European Union
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CORNWALL COUNCIL
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UNIVERSITY OF EXETER

Making space for nature in Cornish towns

St Ives Community Orchard

Cornish Orchard Guidance

July 2020

Contents

1 HISTORY OF CORNISH ORCHARDS

In Cornwall there is a history of orchards going back centuries. Research has shown that cherry orchards can be traced back to the early eighteenth century and reviews of agriculture written in 1811 refer to apple trees in labourers gardens as being "commonplace" as well as " in the gardens annexed to the residences of gentlemen are specimens of taste and embellishment supplying every kind of delicious fruit." The main fruit producing areas appear to be the deep sheltered valleys of the southern coast, the Tamar, the Fowey, the Fal and the Helford and the Camel and Hayle valleys on the north coast. In the main area of the Tamar there were 13 square miles in 6 parishes producing top fruits and soft fruits along with vegetables and flowers. Cider making at Haye Farm, St Veep is thought to go back to the 13th Century.

Until recently, most farms in Cornwall would have had a mixed orchard of apple, cider apple, pear, plum, quince and medlar trees, protected by hedges where lambing could take place and bees could be kept. Cherries were grown in the Tamar valley and in the south east. In West Cornwall special varieties of apples were grown for pickling.

There are quite a number of Cornish varieties which do well in the mild, moist climate of the south west, such as Cornish Aromatic, Cornish Gilliflower, Cornish Honeypin and King Byerd. These tend to be found around the Lizard, Hayle, the Lerryn, St Veep to Goland region and the Tamar valley.

Cherries were grown in the lower Tamar valley for fresh fruit shipped away via the river then by train and for jam making at Saltash. They looked so beautiful at blossom time that special boat trips were arranged. This industry declined after WWI and now few trees remain. Varieties such as Burcombes and Birchenhayes were named after the farms where they were first grown – varieties which are resistant to bacterial canker, the cherry's bane. One of the few remaining cherry orchards in the Tamar Valley can be seen at Bohetherick. Kea plums from Cowlands are used in jam, ice cream and wine production.[1]

Some relatively recent community orchards have been planted in Cornwall;

The Newquay Orchard Project https://newquayorchard.co.uk/
Bude Community Orchard https://www.facebook.com/FoEBude/
St Ives Community Orchard https://www.stivesorchard.co.uk/

The People's Trust for Endangered Species (PTES) is running an orchard project and is mapping all orchards in the UK and they have indicated there are a number of other orchards in Cornwall although little information is provided on their make-up. Logging all orchard information would give a fuller picture
https://ptes.org/campaigns/traditional-orchard-project/orchard-network/community-orchards/

[1] PTES https://ptes.org/campaigns/traditional-orchard-project/orchard-network/info-by-region/cornwall/

2 SITE CONDITIONS


Bude Community Orchard

Bude Community Orchard has published a guide to setting up a Community Orchard. These very useful notes can be found in Appendix 1.

The first step is to select a site suitable for growing an orchard – it is a significant investment and a long-term commitment. It is essential to obtain permission for tree planting and check land ownership and other feasibility issues including ground and soil conditions and utilities checks - for overhead and underground services (gas, electric, water etc). Once the necessary permissions are in place, it's time to look at environmental considerations, to ensure that the new trees have the best possible chance of success.

Sun

Most fruit trees require 6-8 hours of sunlight for good growth and fruit ripening although as a general rule of thumb, cooking varieties require fewer hours. So, it's useful to know how much sun the site receives in the growing season and whether there are any shady spots.

Buildings and trees are the usual sources of shade. Having a map and aiming to be on site around midday will help determine where south is, and how sunny the site is when the sun is at its highest point. Try to identify useful microclimates, such as sunny vertical spaces such as south and west facing walls and fences for trained forms like fans. Remember – such microclimates in towns and cities offer the best chance for growing more tender fruits like peaches and apricots. Semi-shaded areas can be used for cooking fruit. Mark these areas out on the map before drawing on possible positions of trees.

Soil

The ideal soil for fruit trees is well-drained, uncompacted, loamy soil with a pH of 6 (slightly acidic). The best way to get an idea of what kind of soil is present is to take some random

samples using a trowel or spade. Good soil should be easy to dig once the top layer of turf is removed. Simple soil tests can then be carried out for texture and acidity. The key thing to remember is that most soils can be improved over time, and as the trees will be growing in the same spot for decades to come, this soil can be improved through ongoing additions of organic matter, namely in the form of mulch. If builders' rubble is present, some of this should be removed during planting but less fussy rootstock like MM106 will be able to deal with this. The more information about the soil before the planting the better as this will dictate any specific improvements that'll need to be made in the future.

Soil depth

Ideally there should be at least 0.75m of topsoil and sub soil above any solid substrate like rock, concrete foundations etc. Most of a tree's feeder roots will occur in the upper 300mm depth of topsoil. Trees planted in shallow soils may need staking permanently to stop them falling over in the wind, as will many dwarf rootstocks.

Frost pockets and standing water

It's important to understand whether any area is liable to flowing especially during the winter. Most fruit trees do not like to be in standing water for too long, so avoiding these areas will be essential. Frost pockets are areas where cold air can't escape, usually at the bottom of a slope where there is a wall or hedge. The cold air flows downhill and accumulates here and can't escape, meaning that they stay frosty long after other areas have thawed. This can damage fruit buds and these areas are best avoided. Try to avoid planting in those spots.

Water

It is vital that the site has easy access to a water point. This is a key consideration as regular watering is crucial during the first few years of establishment and during times of drought thereafter. Roof surfaces suitable for rainwater collection should be identified during the planning phase to consider rainwater harvesting; rainwater is much better for the trees and the soil microorganisms vital to healthy tree growth (chlorine will damage mycorrhizas for example).

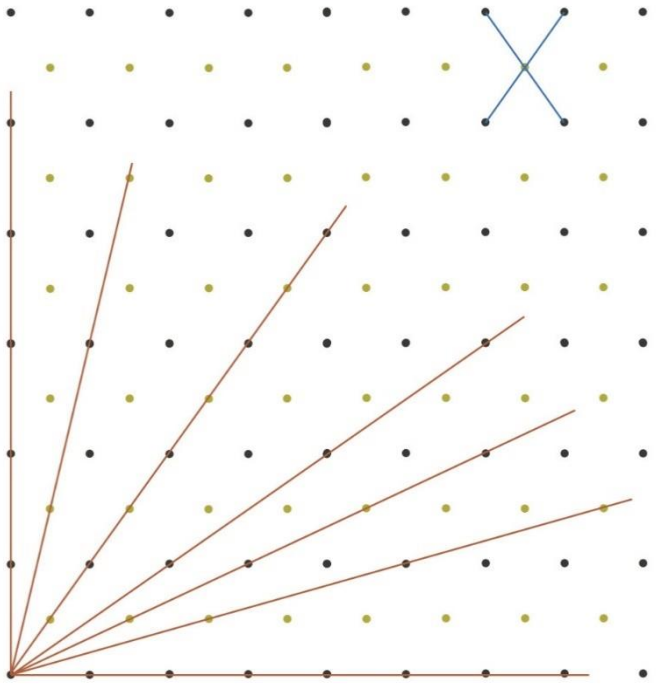
Alternatively, if access to mains water can be established, this would be another option although a budget for ongoing costs to cover standing charges and meters will need to allowed for.

3 DESIGN

The arrangement of the trees will largely be determined by the shape and features of the site which will vary from site to site. The ultimate size of the trees and the species will also dictate the best layout.

Traditionally, orchards are planted in a grid formation, in rows of trees from North to South to maximise how much sun reaches each tree. Some open, sunny urban sites with good soil will allow for this. Others will be clusters of trees here and there where suitable ground allows (this is more typical of estates that have myriad pieces of grassy land scattered around).

A once-popular planting pattern is the quincunx which involves five trees planted like the layout on a die. The nearest trees are on the diagonal plane which allows more trees than if planted on a straight grid. If the middle tree is planted on a dwarfing rootstock (see section 5) it can give an early crop while the other four trees on more vigorous rootstock mature.

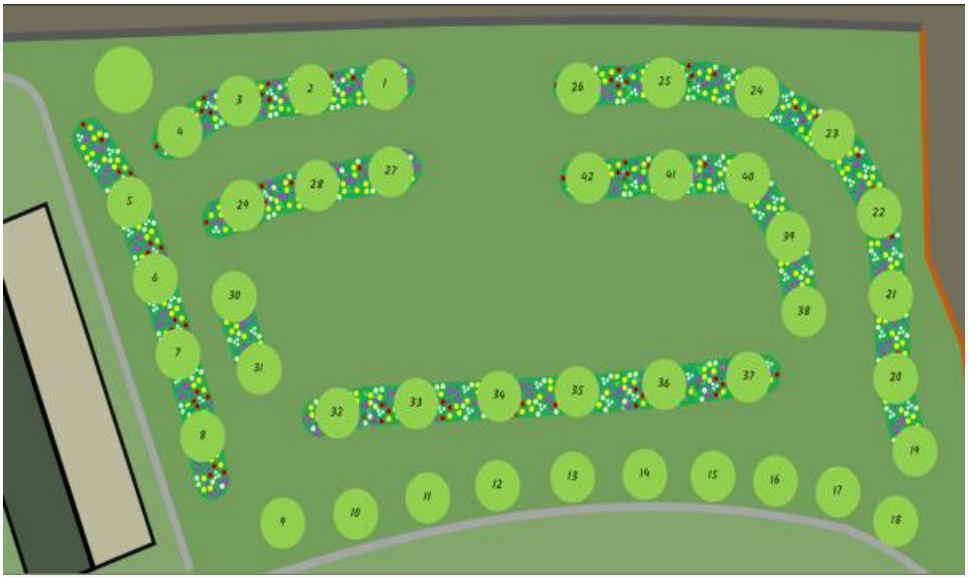


Quincunx grid

The most important thing is that each tree is positioned in a place that receives sufficient sun and soil depth, is well drained and is not too close to other trees or large shrubs.

Spacing between fruit trees should be generous to allow for competition-free root and canopy growth. For MM106 trees these should be planted 5m apart, for M26 3.5-4m apart. This spacing then allows sufficient light to reach the ground so that other species may then be planted in subsequent years if desired (e.g. herbs, soft fruit). If planting close to an existing tree, the ultimate size of that tree must be considered i.e. a 4m tall oak is likely to grow much taller and wider, so planting 5m away is not likely to be sufficient. If in doubt, always give more space than you think the tree will need.

Or as in the case for the Bude Community Orchard they created an orchard with wildflower patches in between the trees and allowed for a central community area. See Appendix 1 for their advice on setting up a community orchard.



4 PLANT CHOICE

4.1 Types of fruit

An orchard can contain both fruit and nut trees. For example with the mild climate in Cornwall, if the right site selection has been made and sufficient shelter from salty winds can be arranged any of the following species could be selected; apple, pear, plum, cherry, apricot, peach, nectarine, sweet chestnut, walnut, crab apple, cob nut, medlar, black mulberry, quince

Cornwall has a successful history of fruit growing – mostly apple and cherry with a sprinkling of plum.

There is a full list of all Cornish varieties of apple, plum and cherries on this website; https://ptes.org/?search=orchard&fruit-type=&region-raised=South+West&county-raised=Cornwall&culinary-use=

Varieties used in Cornwall Council's Making Space for Nature project were

Apple
'Bens Red'
'Cornish Pine'
'Golden Noble'
'Venus Pippin'
'Tregonna King'
'Pig Nose'
'Bramley'

Cherry
'Burcombe'
'Birchenhayes'

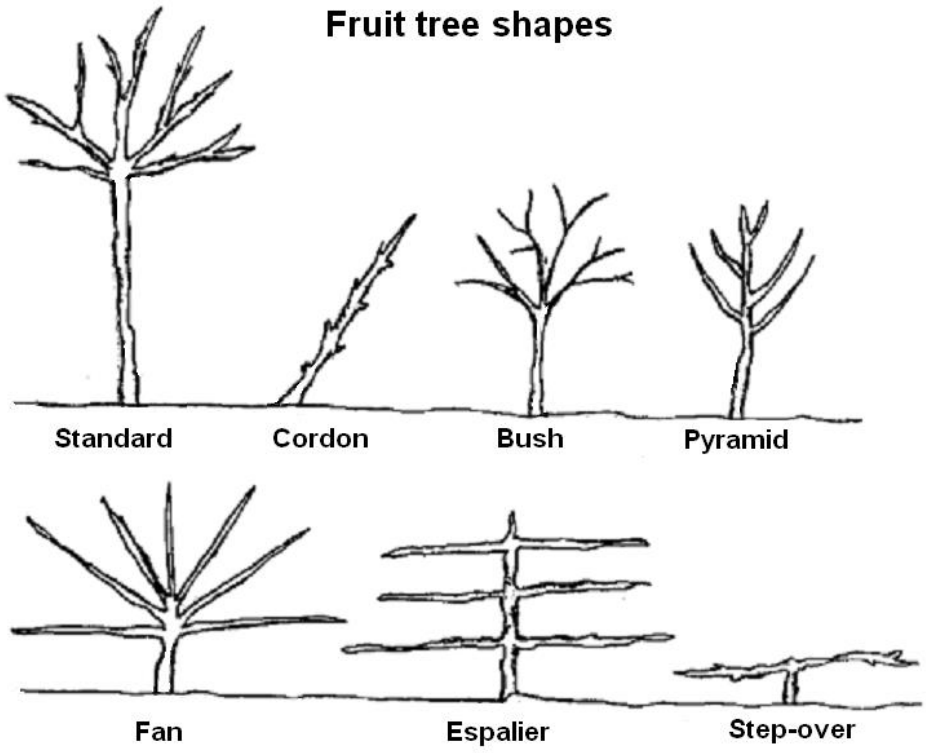
Plum
'Shepherd's Bullace'
'Kea'

A further list of suitable Cornish apple varieties can be found here

https://www.cornwall.gov.uk/environment-and-planning/trees-hedges-and-woodland/apples-and-orchards/orchards-recommended-varieties/

4.2 Forms

Fruit trees are grown in a variety of shapes, sometimes to please the eye but also to encourage fruit production. The form or shape of fruit trees can be manipulated by pruning and training. Shaping and promoting a particular tree form is done to establish the plant in a particular situation under certain environmental conditions, to increase fruit yield, and to enhance fruit quality. For example, pruning a tree to a pyramid shape enables trees to be planted closer together. An open bowl or cup form helps sunlight penetrate the canopy, thus encouraging a high fruit yield whilst keeping the tree short and accessible for harvesting. Other shapes such as cordons, espaliers and fans offer opportunities for growing trees two dimensionally against walls or fences, or they can be trained to function as barriers.



Some of the following fruit tree forms require training by tying the branches to the required form. Most require pruning to retain the desired structure. However, not all types of fruit tree are suitable for all forms; apples and pears do well as cordons and espaliers, for example, whereas cherries are more suited to the fan form.

For most community purposes, the **bush** form would be most suitable with the correct rootstock selected (see section 5).

Bush

An open-centred crown on a short trunk of less than 1 metre. This is a traditional and popular form for apple trees. Bush trees are easy to maintain and bear fruit at a young age. Final height is between 2 metres and 5.5 metres depending on which rootstock is used.

Standard

Larger than the bush form, with trunks of 2 metres or more. Standard trees can reach a total height of 8 metres. They eventually produce high yields but, being large trees, are less accessible for picking fruit and maintaining.

Pyramid

Similar to the bush form, although the main leader shoot is allowed to maintain its dominance, resulting in a pyramidal shape.

Cordon

Single-stemmed trees planted at an angle (usually 45°), with fruiting spurs encouraged to form along the stem. Any side branches are removed by pruning. Cordons take less space and crop earlier than most other forms, so more varieties can be grown in a given space, but yields are smaller per tree.

Espalier

A central vertical trunk with three or four horizontal branches on each side. Useful if there are walls bordering an orchard or for small spaces. Specialist pruning will be required to maintain the shape.

Fan

A short central trunk with several radiating branches growing from the crown. Most suited to cherries grown up a wall.

Step-over espalier

Espaliers with just one tier of horizontal branches 30 cm from the ground. These make a novel and productive border for a vegetable plot or as a border for the orchard area with larger trees. Fruit production is dictated by the size of the plant.

4.3 Pollination

Fruit trees will benefit or even depend on cross pollination to set a good crop.

Most cultivars of apples, pears and plums are, in the main, not self-fertile. This means that in order to produce fruit, these trees need to be planted close to one or more suitable cultivars in flower at the same time.

To help with this, fruit trees are grouped according to when they flower which is marked on the label. Trees in the same, or adjacent numbered flowering group should be selected.

These groups are;

1 Very early; pollinated by groups 1 & 2

2 Pollinated by groups 1,2 & 3

3 Pollinated by groups 2, 3 & 4

4 Pollinated by groups 3, 4 & 5

5 Pollinated by groups 4, 5 & 6

6 Pollinated by groups 5,6 & 7

7 Very late; pollinated by group 6

A full list of apple and pear pollination groups can be downloaded from the RHS website.

When the blossom is out insects, such as bees, are therefore able to cross-pollinate the trees as they buzz around looking for pollen.

Some trees are labelled 'triploid'. These cultivars will need two trees around them. Triploids have sterile pollen, so they're not very good at pollinating the trees that pollinate them. This means that one tree is needed to pollinate a triploid, and another tree to help pollinate the pollinator.

Blossom begins as early as March or April, with plums and damson flowers appearing first, then pears and cherries. Apples flower through April and into May. Quince and medlar trees flower last.

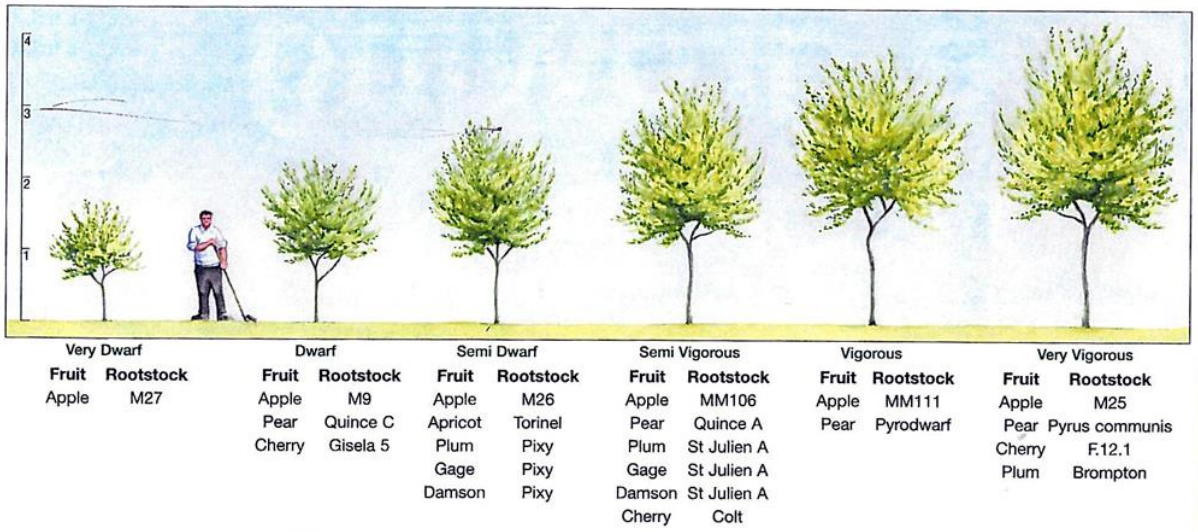
When it comes to apples and pears, the best way to ensure a harvest through the season is to have a mix of groups of trees that fruit at different times – matching trees that flower really early together with some that flower through the summer and early autumn and then really late varieties.

Many fruit trees and some ornamentals are grafted onto rootstocks. These rootstocks control the vigour of the plant, allowing the cultivation of trees and bushes in a smaller space than if they were grown on their own roots.

5 ROOTSTOCK

Rootstocks are used to restrict the vigour of fruit trees and allow a range to grow in a small space. They can also contribute to the disease resisting abilities of the plant.

To give you an idea of the ultimate height of the tree based on the root stock chosen, this is a useful chart, courtesy of LarchCottage.co.uk



For more details on each of the rootstock the following information is published on the RHS website https://www.rhs.org.uk/advice/profile?pid=359 and explains the differing rootstocks available by fruit varieties;

5.1 Apples

Name of rootstock: M27 (extremely dwarfing)
Suitable for: Dwarf pyramids, or stepovers, for small gardens where the soil is fertile
Start fruiting: After two years
Ultimate height as trained as bush: Plants reach 1.2-1.8m x 1.5m
Growing conditions: Good weed and grass free soil. Water plants during drought. Unsuitable on poor soil and for weak cultivars
Staking: Permanently
Spacing: 1.2-1.5 apart with 1.8m between rows

Name of rootstock: M9 (dwarfing)
Suitable for: Bush, pyramid, cordons; an excellent stock for small gardens
Start fruiting: After two or three years
Ultimate height as trained as bush: 1.8-2.4m x 2.7m
Growing conditions: Good weed and grass free soil. Water plants during drought
Staking: Permanently
Spacing: 2.4-3m apart with 3.6m between rows

Name of rootstock: M26 (dwarfing)
Suitable for: Bush, pyramid, cordon, espalier and is ideal for containers
Start fruiting: After two or three years
Ultimate height as trained as bush: 2.4-3m x 3.6m
Growing conditions: Average soils including grassed orchards
Staking: Permanently
Spacing: 2.4-3.6m with 4.5m between rows

Name of rootstock: MM106 (semi-dwarfing)
Suitable for: All forms except standards
Start fruiting: After three or four years
Ultimate height as trained as bush: 3-4m x 4m
Growing conditions: Tolerant of a range of soils including grassed orchards and poor soils. The most widely used rootstock, but unsuitable for small gardens.
Staking: 5 years; longer in exposed locations
Spacing: 3.6 with 4.5m between the rows

Name of rootstock: MM111 (vigorous)
Suitable for: standards and half standards
Start fruiting: After four or five years
Ultimate height as trained as bush: 4-4.5m x 4.5m less on light soils
Growing conditions: Suitable for most soils including orchards in grass and on poor soils
Staking: Staking is not necessary if planted as a one year old but those planted as 2-3 year old trees need staking for the first 3 years
Spacing: 4.5m apart with 6m between rows

Name of rootstock: M25 (very vigorous)
Suitable for: Standards
Start fruiting: After five or six years
Ultimate height as trained as bush: +4.5 x 6m
Growing conditions: Most soils including orchards in grass and on poor soils. They are too vigorous for most gardens except where the soil is poor
Staking: Staking is not necessary if planted as a one year old but those planted as two- or three-year-old trees need staking for the first 3 years
Spacing: 6m

5.2 Pears and quinces

Name of rootstock: Quince C (dwarfing)
Suitable for: Cordon, bush, central leader
Start fruiting: After four years
Ultimate height as trained as bush: 2.5-3m
Growing conditions: Fertile, moisture retentive soil
Staking: Permanently
Spacing: 3m

Name of rootstock: Quince A (semi-vigorous)
Suitable for: Fan, cordon, bush, central leader, half-standard, espalier
Start fruiting: After four years
Ultimate height as trained as bush: 3-4.5m
Growing conditions: Most medium to heavy fertile soils
Staking: Retain for five years
Spacing: 3-4.5m

5.3 Plums, gages, damsons

Name of rootstock: Pixy (semi-dwarfing)
Suitable for: Cordon, dwarf bush
Start fruiting: Three or four years
Ultimate height as trained as bush: 3-4m
Growing conditions: Good light, loamy soil
Staking: Permanently
Spacing: 4m

5.4 Peaches, nectarines, apricots, plums, gages, damsons

Name of rootstock: Saint Julian A (semi-vigorous)
Suitable for: Bush, half standard, fan-trained
Start fruiting: After three or four years
Ultimate height as trained as bush: 4.5-5m
Growing conditions: heavy soils are tolerated
Staking: 5 years
Spacing: 5m

Name of rootstock: Torinel (semi-vigorous)
Suitable for: Bush, half standard, fan-trained, good for containers

Start fruiting: After three or four years
Ultimate height as trained as bush: 2.4-3m
Growing conditions: loamy
Staking: Five years
Spacing: 3m

5.5 Cherry

Name of rootstock: Gisela 5 or G5 (semi-dwarfing)
Suitable for: Bush, pyramid, fan
Start fruiting: Three or four years
Ultimate height as trained as bush: 2.4-3m
Growing conditions: Fertile, loamy soil
Staking: Permanently
Spacing: 2.7m

Name of rootstock: Colt (semi-vigorous)
Suitable for: Bush, half standard, fans
Start fruiting: After three or four years
Ultimate height as trained as bush: 6m
Growing conditions: Many soils tolerated including clay and light, chalky soils
Staking: Permanently
Spacing: 6m

6 PLANTING

Trees are best planted when dormant. November/ early December is favoured as a planting period as this allows the tree to put all its energy into root growth for several months, before coming into leaf. Trees should only be planted when there is no snow or frost on the ground.

Prepare the planting site well and take time over the planting and maintenance.

1. Excavate a good size hole taking care to keep the topsoil separate from sub-soil. (1m x 1m x 500 mm deep is ideal).
2. Remove large stones, rubble and other unsuitable soil.
3. Break up the bottom and sides of the pit to ensure good drainage and rooting.
4. On exposed sites or where larger trees (1.5m+) are planted you may need to stake and tie the tree for the first growing season. Stakes should be sunk into the middle of the base of the pit and should extend 300-500 mm above the ground (e.g. 1m stake, avoid staking if possible).
5. Backfill with a good amount of well-rotted manure or compost and incorporate about half of the excavated soil.
6. Plant the tree ensuring the roots are spread out and at the correct depth.
7. Backfill remaining soil (topsoil around roots and on top) firming the ground as you proceed and ensure that the final soil level is at the level of the root collar (identified by change of colour and swelling).

8. Apply a layer of mulch over the entire planting pit to prevent weeds establishing. Lay a 100 mm layer of wood chips, bark, wool or straw. Do not use cut grass will kill as a mulch.
9. Place a plastic spiral guard or hessian wrapping around base of stem to prevent damage by rabbits and deer. This should be removed 1 – 2 years after the tree is established. Plastic spiral guards should be reused where possible and recycled when no longer useable.

7 MANAGEMENT

7.1 Maintenance

Orchards are relatively simple to maintain. In the first few years, the most important management is to keep the vegetation away from the base of new trees. Adding new mulch each year will help reduce the vegetation and evaporation of water. Ideally a 1 metre diameter of vegetation from the base of the tree should be kept clear.

From the moment the trees are planted, it is essential to keep them well watered especially in periods of low rainfall and during the growing season. For the first year, all trees should be regularly watered with a minimum of 30 litres of water per tree. In some cases, this might be needed weekly especially if there has been a prolonged dry spell.

Pruning

The subject of pruning fruit trees can often seem confusing and off-putting, but it is really not that complicated if a few basic rules are followed. There are a range of reasons why you might want to prune a fruit tree:

- to get better quality fruit;
- to let light and air into the tree, and so help minimise disease outbreaks;
- to control or maintain the size of the tree;
- to remove damaged or diseased sections of the tree;
- to rebalance a tree to keep it from falling over

For guidance on pruning by species, please review suggestions from the RHS
https://www.rhs.org.uk/Advice/profile?pid=90

There are a few basic guidelines to pruning fruit trees in the table below;

	Formation pruning	Structural pruning	Maintenance pruning	Restorative pruning
Pip fruit (e.g. apples, pears)	The pruning of young trees to develop a balanced shape. Develops a strong, evenly spaced, open network of branches above the height of livestock or machinery.	**Winter apple and pear pruning.** When trees are dormant. Maintains shape and balance of growth in trees with established frameworks. Removes weak, crowded and unhelpful growth. Increases growth vigour the following season.	**Summer pruning.** Removes overcrowded and over-vigorous new growth. Increases quality of fruit. Reduced vigour of tree growth, directing this energy into fruit production.	Carry out in winter, when tree is dormant. Spread work over a few years to reduce the stress on the tree. Depending on the condition and shape of the tree this can involve: • Reducing the height of the tree • Removing heavily diseased or overcrowded growth Can increase the vigour of the tree and encourage new growth which can be used for grafting new trees.
Stone fruit (e.g. plums, damsons)	Stone fruits do not respond to pruning as well as apple and pear trees so their formative pruning should be kept to a minimum.	Stone fruits should only be pruned in summer between May and September. Remove excessive dead and damaged wood which forms under the canopy as this reduces light penetration. The weight of the fruit on heavy cropping trees, particularly plums, may require stronger, pruned branches. Damson and plum branches are brittle when elderly, trim the ends of vigorous horizontal branches to prevent them snapping off.		

7.2 Pests and diseases

The most common problems include aphids, caterpillars, weevils, mites, canker, bacterial canker, mildew, fungal diseases, leaf discolouration and mould.

The RHS website has detailed explanations of the different pests and diseases affecting fruit trees together with some suggestions for solutions.

https://www.rhs.org.uk/advice/beginners-guide/fruit-basics/fruit-pests-and-diseases

8 SUPPLIERS

These can change, please check https://www.cornwall.gov.uk/environment/trees-hedges-and-woodlands/apples-and-orchards/fruit-tree-nurseries/ for the latest information.

Adam's Apples
Talaton Plants Ltd
Egremont Barn,
Payhembury,
Honiton, EX14 3JA
Tel: 01404 841166
Email: sales@adamsappletrees.co.uk
Website: http://www.adamsappletrees.co.uk

Agroforestry Services
The Forest Garden
Penjerrick Hill
Budock Water, TR11 5ED
Tel: 01326 250090
Email: simonmiles@theforestgarden.co.uk

Bodmin Plant and Herb Nursery
Laveddon Mill,
Laninval Hill,
Bodmin, PL30 5JU
Tel: 01208 72837
Email: bodminnursery@aol.com

Cornish Apple Trees
Visit by appointment only
Chytroon Farm,
The Bungalow,
Perranwell Station, TR3 7PT
Mobile: 07765809267

Duchy of Cornwall Nurseries
Cott Road,
Lostwithiel, PL22 0HW
Tel: 01208 872668
Email: sales@duchyofcornwallnursery.co.uk
Website: http://www.duchyofcornwallnursery.co.uk/

Endsleigh Gardens
Milton Abbot,
Tavistock, PL19 0PG

Tel: 01822 870235
Email: info@endsleigh-gardens.com
Website: http://www.endsleigh-gardens.com/

Kehelland Horticultural Centre Ltd
Kehelland
Camborne, TR14 0DD
Tel 01209 718975
Email: sales@kehellandtrust.org.uk
Website: http://www.kehellandtrust.org.uk

Perrie Hale Nursery Ltd
Northcote Hill
EX14 9TH Honiton
tel.0140443344
fax.01404 471 63
oliver@perriehale.co.uk

9 REFERENCES

There are a number of excellent websites that provide more detailed information on all aspects of orchards

List of community orchards
https://ptes.org/campaigns/traditional-orchard-project/orchard-network/community-orchards/

Orchard network project
https://ptes.org/campaigns/traditional-orchard-project/orchard-network/

Expertise on fruit trees
https://www.rhs.org.uk/advice/grow-your-own/fruit

Guidance documents for downloading
https://www.theorchardproject.org.uk/guides-and-advice/

The Newquay Orchard Project
https://newquayorchard.co.uk/

Bude Community Orchard
https://www.facebook.com/FoEBude/

St Ives Community Orchard
https://www.stivesorchard.co.uk/

Cornish varieties
https://ptes.org/?search=orchard&fruit-type=&region-raised=South+West&county-raised=Cornwall&culinary-use=

Cornwall Orchard project (finished in 2017)
https://www.cornwall.gov.uk/environment-and-planning/trees-hedges-and-woodland/apples-and-orchards/

Green Infrastructure for Growth 2 is part funded by the European Regional Development Fund

10 APPENDIX 1 – COMMUNITY ORCHARDS – ADVICE FOR NEW GROUPS

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ESTABLISHING A GROUP

Initially hold informal meetings to establish a core group – seek a range of people skills (in our case I had the practical orchard skills and Simon the computer skills to manage the project between us – as always good relationships essential!
Know where to go for help if you don't have the skills in house
https://www.gov.uk/government/publications/community-orchards-a-how-to-guide
https://www.theorchardproject.org.uk/
https://www.commonground.org.uk/community-orchards/
https://www.orchardslive.org.uk/
Several websites can offer training courses and advice on all aspects of planting a new orchard or restoring an old one. These groups can also help with equipment hire when it comes to juicing time (remember apple pulpers can be very power-hungry devices – ensure adequate power supply is available!!)
Involve your local or county council from the start – build trust between parties (We had been managing and successfully enlarging a biodiversity trail for 5 years before proposing the orchard)
What kind of group? Residents Association, Trust, Environmental group (as in our case) food co-op or just a group of local enthusiasts – important to have agreed outcomes right from the start to consider what types of fruit to plant and who will benefit from the produce
Constitution – simple constitution to ensure smooth running of the group and ensure accountability
Provide insurance cover for the group and any members of the public involved
Risk assessments carried out before work begins
Work parties on regular organised basis with adequate supervision
Regular newsletter to build community involvement

LAND

Identify site at the outset and ensure good public access
Carry out simple impact assessment to ensure no harm to existing wildlife or features (In our case featureless mown grass was easy to assess!) Call upon your local Wildlife Trust if in doubt.
Research history of former site uses to avoid contaminated areas left by mining or other industrial practices
If proposed site is local or county council land prepare detailed project plan for the relevant committee to consider and approve – be prepared to answer any questions and accept set date at which project will be reconsidered (In our case after 3 years)
Ensure site is suitable for growing the proposed fruit varieties – soil analysis, soil horizon examination, aspect and elevation
Check for risk of flooding, wind exposure and frost
Establish grass maintenance regime i.e. mowing/haying / grazing - consider wildflower component to enhance biodiversity (Beware the use of strimmer's around the trees!) Remember orchards are not just composed of trees!

PLANTING
Adopt planting plan that encourages community access and creates attractive public space

Research local fruit varieties that were historically grown in the area and try to find any existing examples so that grafts may be taken – strive for local distinctiveness!
Choose apple varieties that are suitable for proposed uses i.e. eating/cooking/cider and do not require harvesting all at one time (We planted mostly eating apples choosing a mix of heritage varieties and modern cultivars for long season cropping of fresh fruit)
Choose rootstocks suitable for the site and be aware of correct planting distances affected by this choice (We chose MM106 semi-dwarfing to reduce eventual height of trees to avoid wind damage)
If site is exposed as is common in Cornwall, consider establishing wind breaks before planting and losing expensive fruit trees – a well-planned orchard will last for generations so be patient!
Check pollination tables to ensure good cropping – balance triploid varieties i.e. Bramley with generous pollinators like James Grieve or crab apple varieties
Choose bare root stock trees over container grown (cheaper and establish better)
Ensure good soil preparation and use mycorrhizal support – the first 5 years of a fruit tree's life are vital for good health and future cropping! Mulch well!
Provide tree guard or other protections as necessary
Consider also planting fruit bushes that will grow well with the trees – i.e. currants, gooseberries, raspberries (We have also planted Chilean Guava (Myrtus ugni) as it is one of my favourites and extends berry harvesting into the late autumn)
Ensure the planting is a public event involving the community – make it a celebration! The same effort needs to go into publicising these events to – NEVER assume everyone knows about the orchard. Make sure you remember to take pictures and videos of people getting involved. They are a great record of the event and really useful for spreading the word on all forms of media – Facebook, Twitter and Instagram – newspapers will be more likely to publish if you can provide great pictures (and also if you write the article for them!)

MAINTENANCE
Agree management strategy to protect and feed the trees i.e. organic/non-organic (We have chosen the former)
Ensure regular programme of workdays especially during the establishment phase of the orchard (we had to schedule 3 extra work sessions to water the trees this summer)
Encourage regular use of the site to establish it as a community asset and deter vandalism – stage community events there (We were there on Heritage Day as a green hub)
Undertake training courses as required to gain necessary skills i.e. grafting/pruning – and offer others the chance to do these too, they may be the orchard custodians of the future
Develop seasonal round of maintenance activities and involve the public – also times to celebrate at blossom/harvest/juicing/pruning/wassailing - remember whilst the creation of an orchard is the main objective many other socially beneficial outcomes should be encouraged to enhance community cohesion and personal wellbeing. Look for opportunities to involve local schools – we had children from the local primary school come and sow wildflower seeds. (It would have been good to have them down for a 'private' juicing session too! One run of the press would have easily provided 30 kids with a glass of freshly pressed apple juice… maybe next year!)

INTERPRETATION

Clear informational signs are essential to explain your project – no matter how much publicity you attract there will always be local people concerned about changes to public space who need to be reassured. Simple signs (Home-made in our case) offer a point of contact initially and can allay concerns that may develop into a complaint to the relevant Council. (All our contact with the public whilst onsite has been positive – local people are enthusiastic about the project)
Planned interpretation boards can be developed later once full funding has been obtained.

Labelling of the trees is optional – we have opted to use roundels of coppice wood which will be cheap and easy to replace.

FUNDING

This is an area which you may know far better than ourselves, but –
The crowdfunding approach was excellent for us and the training and financial support offered by the Grow Nature Seed Fund was important in our decision to go ahead with the project
Crowdfunding achieves three important things at once – of course it helps raise money for the project, but it also provides an engaging way of publicising the project and ensures that donors feel a real sense of ownership and involvement with the project from the very start. It is important to try and publicising the project via as many different channels as you can – if you rely on only one then you severely limit the number of people that will get to know about it. We used Facebook and Twitter and made sure that we primed our personal networks well in advance, it's important to get off to a good start so that people feel they are backing a winner. We also contacted the local newspaper and made sure it was featured on more than one occasion – interaction with the Town Council (i.e. votes at key meetings where the press was present) was a useful part of this.
If you have the right project in the right place and are asking for a realistic amount of money, then you should be confident of success – but don't take it for granted. Follow the advice on the Crowdfunder website about planning the appeal carefully and making sure the project page is informative and engaging. Look for other sources of funding too – other local groups and charities can be very supportive (we had a large donation from Bude Age Concern) and in some cases local businesses will be keen to support projects either with funding or with good in kind (we turned down some offers as Friends of the Earth are mindful of who they accept donations from!)
Be aware that lots of people (particularly older people) might not be comfortable donating online so make sure there are opportunities for them to donate cash or cheques – Crowdfunder doesn't really cater for this so you will need to do this in parallel.
We also found it very helpful to offer tree sponsorship as a reward at £25 each. We probably had 50% of the trees sponsored after the Crowdfunder was complete – partly because we could fit in more trees than we had planned but also because people were even more enthusiastic when planting the trees. With 42 trees in total that was another £500 or so towards keeping the project going.