Alec Hunter Academy

PROJECT STUDY

The Scope

PROJECT
Alec Hunter Academy

TYPE
Refurbishment

LOCATION
Braintree, Essex

ROOF SIZE
550 m²

WATERPROOFING SYSTEM
Nimbus UltraTech with tapered NimTherm insulation

MAIN CONTRACTOR
Acclaim Contracts

THE CLIENT
Archer Building Consultancy

THE SPECIFICATION

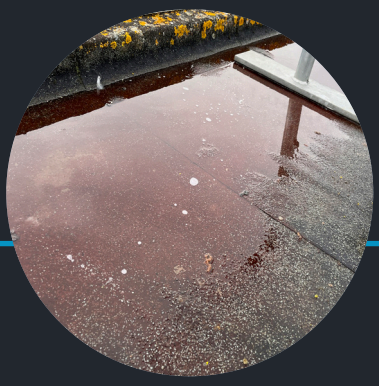
Alec Hunter Academy, located in Braintree, Essex, was identified as a high priority roof refurbishment project following detailed surveys of the whole of the Saffron Academy Trust estate.

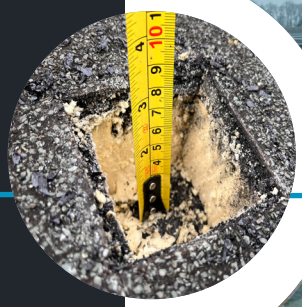
Roof 5 at this Academy was assessed as Grade D1: life-expired and high risk.

The roof, more than 20 years old, had saturated insulation caused by water ingress, RBM felt coverings that were cracked and UV-degraded, and repeated emergency patch repairs that had failed.

Internally, this had resulted in ceiling damage, water-damaged flooring, disruption to classrooms and increased heating demand due to poor thermal performance.

The Survey





CONDITION SURVEY

KEY FINDINGS

INSULATION

60mm PUR, saturated throughout, offering negligible thermal benefit. Wet insulation can lose up to 40% of its performance.

WATERPROOFING

Two-layer RBM felt, aged and cracked, with reinforcement mesh visible; beyond serviceable life.

DRAINAGE

Standing water across multiple zones due to inadequate falls, worsened by failed outlets.

PATCH REPAIRS

Unreinforced liquid coatings at outlets were delaminating, creating micro water traps and accelerating damage.

IMPACT

Persistent leaks, internal damage, safety risks from wet floors, and increased heating demand.

The survey provided the Trust with clear evidence of risk, cost exposure, and the need for immediate refurbishment.

SPECIFICATION SURVEY

KEY FINDINGS

01
60mm PUR, saturated throughout, offering negligible thermal benefit. Wet insulation can lose up to 40% of its performance.

02
New tapered insulation scheme, in compliance with BS6229:2018 to resolve ponding and provide positive drainage falls.

03
Replacement of all rooflights with modern, thermally efficient units.

04
The insulated roof system was installed as a hybrid system, comprising self-adhesive AVCL, self-adhesive underlay, and torch-applied cap sheet in most areas, with flame free cap sheet in high-risk areas, in accordance with NFRC S2T guidance. This approach combines the efficiency and robustness of torch-applied membranes, with the substantially reduced fire risk of flame free membranes in those areas requiring careful management of combustible materials.

05
System designed and installed to comply with Part L (thermal performance) and Part B (fire safety) of the Building Regulations.

06
Single point guarantee, covering materials, labour, design and with added peace of mind consequential loss covered, should aftercare be required.

CHALLENGES

WITH SOLUTIONS

01
No Temporary Roof
Works were sequenced and phased to ensure stripped areas were immediately re-covered, providing continuous weather protection throughout the works.

02
Tight Timescale
Early delivery achieved through close contractor collaboration, strict programme management, and phased working.

03
Drainage Failures
Tapered insulation eliminated ponding, outlets reconfigured for efficient discharge.

04
Fire Risk on a Partially Occupied School Site
The school remained operational in limited areas during the works. While not fully “live,” appropriate fire management measures were implemented in line with NFRC guidance and industry best practice.

BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE 25/7315

NFRC
LEADING ROOFING EXCELLENCE

PERFORMANCE

INCLUDING BENEFITS

This refurbishment project delivered measurable improvements in building performance, operational efficiency, and client confidence.

Key outcomes:

ENERGY PERFORMANCE

Achieved U-value of 0.18 W/m²K, significantly reducing heat loss, energy costs and carbon output.

WATERPROOF INTEGRITY

Long-term watertightness resolved longstanding leaks.

SAFETY

The new system has been tested as a complete system under BS 13501-5, achieving BROOF(t4) classification and is fully compliant with Part B of the Building Regulations. Provision of safety handrails and roof access for maintenance meets the requirements of Part M, allowing safe access for future maintenance.

DAYLIGHTING

New thermally efficient rooflights improved natural light while reducing solar gain.

GUARANTEE

25 years, with a BBA certified durability for the roof in excess of 35 years.

PROGRAMME + COST CONTROL

Delivered early, under budget, with no variations.

VISUAL QUALITY

Drone imagery confirmed a uniform, seamless finish, enhancing the wider academy estate.

QUANTIFIED

VALUE

01
Zero classroom downtime during works.

02
Full compliance with National Federation of Roofing Contractor Safe 2 Torch Scheme with regards to safe application around combustible materials.

03
Significant reduction in heating costs following U-value improvement.

Project Insights

The refurbishment demonstrates how a survey-led technically robust approach can deliver lasting performance, operational efficiency, and assurance for educational clients.

Key Benefits:

01
Survey led decision making: Evidence based data from intrusive surveys, including thermal analysis, enabled informed decisions.

02
Technical superiority: Flame-free safety, thermal compliance, tapered insulation design, and a lifespan in excess of 35 years.

03
Commercial certainty: Delivered early, under budget, with no variations.

04
Sector expertise: We ensure seamless delivery and programme management, allowing work to be carried out during the summer holiday period with minimal disruption to the school.

05
Client assurance: Prioritising Grade D1 roofs reduced maintenance liabilities and safeguarded the estate.

> “Nimbus provided clear evidence, full assurance, and a watertight result.
>
> The project was delivered early, under budget, and with complete confidence in safety.”

Setting the Standard in Roof Refurbishment

WITH NIMBUS	COMPETITORS
Survey led, evidence based reports	Often generic overlay
Flame free, hot air welded	Torch on risk still used
Programme certainty	Neutral
Cost certainty	Variations common
Collaborative, client focused	System first focus
Free annual maintenance inspection for five years	Not included

CLIENT BENEFIT IN SUMMARY

The Alec Hunter Academy project demonstrates Nimbus Roof Technologies' ability to combine technical excellence, commercial reliability, and client focused delivery.

The Trust now benefits from a watertight, efficient, and fully compliant building envelope, secured by a 25-year guarantee, delivered safely and with measurable improvements to performance and value.

Nimbus provides an evidence led, consultative approach, ensuring the right solution is chosen, not simply the most convenient system.

PROGRAMME
Delivered ahead of September term opening

BUDGET
Under budget, with no variations

Nimbus
ROOF TECHNOLOGIES

“

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Beneath The Roof Line, Where Innovation Meets Reliability