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# WESTHILL COMMUNITY CHURCH

PROJECT: **CHURCH**

LOCATION: **ABERDEENSHIRE**

DESIGN: **MCLEAN ARCHITECTS LTD**

Westhill Community Church in Aberdeenshire was a new, green field project. Its highly contemporary style was designed for maximum functionality and to encourage use by the wider community.

33 FAKRO roof windows were discreetly positioned to flood the stage with natural light as well as illuminate a cluster of buildings which form the sanctuary, low rise foyer and adjoining offices.

Products included electrically operated FTP-V U3 Electro windows with a rain sensor, EFW flat roof windows with combination flashings, FAKSV17 Smoke Vent windows, wall switches and remotes.

Project Architect Mark Dysart of McLean Architects Ltd commented, "We specified FAKRO products because of the excellent technical support and the option to specify matching zinc flashings. These were crucial to achieve a fully co-ordinated appearance".





# ZSL LONDON ZOO

PROJECT: **INDOOR ANIMAL HOUSE**

LOCATION: **LONDON**

DESIGN: **WHARMBY KOZDON**

The ZSL London 'Giants of the Galapagos' exhibit is an excellent example of the value of roof windows in combination. Natural daylight was key to the creation of an environment reminiscent of the giant tortoises' natural habitat. The building has a mono-pitch roof in which architects Wharmby Kozdon used 18 FAKRO FTP-V centre pivot windows in a series of combinations to account for 40% of the span. The remainder of the low level, highly insulated structure is covered by a green roof to minimise energy consumption for both heating and cooling.

Budget and build time were limited as architect Mike Kozdon explained. "We needed a roof which would provide large areas of evenly distributed natural light. The short construction programme did not allow for extended lead-in periods associated with bespoke products, so we looked for high performance roof windows which could be used in a variety of combinations. They also needed to open fully in hot weather, provide trickle ventilation during winter and be suitable for integration within a biodiverse green roof. The FAKRO FTP-V provided the solution to all these problems and satisfied all of our requirements".

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# OCKENDON ACADEMY

PROJECT: **SCHOOL**

LOCATION: **ESSEX**

DESIGN: **ARCHITECT SIMON LAWRENCE, CABINCO LTD**

Two new timber buildings at Ockendon Academy have seen use of 53 FAKRO Electro roof windows with blinds. 16 were installed in the 7-classroom English block while 37 were used on the larger 'Ockendon Studio School', a self-contained 6th form facility for year 12 and 13 students. Cabinco, which specialises in eco building, and the construction of sustainable school buildings in particular, was main contractor for both projects.

Designs focussed heavily on the provision of large, open plan teaching areas. As a result, it was particularly important to maximise availability of natural light and with both buildings having low pitch roofs the roof windows play a crucial role.

Simon Lawrence, Director of Cabinco explained their reasons for using FAKRO windows. "Selection was based on a number of factors in addition to local availability. We had specific technical issues to address including a requirement for wall operated electrical operation throughout. We received the support of FAKRO's technical team to produce flashing details specific to the roof construction. Based on past dealings, we were already aware that the windows were of a high quality and had confidence that such requirements would be met without difficulty".





# TAIGH LEARAIGE

PROJECT: **LOW ROOFLINE INSTALLATION**

LOCATION: **STANLEY, PERTSHIRE**

DESIGN: **DUALCHAS ARCHITECTS**

Dualchas Architects' design of Taigh Learaige in Stanley, Perthshire shows the benefit of being able to install FAKRO roof windows at varying depths.

The visual aesthetic is greatly enhanced by their low profile in a structure which takes the timber from the roof into the walls with no visible rainwater goods. Eight non-vented, triple-glazed FTV U5 centre pivot windows were used with thermal combination flashings and XDP fitted underfelt collars around each window.

Architect Alasdair Stephen commented, "The FAKRO windows were used because of the wide range of sizes and the scope the company offers for project-specific customisation. They are also great value compared to other glazing systems".







# LOG CABIN HOMES IN EAGLE BRAE

PROJECT: **HOLIDAY HOMES**

LOCATION: **SCOTTISH HIGHLANDS**

DESIGN: **ARCHITECT STEVEN CAUDRY,  
MAXWELL & CO OF INVERNESS**

FAKRO supplied centre pivot and top hung / pivot roof windows for luxury self-catering log cabins at Eagle Brae in the Highlands of Scotland.

Windows were installed individually and in horizontal combinations. A key element of the project was the requirement for green roofing using wild grasses. The roof windows were fitted into waterproofed timber boxes raised above the vegetation.



Bespoke flashings to suit the unique requirements of the project were also specified. The houses were constructed with red Canadian cedar logs.



Project architect Steven Caudry commented: "We appreciated FAKRO's flexibility to meet our requirements, allowing a far neater end result than could have been achieved using standard flashings".

31 FAKRO roof windows were installed in log cabin homes, including: FTP-V pivot windows, FPP-V top hung and pivot windows





# ABERNETHY SIPS HOUSE

PROJECT: **BESPOKE SIPS HOUSE DESIGN**

LOCATION: **ABERNETHY, PERTSHIRE**

DESIGN: **HEB HOMES**

FPP-V U3 top hung and pivot and FTP-V U3 centre pivot roof win-dows have been used in Heb Homes design of a SIPS home in Abernethy, Perthshire.

Alisdair Stephen, Director of Heb Homes commented, "FAKRO windows were chosen for their quality but also because they offered superior security".

Windows were fitted with external combination and internal airtight flashings, underfelt collars and internal support trims and construction was undertaken by a Heb Homes affiliated contractor. The new home owners have scope to switch window opening on the FPP-V from centre pivot to top hung simply by use of a switch in the frame.





# BODNANT WELSH FOOD CENTRE

PROJECT: **RESTAURANT / BAR**

LOCATION: **CONWY, NORTH WALES**

DESIGN & BUILD: **CAPITA SYMONDS**

Traditional and contemporary styles have come together in the conversion of historic farm buildings at Furnace farm on the National Trust Bodnant Estate in the Conwy Valley. 18 FAKRO FTP-V U5 triple-glazed roof windows were installed in combination in natural slate roofs on the £6.5m Bwyd Cymru Welsh Food Centre.

Overlooking the Conwy Estuary, the 18th century barns have been restored to provide a farmshop, tea room, restaurant, cookery school, the Welsh National Beekeeping Centre and overnight accommodation. Electro and manually operated windows provide a distinctive, contemporary feature of the new restaurant bar, contrasting with exposed original timbers.

Construction of the centre has been backed with £3.3m from the Welsh Government and European Regional Development Fund, Targeted Match Fund and a Processing and Marketing Grant as part of the Rural Development Plan. It was opened by HRH the Prince of Wales and the Duchess of Cambridge.

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# THE GREEN UNIT®

PROJECT: **MODULAR BUILDING TO PASSIVHAUS STANDARDS**

LOCATION: **WALLINGFORD, OXFORDSHIRE**

DESIGN: **THE GREEN UNIT**

The Green Unit® is a modular, single storey Passivhaus design for a variety of sectors and the result of over three years development.

The prefabricated buildings are carbon neutral, FAKRO FTP U5 non-vented, triple-glazed windows with a U-value of 0.97W/m<sup>2</sup>K having been used individually and in L-shaped combination. The latter incorporates an additional lower BDR tilt and turn window to extend the glazing area into the wall.

The FTP U5 windows have been installed in a green roof, those with an easterly aspect also having AMZ external awning blinds to offset solar gain.

The Green Unit's Jonathan Finnerty commented, "The requirement to be carbon neutral meant that procurement for every element was considered in great depth. FAKRO worked with us to achieve what we required and gave us highly valuable technical advice."



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# LOCH ARTHUR CREAMERY AND FARM SHOP

PROJECT: **RETAIL UNIT**

LOCATION: **DUMFRIESSHIRE, SCOTLAND**

DESIGN: **SIMON WINSTANLEY ARCHITECTS**

**IN COLLABORATION WITH CAMPHILL ARCHITECTS**



21 FAKRO roof windows have been used in a series of low pitch zinc roofs at Loch Arthur, a working community of more than 70 people. Its Farm Shop, designed by Simon Winstanley Architects in collaboration with Denis Chanarin of Camphill Architects, forms part of a series of low wings which are attached to a higher barn-like centre. They echo the appearance of traditional farm buildings with timber-clad walls and zinc standing seam roofs.

The detailed product selection process resulted in specification of FAKRO due to the use of FSC® accredited timber. Windows used include fixed closed, electrically and manually operated windows with bespoke flashings to match the pre-weathered mid-grey Quartz-Zinc.

Simon Winstanley commented, "FAKRO roof windows met all our requirements for both fixed closed and electrical operation. We tasked them with providing suitable flashings for integration within the standing seam zinc roof and the end result fully met our requirements".





# HILLCREST

PROJECT: **SELF-BUILD**

LOCATION: **EDGE, CHESHIRE**

DESIGN: **SIMON KETTLE**

'Hillcrest', a self-build in rural Cheshire is an energy-efficient oak frame design of conventional construction in which thermal performance is maximised using a passive stack ventilation system. The owner, Simon Kettle is a Chartered Building Surveyor and Energy Assessor who has also set up his own house design company.

In terms of product selection, performance, sustainability and suitability for the surroundings were critical factors. A variety of FAKRO roof windows were used to maximise natural light, with conservation style used to the front aspect to enhance the traditional cottage style.

The ridge unit has eight electrically operated white, polyurethane-coated pine windows with self-cleaning glass used in combination. Each has an external rain sensor. FAKRO worked with Mr Kettle to ensure that specific aspects of technical performance for the ridge flashings were achieved, design drawings being exchanged with the company's R&D team in Poland.

The passive ventilation aspects were extremely challenging due to an absence of established design information or standardised procedures. FAKRO therefore played a key role in the fulfilment of bespoke design requirements. The house combines a passive solar/thermal mass design with passive ventilation, super insulation and airtightness.



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# BESPOKE SOLUTIONS IN THE MODERN DESIGN



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