

**Heating System:** Underfloor heating on Ground Floor and suitably sized Low Temperature Radiators at First Floor Level. Suitably sized Hitachi Air to Water Heat Pump or similar approved Heat Pump to be installed, tested in accordance to EN 14825 for space heating and EN 16147 for Domestic Hot Water. EcoDesign Data for selected heat pump to be provided for approval prior to installation. Calculations for sizing radiators and non-default Flow Temperatures to be in compliance with SEAI Technical Bulletin July 2020 and such calculations etc provided to BER Assessor once the system has been designed and before installation. Hot water storage to comprise of an Integrated Storage Unit. All Central heating pumps to have an EEI of 0.23 or less. Flow restrictors to be installed on all showers.

**Ventilation:** Vent Axia Sentinel Multivent or similar approved Centralised Mechanical Extract Ventilation Unit to be installed in Attic Space as per manufacturers instructions and ducted to all wet rooms. All ducting that extracts air from all wet rooms to be rigid ducting system or approved Semi Rigid Duct system only taken from the ncm-pcdb.org (Appendix Q) Database. Approval of CMEV Unit and selected Duct system required prior to installation. Controllable Wall Vents to be installed in all habitable rooms and ventilation system to be designed to allow adequate air supply in accordance with Part F 2019. Ventilation system to be validated by an independent validator from the NSAI register after commissioning. Separate mechanical extract fan to be installed over Kitchen Cooker. Final Air Permeability Test to achieve a result of 3.0 m<sup>3</sup>/hr/m<sup>2</sup> or lower and test to be carried out by registered NSAI tester.

Ridge Level  
+8.635

Min. 350mm Earthwool Insulation or similar approved at Ceiling Level, 150mm Insulation between Timber Ceiling Joists and 200mm laid perpendicular over all timber joists, with Siga or similar approved Air Tightness membrane to underside of joists, 12.5mm plasterboard & gypsum skim finish, 3 No. coats of selected emulsion paint finish. Xtratherm LoftWalk to be installed (75mm PIR plus 11mm OSB) where access is required to cold water storage.

Provide 10mm wide continuous vent strip along the full length of the roof eave or approved slate vents providing equivalent rate of air flow to provide ventilation to Timber Roof Structure/ Attic Space.

Additional Wall Ties required at top of cavity wall & around openings. Top of Cavity closed with Kingspan Kooltherm Insulated Cavity Closer. Gable walls should be strapped to roofs as shown in Diagrams 7 (a) and (b) TGD Part A 2012 by 30 x 5 mm tension straps. Vertical strapping at least 1000 mm in length should be provided at eaves level at intervals not exceeding 2000 mm as shown in Diagram 7 (d) TGD Part A 2012.

Ceiling Level  
+5.430

Approved roof tiles laid on, 50 x 38mm treated timber battens, with Tyvek Supro or similar approved Roofing Membrane over Truss Roof manufactured and Installed to Structural Engineers Specifications

All fascia, soffits and rainwater goodsto be appropriately sized proprietary PVC to meet relevant standard.

First Fl Level  
+2.925

BATHROOM  
1800

**Intermediate First Floor:**  
18mm Plywood  
screwed down to PS10 MiTek Posi Joists 253mm deep @400mm centres, with 12.5mm plasterboard

BEDROOM 3  
1830

KITCHEN / DINING

HALLWAY

Riser: 195mm  
Going: 250mm  
15 No. Risers  
2R+G = 640

Ground Fl Level  
+0.000

CompactFoam or similar approved Insulated Door Threshold Unit,

Ground Floor: Compacted 804 Hardcore fill installed in layers of 150mm, sand blinding with Monarflex RBM 400 Radon resisting membrane or similar approved, Raft foundation installed as per Structural Engineers Specification, damp proof membrane placed under 2 No. Layers of 75mm Kingspan Kooltherm K3 Insulation staggered and taped (150mm Kingspan K3 total depth), underfloor heating pipes secured to insulation, with 60mm CemFloor Screed or similar approved and selected Floor Finish.

QuinnLite or similar approved Thermal Block laid at first course of inner leaf blockwork of external walls and Internal Separating block walls rising from the Raft Foundation. Min. of 30mm PIR floor edge insulation to be placed at the perimeter of each room achieving an R-Value of greater than 1.0 m<sup>2</sup>K/W

**Detail 04**  
Dwg 2019-181

Select Colour Render Finish to 100mm block outer leaf, 175mm cavity with fullfill Bead Cavity Insulation (thermal conductivity of 0.033W/<sup>2</sup>K or less) Ø 4.5mm Ancon or similar approved stainless steel wall ties, staggered 750mm horizontally and 450mm vertically, 4.9 ties per sqm, 100mm Block Inner Leaf, with sand cement Render to inner face of Inner Block Leaf (Air Tight Layer) with Gypsum Skim Coat Finish. Target U-Value 0.18 W/m<sup>2</sup>K or less. Wall ties to be installed in accordance with Diagram 9 TGD Part A Structure 2012

Approved Finish uPVC Double Glazed Windows, Argon Filled- Low-E Soft Coat with an Overall U-Value of 1.3 W/2mK or less. NSAI / BFRS Certs required prior to installation.

**W I N D O W S**  
SAFETY GLASS IN ACCORDANCE WITH BS 6262, PART 4 to be used:  
a) Where glass is 800mm or less above local floor level, local balcony level, local ground or walking level.  
b) Where glass is 1500mm or less above local floor level, local balcony level, local ground or walking level in glazed doors.  
c) Glazed side panels for a distance of 300mm from either edge of door up to a level of 1500mm above local floor level, local balcony, local ground or walking level.  
Provision for Fire Escape: All bedroom windows, including to have openings casement/lights to provide a clear fire escape ope at least 0.33sqm with a minimum width & height of 450mm, bottom of opening not more than 1100mm and not less than 800mm above floor level. All ironmongery in escape window to be readily openable.

**Detail 02**  
Dwg 2019-180

F	-	-
E	-	-
D	-	-
C	-	-
B	-	-
A	-	-
Revision Suffix	Revision details	Date

Client  
LIME HILL ESKER LTD

Job title  
DUNLO SHD, BALLINASLOE, Co. GALWAY

Drawing title  
PROPOSED HOUSE TYPE C - SEMI-DETACHED - SECTION

**R. G. GREENE & ASSOCIATES**  
Consulting Engineers  
Civil, Environmental & Structural  
Caher House, Loughrea, Galway, H62 FF61  
Tel 087 2596296  
Email ronnie@greene.ie

chkd. R.G.	date 13/12/2021	scale 1:50 @ A3	drawn WG	rev
DRAWING No	2521 - 132			-

**SECTION A-A**  
**SCALE 1:50**