



Standardised Residential Construction Details for LGS Category 2 MMC – STANDARDIZE

MMC Ireland Conference
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Overview

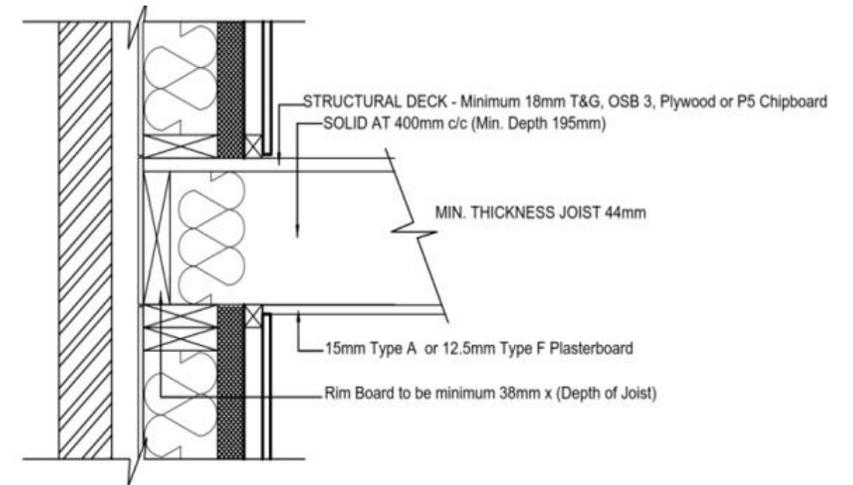
- Overview of the Standardize project
- Current landscape of MMC in Ireland
- Choice of light-gauge steel for the Standardize project
- Existing light gauge steel residential construction ACDs
- Mapping Agrément certificates for ACDs & gap analysis for experimental testing
- Future plans



Standardize Project

- Feedback from industry around the **need for standardised details** for residential construction
- **Support HfA** delivery of new housing
- **Open-source MMC standardised construction performance / details** (Structure, Fire, Energy, Durability, Resistance to Moisture and Sound) for key junctions and build-ups
- The design and testing of the details are intended to **achieve the performance requirements of the Building Regulations** to support the mainstream development and uptake of the identified MMC system.

Part	Building Regulation Compliance	Cost of testing (accredited facilities)
A	Structure	€ 120,000
B	Fire	€ 960,000
C	Resistance to moisture	€ 450,000
E	Sound	€ 90,000



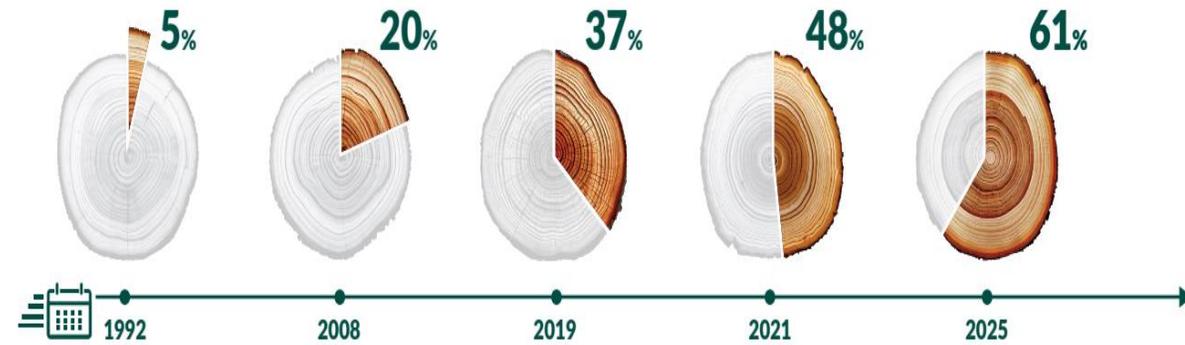
Section

Figure 1(a) Solid Joists @ 400mm c/c

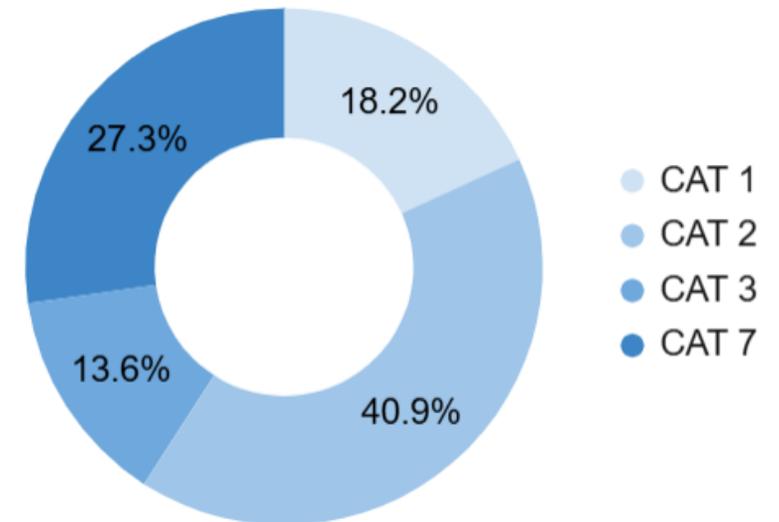
Landscape of MMC Standards/Guidance

Existing Standards/Guidance

- Concrete Centre (2007) Design and Construction using ICF (**Cat 7**)
- **IS 440:2009 Timber frame dwellings (Cat 2)**
- SCI P402 (2015) – Light steel framing in residential construction (**Cat 2**)
- Concrete Centre (2019) Offsite concrete construction (**Cat 1-3**)
- PAS 8700:2025 MMC for new build residential (**Cat 1,2**)
- ISO/TC 59/SC 19 Prefabricated building (**Cat 1**)



Timber Frame Growth (DHLGH 2026)



22 No. MMC Agrément certificates -
Building Systems (NSAI website)

BCMS MMC Data

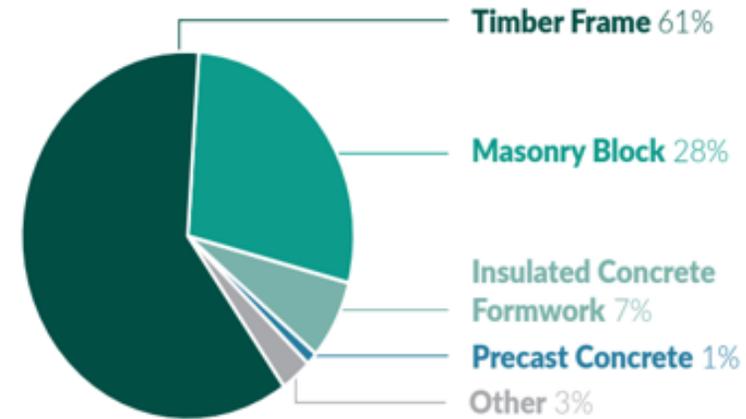


"Main Method of Construction" has a drop-down menu with the following options to choose from:

- Standard Construction (Non-MMC)
- MMC Category 1 3D Volumetric Primary Structure
- MMC Category 2 2D Panelised
- MMC Category 3 Non-systemised
- MMC Category 4 Additive manufacturing
- MMC Category 7 Site Process

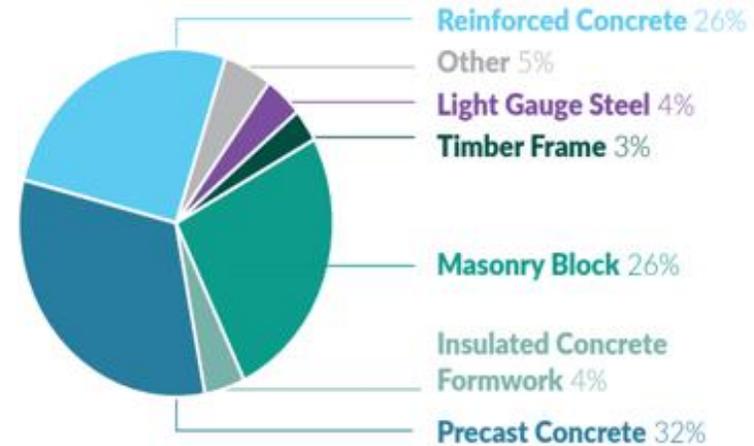
Overall MMC Data July-December 2025 (DHLGH 2026)

Housing Schemes



69% MMC

Apartments



44% MMC

Selection of Category 2 LGS for Standardize

Workshop 1 June 2025 Outcomes

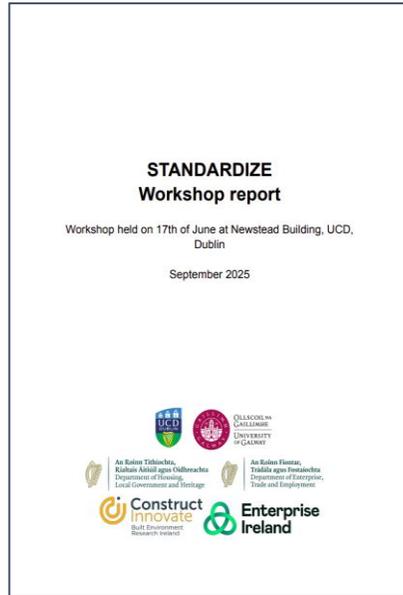


Table 5: Ranking matrix (1-very low, 2-low, 3-medium, 4-high, 5-very high)

Factor	Weighting	Cat 1 Steel Frame	Cat 2 LGS	Cat 1, 2,3 Concrete	Cat 1 Mass timber	Cat 2 Timber frame	Cat 7 ICF
1. Engagement	1.5	5	5	3	3	2	5
2. Commitment	1.5	4	5	3	3	2	4
3. Industry needs	1.0	4	4	1	3	1	4
4. Market maturity	0.5	3	4	5	2	5	4
5. Typologies	1.0	5	5	5	3	2	4
6. Scalability	1.0	3	4	5	3	4	5
7. Risks for medium/high-rise	1.5	5	5	5	2	2	4
Total score		34.5	37.5	30	22	18.5	34.5



Acceptable Construction Details LGS – Part L

Rialtas na hÉireann
Government of Ireland

Technical Guidance Document L

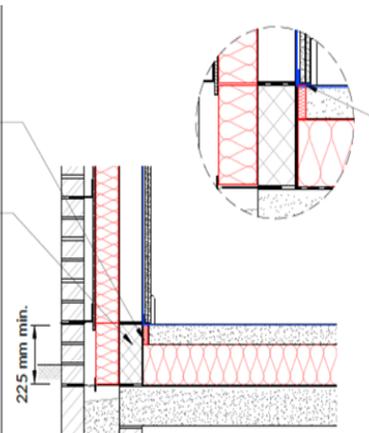
Limiting Thermal Bridging and Air Infiltration
Acceptable Construction Details
2021 Edition

Prepared by the Department of Housing, Local Government and Heritage
housing.gov.ie

THERMAL PERFORMANCE
CHECKLIST (TICK ALL)

- Install edge insulation with min. R-value of 0.75 m²K/W to perimeter of floor screed
- Ensure block with a maximum Thermal Conductivity of 0.20 W/mK in the direction of heat flow is used beneath the steel framing to the floor edge
- Ensure wall insulation is installed at least 225 mm below top of floor

EXTERNAL WALL WITH A GROUND FLOOR

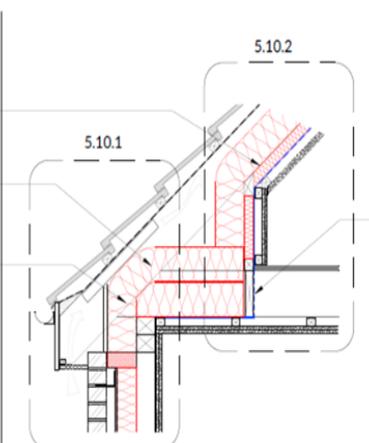


AIR BARRIER - CONTINUITY
CHECKLIST (TICK ALL)

- Seal between wall and floor air barriers with suitable airtightness tape or a flexible sealant
- Seal all penetrations through air barrier with suitable airtightness tape, grommets or flexible sealant

THERMAL PERFORMANCE
CHECKLIST (TICK ALL)

- Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation
- Ensure full depth of insulation between and over joists abuts eaves insulation
- Ensure gap between wall plate and proprietary eaves vent is completely filled with insulation having a minimum R-value across the insulation thickness of 4.58 m²K/W
- Ensure continuity of insulation throughout junction



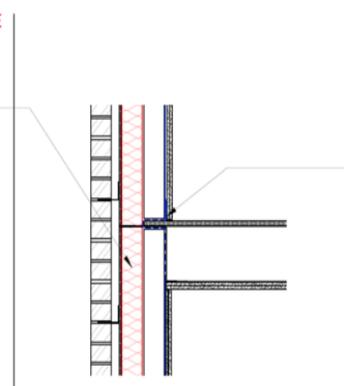
AIR BARRIER - CONTINUITY
CHECKLIST (TICK ALL)

- Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier
- Full-depth nogging installed between ceiling joists to carry air barrier through ceiling zone, sealed to air barrier in roof with airtight tape and/or flexible sealant
- Seal all penetrations through air barrier with suitable airtightness tape, grommets or flexible sealant

INTERMEDIATE FLOOR WALL

THERMAL PERFORMANCE
CHECKLIST (TICK ALL)

- Continue wall insulation across floor abutment zone



AIR BARRIER - CONTINUITY
CHECKLIST (TICK ALL)

- If using wall lining to form air barrier, ensure air barrier continuity between upper and lower wall linings. A flexible membrane installed around floor edge may be used to provide this continuity. (Dotted blue line is notional, to depict the air barrier continuity through floor zone)
- Seal all penetrations through air barrier with suitable airtightness tape, grommets or flexible sealant

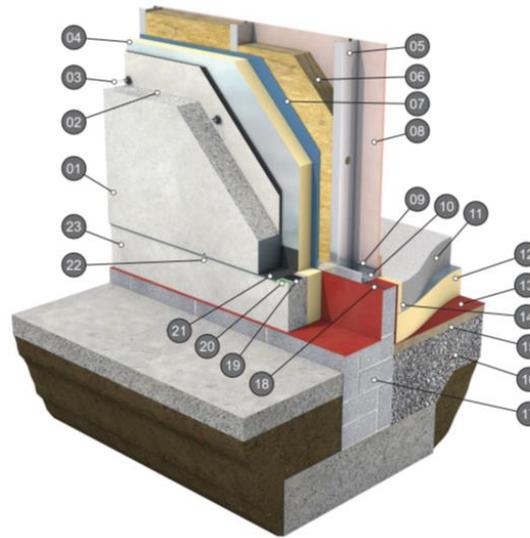
UNVENTILATED EAVES WITH AN INSULATION BETWEEN AND UNDER RAFTERS

Gap Analysis & Mapping Agrément

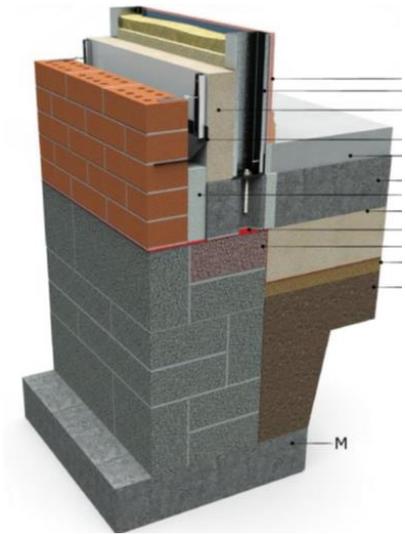
Construction Details	Carlow	Frame form	Frame Space	Greenstone	Metal frame const.	Remagin	Steel frame	Vision built	IS 440 (Timber frame)
External wall	✓	✓	✓	✓	✓	✓	✓	✓	✓
Internal wall	✓	✓	✓	✓	✓	✓	✓	✓	✓
External Cladding and Wall Ties	✓	✓	✓	✓		✓	✓	✓	✓
Roof	✓	✓	✓	✓	✓	✓	✓	✓	✓
Internal linings/finishes	✓	✓	✓	✓	✓	✓	✓	✓	✓
Connections	✓	✓			✓	✓	✓	✓	✓
Frame elements	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fasteners and connection joints	✓	✓	✓	✓	✓	✓	✓	✓	
Racking resistance	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	
Fixings	✓	✓	✓	✓	✓	✓	✓	✓	✓
Party wall / separating wall	✓	✓	✓		✓	✓	✓	✓	✓
compartment wall, compartment floor	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Intermediate floor		✓	✓	✓		✓	✓	✓	

Standardize Next Steps

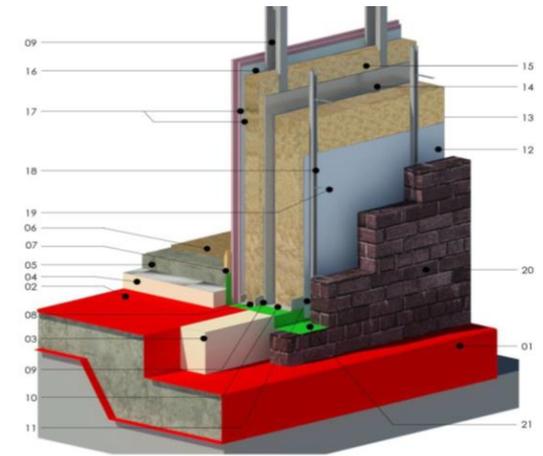
- Sharing of Agrément data to develop into ACDs – Glenveagh/NUA, Remagin & Vision Built
- Gaining understanding of the legal status of ACDs
- Agrément gap analysis to inform experimental testing
- Stakeholder group (53 members - meet monthly) and currently setting up a steering group of independent experts (meet bi-annually)



NUA



VISION BUILT



REMAGIN



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OF GALWAY



An Roinn Fiontar,
Trádála agus Fostaíochta
Department of Enterprise,
Trade and Employment

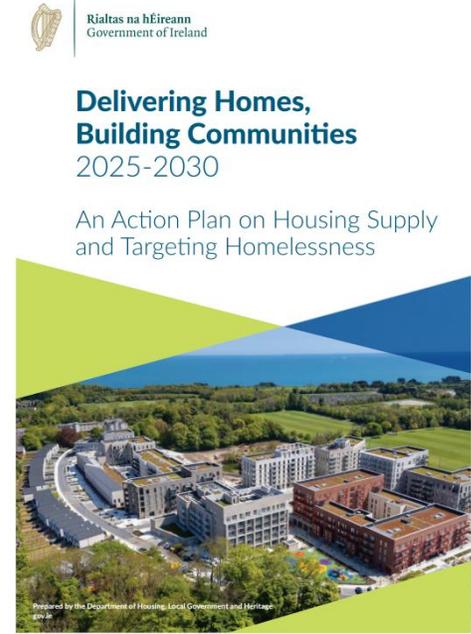


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Department of Housing,
Local Government and Heritage



Standardize – LGS Irish Standard

- NSAI Standards setting up **LGS Standards Committee** to develop Irish standard for light gauge steel residential construction
- Expression of interest to join the committee
- First meet of this committee this month



Section 3.6: “Further, the development of an appropriate Irish Standard for new technologies, such as light gauge steel, similar to that already in place for timber frame dwellings, could assist the development and usage of panelised and modular construction.”



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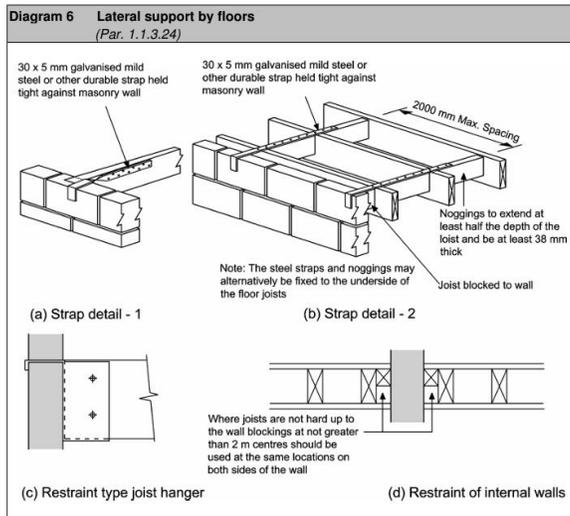
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Department of Housing,
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Repeatability and Scalability

STANDARDIZE ACDs for Cat 2 LGS MMC

Standardised typologies



Standardised Design Approaches Study Stakeholder Workshop

Work in Progress

Hawkins\ Brown Studio Ireland



Reduced risks
Compliance
Repeatability
Scalability





Thank you

Please feel free to contact the team

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