be dampened if necessary; All other joints shall be dry.

Filling materials shall be for joints not exceeding 3mm wide in wall tiling and 6mm wide in floor tiling a water resistant compressible cementitious grout as recommended by the manufacturer of the tile adhesive used and complying with relevant sections of BS 5385-1:2009, BS 5385-3:2007 and BS 5385-4:2009 in respect to resistance to moulds and bacteria.

All filling materials shall be worked well into joints until filled flush with the surface. Proprietary materials shall be used in accordance with the manufacturer's instructions. Joints exceeding 3mm wide shall be well compacted and neatly finished with a trowel or other approved tool. Dry mixed joint filling materials, where described, shall be carefully brushed in. Surplus material shall be removed and all surfaces left clean and free from stains.

T.109 Movement Joints

Movement joints shall be provided as follows and as otherwise may be specified or shown on the drawings:-

- (i) over structural movement joints.
- (ii) at internal wall to wall angles.
- (iii) at angles with structural walls and ceilings.
- (iv) at perimeter of floors and around bases of columns.
- (v) at junctions between different background materials.
- (vi) to give bays not greater than 3000 x 4500mm on brick and block walling.
- (vii) at intervals not exceeding 4500 mm across floors.

Joints shall be not less than 6mm wide in wall tiling and not less than 10mm in floor finishes and shall be to the full depth of tiles/finishes and beddings.

Sealants and backing strips shall be gun applied silicone sealant complying with IS EN ISO 11600:2003 (+A1:2011) Type F. The sealant shall be neatly finished flush with the tile surface.

T.110 Junction Strips

Junction strips at the abutment of differing floor finishes shall be of 3mm Brass Flat for the full depth of the bedding and screed.

T.111

To Nil

T.112

T.113 Glazed Ceramic Wall Tiles

Glazed ceramic wall tiles shall be flat gloss 150mm x 150mm x 5.5mm tiles complying with IS EN 14411:2012 and shall be of the colours selected by the Architect.

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Tiles shall be fixed with adhesive by the thin bed method and shall be wiped clean and fixed dry. The tiles shall be bedded with straight joints not exceeding 3 mm wide to approved finished sample and colour.

Use Proprietary PVC edge strips to match tile at external corners and installed in accordance with the manufacturer's instructions.

T.114 **Nil**

T.115 **Sealant Strips to Baths and Showers**

Shower trays and bathtubs to be sealed to adjacent walls with PVC profile, incorporating a polythene bond breaker, filled with silicone to allow joint movement ('Sealux Reg 25' or equivalent). The seal to be fitted in accordance with manufacturers instructions. Soft lipped seals are not acceptable.

Sealant shall be to be gun applied silicone sealant complying with IS EN ISO 11600:2003 (+A1:2011) Type F and must be as supplied by the profile manufacturer ('Sealux N' or equivalent).

T.116 **Floor Tiles to Shower Areas**

Where shown on drawings Clay floor tiles to shower areas shall be 150mm x 150mm x 12mm dust-pressed ceramic tiles (Vitrified 3%) in accordance with IS EN 14411:2012, (Pilkingtons Dorset Stone Surefoot range or equivalent) to selected colour shall have a complementary range of coves and angles to form 100mm skirtings and upstands.

The tiles shall be clean and fixed dry with straight joints 3mm wide of approved finished sample and colour.

T.117
to
T.124 **Nil**

T.125 **Plastic Floor Tiles**

Vinyl floor tiles shall be 2mm thick through coloured homogenous vinyl marbleised floor covering complying with IS EN 649:2011 and classified 34/43 to IS EN 10874:2012 ('Tarkett Sommer Standard' or Polyflor Standard XL' or 'Gerflex Architecton' or equivalent). The tiles shall be either 300mm x 300mm or 500mm x 500mm in size in colours to the Architects selection.

No flooring shall be laid until all other internal work is complete. The tiles shall be laid by a specialist firm in accordance with BS 8203:2001 (+A1:2009) and the manufacturer's recommendations and with an adhesive approved by said manufacturer. Border cuts shall be 75mm minimum unless otherwise agreed by the Architect.

T.126 **Plastic Sheet Floor Covering**

Anti-slip vinyl sheet flooring shall to be provided in all shower rooms and bathrooms.

The anti-slip vinyl sheet flooring shall be 2mm thick through coloured homogenous vinyl ('Altro T20' or equivalent). It shall be extended 100mm vertically up walls to form skirting and all joints shall be welded.

Where laid on Suspended timber floors a sub base of 9mm plywood as Clause N.43 fixed to T&G flooring, as Clause N.37

No flooring shall be laid until all other internal work is complete. The sheet shall be laid by a specialist firm in accordance with BS 8203:2001 (+A1:2009) and the manufacturer's

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recommendations and with an adhesive approved by said manufacturer. Border cuts shall be 75mm minimum unless otherwise agreed by the Architect.

T.127
to
T.150

Nil

BITUMEN MACADAM PAVING

T.151 Bitumen Macadam

Bitumen macadam for play areas and footpaths etc. shall be made in accordance with BS EN 13108-1:2006 and should conform in respect of aggregate grading, binder content, grade of binder and mixing temperature with the appropriate tables of that standard.

T.152 Formation

Bitumen macadam shall be laid on an approved sub-base on a trimmed graded and compacted formation.

All topsoil over the pavement areas shall be removed.

Where the resulting subgrade levels are lower than those specified in the drawings, low areas shall be made up with approved granular material adequately compacted in 225mm layers. Where, after topsoil removal, the subgrade levels are higher than those specified, the subgrade shall be further excavated, trimmed, graded and compacted to the required levels.

The sub-base shall consist of 200mm (driveways) or 100mm (footpaths) depths of granular material in conformity with Clause 804 of the "Specification for Road Works" by the NRA(National Roads Authority). Compaction of the sub-base material shall be in accordance with Table 8/1, Clause 802 of the 'Specification for Highway Works' or until there is no further movement under the roller. Ensure that pyrite material is excluded.

T.153 Application

The bitumen macadam shall be transported, spread and compacted in accordance with BS 594987:2010.

All joints in the pavement and all concrete retaining structures shall be edge-coated with bitumen prior to laying. The bitumen macadam shall be machine laid where possible and hand laying shall only be permitted for laying regulating courses of irregular shape and varying thickness or in confined spaces where it is impracticable for a machine to operate.

The Contractor shall submit a paving schedule for approval before commencement which clearly indicated the extent of hand laid areas and whether cut back bitumen or slow set additives are necessary to facilitate the laying program.

Any material which has set (material outside the BS 594987:2010 laying temperatures ranges) before proper compaction must be removed. The bitumen macadam should be compacted with a 2.5 tonne (minimum) roller until a smooth even surface has been obtained and all wheel tracks have disappeared. Hand tamping shall only be permissible in areas inaccessible to rolling.

T.154 Tolerance

The bitumen macadam shall be laid to the levels and falls indicated on the drawings.

The finished thickness of the wearing course macadam shall not be less than 50mm (footpaths) or as otherwise indicated on the drawings for avenues, car-parks and playgrounds.

The surface level of the laid wearing course shall not deviate vertically by more than 10mm when measured under a 3m straight edge laid in any horizontal direction.

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Appendix A: List of References and Standards. (Part 1)

Item No.	Clause	Reference	Comment
1.	T.1	IS EN 520:2005+A1:2009	Gypsum plasterboards - Definitions requirements and test methods. (Revised Amendment 2009)
2.	T.7	IS EN 13279-1:2008	Gypsum binders and gypsum plasters – Part 1: Definitions and requirements. (to replace IS EN 13279-1:2005)
3.	T.13	IS EN 197-1:2011	Cement – Composition, Specifications and conformity criteria, for common cements. (to replace IS EN 197-1:2004)
4.	T.15	IS EN 998-1:2010	Specification for mortar for masonry – Part 1: Rendering and plastering mortar. (to replace IS EN 998-1:2003)
5.	T.16	IS EN 12620:2013	Aggregates for concrete. (to replace IS EN 12620:2002)
6.	T.22	BS 5270-1:1989	Bonding agents for use with gypsum plasters and cement. Specification for Polyvinyl Acetate (PVAC) emulsion bonding agents for indoor use with gypsum building plasters.
7.	T.22	IS EN 13914-1:2005 IS EN 13914-2:2005	Design, Preparation and application of external rendering and internal plastering – Part 1: External rendering. Design, Preparation and application of external rendering and internal plastering – Part 2: Design considerations and essential principles for internal plastering.
8.	T.22	BS 8481:2006	Design, Preparation and application of internal gypsum, cement, cement and lime plastering systems - Specification.
9.	T.24	IS EN 13658-1:2005 IS EN 13658-2:2005	Metal lath and beads – definitions, requirements and test methods – Part 1: Internal plastering. Metal lath and beads – Definitions, requirements and test methods – Part 2: External rendering.
10.	T.26	BS 8212:1995	Code of practice for dry lining and partitioning using gypsum plasterboard.

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Appendix A: List of references and Standards, continued... (Part 2)

Item No.	Clause	Reference	Comment
12.	T.101	BS 5385-1:2009 BS 5385-3:2007 BS 5385-4:2009	Wall and floor tiling – Part 1: Design and installation of ceramic, natural stone and mosaic wall tiling in normal internal conditions – Code of practice. (to replace BS 5385-1:1995) Wall and floor tiling – Part 3: Design and installation of internal and external ceramic and mosaic floor tiling in normal conditions – Code of practice. (to replace BS 5385-3:1989) Wall and floor tiling – Part 4 Design and installation of ceramic and mosaic tiling in special conditions – Code of practice. (to replace BS 5385-4:1992)
13.	T.106	IS EN 12004: 2007 + A1: 2012	Adhesives for tiles – Requirements, evaluation of conformity, classification and designation. (to replace IS EN 12004: 2001)
14.	T.109	IS EN ISO 11600:2003 + A1: 2011	Building construction – Jointing products – classification and requirements for sealants. (to replace IS EN ISO 11600: 2004)
15.	T.113	IS EN 14411:2012	Ceramic tiles – Definitions, classification, characteristics, evaluation of conformity and marking. (to replace IS EN 14411:2006)
16.	T.125	IS EN 649:2011	Resilient floor covering – Homogeneous and heterogeneous polyvinyl chloride floor coverings – Specification. (to replace IS EN 649:1997)
17.	T.125	IS EN ISO 10874:2012	Resilient, textile and laminate, floor coverings – classification. (to replace IS EN 685:2005)
18.	T.125	BS 8203:2001+A1:2009	Code of practice for installation of resilient floor coverings. (to replace BS 8203:2001)
19.	T.151	BS EN 13108-1:2006	Bituminous mixtures – Material specification – Part1: Asphalt Concrete. (to replace BS 4987-1:2005)
20.	T.152	'Specification for Road Works' by the NRA.	Series 800: 'Road Pavements – Unbound and Cement Bound Mixtures', Clause 804: Granular Material Type B. (Current version at time of revision; March 2013) (Fixed typo, to now read as the by the NRA, not DoEHLG)

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Appendix A: List of References and Standards, continued... (Part 3)

Item No.	Clause	Reference	Comment
21.	T.152	'Manual of Contract Documents for Highway Works' by the NRA.	Volume 1, Specification for Highway Works, Series 800: 'Roads Pavements – Unbound, Cement and Other Hydraulically Bound Mixtures', Clause 802, Table 8/1. (Current version at time of revision; November 2009)
22.	T.153	BS 594987:2010	Asphalt for roads and other paved areas – Specification for transport, laying, compaction and type testing protocols. (to replace BS 4987-2:2003)

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Appendix B: Amendments List	
Date of Amendments	Amendments
1/05/2014	This section was amended by Barry Sheils and approved by David Byrne, Senior Architect, Fingal County Council.