

Branching Out stories – Present and Future

Table 1: Common framework of social and cultural values of trees and treescapes

Value theme (broad theme encompassing several similar ways in which we value tree(scape)s)	Definition of the theme	Examples of tags within the theme (specific ways in which we value tree(scape)s, elicited from both datasets of stories)	FROM	WITH	IN	AS
History	How trees look, changed over time, past & living history (e.g. what happened to the tree). Events that happened to or around tree(scape)s over time, for society and for individuals, and how the tree(scape) represents that history	Time passing, Memory, Change, Trees as Living History, Heritage, Folklore, Personal traditions				
Connections to people (Community and social bonding)	Value placed on connectivity to people, building relationships during group interactions with and in tree(scape)s (e.g. place to meet with family or community or connection to other countries)	Family, Friends, Companionship, Community, Kinship, Activities bringing people together; Negative side - cause of tension between people				
Connections to trees	Value placed on connectivity to tree(scape)s, building relationships during individual or group interactions with and in tree(scape)s (e.g. how a person interacts with a tree). Includes relationships of caring for tree(scape)s, and for their wellbeing. This is built on a (culture of) respect for nature.	Sense of belonging – connecting people to that or other places; personal tradition about trees, Connecting people to nature, relationships with trees, stewardship and caring activities				
Trees as human, as beings	Value of the non-human, of tree(scape)s in their own right, of trees as beings with own identities, that can be friend or kin.	Kinship with trees – trees as friend or family, Embrace, Communicating with trees, Companion, Self (reflecting) Identity, Tree's identity, agency of tree(scape)s, emotion for tree(scape)s				
Intrinsic value of trees	Value of trees for being there, for existing, and their value in providing an ecosystem for associated wildlife and plants (e.g. Trees as part of the ecosystem or how it is connected to an animal). Includes the value we place on therefore being able to come into contact with nature – trees bring nature into the city.	Existence of trees, Ecosystem, Flora, Fauna, Habitat for nature, Access to nature, Bringing wildlife into the city; Negative side – invasive species or unwanted growth				

Learning	Activities that provide learning about self or environment (e.g. interaction with trees that support knowledge building)	Play for learning, Resource (Supporting life), Facts or knowledge about nature, Skills, Personal growth,				
(Sense of) Place	Value on the ways in which tree(scape)s are part of the character and identity of a place. Includes, how tree(scape)s are part of an emotional connection and attachment that individuals or communities feel towards a particular location or environment (e.g. appreciation of tree as an important memory).	Landmarks, Identity (usually of a place), Emotions based on sense of place, Trees providing sense of welcoming, Place attachment				
Spirituality	Interactions with or connections to tree(scape)s that have sacred or symbolic meaning, or is based on emotional or personal beliefs (e.g. memorial trees or cultural connection to other places)	Life, Death, Ancient belief, Ancestral connections, Religious and cultural belief or tradition, Magical, Inspiration and creativity, Providing grounding, Memorialisation				
Wellbeing	The ways tree(scape)s affect the personal wellbeing of individuals, including physical and mental health (e.g. treescape as calming environments, caring for the environment)	Physical Health: Sports, Physical activity, Commuting, Walking and relaxing outdoors, Nutrition, Clean air, Shelter from elements and noise; Mental health: relaxation, peace & restoration, Respite or escape from stresses, Therapeutic activities, Care, Safety, Security, Privacy; Negative side – allergies, rashes, feeling threatened/unsafe				
(Aesthetic) Enjoyment	Value places on trees in the landscape (e.g. how the tree makes the garden look nice). Enjoyment derived from sensing and experiencing the treescape, visually and otherwise – appreciating the beauty, smell, sound, feel (and taste?) of trees and treescapes.	Emotions based on visual aesthetics or other senses – smell/touch/sight (enjoyment, (dis)pleasure, curiosity)				

Life framework codes

The way in which trees are viewed and valued, according to one's viewpoint/objectives/end goals – what is it that you want from or for the tree(scape)s? Why are you attaching a particular value to the tree(scape)? This is the IPBES LIFE Framework, an interdisciplinary values typology, consisting of worldviews & knowledge systems, broad values, specific values, and value indicators. Values are organised according to four life frames that reflect the richness of human-nature relationships (O'Connor&Kenter2019)

Name	Description
Living As	The ways that urban trees and treescapes matter as a part of people and ways that people feel part of trees, for example through personal relationships, emotional and spiritual connections and kinship with trees that are part of who we are. Goal is harmonious relationships, in terms of personal and immersive engagement, trees being part of the community, a sense of oneness and ownership, feeling part of something larger than ourselves, and recognizing agency of trees.
Living From	The ways urban trees and treescapes are used as a resource to live from or eg. that supports livelihoods, attracts tourists, and raises the value of houses. Goal is prosperity and efficiency, for trees to benefit us. E.g., damage cost avoided by using trees for floodwater management, economic value (productivity, NHS savings) of green gym, fair distribution of benefits.
Living in	Ways that urban trees and treescapes shape the place where you live, work and recreate. Goal is desirable places in terms of recreation, landscape, culture, heritage etc. E.g., improving access for different social groups, attractive and therapeutic environment, protecting iconic and meaningful trees and species, inclusive participation in management.
Living With	The ways that urban trees and treescapes matter as a space for nature that we live with, for example supporting biodiversity and wildlife, and regulating ecosystem services such as flood and climate regulation. Goal is a healthy ecosystem, for nature in its own right and to protect and regulate our environment. E.g., managing to protect rare species, improve biodiversity and achieve good environmental status.
Life Frame Unsure	Not enough detail in the story, or it is not told in a way conducive to clearly identifying a life frame perspective in the narrator (often happened with the Future stories)

Tree attributes

This is any biophysical or other measurable characteristics of trees, such as age, size or location/configuration in the landscape. An initial list of 23 characteristics was drawn up by the project team based on how they think about tree characteristics in the landscape, particularly as being useful in their work e.g. mapping/forestry/geographical studies. This Trees Characteristics Sheet (CP Tree Characteristics table.pdf) was used during the first Citizen Panel workshop, asking participants to indicate which tree characteristics were most meaningful to them, and to add any missing ones. Characteristics were grouped in the worksheet into: Identifying characteristics of trees; What trees provide; and Characteristics of treescapes.

- A few characteristics were added in the coding process, emerging from the anecdotes: proximity to work or home; graveyards and cemeteries; forest schools; diversity within the treescapes; presence of trees in general; sap, pollen, spikes; smell; right tree right place.

During coding, it was found that some of the initial codes were rarely mentioned in the anecdotes, and removed or combined with similar codes as follows:

- 'Formation- Clusters of trees' and 'Location- in copses or groups' combined to 'Groups of trees';
- 'Formation- small or larger woods' and 'Location – in larger woodlands' combined to 'Woodland'
- 'Size - Height' and 'Size of trunk' were combined to 'Size' as there was rarely a distinction beyond 'large' or 'massive'
- Along streets and paths was separated into Along streets and Along paths to reflect different functions of those trees, and different map layers needed to match with the value

Final Tree characteristics codes analysed

Name	Description
Age	When stories of trees refer to or are related to the age of a tree – typically being old. If we came across stories about young or new planting trees, would that also be tagged to this? In theory yes? Else rename it 'Old age?'
signs of old growth (within Age)	e.g. dead wood, hollow trunks, cavities; and how people feel about seeing these things, signs that the tree is old ? Or leaving dead branches for biodiversity but others feel it looks messy or worrying? Note: very few people mentioned this code (7 of >700 tree characteristics codes), so it was subsumed into the 'Age' code

Name	Description
Associated wildlife and nature	Presence with, in or around the tree(scape) of species like animals, plants, mushrooms etc.
Bark	Any mention of the bark in the story/anecdote
Branches, shape	Any mention about the branches - e.g. shape of the tree, or good branches for climbing or interesting to look at, gaps among roots, spreading branches, impressive or unusual shape of the tree or of the branches (these link to different value themes, e.g. Aesthetic Enjoyment and Physical Health/Health and Wellbeing)
Diversity	this is a new code - not in our original sheet, but came up often in discussion, that whatever they liked, they liked a diversity - liked having a variety, because different levels of attributes are important in different contexts and for different reasons.
Flowers and leaves	Notable type or colour or other aspect of flowers or leaves
Lines of trees	Avenues of trees
Single trees	Notable trees within a park or group of trees, or isolated individual trees
Fruits and nuts (edible and inedible)	Conkers, apples,...
Green corridors	Being able to travel a significant portion of your trip (e.g. to work or to town) along roads or paths that have trees.
just the presence of trees in general	Talking of general appreciation for trees, not tied to specific trees or places
Forest school	Interacting with trees while at school, where the lesson or day is spent in a woodland or group of trees (either official forest school, or time during school on an excursion to a forest school, or part of the school day spent out in the school's forest school area)

Name	Description
Woodland (Combined previous codes: Formation-small or larger woods + Location - in larger woodlands)	Woodland, woods, forest, ancient woodland
In gardens	Trees in private gardens or experienced from private gardens (such as a tree belonging to a neighbour)
In graveyard and cemeteries	
Near water	Trees near canals, lakes, ponds, rivers, streams
Along streets	Along driveable roads, in car parks etc
Along paths	Trees alongside pedestrian and cycle paths (not part of road network)
Groups of trees (Combined previous codes: Formation- Clusters of trees +Location-in copses or groups)	Patches of trees that are too small to be classed/mapped as woodland, for example in parks or small pockets of urban green space. Also includes wood meadows and York's strays – meadows with some trees
Parks	Trees in public parks or recreation areas.
Right tree right place	When trees were talked about as being in the wrong or right place according to certain functions or aspects of the tree, e.g. fruit trees in places where fallen fruit was acceptable or unacceptable; or wrong or right size of tree for its location
Proximity to work or home	Trees noticed and mentioned because they are near to the speaker's home or place of work.

Name	Description
Sap, pollen, spikes	Presence of sap, pollen, spikes or thorns particularly mentioned as causing discomfort to the narrator
Shade	Trees provision of shade for sheltering narrator's walking or sitting
Size (Combined previous codes: Size – Height of tree + Size of trunk + Size of canopy)	Any descriptor of size of the tree, usually Large trees, e.g. 'huge' or 'massive'
Smell	Scent of leaves or blossom
Species	Where the specific tree species is mentioned/identified, may be that the species is important to the related value; or whether it is native vs exotic. Mentions of conifer or broadleaf, oak, cherry, willow, horse chestnut, maple, tulip tree,
Views or vistas	Trees creating or framing a view, or providing a place to stop and admire a view

Social and Cultural Value themes and codes grouped within each theme

This category/grouping is for our codes of the ways trees are valued, the benefits or values that we attribute to tree(scape)s. Values are grouped in 10 broad types of value.

Value theme	Codes collected within the theme	Description
History		Events that happened to or around tree(scape)s over time, for society and for individuals, and how the tree(scape) represents that history. Includes how trees look, change over time, past & living history (e.g. what happened to the tree).
	Heritage	Events that have happened in the past to or around tree(scape)s
	Marker of time	Appreciating how seeing the change in colour of leaves of the year – and the growth of the tree over years – remind you of the passage of time Related to Grounding – the reminder of time reminds you of the larger world around you – so, move this to spirituality, or to Aesthetic? It's the effect that comes after the action of appreciation of trees (aesthetic) , and outcome is grounding?
	Memory, nostalgia	When a tree(scape) evokes memories of past events associated with that particular tree(scape) or a similar one, or when the absence of the tree(scape) evokes memories of and nostalgia for when one interacted with it in the past. Often in the citizen panel stories referring to talking of memories of interacting with tree(scape)s in their childhood. - Also for old treescapes, how they were in the past
	personal history - intergenerational activity	Creating 'personal history – intergenerational activity' in or with tree(scape)s - this overlaps with personal connection, but I think is useful to highlight the history aspect of it – things you remember doing with your parents/grandparents, which you're now doing with your children (Y2_green07, and in Cardiff)
	Tradition, folklore	Any traditions or activities rooted in or related to the tree(scape) that are important to the beliefs, culture and traditions of the person or society

Value theme	Codes collected within the theme	Description
	Witness to history	Appreciating how many years the tree has lived, seeing trees as embodying or representing the history they've seen – acknowledging/highlighting that trees that are several hundreds of years old have seen a lot of history, which in turn one can therefore imagine when seeing the tree. This links to taking notice - being reminded of, becoming aware of history, when taking notice of the tree and its age (and setting?)
Connection to people		Value placed on connectivity to people, building relationships during group interactions with and in tree(scape)s (e.g. place to meet with family or community or connection to other countries). Anything that brings the community together or affects social connections or relationships – whether among people or between the community and the treescape.
	group activities outdoors	This includes any activity that brings people together outdoors – e.g. walking, picnics, hobby groups, volunteering etc.
	negative - cause tension between people	The ways in which neighbours or communities have differing opinions about trees, which can lead to conflict. This is often about their management, how they are maintained (for example, not enough or too much, encroaching on footpaths or neighbours' gardens, leaves and roots creating trip hazard, fear of neighbour's tree falling on your property etc) or whether or not to remove a tree.
	opportunity to bring people together	Largely about treescapes as meeting places which in turn encourages the creation of a community around/with a treescape. For example, this can come from activities (in Being outdoors/Recreation): • families and friends gathering and meeting outdoors • interest groups meeting in treescapes for activities (which relate to other themes, for example learning about trees or nature; ecotherapy or other related health and

Value theme	Codes collected within the theme	Description
		wellbeing activities; culture and history e.g. related to the buildings, sites, people or activities in the treescape or indeed the treescape itself; etc.!!) Volunteering activities that meet in or for treescapes, e.g. Friends of groups, or tidy-up/cleaning crews or tree planting or community gardens/orchards or..? - links to stewardship/relationships of care
Connection to trees		Value placed on connectivity to tree(scape)s, building relationships during individual or group interactions with and in tree(scape)s (e.g. how a person interacts with a tree). Includes relationships of caring for tree(scape)s, and for their wellbeing. This is built on a (culture of) respect for nature.
	stewardship, care, responsibility to nature	Activities of care for trees or treescapes including being part of a community or volunteer group looking after parks and gardens; general behaviour to respect trees and treescapes when you spend time there e.g. clearing litter behind you, not causing damage etc.
	connection to another place	Where particular trees or treescapes evoke an emotional response by reminding one of people or places further away, which in turn stimulates an attachment to that tree
	Relationship to tree or trees	Where one develops an attachment to a tree or treescape for any reason – e.g. passing it every day, regularly spending time near it at the park, because of memories attached to it of past events etc.
Trees as beings		Value of the non-human, of tree(scape)s in their own right, of trees as beings with own identities, that can be friend or kin – can be an extension of the ‘Connection to trees’ theme, where the connection is much deeper and personal with particular tree individuals

Value theme	Codes collected within the theme	Description
	agency, identity of trees - they speak	Feeling very strongly that a tree has a character, and you can imagine or sense that they could speak to you
	inspires emotion, impact of a trees charisma on you	Where being near particular trees or treescapes evoke strong emotions, where you can feel their presence as larger than just their physical body
	grief when tree was gone or damaged	Where loss or damage to trees evoked strong emotions of grief and loss, including examples of taking actions to remember particular trees
	tree as part of the family	Where particular trees are seen as family members, as friends, or confidantes, including visiting them often, talking to them, caring for them regularly, checking on their wellbeing
Intrinsic value of trees		Value of trees for being there, for existing, and their value in providing an ecosystem for associated wildlife and plants. Includes the value we place on therefore being able to come into contact with nature – trees bring nature into the city.
	existence value of trees	Valuing the tree for itself as an important being; includes admiration for particular trees, or for trees in general
	sustaining life, provide food habitat	Valuing trees for the food and shelter they provide to other beings (non-human and human)
	bringing wildlife into city	The presence of trees or treescapes providing habitat for wildlife that was not there previously – valued in itself as a good thing

Value theme	Codes collected within the theme	Description
	giving us access to nature	In providing habitat for nature in the city, providing city residents (human) with easier access to nature without travelling out of the city
	Negative - invasive species or unwanted growth	Not all trees are seen as good – certain species are unwanted, or when trees grow into spaces or sizes that cause problems
	Unconscious value – don't realise till its gone	Instances where the Existence value (above) was not recognised until the tree is gone – or when thinking about what it would be like without trees, realising that they are important
Learning		The ways in which tree(scape)s can be used for educational purposes – e.g. about nature and ecosystems and stewardship, or about personal skills and development (e.g. motor skills in children, safety/ awareness of world around us, respect and tradition of interacting with nature, or woodland skills, or inspiring confidence and self-reflection and improvement)
	children playing for learning	Children learning sensory or motor skills by interacting with trees, branches, bark, leaves etc. or to learn about the qualities of wood – building dens or bridges
	knowledge about nature	Learning about ecosystems, trees and nature through noticing or talking about trees and treescapes
	personal growth and development	Any activities in or with trees and treescapes that build one's confidence or other forms of personal development, e.g. empowerment and character-building through outdoor or woodland activities, or self-reflection when interacting with treescapes
	skills	Any activities in or with trees and treescapes that build one's practical or mental skills, capabilities

Value theme	Codes collected within the theme	Description
	treescapes as a teaching tool	Using trees or treescapes to teach other subjects such as Maths, English, History, Geography etc.
Sense of place		Value on the ways in which tree(scape)s are part of the character and identity of a place. Includes, how tree(scape)s are part of an emotional connection and attachment that individuals or communities feel towards a particular location or environment (e.g. appreciation of tree as an important memory).
	changes the atmosphere of a place	How having or seeing trees present in a location changes the way one sees a location. For example, 'it brings life', 'it would be or is drab without trees', or 'it softens the hard edges' (the last one, softening the hard edges, is currently in 'pleasing, beautiful to see or be in')
	Feels welcoming, sense of belonging	Particular trees or treescapes that change the atmosphere of a place particularly in a way that feels welcoming and makes it easier to feel you are allowed to be there/feel comfortable there
	Identity	Particular trees or treescapes that represent or form part of the identity of a place – without those trees or treescapes, the place would no longer be or feel the same.
	Landmarks	Particular trees or treescapes used as landmarks e.g. to orient oneself, identify where you are, or mark places or events. These may be personal landmarks (e.g. turn at that big oak to get home) or widely known landmarks (the big trees next to the York Minster).
Spirituality		Interactions with or connections to tree(scape)s that have sacred or symbolic meaning, or is based on emotional or personal beliefs (e.g. memorial trees or cultural connection to other places). For individuals this includes sense of grounding, being part of something bigger, sense of freedom, self-awareness/reflection, inspiring creativity; For communities this includes religious and ancestral connections.

Value theme	Codes collected within the theme	Description
	grounding, part of something larger, reassuring	Being among trees, or specific trees or types of trees evoking a sense of perspective, grounding and reassuring, feeling connected to something bigger than just humans – the wider community of beings, bigger ecosystem etc.
	inspiration, creativity	Being among trees inspiring something new – self-reflection or imagination; Creativity inspired by trees or being among trees, e.g. art, crafting with parts of trees (wood, leaves, bark, seeds), dance, stories etc.
	magical	Feeling a sense of otherworldly atmosphere around particular trees or treescapes
	memorialisation	Connections to particular trees or treescapes because they represent people or animals that are meaningful to you, e.g. remembering ones who have died, commemorating notable people, celebrating new births etc.
	religious	Spiritual, religious and cultural associations with particular trees
Health and wellbeing		The ways tree(scape)s affect the personal wellbeing of individuals, including physical and mental health (e.g. treescape as calming environments, caring for the environment) – things we do in treescapes and how tree(scape)s make us feel.
	allergies, rashes	Pollen, leaves, bark, nectar or sap evoking allergic reactions or rashes when people come into contact with them
	children playing	Activities of children playing in treescapes (climbing, running, hiding, exploring, playing games, using trees as the setting of stories) or with trees (talking with trees, playing with fruit or seeds or branches of trees) - that affects their health and wellbeing

Value theme	Codes collected within the theme	Description
		(separate from stories where children playing has a Learning outcome – see Learning theme)
	competition with other users	People competing for treed spaces for different uses – which may come with frustration – e.g. dog walkers, families with children and young people socialising or riding dirt bikes
	danger of injury	Risk of injury to people in the vicinity of trees from falling branches or tripping over roots raising the pavement or slipping on unswept and slippery leaves or sap
	feeling enclosed safe	Being among trees evoking a sense of safety, being small among a canopy of vegetation
	feeling unsafe	Being among trees evoking fear and feeling of not being safe, for example from other people that you can't see, or the danger of injury, or superstitions/traditions that wooded areas are dangerous
	lifts your mood	Being among trees leading to feeling better, lighter
	Noise	Trees blocking or buffering noise, e.g. from traffic
	peace, reflection, restoration	Going to trees for the feeling of peace, calm, restoration that ensues, noting that greater self-reflection is possible in this calm, peaceful atmosphere
	Rain	Trees block rainfall
	relax	Being out in treescapes and relaxing
	respite	this is various types of respite, both physical or mental, anything providing a healing break from something, restorative, reducing the physical or mental stressor - e.g. trees providing

Value theme	Codes collected within the theme	Description
		respite/break from the elements (e.g. heatwave) or mental, sitting in treescape providing calmness, reduce stress, escape from city etc.
	Sightlines	Blocking sightlines is positive for providing privacy in gardens or negative for trees in others' gardens blocking your view, or e.g. blocking security guards to do their jobs ...
	space	Trees taking up space that you would want to use – which can cause frustration
	sports, exercise, commuting	Being out in treescapes for the purpose of sports, exercise or commuting (e.g. running, climbing, cycling, outdoor gym, ropes courses etc) – doing your activity among trees rather than elsewhere
	Sun	Trees block the sun and provide shade - good and bad
	walking, spending time outdoors	Spending time outdoors doing something other than sports/exercise/commuting, children playing, or relaxing Note, this may be alone or with others, but the focus is on the benefit to your wellbeing. If the benefit is on meeting (and connecting) with others, then it would go into the 'Connecting with people' theme to a code 'Group activities with others'
	wellbeing	General mentions of feeling good or better
	Wind	Trees or hedges blocking wind - or, in urban areas creating deadspace or wind turbulence...
Aesthetic Enjoyment		Value places on trees in the landscape (e.g. how the tree makes the garden look nice). Enjoyment derived from sensing and experiencing the treescape, visually and otherwise – appreciating the beauty, smell, sound, feel (and taste) of trees and treescapes.

Value theme	Codes collected within the theme	Description
		Anything about how the tree(scape)s or place looks, sounds, feels, or how the (trees in the) landscape is organised. Largely about how trees are pleasing to see, but added separate codes for trees being: awe-inspiring to see; interesting or unusual to see; about sensing in other than visual ways and being negative to see or be around. • Appreciation of experiencing the treescape leads to knowing about tree(scape)s,
	awe, wonder	The look of the tree(scape) inspires a sense of awe or wonder –if it talks of the feel of being in a treescape being awe-inspiring or magical, I would put that in Spiritual/magical or Spiritual/Charismatic trees
	interesting, unusual	How tree(scape)s stand out or are memorable or worth re-visiting because they are interesting or unusual to see (or otherwise experience)
	negative aesthetic	Where the look of the tree(scape)s (or lack thereof) is unpleasant to see, for example neglected (untidy or littered) or dying trees and green spaces, or unpleasant to be in or around, e.g. due to sap or spiky seeds or leaves (sticky or uncomfortable to stand or sit on), or pollen (irritating to be around)
	pleasing beautiful to see, be in	this is anything about how seeing and looking at and being in treescapes makes you happy - it's beautiful, looks so much better, nice to be in Softening the cityscape - where it would be bleak without trees, so trees make it more pleasing – I would put this in 'Changes the atmosphere of a place' which is in 'Sense of Place' theme
	Sensory enjoyment and benefits	Enjoying sensory stimulation of/from treescapes other than sight - smell, touch, sound,