An aerial photograph of a dense, lush green forest. The trees are thick and vibrant, filling most of the frame. On the left side, there is a clear boundary leading to a grassy field. The text 'ART Forest Garden Dartington' is overlaid in white, sans-serif font in the upper-left quadrant of the image.

ART  
Forest Garden  
Dartington

# The ART forest garden at Dartington

This project was started in autumn 1994 on land owned by the Dartington Hall Trust and rented to the ART on a long term basis. It was previously a pasture field, size 0.84 ha (2.1 acres), not very intensively used, and bordered by Dartington woods to the North and West (giving good shelter from the prevailing winds.) To the west the woodlands include some large coast redwood (*Sequoia*) planted in the 1930's which grow very well in this climate. The height of these does mean there are shading issues near that edge which the design takes account of.

The soil on site was acid with a clay loam texture, typical of the area. A soil analysis also showed low phosphorus levels, typical in agricultural fields. A seasonal stream ran through the site – usually only flowing in winter.

The main site preparation was a single application of lime to raise the pH of the soil over most of the site to around 6.0, the minimum preferred by many fruiting trees.

Initial the design concentrated on windbreaks (especially along the East side) and the main canopy trees. The climate of Britain is windy (more so in the West) and good windbreaks are an important part of forest garden design here, whilst they may be less important in some other parts of the world. A variety of species have been used including Red alder (*Alnus rubra*), Juneberry (*Amelanchier lamarckii*), Barberry (*Berberis lycium*), Sweet chestnut (*Castanea sativa*), Autumn olive (*Elaeagnus umbellata*), Willow (*Salix* 'Bowles') and Guelder rose (*Viburnum opulus*).

The main canopy trees were planted in early 1995 and early 1996. Most of the top canopy trees on site are Italian alder (*Alnus cordata*), chosen for its crop of Nitrogen, its conical form, and its greater tolerance of dry summer soils than many alders. These were grown from seed sown in spring 1995.

There are a wide variety of species of other canopy trees, ranging from better known (eg. apple, pear, plum etc.) to lesser known or unknown (as crop trees) in the UK (eg. hawthorn species, plum yews, chinkapins, bladdernuts, Chinese dogwood, Szechuan pepper etc.)

A limited number of short-lived nurse shrubs were used, mainly Scotch broom (*Cytisus scoparius*), none of which remain now.

A roughly 10-year underplanting plan was conceived from the start, to enabled shade to develop for shade-loving plants, and allow for previous results on site to affect future underplanting plans. So about 800 sq m of underplanting took place each year, comprising shrubs of different sizes, perennial crops and ground covering plants.

The main aims on this site is for it be for demonstration and experimentation. The many and varied crops are mainly used domestically, with only the occasional crop being sold.

**This guide will make most sense if you follow the paths as marked by arrows on the map** (though you can go where you like!)

Dartington woods

Key



Italian alder canopy  
(*Alnus cordata*)



Suggested route

Dartington woods

Windbreak:  
*Berberis lycium*

Dartington woods  
(redwoods + others)

Windbreak: alders  
(*Alnus viridis*,  
*Alnus glutinosa*)

Windbreak:  
willow + autumn  
olive

Windbreak:  
*Berberis lycium*

Windbreak: red alder  
(*Alnus rubra*)

Windbreak:  
*Berberis lycium*  
+ *Gaultheria*  
*shallon*

Windbreak: autumn olive  
(*Elaeagnus umbellata*)

Entrance

Windbreak: autumn  
olive

ART Forest garden  
Dartington

Site for  
education &  
processing  
building



10 20 30 40 50 m

Windbreak: red alder (*Alnus rubra*)



# A tour around the forest garden

When you enter through the gate, one of the first plants you might notice is the large bamboo (1) straight ahead of you. This giant timber bamboo is one of the largest we can grow in this climate, giving canes 6-8cm diameter and 8-10m long.

To the right you'll see the New Zealand flax (12) and to the left of it three close-planted and pollarded Toon trees (*Toona sinensis*), a tree vegetable with excellent spicy leaves.

Proceed up the path, past comfrey and Turkish rocket down low and to the left you can see two chinkapin trees (11) which bear small but sweet nuts in autumn. Close to the path on the left is another pollarded tree for a leaf crop, this one white mulberry. Low down between this and the large Italian alder overhead is an area of dense lemon balm (*Melissa*).

To the right of the path, the spiny small tree (20) is one of the Szechuan peppers (a common name that can refer to 20 species of *Zanthoxylum*) whose main crop is the peppery fruits in autumn, but it also has fine spicy young leaves to use as a flavouring.

Past this down low are some good spring shoot vegetables – ostrich fern (*Matteuccia*) and a hosta – with native wild garlic (*Allium ursinum*) near the path (which vanishes in July) underplanted with false strawberry (*Duchesnea indica*).

Carry along the path, past an area on the right of the Japanese vegetable fuki (*Petasites japonica*), behind and next to which is another spring shoot vegetable, Solomon's seal (*Polygonatum biflorum*). Just before the path junction the small tree is Chinese dogwood (23), one of the *Cornus* with good edible fruits.

On the left, just past the path junction is a pollarded lime (linden) tree, one of several on this site for edible salad leaves. Either side of it you can spot a line of conifer shrubs which are plum yews (25), which bear edible fruits in autumn. In front of the plum yews are some more common fruits – redcurrants and raspberries – as well as Japanese quince. On the other side of the path is false indigo (26), here mainly as a nitrogen-fixer.

1. Giant timber bamboo (*Phyllostachys vivax*)
2. Plum yews (*Cephalotaxus harringtonia drupacea*)
3. *Elaeagnus x ebbingei*
4. Chilean myrtle (*Luma apiculata*)
5. *Berberis georgii*
6. *Mahonia japonica*
7. Alder (*Alnus glutinosa*) - pollarded
8. Small leaved lime (*Tilia cordata*)
9. Bush clovers (*Lespedeza bicolor*)
10. Small leaved lime (*Tilia cordata*)
11. Chinkapins (*Castanea pumila*)  
Between 11 & 12: *Toona sinensis* x 3
12. New Zealand flax (*Phormium tenax*)
13. Saskatoon (*Amelanchier alnifolia* 'Obelisk')
14. Salal (*Gaultheria shallon*)
15. *Berberis* 'Buccaneer'
16. European beech (*Fagus sylvatica*)
17. Haw (*Crataegus pedicellata*)
18. White mulberry (*Morus alba*) – pollarded
19. Manzanilla (*Crataegus pubescens*)
20. Szechuan pepper (*Zanthoxylum schinifolium*)
21. Paper mulberry (*Broussonetia papyrifera*)
22. Juneberry (*Amelanchier* 'Ballerina')
23. Chinese dogwood (*Cornus kousa chinensis*)
24. Large leaved lime (*Tilia platyphyllos*)
25. Plum yew (*Cephalotaxus harringtonia drupacea*)
26. False indigo (*Amorpha fruticosa*)



Continuing along the path, on the left are some pollarded native alder (27) and on the right (A) the start of an internal hedge of the evergreen *Elaeagnus x ebbingei* which gives shelter, nitrogen, bee fodder and the first edible fruits of the year in May.

As the path forks, keep left. In the fork of the path is Korean barberry (*Berberis koreana*), one of the best in the family for edible fruits. This selection is one of the old Soviet breeding results. Beneath it you can see the ground cover made of both false strawberry (yellow flowers) and true wild strawberry (white flowers).

To the left of the path fork is a group of saskatoons (29), the species in this family with the best edible fruits although birds love them too! Just past the saskatoons on the left is an American elder bush (30) which flowers from July to November so great for a flower crop. It never gets as high as European elder, only to about 2.5m. Beneath is on the ground is one of the evergreen ground cover raspberries (*Rubus* 'Betty Ashburner')

Behind the American elder is a small line of pollarded small leaved lime trees (31) for edible leaves, also used as a living trellis for hardy kiwi vines (*Actinidia arguta*).

On the right is the greenwax golden bamboo (32). This is one of our most productive bamboos, producing edible shoots from mid April to July, as well as useful sized canes for garden uses. The area of all bamboos is managed by cutting of shoots beyond the boundary we have set.

Past the bamboo you can see some sitka alder (36) on the right, one of the more shrubby alders we use and pollard for nitrogen.

As you approach a small area of bamboo, on the left side of the path is a large cherry plum tree (34), which bears excellent fruits in July although it flowers early and so can be susceptible to frost damage. Behind the plum are two bayberries (35) for nitrogen, leaves for flavouring and wax from the fruits.

The area of smaller bamboo adjacent to the right of the path is umbrella bamboo (37). This bamboo does not have large enough shoots to be worth eating, but unlike the larger bamboo it flowers frequently and yields a rice-like crop of grain. The smaller canes are flexible enough to weave into fences etc.

Ahead of you is our main 'people space' beneath two large Monterey pines (38) and beside the pond. This is a good place to sit and rest.

27. Alder (*Alnus glutinosa*) – pollarded
28. Chinese dogwood (*Cornus kousa chinensis*)
29. Saskatoons (*Amelanchier alnifolia*)
30. American elder (*Sambucus canadensis* 'York')
31. Small leaved limes (*Tilia cordata*)
32. Greenwax golden bamboo (*Phyllostachys viridi-glaucescens*)
33. Sweetbay magnolia (*Magnolia virginiana*)
34. Cherry plum (*Prunus cerasifera*)

35. Bayberry (*Myrica/Morella cerifera*)
36. Sitka alder (*Alnus viridis sinuata*)
37. Umbrella bamboo (*Fargesia murielae*)
38. Monterey pines (*Pinus radiata*)
- A. *Elaeagnus x ebbingei* hedge
- B. Pawpaws (*Asimina triloba* cultivars)
- C. Walnut (*Juglans regia*)
- D. Fig (*Ficus carica* 'Brown Turkey')
- E. Apricot (*Prunus armeniaca* 'Tomcot')



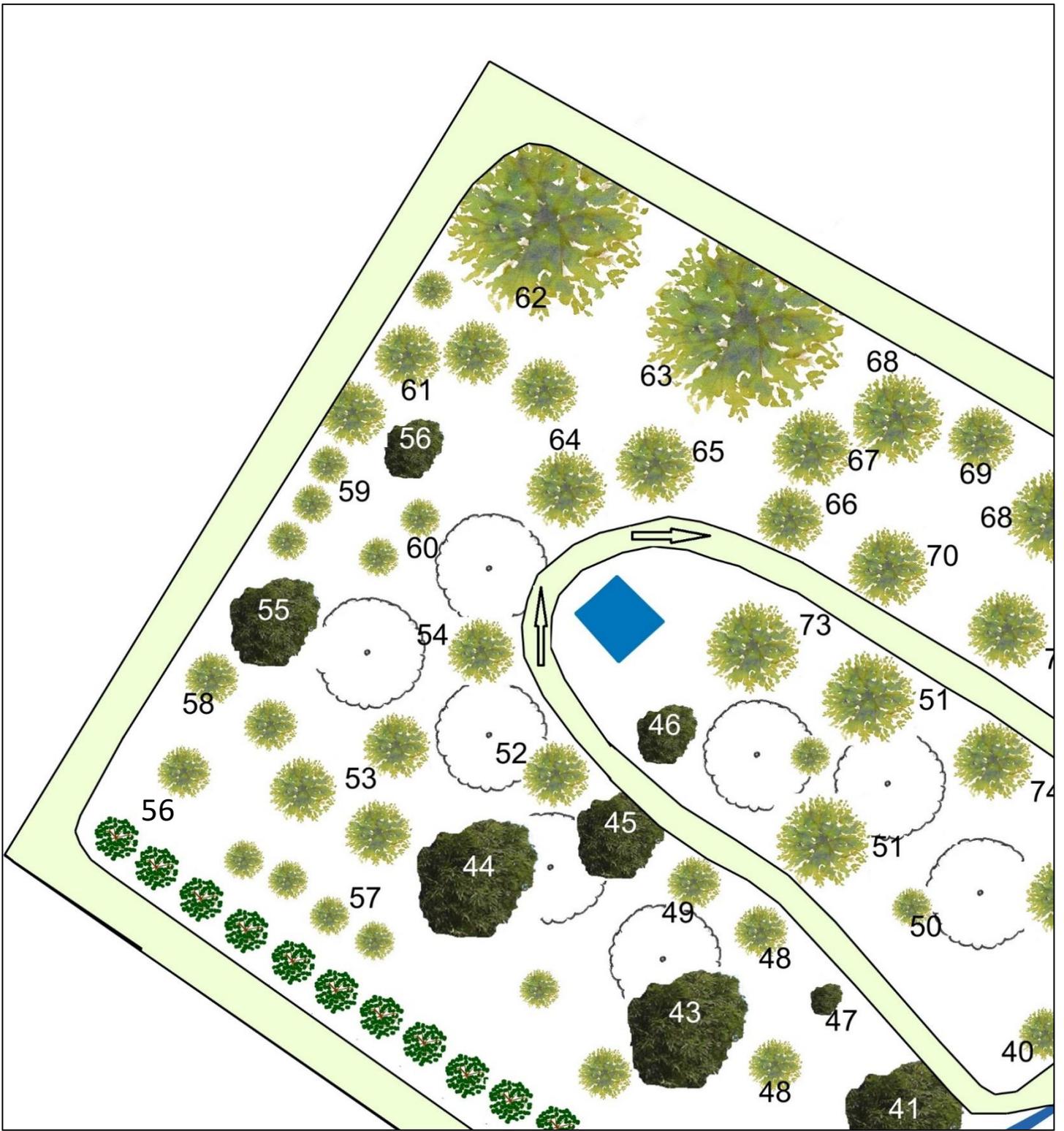
Pass the pond, cross the stream (dry most of the year) and take the path to the left past several bamboos (some for canes, others for edible shoots and canes). On the left is one of the silverbell trees (48) with white flowers in spring and green edible young fruits in July. On the right, one of our *Trachycarpus* palms (50, for fibre and edible flower buds/flowers) and then one of the date plums (51, a persimmon relative). Nepalese raspberry (*Rubus nepalensis*) covers the ground here, but further up on the right there is an area of Hostas interplanted with Siberian purslane (*Claytonia sibirica*).

Further up the path on the left is a medlar (52) – surprisingly shade tolerant – and a Judas tree (54), with its edible sorrel-flavoured flowers in spring; beneath these is the vigorous Korean raspberry groundcover (*Rubus tricolor*). Between the medlar and Judas tree is a bladdernut (*Staphylea pinnata*) with a second one behind: this is a large understory shrub and one of the few seed/nut crops to do well in low light conditions. This a shady area, partly due to large overhanging trees in the adjacent Dartington woods and few fruits do well apart from plum yews (59), redcurrants (*Ribes rubrum*) and the *Rubus* groundcovers.

As the path turns, next to blackcurrants (*Ribes nigrum*) there is a small irrigation reservoir on the right (not actually needed since 2000) and on the left two haws (64, 65) with good edible fruits. Behind these and much larger are our two sweet chestnut trees (62, 63).

As you start going back downhill, there is another apple on the right (70) and an almond on the left (67) behind another Szechuan pepper (66). Further back in this bed are American persimmons (68) and Cathay quinces (69). A second date plum (51) is further down on the right.

- |   |   |
|---|---|
| 39. Swamp cypress ( <i>Taxodium distichum</i> )         | 58. Small leaved lime ( <i>Tilia cordata</i> ) – pollarded      |
| 40. Persimmon ( <i>Diospyros kaki</i> ‘Great Wall’)     | 59. Plum yews ( <i>Cephalotaxus harringtonia drupacea</i> )     |
| 41. Violet bamboo ( <i>Phyllostachys violascens</i> )   | 60. Aronia berries ( <i>Aronia</i> spp.)                        |
| 42. Ringal ( <i>Yushania anceps</i> ‘Pitt White’)       | 61. Small leaved limes ( <i>Tilia cordata</i> ) – pollarded     |
| 43. Bamboo ( <i>Yushania maculata</i> )                 | 62. Sweet chestnut ( <i>Castanea sativa</i> ‘Marron Goujounac’) |
| 44. Ringal ( <i>Yushania anceps</i> )                   | 63. Sweet chestnut ( <i>Castanea</i> spp. ‘Marigoule’)          |
| 45. Narihira bamboo ( <i>Semiarundinaria fastuosa</i> ) | 64. Syrian haw ( <i>Crataegus tanacetifolia</i> )               |
| 46. Fishpole bamboo ( <i>Phyllostachys aurea</i> )      | 65. Red haw ( <i>Crataegus mollis</i> )                         |
| 47. Umbrella bamboo ( <i>Fargesia murielae</i> )        | 66. Szechuan pepper ( <i>Zanthoxylum schinifolium</i> )         |
| 48. Carolina silverbells ( <i>Halesia carolina</i> )    | 67. Almond ( <i>Prunus</i> spp. ‘Robijn’)                       |
| 49. Gage ( <i>Prunus domestica</i> ‘Oullins Golden’)    | 68. American persimmons ( <i>Diospyros virginiana</i> )         |
| 50. Chusan palm ( <i>Trachycarpus fortunei</i> )        | 69. Cathay quinces ( <i>Chaenomeles cathayensis</i> )           |
| 51. Date plums ( <i>Diospyros lotus</i> )               | 70. Plum ( <i>Prunus domestica</i> ‘Czar’)                      |
| 52. Medlar ( <i>Mespilus germanica</i> ‘Royal’)         | 73. Apple ( <i>Malus domestica</i> – 2 cultivars on 1 tree)     |
| 53. Hazels ( <i>Corylus avellana</i> ) – pollarded      |   |
| 54. Judas tree ( <i>Cercis siliquastrum</i> )           |   |
| 55. Arrow bamboo ( <i>Pseudosasa japonica</i> )         |   |
| 56. Chinese angelica tree ( <i>Aralia elata</i> )       |   |
| 57. Plum yews ( <i>Cephalotaxus fortunei</i> )          |   |



Continue down the path. On the left are two large apple trees (71 & 72, both with 4-5 cultivars grafted onto each tree), and behind them you can see a large narrow evergreen shrub/small tree (75) – this is the Californian bayberry (75 - nitrogen, flavouring, wax). The ground cover on the left here is the vigorous horse mint (*Mentha longifolia*) and next to it periwinkle (*Vinca major*), an evergreen ground cover and bee plant. Further down on the left at the bottom of this bed is a hybrid persimmon (78, another Soviet introduction).

On the right of the path as you go downhill is another dogwood with edible fruits (74, Bentham's cornel), below which is an area of soapwort (*Saponaria officinalis*), a native soap plant, and more Nepalese raspberry. There is also another multi-cultivar apple tree (79) and another persimmon (80) next to the evergreen pineapple guava/feijoa (*Acca sellowiana*) and a rowan (81). More blackcurrants adjoin the path.

At the bottom of the path, there is another stream crossing. By the stream here is a plum (84) and looking left there are several goumis (83) and a second plum (82). Up along the streamside are some Indian rhubarb (*Darmera peltata*) and on the other side dwarf comfrey (*Symphytum ibericum*) for bee fodder and mineral accumulation.

A little further along on the left is a striking tree with large grey-green leaves – this is a Tibetan whitebeam (85) which has large edible fruit. As you head towards the pine trees, on the left are two large-fruited haws (87,88) in front of which is another lime/linden/basswood (89), underplanted with mint. Looking up behind the haws you can see a large black locust/false acacia (*Robinia pseudoacacia*) next to more Italian alders in the upper canopy layer.

On the right is an area of swamp cypress (39), a deciduous conifer, which are destined to be coppiced for fencing materials (like the redwoods this species coppices well).

39. Swamp cypress (*Taxodium distichum*)

71. Apple (*Malus domestica*) – several cultivars

72. Apple (*Malus domestica*) – several cultivars

74. Bentham's cornel (*Cornus capitata*)

75. Californian bayberry (*Myrica californica*)

76. Honey locust (*Gleditsia triacanthos*  
'Millwood')

77. Chinese dogwood (*Cornus kousa chinensis*)

78. Hybrid persimmon (*Diospyros* 'Nikita's Gift')

79. Apple (*Malus domestica*) – several cultivars

80. Persimmon (*Diospyros kaki* 'Hiro')

81. Rowan (*Sorbus aucuparia* 'Edulis')

82. Plum (*Prunus domestica* 'Marjories  
Seedling')

83. Goumis (*Elaeagnus multiflora* 'Sweet  
Scarlet')

84. Plum (*Prunus domestica* 'Yellow Pershore')

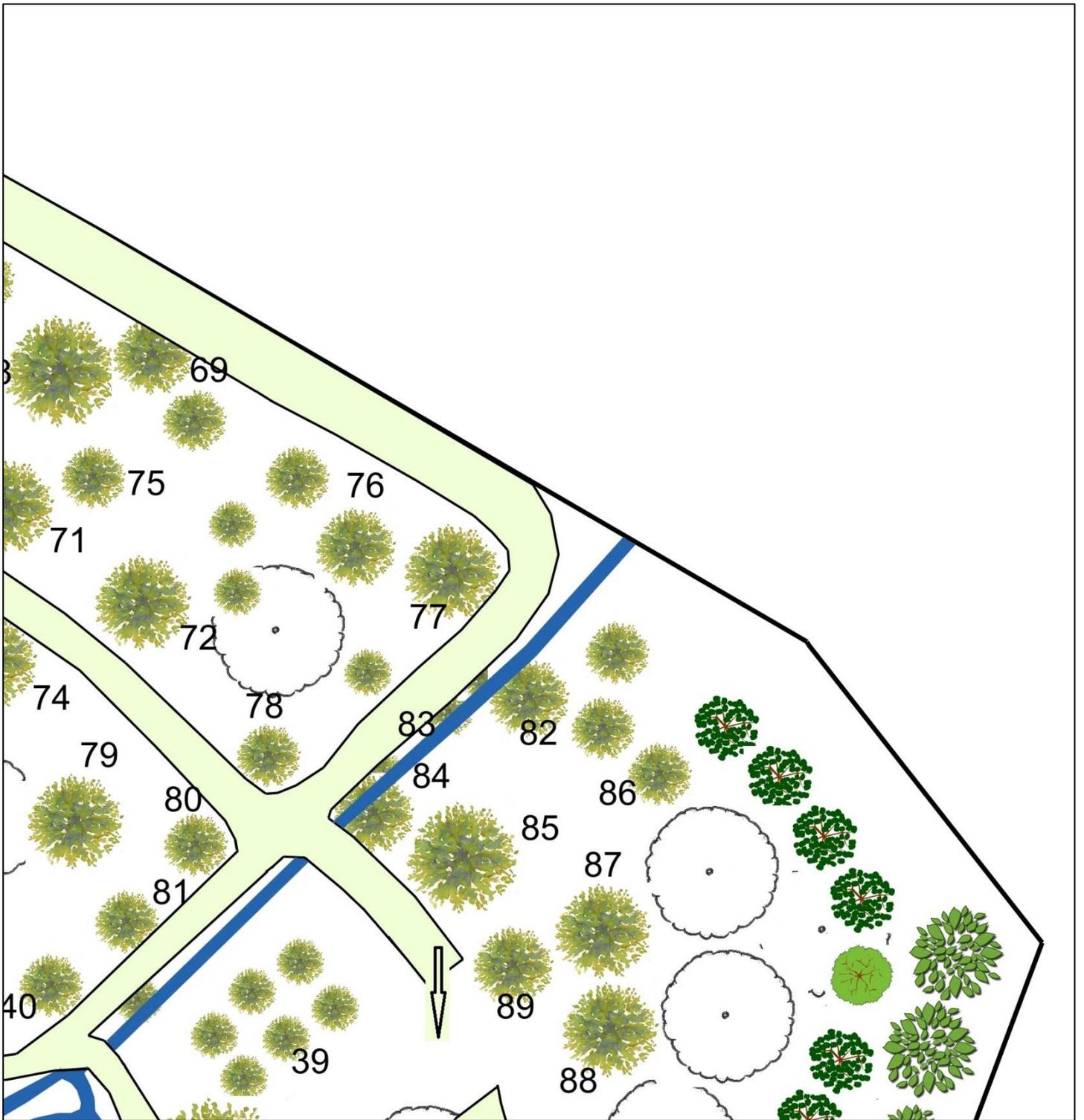
85. Tibetan whitebeam (*Sorbus thibetica* 'John  
Mitchell')

86. Saskatoon (*Amelanchier alnifolia*  
'Northline')

87. Haw (*Crataegus ellwangeriana*)

88. Haw (*Crataegus durobrivensis*)

89. Basswood (*Tilia Americana*) - pollarded



From the area under the pine trees, take the upper path, with some small chinkapins (91) on the right and a mulberry (90) on the left. Next to the mulberry, near the path, is a full size 2m high honeyberry (*Lonicera caerulea*).

As the path levels out, on the right is American bladdernut (94) and next to it one of the nicest members of the *Rubus* family, Japanese wineberry (*R. phoenicolasius*). Around and underneath this is the delicious edible perennial Siberian purslane (*Claytonia sibirica*).

On the other side of the path from the wineberry is another cherry plum (93) and partly behind and either side of this two Chinese quinces (95). Further back still, near to the autumn olive hedge, are several Siberian pea trees (94,96).

Just a few paces on from the wineberry with its reddish stems, on the right is another Italian alder tree, this is one of several being used as supports for climbers. Up this one is climbing a hop plant (*Humulus lupulus*) which is why several low branches have been left. The hop is mainly for edible shoots through spring and summer, although the flowers can of course be used for brewing etc.

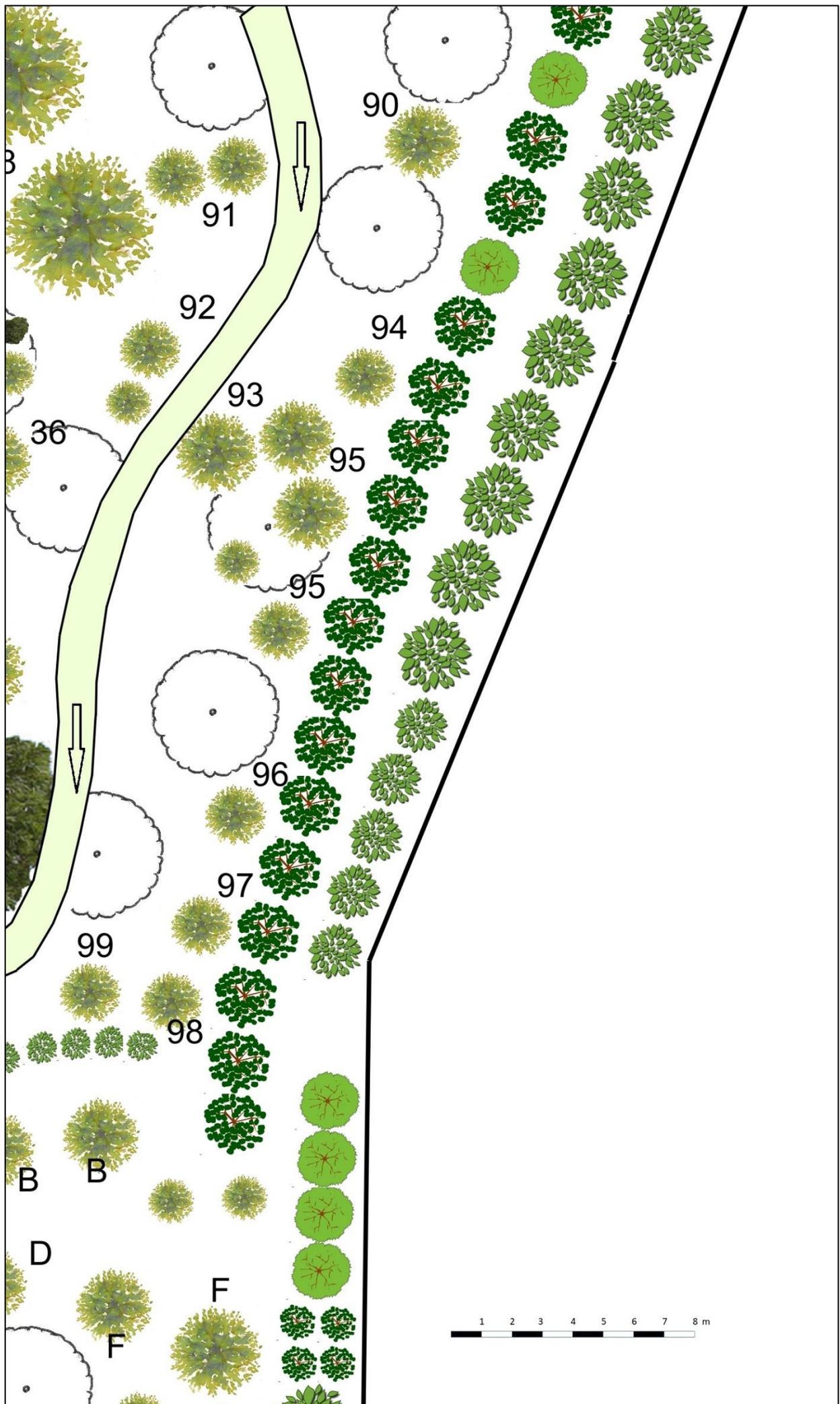
A little further on, the greenwax golden bamboo appears again on the right hand side. On the opposite side of the path to this is the great edible Sweet cicily (*Myrrhis odorata*) next to some lungwort (*Pulmonaria officinalis*) for bee fodder, and the American edible (cooked) pokeweed (*Phytolacca Americana*). Further back in this bed, to the left of another Chusan palm (97) is an area of mioga ginger (*Zingiber mioga*) which has gingery edible shoots and flower buds.

Carry on along the path, next to the dense green inner hedge of *Elaeagnus x ebbingei* on the left, with more blackcurrants on the right.

After the paths join you might notice a path up some steps to the left. Please be careful up these as the Nepalese raspberry groundcover has partly covered the concrete steps. Up in this extra-sheltered area are American pawpaws (B), a root-restricted fig (D) and some other slightly more tender species.

90. Mulberry (*Morus* spp. 'Black Tabor')
91. Chinkapins (*Castanea pumila*)
92. American bladdernut (*Staphylea trifolia*)
93. Cherry plum (*Prunus cerasifera* 'Gullyhof')
94. Siberian pea (*Caragana arborescens*)
95. Chinese quinces (*Pseudocydonia sinensis*)
96. Siberian pea (*Caragana arborescens*)
97. Chusan palm (*Trachycarpus fortunei*)
98. Western sweetshrub (*Calycanthus occidentalis*)

99. Saskatoon (*Amelanchier alnifolia*)
  - A. *Elaeagnus x ebbingei* hedge
  - B. Pawpaws (*Asimina triloba* cultivars)
  - C. Walnut (*Juglans regia*)
  - D. Fig (*Ficus carica* 'Brown Turkey')
  - E. Apricot (*Prunus armeniaca* 'Tomcot')
  - F. Cornelian cherries (*Cornus mas* 'Jolico' and 'Gourmet')



Continue along the path past the *Elaeagnus* hedge. To the left here is an apricot next to false indigo, and in the lower perennial layer the large Turkish rhubarb (*Rheum palmatum*, edible leaf stalks) mixes with valerian (*Valeriana officinalis*, mineral accumulator), lemon balm (*Melissa officinalis*) and next to the path some daylilies (*Hemerocallis* 'Stella d'Oro for edible flowers.)

Bear left now where the path forks by an Italian alder. On the right near the path is another hybrid persimmon (M) underneath which is a very fine variety of peppermint called Swiss mint. On the left is a medlar (H).

Head forwards towards the shed. On the left you might spot the moveable compost toilet that we house in a small tent and gets moved at least yearly to a new position (feel free to use it!) To the left of the shed is a Devon sorb apple (J) and behind it a Spicebush (K). In this area you can also see our stacks of mushroom logs, shiitake and oyster mushrooms being grown on a variety of woods. 'Fruiting' logs might be resting against the shady wall of the shed.

On the corners of the shed are two sweet cherries (L) on dwarfing rootstocks, which are the only two trees protected from birds when the fruits are nearly ripe (British birds have a strong affinity with cherries!) On the South face of the shed there is a peach (O).

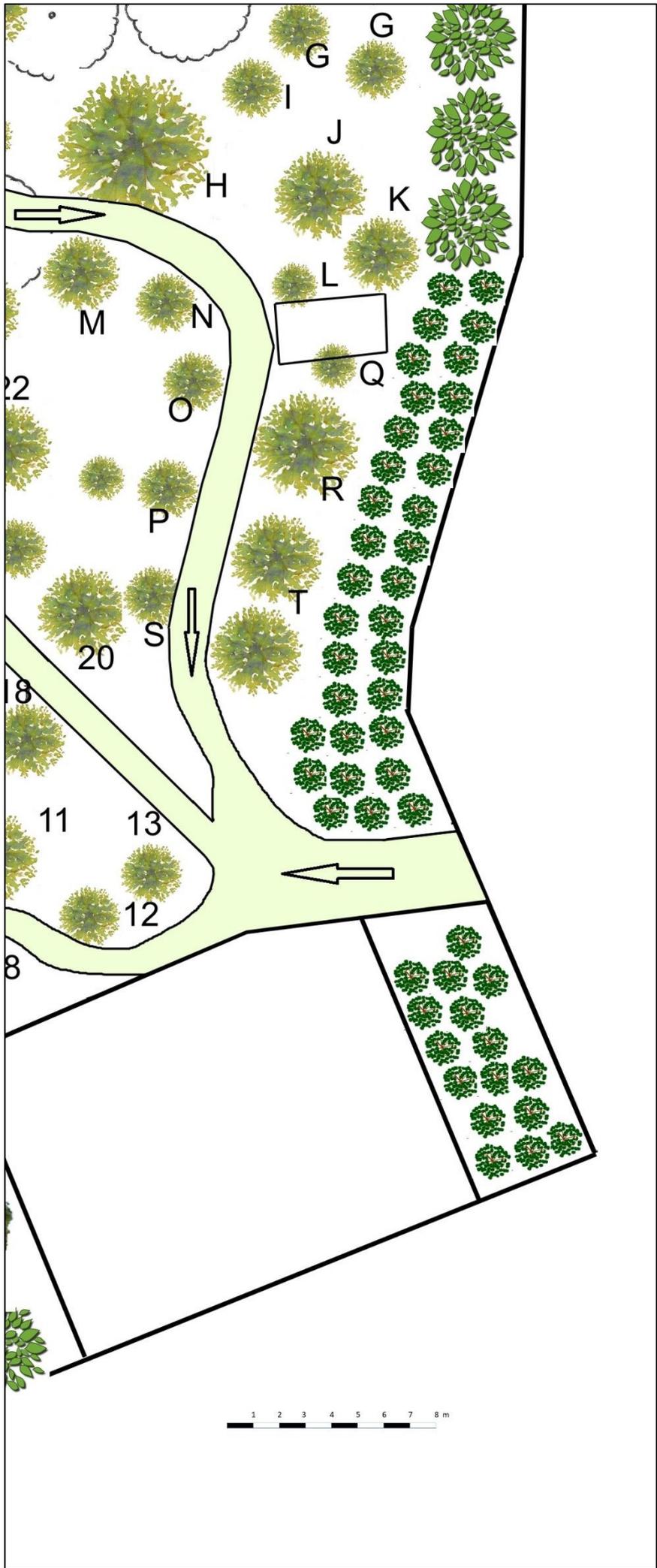
On the other side of the path from the shed there is a pear (N) underplanted with more sweet cicily. As you progress along the path there is a patch of blackcurrants between this pear and a second one (P). On the left of the path is a large Nepalese pepper (R), then two trees of a different species of Szechuan pepper (T).

Past the pears on the right of the path you might spot blueberries, cardoons (*Cynara cardunculus*) and a ground cover of sweet violet (*Viola odorata*) leading to a quince tree (P). Past the quince is a cabbage palm (S) and the perennial crop beneath is a good patch of ostrich fern (*Matteuccia struthiopteris*).

As you head back towards the exit, in the growing season you can see mashua (*Tropaeolum tuberosum*) clambering up the Szechuan pepper (20), and another perennial climber, American groundnut (*Apios americana*), climbing up and through the autumn olive hedge near the gate.

- G. Apricots (*Prunus armeniaca* 'Flavorcot' & 'Lilicot')
- H. Medlar (*Mespilus germanica* 'Nottingham')
- I. False indigo (*Amorpha fruticosa*)
- J. Devon sorb apple (*Sorbus devoniensis* 'Devon Beauty')
- K. Spice bush (*Lindera benzoin*)
- L. Sweet cherries (*Prunus avium* 'Lapins' and 'Stella')
- M. Hybrid persimmon (*Diospyros* spp. 'Russian Beauty')

- N. Pear (*Pyrus communis* 'Louise Bonne of Jersey')
- O. Pear (*Pyrus communis* 'Invincible')
- P. Quince (*Cydonia oblonga* 'Krymsk')
- Q. Peach (*Prunus persica* 'Rochester')
- R. Nepalese pepper (*Zanthoxylum alatum/armatum*)
- S. Cabbage palm (*Cordyline australis*)
- T. Szechuan peppers (*Zanthoxylum giraldii*)



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