



An Roinn Oideachais
Department of Education

The Educational School Building Sector in Ireland and Collaborative Space Environments.

NIER Symposium
Tokyo, Japan,
Jan 29th 2025

Introductions



Stefan Mathews B Arch., MRIAI. Dip. PM
Technical Manager, the Planning and Building Unit

**Capital Delivery and Programme Management
Support Unit**

Department of Education
Ireland



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2040

Our objective is to ensure that the P&T unit provides services successfully by working collaboratively with teams to, achieve value for money in a sustained strategic and coordinated way, when delivering school environments that are pleasant, functional and energy efficient in both, the quality of design and construction.



Gavin Arnold B Arch., MRIAI.
Senior Architect, the Planning and Building Unit

Leads in the area of **School Design Guidelines and Design Team Procedures**

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Ireland

In building a world class education system, the Department's goal is;

“to build a modern and sustainable school infrastructure that provides a place in a safe and inspiring learning physical environment for all students, now and in the future”.

Presentation objectives



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- Introduction to the DoE and the Planning and Building Unit
- Facts relating to the School Building Sector in Ireland
- Examples of School support spaces that inspire collaboration and engagement outside the class room.
- School Campus Developments, optimising the school at the heart of communities. Is this the future ?
- Other school building typologies.



Background Information



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- Total population 5.1 million (2022 census)
- Just over 2 million (40.5%) in the greater Dublin area
- Compulsory education 6-16 years
- Primary school enrolments (2022) 558,143 – underlying downward trend nationally but year on year increase due to accommodation of Ukrainians
- Post-primary school enrolments (2022) 406,392 – continuing to rise



Department of Education Mission



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“To ensure that all children and young people have access to a positive learning experience and to facilitate them, through learning, to realise their full potential and contribute to Ireland’s social, economic and cultural development.”



The Planning and Building Unit excess 240 staff

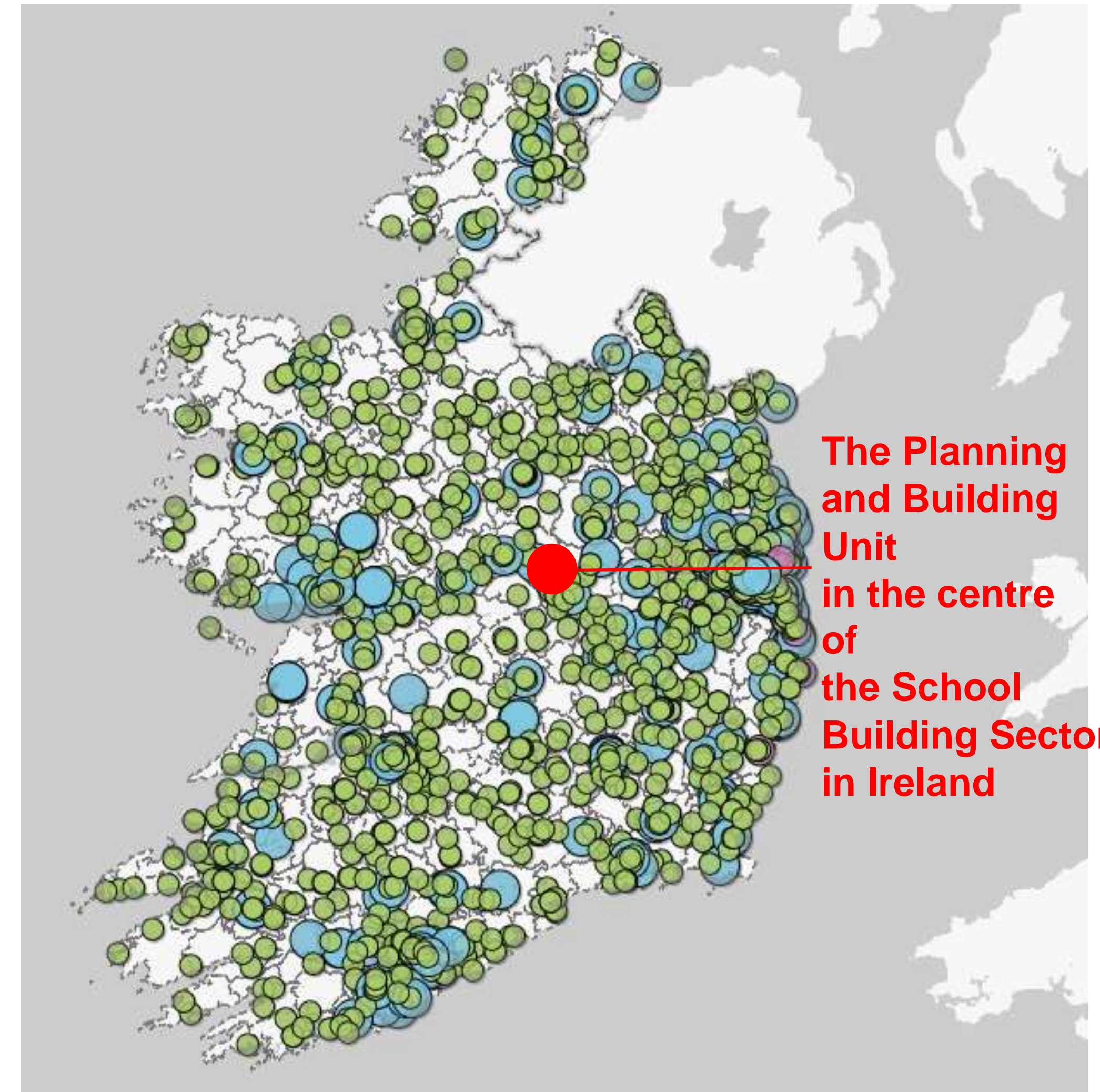
Ireland's School Building Programme



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- Currently we have excess **3140** Primary Schools and over **740** Post Primary Schools.
- During 2018 – 2022, almost **900** school building projects were completed.
- Over **1,350** school building projects in the current pipeline, all being progressed at different stages.
- At least **€6 billion** of capital investment will be spent on the school building sector between 2021 and 2025 under National Development Plan in Ireland.
- In 2024 there were over **350** projects at construction
- A double increase from 80,000m² in 2023 to 160,000m² in 2024

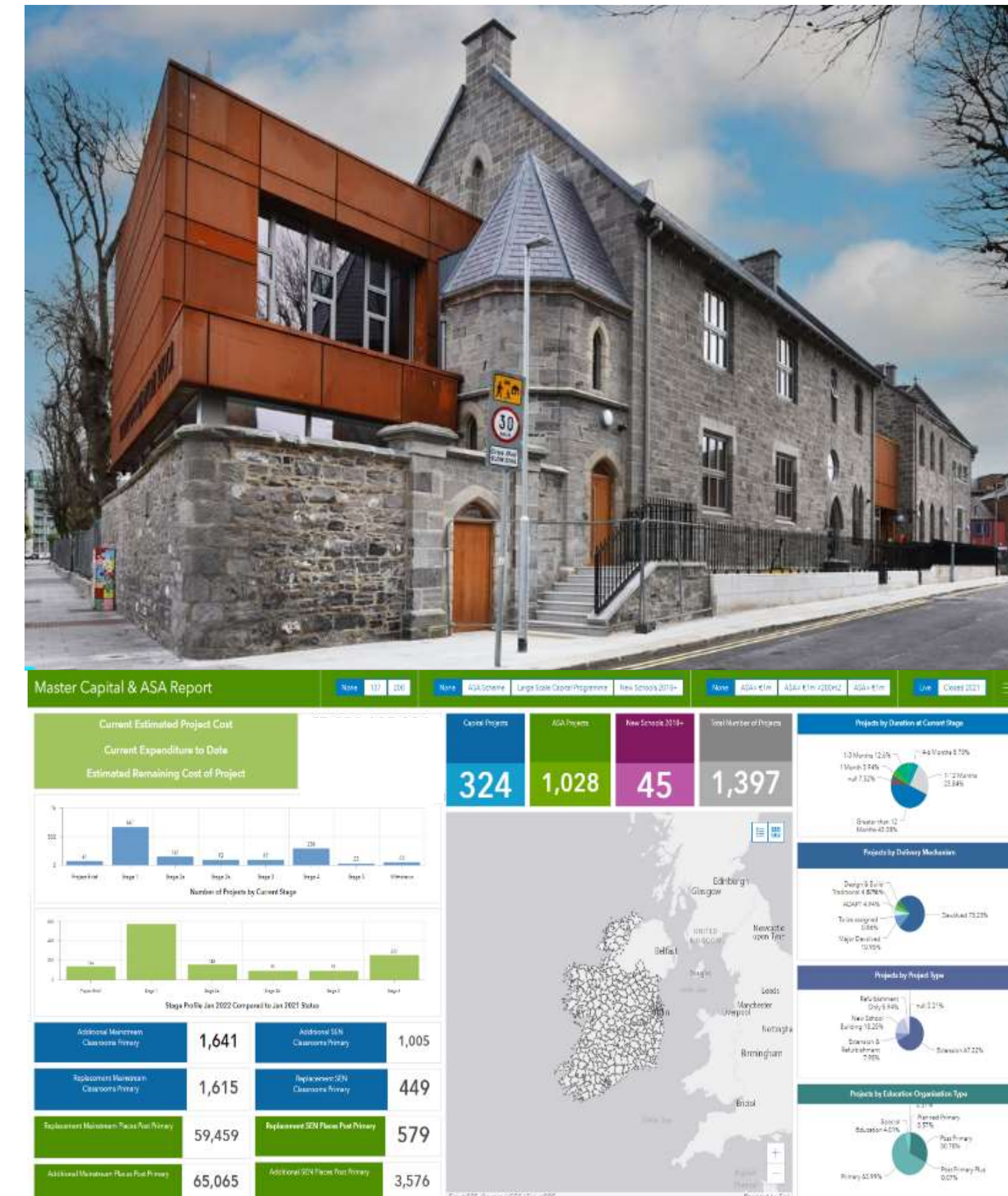


DoE Professional and Technical Unit

- Small Professional & Technical unit at the heart of all school building designs in Ireland, with an excess of 40 team members of various disciplines.
- Multidisciplinary P&T teams consist of Architects, Engineers, Quantity Surveyors and Building maintenance Managers supported by a Digital Data team.
- Multiple delivery streams supporting many programmes supplying the pipeline.
- The P&T teams are engaged directly with hundreds of consultants through out the country – e.g. Doe Delivery Teams of 3 internal Professionals, engage with over 170 + consultants on 70 to excess 150 projects on any one of the 7 delivery programmes.

New Initiatives being developed and delivered

- Decarbonisation of designs by implementing Heat pump and MVHR technologies
- Optimising Special Educational Needs through reconfiguration and new special schools designs throughout the country.
- Digital strategy through data collection, BIM and Geographical Information System





**Examples of School support spaces
that inspire collaboration and engagement
out side the class room.**

Department of Education School Design Guide



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Public documents used by Consultants to assist in
standardising the design of school buildings in Ireland

- GENERAL PURPOSE (GP)/DINING AREA DESIGN CONSIDERATIONS
- The General-Purpose/Dining Area should be the social heart of the school. It should bring a sense of openness to the school, giving order to movement and enhancing general circulation.
- Besides providing a dining/study area, it can also be used for assemblies, plays, exhibitions and social events during and outside school-hours; thus, serving both school and community.
- After hours, it should have easy access from the main entrance without compromising the whole school security.



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School Design Guide SDG 02-03 Post Primary School Design Guide

Prepared by The Planning & Building Unit,
Department of Education
Tullamore, Co. Offaly. R35 Y2N5
www.education.ie



**Kishogue Community College
Dublin**

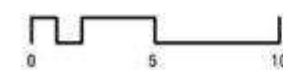
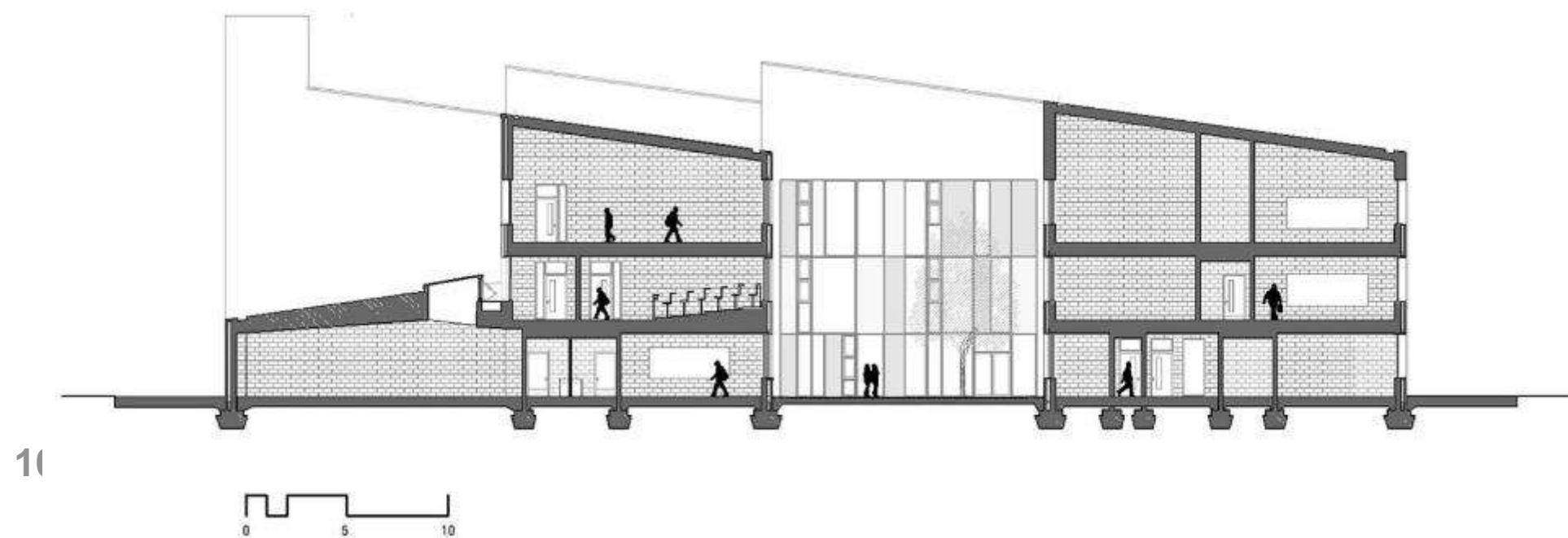


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Architects
McCullough Mulvin Architects

- General Purpose Hall is at the Heart of the Education Environment.
- Architects aim was to make a place and foster a good environment for learning.
- Triple height social Hub of the School is the GP space arranged with balconied routes across adjacent to courtyard
- Design maximises sunlight and natural ventilation to create areas of intense social activity for students both inside and out.





**St Pauls
Secondary School**
Monasterevin

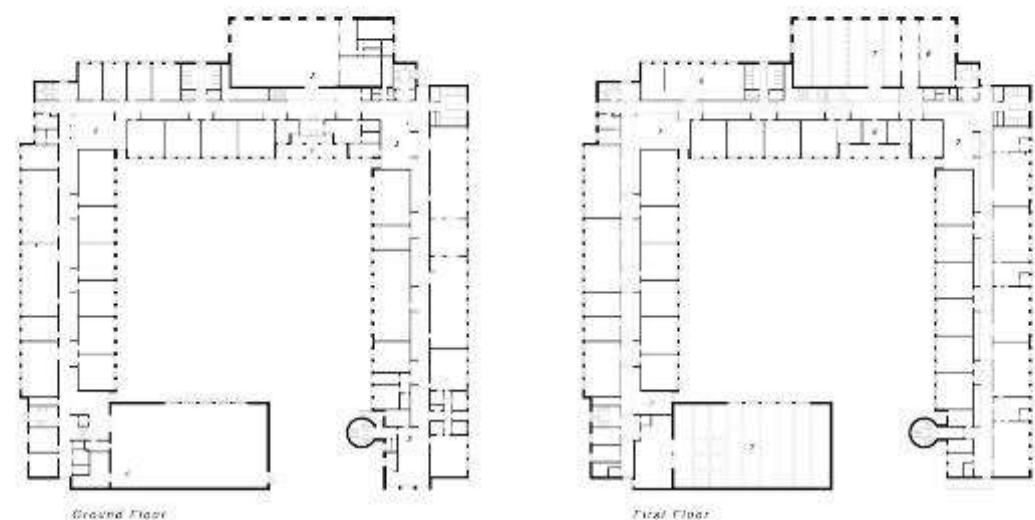


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Architects
Deblacam and Meaghar

- Architectural Competition design for 1000 Pupil Post Primary school set in an 18th and 19th century Parkland setting
- Courtyard plan with a enclosed external space
- Informal social spaces at corners
- Direct access to external environments
- Large GP area with direct access to external landscape
- a large space that the entire school can engage and convene outside within the central space.



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Naas Community
College
Co. Kildare



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Architects
Coady Architects

Shared accommodation at the heart of the school

- Architectural Competition design for 1000 Pupil Post Primary school.
- 2 wings, a sports hall and SNU are arranged around a central hub of the school in the multifunctional GP area
- Tiered seating, concourses and informal learning areas are all included to facilitate engagement amongst students through out the school.
- Direct access to landscape and external environments. These spaces of fun provide potential for outdoor learning opportunities for the students and teachers.





Gael Choilaiste Luimnigh
Limereick City,
Co. Limerick



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Architects
Thompson Architects



Thinking outside the box?

- 6 distinct classroom blocks including a double height GP and sports hall.
- Wide central circulation spine connects the educational spaces,
- Circulation along the spine is external on the first floor.
- Provides fresh air between classes and has direct elevated views of the landscaping courtyards and park.





CBS Post Primary School
Kilkenny City
Co Kilkenny



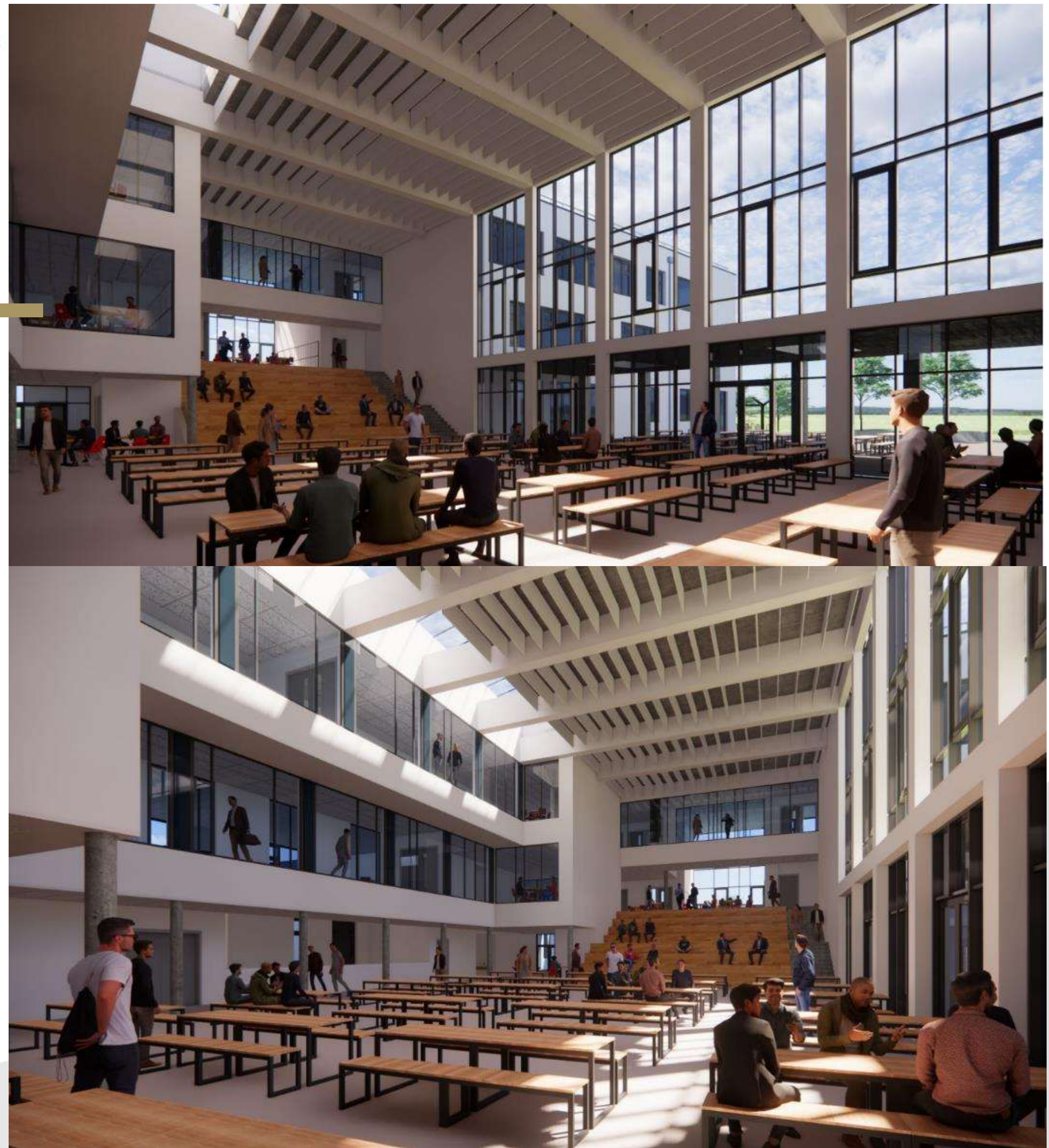
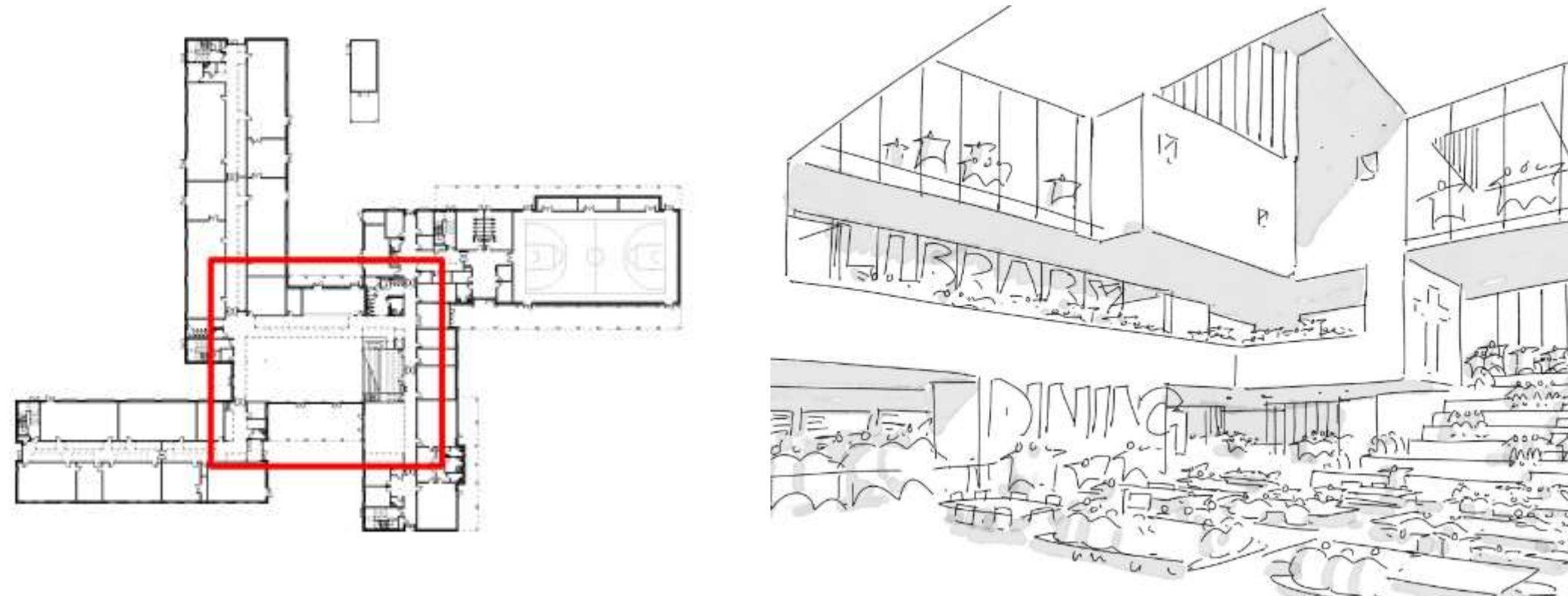
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Architects
Atkins Realis Architects

The TOWN SQUARE

- Inspired by Modern Italianate town square
- Facilitates temporary and permanent event or learning space surrounded ancillary support areas.
- Social Heart of the school linked on all four sides
- Over looked and connected to upper levels including the library.





**Bray Lorretto,
Post primary
Co. Wicklow**



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Architects
Moloney O`Beirne Architects

Multifunctional design and flexible spaces

- Central Core acts as the HUB of the school
- The double height GP hall is situated adjacent to the Central Core and the facility can be opened up by means of sliding doors,
- Optimises the Space for support operations and social events.
- Direct access to the landscape and external environments demonstrating exemplar design to the support space and multipurpose use.





Patrician School,
The BISH
Co Galway



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Architects
Moloney O`Beirne Architects

Optimising space for multipurpose use and the well being of students and teachers

- The two largest volumes are the general purpose hall and Multi purpose Hall which are located in the central sunken area of the site
- Angled to one another to reflect the site geometry, they can also be opened into one another for assembly purposes or a large performance.
- The General Purpose Hall also provides access to a south facing amphitheatre, which is carved into the landscape, encouraging students to engage externally.





**Carrig Twohill
School Campus
Co. Cork**



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Architects
O`Mahony Pike Architects



Future proofing educational needs at scale

- 3 school campus design in the suburb of Cork city
- Future proofing education to the area at primary, post primary and special needs.
- Part of a wider development plan of infrastructure including a road network and flood attenuation designs.
- Leads the way of delivery and construction, the campus project was completed in 18 months.
- One of the Largest scale projects delivered to date but is reflective of the future to the school building programme.



**Roslyn Park Campus
Sandymount
Dublin**



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Architects
O`Mahony Pike Architects



Campus school developments:

- Construction of an educational campus project of a 16 classroom primary school and 1000 Post primary school on an existing school site and phased construction.
- Decarbonised design utilising, MVHR and Heat pump technologies.
- Suburban context providing great access to the local community and strong pedestrian links throughout.
- Sunken external Amphitheatre promoting external social and learning opportunities.



**Harolds Cross
Educational school
Campus
Dublin**



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Architects
DoE Professional and Technical Unit
& AL architects



Urban School Campus Development

- 1000 post primary and 16 class primary school campus
- Construction of the campus project in an existing school site
- Promotes a carfree campus and the enhancement of the permeability of the site via walking / cycling.
- Strong pedestrian links to local areas and aims to achieve an 85% of trips by sustainable mode and travel plan.
- Urban school design response, upto 4 storeys tall with installation of green roof specification.



Laurel Hill Education
Campus
Limerick City



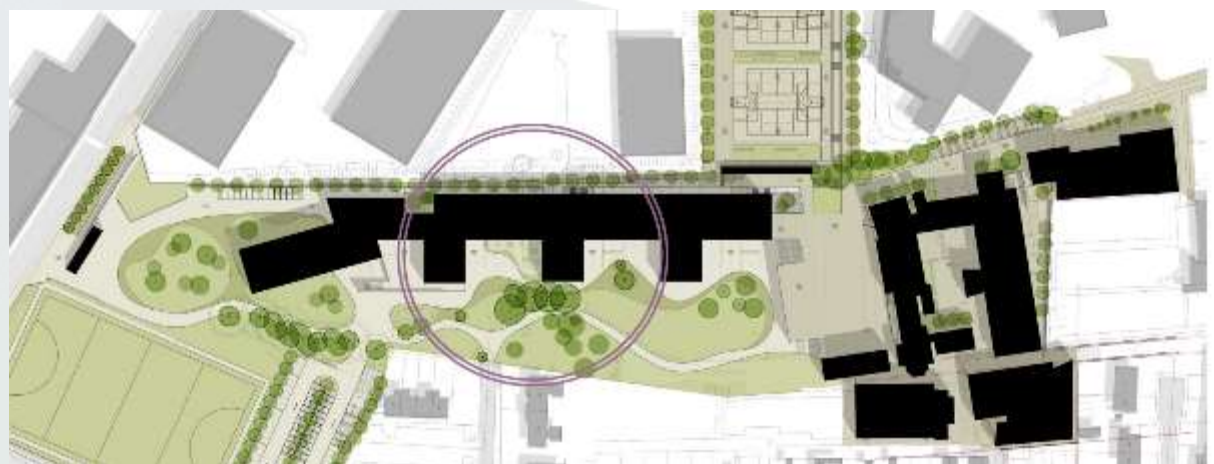
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Architects
Healy Partners Architects

The Landscape – School as a Campus

- Design aims to optimise the use of the long and narrow site minimising the building footprint and maximise the external space and consider the constraints of a sloping site.
- It offers diverse areas for sports, performances and social activities and can also accommodate additional uses that contribute to the development of the surrounding area.



Education





Laurel Hill Education
Campus
Limerick City



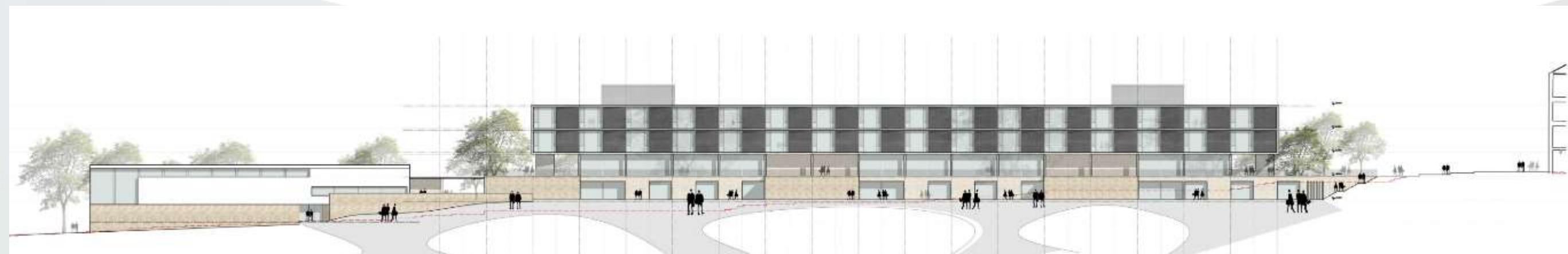
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Architects
Healy Partners Architects

Urban School Campus Development Design

- As a communal hub the campus is intentionally open and inviting, providing a vibrant meeting point for students and staff.
- The space offers outdoor "rooms" for the community and organisations, fostering an educational landscape that extends beyond the classroom.



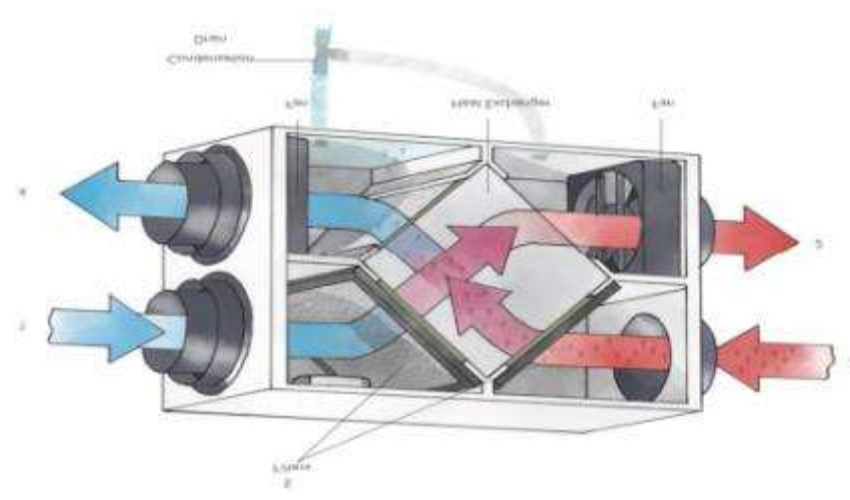
Decarbonised Approach – Heatpumps, MVHR and Solar panels



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- Provide renewable heating system in the form of air to water heat pumps with mechanical ventilation heat recovery (based on 9 litres per second per person) etc. to meet 90 % of annual heat load demand with back up/ support on 75% of the heat losses by gas heating.
- Solar PV to be sized based on cost optimum solution on 10 year payback that takes into account the schools baseload electrical requirements (i.e. electrical load when the school is closed) and the upcoming feed in tariffs provisions. The PV installed output should not exceed expected electrical demand on a May or September school day





St Patricks Special School
Enniscorthy
Co Wexford



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Architects
DoE Professional & Technical Unit



Special Schools Designs:

- Special needs school in a campus development
- leads in relation to developing special school designs
- Promoting inclusive for all ages may be the future.
- 140 students between the ages of 5-17 and 95 staff members
- 22 classrooms, specialist teaching spaces for art, music, horticulture, living skills, woodwork. It also contains GP Hall, Dining Area, staff and admin areas, therapy rooms, medical support and recreation areas.





**Scoil Chuimín & Caitriona
Oughterard
Co. Galway**



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Architects
Simon J Kelly Architects



Primary school designs

- Use of colour as way finding within the school
- Each classroom is coloured differently
- Corridor treated as a “shop front” with natural day light from two directions, creating visual link to and from the classrooms
- Courtyard is crafted as an external classroom
- Integrated seating to promote break out space for children
- External Spaces to integrate spaces for children to congregate and integrate outside the classroom.



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Go raibh míle maith agat

Thank you very much

ありがとうございます