

Climate change adaptation: practical examples for local authorities

3 November 2022



Welcome and introduction

Liz Alston, Worcestershire County Council, Chair

Housekeeping

- Use the chat function to ask questions throughout the session
- Please have your camera on when speaking
- Keep your mic muted when not speaking
- Please ensure your name and organisation are displayed
- Close other applications to improve connectivity
- Let us know if you object to the session being recorded
- Contact Nat with any technical difficulties: nathaniel.weaver@swm.org.uk

Agenda

- 09:30 **Welcome and introduction** (Liz Alston, Worcestershire County Council, Chair)
- 09:35 **National Policy and Programme update** (Nick Jackson, Defra)
- Local adaptation activity and support** (Jim Davies & Tim Pickering, Environment Agency)
- Local authority Climate Adaptation Toolkit** (Rachel Toresen Owuor, Local Partnerships)
- 10:10 **Q&A** (use the chat to ask questions during the presentations)
- 10:20 **Case study 1: Cambridge Canopy Project** (Dr. Matthew Ling, Cambridge City Council)
- Case study 2: SPONGE 2020** (Aleksandar Bogdanov, Essex County Council)
- 10:55 **Comfort break**
- 11:05 **Case study 3: Cool Spaces** (Michele Vianello, Greater London Authority)
- Case study 4: Manchester's Mayfield scheme** (Matt Ellis, Environment Agency)
- Case study 5: Cool Towns** (David Bennett, Kent County Council)
- 11:55 **Interactive session: further good practice and help needed**
- 12:25 **Closing remarks and summary** (Liz Alston, Chair)
- 12:30 **Close**



National policy and programme update

Nick Jackson, Defra



Department
for Environment
Food & Rural Affairs

'Climate change adaptation: practical examples for local authorities' event 3rd November 2022

Climate Change Adaptation – progress on third National Adaptation Programme

Nick Jackson, Defra Climate Adaptation Policy Team



Content

	Item
1	Stakeholder engagement
2	Headlines
3	Recap on Adaptation Reporting Power and Local Authority reporting
4	NAP3 timings
5	Proposal for LG involvement/shape of NAP3 chapter including LG
6	Questions we've been considering

NAP3 Programme Update – Stakeholder Engagement

- Initial stakeholder engagement workshops: Jan/Feb 2022 to explore possibility of using risk pathways in NAP3
- Summer 2022: we delivered further workshops across each NAP3 sector (e.g. Health Communities, Built Environment, Natural Environment, Local Govt)
- Good engagement across all sectors, inc local govt, and attendees noted:
 - importance of considering **climate-specific and wider risk interdependencies**
 - climate-induced risks are not easily separated from other risks that can cause **similar cascading impacts** (e.g. COVID-19, Russia-Ukraine conflict)
 - appetite for engagement opportunities with other sectors and **further engagement with Government** on NAP3 development
 - **Investment challenges** were raised as a barrier to delivering good adaptation measures in natural environment and infrastructure sectors

NAP3 Programme Update - Headlines

- A final pathway commission was sent to Govt Depts in July with deadline of **30th September 2022**.
- Mentioned stakeholder engagement workshops that took place last winter and during the summer. Feedback will be sent to risk-owners to help inform the development of pathways.
- Following the return of risk pathways, the Adaptation team have been undertaking analysis of pathway quality and risk interdependencies.
- Findings from stakeholder engagement workshops and pathways analysis will be presented to Ministers at the next meeting of the Climate Action Implementation (CAI) meeting

Recap on Adaptation Reporting Power

What is the ARP?:

- **a legal power in CCA 2008**, through which government can request reports from public bodies and major infrastructure providers. Reports assess the risks an organisation faces from climate change and sets out how they are addressing these risks.
- Reports cover key sectors including energy generation and transmission, water services, telecommunications, transport, finance, health and the environment.

Reporting cycle?:

- ARP3 closed in December 2021, with 88 reports received. Climate Change Committee carried out an independent evaluation of third round reporting, setting out recommendations for how the reporting process could be improved.
- **We are now working through statutory strategy for ARP4**, which will be published alongside NAP3 in mid-2023.

Adaptation Reporting Power: Local Authority reporting

Additional reporting burdens on LAs

- How would reporting help support/improve LAs own local efforts on adaptation, both for infrastructure and other locally delivered services?
- Initial feedback from LG stakeholders indicates that LAs would prefer additional advice and guidance rather than a new reporting requirement. Mandatory approach would be unlikely to receive widespread support in the sector.

The way ahead

- Working with the sector we will consider how existing guidance for local adaptation planning can be built on to support local approaches to climate change adaptation.
- Could we pilot adaptation reporting with small group of LAs of different types? Would you take part?
- This would test the level of added value that reporting might bring at each LG level and whether it would be beneficial to seek a wider roll-out of this type of reporting in future ARP rounds.
- Encourage and support LAs in their climate risk management practices through monitoring and collection of relevant data, in other ways.

Update and proposed NAP3 timings – subject to ministerial agreement

- Evaluation of Pathways returns by **mid-October**
- Risk interdependency analysis: **October-January**
- Drafting framework of NAP3 **Nov-December**
- Commence first full draft of NAP3 chapters: **January**
- Reviews of NAP3 chapters **February - April** followed by iterations
- Ministerial clearance: **May***
- Ministerial write-rounds: **May-June*** *subject to Ministerial agreement
- Publishing of NAP3 document: **June 2023****subject to Ministerial agreement

Proposal for LA Involvement in NAP3

! Please note this Contents Page is strictly a draft proposal and subject to change (not yet signed off by seniors or ministers).

Mock Draft Contents Page

Ministerial Foreword
Executive Summary

High level summary of how we work (and continue to work) with you

- 1 Chapter 1/Introduction/Scene Setting
- 2 Chapter 2: Interdependencies and Interacting Risks
- 3 Chapter 3: Natural Environment
- 4 Chapter 4: Infrastructure
- 5 Chapter 5: People, Health and the Built Environment
- 6 Chapter 6: Business and Industry
- 7 Chapter 7: International

Could include case studies of local examples of adaptation action happening on the ground – inc. from the Local authorities, ALBs and NGOs. Either in sectoral or working together chapter(s).

8 Chapter 8: Working Together

Chapter on working with Local Authorities and Devolved Administrations. Propose to set out:

- High level strategic intentions and priorities
- Highlight recent adaptation achievements and actions

9 Chapter 9: Fourth Adaptation Reporting Power Strategy

10 Annexes

Annex 1: Pathways

Annex 2: Methodology

Proposal for shape of NAP3 LG section

- Place based climate risks and service provision
- Local adaptation strategies (link to NAP strategic framework) and identification of long-term measures
- Approach of communities, districts and cities
- In comparison with those for other sectors, pathway(s) for local sector – case studies to bring local adaptation action to life

Questions being considered

- Have LAs considered the link between adaptation actions and local growth? If so, how?
- How can we bring out the link between climate adaptation and net zero in the narrative on local action on adaptation?
- Could there be a priority risk pathway(s) that may be applicable to the local sector? If so, what could these be?
- We want to identify short/sharp case studies of good adaptation/resilience that are indicative of best practice. Any examples that we could use, including from your own authority or area?
- Do you use any indicators/metrics to identify adaptation measurement/success that are of measurable benefit to you, and that could be transferable to different sectors? Again, if so, how?
- How can we best highlight the role of different levels of governance i.e. cities, city regions, rural LAs in developing their approaches to adaptation?]



Department
for Environment
Food & Rural Affairs

Thank You!

Contact us at: climate@defra.gov.uk or nick.Jackson@defra.gov.uk



Environment
Agency



Forestry Commission



Local adaptation activity and support

Jim Davies, Environment Agency

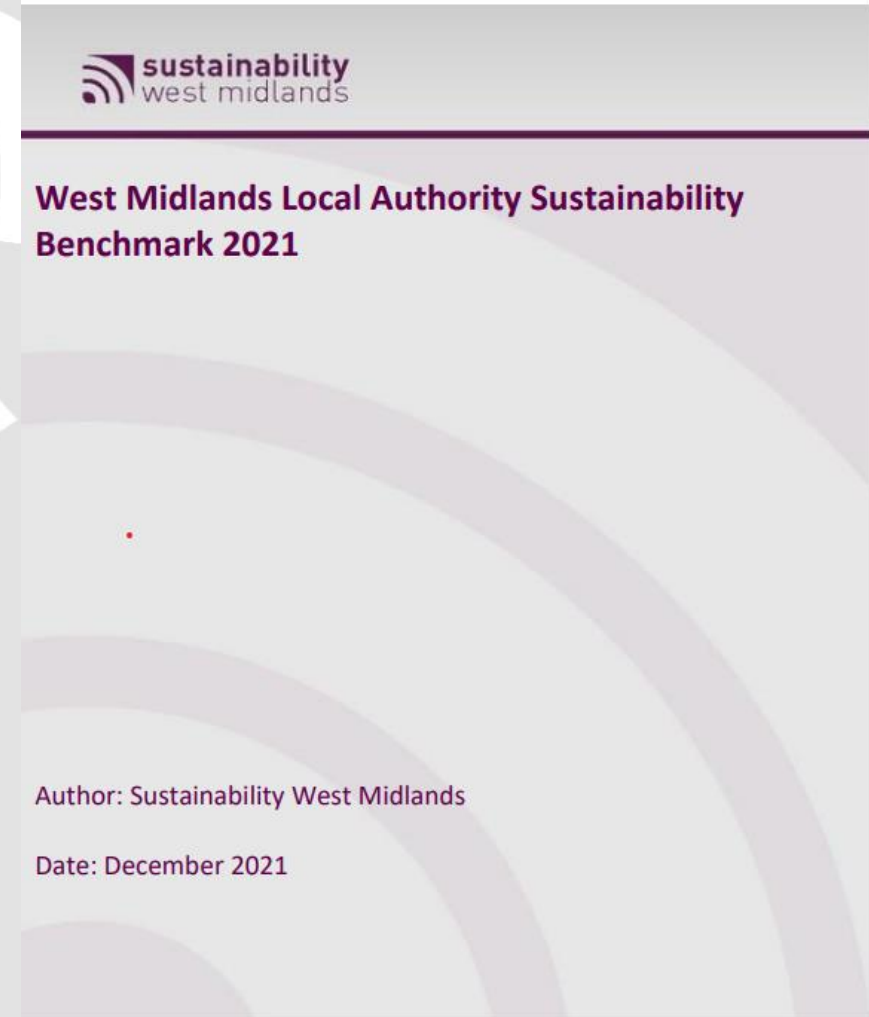
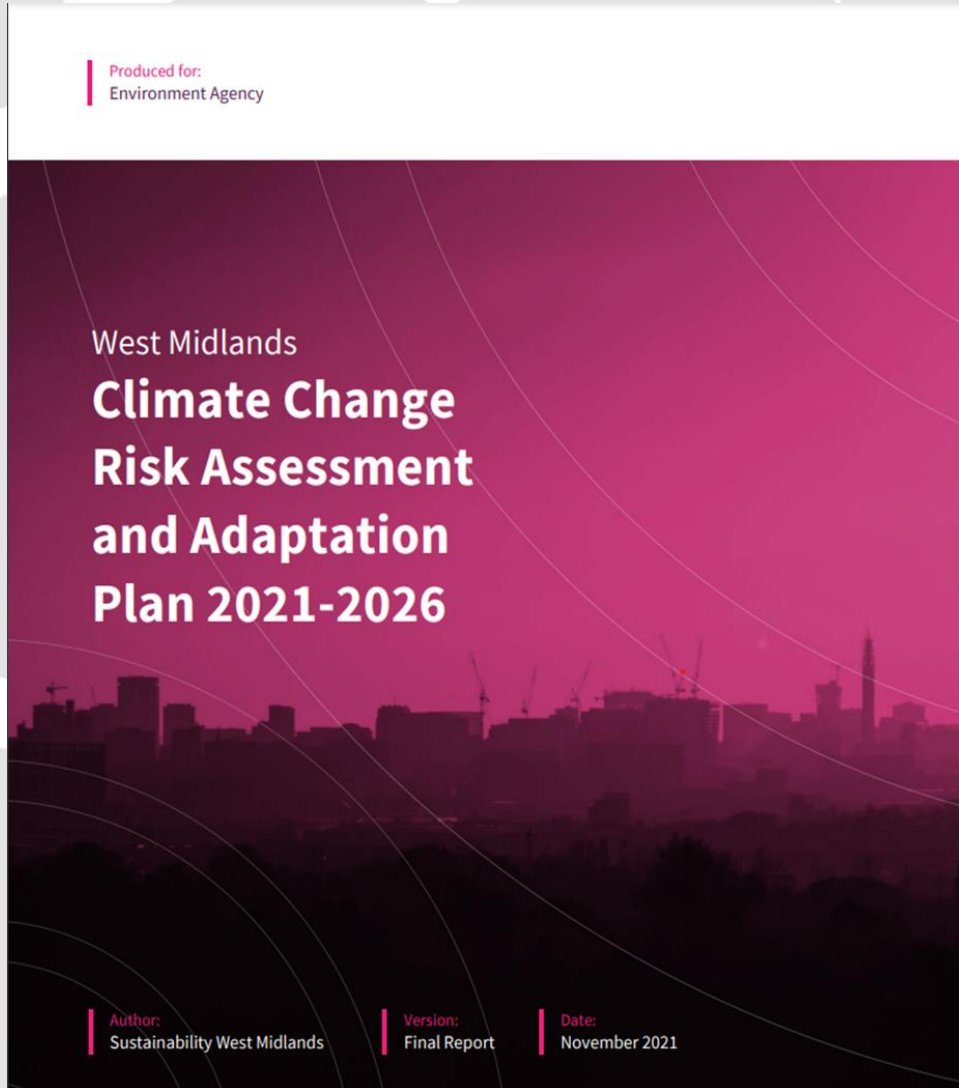
Local adaptation - activity and support

Adaption – its in our Nature”



**Jim Davies,
Strategy and Engagement (LNRS)
National Planning Team**

EA2025 Climate Ambition
Creating a net zero nation (region) resilient to climate change



West Midlands Adaptation Plan Priorities

Resilient and Sustainable Communities

Climate change impacts will be felt more severely in communities with the **highest levels of deprivation and actions need to be taken to support and 'level up' these areas.**

Resilience to the impacts of severe weather on infrastructure, health, vulnerable communities, businesses and new and existing development, as set out in this plan, needs to be considered in all areas of decision making.

Flood risk from all sources will continue to increase due to climate change and extreme weather events, so we have to become a more resilient region tackling these impacts by working together.

Development should be steered towards areas of lower flood risk. Where development does go ahead in areas at risk of flooding or coastal erosion, it must be shown to be necessary, safe and resilient to flooding without increasing risk to others, and take account of residual risks.

Nature Based Solutions should be utilised to provide resilience to climate change and to drive green infrastructure, such as tree planting in urban and rural locations, Sustainable Urban Drainage Systems (SUDs) and green spaces providing environmental, social and economic benefits.

Climate change makes it harder to ensure clean and plentiful water. The West Midlands (with the exception of Herefordshire) contains areas that have been determined by the Secretary of State to be classed as seriously water stressed alongside the East Midlands and Thames Area. Water efficiency measures need to be prioritised as part of a nationwide approach to tackle water supply.

**Align with Environment Agency Priorities on Environmental Protection and Climate Change Adaptation.
Support Green Growth and Economic and Climate Resilient Communities.**

Resilience – *not just to climate change....*

Environmental

- Biodiversity
- Water Resources
- Water Quality
- Nutrient Management
- Flood Risk
- Air Quality

Health

- Deprivation
- Active Travel
- Access to Greenspace

Economic

- Green Recovery
- Energy Costs

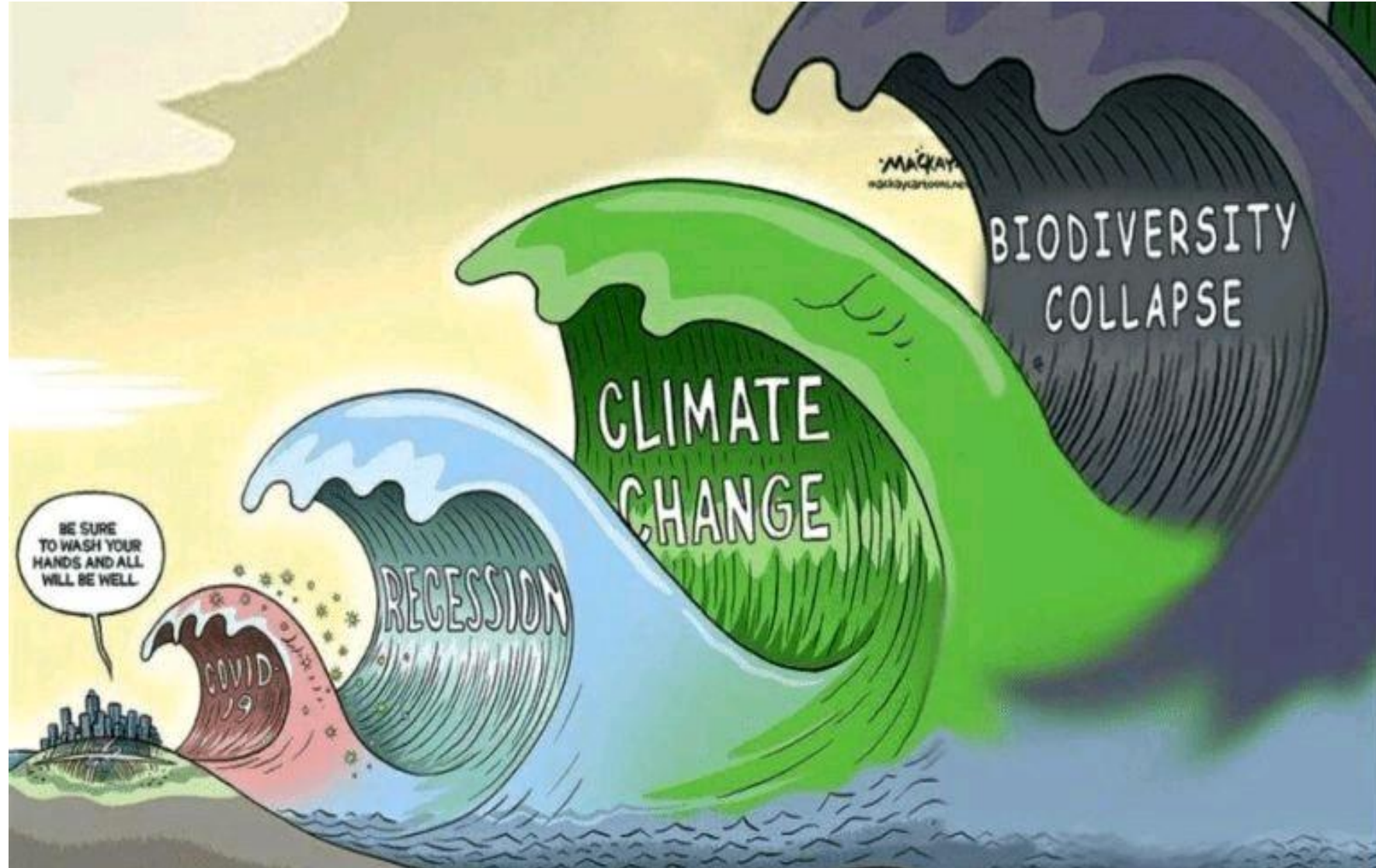
Post Covid Recovery

Green Economy

Self Sufficiency

Resilient Communities

Local and Regional Economic Resilience



Adaptation Strategy

Local Nature Recovery Strategies?

New England-wide system of spatial strategies for nature **Required by the Environment Act 2021**

Support the creation of the **Nature Recovery Network**

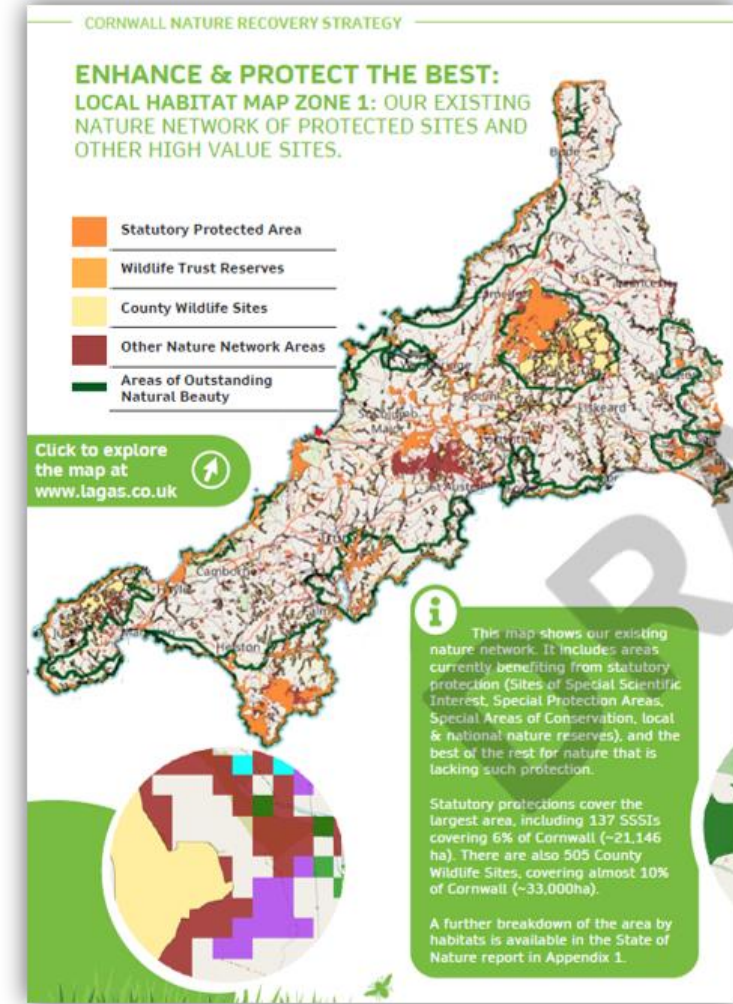
“could be designed to bring a wide range of additional benefits: greater public enjoyment; pollination; carbon capture; water quality improvements and flood management.”

LNRS Regulations and Statutory Guidance due for publication in winter 2022.

The overall responsibility for producing LNRS rests with **the 'Responsible Authority'** (County Councils, Combined Authorities) Natural England lead-ALB role.

Approximately 48 LNRSs covering the whole of England.

Local Nature Recovery (Adaptation) Strategies - Engines for Growth



Role of LNRS

To identify and map locations where creating or improving habitat will deliver the greatest benefit for nature and the wider environment.

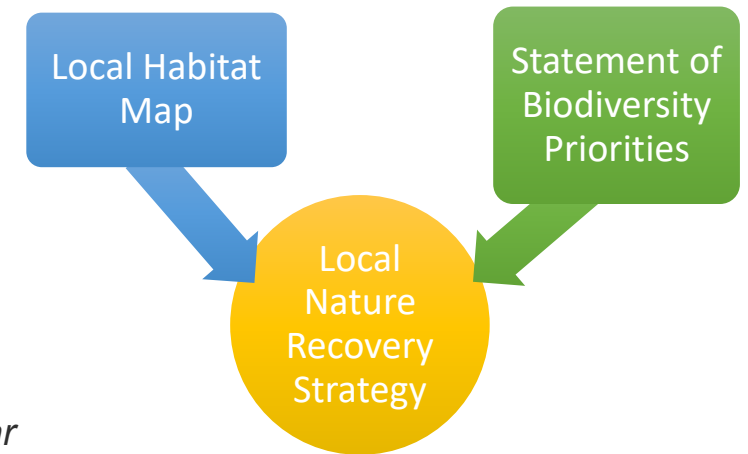
LNRS will help target future investment in nature-based solutions to support:

- **Climate change mitigation and adaptation**
- **Flood risk**
- **Water quality**
- **Water resources**
- Restoring natural processes
- Species/Habitats

Deliver a key part of **Nature Recovery Network**

- *The Nature Recovery Network (NRN) is a major commitment in the government's 25 Year Environment Plan. By bringing together partners, legislation and funding, we can restore and enhance the natural environment.*

Some Responsible Authorities may have a lot of this data, mapping and Biodiversity and Habitat Action Plans – **LNRS seeks to enhance and maximise this.**



LNRS and the Environment Agency

Duty on the EA to ‘have regard’ to LNRS.

LNRS will:

- provide evidence base to support local plan-making and investment decisions on Nature-based solutions
- provide the spatial targeting needed to effectively deliver Biodiversity Net Gain
- underpin the Nature Recovery Network – **Catchment Scale Planning**

LNRS can deliver:

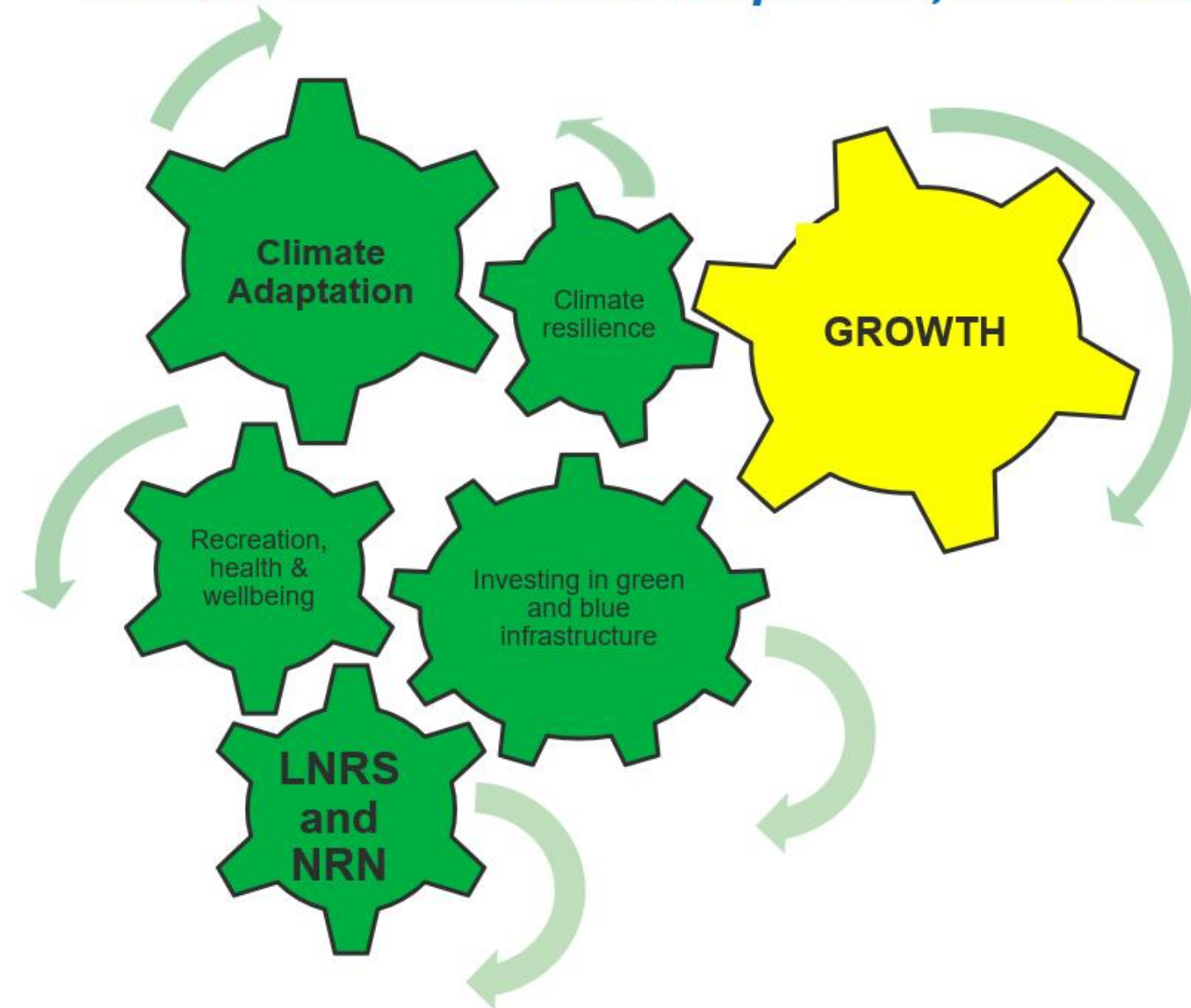
- Climate resilience for people and nature and contribution to mitigation
- Nature recovery including wetland habitats and species
- **Use of nature-based solutions wherever possible**
- Agreed set of priorities for nature recovery
- Coordinated investment in nature recovery
- Inclusion in LNRS increases opportunities for funding and investment and encouraging actions to be carried out.

Draw on technical expertise from a range of EA area teams – **such as Flood, Fisheries, Water Quality...**



Engines for Growth – Engines for Adaptation.

'climate resilience and adaptation, sustainable healthy places, well-being..



Integrated Approach to Water Management – Adaptation – its in our nature!

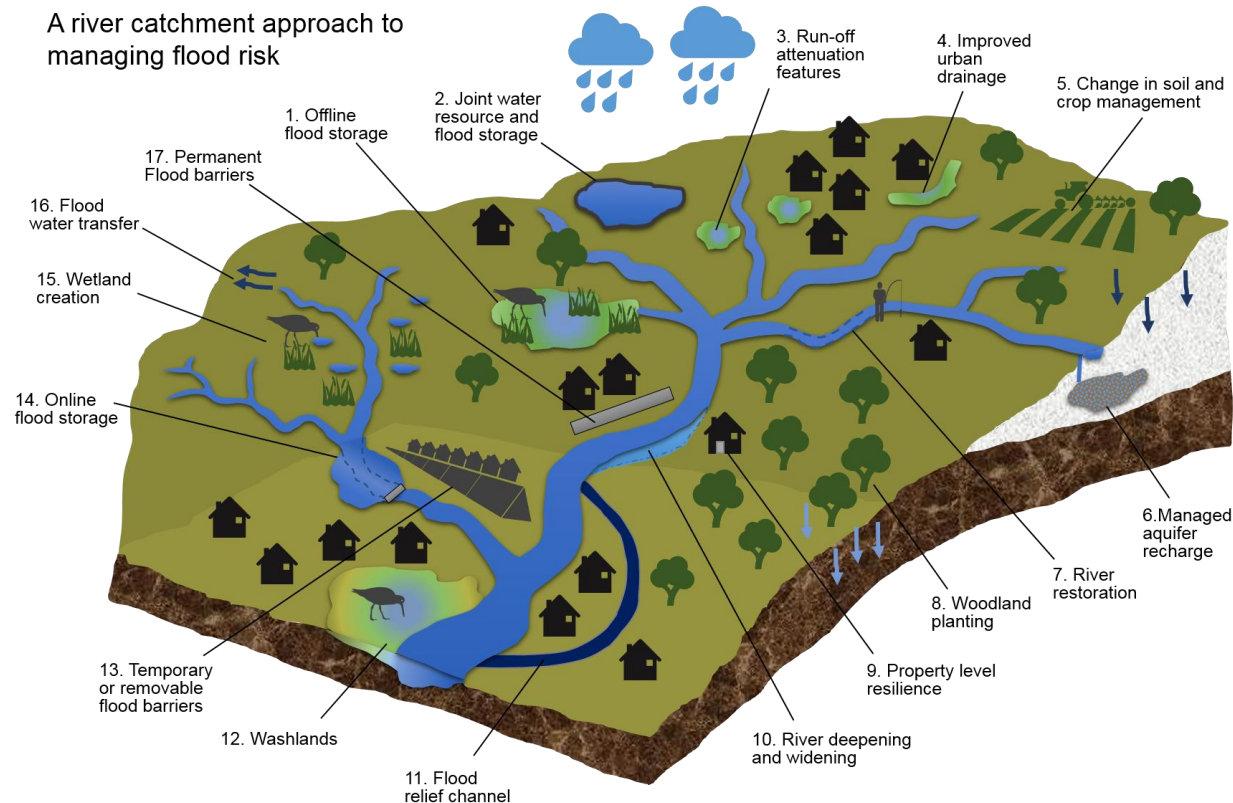
Integrated approach to flood risk management

Catchment based approaches

Improved connectivity with other strategies e.g. water cycle studies and drainage and wastewater management plans

Encourages measures which deliver multiple benefits – including those which unlock sustainable development

Strategic Approach – LNRS.



The area shown in green here is the catchment for the central river.



Environment
Agency

Greening the Grey – Multifunctional SuDs and GI



- Urban heating and air pollution;
- replenish groundwater resources;
- contribute to biodiversity net gain targets;
- capture and re-use rainwater;
- Contaminated Land
- Brownfield Land
- store carbon;
- reduce the need for carbon-intensive construction techniques and pumped systems;
- release capacity in combined sewerage systems and at wastewater treatment works;
- create and connect valuable areas of blue-green infrastructure
- reduce lifetime maintenance costs; and
- enhance the attractiveness and value of new development by integrating water management with habitat for wildlife and opportunities for amenity and recreation.

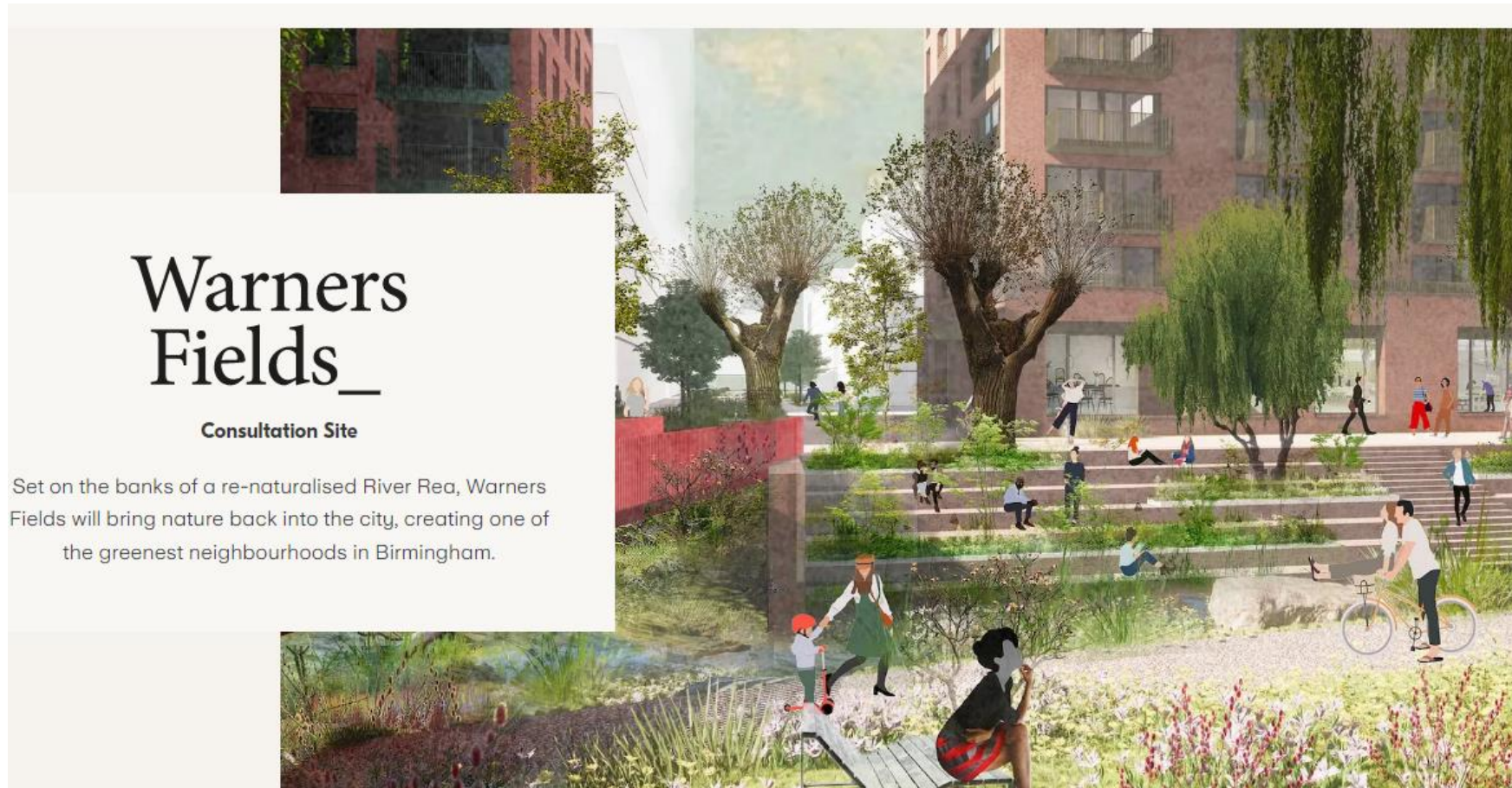


Regeneration – “*its in our nature*”

Creating resilient communities.



Regeneration – its in our Nature



52,500sqm of non-residential floorspace and around **3,000 new homes**

River Rea Quarter SPD

Part of wider River Rea Landscape Scale Scheme

Binley Road 'Mega' Cycle Way

- **Improves physical health** - Exercise
- **Improves social inclusion** - access to safe cycling facilities enables more people to take part in society by improving the ability and opportunity to travel
- **Improves mental health** - Cycling can reduce stress, ease anxiety and reduce the risk of depression.
- **Improves access to employment, education and leisure** - cycling takes you from door to door.

Provides 'Green Space'

Greenery – Nature, Trees, Urban Heat, Well-being

SuDS – Water Management

Multi-functional

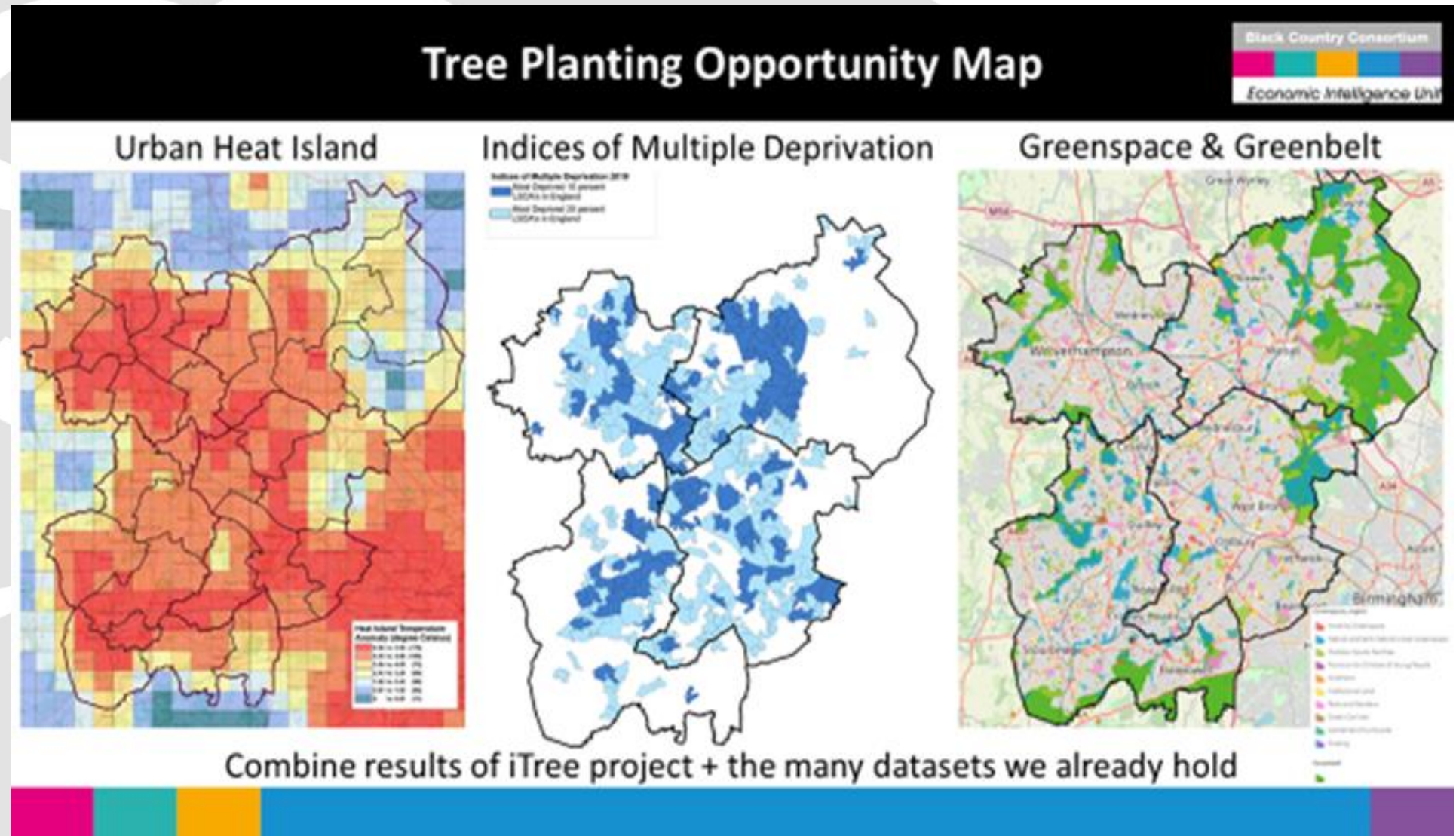


Victoria Ground – nature based regeneration

- 200 homes – High Quality Homes on Brownfield site
- Green Space
- Reduced flood risk to the Victoria Ground site as I has larger capacity (stays in channel in the extreme event)
- Environmental betterment from a biodiversity/habitats perspective with the inclusion of riffles and pools, natural material in the River (WFD) designed to EA requirements
- Alongside this, brownfield land remediated
- River diversion should start end of March 2020 – Phase 1 almost complete
- RTPI Award!
- **We moved the Trent!!**



Black Country iTree – BC Consortium



Stafford Brooks outputs and benefits

- Improved Connectivity
- Significant Biodiversity Netgain
- **Reduction in Flood Risk,**
 - 77 properties along the rising brook and
 - 50 along Sandyford brook
- Carbon Credits/off setting
- Km's of watercourse enhanced
- Improved habitat and biodiversity
- Help towards **WFD objectives**
- Nature Recovery Networks
- Improve **health and wellbeing for local residents** -
- Helping to meet SSSI targets

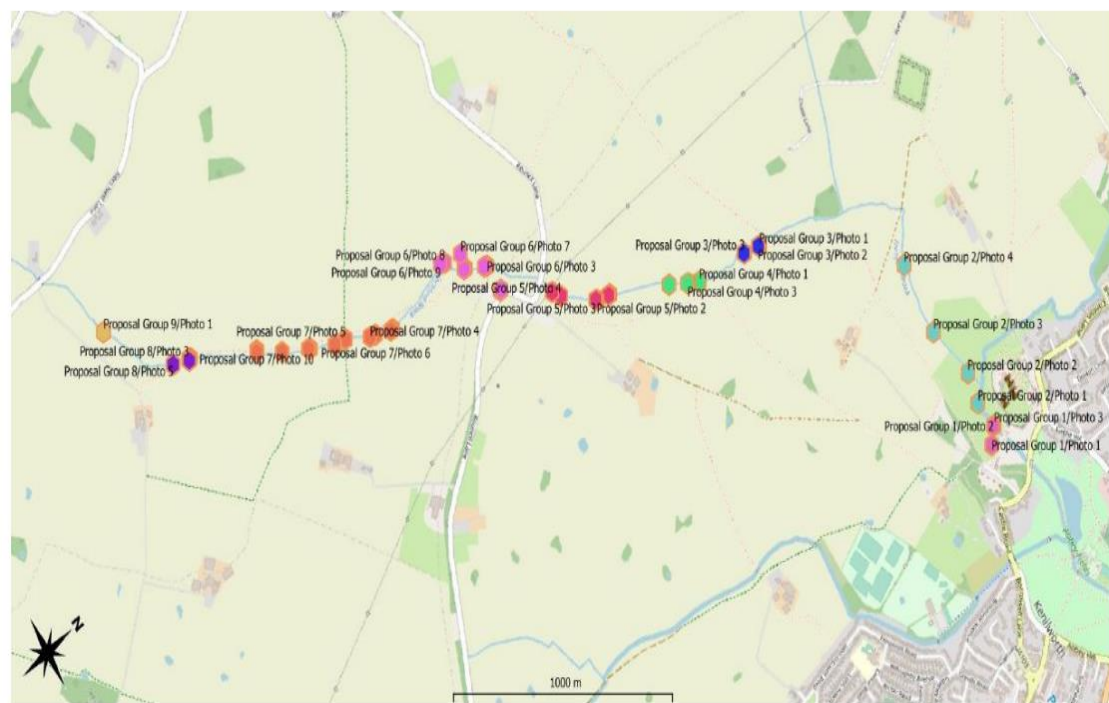
- Nationally significant project for Highways England
- **£4.1 million partnership project with Staffordshire Wildlife Trust, National Highways, Stafford Borough Council, and The Environment Agency.**
- Integrated project delivery
- Partnership working to achieve multiple benefits



Finham/Inchbrook from Kenilworth Natural Flood Management

Walkover by **Warwickshire Wildlife Trust**, with proposal for project work to tackle flooding in the catchment, which will then improve flood situation for Kenilworth residents

Warwickshire Wildlife Trust



Mapped proposal locations, with linked photographs

Credit: Warwickshire Wildlife Trust



Proposal Group 2 shows 3 areas of low lying bank that has potential to be enhanced into larger, seasonally connected online and back water pools. The larger image on the right shows a field drain, draining into short open ditch before entering Finham Brook. This could also be opened and reprofiled into a back water feature. These pools adjacent to the stream would then be fenced so to allow lush marginal vegetation with a small section accessible to livestock to drink from. Plug planting with native, locally abundant pond-edge/ riverine species to increase biodiversity.

Approximate costs would be: £3750

Excavations—£3000

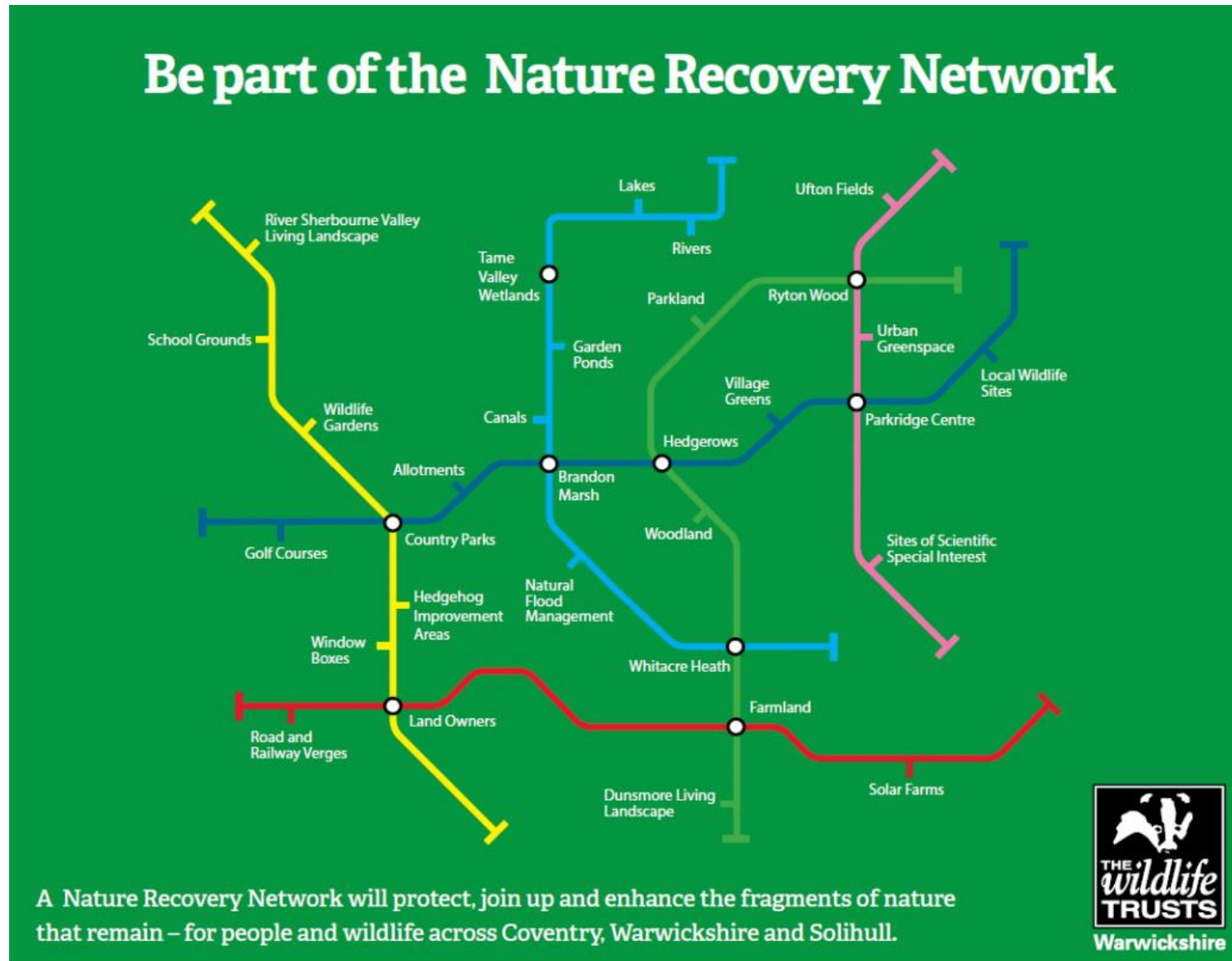
Fencing—£250

Plug planting—£500

Photographs of one site example re flooding, to tackle poaching by cattle/ formalize cattle drinks. Can see old ditch lines in LIDAR image

Credit: Warwickshire Wildlife Trust

Warwickshire Wildlife Trust - Integration



Adaptation and Resilience – working together

- **Economic Strategies**, In accordance with LEP strategies, County, Combined Authorities
- **Regeneration and Green Growth** (socio-economic)
- **Levelling Up/Post Covid Recovery**
- **Health and Wellbeing** health, wellbeing, lifestyle, access to services urban heat, AQ, Asthma, Deprivation, Housing Quality, damp, cold/hot/damp
- **Multifunctional Greenspace** – Parks and Recreation.
- **Local Planning, Local Plans, Transport** – plus Water Cycle Studies, Flood Risk Assessments.
- **Water company** and other Infrastructure Providers.

Shared Objectives – Enhanced Opportunities,

20 minute Neighbourhoods

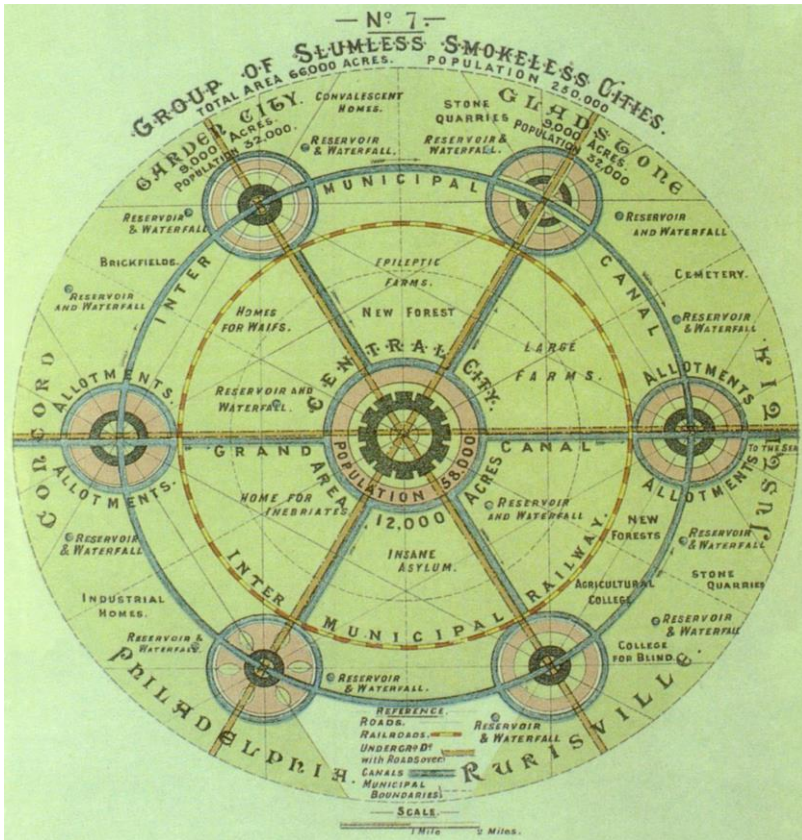
- The 20-minute neighborhood concept is all about ‘**living locally**’
- giving people the ability to meet most of their daily needs within a 20-minute walk from home, with access to safe cycling and local transport options.
- Places where everyone can thrive without having to use a car.
- 10 minutes there, and 10 minutes back.
- Concept out of **Melbourne, Australia**.
- The TCPA is looking at how this idea could be introduced here in the context of the English planning system.
- Working with partners including Sport England, Sustrans, the Design Council, Fields in Trust, CLES and others



Garden Cities and Principals – Learning from the past – models for the future

Founded by **Sir Ebenezer Howard** in 1899 the TCPA represented a fusion of ideas about social justice, beauty in design, health and wellbeing and economic efficiency

TCPA founded the first Garden Cities in **Letchworth** and **Welwyn** and successfully secured the first planning legislation in 1909



Garden Communities – Garden City Principles

The government's aim is to be delivering 300,000 new homes a year on average.

Garden communities provide new housing, infrastructure, jobs and services in sustainable settlements.

Homes England (LPA and Government) the delivery mechanism

The main characteristics should be: (Principles)

- a **purpose-built new settlement, or large extension to an existing town**
 - a community with a **clear identity and attractive environment**
 - it provides a mix of homes, including affordable and self-build
 - **planned by local authorities** or private sector in consultation with the local community
 - As well as building new homes, the communities develop:
 - job opportunities
 - **attractive green space and public realm areas**
 - transport infrastructure, including roads, buses and cycle routes
 - community infrastructure, schools, community and health centers
 - a plan for long-term stewardship of community assets
-
- **Meecebrook (Stafford Borough Council)** – 10,000+ homes – Water Resources a real issue
 - **Cherwell** (NW Bicester 6,000 homes)
 - **Cornwall** – (West Carclaze Garden Village 1,500 homes)
 - **Greater Cambridge** - Bourn Airfield 2,240 homes, Northstowe 6,345 homes...

building successful new communities

Lessons from the TCPA's New Communities Group



Resilience. Restoration. Re-wilding. working with nature.



Local authority Climate Adaptation Toolkit and Risk Generator

Rachel Toresen Owuor, Local Partnerships



JOINTLY OWNED BY



HM Treasury



Adaptation Toolkit for Local Authorities



WHO WE ARE



JOINTLY OWNED BY



HOUSING

INFRASTRUCTURE

**CLIMATE
RESPONSE**

**COMMERCIALISATION
AND REORGANISATION**

ENERGY

RE:FIT

ASSURANCE

**HEALTH AND
SOCIAL CARE**

**PPP, PFI
AND MIM**

WASTE

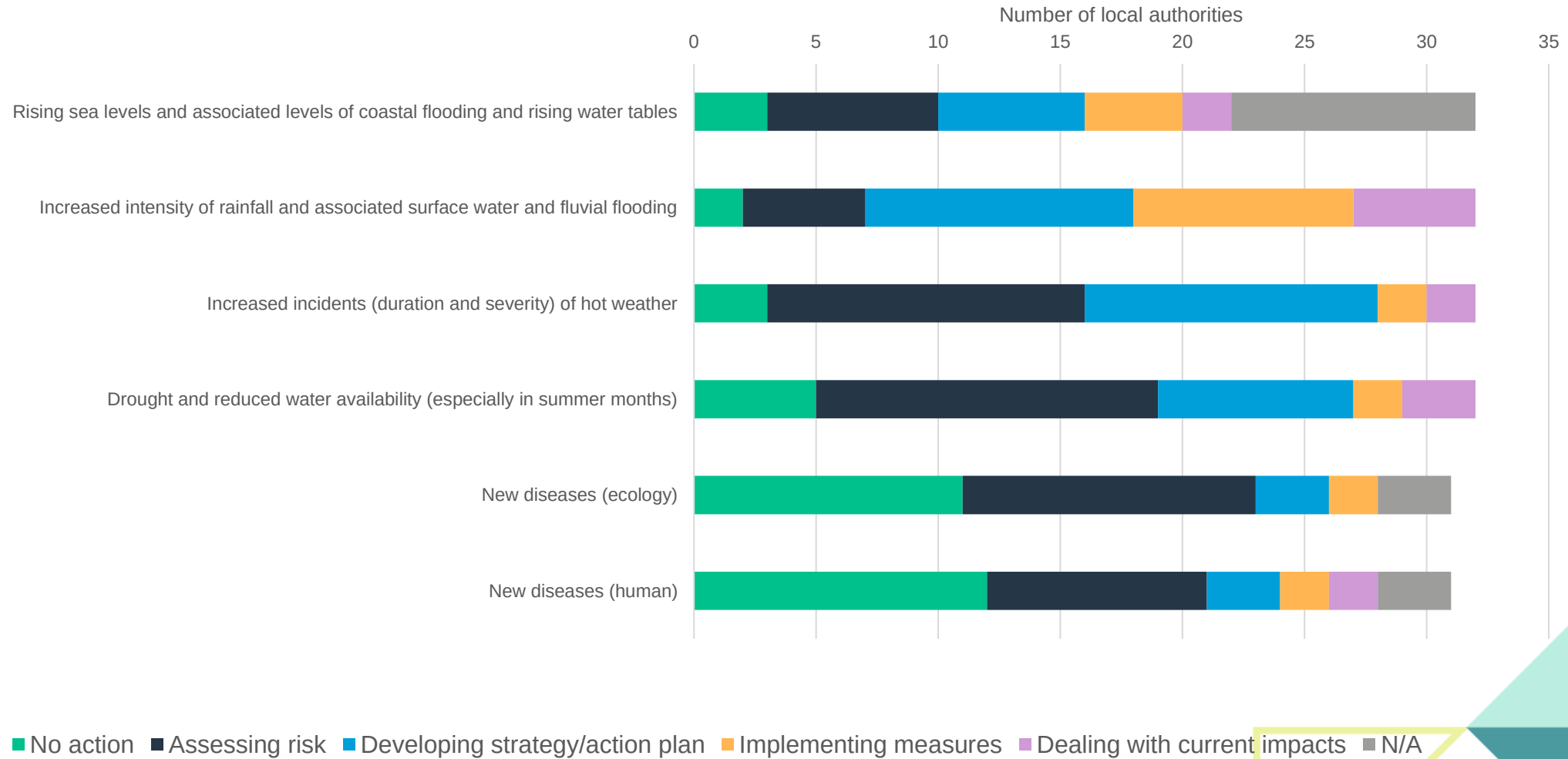
The toolkit – why?



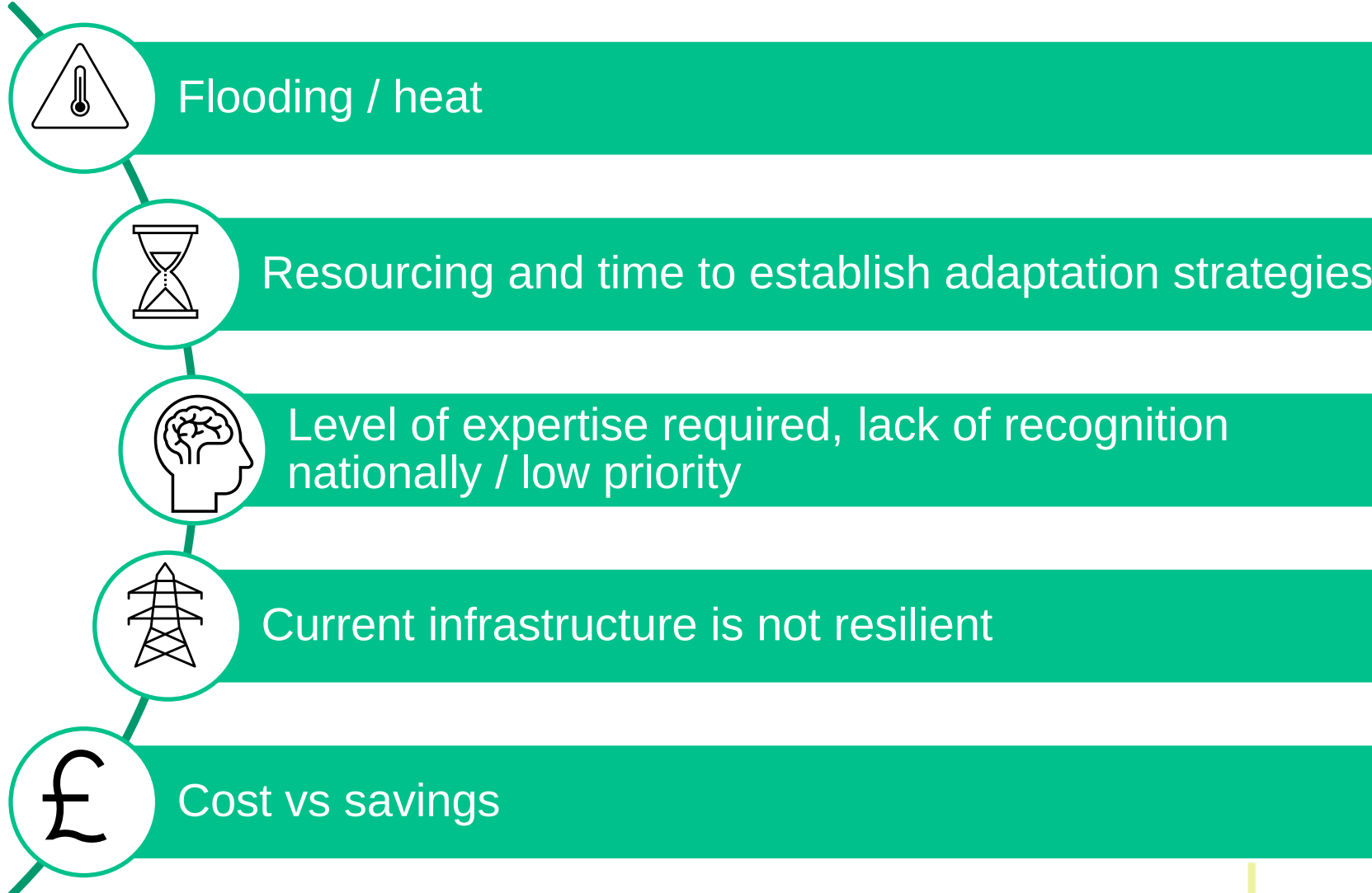
The UK Govt CCRA3

“To achieve net zero, we must integrate adaptation action into mitigation efforts. Successful mitigation will in turn ensure adaptation remains achievable.”

CURRENT LEVELS OF READINESS



MOST SIGNIFICANT AREAS OF CONCERN



Who is the toolkit for?

- Toolkit is suitable for a range of audiences, to introduce adaptation and risk assessment
- Suggested workshops throughout the toolkit for different groups
- Officers with responsibility for managing service risk



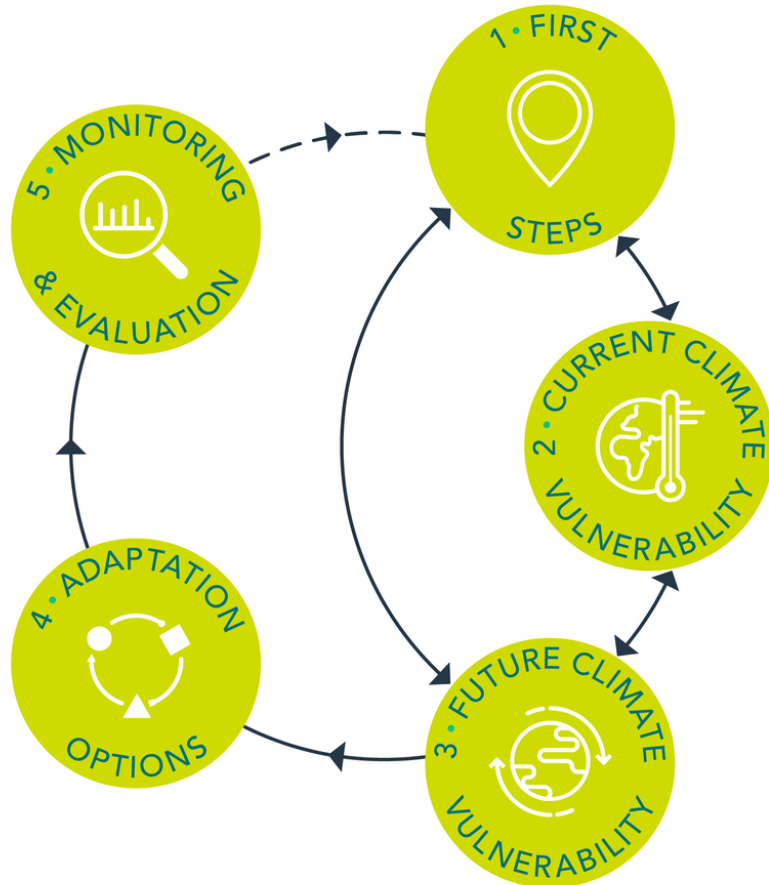
Suggested workshop – OVERCOMING BARRIERS (for officers, leadership team)

Identify potential barriers and constraints within your organisation, and think about how they might be overcome for both completing the Toolkit and to implementing adaptation measures.

This workshop will support the development of the risk register, internal and external engagement activity.

The toolkit itself...

The steps



CONTENTS
INTRODUCTION
1 FIRST STEPS
2 CURRENT CLIMATE VULNERABILITY
3 FUTURE CLIMATE VULNERABILITY
4 ADAPTATION OPTIONS
5 MONITORING & EVALUATION
RESOURCES
GLOSSARY
GET IN TOUCH
LOCAL PARTNERSHIPS CLIMATE ADAPTATION TOOLKIT FOR LOCAL AUTHORITIES

2 CURRENT CLIMATE VULNERABILITY



Having put fundamental building blocks of your adaptation journey in place, it is now necessary to begin thinking about how your organization, its service areas, assets and people are currently being affected by weather events.

At the end of this step you should have:

Assessed your organisation's vulnerability to climate change	☒	Considered how effective your organisation's response to past weather events was, and what features or characteristics influenced its capacity to respond	☒
Identified any critical thresholds which, when exceeded, caused unacceptable losses, or created new opportunities	☒	An awareness of the main uncertainties around your assessment, as well as the quality of the information on which it is based	☒

DRIVERS AND CONSTRAINTS TO ADAPTATION

DRIVERS

INCREASED AWARENESS
FOLLOWING EXPOSURE
TO A RECENT
WEATHER EVENT
SUCH AS FLOODING
OR A HEATWAVE

LEADERSHIP

NEED TO ENSURE
SUSTAINABILITY
OF NEW
DEVELOPMENTS
AND SERVICES

SOCIETAL
PRESSURE
FROM LOCAL
OR NATIONAL
CAMPAIGNS

NEED TO
COMPLY WITH
LEGISLATION
OR STATUTORY
GUIDANCE

PROGRESS

A PREOCCUPATION
WITH SHORT-TERM
– TERMS OF OFFICE
OR SPENDING
REVIEWS – NOT
THE NEXT 50 YEARS

SCEPTICISM
AMONGST
COLLEAGUES

THE FOCUS IS
CURRENTLY ON
MITIGATION;
THE ADAPTATION
IMPERATIVE IS
NOT RECOGNISED

TIME
PRESSURES

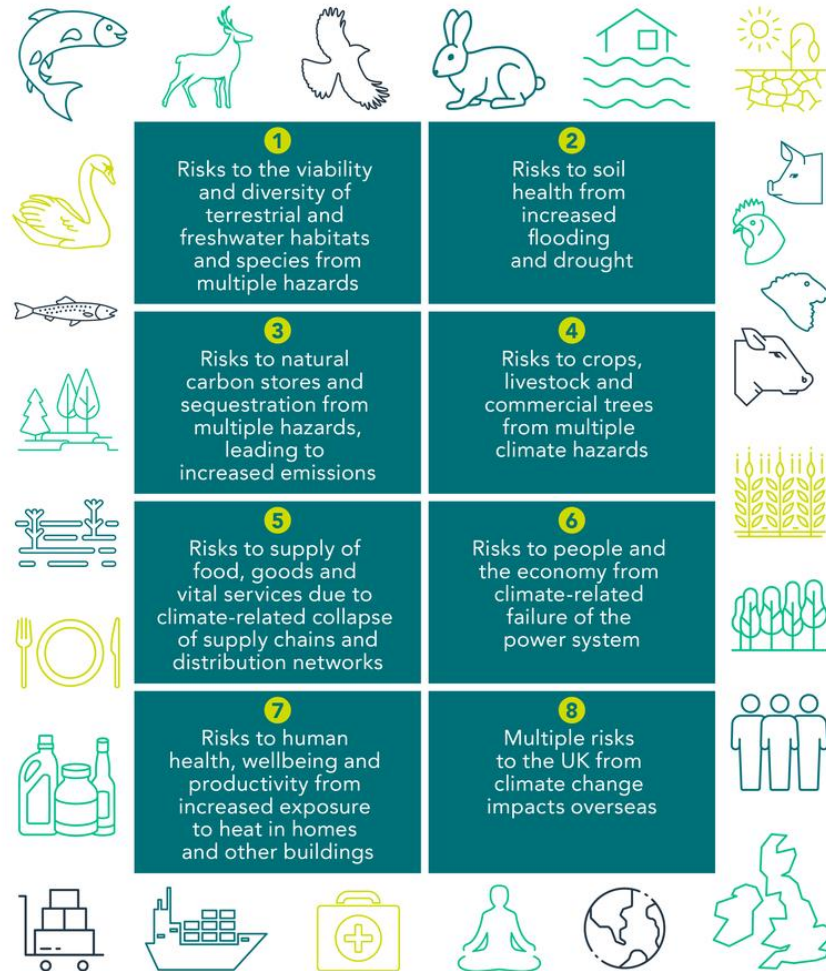
COMPETING
VALUES AND
PRIORITIES

GETTING PEOPLE
TO TAKE CLIMATE
CHANGE SERIOUSLY
WITH THE CURRENT
ECONOMIC
CONSTRAINTS

CONSTRAINTS

Risk assessment

Climate Change Risk Assessment 3 (CCRA3)



- The toolkit and the accompanying risk register draw on the CCRA3 Advice Report
- 61 risks highlighted for local authorities to consider that may impact on service delivery
- Risk register generator as a starting point for development of plans and decision making for local authorities

Highest priorities for next two years and link to local authorities



61 risks and how these apply to service delivery risk

Local Authority Information

Type of LA:

Service Area:

Is the LA located on the coast?

Does the LA include agricultural areas?

Does the LA include forested areas?

Has the LA retained it's council housing stock?

Generate risk register

[illegible]

	G	H	I	J	K	L
	Specific Risk	Proposed Risk Treatment	Risk Owner	Type of decision	Longevity of decision	Decision makers
a. Specify more detailed risks within the CCAR risk for the relevant service area		Identify any action proposed to address the risk				

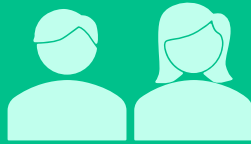
CLIMATE RISK REGISTER FOR COUNCIL SERVICE AREAS

Service Area	Example Impact
Adult Services and public health	Excess deaths due to heatwaves, mental health issues due to flooding, new or more infectious diseases affecting the population.
Emergency planning, civil contingencies and Fire Service	Increased frequency and diversity of events including fires on open ground, flooding, damage to major local infrastructure, increasing antisocial behaviour during hot weather. Overall population resilience to repeated events may be eroded.
Transport and Highways	Existing structures not sufficient to manage flood waters. Damage to infrastructure due to heat and excess rainfall and the need to increase and maintain drainage. Increased risk from trees. Potential need to re-route longer term to avoid flood zones. Air quality, especially during hot, still weather affecting public health.
Waste disposal	Rising water tables could impact landfill sites and lead to leeching of contaminants. Higher temperatures leading to odours, pests and public nuisance.
Planning	Planning applications and local development plans will need to consider climate impacts and resilience measures

PEOPLE – SERVICES

Critical Infrastructure and Assets – CCRA3 risk reference

Staff



Community centres



Leisure Centres



Housing



Sheltered housing



PEOPLE – SERVICES

Critical Infrastructure and Assets – CCRA3 risk reference

More action needed

Further investigation

Sustain current action, watching brief

Asset	Risk ID	Risk / Opportunity
Leisure Centres	B3	Risks to business from water scarcity
Staff,	B5	Risks to business from reduced employee productivity due to infrastructure disruption & higher temperatures in working environments
Community centres, Housing, Sheltered Housing	H1	Risks to health and wellbeing from high temperatures
Staff, Community centres	H3	Risks to people, communities and buildings from flooding
Leisure Centres, Housing, Sheltered Housing	H5	Risks to building fabric
Staff	H7	Risks to health and wellbeing from changes in air quality
Housing	H10	Risks to water quality and household water supplies
Staff	I1	Risks to infrastructure networks (water, energy, transport, ICT) from cascading failures

EXAMPLE

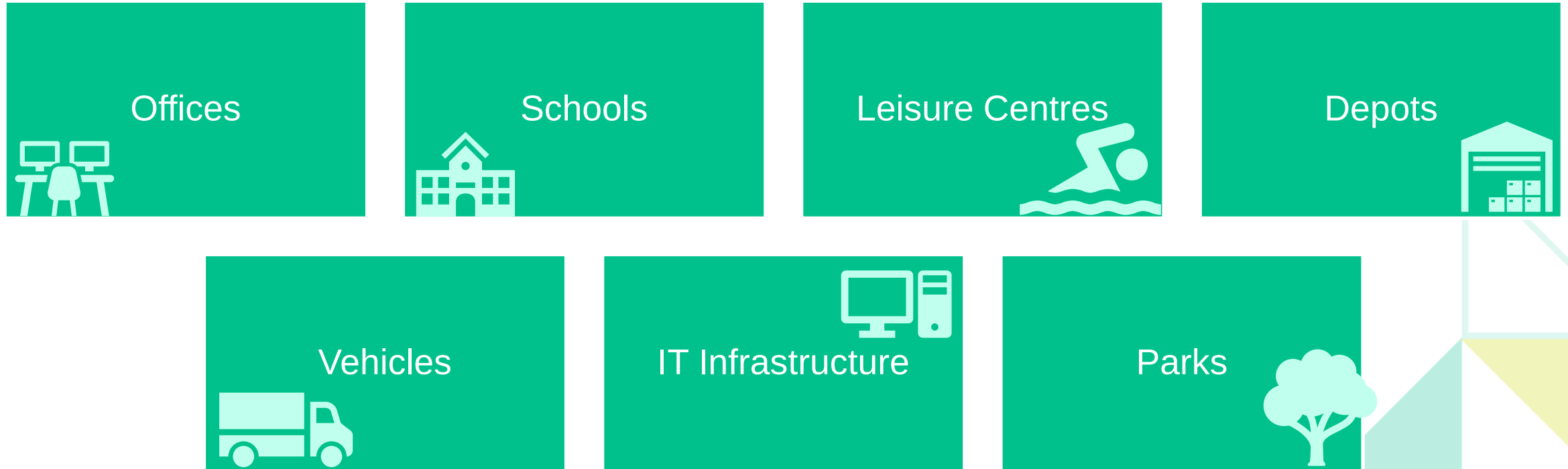
H1: Risks to health and wellbeing from high temperatures

Housing, Public Health, Sheltered Housing



PLACE – SERVICES

Critical Infrastructure and Assets – CCRA3 risk reference



PLACE – SERVICES

Critical Infrastructure and Assets – CCRA3 risk reference

More action needed

Further investigation

Sustain current action, watching brief

Asset	Risk ID	Risk / Opportunity
Schools	B5	Risks to business from reduced employee productivity due to infrastructure disruption & higher temperatures in working environments
Leisure Centres, Schools	H1	Risks to health and wellbeing from high temperatures
Schools	H3	Risks to people, communities and buildings from flooding
Parks	H11	Risks to cultural heritage
Offices, Depots, IT infrastructure	I1	Risks to infrastructure networks (water, energy, transport, ICT) from cascading failures
Depots	I4	Risks to bridges and pipelines from flooding and erosion
Vehicles	I5	Risks to transport networks from slope and embankment failure
Vehicles	I12	Risks to transport from high and low temperatures, high winds, lightning
Parks	N18	Risks and opportunities from climate change to landscape character

EXAMPLE

H1: Risks to health and wellbeing from high temperatures

Planning and Development, Waste Collection, Depots, Infrastructure



ATTITUDE TO RISK

RISK ATTITUDE

RISK ADVERSE

RISK SEEKING



STAKEHOLDER AND DECISION MAPPING

Who are the stakeholders?



Who are the people who experience the decision and its impacts?

Who are the decision makers?

Are the stakeholders the same people/organisations making and accountable for decision making?

How important are the decision makers relative to the stakeholders?

What are the impacts of these decisions?

- Outcomes
- Longevity
- Climate risk/impact

Thank you

Cambridge Canopy Project

Dr. Matthew Ling, Cambridge City Council



The Cambridge Canopy Project: an urban forestry initiative

Dr Matthew Ling

Project Lead, Cambridge Canopy Project

***Climate change adaptation:
practical examples for local authorities***
3rd November 2022



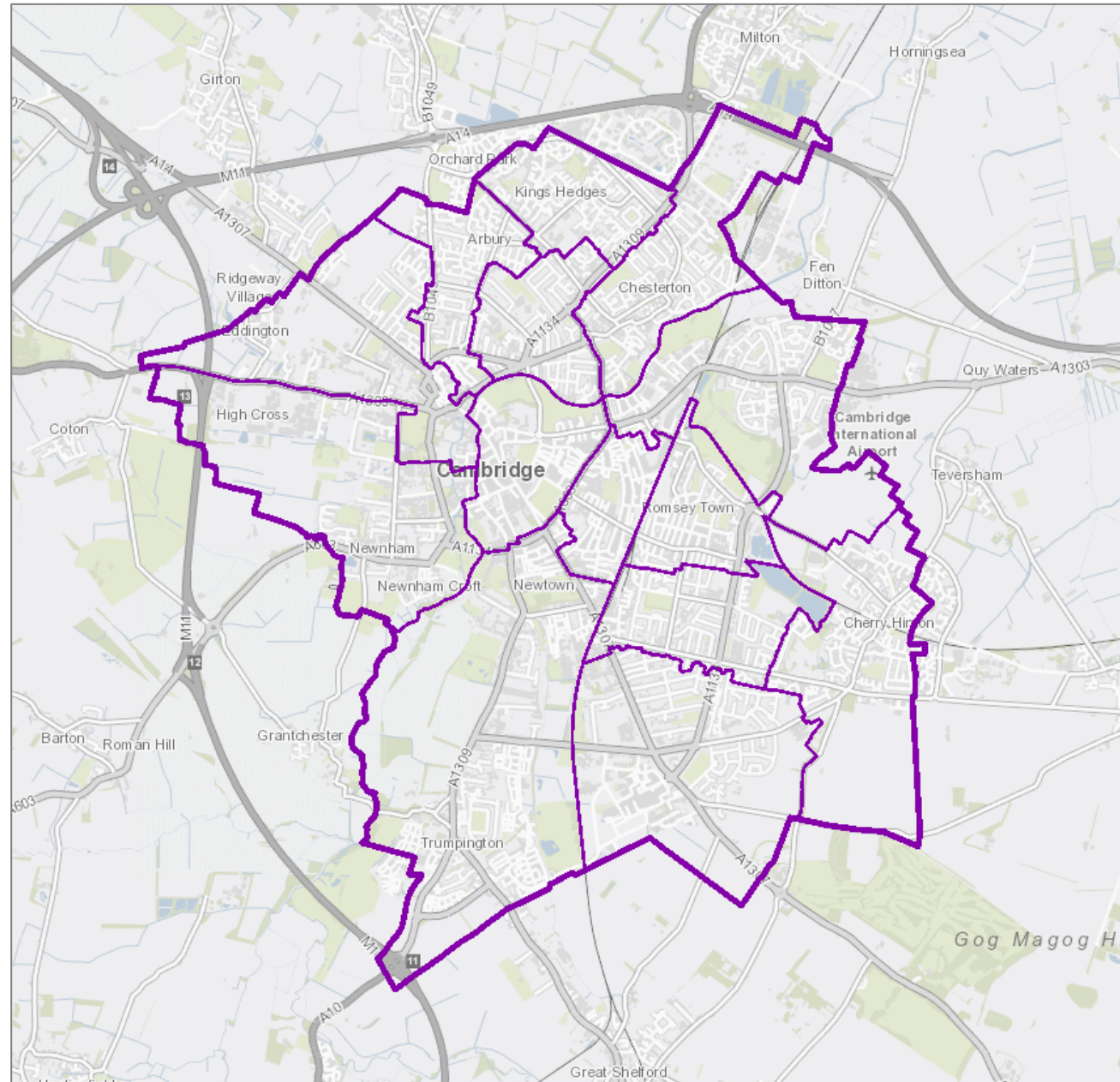




Photo by [Evan Dennis](#) on [Unsplash](#)

What is the **Cambridge Canopy Project**?



Interreg 
2 Seas Mers Zeeën
European Regional Development Fund


NATURE SMART CITIES
ACROSS THE 2 SEAS



NATURE SMART CITIES

ACROSS THE 2 SEAS



Project Partners



Den Haag



Business Model

With the Nature Smart Cities business model, we contribute to estimating the value of green infrastructure in urbanized environments. Through the automated Excel tool, users walk through different steps to explore the multi-benefits of a green infrastructure project and get some insights on how their project may be optimized even further!

The end product of the business model is a factsheet, that serves as a communication tool.

The step-by-step guidance, which takes you through every step of the business model can be downloaded here:

↓ [Step-by-step guidance - Nederlands \(.pdf - 5MB\)](#)

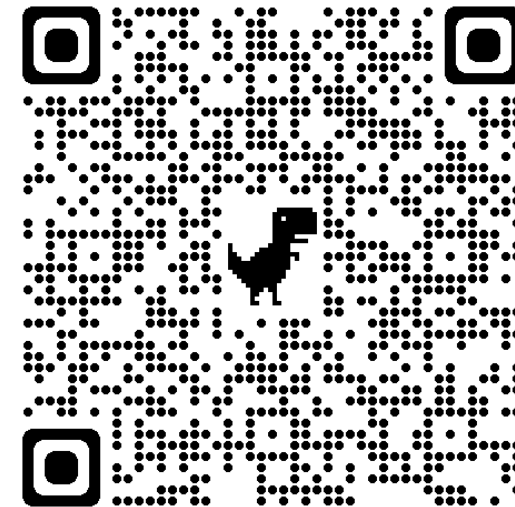
↓ [Step-by-step guidance - Français \(.pdf - 5MB\)](#)

↓ [Step-by-step guidance - English \(.pdf - 5MB\)](#)

For further information on the methods that the Nature Smart Cities business model utilizes, including academic references and the data sources used, you can consult our Technical Manual.

↓ [Download Technical Manual \(.pdf - 5MB\)](#)

<https://www.uantwerpen.be/en/centres/environment-sustainable-development/research/projects/nature-smart-cities/>



**Download the business model →
here**



Tommelstraat, Mortsel, Belgium

The Tommelstraat is located in a quiet residential area in Mortsel. The street has 41 full grown common lime trees with an estimated age of 50 to 60 years. Over the years the roots of the street trees have lifted the sidewalk. Due to this root heave, bumps were formed in the sidewalk, which are causing discomfort and dangerous situations for the residents of the street.

Grey scenario

In this scenario, the street trees would be cleared, nine new trees would be planted, green strips with newly planted lawns would be added, and a traditional concrete paved sidewalk would be constructed.

Avoided runoff per year
456.51 m³ (€237.26)
by the trees, sidewalk and green strips



Water management

Carbon storage
527.40kg (€29.16)
By the trees



Carbon storage

Carbon sequestered per year
45.90kg (€2.52)
By the trees



Carbon sequestration

Air pollution removal per year
243.50gr (€1.08)
By the trees



Air pollution removal

vs.

Green scenario

In this scenario the street trees would be preserved, a permeable pavement would be retrofit constructed on the sidewalk and the green strips would be planted with shrubs.

Avoided runoff per year
1588.84 m³ (€805.52)
by the trees, sidewalk and green strips

Carbon storage
17774.10kg (€981.13)
By the trees (= baseline)

Carbon sequestered per year
602.30kg (€33.23)
By the trees (= baseline)

Air pollution removal per year
13219.60 (€12.15)
By the trees (= baseline)

Baseline



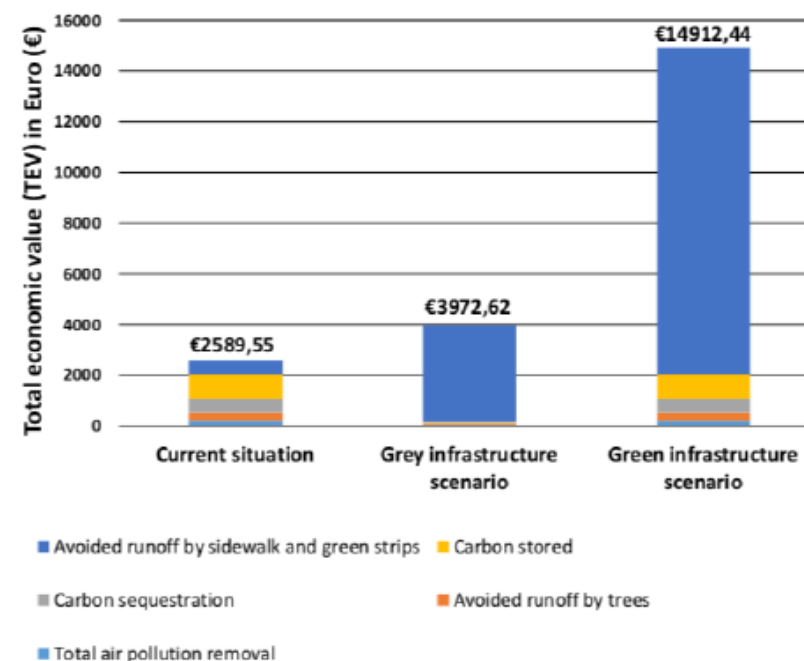
Grey scenario



Green scenario



Comparison Total Economic Value (TEV) per scenario



Maintenance costs and construction costs: Not taken into account

The Cambridge Canopy Project



An urban forestry initiative

- Aiming to increase tree canopy cover in the city by **2%**
 - Growing from **17%** to **19%** by the 2050's.



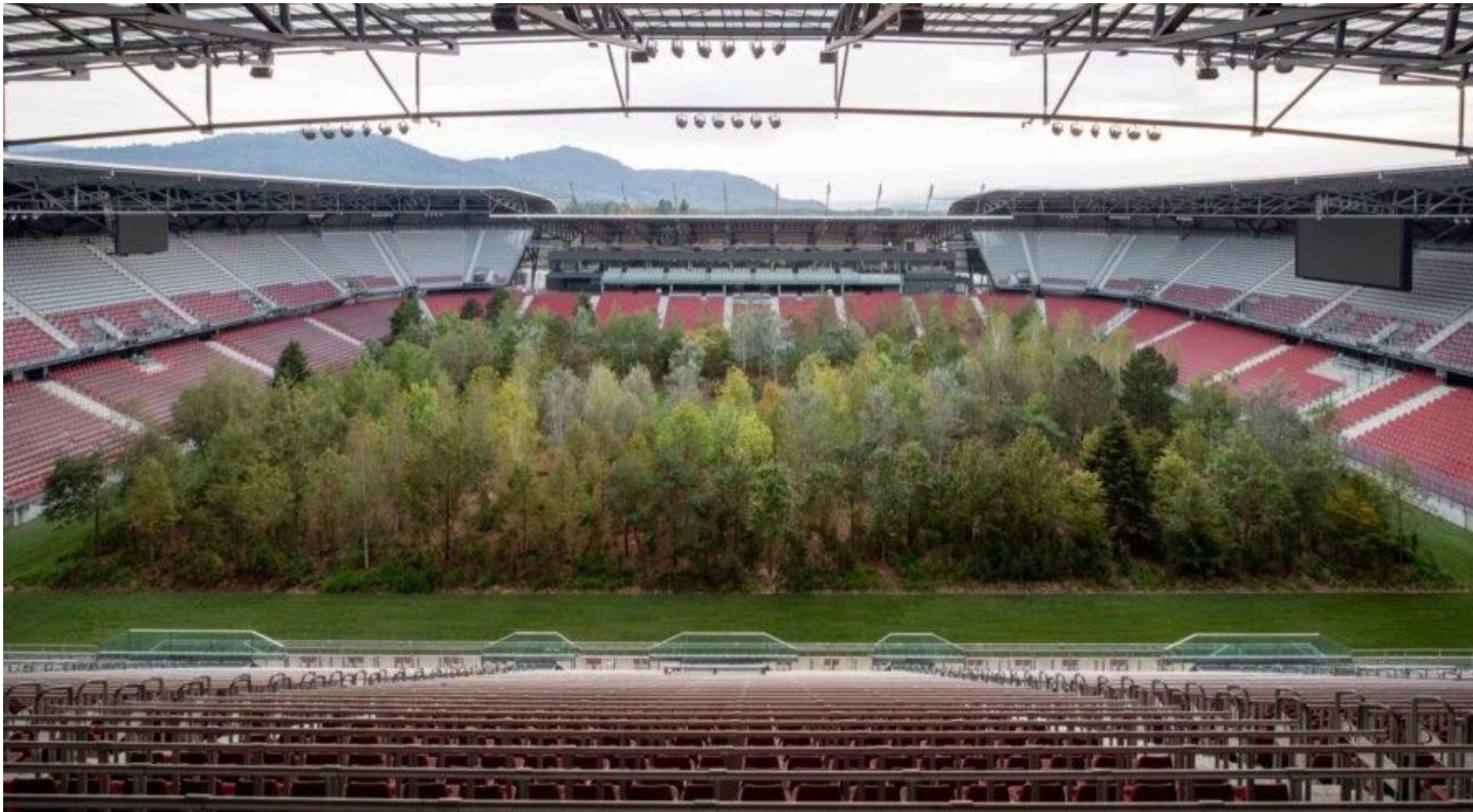
An urban forestry approach



Growing our Urban Forest



- From **17%** to **19%** tree canopy cover
- To achieve this, **16,000** additional trees are needed
- **2,000** nursery-raised ‘standard’ sized trees will be planted on public open spaces



© Gerhard Maurer and Unimo, 2019

Free tree schemes

- 1,500 free trees to be given away through resident engagement schemes



How?



Photo created by wayhomestudio - www.freepik.com

Communications, engagement & outreach



Cambridge Canopy Project
@CamCanopyProj

@CamCitCo urban forestry in
& @Interreg2Seas. Green infra

Cambridge, England
Joined January 2020

845 Following 1,213 Followers



The Cambridge Canopy Project is part of the Interreg 2 Seas Nature Smart Cities across the 2 Seas

Communications, engagement & outreach

FEATURE

By Matthew Ling

FEATURE

2. Distribution of Cambridge's urban forest by ownership type (N/S. Tree canopy area in scale)

© GreenCambridge Ltd. All rights reserved. All content is the property of GreenCambridge Ltd. 2020/2021

Forest preventing some parts of society benefitting equally from these assets. In Cambridge, UK, there are numerous parks and other green open spaces for the public to access and

The greatest canopy cover is found in Newnham (22.6%), and the lowest in the Cherry Hinton (12.8%) and Abbey (12.9%) wards. This unequal distribution of trees

country. In contrast, using Abbey ward as an indicative example, of its six neighbourhoods, two are in the 20% most deprived in the country, and one in each of the 30%, 40% and 50%

earth OPTIMISM CAMBRIDGE

Cambridge Conservation Initiative



About

Stories of Hope

Solutions Fair

Film Festival

Global Earth Optimism

Blog

Q

Plant a tree, grow a forest

- with the Cambridge Canopy Project

Join the Bats in Churches Study

Taking action for the nature near you!

Wildlife adventures at Wicken Fen Nature Reserve

Plant a tree, grow a forest

Discover & record nature and wildlife along the Old West River

School Streets: a greener way to travel

Take part in Citizen Science to engage with the natural world and make a difference

Better deliveries for better cities

Home > Solutions Fair > Out & About > Plant a tree, grow a forest

Print

Share:

Facebook

Twitter

LinkedIn

The vast majority of the human population now resides in urban centres – this trend of urbanisation is set to continue. By 2050, it is projected that nearly 7 billion people globally will be living in towns and cities.

As a consequence of construction and development predominated by engineered materials like concrete, tarmac, steel, and natural stone, urban environments like towns and cities are prone to excess heating – known as the urban heat island effect – and flash flooding resulting from intense rainfall events. Both of these processes are becoming more common and severe with the effects of climate change.

Ness

until 16:00

Glenn Jones

Y

SALES

ABOUT

akfast: Cambridge Canopy

oject

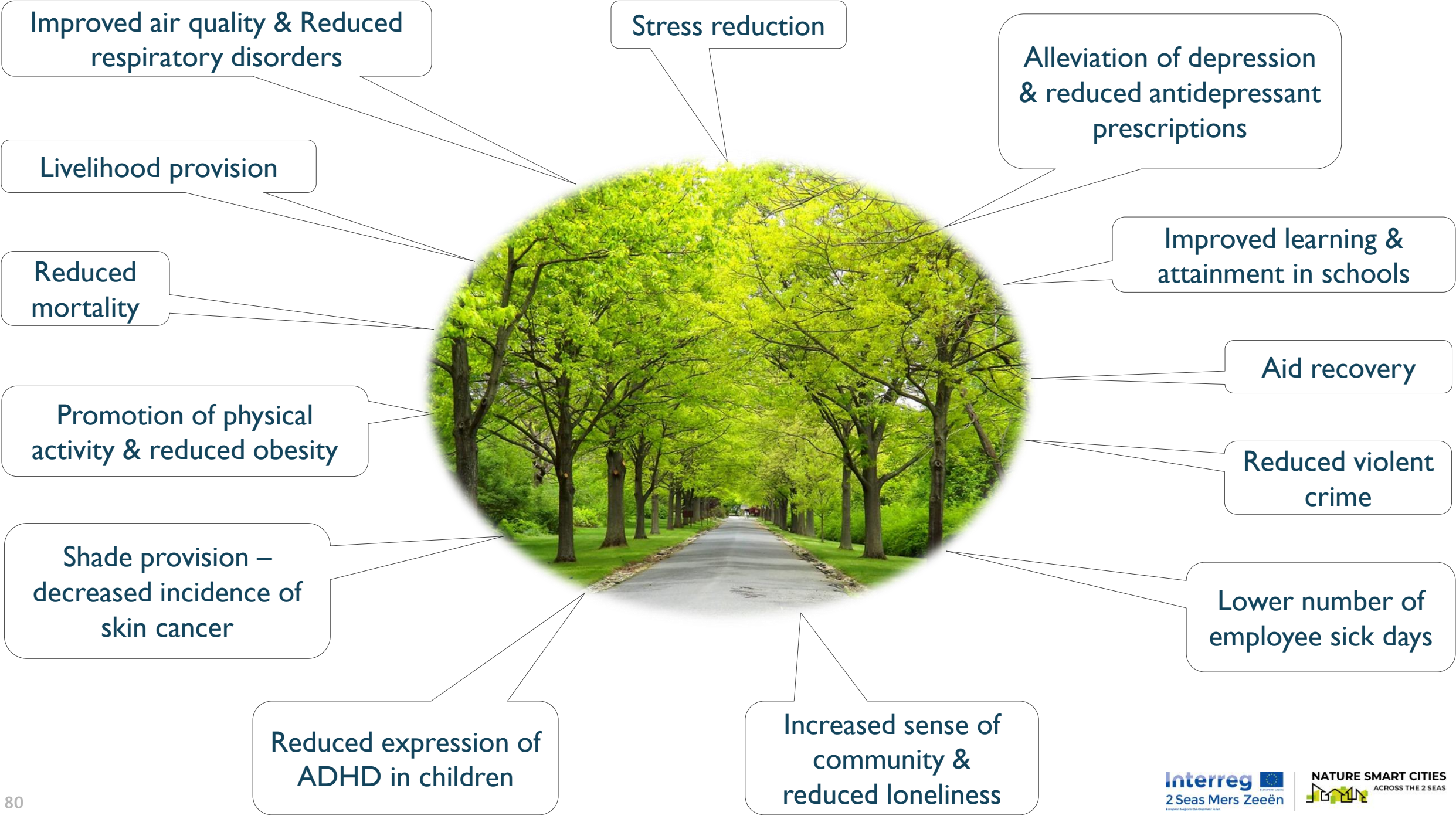


, designed to increase tree

Dr Matthew Ling who

00:00







WE NEED YOU!



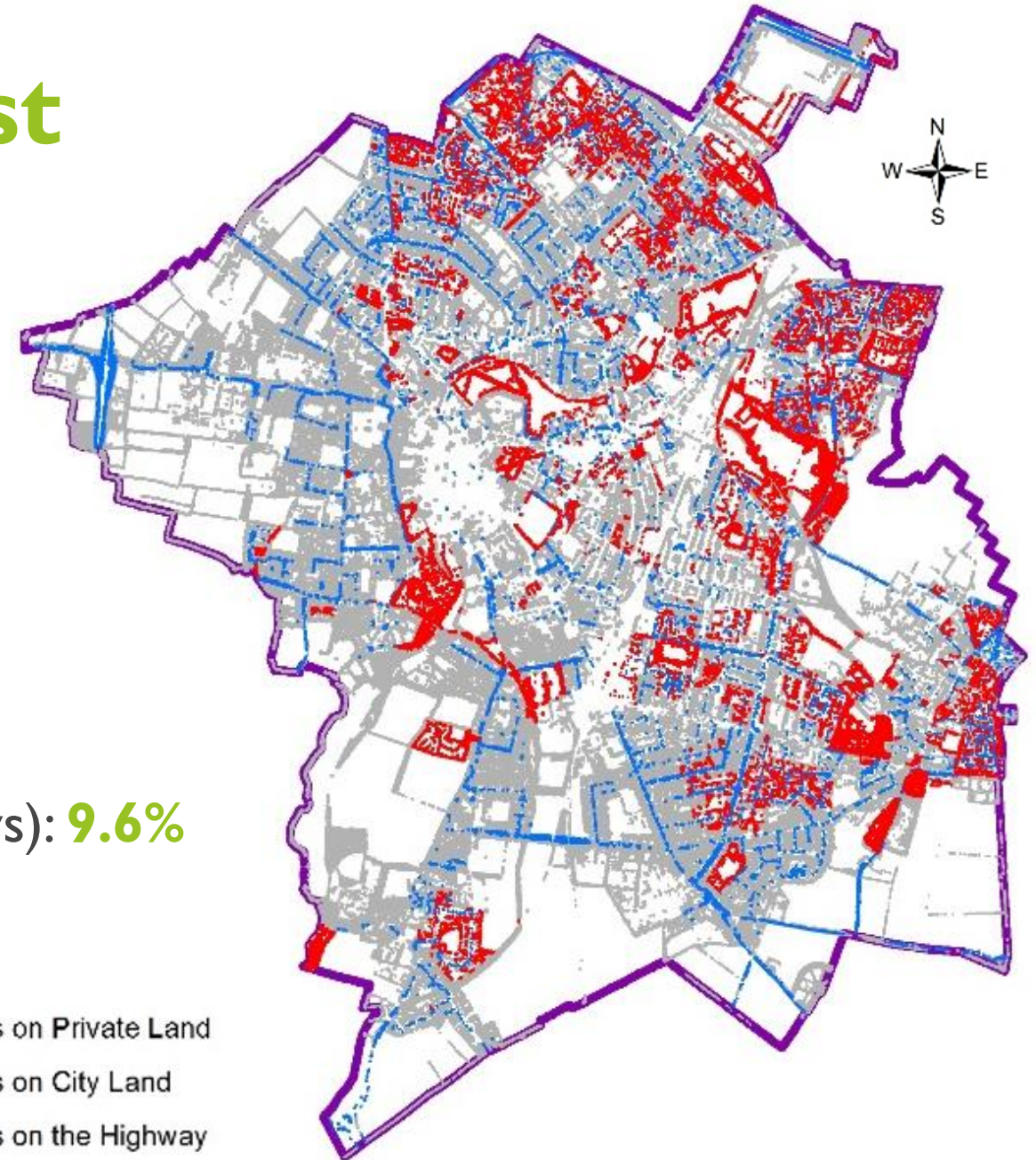
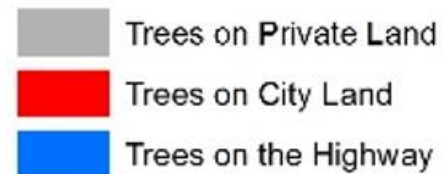
*Right tree,
right place!*

© jerry dohnal 2013 CC BY-NC-ND 2.0 courtesy of Flickr

Cambridge's Urban Forest

- Total tree canopy cover = **17.1%**
- Total tree population = **335,884***
- Tree ownership:
 - Cambridge City Council: **16.3%**
 - Cambridgeshire County Council (Highways): **9.6%**
 - Private: **74.1%**

* all trees & shrubs over 1.2m high



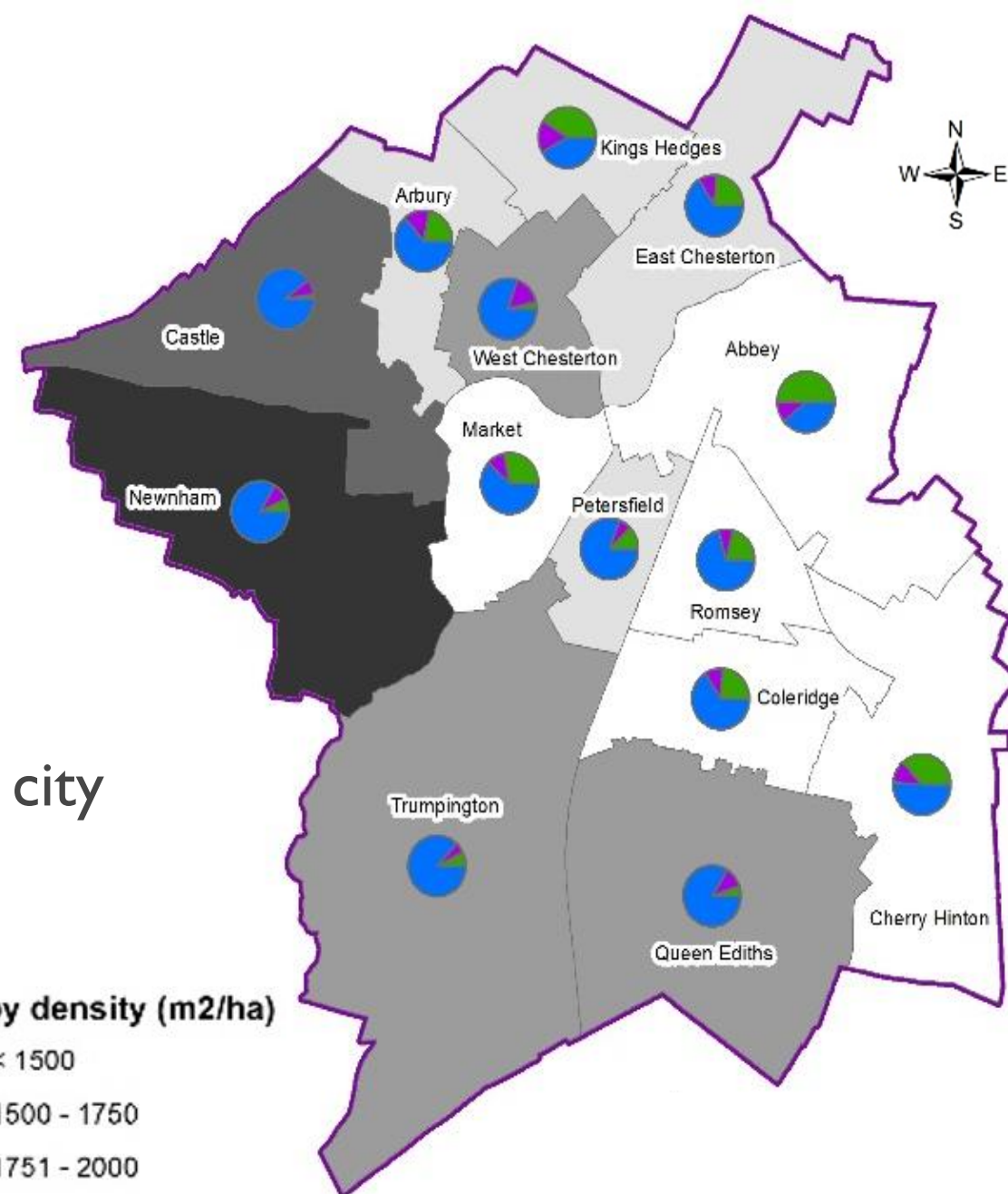
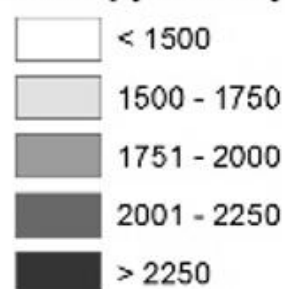
Cambridge's Urban Forest

- Total number of privately owned trees = **248,890**
vs
- Cambridge CC owned trees = **54,749**
- Privately owned land makes up **77%** of the city
- **39%** of **ALL** land uses in Cambridge = Residential

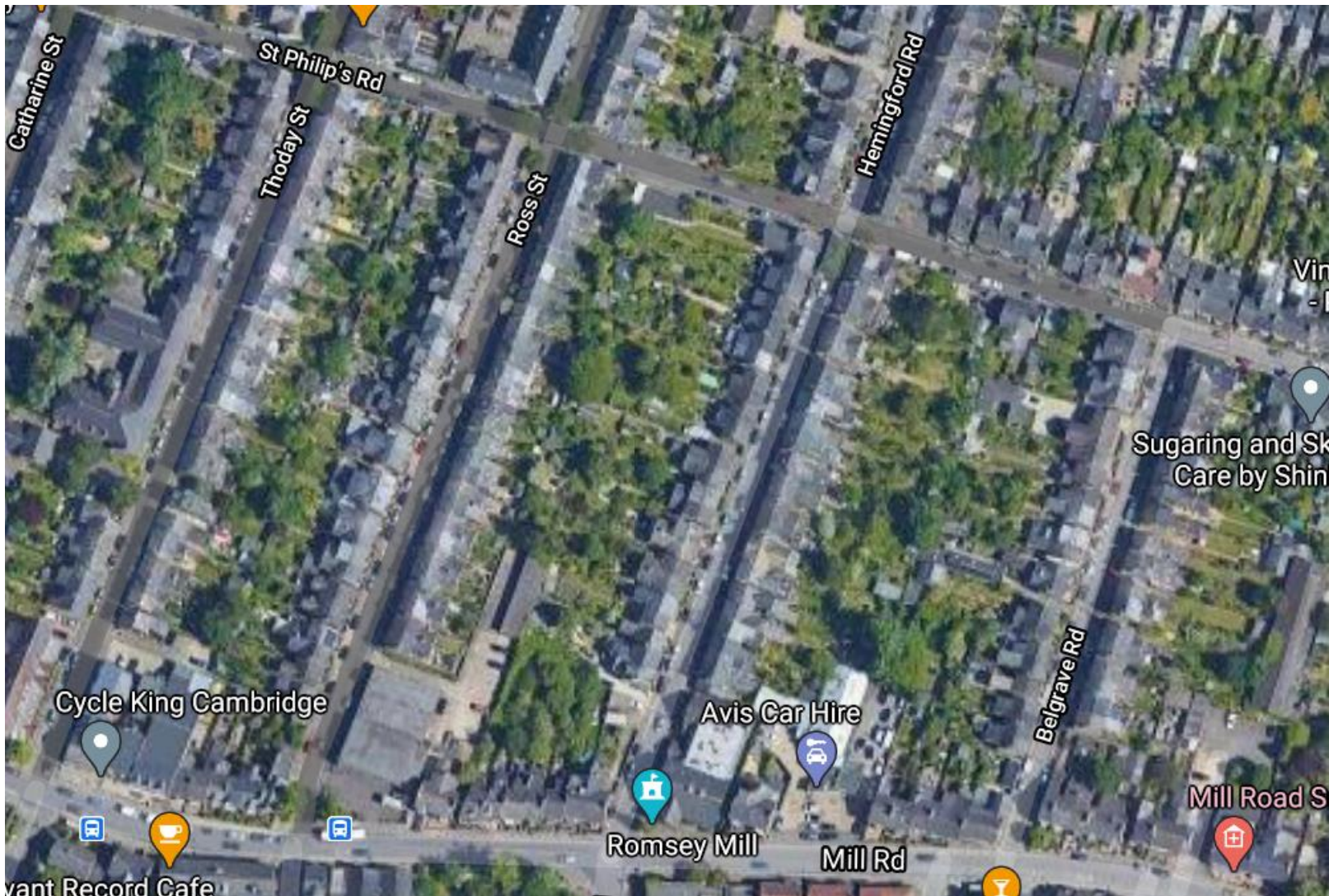
Canopy cover by ownership



Canopy density (m2/ha)



Green oases



Gardens of opportunity

- There are **>54,000** residences in Cambridge
- c. **45,000** of which have a front or back garden, or both

© Thistle-Garden 2018 CC BY-NC 2.0 courtesy of Flickr



GREAT BIG TREE DISCOUNT!

In association with **Ashridge Trees Ltd.**, the **Cambridge Canopy Project** is delighted to offer Cambridge city residents a **20% DISCOUNT** off the price of trees and hardy shrubs bought from Ashridge's online shop (*T&Cs apply*). Simply visit www.ashridgetrees.co.uk/cambridge and enter the code **CCP20** at the checkout.



SCAN ME





HELLO, THIS IS A SPONSORED STREET TREE...

...part-funded by a local resident(s), as part of a national scheme, which your local council is taking part in. The aim of which is to help fund and plant lots more street trees.

If you'd like to sponsor a tree, to go outside your house or nearby, then simply visit the treesforstreets.org



LET'S FILL OUR STREETS WITH TREES

treesforstreets.org

Trees for Streets



www.tinyurl.com/WateringWednesday2021



I'm your new tree

Please water me when I'm thirsty

The Tree team at Cambridge City Council would like to introduce you to your new tree; we hope you'll enjoy the many benefits it'll bring for many years to come.

Achievements & Successes



Image by creativeart on Freepik - www.freepik.com

Logan's Meadow

Tree Planting

On Logan's Meadow



Four one-hour slots
from 11:00 - 15:00 on

Saturday 27 November
Sunday 28 November
Saturday 4 December
Sunday 5 December

VOLUNTEERS REQUIRED
No experience necessary

Pre-booking essential
To reserve a slot email
tonyeva@climateseries.com
or call 07837 055139

 @FOLM_Cambridge



Parker's Piece



Queen's Green Canopy

Elm fit for a Queen is part of city council's Green Canopy celebrations



The tree planting ceremony in Queens' Green as part of the Queen's Green Canopy initiative to mark the Platinum Jubilee

Picture: Cambridge City Council

There was a regal theme as Cambridge City Council planted an elm tree in Queens' Green as part of the Queen's Green Canopy initiative to mark the Platinum Jubilee.

Julie Spence, Lord Lieutenant of Cambridgeshire, led the planting on Friday (March 18), with the High Sheriff of Cambridgeshire, Caroline Bewes, and city mayor Cllr Russ McPherson.

Mrs Spence said: "Hopefully this planting will encourage residents to get involved in the Queen's Green Canopy initiative and plant trees in their gardens which will help support the aims of the Cambridge Canopy Project."

Dr Matthew Ling, project lead for Cambridge Canopy Project, added: "It was a privilege to have organised this event for the Queen's Green Canopy initiative in celebration of Her Majesty's Platinum Jubilee."

"I think the location could not be more apt – a new tree on Queens' Green, off of Queen's Road, behind Queens' College – adding a small piece of history to this wonderful site. I wholeheartedly encourage everyone to get involved and plant a tree for the jubilee."



Soroptimist International



Soroptimist International of Cambridge

Soroptimist International of Cambridge has been a club for business and professional women for the last 75 years. In 2021, across the world Soroptimist International celebrated its Centenary and agreed to plant 100,000 trees to help the environment.

Soroptimists work together on a variety of service projects locally, nationally, internationally and have NGO status. |

These projects, local, national or international, support women, girls and their families in education, health, human rights and environmental issues to improve their lives. Locally we provide financial and practical support to Cambridge Women's Refuge, Jimmy's Nightshelter, Whitworth House amongst many charities/organisations. Our subjects range from issues in the Third World to local concerns or sometimes topics in a lighter vein. (<https://sigbi.org/cambridge/>)

Community planting



Tiny Forest



THE CAMBRIDGE CANOPY PROJECT

HELPING TREES

The Cambridge Canopy Project seeks to increase tree canopy cover in the city, mitigating against and adapting to the likely future impacts of climate change. It is an urban forestry initiative in the Nature Smart Cities across the 2 Seas project under the Interreg 2 Seas programme.

PROJECT AIM, ACTIVITIES & OUTCOME

AIM:
To help the City adapt to a changing climate by cultivating a resilient urban forest with increased tree canopy cover (57% rising to 70%) by the 2030s.

ACTIVITIES:

- Plant 2,000 trees on council-owned land
- Enhance protection & management of the current tree stock
- Engage & encourage residents & private landowners to plant trees
- Develop tools to help us assess tree canopy cover & manage the urban forest better
- Develop guidance to support tree planting & care
- Conduct an ecosystem service valuation study
- Roll-out a citizen engagement scheme to help us manage our trees & collect data

OUTCOME:
Mitigate against the urban heat island effect & climate change related flooding

Read more at:
www.cambridge.gov.uk/cambridge-canopy-project

[@CamCanopyProj](#) [@CamTree](#)

Interreg 2 Seas Mers Zeeën

NATURE SMART CITIES



**Together, we can
grow our urban
forest, and combat
climate change**



Thank you



twitter.com/CamCanopyProj

For more information visit:

www.cambridge.gov.uk/cambridge-canopy-project

www.naturesmartcities.eu

Nature Smart Cities has received funding from the European Union's Interreg 2 Seas Programme under grant agreement no. 2S05-048

SPONGE 2020

Aleksandar Bogdanov, Essex County Council

Essex County Council

SPONGE 2020

Co-creation and implementation of innovative, participative climate adaptation solutions in densely-built areas.



Essex County Council

SPONGE 2020 was an Interreg, 2 Seas project that aimed to improve the adaptation capacity of cities and densely-built areas by implementing innovative climate change adaptation solutions with local stakeholders.



Municipality of Rotterdam
The Netherlands



Somerset County Council
United Kingdom



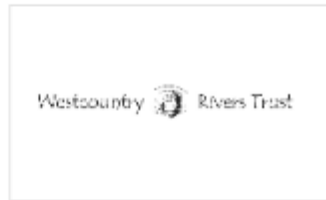
Provincie Oost-Vlaanderen
Belgium



Essex County Council
United Kingdom



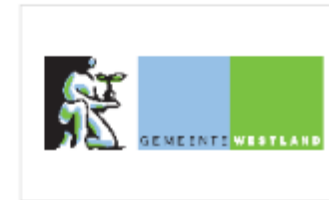
City of Antwerp
Belgium



Westcountry Rivers Trust
United Kingdom



Regional water authority of Delfland
The Netherlands



Municipality of Westland
The Netherlands



Southend-on-Sea Borough Council
United Kingdom



Municipality of Leiden
The Netherlands



Schieland en de Krimpenerwaard
Regional Water Authority
The Netherlands



Rijnland District Water Control Board
The Netherlands

Drivers

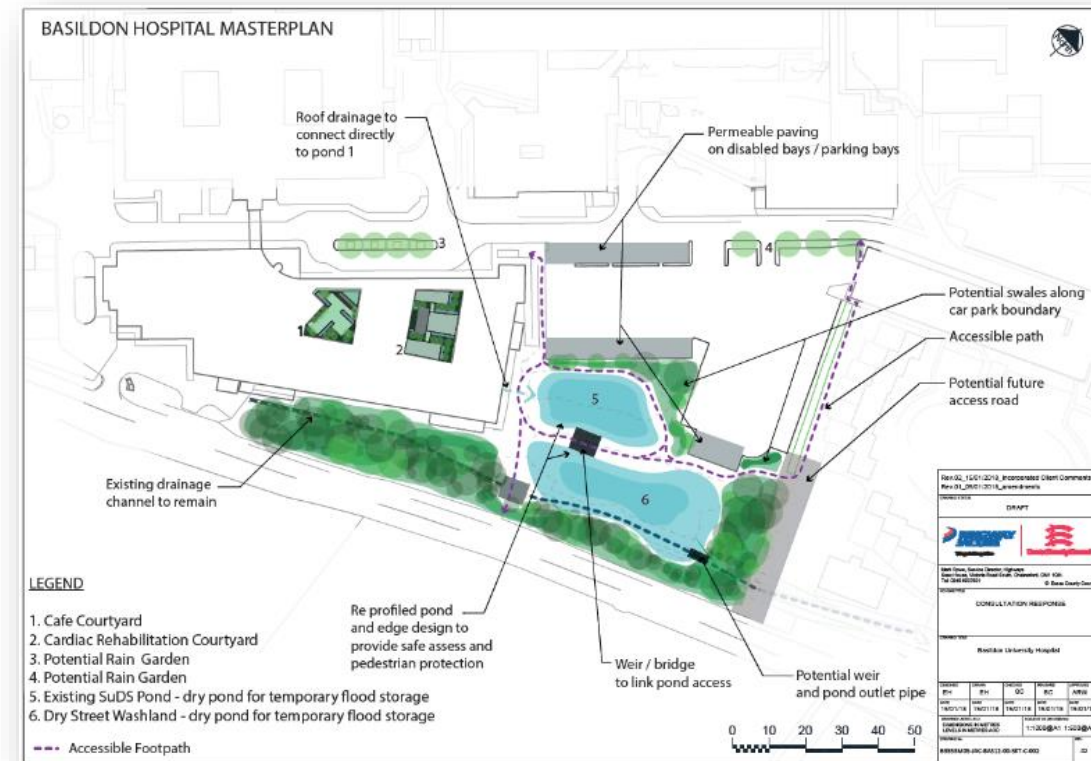
- Retrofitting adaptation measures (SuDS) in densely-built urban areas
- Active participation of local stakeholders, previously not involved in climate adaptation
- Improving not just water retention capacity but also biodiversity and amenities

Project outputs

The project delivered **four key outputs**:

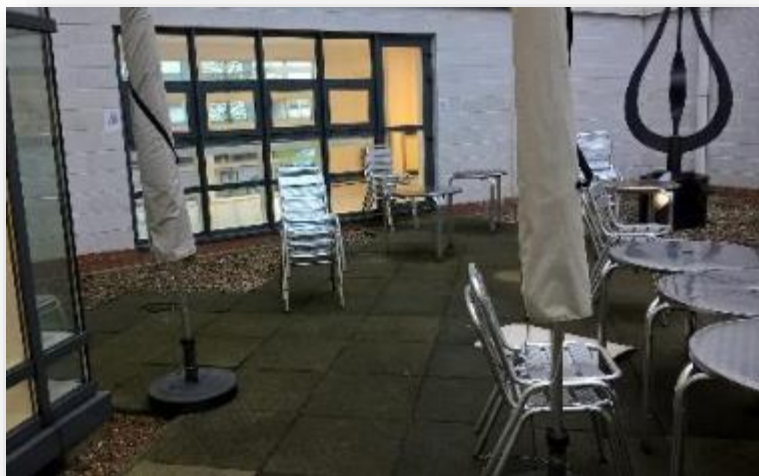
- 7 complementary pilot projects to implement innovative SuDS solutions with heavy involvement of local stakeholders
- 1 toolbox for stakeholder engagement in climate adaptation
- 1 guidance pack for participative climate adaptation in densely built areas
- 1 Cross-border action plan to introduce participative local climate strategies

Basildon University Hospital Pilot



- Basildon University Hospital (BUH) is located in South Essex; it is nationally in the top 10 areas which are at risk of surface water flooding.
- As part of the Sponge project, Essex County Council, working with BUH, retrofitted the Essex Cardiothoracic Centre courtyard with SuDS and a derelict flood attenuation basin was reinstated and landscaped.

Existing areas



Environment
Agency

anglianwater

2 Seas Mers Zeeën

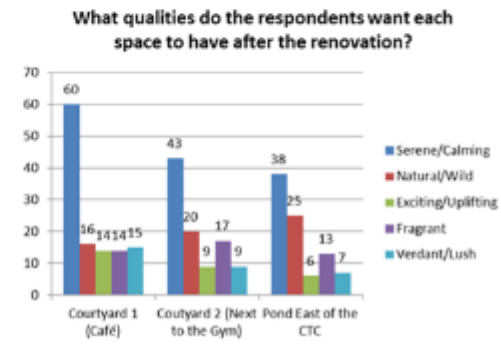
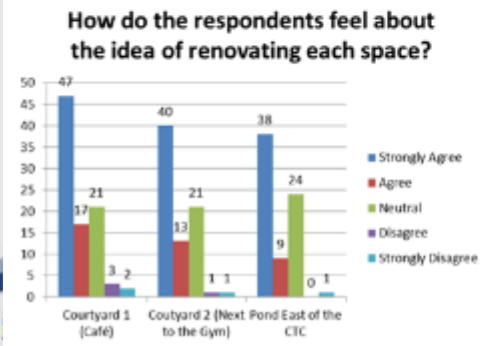
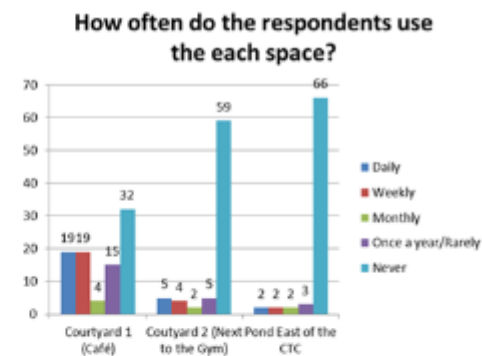
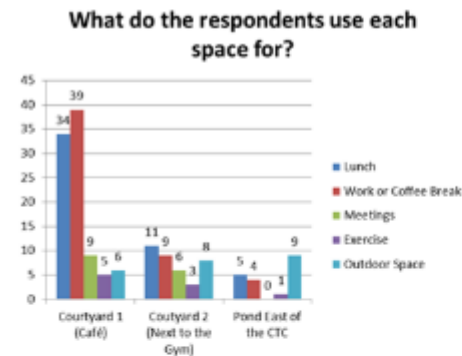
University Hospitals
NHS Foundation Trust

Essex County Council

Stakeholder engagement



A stakeholder engagement event was held in December 2017 to meet key stakeholders such as Staff, Patients and Visitors and get feedback on preferred options for delivery. Some of the features we have incorporated as part of this feedback: cafe tables/chairs, fixed seating for staff, canopy style structures, low maintenance planting, use of natural materials.



Stakeholder engagement

- We collected responses from 95 people at the stakeholder event. Continued to work closely with the Facilities Management Team at the hospital around H&S issues.
- Responses have been mainly positive and supportive of transformation of the existing courtyard areas.
- Limited capacity to retain water at the courtyards prompted discussions with Anglian Water to convert disused Anglian Water-owned land next to the site into a washland to maximise the volume of water retained on site.

Proposed new areas

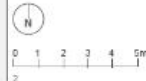


Courtyard 1 (Café) - Preferred Option

27/02/2018

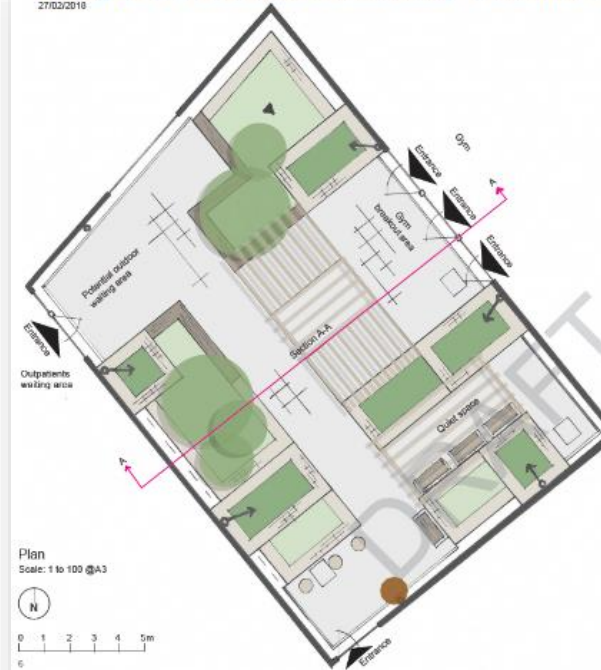


Plan
Scale: 1 to 100 @A3



Courtyard 2 (Cardiac Rehabilitation) - Preferred Option

27/02/2018



Plan
Scale: 1 to 100 @A3

Legend

- Downpipe funnel to direct water into beds, potentially down a rain chain
- Low maintenance planting within raised beds for rainwater attenuation
- Low maintenance planting within low raised beds
- Small tree or large shrub
- Gabion wall with natural stone infill
- Gabion wall with integrated timber seating
- Existing timber benches
- Reclaimed and cleaned existing paving slabs re-laid as indicated
- Pergola
- Water butt



Sketch Section A-A
Scale: 1 to 100 @A3

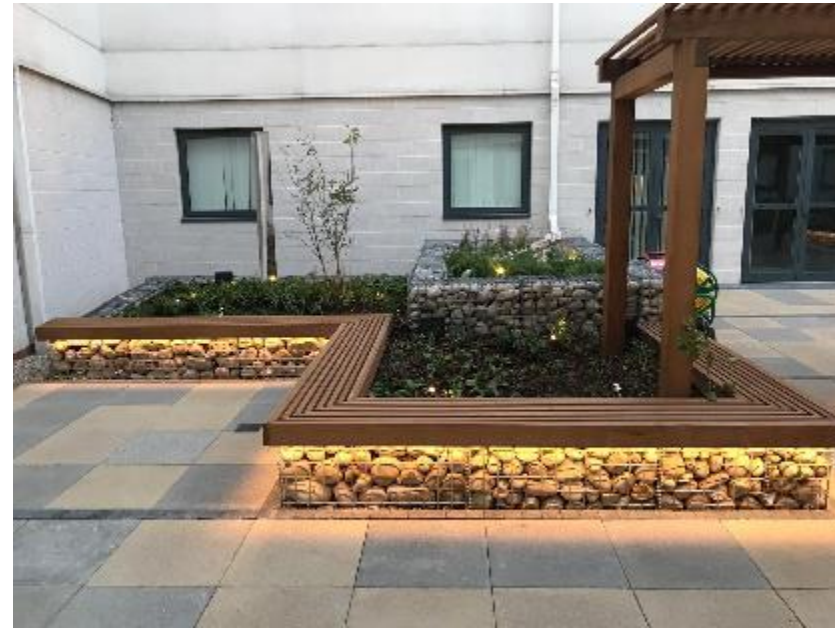
27/02/2018

Legend

- Downpipe funnel to direct water into beds, potentially down a rain chain
- Low maintenance planting within raised beds for rainwater attenuation
- Low maintenance planting within low raised beds
- Small tree or large shrub
- Gabion wall with natural stone infill
- Gabion wall with integrated timber seating
- Reclaimed and cleaned existing paving slabs re-laid as indicated
- New paving with dark grey to enhance existing paving
- Shade well canopy
- Potential location for cafe tables and chairs
- Water butt



Sketch Section A-A
Scale: 1 to 100 @A3





Challenges

There were some significant challenges to overcome during the design and implementation stages:

- Many limitations around the types of SuDS that can be implemented, and the materials used due to health and safety requirements.
- Limited availability of space to incorporate SuDS across the hospital site as the majority of it was already fully utilised for other functions.
- The hospital site is operational 24/7 and emergency access had to be maintained at all times so logistics around the site for investigation / construction works was very difficult.
- Ensuring all hospital requirements are met while achieving the project's requirements.

Outcomes

- Water retention capacity on site increased by 2,900m³ through a combination of rain gardens and off-site attenuation area and improved quality of surface water runoff
- Created new or improved existing areas for recuperation and staff / visitors to enjoy
- Wildflower seeding, coir pallets, shrubs and trees as new planting to increase biodiversity enhance the local environment
- Creation of 2 drainage channels within the pond, one fed by the existing pond and the other fed by surface water drainage from the hospital car park;
- Construction of pedestrian footpaths around the pond perimeter, as well as fencing for safety;

“The gardens are being used mainly by staff at the moment as all outpatient procedures have essentially been moved off site and the Covid patients are too sick to venture outside unfortunately. However we have created a health and wellbeing area for staff in the CTC. This is in the gym area which opens up onto one of the courtyard SUDs / gardens. This is a really nice haven for staff to go and have 5 minutes, get some counselling, take in the quiet green therapeutic space etc.

We have seen lots of staff sitting by the attenuation pond area and also making use of the main courtyard alongside Costa. So they are certainly being used and we are delighted to have them.”

Thank you!

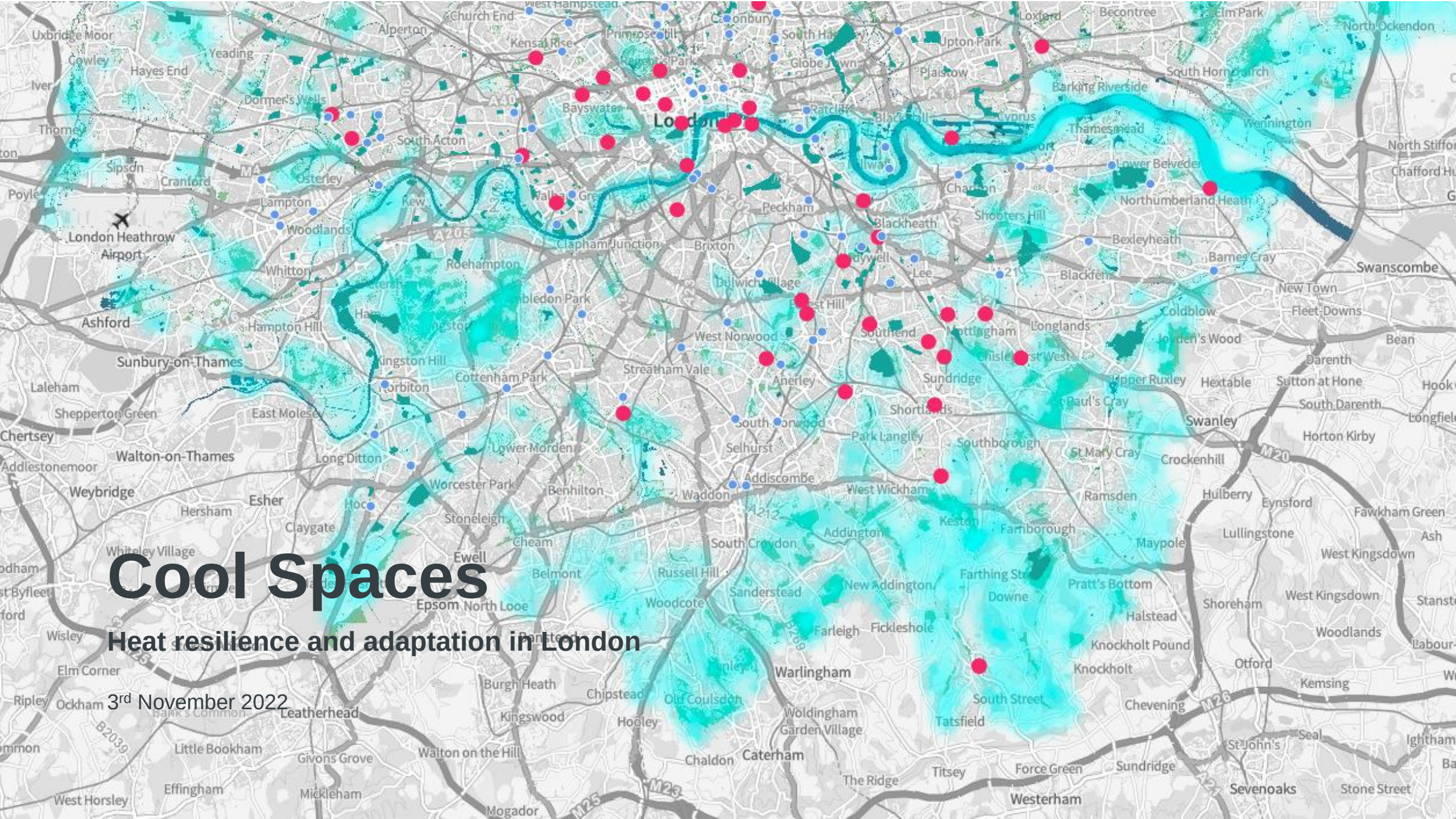
<https://www.urbangreenbluegrids.com/sponge/>

Comfort break



Cool Spaces

Michele Vianello and Kristen Guida,
Greater London Authority



Cool Spaces

Heat resilience and adaptation in London

3rd November 2022

COOL SPACES

What is it? Backend POV

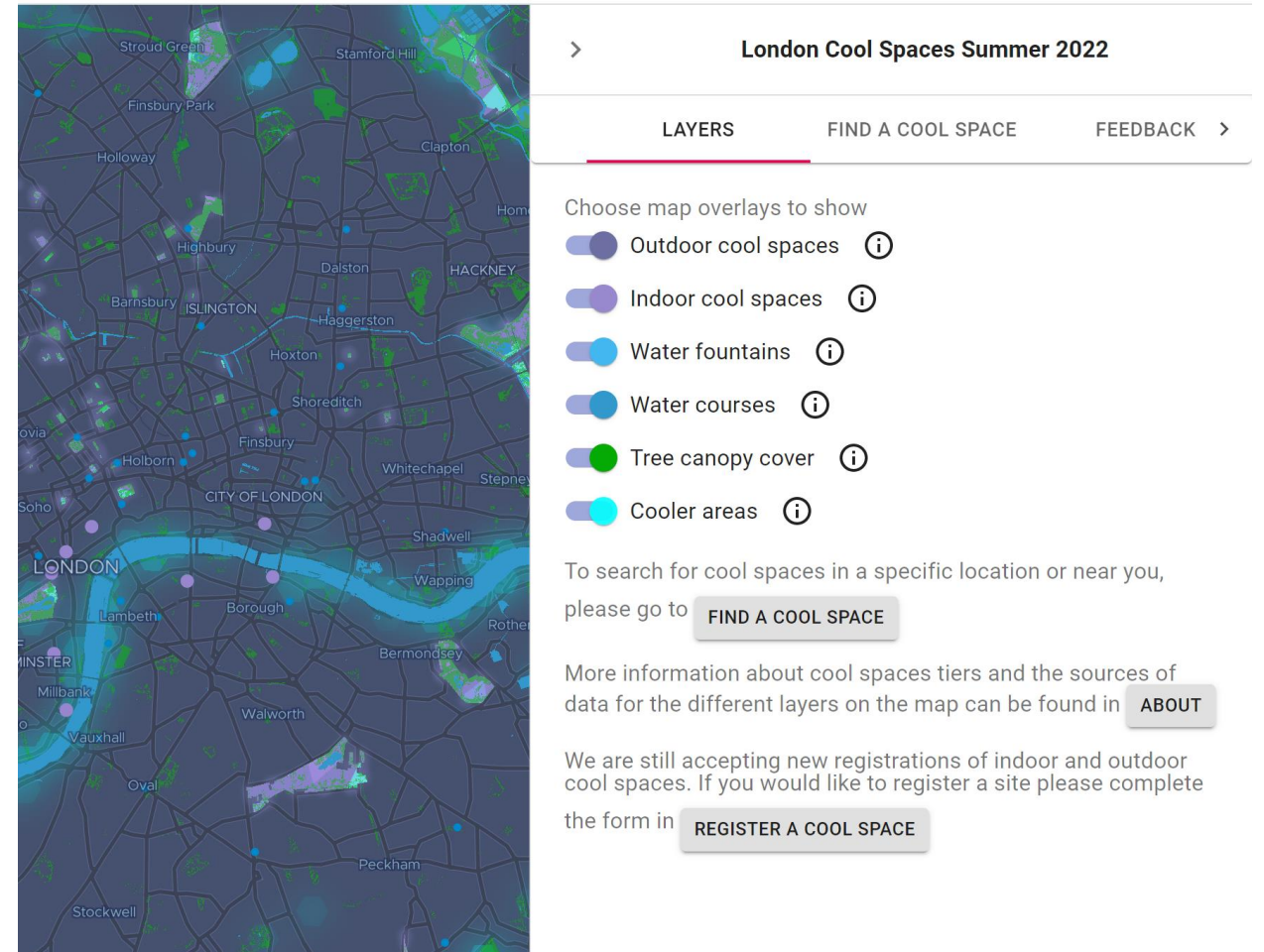
- GLA-managed register of indoor venues/outdoor spaces to help Londoners cope during hot weather.
- Essential standards to qualify:
 - seating space
 - free access
 - guaranteeing lower temperature than in the sun (through shading, ventilation and/or AC)
- Steering group setting standards and criteria for registrations



COOL SPACES

What is it? User POV

- Customisable map
- UX and functionalities:
 - layers
 - complementary data (e.g. canopy cover)
 - 'find a space' search string
 - phone-use optimised



COOL SPACES

Initial conception



- Not a public health intervention.
- Supports Mayor's wider role as Cat 1 responder under the CCA, e.g. amplifying heat messaging from Met Office and NHS.
- Still aligned to PH policy and incident response:
 - timeframe of UKHSA heatwave planning
 - includes NHS hot weather advice

Example of TfL messaging on a hot day

COOL SPACES

Initial conception (2)

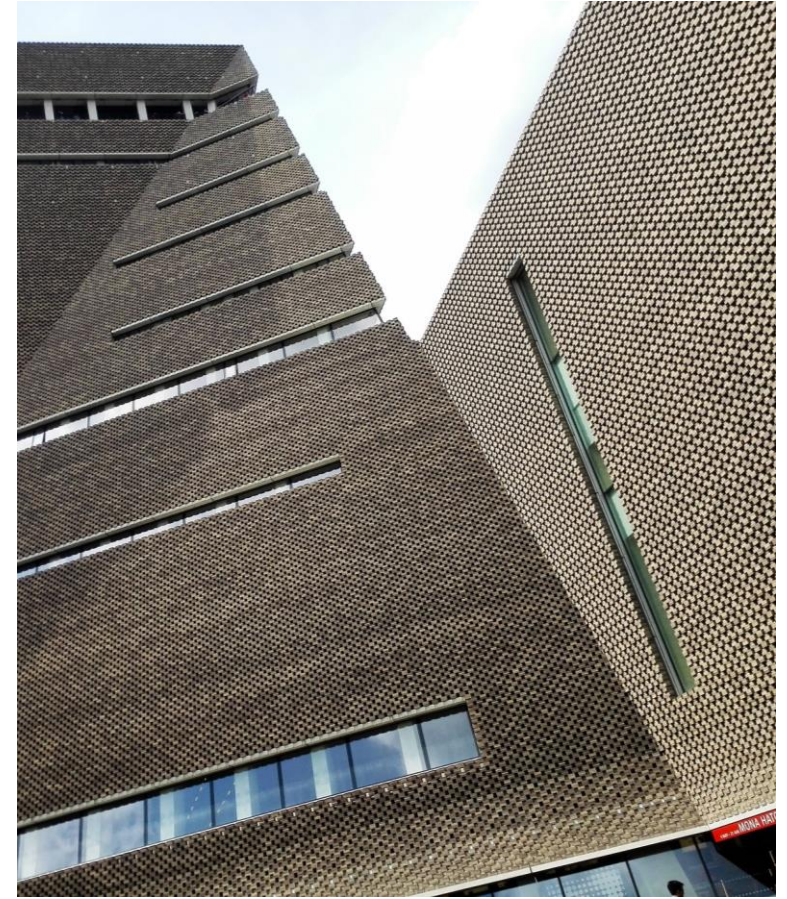
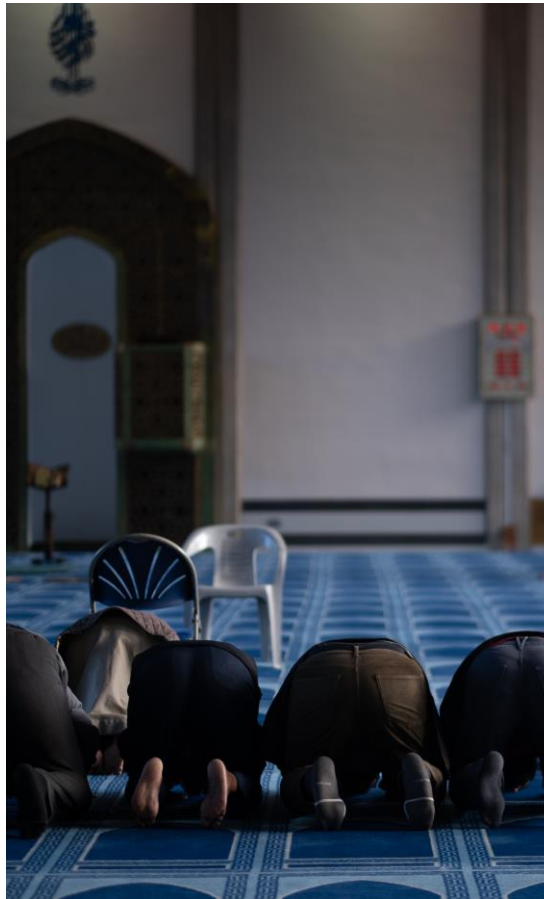
- Cool Spaces align to heatwave plan response levels
 - 0 (long term planning);
 - 1 (preparedness).
- Post-pandemic recovery element:
London 'is open' during summer after Covid-19.
- Messaging about taking respite during hot days while out (shopping, leisure, tourism etc.).



COOL SPACES

Organisations

- Initial tenuous links to PH and incident response, meant Cool Spaces appealed to different orgs.
- Registrations from:
 - leisure, sports and culture sectors
 - community, voluntary and faith sectors.
 - London Boroughs.



COOL SPACES

Criteria and tier system

- Tier assigned to spaces. Both for assessment purposes and for communicating services available to Londoners.
- Tiers helped harmonising engagement with diverse spaces.

Tier 1 Cool Spaces	
General Criteria . Open to all members of the public during weekdays from at least 10:00 – 17:00, with weekend openings when possible . Free of charge . Access to free drinking water (i.e., water cooler, kitchen, water fountain, etc.) . Accessible to disabled persons . Access to toilets (on site or at short walk with signposting)	
Indoor Spaces . Staffed with at least one person to ensure safety . Air conditioning or alternative cooling system that allows significant cooling^[1] . Seating . Clearly stated maximum occupancy^[2]	Outdoor Spaces . Well shaded with trees and/or shading elements (e.g., umbrellas) allowing for cooling or presence of water features, (i.e., lake/river/canal, features for water play) . Shaded seating

Tier 2 Cool Spaces	
General Criteria . Open to all members of the public during weekdays with specified hours of operation . Free of charge . Clearly states level of accessibility to disabled persons	
Indoor Spaces . Access to free drinking water (i.e., water cooler, water fountain, kitchen, etc.) or Air conditioning or alternative cooling system that allows significant cooling¹ . Seating . Clearly stated maximum occupancy²	Outdoor Spaces . Access to drinking water on site, nearby (and signposted) or through partnership with the London Refill scheme . Well shaded with trees and/or shading elements (e.g. umbrellas) allowing for cooling or presence of water features, (i.e. lake/river/canal, features for water play) . Ideally shaded seating (but not essential)
Tier 3 Shaded Spaces	
. Outdoor green areas, blue areas, or areas along blue spaces (i.e. river/canal esplanades) . Publicly accessible . Free of charge . Shading (e.g. tree canopy cover)	

COOL SPACES

Preparation for 2022 summer



Messaging on Seven Sisters Rd North London during Covid-19

- Preparation for Cool Spaces 2022 against backdrop of refreshing the London City Resilience Strategy (focus on shocks and stresses).
- Tilt towards engaging CVS organisations, encouraging indoor faith and community spaces to register.
- From 41 to 131 indoor venues registered (319% increase).

COOL SPACES

Heatwaves and record 40C+



- Record temperatures and heatwave frequency validated focus on indoor spaces.
- Heat itself reinforced engagement: heatwaves > public attention on heat risk > increased engagement with Cool Spaces.
- Cool Spaces naturally transitioning into response instrument.

Hyde Park in summer 2022

COOL SPACES

Lessons from map monitoring



- Of 104,832 map visitors in 2022, 91% visited during heatwave days. Likely indication that Cool Spaces fills a gap in the response.
- Unique click events show 66% of interactions were with indoor spaces.
- Majority of interactions were in Inner London. This was less marked for indoor spaces (66%) than outdoor (83%). Likely indication that interest in indoor spaces during heatwaves is pan-London.

COOL SPACES

Lessons from engaging spaces



- Space managers responded and engaged better in an 'engagement journey' (targeted, customised communications focussing on risk, need and their role in the response).
- Map data monitoring is partial proxy of actual space use.

COOL SPACES

Going forward

Exploring the future of Cool Spaces

- Mechanism for heatwave response?
- Revising standards?
- How to identify and target the most vulnerable?
- What coordination with response by CVS and emergency services?
- Expand monitoring to understand actual usage
- Maintain and expand Cool Spaces as hot weather resilience measure
- Refine monitoring to collect more insights

Thanks -
fireandresilience@london.gov.uk

Manchester's Mayfield Scheme

Matt Ellis, Environment Agency

Adaptation in Action in Greater Manchester – green and resilient growth and the Mayfield Redevelopment

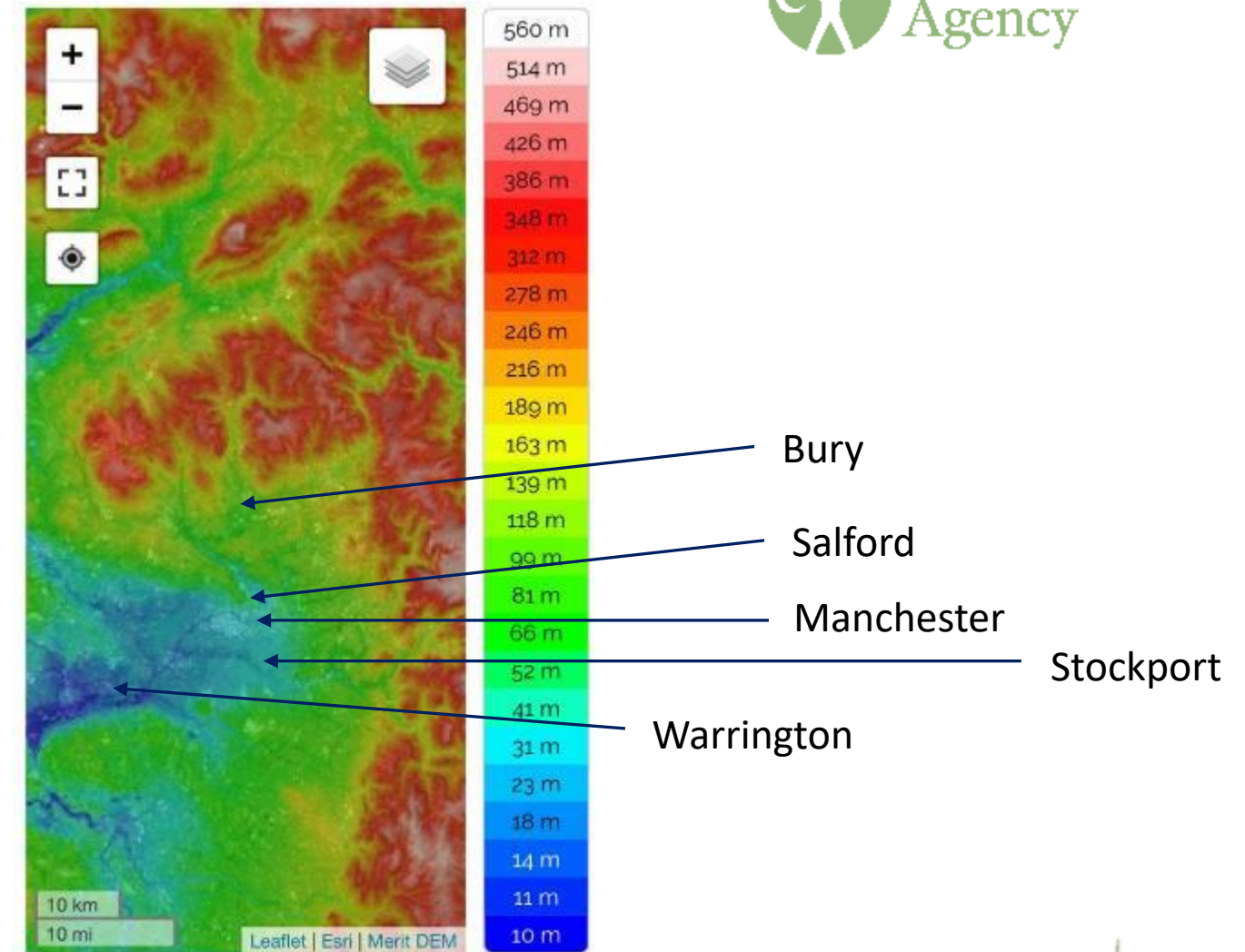


**GREATER
MANCHESTER**
DOING THINGS DIFFERENTLY

But first - Greater Manchester - connected by water

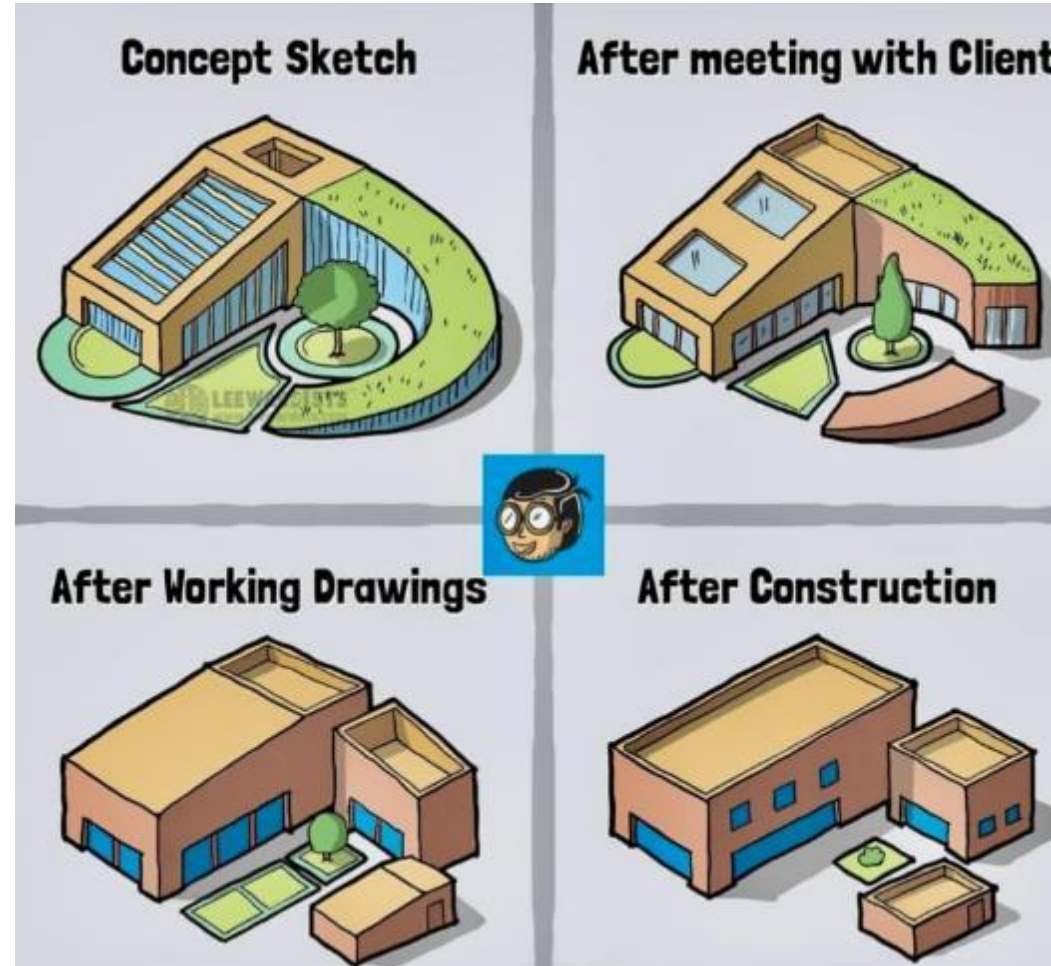


But first - Greater Manchester - connected by water



Greater Manchester, North West England,
England, United Kingdom (53.50652)

Achieving green and resilient growth: what the journey can feel like sometimes.....



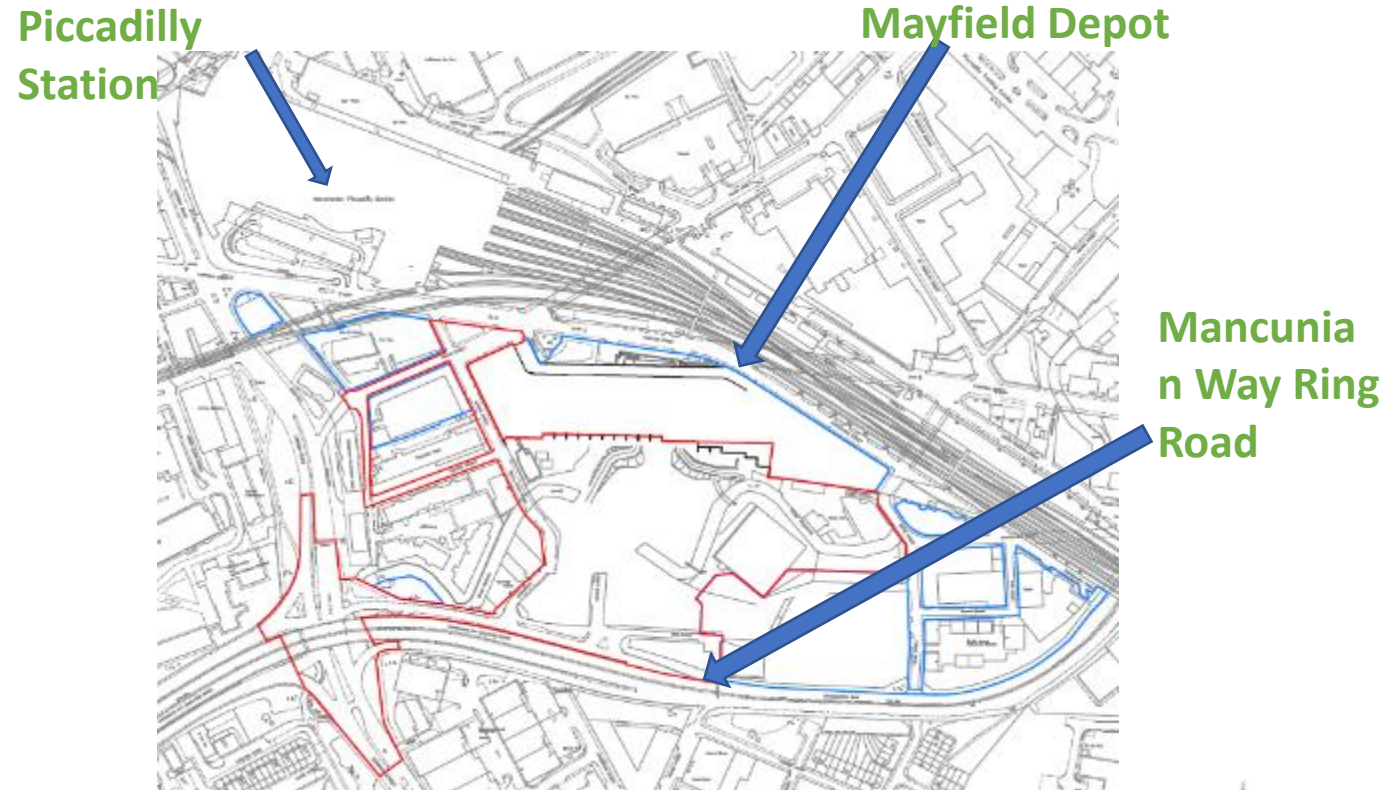
What should the green and resilient growth journey be like? The Mayfield site in Manchester...

- **What was there:**
- Heavily urbanised derelict/under utilised site
- Brownfield site with contamination
- Culverted/canalised and degraded river Medlock with invasives/FR (but some naturalised habitat)



What should the green and resilient growth journey be like? The Mayfield site in Manchester...

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What should the green and resilient growth journey be like? The Mayfield site in Manchester...

The original vision:

- Old depot Mayfield removed
- Site remediated
- Very high density/hi-rise redevelopment
- Medlock opened up but still very formal public realm/green space



What should the green and resilient growth journey be like? The Mayfield site in Manchester...

Partners driving a new Vision emerged:

- A major new park/green lung providing publicly accessible green infrastructure
- Lower density development around the park
- Integrated approach to remediation, de-culverting, river naturalisation and FR management
- Wider Green infrastructure (green roofs, green space on top of rail depot, SuDS)



What should the green and resilient growth journey be like? The Mayfield site in Manchester...

What's been delivered (18 months start to finish):

- 350m river improved (70m de-culverted)
- Wetland inundation area created
- River walls softened/improved + in channel planting
- Heritage features retained inc. well for water supply for irrigation
- 140 native trees within a high quality publicly accessible new park – the first in Manchester for 100 yrs



10.4% average value uplift for residential properties

28.3% average floor space rental value uplift for office/commercial property

The Mayfield journey and lessons learned



The Mayfield journey and lessons learned



The Mayfield journey and lessons learned



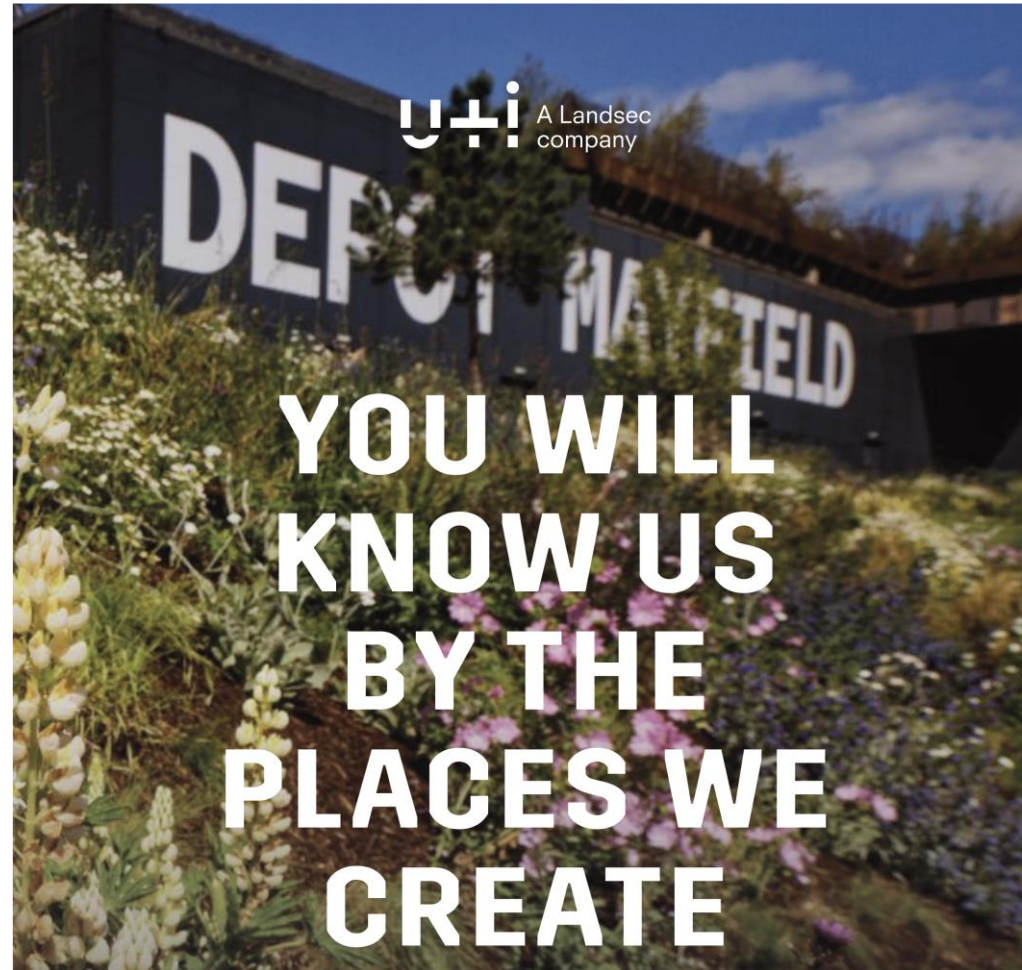
The Mayfield journey and lessons learned



Copyright: Martin Moss



The Mayfield journey and lessons learned



Copyright: U&I PLC



Cool Towns project

David Bennett, Kent County Council

“Making Margate a cooler, greener place”

KCC Cool Towns Pilot



Sustainable Business &
Communities
3.11.22

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Project background

Increasing temperatures are leading to **warmer summers with more heatwaves**, but cities still **lack the knowledge and tools to implement adaptation solutions** to reduce their vulnerability.



UK weather: heatwave to continue before 'severe thunderstorms' roll in

The mercury is set to hit 35C in Kent and Sussex on Sunday before thunderstorms arrive early in the week

K News ▶ Kent News ▶ Weather

Kent weather: Maps show blistering 40C heatwave heading to Kent from Europe

Scorching maximum temperatures of 29C could make an appearance in parts of Kent

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Project partners



Kent
County
Council



SIOEN



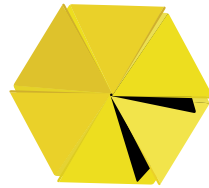
**Amsterdam University
of Applied Sciences**



provincie
Oost-Vlaanderen

CAPSO

COMMUNAUTÉ D'AGGLOMÉRATION
DU PAYS DE SAINT-OMER



AGENCE

D'URBANISME & DE DÉVELOPPEMENT

Pays de Saint-Omer - Flandre Intérieure

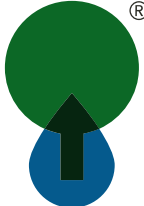
Oostende

DE STAD
AAN ZEE

UNIVERSITÉ

de Picardie

Jules Verne

GreenBlue  **URBAN**

Establishing the future urban landscape



Gemeente Breda



**southend
onsea**

BOROUGH COUNCIL

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**UNIVERSITY of
GREENWICH**

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County
Council**
kent.gov.uk



Project outputs

Increased resilience to heat stress in urban areas

Tool for mapping and modelling heat stress

Increased public health and wellbeing outcomes and other co-benefits from pilot

Roadmap for Local Authorities

Decision support tool

Outputs

Urban development actors have improved heat resilience capacities

Training and capacity building package

7 Pilots

Local Authorities have increased capacity to partake in heat stress resilience planning

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Margate pilot site



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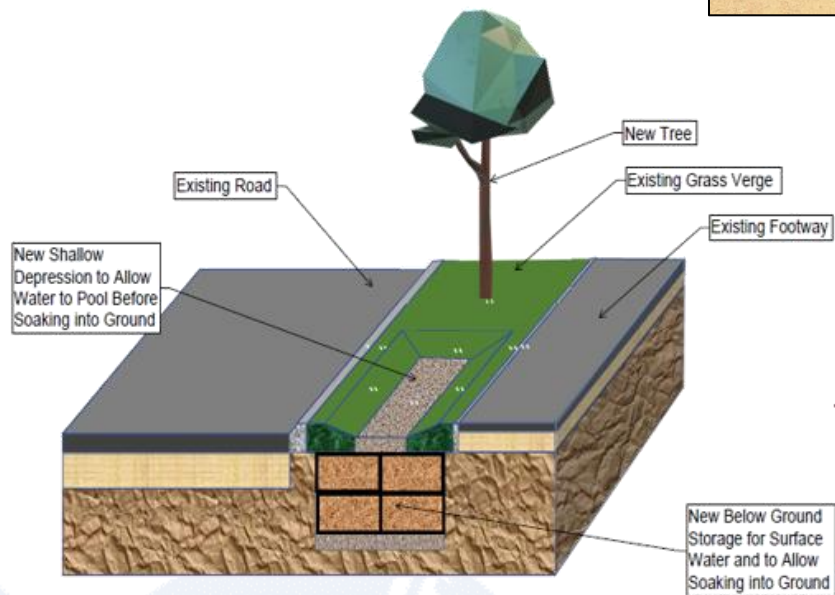
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What changes did KCC make?

31 new trees planted

11 SuDS tree pits installed



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What KCC achieved

- Alleviated surface water flood risk
- Reduced heat stress
- Increased % of tree cover
- Created new spaces for nature
- Carbon reduction
- Improved air quality
- Attractive spaces for communities



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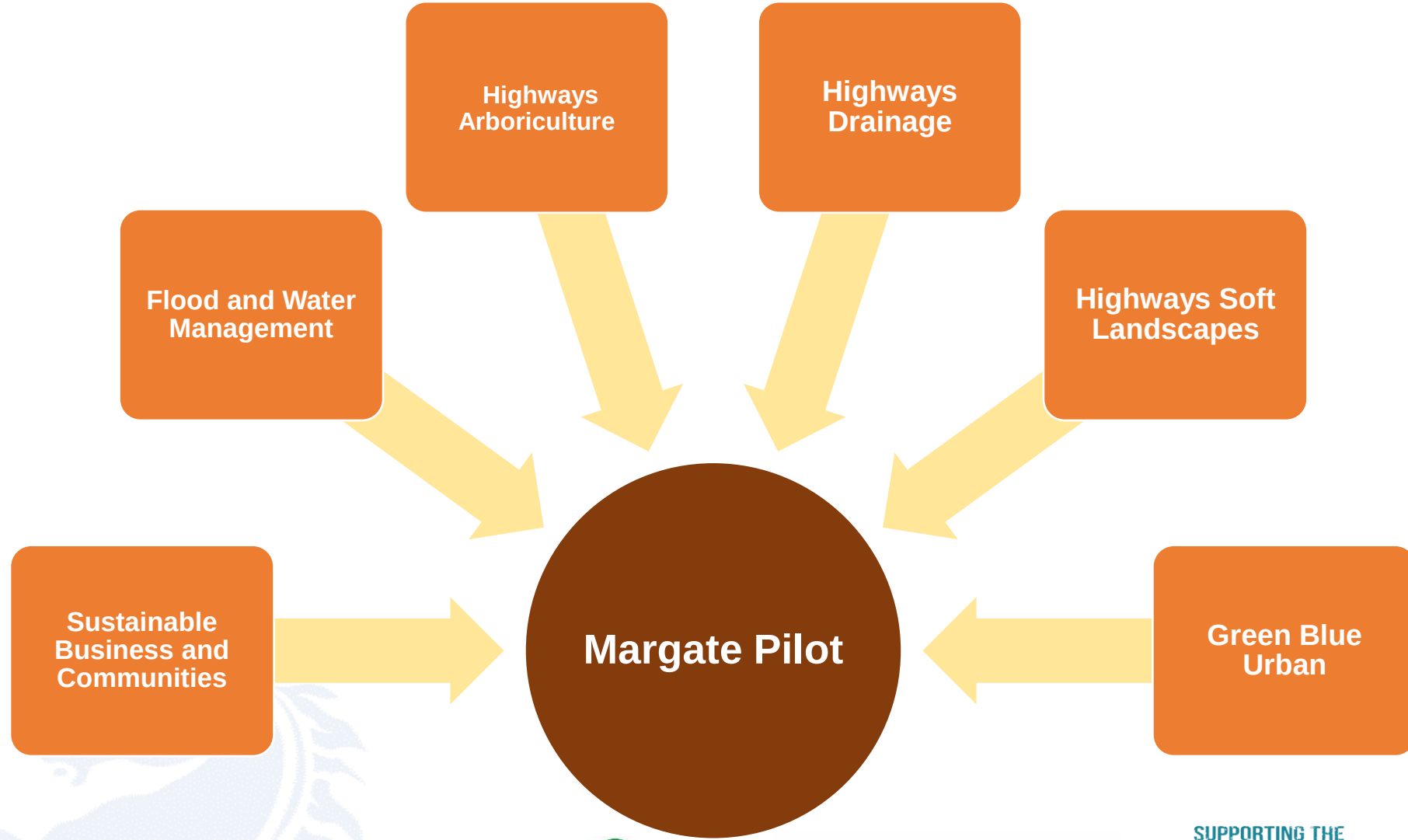
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Who else were involved?



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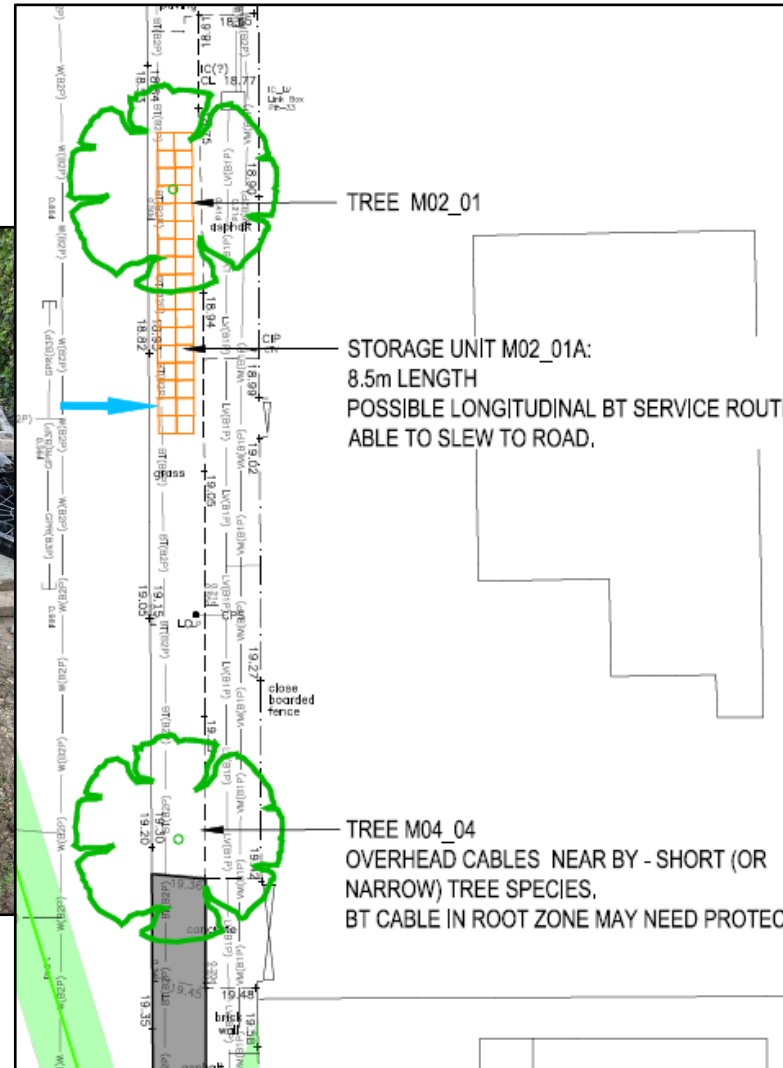


How was it funded?

- ERDF funded
- Total budget of €679,000
- 60% funded by ERDF
- Remaining 40% funded by KCC
- Keep it local



Where things went wrong



Broader challenges

- Securing a site
- Project timescale
- Greater ambition tends to lead to higher complexity



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Collaboration and engagement

- **Effective internal collaboration**
- **Member support and promotion**
- **Resident consultation**
- **Cross-council collaboration**



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- Really sell what you're planning on doing
- Implicit value for money
- Feed in to other projects or schemes where possible
- Integrate adaptation and mitigation



Thank you for listening!

Cool Towns Website: <https://www.cooltowns.eu/>

Contact: david.bennett@kent.gov.uk



Interactive session; council delegates can raise their virtual hand to:

- Ask questions of the speakers
- Share their own good practice examples
- Ask for help and support



Closing remarks and summary

Liz Alston, Chair

Keep in touch

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@SWMtweet

LinkedIn: Sustainability West Midlands

