



NORTHLIGHT™ STUDIOS



Arts Institute Bournemouth – Bespoke IT Pod



Bournemouth Art Building – internal gallery space

Bournemouth Art Studio 2





*Conport Northlight Studio 14 x 30m
One of four linked rooms at the new Silverdale IT Centre, Runshaw College, Leyland*



Bournemouth Arts - Studio Space



1. INTRODUCTION

The Conport Northlight™ Studio was designed in collaboration with David Peters, Architect of the London Institute (now the University of the Arts) and Prof Mike Davies of Manchester University. The brief was to produce an economical pre-engineered structure with maximum access to north light for art students. Since then it has become clear that access to glare-free natural light has a much broader appeal, for example for IT students and general classroom use.

Fast

Northlight™ Studios are fully engineered for rapid assembly during the school holidays

Economical

We use the latest factory technology to produce permanent Northlight™ Studios for the price of temporary cabin type structures

Built to last

Northlight™ Studios have a lifespan of 25 years or more, but they can also be demounted and moved from site to site if required.

Secure

Because the windows are all at high level there are no security weaknesses in the walls, and valuable equipment is kept away from prying eyes.

Flexible

Northlight™ Studios can be subdivided with mobile or fixed partitions without affecting access to natural light.



Excellent for exhibitions

No side windows mean that all walls can be used for exhibition space. Internal partitions are automatically lit from above on both sides

Intelligent for IT

Northern light keeps the sun off computer screens and improves conditions for screen gazers

Solar Northlights

Northlight™ roofs are ideal for Solar panels because they face South - a 9 x 18 Conport Solar Northlight™ can generate an average of 9kW in Southern UK and save over 100 tonnes of CO2 over its lifetime.

Top quality Classrooms

Studies in America have shown that “daylighting” in classrooms improves learning rates by **26% in a year!** (Ask us for details of a huge study)

Education clients who have installed Northlights™

- Camberwell School of Art
- Chelsea School of Art and Design (2)
- Reigate College
- The Arts Institute at Bournemouth (5)
- Runshaw College (IT suite)
- Tameside College (Brickwork construction classroom)

Conport Track record

We have built pre-engineered buildings in over 40 countries since 1965. We are currently working with the UN in Sudan and elsewhere and customers include the British Government, US Air force, BP, Exxon and Oxfam. Further details are available on our websites www.conport.co.uk and www.conport.com



2. BUILDING DIMENSIONS

<u>Building Model</u>	<u>A930</u>	<u>A700</u>
Building Span	9.3m modules	7.0m modules
Building Length	3m modules	3m modules
External Ridge Height	4.8m	4.8m
Eaves Height	3.2m	3.2m
Roof pitch	27 deg	27 deg

Non standard spans are available on request



3. SPECIFICATIONS

- Design

Design of the building is in accordance with “European recommendations for the stressed skin design of steel buildings”.

- Steelwork specifications

Steel main frame hot rolled section grade 43a

Secondary steel frame cold rolled galvanised steel sections

- Steelwork includes

Hot rolled veerendahl trusses and supporting stanchions @ 3m c/c

Cold formed sheeting rails holding down bolts and erection bolts.

All hot rolled steel members shall be shot blasted to standard sa 2.5 at the works prior to fabrication.

After fabrication one coat of good quality zinc phosphate primer will be applied by airless spray to 75 microns nominal thickness.

All cold formed members shall be manufactured from pre galvanized strips.

Bolts will be anchor bolts and shall be black and complete with anchor plates nuts and washers. Erection bolts shall be zinc plated



- Cladding sheet specifications

External sheets 0.7mm galvanised steel colour coated with 200µ plastisol finish with a life to first maintenance of up to 25 years. External flashing and sheet colour to be goosewing grey

Internal lining sheets galvanised steel with white lining enamel wash coat

All cladding materials from "galvatite" hot dipped zinc coated steel. The substrate is of grade fe e280g commercial quality mild steel with minimum yield stress of 280 n/mm²

Galvanized coating is to a minimum thickness of 275g/m² with a conventional spangle finish.

The steel substrate fully complies with the provisions of the British Standard BSEN 10147:1992

All steel is profiled rolled to comply with the provisions of BS 5427:1975 in respect of materials, design, handling, working performance and storage.

- Insulation

Roof and walls: double steel skin with 160mm fibreglass, with "u" value <0.26 watts per m² deg. K + rubber strips to eliminate cold bridging.

- Internal lining

Two staggered layers of firecheck 12.5mm plasterboard are fitted up to the eaves this gives 60 minutes fire protection to external wall.

- Concrete foundations

Contractor specification:

Please allow for providing 150mm minimum reinforced concrete slab with downstand perimeter beam under conport structures wall construction all to engineers details and to achieve insulation 0.25 w/m²k all to the approval and requirements of the building control department/regulations.



- Slab

Slab dimension: span +110mm; length +190mm.
Slab tolerances +/- 10mm in overall length and width.
Level tolerance +/- 2mm per 1m.
All four corners to lie in the same plane +/- 2.5mm.

- Floor

There are two standard options for flooring:

Painted floor slab

Timber floor with vinyl tiles and plastic skirting.

- Drainage

Surface water drainage to discharge into uPVC hoppers and 75mm uPVC down pipes at each valley point, this will then discharge into drainage supplied by clients site drainage.

- Surrounding site works

All new footpaths and concrete hard stand paving to be provided by client.

All ramping and handrails to be provided by client

- Doors

Doors to be insulated steel double hinged double doors complete with furniture and fitted with an approved type of panic bolts.

Door opening to be 1828mm for disabled access. Doors to have a minimum 800mm for one leaf with glazing 800mm x 1500mm for visibility. "U" value of doors to be <2 w/m² deg k

- Windows

Fixed light double glazed uPVC windows with 6 top hung opening casements to each bay. "U" value of windows to be <2 w/m² deg k



- Partitions

To be agreed with client

- Power, light & it cabling

To be agreed with client

- Ventilation.

Four opening windows per bay.
All windows factory fitted wit trickle vents.

- Heating/air conditioning

To be agreed with client

- Fire alarm and security alarm

To be agreed with client





4. PERFORMANCE DATA

V-Span and Northlight Studio buildings have been designed according to calculations by Professor J M Davies of Manchester University, copies of which are available from our Technical Department.

Northlight™ Studios have been designed to comply fully with the loadings required under BS6399: Part3: 1988 and British Standard Code of Practice CP3 Chapter V Part 1:1975 and Chapter V Part 2:1972 in respect of imposed roof loads other than wind loads.

In 1972 general terms the above standards require a maximum safe applied load of 0.75 kN/m² inclusive of snow loads, services loads, intermittent access loads and the imposed weight of any lining or insulation system provided that this does not exceed 0.15kN/m².

