



St. Colmcille's Community School, Knocklyon, Co. Dublin

PROJECT TEAM

CLIENT

Department of Education & Science

ARCHITECTS

Newenham Mulligan & Associates

Project Architect: Gavin Arnold

Assistant Architect: David Power

Project Team: Barry Kirwan, Joanne Maher,

Bryan Joyce, Margaret Brennan,

Michael Lamb.

STRUCTURAL ENGINEERS

Rooney Associates

SERVICES ENGINEERS

Building Design Partnership

QUANTITY SURVEYORS

Austin Reddy & Company

LANDSCAPE ARCHITECT

Mitchell & Associates

PHOTOGRAPHY

Gerry O'Leary Photography

MAIN CONTRACTOR

Duggan Brothers (Contractors) Ltd.

Architects' Account

The new Community School at Scholarstown Road, Knocklyon in South County Dublin for 650 pupils is designed in accordance with the general design brief for post primary schools issued by the Department of Education and Science. The school includes general classrooms, practical and specialist teaching areas, social and general purpose areas, indoor and outdoor sports facilities, administration and ancillary services. The project includes landscaping to the site and external works. Future sports fields planned for the rest of the site are awaiting funding.

The architectural concept is based on a number of key principles:

- The stepped linear form is generated by the site context.

The two storey general classrooms and double height general purpose/dining area benefit from the southerly orientation with views across the landscaped open space to the Dublin hills.

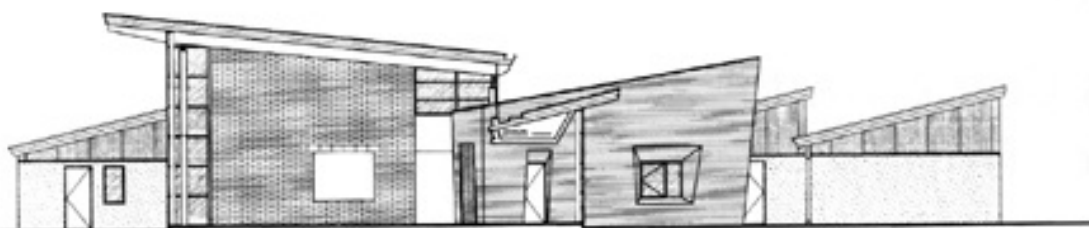
- The single storey practical and specialist spaces to the more public side of the building benefit from high level glazing with north and east daylight orientations, using the 'saw-tooth' type roof section.
- The linear "paths" link inside and outside to form a strong landscape structure and progression through the school.
- The regular grid of the building is punctuated by "events", a variety of forms of spatial diversity including the circular library, the cedar clad music and drama volume, the PE Hall and the double height glazed general

purpose area.

- The design emphasises a high level of daylight and natural ventilation to all spaces. In particular the general purpose area with its double height glazing and views south to the Dublin hills create a welcoming bright transparent space at the main entrance.
- Colour is used internally to walls and floors in specific areas to reinforce the spatial diversity.
- There is an optimisation of floor area in relation to the tight area constraints imposed by the client's brief achieving a variety of spaces from the structured learning spaces to the more informal social spaces as part of the circulation.
- The stepped central corridor and services spine provides clear distribution and circulation linking general classrooms and other

View of main entrance





Cross section

teaching areas. Ancillary areas such as toilets, stairs, stores and lockers are located along this spine.

- Junctions at the stepped classroom blocks form double height glazed nodes which form intermediary social areas supervised by the corner year-head offices and enhance passive solar

gain back into the structure of the school.

- The energy strategy for the school was to maximise passive solar gain from the southerly orientation, a high standard of daylight and natural ventilation throughout the school and minimise thermal loss by high levels of insulation. The external planting plan includes

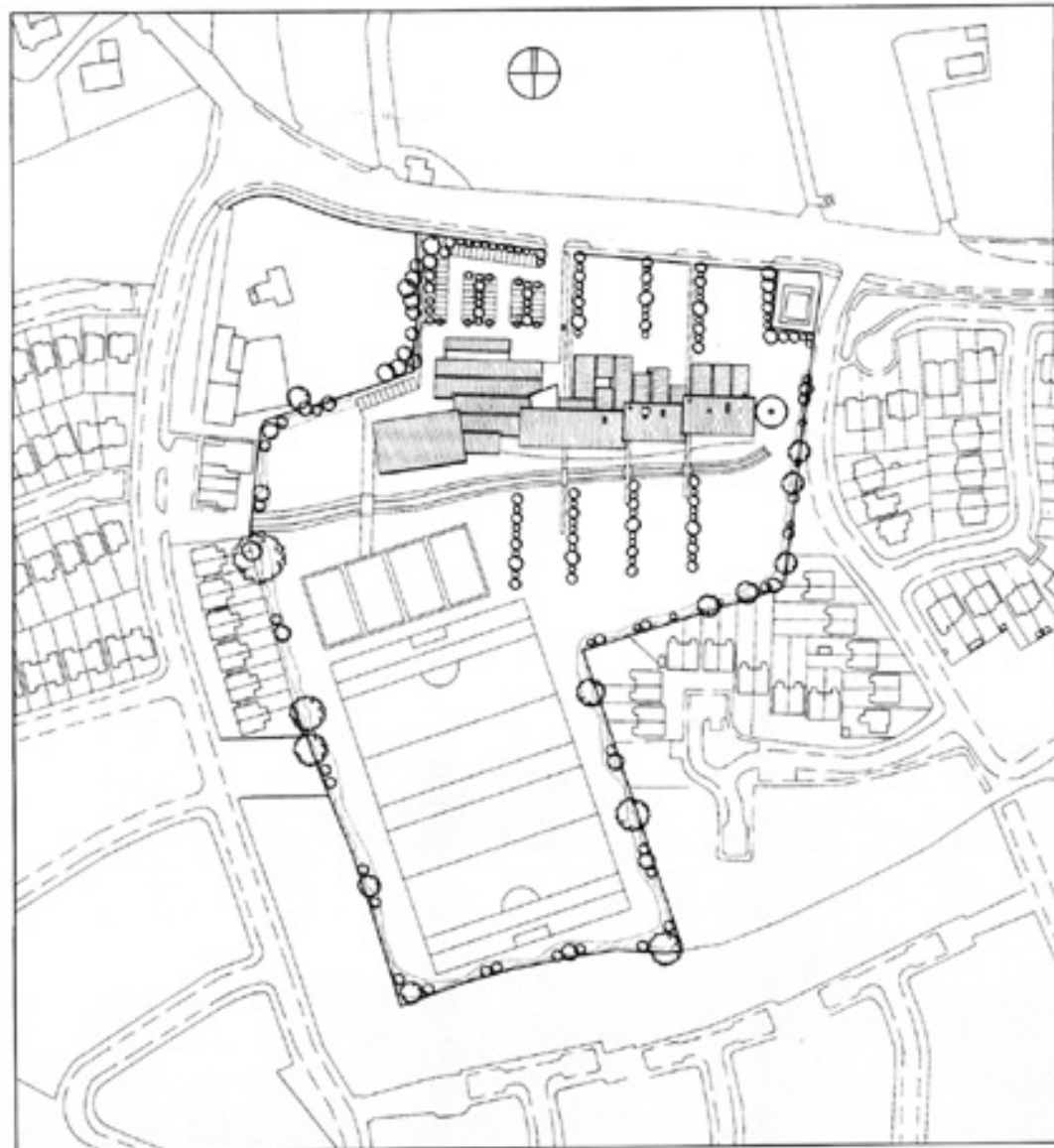
wind-break lines of trees.

- The landscaping of the site was seen as an integral part of the overall concept with an emphasis on the relationship between internal and external spaces.
- The school is also a resource for the community and the PE hall can be accessed independently.
- The material specification is for

economic and durable materials in accordance with the client's requirements and budget. The regular grid allowed an economical structural system to be adopted. The ground floor of the classroom blocks are expressed externally as solid masonry rendered and painted walls supporting the first floor cladding. Windows and curtain walling are all double glazed. Internal walls are generally painted fair-faced blockwork.

- The roof is an aluminium standing seam system supported on a steel structural deck which spans the 7.2m grid and eliminates the requirement for purlins between the primary steel structure. The PE hall has a steel underbraced roof structure.

In summary the desire was to create an environment that would inspire a learning and teaching process beyond the basic functional requirements of the school, to allow expression of individuality within the overall social structure of the school and to provide a diversity of spaces to enhance spatial awareness and social interaction.



Site plan

View of library and science laboratories



View of music/drama room

View of south façade



View of general purpose/dining area

View of library



View of staff room



NMA

Newenham Mulligan & Associates
Architects | Project Managers | Interior Designers

Articles

Extract from:
Irish Architect - February 2002

