

"Everybody's twelve years old in an apple orchard" Rachael Ray



*"In an orchard there should be; enough to eat, enough to lay up
enough to be stolen, and enough to rot on the ground"* James Boswell

Leeds School and Community Orchards

A Discussion Document

Triggered by the launch of the White Rose Forest (WRF), in which orchards have not been a priority to date, this document stems from an investigation by the authors into the viability of planting fruit trees in areas of multi deprivation identified in the Leeds City Council's White Rose Strategy.

We explore the pros and cons of orchard creation, and discuss potential ways to harness both the WRF and the emerging Leeds Food Strategy to increase the number of fruit trees in Leeds for the benefit of individuals, local communities and the city as a whole.



Feed Leeds • Leeds City Council (Woodland Creation) • Fruit Works Co-operative
Tom Bliss • Danny Smith • Alan Thornton and Gini Morandi (images)

Orchards

Orchards have a unique place in modern environmental and social thinking: They sit at a nexus between woodland creation, rewilding and soil regeneration, and the burgeoning local and community food movements.

In the same place, they embody the virtues of climate action, biodiversity promotion, local food provision, health and wellbeing, community spirit, traditional culture, radical action and more.

As few as five fruit trees can be called an orchard, but to succeed they must be 'owned' (even if the land and trees technically belong to someone else) and tended by committed people. This presents both challenges and opportunities.

Context

As part of the [White Rose Forest Initiative](#), [Leeds City Council](#) has set a target of planting approximately 5.8m trees over 25 years in parks and green spaces across the city, as part of their wide-ranging effort to tackle the climate emergency, and to meet the aim of making Leeds carbon neutral by 2030. Orchards have not been central to this effort, but fruit trees are included in planting mixes, and an opportunity exists to do more.

There are many old orchards in Leeds, and new ones are being planted all the time - typically for a combination of food, community, biodiversity and occasionally commercial reasons, but with climate becoming ever more a factor, as the emergency gains recognition.

Over recent years, schools, universities, community groups, 'friends of' groups, the parks department and private land owners have all planted orchards, often with help from the Leeds Orchard Project / Helping Britain Blossom or its successor, [Fruit Works Co-op](#), who run courses and workshops on all aspects of orchard creation and maintenance, design and plant orchards, and manage the only fruit tree nursery in the city.

Fruit Works are, along with The Northern Fruit Group and Leeds Urban Harvest, members of [Feed Leeds](#), the network which connects food growing projects across the city, and campaigns for good, low carbon, local food production.

There are already more than 70 orchards in the area. A growing list can be seen on the map at [Feed Leeds' Leeds Orchards page](#), along with videos featuring Fruit Works orchard activity and more.



Orchard Benefits

Fruit and nut trees planted as an orchard offer a number of benefits:

- Like all trees, they **capture and store carbon**, manufacture oxygen, clean the air, create healthy soil, provide **food for wildlife**, retain ground water, etc.

- They represent a **climate action** with which people can easily engage. This develops over years as people tend to the trees, whereas woodland typically only involves community activity for initial planting followed by occasional tree guard 'wombling'
- They can provide an **entry point for woodland planting** in places where there is resistance to change
- Trees are **easy to care for**
- They deliver **free, tasty, healthy, organic, local, low-carbon food** - both as fresh fruit and as juices, jams and pickles
- They **encourage discussion** about low carbon and healthy diets
- They provide a convening, educational year-round focus for **outdoor community activity** with strong social and personal wellbeing benefits
- Groups can come together for **a wide range of activities**, where learning new skills and taking away a free fruit tree or harvest produce encourages beneficial relationships with food, fruit, trees and the natural environment. Activities include:
 - design workshops
 - planting days
 - blossom picnics
 - mulching and scything parties
 - harvesting events
 - apple days (various events themed around any kinds of fruit)
 - pruning workshops
 - grafting workshops (Making a new fruit tree by grafting, is a simple process that can be explained and practiced in half an hour).
 - juicing, pickle and jam-making
 - [wassailing](#).
- They provide **educational opportunities**, both in topics around orchards, food, trees etc. and as a pleasant space for outdoor learning
- Being easier to cultivate than vegetables, they provide an **entry point to other food growing**, so can help democratise the means of production for those who need it most
- They create **an ideal space for other food planting**, such as community gardens, apothecary plots, forest gardens, jam hedges, berry and current bushes etc.
- If large enough to be run as a business (perhaps as Community Supported Agriculture), they may provide **jobs and economic benefits**
- They create **support jobs and commercial opportunities** such as tree propagation (nursery work), grafting and pruning, community support, education, harvesting, fruit products, sales, marketing, transport, delivery etc.

- They look especially **attractive when in blossom or fruit**, so will enhance green spaces even if not tended and harvested
- Both **blossom and unharvested fruit** support wildlife



Orchard Challenges

- **Cost:** While woodland tree whips (including a few wild fruit tree species) can be obtained for free from The Woodland Trust and elsewhere, orchard trees need to be purchased. Being grafted onto root stock and planted at an older age, they are typically more expensive than woodland trees, and will usually require staking, wood chip and protection too.
- **Vandalism:** Fruit trees can be a target. The Investment in an orchard needs to be protected with proper fencing, or vandalised trees may confirm prejudices.
- **Expertise:** While fruit trees tend to manage quite well on their own, specialist skills are needed to optimise productivity (but this can be turned to a benefit - see above)
- **Carbon:** Fruit trees may not store as much carbon as larger woodland trees. They tend to grow more slowly and mature at a smaller size. However, they do tend to be long-lived and develop a thick girth, and windfall fruit do contribute to soil carbon - and other co-benefits more than compensate
- **Delay:** Trees take a few years to grow to productivity, so effort needs to be made to maintain group interest between planting and first harvest. Most existing new orchards are on council land, but are underutilised because a strong community group was not created when the orchard was planted.
- **Land:** Secure land access on a decadal scale is a priority.
- **Waste:** Wind-fallen fruit is seen by some as messy, especially if it's fallen on hard surfaces. A strong long term commitment to both harvesting and windfall collection may be necessary to win approvals.

Types of Orchard

We would broadly identify three types of orchard, with many having elements of each. All may include other food planting such as jam hedges, raised beds or perennial plants with berries etc:

- Old existing orchards which could be restored and/or extended
- New orchards designed to provide a worthwhile return
- Informal orchards where fruit and nut trees have been / are being planted for other reasons, such as climate mitigation, where there may be opportunities to add more productive trees, with protection, over time to create a new orchard.

To optimise this possibility, we recommend that fruit trees in woodland planting should be grouped in suitable, accessible places, to maximise pollination and facilitate maintenance as they become productive, and so encourage the creation of a true orchard.



Orchard Hosts

While the basic processes involved in orchard creation are universal, different approaches for different categories of orchard host may deliver better results.

In this document we concentrate on the two most likely to be employed initially in Leeds - schools and community groups - in hope that others can glean useful ideas from these. In each case, we assume that Fruit Works Co-op, or others with similar expertise, will provide mentoring and resources.



1) Schools

Schools often have land suitable for orchard planting, perhaps in association with an allotment, nature area, outdoor teaching space, or all three.

Various examples can be seen in this video from Feed Leeds / Leeds Edible Schools

<https://vimeo.com/71192084>

The size of any orchard will depend on available space and other resources, but there should be at least 5 trees to facilitate cross-pollination.

Stage 1: Design

- Contact between school and mentor. Background information collecting by phone and email. Initial site visit.
- Design workshop using scrap book of food forest examples and an orchard design kit. (This could potentially include an outdoor exercise, with children acting as trees to model the tree plan).
- Identification of particular class/es or school groups to be responsible for maintenance.
- Further feedback and discussion on the design as required.
- Headteacher (or delegated staff member) approves final design.
- Date for planting agreed.

Stage 2: Planting (Dec-March)

- Risk assessment completed and shared with school.
- Final arrangements with the school about which classes are going to be planting and when.
- Trees and plants sourced and tools assembled.
- Planting session with children and staff.

Fruit Works planting session (no children in video) https://youtu.be/SIJ0_Ra2ueM

Stage 3: Year-round orchard activities

Once the orchard has been planted it provides a host of opportunities for activities and learning. Below are several options for each school to choose from. How many can be provided by the mentor will be determined by the budget.

Part of the curriculum

Ideas shared with lead class staff for using the food forest as a resource for: Literacy and languages; Expressive arts; Maths and numeracy; Technologies; Science (a good intro topic for climate change); Social studies. (see Step 6 in the Learning Through Landscapes "School Orchards" booklet).

Drink the juice of what you are growing (September-November)

Crates of apples and be brought in to supplement the school's own for KS2 children to juice and taste. Juicing equipment is provided - up to 3 juicy lessons in a day.

Make your own apple trees (Feb-March)

Fruit trees aren't planted from seed - they are grafted. Grafting involves taking a cutting from the tree that you want to reproduce and joining it to the base of another tree. Groups of 10 Y5 or Y6 pupils can graft 30 baby apple trees which can be planted out the following year, sold or given away. This session also teaches basic tree biology, allowing pupils to understand what makes a successful graft, and the values of trees for pollination, climate mitigation, carbon storage, water retention, pollution control etc.

Pruning (December-February)

A couple of staff members can learn and practice pruning. Ideally, this activity should be linked up with a supportive local resident to ensure that the school has sufficient knowledge and expertise to maintain its fruit trees for years to come and through the holidays.

Summer health check (summer term)

A fruit tree specialist should visit for a lesson, with some mulch to help the children care for the trees during the dry summer, and to help them understand some of the biology.

Host	Item	Forest funding	Education funding
Schools			
	Stage 1 (Design)	£350	
	Stage 2 (Planting)	£350	
	Stage 3 (Activities)		£450
	TOTAL (PER SCHOOL)	£700	£450



2) Community Groups

A wide range of groups already host or might be interested in hosting an orchard, including Friends of parks and green spaces, special needs groups, out-door work groups such as TCV and Groundwork, community gardens, faith sites, health sites including health centres and hospitals, libraries and community centres etc.

Some might want physically to plant an orchard, others might want only to host workshops promoting orchards and/or fruit trees where people can learn about orchard design, grafting, planting, pruning, juicing etc. and perhaps go home with a fruit to plant, of fruit, juices or jams to enjoy.

The final shape of any project would be defined according to the group's need. The primary task would be to provide vision of the options to likely groups, and target those with a green focus to act as pioneers / early adopter and perhaps future mentors.

Phase 1: Promotion and recruitment

Fruit Works, supported by Feed Leeds and LCC, would promote the scheme and recruit participants through spring and early summer.

We would identify hosts, sites for orchard planting, and locations for “pop-up” fruit tree making sessions (grafting, planting and planning). We would also support the securing of permissions and funding as required.

Phase 2: Planting and workshops

In late summer and early autumn, we would run pop-up tree-making sessions, Apple Days and other events to build up the groups. This might include trees and fruit bushes to take away and plant at home or other suitable sites, apart from the planned orchard.

In late autumn and winter, we would supervise planting sessions for the new orchard sites, and run pruning and other maintenance workshops for existing orchards.

Phase 3: Nurturing both carbon capture and conversations

We would keep in touch with participants with encouragement, advice and signposting to other services and activities.

Project	Item	Forest Funding	Community funding
	Publicity		£250
	Grafting equipment and supplies	£350	
	Compost		£100
	Venue costs		£550
	Transport		£200

Communities	Materials for 400 trees and bushes	£1050	
	2 days of preparation by Fruit Works team of two staff @ £300	£650	
	5 days of training by Fruit Works team of two staff @ £300		£1550
	1 day of follow-up by Fruit Works team of two staff @ £300		£350
	TOTAL (PER COMMUNITY)	£2050	£3000

Funding Sources

As this document is focussed on providing multiple benefits on a cross-cutting basis, proposed orchards will need grant support for relevant areas of the project. One of the primary tasks will be the identification of suitable sources of funding.

The funders we tend to recommend include:

<https://treecouncil.org.uk/take-action/grants-for-trees/>

www.charlesandelsiesykestrust.co.uk

www.grantscape.org.uk/fund/cairdpeckfieldcommunityfund/

<https://hdhwills.org/grants/>

We have broken down the costs of a project and identified an amount that will cover the costs of the trees from the Fruit Works Nursery (other sources may prove more expensive). This would allow the project to get the trees in the ground, in identified suitable areas, and support the targets of the White Rose Forest.

Further funding will be needed to cover educational and workshop elements if included. These will enable projects to achieve targets of the White Rose Forest, and address wider carbon saving issues across the climate emergency.

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