



Driveways and Gardens

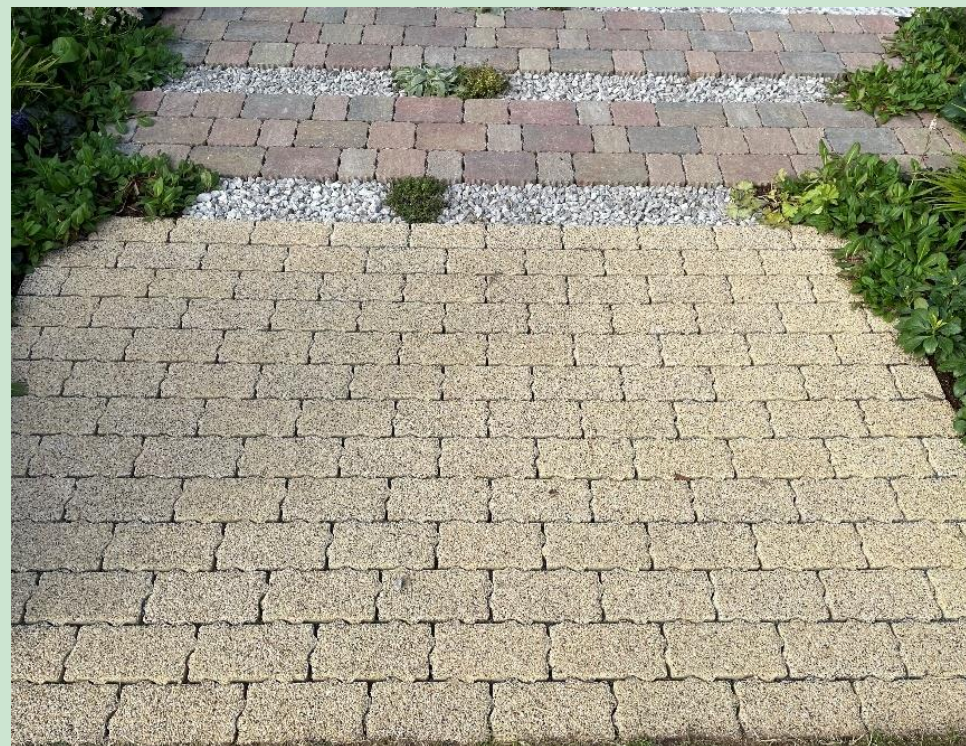
A Design Handbook for Householders



Low-maintenance planting



Sustainable drainage



Permeable paving

This guide has been produced in collaboration with:



Disclaimer

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Your guide to a better driveway and garden

Looking to transform your driveway and garden into a space that's both beautiful and practical? This guide is packed with inspiration to help you make design choices that benefit you, your local wildlife and the wider environment.

It's been produced by the Unpave the Way project following successful exhibitions at the RHS Urban Show (Rainwater Capture Cube) and RHS Tatton Flower Show (2024). You can visit the Unpave the Way Garden for free at Whitaker Park, Rossendale, Lancashire.

Inside this guide, you'll find:

- ✓ A low-maintenance planting list curated by an RHS Gold Medal Winning Garden Designer
- ✓ Simple DIY sustainable drainage (SuDS) features from the Unpave the Way Garden
- ✓ Low-cost aesthetic permeable paving options for your driveway
- ✓ Tips for finding a suitably qualified permeable paving installer

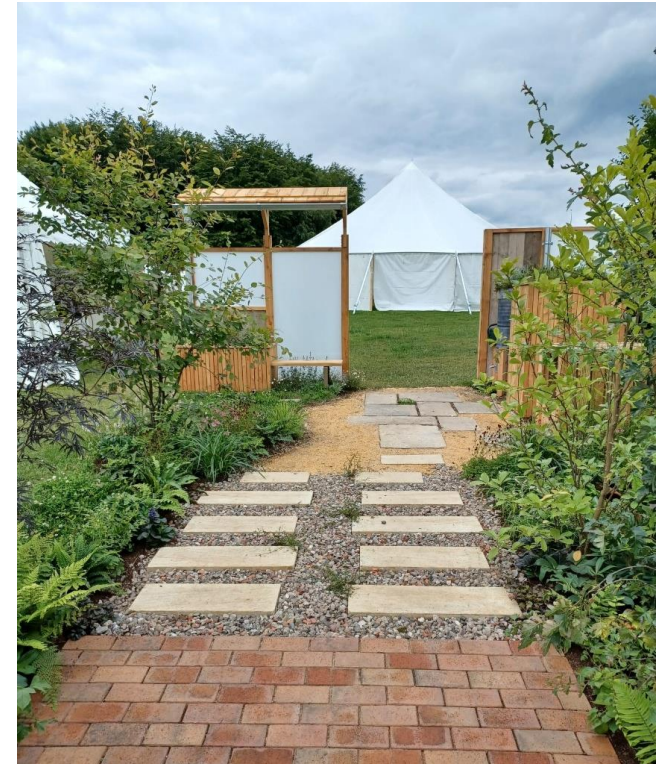
Whether you're starting from scratch or just looking to improve your existing driveway and garden, this guide will show you how you can have a green front garden as well as driveway space.



Whilst driveways and front gardens are the focus of Unpave the Way, all the ideas in this guide can be used in your back garden too!



The Unpave the Way project is funded by the North West Regional Flood and Coastal Committee and supported by project partners: United Utilities Rainwater Management Team, Environment Agency, and Lancashire County Council. To find out more about the project, visit: [Unpave the Way | The Flood Hub](#)



**Sustainable drainage (SuDS)
retrofit-designed front garden and
driveway from the
Unpave the Way Garden
RHS Tatton 2024**

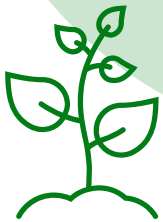
Having a green and permeable front garden is more important than ever!

RHS research published in 2025 highlighted:

There are
16.6m
front gardens in Great Britain,
covering a total area of **162,624 ha**

89,000 ha
of that has been paved over...

...equivalent in size to
over half
of Greater London



Gardens host
over half
of the UK's butterfly
species and more than
40%
of bird and mammal
species



People living
near gardens and
green spaces have
lower death rates,
including from heart
issues and chronic
respiratory
diseases

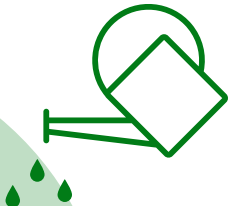


Gardening
improves your mental,
physical and social wellbeing

77%
of gardeners reported
positive impacts on their
mental health

Householders use
7–8 litres
of mains tap water in their
garden per day

Using rainwater from a
water butt instead is
**better for your plants
and your pocket!**



Planning permission for your front garden and driveway

Since 2008, there has been a legal requirement for homeowners to gain planning permission from their Local Planning Authority for new or replacement paved areas within their front garden which exceed 5m^2 , unless the paving is permeable or porous or drains to a porous area within their front garden.

For context, 5m^2 is less than half a car parking space (11.5m^2) therefore if you're paving your front garden to accommodate a car you will need planning permission, unless you use permeable or porous paving.



For more information, visit:

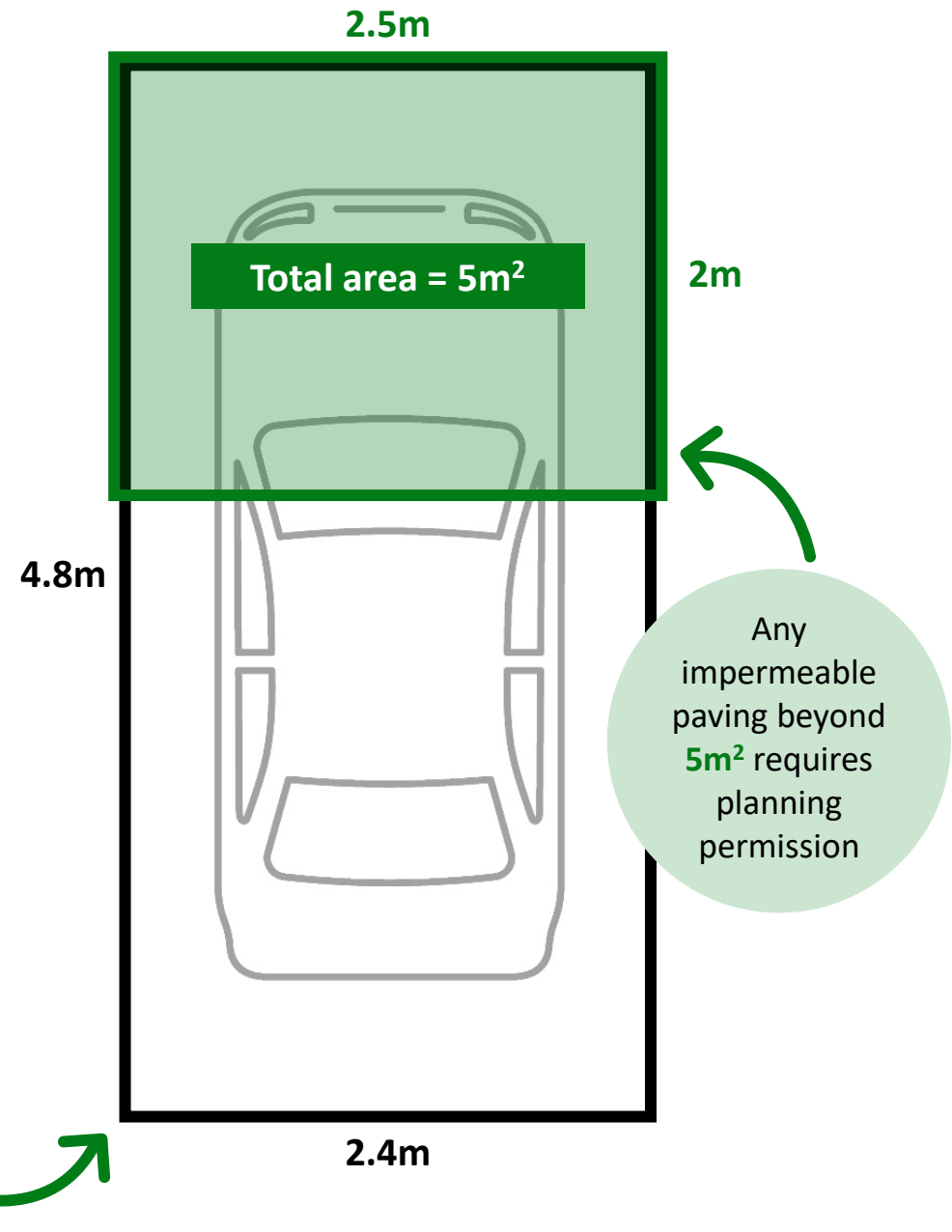
[Guidance on the permeable surfacing of front gardens | gov.uk](https://www.gov.uk/guidance/permeable-surfacing-front-gardens)

What happens if I don't secure planning permission for my driveway?

Your local council may take enforcement action and either make you apply for retrospective planning permission or make you pull up your impermeable paving.

Not having planning permission for your driveway can cause costly delays when selling your home, as it can be classed as a 'Defective Title' which would require you to gain retrospective planning permission prior to the sale.

Note: The diagram opposite is not to scale, and is for visualisation purposes only.



Bad example

Paved front gardens or driveways can have negative impacts

Environmental impacts

- Loss of wildlife habitats, reducing shade, shelter, and access to water.
- Fewer plants to filter pollutants, worsening water quality of surface water run off.
- Faster and larger surface water run off from impermeable surfaces which overwhelms sewers, causing flooding and river pollution due to combined sewer overflows (CSO's).
- Hard surfacing contributes to the urban 'heat island effect' by increasing the temperature around homes, causing drought in the summer months.
- Dust and other air pollutants aren't trapped and absorbed by planting, worsening local air quality.
- Hard garden boundaries like fencing limit wildlife movement (e.g. hedgehogs) and prevent them from accessing food and water.

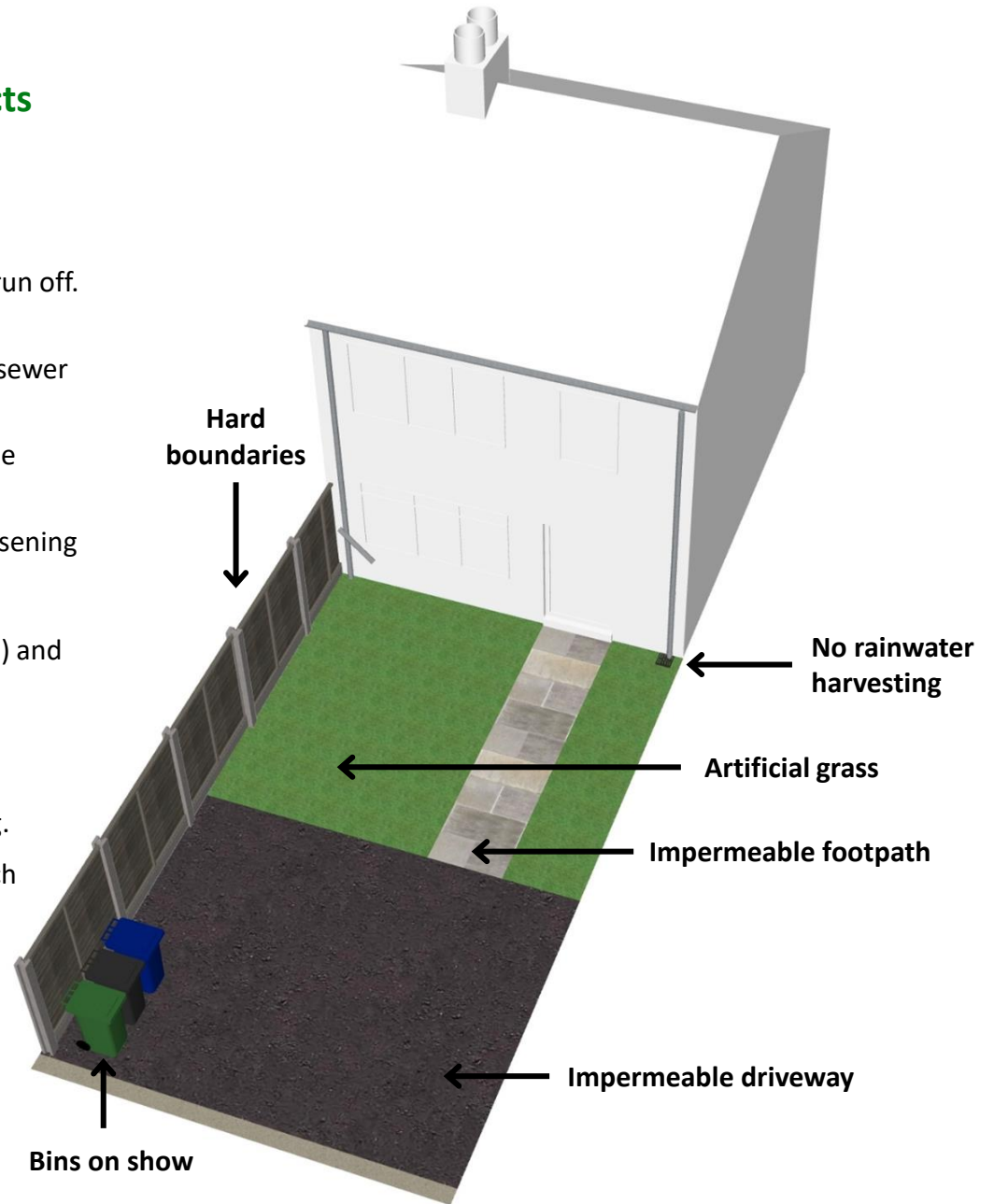
Householder wellbeing impacts

- Removes access to greenspace which is proven to impact mental wellbeing.
- Removes the need for gardening, creating less active indoor lifestyles, which impact physical and mental health.

When heavy rain falls onto a double driveway made of impermeable surfacing, this causes **1,170 litres** of surface water runoff.

Multiply this by 100 impermeable driveways and **117,000 litres** of floodwater is generated, which is equivalent to approximately 780 bathtubs of water.

Unpave the Way Research, 2024



Good example

Creating a green, sustainable front garden or driveway has many benefits

Environmental benefits

- Significantly reduces surface water runoff and flooding by allowing rainwater to soak into the ground.
- Plants absorb pollutants and produce oxygen, which improves air quality.
- Native plants, trees, and flowers increase biodiversity and provide food and shelter for wildlife.
- Greenery cools urban areas by reducing the urban 'heat island' effect.

Sustainability and resource efficiency

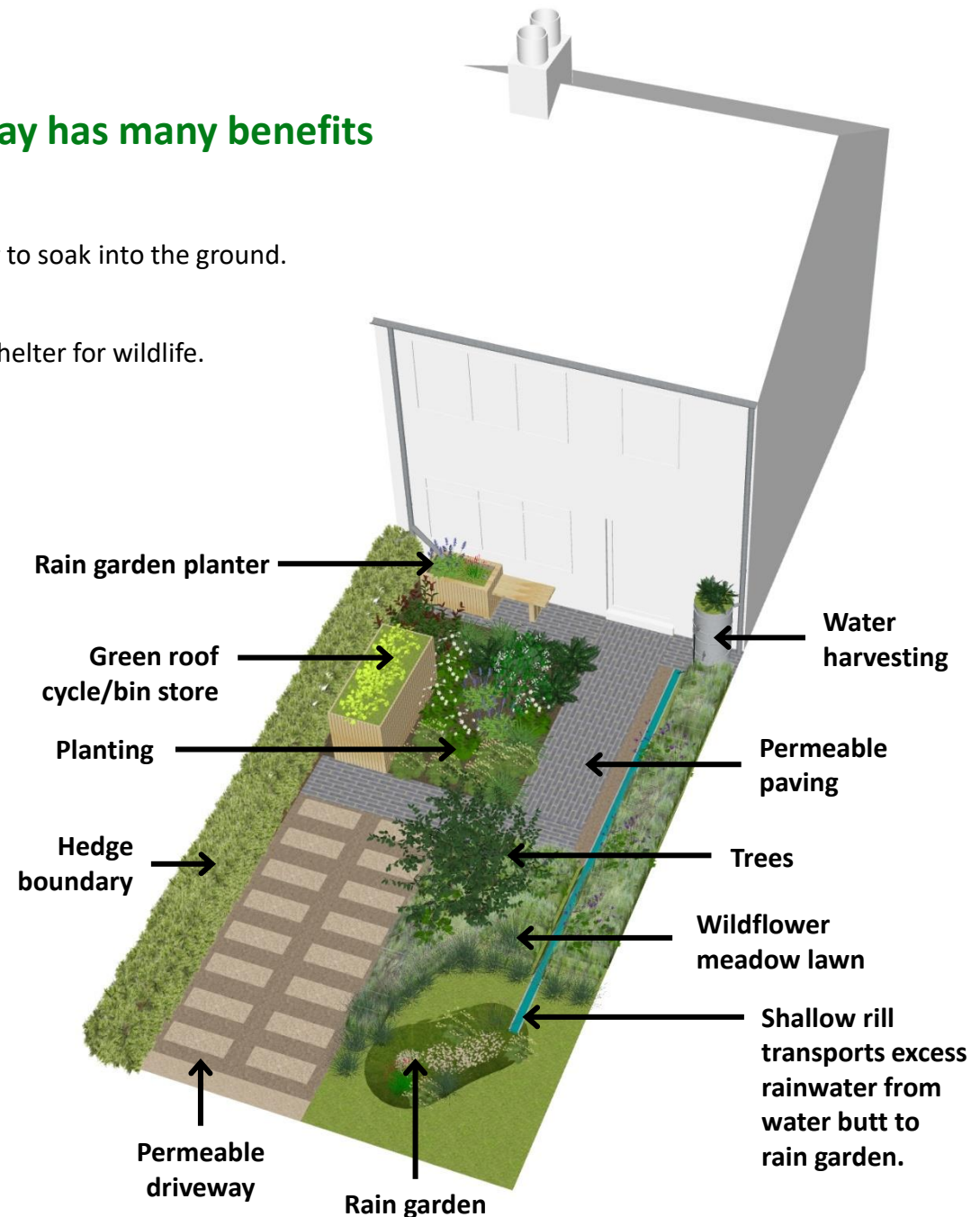
- Drought-tolerant plants and water butts reduce water use.
- Includes hardy, low-maintenance plants and materials that last longer.
- Uses natural and recycled materials which reduces carbon footprint.

Aesthetic and practical benefits

- A green, well-designed front garden improves the appearance and value of your property.
- Even a small green area can make your home feel more inviting.
- Greenery and natural materials promote relaxation and connection with nature.

Functional benefits for driveways

- Permeable paving reduces surface water run off and flooding.
- Permeable paving traps and filters pollutants improving water quality.
- A well-planned design allows both vehicle access and green space.



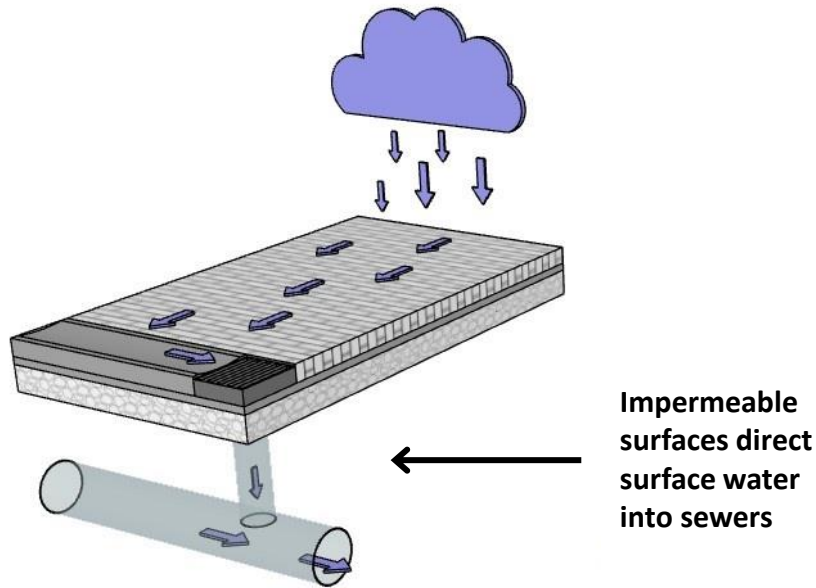
Permeable vs impermeable

When a driveway's surfacing is impermeable the rainwater is prevented from draining into the ground and instead runs off the driveway at an increased rate.

During heavy rainfall, surface water runoff from impermeable surfaces can cause flooding to your home, neighbours and community.

Unless this surface water is directed onto permeable paving, a raingarden or other permeable/porous surface within the front garden.

Examples of impermeable surfacing are tarmac, imprinted concrete and traditional block paving.

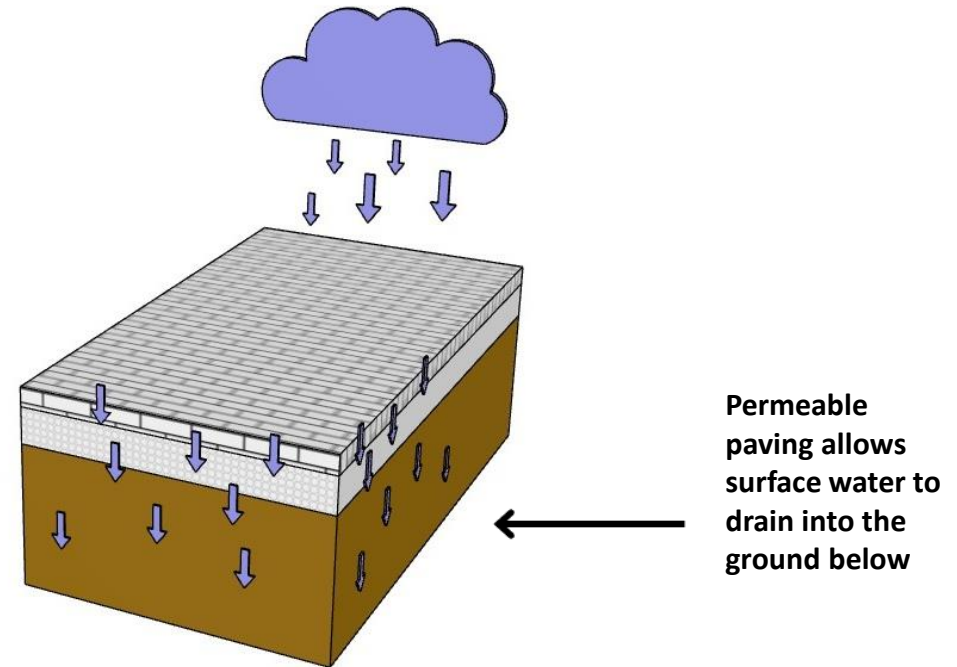


Impermeable surface

Permeable driveways mimic the natural process of infiltration where rainwater can drain through the surface and into the ground.

Permeable paving can still be used on clay-heavy ground, if extra storage space is built underneath. This temporarily holds rainwater, before slowly releasing it through an outlet pipe which connects to a surface water sewer.

You should consult with a suitably qualified contractor to install underground storage systems.



Permeable surface

Your permeable paving options

Fortunately, there are many permeable paving options available which do not require planning permission.

Permeable paving is available to purchase online and from main garden centres and home improvement retailers.

Most permeable paving suppliers have registered contractors who are suitably qualified to install permeable paving.

The following pages describe the main permeable paving types and the associated cost, maintenance requirements and environmental benefits.



You must ensure that your sub-base is also permeable, otherwise rainwater will not be able to drain into the ground as intended.

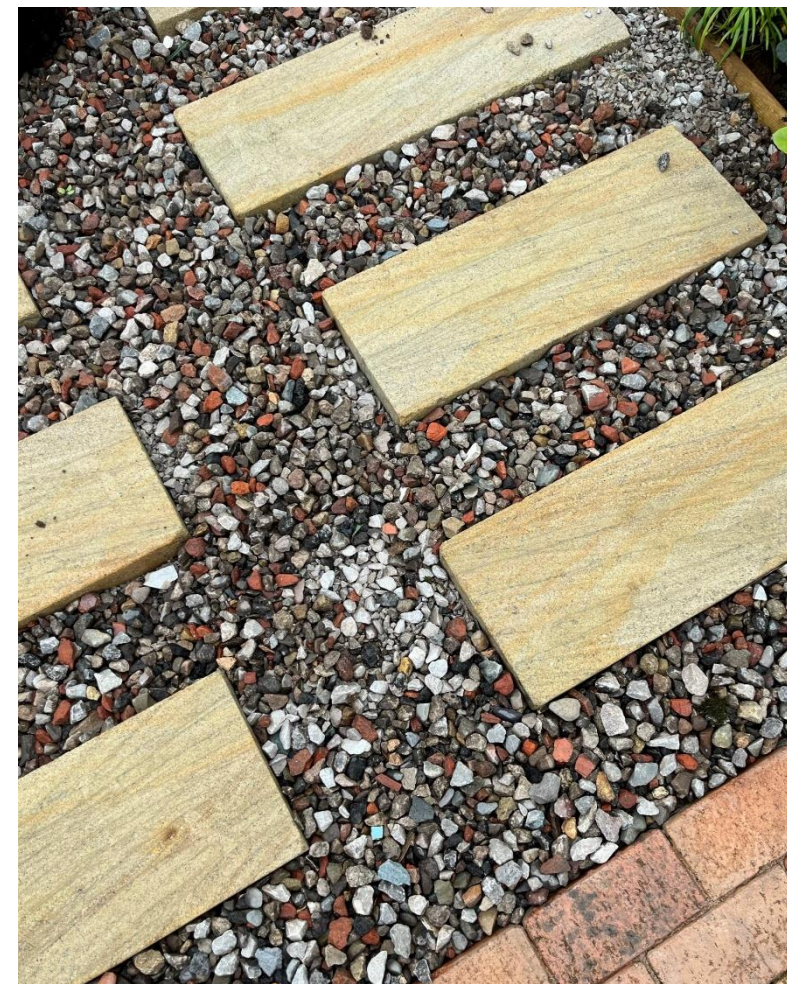


Carry out an infiltration test prior to installing permeable paving to ensure your soil can drain rainwater effectively.

Find out how to carry out this test on page 39.



Before purchasing, check that the paving you have selected is permeable as there are both permeable and impermeable varieties of many paving products, e.g. resin bound paving.



Permeable wheel track arrangement made of sandstone pavers and angular gravel
Unpave the Way Garden

Your permeable paving options



**Gravel grids and
permeable block pavers**



**Permeable
resin-bound gravel**



**Concrete block
permeable paving**



**Reinforced grass/
grass grids**

Image: Gaia Landscapes



**Granite finish -
concrete block
permeable paving**

Permeable paving: cost and maintenance

Material	Description	Environmental benefits	Application	Cost estimate	Installation	Maintenance
Permeable resin-bound gravel	Resin-bound paving is a hardened mixture of small aggregate stones and resin. Note: Not all resin bound paving is permeable therefore please ensure you research individual products.	Helps to reduce flood risk by enabling rainwater to infiltrate into the soil or be temporarily stored in a permeable sub-base, before being gradually released into the ground or drainage network.	Footpaths, patios and driveways.	£20–£30/m² (materials only) £40–£60/m² (materials and labour) Example: In the UK, a 40m² resin driveway costs around £3,000–£5,000 for materials and installation.	Using a certified installer is strongly advised.	Sweep regularly using a stiff brush to keep it free of dirt and debris.
Concrete block permeable paving	Non-porous blocks with permeable aggregate filled joints so that rainwater can infiltrate. Pollutants, micro plastics and sediments are trapped at the surface of the joint material which filters the water as it passes through the system.	Helps to reduce flood risk by enabling rainwater to infiltrate into the soil or be temporarily stored in a permeable sub-base, before gradually draining into the ground or sewer. Permeable paving works well with trees, by allowing essential oxygen and carbon dioxide (CO₂) exchange for roots and access to rainwater.	Footpaths, patios and driveways.	£30–£70/m² (product only) £80–£120/m² (product and labour) Example: In the UK, a double driveway costs around £3,400–£5,200 for materials and installation.	Using a certified installer is strongly advised.	Little maintenance is required. Keep it well swept. The surface should be inspected at three months and, if needed, the joint material topped up. Inspect annually to check the jointing. Do not put piles of soil or mix concrete on the paving and avoid other activities that could block it.

Permeable paving: cost and maintenance

Material	Description	Environmental benefits	Application	Cost estimate	Installation	Maintenance
Gravel grids	Angular gravel/stone aggregate laid on a porous surface which allows rainfall to infiltrate through into the soil.	Helps to reduce flood risk by enabling rainwater to infiltrate into the soil.	Footpaths and driveways.	£35–£55 (materials only)	Can be done DIY. Note: Angular gravel stays in place much better than round gravel. Gravel should be laid in a mesh grid.	Weed, rake and replenish with additional gravel as required.
Reinforced grass mats	Both plastic and concrete reinforcement systems are available to strengthen the ground and reduce erosion. The plastic systems can also be used with gravel.	Helps to reduce flood risk by enabling rainwater to infiltrate into the soil.	Footpaths and driveways.	£12–£20/m ² (materials only)	Can be done DIY.	Mow during the summer months, reseed as required.

Note: The costs in this table are 2026 price estimates and are subject to fluctuation. Costs may vary regionally. Source: Checkatrade.

Impermeable paving: cost comparison

Material	Description	Environmental impacts	Application	Cost estimate	Installation	Maintenance
Tarmac	Black/grey impermeable material made of crushed stone, fine minerals and bitumen (a tar like) by-product of petroleum refining.	Doesn't let rainwater drain through the surface which increases surface water run off and flooding. Absorbs heat during summer and can reach temperatures of 60°C.	Footpaths and driveways.	Approx £50 per m² A two-car driveway (50m²) costs approx. £4,500 for materials and labour. Note: Additional planning permission cost of £262.	Not DIY friendly. Using a certified installer is strongly advised.	Sweep regularly with a stiff brush to clear leaves and debris. Wash away oil stains, mud and moss using a hose and a mild detergent. Avoid high-pressure washers, as the intense water can blast away the protective binder and create holes. Repair cracks and holes with a repair mix. Apply Tarmac Restorer every three to five years to restore its colour and protect against weathering and UV damage.
Printed concrete	Concrete which is poured and stamped with patterns to mimic cobbles, slate and brick.	Doesn't let rainwater drain through the surface which increases surface water run off and flooding. Absorbs heat during summer and can reach temperatures of 60°C.	Footpaths, patios and driveways.	Approx £80 per m² A two-car driveway (50m²) costs approx. £5,000–£6,000 for materials and labour. Note: Additional planning permission cost of £262.	Not DIY friendly. Using a certified installer is strongly advised.	Sweep regularly to clear leaves and dirt. Wash occasionally to remove oil and fuel stains. Reseal every three to five years.

Impermeable paving: cost comparison

Material	Description	Environmental impacts	Application	Cost estimate	Installation	Maintenance
Impermeable block paving	Non-porous concrete block paving.	Doesn't let rainwater drain through the surface which increases surface water run off and flooding.	Footpaths, patios and driveways.	£30 to £60 per m². Example: In the UK, a two-car driveway (50m²) costs approx. £4,500–£6,500 for materials and installation. Note: Additional planning permission cost of £262.	Using a certified installer is strongly advised.	Sweep regularly with a stiff brush to remove leaves and dirt. Clean oil stains with a specialist block paving degreaser. Replace any lost jointing material once a year.
Porcelain pavers/slabs	Non-porous porcelain material made using a mix of sand, clay and minerals.	Doesn't let rainwater drain through the surface which increases surface water run off and flooding.	Footpaths, patios and driveways.	£30-£80 per m². Example: In the UK, a two-car driveway (50m²) costs approx. £5,000–£8,000 for materials and installation. Note: Additional planning permission cost of £262.	Not DIY friendly due to complex installation process. Using a certified installer is strongly advised.	Sweep regularly with a soft-bristled brush to remove leaves and dirt. Mop/scrub with a mild, pH-neutral soap and warm water. Dry with a soft cloth to prevent watermarks.

Note: The costs in this table are 2026 price estimates and are subject to fluctuation. Costs may vary regionally. Source: Checkatrade.

Tips for choosing a driveway contractor

Information you should know before choosing a driveway contractor to install permeable paving

Basic checks

- Ensure the driveway contractor is a registered business by searching on Companies House: [Get information about a company | gov.UK](https://www.gov.uk/get-information-about-a-company)
- Ask if the contractor has public liability insurance and ask for proof of insurance.

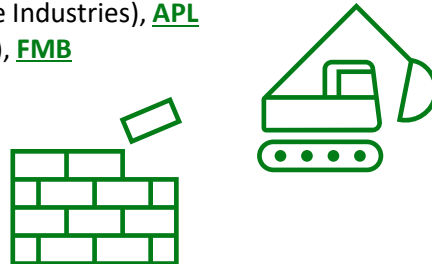


Review customer feedback

- Read customer reviews on Trustpilot, Google, Checkatrade and social media (e.g. Facebook) and check for references from past clients who have had permeable paving installed.
- Get personal recommendations from friends, family, neighbours and your local community Facebook group.
- Look for a contractor with a strong work portfolio of permeable paving driveways.

Look for accredited contractors

- Search permeable paving suppliers' websites for their accredited contractors list, who have received training on installing their permeable paving products.
- Check if the contractor is registered with relevant professional bodies such as [BALI](#) (British Association of Landscape Industries), [APL](#) (The Association of Professional Landscapers), [FMB](#) (Federation of Master Builders).
- You can also search these associations' websites for registered contractors.



Check their sustainable drainage (SuDS) knowledge

- Permeable paving is a form of SuDS, therefore they should understand the principles of SuDS and permeable paving installation.
- Ask the contractor if they are experienced in constructing driveways using permeable paving as the construction process is different from traditional impermeable paving.
- The contractor should be aware of local planning requirements and the need for planning permission for impermeable surfaces exceeding 5m².

Qualifications

- There are no mandatory, specific qualifications or licences required for driveway contractors to install permeable paving in the UK, but they must adhere to [British Standards](#), particularly [BS 7533-103](#), for correct installation and compliance with SuDS (Sustainable Drainage Systems) regulations.
- [BS 7533-103](#) specifically covers the laying of permeable paving and ensures water can percolate through the system.
- A common qualification for driveway contractors to hold is a Level 2 or 3 Diploma in paving construction, hard landscaping, or landscape construction.
- Many driveway contractors in the UK possess a Construction Skills Certification Scheme (CSCS) card. This certification demonstrates that the contractor has the necessary skills and knowledge to work on construction sites safely. A CSCS card is a good indicator of a contractor's professionalism and adherence to industry standards.
- If working on a public highway, driveway contractors must comply with the [Health and Safety at Work Act 1974](#), which mandates safe working practices on-site. Homeowners should verify that their chosen contractor is familiar with and follows these regulations to avoid potential accidents and legal issues.

Sustainable drainage systems (SuDS) for your garden

SuDS are great features to include in front and back gardens as they help to slow the flow of rainwater from your home, which in turn helps to mitigate against flooding. These features are also attractive and provide important habitats for wildlife.

Permeable paving is considered a key SuDS 'source control' component; however, there are many other SuDS components which can be used for rainwater harvesting and habitat creation as well as rainwater drainage, as described on the following pages.



Downspout SuDS planter



**Rain garden from the
Unpave the Way Garden**



**Slow-release water butt
with planter from the
Unpave the Way Garden**

Sustainable drainage benefits key



Temporary rainwater storage to slow the flow and reduce flooding



Rainwater reuse for your garden



Biodiversity for pollinators



Helps to improve water quality in rivers



Urban cooling



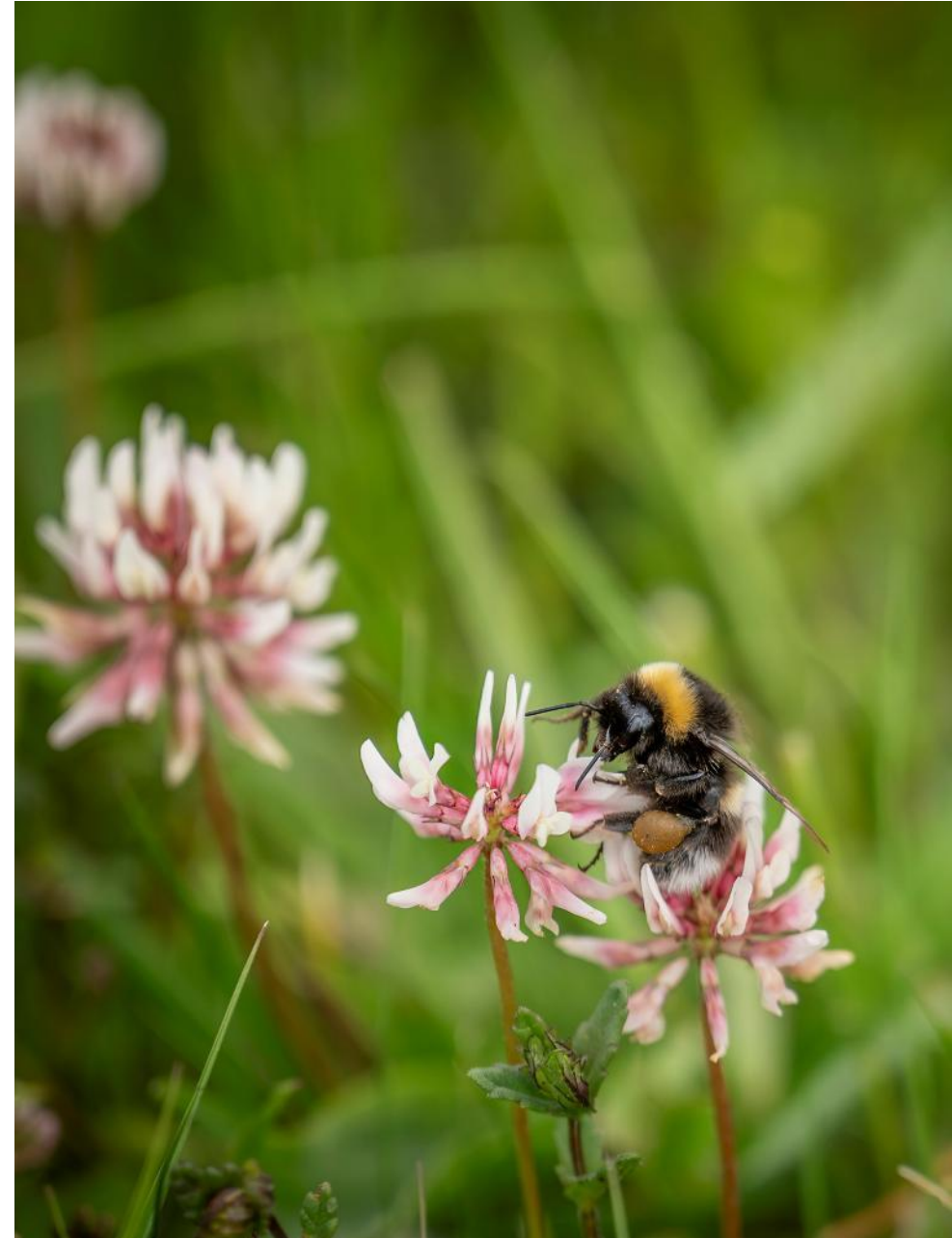
Adds aesthetic value to your home



Improves air quality surrounding your home



Improves your wellbeing through access to greenspace



Rain garden



A rain garden is a shallow depression within the ground which receives surface water run-off from hard surfaces. They are planted with plants that can withstand waterlogging and periods of drought.

Surface water fills the depression and then drains away either via infiltration to the ground or through a drainage outlet to either a further SuDS feature or sewer.



If you have an existing water butt you can connect this up to the rain garden via an above-ground shallow drainage channel, e.g. rill or swale, so that the rain garden can store and drain excess rainwater.



Rain gardens are not permanently wet features. They store and drain (via infiltration) rainwater when it falls and for a short while after but will then dry up.

Plant list from the Unpave the Way Garden

[Ajuga reptans 'Catlin's Giant'](#)

[Alchemilla mollis](#)

[Astilbe white](#)

[Iris 'Black Gamecock'](#)

[Crocsmia x crocosmiiflora 'Emily McKenzie'](#)

[Hosta 'Blue Mouse Ears'](#)

[Hosta 'Halcyon'](#)

[Persicaria Taurus](#)

If you have a variation in ground levels in your garden it is best to use an existing low-spot as this will be the area rainwater naturally flows to.

Alternatively, if your garden has a consistent ground level then you can dig down to create a new rain garden.



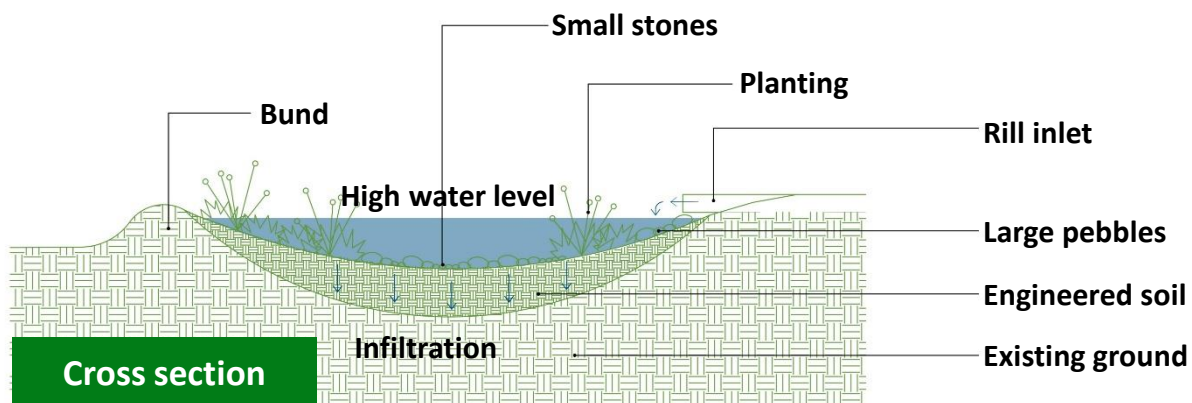
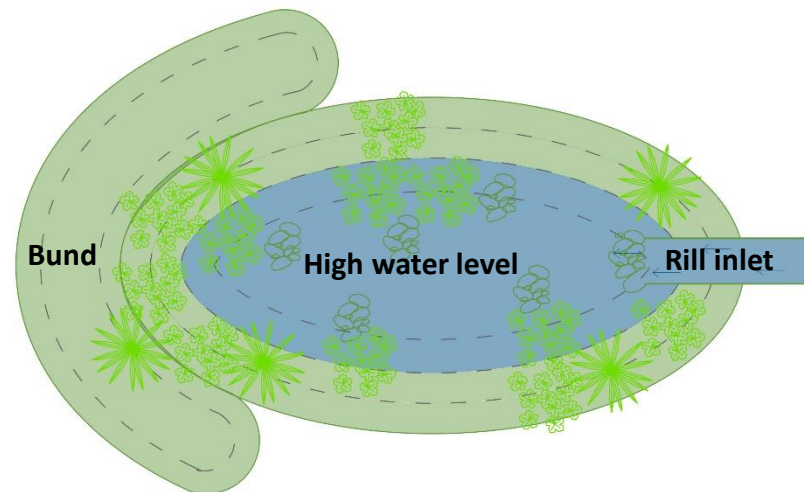
Rain garden
Unpave the Way Garden, RHS Tatton 2024

Rain garden



How to create a simple rain garden

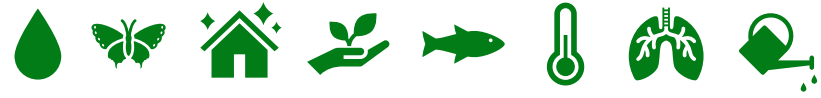
- 1 Use an existing low spot in your front garden, or if your garden is level then create a new low spot by digging down to create a shallow depression approximately 300mm deep. The rain garden diameter and shape can be adjusted to suit the space available.
- 2 Refill the depression with layers of growing medium such as soil, compost and organic matter like mulch to assist with drainage of rainwater.
- 3 Plant water-tolerant plants in the middle of the rain garden as this will be the wettest area during heavy rainfall. Choose drought-tolerant planting for the outer edge of the rain garden, as these areas will dry out the fastest due to being at a higher level.
- 4 Some examples include:
Iris 'Black Gamecock' – plant on outer edge
Astilbe chinensis 'Vision in White' – plant in the middle
Crocsmia × crocosmiiflora 'Emily McKenzie' – plant on outer edge



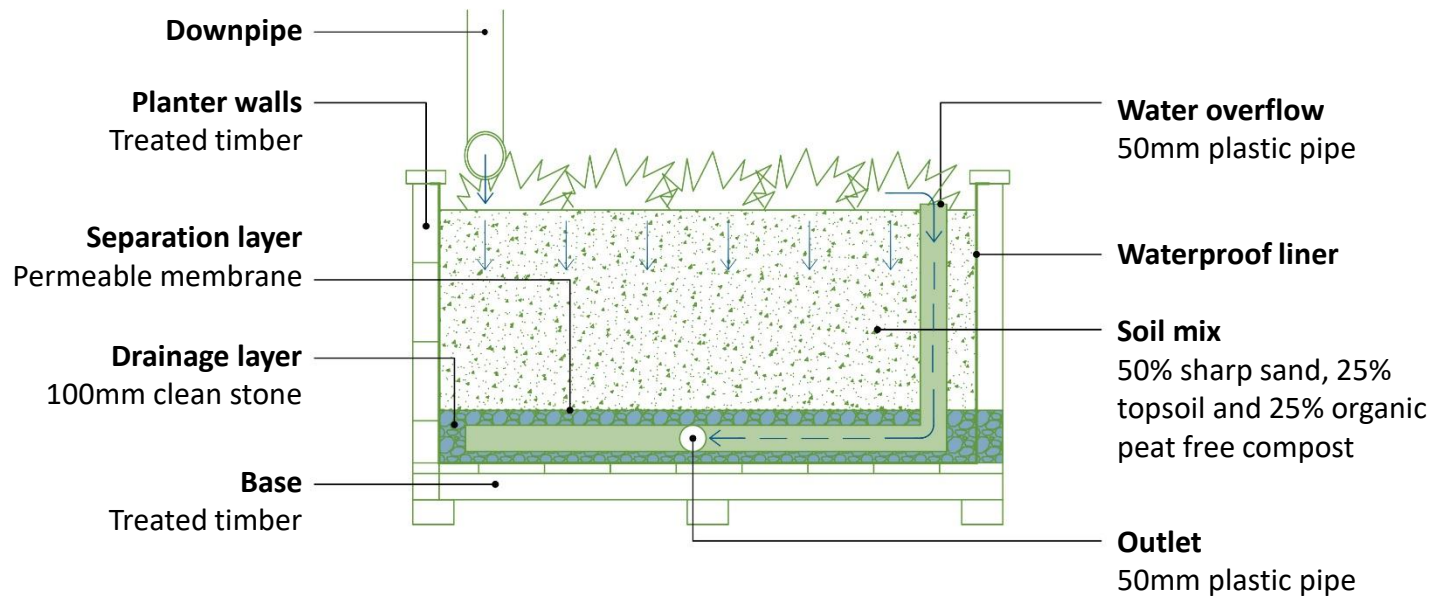
For guidance on creating a rain garden in a sloped garden, visit:

[Rain Garden Guidance](#) | [RHS Gardening](#)

Downspout SuDS planter



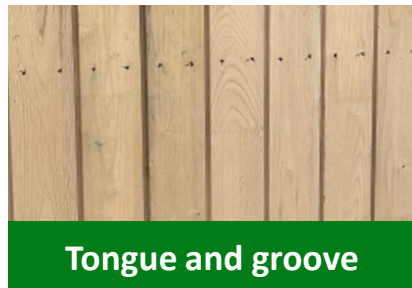
Downspout SuDS planters collect rooftop surface water runoff via a downpipe and store it within the planter. They help to remove surface water from the drainage network by capturing and storing rainfall, allowing it to soak into the ground, or release it slowly into the drainage network.



Downspout planter
Unpave the Way Garden
RHS Tatton 2024



Wooden battens



Tongue and groove



Painted battens

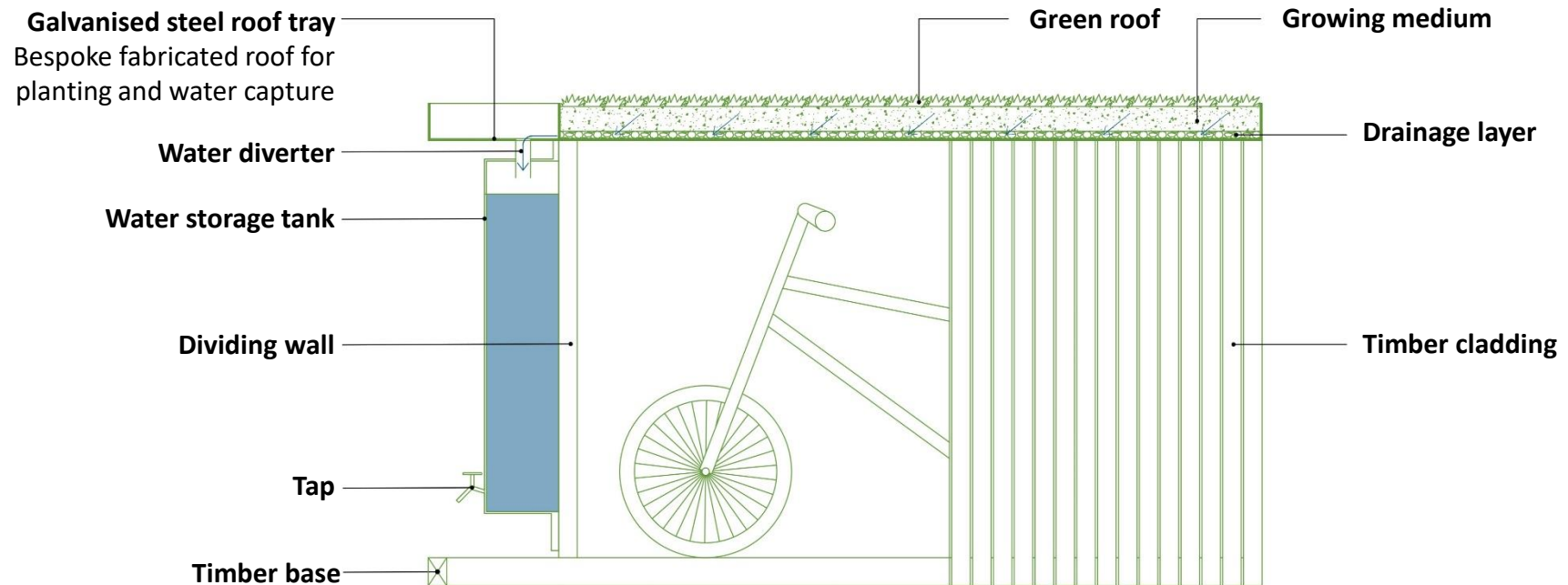


Direct water from the overflow outlet
to a rain garden or planting bed.

Green roof cycle store



Green roof cycle stores function by intercepting and retaining rainfall, reducing the speed and volume of surface water runoff. There are different planting options for green roofs such as sedum, wildflowers, perennials and grasses.



Sedum and gravel roof



Wildflower roof



Mixed planting green roof

Rills



Rills are shallow drainage channels which transport rainwater from one sustainable drainage (SuDS) component to another.

In the Unpave the Way Garden a galvanised steel channel and half a clay pipe was used to connect a SuDS downspout planter to a rain garden.

Other systems are available, such as precast concrete dished channels.



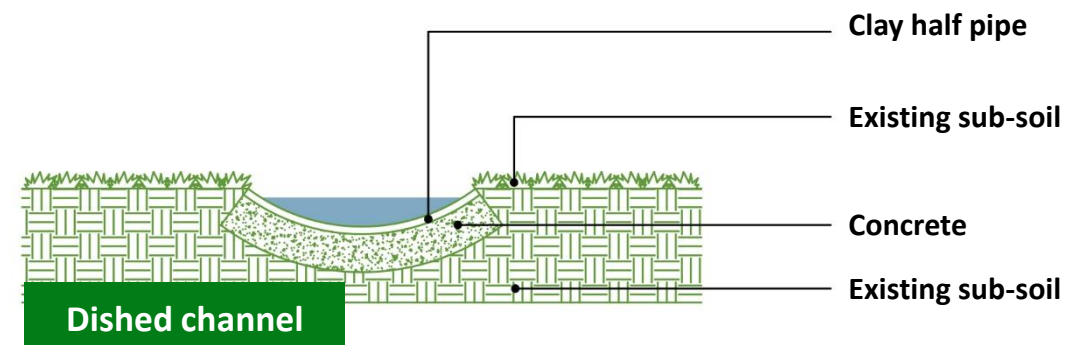
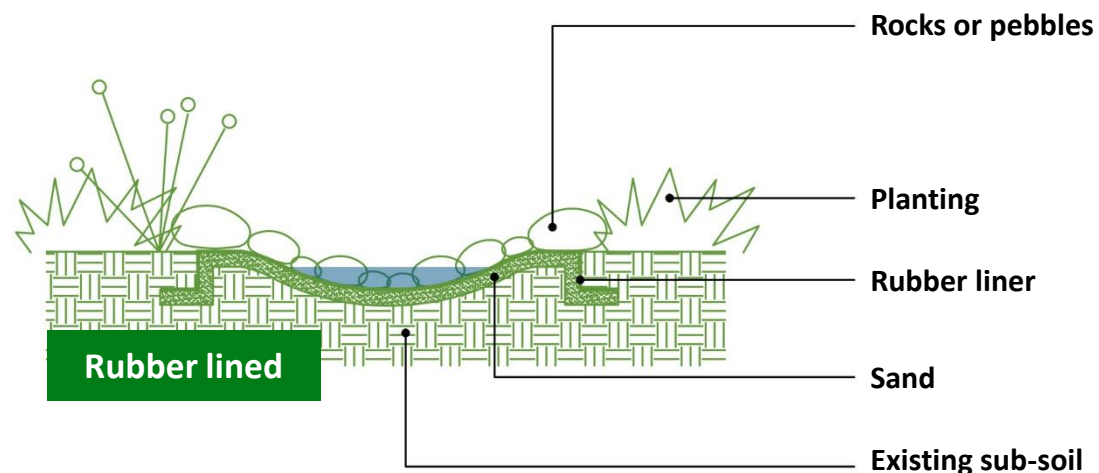
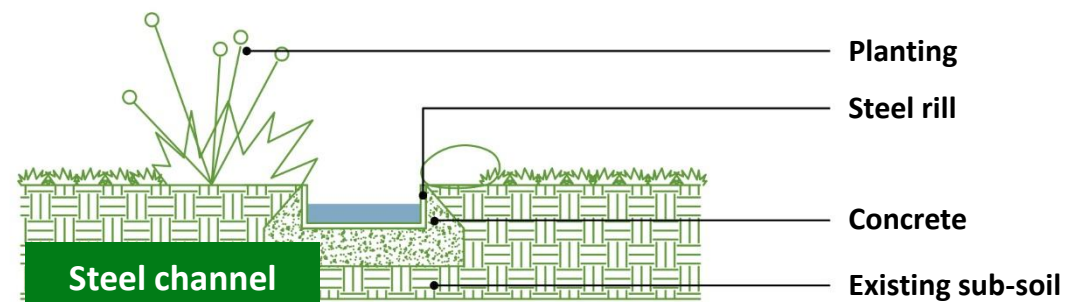
Steel rill
Unpave the Way Garden
RHS Tatton 2024



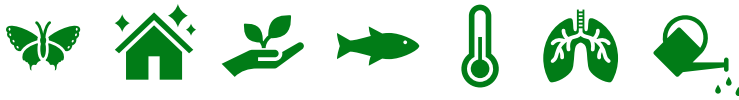
Half clay pipe rill
Unpave the Way Garden
RHS Tatton 2024



Design your water rill to be slightly sloped so water flows gently without stagnating.



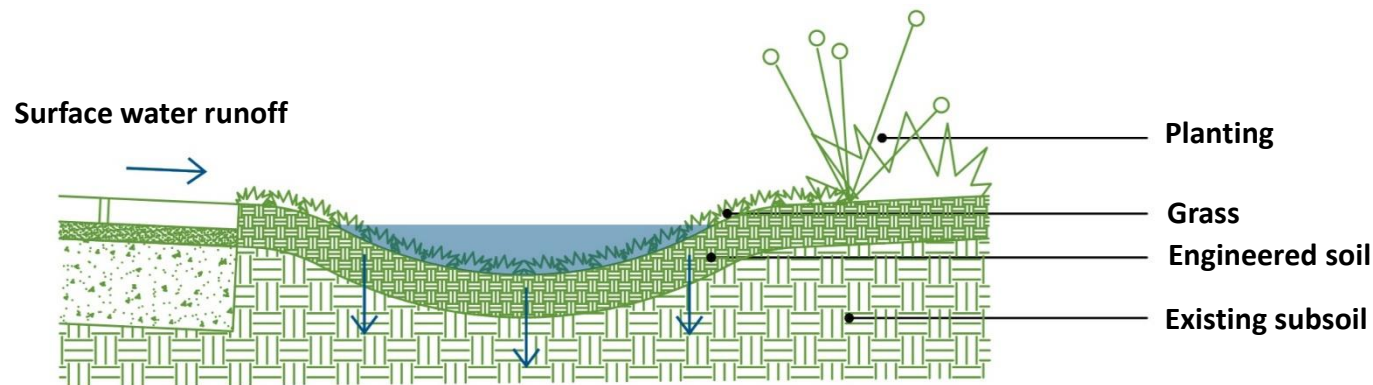
Swale



Swales are shallow vegetated channels which collect and slowly drain surface water run off during heavy rainfall.

They are useful to include on garden boundaries to prevent surface water run off transfer between neighbouring gardens.

Swales are often planted with grass, perennials, or other vegetation to enhance water infiltration and increase attractiveness.



Swale
Unpave the Way Garden
RHS Tatton 2024



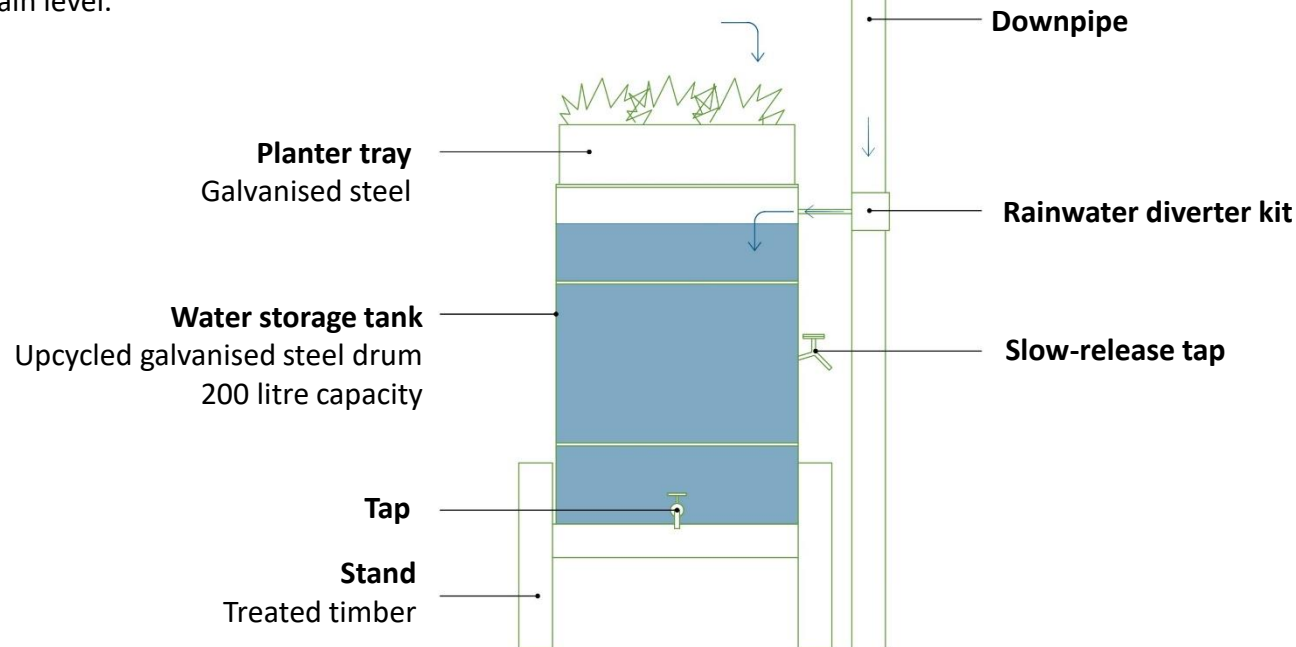
Include a gentle overflow route (like a gravel-filled trench) to direct excess water safely during heavy rainfall.

Water butt



Water butts function by storing surface water runoff from roofs so that it can be reused around the garden during dry weather.

The diagram below shows a slow-release water butt design. It has an overflow tap positioned higher up, which allows excess rainwater to drain away slowly once it reaches a certain level.



Galvanised steel



Treated timber



Slow-release water butt
Unpave the Way Garden
RHS Tatton 2024



To help keep your rainwater clean, fit a filter diverter to keep leaves and debris out and prevent overflow during heavy rain.

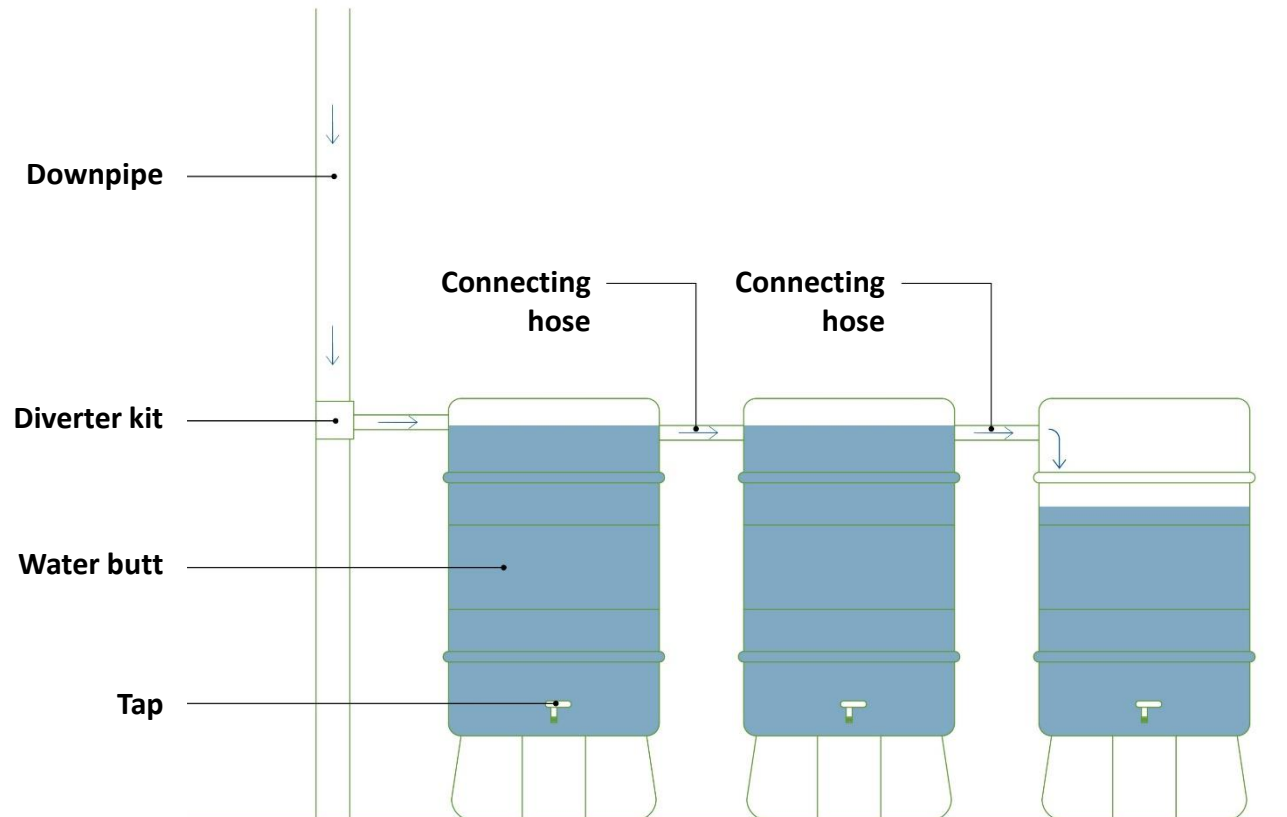
Budget and premium materials list

Product	Budget materials	Premium materials
Downspout SuDS planter	Internal body construction - Treated softwood timber - Reclaimed timber, i.e. scaffold boards/pallet wood Cladding - Treated softwood timber. - Reclaimed timber, i.e. scaffold boards/pallet wood	Internal body construction - Treated softwood timber Cladding - UK-grown larch or Douglas fir - Recycled composite materials
Slow-release water butt	Steel drum - Second-hand drums are available online – always check that they are water safe and have not been used for chemicals, etc. Base - Treated softwood timber. - Reclaimed timber – if using reclaimed timber, make sure that it is structurally sound	Steel drum - New steel galvanised drums Base - Treated softwood timber - UK-grown larch, Douglas fir or oak - Galvanised steel - Powder-coated aluminium
Green roof cycle store	Internal body construction - Treated softwood timber. - Reclaimed timber, i.e. scaffold boards/pallet wood Cladding - Treated softwood timber. - Reclaimed timber, i.e. scaffold boards/pallet wood Planting material - Recycled substrate, i.e. crushed brick or concrete	Internal body construction - Treated softwood timber Cladding - UK-grown larch or Douglas fir - Recycled composite materials Planting material - Specialist lightweight engineered substrate - Perlite - Leca
Rill	Rill or pipe - Reclaimed clay pipe or half pipes - Reclaimed brick channel - Reclaimed steel channel	Rill or pipe - Galvanised steel - Powder-coated aluminium - Precast concrete dished channel

How to connect water butts



Linking multiple water butts together is a simple way to store more rainwater. The arrangement below lets water flow from one butt to the next when the first one fills up.



Visit United Utilities website to learn how to easily install and maintain your water butt:

- [How to fit a water butt in your garden](#)
- [Step-by-step guide](#)



Multiple water butts connected together



If you have limited space, use flat 'slimline' butts that can be joined side by side along a wall.

Low-maintenance planting



Ways you can incorporate planting into your front and back garden to improve drainage, create habitats for wildlife and boost your wellbeing.

Low-maintenance lawns



Clover

Drought-tolerant plant that stays green even with less water and attracts wildlife.

Maintenance: can be mowed as little as twice a year.



Creeping thyme

Fragrant, ground-hugging plant that can withstand light foot traffic and is drought tolerant.

Maintenance: requires minimal mowing and is a good option for paths or smaller areas.



Chamomile

Attractive, low growing and fragrant apple like scent.

Maintenance: doesn't require mowing.



Wildflowers

Beautiful, natural and colourful mix of planting which attracts pollinators like bees and butterflies.

Maintenance: mowing required once or twice a year. You should choose mixes that are specific to your region and sunlight conditions.



Find the ideal plants for your garden, filtering by soil type, sunlight exposure, moisture level, and more:

[Plant finder: advice and tips on garden and indoor plants | RHS Gardening](#)



Visit the Unpave the Way webpage for more information and guidance:

[Unpave the Way | The Flood Hub](#)

Your garden's orientation to the sun

The direction your garden faces (north, south, east, or west) affects how much sun it gets. Once you know this, you can choose plants that will grow well with the amount of sunlight your garden receives.

Work out your garden's orientation by following these simple steps:

- 1 Stand at your front door facing out, looking into your front garden.
- 2 Use a physical compass or the compass app/tool on your smartphone and hold it flat in your palm.
- 3 The direction displayed in front of you is your garden's main orientation.

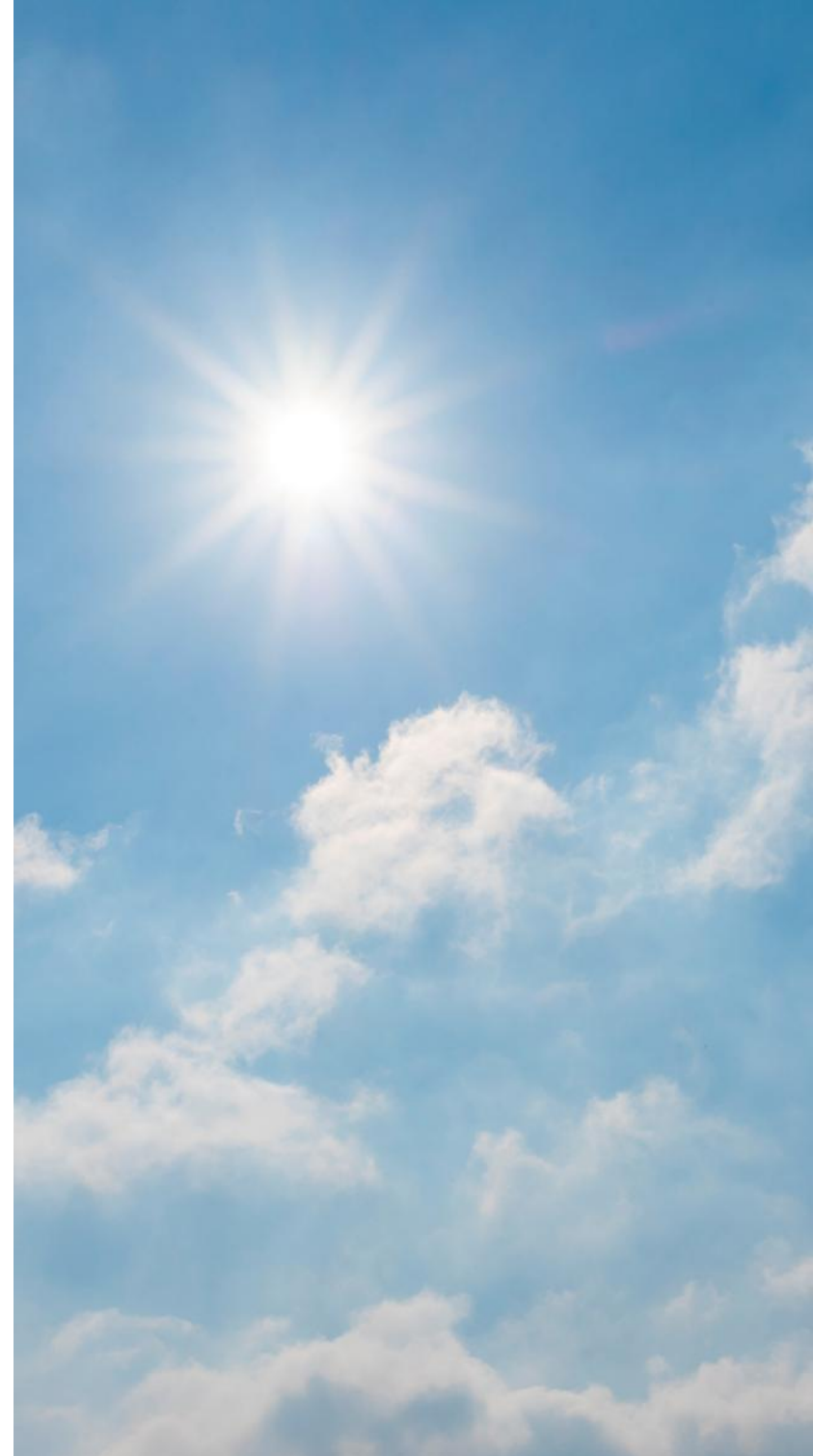
Observe the passage of the sun through your garden:

The sun rises in the east and sets in the west, moving across the sky in a southerly arc in the northern hemisphere.

- Morning sun: If your garden is sunny in the morning and shaded in the afternoon, it is **east-facing**
- Afternoon/evening sun: If it is shady in the morning and bright from noon until sunset, it is **west-facing**
- All day sun: If it receives direct sunlight for most of the day, it is **south-facing**
- Little direct sun: If it is largely in shade throughout the day, it is **north-facing**



There are lots of videos available on YouTube which help to explain your garden's orientation.



Garden orientation characteristics

South-facing gardens: receive the most sunlight throughout the day, making them ideal for full sun plant types. They can be hot and dry in summer; therefore, plants need frequent watering.

West-facing gardens: mornings are often shaded and have sun in the late afternoon and evening.

East-facing gardens: receive direct morning sun and become shaded in the afternoon, making them ideal for shade-loving plants.

North-facing gardens: get the least sunlight. They tend to be cooler and damper, which suits plants that prefer shade.



Buildings, trees, hedges, fences and sheds can create shade in your garden therefore ensure you're taking these into account when choosing your plant types.



You can use the free RHS 'Find a plant' online tool to filter plant types based on the amount of sunlight your garden receives:

[Plant finder: advice and tips on garden and indoor plants | RHS Gardening](#)

Plants from the Unpave the Way Garden



Popular plants from the Unpave the Way Garden

- Mexican fleabane *Erigeron karvinskianus*
- *Crocosmia* × *crocosiiflora* 'Emily McKenzie'
- *Astrantia* 'Roma'
- *Hydrangea arborescens* 'Lime Rickey'
- West Himalayan Birch *Betula utilis* subsp. *Jacquemontii*

Note: The full planting list from the Unpave the Way Garden is available on page 30 and the garden design is available to view on the [Unpave the Way webpage](#).

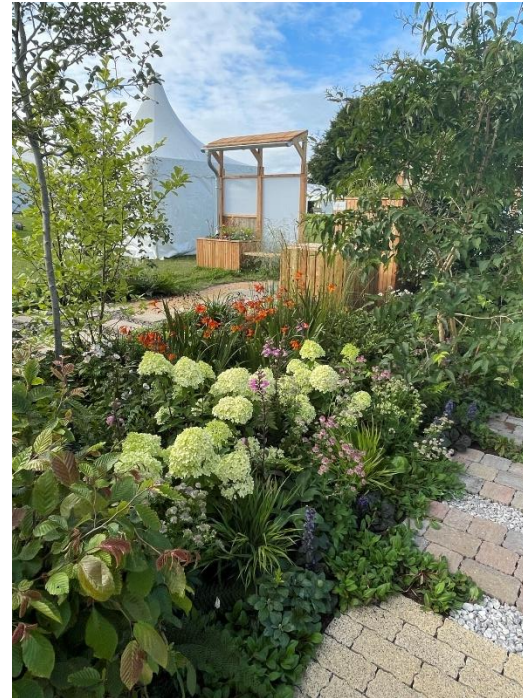


Choose a mix of plants that provide year-round interest while supporting pollinators and local wildlife. Combine evergreen structure with seasonal colour from perennials and bulbs.



Gardening novice? There are lots of free online resources available to help you learn the basics of gardening and plants. The RHS has a collection of beginner-friendly resources:

[Beginner's guide to gardening](#) | [RHS Gardening](#)



Plants from the Unpave the Way Garden



Full sun

More than six hours of direct sunlight per day during summer



Part shade

Three to six hours of sun per day



Shade

Less than two hours of sun per day

SHRUBS



Full sun

Hydrangea paniculata 'Bombshell'
Physocarpus opulifolius 'Amber Jubilee'
Cornus alba 'Sibirica'
Viburnum tinus 'Eve Price'



Part shade

Hydrangea arborescens 'Lime Rickey'
Fuchsia 'Hawkshead'
Ilex x altaclerensis 'Golden King'
Cornus kousa var. chinensis
Osmanthus x burkwoodii
Mahonia aquifolium 'Apollo'



Shade

Pachysandra terminalis
Sarcococca hookeriana var. humilis
Skimmia x confusa 'Kew Green'
Skimmia japonica 'Nymans'

HERBACIOUS PERENNIALS



Full sun

Alchemilla erythropoda
Alchemilla mollis 'lady's mantle'
Erigeron karvinskianus 'Mexican fleabane'
Geranium pratense
Bistorta affinis 'Darjeeling Red'
Bistorta amplexicaulis 'Taurus'
Sanguisorba officinalis 'great burnet'
Stachys byzantinus lamb's ear 'Silver Carpet'



Part shade

Anemone x hybrida 'September Charm'
Anemone Wild Swan
Astrantia major subsp. 'Shaggy'
Astrantia 'Roma'
Astrantia 'Ruby Wedding'
Astilbe 'White'
Aquilegia vulgaris 'Nivea'
Bergenia elephant's ears 'Bressingham White'
Geranium macrorrhizum 'Spessart'
Geum rivale 'Marmalade'
Helleborus x hybridus 'Lenten rose'
Helleborus orientalis
Liriope muscari
Thalictrum delavayi
Hosta 'Halcyon'
Cyclamen hederifolium
Epimedium x youngianum 'Niveum'



Shade

Ajuga reptans 'Atropurpurea'
Ajuga reptans 'Catlin's Giant'
Brunnera macrophylla 'Jack Frost'
Convallaria majalis
Euphorbia amygdaloides var. robbiae
Tiarella 'Spring Symphony'

FERNS



Part shade

Dryopteris filix-mas
Polypodium vulgare



Shade

Asplenium scolopendrium
Blechnum spicant
Polystichum setiferum

GRASSES



Sun

Calamagrostis x acutiflora 'Karl Foerster'
Calamagrostis acutifolia 'Overdam'
Molinia caerulea



Part shade

Carex 'Irish green'
Deschampsia cespitosa
Molinia caerulea
Hakonechloa macra
Carex oshimensis 'everest'



Shade

Hakonechloa macra

CLIMBERS



Sun

(full sun/south-facing)

Trachelospermum jasminoides
Lonicera japonica 'Halliana'



Part shade
(east/west-facing)

Clematis montana
Hydrangea petiolaris



Shade
(north-facing/low light)

Hedera helix



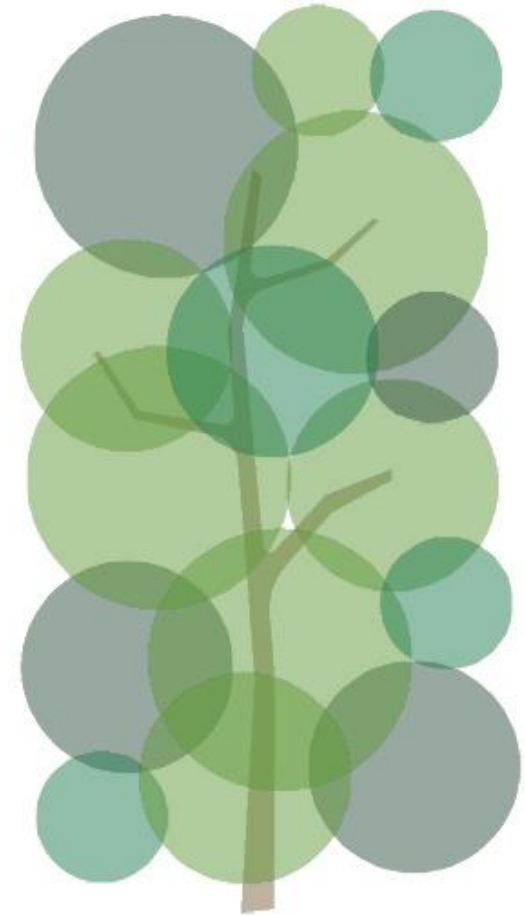
Hedges



Plant a hedge on your garden boundary to create a vital wildlife corridor, buffer noise and air pollution from traffic and improve your garden's drainage.

Hornbeam hedgerows are a good option for waterlogged gardens as they help to absorb excess water.

- ✓ Buffers noise and air pollution from roadside traffic.
- ✓ Cools your home and garden during summer months.
- ✓ Creates privacy for your home and garden.
- ✓ Provides food and shelter for insects, birds and hedgehogs.



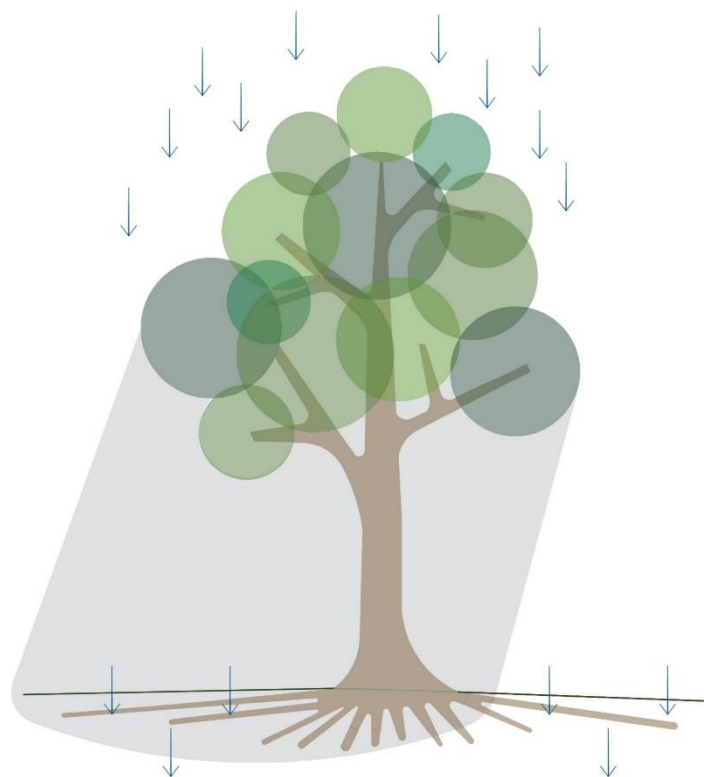
Select native or mixed-species hedges to boost biodiversity and create a resilient, low-maintenance boundary. Native hedges like hawthorn, hazel, holly, blackthorn, and dogwood attract birds, bees, and butterflies while coping well with extreme conditions.

Small garden trees



Planting a small tree in your garden can provide you with lots of benefits.

- ✓ Improves your garden's drainage by absorbing more rainwater through its roots.
- ✓ Cools your garden and home during the summer months.
- ✓ Improves soil and plant health as its roots create air pockets, helping to deliver oxygen to the soil.
- ✓ Leaf fall provides a source of organic nutrient-dense mulch.
- ✓ Provides shaded habitats for wildlife.



Planting a tree in your front garden is a great way to encourage many beautiful varieties of birds. Why not attach a bird feeder to your tree to make it extra inviting for your feathered friends?



For guidance on choosing the best tree for your garden, visit: [Trees for Smaller Gardens | RHS Gardening](#)



Planting ideas for small spaces



1 Utilise climbing plants, such as:

Wisteria

Clematis

Parthenocissus

Sweet pea

Trachelospermum

Hydrangea petiolaris

Climbing rose

Ivy

2 Retrofit existing structures (e.g. sheds, bike and bin stores) with green roofs.

3 Add plant pots and small planters.

4 Utilise self-watering hanging baskets.

5 Add a water butt with a planter on top.



Make the most of vertical surfaces by planting climbers and wall shrubs to draw the eye upward and make the space feel larger.



For more ideas, visit:

[Planting ideas for small spaces | RHS Gardening](#)



How to create a green and permeable garden on a budget

Utilise free resources

- Create your own compost from kitchen and garden waste to enrich your soil naturally.
- Save on your water bill by collecting rainwater for watering your plants.

Choose budget-friendly plants

- Plant perennials that come back year after year, saving you the cost of buying new plants annually.
- Native plants are well-suited to your local climate and soil, making them easier to grow and maintain.
- Divide existing plants to create new ones, filling your borders without extra cost.
- Participate in seed swaps with other gardeners to exchange seeds and plants.
- Join a local gardening group or community garden to share resources and knowledge.
- Grow from seed; seed packets are much cheaper than buying mature plants. Plus growing from seed allows you to control the growing process and ensure plants are free from pesticides or chemicals.

Use recycled materials

- Turn wooden pallets into planters; pallets can be sourced for free and repurposed as planters, raised beds or insect shelters.
- Reuse your existing paving slabs and arrange into a new design or search reclamation yards or online marketplaces for new cheaper paving. For example, you could use reclaimed bricks to create an attractive herringbone pattern for a pathway or use the bricks to create wheel tracks for your car.
- Source recycled materials from hardware shops, construction reclamation stores, small gardening shops or recycling sites online e.g. Freecycle.

Rethink how much paving you need

- You don't need to pave over your entire front garden to create a driveway.
- You only need a small quantity of paving to create wheel tracks to park a car and a pathway to access your house.
- Using less paving can save you a lot of money and is better for the environment.
- Use low cost and DIY friendly paving options like gravel grids or reinforced grass grids.

Use free resources to upskill

- Gain free gardening advice via the Royal Horticultural Society website, podcasts, social media and develop your gardening skills by volunteering at community gardening groups.

For more ideas, visit:



- [25 Budget Garden Ideas | BBC Gardeners World Magazine](#)
- [10 thrifty tips from The Money-Saving Gardener | RHS Gardening](#)



Gardening with disabilities

Adjustments can be made to gardening practises and your garden layout to make time spent in the garden enjoyable.

Ideas

- Use raised planters that are waist height so that they are easier to view and maintain, especially if you use a wheelchair.
- Use lightweight, ergonomic gardening tools with pistol grips or arm support cuffs to reduce wrist strain and fatigue. Long-handled hoes and cultivators allow you to weed and plant from a seated position.
- Make use of mobility aids such as garden scooters with swivel seats or mobile gardening cots which make it easier to manoeuvre through the garden.
- Make pathways a minimum of 1.5 metres wide to accommodate wheelchairs or walking aids and pave them with even, solid material like permeable block paving or permeable resin-bound paving.
- Install automated soaker hoses, drip irrigation, or use lightweight, kink-free hoses with trigger-style sprayers to make watering easier and to reduce strain on your body.
- Choose drought-tolerant and low-maintenance planting and lawns.
- Use robot lawnmowers to reduce physical strain.



Visit these free resources for more ideas and to find out how you can purchase adaptive gardening tools and aids.

- [Tips for Gardening with Disabilities | RHS Advice](#)
- [The gardening for health charity - Thrive](#)
- [Gardening in raised beds – Thrive](#)
- [Home - Gardening With Disabilities Trust](#)
- [Gardening and Arthritis | Tips for Gardening with Joint Pain | Arthritis UK](#)
- [Gardening | Planning, preparing and protecting](#)

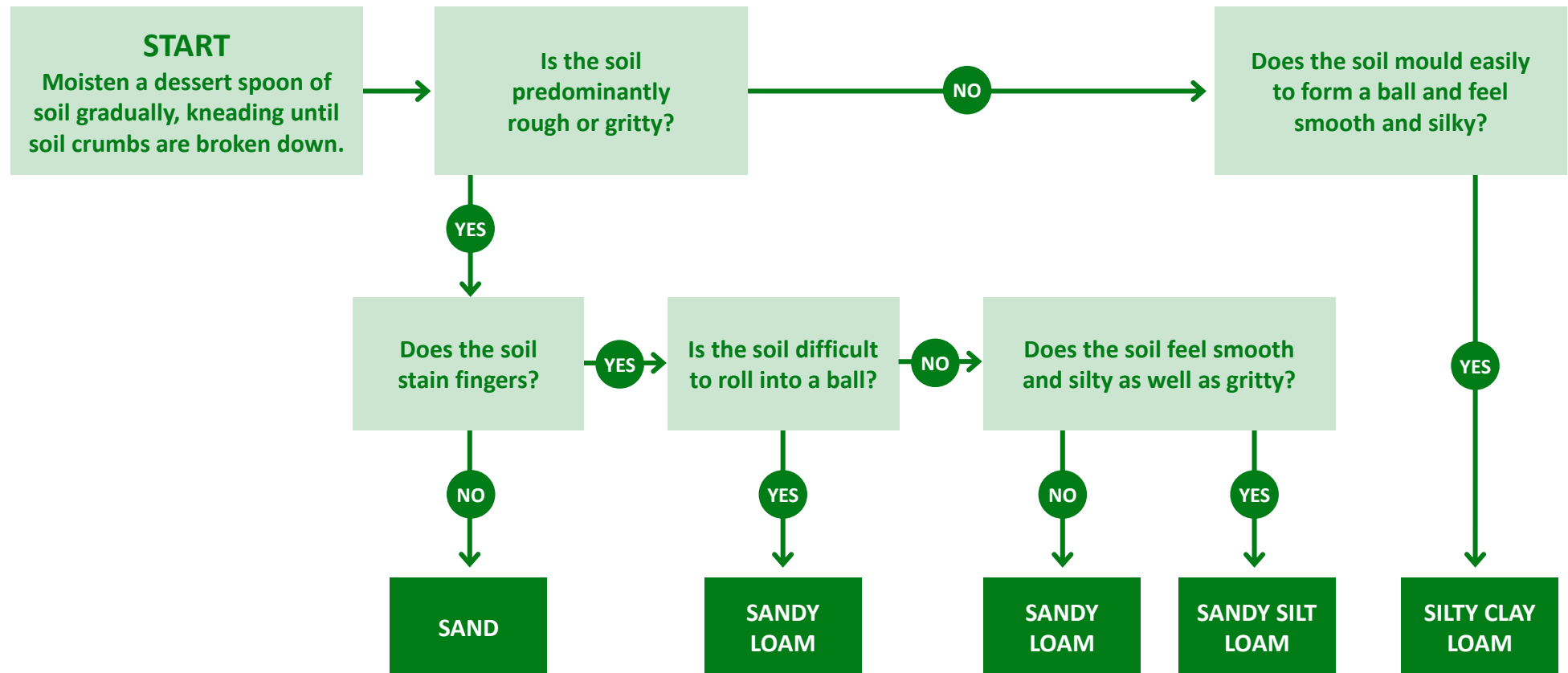


Assessing your soil type

Understanding your soil type is an essential first step in creating a sustainable, green front garden or driveway. The type of soil you have will affect how well plants grow, how quickly rainwater drains, and what landscaping materials are most suitable.



Still unsure of your soil type? The RHS has more information on how to determine your soil type: [Soil types explained | RHS Gardening](#)



Site testing and analysis for permeable paving

Before purchasing and constructing permeable paving it's important to carry out an infiltration test to check that your soil is suitable for infiltration of rainwater to the ground. Infiltration tests are simple and can be carried out by householders.

The trade association MPA Precast has useful information on designing and installing concrete block permeable paving around the home (available at the link below). It includes the following infiltration test and table.



[Paving for Rain | MPA Precast](#)

The type of soil around your home and its ability for water to drain through (known as permeability) can be estimated using a simple infiltration test:

- 1

Dig a hole at the same location as the permeable paving or rain garden is to be installed. The bottom of the hole should be at the same level that water will drain out of the system into the ground. Beware of gravel or other aggregate which could have been buried when your house was built. The hole should be 300mm x 300mm, and 300mm deep.
- 2

Fill the hole with water and allow it to drain away into the ground, this may take several hours.
- 3

Fill the hole with water again and record the time it takes for the water to drain away on this occasion.
- 4

Read off the soil permeability for the time taken.

Time to drain	Permeability
Less than 30 seconds	Excellent 
Between 30 seconds and 13 minutes	Good 
Between 13 minutes and 11 hours	Fair 
Greater than 11 hours	Poor 



Check out our contractor checklist in Appendix B for advice on what to ask a driveway contractor prior to installing a driveway.



Underground soakaways should be located at least 5 metres from your house to help prevent potential water damage to the building's foundations.

The same 5 metre minimum distance applies to permeable paving that receives and drains rainwater from your roof.

How to improve your soil

Healthy plants start with healthy soil!

Soil needs air, water and nutrients to thrive and support planting.

Mulching

Mulching adds extra nutrients to your soil, retains moisture and suppresses weeds, therefore considerably cutting down on watering and weeding.

Examples of biodegradable organic mulch are leaf mould, wood chippings and garden compost. Mulch can boost moisture retention in fast-draining sandy soils and aid drainage in heavy clay soils.

No dig gardening

Keep digging in your garden to a minimum to allow soil structures time to strengthen and grow undisturbed.



For more information, visit:

[No-dig gardening](#) | [RHS Gardening](#)

Grow your lawn longer

Longer lawns provide more shade, which helps retain soil moisture, reduce water evaporation, and encourage deeper root growth.

The increased organic matter from deeper roots contributes to a healthier soil ecosystem and improved soil structure.

The dense vegetation of a longer lawn acts as a barrier against the force of rain and wind, preventing soil erosion.

Longer lawns are more resistant to drought and recover more quickly than short lawns.



Use organic garden and food waste, e.g. hedge trimmings and vegetable peelings, to create free compost for your garden.



For more information, visit:

[Composting](#) | [RHS Gardening](#)

Managing a waterlogged garden

Aerate compacted soil

Compacted soil can make it difficult for rainwater to infiltrate through the soil and drain away. You can help rainwater drain by using a gardening fork or hollow tine aeration tool to poke holes in the soil. The holes should ideally be 10–15cm (4–6in) deep. Wait until standing water has drained away before doing this.



For more guidance on how to aerate your soil, visit:

[Waterlogged lawns | RHS Gardening](#)

Plant a water loving tree and hedge

Trees and hedgerows help to absorb excess rainwater and help rainwater infiltration into the soil.

Use raised beds or soil mounds for planting

Elevate decorative planting using raised planting beds or soil mounds so that they can grow and drain more easily.

Incorporate organic matter

Add layers of compost and mulch to the soil to help absorb excess moisture.



Create a rain garden

Low spots in gardens which frequently become saturated are good areas to create a rain garden to help absorb excess rainwater.

Install formal drainage

There are more formal drainage methods available such as French drains and soakaways.



For more information, visit

[How to install garden drainage | RHS Gardening](#)

Note: you should get specialist advice from a suitably qualified contractor before undertaking formal drainage works. Furthermore, it's important to have a feasible drainage outfall for the water to drain to. Water from your garden should not drain to neighbouring properties or their gardens as this can cause flooding.

Homeowners must obtain the required approvals before connecting drainage to a watercourse or sewer, including permission from the relevant landowner and authority:

- **Environment Agency**
For connection to main rivers
- **Lead Local Flood Authority (LLFA)**
For connection to ordinary watercourses
- **Water company (e.g. United Utilities)**
For connection to sewers





If you create any of the features referenced within this guide, we'd love to see them!



Tag us in your photos on social media using: [#unpavetheway](#)



Or share your photos with us via email: unpavetheway@environment-agency.gov.uk



Visit our webpage for more information and ideas: [Unpave the Way | The Flood Hub](#)



Follow us on social media for project news and updates: [@unpavetheway](#)

Useful links and references

- [How to green your grey front garden | RHS Gardening](#)
- [Rain gardens | RHS Gardening](#)
- [Swales | RHS Gardening](#)
- [Hedges: choices with environmental benefits | RHS Gardening](#)
- [Plant finder: advice and tips on garden and indoor plants | RHS Gardening](#)
- [Plants for bog gardens | RHS Gardening](#)
- [Plants for clay soils | RHS Gardening](#)
- [Resilient Garden](#) by Tom Massey
- [Bringing Fronts Back: A Research Agenda to Investigate the Health and Well-Being Impacts of Front Gardens](#) by Lauriane Suyin Chalmin-Pui, Alistair Griffiths, Jenny J. Roe and Ross W. F. Cameron. *Challenges* 2019, 10, 37.
<https://doi.org/10.3390/challe10020037>
- [DePave | Shropshire Wildlife Trust](#)
- [Paving for Rain | MPA Precast](#)
- [The community for sustainable drainage | Susdrain](#)

Appendix A:

Contractor checklist



To download the checklist, visit
[Contractor Checklist | The Flood Hub](#)

Contractor Checklist

This checklist should be completed prior to designing and constructing a driveway. The checklist should be used by suitably qualified contractors or by householders intending to construct a DIY driveway.

1. Is the property at risk of flooding?

Check your Flood Risk: [Check the long term flood risk for an area in England - GOV.UK \(www.gov.uk\)](https://www.gov.uk/check-the-long-term-flood-risk-for-an-area-in-england)

Please select the property's flood risk from the table below:

		Risk of Flooding		
		Low / Unlikely	Medium	High / Likely
Flood Source	Surface water			
	Rivers and the sea			
	Groundwater			
	Reservoir			

Important Note: If the property is at risk of flooding, you should contact a suitably qualified flood risk specialist for advice prior to designing and constructing the driveway, to ensure you do not increase flood risk to the property.

2. Are you installing a permeable driveway?

- ☐ Yes **Next Step:** Carry out an infiltration test in the proposed driveway construction area to confirm the ground conditions on site.
- ☐ No **Next Step:** If the proposed driveway area exceeds 5m², check that the householder has secured the required planning permission from their local planning authority.

3. Does the proposed driveway have a connection to a drainage outfall for surface water?

- ☐ Infiltration of surface water to ground
- ☐ Piped connection to a surface water sewer
- ☐ Piped connection to a watercourse
- ☐ Piped connection to a waterbody i.e. pond

Note: Infiltration to ground should always be the first option for surface water drainage if ground conditions allow. Surface water runoff from the driveway must not enter the public foul sewer network or the public highway sewer.

Permission to Connect Note: If you are proposing to connect to a public surface water sewer, you must ensure that you have permission from United Utilities. If you are proposing a new connection to a main river, you will need a permit from the Environment Agency, and if you are proposing a connection to an ordinary watercourse you will need consent from your Lead Local Flood Authority, which is the County Council or Unitary Council for your area.

4. Have you got a mechanism to store excess surface water within the front garden during rainfall?

- ☐ Rain Garden
- ☐ Swale
- ☐ Underground Cellular Storage

5. Have you incorporated water tolerant and drought resistant planting within the design?

- ☐ Yes
- ☐ No

Tip: For ideas on climate resilient planting for incorporation in front gardens please visit:

[Building a resilient garden for a changing climate / RHS Gardening](#)

[Wet and dry soils: plants for / RHS Gardening](#)

[Clay soils: plants for / RHS Gardening](#)

[Sandy soils: plants for / RHS Gardening](#)

6. Is the front garden/driveway on a slope?

- ☐ Yes
- ☐ No

If you have answered yes, please proceed to Q6a below.

6a. Have you incorporated a cut off/channel drain to capture surface water run off?

- ☐ Yes
- ☐ No **Next Step:** This will be required to mitigate surface water flood risk.

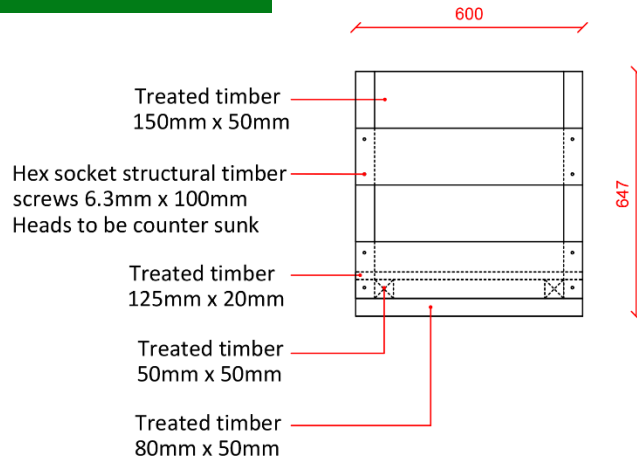
Appendix B:

DIY design drawings for SuDS features

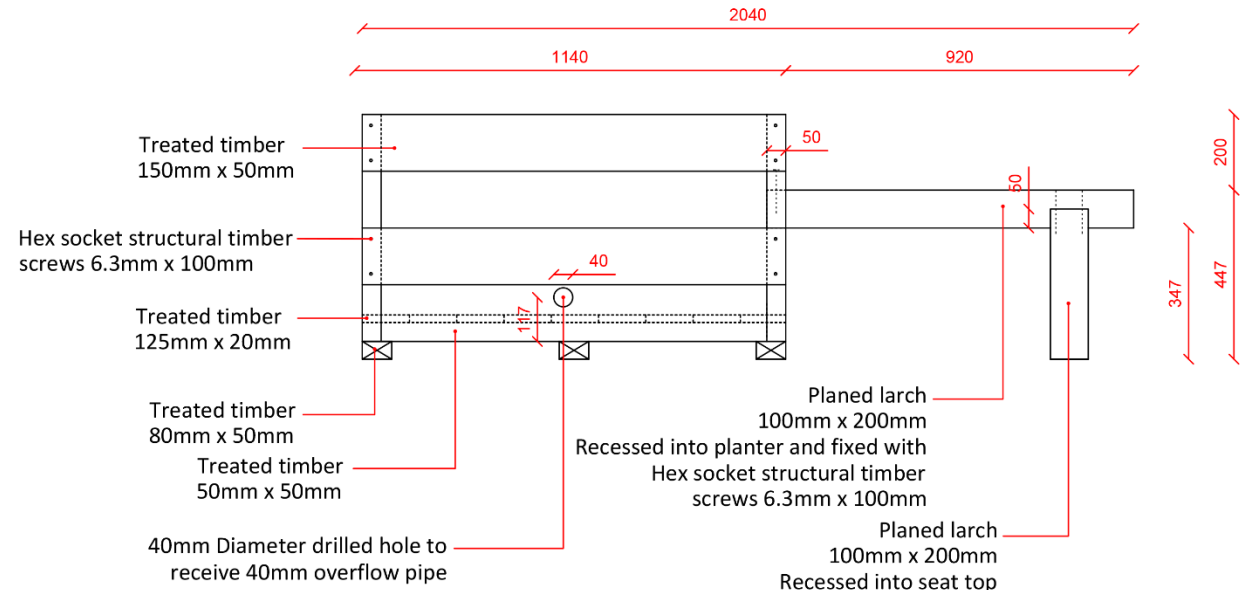
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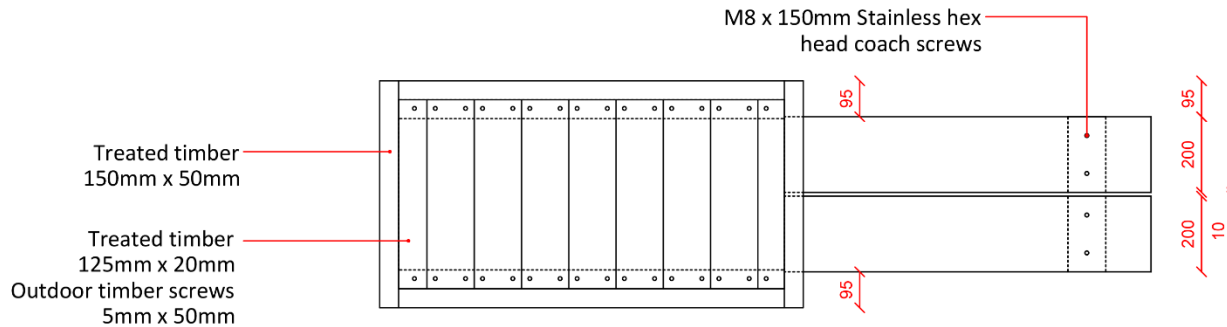
SuDS planter



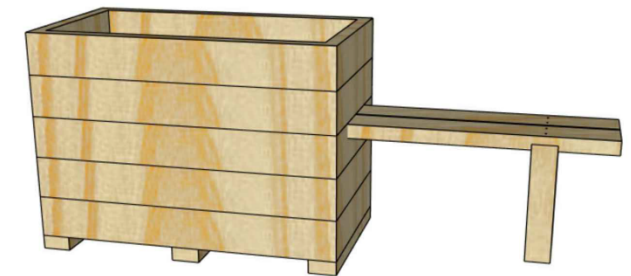
SIDE ELEVATION



FRONT ELEVATION



PLAN VIEW



VISUALISATION OF PLANter FRAME

TREATED TIMBER:

- 150mm x 50mm x 12.5 LM
- 125mm x 20mm x 5.4 LM
- 50mm x 50mm x 2.1 LM
- 80mm x 50mm x 1.8LM

PLANED UK LARCH:

- 200mm x 100mm x 3.6 LM
- 80mm x 50mm x 1.8 LM
- 50mm x 20mm x 38.4 LM

FIXINGS:

- 28 No. 6.3 X 100mm Timberlocks
- 36 No. 5mm x 50mm Outdoor wood screws
- 4 No. M8 X 150mm Stainless steel coach screws
- 222 No. 4.2 x 60mm Stainless steel screws

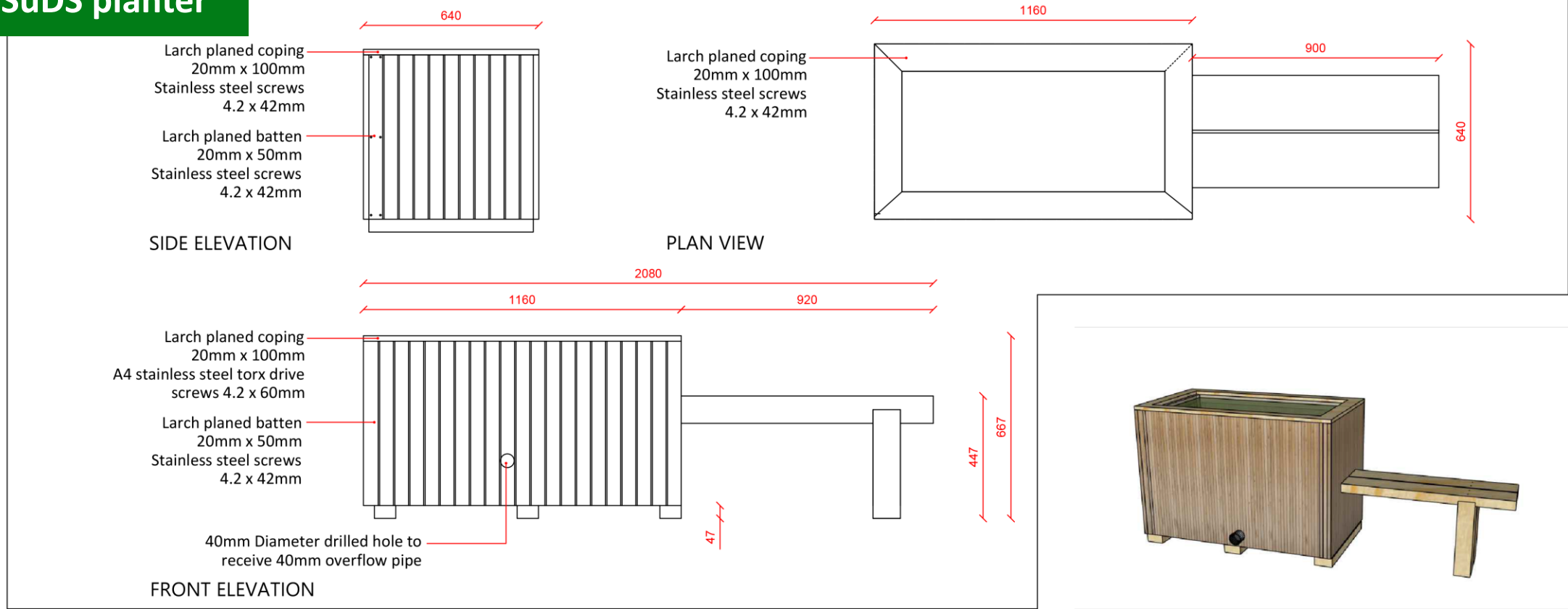
OTHER MATERIALS:

- 40mm Black push fit waste pipe 1.4 LM
- 1 No. 40mm black push fit waste tee
- 1 No. 90 Degree black push fit knuckle bend
- 46kg Sharp sand
- 25kg Top soil
- 25kg Peat free compost

SUGGESTED TOOLS

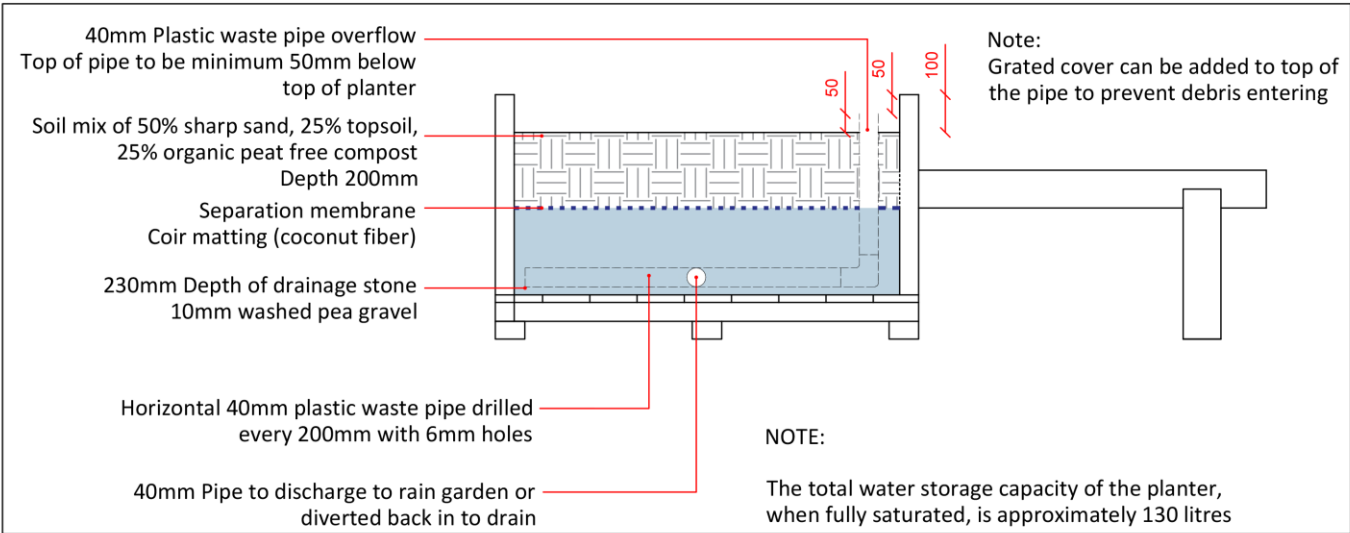
- Chop saw or handsaw
- Drill
- Impact driver or pozi screwdriver
- 5mm Timber drill bit
- 40mm wood cut core bit
- 13mm socket bit and wrench
- Spirit level
- Rafter square
- Sandpaper
- Pencil

SuDS planter



PLANTER CLADDING DETAIL

VISUALISATION OF FINISHED PLANTER

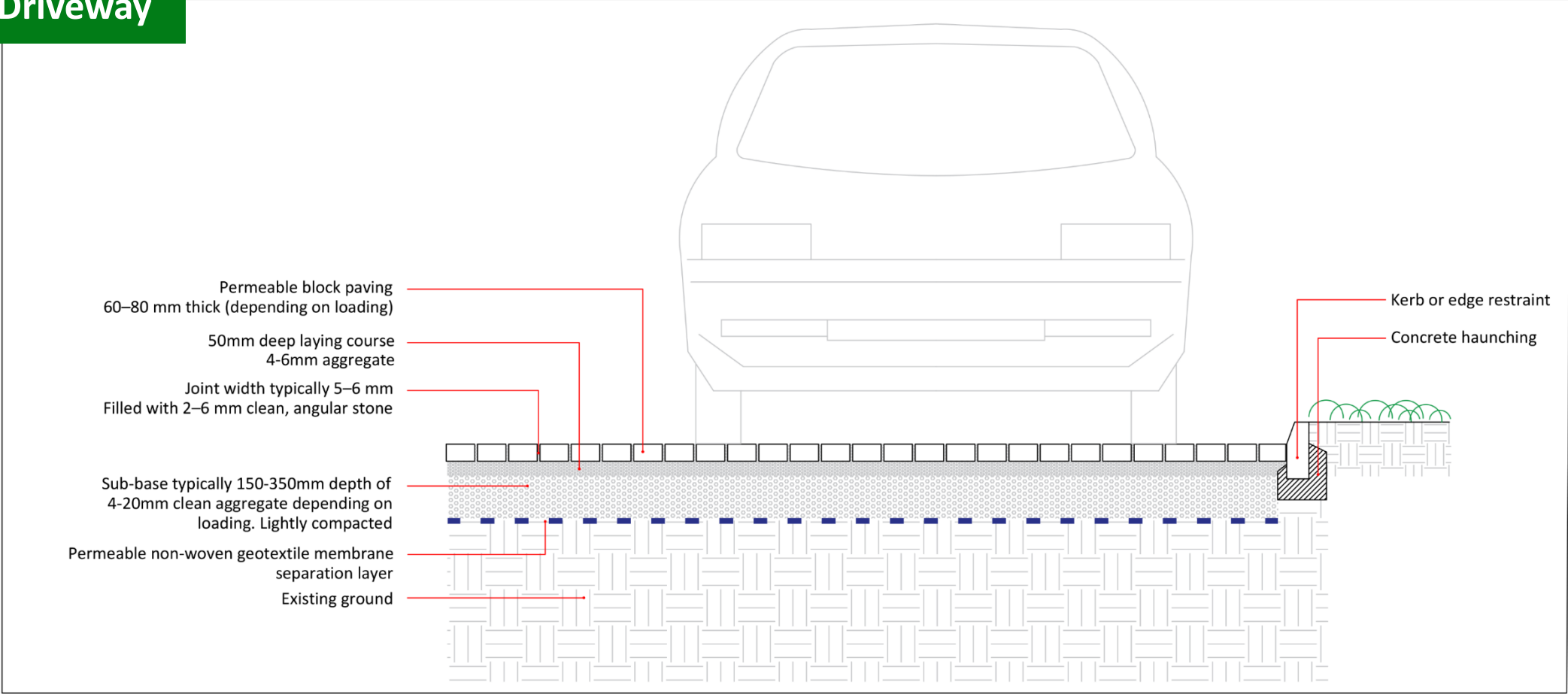


PLANTER DRAINAGE DETAIL

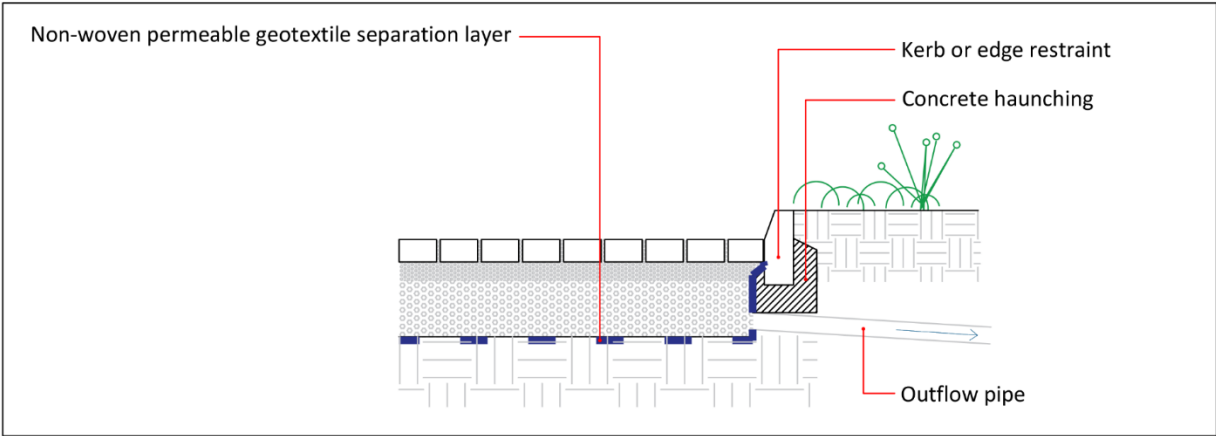
Note:
Please refer to the Unpave the Way Guide for guidance on calculating the size of your rain garden planter.

Please source all materials responsibly using FSC certified timber.

This planter can also be built without the seat for garden space saving purposes.



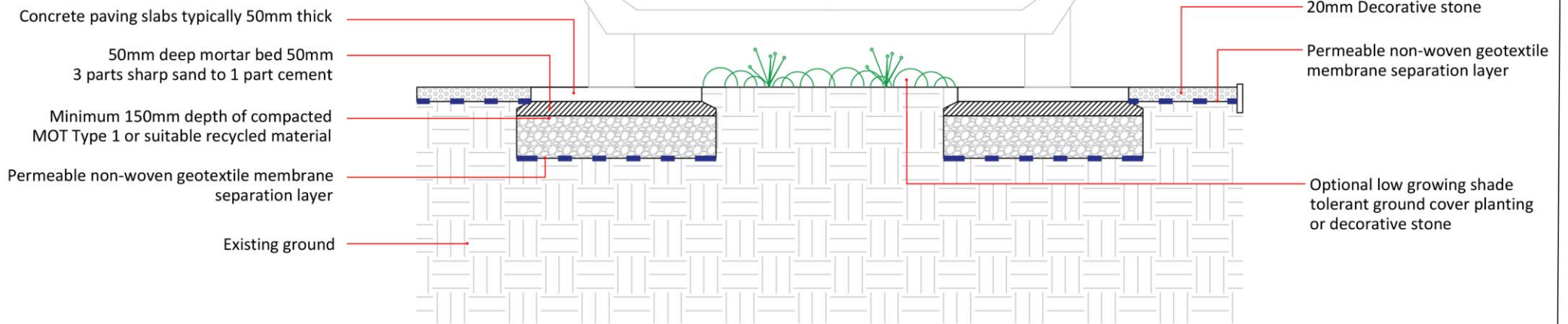
TYPICAL CROSS SECTION FOR TOTAL RAINWATER FILTRATION TO GROUND



PERMEABLE PAVING WITH PARTIAL INFILTRATION

Note: The recommended maximum slope for permeable paving is 5% (1:20), as steeper gradients may cause water to flow across the surface rather than infiltrate through the paving system.

Please refer to structural engineer or suitably qualified and experienced contractor.

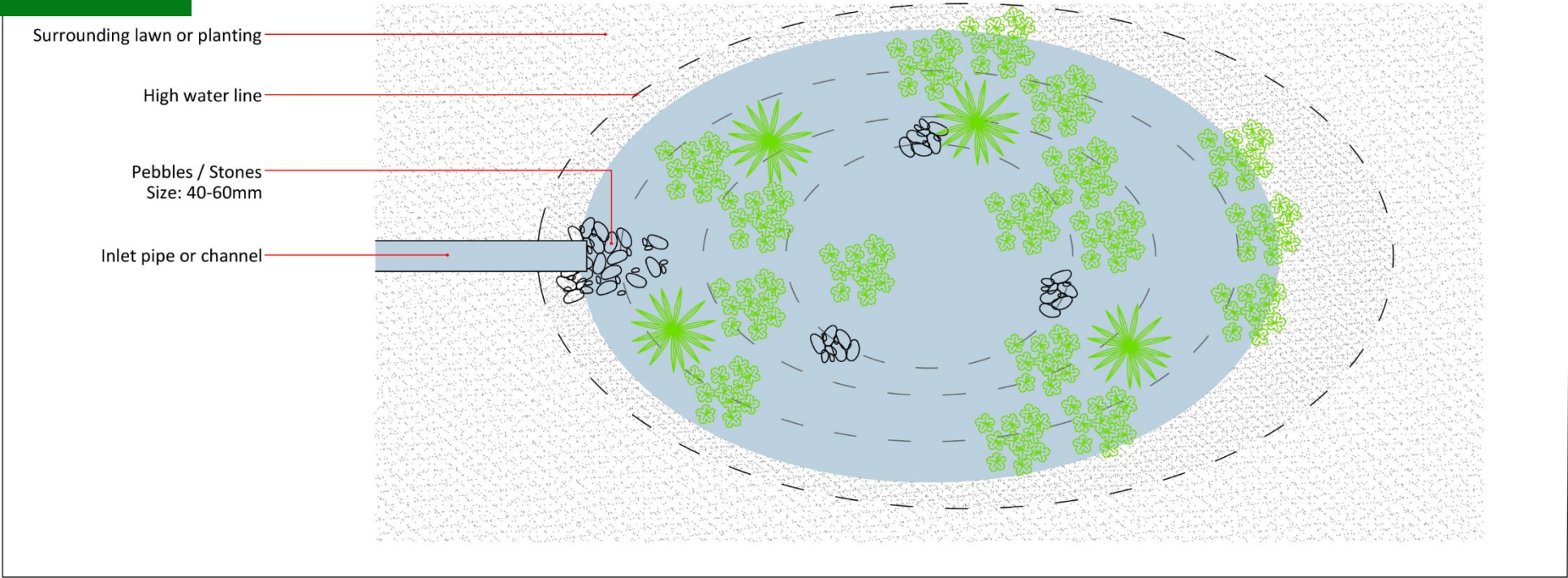


TYPICAL CROSS SECTION FOR TWO TRACK DRIVEWAY

Note: Natural stone pavers can also be used. Please speak with suppliers about suitable products. Reclaimed pavers are also a good option.

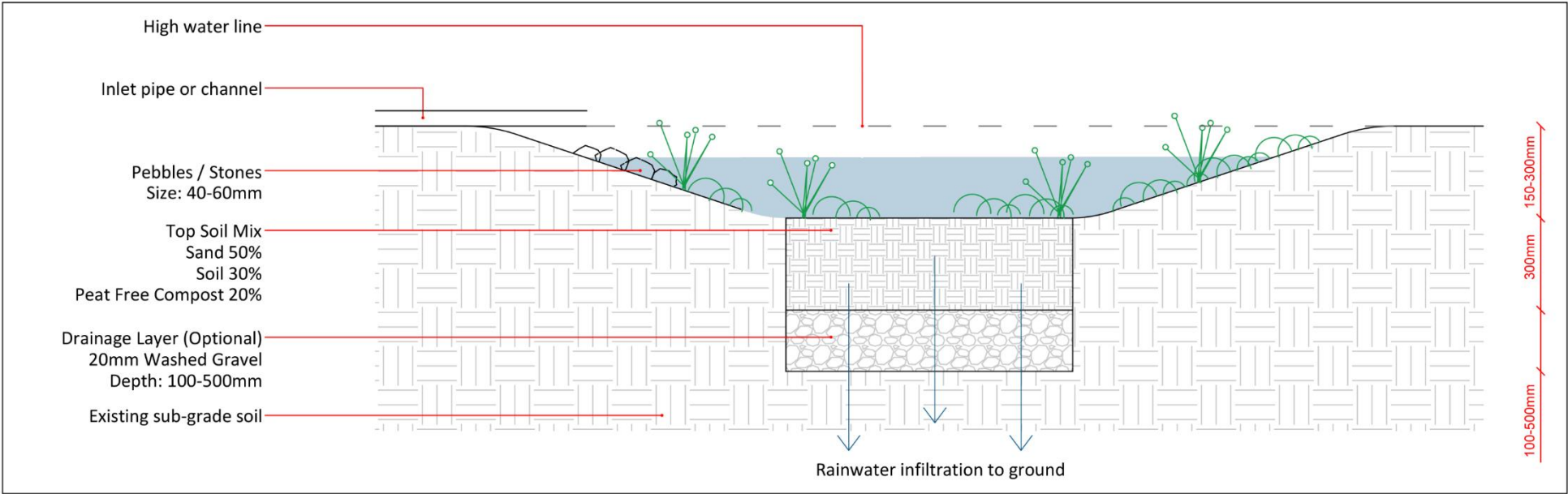
Please refer to structural engineer or suitably qualified and experienced contractor.

Rain garden

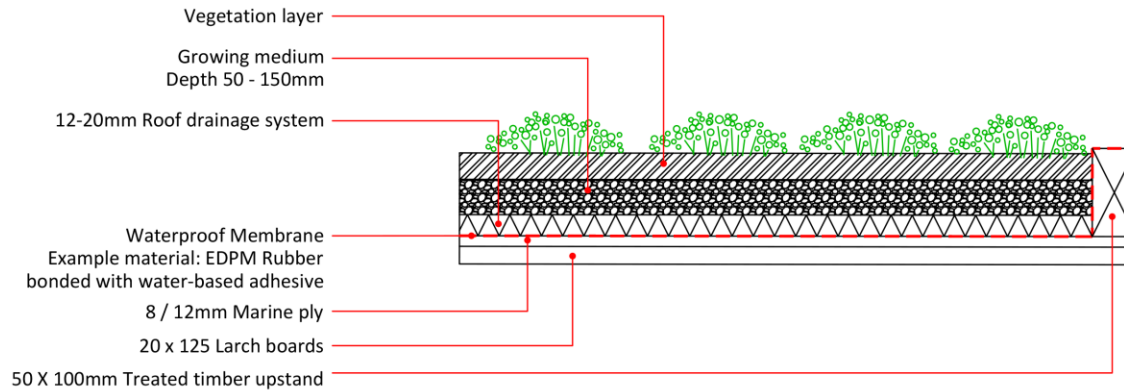


RAIN GARDEN PLAN

Note: Please refer to the Unpave the Way Guide for information on size and positioning your rain garden.



RAIN GARDEN CROSS SECTION



PLANT TYPES SUITABLE FOR SUBSTRATE DEPTH OF 50-100MM:

- Sempervivum
- Sedums (matting or plugs)
- Ferns

PLANT TYPES SUITABLE FOR SUBSTRATE DEPTH OF 100-150MM:

- Wildflowers
- Ferns
- Substrate left bare to self-seed

LIGHTWEIGHT GROWING MATERIALS:

- Specialist engineered growing substrate
- Perlite
- Leca
- Sand
- Crushed tiles or concrete

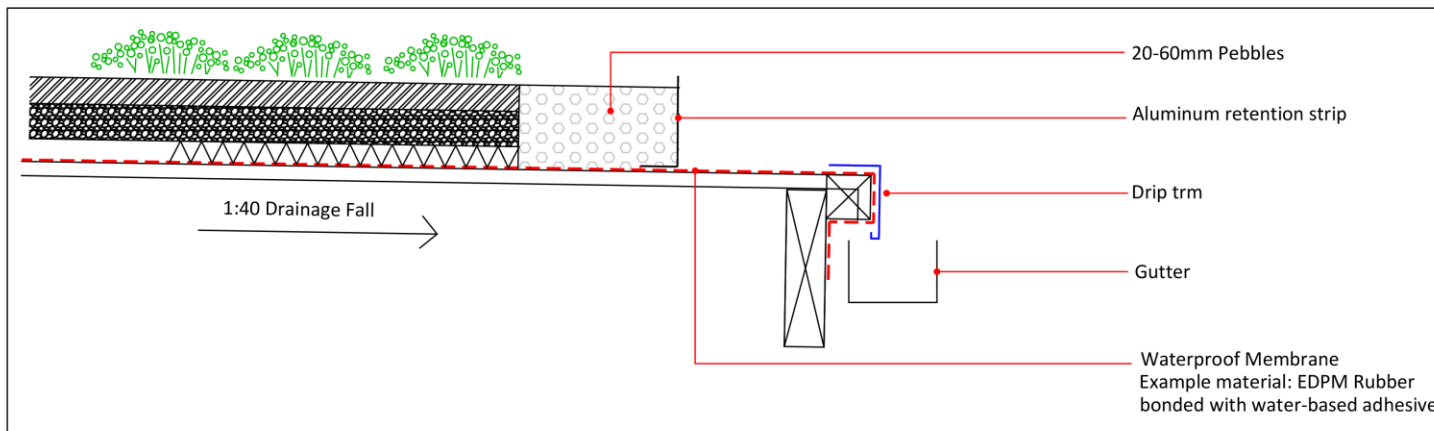
Note:

This design is intended for use on garden structures only e.g. bin stores, cycle stores, sheds.

Please refer to structural engineer if unsure.

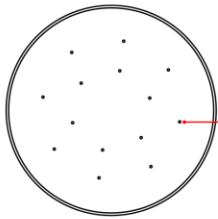
Please source all materials responsibly using FSC certified timber.

GREEN ROOF CROSS SECTION DETAIL



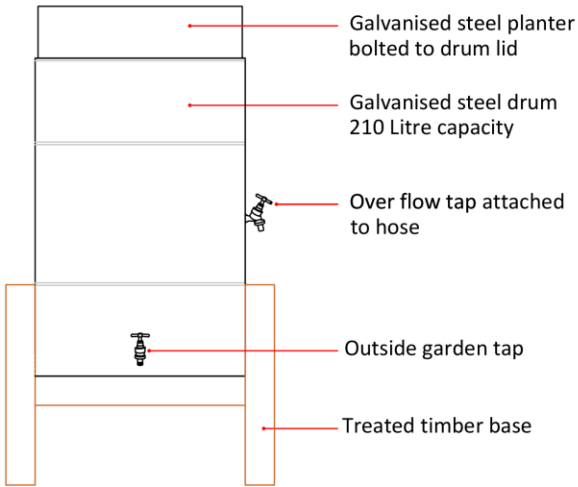
ROOF DRAINAGE DETAIL

Water butt



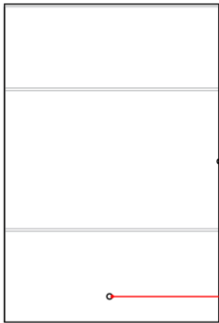
Drainage holes drilled into lid
Cover with permeable
separation membrane

PLAN VIEW OF DRUM LID



FULL WATER BUTT ELEVATION

DRUM WATER BUTT

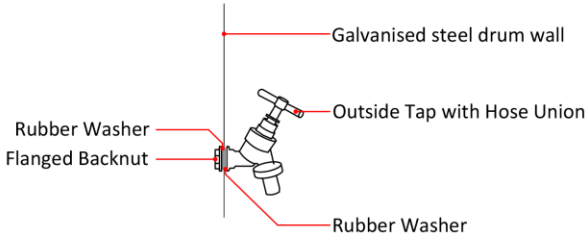


STEEL DRUM ELEVATION
WITH HOLES POSITIONS

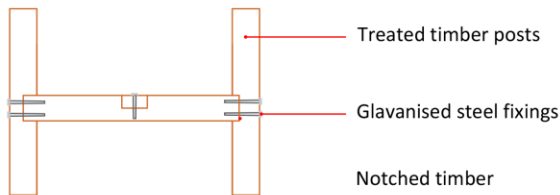


STEEL DRUM ELEVATION
WITH TAP POSITIONS

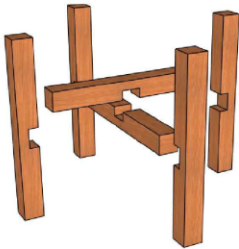
TAP HOLE DETAIL IN STEEL DRUM



TAP FIXING DETAIL

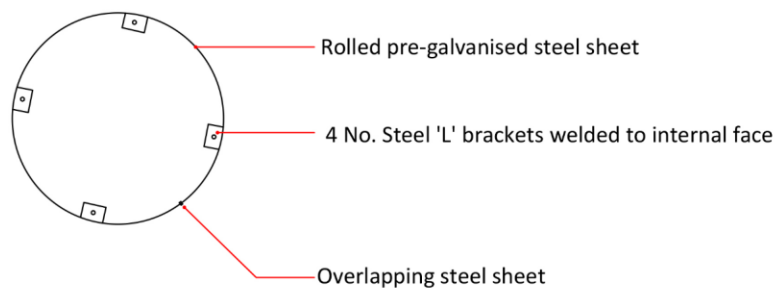


TIMBER BASE DETAIL



BASE VISUALISATION

Water butt



PLAN VIEW OF PLANTER TOP

PLANTER TOP DETAIL

Grasses:

- Festuca glauca
- Carex oshimensis
- Stipa tenuissima

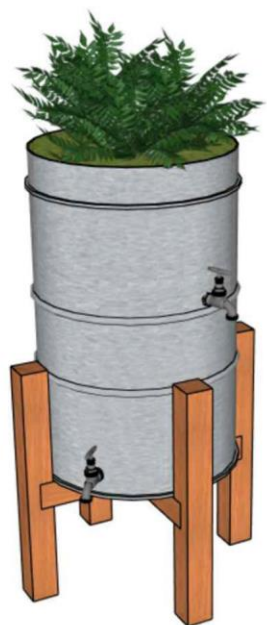
Herbaceous Perennials:

- Armeria maritima
- Ajuga reptans
- Erigeron karvinskianus
- Saxifraga
- Primula vulgaris
- Heuchera
- Alchemilla alpina
- Sedum spurium

Herbs:

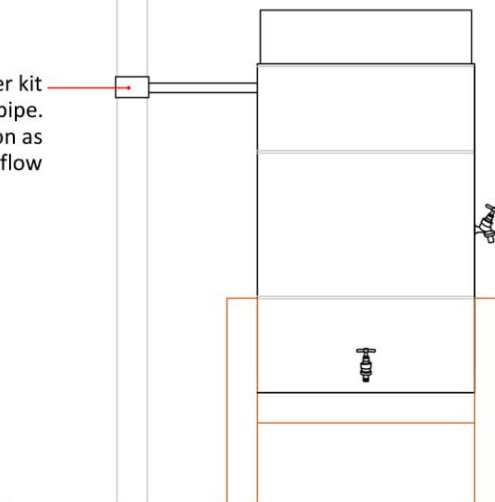
- Thyme
- Chives
- Oregano
- Marjoram
- Parsley
- Mint

SUGGESTED PLANT LIST



DRUM WATER BUTT VISUALISATION

Standard rainwater diverter kit
attached to downpipe.
Installed level to also function as
overflow



DOWNPIPE DIVERTER KIT

Note: Please source all materials responsibly using FSC certified timber.

Glossary

Surface water: When rainwater accumulates on the ground, particularly in low spots and on impermeable surfaces, e.g. tarmac.

Impermeable: Does not allow rainwater to pass through the surface.

Permeable: Does allow rainwater to pass through the surface and into the ground.

Infiltration: Process by which water passes through the ground's surface and into the soil.

Porous surface: rainwater infiltrates through the whole surface via pores in the material.

Sustainable drainage systems (SuDS): Surface water drainage features which mimic natural drainage processes and manage rainfall close to where it falls. Can be designed to transport (convey) surface water, and slow down runoff (attenuate) before it enters sewers and watercourses. SuDS provide areas to store surface water and can be used to allow surface water to soak (infiltrate) into the ground or evaporate from surfaces and be transpired from vegetation (known as evapotranspiration).

Rain gardens: Small depressions in the ground that allow surface water to infiltrate into the ground. If soil permeability is poor, then they can be lined so that they temporarily store surface water before it enters the sewer system or other drainage feature.

Swales: Shallow vegetated above-ground channels designed to capture, store, drain or convey surface water runoff.

Downspout SuDS planters: Slow the flow of rainwater runoff from roofs by capturing and storing rainwater, before slowly releasing it into the sewer.

Green roofs: Intercept and retain rainwater, reducing the volume and speed of surface water runoff from roofs.

Perennials: Plants which return each year and live for multiple years which do not require replanting for at least 3–5 years.

Biodiversity: The variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable.

No-dig gardening: A method which avoids breaking up, lifting or turning the soil. Vegetable beds and flower borders are simply prepared by covering the ground with organic matter, such as garden compost. Plants are grown directly into this layer of organic matter.

Native plants: Originated or arrived naturally in a specific geographic area without human involvement, having evolved and adapted to the local conditions over thousands of years. These plants are typically well-suited to the climate and soil, making them hardier and requiring less maintenance than non-native species once established.

Biodegradable: Materials which can be broken down/decomposed by bacteria or other living organisms.

Soil ecosystem: A complex, living community composed of minerals, organic matter, gases, liquids, and organisms (bacteria, fungi, earthworms) that interact to support life.

Biodegradable mulch: A natural material which can be broken down within soil, e.g. leaf fall. It is typically placed on the surface of the soil to improve soil structure and retain moisture, reducing the need for manual watering.

Urban heat island effect: the increase in temperatures in urban areas caused by buildings, hard surfaces, and limited vegetation.

Defective title: An irregularity in or something missing from the legal title. Such a defect may make the property less attractive to a buyer or deter them altogether.