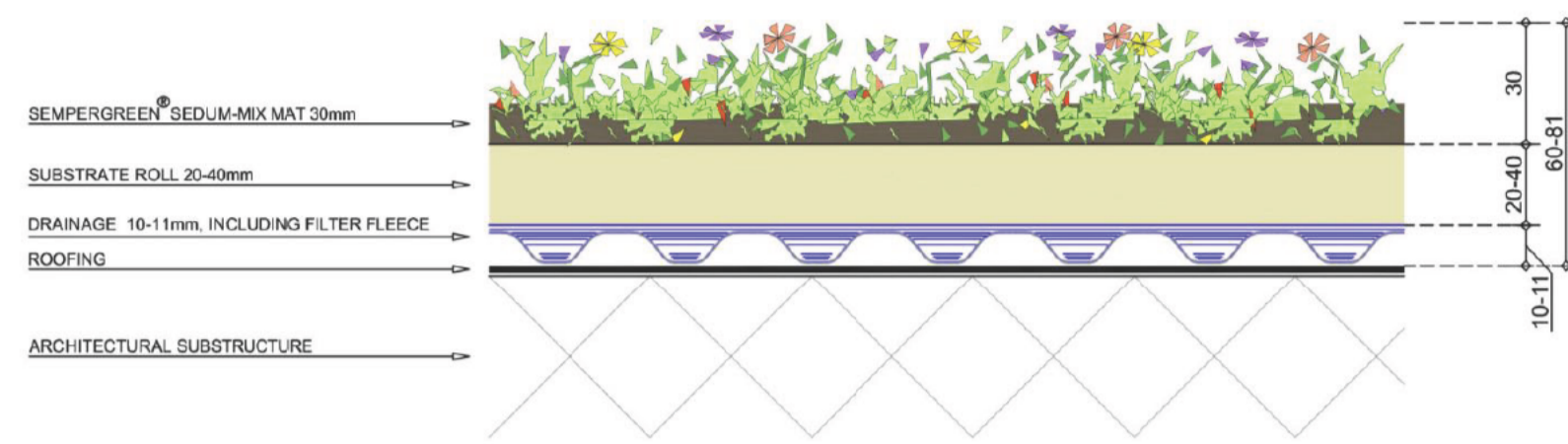


PROPOSED GREEN PRODUCTS

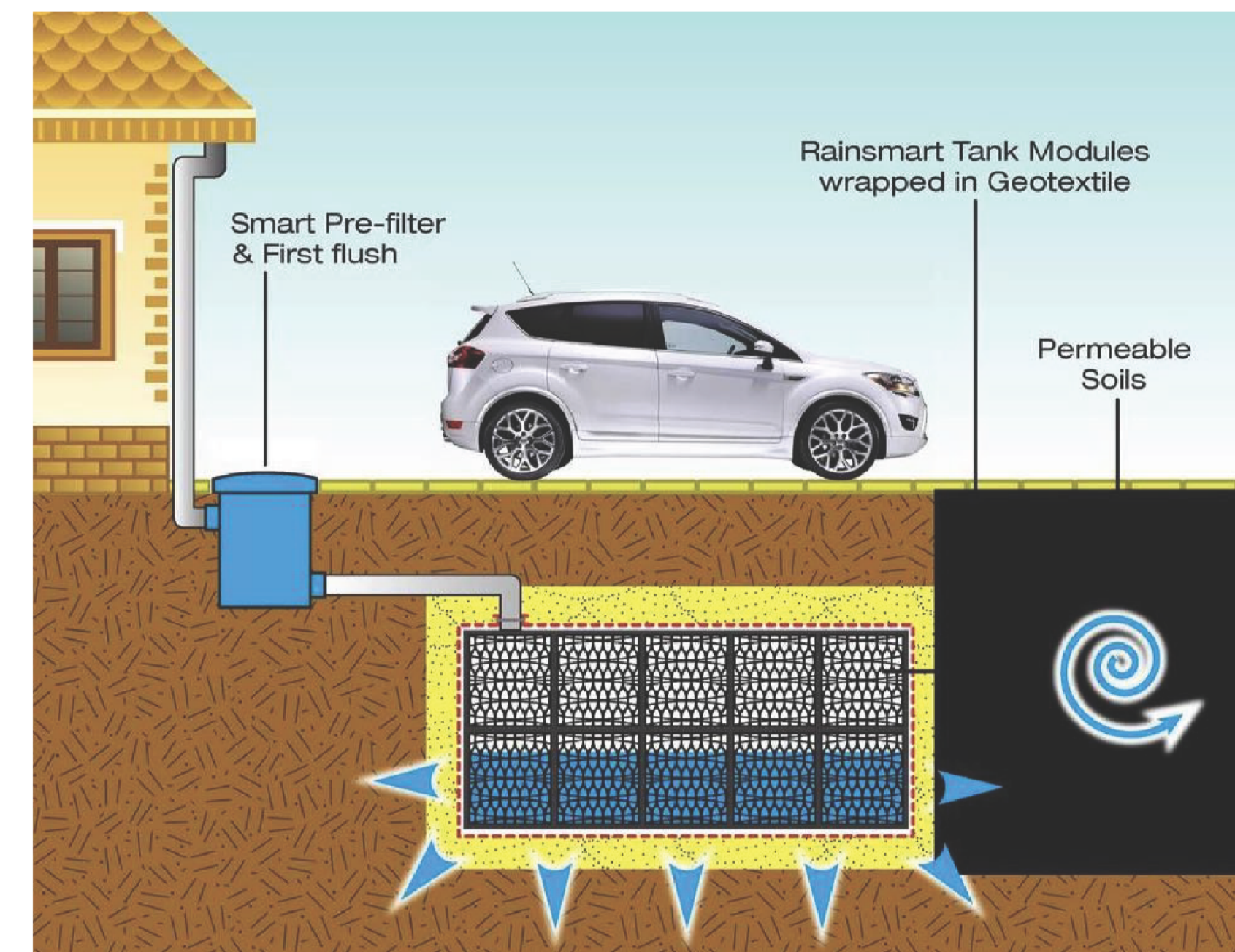
<https://thegreenroofcompany.co.uk/shop/systems/sempergreen-super-lightweight-system/>



ROOFING : EPDM / BITUMEN / PVC
 PITCH : 2-5°
 VEGETATION : SEDUM-MIX
 SUBSTRATE : SUBSTRATE ROLL 20-40mm
 DRAINAGE : DRAINAGE 10-11mm INCLUDING FILTER FLEECE
 MAT : SEMPERGREEN SEDUM-MIX MAT 30mm
 MINIMAL FERTILISATION / YEAR : 2
 MAX WEIGHT / m² : 40-50

PITCH: 2-5°
 TYPE: LIGHT WEIGHT
 THICKNESS INCL. SEDUM: 60-81mm
 SATURATED WEIGHT: 40-50 kg/m²

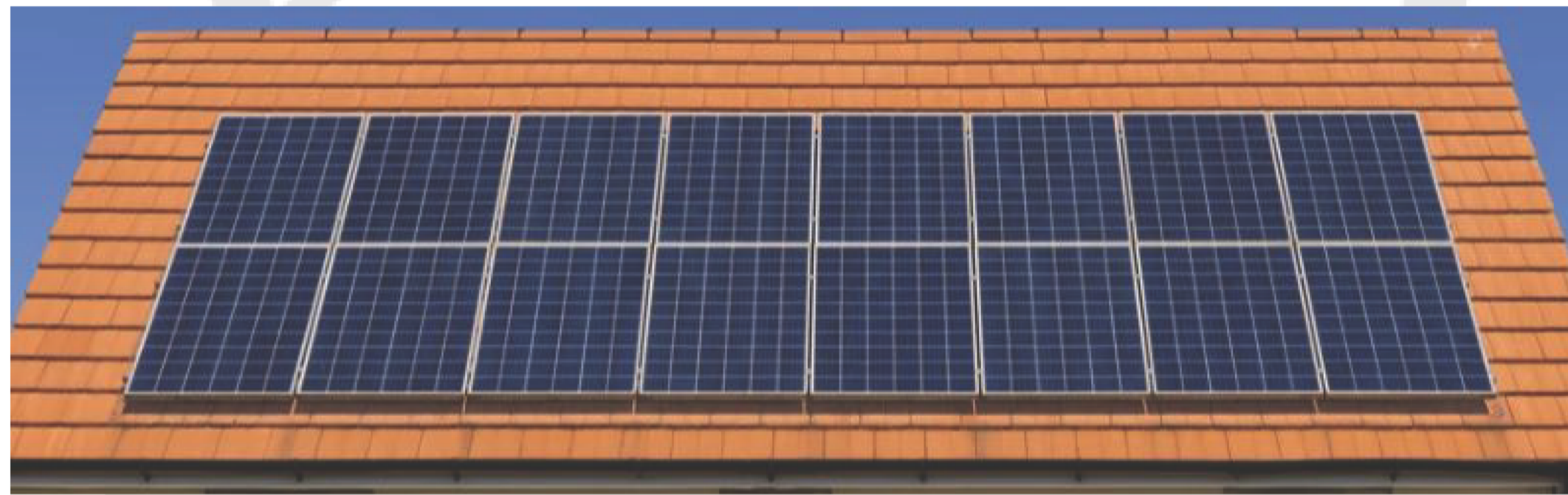
The Sempergreen® SUPER Lightweight sedum green roof system is a unique product, that allows you to create your own green living roof. Suitable for use on flat roofs from 3° to 15°, the substrate layer is 20mm thick and has excellent water absorption qualities. There are 6 – 8 different species of hardy succulents, each chosen for their ability to absorb and retain water and to thrive in adverse weather conditions. The sedum blankets in our Super Lightweight System have at least 95% plant coverage.



<https://www.drainagepipe.co.uk/rainsmart-ellipse-soakaway-crate-flat-packed-p-90004F/>



WALL WATER BUTT X 3



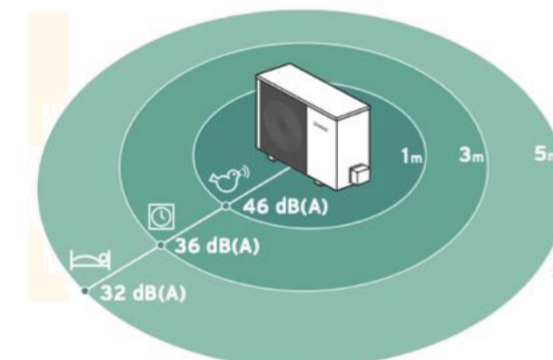
A solar PV panel consists of many cells made from layers of semi-conducting material, most commonly silicon. When light shines on this material, a flow of electricity is created.

The cells don't need direct sunlight to work and can even work on cloudy days. However, the stronger the sunshine, the more electricity generated.

Solar PV systems are made up of several panels, with each panel generating around 355W of energy in strong sunlight. Typical systems contain around 10 panels and generate direct current (DC) electricity. Because the electricity used for household appliances is alternating current (AC), an inverter is installed along with the system to convert DC electricity to AC. This electricity can be used throughout your home, or exported to the grid.



Sound power



Model	Sound Power Level A7/W55	Sound Pressure Level		
		1m distance	3m distance	5m distance
aroTHERM plus 3.5kW	54 dB	46 dB(A)	36 dB(A)	32 dB(A)
aroTHERM plus 5kW	54 dB	46 dB(A)	36 dB(A)	32 dB(A)
aroTHERM plus 7kW	55 dB	47 dB(A)	37 dB(A)	33 dB(A)
aroTHERM plus 10kW	60 dB	52 dB(A)	42 dB(A)	38 dB(A)
aroTHERM plus 12kW	60 dB	52 dB(A)	42 dB(A)	38 dB(A)

“What is a heat pump?” A Heat Pump uses refrigerant technology to produce heating or cooling at an efficiency which has never before been seen. They can produce this energy from multiple sources be it air, water or the ground. The nature of these sources as its ‘fuel’ are the reason why the demand for such products has risen rapidly and continues to grow. Replacing conventional heating methods such as gas and oil boilers heat pumps are being brought in due to the global demand for lower c02 levels and the UK’s carbon neutral goal by 2050. To speed up the process after 2025 any new build must be fitted with a renewable heating system. Initially invented in 1856 by Peter Von Rittinger, it took many years to develop a sufficient model to maximise the output of such systems. It was not until the oil crisis in the 1970’s that caused a drift away from fossil fuels leading to a rise in installation throughout America for their dual action of heating & cooling.



Operating Costs of Different Heating Systems

Thermo-dynamic panel	Electric Boiler	Electric Immersion Heater	Heating Oil	Bottled Gas	LPG Gas	Mains Gas	Cost per unit
2.5	12.0	30.0	6.0	32.0	7.5	4.5	pence / kWh
30	144	360	72	384	90	54	pence / day

Thermodynamic Panels

Renewable energy sources have improved the lives of many in the UK, and they continue to do so as more people embrace them. **Thermodynamic panels are one of these alternative energy sources** that are still relatively new to the British market, yet have already made a name for themselves thanks to their efficiency and reliability, as well as their ability to operate in conditions which are unsuitable for solar thermal collectors, for example, at night or during wintertime.



Bracken

This product offers the antique warmth and elegance of our Tegula range in a permeable paving solution to help you manage the surface water run off. The tumbled stones have a beautiful effect and are available in a variety of vibrant and long lasting colours.

<https://www.tobermore.co.uk/homeowner/products/permeable-paving/hydropave-tegula/>

Your Design Bristol

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Client:	Mr & Mrs Ashby	Drawing:	Proposed Green Products	Project Description:	
Address:	8 Druid Stoke Avenue Bristol	Designed By:	CH	Proposed Dwelling:	
		Date:	29/12/2023		
		Cad File:	Ashby		
		Status:	For Comment		
	BS9 1DD	Scale:	Labelled @ A1		
				Revisions:	
				A	
				B	
				C	
				D	
				E	

NB
 Author Retains Copyright.
 Responsibility is not accepted for errors made by others in scaling from this drawing.
 All dimensions, levels and angles to be checked on site by the contractor.
 All boundaries are assumed and we accept no liability for boundary inaccuracy.
 You are reminded of your responsibilities under the 'Party Wall etc. Act' 1996 where applicable.