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# **Adhered System**

**CLIENT:** 

**Bugler Developments Ltd** 

**PROJECT:** 

59 Maygrove Road, London, NW6 2EE

**ROOF AREA:** 

159 m<sup>2</sup>

**SPECIFICATION** 

**REF No.:** 

DATE:

26<sup>th</sup> May 2010

# **Spectraplan Environmental Benefits**

Spectraplan TPE membranes are an exceptionally environmentally friendly product, containing no plasticisers, CFC's/HCFCs, heavy metals or other ozone depleting substances. Due to the purity of the product, when Spectraplan TPE roofing sheets reach the end of their long life span, they can be completely recycled into first generation synthetic materials (new roofing membranes).

### **Key Benefits**

- No plasticisers
- No heavy metals
- Does not leach
- No halogens such as Chlorine, Fluorine, Bromine
- Free of (H)CFC's
- 'A' Rating awarded in BRE 'Green Guide to Specification'
- No aggressive solvents required as a pre-weld preparation.

#### Spectraplan Membranes are manufactured in the UK by IKO PLC

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#### **PRELIMINARIES**

Structural decking to comply with the recommendations of BS 6229:2003 - Flat roofs with continuously supported coverings and be laid in accordance with relevant Codes of Practice.

Before commencement of works the contractor must ensure that all surfaces to receive the waterproofing system are suitable and fit for the purpose.

Works must comply with the requirements of the appropriate Health and Safety guidelines and any additional requirements of the Client.

All rainwater outlets, pipe inlets and openings to the building interior should be protected during periods of the roofing works. Liaise with the building occupier to ensure essential services are not disturbed or decommissioned unnecessarily.

All preliminary work including alterations to detail items must be complete and satisfactory.

Waterproofing should be installed in accordance with BS 8000: Part 4:1989 and SpectraRoof fixing instructions.

As the works proceed, night joints should be provided to seal the edges of the new roofing and ensure no water enters the building or damages the newly installed system.

To qualify for a Full IKO PLC guarantee, IKO PLC products and components must be used throughout.

Adequate protection must be afforded the newly installed Spectraplan installation against damage caused by following trades.

The roof deck is deemed structurally suitable to accept the loading of the new roofing system as well as all associated installation procedures. Suitable professional advice should be sought as required.

In accordance with accepted Codes of Practice all detail upstands, where ingress to the building interior could occur, should not be less than 150mm vertically from the finished level of the roofing system, including any timber decking, paving or loading coats. Any water ingress problems that are attributable to detail items that do not meet this requirement will be excluded from any guarantee or warranty offered or implied by issue of this specification.

### COMMENTS

The specification is based on the information available to us at the time of writing; we will be pleased to revise these proposals should there be any omissions or additions.

# SPECTRAPLAN SG SPECIFICATION Adhered System Warm Roof Design

Project:	59 Maygrove Road
Project Location:	London NW6 2EE
Roof Location - On Site:	
Structural Deck:	Concrete
Approximate Area:	159m²

#### **PART 1 GENERAL**

#### 1.01 DESCRIPTION

- 1.01.1 The roofing project consists of installing Spectraplan TPE adhered systems for warm roofs as outlined below.
- 1.01.2 Apply Spectraplan SG120 TPE fleece backed single ply membrane, adhered to thermal insulation layer, over SpectraRoof vapour control layer, over the roof decking.

#### 1.02 EXTENT OF WORK

- 1.02.1 Provide all labour, material, tools, equipment, and supervision necessary to complete the installation of Spectraplan SG120 fleece backed TPE membrane roofing system including flashings, edge details and finishes, vapour control layers and thermal insulation as specified herein and as indicated on the drawings and/or Bill of Quantities in accordance with SpectraRoof most current application manual.
- 1.02.2 Spectraplan roofing system shall be installed only by fully trained authorised and approved SpectraRoof Contractors.

# 1,03 SUBMITTALS

Prior to starting work, the SpectraRoof Authorised Contractor shall submit, where required by the client, the following:

- 1.03.1 Shop drawings showing layout, details of construction and identification of materials.
- 1.03.2 On completion of the roofing works the contractor should submit a copy of the final inspection report as issued by the IKO Technical Services Department.

#### 1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- 1.04.1 Delivered materials to site should remain in the original, unopened containers or wrappings with the manufacturer's name, brand name and installation instructions intact and legible
- 1.04.2 Observe and comply with the written instructions for proper material storage.
- 1.04.3 Store Spectraplan membranes and ancillary items in a dry, cool and shaded area on pallets of suitable bearers.
- 1.04.4 Store insulation off the surface of the roof/floor on pallets or bearers avoiding any standing water. When stored outside the insulation must always be covered with suitable waterproof sheeting.
  - Note:- the polyethylene wrapping is for stability in handling and transport only and does not provide protection from adverse weather. Wet insulation materials must not be laid; any such materials must be removed from the roof and replaced.
- 1.04.5 Store curable materials (adhesives and sealants) between 15°C and 20°C in dry areas protected from water and direct sunlight. If exposed to lower temperature, restore to 15°C minimum temperature before using.
- 1.04.6 Store materials containing solvents in dry, well-ventilated spaces with proper fire and safety precautions. Keep lids on tight. Use before expiration of their shelf life.
- 1.04.7 Materials found to be damaged shall be removed and replaced.
- 1.04.8 The membrane must not be laid in wet or damp conditions or at temperatures below 5°C when using with curable materials.

# 1.05 WORK SEQUENCE

- 1.05.1 Schedule and execute work to prevent water ingress and excessive traffic on completed roof sections.
- 1.05.2 Provide protection for the interior of the building and ensure water does not flow beneath any completed sections of the membrane system.
- 1.05.3 Provide temporary covers and drainage as required to keep unfinished areas of the roof dry.
- 1.05.4 Suspend work in severe or continuously wet weather unless an effective temporary roof is provided over the working area.
- 1.05.5 If unavoidable wetting of the roof build up or construction does occur, take prompt action to minimise and make good any damage.
- 1.05.6 Temporarily ballast incomplete areas of membrane as necessary to protect from wind action.

#### 1.06 SAFETY

1.06.1 The roofing contractor shall be responsible for all means and methods as they relate to safety and shall comply with all applicable local and national CDM requirements.

#### 1.07 FINAL INSPECTION

1.07.1 Upon completion of the installation, the contractor shall arrange for an inspection to be made by the IKO Single Ply Technical Engineer before any warranty is issued.

# 1.08 JOB CONDITIONS AND CAUTIONS

Refer to SpectraRoof TPE roofing systems specifications and application guidelines.

- 1.08.1 Material Safety Data sheets and COSHH statements should be on location at all times during the transportation, storage and application of materials.
- 1.08.2 When loading materials onto the roof, the authorised contractor must comply with the requirements of the client's representative to prevent overloading and possible disturbance to the building structure.
- 1.08.3 Proceed with roofing work only when weather conditions fall within recommended limitations, and where conditions permit work to proceed in accordance with the manufacturer's requirements and recommendations.
- 1.08.4 Roof decking shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the Spectraplan TPE roofing system.
- 1.08.5 New roofing shall be complete and weathertight at the end of each working day. All side laps, end laps or any detail seams must be welded at the end of each working day.

# 1.09 PREPARATION WORKS

1.09.01 Before laying single ply membrane ensure that:

The condition of the roof structure is suitable to receive the proposed roofing system.

The moisture content and stability of construction materials will not impair the integrity of the roof build-up.

Surfaces to receive the SpectraRoof installation should be clean, smooth and dry.

#### **PART 2 PRODUCTS**

#### 2.01 GENERAL

- 2.01.1 To achieve a full IKO PLC guarantee all components of the specified Spectraplan TPE roofing system shall be products of and be supplied by IKO PLC. All IKO PLC products shall be included in the warranty
- 2.01.2 Lay roof covering to provide a secure and completely weathertight roof.
- 2.01.3 Ancillary products and accessories, where not specified, to be types recommended for the purpose by and approved by SpectraRoof or IKO PLC Technical Services Department.
- 2.01.4 Only use operatives trained in the application of single ply membranes and who have attended the SpectraRoof training course. Submit evidence of training to CA on request.
- 2.01.5 Avoid introducing unnecessary wrinkles or folds into the Spectraplan membranes. Note: TPE Polymer Membranes (Spectraplan) can be affected by differing temperatures and direct sunlight when first laid which may cause some rippling to appear, this is perfectly normal and generally the rippling effect will settle down and should not occur after a period of time.

#### 2.02 DECK

The proposed roof deck must be deemed fit for purpose.

- 2.02.1 Concrete and screed surfaces must be smooth and fully cured prior to application of the roofing system
- 2.02.2 Plywood must be WBP grade; Minimum grade of Orientated Strand Board should be OSB 3
- 2.02.3 Plywood / OSB is to be fixed to the substructure using screws or annular ring shanked nails
- 2.02.4 Heads of nails or screws to be punched or countersunk flush with the surface of the deck
- 2.02.5 Tape all board joints if using a bituminous vapour control layer

# 2.03 VAPOUR CONTROL LAYER

- 2.03.1 Determine the interstitial condensation risk of the roof as recommended in BS 6229 but with the calculation method modified to conform to BS 5250 and, if necessary, provide a suitable vapour control membrane or system to ensure that damage and nuisance from interstitial condensation do not occur.
- 2.03.2 The installation of vapour control layers should be generally in accordance with BS 8000-4 1989: BS 8217: 2005. The vapour control layer should always marry up with the waterproofing system to ensure the insulation is enveloped at all times.

# 2.03.3 Products

Lay Challenger Polyester 180 Sand, fully bonded to the deck, with minimum 75mm side and end laps fully sealed, in IKOpro Easy Melt Bitumen or SpectraBond PU Adhesive

# 2.04 THERMAL INSULATION

2.04.1 Thermal performance must meet with guidelines set down by Local Authority Building Control Office.

#### 2.04.2 Products

Thermal insulation layer shall be IKO Tapered Rockfibre. Enertherm Rockfibre is suitable for flat roofing use beneath mechanically fixed or adhered polymeric single ply membranes.

- > Board Size = As tapered scheme drawings
- > Thermal Conductivity = 0.020w/mk
- > Global Warming Potential = Less than 5
- > Totally CFC/HCFC free (Zero Ozone Depletion)
- ? Fire-performance non combustible

Thickness: Refer to tapered scheme (min 140mm maximum 240mm)

The thickness of insulation specified has been calculated, based on information available, to achieve a thermal transmittance (U value) of 0.20 W/m²K.

# 2.05 MEMBRANE

#### 2.05.1 Products

The roofing membrane shall be Spectraplan SG120 TPE

- > Dark Grey (RAL 7011)
- > Thickness: 1.2mm
- > Polyester reinforced
- > Roll Size 2.05m x 20m
- > UV stable
- > Suitable for adhering with Spectrabond Low Foaming PU adhesive.

#### 2.06 ADHESIVES, SEALANTS AND CLEANERS

- 2.06.1 Spectrabond low foaming PU Adhesive for bonding of field sheet.
- 2.06.2 Spectrabond Contact Adhesive for bonding detail work.
- 2.06.3 IKOpro High Performance PU Adhesive for bonding of insulation boards.
- 2.06.4 Bond & Seal Sealant and Cleaner/Primer for sealing construction joints as well as junctions with flush surfaces.
- 2.06.5 IKOpro Easy Melt Bitumen for bonding bituminous vapour control layers and or bedding rigid insulation boards.

#### 2.07 FASTENER ASSEMBLIES

2.07.1 IKOfix fasteners and non-toothed flatbar used for membrane securement at all perimeters and roof openings. Cut edges of flatbar to be cloaked with sacrificial strips of Spectraplan Membrane.

# 2.08 METAL, TIMBER EDGING AND MEMBRANE TERMINATIONS

- 2.08.1 Spectraclad coated metal detail system consisting of factory adhered Spectraplan membrane and 0.6 galvanised steel sheet for off-site fabrication to suit specific roof details in accordance with the specification.
- 2.08.2 Spectraplan clamping strip, 25mm wide and 24mm thick extruded aluminium bar pre-punched at 150mm centres; incorporating sealant ledge to support proprietary sealant.
- 2.08.3 Timber for trims etc by roofing sub-contractor; Planed, free from wane, pitch pockets, decay and insect attack except pinhole borers.

Moisture content: Not more than 22% at time of covering.

Preservative treatment: CCA as section Z12 and British Wood Preserving and Damp-proofing Association Commodity Specification C8.

Fix with Sherardized steel screws at not more than 500 mm centres.

#### 2.09 RAINWATER OUTLETS

- 2.09.1 Through wall outlets should be pre-formed TPE Spectradrain outlets in to enable secure homogenous hot air welding of the Spectraplan membrane.
- 2.09.2 Through roof outlets shall be SpectraRoof standard TPE Roof Drains. Third party goods may be used, check with the Technical Services Department for approval, suitability and compatibility.

#### 2.10 ROOF PENETRATIONS

2,10.1. Cut membrane around all roof penetrations and secure membrane to deck. Form sleeve with a base flashing utilising Spectraplan D un-reinforced membrane. Ensure an overlap of a minimum of 50 mm beyond any fastening, weld flange of sleeve to roof membrane. Weld a sleeve flashing around penetration using Spectraplan D un-reinforced membrane. Protect top edge of sleeve with flashing or weathering cravat.

#### **PART 3 EXECUTION**

#### 3.00 GENERAL

Comply with SpectraRoof published instructions for the installation of the Spectraplan TPE membrane roofing system including proper substrate preparation, site considerations and weather restrictions.

Roofing membranes should be laid in accordance with good practice.

#### 3.01 VAPOUR CONTROL LAYER

- 3.01.1 Lay sheets loose, flat and without wrinkles.
- 3.01.2 Ensure all lap and end joints are sealed using appropriate products and methods.
- 3.01.3 Dress the vapour control layer up all up stands kerbs and other penetrations, around the edge of the insulation and under the waterproof membrane to form a complete seal.
- 3.01.4 Bonded bituminous vapour barriers, where used, should be applied using the appropriate method of attachment with side and end laps fully sealed.

#### 3.02 INSULATION INSTALLATION

- 3.02.1 Install approved thermal insulation over the substrate with boards butted tightly together. Stagger joints both horizontally and vertically where multiple layers are provided. Boards must be fully supported if laid on metal decking. Boards can be laid at 45° to the metal decking where pitch dimensions do not match insulation board dimensions.
- 3.02.2 When using a bonded system bed insulation in full accordance with the application instructions for the approved adhesive.
- 3.02.3 On completion of lying ensure that boards are in good condition and well fitting.

# 3.03 MEMBRANE INSTALLATION

- 3.03.1 Unroll and position Spectraplan membrane and allow to relax prior to fixing into position.
- 3.03.2 Secure Spectraplan membrane using Spectrabond low foaming PU adhesive in strict accordance with application instructions
- 3.03.3 End laps in Spectraplan SG120 to be butt jointed and covered with a 150mm wide strip of Spectraplan SM120 with edges all fully welded.
- 3.03.4 Install fastenings using recommended equipment, fitted with bit stop, etc. to ensure correct and consistent insertion.
- 3.03.5. Secure all perimeters and penetration with non-toothed flat bar and fixings to suit.
- 3.03.6. Avoid introducing unnecessary wrinkles or folds into the Spectraplan membranes.

  Note: TPE Polymer Membranes (Spectraplan) can be affected by differing temperatures and direct sunlight when first laid which may cause some rippling to appear, this is perfectly normal and generally the rippling effect will settle down and should not occur after a period of time.

#### 3.04 MEMBRANE SEAM WELDING

3.04.1 Test Welds

At the commencement of each period of work, or as weather conditions change, carry out test welds to ensure correct set up of welding equipment. Mark test samples with date and time and retain for further inspection by IKO Technical Services engineer, as required.

3.04.2 Seam Preparation

Ensure that areas to be hot air welded are clean, dry and free of loosely adhering particles.

3.04.3 Horizontal Welding

Use a suitable hand held welder, roll welded sections with a silicone roller as heat is applied. All welds to be completed as a minimum two-part operation; Pre-weld and full weld. Particular attention must be made at all cross joints to prevent any capillary leaks.

Where practical, an automatic hot air welding machine can be used.

Contact IKO Technical Services Department for further guidance on approved welding equipment and welding techniques.

3.04.4 Details

Use hot air hand welders for seams to details such as corners, pipe penetrations, outlets all in accordance with SpectraRoof specifications.

3.04.5 Checking

We recommend to probe all seams once the hot air welds have thoroughly cooled. All welds should be checked at the end of each day's application.

3.04.6 Re-welding

Re-weld all seam deficiencies as and when they are discovered.

#### 3.05 FLASHINGS

- 3.05.1 Follow SpectraRoof typical flashing procedures for all wall, kerb and penetration flashing including metal edging/coping and roof outlet applications.
- 3.05.2 For internal and external corners Spectraplan pre-formed detail sections may be utilised. In the absence of pre-formed detail parts Spectraplan SM and/or D membranes can be used.
- 3.05.3 Spectraplan D non-reinforced membrane should be used for flashing to pipe penetrations and non TPE approved clamping ring type rainwater outlets.
- 3.05.4 Flashing of parapets, kerbs, expansion joints and other parts of the roof is carried out using Spectraplan SM TPE reinforced membrane

#### 3.06 WALKWAYS

- 3.06.1 For lightly trafficked areas install Spectraplan Textured walkway membrane at all traffic concentration points (such as roof hatches, access doors, rooftop ladders, etc.) and at all locations identified on the specifier's drawing. After placing in position hot air weld all walkway perimeters to the underlying membrane using hot air welding equipment.
- 3.06.2 For heavier trafficked areas a galvanised plate, wrapped in IKOtex fleece, should be fixed in position beneath the walkway membrane prior to welding.
- 3.06.3 Concrete paving, when used, should be sited on proprietary support pads ensuring all adjacent slabs are level and do not form a trip hazard.
- 3.06.4 The placement of plant and M&E equipment should be on suitable supports to spread loads, approval must be sough from the Technical Services Department prior to any installation.

# INSPECTION AND APPROVALS - ROOF GARDEN FINISHES

The finished membrane must be inspected, and approved by IKO Technical Personnel, before any roof garden finishes are applied. Where following trades are to work on the roof, proper protection must be afforded the finished waterproofing and additional inspection/ testing of the membrane carried prior to the application of the roof garden finishes.

#### ELECTRONIC ROOF INTEGRITY TEST

Testing to be carried out by a IKO approved testing company. Carry out test immediately before application of the roof garden finishes. Prior to testing ensure that roofing work has been completed to a stage where the integrity of the membrane can be tested, that obvious defects have been made good and that the roof has been cleared of all materials, debris, dust, etc. If any leaks/defects are discovered mark the location on the roof, prepare report and submit to Project Manager together with proposals for remedial measures.

NB. After making good of any defects by the roofing contractor retest locally to verify integrity of repair.

#### DRAINAGE AND EDGE RETENTION SYSTEM

Install at open roof edges and at intermediate positions on the roof as specified **IKOgreen Drainage and Edge Retention Trim**, including connector and corner sections as applicable. The retention trim is bonded in **IKOpro PU Adhesive**..

On roofs of 20 degrees and more, shearing protection is necessary. This is achieved by introducing intermediate cross battens, to deal with the shear force.

The spacing of the battens depends on the roof slope:

20 degree slope, battens at 10m centres

25 degree slope, battens at 8m centres

30 degree slope, battens at 5m centres.

# OUTLET PROTECTION

Cut and bend **IKOGreen Drainage and Edge Retention Trim** to fit around each internal outlet position, to protect the outlet from being blocked by the roof garden finishes.

# IRRIGATION

It is essential to the long term life of the installed landscape that some form of irrigation system is provided, preferably on an automatic basis. Permanite Engineered Roofing Systems work closely with **Access Irrigation Ltd, Crick, Northampton, NN6 7XS Tel 01788 823811** who will design a suitable green roof irrigation system and ensure that the system is installed and operating as designed.

#### DRAINAGE / RETENTION BOARD

**Install IKOGreen Plasfeed 5+1** unrolled and loose laid directly over the finished waterproofing membrane abutting drainage and edge retention system and outlet protection grilles. Rolls should be laid overlapping the geotextile layer on to the previously laid roll. Install material under all green roof areas (including the vegetation barrier). In windy conditions, it may be necessary to temporarily weight down areas installed, prior to the surface finishes being applied.

#### FILTER FLEECE

**IKOGreen Filter Fleece** should be laid, where the selvedge of the IKOgreen Plasfeed 5+1 is insufficient to provide continuity of the filter layer. It should be installed at perimeter details and penetration upstands, with 100mm lap joints dressing 100mm on to the Plasfeed 5+1 geotextile.

# GROWING SUBSTRATES

Lay **IKOGreen Extensive Growing Substrate**, directly on to the surface of the IKOgreen Plasfeed 5+1, to a minimum of 60mm.

OR

Lay **IKOGreen Intensive Growing Substrate**, directly on to the surface of the IKOgreen Plasfeed 5+1, to a minimum of 200mm.

#### VEGETATION BARRIER

Install around all perimeter upstands, rooflights, vents, and outlets etc, a vegetation barrier of 20/40mm rounded washed stones approximately 300mm wide, to the depth of the growing medium and sedum blanket. Install vegetation barrier to cover the edges of the sedum by 100mm to protect against wind uplift.

# HORTICULTURAL FINISHES

#### **SEDUM FINISHES**

Lay **IKOgreen Sedum Blanket** directly on to the surface of the Growing Medium, with joints staggered and close butted. Any excess pieces of sedum blanket must be removed from the roof immediately. Any areas of soil loss to the blanket must be filled and planted with Sedum cuttings.

OR

#### **WILDFLOWER TURF**

Lay **IKOgreen Wildflower Turf** directly on to the surface of the Growing Medium, with joints staggered and close butted

#### Notes: -

- 1. On completion, the Sedum Blanket must be saturated with water to a volume of approximately 30%, to promote growth and assist with establishing the plants. It is the responsibility of the roofing contractor to liase with the main contractor, to ensure that the Sedum Blanket does not dry out with the first month after installation.
- 2. Sedum Blankets are living plants, and as such the delivery to site and installation must be carefully programmed, with other site trades to ensure optimum propagation conditions. During hot weather, the Sedum Blankets must be unrolled on the day of delivery to site. Any rolls not used must be kept watered prior to final installation. During colder weather Sedum Blanket rolls must be rolled out and used within 48 hours.
- 3. Where other trades are likely to be working on the finished roof surface, the scheduling of the work must ensure that all of these works have been completed prior to the application of the landscape finishes. This will ensure that the Sedum Blanket is not used as a working platform and damaged after installation. Proper protection must be afforded the waterproofing from damage by other trades.
- 4. Extensive roof garden finishes need little maintenance however; proper protection must be afforded where ongoing building maintenance will be required (e.g. window cleaning etc). In these circumstances, the addition of paved walkway areas should be provided.
- 5. It is recommended that an external water supply is positioned with access to the roof, to allow watering of the sedum finishes in the early stages of development and to augment the natural rainwater supply in particularly dry conditions. This is the responsibility of the main contractor in new build projects and the client in the case of refurbishment.

# FIRST YEAR MONITORING SCHEDULE

Sedum finishes are living plants, and as such, some care must be taken to ensure they reach maturity and flourish. As part of the IKOGreen extensive roof garden installation package, all systems are supported by an integral first year maintenance programme, to ensure the horticultural finishes establish quickly and grow to maturity. This includes two visits in the first year to carry out the following: -

Application of suitable fertiliser to enhance growth and to aid establishment of the plant finishes. A general appraisal of the plants should be made to ensure that areas of damage, or deficiencies, are quickly identified.

Removal of weeds and or unwanted "self-set" plant growth (e.g. Buddleia) from the horticultural finishes before they become established.

NB. Package offer assumes that client can provide suitable access arrangements.

#### PLANNED ROOF MAINTENANCE

In addition to the first year monitoring programme, IKO can offer a range of ongoing maintenance programmes, tailored to the individual roof, to ensure that the plant finishes thrive and give maximum interest and colour throughout the life of the installation. NB. A separate charge is levied for this service.

## 3.07 DAILY SEALS

At the end of the working day:

- 3.07.1 Temporarily seal the roof system to the deck to prevent any water infiltration, using appropriate materials and methods to suit.
- 3.07.2 On resumption of work cut ensure no water is trapped within the system. Clean and dry any contaminates prior to recommencement of works.

#### 4.01 SPECIFIC DETAILS

All standard detail items to be in accordance with the SpectraRoof Installation Manual, non standard items to be confirmed and approved prior to commencement of works with IKO PLC Technical Services Department .

- 4.01.1 Install Spectra Standing Seam Detail, fully welded to the field sheet at agreed centres and to other required design feature in accordance with client's or specifier's instruction.
- 4.01.2 Apply Tecnodetail liquid detailing system, in 2 coats (allow 4 hours between each coating layer) to identified sections, as required, in strict accordance with product instructions.

#### 5.00 GUARANTEE

IKO PLC will on successful completion of the contract, issue a 20-year guarantee, covering design of the roof waterproofing system, labour and materials for the project.

#### 6.00 APPROVED CONTRACTORS

The following SpectraRoof Approved Contractors will be pleased to offer quotations for the project.

CSCL Roofing Ltd Harlow Enterprise Hub Kao Hockham Building Edinburgh Way

Harlow CM20 2NQ

Tecta Roofing Ltd 326 Southborough Lane

Bromley Kent BR2 8AA

Flame Construction
Robert Denholm House

Bletchingley Rd Nutfield

Surrey RH1 4HW

Robseal Roofing Solutions

146 Finchampstead

Wokingham Berkshire RG41 2NU

Gregory Roofing Ltd 53 London Rd Abridge Essex RM4 1HX Contact: Reg Breen **☎ 07774 719 655** 

Email: info@csclroofing.co.uk

Contact: Martin Maunders

**☎** 0794 100 3562 0208 249 4910

Email: martin.maunders@tectsroofing.co.uk

Contact: Andrew Lambert 
7836 293 014

Email: redroofs@hotmail.co.uk

Contact: Richard Walgate 207785 112 155

Email: Robseal@twamg.co.uk

Contact: Mark Gregory 7889 103 122

Email: gregoryroofing@aol.com