



Rialtas na hÉireann  
Government of Ireland

# Housing for All and Modern Methods of Construction (MMC) NBCO MMC CPD Day 2<sup>nd</sup> April 2025

Climate & Construction Innovation Unit  
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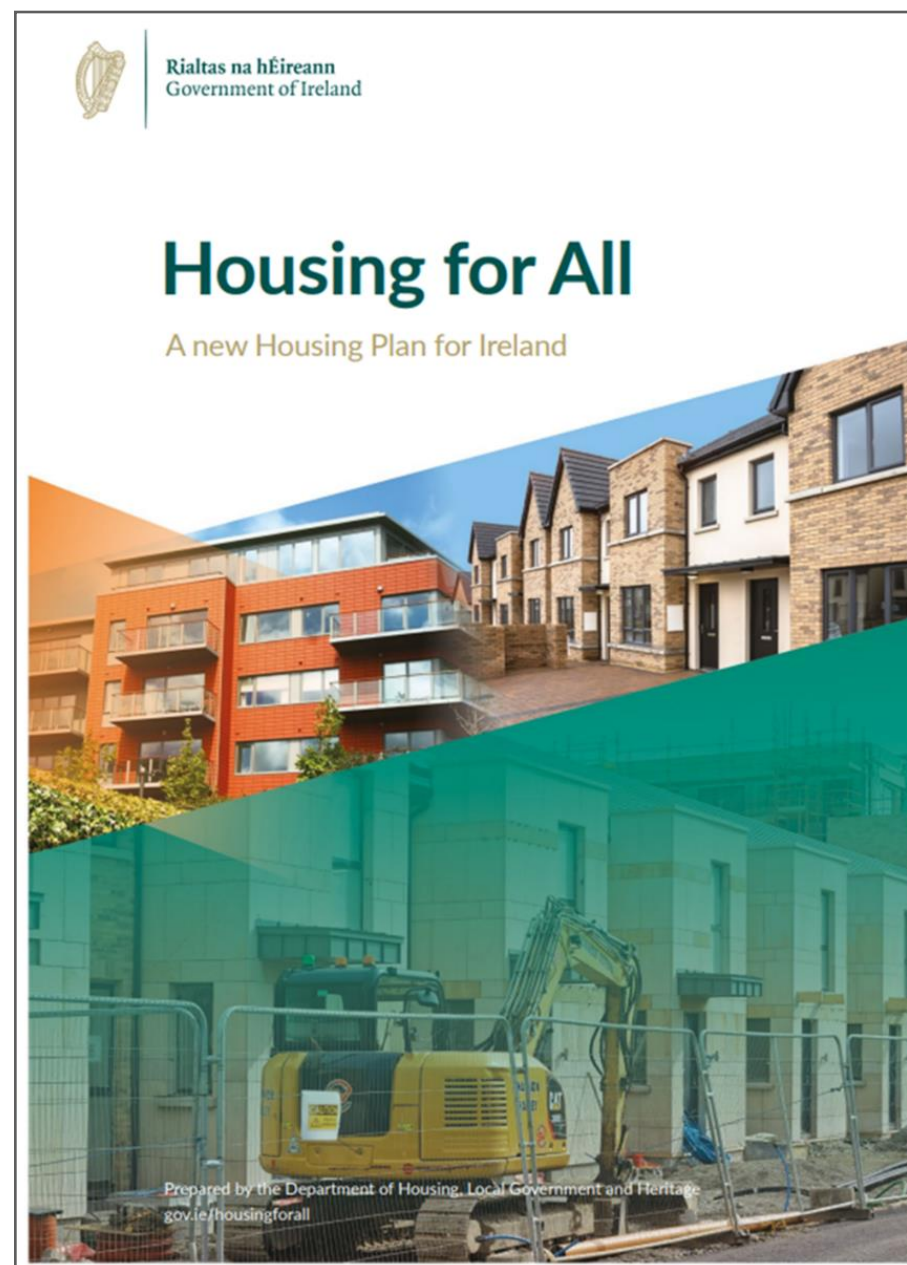
# Content

1. Policy Context
2. Terminology
3. Key Initiatives
4. Programme for Government
5. MMC and Building Control



# 1. Policy Context

# Government's Housing for All Plan



*Aim is that ‘...**everyone** in the State should have access to a home to purchase or rent at an **affordable price**, built to a **high standard** and in **the right place**, offering a high quality of life’.*

- All of Government plan (2021) led by Department of Taoiseach
- 2025-2030 – target of **303,000** new homes
- 2025 - **€6 billion** capital investment
- Housing for All identifies MMC as ‘a *key measure to boost productivity & reduce construction cost in housing delivery*’.
- Housing sector accounts for about half of total value of construction sector and about half the labour force work in housing sector.

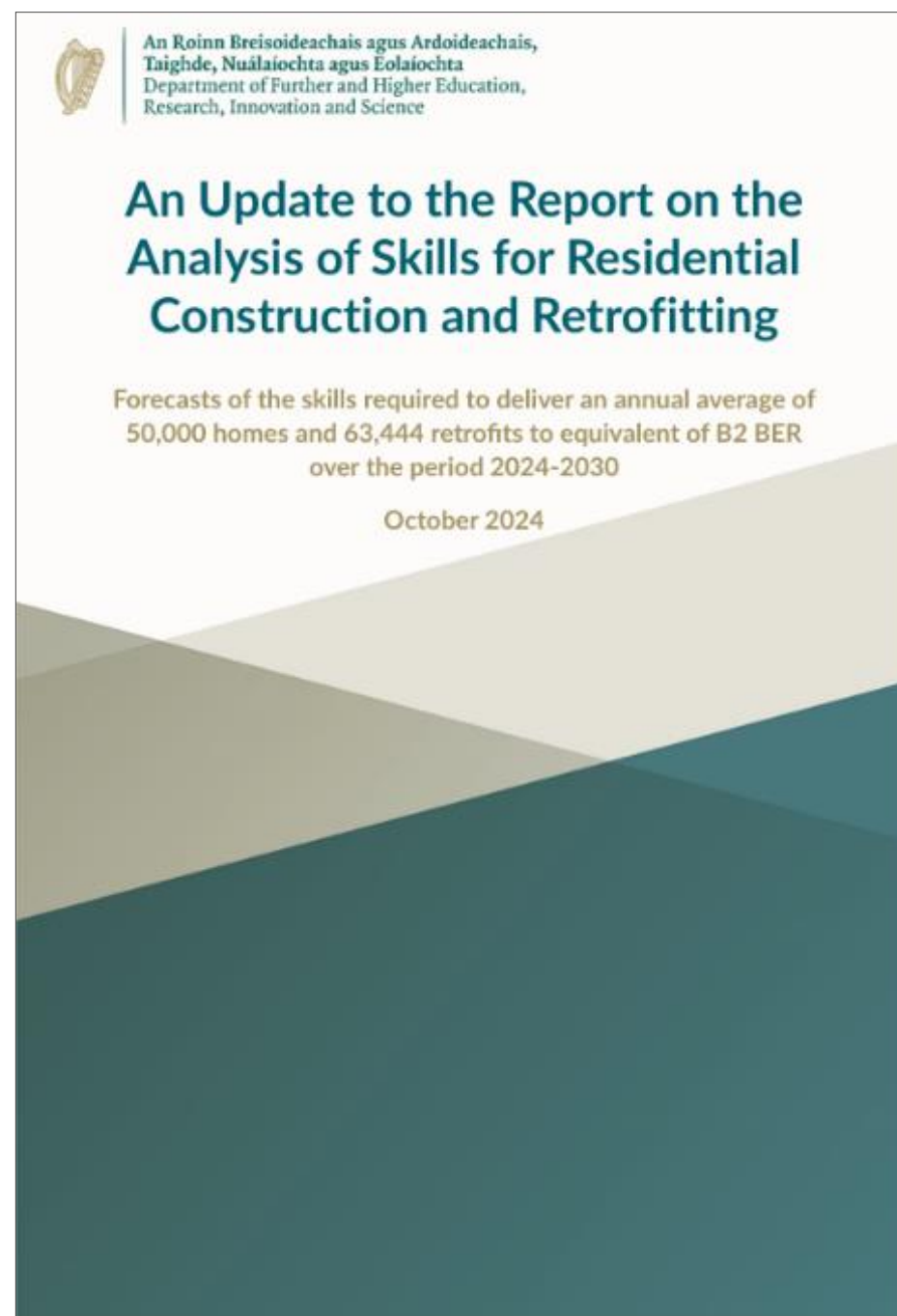


# MMC Leadership & Governance



- **HfA Industry Capability Working Group (2021-) (DFHERIS Chair)**  
Focus on leading initiatives on innovation and productivity, skills and capacity, enterprise support, standards and compliance, and sectoral engagement. Reports to Cabinet Committee on Housing.
- **MMC Leadership & Integration Group (LIG) (2022-) (DETE Chair)**  
Focus on productivity and innovation challenges identified in HfA and provides oversight and direction to related MMC Actions and development and oversight of MMC Roadmap. Reports to the Industry Capability Group.
- **Construction Sector Group (2018-) & Digital Adoption & Innovation Subgroup (2020-) (DPENDR Chairs)**  
Industry-Government forum with focus on the delivery of infrastructure. Reports to Minister.
- **Timber in Construction Steering Group (2023-2025) (DAFM Chair)**  
Focus on increasing the cross-sectoral use of timber in construction with 5 thematic working groups. Reports to Minister.

# Construction Challenges



## Construction Labour Force

- ‘McGrath’ Report Update (2024, DFHERIS)
- Careers in Construction Action Plan (2023, DFHERIS)
- Construction Labour Force Study (2025, DFHERIS, forthcoming)

## Productivity & Cost

- Build 2024 (2024, DPENDR)
- Total Development Cost Study (2024, DHLGH)

## Climate Action

- Climate Action Plan (2024, DECC)
- Energy Performance of Buildings Directive (2024, EU Directive)
- Procurement guidance for public bodies: Reducing embodied carbon in construction (2024, DETE)

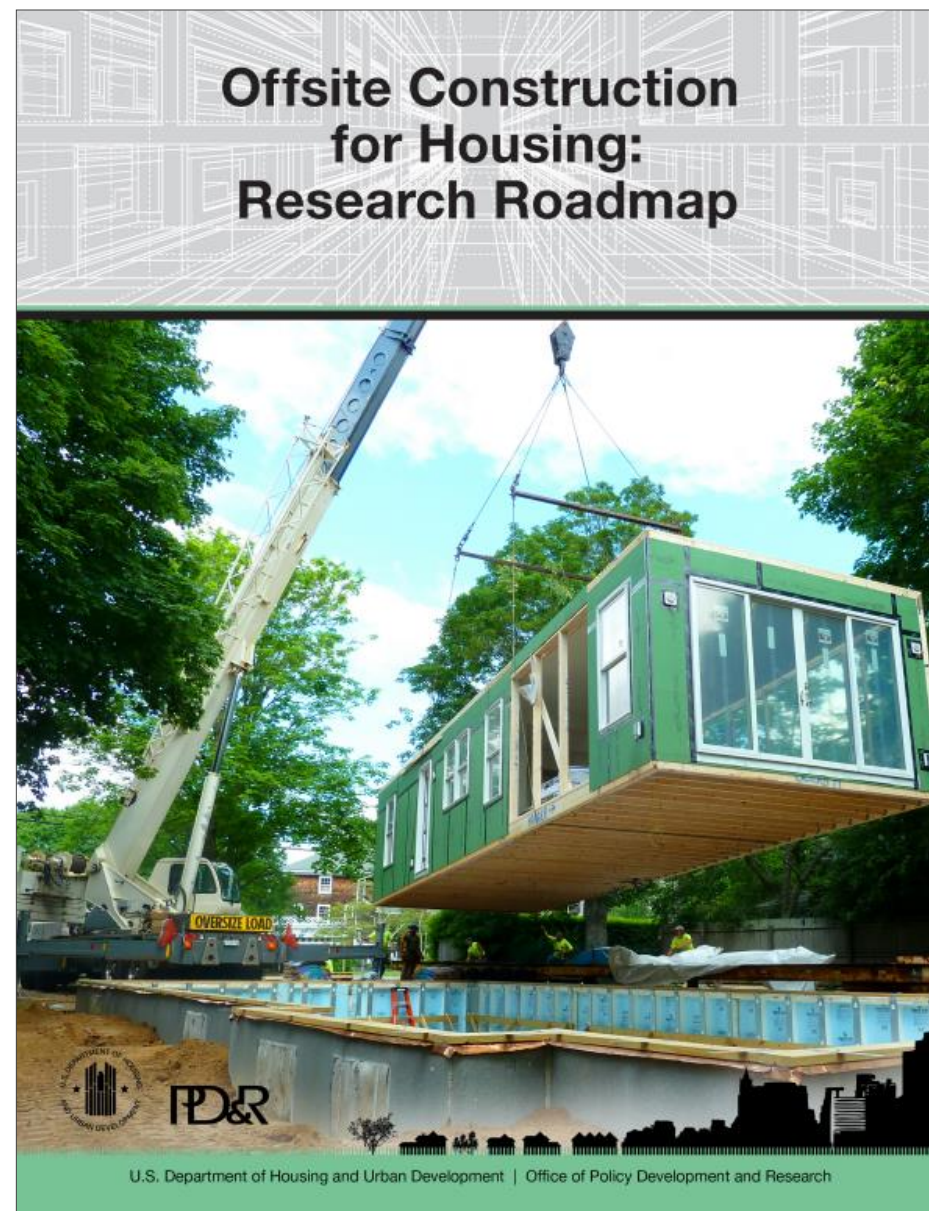




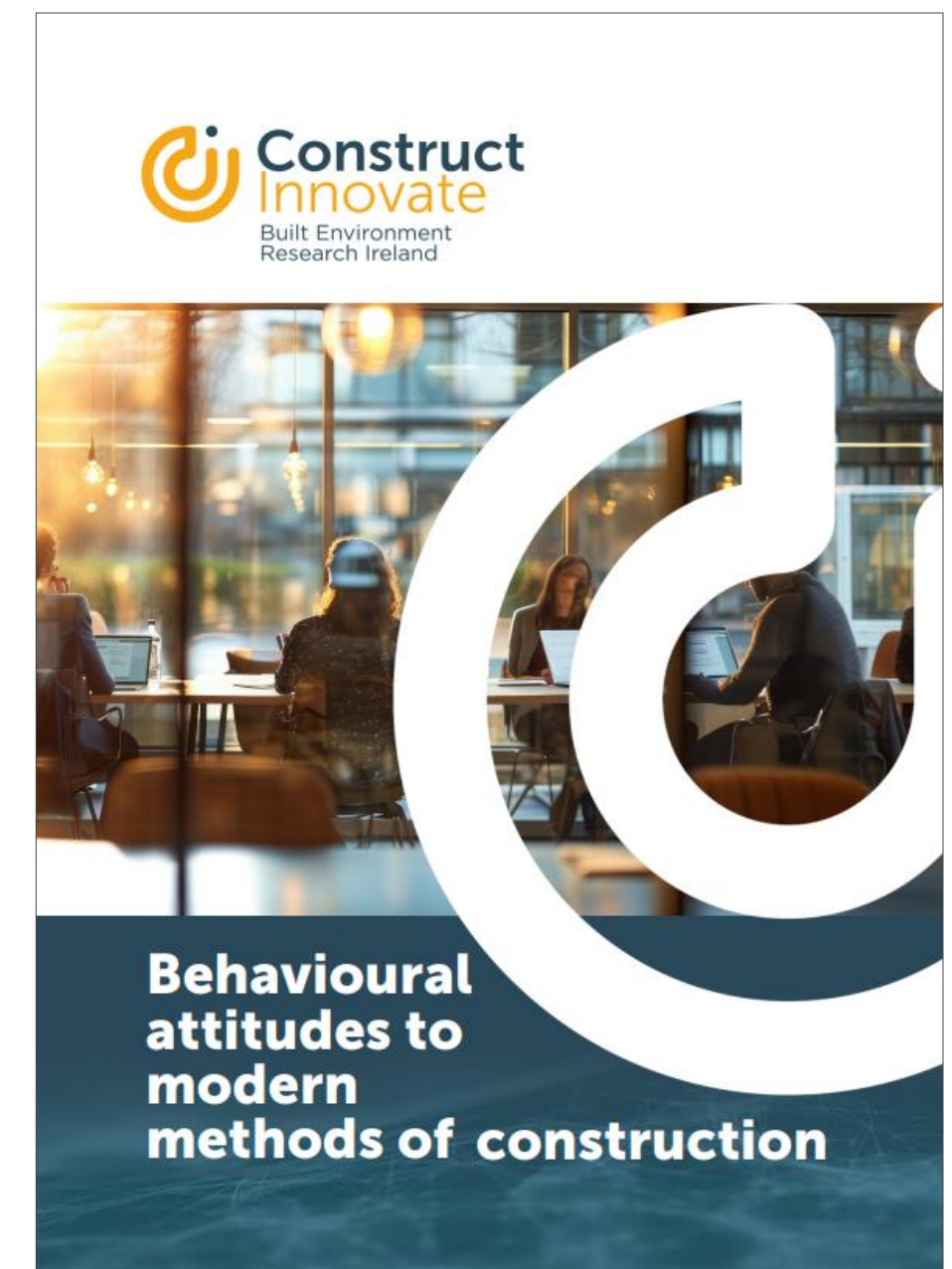
## 2. Terminology



# Terminology

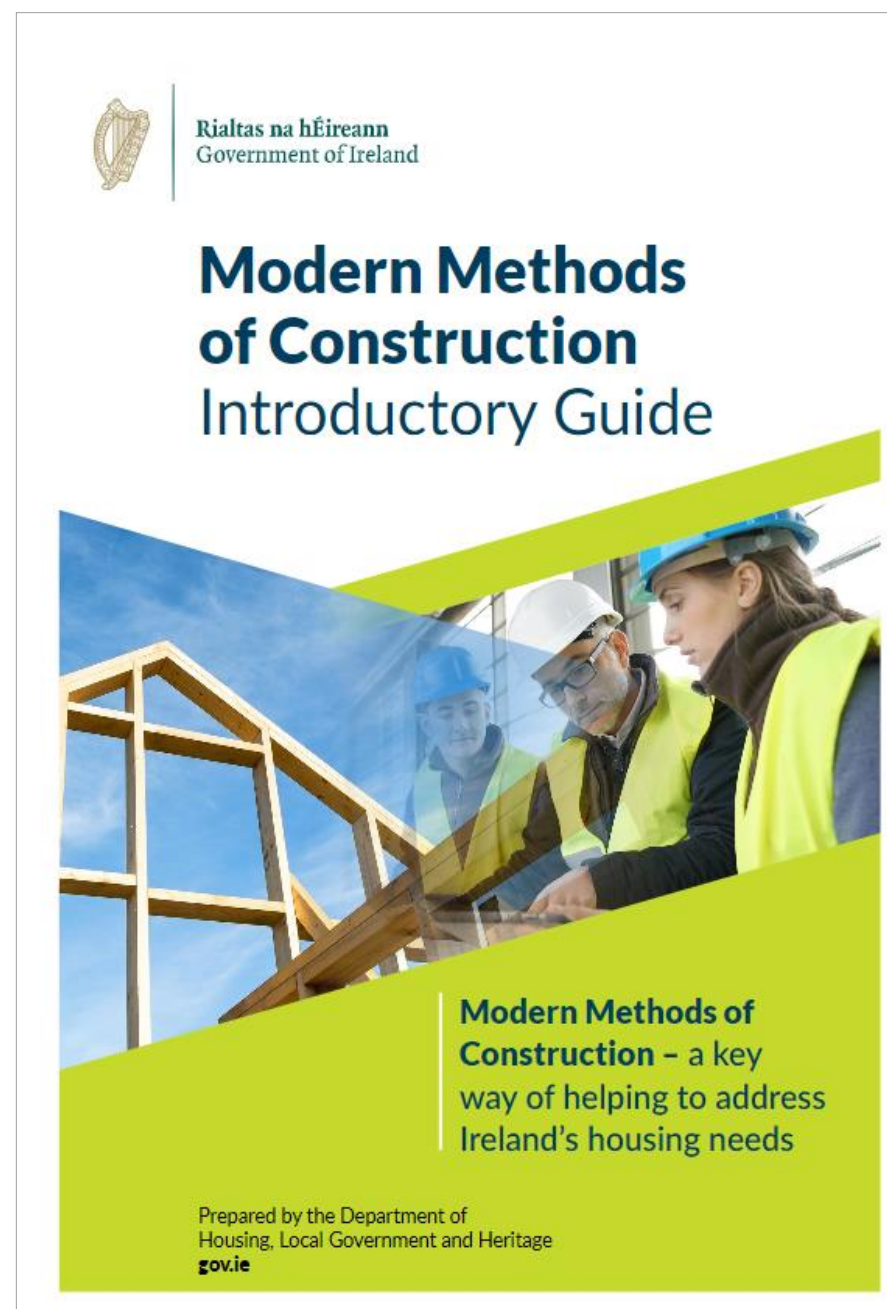


- Prefabrication | Pre-manufacturing | Off-site | Near-site | Industrialised | MMC  
Modular | Volumetric | Rapid Construction
- **UK-Ireland 2030 Strategic Co-operation**  
Modern Methods of Construction (**MMC**)
- **EU Member State's Housing Ministers' Summits**  
**Housing & Energy Commissioner – Dan Jorgensen**  
**Industrialised Construction**
- **US HUD Department w/ MOD X**  
**Offsite Construction for Housing: Research Roadmap**
- ConstructInnovate Research  
'Behavioural Attitudes to MMC' (2024)

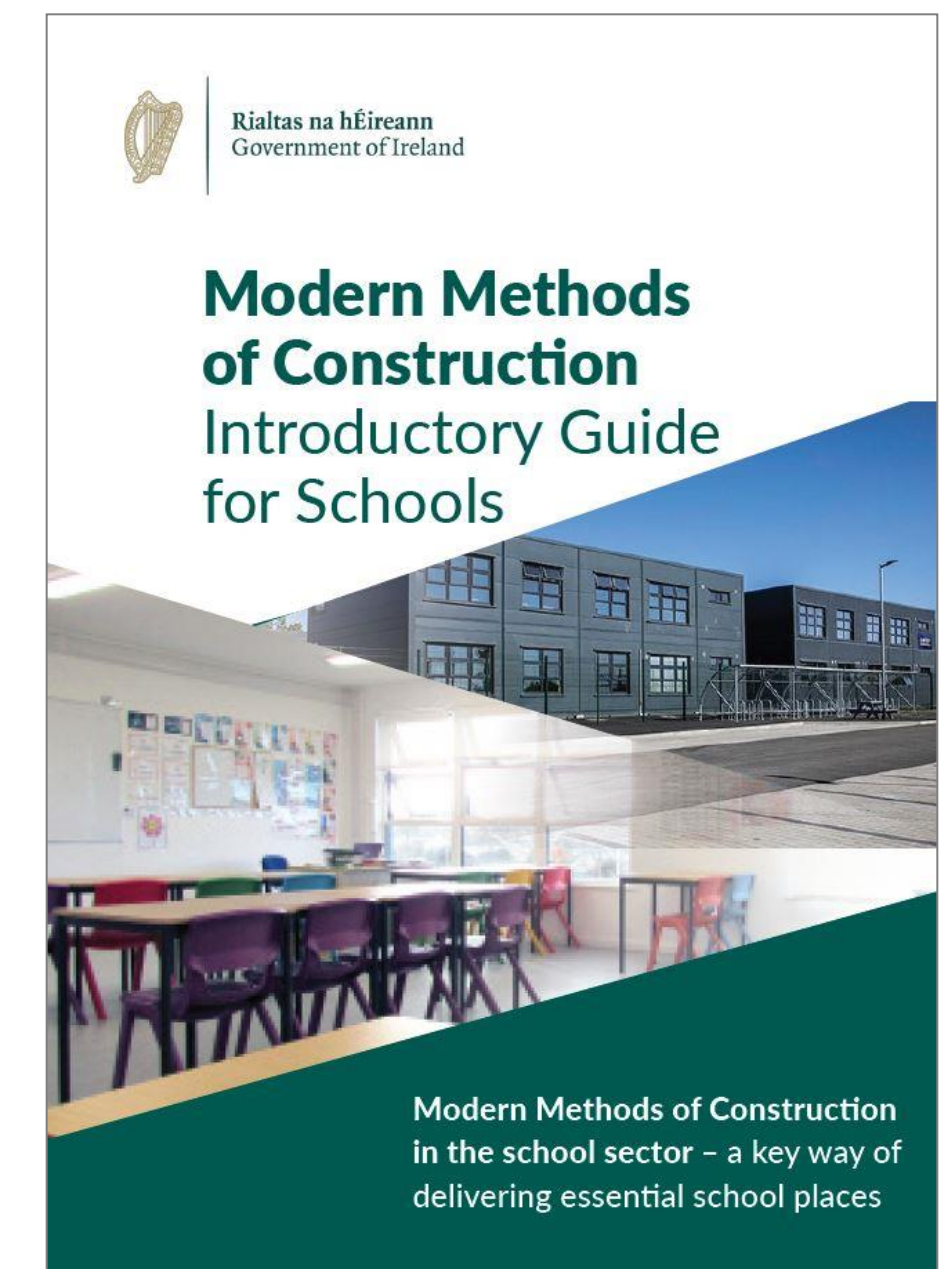




# Introductory Guide to MMC (2023)



- Published to accompany MMC Roadmap in July 2023
- Short, non-technical guide **approved by Government**
- Focused on Housing Sector
- **Aligned with UK Definitions Framework for MMC (2019)**
- Includes overview of **7 categories** and more detail on Categories 1, 2, 5 & 7
- Includes key points on compliance and further resources
- Update scheduled in **Q2 2025**
- Similar document prepared by Department of Education for Schools Programme

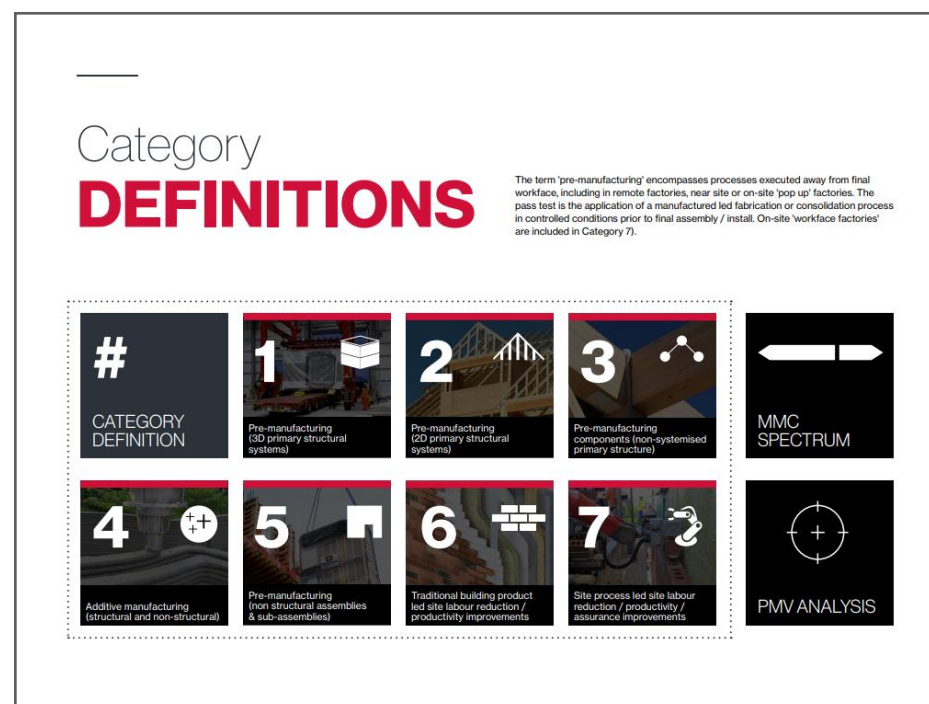


# MMC Definitions Framework (2019)



Developed by UK Government with a cross-industry working group

Group tasked with supporting the mortgage finance, insurance and valuation communities in **better understanding and supporting the greater use** of Modern Methods of Construction (MMC) across **residential** development.



Category 1a-d	<b>Pre-Manufacturing</b>	<i>3D primary structural systems</i>
Category 2a-c	<b>Pre-Manufacturing</b>	<i>2D primary structural systems</i>
Category 3a-g	<b>Pre-Manufacturing</b>	<i>Non-systemised structural components</i>
Category 4a-b	<b>Additive Manufacturing</b>	<i>Structural and non-structural</i>
Category 5a-l	<b>Pre-Manufacturing</b>	<i>Non-structural assemblies and subassemblies</i>
Category 6a-e	<b>Site labour reduction/productivity improvements</b>	<i>Traditional building product-led</i>
Category 7a-i	<b>Site labour reduction/productivity improvements</b>	<i>Process-led</i>

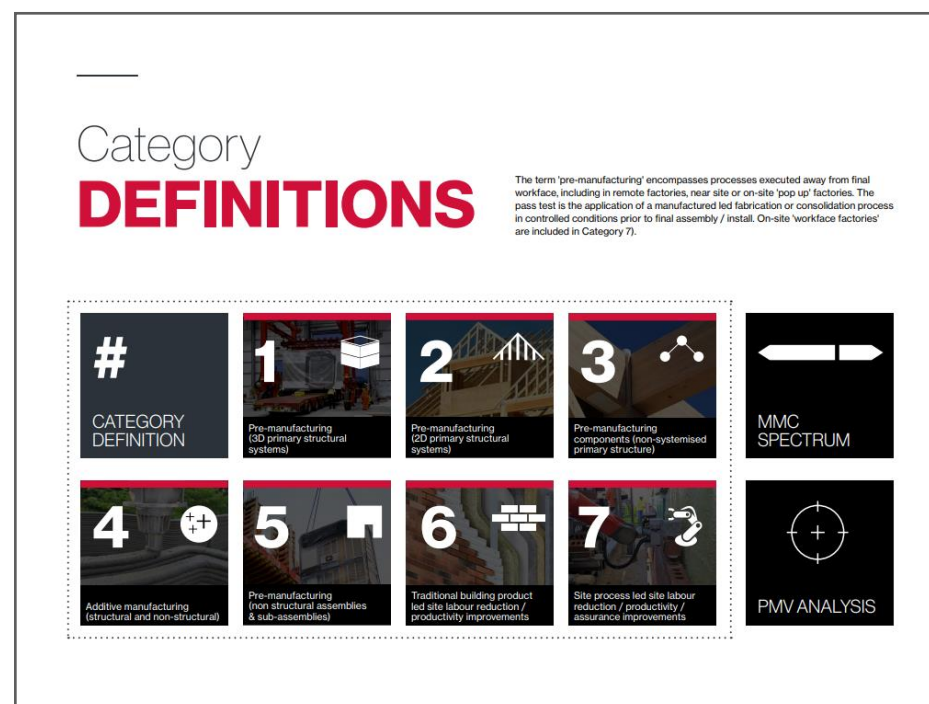


# MMC Definitions Framework (2019)



The intention is for this framework to **regularise and refine** the term ‘MMC’ by defining the broad spectrum of innovative construction techniques being applied in the residential market, both now and in the future.

The framework also offers the opportunity to **create more structured datasets** capturing use of MMC and its performance, so enabling clients, advisors, lenders and investors, warranty providers, building insurers and valuers to all build a **common understanding** of the different forms of MMC use.



In turn this should **enable confidence** building through a **better evidence** base using the categorisation framework as a data taxonomy including the identification of building height typologies and primary structural materials used.



# MMC Categories' Examples



**Cat 2a** 2D Panellised



**Cat 2a** 2D Panellised



**Cat 2c** 2D Panellised



**Cat 2c** 2D Panellised



**Cat 3c** Structural Components



**Cat 5a** 3D Volumetric subassembly (Pod)



**Cat 1c** 3D Volumetric



**Cat 7b** Innovative site process



# MMC Potential Benefits



*Potential benefits of MMC to be assessed on a project-specific basis*

- **Faster Delivery** – Construction Programme & Overall Development Programme
- Lower Construction Cost – Economies of Scale & **More Cost Certainty**
- Different & Lower **Labour Requirements**
- Health & Safety; **Working Conditions**
- Regional Employment
- High Quality & **Better Quality Control**
- **Better Data** – Digital
- Efficient Use of Resources
- Reduced Construction Waste



# MMC Considerations



*Only do in a factory what is more efficient to do there than on a site.*

*- MMC manufacturer*

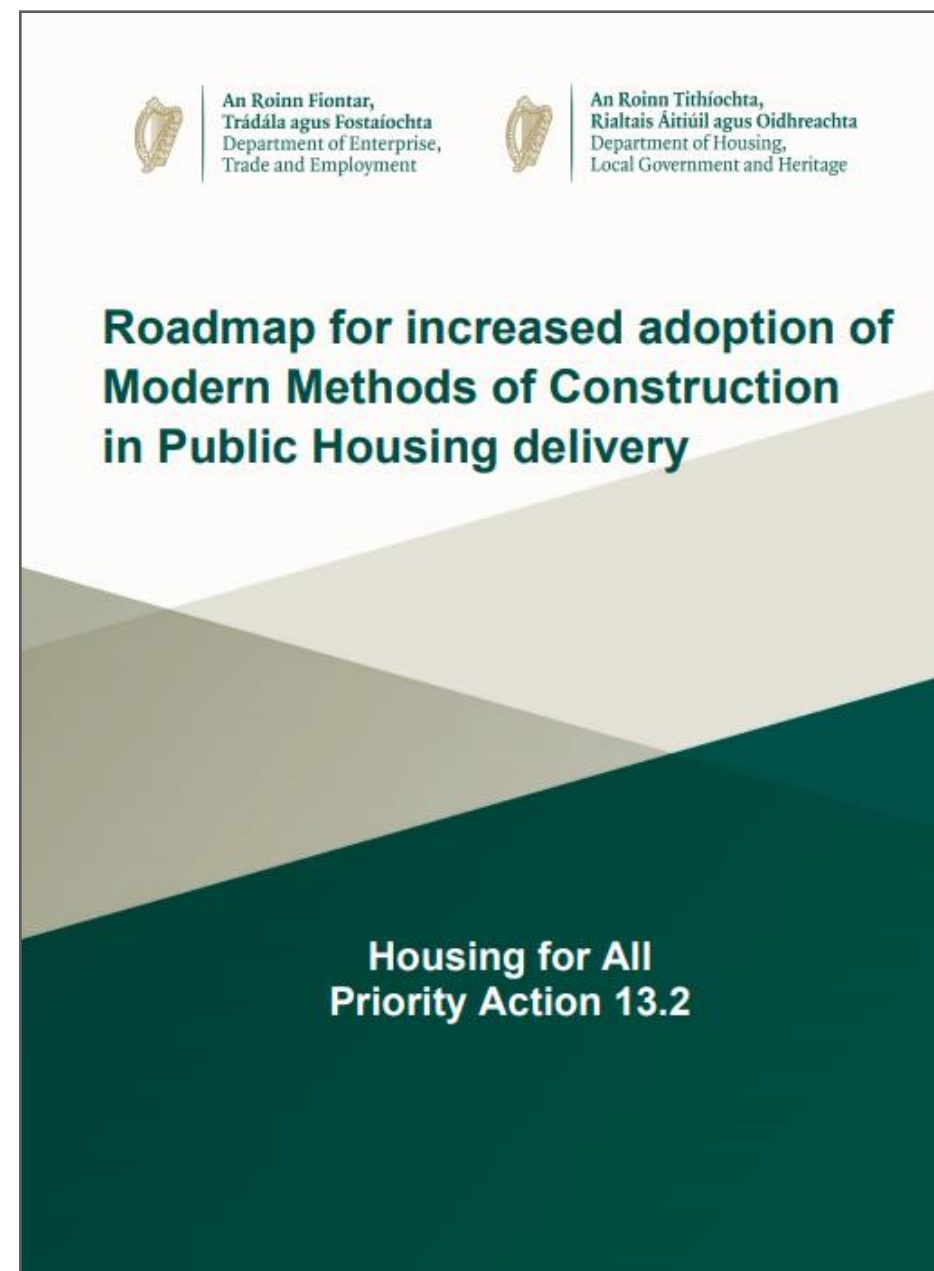
- Site Location – **Proximity** to Manufacturing Facilities/ Supply Chain
- Site Constraints – **Access**, Cranage, Scale, Topography, Scaffolding
- **Transportation**
- Site Protection & **Storage**
- On-site/ Off-site **Interfaces & Design Responsibility Matrix**
- **Speed** of Assembly/Construction and **Inspection** Plan
- **Certification**
- **Design for Manufacture and Assembly**
- Design, Manufacturing & Construction Programming – **Lean** Principles





## 3. Key Initiatives

# MMC Roadmap (2023)



*The Roadmap has and continues to be a live document which has enabled the Government partners to **continue work across the thematic areas** in the context of the Housing for All Plan and through the MMC Leadership and Integration Group. The Programme for Government recommits to growing the role of MMC in housing delivery and in that regard **it is important that the Roadmap continues to have relevance and with strong industry input.***

1. Procurement Approaches
2. Regulations & Standards
3. Capital, Finance & Insurance
4. Skills Development
5. Industry Competitiveness & Capacity
6. Effective Policy Execution & Communication

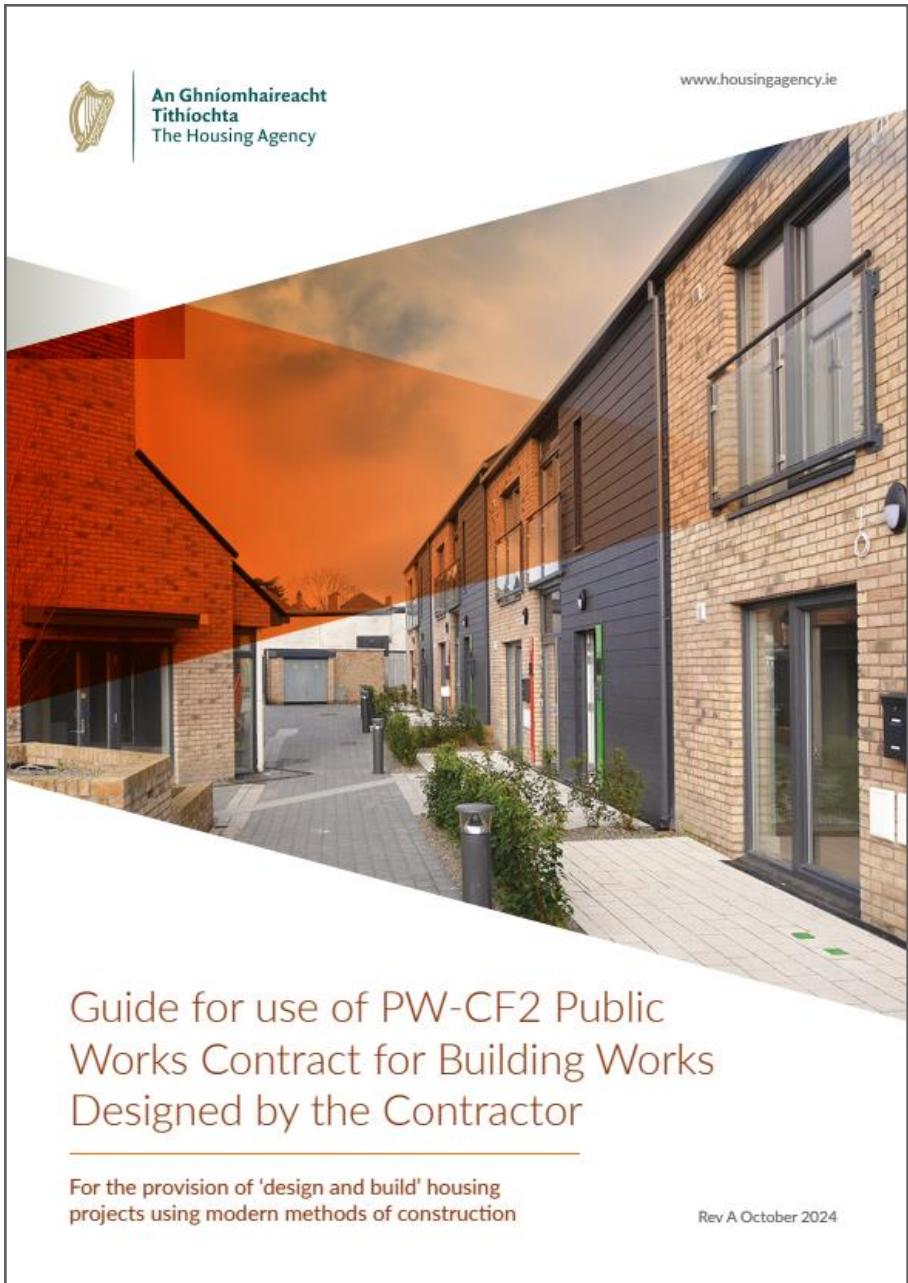
# MMC Key Initiatives



- **Social Housing Accelerated Delivery Programme** (DHLGH-LGMA-HA-LAs)
- **Standardisation** (DHLGH-LGMA-HA-LDA-NDFA-Industry)
- **Procurement Study incl. PMV** (DHLGH)
- **ConstructInnovate Housing Research** (DETE-EI-DHLGH-Industry)
- **Built-to-Innovate Initiative incl. Lean** (DETE-EI-Industry)
- **MMC Skills Report & (forthcoming) Action Plan** (EGFSN-DFHERIS)
- **MMC Demonstration Park** (DFHERIS-DETE-DHLGH-SOLAS-LOETB)
- **Timber in Construction** (DAFM-DETE-DHLGH-OPW-UoG-Coillte-Industry)
- **MMC Cat 1 (3D Volumetric) Pilot Projects** (DHLGH-LGMA)
- **MMC Training** (DFHERIS–SOLAS-DHLGH-LGMA-HA-NBCO-Skillnet-CITA)
- **MMC Data Dashboard** (DETE-DHLGH-DoT)
- **Build Digital** (DPENDR-TU Dublin)



# Social Housing Accelerated Delivery Programme

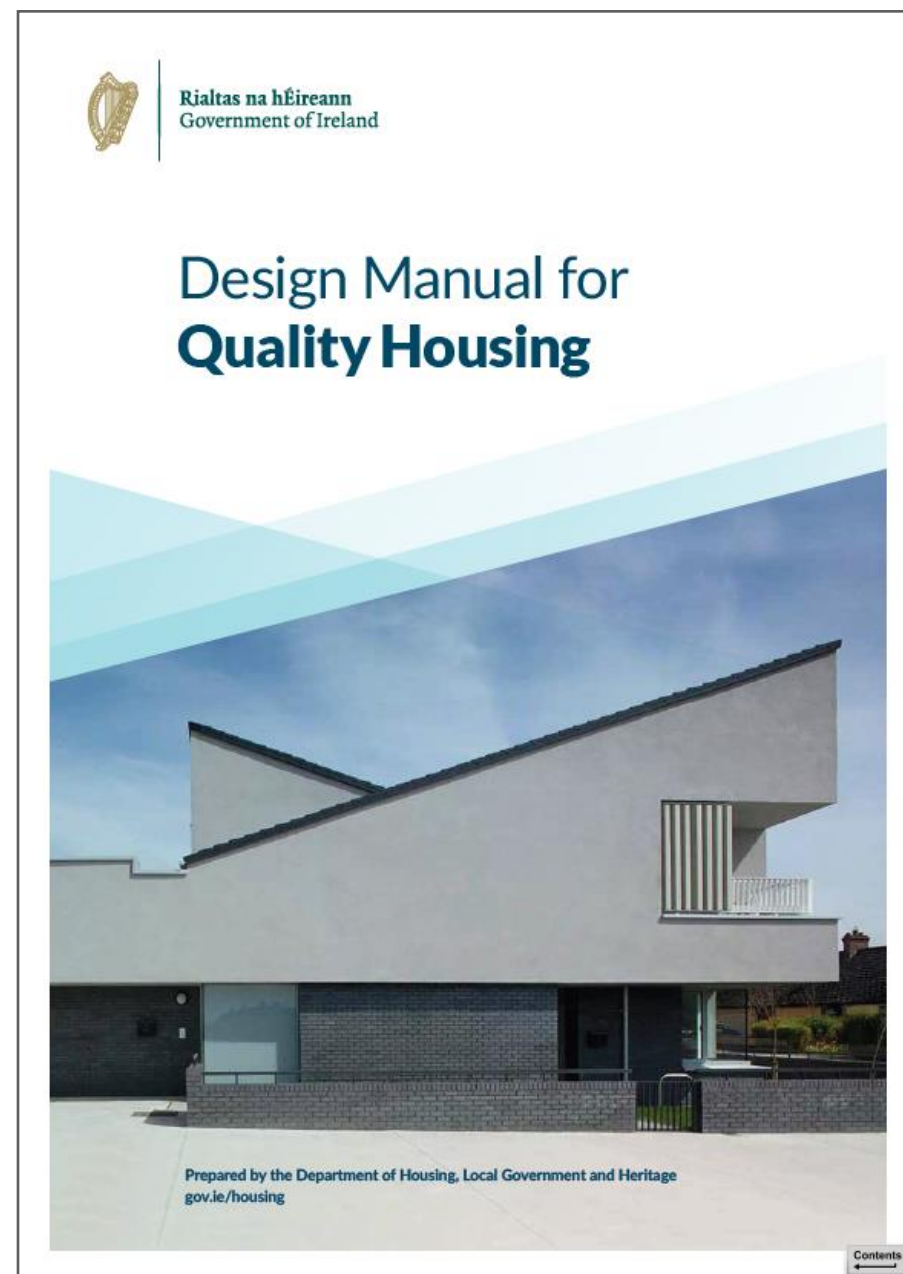


Aim is to **build capacity** in LAs to deliver social housing through **new procurement routes (D&B)** and **enable greater use of MMC**

- DHLGH Social Housing Division, LGMA, The Housing Agency and Local Authorities
- €94M fund for LA land legacy debts
- Commitment to procure using D&B
- **c. 36 sites | + 1800 dwellings | 13 LAs**
- c. 1000 dwellings contracted
- Remainder at or near to tender
- First dwellings due for completion H2 2025
- Updated PW-CF2 Guidance (2024, HA)

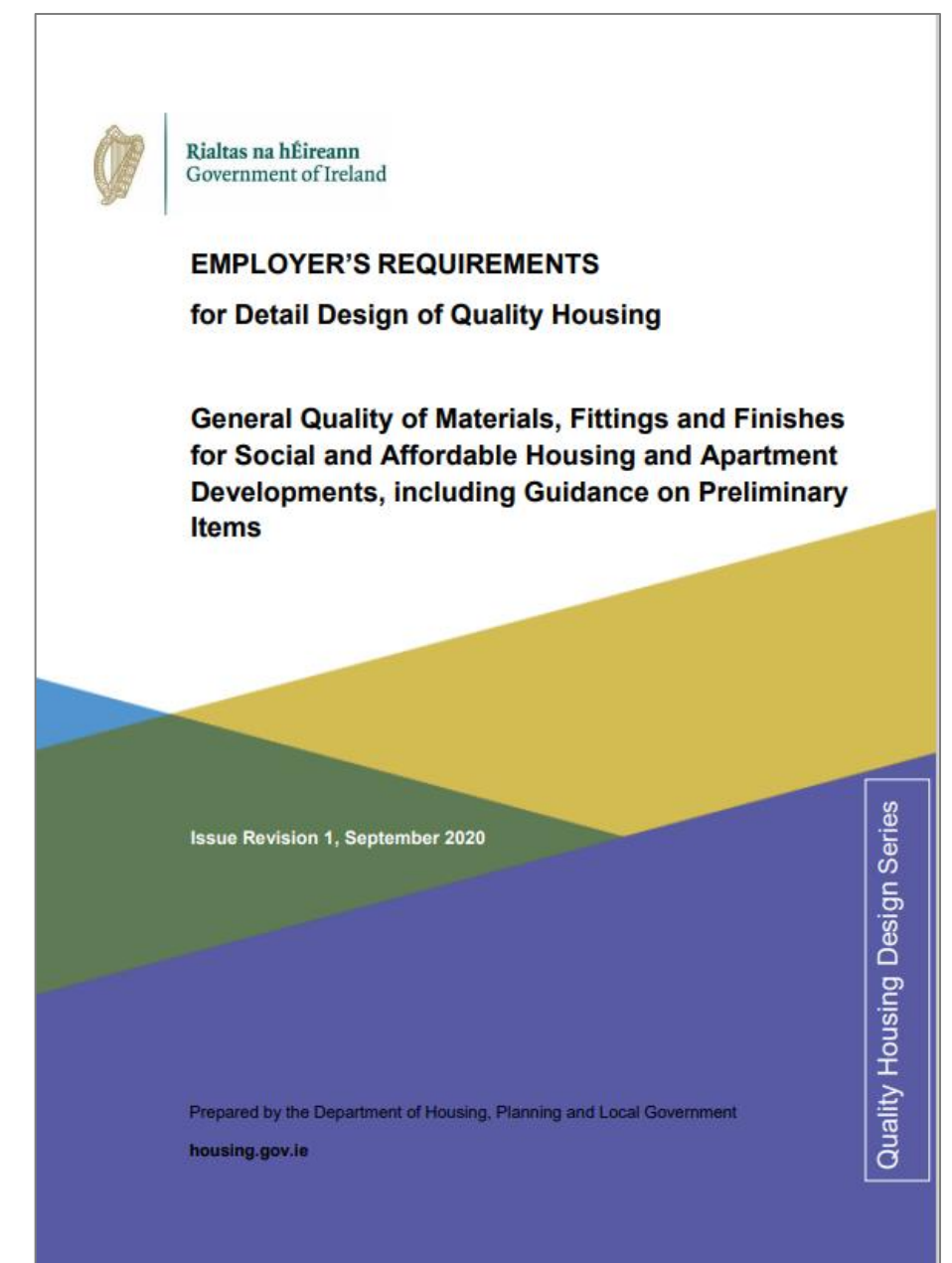
REGIONAL CONTRACTOR FRAMEWORK (OVER €5M)	LEAD LA	INDICATIVE NO. OF UNITS*	NO. OF PROJECTS**
1. Meath, Louth, Westmeath, Cavan, Longford and Monaghan	Meath	c.350	6+
2. Sligo, Galway City, Roscommon, Mayo, Leitrim, Donegal, Galway County	Sligo	c.350	10+
3. Cork County, Kerry	Cork County	c.250	8
4. Limerick, Clare	Limerick	c.20	1+
5. Kilkenny, Waterford, Tipperary, Wexford, Wicklow, Carlow	Kilkenny	c.30	1+
6. Dún Laoghaire Rathdown, Kildare, South Dublin	Dún Laoghaire Rathdown	c.350	4+
Regional Contractor Framework (under €5M)	Westmeath	c.10	1
Standalone	Fingal	c.250	4
Standalone	Cork City	c.250	1
Total			36*

# Social Housing Regional Contractor Frameworks



*Aim is to **build capacity and achieve efficiencies** for social housing delivery*

- 4 Regional Contractor Frameworks established: €250-400M each over 4 years
- Frameworks in place / underway for 26 LAs
- Regional roadshows/workshops with each region's LAs
  - Supported by central resources in DHLGH, HA & LGMA
- Standardised Design Guidance available
- **Design Manual for Quality Housing (2022 +, DHLGH)**
- **Employer's Requirements for Detail Design of Quality Housing (2020, DHLGH) (2025 update forthcoming)**





# MMC in Public Housing Delivery



## Social housing Design-Build data

- Reduced delivery programme (up to 40% improvement)
- Reduced change orders (90 reduced to 10 average per contract)
- Greater cost certainty (Final Accounts + 2-4%)



36 Social Houses & Apts  
Greystones, Wicklow CoCo  
**Cat 2** 2D Panellised TF



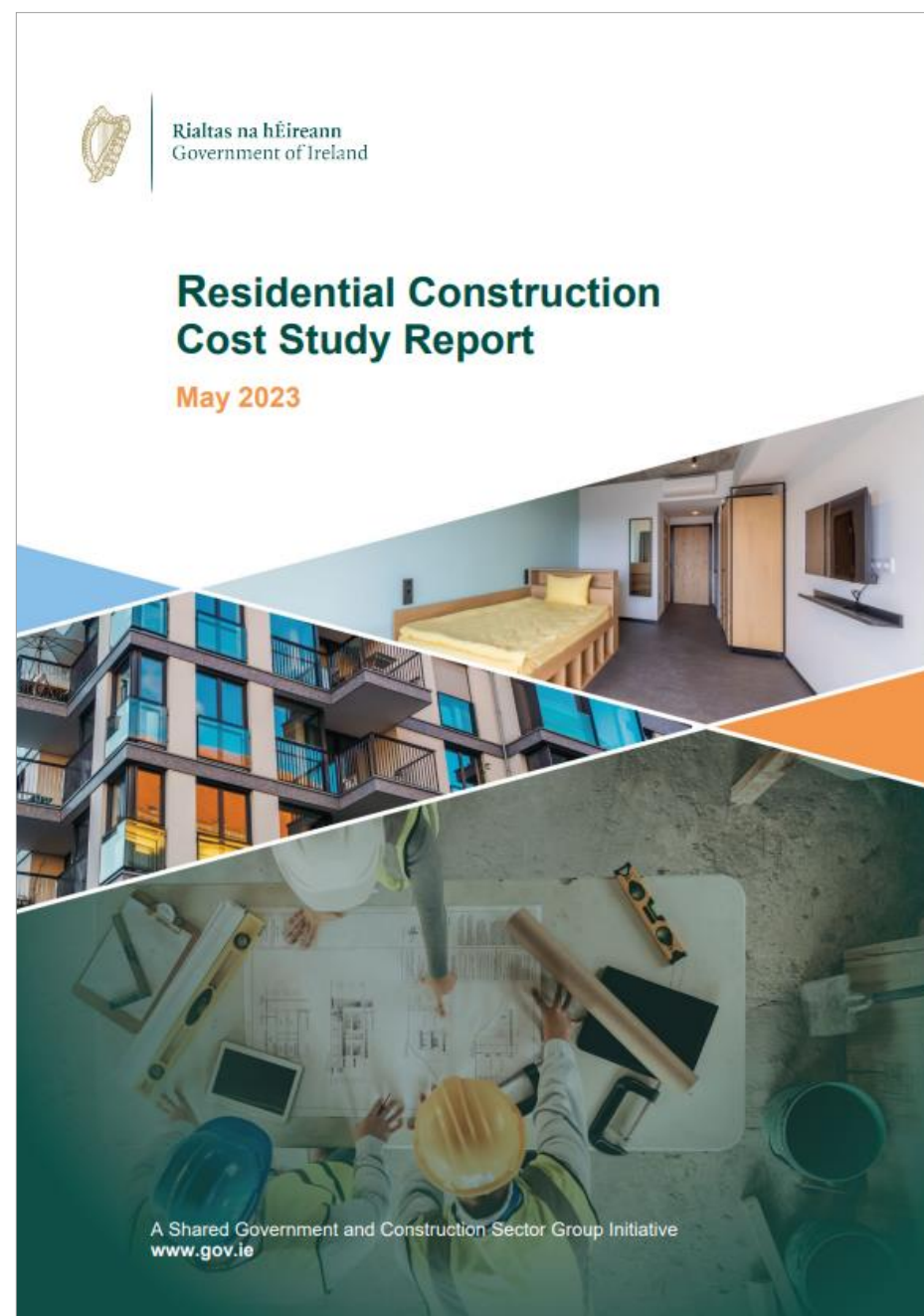
24 Social Houses & Apts  
Athlone, Westmeath CoCo  
**Cat 2** 2D Panellised LGSF



133 Cost Rental Apts  
Tallaght, South Dublin CoCo  
**Cat 2** 2D Panellised Precast  
**Cat 5** Bathroom Pods



# Cost Studies



## Residential Construction Cost Study (2023, CSG & Government)

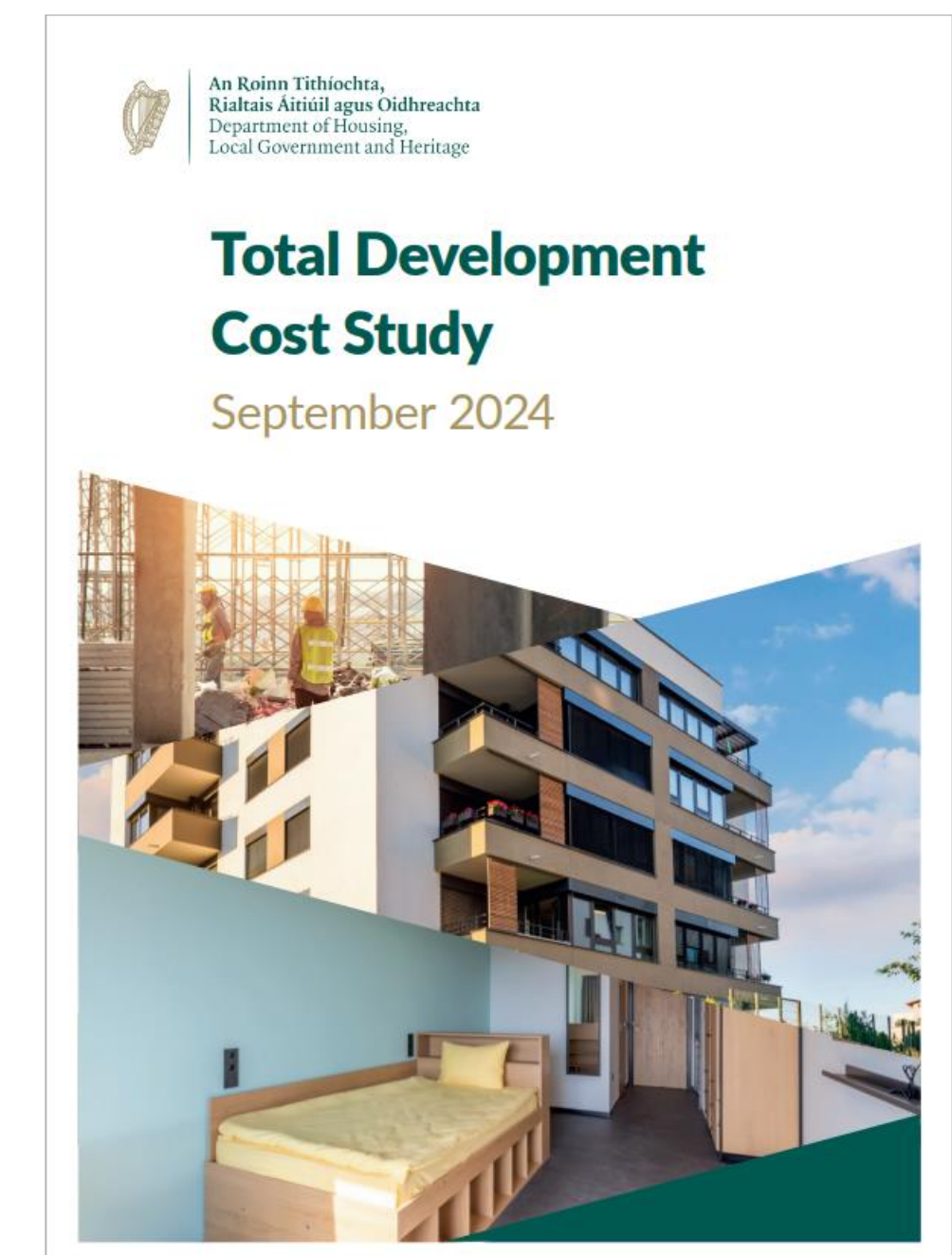
*Aim is to **identify cost reduction opportunities** in construction incl. international comparison*

- Opportunities identified in scope, specification, size, increased standardisation use of MMC & 7 actions were recommended incl.
  - Standardised Design Approaches Study
  - Design Standard for Student Accommodation
  - Total Development Cost Study

## Total Development Cost Study (2024, DHLGH)

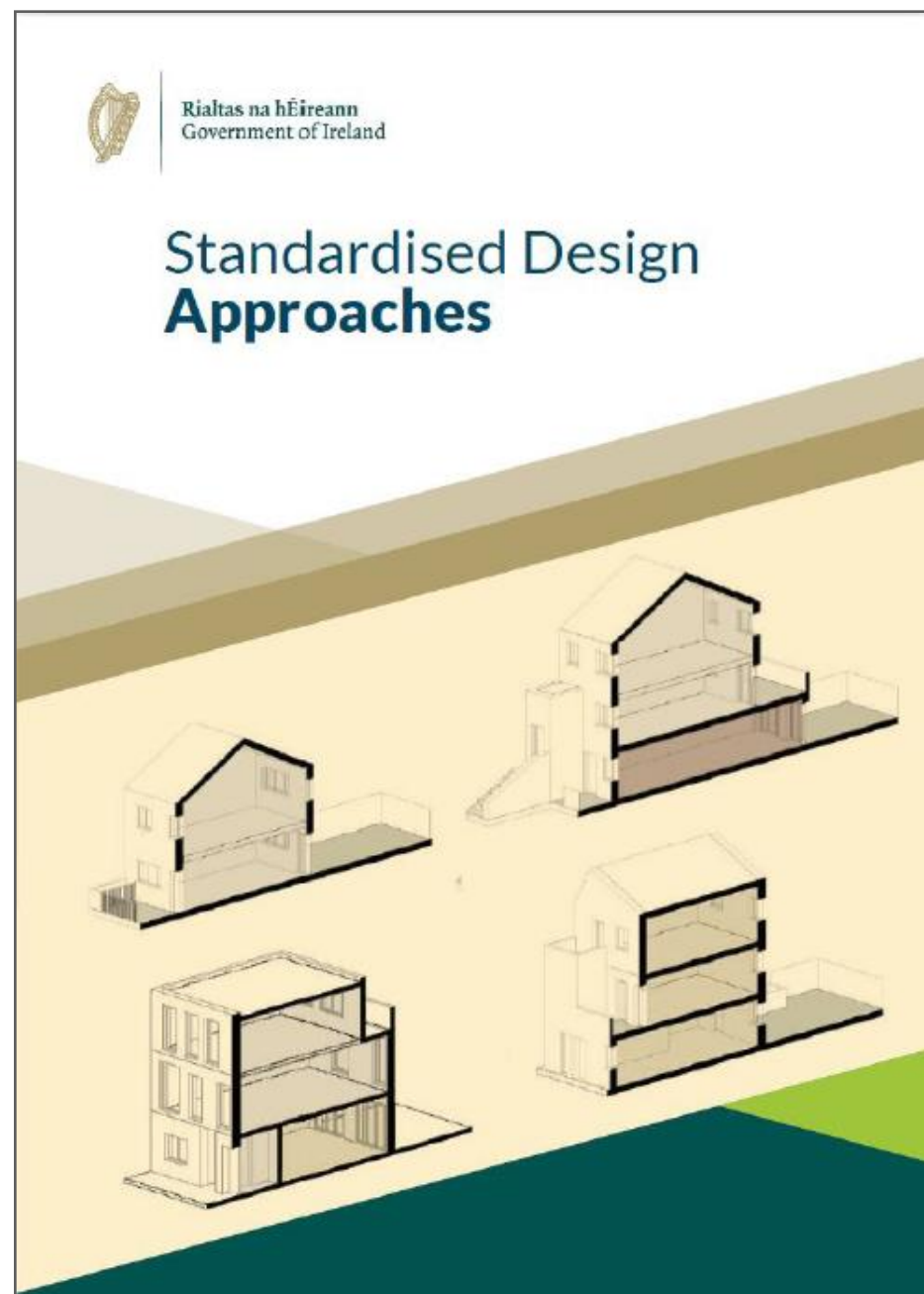
*Aim is to gain insights into **all facets of development costs**, from construction to 'soft' costs*

- Construction cost determines some development costs (e.g. VAT, fees, cost of finance)



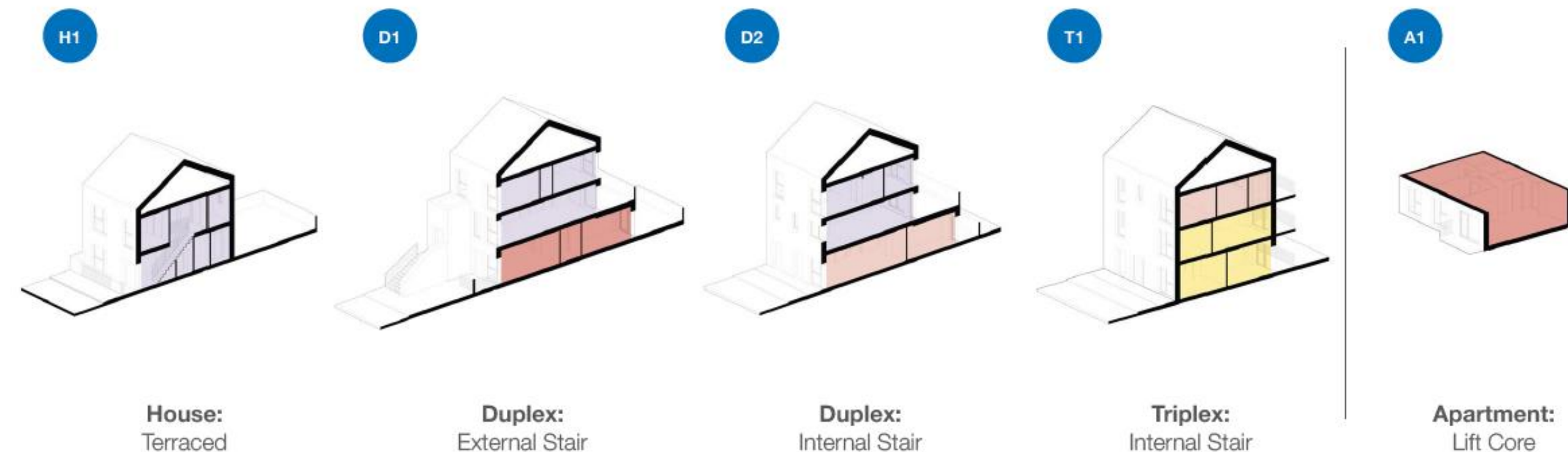


# Standardised Design Approaches Study

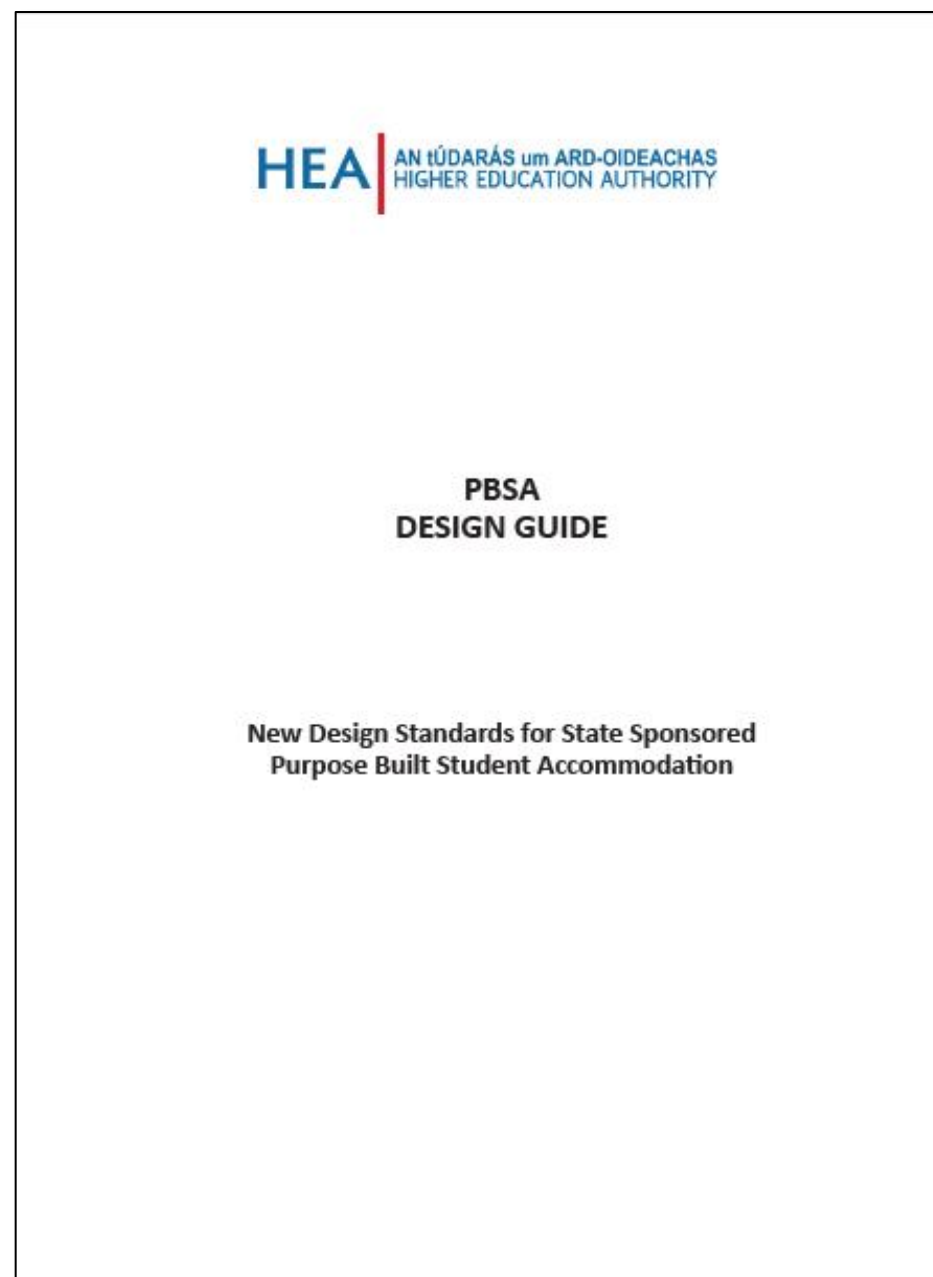


*Aim is to promote **greater use of standardised design approaches** to reduce cost and enable greater adoption of MMC*

- Commissioned by **DHLGH**, due in **H1 2025**
- Stakeholder engagement key
- Block layouts, typologies, components, MMC systems, structural strategy, building services strategy, costs
- Building on existing guidance such as LDA's Apartment Typology Booklet
- Aligned with Sustainable Residential Development & Compact Settlement Guidelines density ranges
- Focus on medium-density



# Design Standard for Student Accommodation



*Aim is to examine **national & international best practise** to inform appropriate standards in the delivery of **state-funded** student accommodation.*

- Commissioned by **DFHERIS/ HEA**; due in **H1 2025**
- Standard expected to include sections on:
  - Urban Design and Site Layout
  - Building Design - Study/Bedroom Layout | Communal Areas
  - Standardisation & **MMC** | Technical Considerations
  - Outline Specification
  - Concept drawings of layouts, outlining **typology options** e.g. clusters of different sizes (e.g. 4, 6 bed etc.), ensembles/shared bathrooms etc. for both on and off campus locations



# STANDARDIZE Research Project

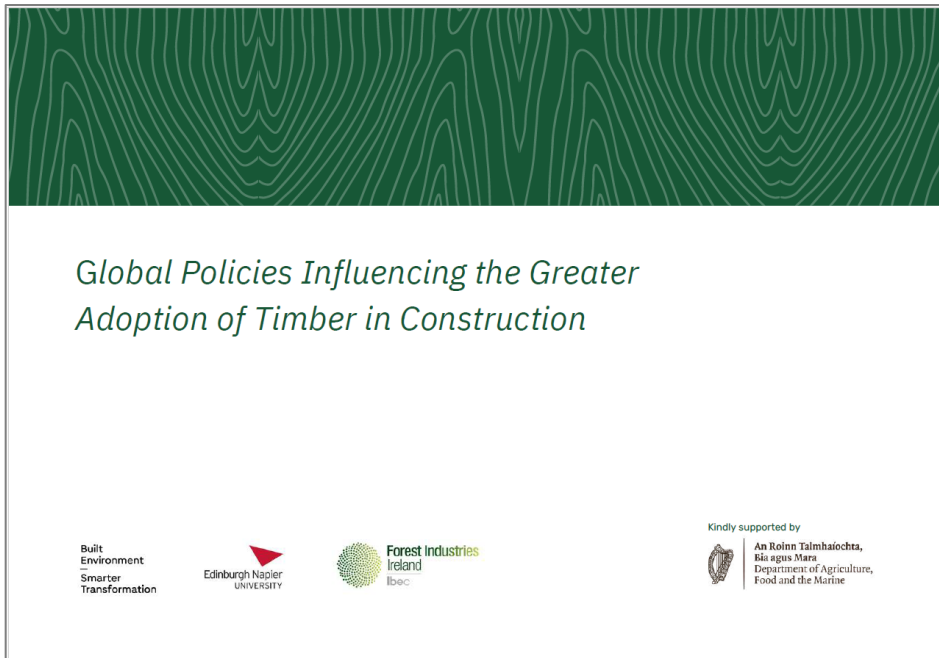


*Aim is to develop open access standardised design details to support greater adoption of MMC and increased housing delivery*

- Commissioned by **DETE/DHLGH/ConstructInnovate; 2024-2028**
- **Feedback from industry** around needs
- **One MMC system to be identified** to commence project
- Most **market ready and impactful** MMC category & material is selected
- **Open-source MMC standardised construction performance / details** for all key junctions
- **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
- First Stakeholder/Industry **workshop planned for Q2 2025**

Test ID	Fire Testing Locations	Internal board 1	Internal board 2	Internal board 3	30 min	60 min	90 min	Test Number	Repetition	Total Test Number
B1	Party Wall Panel	1	1	1	1	1	1	6	1	6
B2	External Wall Panel	1	1	1	1	1	1	6	1	6
B3	Internal Wall Panel	1	1	1	1	1	1	6	1	6
B4	Floor Panel	1	1	1	1	1	1	6	1	6
B5	Roof Panel	1	1	1	1	1	1	6	1	6
B6	Junction 1 - wall to floor	1	1	1	1	1	1	6	1	6
B7	Junction 2 - wall to roof	1	1	1	1	1	1	6	1	6
B8	Junction 3 - wall to wall	1	1	1	1	1	1	6	1	6

# Timber in Construction



*Aim is to develop a forum with Government and Industry to work collaboratively:*

- i. to create the conditions to **increase the use of timber in construction** whilst ensuring the highest degree of building safety and property protection;*
- ii. to **examine regulatory and standards challenges**; and*
- iii. to maximise the use of **home-grown timber** in construction.*



- TG1 Timber Market Study - Survey live!
- TG2 **Mass Engineered Timber Study, due in H1 2025** – Recommendations for NTS
- TG3 Demonstrator Projects Study, due in H1 2025
- TG4 Research list identified
- TG5 Global Policies Influencing the Greater Adoption of Timber in Construction  
Timber in Construction Academic Survey



Annual Report by DAFM to Minister





# 4. Programme for Government

# MMC in the Programme for Government



*The Programme for Government recommits to growing the role of MMC in housing delivery.*

- Set up a **MMC Innovation Fund** via the Ireland Strategic Investment Fund (ISIF), to directly fund new housing factories, and the expansion of existing factories.
- **Leverage state capital investment** to promote MMC and set **binding targets for MMC** use in at least 25% of all State backed housing.
- Overhaul and **resource the National Standards Authority of Ireland (NSAI)** to ensure all-encompassing regulatory certificates are issued in a timely manner, harmonising Irish regulations with EU regulations to open up new market opportunities.
- **Promote the use of timber** in new buildings and ensure multi storey timber frame residential units can be built.
- Increase co-ordination and additional resourcing of organisations' **training programmes**; and develop and fund more dedicated **apprenticeship and internship options for MMC** in housing.





# 5. MMC and Building Control

# MMC and Building Control



- Update to Building Control Management System planned for Q2 2025
- Better granularity of information for Building Control Authorities' **risk assessment**
- Bringing the BCMS **in line with current construction methods and materials and policy terminology**
- Responses will be monitored with **ability to update fields** as required
- Supporting **information and training being developed**
- **2 no. MMC CPD Days held by NBCO** – available on NBCO Youtube
- New **MMC Essentials** course by Laois Offaly ETB
- **MMC Accelerate** platform by Skillnet/CITA – launch in summer 2025
- ConstructInnovate/Engineer's Ireland **MMC Webinar Series** – available on ConstructInnovate website
- Professional bodies/universities developing **modules and CPD** for members/ students
- **Platform4MMC** – Research Ireland-funded decision-making tool for MMC – in development





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# Many thanks

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