



**Table 2.1 SuDS components**

		What	Why	Where	Flood risk management benefits	Water quality management benefits	Amenity and biodiversity benefits
Green roofs		The roof of a building that is partially or completely covered with vegetation or another growing medium.	To control runoff as close to source. Store water and filter out pollutants. Can provide other benefits.	Private in curtilage (source control).	☆☆☆	☆☆	☆☆☆
Soakaways		Excavation or trench that can be filled with filter material. Can be made of pre-cast concrete or polyethylene rings/perforated storage structures that are then backfilled with granular material. Allows water to soak away into the ground.	To store runoff, filter out pollutants and recharge groundwater.	Private in curtilage (source control). Also next to roads. Can be easily retrofitted.	☆☆☆	☆☆☆	☆
Rainwater harvesting		System to collect water from impermeable surfaces for use in non-potable water situations.	Reduce the amount of potable water use.	Private in curtilage (source control).	☆☆☆	☆☆	☆
Permeable pavements		Surfaces that allow water to soak into the ground or a gravel-filled base. Porous surface replaces traditional hard (impermeable) surfaces.	Water is stored in the base and released gradually. Also, it can treat runoff and remove pollutants. Can be used in permeable and impermeable ground conditions (it incorporates some form of outflow and overflow component).	Private in curtilage (source control), car parks and some roads.	☆☆☆	☆☆☆	☆
Geocellular /modular systems		Modular plastic systems that can be used to create below ground infiltration or storage.	Can both store and allow infiltration of water. Flexible systems that can be used on most sites.	Driveways, car parks, next to roads.	☆☆☆	☆	☆





**Key**

Good contribution ☆☆☆



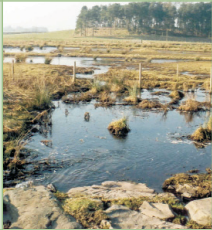
Medium contribution ☆☆

Low contribution ☆

**Table 2.1**     **SuDS components (continued)**

		What	Why	Where	Flood risk management benefits	Water quality management benefits	Amenity and biodiversity benefits
Channels and rills		Open landscaped channels which can be vegetated, used to convey water from one SuDS component to another.	Used to convey water and can provide some storage.	In curtilage, in open space.	☆☆	☆☆☆	☆☆☆
Bioretention		Depressions backfilled with a sand/soil mixture and planted with vegetation. Water enters through a vegetated surface and then trickles via a filter layer entering a perforated pipe at the bottom before being carefully transported downstream.	To store water and release it gradually. Some water quality improvement is provided by a filter layer.	Private in curtilage SuDS (source control), in open space, next to roads and car parking.	☆☆☆	☆☆☆	☆☆☆
Infiltration trench		Stone-filled trenches that allow water to soak into the ground, as close to where the rain lands as possible.	To control the amount of runoff and provide storage. Needs permeable ground conditions.	Open space next to roads (if preceded by filter strip) and car parks.	☆☆☆	☆☆	☆☆☆
Filter strips		A vegetated area of gently sloping ground designed to drain water evenly off impermeable areas and filter out silt and other material.	To filter out pollutants, especially sediment, before runoff entering another SuDS component or watercourse.	Open space, next to roads and car parks.	☆☆	☆☆☆	☆☆
Rain garden		Vegetated area into which runoff is drained, attenuated and stored. Water infiltrates into the ground or is taken up by plants.	To store runoff, filter out pollutants and recharge groundwater.	Next to roads, in residential developments and throughout urban areas.	☆☆☆	☆☆☆	☆☆☆

**Table 2.1 SuDS components (continued)**

		What	Why	Where	Flood risk management benefits	Water quality management benefits	Amenity and biodiversity benefits
Filter drain		They are gravel filled trenches with a pipe with small holes installed in the bottom.	The gravel slows the flow by storing water and releasing it gradually. Can be used in permeable or impermeable conditions. May need periodic maintenance to prevent siltation.	In open space, next to roads and car parks.	☆☆☆	☆☆	☆
Swales		Shallow vegetated swales that can run parallel to hard surfaces, allowing runoff to trickle down the side slopes and into the base of the component. Water is then transported in a controlled manner to another SuDS component or to a stream or river downstream.	To treat and attenuate runoff. Can be used in permeable or impermeable ground conditions (if under-drained).	In open space, next to roads and car parks.	☆☆☆	☆☆☆	☆☆
Trench troughs		Open landscaped channels which can be vegetated, over filter medium and under-drained. Used to convey, attenuate and improve water quality.	Used to convey water. Will provide some storage and attenuation.	In open space.	☆☆☆	☆☆☆	☆☆☆
Detention basin		Shallow vegetated depressions to control the amount and rate of runoff and some water quality improvement.	To store water during large storms, and release it gradually.	In open space.	☆☆	☆☆☆	☆☆
Wetland		Retention ponds with more emergent aquatic vegetation and a smaller open water area.	The wetlands store water and release it slowly. Sediment removal also takes place through settlement and biological treatment occurs due to the vegetation.	In open space, next to roads and car parks.	☆☆☆	☆☆☆	☆☆☆
Retention ponds		Artificial ponds with an open water area and marginal wetland around the edge. Also, should incorporate a stilling/settlement area at the inlet to allow for some treatment and calming of storm flows to prevent shock loading of the main water body.	Ponds store water and release it slowly, allowing sediment to settle in the pond in a designated basin at the inlet, while the vegetation provides biological treatment. Can be hard engineered.	In open space.	☆☆☆	☆☆☆	☆☆☆