CIBSE Evening Seminar
23rd April 2018

Ysgol Bae Baglan
INTRODUCTION
Introduction

Thanks to:

- Mike Tate, Headteacher
- Neath Port Talbot CBC
Introduction

Tim Lockett

Principal Mechanical Engineer
AECOM (Cardiff office)

Lead MEP Engineer for Ysgol Bae Baglan Project
Introduction – Statistics

- Project Cost ~ £35m
- GIFA ~ 12,000m²
- No. Pupils ~ 1400
- Ages 3 – 16
- Completed Summer 2016
- EPC Score = 25 (A)
- BREEAM Excellent
- 25% Improvement on Part L TER
- Microsoft Showcase School
2017 Awards

• National Eisteddfod of Wales “Gold Medal for Architecture”

• LABC Building Excellence Awards “Best Educational Building”

• Constructing Excellence Wales (CEW) “Project of the Year”

• Constructing Excellence UK “Project of the Year”
• Level 2 including COBie data drops
Architecture – General Layout

Secondary School

Changing for Outside

Theatre

Heart Space

Sports / Fitness (also for community)

Primary School

Secondary School
MEP – General Layout

Main Boiler / Hot Water Services Plant Room

Separate Cold Water Services Tank / Booster Room

Main Electrical Switchroom

(1st Floor) AHU Plant Room Associated with Transpired Solar Collector
MEP – General Layout – Roof

AHU / VRF Condenser Roof Enclosure

PV Arrays
MEP – General Distribution

GF to FF height = 3.9m

FF to SF height = 3.6m
MEP – Underfloor Heating

• Even temperature throughout the day
• Central automatic control
• Maximise wall space
• Warm floor
MEP – Ventilation Strategy

**SUMMER**
- V. High Level Window
- High Ceilings
- Natural Vent
- Mechanical Vent / Cooling

**WINTER**
- V. High Level Window
- High Ceilings
MEP – Ventilation Strategy

2nd Floor Science Rooms
MEP – Transpired Solar Collector (Solar Wall)
MEP – Transpired Solar Collector (Solar Wall)
MEP – Electrical Services

• Lighting
  – Fluorescent in the majority of areas
  – LED in circulation and areas with long hours of occupation

• PV
  – 250 kWp PV array
TOUR