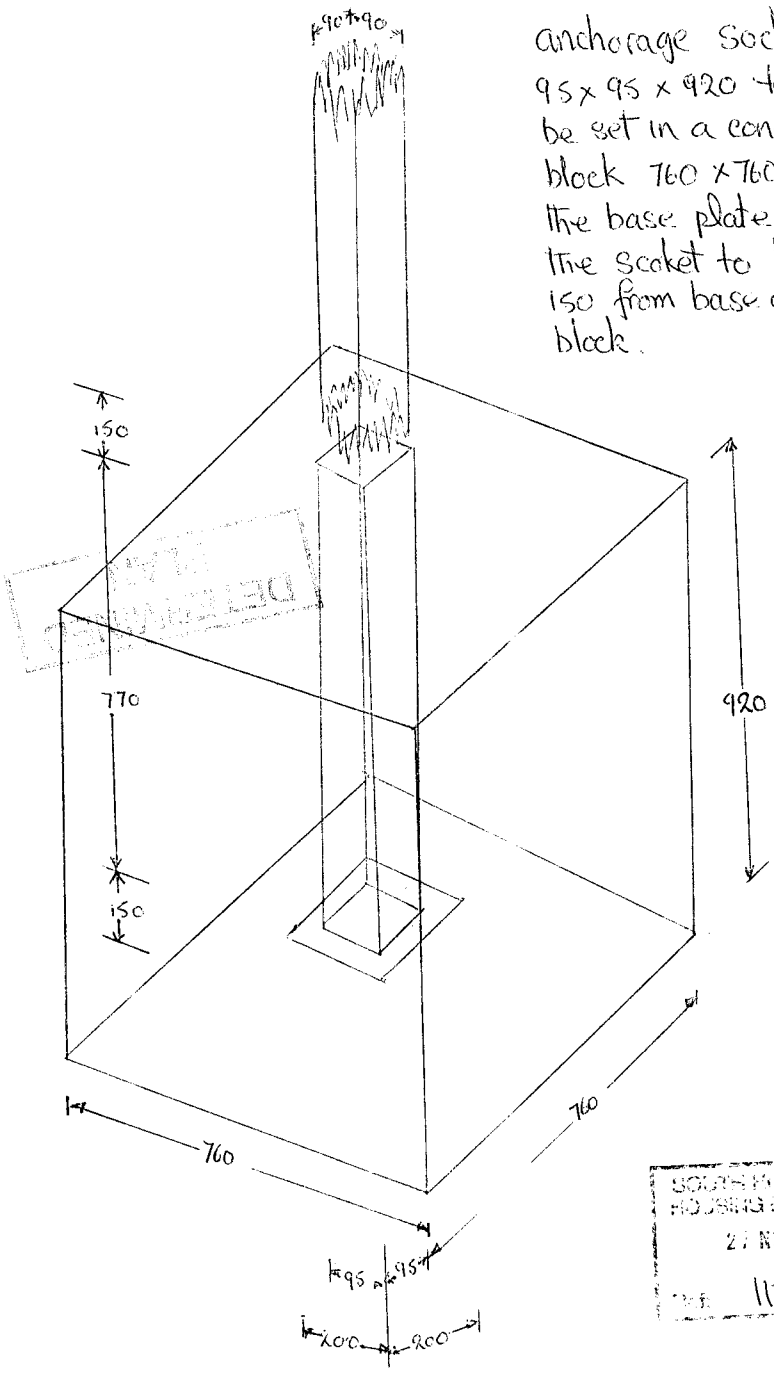
anchorage Socket
95 x 95 x 920 to
be set in a concrete
block 760 x 760 x 920
the base plate of
the socket to be
150 from base of
block.




SOUTH RUTLAND DC
HOUSING & PLANNING
27 NOV 1998
1177/98

BIRCHGROVE GARDEN CENTRE

SCALE 1·200



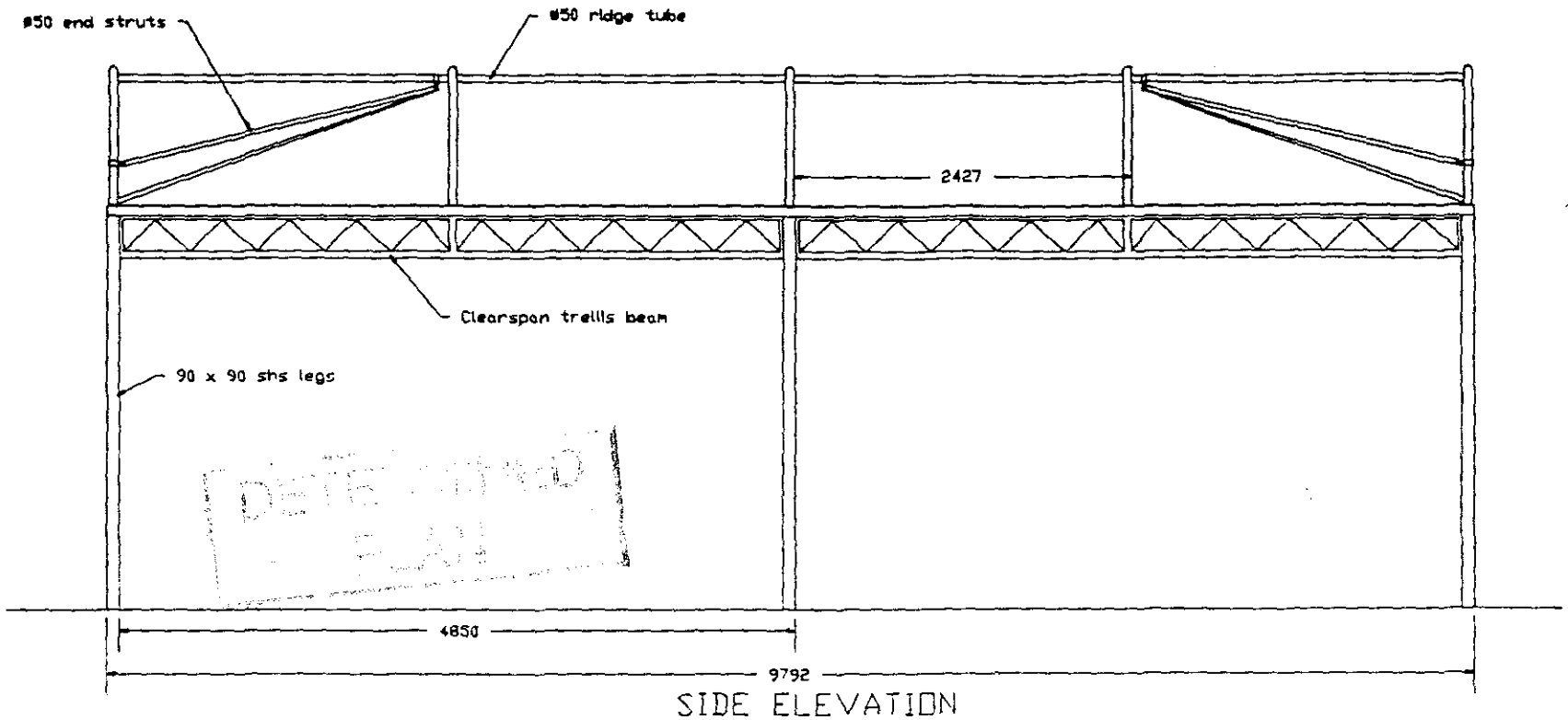

BLUE - EXISTING
RED - PROPOSED NEW
GREEN EXITS + ENTRANCES INTO PROPOSED NEW

SOUTH HOLLAND DC
HOUSING & PLANNING
27 NOV 1998
Doc 1177/98

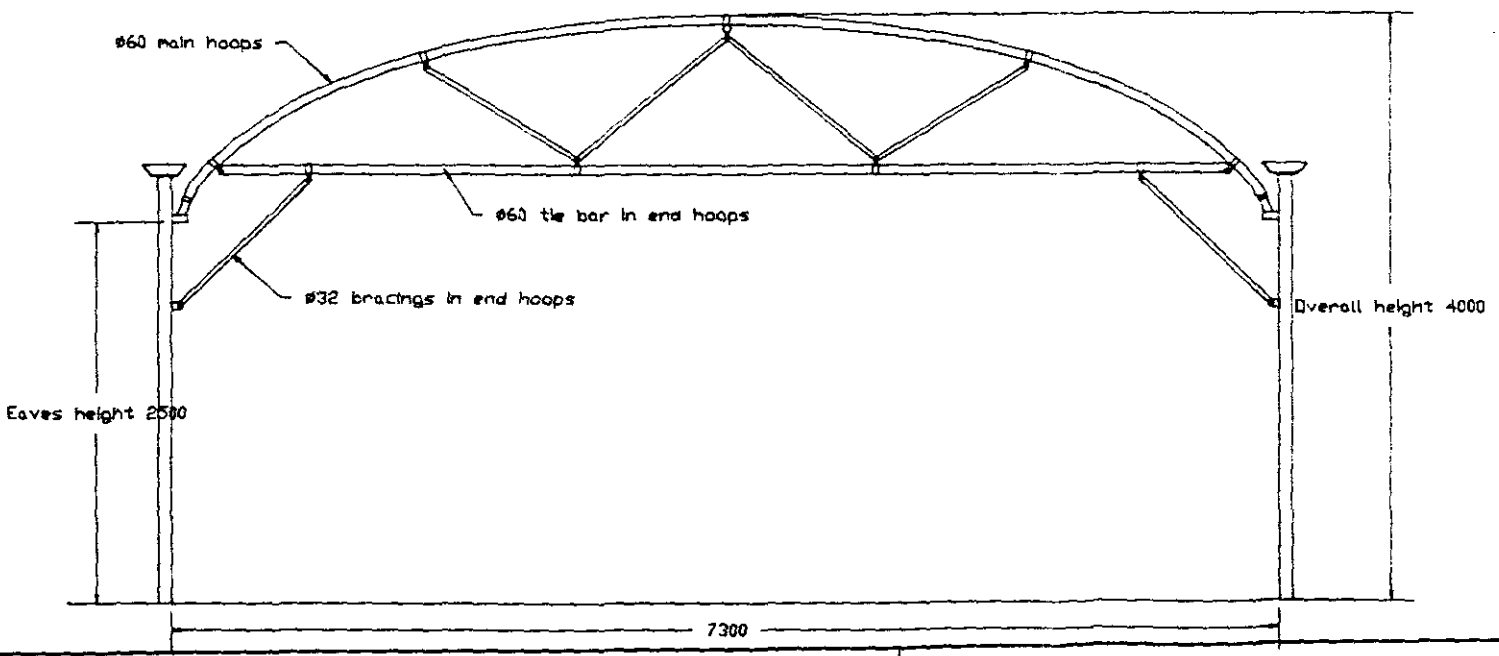
IF IN DOUBT ASK

FIRST ANGLE PROJECTION

DO NOT SCALE




SIDE ELEVATION




END ELEVATION

SOUTH RIBBLE BC
HOUSING & PLANNING
27 NOV 1998
Ref: 1177/98

| | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT COPIED OR COMMUNICATED TO OTHER PERSONS OR COMPANIES WITHOUT THE WRITTEN CONSENT OF – L.B.S. POLYTHENE...

BS GROUP

**NORTHERN POLYTUNNELS**
CALDER MILL, GREEN ROAD.
COLNE, LANCS. TEL.01282 873120

**AQUAMATIC IRRIGATION**
COTTONTREE, COLNE
LANCASHIRE TEL.01282 873322

FABRICATED TOLERANCES
UNLESS SPECIFIED OTHERWISE

| | |
|---|---|
| UP TO 300mm | ± 1 mm |
| 300mm TO 1000mm | ± 2 mm |
| ABOVE 1000mm | ± 3 mm |

TOLERANCES ON ALL UNLIMITED MACHINED DIMENSIONS.

| | |
|---|---|
| UP TO 75mm | ± 0·3 |
| OVER 75mm UP TO 300mm | ± 0·4 |
| OVER 300mm UP TO 600mm | ± 0·5 |
| OVER 600mm | ± 0·8 |

| ISSUE No. | ALTERATION | DATE |
|---|---|---|
| 1 | AS FIRST DRAWN | |

ALL MACHINING $\sqrt{32}$ UNLESS OTHERWISE SPECIFIED

ALL WELDING TO BS. 5135

| | |
|---|---|
| DRAWN | S. ROBINSON |
| APPROVED | |

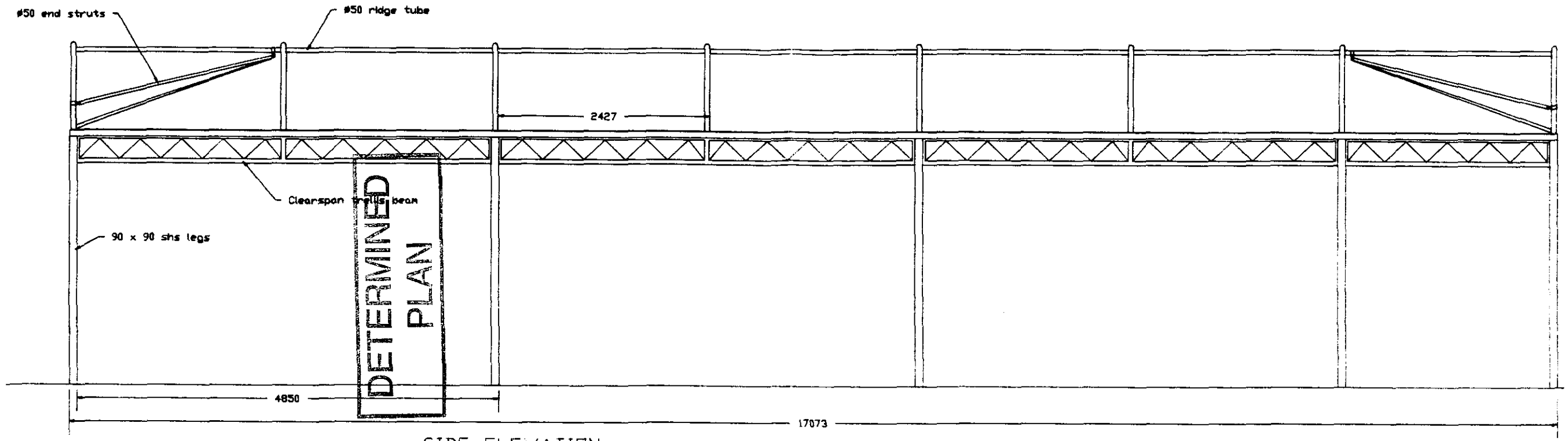
TITLE
CLEARSPAN TRELLIS CANOPY, 7.3m x 9.8m.
[illegible] GARDEN CENTRE.

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DRAWING NUMBER | P | L | 0 | 3 | 4 | 2 | | | | | | SHEET NUMBER | 1 | MATERIAL · SPECN. | |
| ISSUE NUMBER | | | | | | | | | | | | NUMBER OF SHEETS | 1 | MATERIAL | |

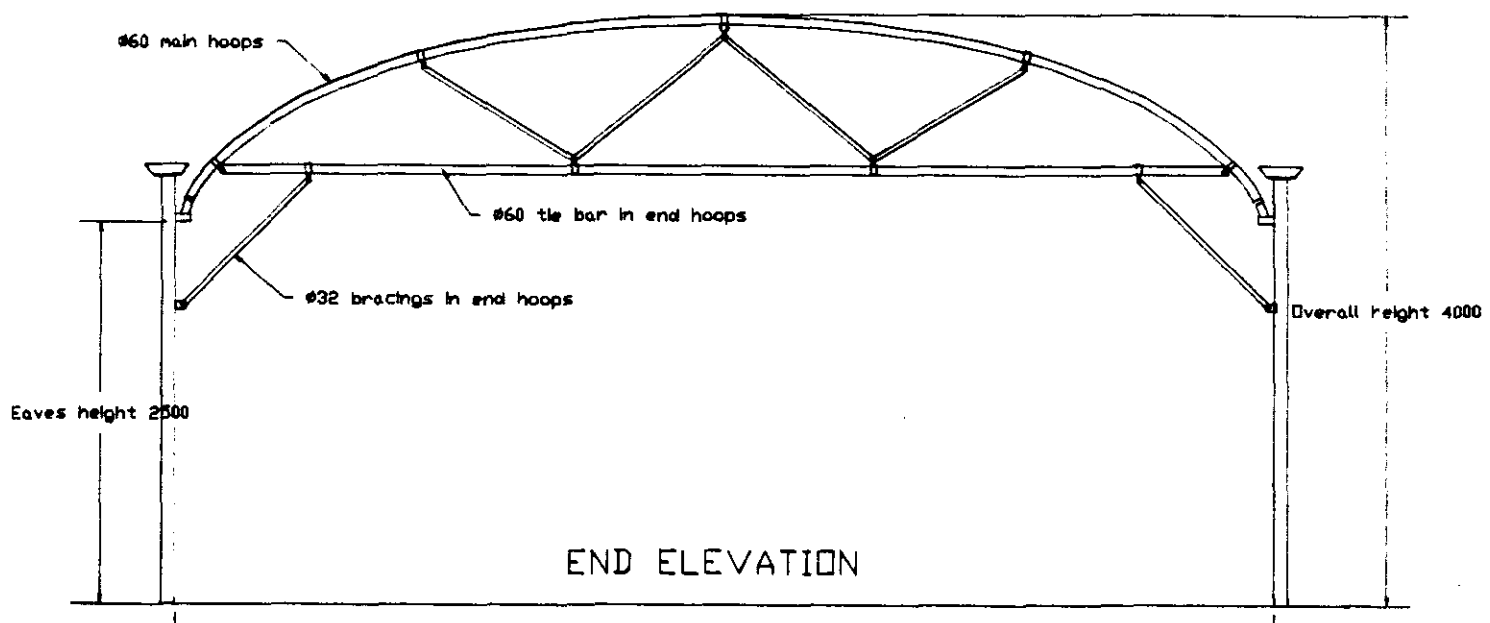
IF IN DOUBT ASK

FIRST ANGLE PROJECTION

DO NOT SCALE




SIDE ELEVATION




END ELEVATION

SOUTH HOLLAND DC
HOUSING & PLANNING
27 NOV 1998
Ref: 1177/98

| ISSUE No. | ALTERATION | DATE |
|---|---|---|
| 1 | AS FIRST DRAWN | |

ALL MACHINING $\frac{3.2}{\nabla}$ UNLESS OTHERWISE SPECIFIED

ALL WELDING TO BS. 5135

THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT COPIED OR COMMUNICATED TO OTHER PERSONS OR COMPANIES WITHOUT THE WRITTEN CONSENT OF – **L.B.S. POLYTHENE...**

BS GROUP

**NORTHERN POLYTUNNELS**
CALDER MILL, GREEN ROAD.
COLNE, LANCS. TEL.01282 873120
**AQUAMATIC IRRIGATION**
COTTONTREE, COLNE
LANCASHIRE TEL. 01282 873322

FABRICATED TOLERANCES UNLESS SPECIFIED OTHERWISE

| | |
|---|---|
| UP TO 300mm | ± 1 mm |
| 300mm TO 1000mm | ± 2 mm |
| ABOVE 1000mm | ± 3 mm |

TOLERANCES ON ALL UNLIMITED MACHINED DIMENSIONS.

| | | |
|---|---|---|
| | UP TO 75mm | ± 0·3 |
| OVER 75mm | UP TO 300mm | ± 0·4 |
| OVER 300mm | UP TO 600mm | ± 0·5 |
| OVER 600mm | | ± 0·8 |

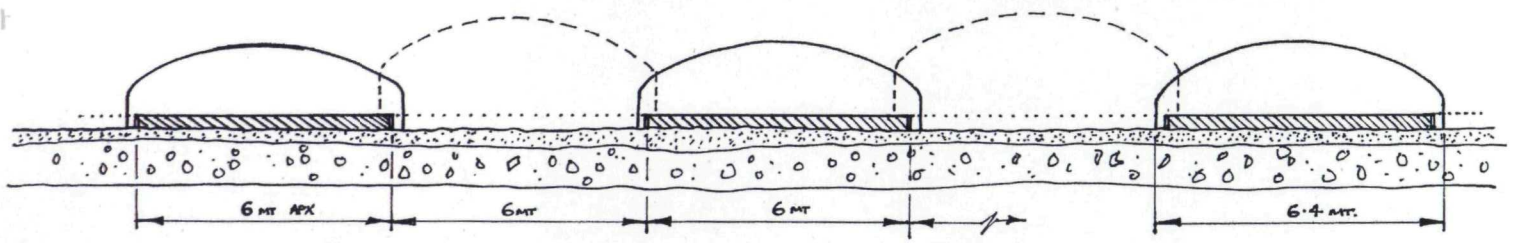
| | |
|---|---|
| DRAWN | S. ROBINSON |
| APPROVED | |
| DATE | 20-Oct-'98 |
| SCALE | 1:50 (A3) |

TITLE
CLEARSPAN TRELLIS CANOPY, 7.3m × 17m.
BIRCH GROVE GARDEN CENTRE

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DRAWING NUMBER | P | L | 0 | 3 | 4 | 3 | | | | | SHEET NUMBER | 1 | MATERIAL SPECN. | | |
| ISSUE NUMBER | | | | | | | | | | | NUMBER OF SHEETS | 1 | MATERIAL | | |





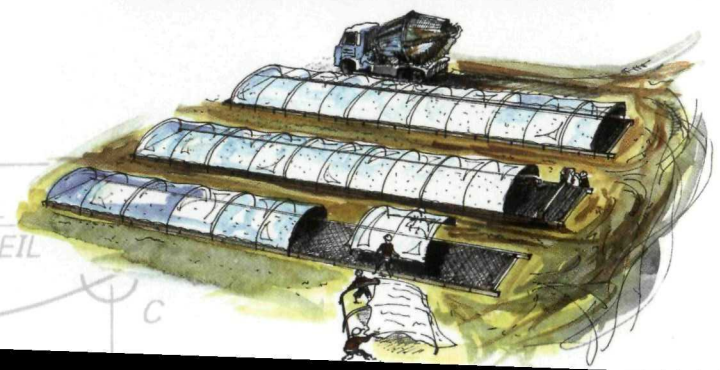



## Civil Engineering Structures

Work on laying concrete slabs can be very susceptible to adverse weather conditions. Heavy rain can ruin the surface of a freshly floated pour. Similarly, extremes in temperature will also affect the quality of the concrete. Delays can be very costly when deadlines or penalty clauses are part of the contract.



All our civil engineering covers basically cover the width of concrete for a period until the prevailing weather no longer poses a threat to the concretes finish. They can be wheeled or carried over the slab as the float is working along usually leaving the day's concrete fully covered. The low tunnel created can be used to keep the fresh concrete out of direct sunlight and keep frost away by putting a heater at one end and blowing air into the frames thus raising the temperature. Once the concrete has cured the areas between the slabs can be filled. They can then rest on top of the previous day's concrete (Fig. 1).



Northern Polytunnels manufacture several forms of Civil Engineering covers, to suit any application.
These can be supplied with various types of covers and structure strength.

**1. Carry on / off type**
**2. Wheeled structures to roll on / roll off**
**3. Larger structures which cover both people and equipment**

## Covers For Building Work

Building extensions or re-slating roofs can be delayed months due to inclement weather. Heavy rain and wind can be both damaging for footings, concrete and exposed ceilings, not to mention unpleasant to work in.

Adapted polytunnels have been used for various applications where builders are concerned. The most common are used for the following:

**Fig 1. Re-roofing existing properties**
**Fig 2. Half tunnels to encompass a proposed lean-to or barn conversion.**

These tend to be quickly erected inexpensive frameworks, as speed and budgets are tight.
The arch-shaped tubular framework with light gauge polythene is better for shedding rain than scaffolding with the heavier gauge damp proof membrane and does not form ponds of rain water.



Fig 2

**"taking the concept to completion"**

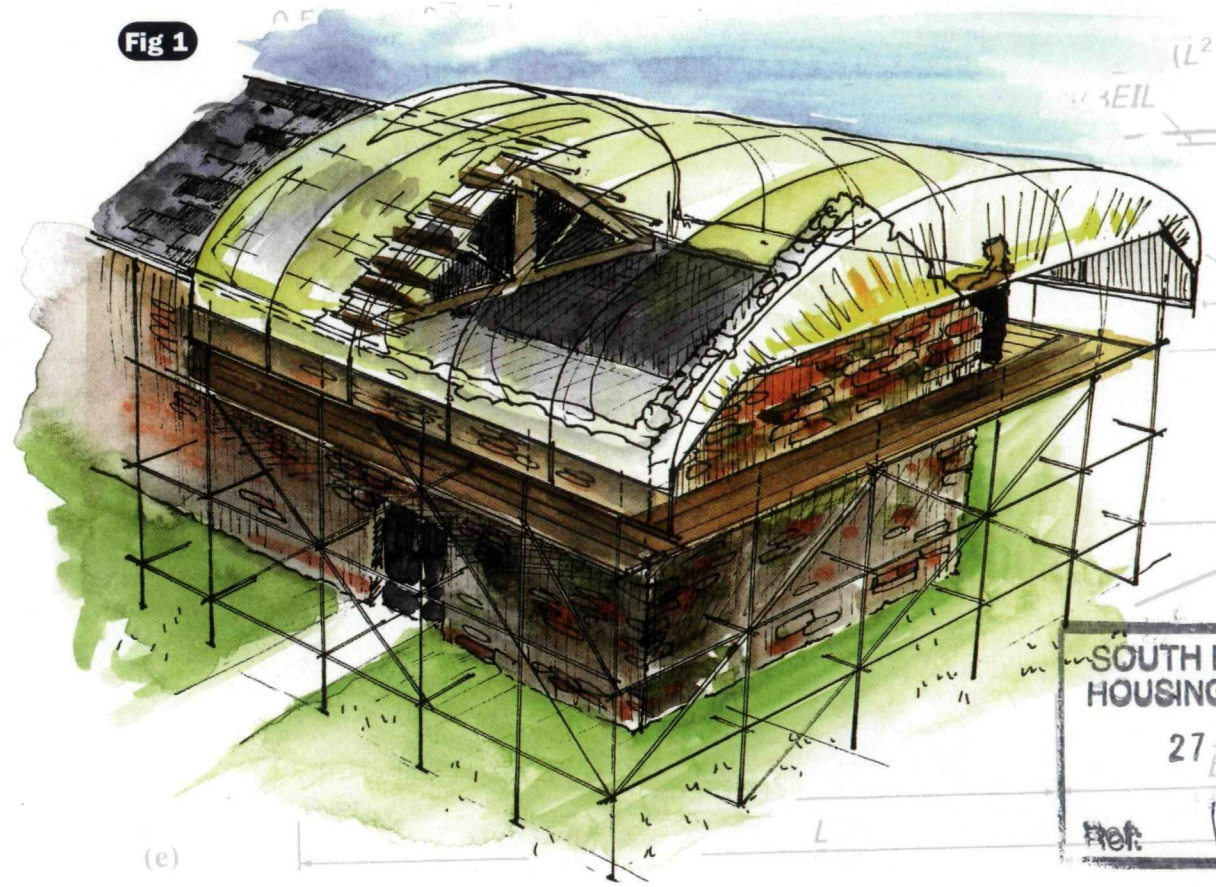


Fig 1

SOUTH HOLLAND DC
HOUSING & PLANNING
27 NOV 1998
Ref: 1177/98

# Canopies & Walkways

The predominant use of polytunnels is to grow plants. The light quality combined with ventilation and the general ease of construction has allowed thousands of growers to expand with little capital outlay.

Garden Centres need a similar product to cover and promote plant growth whilst also providing a covered area for customers to browse rather than fighting with the elements. For canopies the balance between shade and light is vital, anything too light makes plants bloom early and grow bushy, too shaded, the plants grow leggy and strive for light. For this reason portal framed structures or dark buildings are not ideal, nor do they provide a cheerful ambience whilst keeping the right climate for plants.

### Some examples of Canopies

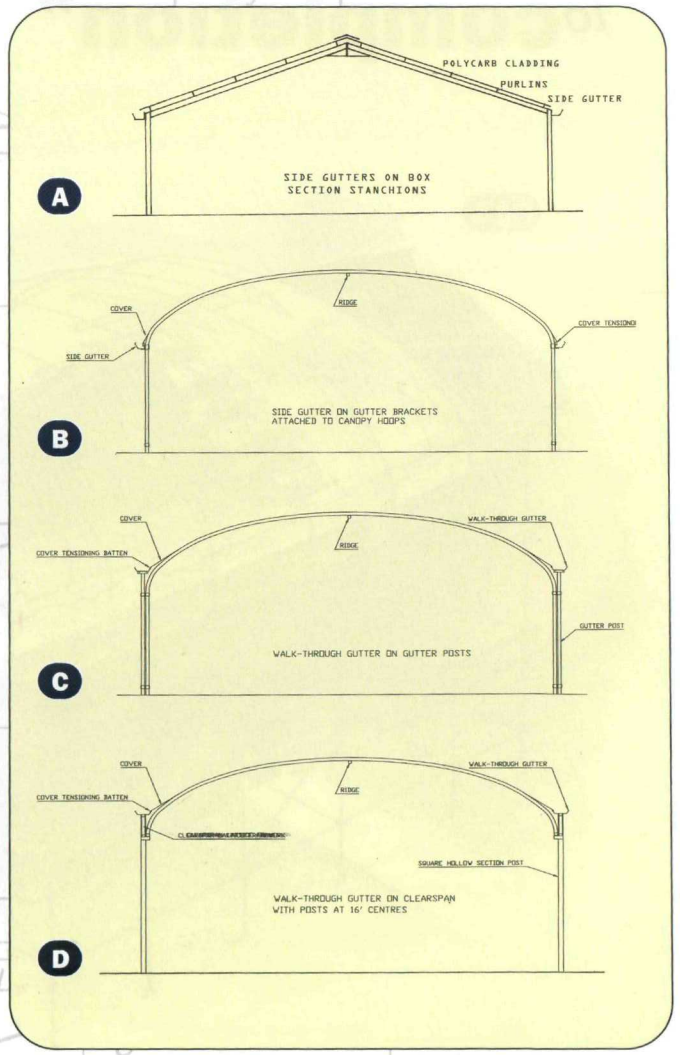
A. Polycarbonate clad structure, using a box section and structural steel framework. Probably powder coated or galvanised finish.

B. A simple arched structure, generally used for shelter over walkways. Clearance under the side mounted gutters for normal pedestrian access. Should be used as a self standing unit and the width limited to a maximum of 6 metres.

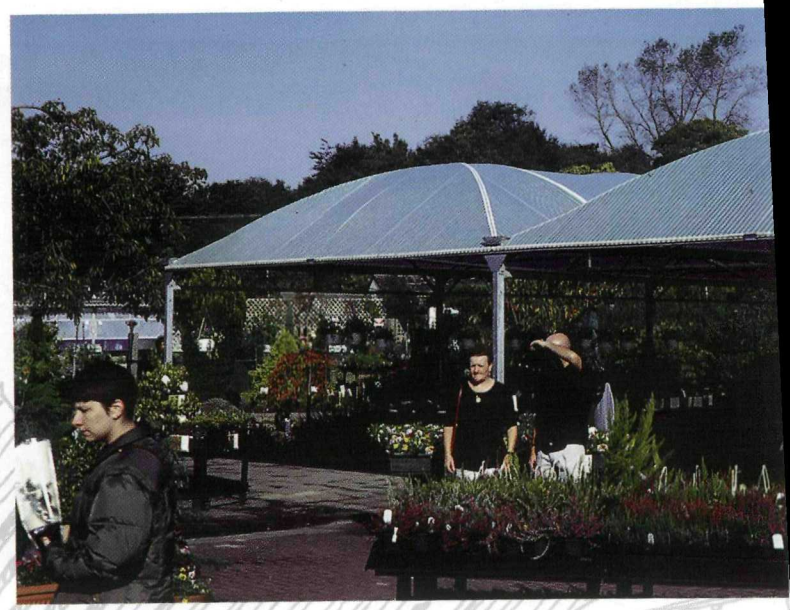
C. A high sided structure with wide gutters and additional posts for strength. The arch in this case is adjustable and can be tensioned into the sheet separately. This type of structure can go up to approximately 9 mt. wide, and can be fitted against an other structure whilst still allowing room to be sheeted.

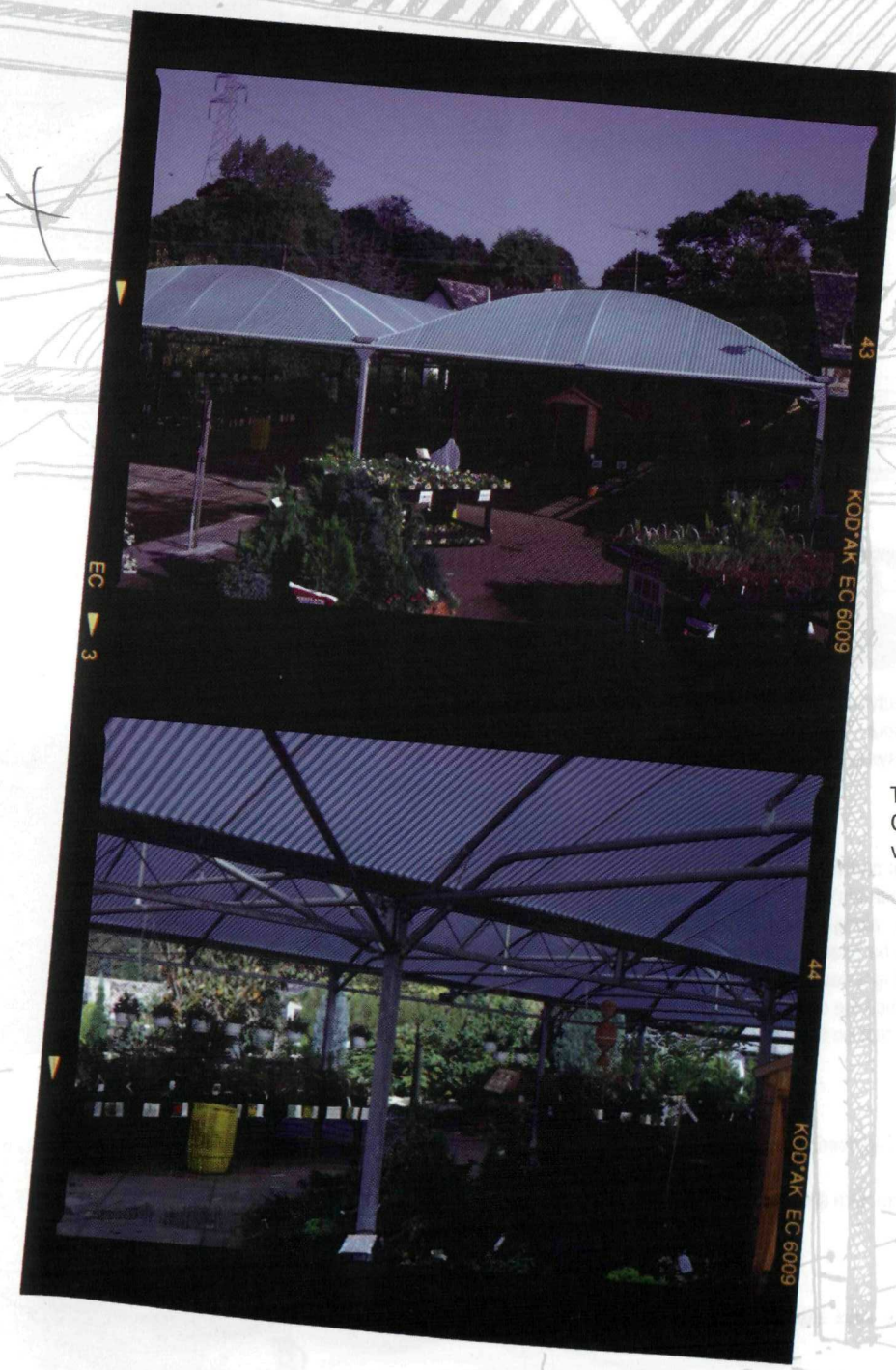
D. For larger structures (up to 10 mt wide). Galvanised legs fabricated with trellis beams form an extremely rigid framework with tubular arches used as the roof section incorporating tie bars and struts for extra strength.











To comply to the regulations of each local authority Reta
Canopies can become an extremely strong, colourful an
versatile asset to any business aiming to expand.


Northern Polytunnels

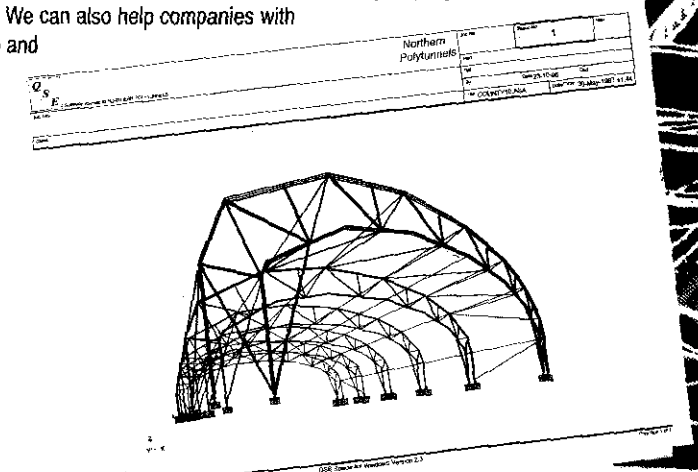
Sales
01282 870444

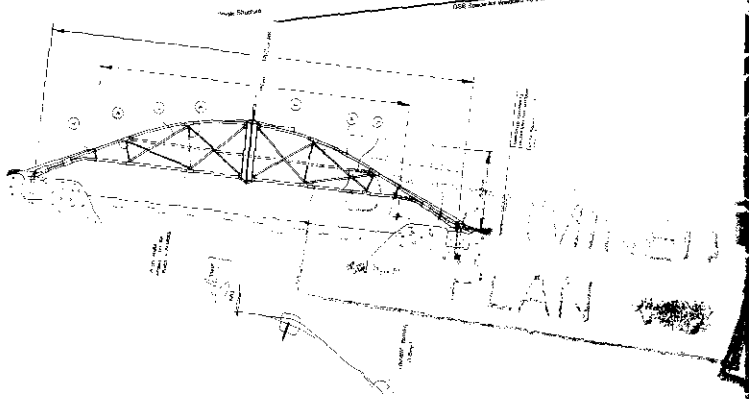
Fax
01282 871733

# Design Process

The design process on custom designed structures can be developed from standard components. A brief from a client, together with the planning and building requirements shape the design of a structure so as to allow the stylist to draw an artistic impression. If this drawing is agreeable a budget price can be worked out. After that, bills of materials and structural calculations, if needed, are undertaken and an official quotation is sent. This would usually include a construction price, unless a self-build structure was required.

Northern Polytunnels use Autocad and the latest structural analysis program to check their designs. We can also help companies with planning permission and building regulations for their structures.




# Planning & Building Regulations

Most permanent structures and some temporary structures now need some form of planning and building control.

You are advised to seek the advice of the relevant local planning authority (L.P.A.) as to whether planning permission is needed.

Northern Polytunnels can however advise on types of structures and materials available, to meet guidelines and regulations set down by an L.P.A.

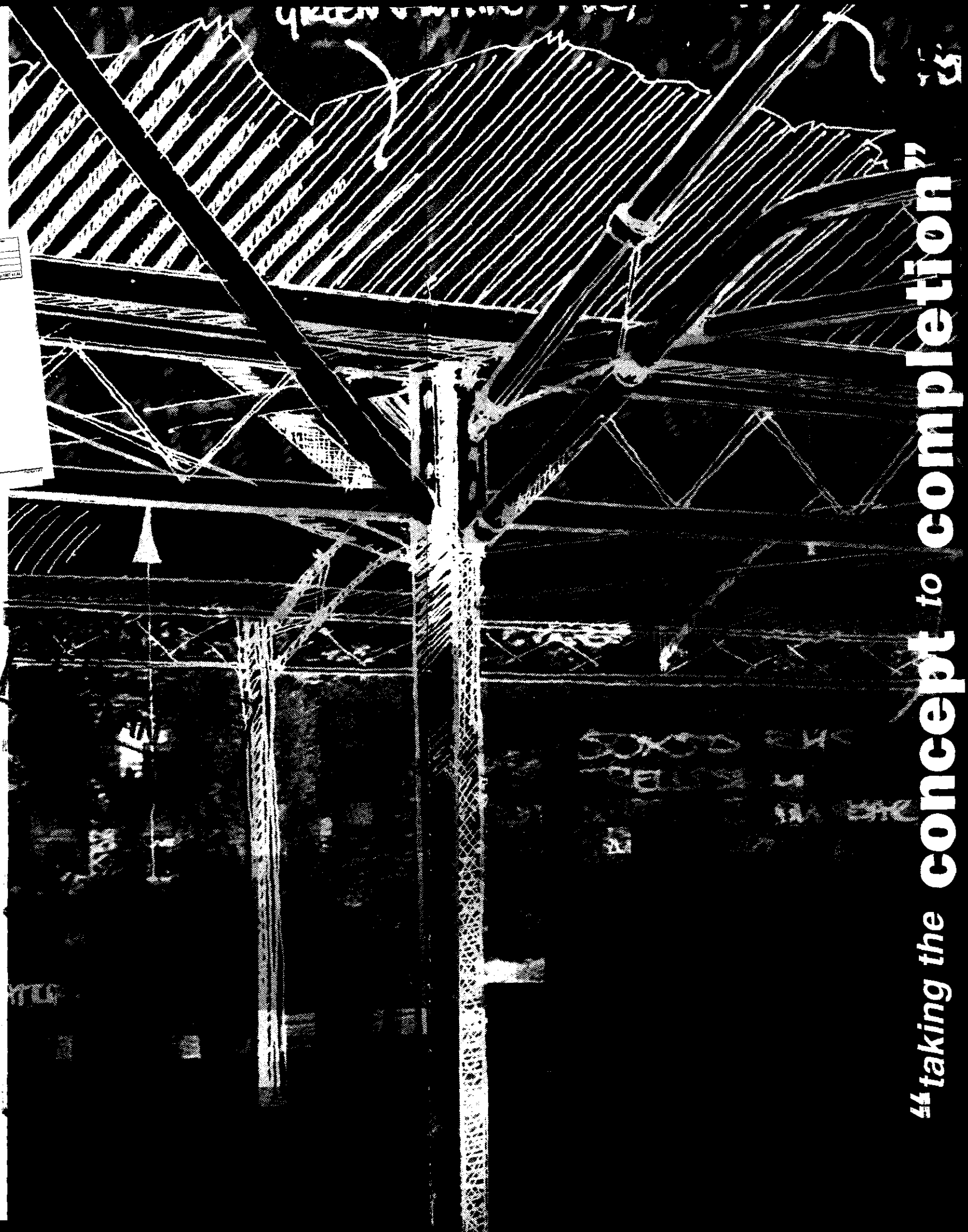
We can assist with submissions for planning/building regulations and provide any plans or structural calculations which may be needed by building control.

**Visit Northern Polytunnels on the internet:**
**http://www.lbs-group.co.uk**

Northern Polytunnels

Calder Mill, Green Road, Colne, Lancashire, BB8 8AL

Tel: 01282 870444 Fax: 01282 871733



*"taking the concept to completion"*

Northern Polytunnels

**Specialised Structures**

*Garden Centres*
*Civil Engineering*
*Workshelters*
*Walkways*