

Trees for human resilience and wellbeing



Chair: Dr Suzanne Bartington, Clinical Associate Professor in Environmental Health, University of Birmingham

Updating the health benefits of urban trees – guidance by the Toronto and Region Conservation Authority

Dr Kathy Wolf, Research Social Scientist, Affiliate of College of Built Environments University of Washington

Sharon Lam, Intermediate Research Scientist, Ecosystem and Climate Science, Watershed Planning and Ecosystem Science | Development and Engineering Services, TRCA

Assessing the benefits – lessons from The Mersey Forest

Gareth Howatson, Natural Health Service Co-Ordinator, The Mersey Forest

Dr Hannah Burnett, Postdoctoral Research Associate working within the GroundsWell Consortium

Partners: Institute of Chartered Foresters, Town and Country Planning Association

NB: All recordings and presentations are on the TDAG website along with the information and links from the chat. <https://www.tdag.org.uk/past-events.html>

There 2-3 years of resources on the past events tab that might be useful for students or others interested in urban trees

Education loomed large in the discussion - we are looking at a seminar topic for 8th October on education to encourage the resilience of urban treescapes - if anyone is interested in taking part, please let me know sue.jamesriba@gmail.com

REFERENCES

With thanks to all and especially David Long

Link for Sharon and Kathy's work: <https://trca.ca/urban-trees-health-benefits/#:~:text=Trees%20offer%20natural%20cooling%20benefits,heat%20than%20surrounding%20rural%20areas.>

The slide deck is also available here. It is a great resource for all sorts of things - I am wondering if I should use it in teaching the UG students next week :-)

The NHS Forest's database of evidence and resources: <https://nhsforest.org/evidence/>

At the NHS forest we have loads of resources on benefits of trees and human health, we are also taking orders for trees until Friday (in case there's anyone from the NHS here!)

<https://nhsforest.org/green-your-site/tree-planting/trees-bundles/>

Health benefits of street trees:

<https://www.forestresearch.gov.uk/research/health-benefits-of-street-trees/>

Trees and new developments - tips for protecting existing trees

<http://epapers.bham.ac.uk/4109/>

Lots of information on Trees, planning and developments <https://www.tdag.org.uk/trees-planning-and-development.html>

Forest Research – ‘Selecting Urban Trees for Ecosystem Service Provision’:

<https://www.forestresearch.gov.uk/research/quantification-and-valuation-of-benefits-provided-by-urban-trees/selecting-urban-trees-for-ecosystem-service-provision/>

FOREST RESEARCH - ‘Tools and Resources - Evidence notes’:

<https://www.forestresearch.gov.uk/tools-and-resources/fthr/urban-regeneration-and-greenspace-partnership/resources/evidence-notes/>

The Mersey Forest

<https://merseyforest.org.uk/our-work/natural-health-service/>

Department for Environment, Food & Rural Affairs (DEFRA)

‘The Urban Forest Accelerator Toolkit’:

<https://futureparksaccelerator.notion.site/The-Urban-Forest-Accelerator-Toolkit-1432185564378089b7cfdb33818b38ad>

[SJ: this includes guidance for community planting and a costing methodology]

Food and Agriculture Organization of The United Nations (FAO)

‘Forestry Communication Toolkit’:

<https://www.fao.org/forestry/resources/toolkit-resources/en>

The older webpages are easier to use:

<https://web.archive.org/web/20240514125453/https://www.fao.org/forestry-fao/communication-toolkit/en/>

<https://web.archive.org/web/20140508053014/https://www.fao.org/forestry/communication-toolkit/76376/en/>

Quantifying the unseen benefits: an innovative economic valuation of the social and cultural values of trees, woods, and forests at risk. Arboricultural Journal, 46(4), 259–271.

<https://doi.org/10.1080/03071375.2024.2416317>

Trees/GI and airflow: <https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/environment-publications/using-green-infrastructure-protect-people-air-pollution>

Take a look at GI4RAQ for your MSc students <http://epapers.bham.ac.uk/3398/>

A Primer on Nonmarket Valuation:

https://web.archive.org/web/20240616101146/https://econ676.weebly.com/uploads/1/6/5/9/16597232/champ_boyle__brown_--_primer_2017.pdf

A trait-based investigation into evergreen woody plants for traffic-related air pollution mitigation over time - ScienceDirect

<https://www.sciencedirect.com/science/article/pii/S0048969723083432>

More about Nicks role here

<https://nhsforest.org/projects/nature-recovery-rangers/nature-recovery-ranger-liverpool-hospitals/>

National Institute for Health & Care Excellence

Air pollution: outdoor air quality and health (2017 Guidance)

<https://www.nice.org.uk/guidance/NG70>

Festival Of Debate (Sheffield, UK)

“The Silent Killer: Air Pollution – Q&A” (2017):

<https://ianswalkonthewildside.wordpress.com/2017/02/26/on-the-value-of-urban-trees-with-large-crowns/comment-page-1/#comment-1676>

Check out the LI journal Landscape winter 2024 is focused on the healing power of landscape Nature community and resilience in healthcare environments

https://issuu.com/landscape-institute/docs/13470_li_journal_3_2024_v6_issuu

NEER030 A narrative review of reviews of nature exposure and human health and well-being in the UK - NEER030

<https://publications.naturalengland.org.uk/publication/5939107801595904>

<https://www.forestresearch.gov.uk/publications/greenspace-design-for-health-and-well-being/>

Public engagement in forestry toolbox and guidance

<https://www.forestresearch.gov.uk/tools-and-resources/ftth/public-engagement-forestry-toolbox-and-guidance/>

National Green Infrastructure framework design Guide 6.12 Healthcare facilities: Natural England Green Infrastructure Planning and Design Guide 2023

<https://www.naturalcurriculum.co.uk/>

<https://www.ljmu.ac.uk/about-us/faculties/faculty-of-arts-professional-and-social-studies/school-of-education/natural-curriculum>

United Nations Economic Commission for Europe (2015)

Maastricht Recommendations on Promoting Effective Public Participation in Decision-making in Environmental Matters prepared under the Aarhus Convention

<https://1drv.ms/b/c/7bac9ff85eb9a0c5/EcWguV74n6wggHvfAgAAAAABnB2eXmvtIGVcoQp8UizLJw?e=cEpbBB>

United Nations Economic Commission for Europe

Good practice recommendations on public participation in strategic environmental assessment prepared under the Protocol on Strategic Environmental Assessment (SEA)

https://1drv.ms/b/c/7bac9ff85eb9a0c5/EcWguV74n6wggHveAgAAAAABvWBWtysoAA354yIlaA7J_w?e=TfcRbc

Enabling a Natural Capital Approach (ENCA): <https://www.gov.uk/guidance/enabling-a-natural-capital-approach-enca>

Details of the 'chat' discussion with additional references continue below.

QUESTIONS AND COMMENTS

For Kathy and Sharon specifically:

Comment/question - from the UK reviewers, they were confident that this information and infographics could be used in the UK - do you agree? Yes

Q: Have you had good feedback from those who have used the infographics?

Q: is the school system linked in – are you able to get these key messages into schools?

Q: did you come across any disbenefits of trees and how did you navigate these (e.g. allergies, increase risk of damage during high winds)

Q: are you monitoring to see if the communication is making changes on the ground?

Q: are you recording who is downloading and using your slides?

Comment: What I like is the addition of evidence links to the various elements

Q: Over the last ten years I have seen a fabulous range of systematic studies and reviews demonstrating the value of trees and nature to health. There are of course some examples of health care providers picking these up, influencing e.g. hospital design, public health initiatives and green social prescribing, but mainstreaming the messages seems lost in the drive for other objectives, such as removing obstacles to development.

Have there been enough studies into the theory of change (what works and why) in convincing decision makers, do you think, or is it that we just haven't been adopting and resourcing their findings?

- Replying to "Over the last ten years I have seen a fabulous ran...":
We have the same problem in Rother East Sussex where the council just refuse to protect any tree whatsoever and actively help the developers!
- We have the knowledge and evidence...how do we get it mainstreamed into practice when they lose out to removing barriers to development etc?
- As a former NHS gardener, one of the most depressing aspects was seeing trees we'd planted [as well as existing trees] removed with no consultation or notice by project managers implementing development on NHS sites. The NHS seems more afflicted than most by rapid change on their sites, which frequently has a destructive effect on trees and other green spaces. There seems to be very little communication between internal planning and development and those most directly concerned with grounds maintenance, unless a particularly enlightened and diligent manager insists we are involved. Trees are often seen as a temporary, replaceable feature in what is already an exceptionally fluid environment

Thanks Sharon, for your response to my question. It does seem that better 'stories' could be one of the mechanisms. Just need some research on which stories work best!

- Slightly different topic, but same idea. Katharine Hayhoe talks a lot about why we need to talk about climate change. There is a TED talk and you can follow her on LinkedIn or other platforms.
https://www.ted.com/talks/katharine_hayhoe_the_most_important_thing_you_can_do_to_fight_climate_change_talk_about_it
- Can some incentives be shared? what works more for motivating people
- Sharon mentioned hearts and minds. I think we need to be linking up with experts in marketing/comms/social media. They can help us promote the benefits of trees and translate the science into something the average person can understand and share.
 - I'd like to echo the comment about the value of engaging with graphic designers and making sure the material we produce is easy to digest and aesthetically pleasing. I work as an environmental psychologist in an architecture firm and very often use many of the cited studies in my daily work but unless it is presented in the most visual way (with as little text as possible) it will have limited impact. Visual communication is really a way to engage with much wider audiences

Comment: The health benefits of urban trees is no doubt related to the health and establishment / maturity of the trees themselves

- Good point - protecting existing trees and reducing the performance gap with new planting!
- Trees managing surface water also brings health benefits of reducing flooding and keeping watercourses cleaner

Q: What about like introducing an invasive species into a region that doesn't fit to the development of the local habitat around that urban regions?

For Gareth and Hannah specifically:

Q: How is the Natural Health Service funded? I can see the savings for the NHS, but presumably they don't provide funding to achieve these benefits?

Q: What policy changes would you like to see that would make a significant difference?

Q: Do we teach trainee doctors and nurses about the benefits of nature?

Q: Do we need to review some of our professional changes i.e. engineers...not just built infrastructure, you need to know more about nature- based solutions...doctors...you need to know about the benefits of nature, more about food etc, etc

Q: Does the NHS still give all staff one day a year to do volunteering? I wonder if we could help shape those volunteering days, to get staff involved in green space etc...

- And teachers, and healthcare workers, and corporates, it's everyone

Comment: In my work I have found a sense of ease when being in nature and working with other people. It allows space and time to flow, without feeling awkward, anxious, under pressure to speak

Comment: Being taught how to connect to nature. That's why we need forest schools, especially for those kids who wouldn't otherwise be surrounded by trees and nature

- And also or those kids who cannot handle formal education but who become different people with entirely different competencies and interests once in a natural environment

Comment: GroundsWell not to be confused with Groundswell (Groundswell - Regenerative Agriculture Festival Groundswell)

Comment: When doing some work with Great Ormond Street children's hospital, there was concern with indoor planting - mould etc especially with some of these very ill children - is that an issue?

- Strange, GI uptakes mould, especially indoor ivy
 - Plants had to be physically separated – could be seen but not part of the internal air system.
- What gets my flipping goat is plastic plants in doctors and dentist surgeries and medical centres! Very bad for health! as well as dust gatherers!

Comment: This is all great but it is not a new concept. It was used in late 19th C and arguably in ancient Greece. The question is why does the approach collapse every generation and then need to be re-invented?

- The Victorian asylums were based on that model of being situated within large grounds [and often actually productive, with farming and horticulture as well as other trades as therapy]. But they were virtually all sold off for housing following "community care" which has arguably failed to provide the same level of care.
- Lots of evidence on physical activity in the outdoors and health from 1990s onwards. a good partner could be <https://www.intelligenthealth.co.uk/about/> - Dr William Bird was health adviser to Natural England when it was first set up and at that stage was going to be a 'campaigning' organisation
- the Victorians also embraced slow recovery <https://www.nationalgeographic.com/science/article/can-this-19th-century-health-practice-help-with-long-covid>
- And young people.... children should be a large focus of this work - it helps raise awareness up through the generations, and creates peer networks throughout young people.
 - Intergenerational learning begins in young people
- Public engagement in forestry toolbox and guidance: <https://www.forestresearch.gov.uk/tools-and-resources/fthr/public-engagement-forestry-toolbox-and-guidance/>
 - Sounds like the right moment to fly the flag for TDAG resources that we work on with a graphic designer.... <https://www.tdag.org.uk/our-guides.html>

My point is we are running around in circles and re-inventing the wheel after intervals of abandonment of good holistic approaches. Why does this keep happening???

Festival Of Debate (Sheffield, UK)

“The Silent Killer: Air Pollution – Q&A” (2017):

<https://ianswalkonthewildside.wordpress.com/2017/02/26/on-the-value-of-urban-trees-with-large-crowns/comment-page-1/#comment-1676>

There was a really interesting report inspired by Covid on the link between ventilation and energy efficiency - <https://raeng.org.uk/news/ventilation-vital-as-we-boost-energy-efficiency-with-building-retrofits>

Comment: Free Air Quality Monitor for every Birmingham school

Poor air quality remains the single biggest environmental risk to public health, with children particularly vulnerable and exposed at the school gate. Cleaner air means a better learning environment and improved physical and mental health for children, staff and parents. A free outdoor air quality monitor and resources are offered to improve knowledge and awareness, linking insight from real-time data to curricula and wider sustainability work around physical activity, healthy eating, active travel, road safety, anti-idling, climate change and Modeshift Stars accreditation

Comment: It also links to the habits and leading life style nowadays which will influence how willingness the public will spend on the green and blue space building.

Comment: There are doctors and tv personalities and have a great kids programme called operation ouch, and have also produced programmes around processed food and weight loss

Comment: From an architectural point of view trees are invaluable in tempering the environment - both inside and outside of all buildings. Trees should be an integral part of architectural education. They interface with services, insulation, heat gain, cooling together with the numerous aesthetic and psychological advantages - and of course your current subject - health + well-being. After many years of seeing major projects develop around the world in many different quite extreme climates trees are unfortunately widely inadequately understood and under-used in the architectural profession. Maybe the RIBA needs an ambassador? (SJ – we are working on this with the RIBA)

- Maybe greater crossover with Landscape Architecture courses ?
- ACAN! Architects Climate Action Network UK too
- <https://www.planners4climateaction.org/>

Comment: But it can't just be about planting. It has to be about what's already in the ground and how do we grow what is in the ground

GENERAL DISCUSSION

Q: Any news of what's happened to publication of Manual for Streets 2 & the associated technical guidance for street trees?

- No news on Manual for Streets 3, street tree drawings getting close to publication.

Seminar topic suggestion:

Please can TDAG provide guidance on soft capping on development sites for new planting

Seminar topics suggestion:

Planting guidance and species selection for podium and roofscapes would be helpful

- There is a previous TDAG session on podium planting – Seething Lane Garden, City of London

Comment: European tree planting standard might be a candidate for an industry agreement? [Along with their growing suite of standards]

- We have already adopted for conditions as BSI is a member of the ESA