

## GREEN ROOF LANDSCAPING COMPONENT

### BAUDER DSE40 - Multi-functional Reservoir / Drainage Board



Material	Recycled HDPE
Board size	1.04m x 2.03m <sup>2</sup>
Thickness	40 mm
Water storage capacity	13.5 litres/m <sup>2</sup>
Weight	ca. 1.8kg/m <sup>2</sup>
Pressure resistance	80kN/m <sup>2</sup>
Infill capacity	21 litres/ m <sup>2</sup>



We are pleased to announce the introduction of the Bauder DSE40 Reservoir/Drainage Board to the Bauder range of green roof components. This product is the result of extensive research and testing, designed to ensure that its performance will allow inclusion in the broadest range of applications possible.

Manufactured from recycled lightweight HDPE and in a shape that allows it to be stacked in its own profile to minimise the space taken up on transport, this product helps deliver our commitment to developing new products which minimises environmental impact.

The large panel size and interlocking nature of the board prevents substrate loss and speeds up the installation of the drainage layer, thus bringing further cost benefits to both the client and the contractor.

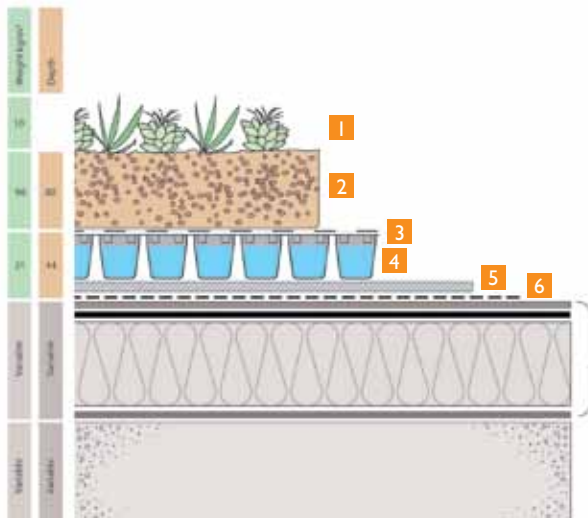
The design height of the board allows for 13.5l/m<sup>2</sup> of water storage when installed flat, yet will still provide adequate drainage for all intensive and extensive soft landscape applications. It will also stop any saturation of the growing medium from occurring in those areas of standing water which are regularly found on 'zero falls' roofs and podiums.

Whilst very lightweight, the shape of the profile has been cleverly designed to support an imposed load of up to 80kN/m<sup>2</sup> without significant distortion and so when used under soft landscaping there is no need for an additional supporting granular fill.

Because of the shape of the profile and size of footprint of the reservoirs, where hard construction such as footpaths and planter walls are required this can easily be achieved by infilling the profile with either cement, mortar or loose or compacted fill, dependant upon the application.

Because of its versatility, in most green roof installations the Bauder DSE40 can be used across the entire roof surface, providing the ideal platform for the construction of all types of landscape, thereby removing any scope for error during installation whilst also reducing cost.

# EXTENSIVE GREEN ROOFS



## 1. Plug Planting, Hydroplanting or Vegetation Mat

Selected species to suit the project and site locality.

## 2. Bauder Extensive Substrate

Lightweight growing medium, depth 80 mm. Manufactured and used in accordance with FLL guidelines.

## 3. Bauder Filter Fleece

Filtration layer prevents substrate fines from washing into the drainage layer.

## 4. Bauder DSE40

Water storage and drainage 40 mm in depth.

## 5. Bauder FSM 600

A 4 mm thick protection layer.

## 6. Bauder PE Foil

A polyethylene foil separation and slip layer manufactured from recycled granules. (Not used if the roof fall is over 3°)

## 7. Bauder Waterproofing System

High performance waterproofing membranes suitable for green roof systems.

## KEY FEATURES

- Suitable for roofs from 0 - 5° slope.
- Excellent drainage and water storage.
- Compression resistant.
- 13.5 litres/m<sup>2</sup> water storage



## SLOPES OF 0° – 5°

Providing an extensive green roof installation to a zero falls roof necessitates that the growing medium must be lifted clear of any standing water that collects on the roof surface, to prevent the plant roots from becoming saturated and eventually rotting. This can most easily be achieved using the Bauder DSE40 drainage/reservoir Board, which is manufactured from environmentally friendly recycled high density polyethylene (HDPE), with a profile that provides lightweight water retention and multi-directional drainage.

Bauder DSE40 provides an effective method of retaining low system weight, whilst at the same time providing excellent water retention. If the chosen planting is predominantly sedum, it is possible to reduce the substrate depth down to 60 mm to reduce the overall system weight by a further 24 kg/m<sup>2</sup>, or can be used to increase the volume of water stored within the system, thus allowing for a more diverse plant mix.

Bauder DSE40 is ideal for projects where the overall system weight is a critical factor or where the extensive planting schedule is to be more diverse and to include species such as herbs and grasses that require more water than typical drought tolerant plants like sedums.

Planting options are: hydroplanting, where a wide variety of pre-selected plants are incorporated, plug-planting, where specific plants may be chosen, or pre-cultivated vegetation mats, where a mature vegetation sward is installed over the substrate.



## SPECIFICATION SUPPORT

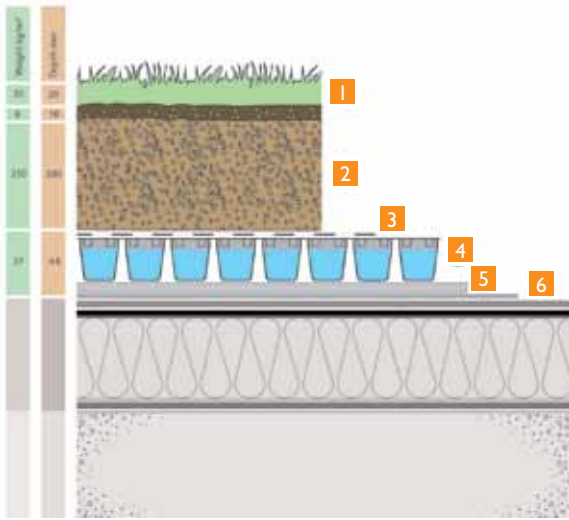


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# INTENSIVE GREEN ROOFS



## 1. Turf on 10 mm Bedding Compost

## 2. Bauder Intensive Substrate

Lightweight growing medium, depth is dependent on planting scheme. Alternatively, free draining topsoil can be used but this is heavier.

## 3. Bauder Filter Fleece

Filtration layer prevents substrate fines from washing into the drainage layer.

## 4. Bauder DSE40

Water storage and drainage 40 mm thick.

## 5. Bauder FSM I 100 Protection Mat

Polyester and polypropylene fibre, 8 mm thick.

## 6. Bauder PE Foil

Polyethylene foil separation layer (two layers).

## KEY FEATURES

- Multi-directional drainage
- High drainage capacity
- Will work in zero degree falls applications
- Good compressive strength - excellent when infilled
- Large footprint to reduce point loading
- Use under soft and hard landscapes

## DSE40 WITHIN AN INTENSIVE GREEN ROOF CONSTRUCTION

Bauder DSE40 simplifies the construction of intensive multi-landscaping finishes as it offers the designer one product to suit all situations. The board can provide the functions of water storage and drainage, but also allows construction of features such as planter walls, roadways or paving built directly off the infilled profiled board surface.

The large contact areas to the underside will allow for the construction of a broad range of hard landscapes off the profile, whilst ensuring that the waterproofing below will not suffer from point load damage.

The high level of water retention combined with the compressive strength of the board means that it is particularly well suited for use under turfed areas and other soft landscaping, where only foot traffic can gain access, without the need to infill the board profile.

In applications where roadways and footpaths are required, the board area immediately underneath can be infilled, to provide a stable base for construction capable of supporting heavy vehicular loads, to allow for uninterrupted drainage underneath the hard landscaping.



The board also lends itself well to meeting the increasing demand for all types of permeable paving and can be used with a wide range of infill materials, which may be mechanically compacted if required, to meet the performance and load criteria required.



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