Bristol City Council
Tree Planting Report 2023-24

During winter 2023 – 2024, Bristol City Council planted **7,918 trees**, adding **17.6 hectares**[1] of tree canopy through our One Tree Per Child (OTPC) and TreeBristol planting programmes.

One Tree Per Child began in 2015 with the aim of planting one tree for every primary school aged child in the city. We have now planted[2] **106,808** trees and continue to plant at least 5,000[3] trees per year – one for each child starting primary school.

In the 2023-24 winter OTPC planted our 100,000th tree at Henbury Open Space on 31st January 2024. This special celebration event was attended by 30 children from Blaise Primary School, volunteers, and project partners.

TreeBristol began in 2005 to plant more standard sized trees in streets, parks and green spaces across Bristol, and now includes our tree sponsorship programme.

Our tree planting programmes are funded through a variety of sources, including private and corporate sponsorship, planning obligations, grants, and direct support from organisations.

We are very grateful for the many people who have given their time to plant trees and help care for them.

[1] projected canopy - see method below.
[2] includes trees gifted and planted by others.
[3] previously 6,000 reduced to reflect revised number of children starting school in Bristol.

One Tree Per Child, Bristol 2023-24

This section describes the trees planted by OTPC, including our volunteer and education programmes.

OTPC planted:

7,246 trees in total (2.6 hectares projected tree canopy)[4].

9 woodlands in Bristol's parks and greenspace (2.1 hectares, 4,470 trees).

3 community orchards and 1 school orchard.

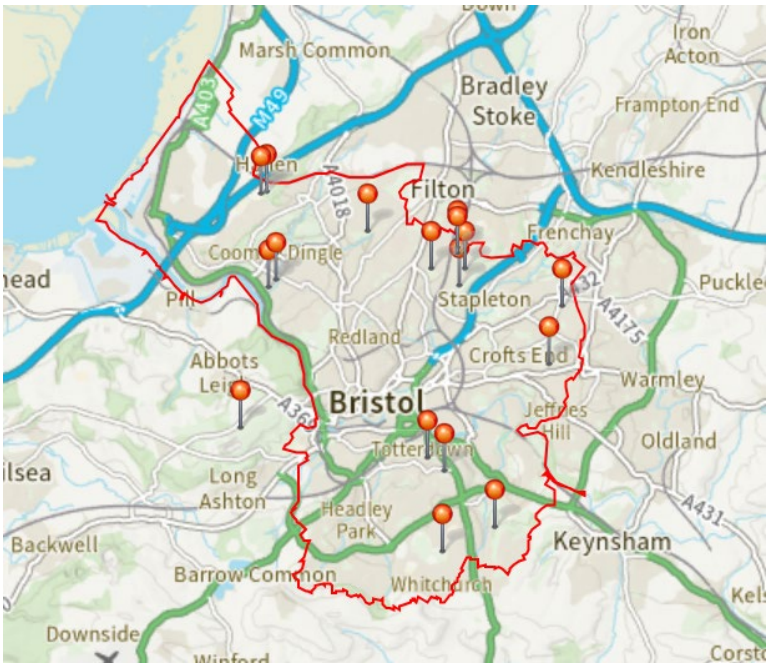
6 hedgerows (544 metres, 2,720 trees).

400 trees replaced due to drought or vandalism (not included in final tree planting figures).

OTPC typically plants smaller trees called 'whips', which are easier to plant.

[4] 7,246 total includes 4,470 woodland trees, 53 fruit trees, 2,720 hedgerow trees and 3 specimen trees.

2023-24 One Tree Per Child planting sites:



One Tree Per Child example tree planting projects:

Hedgerow planted at Ashton Court Estate

100,000th tree planting celebration
Crow Lane, Henbury

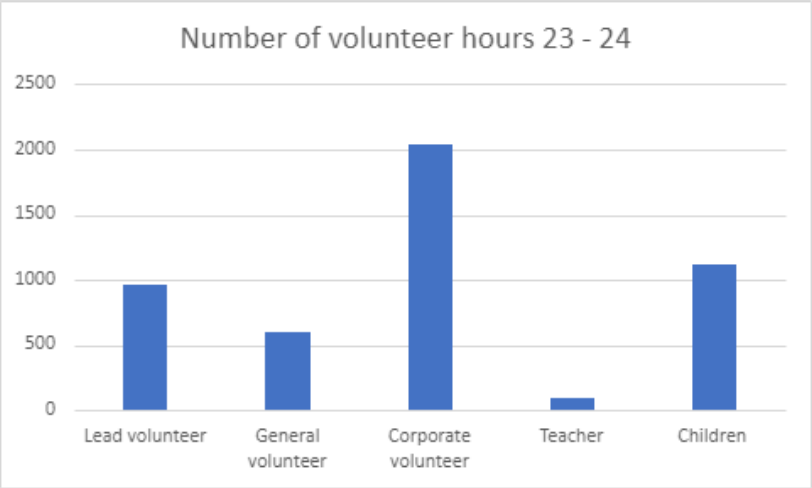
Woodland planted at Trymside Open Space

Woodland planted at Perrett Park

One Tree Per Child Volunteer Programme

From April 2023 to the end of March 2024, a total of 72 volunteer sessions were held, involving 1,204 volunteers across 34 tree planting days and 38 tree maintenance days – where volunteers return to look after trees planted in previous years.

OTPC continued to work with Your Park Bristol and Bath to develop corporate volunteer opportunities, providing an enhanced volunteering opportunity to business organisations. Corporate volunteers were involved in 18 of our 34 planting projects, with 15 businesses taking part (36 businesses throughout the year).



We would like to say a big thank you to those volunteers who came out and helped OTPC during the 2023-24 season, especially our Lead Volunteers who come on a weekly basis in all weathers and provide such important support, not only to the project but to the staff as well.

We are grateful to the support from the following organisations:

Bristol Tree Forum, the Forest of Avon Trust, DEFRA, Woodland Trust, Trees for Cities, Your Park, Really Wild Lockleaze, and community groups from Rodney Road, Marshfield Road and Recatch Park.

One Tree Per Child Education Programme

Our OTPC education programme supported around 400 primary school aged children from 5 primary schools to plant and care for trees in their local communities. We worked with a primary school in Hengrove to plan in an outdoor classroom / forest school area. We planted standard trees and an orchard in a primary school in Lawrence Weston.

Over the year, assemblies and tree education workshops were given in 17 schools.

One Tree Per Child Fundraising

We are grateful for the financial support from the following organisations:

Sponsor / grant fund	Amount £
Trees for Climate	£30,187
The Woodland Trust	£610
Trees for Cities	£6,515
Total	**£37,312**

TreeBristol 2023-24

During 2023-24 our TreeBristol programme planted **672** standard sized trees across most electoral wards, plus replacing 120 trees from previous years. See Table at end of report.

TreeBristol plants larger, (standard), sized trees in streets and green spaces across the city. These larger trees have an immediate impact and are robust enough to survive in spaces like streets. Trees may be planted as a replacement for a lost tree or in new locations.

We are happy to report that **143 trees** were sponsored and planted in streets and parks across the city, through our collaboration with Trees for Streets. Thank you to everyone who made this commitment and provided funds.

TreeBristol example tree planting

Park tree

Street tree

TreeBristol Funding

TreeBristol is grateful for the financial support from the following organisations, grants and private sponsors. Where possible, funds support long term maintenance of these trees.

Funding Source	Number of Trees Planted	Amount £
Private and corporate sponsorship	143	£39,485
Section 106 / CIL devolved (developer contribution)	175	£182,290
Section 106 non-devolved (Avonmouth)	61	£63,541
Trees for Climate fund (Forest of Avon Trust grant)	225	£70,851
Wessex Water	27	£7,965
Network Rail	25	£7,375
Flax Bourton Mortuary levy	4	£4,166
Developer replacements, Lower Ashley Rd	2	£1,530
TRESA – Zone A Totterdown	2	£307
Bristol Beacon	1	£1,041
Other	7	£196
TOTAL	**672**	**£378,747**

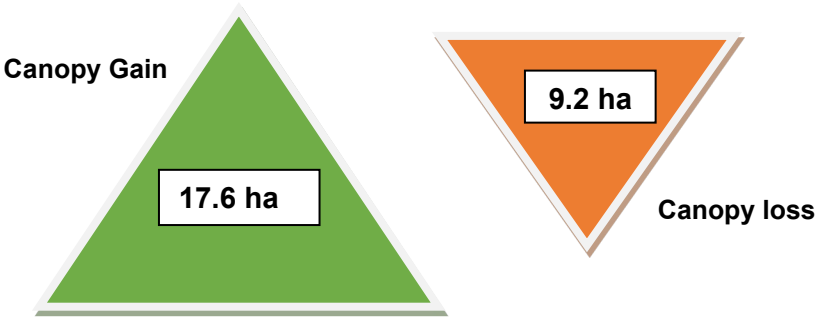
Our Environmental Commitments

We source most of our trees from UK tree nurseries. We use biodegradable tree guards, biodegradable mulch mats and biodegradable tree planting pegs. We use tree watering bags for larger trees which store water and deliver this more efficiently to the tree. Our tree stakes are Forest Stewardship Council certified. Trees are managed through Blaise Plant Nursery where electricity is generated by solar, water is provided by a borehole, on-site vehicles are electric powered, and no peat is used.

Tree Canopy (addition and loss) within Bristol City Council estate

Tree canopy contribution data included in this report is a projection based on the assumed size of trees when mature – see method below. Tree canopy loss is based assigned crown size category at time of felling.

2023-24 projected tree canopy contribution (OTPC and TreeBristol programmes)



During 2023-24, Bristol City Council planted 7,918 trees, projected to add **17.6 hectares** of tree canopy.

During the 2023-24, Bristol City Council felled 468 trees resulting in the loss of **9.2 hectares** canopy. Trees are felled for a variety of reasons – mostly for health and safety, where diseased or damaged trees have reached the end of their useful life and replacement planting is the best course of action.

The net projected canopy **added** within the Bristol City Council estate is **8.4 hectares**.

Tree Canopy Projection Method

Tree canopy has been defined as the area occupied by a tree crown taking a 'birds-eye view'.

Trees planted across OTPC and Tree Bristol fall into three main categories: woodland, hedgerow and individual or 'specimen' trees.

For woodland and hedgerows, it is assumed that their overall canopy will be the same size as the boundary of the area planted. For example, if 2,500 trees are planted 2 x 2 metre spacing, the total area is 1 hectare (1 ha = 10,000 m^2)

When planting individual trees, we need a different approach to estimate 'canopy contribution', as each tree has the potential to spread and grow. For such trees, canopy can be estimated by assuming their crown diameter when mature. As data to project tree canopy is limited, an estimated canopy diameter for a range of species was taken using information from the Royal Horticultural Society. The figure for canopy diameter at maturity is derived from data for the potential spread of each species. The age at which the tree will reach this size differs by

species, but generally ranges from 50 to 100 years.

Each species was categorised from ‘very small’ to ‘very large’, and the area was calculated using the midpoint of the canopy diameter in each range. The resulting area (see table below) was multiplied by the number of individual trees planted allocated to the projected size category.

Classification of tree species according to their canopy diameter at maturity.

Projected Tree Size	Projected Crown Diameter	Projected Tree Canopy Area (m²)
Very small	<5m	9.6
Small	≥5<10m	44.2
Medium	≥10<15m	122.7
Large	≥15<20m	240.5
Very Large	≥20m	397.6

Trees planted canopy added (projection)

Projected tree size category	Projected tree canopy m² by size category	No. of trees planted	Projected tree canopy gain m²
Woodland	NA	4,470	21,400
Hedgerow	NA	2,720	1,100
Very small	9.6	7	67.2
Small	44.2	150	6,630.0
Medium	122.7	137	16,809.9
Large	240.5	268	64,454.0
Very Large	397.6	166	66,001.6
	TOTAL	**7,918**	**176,463 m²**
			17.6 ha

Trees felled canopy loss

Projected tree size category	Projected tree canopy m² by size category	No. of trees felled	Projected tree canopy loss m²
Very small	9.6	0	0
Small	44.2	42	1,856.4
Medium	122.7	179	21,963.3
Large	240.5	188	45,214.0
Very Large	397.6	59	23,458.4
	TOTAL	**468**	**92,492.1 m²**
			9.2 ha

In 2023-24 the council felled 468 trees. The loss in canopy has been calculated at around 9.2 hectares. This data is subject to errors in that some trees felled by the council may not be recorded in our database. To calculate canopy loss in a similar way to canopy projections, the felled trees were allocated to a ‘tree size’ category – giving a sum per category that was multiplied by the canopy area for that category.

Comments

This analysis demonstrates the stark difference between planting woodlands and hedgerows compared with planting individual trees where the goal is to maximise tree canopy. Although the numbers of trees in a hedge or wood may be high, the overall canopy area is limited to the planting area.

Given that the canopy projection for specimen trees represents potential size in ideal conditions and does not factor in the failure of any of these trees it is likely to be an over-estimate, as such this projected data is an indication of canopy added – to be confirmed by ongoing monitoring.

This report does not record the percentage change in tree canopy from growth within the population of trees managed by the council. It is expected that this change will be picked up in periodic monitoring in the change in tree canopy (from new planting, growth of existing trees and woodland due to losses).

Trees planted by our TreeBristol programme

Electoral Ward	Sponsored	Section 106 / CIL	ND 106	TfC	Other	NR	FB	WW	Replacements	Total planted
Ashley	4	6	0	0	2	0	0	0	1	13
Avonmouth LW	2	3	61	13	0	0	0	0	20	99
Bedminster	1	1	0	0	0	0	0	0	0	2
Bishopston AD	6	0	0	0	0	0	0	0	0	6
Bishopsworth	3	0	0	0	0	0	0	0	0	3
Brislington East	4	0	0	0	0	2	0	0	0	6
Brislington West	1	0	0	0	0	3	0	0	1	5
Central	0	31	0	0	1	0	0	0	1	33
Clifton	6	1	0	0	0	0	0	0	4	11
Clifton Down	3	7	0	0	0	0	0	0	0	10
Cotham	2	1	0	0	0	0	0	0	1	4
Easton	1	4	0	0	0	0	0	0	6	11
Eastville	5	3	0	13	0	2	0	0	2	25
Filwood	0	0	0	0	0	0	0	0	1	1
Frome Vale	4	0	0	0	0	0	0	0	3	7
Hartcliffe With	0	0	0	75	0	0	0	0	3	78
Henbury Brent	2	24	0	0	0	0	0	27	3	56
Hengrove WP	2	1	0	29	2	5	0	0	4	43
Hillfields	0	0	0	0	1	0	0	0	1	2
Horfield	2	3	0	0	0	0	0	0	11	16
Hotwells Harbourside	3	5	0	0	0	0	0	0	1	9
Knowle	3	1	0	0	0	4	0	0	3	11
Lawrence Hill	0	33	0	0	0	0	0	0	11	44
Lockleaze	3	15	0	8	0	0	0	0	7	33
Redland	7	1	0	0	0	1	0	0	2	10
Southmead	22	10	0	43	2	0	0	0	12	89
Southville	3	0	0	0	0	0	0	0	0	3
St George Cent	3	4	0	0	0	2	0	0	3	15
St George TH	2	0	0	0	0	2	0	0	0	4
St George West	4	9	0	0	0	0	0	0	2	15

Stockwood	0	0	0	37	0	1	0	0	1	39
Stoke Bishop	16	7	0	0	2	0	0	0	9	34
W-O-T Henleaze	18	5	0	0	0	0	0	0	5	29
Windmill Hill	5	0	0	7	2	3	0	0	2	19
Other, (inc. Ashton Court)	6	0	0	0	0	0	4	0	0	10
TOTAL	**143**	**175**	**61**	**225**	**12**	**25**	**4**	**27**	**120**	**792**

Trees funded through: CIL – Community Infrastructure Levy; TfC – Trees for Climate grant; HS – BCC Highways Scheme; BG – Bedminster Green Development; BT – British Telecom sponsored; EA – Environment Agency Flood Mitigation; IC – Insurance Claim; WW – Wessex Water Funded.