

Typical external wall buildup
Minimum U-Value required 0.15W/m²K
 Scale 1 : 10

- Specification Notes:**
- All work to be carried out in accordance with the up to-date Irish Building Control Regulations and the latest edition of the Building Regulations.
 - All drawings to be read in conjunction with all relevant Architects drawings and specifications.
 - Setting out to Architects details.
 - Any discrepancies between drawings, specifications, sketches, verbal instructions & site conditions to be referred to the design team before work commences.
 - The position of opens less than 150mm x 150mm have not been shown. This information should be checked with the relevant drawings supplied by Architects or Service Engineer & confirmed with Structural Engineer.
 - Engineer to inspect foundations before blinding. Provide minimum of 24 hours' notice in advance of inspection.
 - All d.p.c.'s & radon barriers to Architects details.
 - All temporary works necessary shall be the sole responsibility of the contractor

- Aggregates:**
- All aggregates used under ground floor slabs, footpaths etc are to be in accordance with SR. 21: 2014 + A1: 2016 Annex-E Aggregates for use as hardcore under concrete slabs and footpaths.

- Concrete:**
- Cover to reinforcement shall be as shown, where not shown, nominal cover shall be in accordance with EN 1992-1-1 and the Irish National Annex, based on exposure class, fire resistance and bar diameter, unless noted otherwise, nominal cover shall be taken as 50mm to foundations and 30mm to internal slabs.

- Minimum lap lengths shall be in accordance with EN 1992-1-1, unless noted otherwise, provide a minimum lap of 450mm for mesh reinforcement.
- Concrete grades, strength classes and exposure classes shall comply with EN 206 and EN 1992 1 1 (Irish national annex), unless noted otherwise.

- Typical concrete designations are as follow:
 - External concrete slabs exposed to weather and frost: C30/37, XF3, (air entrained)
 - Structural concrete ground beams and floor slab cast in ground (not exposed to freeze-thaw): C30/37, XC2
 - Concrete blinding to foundations: C20/25, X0, nominal thickness 50mm unless noted otherwise.

- concrete specifications, including durability requirements, cement type and any air entrainment, shall be confirmed with the engineer prior to construction.
- Concrete testing shall be in accordance with EN 206. Minimum sample frequency shall be one sample (3 cubes) per 10³ of fresh concrete for testing at 7 and 28 days.

- Blockwork:**
- All blockwork to be constructed with dense concrete solid blocks with a minimum compressive strength of 7.5N/mm². U.N.O. Wall thickness as shown on the drawings.
 - Use grade M4 mortar.

- Stainless steel cranked wall ties to be provided to tie the outer blockwork leaf to the timber frame.
 - Horizontal spacing: 400mm c/c to match the stud spacing.
 - Vertical spacing: 450mm generally and 225mm at openings and either side of vertical movement joints

Wall ties should be fixed through the sheathing material with the nails supplied with the ties into the timber studs. The location of the timber studs should be identified by vertical lines on the breather membrane. Wall ties should provide a minimum of 50mm embedment into the blockwork outer leaf.

Extra wall ties are required at the jambs of openings and movement joints as shown in Diagram 9 of TGD A of the Irish Building Regulations.

All Wall ties to comply with IS. EN 845-1

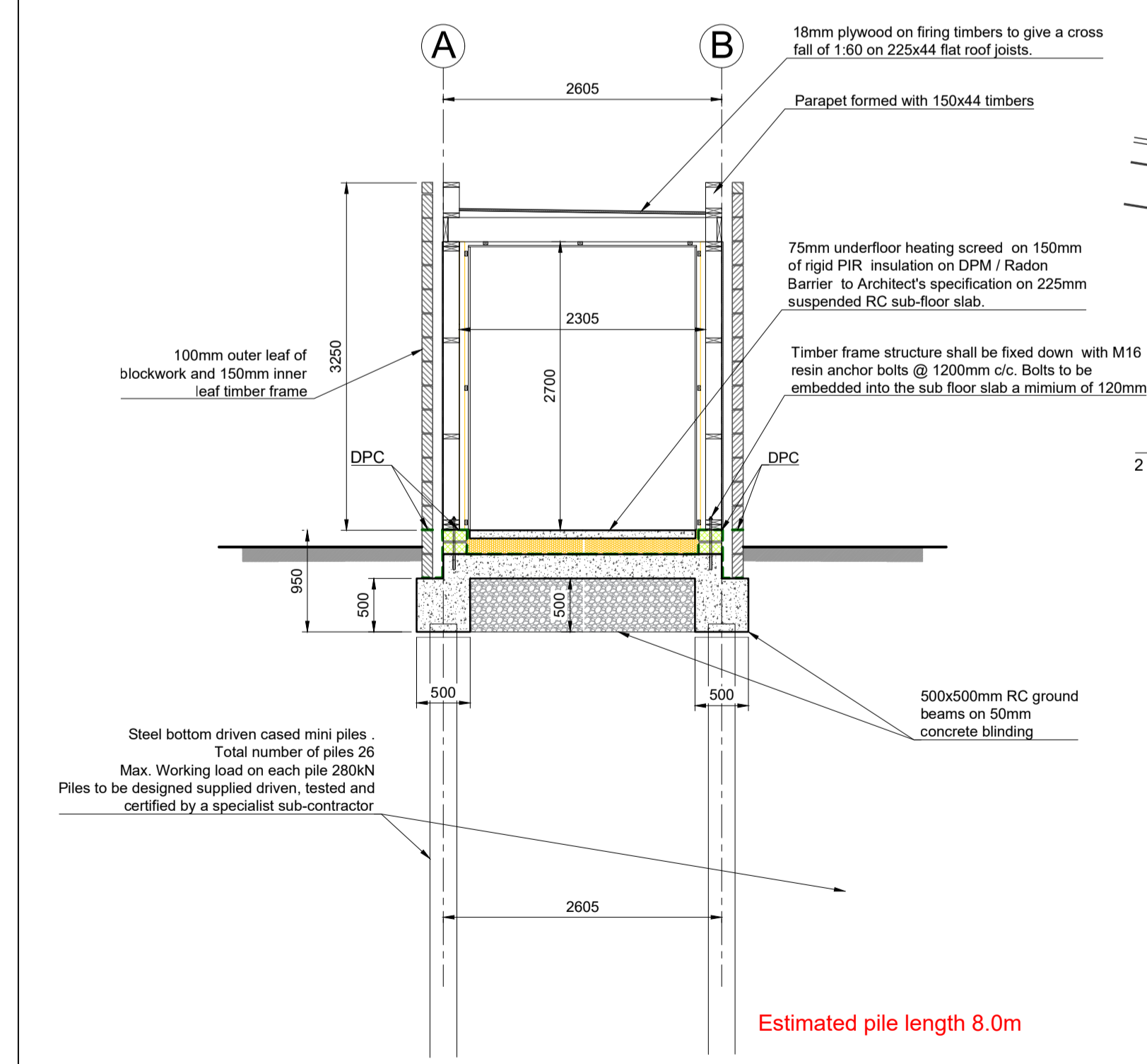
- Provide concrete bearing pads to all steelwork beam supports onto masonry. U.N.O.

- Timber**
- All structural timber to be grade C16 or better.
 - All steel-timber fixings to be sherardized including screws, nails, bolts and connectors.
 - Floor joists to be doubled up under stud partitions.
 - All doubled up timber joists/trimmers to be bolted together using M12 bolts staggered at 900mm c/c
 - Floor joists may be drilled in accordance with IS444. Notching is not allowable.
 - All timbers to be chemically treated at support ends.

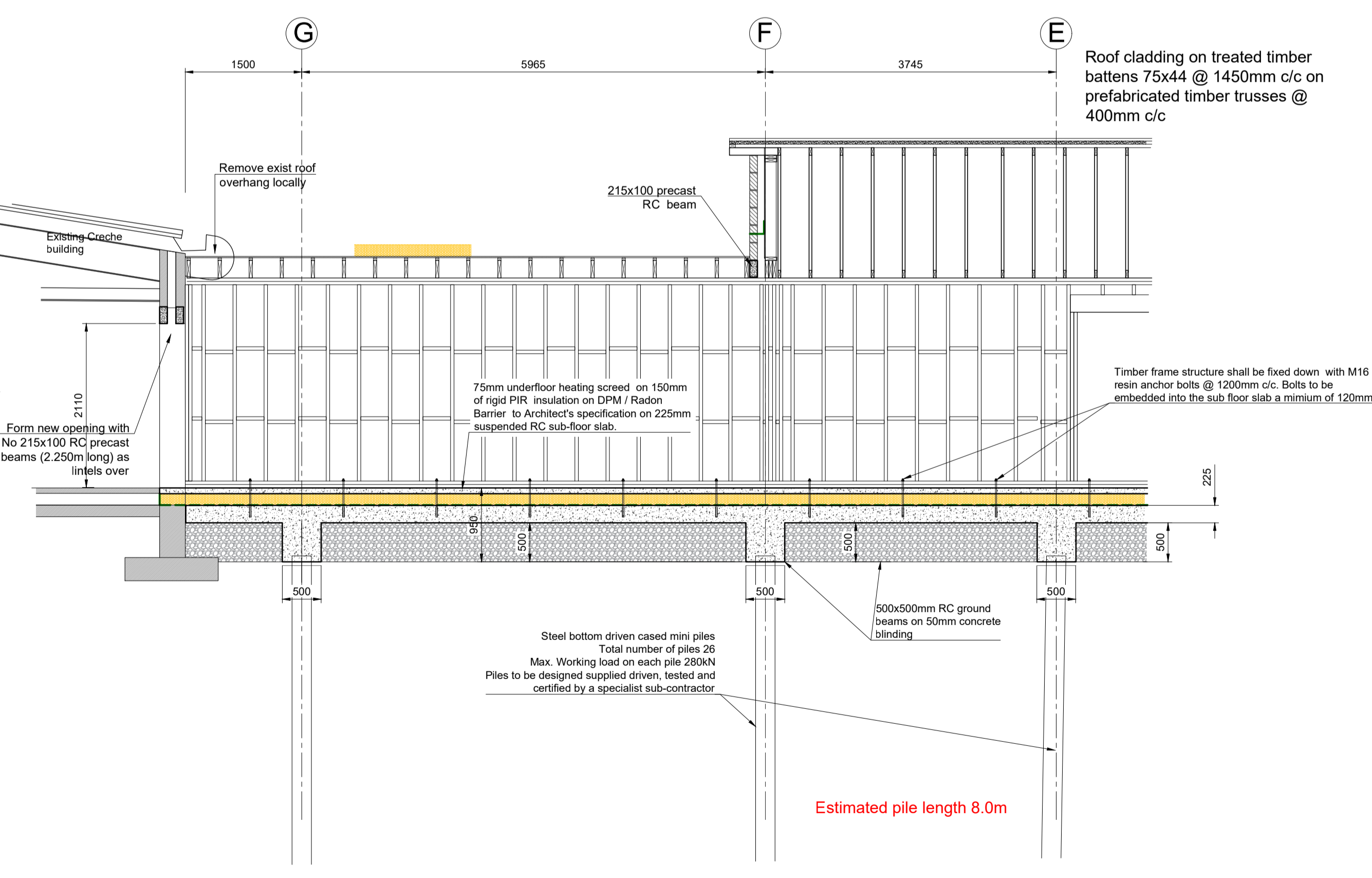
- Steelwork**
- All structural steelwork to be grade S355 u.n.o.
 - All welds to be 6mm full profile fillet welds u.n.o.
 - All bolts to be grade 8.8 u.n.o.
 - Steel posts below ground level to be painted with bituminous paint and surrounded with minimum of 50mm concrete cover
 - Surface Preparation and Painting of Steelwork: All steel work unless hot dipped galvanized to be:
 - Surface Preparation: Blast clean SA2.5
 - Primer Acrylated Rubber Primer 75 microns
 - Barrier coat Acrylated Rubber barrier coat 40 microns

- Provide a minimum of 30 minutes fire protection to all structural steelwork.
- All Stainless Steel to be grade 316.

Section A-A
 Scale 1 : 50



Section C-C
 Scale 1 : 50



Section D-D
 Scale 1 : 50

Tender Drawing

Gerry Gallagher, Consulting Engineer 11 Booterstown, Dunmore Road, Waterford. Tel. 087 2345669 ggstructuraldesign@gmail.com	Project:	Extension to Bright Sparks Community Childcare Centre, Station Road, Allenwood	Sheet size:	A1
	Client:	O'Loughlin Architects Ltd.	Date:	May 2026
	Drawing Title:	Sections	Scale:	1:50
	Drawn By:		Check By:	2025-10-03