

URBAN SERIES



Gardening Matters

FRONT GARDENS

Are we parking on our gardens?
Do driveways cause flooding?



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Welcome

Protect the environment on your doorstep



"Front gardens bring so much colour into our lives – who prefers to look at concrete?"

REBECCA MATTHEWS JOYCE
RHS Principal Environmental Advisor

Front gardens help turn our towns and cities into green and pleasant places to be. Yet many are being paved over to provide parking for the millions of cars we own in Great Britain. RHS research found that almost a quarter of the front gardens in north-east England are now completely paved. And it is estimated that the capital's losses are equal to the area covered by 5,200 football pitches, according to the London Assembly.

With few planning controls to prevent front gardens disappearing, it's up to everyone to think carefully before creating a driveway. Starting on page 2, discover the potential problems caused by this loss of garden space. And from page 6, there are design solutions to help you create an attractive garden complete with off-street parking.



What's the problem?

Paving and concrete need very little maintenance and provide a great place to keep the car, but at what cost?



Paving over our front gardens might seem like the ideal way to solve parking problems. But these extra hard surfaces can have a surprising impact on the wider environment. Clearly there is less garden to enjoy, but did you know that paving can also cause flooding and increase local temperatures?

While paving over one front garden might seem of little consequence, the difficulties start when neighbours on both sides of the street do the same, effectively tripling the width of the road. But how many of us really are swapping our patches of green for the hard stuff?

When the London Assembly examined aerial photographs of the capital, it found that 12 square miles of front gardens are now under paving. This is the equivalent of 22 Hyde Parks. "If this was a real park that had been lost, there would be a huge public outcry," says Darren Johnson, chairman of the London Assembly's environment committee.

To get a picture of what's happening in the rest of the country, the Royal Horticultural Society (RHS) and the Horticultural Trades Association commissioned their own survey. This showed geographical hotspots (see Key Facts, right), including north-east England, where almost a quarter of front gardens are entirely paved.

However, the precise rate at which front gardens are being lost is not known. The only records to provide any clues are local council planning applications for dropped kerbs – ie. lowering the kerb so vehicles can cross the pavement to their driveways. In London alone, nearly 120,000 such applications have been made during the last five years. "Even these numbers are just a guide," explains Christine Eborall, of Local Agenda 21 in Ealing, London, which is studying front gardens. "Some people illegally drop kerbs and others use ramps to get cars into their garden."

Paving over front gardens is certainly a fact of life in many urban areas. And the effects are cumulative, which means they're likely to become more noticeable in the future. Why is this a concern? First and foremost, it is the part hard surfaces play in causing environmental problems, and increasing the risk of flooding is top of this list. Gardens can soak up rain, while paving, tarmac and concrete are less porous and increase the amount of rainwater that runs off by as much as 50 per cent.

This additional water usually flows into street drains, which can't always cope with the thousands of extra litres in a storm. The excess can then go back up people's front drives to floods their homes. RHS Principal Environmental Advisor, Rebecca Matthews Joyce, explains, "The water has to go somewhere and, even if you are not flooded, it might be affecting your neighbours downhill." ▶▶

CHECK BEFORE YOU PAVE

Even if you own your home, you may not be able to change the front garden without permission. Properties in conservation areas will usually need the approval of the local council, and there may be other restrictions in the house deeds or if the property is listed by English Heritage.

KEY FACTS

Front gardens that are more than three-quarters paved:

- North-east England 47%
- Scotland 31%
- South-west England 31%
- Eastern England 30%
- East Midlands 25%
- North-west England 25%
- Yorkshire/Hull 24%
- South-east England 23%
- West Midlands 21%
- Wales 19%
- London 14%

SOURCE: MORI



Verges (top) are often paved over to allow cars to pass from the road to the driveway. Less street greenery can also have a negative effect on property prices (bottom).

In most UK cities rainwater run-off, mixed with any pollution it picks up along the way, is channelled into storm drains and ultimately rivers. However, rather than heading straight for the natural watercourses, London's rain goes to the sewerage system, which can't always process the surge of water. In an emergency the excess has to be jettisoned into rivers. In one incident in 2004, more than 100,000 fish were killed in the River Thames.

The other main environmental impacts are at local level. "If vegetation is lost from our streets there is less to regulate urban temperatures," explains Rebecca. "Hard surfaces absorb heat in the day and release it at night, making it hot and difficult to sleep." This is part of the 'heat island effect', which can also be responsible for poorer air quality and localised weather conditions, such as thunderstorms. Plus, higher temperatures mean that air conditioning units are more likely to be installed, which use extra energy and fossil fuels.

Then there is the removal of grass verges and the felling of street trees to accommodate dropped kerbs. Without the trees and plants, dust is no longer absorbed and there is nowhere for birds to nest and insects to feed.

Attractive front gardens have benefits for people too. They provide screening and privacy, creating a green oasis for enjoyment. Tending your garden at the front of the house gives neighbours the opportunity to meet and can help to build community spirit.

There are also financial incentives for keeping front gardens. London Assembly's Darren Johnson explains, "If lots of homeowners along a single street pave over their gardens, then the average house price can drop." Leafy streets attract buyers and make the area more desirable. However, in contradiction, estate agents point out that in areas with controlled parking zones, off-street parking can actually add thousands to the asking price.

The other costly issue is subsidence. According to Neil Curling, Senior Subsidence Manager at Halifax Home Insurance, "Hard paving can cause severe subsidence as it reduces or stops rainfall getting into the ground."



This can cause the soil to shrink, especially if it is predominantly clay, which has consequences for structures built on it. Garden walls, paths and houses may develop severe cracks.

This still leaves the issue of convenience. Parking close to the house can be particularly important if you are vulnerable or disabled. And pressure on parking in most urban streets is great, particularly when many houses have more than one car.

If you do decide that you need to park outside your house, there are still plenty of ways to keep the front garden green and reduce the impact paving has on the environment (see Park and garden, page 6). As the RHS's Rebecca says, "We all need to change our mind-set to want more than just paving at the front of our house. Front gardens bring so much colour into our lives – who prefers to look at concrete?"

Homes with basements are particularly at risk from localised flooding, but neighbours down the hill are just as likely to be affected.

Why all the concern? First and foremost, it is the part hard surfaces play in causing environmental problems, and increasing the risk of flooding is top of the list.



CHOOSING A CAR

As well as choosing a car for all the traditional reasons, make sure it fits on your driveway. An unnecessarily large car in a small garden will stick out on to the pavement, looking ungainly and presenting a hazard to pedestrians. Where possible, consider a smaller car in a sympathetic shade. Make sure you can safely manoeuvre it into the front garden, install mirrors in blind spots and cut sloping corners on boundary hedges to improve visibility.

GET DESIGN HELP

If you would prefer to use a professional designer to plan your front garden, contact The Society of Garden Designers (see page 13 for details).

Park and garden

Getting a parking space into the front garden and managing to keep some greenery can seem tricky, so here are some simple design solutions for gardens large or small.

If you need to park outside your house, the most logical solution is to pave over the garden. This is certainly a practical option, but with a bit of imagination you can combine paving with an attractive and welcoming garden. And by using materials that allow rainwater to penetrate the ground below, the hard surfaces you do install will shed less water that could otherwise contribute to flooding.

Begin by taking a close look at your front garden. How many cars do you really need to park and how much space do they take up? Have you got walls and fences that climbers could scramble up? Are there dead spaces that could accommodate plants, such as the corners? With the answers to these questions, you can create a design that minimises paving and maximises planting and permeable surfaces.

To show how this works in practice, look at the following three examples. The ideas can be used in just about any front garden.

THE TERRACE



The terraced house is a familiar feature of many of our towns and cities, but its front garden is small and needs careful planning to maximise space. To keep the hard surfaces to a minimum, create just two paved tracks to take the car wheels. The rest of the area can be covered with permeable plastic membrane to suppress weeds, then topped with gravel. By simply cutting through the membrane, you can then grow plants that will spill over the gravel. Thyme, bugle and creeping jenny will even tolerate a position underneath the car, as long as it is moved most days. Shrubs have been planted in the dead spaces, the blank walls clothed with climbers, and containers added to bring colour through the seasons.

SEMI-DETACHED HOUSE



Gardens of semi-detached properties are generally large enough for several cars. In this illustration space has been created for two cars, one of which is only parked on the drive at night and weekends. The main parking space is in front of the door, while the second space is off to the left. Although this arrangement means that the cars may sometimes need swapping around, it ensures there's room for a garden and all its benefits.

The hedge will filter some of the dust from the street and there are berries for birds and nectar for butterflies. The hard surface is resin-bonded gravel (see Matrix pavers, page 12), which blends with the surrounding loose gravel containing the planting.

TOWN HOUSE



The frontages of town houses vary greatly in size, but this larger property has enough room to accommodate three cars unobtrusively. The first vehicle sweeps to the right and parks alongside the existing wall. Behind, a new hedge helps screen it and prevents it being seen from the main rooms on the ground floor. The second car fits on the pavers to the left, while a third car can occasionally be parked on the adjacent lawn, which has been reinforced with a plastic mesh.

While there are hard surfaces, these have been constructed using permeable pavers, which allow more water into the ground than traditional types of paving. Finally, the herbaceous plants and a tree provide shelter and food for wildlife, making the front garden an attractive and low-maintenance addition to the house.

Planting ideas

There's no limit to what you can grow in your front garden, but here is a selection of plants that will thrive in most situations. All have been chosen because they are tough and won't need too much cossetting.

| TREES | SHRUBS | HEDGES | PERENNIALS | DRY SHADE |
|---|---|--|---|--|
| <ul style="list-style-type: none"> ■ Holly ■ <i>Magnolia x loebneri</i> 'Leonard Messel' ■ <i>Malus</i> 'Golden Hornet' ■ <i>Prunus</i> 'Shôgetsu' ■ <i>Pyrus calleryana</i> 'Chanticleer' | <ul style="list-style-type: none"> ■ <i>Aucuba japonica</i> ■ <i>Camellia x williamsii</i> ■ <i>Choisya ternata</i> ■ <i>Escallonia</i> ■ Lavender ■ <i>Mahonia x media</i> 'Charity' ■ <i>Skimmia</i> | <ul style="list-style-type: none"> ■ <i>Berberis thunbergii</i> ■ Box, <i>Buxus sempervirens</i> ■ Dwarf box, <i>Buxus sempervirens</i> 'Suffruticosa' ■ Hornbeam ■ <i>Lonicera nitida</i> ■ <i>Thuja plicata</i> ■ Yew | <ul style="list-style-type: none"> ■ <i>Alchemilla mollis</i> ■ <i>Anemone hupehensis</i> ■ Catmint, <i>Nepeta</i> ■ Geraniums such as Rozanne ■ <i>Heuchera</i> ■ <i>Stipa tenuissima</i> ■ <i>Phormium</i> | <ul style="list-style-type: none"> ■ <i>Bergenia</i> ■ <i>Cyclamen hederifolium</i> ■ <i>Euonymus</i> (variegated) ■ <i>Lamium</i> ■ <i>Luzula sylvatica</i> ■ <i>Pachysandra</i> ■ <i>Vinca minor</i> 'Illumination' |



Bugle can grow under cars

PLANTING UNDER CARS

If the car is moved fairly regularly, then there are plants you can grow that will tolerate being parked over. These need to be low-growing but tough enough to withstand the occasional running over. Try creeping jenny, *Lysimachia nummularia*; bugle, *Ajuga reptans*; and thymes such as *Thymus serpyllum*. Just leave planting pockets in the paving or gravel to ensure there is soil for them to grow in, rather than hardcore or a bed of concrete.



Birds enjoy pyracantha berries

ATTRACT WILDLIFE

Shrubs, trees and hedges provide shelter and nesting sites for birds and insects. With careful selection they can also provide food. Birds will eat berries from plants such as pyracantha, while a wide range of insects feast on the pollen and nectar produced by flowers. Aim to have plants in bloom from early spring to late autumn, and choose open, single flowers to ensure insects have easy access to their food. Good examples include catmint, *Nepeta x faassenii*; honeysuckle, *Lonicera periclymenum*; ivy, *Hedera helix* cultivars; and *Aster novi-belgii*.

COLOURFUL CONTAINERS

Pots can be placed anywhere, allowing plants to be grown in areas of the front garden that don't have soil. For summer colour, plant bedding plants such as petunias and nicotiana in late May. These can be replaced with pansies in September to keep the display going through the winter. If you want the containers to look good for more than one season, choose evergreen shrubs and plant into pots at least 45cm (18in) wide using John Innes No.2 compost.



Plant pansies in containers

CLIMBERS AND SCREENING

Climbing plants can easily be used to dress bare walls and fences with decorative foliage and flowers. Secure trellis or wires to the support posts or wall before you plant, as most climbers will need something to hang on to. Try *Clematis alpina* cultivars, *Hydrangea anomala* subsp. *petiolaris*, variegated ivy cultivars, and *Ceanothus* such as 'Delight'.

PLANTING AND GROWING

Find out how to plant and care for a wide range of plants on the RHS's website at www.rhs.org.uk. From here, you can also click on to the *RHS Plant Finder*, which lists more than 73,000 plants and where to buy them.



Ivy attaches itself to walls

Pave to perfection

PRODUCT GUIDE

If you do choose to pave, go for permeable products that allow rainwater into the ground below. Here are just some of the materials available (manufacturers' contact details can be found on page 13). However, do visit your local builders' merchants or DIY store as you may find more options.



BRICK PAVERS

These bricks have the appearance of traditional block paving, but their interlocking shape ensures rainwater can penetrate the tiny gaps. They need to be installed correctly on to compacted aggregate so the water can drain away freely.

Priora pavers are available from Marshalls and cost from £21.50 per sq m. Aquaflo Permeable Paving is available from Formpave, from £15.95 per sq m.



GRAVEL

Gravel is by far the cheapest permeable hard-landscaping option. It comes in many colours, depending on where it was quarried, and can be bought in bags or by the tonne. You can also buy recycled products, such as Eco Aggs's gravel which is a by-product of the ceramics industry. Gravel and aggregate prices start at just £2 per sq m, and locally quarried materials are usually the most inexpensive.



MATRIX PAVERS

Also known as cellular paving, these hexagonal cells are made from recycled plastic and hold an aggregate of your choice, such as resin-bonded gravel. They usually come in green, although other shades are available. Just lay them according to the manufacturers' instructions, so that rainwater drains away thoroughly.

Try Addastone Matrix Paving. Cost: from £60 per sq m (DIY) or £100 (installed).



GRASS REINFORCEMENT

There is a range of products that can be used to reinforce grass. These make the surface suitable for driving vehicles over and prevent it turning into a muddy field.

Grassguard from Marshalls is made from concrete (above), but there are tough plastic versions too, such as Netpave from Netlon. Cost: Grassguard £22 per sq m; Netpave £16.50 per sq m (including delivery).

CONTACTS AND RESOURCES

FIND OUT MORE

THE RHS PLANT FINDER
Lists over 73,000 plants and where to buy them. Available in bookshops or online at www.rhs.org.uk

RHS ADVISORY SERVICES
Free advice is available to RHS members by calling 01483 479700. To join, see page 14

ARBORICULTURAL ASSOCIATION
Directory of approved contractors and consultants
Tel 01794 368717
www.trees.org.uk

THE ASSOCIATION OF PROFESSIONAL LANDSCAPERS
Directory of landscapers
Tel 0118 930 3132
www.landscaper.org.uk

THE SOCIETY OF GARDEN DESIGNERS
Directory of designers, with portfolios available online
Tel 01989 566695
www.sgd.org.uk

PRODUCTS

ADDASTONE
Resin-bonded pavers
Tel 01825 761333
www.addagrip.co.uk

ECO AGGS
Recycled aggregates
Tel 01948 664656

FORMPAVE
Paving materials
Tel 01594 836999
www.formpave.co.uk

MARSHALLS
Paving materials
Tel 0870 120 7474
www.marshalls.co.uk

NETLON (CONWED)
Grass reinforcing system
Tel 01254 694494
www.netlon.com

SURE SET
Resin-bonded aggregates
Tel 01986 841180
www.sureset.co.uk

Gravel and aggregates can also be bought from builders' merchants and garden centres, plus suppliers listed in telephone directories

WILDLIFE

ROYAL SOCIETY FOR THE PROTECTION OF BIRDS
Tel 01767 680551
www.rspb.org.uk

SCOTTISH WILDLIFE TRUST
0131 312 7765
www.swt.org.uk

WILDLIFE TRUSTS
Tel 0870 036 7711
www.wildlifetrusts.org

ENVIRONMENT

DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (DEFRA)
Tel 08459 335577
www.defra.gov.uk/environment/water/conservation/

ENVIRONMENT AGENCY
Tel 08708 506506
www.environment-agency.gov.uk

PLANNING ISSUES

LOCAL COUNCILS
Planning and Tree Preservation Orders. Contacts can be found in the telephone directory or at www.direct.gov.uk

ENGLISH HERITAGE
Information on listed buildings. However, call your local council's planning department before making an application to English Heritage
Tel 0870 333 1181
www.english-heritage.org.uk

LONDON ASSEMBLY
Tel 020 7983 4100
www.london.gov.uk
For the environment committee's report on the importance of London's front gardens, log on to www.london.gov.uk/assembly/reports/environment.jsp

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