

Roofing and Cladding Services

Part of the Shepley Group



@ShepleysUK



Shepley Engineers Ltd



engineers@shepley.vhe.co.uk



01946 599022



www.shepleyengineers.co.uk



Shepley Roofing and Cladding Services

Our Roofing and Cladding team have been working on the Sellafield Site since 2009 and are dedicated to providing the highest levels of customer satisfaction to our clients. Key members of our personnel have over 30 years' experience in the industrial roofing and cladding industry, this allows us to provide up front engineering support to help our clients develop the best solutions to meet their needs.

One of our differentiators in the market is our rapid response rate and ability to deal with emergency repairs quickly and effectively, whether this be a patch or a full repair. Our flexibility and collaborative approach is achieved through the relationships which have been built over many years with our supply chain and key suppliers.

The quality of our work speaks for itself. Our Roofing and Cladding team are approved installers of **Kalzip, Sika Decothane and Rapid systems, Kingspan, EuroClad, Corus, Steadmans and many more**. This provides us with the experience and knowledge to deliver a diverse variety of projects. Over the past decade we have completed a wide variety of projects from minor repairs to major re-cladding works. The largest of these being the re-cladding of the THORP Receipt and Storage building which required the removal and replacement of 13,000m² of cladding. Full details are given in the case study later in this booklet.

We are able to offer the following capabilities:

- Design and Build
- New Build
- Refurbishments
- Repairs
- Aluminium Walk Ways
- Edge Protection
- Access Ladders
- Aluminium Welding

Roofing and Cladding Experience

Our engineers have developed their roofing and cladding experience since the 1990's, and have worked for various high-end clients such as BAE systems and Repsol. Working for a variety of different clients has enabled our team to gain vast experience in project delivery and across a wide range of requirements and site conditions. Our personnel have a strong engineering education which means we are able to assist with design and development having delivered a wide range of solutions across numerous facilities. With over 30 years' experience delivering roofing and cladding projects across nuclear and non-nuclear sites our employees are well respected within the supply chain and roofing and cladding community.

Installation Resource Capability

At the centre of our Roofing and Cladding capability is our experienced installation team. Each individual team member is highly skilled in their core discipline and carries valuable experience and knowledge gained from delivering as part of a multi-discipline team across a wide range of projects. Our core team consists of a number of SQEP operatives, all of whom possess SC and DV security clearance allowing them to be deployed with minimum lead times. We also have the ability to call upon our mechanical installation team when structural steel framework is required. Having this in-house capability ensures rapid response rates.

Fabrication Capability

West Cumberland Engineering (WCEL) are a well-established and experienced fabrication company specialising in the manufacture and testing of high quality welded fabrications mainly for the nuclear and petrochemical industry sectors. The fabrication facilities are supported by our fully equipped machine shop to provide a comprehensive manufacturing capability at our extensive facilities at Lillyhall.

Our roofing and cladding team have the ability to call upon this in-house support for structural steel frame works, all fabrications support CE marking.

The WCEL team are dedicated to achieving the highest quality standards and operate a quality management system that is accredited to BS EN ISO 9001:2015. The quality management system incorporates the requirements for fusion welding of metallic materials (ISO 3834-2) and also for the manufacture of fabricated steel components (EN 1090-2 & 3)

For further information on our quality systems or manufacturing capability please visit our website at: www.westcumberlandengineering.co.uk



Design Support

Between our roofing and cladding team and our supply chain partners we have the capability to provide a complete range of design services. From supporting with technical assessments and constructability reviews through to providing detailed design solutions we are able to supply a professional service to accommodate any customer requirement. Our supply chain partners who provide design services are industry accredited and are approved suppliers to Sellafield Ltd.

The out sourcing of design services allows the client design authority to assume the intelligent customer role and can afford greater flexibility in deployment of their critical resources. Our integrated approach to design and delivery also affords us the opportunity to rationalise design outputs and to provide real benefits for our customer in terms of time and cost. Key elements of the service we can provide are listed below:

- Optioneering Studies.
- Scope and Business Case Development.
- Concept Development.
- Technical Specification.
- Site Surveys.
- Detailed Design Delivery

Supply Chain Interfaces

- ASL Flashings and Fabrications (Architectural Steel Ltd)
- Premium Roofing Supplies (Fixings and Sealants)
- Metsec Purling's and Cladding Rails
- Kingspan Purling's and Cladding Rails
- And Many Others

We have a well-established working relationship with our supply chain partners who have supported the Shepley Group with a number of Roofing and Cladding projects. All our current partners are recognised suppliers to Sellafield Ltd.

Quality

Our clients are confident that our products are fit for purpose and installed to the highest quality possible. Our key suppliers and solution providers provide the client with reassurance through their guarantee service which is a minimum of 25 years up to a maximum of 40 years (for selected companies). This makes us a platinum approved contractor. By being an official installer of Kalzip and Sika we are accredited to their own independent inspections, this means stage inspections are carried out throughout each products life cycle before being finally signed off.

Health, Safety and Environment

At Shepley Group we recognise that we have a responsibility for the health, safety and welfare of not only our employees but also those who may be affected by our operations. We also recognise that we have a responsibility towards the environment we operate in. For that reason, our Health & Safety Management System and Environmental Policies are always a prime consideration in everything we undertake. Our management systems are based around a policy of continuous improvement and we continuously monitor our performance against our primary objectives and the standards and expectations of our customers. To achieve these objectives and to promote our group safety / environmental awareness culture we have an ongoing commitment to actively invest in training, equipment and process development. The success of this approach has been evident in that we have been awarded ROSPA Gold Awards or Orders of Distinction in consecutive years since 2001 and are regularly in receipt of the Sellafield Management of Contractors Safety Award. The documentation associated with our Health & Safety Management System and Environmental Policies are available to review on request, but the key elements are summarised below.

- Dedicated Professional Health and Safety Team.
- Appointed Environmental Manager.
- Documented Operational Control Procedures.
- Internal SHEAR Audit Process.
- Occupational Health assessment.
- CSCS Skill Card Scheme.
- CHAS registration.
- BS OHSAS 18001 Occupational Health and Safety Management Accreditation.
- BS ISO 14001 Environmental Management Accreditation.



Case Study

Thermal Oxide Reprocessing Plant (THORP) Receipt and Storage Building Cladding

Location:

Sellafield, Cumbria

Client:

Sellafield Ltd

Value:

Circa £1.4m



Project Overview

The THORP facility located on the Sellafield Nuclear Site in Cumbria opened in 1994. Since opening it has processed 9331 tonnes of used nuclear fuel from 30 customers in nine countries around the world. However, reprocessing operations came to end in November 2018 due to clients deciding to store waste rather than reprocess it. The facility will now be used to store used nuclear fuel until the 2070s.

In 2012 Shepley acted as the main contractor on the THORP re-cladding project. The project is one of the biggest we have completed; the building itself is 36 meters tall and 192 meters long. The client (Sellafield Ltd) carried out a performance analysis of the building and were concerned of the potential long-term integrity of the building, signs were emerging and suggested that it would eventually require a replacement and a permanent solution. Therefore, Shepley worked together with the supply chain to establish a longterm solution. We were responsible for the removal of the existing 13,000m² of single skin aluminium sheeting and replacing it with Corus composite Trisomet 333 System panels.

The Trisomet 333 System panel was best suited for the job due to its good lifetime performance, this material reduced the need to further re-clad in the future and met the performance criteria set by the client and provides faster installation.

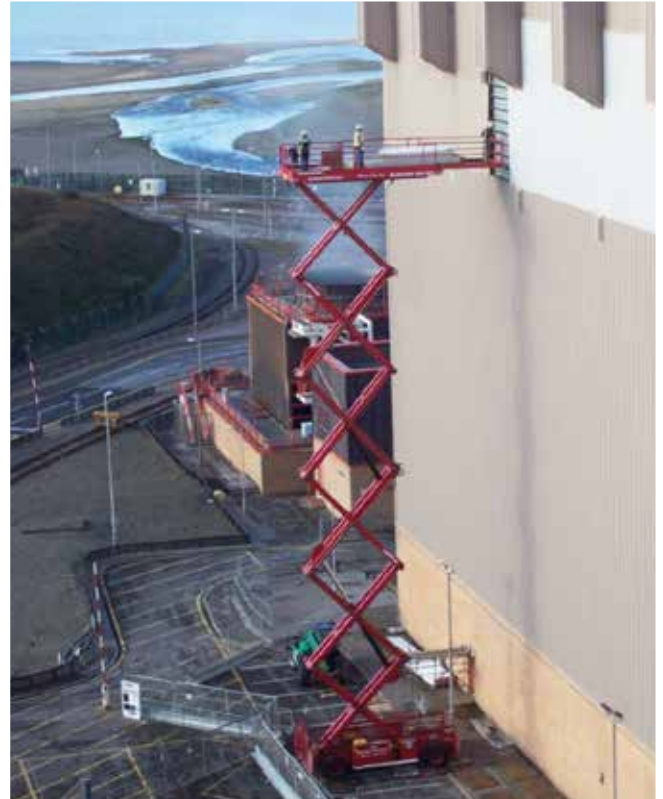
Mitch Dunne, Roofing and Cladding Project Manager explained that the new Trisomet 333 System walls featured the Tata Steel Repertoire bespoke colour matching service to match the original cladding.

Over 13,000m² of panels were supplied in four-meter lengths to comply with site health and safety handling requirements. The thermal performance of Trisomet 333 System helped to improve the mean temperature of the building. Installation of the panels also cut down the risk of air leakage through voids.

The existing stainless-steel structural tray linings remained in place, but we did carry out work to reseal the liner joints to improve airtightness. We also installed a new stainless-steel carrier rail to the existing structural liner laps and fixed the new Trisomet 333 System panels, using Ash & Lacy Building Systems' stainless-steel fixings throughout, having carried out appropriate pull out and shear testing. Flashings were made by Architectural Steel Ltd.

We delivered the project using an innovative approach to recladding such a large building, and one which had not been used before at Sellafeld. We reclad the building using a large scissor lift, rather than putting up a huge amount of scaffolding (see picture). This approach was much more efficient, saving a lot of time and money, and ended up with us giving the client some money back!

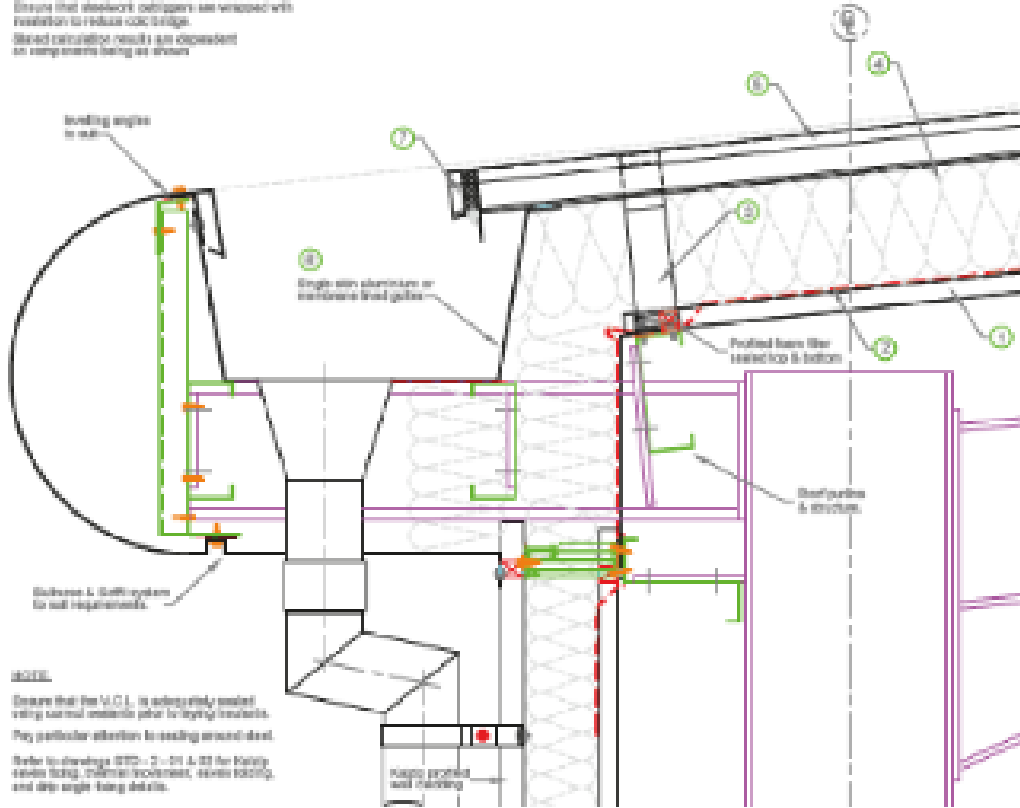
The contract required a phased approach to maintain weather integrity and a positive attitude in order to work collaboratively with the design team, the supply chain and the client to successfully deliver the project.



Example Design Detail Kalzip and Sika

Wall construction to achieve minimum U-value of 0.20 W/m² K

Ensure that steelwork components are welded with insulation to reduce cold bridge.
Steel fabrication results are dependent on components being as shown

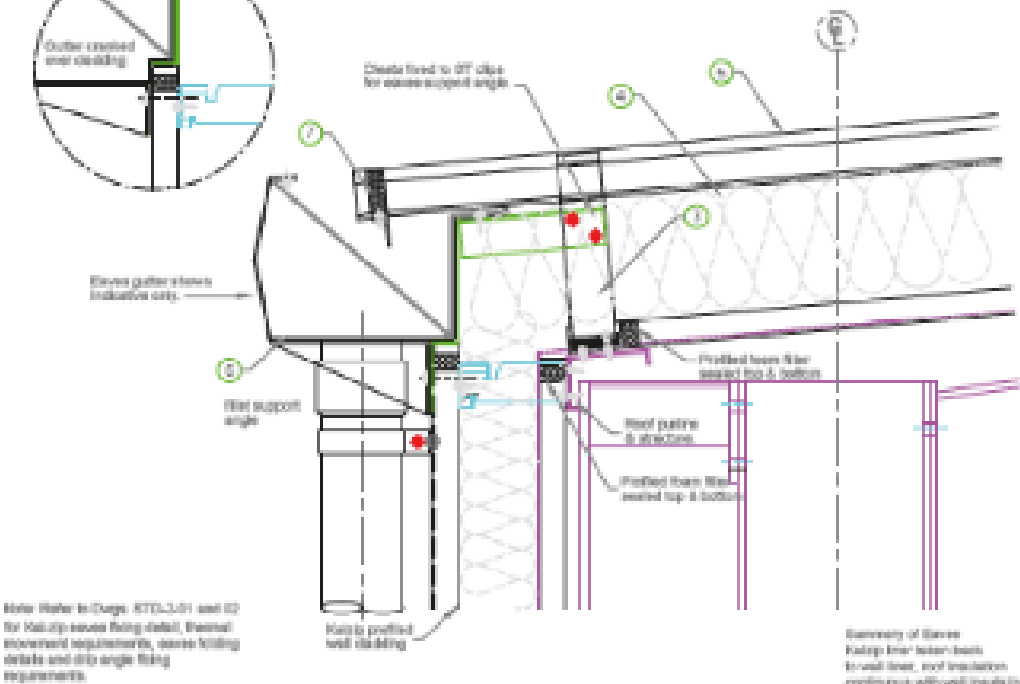
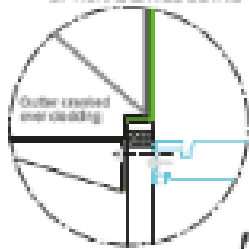


Wall construction to achieve minimum U-value of 0.20 W/m² K

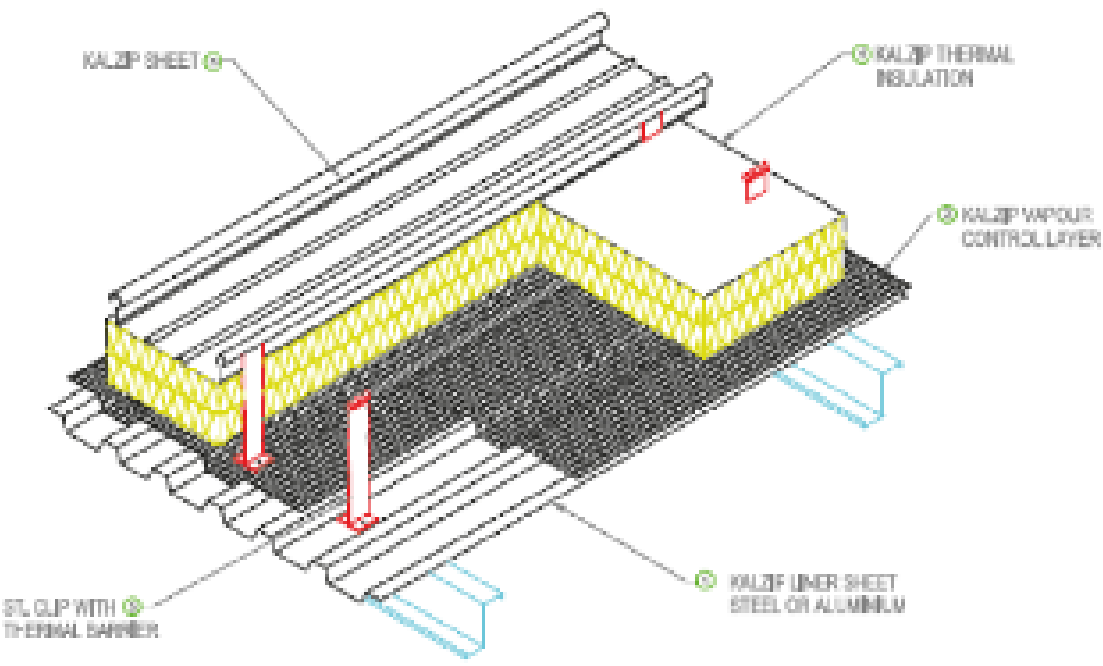
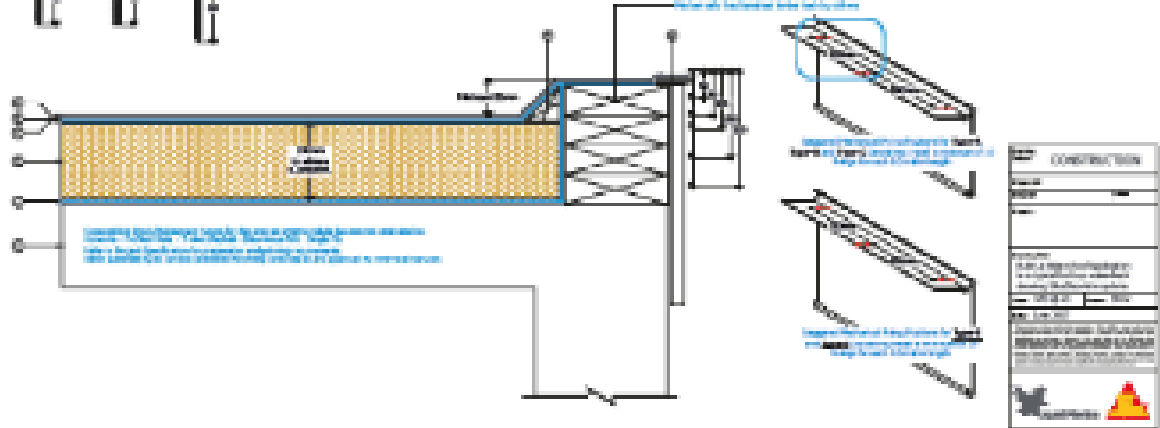
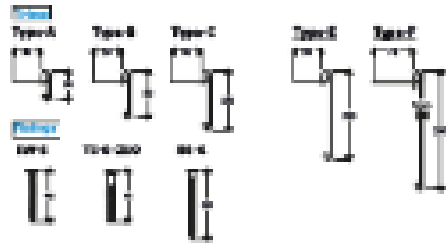
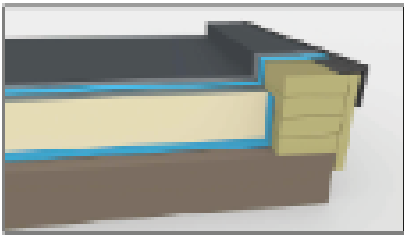
Steel fabrication results are dependent on components being as shown

THE MAIN AREAS OF POTENTIAL AIR LEAKAGE ARE AT JUNCTION DETAILS. CONSIDERATION SHOULD BE GIVEN TO COMPONENT JUNCTIONS TO ACHIEVE AIR(TIGHTNESS)

OPTIONAL DRAINED DETAIL



- 10. Heavy duty aluminium roof panels attached to steel structural frame roof system
- 11. High strength steel or timber joists attached to steel or timber structure with the roof sheeting system
- 12. Insulation board or profile attached to steel or timber structure with the roof sheeting system
- 13. High strength steel or timber joists attached to steel or timber structure with the roof sheeting system
- 14. High strength steel or timber joists attached to steel or timber structure with the roof sheeting system
- 15. High strength steel or timber joists attached to steel or timber structure with the roof sheeting system
- 16. High strength steel or timber joists attached to steel or timber structure with the roof sheeting system
- 17. High strength steel or timber joists attached to steel or timber structure with the roof sheeting system
- 18. High strength steel or timber joists attached to steel or timber structure with the roof sheeting system
- 19. High strength steel or timber joists attached to steel or timber structure with the roof sheeting system
- 20. High strength steel or timber joists attached to steel or timber structure with the roof sheeting system



KALZIP ALUMINIUM ROOFING SYSTEM TO ACHIEVE MINIMUM U VALUE OF 0.25 W/m²K

Contact Us

The content of this brochure is only a sample of the services the Shepley Roofing and Cladding team can offer. If you wish to discuss any of the services contained within or alternatively require more information do not hesitate to contact our team as they would be too happy to deal with your enquiry.

General and Technical Enquiries

Mitch Dunne

tel: 019467 88833

mob: 07834 558 802

email: mitch.dunne@shepley.vhe.co.uk

Garth Seed

tel: 019467 77987

mob: 07724 662 605

email: garth.seed@shepley.vhe.co.uk

Part of the Shepley Group



Shepley Engineers Ltd

Shepley Roofing and Cladding Services
Old Town Hall
Duke Street
Whitehaven
Cumbria
CA28 7NU

engineers@shepley.vhe.co.uk
www.shepleyengineers.co.uk

01946 599022



@ShepleysUK



Shepley Engineers Ltd

The logo for 'renew', featuring the word 'renew' in a lowercase, blue, sans-serif font. Above the letter 'e' is a stylized sunburst graphic with multiple rays extending outwards.

A wholly owned subsidiary of Renew Holdings Plc

