intelishade

GDL
AIR SYSTEMS LTD

SOLAR SHADING

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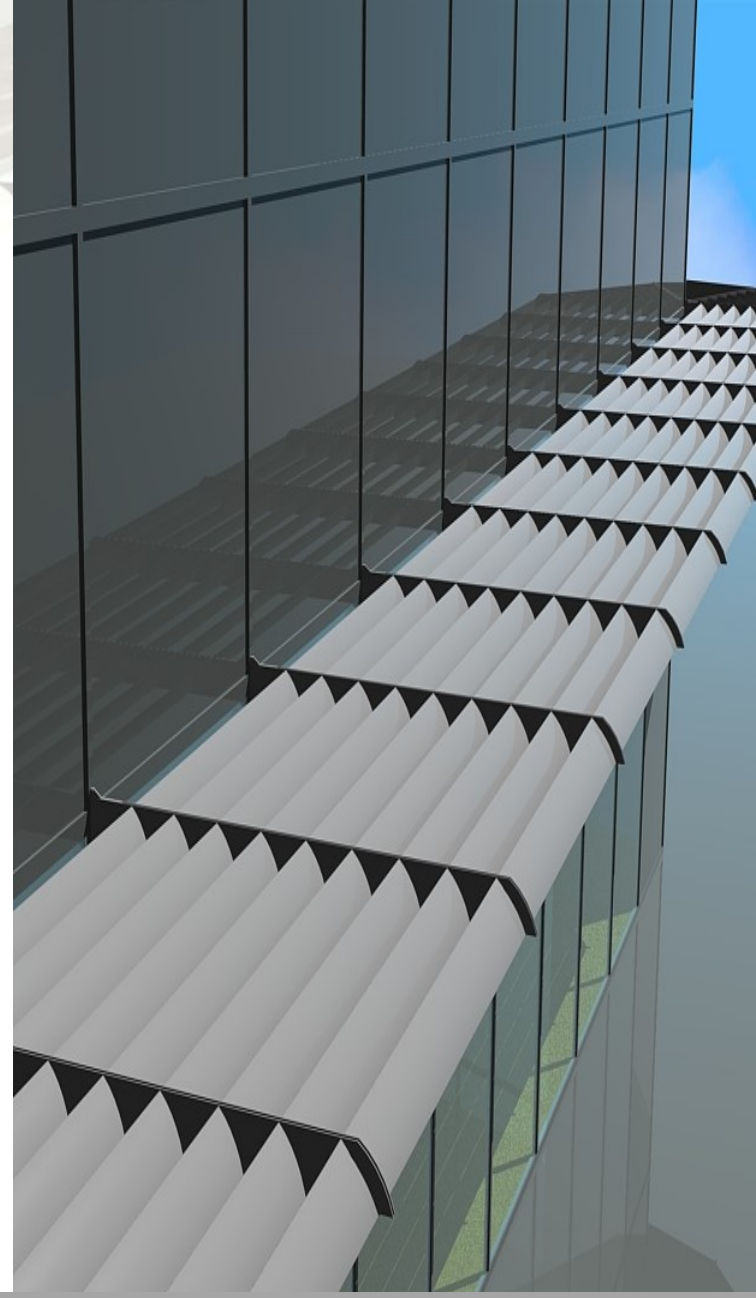


SOLAR SHADING

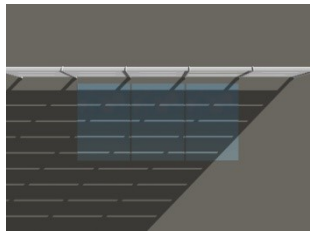
GDL Air Systems has developed a range of architectural standard and bespoke Brise Soleil systems designed to enhance and shade the most elegant of buildings.

As architecture continues to make progress in ensuring buildings and the products that are used in the construction of the buildings both add to the efficiency of the buildings use and have consideration for the environment when in manufacture.

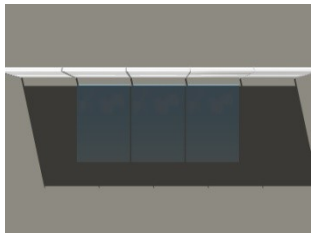
Brise Soleil systems reduce the need for expensive air conditioning systems by providing the required shading to the façade of the building, with potentially significant cost savings and reducing the carbon footprint.

In summer periods it can reduce the amount of heat entering a building by keeping the excessive heat of the sun out and avoiding overheating and in winter and can decrease heat loss reducing the need for additional climate control measures.

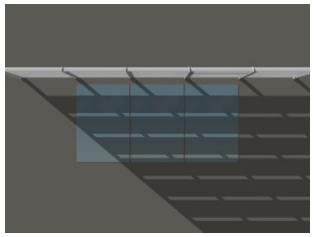
GDL Air Systems Ltd can assist you with your solar shading system design using the most up to date computer modelling systems. We are able to design a system of either vertical or horizontal Brise Soleil or a combination of the two to give the required level of solar shading.



July 9am Solar Angle



July 1pm Solar Angle



July 4pm Solar Angle

The system can be used to optimise the design and to minimise the amount of projection required. By limiting the projection advantages can be gained in the construction of the system and its structural design considering the interface with the building and the wind and snow loading requirements specific to the project. By reducing the number and structural complexity of the Brise Soleil supports can have a major commercial effect on the overall cost of the system and its installation onto the building.

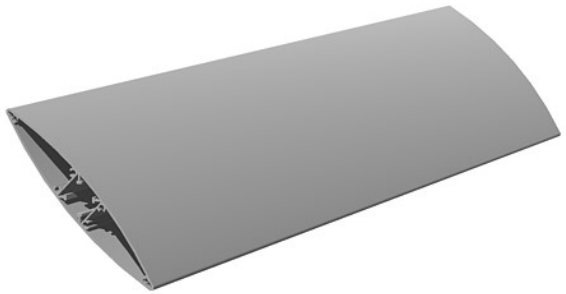
GDL are able to accurately chart degree of elevation and radial position of the sun at any given time either to ensure correct specification of louvre blade orientation, assembly mounting and screen dimensions, or to determine the effect of a specified Solar Shade Louvre when installed.

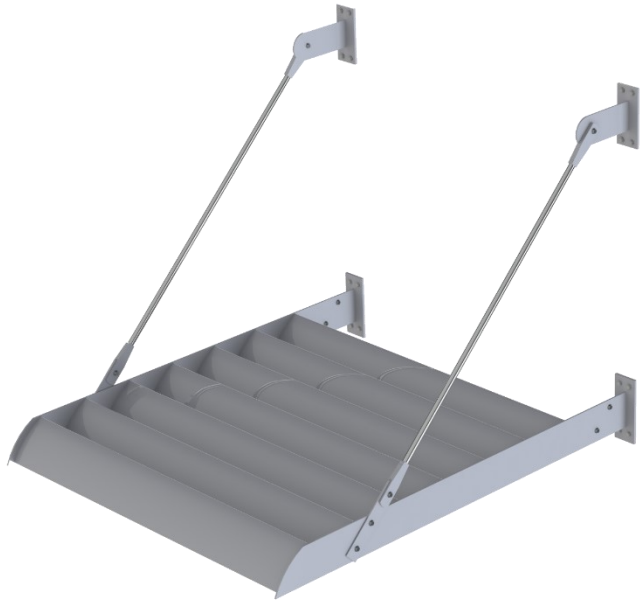
ELLIPTICAL BLADES

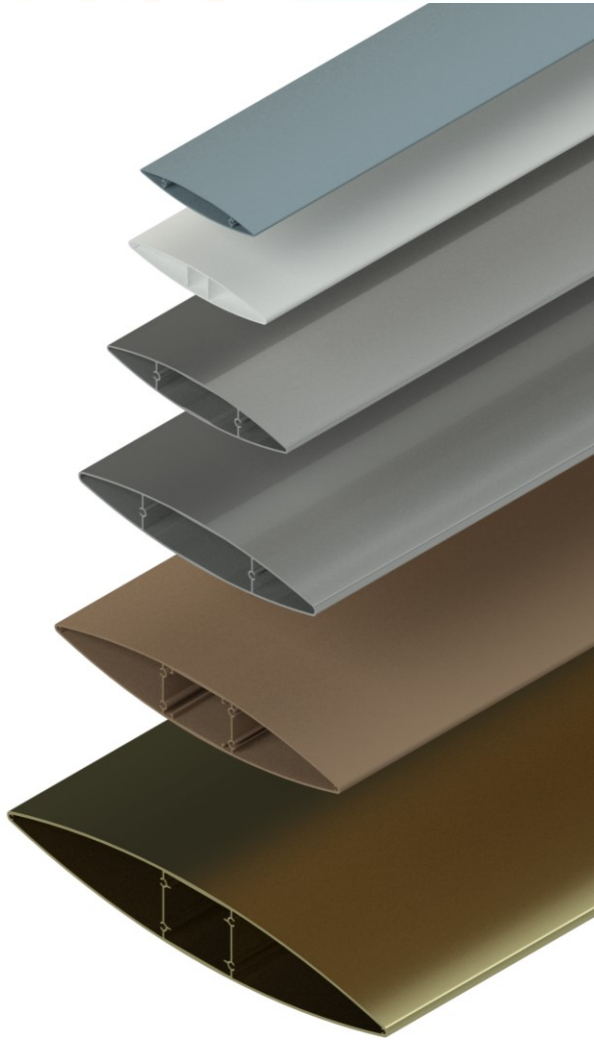
Elliptical extruded blades provide the engineer with the option to include internal strengthening webs within the extrusion. The elliptical blades are extremely strong and rigid and as a consequence the blades can span much greater lengths with minimal deflection.

Their robustness allows the minimisation of the number of support armatures. This results in cost savings on both materials and in particular installation time and costs which quite often outweigh the additional cost of the blades.

The reduction in the number of armatures has the added benefit of minimising the number of interfaces and connections with the building structure; this is a particular advantage when considering penetrations through rain screen cladding and other similar structures.

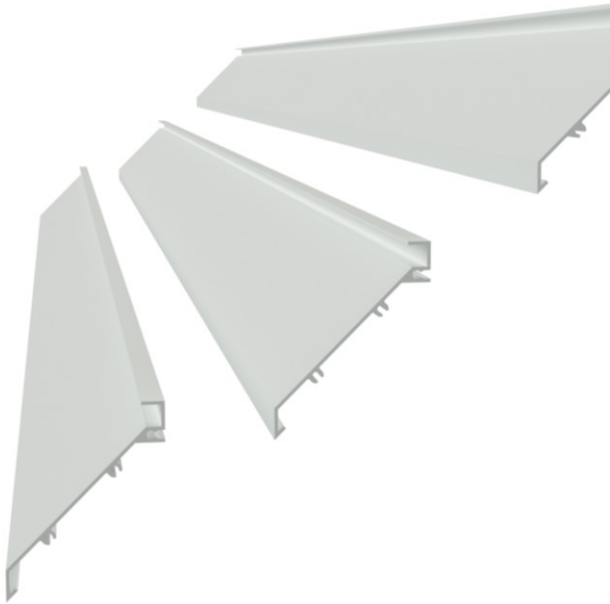






SINGLE SKINNED BLADES

Traditional single skinned profiles are available for smaller light weight applications. These systems can be an integral part of the curtain walling system or stand alone fixed to supporting structures. The blades are available from 75mm to 100mm deep and can be used for both vertical and horizontal applications.



SUPPORTS

Mullions, which support the blades will occur at the maximum of 2000mm (depending on blade selection) centres, each mullion requires to be fixed back to the structure either by GDL's supporting struts or by the way of a parent structure or steelwork etc. Blades may overhang the mullions by a maximum of 300mm at each end of the assembly or panel.

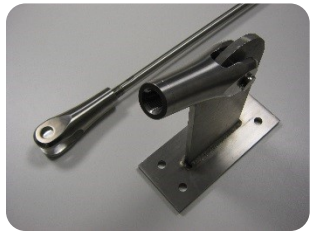
Mitred corners can be achieved by utilising this overhang depending upon applications; blades however will not be physically fixed to adjacent corner panels.

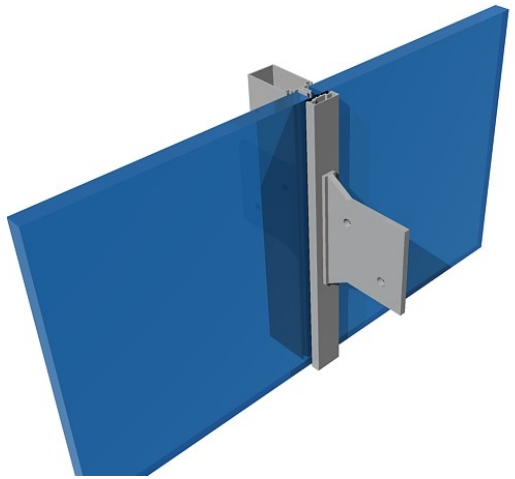
Tie Rod System:

A variety of fittings can be supplied to match the requirements of the specification by engineers and architects. All fittings are designed to the requirements of BS5950 and exceed the capacity of the bar.

Threaded fork ends are used to terminate bars and transfer load to the structure. Fork ends are cast components from M12 - M20. The forks are threaded left hand or right hand depending on the tie rod arrangement.

Turnbuckles are left hand and right hand threaded bar connectors. These are machined with a central chamber to give greater length with the left hand/right hand fork combination.

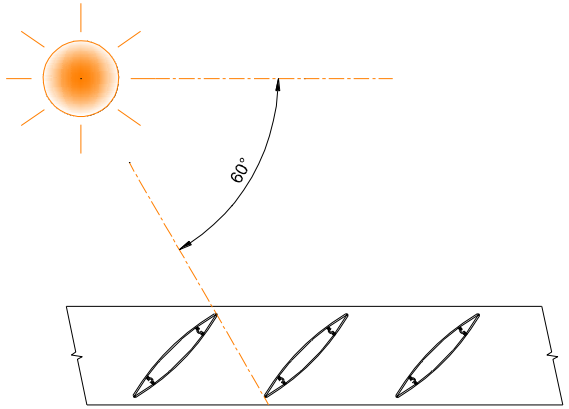


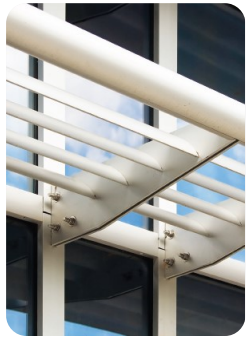


HORIZONTAL SYSTEM

Primarily on the South elevations where the higher sun angles are blocked reducing both glare and solar heat gain.

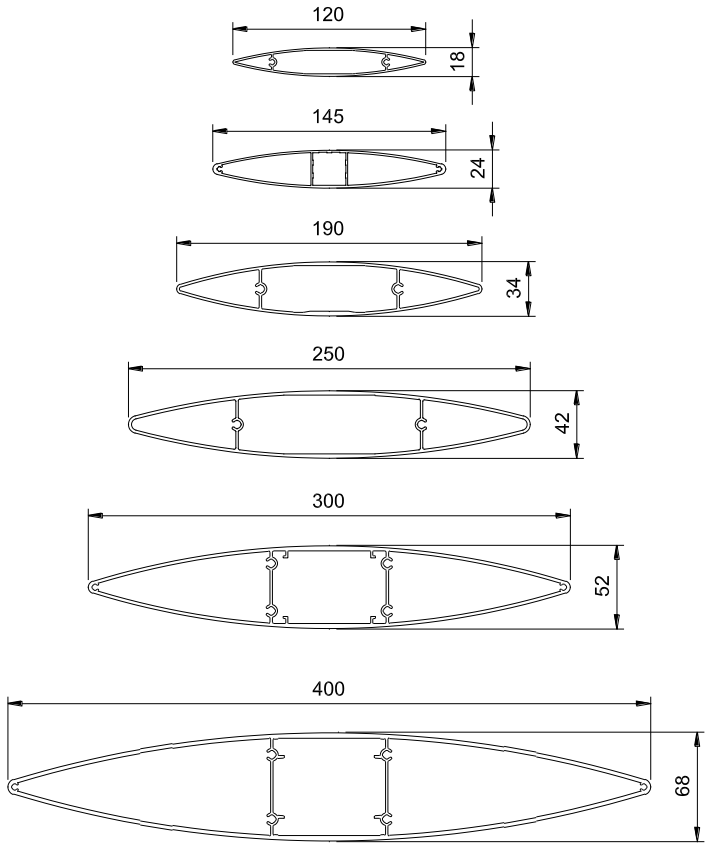
The Horizontal Solar System provides excellent shading during the summer months which reduces the energy costs to cool the occupied area of the building, whilst maintaining uninterrupted views through the glazing and minimising the effect on light transmission in the winter.





HORIZONTAL SYSTEM - BLADE OPTIONS

BLADE OPTIONS: ELLIPTICAL



1200mm max span

1200mm max span

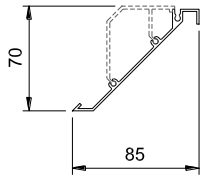
2100mm max span

2600mm max span

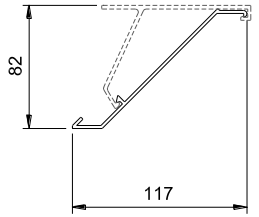
3200mm max span

4800mm max span

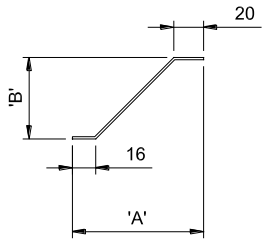
BLADE OPTIONS: SINGLE SKINNED



1200mm max span



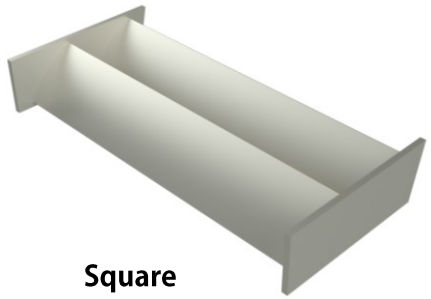
1200mm max span



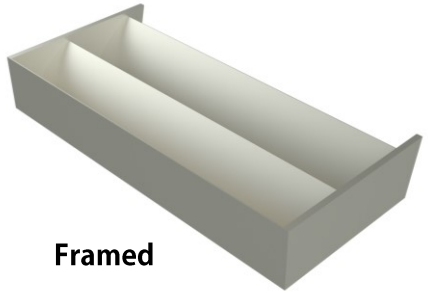
Bespoke Blade: 1200mm - 1800 max span

HORIZONTAL SYSTEM

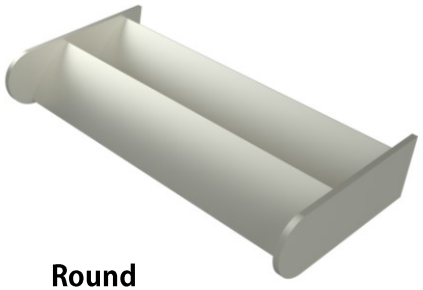
NOSING OPTIONS:



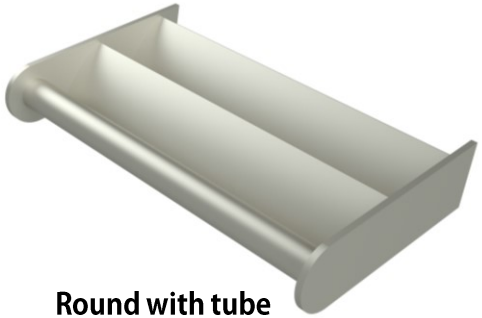
Square



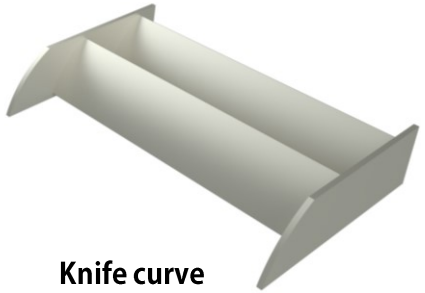
Framed



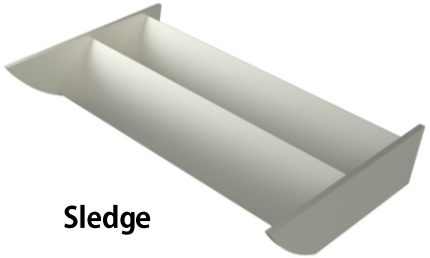
Round



Round with tube



Knife curve

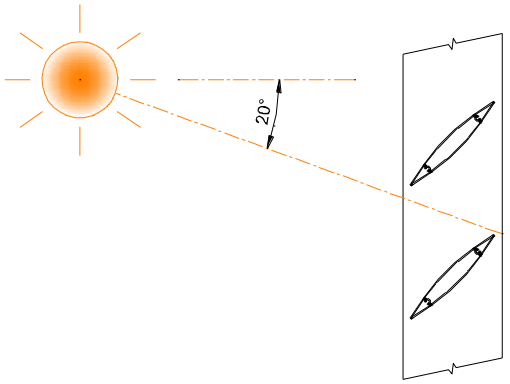


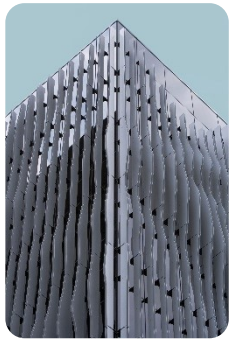
Sledge

VERTICAL SYSTEM

The system provides excellent shading to the East and West elevations of the building catering for the lower sun angles.

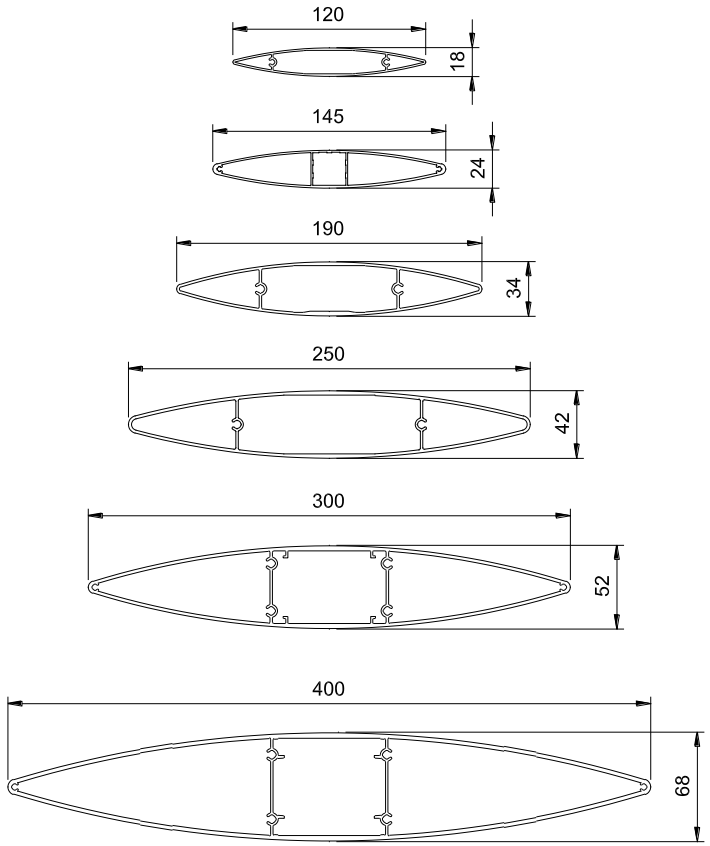
The Vertical Solar Systems provide excellent reduction to solar gain through the glazing and so saving energy required to cool the internal space of the building. A variety of blade types and sizes allow the Architect and designers flexibility to design an aesthetic facade to the building while still offering excellent vision through the glazing.





VERTICAL SYSTEM

BLADE OPTIONS: ELLIPTICAL



1200mm max span

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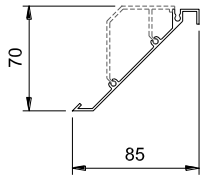
2100mm max span

2600mm max span

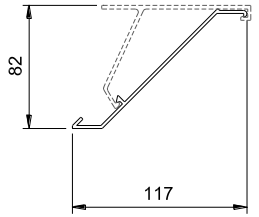
3200mm max span

4800mm max span

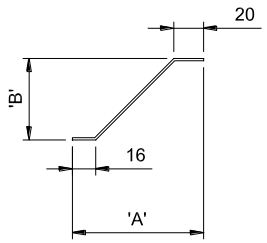
BLADE OPTIONS: SINGLE SKINNED



1200mm max span



1200mm max span



Bespoke Blade: 1200mm - 1800 max span

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HEAD OFFICE

GDL Air Systems Ltd | Air Diffusion Works | Woolley Bridge Road | Hadfield | Glossop | Derbyshire | SK13 1AB

01457 861 538