

PROJECT DETAILS

CLIENT Wakefield Council

PROJECT Sandal Magna Community Academy Major Structural Remediation & New Roof Installation

LOCATION Belle Vue Road, Wakefield, WF1 5NF

START DATE 6 July 2020

DURATION Phase 1: 15 Weeks
Phase 2: 42 Weeks

VALUE Phase 1: £891,627
Phase 2: £2,758,757
Total: £3,650,384

RTM Single Stage Open Procedure

CONTRACT JCT Minor Works – Contractors Design 2016

ROLE Principal Contractor



PROJECT SUMMARY

Sandal Magna Community Academy operates in a highly residential community and delivers pre-school nursery and primary school services for children aged 5-11. Built in 2010 to replace the previous Victorian School, the new buildings were constructed in three, parallel, single storey blocks. Constructed in timber frame, the structures comprised glulam beams, raw timbers, weatherboarding, corrugated roof rain screens and associated mechanical & electrical services.

McConnell were originally contracted to deliver a roof replacement programme across all three blocks comprising the removal of the existing corrugated cement particle roofing system and the installation of a waterproof Sika single ply roofing system. However, during the course of the roof removal works, it became apparent very early on that major structural (frame and beam) elements were damaged and showing signs of degradation and rot. We informed the Council of our findings and were subsequently commissioned to appoint and manage a specialist design team and, propose and deliver an approved, cost effective technical solution supported by appropriate insurance backed guarantees and third party warranties.

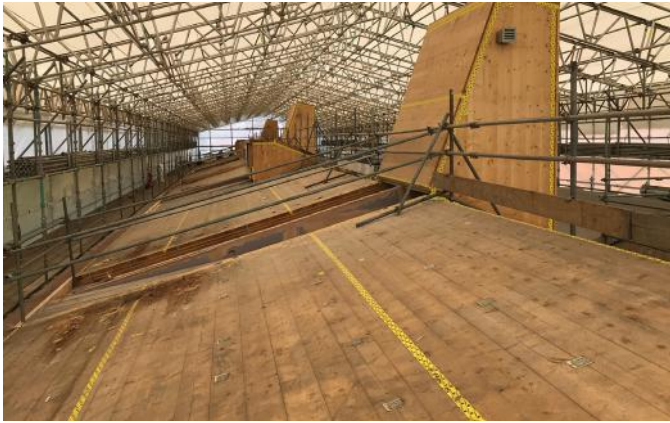
The original duration of the project was amended to include a second phase of major remedial works and retro-fit installations focussed on exposure, deconstruction and remediation of the timber structure and glulam beams; internal and external propping; structural and timber resin repairs; the installation of additional structural components; temporary internal and external roofs; the installation of new single ply roofs; lighting, mechanical and electrical upgrades to current standards; the design and installation of fire-sprinklers and associated controls; fire barrier installations and fire proofing works to current standards; the installation of new wall cladding systems on elevations; new ceiling linings, floor finishes, internal joiner works and decoration.

The end result is a collaborative, cost effective, insurance backed solution, delivered to current building and technical standards that avoided the disruptive closure and complete demolition of a key community asset, all delivered safely and sensitively in a live school environment without any reduction in curriculum or education services.

SCOPE OF WORKS

- ▶ Installation of a protective scaffold design comprising temporary roof and elevation protection in a tented structure
- ▶ Deconstruction of structural roofing components & brickwork to expose degraded Glulam structure
- ▶ Extensive structural and borescope surveys
- ▶ Installation of structural propping and internal temporary roofs
- ▶ Design & installation of new Glulam beams and associated additional structural components
- ▶ Resin repairs to existing structural components
- ▶ Retrofit cladding installations to refurbished external elevations
- ▶ Installation of new waterproof Sika single ply roofing system
- ▶ Installation of new Brett Martin rooflights
- ▶ Retrofit installation of Fire Sprinkler System and associated controls
- ▶ Associated Lighting, Mechanical, Heating, Venting and Electrical Works
- ▶ Internal fit out including Ceilings, Flooring, Joinery & Decorations
- ▶ Hard and soft landscaping and additional external drainage

Sandal Magna Community Academy



CRITICAL SUCCESS FACTORS

- ▶ Early recognition and reporting of rot and degradation in major structural components by our highly experienced roofing team was critical to protecting the school-users and safeguarding the long-term stability and future viability of the structure.
- ▶ Early acceptance of the extended scope of works and our addition of a Technical Director and a Senior Contract Manager to our project management team provided invaluable experience and dynamic project leadership.
- ▶ Our immediate commissioning of a (disruptive) Timber Condition & Structural Survey via BM Trada, the UK's leading timber specialist, provided us with an expert report and a highly detailed structural remediation strategy and retrofit specification.
- ▶ Running in tandem with the timber specialist investigations, our immediate appointment and mobilisation of a specialist design team comprising NASC Approved Scaffold Designers; Timber Rot Remediation Specialists; Civil & Structural Engineers; Mechanical & Electrical Engineers; Heating & Ventilation Engineers; Fire Safety Engineers and Temporary Works Specialists reduced delay and accelerated the Phase 2 pre-construction and construction periods.
- ▶ Leading collaboratively with BM Trada, our specialist Design Team, Council Officials, Planning Officers and Building Control Officers, we presented (and subsequently delivered) a suite of revised Contractors Proposals that complied with all advisory, statutory and regulatory requirements.
- ▶ In compliance with the BM Trada Report, the use of specialist resins, the replacement of failed Glulam sections with new, higher specification Glulam sections and, the addition of extra structural components including additional Glulam slabs resulted in a highly effective, partial, de-construction, remediation and retrofit.
- ▶ Our contractor-designed, insurance backed, and third party warranted solution avoided a costly and disruptive full demolition and the loss of a highly valuable community asset.
- ▶ The design and installation of scaffolding and temporary external and internal roofs varied across all three blocks and were critical in the overall remediation and retrofit strategy.
- ▶ Our flexible approach to evening, and twilight working; school holidays and in-service days; off-peak periods in the school curriculum; occasional night shift working; coupled with a sensitive approach to the School's requirements and a diligent approach to managing and operating the site in full compliance with site specific, mandatory Safe Operating Procedures; saw our revised Contractor's Proposals delivered competently, cost-effectively, safely and on-time, in full compliance with the Council's Requirements and BM Trada's Report Recommendations and Specifications.