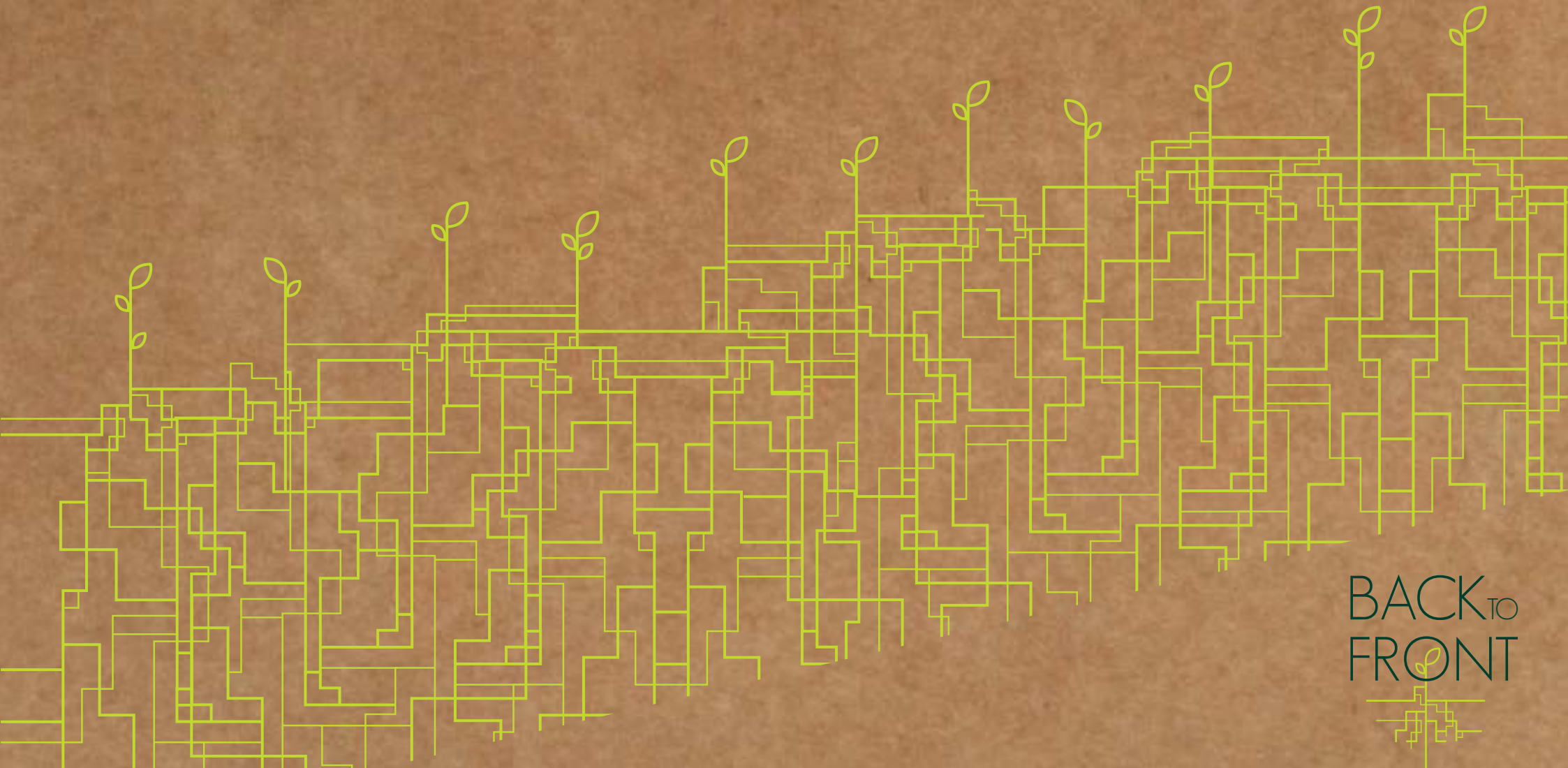
BACK TO FRONT MANUAL

for Growing Food in Front Gardens



BACK TO FRONT

Back to Front is an initiative based on an original idea by Roxana Summers

This manual is a partnership project delivered by Leeds Metropolitan University, NHS Leeds and Leeds City Council. The authors include:

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Please see page 65 for contributions and credits thanking all individuals, organisations, and designers involved in producing this manual.

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BACK TO FRONT ENCOURAGES PEOPLE TO HAVE FRONT GARDENS THAT LOOK GOOD AND TASTE BETTER

INTRODUCING BACK TO FRONT

Back to Front is a community organisation set up to promote food growing in front gardens so that they 'look good and taste better'.

Growing food at home gives people a chance to exercise, eat fresher food, spend less money on groceries, feel better and help the environment. Front garden growing improves the look and feel of your street and is super-convenient for growers. But Back to Front gardening is much more than this; it is about how neighbours talk and share and grow together as communities.

As the chair of the Back to Front community group, I want to thank everyone involved in this project so far. This includes my two children who indirectly and randomly inspired me to develop the project.

It is Back to Front's dream that all front gardens 'look good and taste better'. Whether you are starting from scratch or an experienced grower wanting to make the most of your space, I hope this manual can inspire you to grow more food in your front garden. Make sure you tell us how you got on!

Roxana Summers, Back to Front Community Group
growing@backtofront.org.uk

Iris in her garden. Harehills

THE BACK TO FRONT MANUAL

Back to Front encourages people to have front gardens that 'look good and taste better'.

This manual contains information to help you start to grow food in your front garden by starting off small, saving money and space and by using local resources.

Back to Front's approach has been informed and inspired by our work in Harehills and Chapeltown, Leeds, between 2009 and 2011.

The manual can be used by individuals, community organisations and schools. We hope you enjoy reading and using it and that it helps you to grow more food in your front garden.

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PART 1

BACK TO FRONT

THE BACK TO FRONT STORY

Back to Front had its first home in Inner North East Leeds and was envisioned by Roxana Summers, who is a Leeds resident and health improvement worker for NHS Leeds. Roxana was initially inspired by the Bangladeshi people of Leeds who often used their front gardens to grow spinach, beans, pumpkins, garlic and coriander. There was such a contrast between these edible gardens and some of the gardens next door, which could be at best, laid with a finely manicured lawn and at worst, used as a dumping ground for rubbish, old tyres and furniture. Roxana wanted to unlock the potential of front gardens and promote these sometimes forgotten spaces as places to grow your own food.

To find out what local people thought about local food growing, NHS Leeds and BTCV conducted a survey of 361 residents in Inner North East Leeds[1+2]. Then, using this knowledge, Back to Front successfully secured funding from the Local Government Group to write this manual. The project developed in partnership with Leeds City Council, the Landscape Architecture team at Leeds Metropolitan University and NHS Leeds. It has been enriched by injections of public and professional involvement along the way. A list of all contributions is included on page 65.

It is Back to Front's dream that in the future, everyone will have gardens that look good and taste better. Look at part two of this manual for information about how to get going with growing and help make this dream become reality!

You can read more about the future of Back to Front on page 70.

[1]NHS Leeds (2011) Growing Trends in Inner North East Leeds [2]BTCV Leeds (2009) Growing Trends in Inner North East Leeds

WHY BACK TO FRONT?

Front gardens have huge potential for growing. No one has measured the total size of all the front gardens in the UK but in Harehills, Leeds, front gardens take up 20% of the land in a typical street of Victorian terraces.

Front gardens are an important part of our neighbourhoods but we rarely think of using them as places to grow fruit and vegetables.

Front gardens take up 20% of the land in a typical street of brick Victorian terraces in Harehills, Leeds

Back to Front aims to inspire everyone to start using their front gardens more for growing food. The idea supports nationwide guidance that encourages people to stop paving over their front gardens. In fact, since 2008, if you want to pave an area of over five metres squared or more, with watertight paving like mortared stone or tarmac, you will need to apply for planning permission[2].

Other paving options are explained well in the RHS booklet 'Gardening Matters' (2005).

Encouraging people to grow plants instead of laying slabs in their front gardens is one thing. But what about using them for growing fruit and vegetables? First let's think about why we don't generally use our gardens for food growing in the UK.

WHY DON'T WE USE OUR FRONT GARDENS FOR GROWING FOOD IN THE UK?

A lot can be explained by our cultural heritage and history. Places like Harehills changed radically in the 19th and early 20th centuries, when many of the terraced houses were built. This change went hand in hand with the reduction and privatisation of land that some people used to grow food. The gardens provided weren't particularly designed for growing and people didn't use them for that. Often, the quality of the soil was poor and the space needed for doing household chores.

Of course many people could afford to go and buy their fruit and vegetables from shops and markets. But those that couldn't, suffered. The Allotment Act in 1908 forced local authorities to provide places for growing in cities. Initially, mainly poor people tended to work allotments but they became more and more popular during the world wars when food became harder to come by. Even so, it's easy to see that over time, growing your own has been associated with the need to make ends meet. Some people were embarrassed about growing instead of buying food so often, vegetable patches were hidden from view.

[1]Greater London Authority (2005) Crazy Paving: The Environmental Importance of London's Front Gardens. Sept 2005, p5. [2]Department of Communities and Local Government (2008) Guidance on the Permeable Surfacing of Front Gardens, p5.

GROWING TRENDS TODAY

All over the country and all over Leeds, people are really getting interested in growing food. Allotment waiting lists are massively oversubscribed with almost 85,000 people waiting for the 152,442 plots available in England[1]. In Leeds there are about 1800 people waiting for space on the 32 allotment sites owned by Leeds City Council[2]. In response, people are becoming more creative. Local groups have been trying to reclaim public space for growing and setting up garden swapping or sharing schemes. All sorts of spaces are being used to grow food from balconies, window boxes and gardens to pockets of leftover land in towns and cities.

People in Leeds are certainly keen to join the food movement. In a survey of 361 local residents from Inner North East Leeds completed in 2009[3], 21% already grow some of their own food and 42% expressed an interest in growing more. However, a lack of time, space and money are the main reasons that put people off growing their own food at home[4].

This manual shows how these concerns can be alleviated through being resourceful and through clever design solutions.

There are many reasons why food growing is becoming popular[5].
Our Back to Front gardeners explain that:

- Growing your own can save you money, especially if you grow foods that are expensive to buy like soft fruit or asparagus
- Growing your own food means than you can make sure that your food has been grown just the way you like it
- The whole family can get involved in growing food
- Growing your own makes you feel excited and proud.

Right: A Garden for Time: A Back to Front demonstration garden

[1]Campbell, M & Campbell, I (2011) Allotment Waiting Lists in England in 2011, May 2011, Transition Towns West Kirby and NSALG. [2]Personal communication with Leeds City Council, Allotments Inspector. [3]NHS Leeds (2011) Growing Trends in Inner North East Leeds. [4]BTCV Leeds (2009) Growing Trends in Inner North East Leeds. [5] www.direct.gov.uk (n.d.) Grow Your Own Fruit and Vegetables.

FRONT GARDEN GROWING CAN BENEFIT YOU IN THE FOLLOWING WAYS

1 Our Back to Front growers have found it is super-convenient to be able to care for their gardens and harvest food on their way home.

2 Gardening up front can improve your social life! Our front gardeners report that since they started growing food in their front gardens, they have spoken to more of their neighbours and passers by then they did previously.

3 Beautiful and bountiful front gardens have a positive effect on the general look and feel of the neighbourhood[1]. When we asked people in Harehills about this, everyone who took part agreed that the neighbourhood felt better after we built our demonstration gardens.

[1] Soomeren et al (2008) Reducing the Fear Factor

Above: Back to Front's A Garden To Share

So, Back to Front can benefit you, your family and your neighbourhood. But there's also a bigger picture that Back to Front sits within. The way that we sow, grow and source our food in the UK and further afield is becoming more of a problem. In summary;

The cost of food is continuing to rise and could cost us up to 30% more by 2020[1].

A greener front garden helps reduce flooding and other environmental issues[2].

Our food habits are carbon heavy[3].

Food and the farming and manufacturing processes that produce it accounts for at least 20% of our harmful emissions in the UK[3].

[1]OECD-FAO (2011) OECD-FAO Agricultural Outlook 2011-2020. [2]Department of Communities and Local Government (2008) Guidance on the Permeable Surfacing of Front Gardens. [3]Sustainable Development Commission (2011) Looking Back, Looking Forward, Sustainability and UK Policy, 2000-2011.

THE BACK TO FRONT PRINCIPLES

The Back to Front idea is very simple and is captured in the principles listed below. Back to Front can be taken on by individuals, families and groups of friends; neighbourhoods, community organisations, landlords and schools.

1. Use your front garden
2. Grow fruit, vegetables and flowers
3. Use vertical space
4. Start small
5. Reduce, re-use and recycle
6. Use local resources
7. Share knowledge and supplies
8. Work together
9. Work with managers of public space and buildings to increase space and facilities
10. Be ambitious

PART 2

LET'S GET GROWING

START OFF **SMALL**

Growing fruit and vegetables is easy and fun. You can start off small by growing plants in containers. Container growing can help you keep on top of weeds and garden pests and makes it easy move and change your garden around. All you need to do is make sure that each container you use has:

1. A wide enough opening to allow rain water to fall into it (that's if you are not planning to water your plants with a watering can or hose)
2. A hole in the bottom so that water can drain out. This stops your plants getting waterlogged when it rains or if it gets over-watered
3. Enough space inside for the plant to grow
4. Been filled almost to the top with soil or compost.

If you decide to have a go at container gardening, you are likely to need to water your plants more often than if they were planted in the ground. Our growing guide section on page 22 includes information to help you choose the right vegetables for the right size pots.

It's worth remembering there are all sorts of containers available for growing and planting vegetables in. You don't have to spend a fortune on pots and planters and can often re-use things that you find at home. Here's what happened when Back to Front got creative with container growing!


Veg by the barrow


Washing up bowl


Loo loads of veg


Baby bath salad

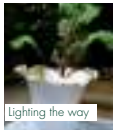

Hats off to growing


Any veg for juicing?


Put the kettle on


Gas pipes full of spuds


Time for tea?


Lighting the way


Buckets of beans

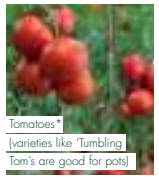
EASY WINS

Here is a list of plants that Back to Front gardeners have found easy to grow from seed

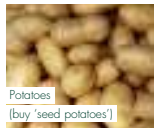
*These plants may need to be grown indoors to begin with.


Radishes


Spring Onion


Tomatoes*
(varieties like 'Tumbling Tom's are good for pots)


Beetroot*


Potatoes
(buy 'seed potatoes')


Courgette*


Spinach*


Beans*


Pea*


Coriander*

WANT TO GET STARTED?

Just follow the instructions on the seed packet and watch as your efforts flourish.

TOO MANY SEEDS IN THE PACKET?

Why not share your left over seeds with a friend or neighbour? Organised sessions are listed on page 64.

If growing from seeds sounds a bit fiddly try buying young plants from supermarkets, garden centres or nurseries. You'll need to re-pot baby plants (or 'plugs' as they are often called) into your own, more spacious containers. You might need to do this more than once to make sure each plant has more room to grow and thrive. Look at our growing guide section from page 22 for more information.

BASIC TOOLS

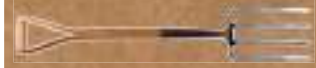
You don't need to invest in many tools to start growing your own at home. Back to Front basics include:

FOR CONTAINER GARDENING


A trowel to dig holes

A watering can

FOR FRONT GARDEN GROWING


A fork to break up and dig over the soil


A trowel for digging holes


A spade if you want to dig big holes


A watering can

A MORE **PERMANENT** GARDEN

You can create a more permanent fruit and vegetable garden at the front of your house by;

- Making supersize containers
- Devoting your borders to growing food
- Turning lawn areas into growing spaces
- Making some raised beds
- Growing plants up walls and fences.

The following ideas might provide some inspiration.

SUPER-SIZE CONTAINER GARDENING

Steve and Suzi in Pudsey don't mess about when it comes to container gardening! They've planted a whole harvest of fruits and vegetables in builder's bags that they've looped over their front garden fence. They have fixed more recycled fencing around the bags to contain them.

Builder's bags can often be collected free of charge from builder's merchants and building companies.

Conveniently, you can have a whole tonne of topsoil in a builder's bag delivered from building and soil suppliers straight to your front garden. Prices vary between £35 and £75 depending on the company, how easy it is to access your garden and according to the quality of soil you are buying. It might be worth thinking about ordering in bulk with your neighbours.

Thinking about ordering a super-size bag of soil?

1. **Make sure that a lorry can park close to your garden fence so that the soil can be lifted into your garden with the crane.**
2. **Make sure that the soil filled bag can fit inside your garden. Builders bags measure about one metre in width, depth and height when they are full.**
3. **Make sure that the bag of soil is left in exactly the right place! These bags of soil really do weigh a tonne and can't be moved unless you shovel all of the soil out first. We know from experience that this can be back-breaking work!**
4. **Be mindful that soil quality can vary. Soil that has been screened contains fewer stones, debris and roots. Top quality soil should at least meet British Standard* BS3882:2007**

Topsoil isn't always expensive. Some builder's yards allow you to go and collect it for very low prices and sometimes for free, which is a good cheap option if you have time, your own transport and lots of muscles!

*British Standards provide quality indicators for a range of products and services within the building industry.

Suzi and Steve's garden. You can visit this garden yourself because it is a permaculture demonstration garden. More information is available from www.permaculture.org.uk.

MARK'S NO DIG GARDEN

Who said gardening was all hard work?

Mark Beardmore tells us how he transformed his lawn into a well-stocked vegetable patch in three easy steps and without doing any digging!

You can visit Mark's garden yourself because it is a permaculture demonstration garden. More information is available from www.permaculture.org.uk.

CHOOSE IT

Choose a piece of overgrown garden

Julian Willis' garden and photo.

COVER IT

Cover it with cardboard or heavy fabric (old carpet does the job well) or plastic and leave over winter.

COMPOST IT

In spring remove all materials from your patch unless you have used cardboard, which will rot into the soil. Next, cover the ground with a thick layer of mulch. You could use compost or well-rotted horse manure. Leave the mulch to settle for a few weeks, then plant out seedlings or sow directly into the compost. Timber edges are optional but helpful.

No-dig gardening is a popular activity as you might well imagine. You can find out more from the Garden Organic website and there is an alternative method published on You Tube.

Suzi and Steve's garden.

IRIS' GARDEN

An abundant garden that really makes the most of the front garden space.

Made by Iris and José | Harehills, Leeds | Winner of In Bloom competition 2010 and 2011 and gardening competitions in East North East Homes Leeds between 2009-2011

KEY FEATURES

- North-facing
- Using vertical surfaces to hang up pots and grow climbers
- Mixing in flowering plants to make the garden prettier and attract insects to pollinate plants and eat troublesome pests.
- Using a small metal tin to compost peelings and replenish the garden's nutrients

WE FOUND THAT:

- This sort of garden takes a lot of time to make and maintain but is very rewarding for Iris, José and their neighbours.
- Iris and José eat something from their garden every day in summer
- You can still grow lots of food in a north-facing garden

CHRIS' GARDEN

A terraced garden designed for wildlife, ease of use and to make the most of garden ecosystems. This approach is based on the ideas and principles of permaculture design. For more information about permaculture, please see page 66.

Made by Chris | Meanwood, Leeds

KEY FEATURES

- Re-using recycled materials found in skips
- Keeping the growing spaces that you need to access more often closer to the front door and pathway
- Use of perennial planting that can be harvested year after year and help to save time. Chris grows an almond tree, an apple tree hedge, figs, grapes, hardy herbs, gooseberries, rhubarb and globe artichokes.
- The pond attracts wildlife that help control slugs and insects.

WE FOUND THAT:

- The way that this garden has been designed makes the most of the space available.

Below: Chris' garden and photograph

BACK TO FRONT DEMO GARDENS

In 2010, Leeds Inner North East Area Management Committee donated £1000 to Back to Front to build three demonstration gardens. The gardens designs aimed to:

- Be great places for residents and meet their needs as a garden
- Be made in an environmentally friendly way
- Reduce the use of, re-use and recycle materials where possible
- Make the most of all front garden space available
- Include as many edible plants as possible.

Students from Leeds Metropolitan University's landscape architecture and garden design courses worked with local residents from Harehills and Chapeltown. Volunteers for front garden makeovers were identified through the survey of growing trends in the area[1]. Three gardens were shortlisted following a public exhibition at Shine, a local business and community centre. Some of the materials and all of the plants were salvaged or donated by local people. Landscape architect Emma Oldroyd, from Leeds Metropolitan University, worked closely with residents to refine the designs and make sure that they could be built within budget and using only basic construction skills. Over a very hectic week of remarkably sunny weather in June 2010, Emma along with student volunteers from the course built and planted up three demonstration gardens.

Three gardens were built, which were named 'A Garden for Time', 'A Garden Above Ground' and 'A Garden to Share'. Back to Front were very grateful to youth volunteers at Groundwork Leeds who did a fantastic job building the planters in 'A Garden to Share'. The experience of building the gardens has helped Back to Front write this manual. The gardens themselves have been beautiful and bountiful and continue to be loved and used by our residents. More widely, they have made local people more positive about the way their neighbourhood looks and feels. The next three pages showcase each garden and summarise what we learnt from building each one.

[1]BTCV Leeds (2009) Growing Trends in Inner North East Leeds

A GARDEN FOR TIME

Ideal for people who own their garden and want to make something individual that lasts.

Designed by landscape architect Liam Clarke and Leeds Metropolitan University | Harehills, Leeds

KEY FEATURES

- Working with the existing pathways
- Digging over and re-planting the lawn
- Using raised planters to provide more space for growing
- Providing opportunities for crop rotation

WE FOUND THAT:

- Cutting chunky wood can be tricky and requires the correct power tools
- Investing in treated timber for use outside means that it lasts longer but isn't so environmentally friendly
- Installing a water butt would help save more time when watering

" It's nice taking care of it because the whole family got involved. In the beginning, we were arguing over who was going to water it"

Back to Front gardener: A Garden for Time

Garden plans

Making the garden

"We've got the best garden in the ghetto now"!

A GARDEN **ABOVE GROUND**

Ideal for people who rent or want to avoid disturbing the ground.

Designed by landscape architect Rachel Forbes and Leeds Metropolitan University | Harehills, Leeds.

KEY FEATURES

- Raised planters
- Freestanding timber and rope frames
- Stackable planters that can be moved about year after year.
- Pots and window boxes

WE FOUND THAT:

- Rope is a cheap and durable material for growing climbers up
- The stackable planters worked really well
- These raised beds accommodate more soil than you might think!

"I love my new garden. It looks fantastic. My neighbours keep coming over for a look"

Back to Front gardener: A Garden Above Ground

Garden plans

If you want to make some stackable planters like this please go to the 'Space and money-saving ideas' section of this manual on page 32.

A GARDEN **TO SHARE**

Big beds in a communal garden for people with more to grow.

Designed by the residents and Leeds Metropolitan University | Built by Groundwork youth volunteers | Harehills, Leeds

KEY FEATURES

- Raised planters
- Reclaimed materials
- Working with volunteer groups

WE FOUND THAT:

- When planning and making a shared garden, there needs to be a willing volunteer within the group who will bring everyone together and lead the project. This can be a high-pressure but rewarding challenge to take on!

Garden plans

"Having things in the front garden means it's easy to pick [produce] on the way in"

Back to Front gardener: A Garden To Share

The finished and established garden

Groundwork youth volunteer team

GROWING GUIDE **QUESTIONS**

Knowing what to plant in your pots, planters and gardens can sometimes be a little confusing. These pages explain what you need to think about when choosing your plants with answers to these ten questions;

1. How deep is my soil?
2. What type of soil do I need?
3. Will this plant grow in the shade?
4. Will my plants produce food year after year? (annuals and perennials)
5. Will my plants die outside in winter? (hardiness)
6. Do I need a greenhouse?
7. How much watering will I have to do?
8. Do I need to stake up my plants?
9. How long do I have to wait to pick my fruit and veg?
10. How much produce will I get from each plant?

HOW TO USE THIS SECTION

This section provides a basic introduction to each question listed above. The growing guide on page 26 shows the answers to all these questions for some of the vegetables that proved popular with our Back to Front gardeners.

More detailed information on each question can be found by looking at the books and websites listed in our Information and Resources section on page 66. You will also find that most packets of seeds have instructions printed on the back of them.

1. HOW DEEP IS MY SOIL?

Soil depth is important when growing fruit and vegetables because plants have different sized roots and ways of growing. For example beans and peas have long deep roots whereas salad leaves only have shallow roots.

Vegetables that are part of a plant's root system, like carrots and potatoes need lots of space underground but leafy vegetables like broccoli and cabbages can make do with less. Usually, the bigger the plant, the more root space it needs, so pumpkins need far more space to grow than spinach.

Choose the right plant for the space you have available with the help of our growing guide. See page 26.

NOT SURE WHICH PLANTS ARE HAPPY IN POTS? **Check out our growing guide to find out.**

2. WHAT TYPE OF SOIL DO I NEED?

Soil is important because it contains nutrients, air and water for your plants. Different types of soils suit different types of vegetables.

The RHS[1] say, lighter, sandier, grainier, free-draining soils are better for growing plants that produce fruit and vegetables earlier on in the year. Heavier, clay like soils take longer to warm up in spring and so are better for crops that are available for eating later on. Also, these clayey soils are very good at holding water. Clayey soil can be improved by digging sharp sand into it. You can buy this cheaply from builder's yards.

All garden soil can be improved by breaking it up with your garden fork. You need to make it as fine as possible and should remove as many stones as you can. Next, dig in more organic material such as well-rotted manure or compost to further improve your soil. More information about soils is available on the RHS website[1].

If you read more detailed growing guides, you see that the pH value of soils is sometimes mentioned. This refers to the soil's chemical state which can be either alkaline or acidic. Most vegetables prefer soil that is neither (or neutral), with a pH value of about 7.

We found that our Back to Front demonstration gardens all had soil that was almost neutral or slightly alkaline. All of the fruits, vegetables and herbs in our growing guide on page 26 would grow in this soil except for blueberries, which prefer more alkaline soil of about 4pH.

It is easy to make your soil more alkaline by adding lime to it but it's harder to make it more acidic.

WORRIED ABOUT YOUR SOIL? **We think it's best to just start gardening and give your soil a go. For more detailed information on soil pH, please refer to the information and resources on page 66.**

[1]Royal Horticultural Society website | www.rhs.org.uk

A SIMPLE WAY OF FINDING OUT WHAT TYPE OF SOIL YOU HAVE

- If your soil looks and feels very grainy and dusty and falls apart really easily when it is wet and squashed together, your soil is likely to be **silty or sandy.** You may need to dig in more organic material before you start growing.
- If your soil looks a dark or deep brown and looks more crumbly rather than grainy it is likely to be **generally good soil** (called loam) and is perfect for growing.
- If your soil feels greasy and you are able to make it into shapes then it is likely to be **heavy and clayey.** You could improve it by digging sharp sand and organic matter into it before you start growing.

We've matched your most popular food plants with the soils where they grow best in the growing guide on page 26.

You need to make sure you have broken up your soil before you check what type it is. If it's too squashed, you might not be able to tell how clayey or silty it really is.

AN EASY WAY TO TEST YOUR DRAINAGE

It is easy to test the drainage of your soil by digging a hole in the ground. The hole should be about 45cm wide and deep (or as far down as you can dig). Fill the hole up with water and see how long it takes to drain away. If your soil is 'well-drained', the water will drain away quickly or steadily. If the water hangs around for hours or days, its drainage is not so good and can be improved by adding sand and lime to it and by digging it over in dry weather. After you've done all this, it is even better to let it get really cold over winter because the frost breaks the soil up even more.

3. WILL THIS PLANT GROW IN THE SHADE?

Growing food in front gardens means that your house and your neighbour's houses might not be very far away at all. All these houses can make your garden a little (or sometimes very) shady at different times of the day. Other features in your garden such as walls, hedges, fences and bins might also cast shade on your garden.

Emma's garden

Spend a bit of time watching how the sun and shade falls on your garden throughout the day. How does it change? Where are the sunniest spots? Can you move things around in the garden to make the most of the sunshine?

It's always best to grow fruit and vegetables in the sunniest spots of the garden but if you've got a shady space, then there's still plenty that you can grow and harvest (see Iris' garden on page 17).

WANT TO KNOW WHICH PLANTS GROW BEST IN SUN AND SHADE? **Have a look at the growing guide on page 26 to see what your options are.**

4. WILL MY PLANTS PRODUCE FOOD YEAR AFTER YEAR? (ANNUALS AND PERENNIALS)

Most vegetables are **annuals** and need to be re-grown from a seed every year.

Plants that return year after year are called **perennials**. These plants can involve less work than annuals because they don't need growing from seed every year.

Plants that grow from a sort of swollen root are called tubers. Some tubers, like ginger, are perennial. But others, like potatoes, are not.

Most people like to grow a mix of annual and perennial fruits and vegetables if they can.

Look at our growing guide on page 26 to help you plan your plot out. We have divided it into 4 **annual** and **perennial** plants.

Within these sections we have grouped together

- Vegetables
- Fruits
- Herbs

5. WILL MY PLANTS DIE OUTSIDE IN WINTER (HARDINESS)?

Different plants should be sown and harvested at different times of the year. There are a number of annual plants that are happy in the soil until December, such as parsnips and leeks. Some annual plants even grow throughout the winter, like cabbage, garlic, broad beans, brussel sprouts. Other annual plants, like potatoes can be grown throughout the winter in greenhouses. The trick is to plan ahead and use all your growing space as it becomes available.

Over winter, some perennials die back and re-grow again in spring. Others are evergreen and keep their leaves. Some perennials (like lemongrass) are too tender for the UK climate and need to be kept protected from the cold over winter.

NEED TO PLAN AHEAD? **Look at our growing guide on page 26 help you.**

6. DO I NEED A GREENHOUSE?

Many fruits and vegetables will grow straight from the seed if you plant it outdoors in the garden. All it needs is a little water, light and some soil and the rest is automatic.

Some seeds, like tomato seeds, only germinate (or start to grow) if they are sown in a place that is above a certain temperature. They will still need water, light and soil but once the spring frosts are well and truly over the seedlings can be taken outside to grow. A sunny windowsill provides the perfect place to start off these sorts of plants. You could also start them off in a greenhouse outside.

Other plants, like aubergines, really need a warmer climate than we have in the UK and so are best grown in a greenhouse or indoors. Sometimes you might get away with growing these fussier plants outside for the hottest part of the summer but only if your garden is very sheltered from the wind and gets a lot of sunshine. In the spring and autumn, you may need to heat your greenhouse to protect your plants from any frosts that we might get.


John's garden

7. HOW MUCH WATERING WILL I HAVE TO DO?

The amount of watering you have to will depend on

1. **Whether it's been raining**
2. **How long it's been since you planted your plants in the ground**
3. **The size of your garden**
4. **The type of plants that you grow**

New plants need a little more care and attention than established plants. If you are planting out young plants or plants that you have bought or grown elsewhere, you should give them a little bit of water every day for a week unless it's rained.

Bigger gardens tend to need more watering. It's a good idea to invest in a rainwater butt to collect water that has run off your roof. Rainwater is better for plants than tap water and saves valuable resources in summer. It might also mean that you don't have to carry your watering can so far.

Clever planting can also reduce the need to water plants. Start off small by avoiding thirsty plants. A more advanced approach could see you creating drought gardens and mimicking what happens in natural eco-systems. See 'Growing On' in our Information and Resources section on page 66 for more.

Despite the obvious need to water the garden, our demonstration gardeners didn't find it a chore. In one garden, the family even argued about who was going to be responsible for doing all the watering! **In general, our demonstration gardeners normally only watered the garden for about 15 minutes a day in the height of summer.**

We've indicated which plants are especially thirsty in our growing guide on page 26.

8. DO I NEED TO STAKE UP MY PLANTS?

A few plants need staking up once they grow large. Bamboo canes are used by lots of gardeners but you can use any type of pole, rod or stake. How about using old bits of piping or pieces of wood? Perhaps an old ladder or even an old gate would do the trick? The plants won't be fussy, they just need something stable to grow up.

WHICH PLANTS NEED EXTRA SUPPORT?
Check our growing guide on page 26 to find out.

9. HOW LONG DO I HAVE TO WAIT TO PICK MY FRUIT AND VEG?

Plants take different lengths of time to produce the roots, fruits and leaves that are edible. Some plants (such as coriander or rocket) only take between 6 to 8 weeks before they are ready to eat but you need to wait a good couple of years before you can pick your asparagus or raspberries.

We've indicated what sort of time you'll need to wait for the fruits of your labours in our growing guide.


Harry's harvest

10. HOW MUCH PRODUCE WILL I GET FROM EACH PLANT?

Different plants provide more food than others when grown in the same space. The amount of food a plant produces is called its yield.

Plants that grow tall and spread out, like beans, or grow deep potatoes are usually very space efficient.

Andi Clevely[1] says the best plants for the greatest yield for lowest effort are; beetroot, carrots, courgettes, dwarf French beans, gooseberries, lettuce, parsley and tomatoes.

In our growing guide, we've shown which plants give particularly high yields, which means that you could grow at least 2kg of food for every metre of your garden.

[1]Clevely, A (2006) The Allotment Book Harper, Collins, London
[2] Bizzybee (2009) The Allotment Journal, Bizzybee, China.


Julia's pickings and photo

BACK TO FRONT GROWING GUIDE

A QUICK REFERENCE GUIDE TO EDIBLE PLANTS SELECTED BY LOCAL PEOPLE

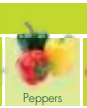
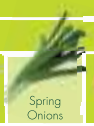
Measurements are approximate. Always check the seed packet for more information. Compiled from experience and with reference to the following sources[1+2]

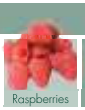
[1]Clevely, A (2006) The Allotment Book Harper Collins, London
[2] BizzyBee (2009) The Allotment Journal, Bizzybee, China

ANNUAL PLANTS THAT ONLY GROW ONCE A YEAR

VEGETABLES

	 Aubergine	 Beans	 Beetroot	 Broccoli	 Cabbage	 Carrots	 Celery	Chillies	 Courgette	 Outdoor Cucumber	 Lettuce
SPACE TO GROW	30-40cm deep 30cm wide	40-60cm deep 45-60cm wide	20cm deep 20cm wide	40-60cm deep 60cm wide	30-40cm deep 30cm wide	40-60cm deep 10cm wide	40-60cm deep 30cm wide	40-60cm deep 45cm wide	45-60cm deep 60-75cm wide	45-60cm deep 50-75cm wide	20-30cm deep 15-30cm wide
SOIL TYPE	Well drained nutrient rich	Well drained	Light / sandy	Well drained	Well drained nutrient rich	Light / sandy	Nutrient rich	Variable	Moist well drained	Well drained nutrient rich	Well drained
HAPPY IN POTS?	N	Y	Y for round varieties	N	Y	Y	N	Y	Y	Y	Y
SUN OR SHADE?	Sun	Sun or part shade	Sun	Sun or part shade	Sun or Shade	Sun	Sun	Sun	Sun	Sun	Sun or Shade
HARDY?	N	Y for broad beans	Y	Y	Y	Y	N	N	N	N	Some types Y
GROW INDOORS OR OUTDOORS?	Indoors or in a greenhouse	Outdoors or start indoors	Outdoors	Outdoors	Outdoors	Outdoors	Start off indoors	Indoors or in a greenhouse	Start off indoors	Outdoors or start indoors	Both – depends on variety
PARTICULARLY THIRSTY?	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
SUPPORT AND STAKING?	Y	Y	N	Y	N	N	N	N	Can climb	Can climb	N
TIME TO WAIT FROM SEED TO PLATE	6-8 months	2-4 months	3-4 months	10 months	4 months (summer) 8-10 months (winter)	2-4 months	6-9 months	4-5 months	3 months	3-4 months	2-3 months
PARTICULARLY HIGH YIELD?	N	Y (runner beans)	N	N	N	N	N	N	N	N	N

	ANNUAL PLANTS THAT ONLY GROW ONCE A YEAR									
	VEGETABLES									
	 Onions	 Peas	 Peppers	 Potatoes	 Pumpkin & Squash	 Radishes	 Rocket	 Spinach	 Spring Onions	 Tomatoes
SPACE TO GROW	30-40cm deep 20-30cm wide	30-40cm deep 45cm wide	40-60cm deep 45cm wide	60cm deep 45cm wide	60cm deep 60-90cm wide	15-20cm deep 10-15cm wide	20-30cm deep 15-30cm wide	20-30cm deep 15-30cm wide	10-20cm deep 10cm wide	130-60cm deep 45-30cm wide
SOIL TYPE	Well drained	Well drained nutrient rich	Well drained nutrient rich	Nutrient rich soil	Nutrient rich soil	Well drained nutrient rich	Varied	Well-drained	Well drained	Well drained nutrient rich
HAPPY IN POTS?	N	Y	Y	Y	N	Y	Y	Y	Y	Y
SUN OR SHADE?	Sun	Sun	Sun	Sun or part shade	Sun	Sun	Shade	Sun or shade	Sun	Sun
HARDY?	Y	Y	N	Y	N	Some varieties are	Y	Y	Y	N
GROW INDOORS OR OUTDOORS?	Outdoors	Outdoors or start indoors	Indoors or in a greenhouse	Outdoors	Start indoors	Outdoors	Outdoors or start indoors	Outdoors or start indoors	Outdoors	Start indoors
PARTICULARLY THIRSTY?	N	N	Y	Y	Y	N	N	N	N	Y
SUPPORT AND STAKING?	N	Y	N	N	N	N	N	N	N	Y
TIME TO WAIT FROM SEED TO PLATE	7-8 months	2-3 months	4-5 months	6-8 months	3-4 months	1 month	1-2 months	2-3 months	4-5 months	4-5 months
PARTICULARLY HIGH YIELD?	Y	N	N	Y	Y	N	N	N	N	Y

	PERENNIAL PLANTS THAT GROW AGAIN YEAR AFTER YEAR											
	HERBS & SPICES				VEG	HERBS &SPICES				FRUIT		
	 Basil	 Coriander	 Garlic	 Ginger	 Asparagus	 Chives	 Lemongrass	 Mint	 Rosemary	 Blueberries	 Raspberries	 Strawberries
SPACE TO GROW	15-30cm deep 15-30cm wide	15-30cm deep 15-30cm wide	30cm deep 20-30cm wide	20cm deep 15cm wide	40-60cm deep 45cm wide	20cm deep 10-20cm wide	30cm deep 30cm wide	40cm deep 60cm wide	40cm deep 60cm wide	60cm deep 1.5m wide	60cm deep 1.5m wide	30cm deep and wide
SOIL TYPE	Light / sandy	Light / sandy	Well drained nutrient rich	Well drained nutrient rich	Well drained	Well drained nutrient rich	Well drained nutrient rich.	Moist, nutrient rich	Dry well drained	Light / sandy well drained	Moist, nutrient rich	Varied
HAPPY IN POTS?	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y
SUN OR SHADE?	Sun	Sun	Sun	Sun	Sun	Sun or part shade	Sun	Sun or shade	Sun	Sun or part shade	Sun	Sun
HARDY?	N	N	Y	N	Y	Y	N	Y	Y	Y	Y	Y
GROW INDOORS OR OUTDOORS?	Start indoors	Outdoors or start indoors	Outdoors	Indoors	Outdoors	Outdoors or start indoors	Start indoors	Outdoors	Outdoors	Outdoors	Outdoors	Outdoors
PARTICULARLY THIRSTY?	N	N	N	Y	Y	N	Y	Y	N	N – avoid watering from tap	N	Y
SUPPORT AND STAKING?	N	N	N	N	N	N	N	N	N	N	Y	N
TIME TO WAIT FROM SEED TO PLATE	6 weeks - 2 months	6 weeks - 2 months	6-9 months	9 months. Easier to buy fingers	Grow for 2-3 years before cutting. Easier to buy small plants	2-3 months	1 year from seed. Easier to buy small plants	1-2 months	3-4 months	3-5 years to crop. Easier to buy small plants	2 years to crop. Easier to buy canes	Easier to buy plants
PARTICULARLY HIGH YIELD?	N	N	N	N	N	N	N	N	N	N	Y	N

BACK TO FRONT **WORRIES**

Starting something new like growing your own fruit and vegetables can be a bit daunting. From our work in Leeds, we know that some people worry about:

- Pollution from vehicles
- Soil contamination in cities
- Infection from cat and fox excrement
- Theft and vandalism.

This section discusses each of these concerns and provides some tips for helping to lessen some of them.

POLLUTION FROM VEHICLES

Vehicle exhausts produce very fine particles of soot, brake dust and a small amount of hydrocarbons including benzene (which is poisonous). But, the quantities are small on most urban streets. A thick hedge will filter some of the road dust and particles[1]. Remember that you should always wash and peel your fruit and vegetables before eating them, especially when feeding children or other more vulnerable people.

[1]Girardet, H. (1999) Creating Sustainable Cities, Schumacher Briefing No.2 Green Books

SOIL CONTAMINATION IN CITIES

Overall, cities are good places to grow vegetables. It's warmer than the countryside, so there is a longer growing season and there can be less wind to damage crops. However, there is a risk of soil and sometimes plants becoming contaminated in places that are, or have been, industrial. You can find out more about your local area's past by studying old maps. Take a trip to your local history library or look at online resources such as The Leeds Tithe Maps website[1].

Although incomplete in places, The Harehills and Chapeltown tithe maps (1836-1851) show that most of the area contained agricultural fields, pastures and meadows with occasional orchards or garden plots and so do not suggest widespread contamination. Later maps (1880 and 1910) show further (mostly residential) development in the area.

Maps provide a broad level of information only. It is hard to know if all of the activities in a particular area were actually illustrated. For example, it is possible that some houses may have been built on old dumping grounds. In addition, soil in some gardens may contain imported materials, which could have come from elsewhere, including industrial sites.

Leeds City Council have a Contaminated Land Inspection Strategy[2] that is reviewed every year. A number of places within Leeds have been surveyed and if found to be potentially harmful, cleaned up.

If you are concerned about soil contamination then a number of special precautions are proposed:

RAISED BED GROWING Grow in raised beds that are about ½ a metre high filled with fresh topsoil or compost. To keep the old and new soil separate, place a net at the bottom of the raised bed so that water and worms can still pass through.

CONTAINER GROWING Grow in containers – or how about trying one of our space and money saving ideas.

FLUSHING OUT Dig 1m x 1m plot sizes (or smaller) and dig out the soil to 1m depth. Fill 60 - 80cm of the hole with gravel (this breaks the capillary action of the contaminants) and cover with fresh soil. Grow plants with shallow roots are grown in this plot. Find out more in our growing guide on page 26.

If possible, edible crops should be grown in completely uncontaminated soil but if you are at all concerned, wash and peel your fruit and vegetables before eating them, especially when feeding children or other more vulnerable people.

Further advice is available from Leeds City Council's Contaminated Land Team who can be contacted on 0113 2476484. They may advise how your soil can be tested. For more information on avoiding any harmful effects of contaminated soil see the World Health Organisation European Health 21 guidelines on Contaminated Soil in Gardens[3].

[1] For historical maps of Leeds please see www.tithemaps.leeds.gov.uk
[2] Leeds City Council (2001) Contaminated Land – An Assessment Strategy for Leeds
[3] WHO European Health 21 guidelines - Contaminated Soil in Gardens

INFECTION FROM CAT AND FOX EXCREMENT

Cat excrement does pose potential health problems for humans, particularly pregnant women. If you are worried about cat excrement, wear gloves when working with soil and keep your hands away from your mouth. After gardening, wash your hands with soap and water, especially before you eat or prepare food. Carefully wash all vegetables and fruits before eating them. Peel and wash all root crops. If in doubt remember that cooking will kill any diseases.

If your front garden contains a lot of cat excrement, the contaminants can stay active in the soil for more than a year. Here's how you should deal with this:

1. Remove the excrement
2. Break up the soil and tightly cover it with carpet or recycled black plastic for 1 year
3. In the spring, the bed of soil will be ready to plant up. Covering the soil with 1-inch chicken wire, tight netting or a thick mulch between plants and rows of vegetables may help deter cats[1].

There are a number of cat deterrents available to buy. Silent Roar[2] came out on top in a survey by BBC Watchdog into cat deterrents for the garden. They found that after just three hours of putting the pellets down, no cats visited the garden.

Mark from Pudsey keeps our four-legged friends out of his vegetable beds with a Perspex fence, which lets in the light while protecting the plants.

[1]JoAnne Skelly, University of Nevada Be wary of cat poop in the veggie garden
[2]RHS Silent Roar www.rhs.org.uk

THEFT AND VANDALISM

While vandalism is a valid concern it is interesting to note that none of our Back to Front demonstration gardeners experienced any theft or vandalism when we spoke to them in winter 2010.

However, if you are concerned about vandalism in your front garden, there are at least six ways that you can deal with such a worry:

1. SPEND MORE TIME IN THE GARDEN: By being outside more you already making your garden less appealing as a target for crime[1]. Busier streets experience less crime[2] simply because there are more eyes upon the street.

2. MAKE FRIENDS WITH YOUR NEIGHBOURS: Knowing your neighbours won't directly prevent people stealing but it will help create a place where people look out for each other[2]. This creates a sense of there being more eyes on the street, which does help to deter crime[1].

3. SHARE AND SHARE ALIKE: Sometimes it might be worth just accepting that some people are just not going to be able to resist the temptation of eating some of your harvest. If you share your food on the street, perhaps it will prevent unwelcome visitors coming into your garden to search for rich pickings.

4. USE GRAVEL FOR PATHS[4] : Using gravel for pathways may help you to hear intruders before you see them and the idea of creating noise will deter the opportunist thief.

5. START A TREND: Get more of your neighbours to garden up front just by doing it yourself. Research has shown that people copy each other's garden styles[3]. More people out gardening means that there will be more eyes on the street.

6. DEFINE YOUR BOUNDARY[4]: The most labour intensive approach is to clearly define your front garden by using a wall, fence or hedge and gate to restrict entry. Make sure the boundary is low enough for passers by to see over it. A thorny hedge along the boundary can put thieves off. You could try growing a hedge of edible plants like gooseberries (which are thorny) or apples, as Chris has done in his garden (see page 18), or how about growing a hardy climbing kiwi plant over a privet hedge? If you are making a fence, try to incorporate ways to grow climbing plants such as beans and courgettes into your design. A good example of this sort of thing can be seen at Back to Front's 'A Garden Above Ground', which has a fence made out of ropes. (see below)

[1]Secured by Design (2004) Secured by Design Principles [2]Secured By Design (2010) New Homes [3]Zmyslony & Daniel Gagnon (1998) Residential management of urban front-yard landscapes: A random process? [4]Secured by Design (n.d) Crime Prevention At Home.

PART 3

LET'S GET BUILDING

This section is for people that want to really make the most of their space and do it in a cheap and environmentally friendly way.

When we talked to local people in Leeds, we found out that 41%[1] of you were keen to grow more food at home but were worried about lack of space and the cost of growing[2]. This section includes ways that you can save space and money as you start growing food in your front garden.

SAVING MONEY

The good news is that growing your own soon starts to save you money, especially if you start to grow some of the fruits and vegetables that are more expensive to buy. We've already shown you that you can save money by re-using all sorts of containers to grow in. This section shows you how you can make the most of the materials that are being thrown away in your local area (see page 63 for more information).

SPACE SAVING IDEAS

Making the most of your garden space is very important. Gardens are used by most people for many activities. Gardens are for relaxing, socialising, playing and for chores like drying washing. If you don't have a very big front garden then it's hard to think how you could fit in spaces for growing on top of all these other demands.

The key idea is to make the most of your space. Perhaps raised beds could also be seating areas[3]? Perhaps you can take some inspiration from some of our demonstration gardens (see page 18)? Perhaps you can make the most of the vertical parts of your gardens like walls and fences? Perhaps you can build one of the design solutions presented in this section of the manual?

This section includes seven space and money saving projects that you can build at home. The projects have been arranged in order of ease to build starting with the least difficult.

All of these ideas were designed and drawn by students at Leeds Metropolitan University[4]. Each project is supported by a series of diagrams and instructions to show you what you need to do to build it. We also tell you:

- Which tools, equipment and materials you will need
- How difficult it is to build
- How much time it takes
- How many people are needed to make it
- How much you might need to pay for the materials.

Use our growing guide on page 26 to find out what you can plant in your new planter and find out where you can get building materials for free in our information about local resources on page 60.

[1]NHS Leeds (2011) Growing Trends in Inner North East Leeds [2]BTCV Leeds (2009) Growing Trends in Inner North East Leeds [3]See Back to Front's A Garden to Share on page 21 for one idea of how this could work. [4]Students from Landscape Architecture, Garden Design and Design courses worked on these ideas between 2009 and 2010.

QUICK REFERENCE

TOOLS

Craft knife or scissors
Large eyed needle

MATERIALS

Old pair of trousers (waterproof trousers or denim materials are best)
Roll of plastic coated string
Sand
Soil

TIME

3 Hours

NUMBER OF PEOPLE

COST

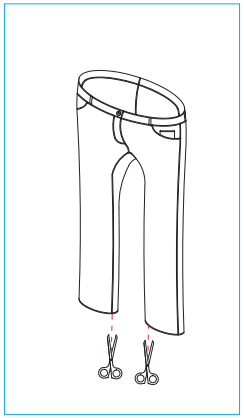
Under £5

TROUSER PLANTER

You'll grow into them!

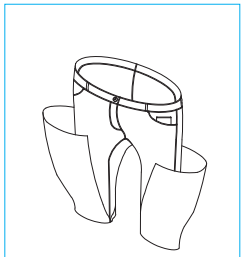
These planters are very cheap, easy to make and can be used for growing all sorts of fruit, vegetables and herbs in.

designed by Daniel Ridgway



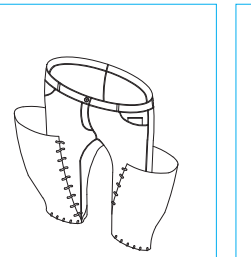
STEP 1

Using a craft knife or scissors cut just over half way up the inside seams of both legs.



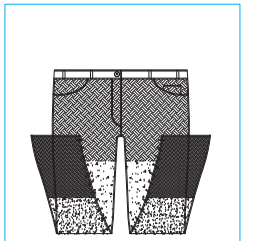
STEP 2

Turn the trouser legs up and inside out so the legs finish about 30cm from the waist line and10cm from the outside edge of the trousers.



STEP 3

Stitch the bottom and side edges of the turned up sections so you make three large pockets to plant into.



STEP 4

Decide upon the location of your planter. Fill about a quarter of each pocket with sand and the rest with soil.

Plant up your trousers!

LIVING SPICE RACK

designed by Artem Barkhin

QUICK REFERENCE

TOOLS

Drill
Phillips screwdriver
Hammer
Saw
Crowbar
Treatment for wood (optional)
Metal file

MATERIALS

A wooden pallet
Sandpaper
Extra timber for supports to measure roughly 1200 x 50 x 25mm. 6 - 8 pieces needed (you can cut these lengths from pallets if you have a jigsaw).
At least 30 tin cans
1 nail
30mm wood screws
Soil
16 x nuts and bolts that are about 90mm long. The thinner the bolts the better.

TIME

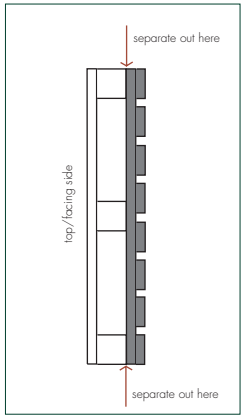
1 day

NUMBER OF PEOPLE

1

COST

Under £5

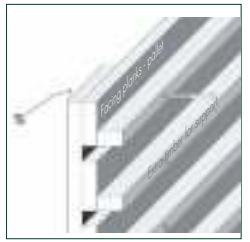


STEP 1

Take one wooden pallet. Separate, the main planks, from the supporting pieces (see above).

Use the top planks for the main structure of your Living Spice Rack

You could also use bought or scrap wood to make something similar. VVhatever you use, remember that all timber will need treating to make it last outdoors.



STEP 2

Attach supporting timbers to the pallet. Line up the thinner narrow edge against facing planks of the pallet.

Drill holes through the support timbers and pallet the thread the bolts through. These should be about 2cm from each end of the supports.

Fix the supporting timbers to the pallet using 90mm long nuts and bolts as shown.

Repeat this step so that there is a timber support attached to every plank of the pallet.

STEP 3 (optional)

Apply any preservative or stain

STEP 4

Use the hammer and nail to make holes in the bottom of each tin can. This will provide drainage.

Follow the pattern shown above.

STEP 5

Peel off the stickers from each tin can and use a file to rub away at the sharp edges.

Position the cans at roughly a 40 degree angle to the supports (as in the photo above). Use two 30mm screws for each tin can to fix them in place. Screw through the timber and into the can. Secure through the drainage holes.

STEP 6

Plant up the Living Spice Rack! Plant herbs and small vegetables such as salad leaves, spring onions and radishes.

You can remove each row for re-planting by unscrewing the nuts and bolts that support it.

GROWING POCKETS

designed by Georgia Papadopolou

QUICK REFERENCE

TOOLS

Scissors
Large eyed needle
Tape measure
Dressmaking pins
Hair grips or paper clips
Marker

MATERIALS

Three old 'bags for life'

Waterproof backing sheet. A garden sheet, old tarpaulin, old shower curtain or raincoat or any waterproof strong material you want to use.

Plastic coated string (sold in rolls) or fishing wire.

TIME

4-5 Hours

NUMBER OF PEOPLE

COST

£0 - £6

STEP 1

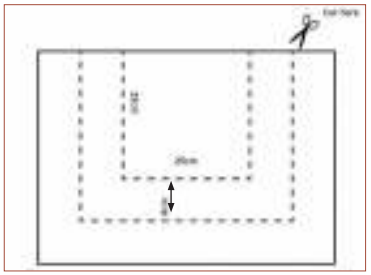
Using your scissors, split the reusable bag into two by cutting the seams around the bottom of the bag and along both sides.

STEP 2

Cut the handles off the bag and cut the threads that attach it to the bag.

STEP 3

To make a pocket, place one side of the bag onto a table or flat surface. Draw a square on it with a marker. We recommend that each pocket is about 25 x 25cm in size.

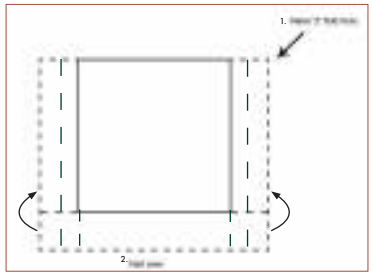


STEP 4

Now draw another, bigger square around the first one. It should be about 8cm wider than the first square all the way round. Cut the larger square out of the bag.

Once you have measured and cut one pocket use it as a guide to make the rest. Place it on top of another piece of the bag. Mark around the edge and cut. Lay the pockets out on your plastic backing sheet to see how many you need to make. For guidance, you can fit six pockets on a 1m x 1m garden sheet.

Repeat until you have enough pockets.



STEP 5

1. Make a 'Z' shaped fold on two opposite sides of the square as shown in the diagram. Pin it in place with hairpins. Make sure all the folds are turned away from front of the bag.

2. Fold the bottom of the pocket up and back and pin with hair pins.

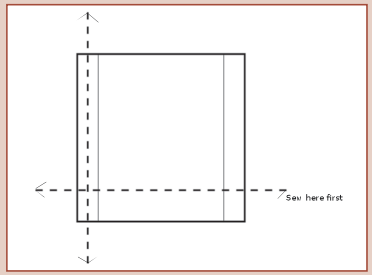
Do the same for all the pockets.

STEP 6

Measure the space where you will hang your Growing Pockets. Cut the plastic sheet to the size required. We used a 1m x 1m garden sheet.

STEP 7

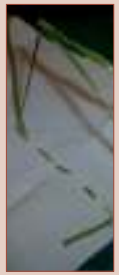
Arrange the pockets on the sheet. Make sure you leave enough space for the plants to grow. Attach them with dressmaking pins to fix their position.



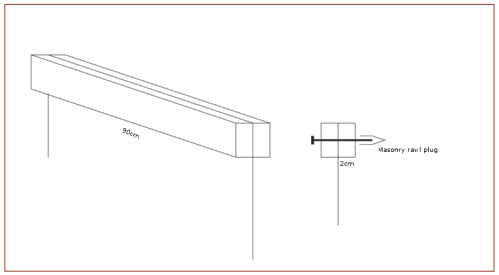
STEP 8

Start sewing the pockets onto the backing sheet one by one using your needle and the plastic string. You need to sew the bottom seam first. Make sure you remember to tie off the twine with a knot when you have finished sewing each seam.

Allow small holes in the corners for drainage.



TO HANG UP YOUR GROWING POCKETS



STEP 9

Use two pieces of timber that are not thicker than 3cm. Use screws long enough to go through 2 x timber widths and into the wall (screws that are about 10cm long should be suitable) .

Sandwich the top edge of the plastic sheet in between the pieces of wood as shown. Hold them together and drill pilot holes through all layers, at opposite ends and in the middle of the timbers. You will need to secure the structure using correct masonry fittings such as rawl plugs. Insert and tighten the screws.

Treating the wood will make it last longer outdoors.

TOOLS

Drill and masonry drill bits
and screw driver heads.
Saw

MATERIALS

2 lengths of timber (suitable or treated for outside use)
Rawl plugs
Masonry screws

OUT OF THE GUTTER

designed by Edward Collet

QUICK REFERENCE

TOOLS

Electric drill
Drill bits
Spanner
Pliers
Crowbar/claw hammer
Wood saw
Vice

MATERIALS

1 pallet
Guttering (approximately 3m long)
8 x Guttering pipe ends
Nuts and bolts
Wood preservative (optional)
8 x 40mm bolts with nuts & washers
2 x 65mm bolts with nuts & washers
OPTIONAL
2 x light chain + 4 screws and washers (or 1 metre of rope)

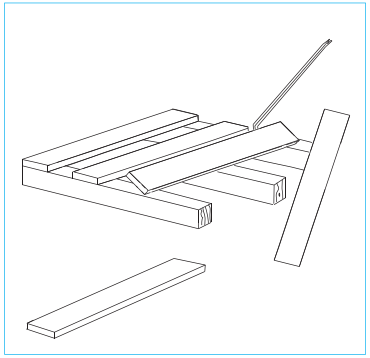
TIME

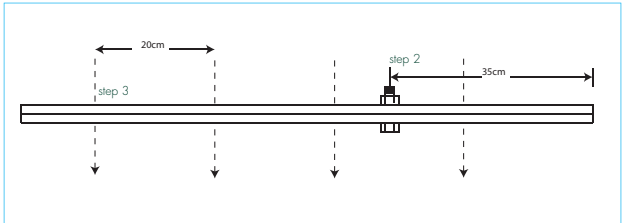
6-8 Hours

NUMBER OF PEOPLE

COST

Cost if using new parts £15-20
Cost if made from recycled parts £5





STEP 1

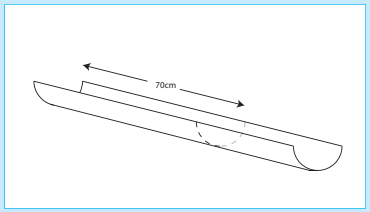
Dismantle a standard wooden pallet. Saw planks into two 1m lengths and two 70cm lengths..

STEP 2

Using a 10mm drill bit, drill a hole 35cm from the end of the 1m lengths of plank. Lay the two planks on top of each other and use an appropriate sized nut and bolt join the two lengths together.

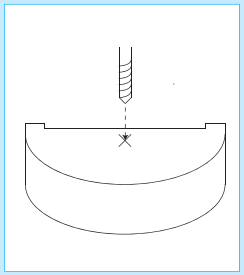
STEP 3

Drill 10mm holes at 20cm intervals along the length of the joined 1m planks. Undo the nut and bolt and take apart the 1m planks.



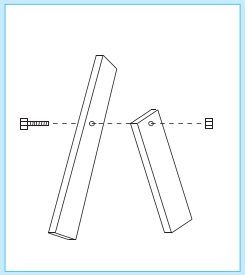
STEP 4

Using a hacksaw cut guttering into lengths of 70cm. Take the gutter ends and lightly place them in a vice or secure them as securely as possible. Drill one 10mm hole in the top-centre of each of the end pieces. Clip the end pieces to the 70cm gutter lengths.



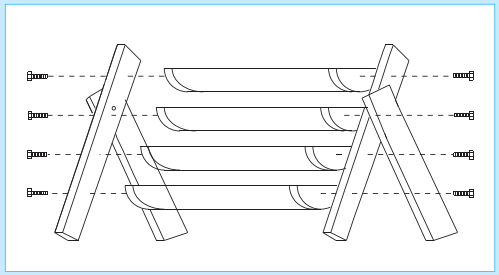
STEP 5

Drill one 10mm hole 5cm from the top of the 70cm planks.



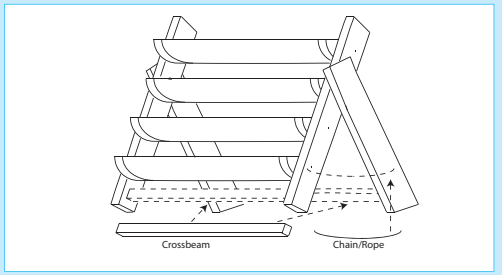
STEP 6

Using an appropriate nut and bolt join the 1m planks to the 70cm planks. This should leave you with two V shaped pieces.



STEP 7

Take the two V shaped pieces and place them 70cm apart. Using appropriately sized nuts and bolts attach each of the guttering lengths through the 20cm interval holes in the 1m planks.



STEP 8

With the rough structure in place screw supporting beams across the top and bottom of the 1m lengths. You could make these from the pallet too.

To add additional support attach similar supporting beams to the rear of the 70cm legs.

You could also attach chains or rope between the A-Frame to keep it in place.

STACKS OF VEG

designed by Rachel Forbes

QUICK REFERENCE

TOOLS

Wood saw (or jigsaw)
Hammer
A tool bench with clamps will be useful if you have them.
Drill
Screwdriver

MATERIALS

<u>For the wooden boxes</u>
4 sides of timber planks per box. You could use old scaffolding boards, skirting boards or decking. We used 150x22x500mm tanalised timber. All lengths need to be the same lengths and thickness for stacking.
Posts – you need some square or rectangular lengths of wood for this. We used 50x50cm lengths but we think that 25x25cm lengths would also work well. Allow for 60cm lengths for each box
Wood glue
50x50cm baseboard or paving slab
24 x 2 inch screws for each box
4-9 x 1 inch screws (or other) **for attaching the baseboard.**

TIME

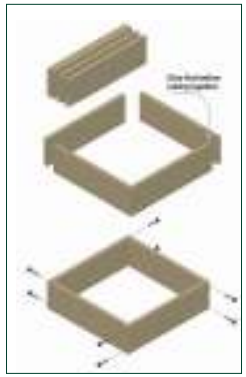
1 day

NUMBER OF PEOPLE

1 person can make this but it's easier with 2

COST

Under £10



STEP 1: Make the base box

Take 4 of the side planks and arrange them in a square as shown in the image above. One end of each plank should overlap only one other piece.

Glue the touching faces together and then use screws to secure them into place. Always drive screws into the side rather than the end of the timber to help prevent splitting. Make pilot holes by drilling a hole through the wood that is thinner than the screw. This will also help prevent the wood from splitting.

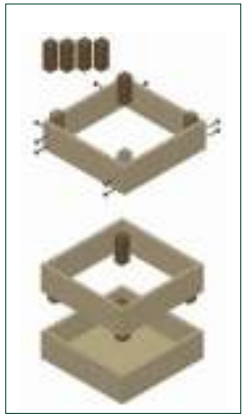
STEP 2: Secure the base box

Secure your base board to the frame with nails.

Drill between nine and sixteen holes in the bottom for drainage.

Take your 50x50 lengths of timber (or similar) and cut 4 lengths that are 5cm shorter than the height of the frame

Secure each one to an inside corner with glue first and then using screws. Screw through the plank and into the post taking care to avoid any other screws already in place.



STEP 3: Make a stack

Make a second frame out of planks in the same way that you made the first one.

Take your 50x50cm lengths of timber and this time, cut 4 lengths that are the same heights as the frame. Each post should be placed so it sticks above the top of the frame by 5cm.

Secure each post into the corner with glue and screws as before.

Turn the frame over and place it upon the base box as shown.

Repeat this stage to make more stackable layers for your planter.

STEP 4: Stack it up

Stack up your planter and repeat the process as many times as you like.

Balance a piece of old glass or Perspex on top of the stack to encourage seeds and young plants to grow.

GROWING LADDER

designed by Mariam Aomar Perez

QUICK REFERENCE

TOOLS

Wood saw (or jigsaw)
Screwdriver
Claw hammer
A bradawl, electric screwdriver and drill are useful if you have them.

MATERIALS

1 pallet
4 eyelet screws
2 x 40mm length screws
Nails
3 x 750mm hinges
A length of chain
A number of window boxes and plant pots.
2 hooks, nuts and bolts for each window box used.
Course grain sandpaper

TIME

1 day to prepare the wood,
1 day to make

NUMBER OF PEOPLE

1 person can make this but it's easier with 2

COST

Under £10

These spaces could be used for storage

STEP 1: PREPARE THE WOOD

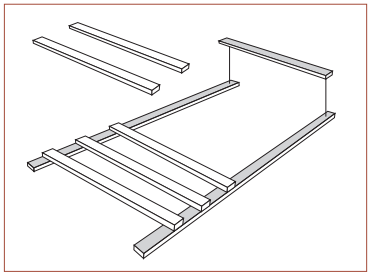
Break down the pallet using a saw and hammer. Take out all the nails and staples holding it together and give it a good sand down.

STEP 2: CUT THE WOOD TO SIZE

Take four longer lengths of wood that are all the same length. As a guide, ours are 110cm long but you can make your growing ladder any size you like.

Decide how wide you would like the ladder to be (ours is 50cm wide) and cut a number of short lengths of wood that are all this length. You can make as many or as few as you like. As a guide, our ladder has 12 short lengths on each side.

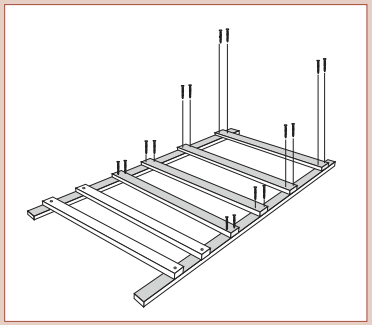
VARIATION: Use different thicknesses of the wood for a more irregular visual effect.



STEP 3: LAY OUT THE WOOD

Place the two long planks of wood on the ground. Arrange the short planks of wood as shown. Make sure they are equally spaced. As a guide, the gaps between our planks are 7cm.

Use a pencil to mark their places along the long pieces of wood.

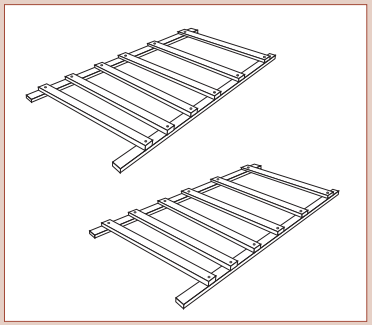


STEP 4: NAIL TOGETHER

Nail the structure together.

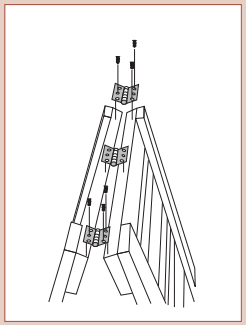
Try to keep the short pieces as straight as possible.

Two nails fixed in a diagonal pattern is more secure.



STEP 5

Repeat steps two - four so you have two separate ladders. Make sure the sides are the same height and width.

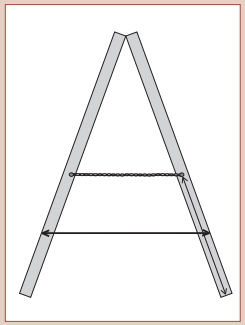


STEP 6: ATTACH HINGES

Take each of the three hinges and use them to join the two sides of the latter at the top as shown.

Use a drill to make pilot holes before you insert and tighten the screws.

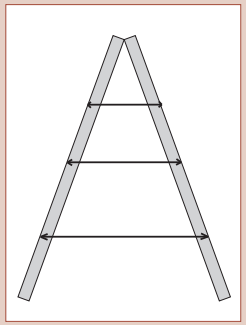
Your Growing Ladder should now stand up on its own



STEP 7: ATTACH CHAIN

Two lengths of chain attached to both sides of the ladder will make the ladder more secure. Make sure the chain is fixed at the same distance from the bottom of the ladder on each side.

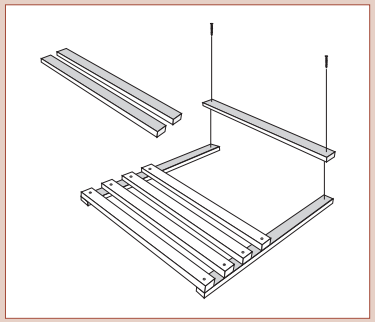
Jump to step 12 if you don't want to add shelves to your growing ladder.



STEP 8: PLAN SHELVING

Before making the shelves, you need to decide how many you want and where they will go.

Stand the ladder up and measure the distance between the outside edges of both sides for each shelf. Add at least 20cm to this measurement so that the shelf can support small pots.

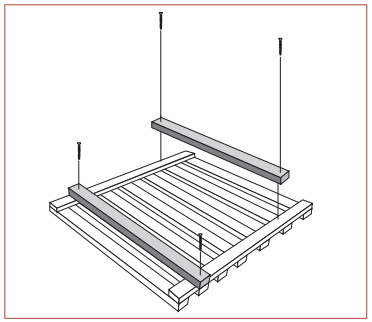


STEP 9: MAKE THE SHELVES

Cut two lengths of wood using one of your measurements from step 8. These will be the side panels of your shelf.

Measure the width of the sides of the ladder. Cut a number of ladder width lengths of wood to attach to the side panels of your shelves as shown.

Remember to make pilot holes using a drill before you insert the screws.

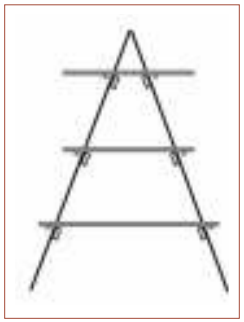


STEP 10: Add shelf supports

To keep the shelf secure, you need to turn your shelf upside-down and attach two more thin pieces of wood that are the same width as the ladder sides.

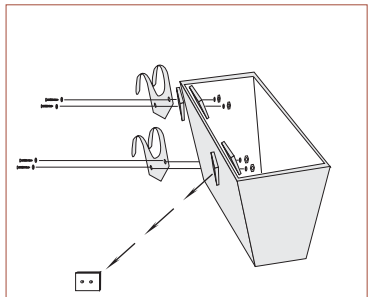
The supports should line up with the rungs of the shelf as shown.

The distance between the supports should be the same as the measurements you took in step 8 BEFORE you added the extra distance on for shelves.



STEP 11: Add shelves to ladder

Place your shelves on the rungs of the ladder as shown.



STEP 12: Attach window boxes

For each window box you want to attach to your ladder you will need 2 hooks, 4 short nuts and bolts and 4 thin rectangular pieces of plastic (you could use old milk cartons).

Create holes in the plastic rectangles in the same place as the screw holes using a nail or bradawl. Attach everything together as shown above.

Alternatively, you could bolt the window boxes onto a wooden batten (or strip), which would spread their weight.

VARIATION: Pots for growing in can be hooked onto the ladder by simply attaching hooks to the ladder itself using screws.

MILKING IT!

Make the most of your space

designed by Michael Grocock

QUICK REFERENCE

TOOLS

Wood saw
Tape measure
Sharp knife
Pencil
Screwdriver

MATERIALS

Plastic milk cartons
Wood screws 5cm long
Timber for the structure (we used 80mm x 30mm lengths)
Timber for the milk carton support rails (use19mm x 38mm lengths)
Compost
Plants

TIME

Structure - Approximately 2 hours
Planting - Depends on the amount of bottles

NUMBER OF PEOPLE

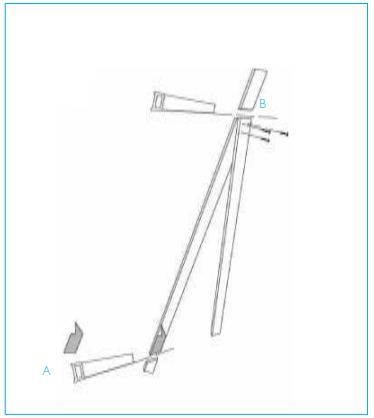
1 person can make this but it's easier with 2

COST

£10 plus. Depending on size and wood used.

A NOTE ON WOOD:

Pallets can be used but a longer lasting and larger structure can be built using FSA approved timber. Roofing lath is cheap and readily available from DIY shops, it is ideal for the rails that support the bottles.



STEP 1

Measure the height and width of the space you wish to use then cut off the upright wood to the desired height.

Using the template mark and cut off the end of the diagonal piece of wood (see A on the diagram above).

Screw the two bits of wood together at the top. Make pilot holes before you insert the screws to stop the wood from splitting. The diameter of the pilot holes should be slightly smaller than that of the screws that you are using (see B on the diagram above).

Cut off any excess wood from the diagonal piece at the top.

Repeat steps the last 3 steps to produce two 'A' frames.

NOTE: Your growing structure should not be more than two times higher than it is wide and no higher than your eye level. You will have to water the plants!

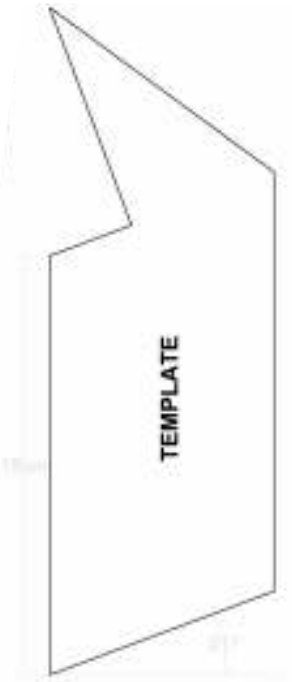
STEP 2

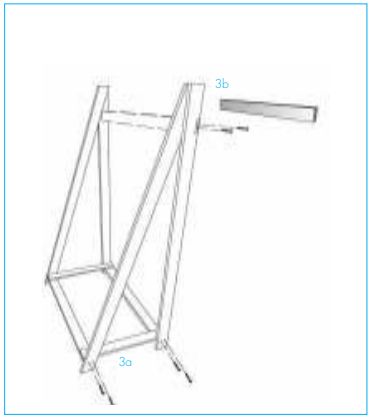
Measure the distance from the front to the back of each 'A' frame .5cm off the ground. Cut two pieces of wood that are this length.

Measure the width of the space you wish to use and cut two pieces of wood to this length.

Screw the 4 pieces together making sure they are square at the corners.. Remember to make pilot holes first.

NOTE: Always use at least two screws to stop your structure from flexing





STEP 3

3a. Fix the base to the two 'A' frames 5cm from the ground using screws. You could prop up the base with bricks to keep it sturdy.

3b. Cut another piece of wood to the width of your structure and screw just below the top of the points but at the rear of the frame.

STEP 4

Turn to face the back of the frame (the vertical side) and measure from one of the top corners to the diagonally opposite bottom corner. Cut a piece of wood to fit.

This will brace the structure and should be fixed with three screws.

STEP 5

Your structure should now look like this.

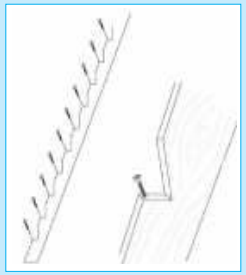
Check that it is stable and fits in the place you wish to put it.

STEP 6

The diagonal lengths must now be cut to support the milk cartons.

Using the template mark out the notches one by one, placing the bottom left corner of the template in the bottom left of each notch as you go up.

Repeat this all the way to the top on both diagonals.



STEP 7

A screw must now be fixed into the bottom outer corner of each notch to prevent the bottle support rails from slipping out.

The screws should be at least 5cm long and have 3cm exposed. Making pilot holes first will make them easier to screw in.

STEP 8

Use lengths of 38x19mm (2"x1") timber to make the support rails for the milk cartons. Measure the distance between your two diagonal (and recently notched) lengths of wood. Count how many rails you'll need to cut.

STEP 9

Using a sharp knife cut the tops off of your milk cartons and make sure you do not damage the handle.

The bottoms of the cartons must be punctured with a knife to provide drainage. Try to make the slits circular to allow the water to drain out properly.

Now thread your cartons on to lengths of wood that have been cut to the width of your structure.

STEP 10

Your growing structure is now ready for planting. Use smaller cartons towards the top and larger ones towards the bottom.

You can remove the support rails one by one to make planting and caring for your vertical garden easier.

NOTE: Soil based compost such as John Innes should be avoided for the larger bottles as it becomes very heavy when wet.

PART 4

LOCAL RESOURCES

WANT TO KNOW MORE?

This section is to help you:

- find materials and plants in a creative and economical way
- find out more about local organisations who will be able to help you become a front garden food grower
- find more detailed information about some of the ideas that we have made reference to in this manual.

Finally, you can use this section to find out more about the individuals and organisations who have been involved in this project. Where possible, we've provided contact details so you can get in touch.

MATERIALS AND PLANTS

This section includes ideas for getting hold of materials and plants to use in your front garden. We have avoided listing local shops where you would buy goods at full price but have focussed on where and how you might be able to source materials cheaply or even better – for free! This approach has been inspired by:

- **You!** In part 4 of this manual we wrote about how many local people we talked to were keen to save money as they began to grow food at home[1].
- **Our experiences building the demonstration gardens** (see page 18) where we found it tricky to transport lots of our building materials in cars and so decided that it would be really helpful to be able to tell people what could be collected, found and salvaged from places just on their doorsteps.

You can grow things in;

Animal Feed bags
Baby baths
Boots and shoes
Buckets
Building bags
Carrier bags
Chimney pots
Guttering
Oil drums
Polystyrene packaging
Sinks
Tyres
Washing up bowls
Yoghurt pots
Window boxes

Ideas from a Back to Front workshop for Tinwolf in Headingley, January 2011

Back to Front community group has the chance to use some of Leeds City Council's[2] facilities such as;

1. Leftover planters
2. Leftover pots and builder's bags
3. Seeding facilities at LCC nurseries
4. Collection of items at recycling centres and delivery to a single address with good access. (A list of items needed would need to be provided to LCC and arrangements made in good time. All health and safety requirements will need to be met).

LCC advises that growers are wary when re-using wood as there is no way to tell if the wood has been treated.

Contact the Back to Front community group for more information on **growing@backtofront.org.uk**

[1] BTCV Leeds (2009) Growing Trends in Inner North East Leeds [2] Summary of discussion held with LCC officers 17.01.10

FREE AND CHEAP SOIL

When we built our demonstration gardens (showcased on pages 18 to 21) **we found that soils and compost were one of the most expensive and hardest to transport materials needed. Here are some tips on how you can get hold of soil and compost near home and for little cost.**

1. LOOK OUT FOR LOCAL BUILDING PROJECTS. Building contractors have to pay to dispose of any waste that they take from a building site. Some contractors are happy for people to do this for them as long as it's safe to do so. Building contractors often screen any soil that they remove from their building sites to sieve out weeds and rubbish. They usually sell this at a higher price from their depots. If you take soil from any sites, beware of potential contaminants, natural or unnatural. See our Back to Front worries section for more information.

2. DIG IT FOR FREE. Look out for adverts on websites such as Freecycle, Gumtree, or Freegle and in local papers because sometimes people need a hand shifting and removing soil from their gardens. The same warning about potential contamination applies again here.

3. MAKE YOUR OWN. You can make your own soil by composting all your household peelings and green waste. Even in a small space, it is possible to have a small compost bin made from an old paint pot, plastic storage box or bin. See the following websites for more ideas and inspiration:

- General information on composting - www.rhs.org.uk
- A guide to making a compost heap from old pallets - www.gardenersworld.com
- About.com has descriptions of how to make a compost bin from a storage box and bin.

4. HAVE WORMS DO THE WORK! Worms convert green waste to compost naturally. They speed up the time it takes to make compost and so are welcome guests in composts heaps. Wormeries are purpose built worm houses. You add your green waste to the wormery and keep the worms fed and watered. Your reward is free compost! Wormeries are expensive things to buy from the shops but you can make one very cheaply out of old supermarket storage boxes. Chris Beardshaw explains how on YouTube although it's better not to use transparent boxes. More comprehensive information can be found on an online leaflet called 'How to Make a Wormery' produced by Milton Keynes Council.

5. CONTACT UNIVERSITY AND LOCAL COUNCIL ESTATES SERVICES. A group of Back to Front members may be able to arrange for excess compost and mulch supplies to be delivered to a single and easy to access place.

LOCAL BUSINESSES: A GREAT SOURCE OF FREE GROWING MATERIALS

In February 2011, students from Leeds Metropolitan University[1] surveyed 25 local businesses in Harehills and Chapeltown to find out what they threw away. We have listed some of the materials available and suggested ways that you could use them in your garden project.

CARDBOARD: Many businesses throw away vast amounts of cardboard. You could use this for killing weeds over winter.

CARPETS: Old carpets are even better than cardboard for winter weed killing because they are thicker. Old underlay can also be used to line pots and containers to help protect roots from harmful frosts.

CARPET TUBES: These robust tubes are made from thick cardboard and are useful for growing deep rooted plants. Carpet tubes will only last one growing season but are 100% recyclable. If you think you might want to move your carpet tube pot about place it on a piece of board before you fill it with soil.

GLASS AND OLD WINDOWS: Double glazing companies frequently throw away old windows and panes of glass. If you are very careful then you can re-use these materials to make homemade greenhouses and propagators. This can be most simply done by laying an old window on top of a raised bed or pot.

GREEN WASTE: Florists throw away cuttings from plants. This can be used to top up your compost heap to make a nutritious mix to add to your soil.

LARGE OIL CANS: Take away businesses and restaurants buy oils in large (and sometimes very attractive looking) cans. These make great planters and just need a good clean and a hole drilling in the bottom.

POLYSTYRENE: Electrical and appliance shops throw away lots of polystyrene. Polystyrene does not decompose and could be used to make planters with or could be broken up to provide a drainage layer in the bottom of deep pots and planters. We think it's best to break up polystyrene indoors as it has a habit of spreading everywhere!

TYRES: Garages and mechanics have a good stock of old tyres that they usually throw away. Tyres provide great opportunities for growing just like Suzi and Steve have done in their garden (left).

WIRE: Removals companies dispose of wire that could be used to make supports for climbing plants, much like we have done in our Garden Above Ground (see page 20)

WOODEN PALLETS: These are really useful for building wooden planters and have been used in a number of our space and money saving building projects (see page 32). Builder's yards and shops that trade in heavy goods such as kitchen appliances, tile merchants, and plumber's merchants throw away a good supply of pallets. It is likely that you will need to break up any pallets you find with a crow bar and claw hammer so that you can use the wood. Watch out for any staples or nails that might be sticking out of the pallet. The surface of the wood can be much improved by sanding it down, a job which will be much easier with an electric sander. Pallet wood varies in quality and is usually untreated and so has a lifespan of two to four years when left outside and exposed to the elements, or when it is left in contact with the ground. Treating the pallet with wood preserver or paint may help prolong its life time and will smarten it up a little too (Our 'Out of the Gutter' project on page 44 is a good example of this).

More ideas for finding materials for free

1. **Check out Why Waste, a regional organisation that stores re-useable business waste like scaffolding boards, containers and oil drums.**
2. **Check out websites such as Freecycle, Gumtree or Freegle, Scrap Stuff (based in Kirkstall, Leeds) and Seagulls reclaimed paints (also based in Kirkstall).**

PLANTS

Here are our tips for reducing the cost of planting:

1. **GROW FROM SEED.** Seeds are very cheap to buy and there are usually many seeds in a packet. Growing from seed is exciting because as the plants grow and thrive, you know that it was all down to you. Seeds do require extra care and may not be suitable for those of you who have very little time.

2. **SHARE YOUR SEEDS.** Often there are too many seeds in a packet and growers find that once the plants grow, there's not enough room for them all in the garden. Why not share your seeds with neighbours and friends or go along to one of the seed swapping sessions that are springing up as part of other events all around Leeds. Here are some of them:

   - Roundhay Environmental Action Group Gardening Club and Farmers Market. Please see the REAP website for more details www.reap-leeds.org.uk
   - Leeds Seed Co-op, based in Woodhouse, have a seed swap box
   - Pudsey based PuLSE (Pudsey Land Share Enterprises) hold monthly growing events with seed swaps.

3. **WORK WITH LOCAL ALLOTMENT HOLDERS.** Local allotment holders may be willing to donate any spare plants to the Back to Front community group. When we built our demonstration gardens in June 2010, generous growers supplied all of the plants that we needed through the salvage days that we held at Shine in Harehills, a local business and community centre. Timing will be crucial as growers will be potting on their young plants at specific times of the year, most likely between April and June.

4. **GO FORAGING.** Some common garden plants are actually edible and you don't even have to worry about cultivating them. Dandelion shoots, nettles and camomile all have edible parts to the plant. But we have a very IMPORTANT message here. Please consult an authoritative guide on this subject such as Mabey's Food for Free before diving in and dining from overgrown gardens. Unless you're an expert, we strongly recommend that you **do not pick or eat any mushrooms and fungi.** It is almost impossible to tell which varieties are poisonous and mistakes can be fatal.

Marie-Pierre's garden

CONTRIBUTIONS AND CREDITS

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INFORMATION AND RESOURCES

Want to find out more? We've referred to this information while writing this manual and we think it will be a good starting point for you to do some more detailed reading. To help with this, we've organised the list in themes.

All web references were last accessed in September 2011. There is a possibility that web based information will be updated and changed over time but we hope that we have provided a sufficient starting point for you.

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FRONT GARDEN & FOOD GROWING PROJECTS LOCAL GROUPS

BTCV Leeds| Hollybush Conservation Centre , Broad Lane, Kirkstall, Leeds, LS5 3BP | 0113274 2335 | Email: J.Kandola@btcv.org.uk | www2.btcv.org.uk/display/btcv_leeds

Community Orchard Headingley | www.headingley.org/orchard

Edible Public Space | Chiara Tornaghi (0783 8404642) mail: chiara.tornaghi@gmail.com or John Preston, mail: j.preston@btcv.org.uk | www.ediblepublicspace.org/home

Groundwork Leeds | Environment and Business Centre, Merlyn-Rees Avenue, Morley, Leeds, LS27 9SL | 0113 238 0601 | www.yorkshire.groundwork.org.uk/leeds.aspx

Hands On | 176 Chapeltown Road, Leeds, LS7 4HP | 01132374482 | www.handson.latch.org.uk/

Healthy Living Network | Unit 4, Armley Park Court, Stanningley Rd, Leeds LS12 2AE | 0113 295 1043 | email: info@healthylivingnetworks.org.uk | www.healthylivingnetworkleeds.org.uk/

Leeds Permaculture Network | www.leedspermaculturenetwork.org/

Leeds Seed Co-op: based in Woodhouse (Oblong Resource Centre) Contact through Leeds Permaculture Network

Pudsey Land Share Enterprises (PuLSE) | www.landshare.net/listings/17259/

Roundhay Environmental Action Project (REAP) | www.reap-leeds.org.uk

Urban Harvest Leeds| Email: hello@leedsurbanharvest.org.uk | http://www.leedsurbanharvest.org.uk/

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Roxana at the Back to Front Spring Fun Event at Shine, Harehills, April 2011

THE FUTURE OF BACK TO FRONT

Back to Front has achieved a great deal so far. Focused initially on disadvantaged parts of Leeds, the project has:

- surveyed local people for their views on growing food in front gardens (in partnership with BTCV Leeds)
- designed and built three demonstration front gardens in Harehills and Chapeltown
- supported more than 35 households in Beeston to grow food in their front gardens
- set up Back to Front as an unstructured community voluntary group
- set up a website and issued newsletters
- established a network of local contacts and resources
- developed a strong link with social enterprise Shine in Harehills
- written this manual.

AIMS FOR THE FUTURE

In September 2011 Back to Front received 12 months funding from Jimbo's Fund to employ a part-time project worker to take the idea and organisation into its next phase. This includes developing a membership base, organising and delivering training, making contact with local communities, updating the website and writing the newsletter. The postholder will also help 200 households to use the manual to develop their front garden into a food growing space and encourage another 200 to get involved in Back to Front.

There has been much interest in this project from local housing associations such as Connect Housing, Latch and Leeds Tenant's Federation and there is potential to build on this interest in the future.

The long term aim for Back to Front is to encourage more and more people to grow fruit, vegetables and herbs their front gardens. Back to Front believes that this will create healthier and happier neighbourhoods and lifestyles for everyone. Leeds City Council believes the project will help to make Leeds a greener, more sustainable city.

Keep up to date with Back to Front on www.backtofront.org.uk

These images were produced by Leeds Metropolitan University students Liam Clarke, Christopher Hartshorne, Patrick Helegwa, Rachel Forbes and Adam Leigh-Brown.

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