Renovate Europe Day 2026



RENOVATE EUROPE

IGBC IRISH GREEN BUILDING COUNCIL

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Renovate Europe Day 2026



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Renovate Europe Day 2026

Welcome addresses:



Adrian Joyce

Director

Renovate Europe Campaign



Ali Grehan

Chair

Irish Green Building Council (IGBC)



William Walsh

CEO

Sustainable Energy Authority of Ireland (SEAI)

Renovate Europe Day 2026

Keynote Address:



Brian Carroll

Assistant Secretary General

Department of Climate, Energy and the Environment

Renovate Europe Day 2026

Keynote Address:



Donna Gartland

CEO

Codema (Dublin Energy Agency)

Codema
Dublin's Energy Agency

REDAY2026 KEYNOTE ADDRESS

Bringing the local Dublin perspective to Europe's building decarbonisation challenge

Donna Gartland
CEO

5th November 2026



Who we are

Codema
Dublin's Energy Agency

Not-for-profit social enterprise
Established in 1997 to support climate and energy action across Dublin.

4 Dublin municipalities
Partnering with Dublin City Council, Dún Laoghaire-Rathdown, Fingal and South Dublin County Councils.

40 energy specialists
Multidisciplinary team in research, planning, project delivery and public engagement.

Delivering on EU and National Policy
Working on the ground with stakeholders and communities to make change



EUROPEAN REACH

Part of a wider European network

Connecting local implementation with European climate ambition

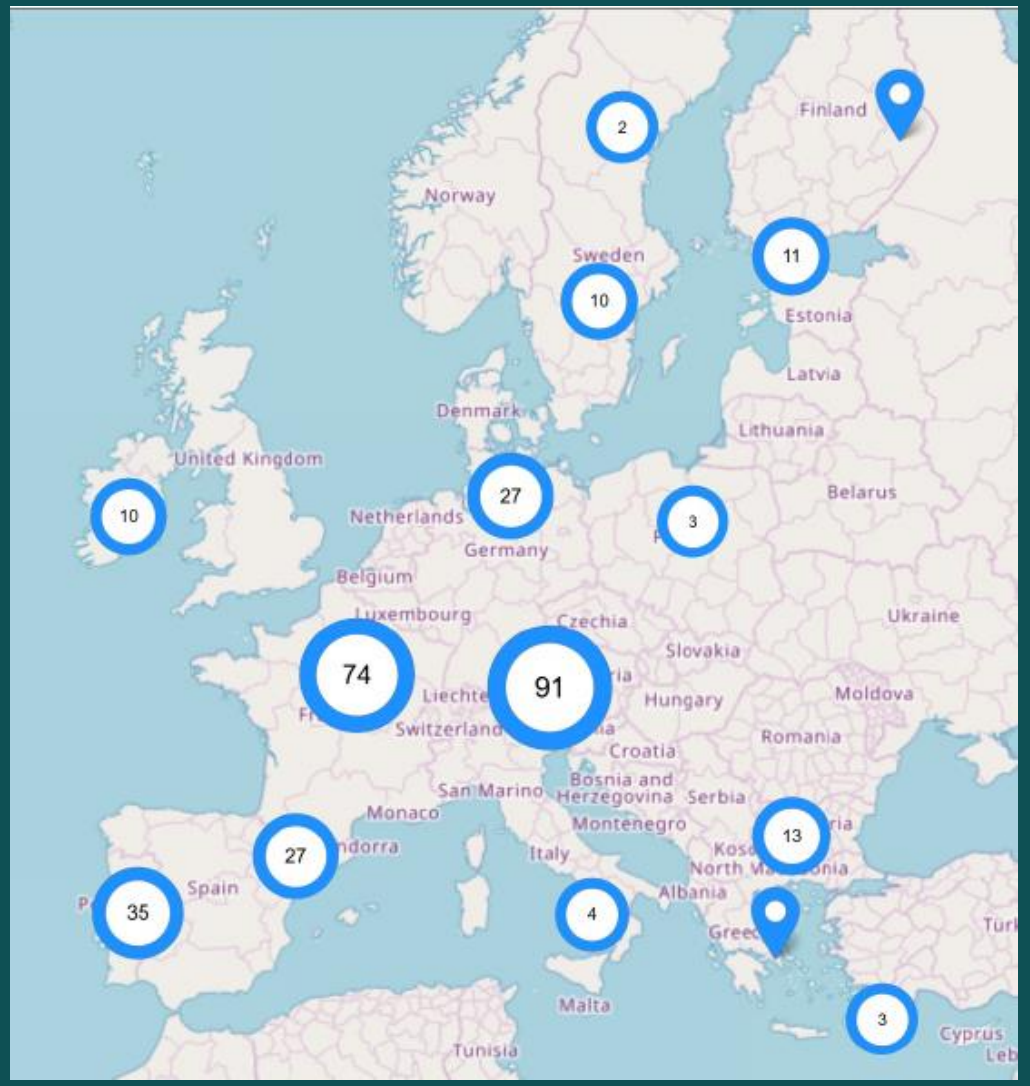
300+

Local and regional energy agencies active across Europe.

3,800+

Energy professionals driving local energy transitions.

Active member of FEDARENE and ManagEnergy networks, exchanging best practice across EU member states.



Codema
Dublin's Energy Agency

Our vision

Codema's vision is for a better quality of life for all citizens through a fair and inclusive transition to a low-carbon society.



Codema
Dublin's Energy Agency

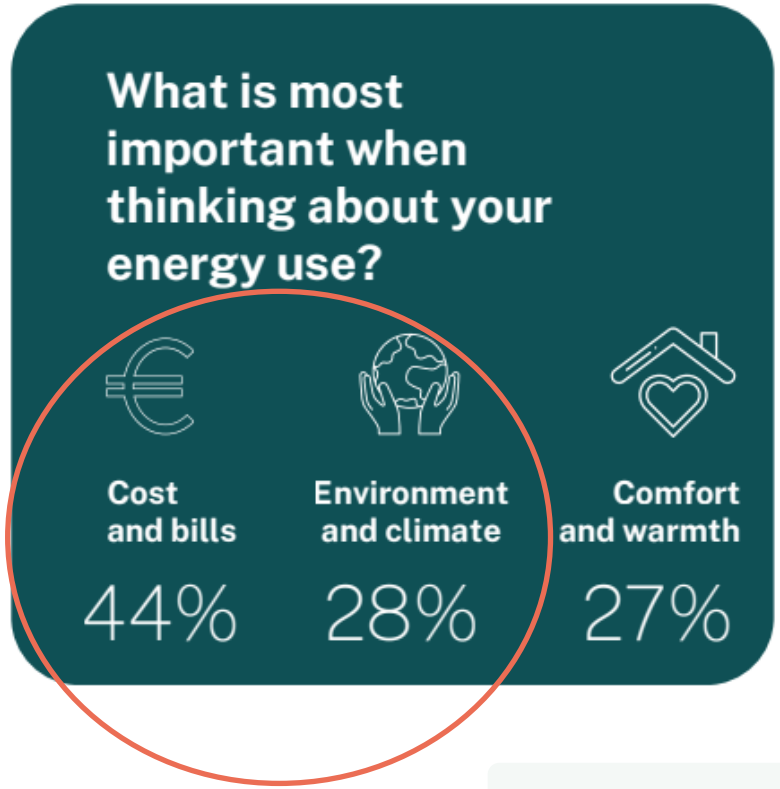
Examples of Our Work

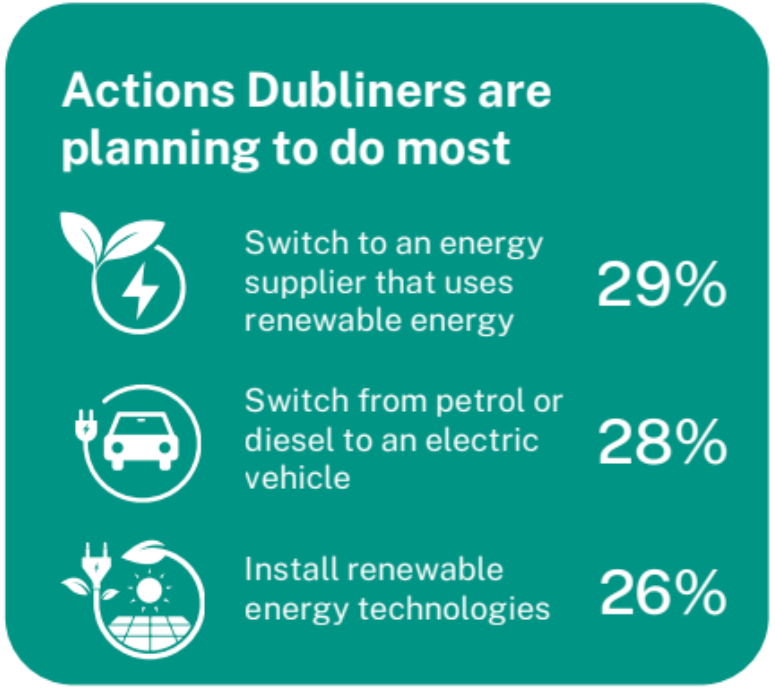
- District Heating
- Energy management
- Home Energy Saving Kits
- Decarbonising Zones
- Energy Master Plans
- Energy Performance Contracting

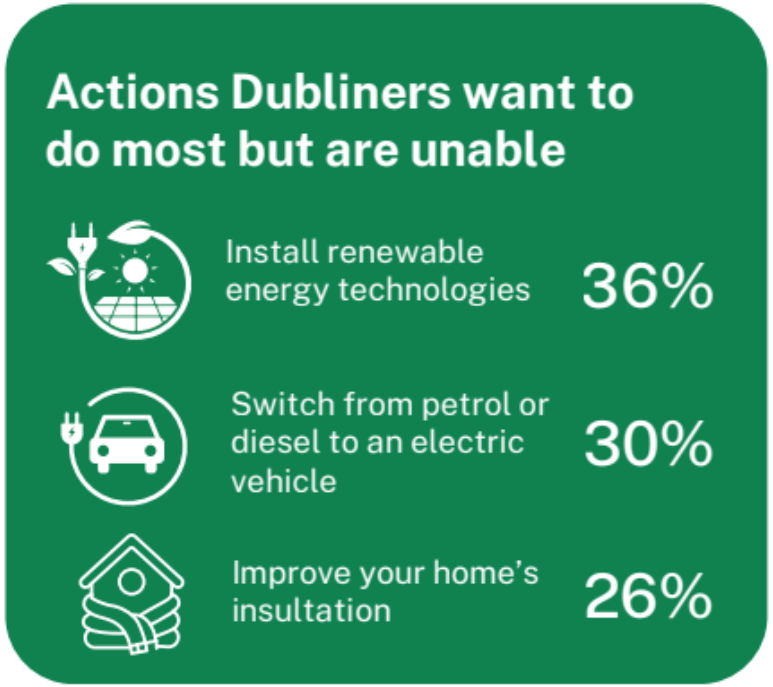
SURVEY INSIGHTS

Local Context - citizen barriers on the ground

Addressing financial pressure, lack of agency and everyday energy stress







81% are avoiding energy use

Local Context – escalating costs

Addressing financial pressure, lack of agency and everyday energy stress



41% of households in Dublin live in rented accommodation – private renter agency gap

Median house price €500k – 10 times the average Dublin salary

How We Help Deliver Renovation at Scale:

Moving beyond plans to delivery through innovative solutions

District Heating



Replacing fossil fuel boilers with local waste heat and renewables

Energy Performance Contracting



Aggregation, standardisation and guaranteed savings in Public and Private buildings

Energy Communities



Helping communities move from plans to action

COMMUNITY ENGAGEMENT

Meeting people where they are: local engagement and trust







> We do not have an information problem—we have an engagement one. We do not need more websites and leaflets; we need more conversations and trust at local level.







Citizen Led Renovation (CLR) – local delivery

- The CLR Buying Club – supports Sustainable Energy Communities (SECs) and homeowners to move from retrofit interest to contract signing
- Supporting 9 pilots across the Greater Dublin Area
- Alleviates reliance on local volunteer time
- Uses aggregation and standardisation to reduce costs and admin burden
- Codema acts as local coordinator, facilitator and technical/project support
- In partnership with SEAI, funded by the EU



Energy Performance Contracting – What is it?

Codema
Dublin's Energy Agency

- Provision of Energy Services with a guaranteed outcome
- Energy services company (ESCo) provides design, build, operate and maintain service
- Groups of buildings aggregated into one contract – reduce costs and attract market scale
- Tenders evaluated based on guaranteed energy and emissions savings
- Addresses the Performance Gap – design vs actual operation
- Codema has over 10 years experience – established dedicated delivery unit

Results of First EPC Pilot – Dublin City Council (2016)

€669,291
Verified cost savings
Across 3 leisure centres

35%
Verified energy savings
Exceeded initial contract guarantees

6,100 t
Total CO_2 emissions saved
Over the 8-year contract

SCALING UP

EPC in numbers: proven carbon and financial impact

Verified outcomes across local authority building upgrades

DeliveREE

	Results so far (signed EPC contracts)	Including 2026 Pipeline (due for signing)
Total Investment / Contracts	€21m	€46m
Private Investment	€2.9m	€6.7m
Energy Savings (GWh/yr)	15.5	29.4
CO2 Reduction (tCO2/yr)	2,797	6,269

KEY TAKEAWAYS

Key takeaways for scaling energy renovation across Europe

Core principles to achieve deep renovation targets by 2030



Delivery architecture is as important as funding in determining programme speed



Aggregated project portfolios reduce transaction costs and improve market engagement



Build local trust and meet citizens where they are



Institutional capacity is essential for sustained programme delivery



Structured delivery systems provide a pathway for scaling decarbonisation programmes across Europe

Codema
Dublin's Energy Agency

Thank you

Contact
Donna Gartland
donna.gartland@codema.ie

Renovate Europe Day 2026

Short presentation of Renovate Europe's EPBD Implementation Tracker



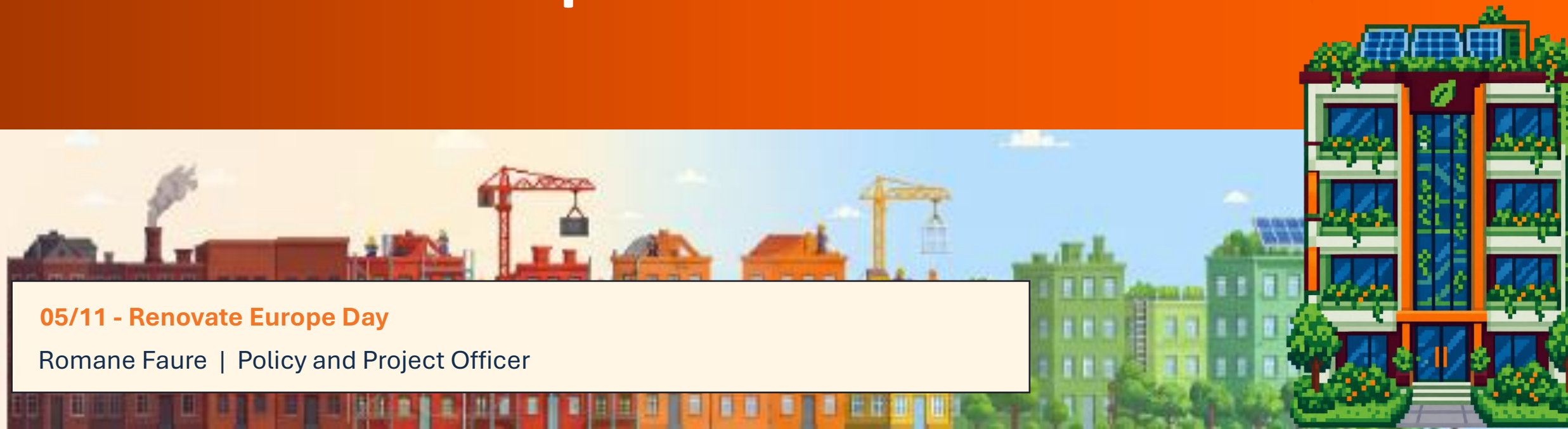
Romane Faure

Project and Policy Officer

Efficient Buildings Europe & Renovate Europe Campaign

RENOVATE EUROPE

EPBD implementation tracker



05/11 - Renovate Europe Day

Romane Faure | Policy and Project Officer

RENOVATE EUROPE

EPBD LOADING...

HOW IS EUROPE ADVANCING IN THIS MULTIPLAYER GAME?

06

POLICY TRACKS

↓

01

SHARED MISSION

↓

A DECARBONISED BUILDING STOCK BY 2050



6 POLICY TRACKS. 16 KEY PROVISIONS OF THE EPBD.

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01



MAP THE STOCK

02



PLAN THE ROUTE

03



SET THE STANDARDS

04



ACTIVATE SMART PERFORMANCE

05



CUT THE CARBON

06



ENABLE DELIVERY

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SUCCESS UNLOCKED:

- EPC modernisation is advancing.
- National Building Renovation Plans are taking shape across all Member States.
- ZEB requirements are entering national legislation and building codes.
- Technical building system rules are being upgraded across most Member States.
- Most Member States have ended public incentives for new stand-alone fossil-fuel boilers.
- Some form of renovation one-stop shop is now present in 26 Member States.

PLAY

Join the campaign and unlock the country-specific view!



PROMISING MOVES – LEARNING FROM EACH OTHER

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Building Energy Rating (BER)



- ✓ Simplified rating system into A0-G scale
- ✓ Transparency, accessibility and comparability

Life-Cycle Global Warming Potential



- ✓ Co-design between government and industry
- ✓ Test on 100 buildings

+ Progresses unlocked + Obstacles ahead + Next legislative checkpoints + Awaiting release

Join the campaign and unlock the country-specific view!

Thanks!

Romane Faure, Policy Officer
Efficient Buildings Europe / Renovate Europe Campaign
romane.faure@efficientbuildings.eu

Join the campaign and unlock the country-specific view!



Renovate Europe Day 2026

Session 1: Delivering Energy Renovation at Scale



Moderator

Marion Jammet

Director of Policy & Advocacy

IGBC



Susan Vickers

Head of Environmental Sustainability, Clúid Housing /

Chair, Healthy Homes Ireland



Robert Nuij

Head of Unit

DG ENER, European Commission



Kieran Holohan

Managing Director for Ireland

Saint-Gobain



Jennifer O'Donnell

Co-founder

O'Donnell Brown: the Scottish experience



Tom Gilligan

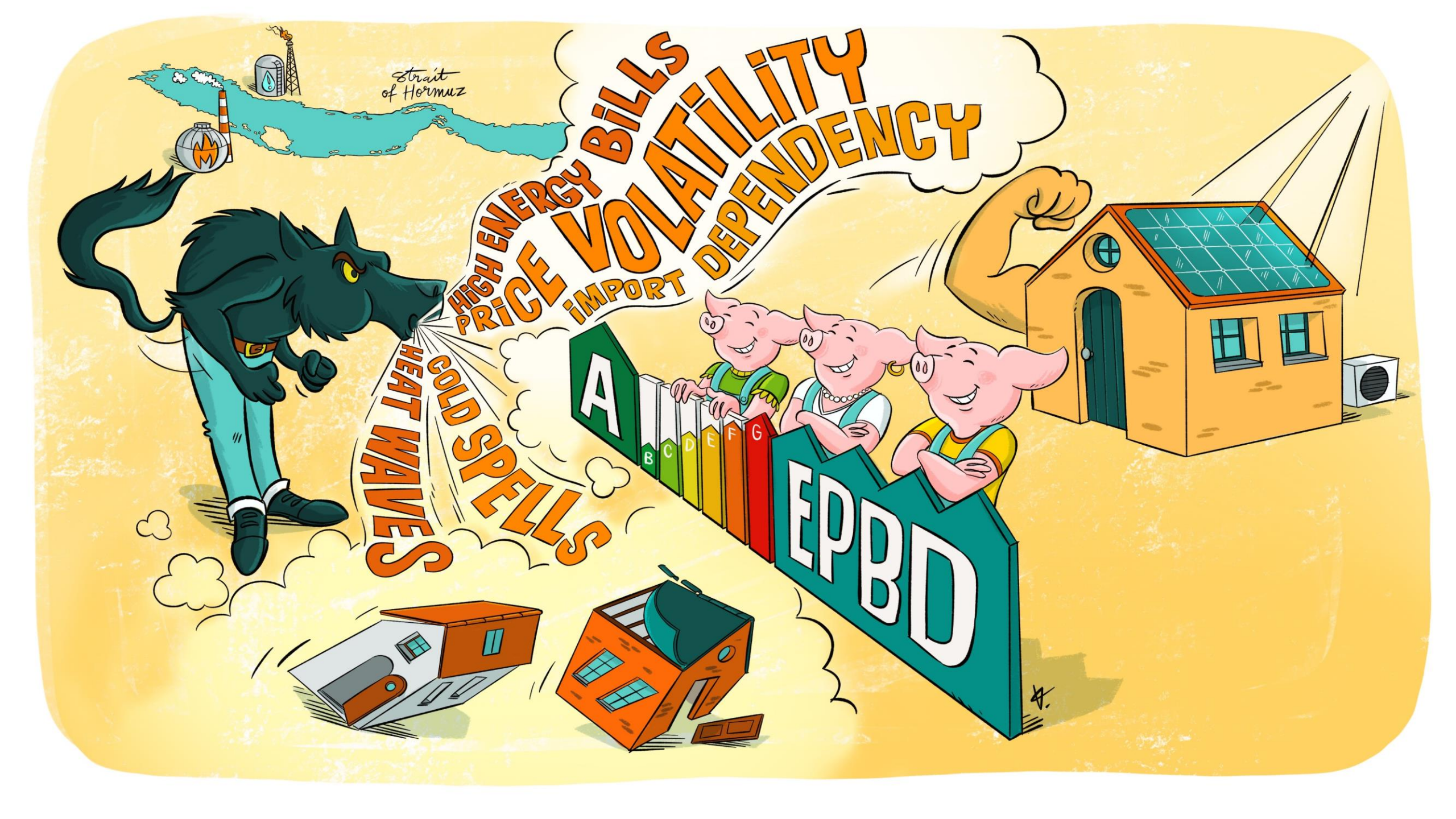
Director of Services

Mayo County Council

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Strait of Hormuz
HIGH ENERGY BILLS
PRICE VOLATILITY
IMPORT DEPENDENCY
HEAT WAVES
COLD SPELLS
A
B
C
D
E
F
G
EPBD

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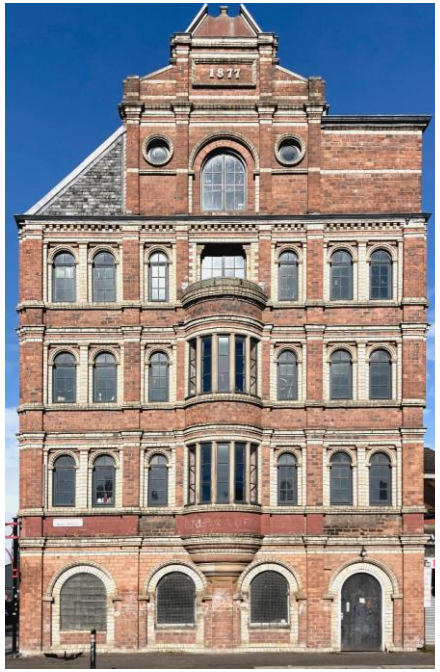
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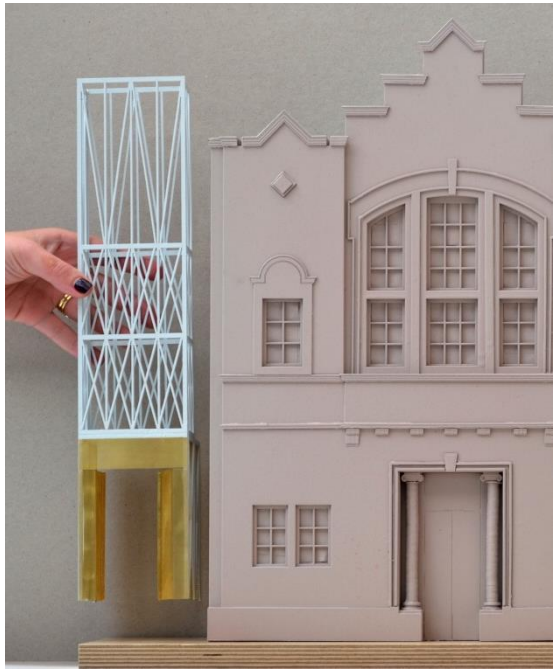
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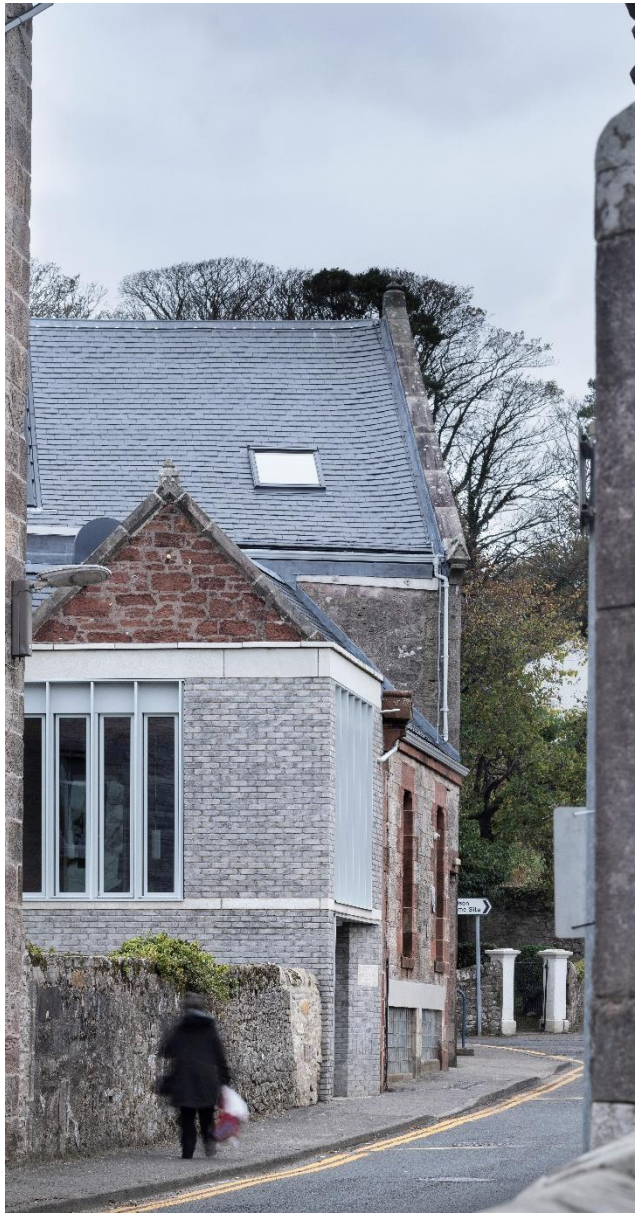
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Retrofit, repair and regeneration









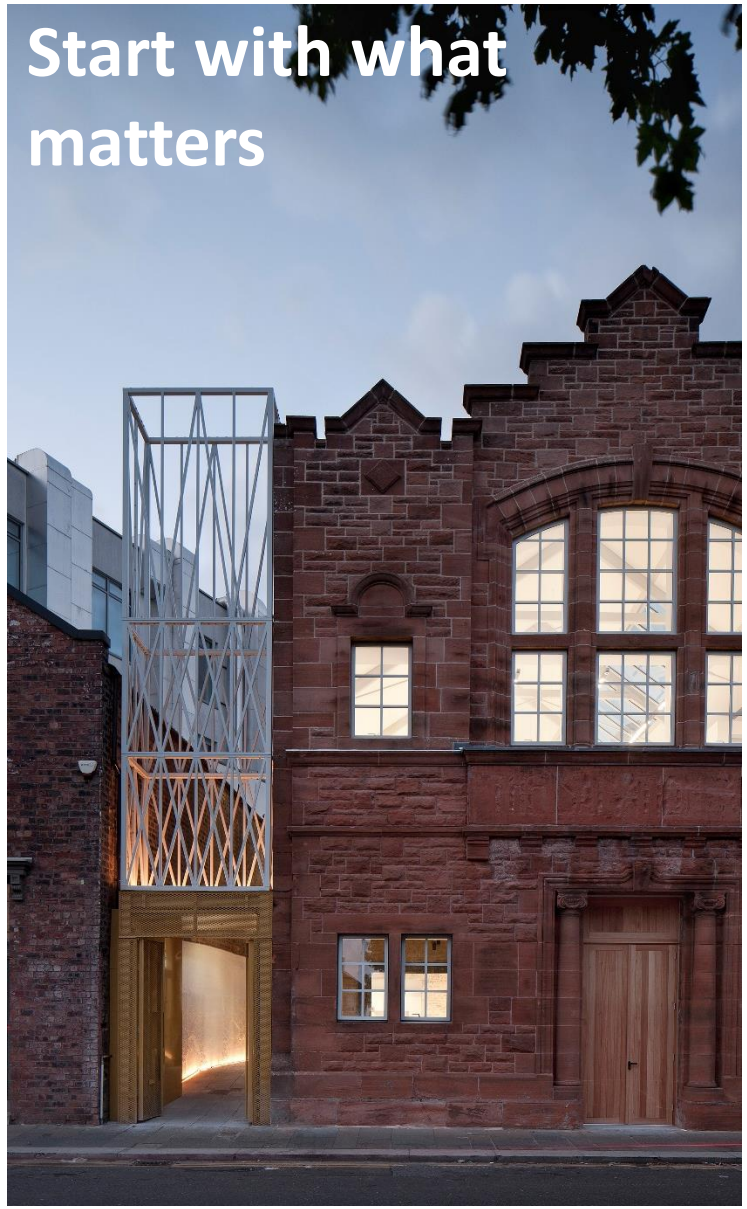




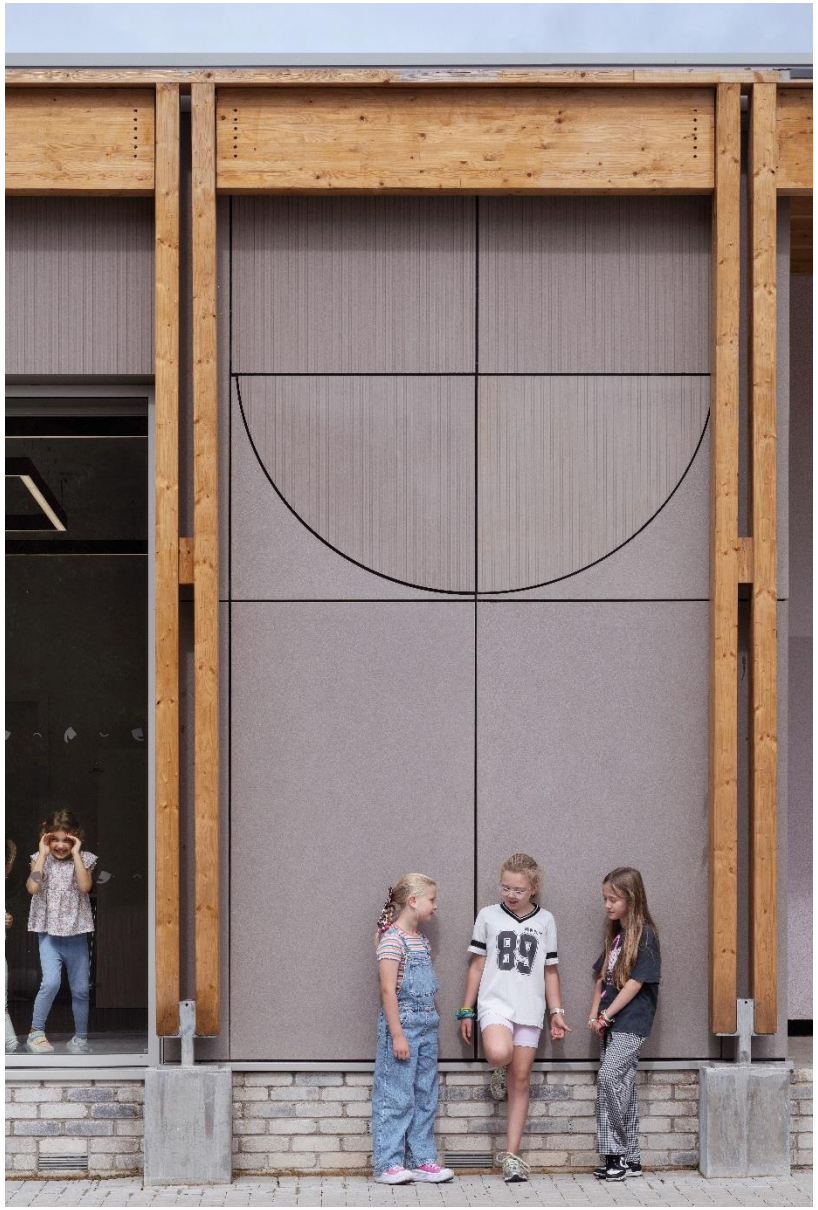


O'DonnellBrown

Start with what matters



New Olympia House, Glasgow

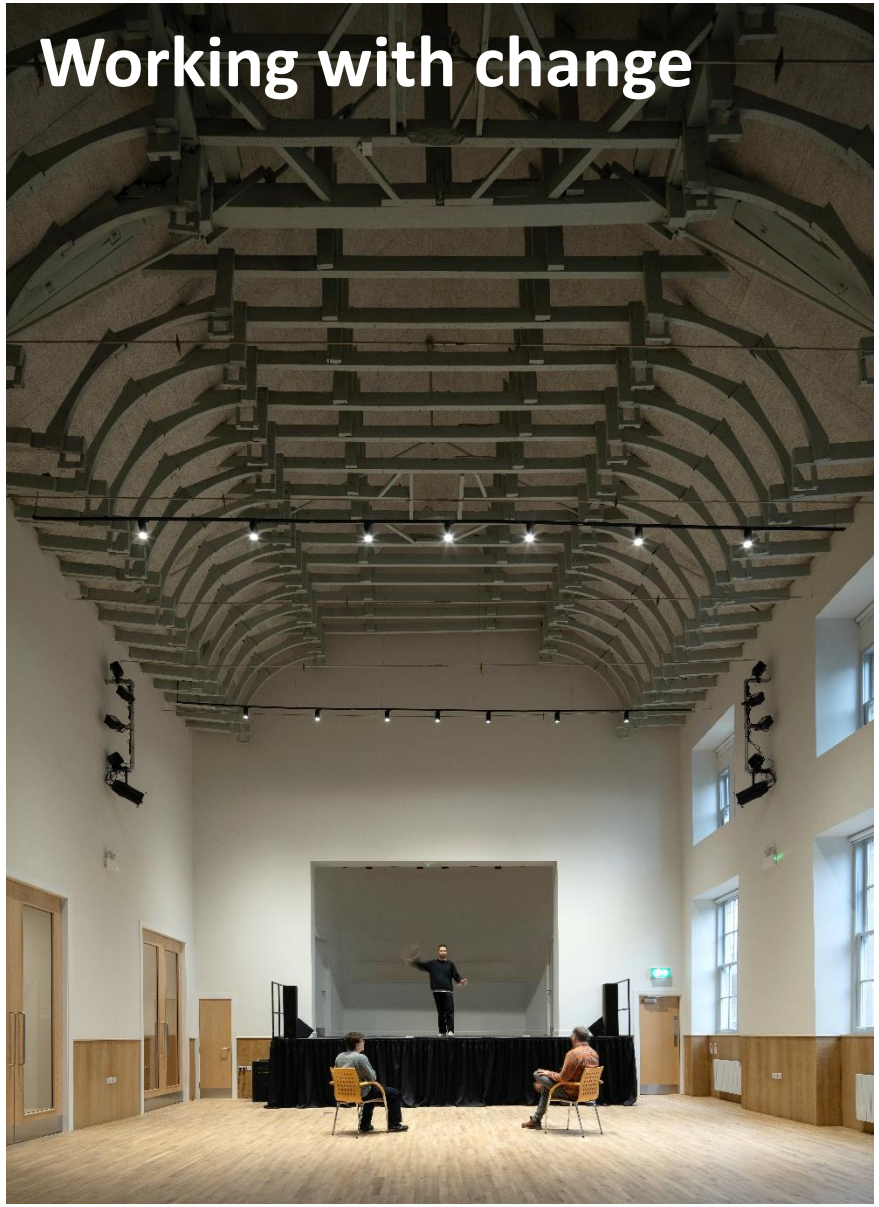


Take a Bow, Kilmarnock



Millport Town Hall, Cumbrae

Working with change

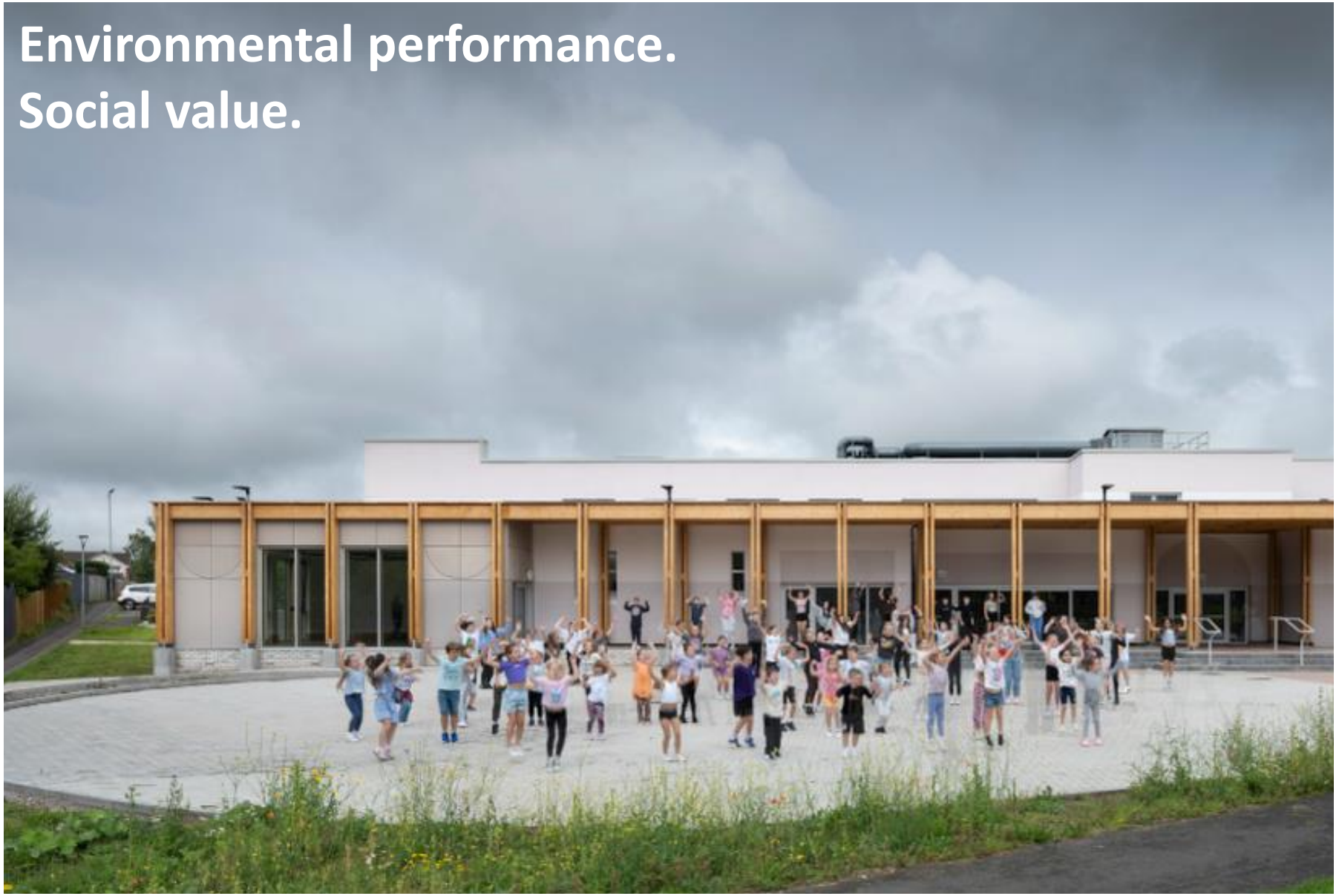


Millport Town Hall, Isle of Cumbrae



Community Use – Improved Performance – Income Generation

Environmental performance.
Social value.



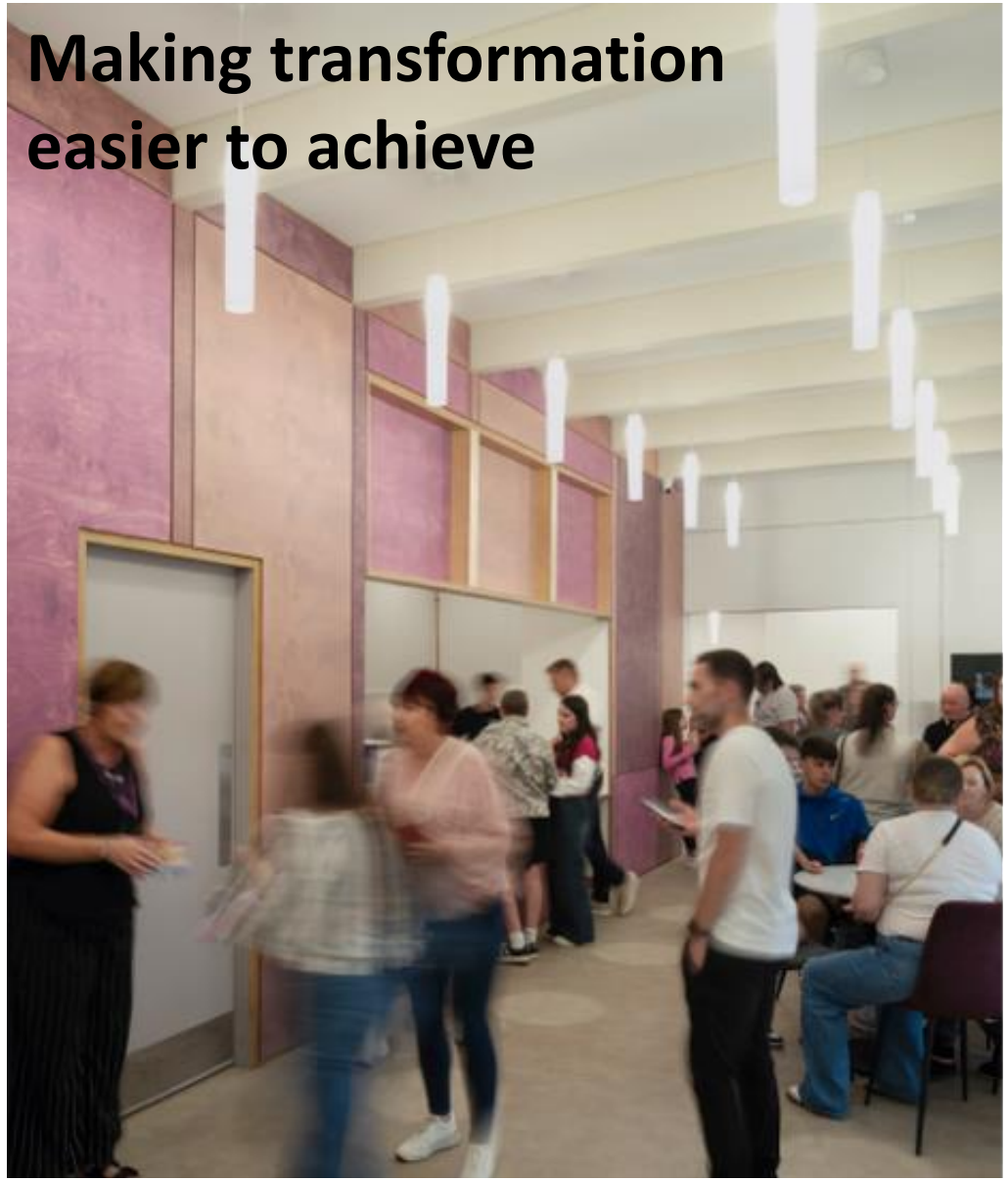
Take a Bow Opportunity Centre, Kilmarnock





Before renovation

Making transformation easier to achieve





Take a Bow Opportunity Centre, Kilmarnock

Renovate Europe Day 2026

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Audience Q&A

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Renovate Europe Day 2026

Keynote Address:



Alan Dillon TD

Minister of State at the Department of Enterprise, Tourism and Employment and at the Department of Climate, Energy and the Environment

Renovate Europe Day 2026

Coffee Break: 11:25 – 11:55



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Renovate Europe Day 2026

Better Housing, Better Living: Turning Renovation Ambition into Reality



Fleming Voetmann

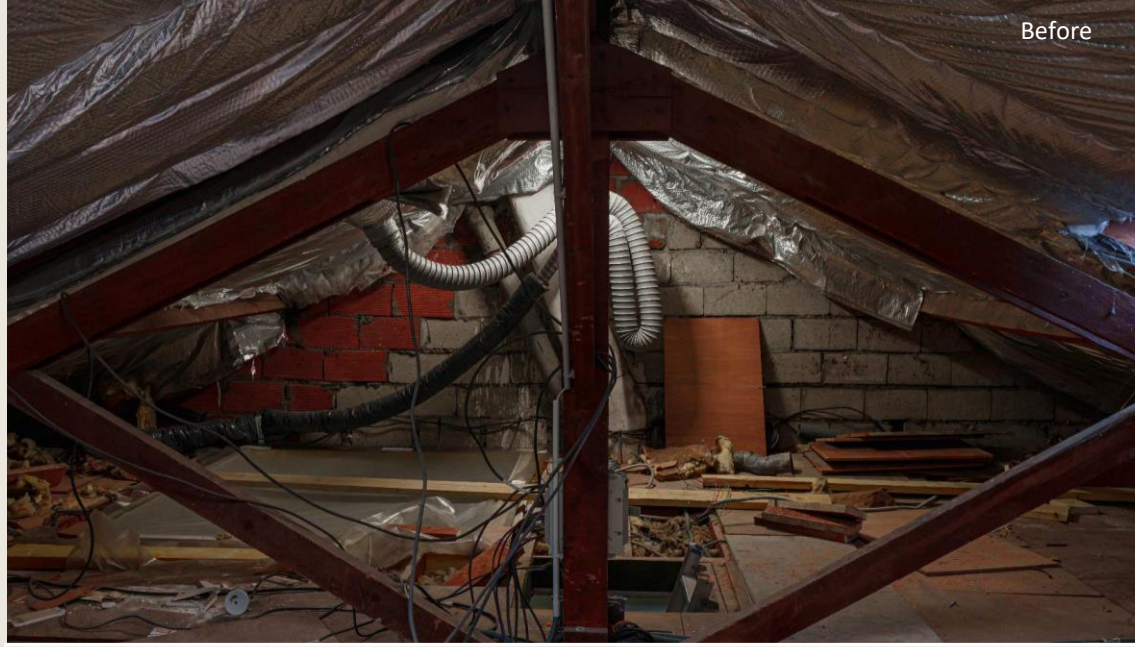
Vice President for Public Affairs and Product Regulatory Affairs

VELUX

Fleming Voetmann, Renovate Europe Day 2026
5 November 2026

Better Housing, Better Living

Turning Renovation Ambition into Reality



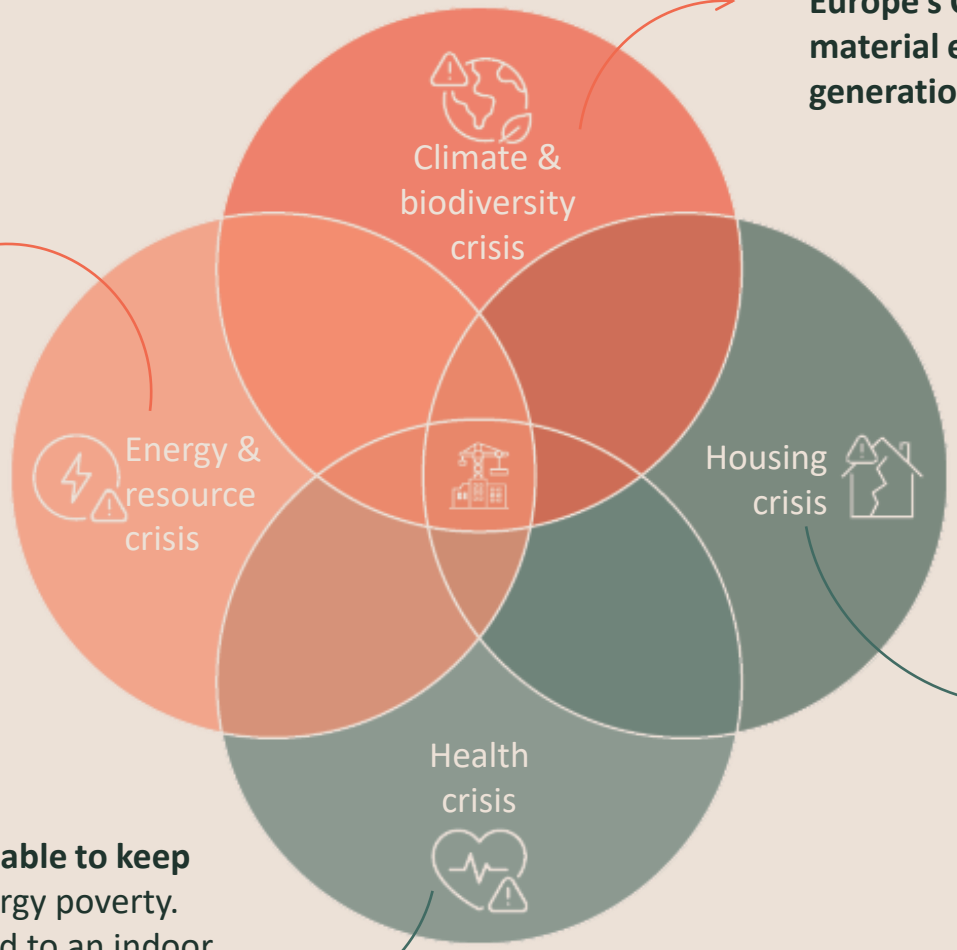


VELUX®

Four interconnected crisis

The built environment accounts for **36% of Europe's CO2 emissions, 50% of its raw material extraction, 37.5% of its waste generation**.

Buildings are responsible for **40% of EU's energy use** and **36% of CO2 emissions**. Combining efficiency, electrification and clean energy could **reduce EU gas demand by 70%** and **oil demand by 72%** by 2040.



Housing costs exceed **40% of disposable income** for nearly 10% of EU urban households. **House prices rose by 53%** between 2015-2024. **20% of existing dwellings are underoccupied**, while **16.8% are overcrowded**.

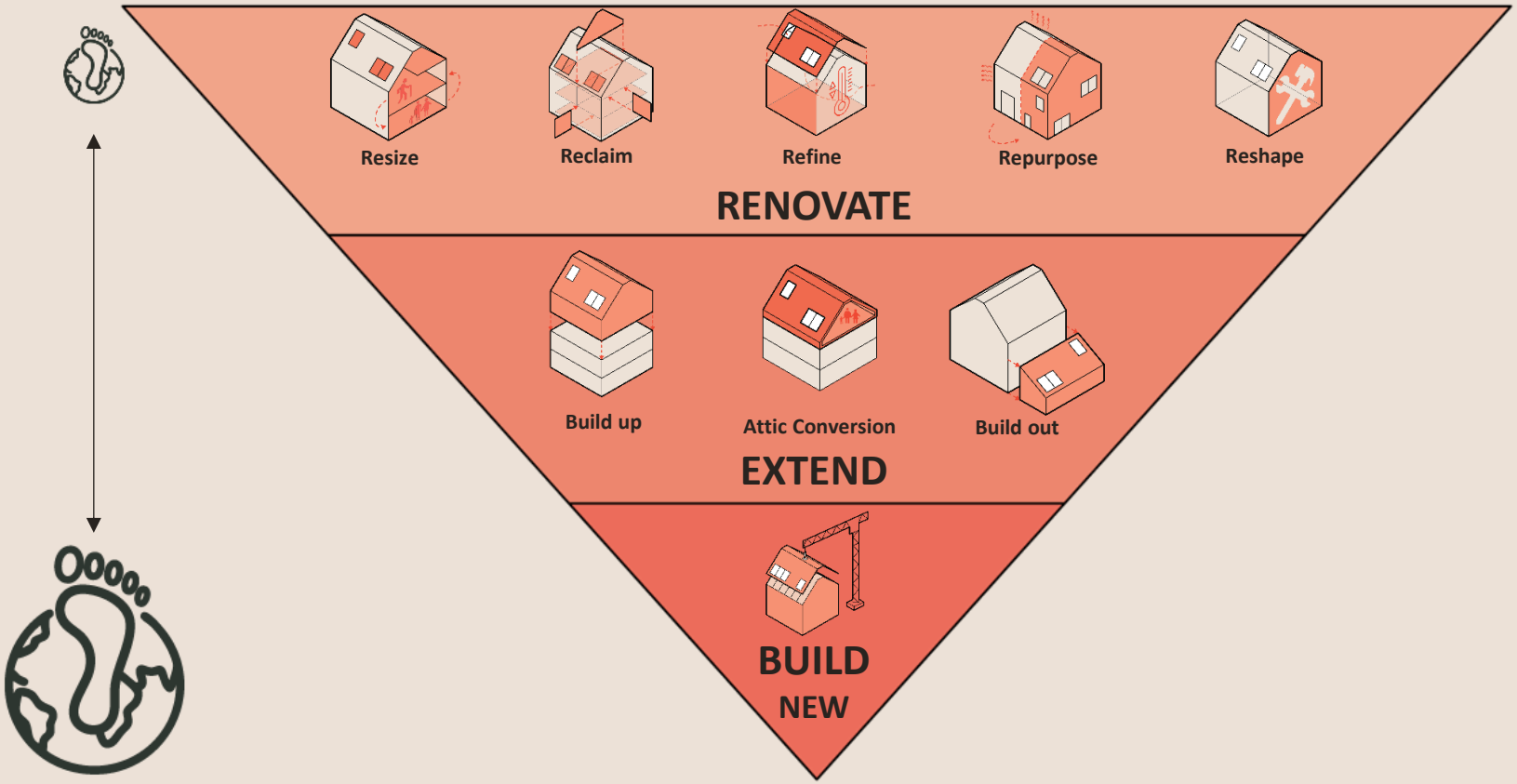
Over **40 million Europeans are unable to keep their homes warm** and live in energy poverty. **One in three Europeans** is exposed to an indoor climate hazard at home.

General - All

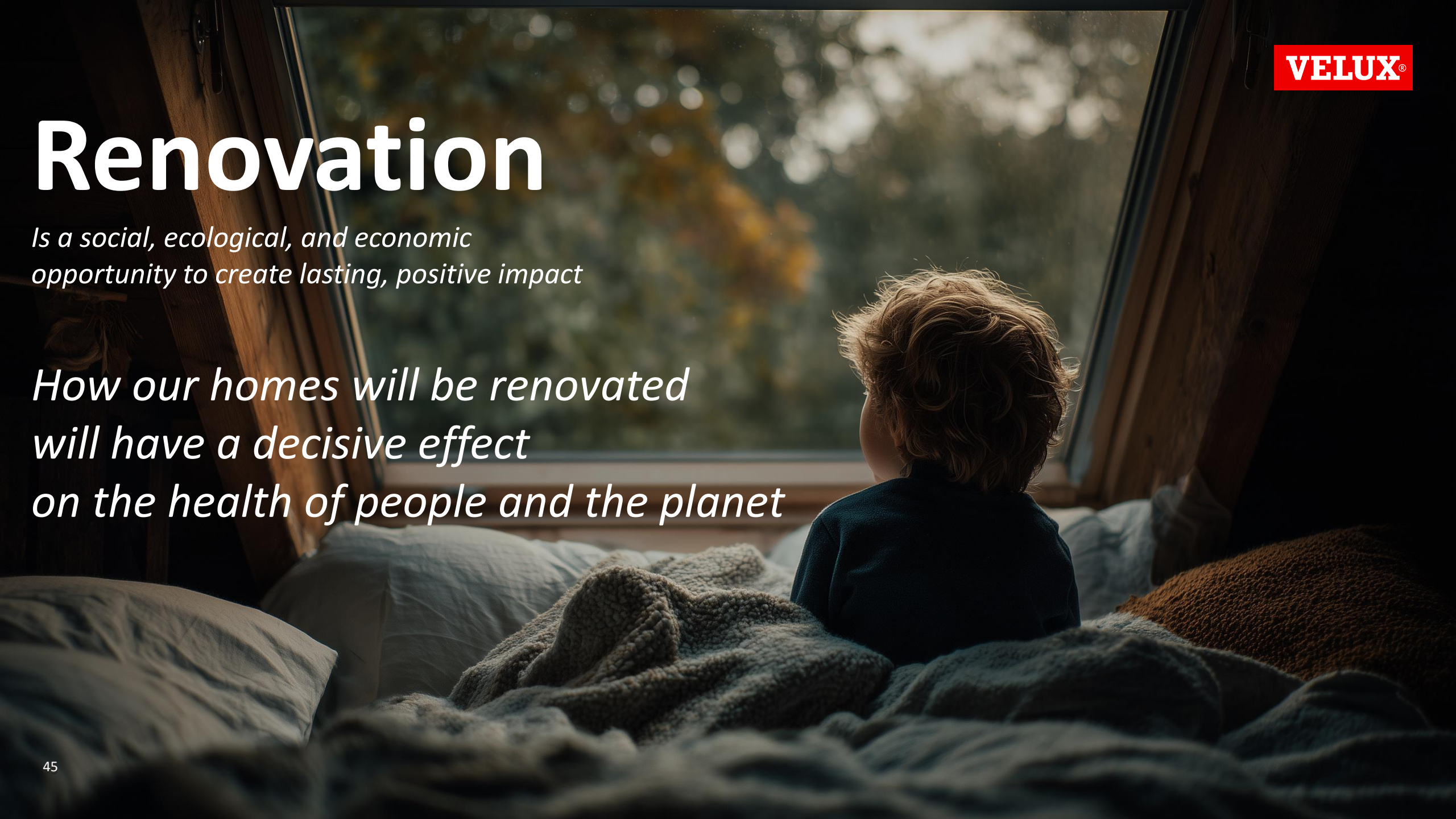

3x
Lower
CO_2 Footprint
3x
Better
Indoor Climate
1x
At Market
Price
From New Build
Living Places
Proved that new building could be built while reducing harm enabling us get drastic emissions reductions
To Renovation
Re:Living
But why stop at less harm? What if renovation could restore ecosystems, draw down carbon, and provide affordable homes for all?

Renovate First approach

The analysis verified the hierarchy, proving that renovating has the lowest carbon footprint and material intensity than extending or building new.



Hierarchy structure source: https://journal-buildingscities.org/articles/10.5334/bc.351



Renovation

Is a social, ecological, and economic opportunity to create lasting, positive impact

How our homes will be renovated will have a decisive effect on the health of people and the planet

Cube Renovation Pilot in Hungary








VELUX® EQUINOX

Partner organisations

Tangible results after renovation

-88 % energy consumption

-97 % heating energy

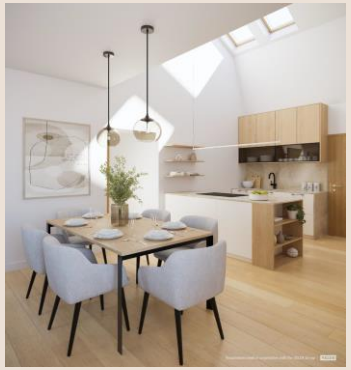
-45 % lighting energy

+42% passive comfort












Healthy Homes Barometer 2015
European Survey by the VELUX Group
Healthy Homes Barometer 2016
European Survey by the VELUX Group
Healthy Homes Barometer 2017
Buildings and Their Impact on the Health of Europeans
Healthy Homes Barometer 2018
Healthy Buildings Barometer
Edition 9
From principles to practice
Healthy Homes Barometer 2019
Growing up in (un)healthy buildings
Healthy Homes Barometer 2020
Ensuring a green recovery post-Covid-19 with sustainable buildings
Healthy Homes Barometer 2022
Sustainable buildings for a resilient society
Healthy Buildings Barometer 2024
How to deliver healthy, sustainable, and resilient buildings for people
Brussels launch in Q1 2027



Contact info
Fleming Voetmann
Fleming.Voetmann@velux.com
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Audience Q&A

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Renovate Europe Day 2026

Session 2: Renovate all Educational Buildings by 2035!



Moderator

Adrian Joyce

Director

Renovate Europe Campaign



Sophie Breton

President, Professional Business Unit Europe

Signify



Petra van Haren

Director

European School Heads Association



John Dolan

Manager, Planning and Building Unit

Department of Education

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Survey on school buildings

Capture the objective state and functional impact of school buildings across the EU (survey ongoing)

2-11-2026

esha

esha



Members in 30 European Countries

School Heads engaged in our network.

ESHA is the School Heads Association in Europe and connects about 130.000 school leaders in (pre-) primary, secondary and vocational education.

ESHA connects school leaders, researchers and policy makers with the collective aim to learn from each other and improve education.

The pressing topics

Poor air quality and Inadequate Ventilation + Temperature extremes

- CO2 levels often rise above recommended limits (natural ventilation or outdated systems).
- High CO_2 levels and the buildup of pathogens lead to headaches, fatigue, drowsiness, and increased absenteeism among students and teachers. It significantly reduces absorption and concentration capacity.

- Classrooms to hot or cold.
- Poor isolation, lack sun protection, absence climate control.

Deferred maintainance, outdated infrastructure and mold

- Decades of underinvestment have led to leaks, moisture problems, mold growth, and outdated or unhygienic sanitary facilities.

- Moisture and mold increase the risk of asthma, allergies, and respiratory infections in children. Additionally, poor or neglected sanitary facilities cause students to postpone using the toilet, leading to physical complaints and affecting the general sense of safety and well-being at school.

Poor acoustics and noise pollution

- Hard materials, high ceilings, outdated walls, and the lack of sound-absorbing panels cause long reverberation times in classrooms, hallways, and gymnasiums.

- Noise pollution leads to stress, mental fatigue, and voice problems among teachers. Among students (particularly children with hearing problems, ADHD, or a language delay), speech intelligibility and task focus deteriorate.

Lack of / poor quality of daylight and lighting

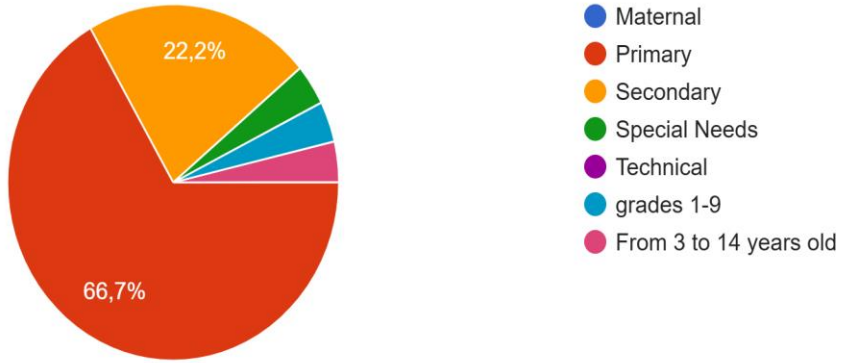
- Old school buildings often have windows that are too small, no or poor sun protection, or conversely, outdated, flickering artificial lighting (such as old fluorescent tubes).

- Insufficient natural daylight disrupts children's biological rhythm (sleep-wake cycle), leading to reduced alertness and a poorer mood. Furthermore, flickering or too dim light causes eye strain and headaches.

SURVEY ON SCHOOL BUILDINGS respondence 22 countries

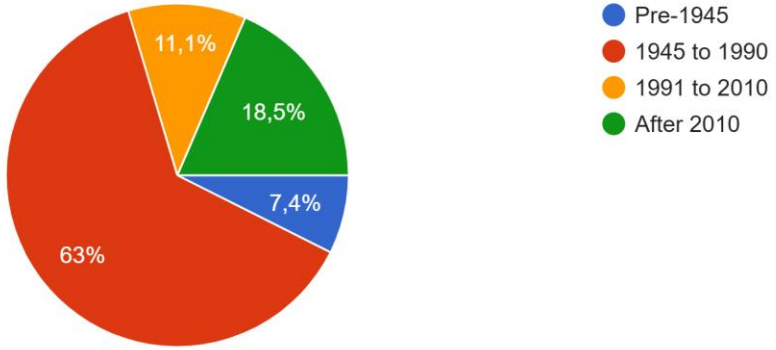
What type of school is your school?

27 antwoorden



In approximately what year was your school built?

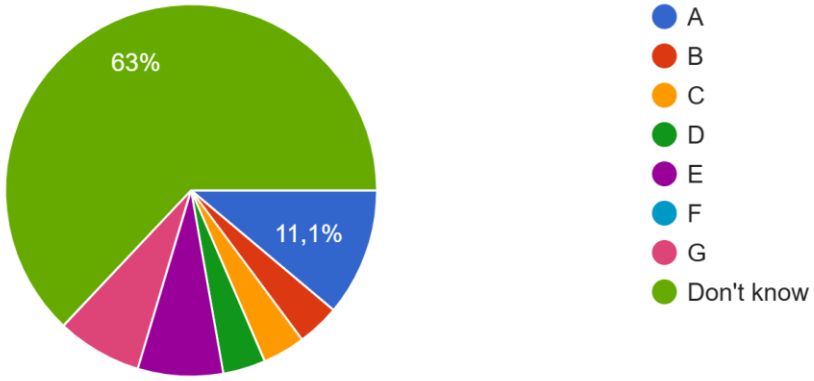
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SURVEY ON SCHOOL BUILDINGS

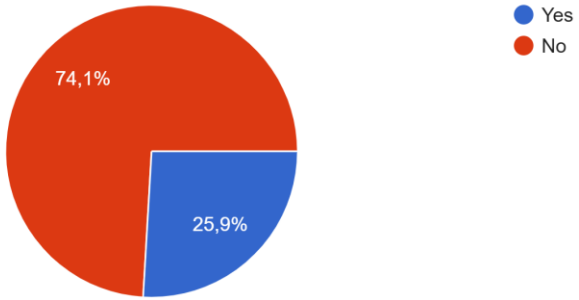
If your school has an Energy Performance Certificate, please indicate what class it is (usually a scale from A for best to G for worst).

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Do you have temporary buildings in use to accommodate the population of pupils and/or students in your school?

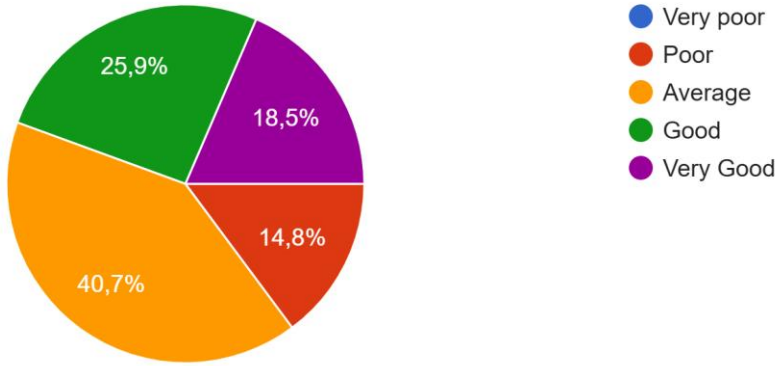
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SURVEY ON SCHOOL BUILDINGS

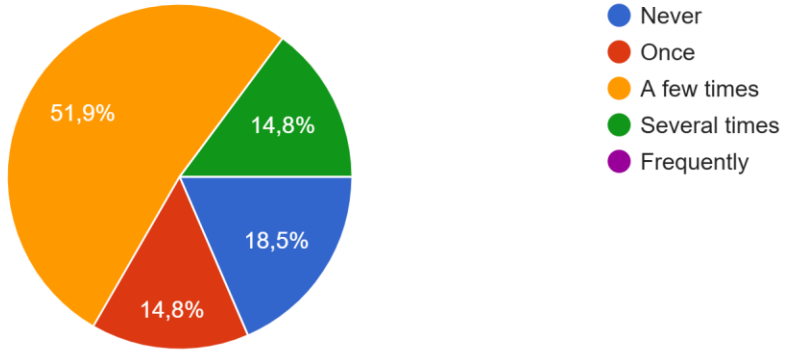
How do you judge the general condition of your school buildings and facilities?

27 antwoorden



Within a school year, how often do building-related problems significantly disrupt normal school activities?

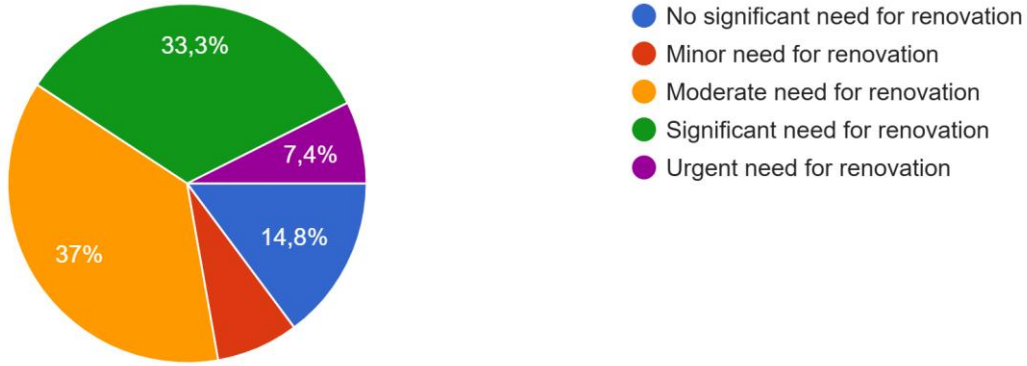
27 antwoorden



SURVEY ON SCHOOL BUILDINGS

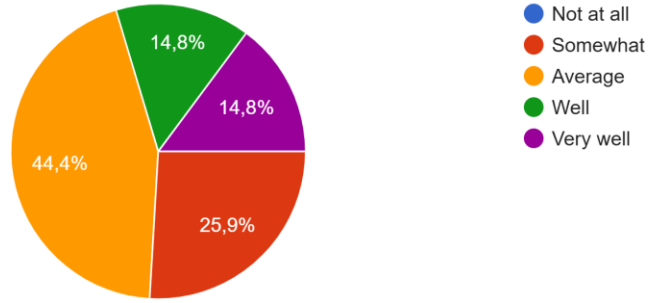
Overall, how would you rate the need for renovation of your school building?

27 antwoorden



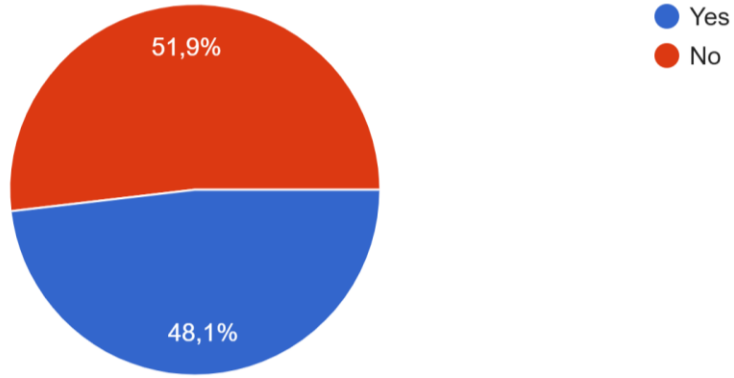
How well do your current buildings accommodate your student population and the modern educational needs that you provide (e.g., technology...ration, specialised labs, flexible learning spaces)?

27 antwoorden



Do your facilities currently meet 100% of basic accessibility and essential amenity standards (including functionality, clean sanitation facilities, ...ity-impaired individuals, and reliable potable water)?

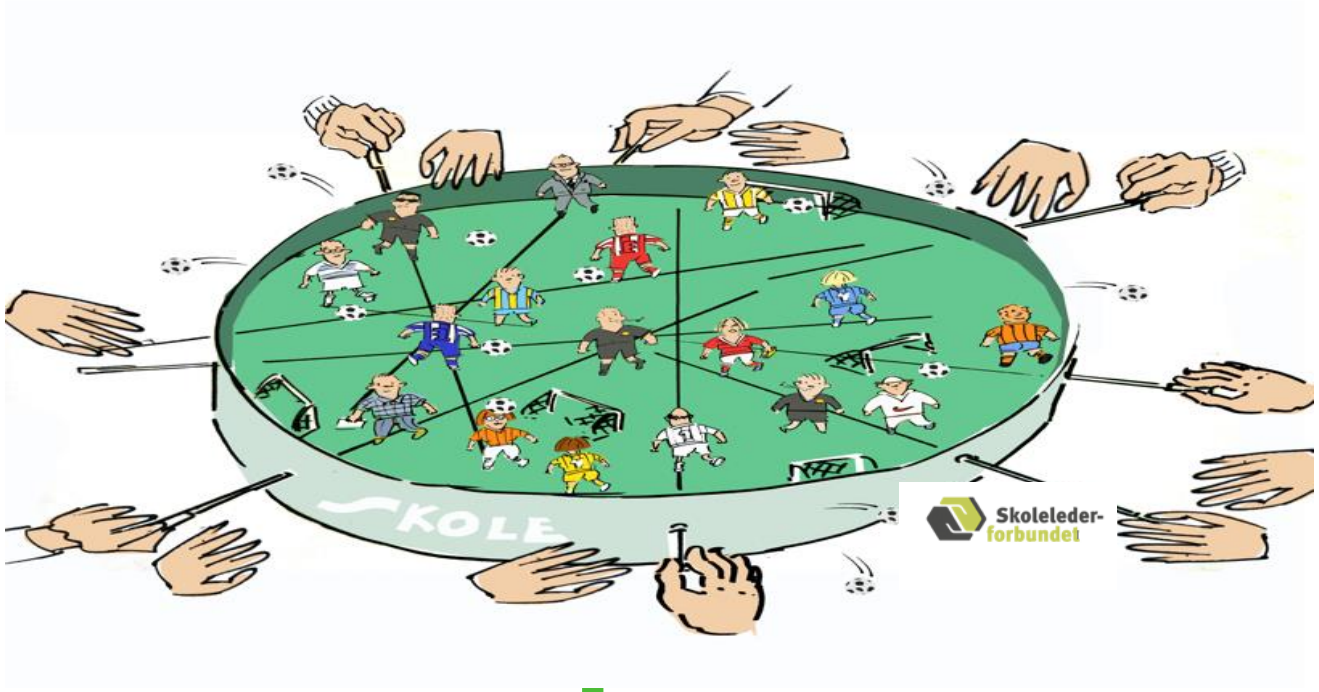
27 antwoorden



How schools feel

We all know about the problems,

Multiple inputs, pushes and pulls, but no clear direction where we go..



esha

The pressing solutions

Poor air quality and Inadequate Ventilation + Temperature extremes

- To address physical building quality and well-being in school buildings, guidelines, technical solutions, and overarching renovation strategies must be implemented at both the European and national levels.

- Policy, Planning and Budget

Deferred maintainance, outdated infrastructure and mold

- To address physical building quality and well-being in school buildings, guidelines, technical solutions, and overarching renovation strategies must be implemented at both the European and national levels.

- Policy, Planning and Budget

Poor acoustics and noise pollution

- To address physical building quality and well-being in school buildings, guidelines, technical solutions, and overarching renovation strategies must be implemented at both the European and national levels.

- Policy, Planning and Budget

Lack of/poor quality of daylight and lighting

- To address physical building quality and well-being in school buildings, guidelines, technical solutions, and overarching renovation strategies must be implemented at both the European and national levels.

- Policy, Planning and Budget

The WHY→

OUR KIDS MATTER!

→ The future of our countries depend on quality education!

- **Our children are our future. Learning outcomes matter. Good physical conditions are preliminary.**
  - Would your own buildings be allowed accessible when conditions are below labor conditions? Would your organization optimize factors that enhance productivity?
- **Children's rights point towards equal chances and access to quality education. Schools in bad buildings undermine this.**
  - Adult people, unions or societal representation groups speak up, go on demonstration or strike for their needs. Children lack agency, they need that you take responsibility and have a vision.
- **Teachers need sufficient labor conditions. To optimize teaching and learning our buildings must facilitate the education of today and tomorrow.**
  - We have high expectations and demands to education. We need to prepare our kids for the (digi) future. We don’t facilitate our educators with up to date buildings.

esha

The pressing solution→ ACT!

Collaborate and INVEST to move forwards!



Commit to valuable Frameworks such as:

SINPHONIE Guidelines (*European Guidelines for Healthy Environments in Schools*):

NL:BREEAM-NL In-Use for Education: A certification methodology used to assess how sustainable, healthy, and well-managed an existing school building actually is.

THANK YOU

www.esha.org

Petra van Haren

Petra.vanharen@esha.org



Renovate Europe Day 2026

Session 2: Renovate all Educational Buildings by 2035!



Moderator

Adrian Joyce

Director

Renovate Europe Campaign



Sophie Breton

President, Professional Business Unit Europe

Signify



Petra van Haren

Director

European School Heads Association



John Dolan

Manager, Planning and Building Unit

Department of Education

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Department of Education
and Youth

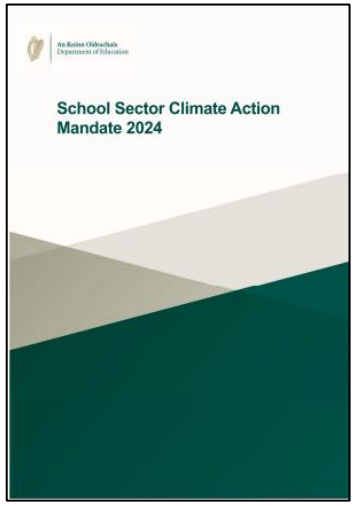
Delivering Climate Action to the School Sector in Ireland

John Dolan, Chartered Engineer.
Head of Climate Action Unit
REDay2026 5th November, Dublin

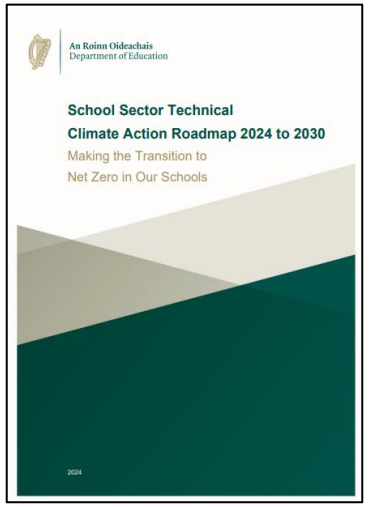
Delivering the Climate Action Agenda

Transitioning the School Sector to an era of Net Zero Carbon by 2050

- School Sector Climate Action Mandate



- School Sector Climate Action Roadmap



- Energy Research Programme EST. 1997

  56 different strands

Delivery Programme Overview



- Climate Action Summer Works Scheme
- Schools Energy Retrofit Pathfinder Programme with the SEAI
- Renewable heating Decarbonisation Programme Heat Pump / Biomass with the SEAI
- Schools PV Programme supported by Climate Action Fund
- REPowerEU Schools Pathfinder Decarbonisation Programme
- Energy and Condition Inventory Profile

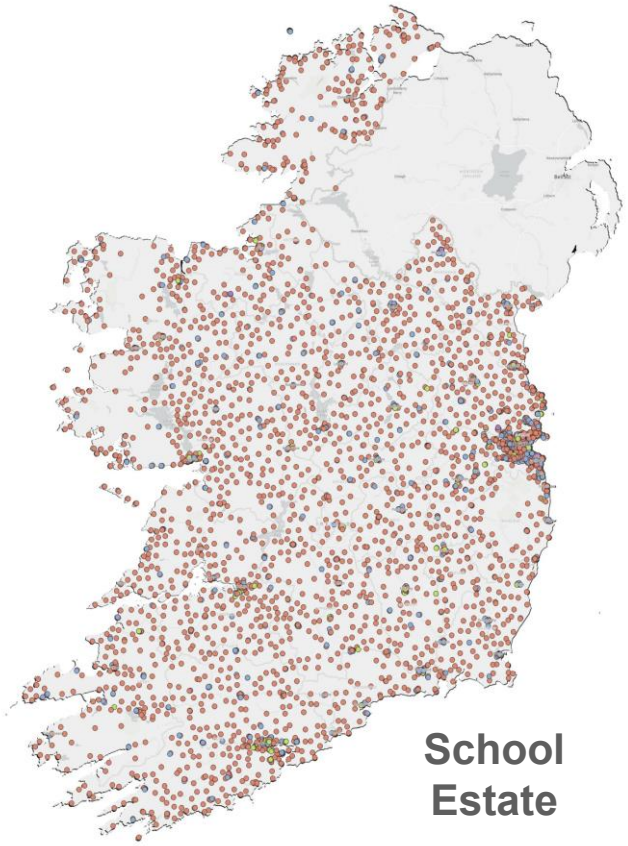
School Sector Energy & Condition Inventory Programme

The Department's Goal:

- Establish a Climate Action Roadmap for the school estate

Requirement

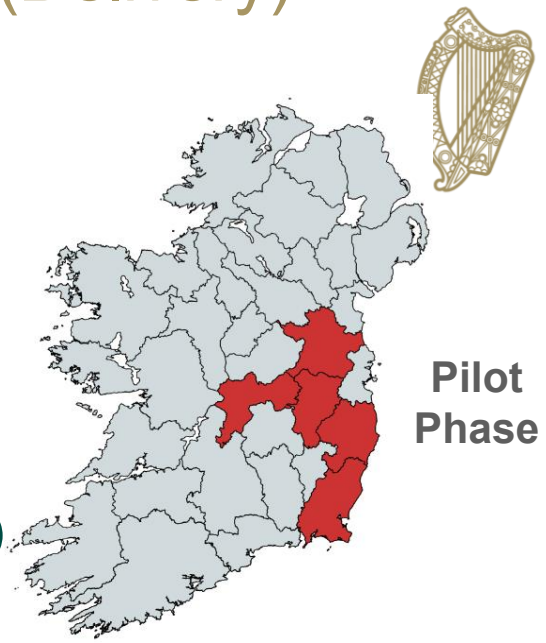
- Clear & measured understanding of the requirements nationally
- Establishing a baseline for improving energy efficiency
- Large scale audit/ survey to provide a Portfolio Data Base
- Produce an Inventory that schedules;
  - School type
  - Building sizes
  - Building fabric type & condition
  - Building services type & condition
  - Energy performance characteristics
  - Energy consumption characteristics



School Sector Energy & Condition Inventory Programme (Delivery)

Pilot Phase Funded by the EIB (European Investment Bank)

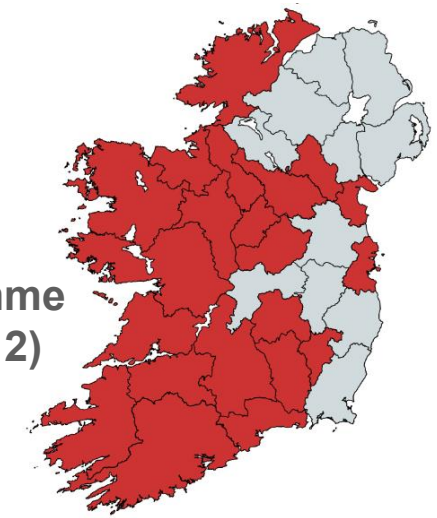
- Approx. 600 schools across five counties were surveyed in 2022
  - (Meath, Kildare, Offaly, Wicklow & Wexford)
- Primarily Energy data collected and uploaded to the DEY's GIS system
- Data Collected at 3 key levels (School Level, Building Level & Block Level)



Pilot Phase

Full Rollout of the Programme Funded by REPower EU

- All remaining schools were surveyed (21 counties)
- Framework of 8 Surveying Companies established
- Surveys conducted by professionals (Energy Engineers / BER Assessors)



Main Programme (Phase 2)

Survey process completed by end of Q3 2026

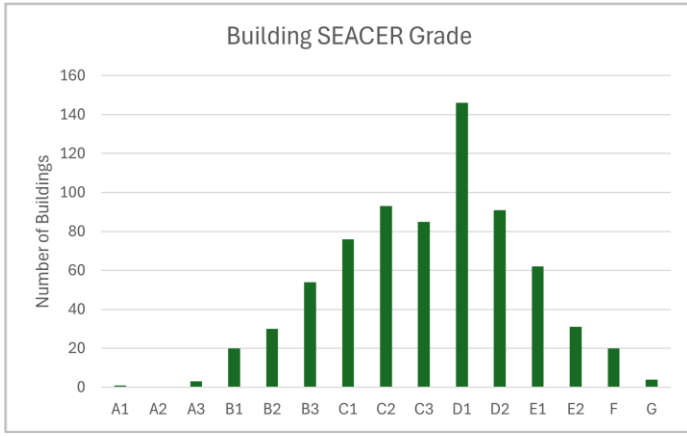
- Quality Assurance process currently underway on all survey data

School Sector Energy & Condition Inventory Programme (Outputs)

- Bespoke School Sector Analysis Tool
- Consolidated School Sector Portfolio Database
- **SEACER** (**S**chools **E**nergy **A**nd **C**arbon **E**stimated **R**ating)
- Reporting capacity on each school based on the collected data

Early use

- Pilot Phase data used in the selection process & developing business case for the REPowerEU Pathfinder Programme
- Identification of Energy Upgrade Measures
- Energy and condition data collated in the one survey database is very innovative and will facilitate;
  - Good strategic overview of estate management
  - Decision-making support for investment



An Roinn Oideachais
agus Óige
Department of Education
and Youth

Delivering Climate Action to the School Sector in Ireland

Thank You

Renovate Europe Day 2026

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Case Study: Pathfinder Programme in Cork, Ireland



Sarah Kelly

Director

KOBW Architects



Schools' Energy Pathfinder 2021

St. Gabriel's Special School

REDay2026

5th November 2026

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SEN School Established Within Community

St. Gabriel's Special School

"The Benefits of a special education school being located within an **urban community** cannot be stressed enough. As special schools, we are by nature segregated from the mainstream primary education community. By being located within a community such as Bishopston, Cork, we have **opportunities** on our doorstep for real life opportunities to practice road safety, inclusion at the local playground with like peers, access to urban river walk and nature trails, access to walk to local shops and practice life skills, access to walk to the local church to attend services, partnership with local creche and tennis village, low mileage driving to local swimming pool and restaurants for life skills."

Principal David Thomas

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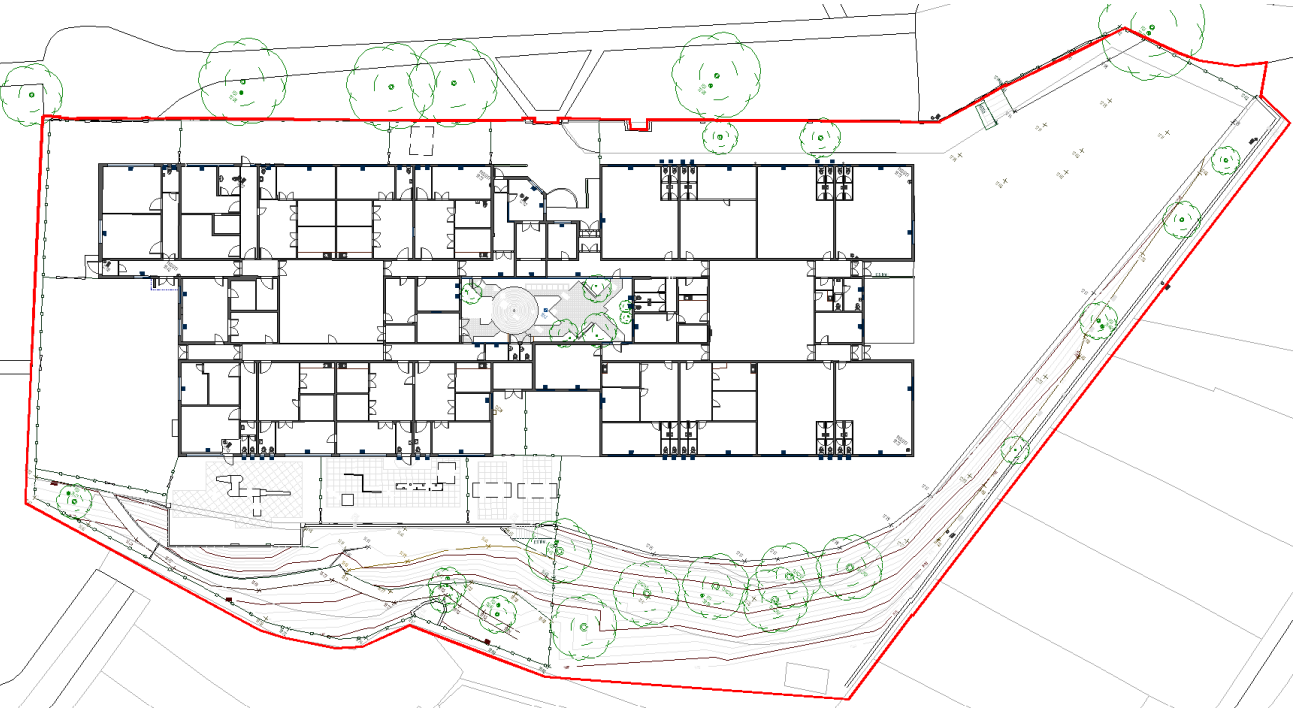
St. Gabriel's Special School

Existing School Building

"The building was very claustrophobic and led to many pupils, who struggle with transitions in the first place, struggling even more to navigate their way through a dim, non-spacious environment.

Level access was a big issue for all students and staff. "

Floor Area	2,122 m²
Built	Early 1980s
Occupancy	110 people - 55 students with 1 teacher for each student.



SITEPLAN

Energy Upgrade









Reconfiguration & Renovation









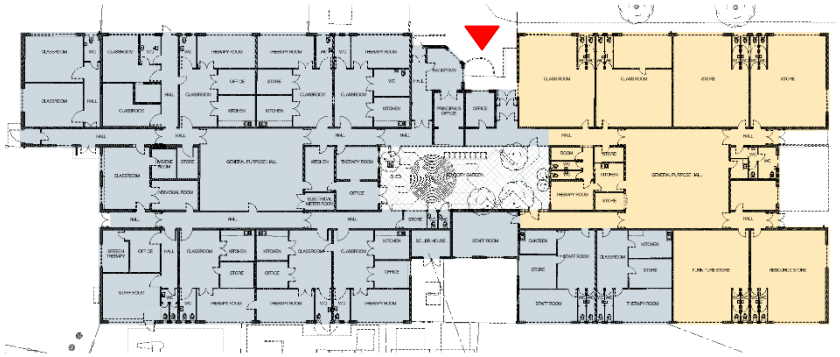
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St. Gabriel's Special School

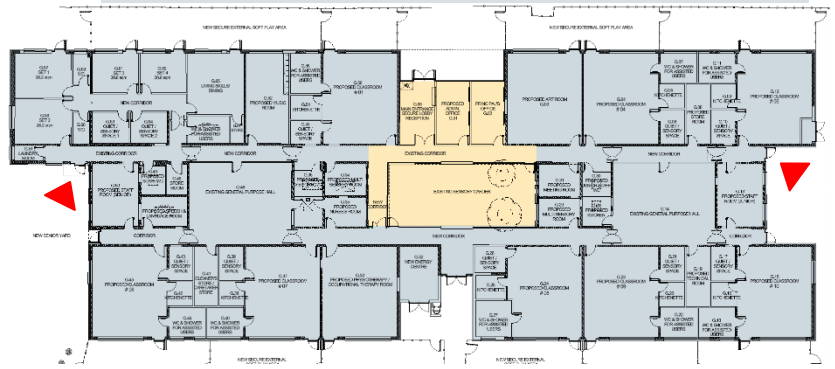
Design Strategy & Phasing



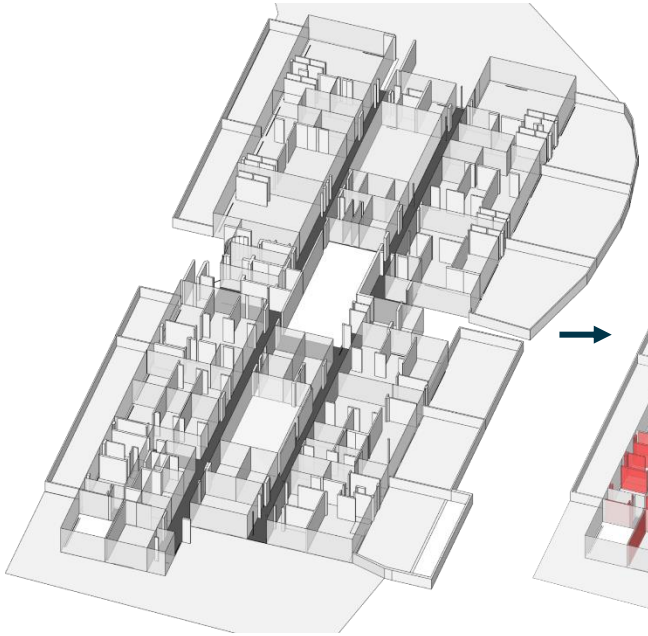
PHASE 1



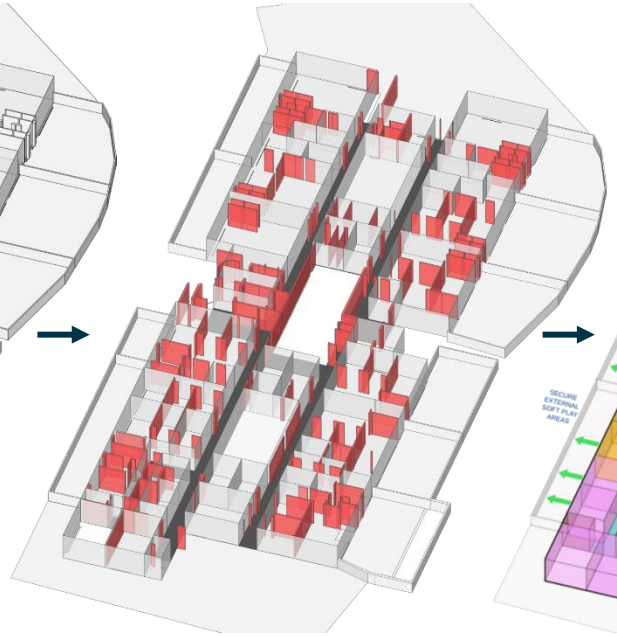
PHASE 2



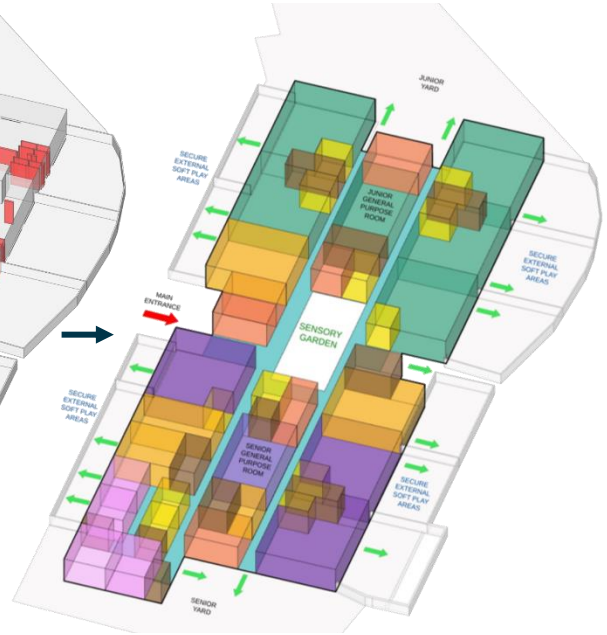
PHASE 3



EXISTING 1980S BUILDING



INTERNAL DEMOLITION



RECONFIGURED 2022 BUILDING

Legend

- Occupied School
- Construction Area

- Phased Construction
- Special Educational Needs Environment
  - Noise sensitivity
  - Need for Flexibility
  - Changing routes and transitions

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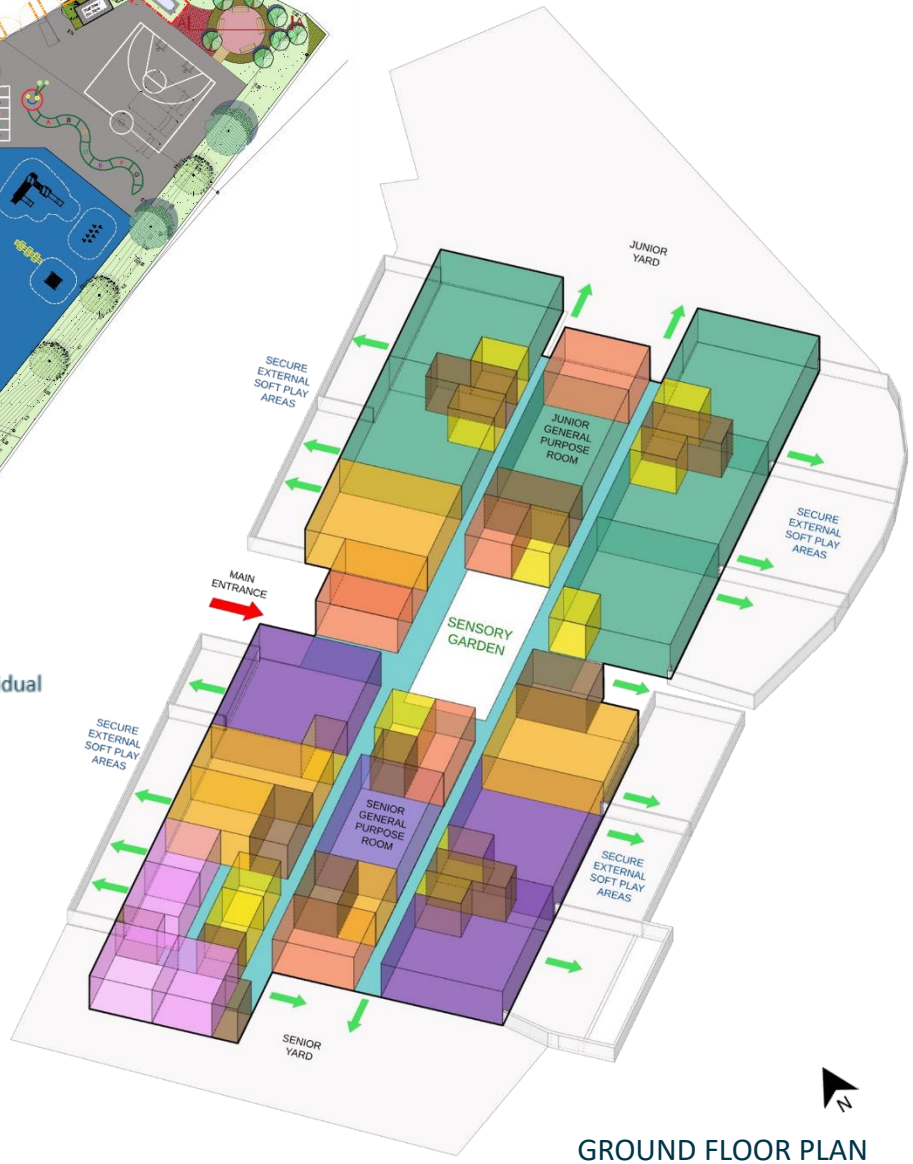
Design Strategy



SITE PLAN

Legend

- Junior Classes
- Sensory/Quiet Spaces
- Senior Classes
- Shared / Specialist Teaching Spaces
- Senior SET Rooms for Individual Learning
- Admin Spaces
- Ancillary Spaces
- Circulation

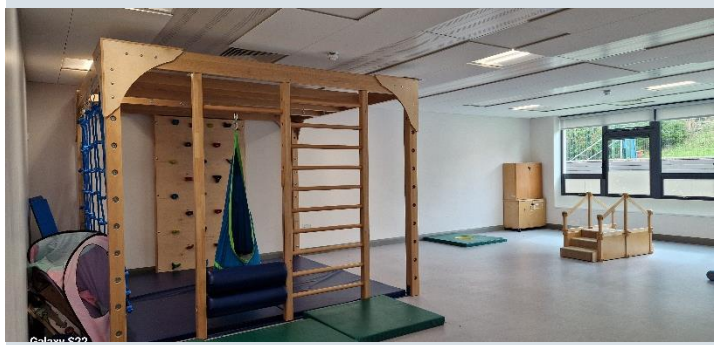


GROUND FLOOR PLAN







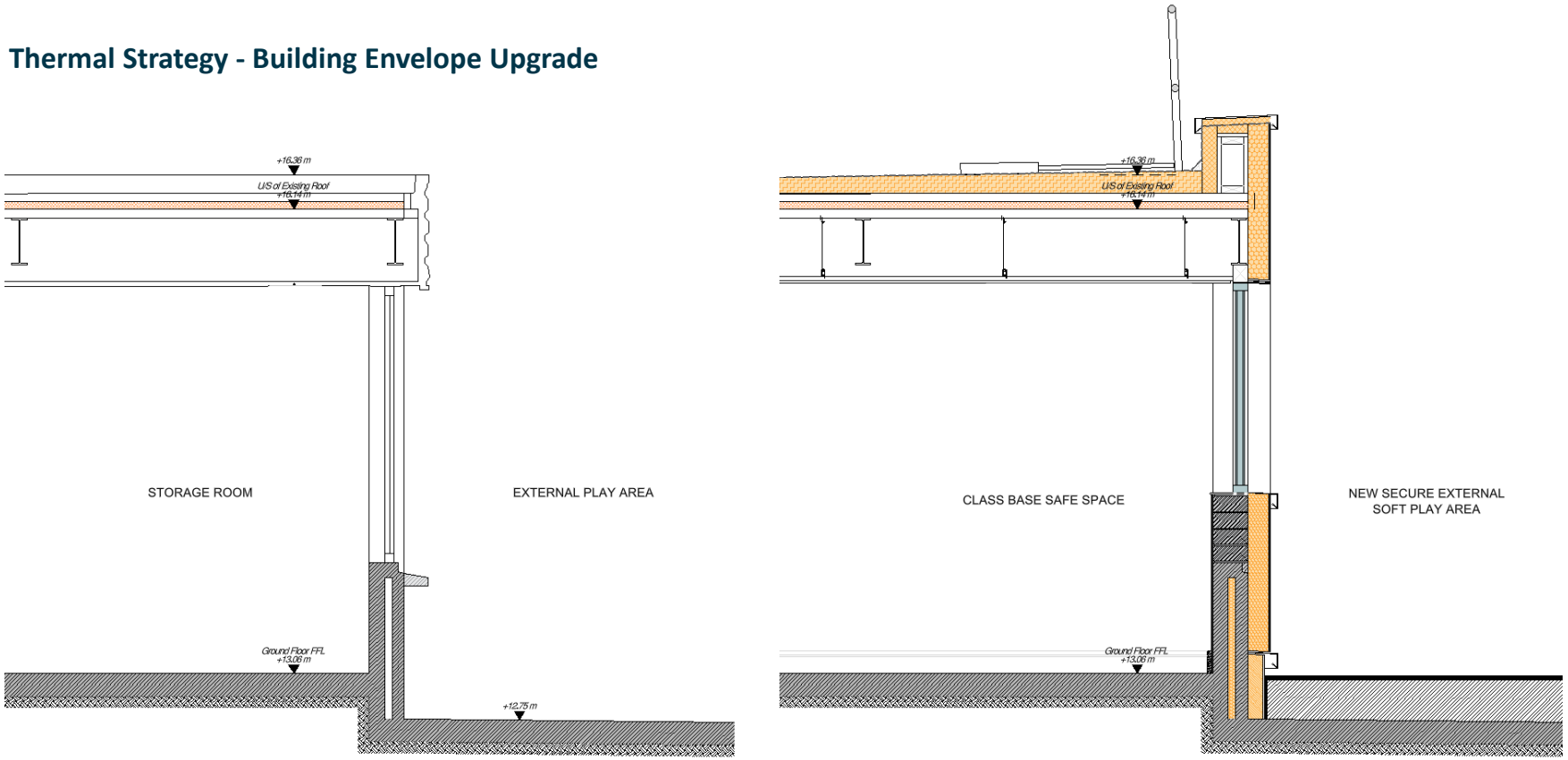


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St. Gabriel's Special School

Thermal Strategy - Building Envelope Upgrade



Building Element	Existing	Proposed Intervention
Roof	Single ply membrane on insulated metal deck	Increase insulation, new roof covering, new PV panels
External Walls	215mm blockwork, 70mm cavity, 100mm brickwork	Pump cavity and clad externally with insulation
Windows	Aluminium and PVC framed single glazed windows	Thermally broken, aluminium framed, double glazed
Floor	150mm concrete slab	New floor coverings



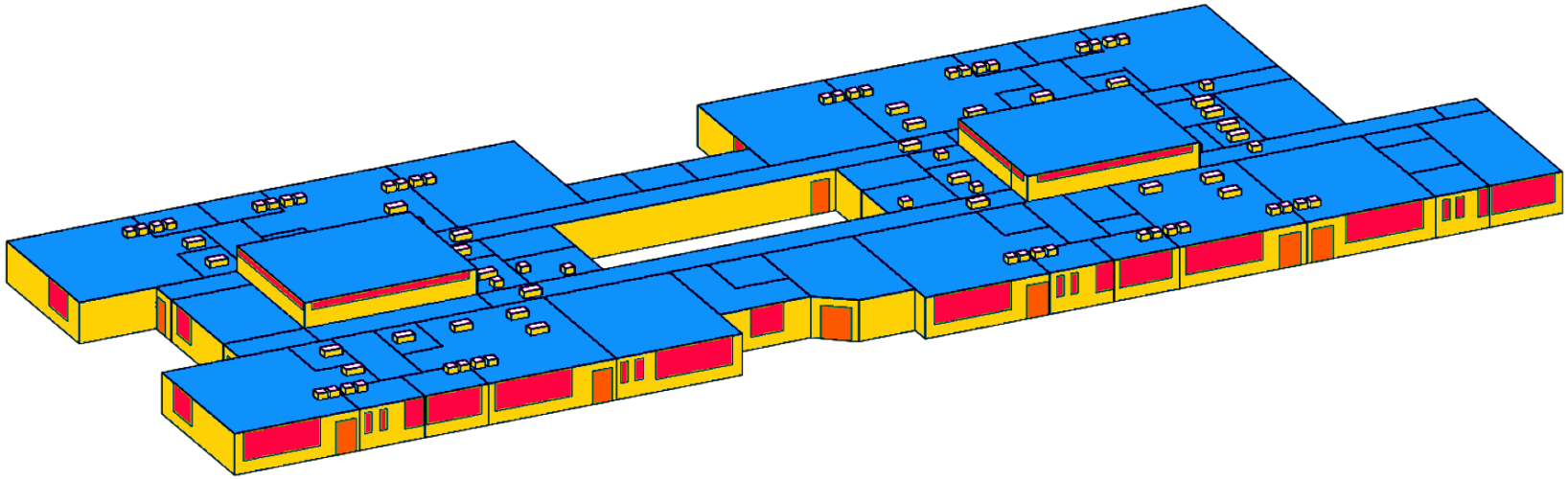




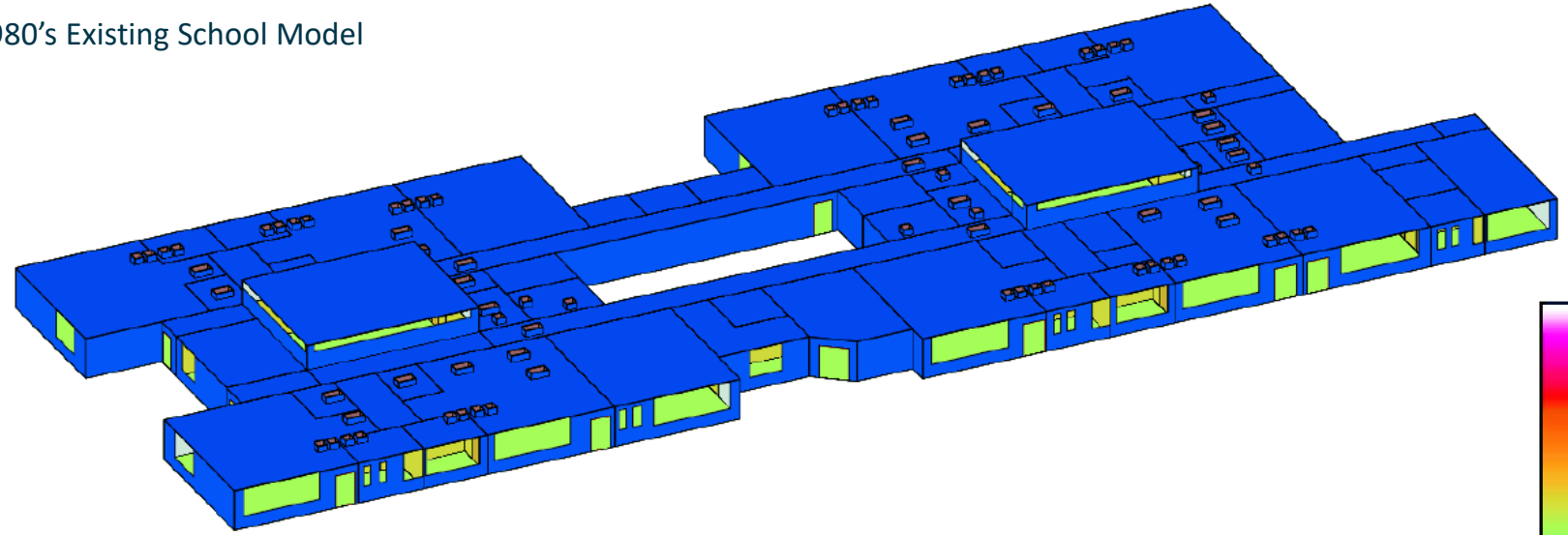
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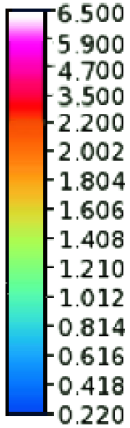
Thermal Strategy - Building Energy Rating (BER)



1980's Existing School Model



2022 Finished School Model



Construction U-value, W/m² K

St. Gabriel's Special School

Existing building's BER rating was **D1**

By making the following changes we achieved a BER rating of **B1**

Building Fabric

- Pump cavity walls with bead insulation
- Clad walls with external insulation
- Increase roof insulation
- Improve air tightness from 10m³/h/m² to 5m³/h/m²
- Replace single-glazed metal windows with thermally broken aluminium framed double-glazed windows and external doors

M&E Installations

- Light-emitting diode (LED) light fittings
- Air to water heat pumps
- Mechanical ventilation heat recovery
- Photovoltaic panels
- Building Management System

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St. Gabriel's Special School

Lessons Learned

- Understand the Building
- Achieving a shared vision
- Good Communication
- Classroom Outdoor Play Areas
- Students' Self-regulation
- Quiet Spaces
- Students' Comfort
- Space & Daylight
- Enhanced Building Performance
- Thermal Comfort
- Post-occupancy maintenance
- Lasting benefits









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Thank You.



KOBW | ARCHITECTS

KELLY BARRY O'BRIEN WHELAN

Case Study: Croatian communications campaign on renovating educational buildings



Andelka Toto Ormuz

Representative

HUPFAS



HUPFAS

RENOVATE EUROPE

supeus

HAZ



Renovate Schools, Renovate Future CAMPAIGN



obnovimo škole budućnost

HUPFAS

RENOVATE EUROPE

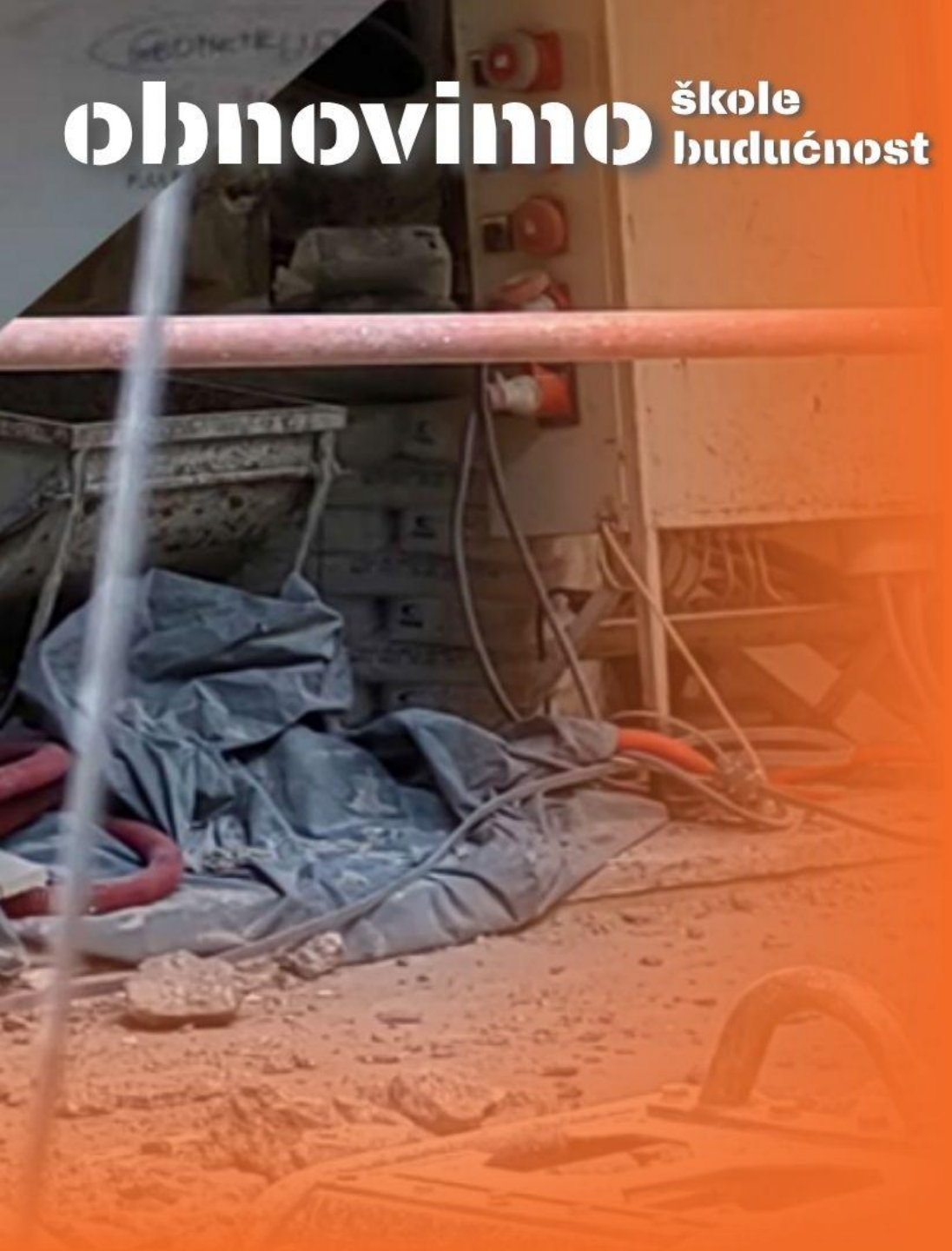
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HAZ

why

Croatia was a perfect match for the RECampaing

- 1 in 3 schools is energy inefficient.
- Nearly 900,000 people use these buildings daily.
- About 100 schools were heavily damaged in the 2020 earthquakes.
- Building quality impacts both health and learning outcomes.
- Renovation is too often treated as a technical project only.



obnovimo školе budućnost

HUPFAS RENOVATE EUROPE supeus HAZ

goals

- Accelerate deep renovation of educational buildings by 2035.
- Position school renovation as an investment in people and the future.
- Showcase educational, economic, and environmental benefits.
- Engage all stakeholders in the conversation.
- Foster collaboration between experts, educators, and policymakers.
- Influence policy development and investment decisions.



























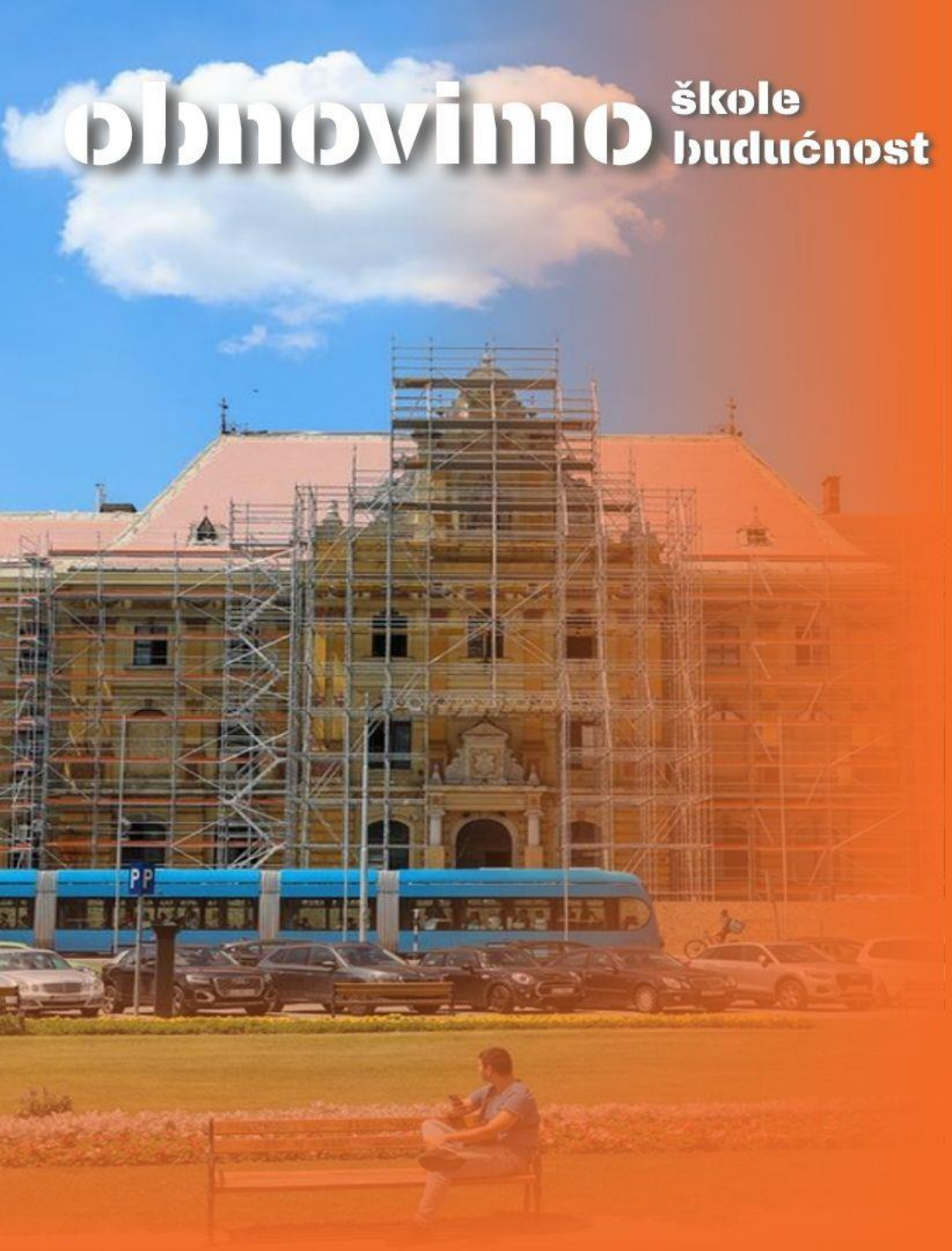






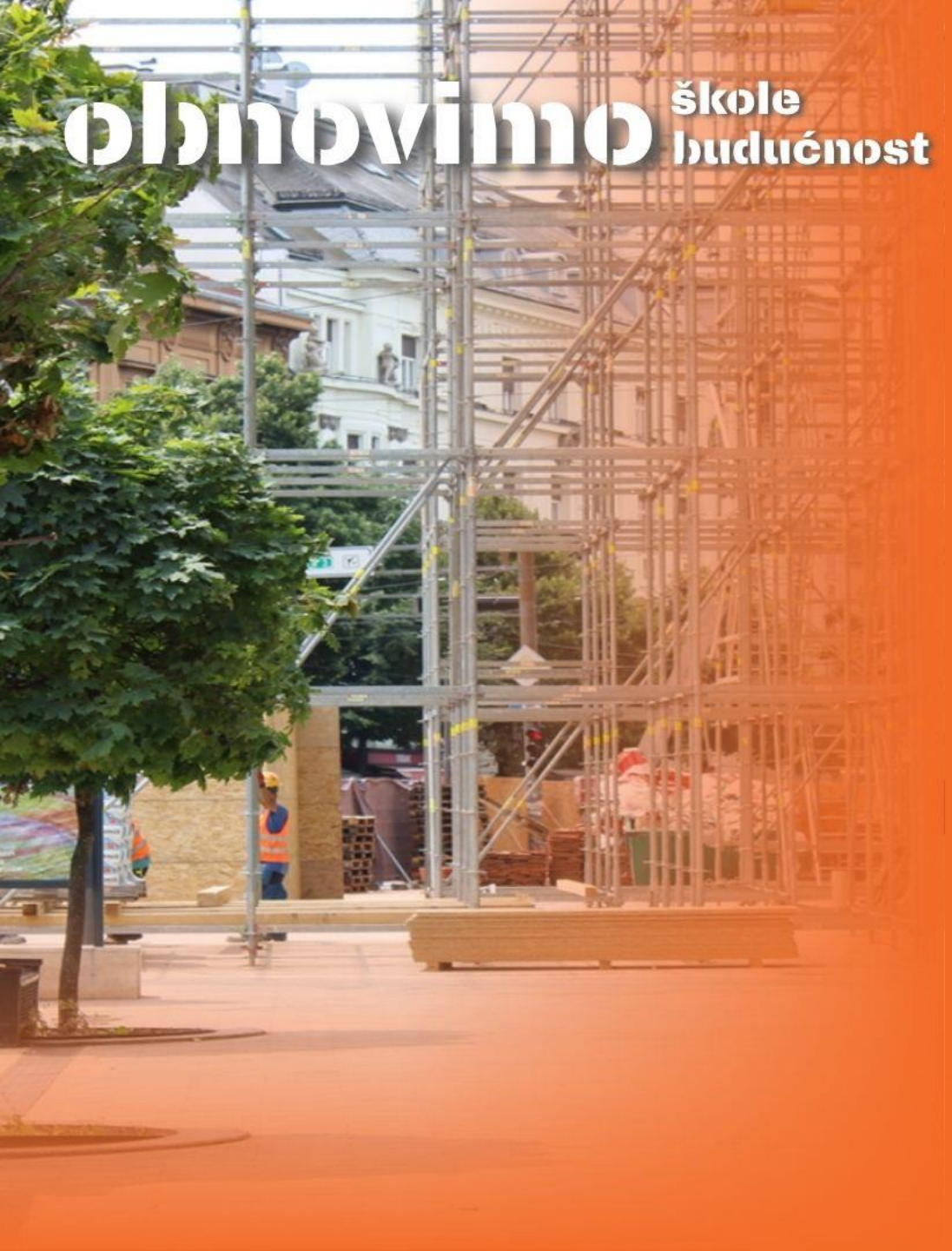
These are the campaign heros

- We created 6 videos + 11 reels
- These are authentic stories
- Authentic people
- In their authentic environment



some stories we have witnessed

- About a prison which, after the earthquake was completely renovated and turned into a beautiful music school with 450 children
- How renovation project was big inspiration to 2 students who made a student project that was awarded by the Zagreb University Rector
- CROSKILLS Plus project - Necessary education of engeneers, specifiers and workers
- When schools were renovated (energy, seismic, fire safety, indoor air quality) – huge logistic preparation was necessary
- Faculty in Zagreb used this renovation project and built a new innovation center with 50 laboratories
- The experience of school generation after they returned to the renovated school
- Renovated schools help to prevent depopulation in small villages, as they become the social life venue



obnovimo škole budućnost

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RENOVATE EUROPE

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HAZ

Campaign supported by

HGK HRVATSKA GOSPODARSKA KOMORA

HUP Hrvatska udruga poslodavaca

GBC CROATIA

Kick-off event

We brought together representatives of government, ministries, the City of Zagreb, the banks, independent experts, school principals, deans, students, and pupils to discuss the future of educational facilities and their renovation.





Zagreb, September 2026
Venue: 100 old renovated school

Renovate Schools, Renovate Future

Campaign reach

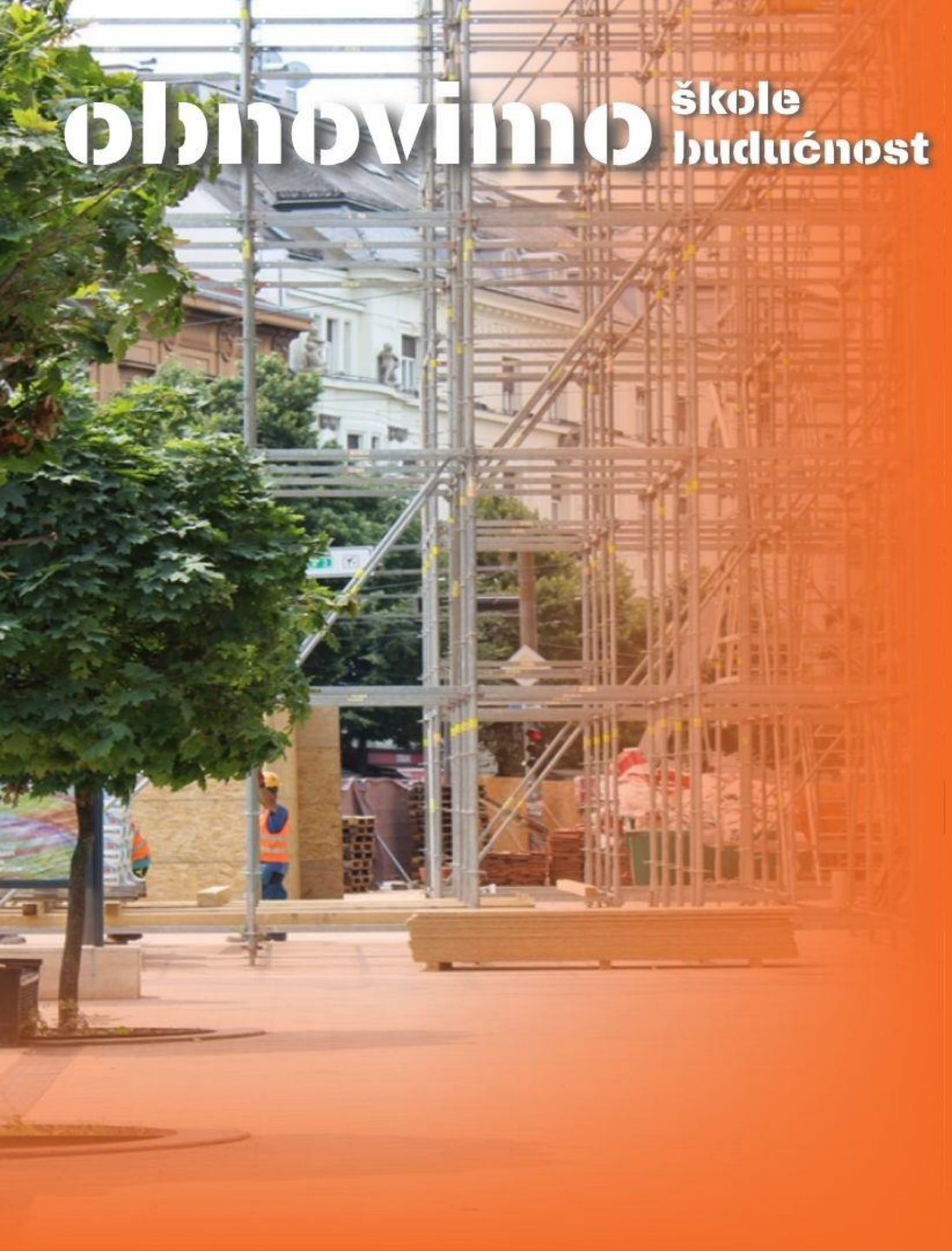
~ 400.000

people reached (estimate)

~ 500.000

views and impressions in total

YouTube	views	~ 200.000
LinkedIn	impressions	~ 170.000
Instagram	profile visitors	~ 75.482
Facebook	views	~ 12.000
Mailchimp	people	~ 400



HUPFAS RENOVATE EUROPE supeus HAZ

Investment in renovation of schools is investment in young people. Without educated young people, our country has no future.

Thank you.

Renovate Europe Day 2026

Session 2: Renovate all Educational Buildings by 2035!



Moderator

Adrian Joyce

Director

Renovate Europe Campaign



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President, Professional Business Unit Europe

Signify



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Do not edit
How to change the design



Audience Q&A

ⓘ The Slido app must be installed on every computer you're presenting from

slido

Renovate Europe Day 2026

Lunch Break: 13:00 – 14:00



Renovate Europe Day 2026

Lunch Break: 13:00 – 14:00



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PASSIVE HOUSE+ SUSTAINABLE BUILDING
REVOLVE

Renovate Europe Day 2026

Lunch Break: 13:00 – 14:00



Renovate Europe Day 2026

Lunch Break: 13:00 – 14:00



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Renovate Europe Day 2026

Session 3: From Data to Delivery: Scaling Energy Renovation Rates in the EU



Moderator

Ciaran Byrne

Director of National Retrofit
SEAI



Marcella Maher Keogh

Director and Project Manager
Carrig Energy Consultancy



Ciara Ahern

Project Lead
Irish Building Stock Observatory



Niall O'Connor

Managing Director
Kingspan Insulation, Ireland



Orla Coyle

Director, Head of Energy & Sustainability
Savills

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seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

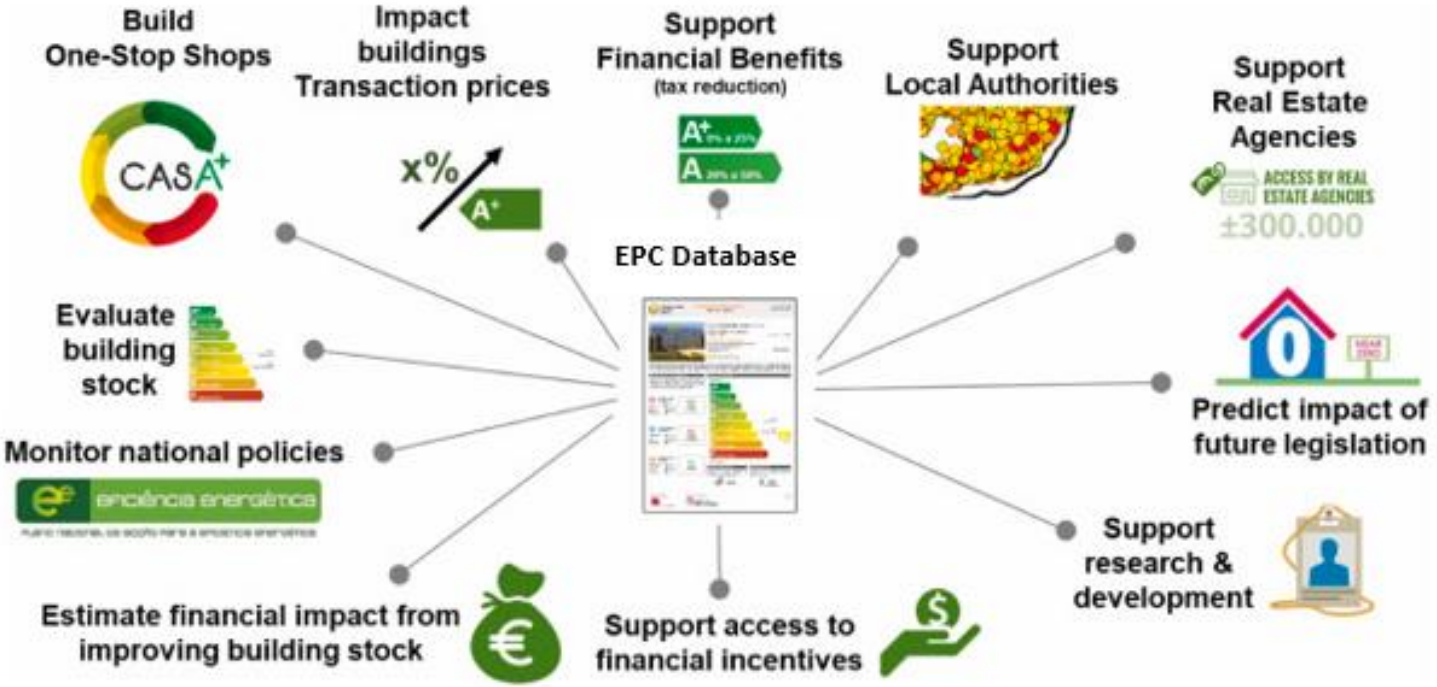
On Track? Ireland's National Retrofit Targets and the Buildings MEPS Will Reach

Insights from the Irish Building Stock Observatory

Dr. Ciara Ahern

SEAI Grant No. RDD/855

Why do we need better data?



Role of EPCs beyond a comparative building to building energy efficiency assessment – case study Portugal (Zuhaib and Goggins 2019)

"Stakeholders interfacing with EPC/BER data extend well beyond those au fait with building energy rating calculations"

(Raushan et. al 2024)

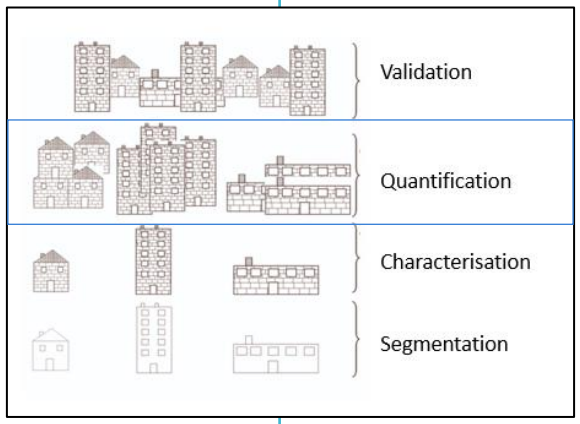
Step 1a) BER Coverage in Ireland

Residential

1.4m* of 1.8m** dwellings represented

78%

* SEAI EPC/BER Database
** CSO



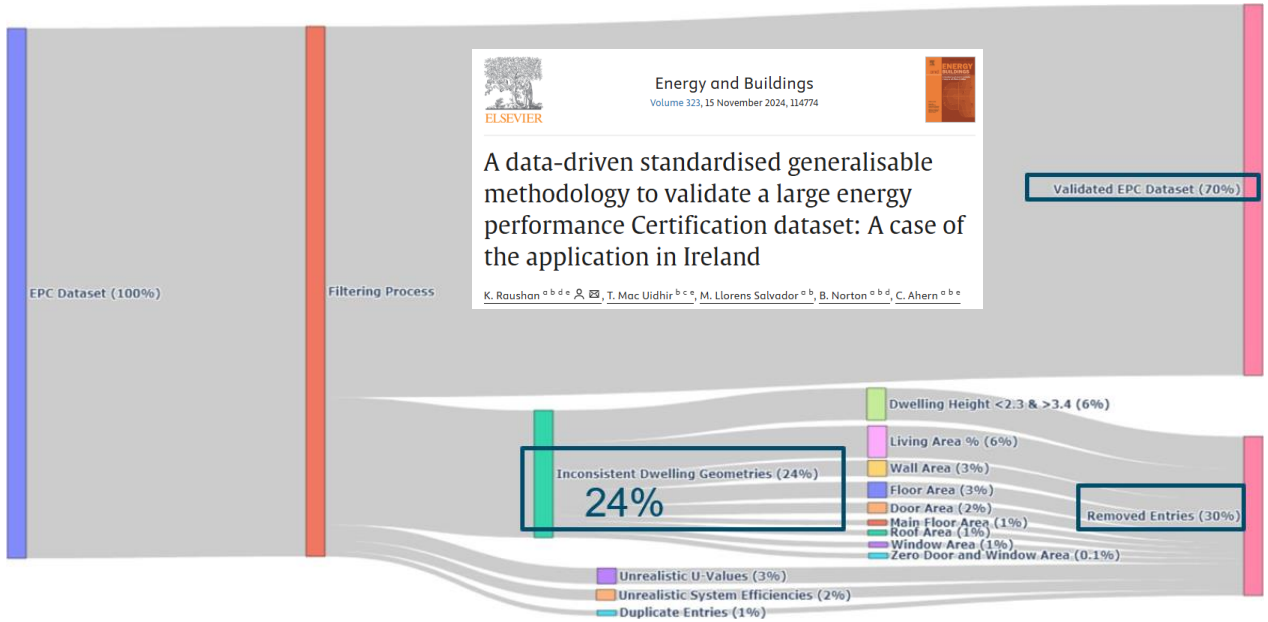
Non-Residential (Under License)

86k* of 156k*** buildings represented

55%

* SEAI EPC/BER Database
*** Táillte Eireann GeoDirectory Database

Bad Data = Bad Everything





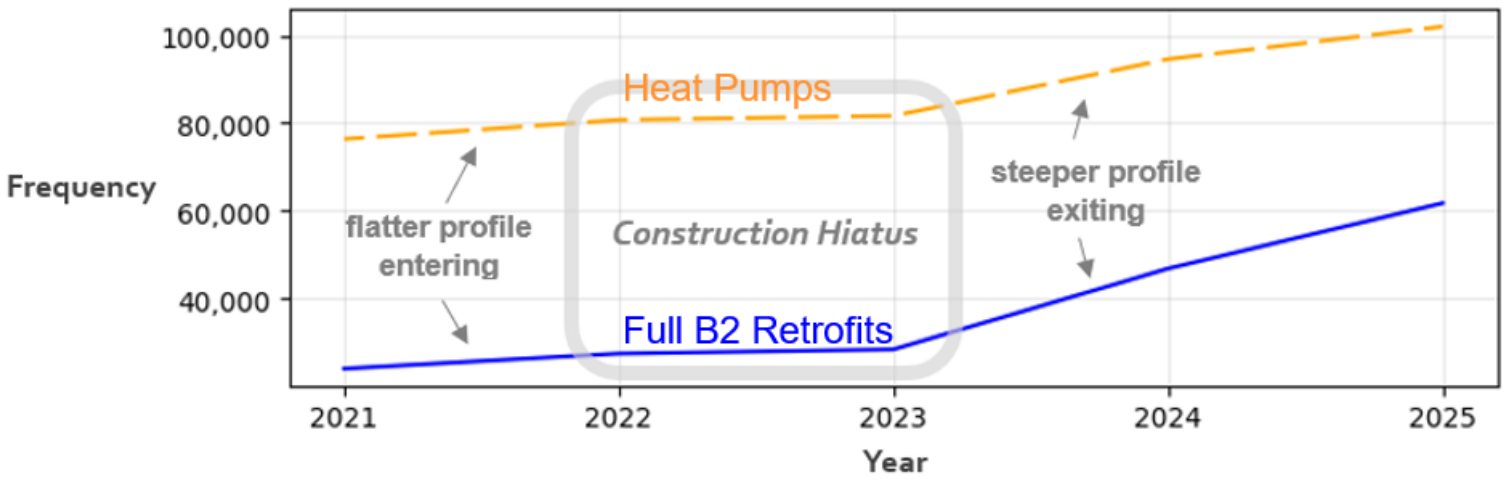
Erroneous and Outlier Data in EPC Dataset in 2024

(Raushan et al 2024)

- Errors and outlier* data are inevitable in manually collected survey or measured data
- Left unaddressed, this ‘bad’ data can lead to resultant analysis lacking validity leading to poorly informed policy
- SEAI are actively reducing errors and inconsistencies with time and with upstream measures

Is Ireland on Track to meet its retrofit targets?

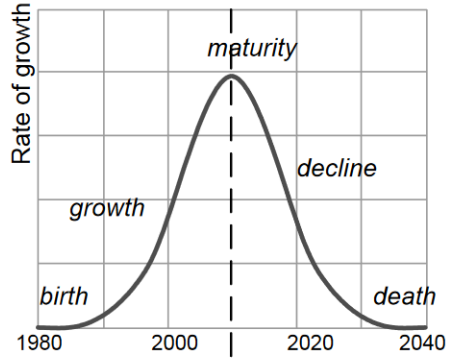


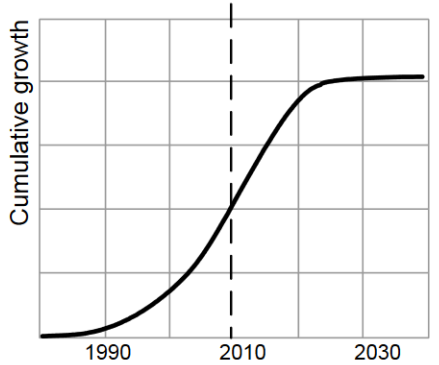


Measure	2021-2022	2022-2023	2023-2024	2024-2025
Net B2 upgrades	3,404	958	18,368	14,831
Annual renovation rate	0.21%	0.06%	1.11%	0.90%

Requirements & Challenges

- Curve Fitting
- Market Saturation Limits
- Outlier Management





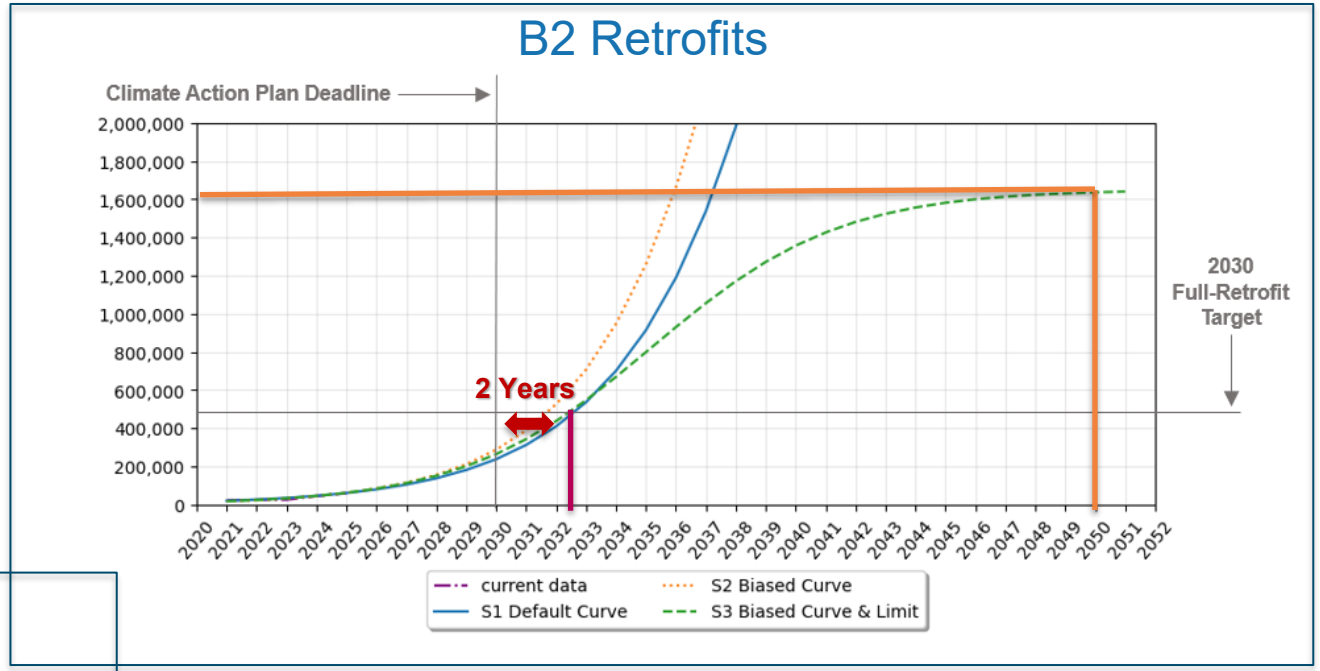
Irish Building Stock Observatory

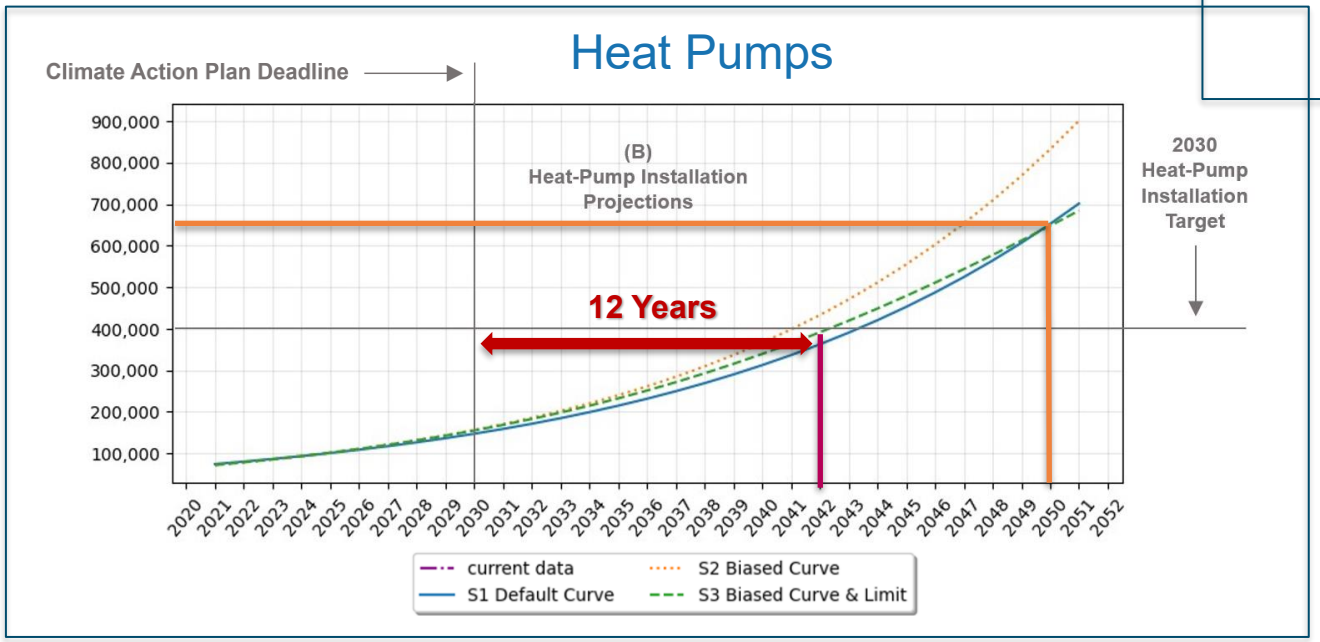
Maybe…

B2 Retrofits

- Nearly

1 in 4, totalling **500K** homes, to be retrofitted to **a B2 BER**



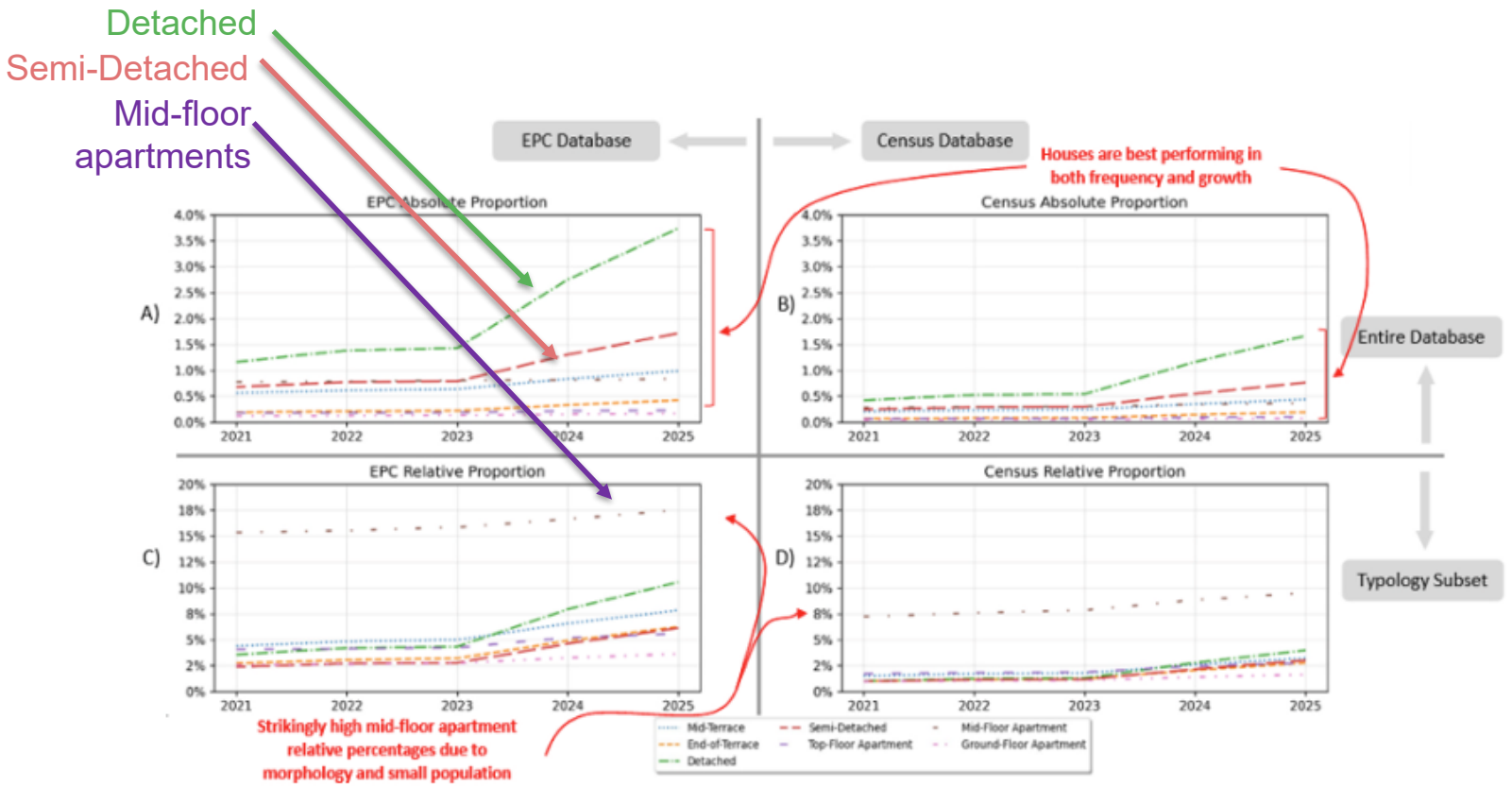


Heat Pump

No (by a long way)

1 in 5, totalling **400K** homes, to have a **heat pump retrofitted**

Typology Breakdown – *Retrofits to B2*



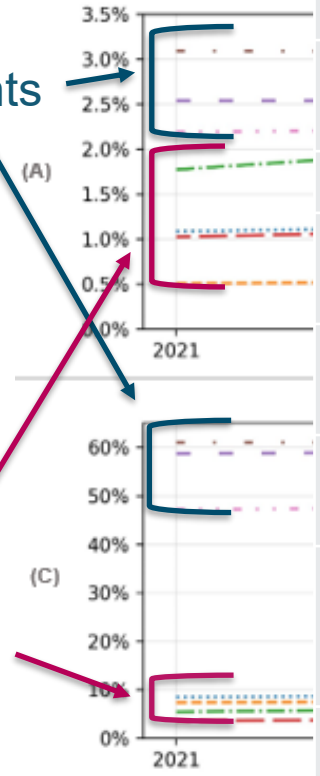
		Renovation Rate by Typology			
Typology	Census stock	2021-2022	2022-2023	2023-2024	2024-2025
Detached	691,109	0.24%	0.05%	1.48%	**1.20%**
Semi-detached	419,419	0.18%	0.03%	0.99%	**0.84%**
Mid-terrace	224,759	0.20%	0.08%	0.80%	**0.64%**
End-of-terrace	113,111	0.16%	0.07%	0.84%	**0.70%**
Mid-floor apartment	64,393	0.37%	0.24%	0.99%	**0.70%**
Top-floor apartment	61,222	0.09%	0.06%	0.59%	**0.27%**
Ground-floor apartment	73,765	0.08%	0.05%	0.31%	**0.23%**
All dwellings *	1,651,331	0.21%	0.06%	1.11%	**0.90%**

Fig. A1. Proportion of B2 retrofits comparing the observed frequency against (A) total number of dwellings in the EPC database, (B) total number of dwellings in Census records (C) total number of dwellings *per typology* in the EPC database (D) total number of dwellings *per typology* in Census records from year-end 2020 (Q4) till year-end 2024 (Q4).

Typology Breakdown – *Heat Pumps Retrofits*

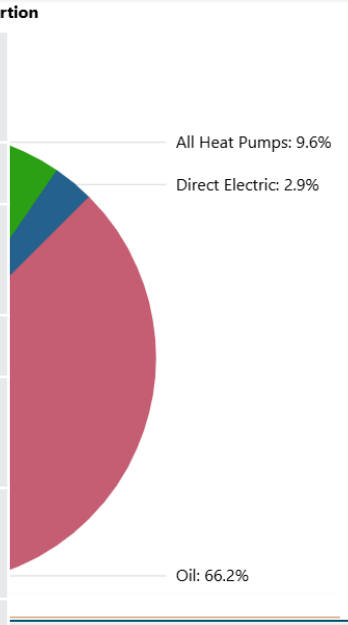
Apartments

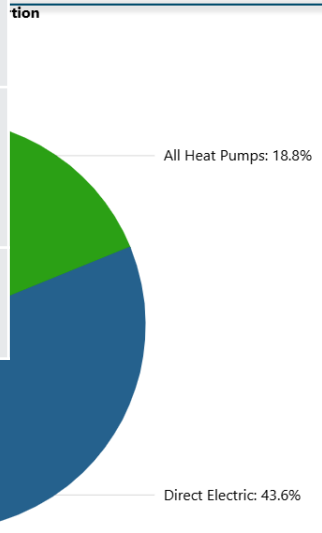
Houses



Typology	Census stock	2021	2022	2023	**2024**
Detached	691,109	0.18%	0.04%	0.63%	**0.38%**
Semi-detached	419,419	0.11%	0.02%	0.46%	**0.30%**
Mid-terrace	224,759	0.19%	0.08%	0.63%	**0.42%**
End-of-terrace	113,111	0.18%	0.07%	0.70%	**0.50%**
Mid-floor apartment	64,393	1.12%	0.16%	2.30%	**1.00%**
Top-floor apartment	61,222	0.99%	0.22%	2.26%	**1.02%**
Ground-floor apartment	73,765	0.84%	0.12%	1.87%	**0.97%**
All dwellings*	1,651,331	0.26%	0.06%	0.77%	**0.45%**



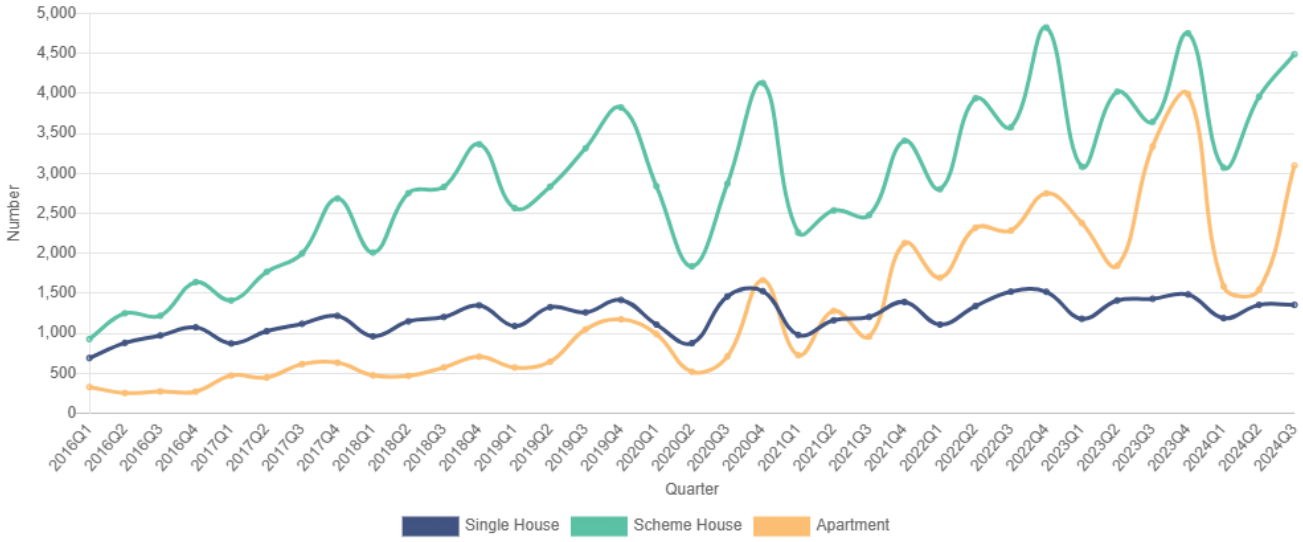




Risks to achieving CAP Targets

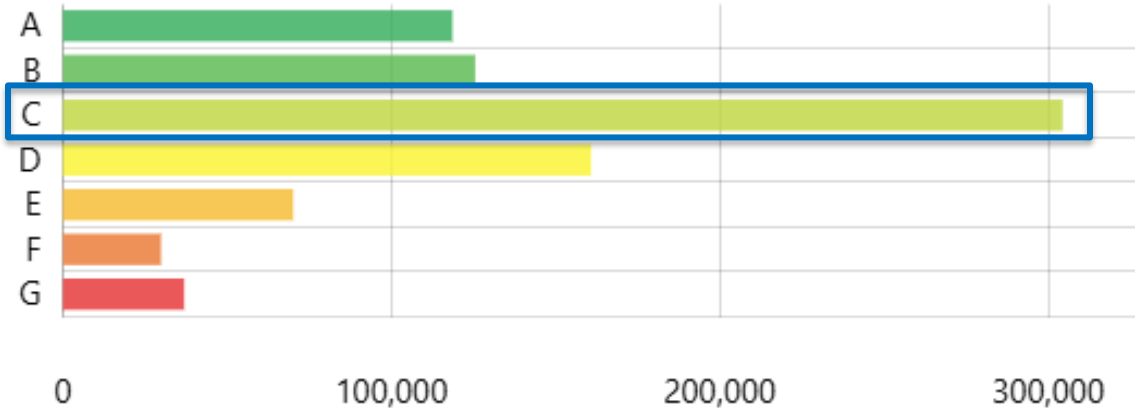
- Older Apartments are at risk of becoming stranded assets

Figure 1: Number of new dwelling completions by type of dwelling Q1 2016 - Q3 2024



© Central Statistics Office, Ireland
https://data.cso.ie/table/NDQ01

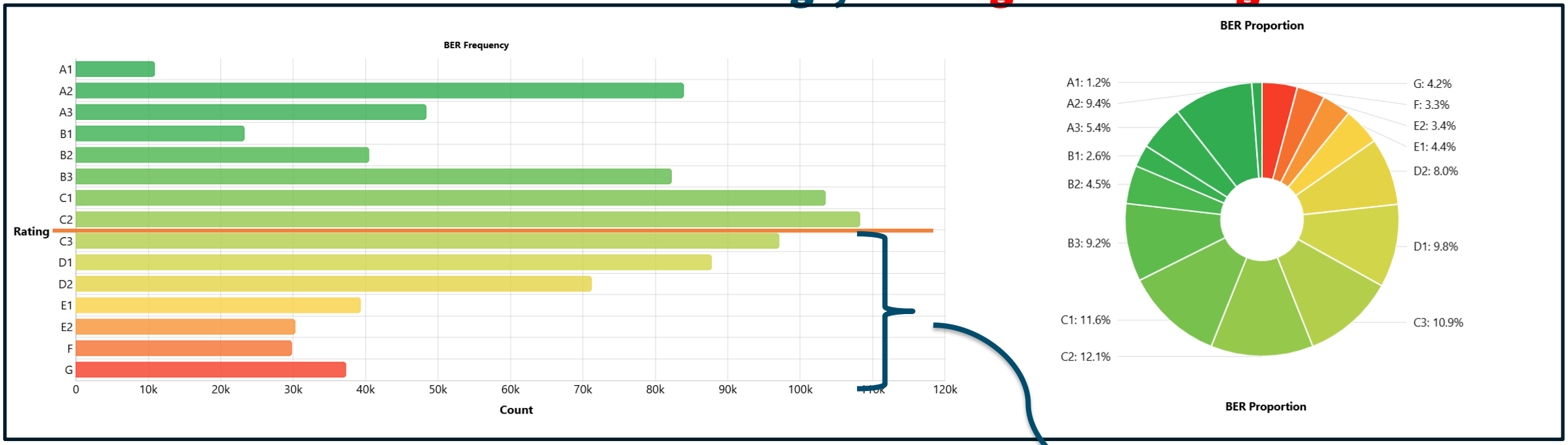
BER data for the latest quarter



- C Rating Dwellings?

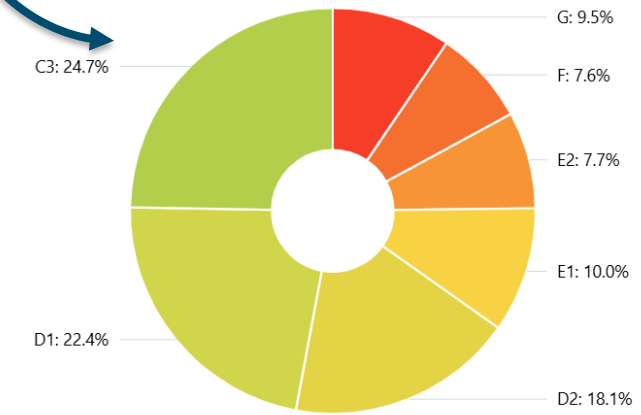
Minimum Energy Performance Targets (Residential)

Bottom 43% of Dwellings; G rating to C3 Rating

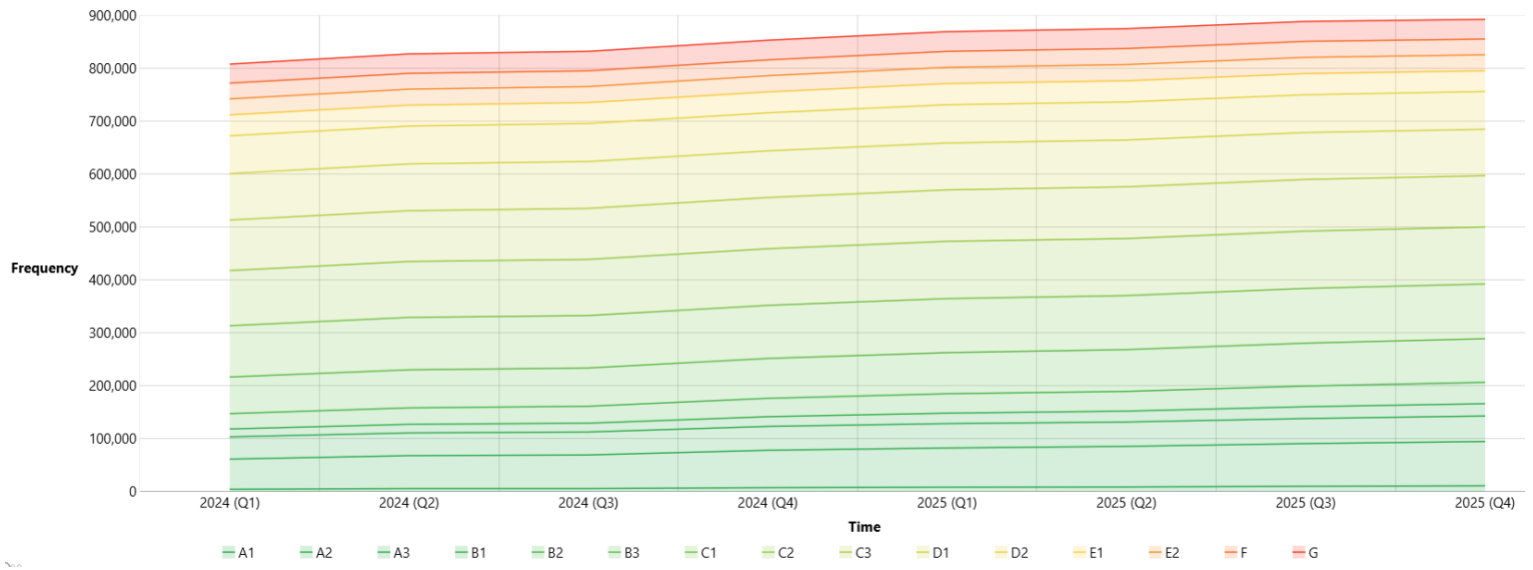


A minimum of 55% of the decrease will need to be achieved through the renovation of the **worst-performing residential buildings (defined as the 43% worst-performing buildings).**

Bottom 43%

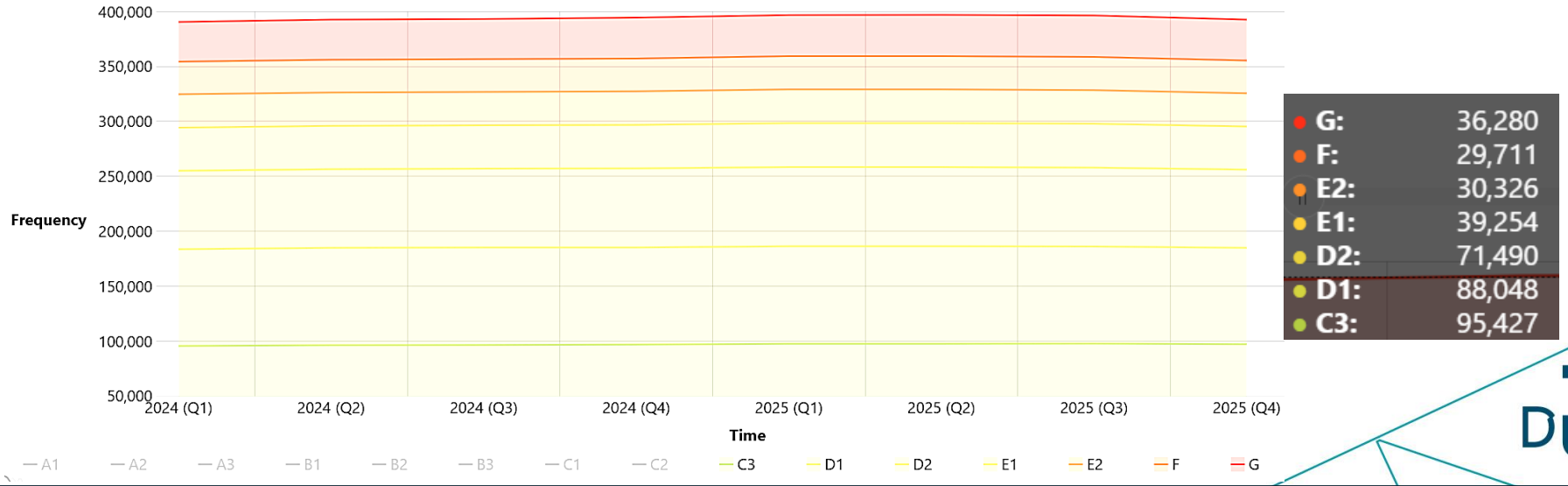


Evolution and Composition of the Bottom 43% Residential

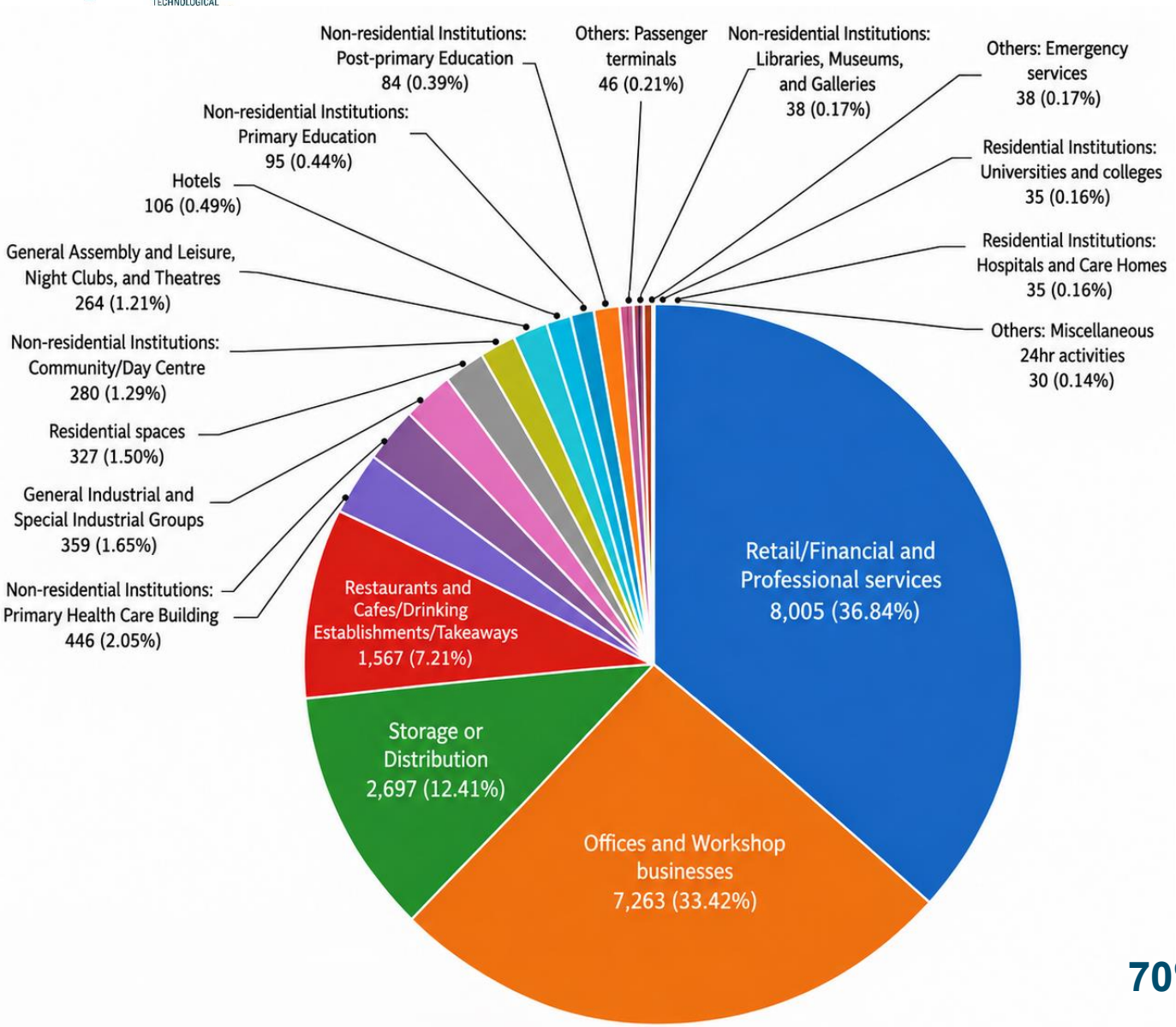


Stock-at-large

Bottom 43%



Bottom 26% of Non-Residential; G rating to E1 Rating





Retail and Office Dominant

70%

Source: SEAI – Q4 2025 Validated BER Dataset

What does the bottom 26% look like?

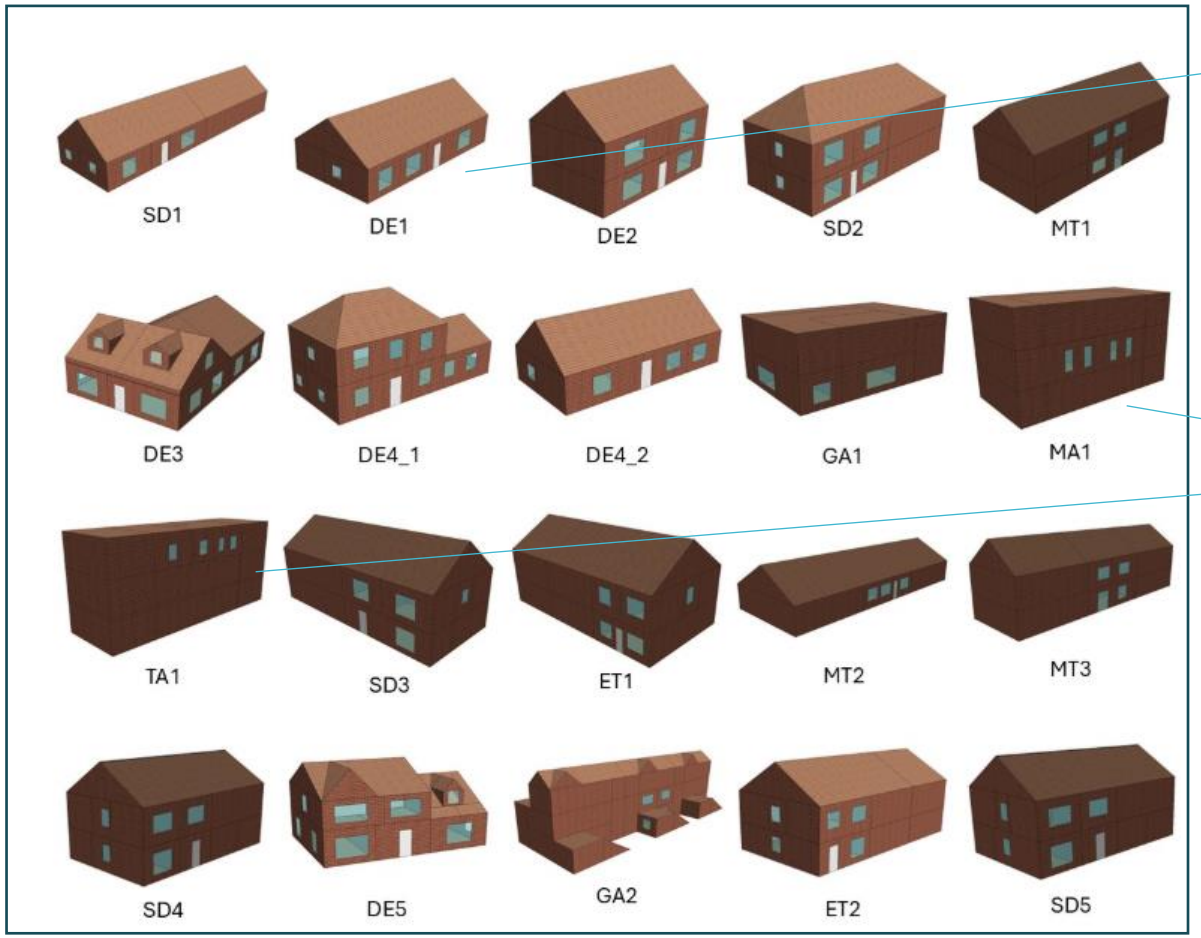
		Offices							
		No. Buildings		Primary Energy Threshold - kWh/m2/year		Final Energy Threshold - kWh/m2/year		Energy Rating	
		2020	2026	2020	2026	2020	2026	2020	2026
Method	Floor Area Method	6529	9992	606	497	298	184	F	E
	Primary Energy Method	1242	1718	1299	1185	527	439	G	G
	Final Energy Method	1316	1889	1531	1417	567	525	G	G
	No. Buildings Method (PE)	3955	5967	790	**675**	606	291	G	F
	No. Buildings Method (FE)	3955	5967	976	**602**	362	323	G	F

		Retail							
		No. Buildings		Primary Energy Threshold - kWh/m2/year		Final Energy Threshold - kWh/m2/year		Energy Rating	
		2020	2026	2020	2026	2020	2026	2020	2026
Method	Floor Area Method	7621	12324	1048	885	388	328	F	E
	Primary Energy Method	1245	1714	3211	2610	1189	1517	G	G
	Final Energy Method	1318	1889	3148	1696	1188	1010	G	F
	No. Buildings Method (PE)	5600	8290	1233	1065	457	394	G	F
	No. Buildings Method (FE)	5600	8290	1334	942	494	450	G	F

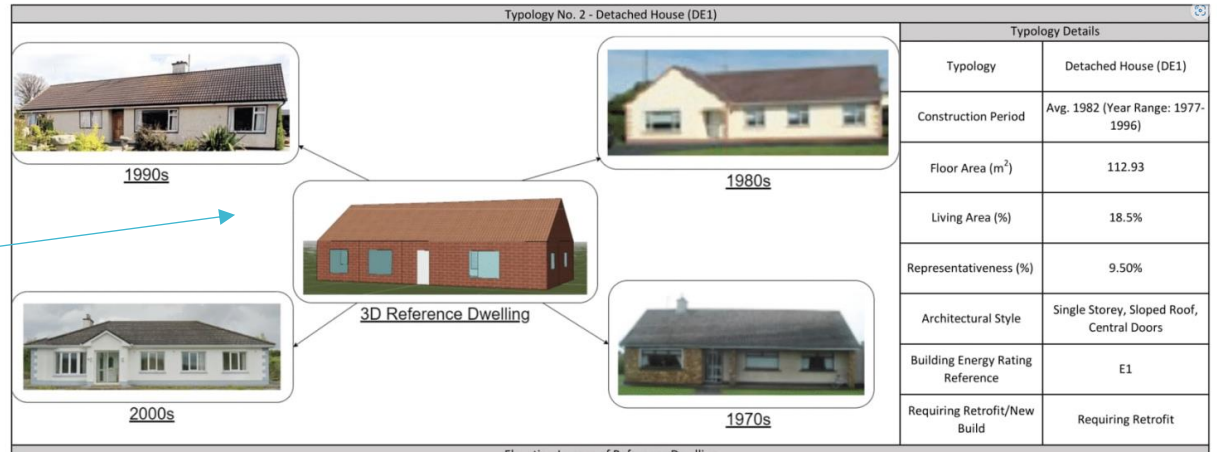
		Storage or Distribution							
		No. Buildings		Primary Energy Threshold - kWh/m2/year		Final Energy Threshold - kWh/m2/year		Energy Rating	
		2020	2026	2020	2026	2020	2026	2020	2026
Method	Floor Area Method	2655	3665	584	494	233	380	G	G
	Primary Energy Method	399	525	1525	1381	1196	512	G	G
	Final Energy Method	450	595	782	1347	696	650	G	G
	No. Buildings Method (PE)	2031	2659	688	**620**	349	263	D	D
	No. Buildings Method (FE)	2031	2659	874	**666**	324	303	E	D

Building type	A0*	A	B	C	D	E	F	G
Offices & Workshops (also Law Courts, Car Parks 24hr)	≤40	≤120	≤240	≤360	≤480	≤600	≤720	>720
Retail / Financial & Professional	≤70	≤180	≤360	≤540	≤720	≤900	≤1,080	>1,080
Storage / Distribution	≤50	≤175	≤350	≤525	≤700	≤875	≤1,050	>1,050
Restaurants / Cafés / Takeaways	≤160	≤250	≤500	≤750	≤1,000	≤1,250	≤1,500	>1,500
Residential spaces	≤65	≤125	≤250	≤375	≤500	≤625	≤750	>750
Residential Institutions – Care Homes	≤110	≤205	≤410	≤615	≤820	≤1,025	≤1,230	>1,230
Residential Institutions – Hospitals	≤210	≤300	≤520	≤740	≤960	≤1,180	≤1,400	>1,400
Secure Residential Institutions	≤105	≤230	≤460	≤690	≤920	≤1,150	≤1,380	>1,380
Universities & colleges	≤70	≤140	≤280	≤420	≤560	≤700	≤840	>840
Hospitals	≤210	≤300	≤520	≤740	≤960	≤1,180	≤1,400	>1,400
Passenger terminals	≤90	≤170	≤340	≤510	≤680	≤850	≤1,020	>1,020
Misc. 24hr activities	≤500	≤1,000	≤2,000	≤3,000	≤4,000	≤5,000	≤6,000	>6,000
Emergency services	≤275	≤350	≤700	≤1,050	≤1,400	≤1,750	≤2,100	>2,100
Primary Health Care	≤70	≤120	≤240	≤360	≤480	≤600	≤720	>720
Schools (primary & post-primary)	≤30	≤60	≤120	≤180	≤240	≤300	≤360	>360
Libraries, Museums & Galleries	≤90	≤140	≤280	≤420	≤560	≤700	≤840	>840
Community / Day Centre	≤85	≤110	≤220	≤330	≤440	≤550	≤660	>660
Hotels	≤190	≤270	≤540	≤810	≤1,080	≤1,350	≤1,620	>1,620
General / Special Industrial	≤115	≤175	≤350	≤525	≤700	≤875	≤1,050	>1,050
General Assembly & Leisure	≤140	≤185	≤370	≤555	≤740	≤925	≤1,110	>1,110

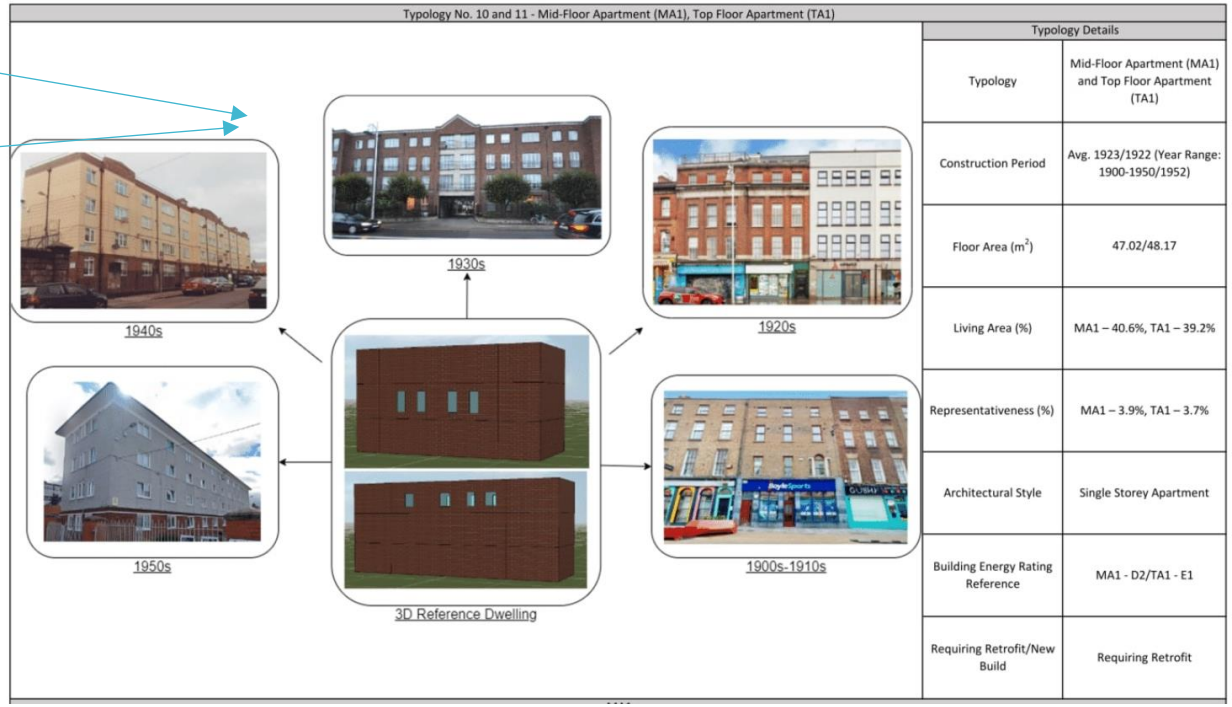
Residential Reference Dwellings or Archetypes



Detached House Cluster 1 - Representing 9.5% of the Irish dwelling stock



Combined Mid- and Top-Floor Apartement Cluster - Representing respectively 3.9% and 3.7% of the Irish dwelling stock



Irish Building Stock Observatory

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TU DUBLIN
OLLSCOIL TEICNEOLAÍOCHTA BHAILE ÁTHA CLIATH
TECHNOLOGICAL UNIVERSITY DUBLIN

Renovate Europe Day 2026

Session 3: From Data to Delivery: Scaling Energy Renovation Rates in the EU



Moderator

Ciaran Byrne

Director of National Retrofit
SEAI



Marcella Maher Keogh

Director and Project Manager
Carrig Energy Consultancy



Ciara Ahern

Project Lead
Irish Building Stock Observatory



Niall O'Connor

Managing Director
Kingspan Insulation, Ireland



Orla Coyle

Director, Head of Energy & Sustainability
Savills

RENOVATE EUROPE

IGBC IRISH GREEN BUILDING COUNCIL

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

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Audience Q&A

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slido

Closing remarks



Mechthild Wörsdörfer

Deputy Director General

DG Energy, European Commission

Closing remarks



Oonagh Buckley

Secretary General

Department of Climate, Energy and the Environment

Presentation of Ellis Court site visit



Tiarnan Spain

Tuath Housing

Tuath Housing



Ellis Court

RENOVATE EUROPE

5th November, 2026

- Late 19th century Dublin had severe overcrowding
- Most families lived in single rooms (tenements)
- Housing schemes provided by Philatropic entities
- Dublin Corporation deemed new housing necessary







Tuath Housing

- Built in the 1880's
- Dublin’s first social housing development
- 144 tenements across four blocks
- Remained as social housing
- Damaged extensively by fire in 2005



Tuath Housing

- Works commenced in 2020
- Renovation completed December 2022
- Total refurbishment & extension
- 22 homes
- 11 new balconies installed
- Key features retained



Tuath Housing

‘Echoes through the Hallway’ Exhibition



Tuath Housing

COADY ARCHITECTS





Tuath Housing

John Campbell

Architect

Marie McNamara

Head of Construction

Tuath Housing

Thank you.



Tuath Housing

Presentation of Tom Johnson House site visit



Kevin Dooney

Department of Climate, Energy and the Environment

Department of Climate, Energy and the Environment

The Deep Retrofit of Tom Johnson House

Kevin Dooney,
Corporate Services Section,
Department of Climate, Energy and the Environment

OPW
Oifig na nOibreacha Poiblí
Office of Public Works



Located in Beggars Bush Dublin 2, Tom Johnson House is a five storey over basement office building which was built in the 1970s within the curtilage of a number of adjoining Protected Structures comprising the former Beggar's Bush Military Barracks.

The site derives its name from a wooded area which once occupied the site, and was home to vagrants and beggars who lived off the charity of travellers on the nearby highway.

The Beggars Bush British Army Barracks opened in 1827. It was used as recruit training depot for the garrison in Ireland. The open square just inside the main gate was originally in use as the infantry parade ground.



Extract from 6 inch colour Ordnance Survey map (1829-41)


Beggar's Bush barracks main entrance. Hogan-Wilson Photo Collection, 1922

Site Location & History of Beggars Bush



- *This project is a deep refurbishment of the existing 1970s office building to the NZEB standard.*
- *It includes upgrading of the facade, roof, internal finishes and installation of all new services within the existing structure*
- *Modifications and upgrade works to the existing structure will also be required, including the creation of a new atrium void*



Original Design (1976) *Tyndall Hogan Hurley Architects*





Site Photographs (cir.1976)

DESIGN STRATEGY :

- This **Deep Retrofit** is designed to upgrade building to **NZEB standard**
- Extending the **building lifespan** for at least another 70 years
- Increase the **building occupancy** from 200 to 500
- minimise **operation costs** – naturally ventilated and maximise daylighting
- Create a **Fossil Fuel free** building
- **Sustainable Design** principles to inform all aspects of renovation
- Renovation to have **flexible design** to meet any future needs
- Renovation to focus on **circular economy** of all selected materials
- Renovation to **minimise whole life carbon** & Carbon footprint
- Project to serve as an **exemplar deep retrofit**, where lessons learned can feed into other public and private sector projects



EXISTING	TARGET	ACHIEVED
		
Energy Use 253.00 kwh/m²/y	**Energy Use** 61.00 kwh/m²/y	**Energy Use** 47.27 kwh/m²/y
CO_2 Emissions 54.00 kgCO_2/m²/yr	**CO_2 Emissions** 12.00 kgCO_2/m²/yr	**CO_2 Emissions** 6.05 kgCO_2/m²/yr
Air Tightness 5.00 m³/hr/m²@50Pa	**Air Tightness** 2.00 m³/hr/m²@50Pa	**Air Tightness** 1.97 m³/hr/m²@50Pa

3. NZEB

i. Renewables

PV Panels

The PV system was designed to offset the electrical use in the building which includes all the heating systems etc.

112 PV Panels provide 51kWp. Computer simulation estimate savings of 44,000kwh per annum.

Pay back calculated at 5 yrs.



3. NZEB

i. Renewables

Airsource Heat Pump

2no. 500kw **multifunction heat pumps** provide heating and cooling system for the building.

Secondary heat pump system provides domestic hot water heating above 60°C for all washing facilities.

Heating/Cooling types:

- **Central heating** using low temperature radiators - Open Plan Offices, cellular offices & Teastations
- **Underfloor heating** (UFH) - Reception areas, WCs & Lift Lobbies also provided via the multifunction heat pumps
- **Fan coil system** (FCU) provide cooling to high occupancy spaces - Meeting Rooms
- Auditorium & Canteen are mechanically heated and cooled via **Air Handling Units** (AHUs) dedicated to those spaces.



3. NZEB

i. Renewables

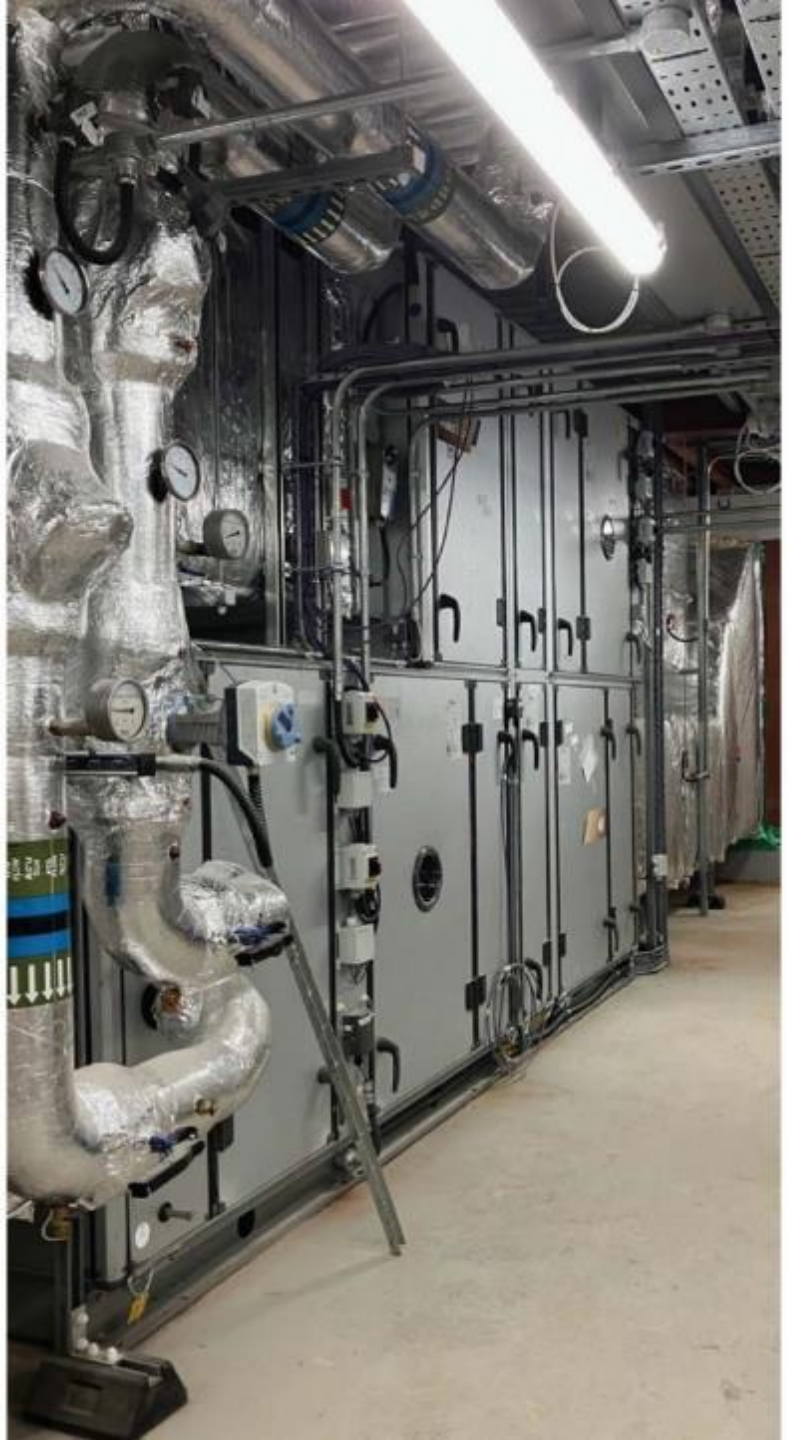
Heat Recovery

Heat Recovery integrated into the 7no. Air Handling Units (AHUs) via **thermal wheel** technology, which contributes towards temperature efficiencies of over **70%**, reducing energy consumption and offsetting the energy required to heat the building.

BMS

Heat and **CO_2 sensors** located throughout the building permitting the BMS to monitor and control the internal environment.

BMS allows OPW M&E view the energy consumed and identify any anomalies or uncharacteristic energy allowing them to modify usage and **reduce potential energy waste**.





3. NZEB

ii. E V C h a r g i n g

EV charging facilities are provided for both **cars and bicycles**

Promotes staff to travel to work using low carbon methods

Expansion - Ducting provided throughout the site



3. NZEB

iii. Lighting

Optimised provision of natural daylight to minimise electrical requirement.

Low-energy LED lighting has been installed throughout the building.

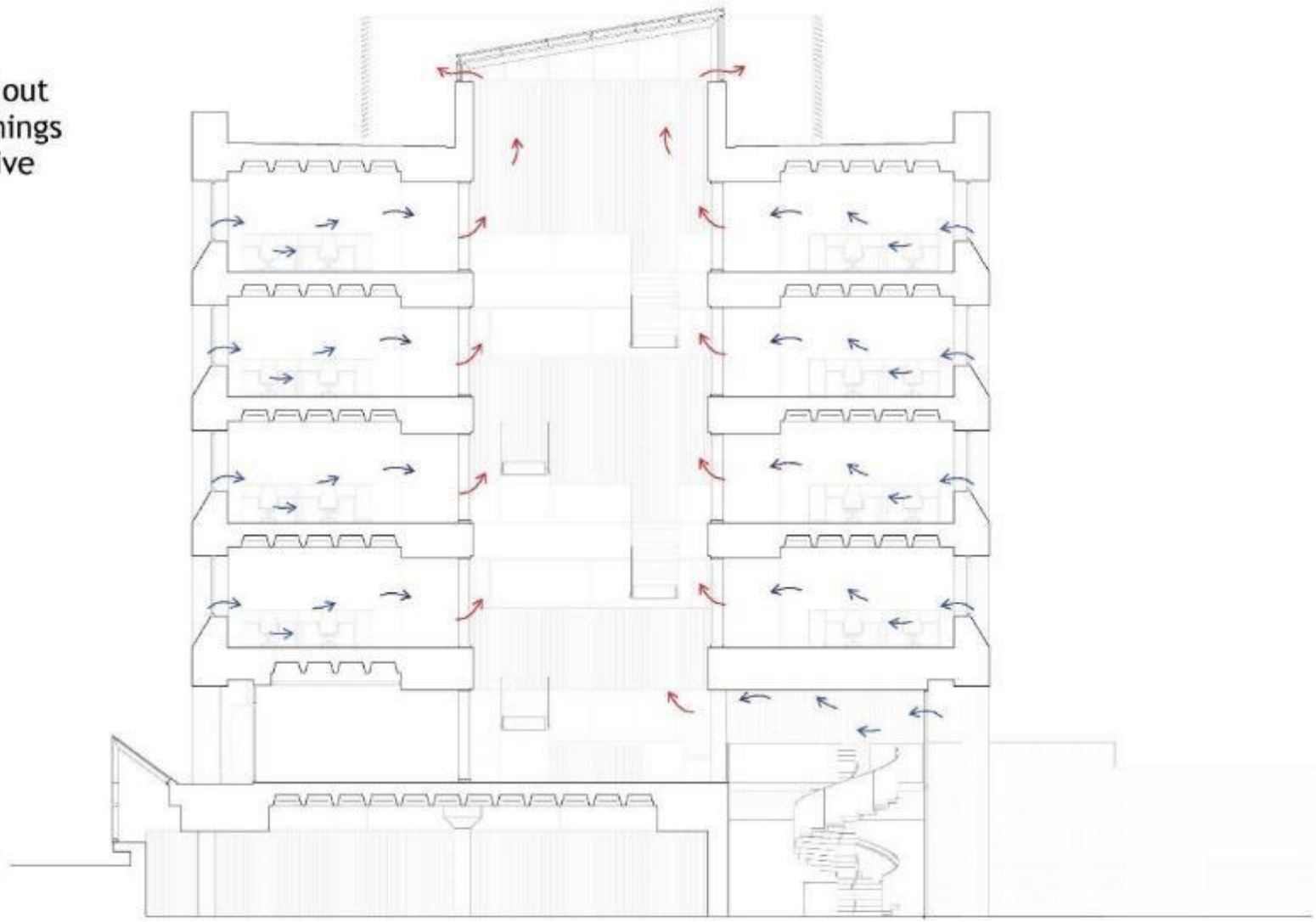
Energy-efficient lighting controls provided in the form of a timed presence and absence detection system.



3. NZEB

Ventilation

Stack Effect - passive movement of air into and out of a building through openings due to positive and negative buoyancy forces.



3. NZEB

Ventilation

View of central atrium

Air exhausted through opening sections along the atrium rooflight

Typical atrium timber screen with openable sections controlled by the BMS

New triple glazed windows (0.82 W/m²K) are an integral part in how the BMS controls the internal environment.

Through intelligent design and organisation of the building use of passive ventilation has been maximised in office and shared spaces.

Reduces the mechanical and therefore electrical requirement to ventilate the building.



4. Whole Life Carbon

Materials

External windows - 75% recycled post-consumer scrap content

External glass - 20% recycled content reducing energy during production by 6%

Recycled glass bead insulation

Flat Roof waterproofing - Achieves 'CarbonZero' Standard. Capsheet consists of titanium dioxide coating which purifies the air.

Carpet tiles - 100% recycled content

Auro wall paint - natural product

Natural Materials - Internal timber cladding & Irish stone flooring





RIAI 2030 Climate Challenge

5 Key Targets:

Key targets:

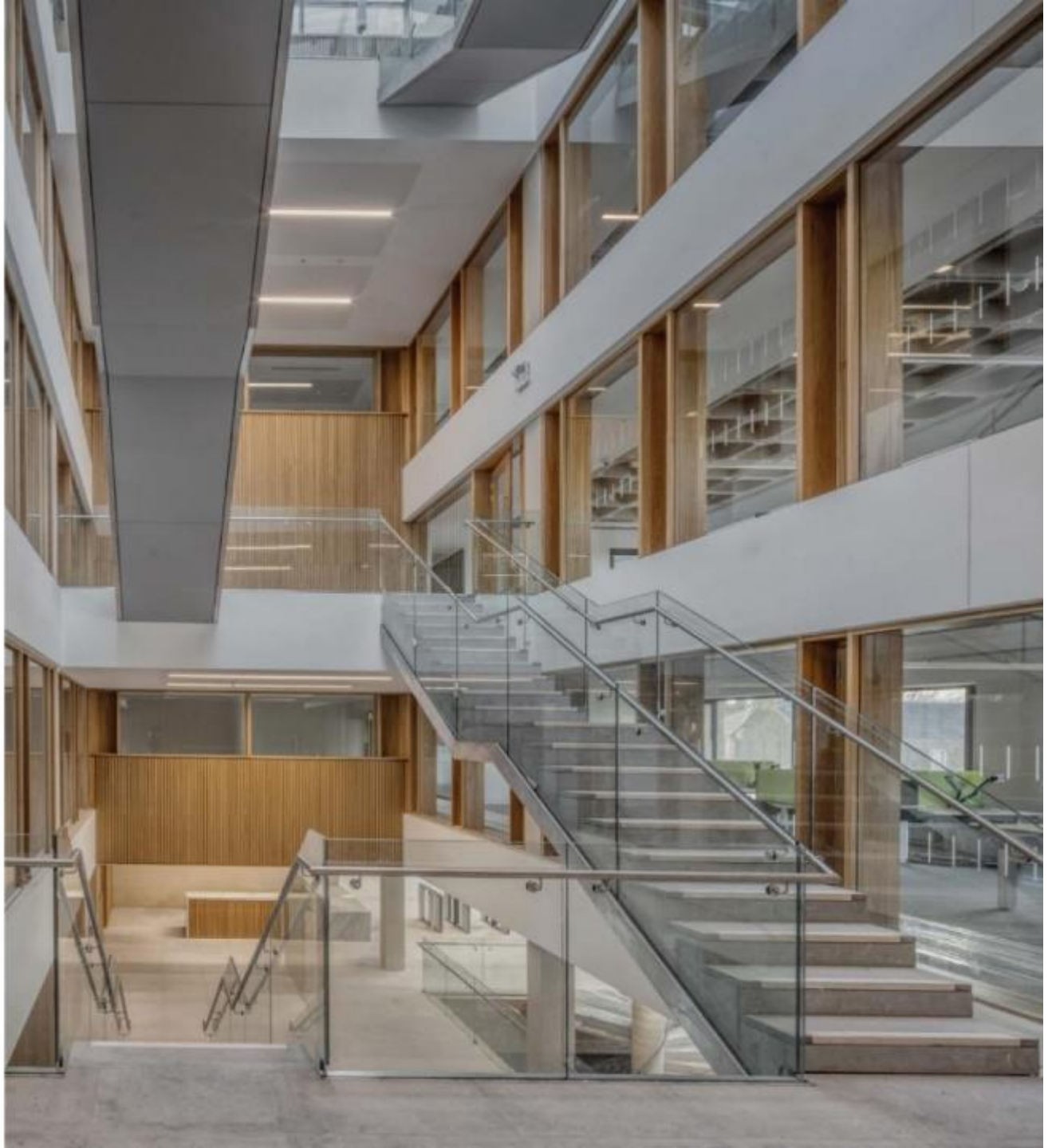
1. Improve site biodiversity by providing a net biodiversity gain
Landscape design & DECC Biodiversity Group

2. Reduce operational energy demand between 33-66%
Operational energy of 33.3kwh/m2
43% reduction to the ref. building

3. Reduce embodied carbon by at least 40%
51%* reduction compared to new build office building

4. Reduce potable water use by at least 40%
42% reduction - BREEAM Water Consumption efficiency calculator

5. Achieve core health and wellbeing targets
Atrium/Daylight/Ventilation
Air quality















OPW
Oifig na nOibreacha Poiblí
Office of Public Works

Funded by the European Union

An Roinn Aeráide, Fuinnimh agus Comhshaoil
Department of Climate, Energy and the Environment

- *The deep retrofit is funded by the EU Commission through the National Recovery and Resilience Plan (NRRP).*

- *As part of the National Recovery and Resilience Plan, work is currently underway to transform and retrofit this building into an exemplar, energy efficient, State office.*

- *All EU Regulatory requirements in relation to building material inputs, waste management and the re-use and recycling of waste materials have been incorporated into the project Works Requirements.*

- *This project has been selected as a Public Sector Retrofit Pathfinder Project, designed by the Office of Public Works.*

Renovate Europe Day 2026

15:15 Departure for Site Visits; 17:00 Networking Reception

There are a few spots available for site visits: if you were on the waiting list and still would like to join one of the site visits, reach out to the organisers



Renovate Europe Day 2026

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