



TEP Annual Forum 2019

Tower of London

#TEPAnnualForum2019

@ThamesEstPart



WELCOME

ANUSHA SHAH

CHAIR, TEP
DIRECTOR, RESILIENT CITIES, ARCADIS

#TEPAnnualForum2019

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Welcome

Anusha Shah

Chair, Thames Estuary
Partnership

Director, Resilient Cities, Arcadis



**Environment Agency
Historic England
Archaeological Firms**

**Utilities
Industries
Port Authorities
Infra Providers**

**Schools
Universities**

**Private &
Independent
Consultancies**

**Developers
Investors
Financial Institutes**

**NGOs
Communities
Other Charities**

**Government
Agencies**

**GLA
Local Councils
Local Govt**

In partnership with



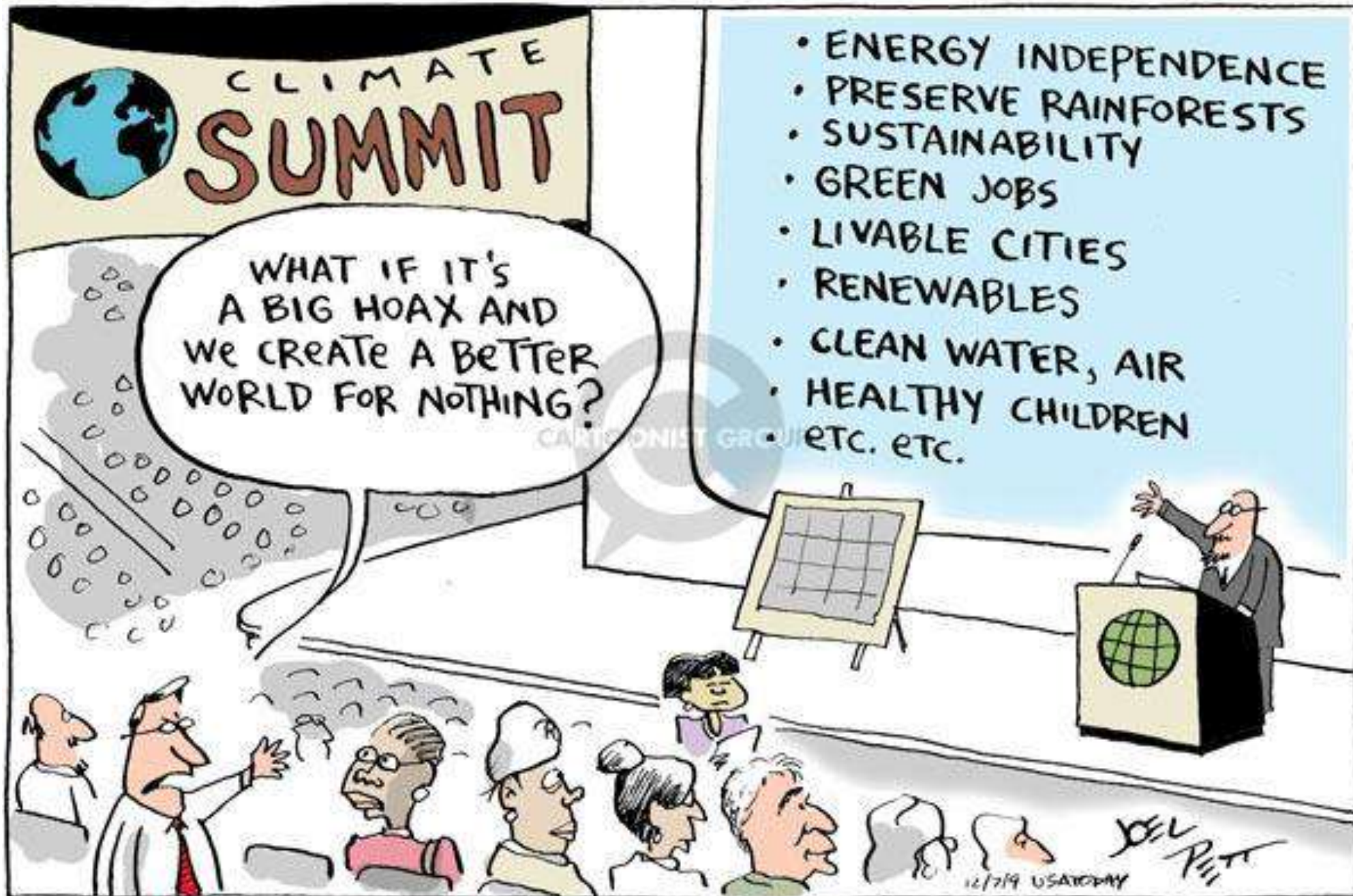
“I don’t want your hope. I don’t want you to be hopeful. I want you to panic ... and act as if the house was on fire. ”

Greta Thunberg
Environmental Activist



SORRY FOR THE
INCONVENIENCE
WE'RE TRYING TO
CHANGE THE WORLD





The tidal Thames in a changing climate



Cooperation NOT Competition will help us survive and thrive





VISION FOR TEP

HEATHER HILBURN

CEO, TEP

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VISION FOR TEP

Who are we?

Heather Hilburn BArch, AAGrad FRSA

The Land

- Graduate of Architectural Association
- Built Environment & Infrastructure Delivery
- Project Director & Design/Planning Advisor
- Urban Planning, Place Making, Heritage Protection
- Tourism, Visitor Experience Strategies
- Future & Master Planning, Cultural Programming
- Data Technology and the science of people flow
- Tower of London, Tate Modern, Turner Contemporary
- Queen Elizabeth Park Venues and Parklands
- Transformation of the River Lea
- The Arno, Italy River Micro-Plastics Campaign
- DCMS advisor on Social Enterprise Funding

Amy Pryor, BSc, MSc, FRSA

The Sea

- Graduate of Marine Biology & Aquatic Science
- Estuarine & marine environment – whole systems
- Fisheries, habitat, water quality & maritime industry
- Project & process design, partnerships & management
- Fundraising, bid writing
- Stakeholder engagement & facilitation
- National advocacy – Coastal Partnerships, EYOC
- High Seas International Fisheries Consultant – 7 years
- MCZs, NTFLAG, Estuary Edges, Environmental Data
- Marine CoLABoration - Ocean Literacy, #OneLess, health & wellbeing
- National, regional & local networks

Bring built environment, estuary and coast together to tackle climate change

VISION FOR TEP



Who are we? Project Team

Anna Patel, Fisheries & Project Management

Eve Sanders, Field Work & Citizen Science

Julia Lanoue, Data Scientist & Communicator

Maryam Abdalla, Accountant

Wanda Bodnar, GIS & Data

Jacob Ashton, Interim Comms

Alice Watts, Learning Networks & Urban Planning

Olivia Squires, Intern

Yarema Ronish, Volunteer

Georgina Kosanovic, Volunteer

Plus our project partners !

VISION FOR TEP



A joined up approach across land & water

Marine
CoLABoration



YEAR OF THE ENGLISH COAST 2021

#ENGLISHCOAST2021

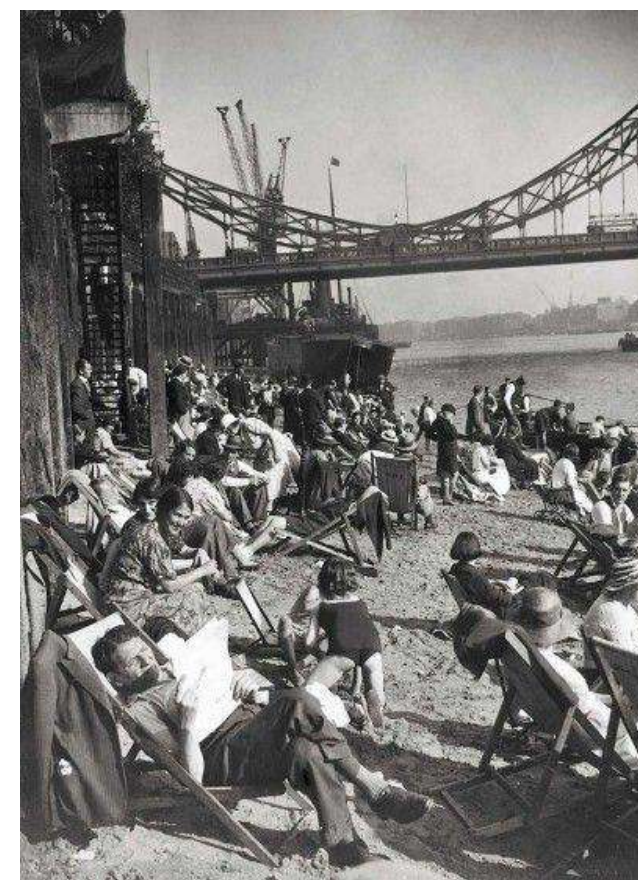
VISION FOR TEP

Access, One Ocean & Legacy



VISION FOR TEP

Access, One Ocean & Legacy



HM Tower of London

Commander Debbie Whittingham Royal
Navy

Deputy Governor
Head of Operations and Security



Historic Royal Palaces Tower of London



Historic Royal Palaces
Tower of London



www.british-towns.net



Historic Royal Palaces Tower of London











KEYNOTE

EMMA HOWARD BOYD

CHAIR, ENVIRONMENT AGENCY

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THE CLIMATE EMERGENCY IN A COASTAL CITY

SESSION ONE

FERNANDA BALATA

SENIOR RESEARCHER, NEW ECONOMICS FOUNDATION

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PROJECTIONS FOR LONDON

SESSION ONE

DR MARTIN HURST

CHAIR, SOUTHERN REGIONAL FLOOD & COASTAL COMMITTEE

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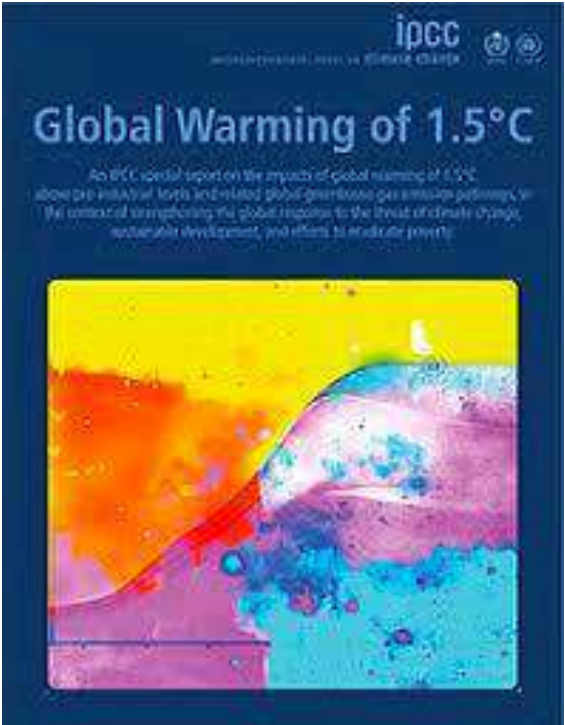
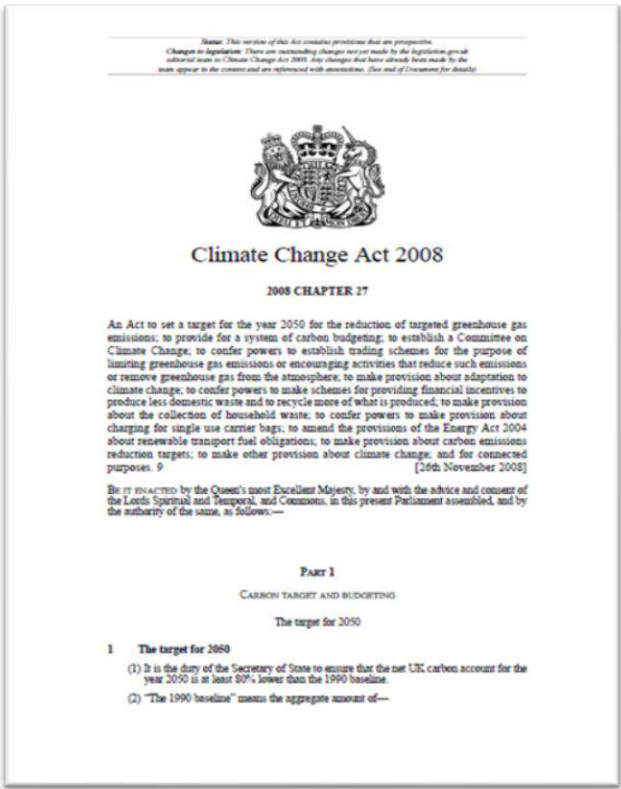
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Thames Estuary 2100: working together to combat climate change in London

Presented by Martin Hurst



Climate Change – UK leading the debate



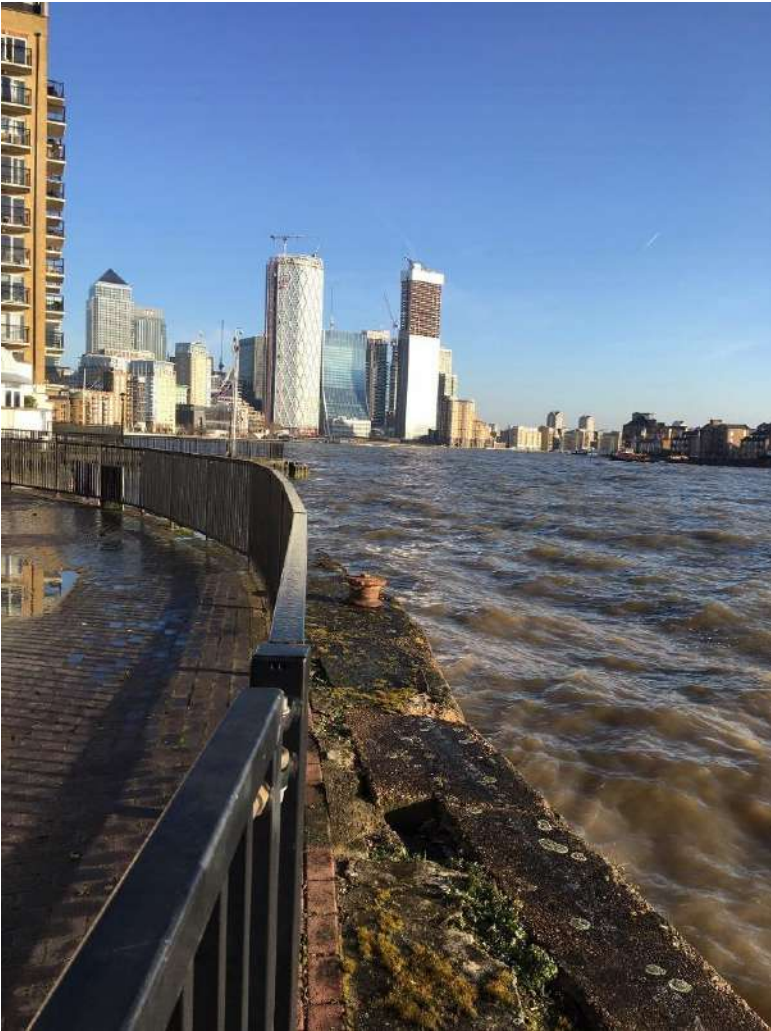
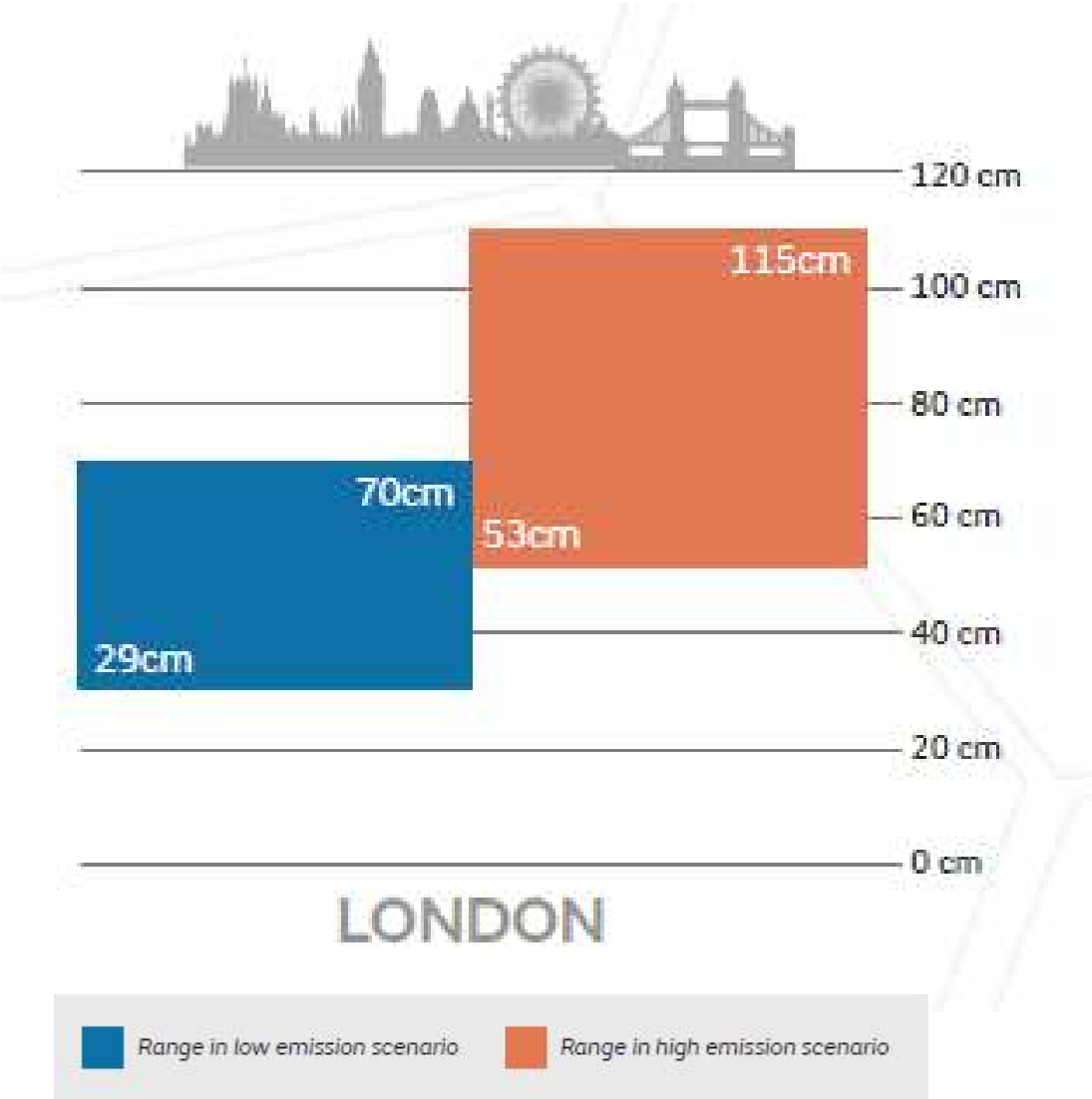
UK Climate Projections 2018 (UKCP18)



<https://www.metoffice.gov.uk/research/collaboration/ukcp>



Sea level rise in London



A photograph of a multi-layered flood defence wall. The wall is composed of several distinct sections of masonry and concrete, separated by horizontal dashed lines. The top section is a modern concrete wall. Below it is a layer of brickwork, followed by a layer of rougher masonry, and at the base, there are dark, rectangular openings. A person in a white jacket and red hat stands on the gravelly ground in the foreground to the left, providing a sense of scale. In the background, there are trees and a building.

1970s Interim defences during the construction of the Thames Barrier

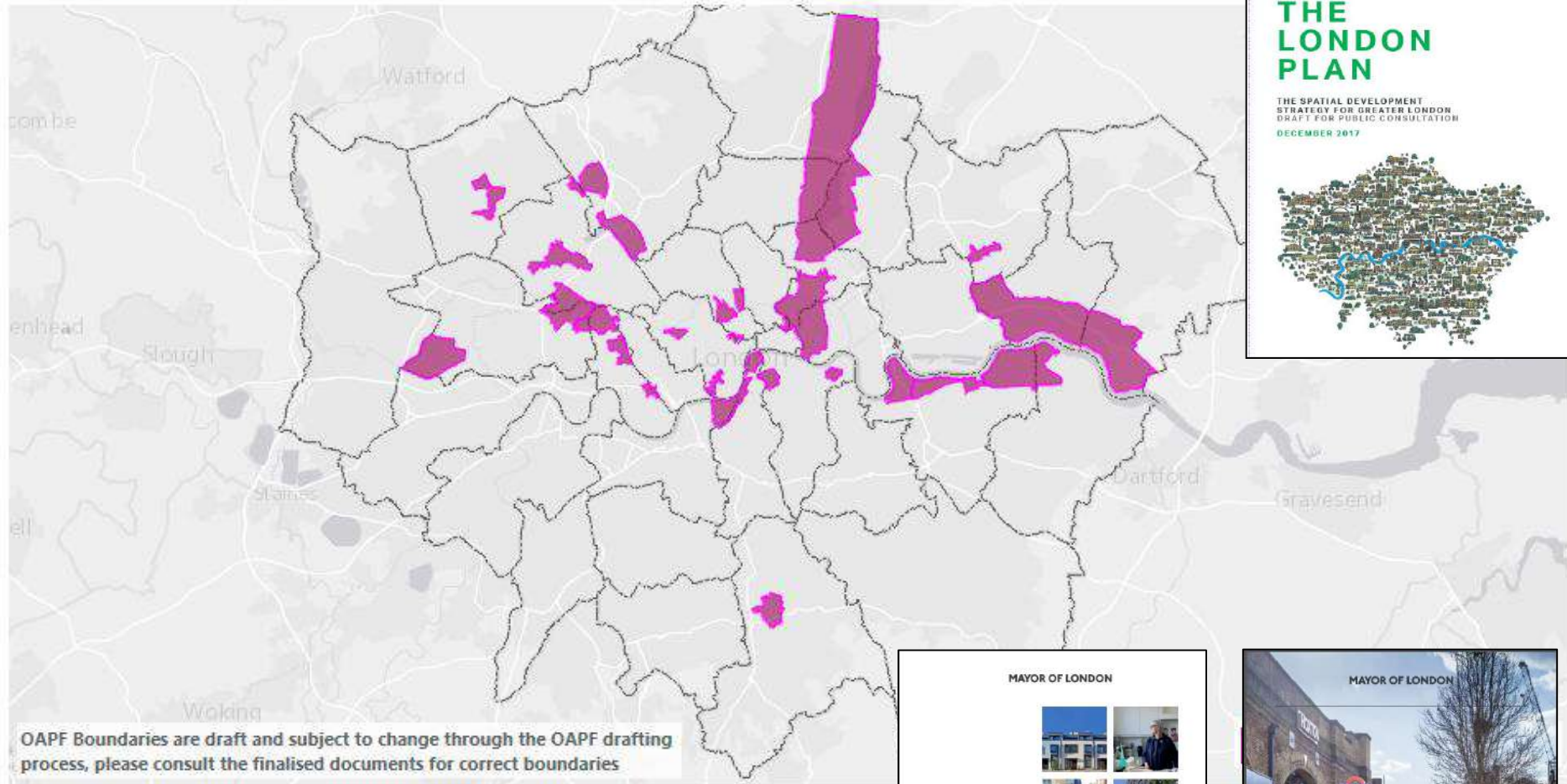
1928 Flood and subsequent 1930 Flood Act

Late 19th century update to Flood Act

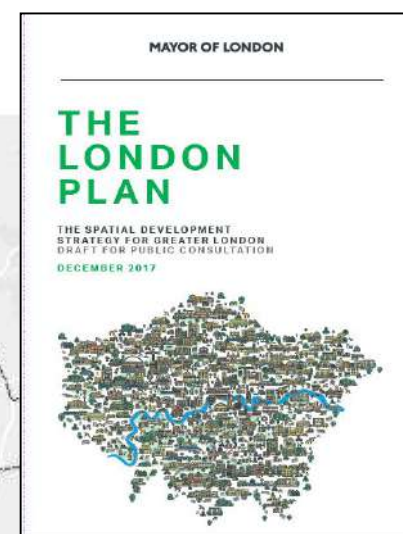
1879 Flood Act

ageing flood defences

London's Opportunity Areas



a growing city



1.3m
people

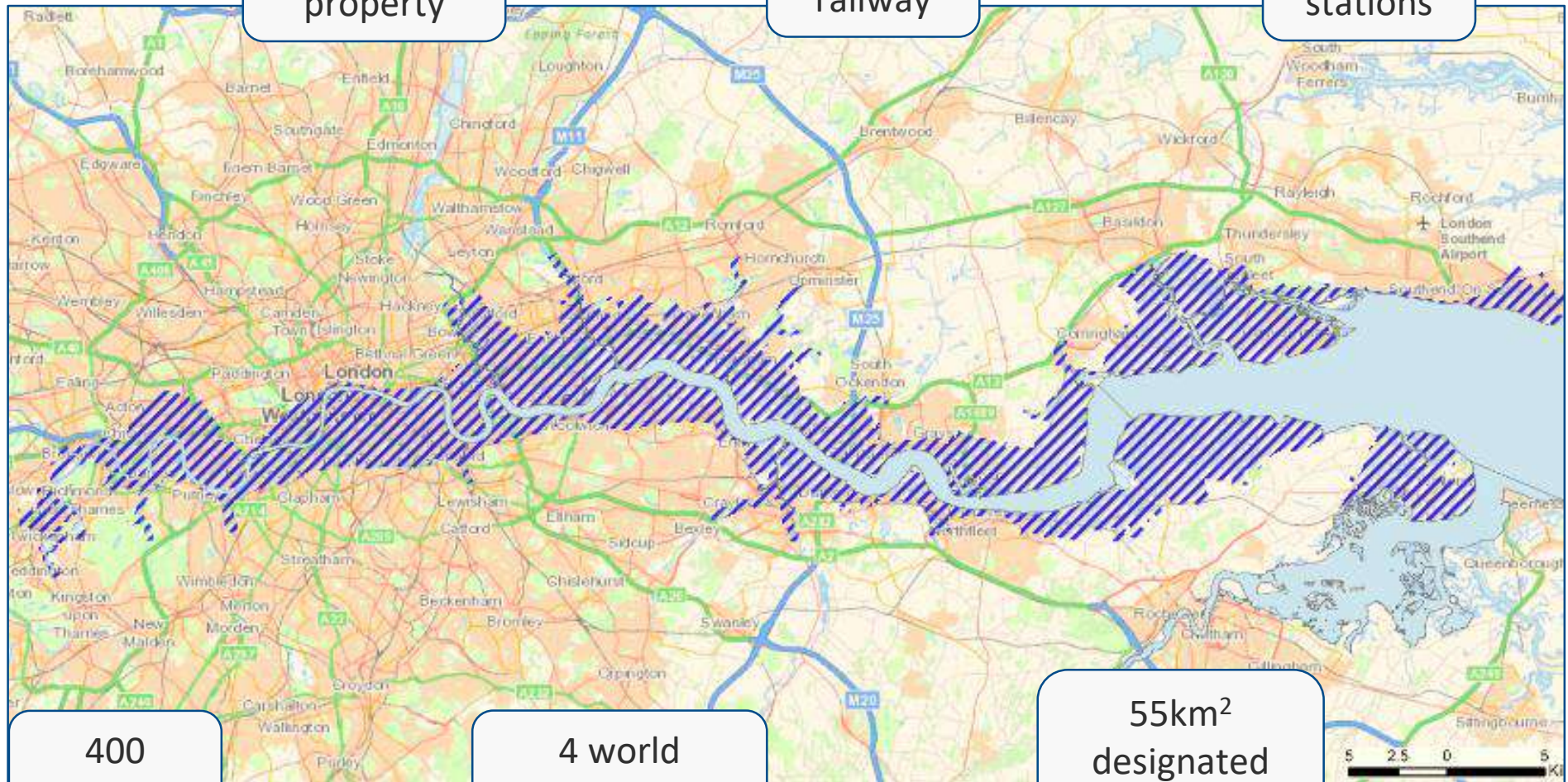
£275bn of
property

300km +
of roads

167km of
railway

51 railway
stations

35 tube
stations



400
schools

16
hospitals

4 world
heritage sites

8 power
stations

55km²
designated
habitat



Phase 1: Until 2035

Maintain and improve current defences, safeguard areas required for future improvements, monitor change in the estuary and to the climate

2010 - 2035



Phase 2: Middle 15 years

Raise existing walls, defences and smaller barriers whilst reshaping the riverside environment

2035 - 2050



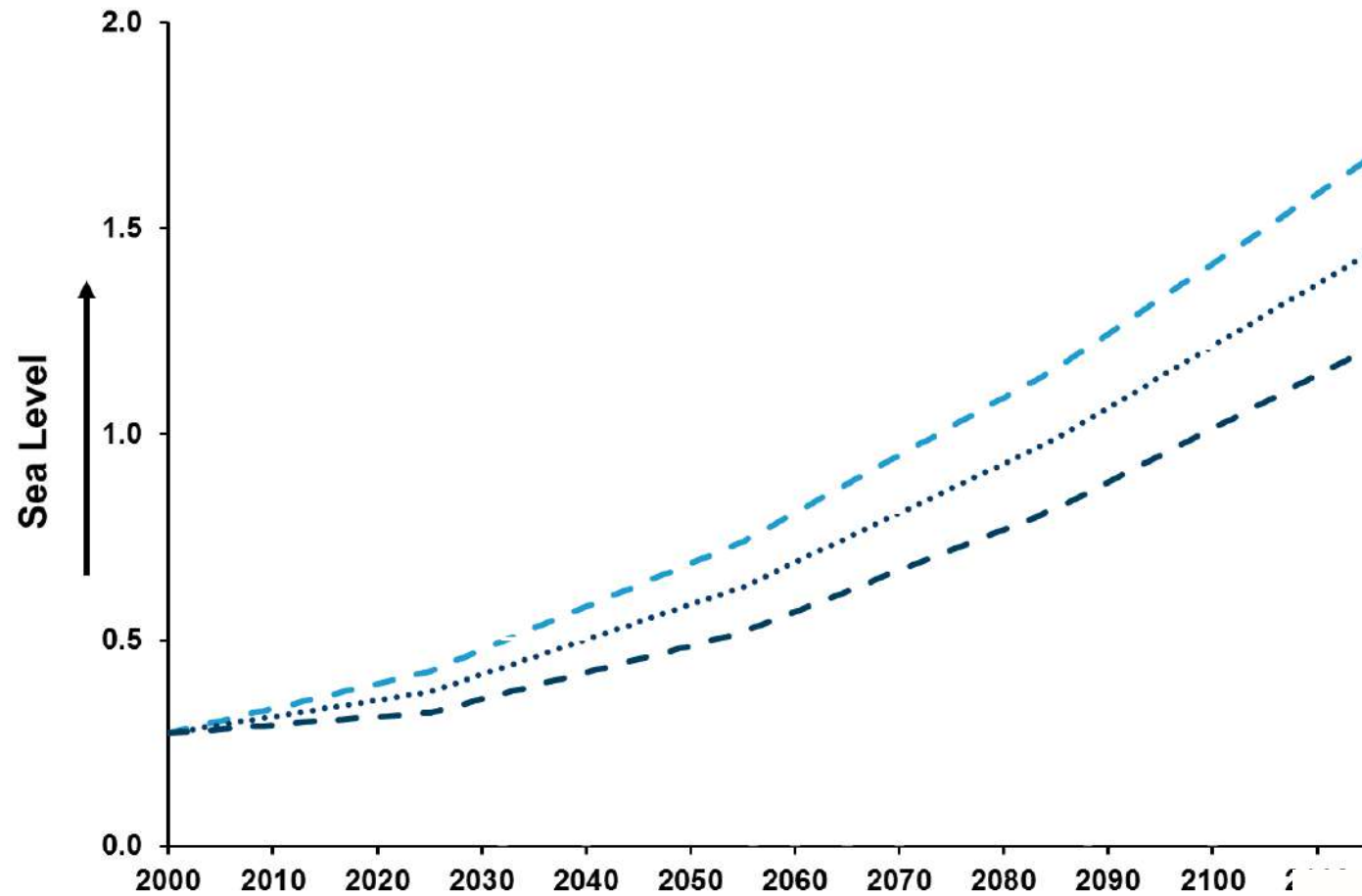
Phase 3: To the end of the century

Determine and implement an option for the future of the Thames Barrier, adapt other defences as required to work alongside this to protect the estuary

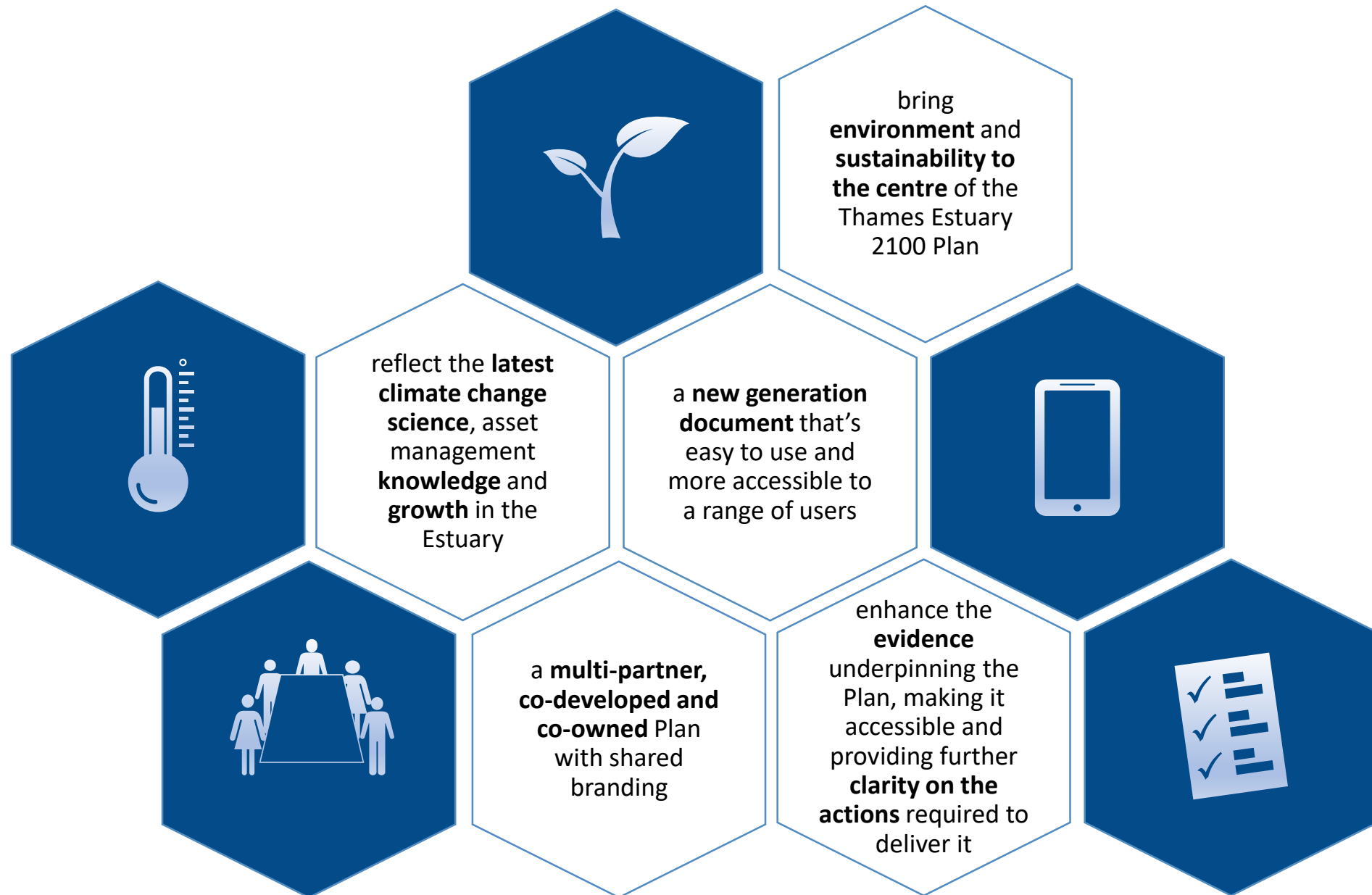
2050 - 2100



Adaptive Pathways Approach

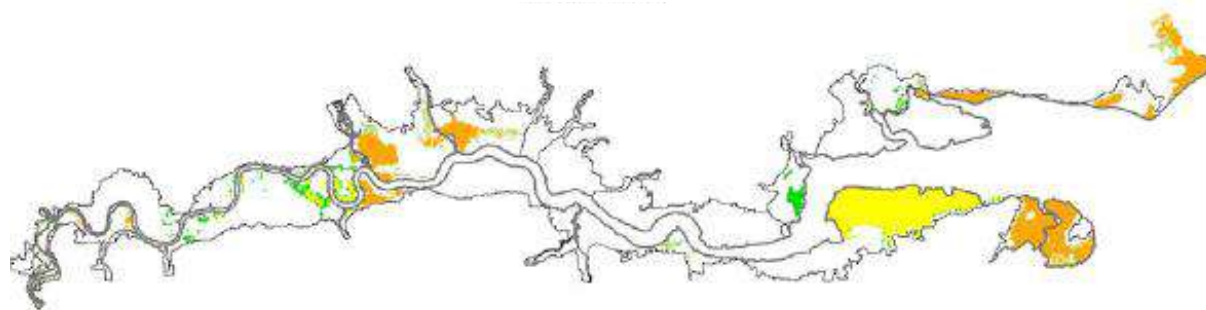


Our vision for the TE2100 Plan's 10 year review

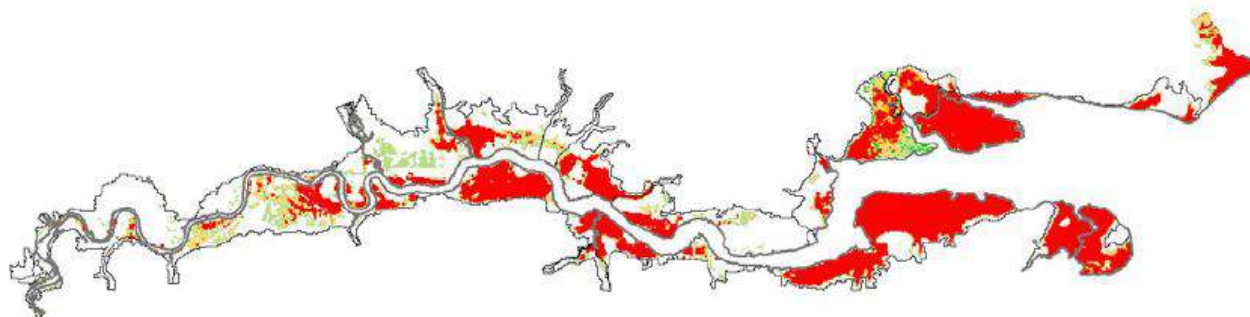


Just a few of our TE2100 plan partners

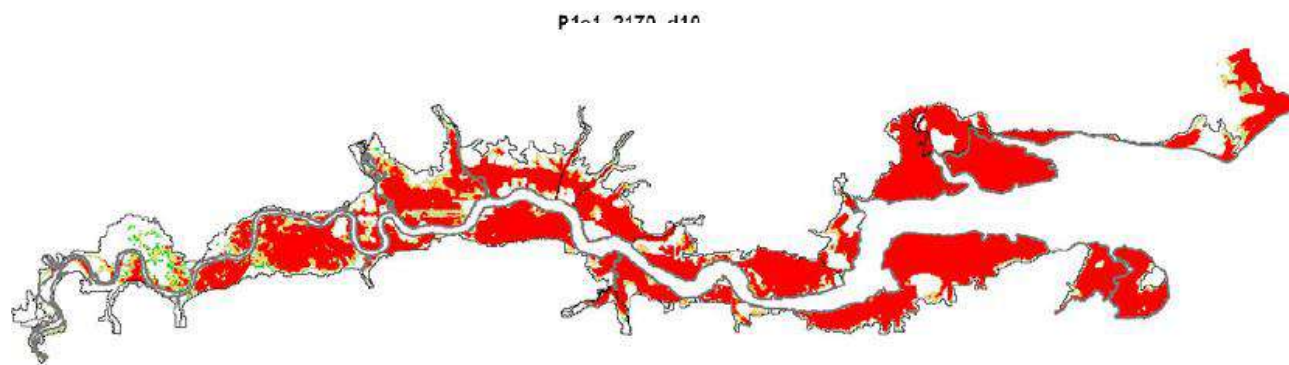




2030



2080



2170





DON'T PANIC,



ORGANISE!



A YOUNG PERSON'S PERSPECTIVE

SESSION ONE

DAZE AGHAJI

POLITICS STUDENT & CLIMATE ACTIVIST

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extinction

rebellion



TAKING A SYSTEMS APPROACH

SESSION ONE

HANNAH PATHAK

UK & EUROPE DIRECTOR, FORUM FOR THE FUTURE

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Taking a Systems Approach

Introducing Forum for the Future

Forum for the Future is an international sustainability non-profit.

For over 20 years we've been working in partnership with business, governments and civil society to accelerate the shift toward a sustainable future.

We do this using systems and futures practice.







The world is a complex, interconnected, finite, ecological-social-psychological-economic system. We treat it as if it were not, as if it were divisible, separable, simple and infinite. Our persistent, intractable, global problems arise directly from this mismatch.



Meadows, 2000

Change happens at different scales and altitudes

LANDSCAPE

The big picture 'operating context' of long term mega-trends and shared social values



REGIME

The mainstream, day-to-day 'business as usual'



NICHE

The margins of the mainstream – social & technical innovations



LANDSCAPE

Landscape Trends – e.g. Increasing Population

×

What's not changing in the landscape?
(stabilising factors)

×

What pressures are causing the system
to change?

×

What needs to change to enable sustainability?
What barriers are there and how can they be
overcome?

×

What would be the goals
of the new system?

RIGIME

The System – e.g. Our Current Food System

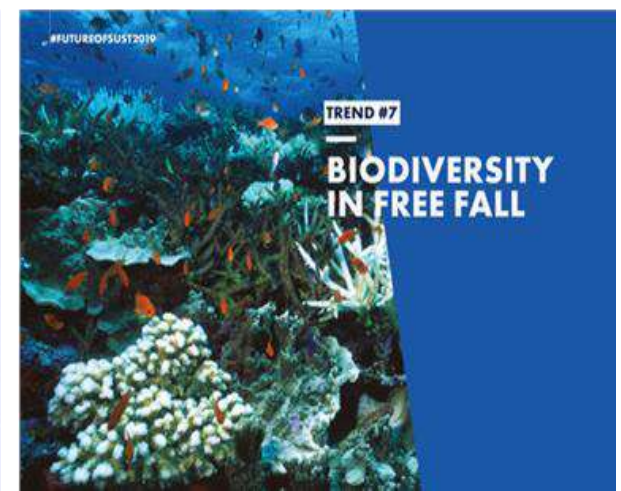
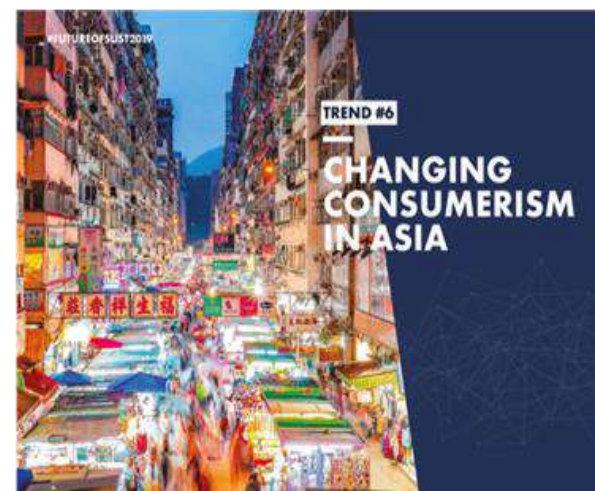
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Who are the stakeholders in the system?
Who has power, influence and resources?

Our shifting landscape

Turbulent times lie ahead, pushing global systems to the brink

FORUM
FOR THE
FUTURE

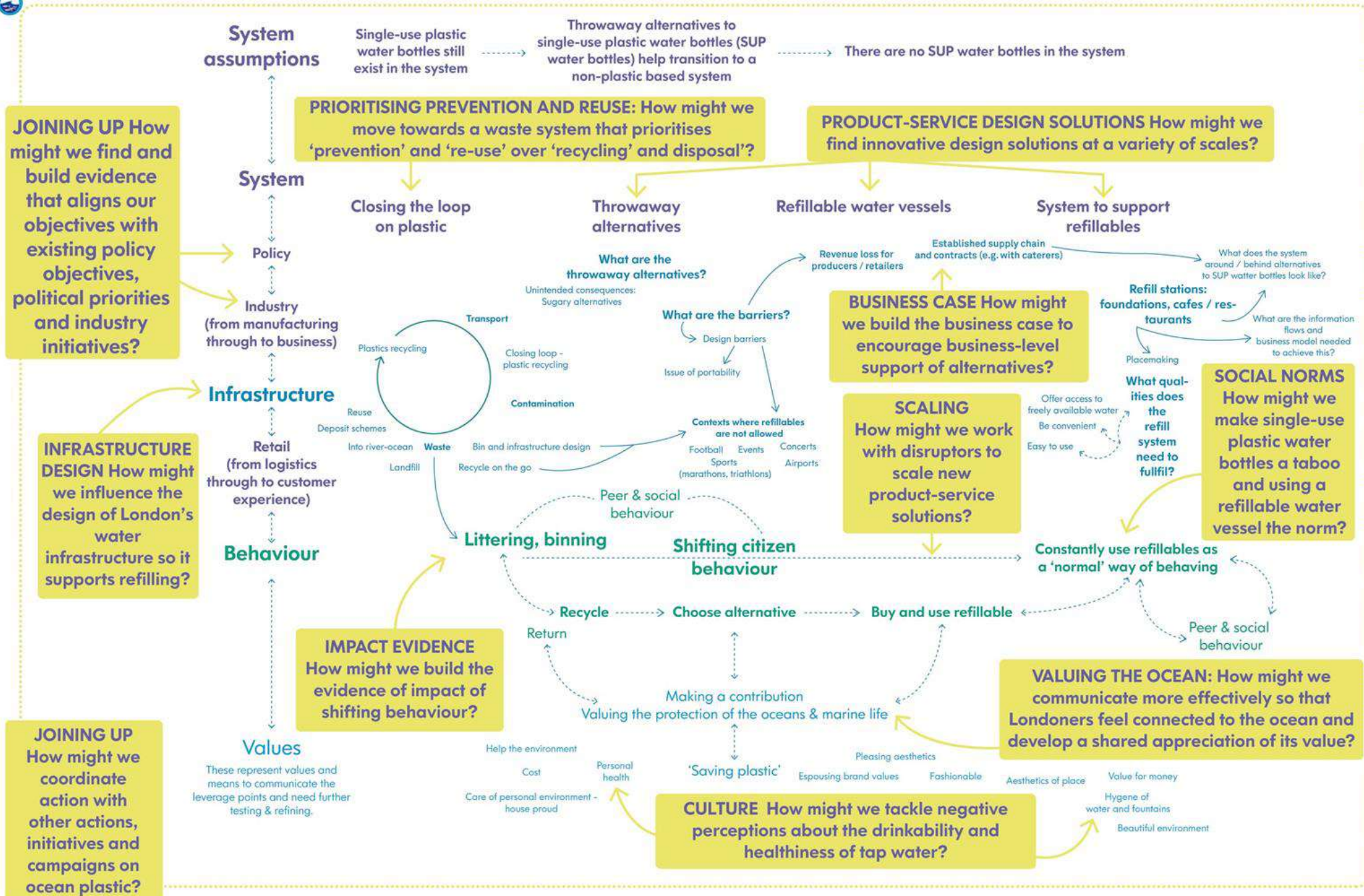


#FUTUREOFSUST2019

TREND #1

THE PLASTICS KICKBACK

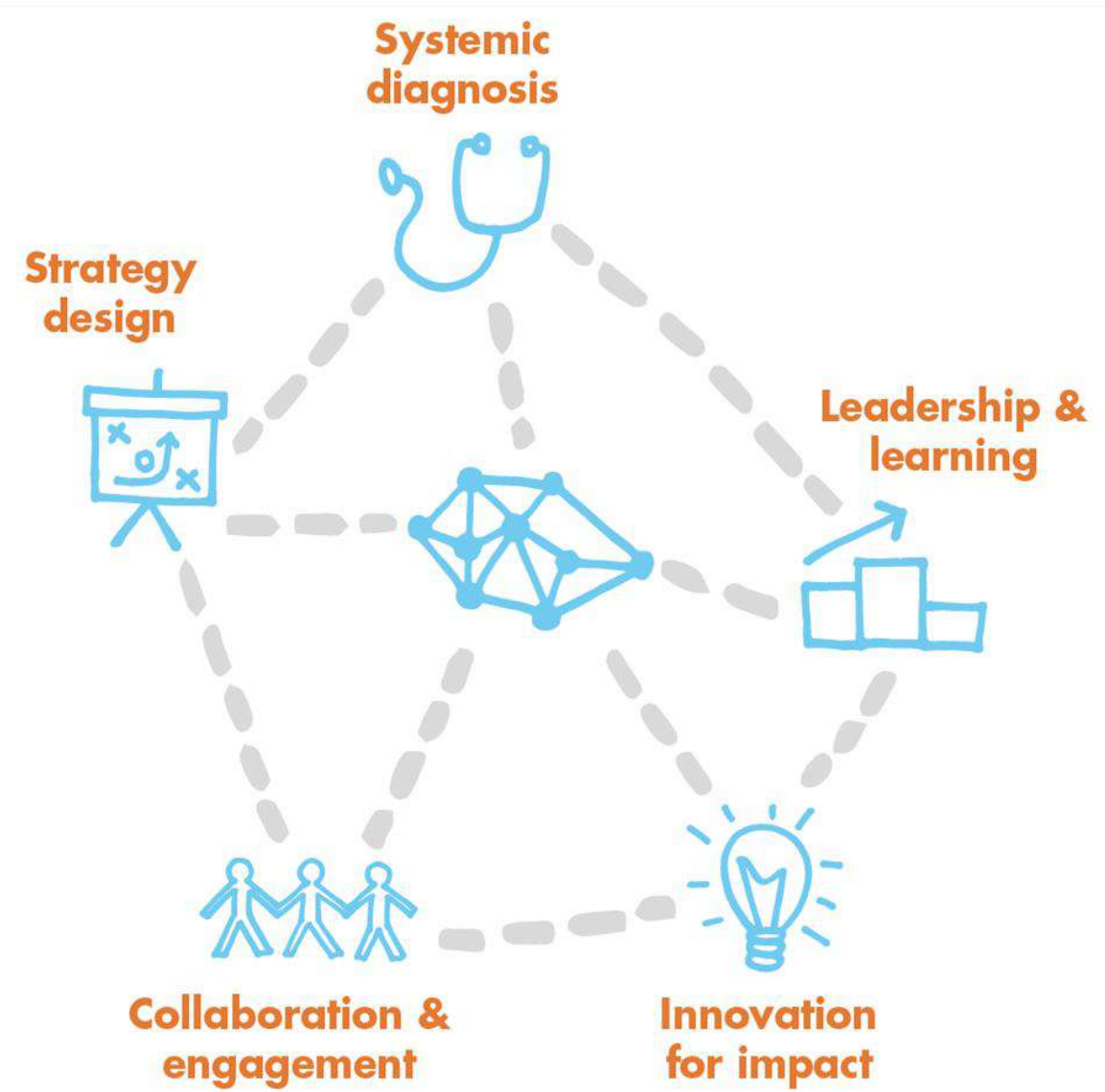


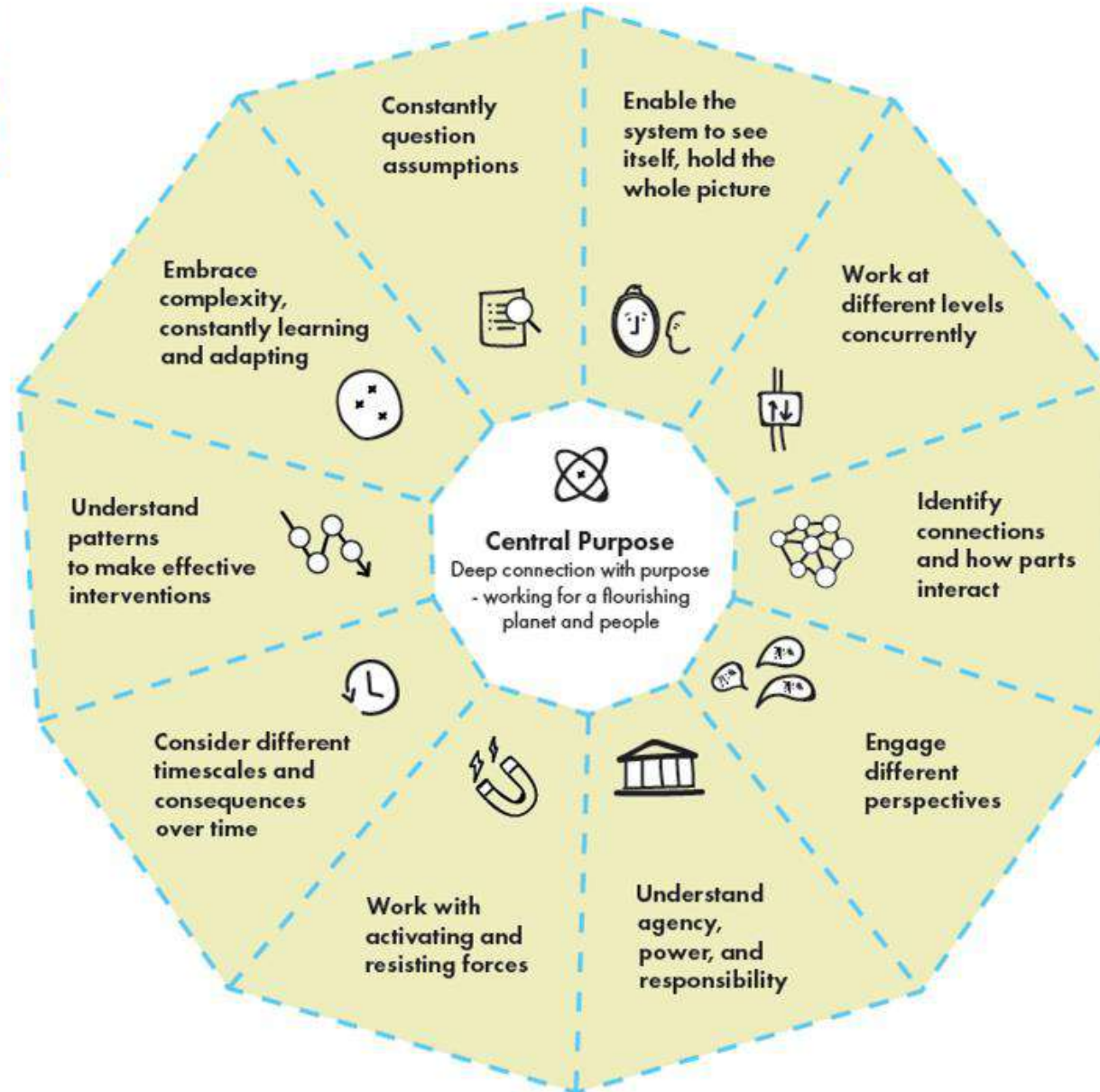


Aims of #OneLess

- **Structural system.** Create a structural change in the way water is delivered in London, from single-use plastic packaging to a new refillable model.
- **Behaviour.** Change the predominant drinking water behaviour in London, from using single-use plastic water bottles to refilling refillable water bottles.
- **Policy.** Achieve policy and legislative changes at local and national level that enable and support the reduction of plastic pollution in the ocean.
- **Values.** Activate benevolent human values to elicit a positive behaviour change and to increase the sense of connection between people and the ocean. Communicate a wide range of ocean services and ocean value.
- **Action-learning.** Facilitate, create, and learn from experiments and interventions.
- **Wider impact.** Use and share learning from London to scale our impact.

Capabilities for system change





THANK YOU

h.pathak@forumforthefuture.org



PANEL DISCUSSION AND Q&A

SESSION ONE

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COFFEE BREAK & MARKETPLACE

JOIN US AT 11:35 FOR SESSION TWO

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CLIMATE CHANGE INNOVATIONS

SESSION TWO

PETER HOGG

LONDON CITIES DIRECTOR, ARCADIS

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CLIMATE CHANGE AND PLA'S ADAPTATION APPROACH

SESSION TWO

JIM TRIMMER

DIRECTOR OF PLANNING & ENVIRONMENT, PORT OF LONDON AUTHORITY

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Climate Change, Adaptation and Recent Experiences on the Tidal Thames

5 November 2019

James Trimmer, Director of Planning & Environment

Port of London Authority

Winter Fluvial Flow at Teddington Weir



Red Flag Warning at the PLA's Richmond Lock







CONNECTED CITIES

SESSION TWO

THOMAS DARCY

CITY GROWTH DIRECTOR, JACOBS

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GREEN FINANCE

SESSION TWO

ANDREW ROSS
CEO, GLOBAL GARDEN LTD

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GREEN FINANCE AT COP 26



Project Homework!

**See: Valuing Nature Network
“Demystifying Green Finance”**

<https://valuing-nature.net/demystify-green-finance>




COP 26: GLASGOW November 2020

- **5-Year Review of Paris Agreement**
- **Target: 1.5° global GHG reduction**
 - \$93 trillion investment needed by 2030** [Mark Carney]
 - IPCC Report on Climate Change and Land: global agriculture & degraded land responsible for 24%-37% of global GHG emissions**
 - Requires Natural Capital metrics and revaluation at scale of landscapes & catchment system management for bond market investors**
- **EU Taxonomy for Sustainable Finance**



Eligible Themes for Green Bond Investment

Climate Bonds Taxonomy				Climate Bonds <small>INITIATIVE</small>			
ENERGY	TRANSPORT	WATER	BUILDINGS	LAND USE & MARINE RESOURCES	INDUSTRY	WASTE	ICT
Solar	Private transport	Water monitoring	Residential	Agriculture	Cement production	Preparation	Broadband networks
Wind	Public passenger transport	Water storage	Commercial	Commercial Forestry	Steel, iron & aluminium production	Reuse	Telecommuting software and service
Geothermal	Freight rail	Water treatment	Products & systems for efficiency	Ecosystem conservation & restoration	Glass production	Recycling	Data hubs
Bioenergy	Aviation	Water distribution	Urban development	Fisheries & aquaculture	Chemical production	Biological treatment	Power management
Hydropower	Water-borne	Flood defence		Supply chain management	Fuel production	Waste to energy	
Marine Renewables		Nature-based solutions				Landfill	
Transmission & distribution						Radioactive waste management	
Storage							
Nuclear							



Climate Bond Certified

Certification Criteria approved

Criteria under development

Due to commence



WHERE IS THE UK IN THIS?

- Below 17th in world ranking for issuing any Green Bonds [4/898]
- Government commitment to Net Zero by 2050: Needs £1tn by 2030
- Green Finance Institute set up by HM Treasury & City of London
- Aim: To accelerate the issue of Green Bonds in the UK for COP 26
- UK Municipal Bond Agency enables local authorities to issue bonds
- Sustainable infrastructure required at major river basin scale
- Application of Eco:Actuary to value TEP projects and issue:

10 MUNICIPAL GREEN BONDS IN THE UK

10 MAJOR RIVER BASINS [Defra / EA]



10 MUNICIPAL GREEN BONDS

Oxford – Cambridge Arc

Watershed for London and the Thames Valley





Oxford – Cambridge Arc

Major Economic Development Region

Joint Declaration of Ambition co-signed by:

- ▶ Department of Transport
- ▶ Department of Housing, Communities & Local Government
- ▶ Department of Food & Rural Affairs
- ▶ HM Treasury
- ▶ Leaders of all the local authorities / combined authorities / LEPs



Oxford – Cambridge Arc

Major Economic Development Region

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Major Infrastructure Projects: Aggregated for Green Bond investment

- Transport Strategy: East–West “Varsity” Railway Line / Freight & road network
- Connected Places Catapult: 5 new towns: 1m new homes: 3.1m ▶ 5.1m people
- “Knowledge Spine”: Digital fibre network / technology hubs / cleantech growth
- Sustainable environment: Agriculture / Forestry / Water / Natural Capital
- 25 Year Environment Plan / Biodiversity Net Gain / Net Zero / Clean Growth



DEFRA/EA Policy: FOOD & FARMING & FLOODS

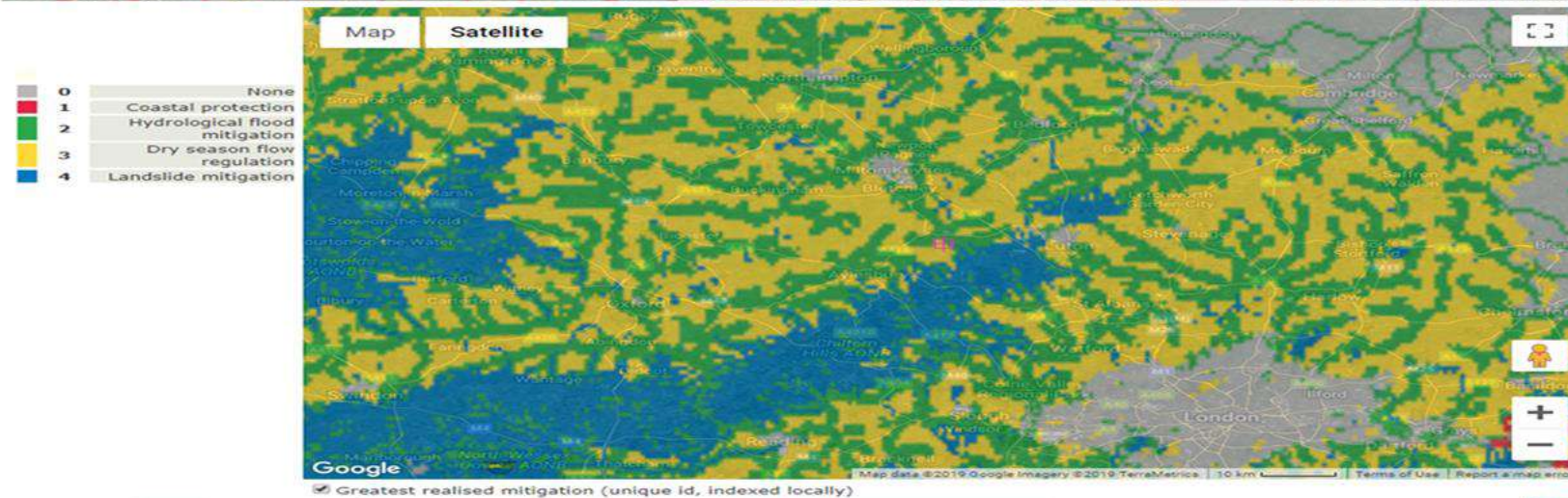
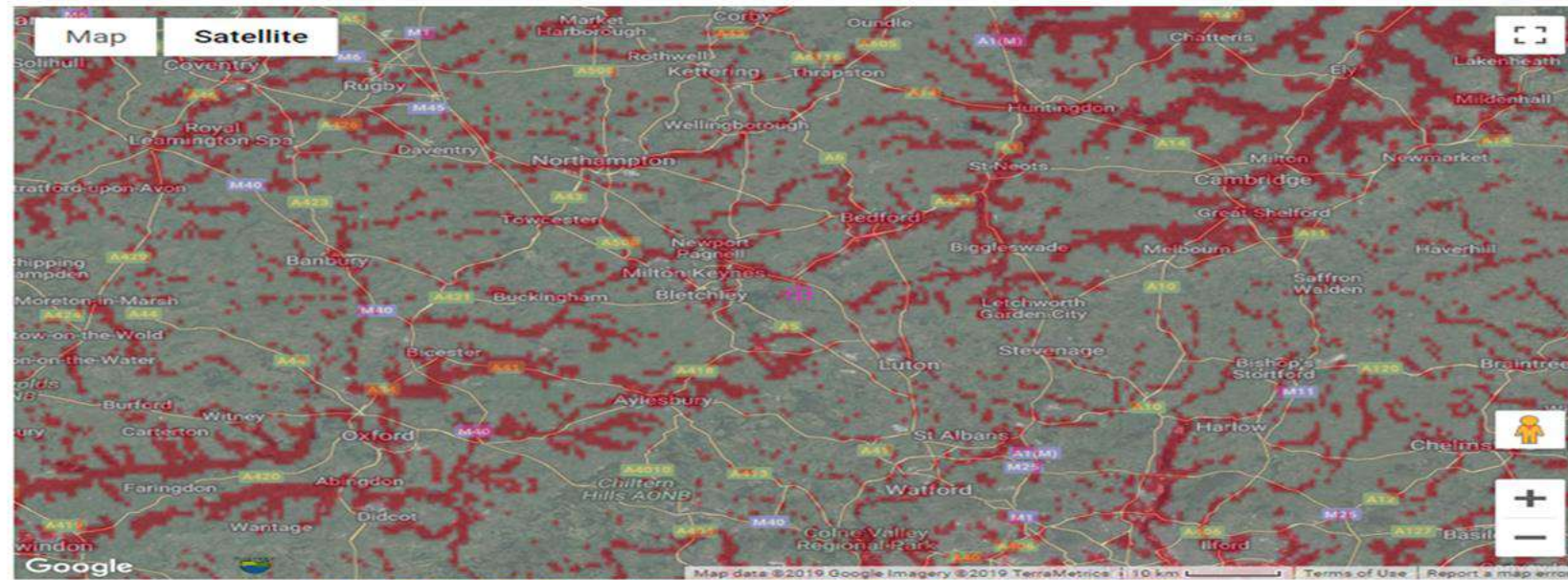
- **Post-Brexit, ex-CAP: ‘Public Money for Public Goods’**
 - **Payment for Ecosystem Services [by Cost:Benefit]**
 - **Environmental Land Management Schemes [ELMS]**
 - **ONS Natural Capital Accounts [25-Year Environment Plan]**
- **1. Where are these projects?**
- **2. What are they really worth when using ROI?**
- **3. Why will investors pay more for them?**
- **4. When will farmers / landowners get the money?**

Oxford – Cambridge Arc

Value of assets at risk of flooding: £740 billion



OX-CAM ARC: FLOODPLAIN & DAMAGE MITIGATION



Example outputs from EcoActuary showing the flood plain (red) for the Oxford - Cambridge Arc (top) and the greatest hazard mitigation service provided by nature (bottom, blue=landslide mitigation, yellow=drought mitigation, green=flood mitigation).

LANNOCK MANOR FARM

Geological watershed of the Oxford – Cambridge Arc

< River Thames to London River Great Ouse to Cambridge >



Groundswell: Regenerative Agriculture Festival 2019

Sustainable land use & good soil management with “No-Till” farming technique mitigating flood risk



Regenerative Agriculture and Eligible Projects

- Low-till or no-tillage means: no field ploughing, ever
- Planting with a cover crop means: no bare soil, ever
 - Soil biodiversity metric: more worms!
- Retain the carbon in the soil [not burning it off by exposing it to oxygen]

SIGNIFICANT REDUCTION IN GHG EMISSIONS



Regenerative Agriculture and Eligible Projects

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SIGNIFICANT REDUCTION IN GHG EMISSIONS

- Builds up organic matter in the soil: infiltrating rainfall
 - Increases the depth and porosity of soil with less soil compaction
 - Prevents water run-off carrying away irreplaceable soil / silt / nutrients
- Prevents the siltation and chemical / fertilizer pollution of streams and rivers



Regenerative Agriculture and Eligible Projects

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Eligible Projects [EU Taxonomy]

- Wetlands / Nature-based Solutions / Flood Defences / Green Infrastructure

MITIGATING THE INSURANCE COST OF DOWNSTREAM FLOODING



RISING INSURANCE COST OF FLOODING: \$337bn [2017]

Losses due to:

- Building towns and infrastructure on floodplains: Obvious insurance risk!
- Known financial impact and cost of infrastructure investment decisions
- Adding to costs for local authorities: Ask to Government
- Regional planning policy and local authority contingency funds depleted
- Corporate confidence in supply chain / inward investment diminished
- Poor sustainability: Employment prospects greatly reduced. Less tax income
- Regional Gross Value Added [GVA] significantly impaired
- Social and community distress – with long lasting emotional effects
- Flooding has 1° / 2° / 3° / 4° order financial consequences: worldwide
- Projection of climate change flood insurance losses: \$10 trillion



Applying Eco:Actuary to value flood mitigation at the river basin scale

Transposing the insurance value of assets at risk into a Municipal Green Bond Investability Algorithm

$$I=f(A_{[c,f]},B)$$

Investability is a function of:

Current value: $A_c=f(W_r,Sc,I)$

Future losses: $A_f=f(W_p,Sc,I)$

Risk mitigation: $B=f(P,T,U,O)$



Municipal Green Bond: Process

- ▼ Aggregation of all Eligible Projects at the whole river basin scale
- ▼ Integrated regional infrastructure projects underpinned by Natural Capital
- ▼ Bond endorsed by Green Finance Institute & with 2nd Opinion valuation
- ▼ Bond issued by UK Municipal Bond Agency for sets of local authorities
- ▼ Bought by insurers as investors, not as underwriters [For portfolio ROI]
- ▼ Bought by pension funds [For Bank of England / FSB TCFD reporting]
- ▼ Bought by corporates [For ESG / global supply chain reporting]
- ▼ Bought by developers [For Planning Consent: “Have you bought our bond?”]
- ▼ Bought by the public [As a retail bond for local community engagement]
- ▼ Payments to farmers / landowners for project delivery and reporting

10 MUNICIPAL GREEN BONDS



UK SOVEREIGN GREEN BOND



GREEN FINANCE AT COP 26

- **Application of insurance value of assets at risk of flooding across the UK – and worldwide**
- **Enables revaluation of sustainable agriculture and land use, water and Natural Capital assets**
- **Based on replicable model of Ox-Cam Arc:**
- **Thames Valley [City & Canary Wharf: >£1tn]**
- **Pipeline of x10 UK Municipal Green Bonds**
- **Aggregated Sovereign Green Bond for UK**



SUMMARY

Application of EcoActuary in Municipal Green Bonds redefines Regenerative Agriculture and revalues Natural Capital assets to underpin sustainable economic growth in major river basins and in sustainable cities worldwide to meet COP 26 and UN SDG targets



SUMMARY

Application of EcoActuary in Municipal Green Bonds redefines Regenerative Agriculture and revalues Natural Capital assets to underpin sustainable economic growth in major river basins and in sustainable cities worldwide to meet COP 26 and UN SDG targets

Opportunity

Revaluing natural capital for the global bond market

Project Homework!

Valuing Nature Network [“Demystifying Green Finance”](#)

<https://valuing-nature.net/demystify-green-finance>

Andrew.Ross@global-garden.co.uk

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Thames Estuary Partnership

Tower of London 5 November 2019



PANEL DISCUSSION AND Q&A

SESSION TWO

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CLIMATE CHANGE MESSAGING

SESSION THREE

KATRINA RYAN

DIRECTOR, MINDFULLY WIRED COMMUNICATIONS

#TEPAnnualForum2019

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ACCESS & THE ILLUMINATED RIVER

SESSION THREE

ALEX LIFSCHUTZ

DIRECTOR, LIFSCHUTZ DAVIDSON SANDILANDS

#TEPAnnualForum2019

@ThamesEstPart

THE

illuminated River

The ILLUMINATED RIVER



Design Team



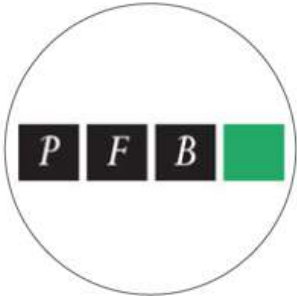
artist



architect



cost consultant



PD



environmental



ecology



planning



heritage



structural engineer



marine engineer



MEP / lighting design



engagement

Additional Support



measured survey



bat survey



bird survey

Existing Bridge Owners



Royal Borough of Kensington and Chelsea



Westminster City Council



Bridge House Estates



Network Rail



Transport for London

Statutory Authorities



Greater London Authority



Wandsworth
London Borough of
Wandsworth Council



London Borough of Tower
Hamlets



London Borough of Southwark
council



Lambeth
London Borough of Lambeth
council

Statutory Authorities



Royal borough of Kensington and Chelsea



Westminster City Council



City of London Corporation



Port of London Authority

Infrastructure & Technical



Cross River Partnership (CRP)



Colas, Volker Highways and URS



Fosters and Partners



Zoon Engineering



FM Conway



Thames Tideway



JB Riney



City of London engineers

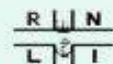
Environmental



Environment Agency



London Bat Group



Royal National Lifeboat
Institution



defra

The Department for
Environment, Food and Rural
Affairs



Greenspace Information for
Greater London



Forestry Commission England



THAMES21
Thames 21



Thames Water



Joint Nature Conservation
Committee

Environmental



Natural England



Zoological Society of London



River Thames Society



Uk Green Building Council



Royal society for the
protection of birds



Marine Management
Organisation



Thames Estuary Partnership



London Wildlife Trust



Civil Aviation Authority

Security



MI5 the security service



MI6 secret intelligence service



Metropolitan Police

Design & Heritage



Historic England

The Artist



ILLUMINATED RIVER



FROM THE AIR

29
million
times



FROM THE RIVER

3
million
times



FROM BANKSIDE & SOUTHBANK

20
million
times

BY COMMUTERS:

85
million
times*



7 million cyclists



39 million pedestrians



38 million train passengers

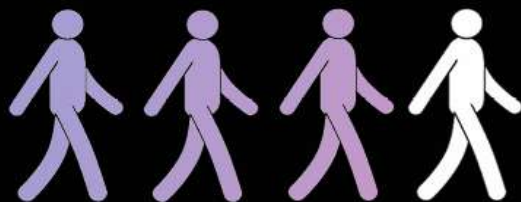


One in ten children who live in London have never seen the central London stretch of the Thames.

Only **60%** of millennials (aged 18-34) consider the Thames an iconic attraction, compared with **over 90%** of people aged 50+

82% of Londoners consider the river Thames to be an iconic attraction.

40% of Londoners believe that more free attractions along the Thames would encourage them to visit the river.



A quarter of Londoners say they do not visit the river Thames for pleasure.



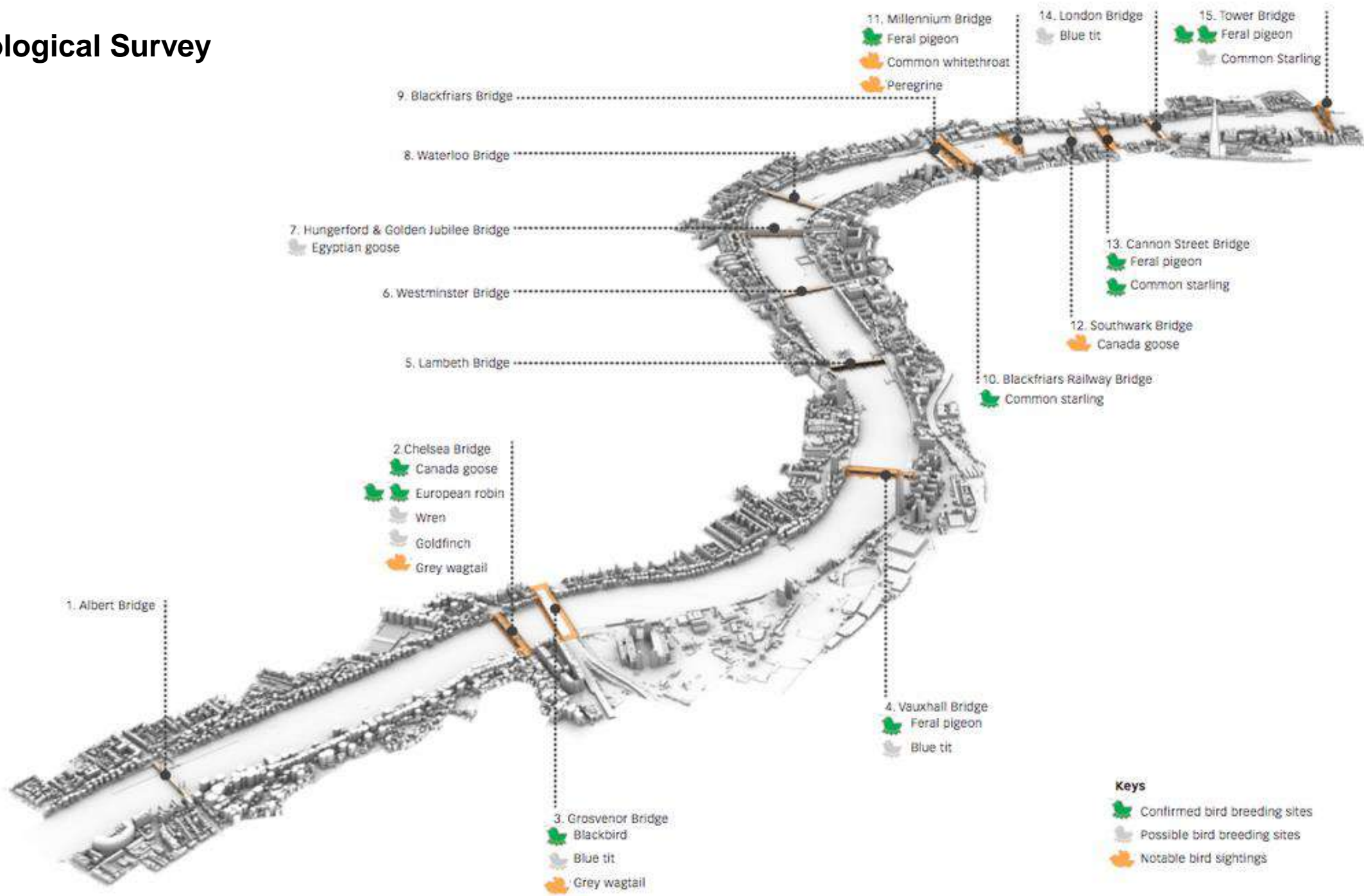
Over half (52%) of Londoners have not visited an attraction along the Thames in over a year.



67% of parents of under-16s say they have never taken their children on a boat along the Thames.

Parents living in the City of Westminster have the highest proportion of children (**17%**) under the age of 16 who have never seen the Thames, despite the river being on their doorstep.

Ecological Survey



Ecological Survey

bats



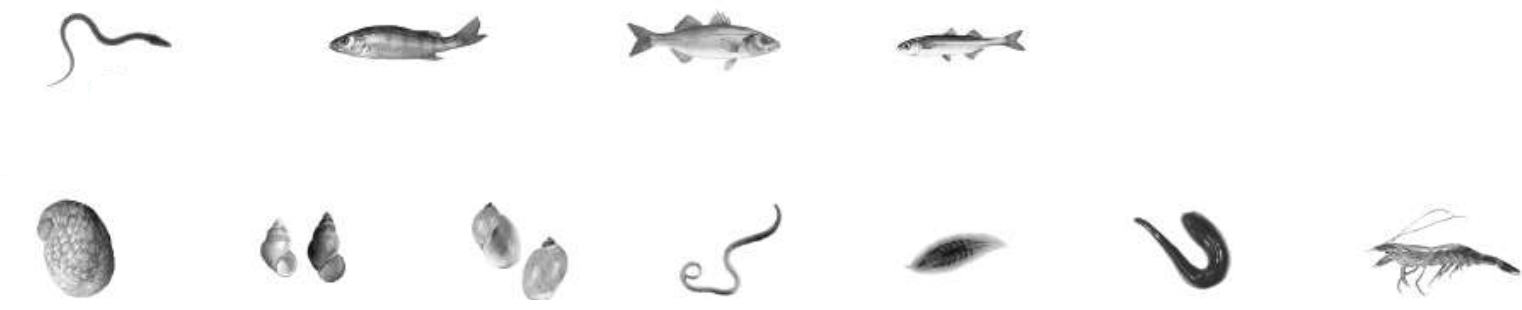
birds



fish



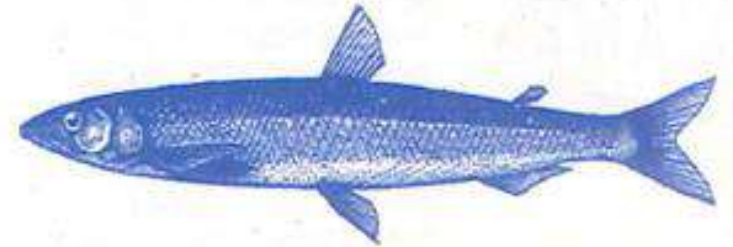
invertebrates



ZSL | LET'S WORK
FOR WILDLIFE

THE STORY OF THE
CUCUMBER FISH
IN THE THAMES

THE
THAMES
TIMES



**HAVE YOU
SMELT A
SMELT?**



The European smelt (*Osmerus eperlanus*) is a fish with a silver body that smells like a cucumber.

The presence of smelt indicates an estuary has clean water and can support other wildlife. The smelt's story in the Thames teaches us about the need to look after our river.

**ONCE
THRIVING
SMELT
FISHERY**

**Fish from the Thames
have fed Londoners for
thousands of years.**

Evidence of smelt bones in Medieval and Roman archaeological sites and the wooden remains of Anglo-Saxon fish traps, that can still be seen in the river today, show us that the significance of smelt and other fishes stretches back over the entire history of London.

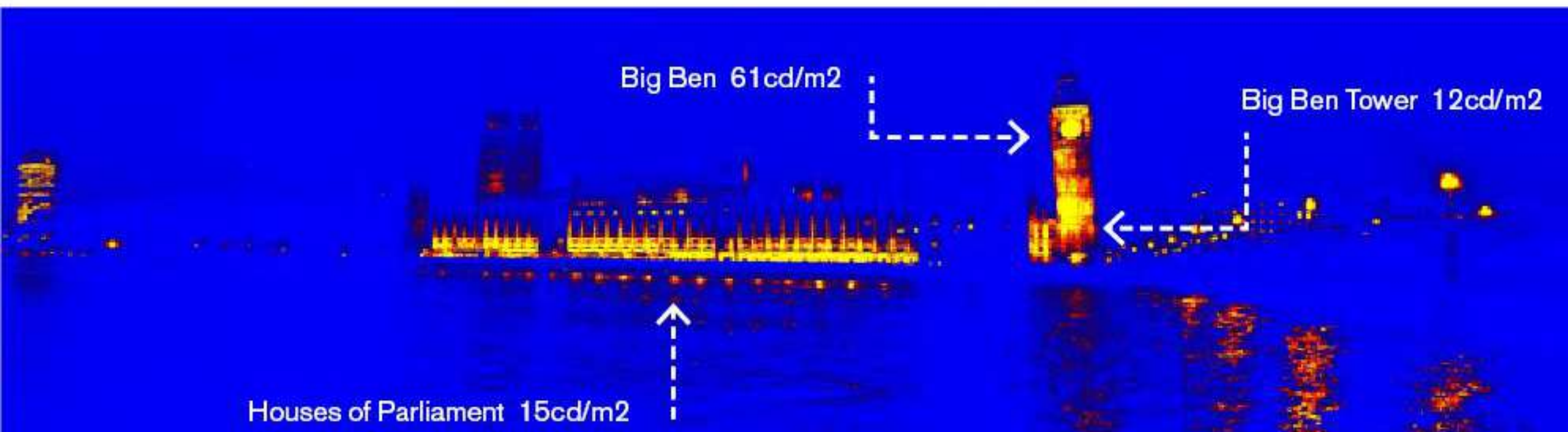
In the 19th century, the Thames in London provided a plentiful supply of fish to eat. Many fishing families relied on the river to make a living from selling fish like smelt, which was considered a delicacy.

Beginning at age 9, fathers would train their sons during a 7 year apprenticeship. On the Thames, fishermen used peterboats, which had a well for holding live fish and only had space for one man and a boy. In the early 1800s, records show that fisherman and their apprentices only returned home once a month or every six weeks.

Ecological Survey



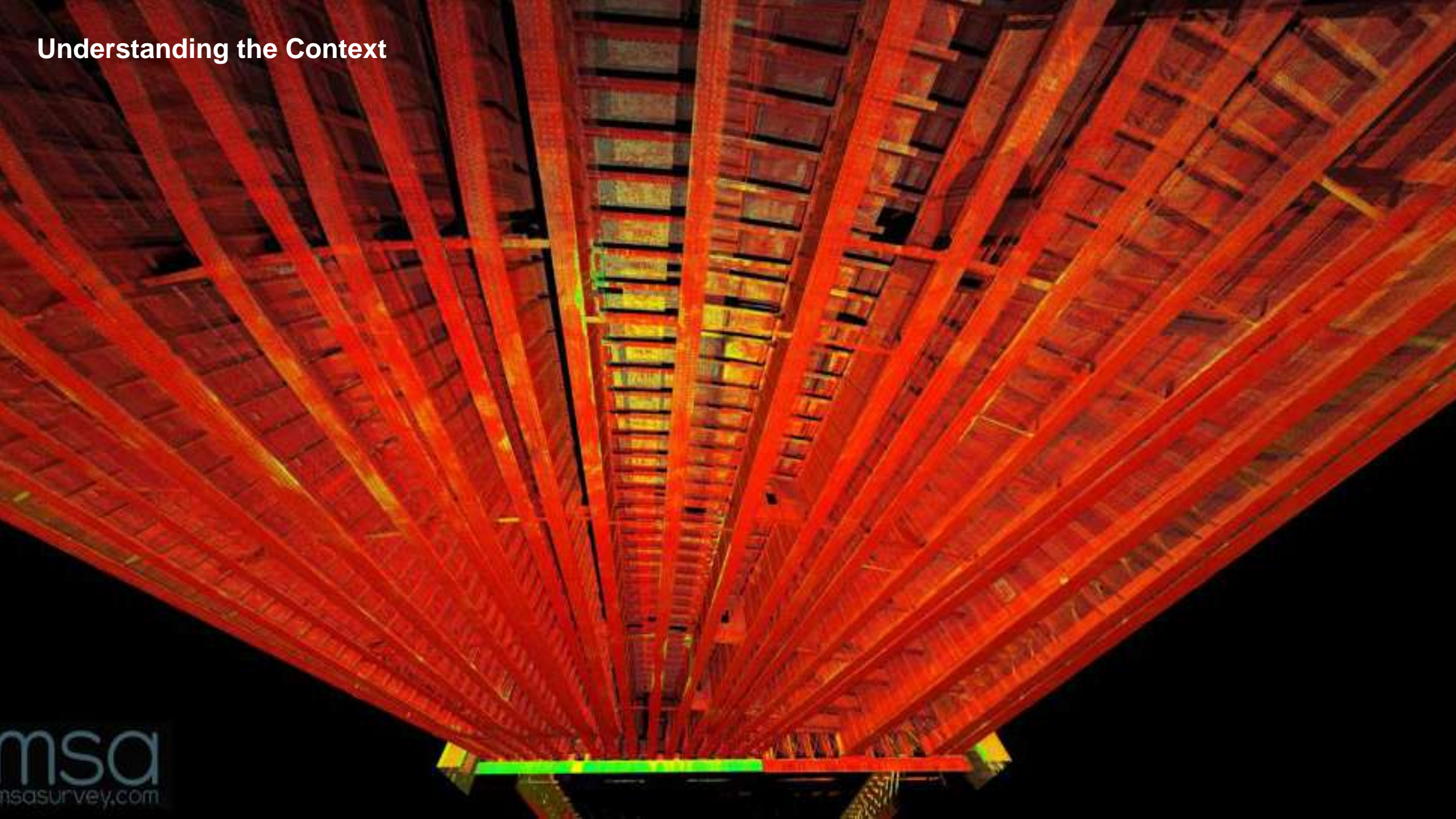
Luminance Survey





1 - Albert Bridge	10
2 - Chelsea Bridge	10
3 - Grosvenor Bridge	10
4 - Vauxhall Bridge	20
5 - Lambeth Bridge	15
6 - Westminster Bridge	15
7 - Golden Jubilee Footbridges	15
8 - Waterloo Bridge	20
9 - Blackfriars Bridge	20
10 - Blackfriars Railway	20
11 - Millennium Bridge	15
12 - Southwark Bridge	15
13 - Cannon Street Railway Bridge	15
14 - London Bridge	20
15 - Tower Bridge	25

Understanding the Context



Developing the Artwork



Power Cable



DMX Data Cable



distribution board - 6 way



Power/Data Supplier (PDS)



Junction Box



Leader Cable



End to End cable



PC + Back Up PC's



Stainless Steel Shield Channel



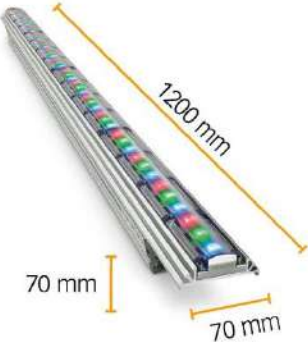
Stainless Steel Straps



WiFi Telemetry



DMX controller



LED Linear Graze

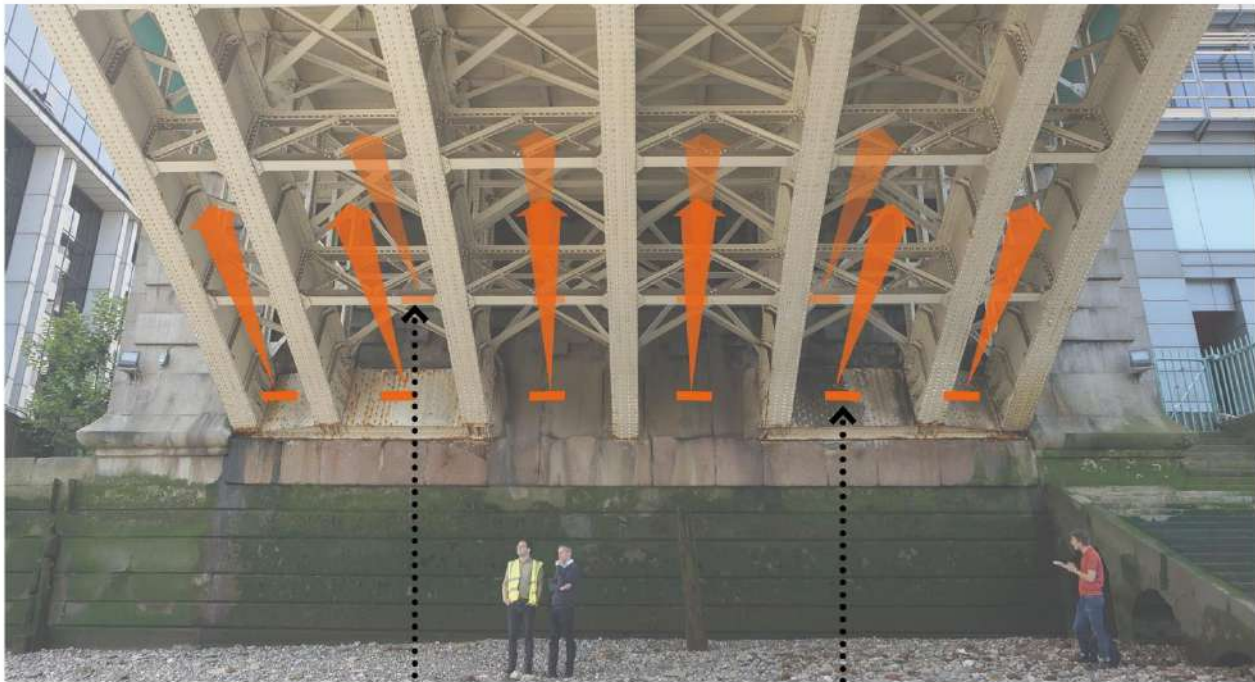


LED Floodlight



LED Nodes

Developing the Artwork



Southwark Bridge under-arches at the north bank

LED Reach 100
mounted between
the bridge arches
at higher level

LED Reach 100
mounted between
the bridge arches at
lower level



Southwark Bridge pier

LED ColorBlast
mounted on the
bridge pier



proposed installation method:
abseiling



remote sequencing of lights



100no Reach Elite 100



16no LED Colour Blast

key

LED ColorBlast

LED Reach 100



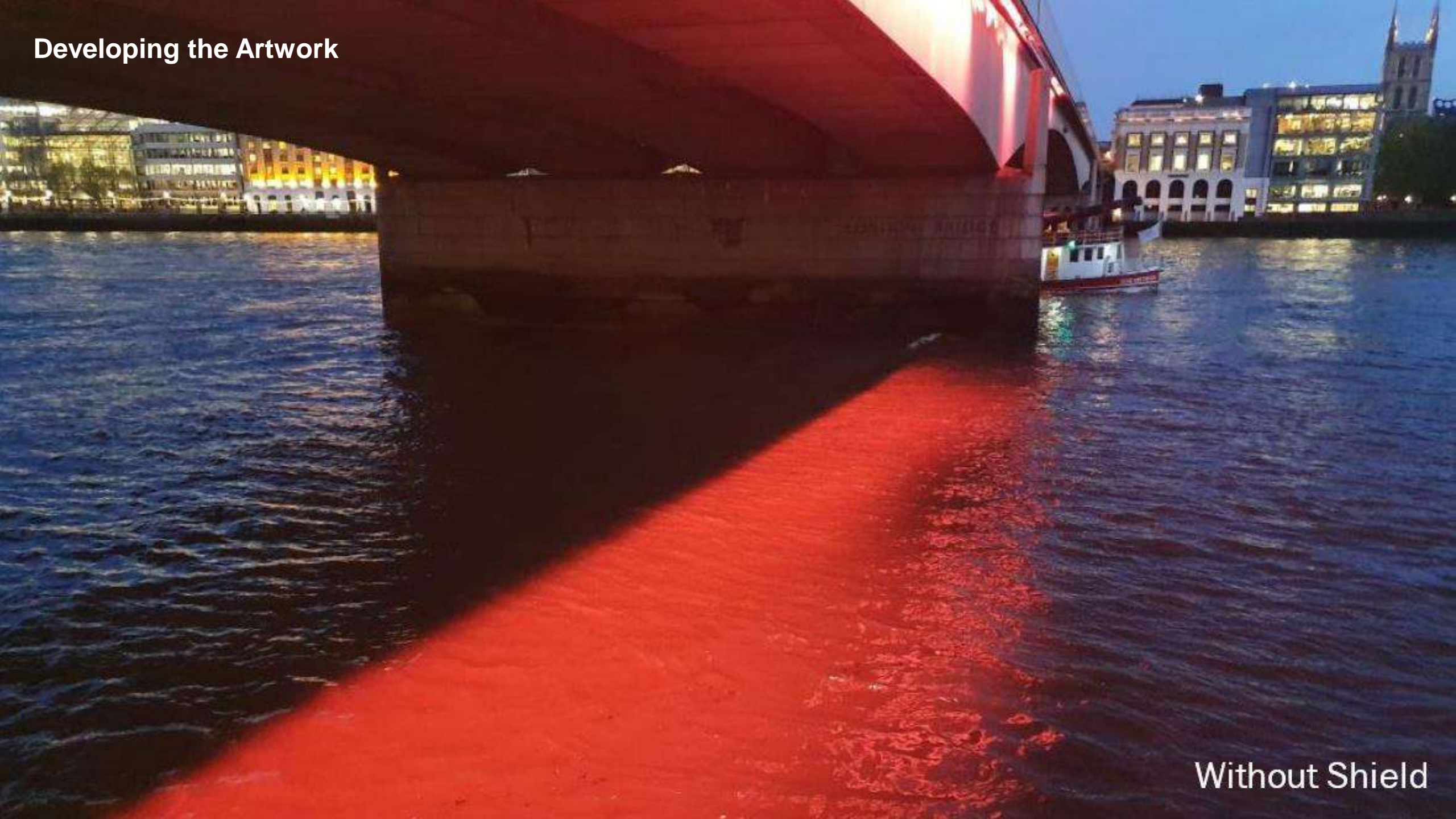
Developing the Artwork



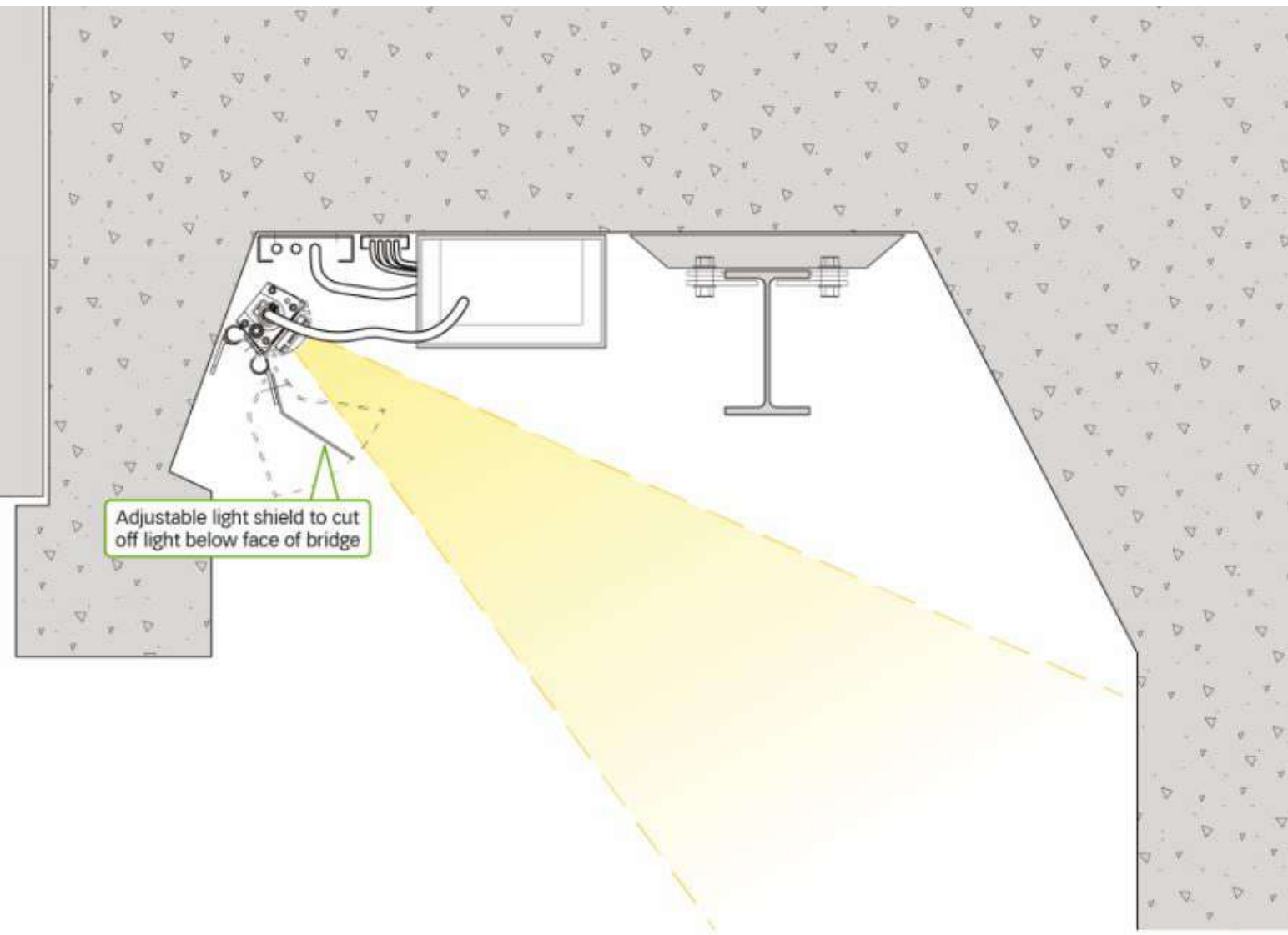
Developing the Artwork



Developing the Artwork



Without Shield



Developing the Artwork



With Shield

The Installation



The Installation





Before



London Bridge

After



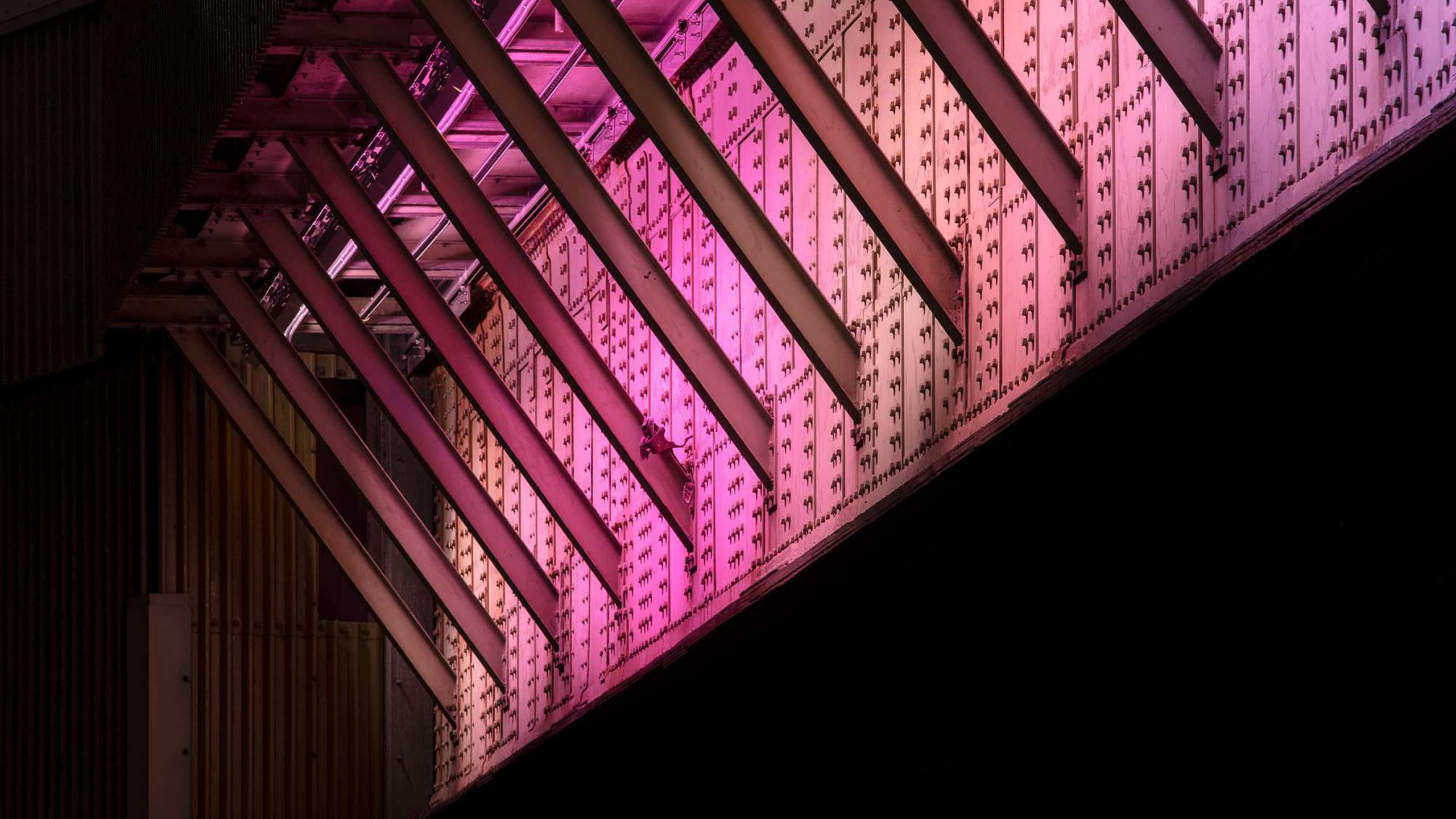


Before



Cannon Street Railway Bridge

After







Before



Southwark Bridge

After





Before



Millennium Bridge

After





Westminster Bridge





THE

illuminated River

The ILLUMINATED RIVER









THE

illuminated River

The ILLUMINATED RIVER











THE NATIONAL PARK CITY

SESSION THREE

BEN SMITH

DIRECTOR OF ENERGY, CITIES & CLIMATE CHANGE, ARUP

#TEPAnnualForum2019

@ThamesEstPart

The London National Park City.

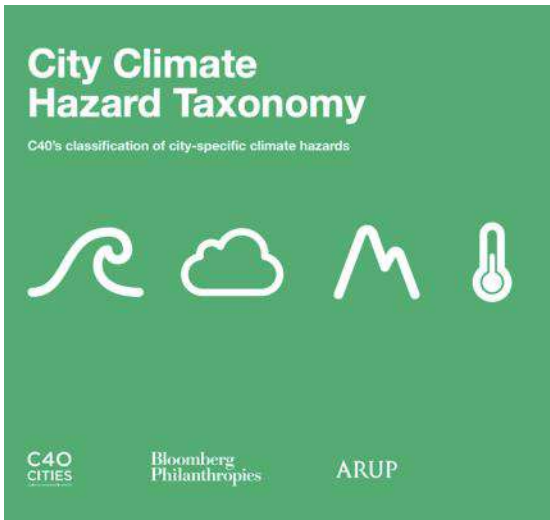
Thames Estuary Partnership, Annual Forum. 05 November
2019.

Ben Smith
@Smithster76



Photo credit: @LMasseyImages

Cities and climate change



CITY CLIMATE HAZARD
TAXONOMY, 2015



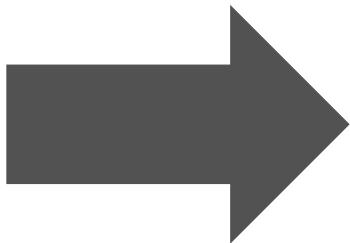
CLIMATE ACTION IN
MEGACITIES, 2015



DEADLINE 2020, 2016



THE FUTURE OF URBAN
CONSUMPTION IN A 1.5
WORLD, 2019



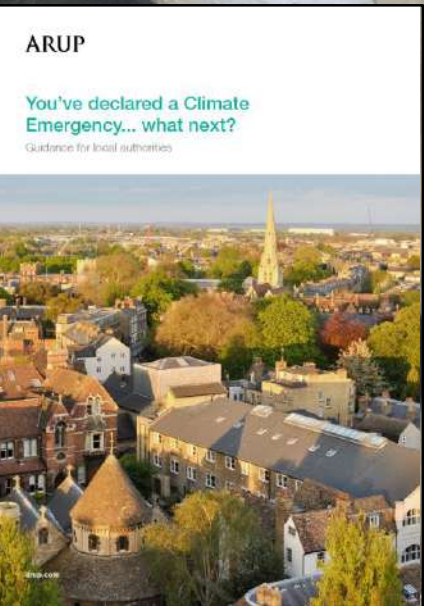
INCLUSIVE COMMUNITY
ENGAGEMENT, 2019

NATURE, HIP-HOP,
DANCE, SPORT, FASHION,
ARTS, CULTURE

FROM THIS MOMENT
DESPAIR ENDS
AND TACTICS BEGIN



Head or heart?





- Daniel Raven-Ellison
- Former Geography Teacher
- Guerrilla Geographer & Creative Explorer
- London National Park City Founder



LONDON NATIONAL PARK CITY*

north design

A VISION
— GREENER
— HEALTHIER
— WILDER

We inspire people through our campaigns and outreach. We connect individuals, communities, businesses and government agencies so that we can act together for a greener and healthier London.

* What if?
Why not?



5 YEARS!

- PROPOSAL
- CAMPAIGN
- EVENTS / MEDIA
- CITIZENS
- COMMUNITIES
- BUSINESSES
- THE MAYOR

LAUNCH DAY!



LONDON
NATIONAL
PARK CITY
FESTIVAL

TAKE ACTION

12 WAYS TO MAKE LIFE IN LONDON BETTER

NATIONAL PARK CITY MAKER*

WATCH SIR DAVID ATTENBOROUGH'S "CLIMATE FACTS". SUPPORT POLITICIANS, CHARITIES AND WORKING TO REDUCE CARBON EMISSIONS • GREEN ENERGY PROVIDER •



Acting in the rain. Photo: Steve Pocock

ADOPT A MORE PLANT-BASED DIET AND WASTE LESS FOOD • WALK AND CYCLE MORE, USE CARBON-FUELLED TRANSPORT LESS



NATIONAL PARK CITY - 41

"It may sound frightening, but the scientific evidence is that if we've not taken dramatic action within the next decade, we could face irreversible damage to the natural world and the collapse of our societies." — Sir David Attenborough

Climate and environmental crises are now widely acknowledged, from school pupils to politicians. Environmental concerns are being expressed more loudly than ever before. We need behavioural change, societal change, and systems change. Our own lifestyles, behaviours and values are at the heart of this. Acting in our own lives helps create demand for better products, activities, policies.

Personal action helps convince and support community and political leaders and decision makers to take the bolder actions necessary to avoid the increasing likelihood of species extinction and climate catastrophe.

It is possible to reduce our harmful impact on the planet, but we must think globally as well as locally. London's population has swollen by two million since 1990, and whilst the emissions produced in London in that time have decreased, London is still a centre of consumption of goods and services. Through our national and international supply chains Londoners have a significant emissions impact.

HERE ARE SIX IMMEDIATE WAYS TO TAKE ACTION:

1. If you haven't already, consider switching to a more plant-based diet. Londoners' diets are steadily veering towards flexitarianism; dominated more by plants than meat or fish. Studies show that without meat or dairy products, global farmland use could be reduced by 75%. That's an area larger than China, Europe, Australia and the US added together. Reducing meat and fish intake by about half, would mean a corresponding drop of about two thirds in greenhouse gases, nitrogen levels in soils and oceans, land use and water use.
2. Get around under your own steam or use public transport. Walking and cycling not only reduce emissions, they are better for personal and collective health. Active travel is also a brilliant way to stay connected to the city.
3. Switch to a green energy supplier, sourcing electricity powered by wind, light or water.

TIP: Using a smart meter you can gauge energy use to identify other potential savings.

4. Try to reduce the amount of new clothing and textiles you purchase. Since 2002, global clothing production has more than doubled. The average consumer buys 60% more, and each garment is kept for half as long.

IP: The DePop app makes buying and selling unwanted items through a smartphone quick and convenient.

5. Consider where you take your holidays and how you travel for work and pleasure. Flying is a significant generator of emissions and almost all of the UK and Europe is now accessible by ferry and train. Amsterdam is 3.5 hours direct from Kings Cross by train, competing with air travel in time, price and comfort, or you could support the UK's 15 traditional National Parks.

6. Waste less food. Londoners generate a whopping 3.7 million tonnes of waste a year. Nearly half of that is food; most of which is fit to eat.

TIP: Karma is a Swedish app now operating in London with 700 cafes, restaurants and grocery stores selling excess produce at half price towards the end of their trading day. Followers can see what's available nearby, purchase online and collect from the relevant outlet.

Further information on diets for planetary health: eatforum.org/eat-la-nct-commission/

More on reducing emissions from consumption in cities: c40.org/consumption

There is some inspiring content on the climate crisis and planetary health as part of the Olafur Eliasson (In Real Life) exhibition running at the Tate Modern until January 2020.

- 
- A photograph of two deer in a field. One deer is in the foreground, facing left, and another is slightly behind it. In the background, a person is riding a bicycle. The scene is set in a grassy field with trees in the distance.
- THE FOUNDATION
 - INTERNATIONAL CHARTER
 - 25 x 2025

**NATIONAL
PARK CITY
FOUNDATION***

DELIVERING ON THE VISION ...STARTING IN LONDON



PARTNERSHIPS




NINE

NATURE NEEDS HER

NINE

Timberland

timberland 

LONDON
NATIONAL
PARK CITY

NATURE NEEDS HEROES

BECOME A RANGER

Want to make a difference in your community?
Help us make London greener, healthier, wilder by
signing up to be a London National Park City Ranger.

Interested?
Receive full training from the National Park City
Foundation, supported by Timberland, to have
your green ideas for the community realised.
Get involved at
www.nationalparkcity.london/rangers

#NATURENEEDSHEROES



PLANT THIS POPPY SEEDS PAPER TO HELP US AND
LONDON NATIONAL PARK CITY MAKE LONDON GREENER.

Optimists, artists, rewilders, local guides, game-makers, photographers, gardeners, writers, first aiders, teachers, storytellers, natural navigators, fundraisers, mappers, tree planters, rescuers, expert guides, play street organisers, hedgehog hole makers, poets and **people with other skills and talents to share with others.**

Vision & mission aligned with TEP and wanting to drive change through networks and partnership. Help find us the best Rangers!





Contact details:

ben-g.smith@arup.com

ben.smith@nationalparkcity.org

www.nationalparkcity.london

www.nationalparkcity.org

With thanks - for allowing me to work flexibly and accommodating my
voluntary work:

ARUP



A VALUES-BASED APPROACH & MARINE COLAB

SESSION THREE

SUE RANGER

ENGAGEMENT AND EDUCATION MANAGER, MARINE CONSERVATION SOCIETY

#TEPAnnualForum2019

@ThamesEstPart



PANEL DISCUSSION AND Q&A

SESSION THREE

#TEPAnnualForum2019

@ThamesEstPart



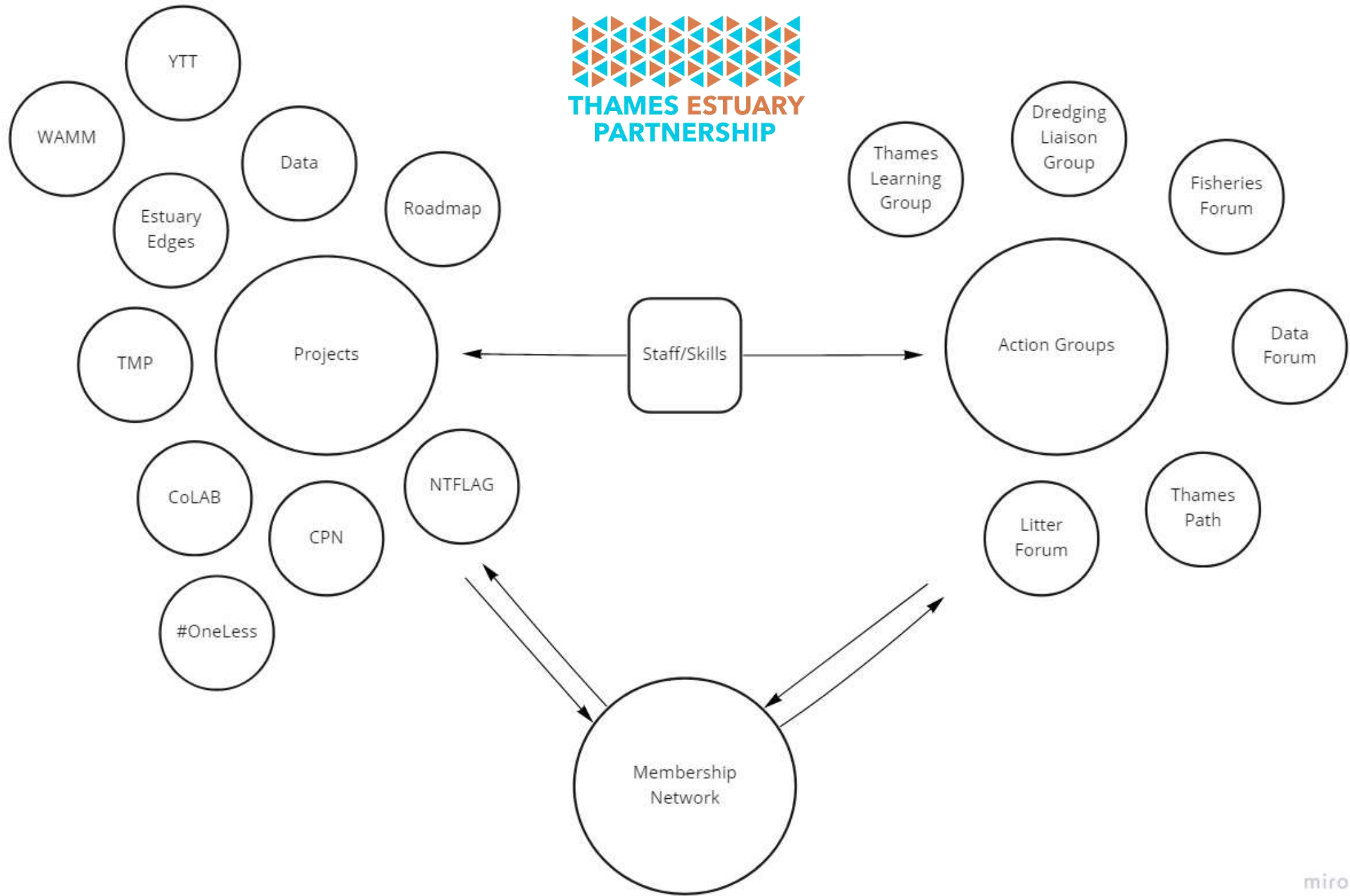
WORKSHOP BRIEFING

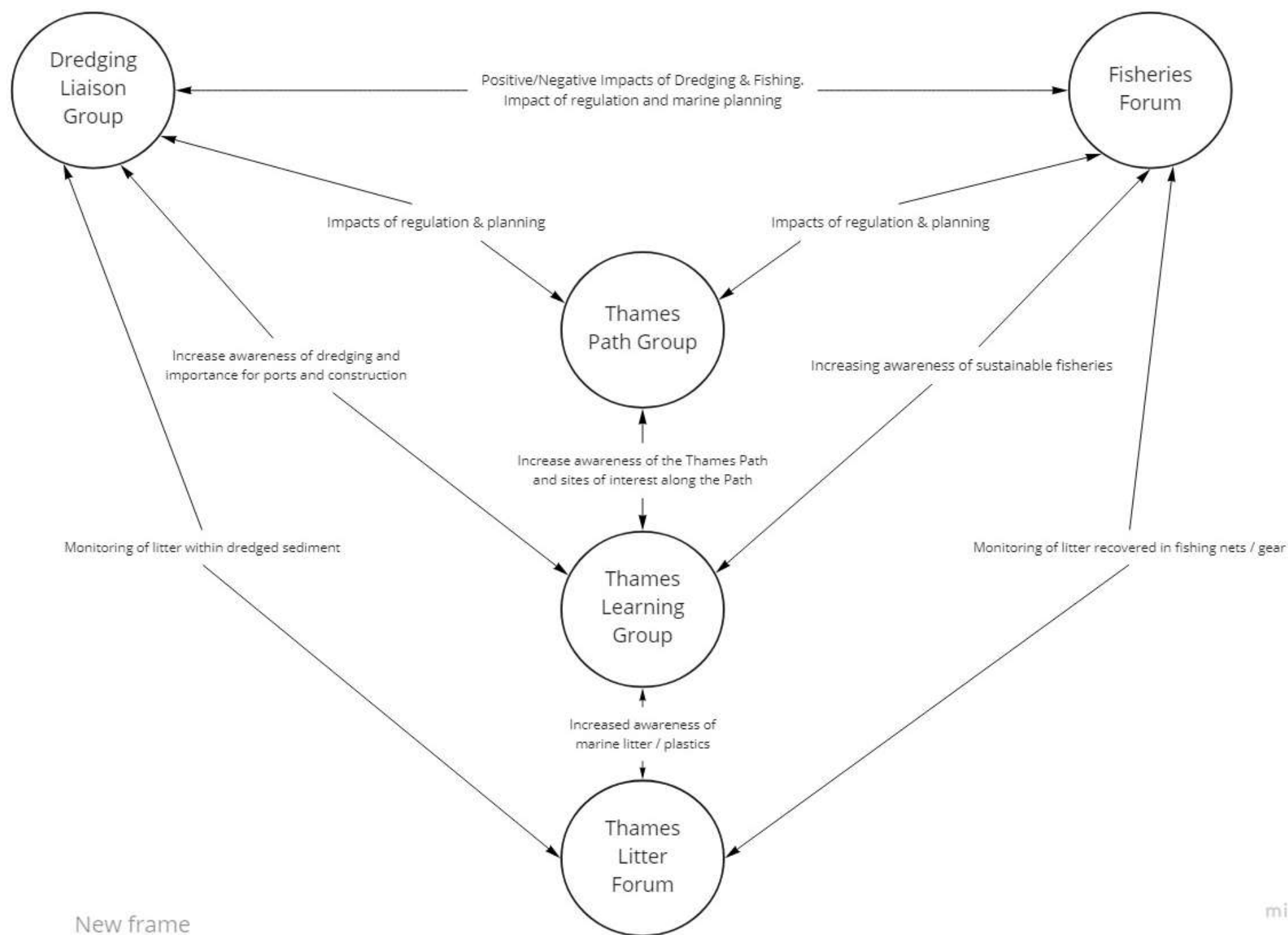
AMY PRYOR

TECHNICAL DIRECTOR, TEP

#TEPAnnualForum2019

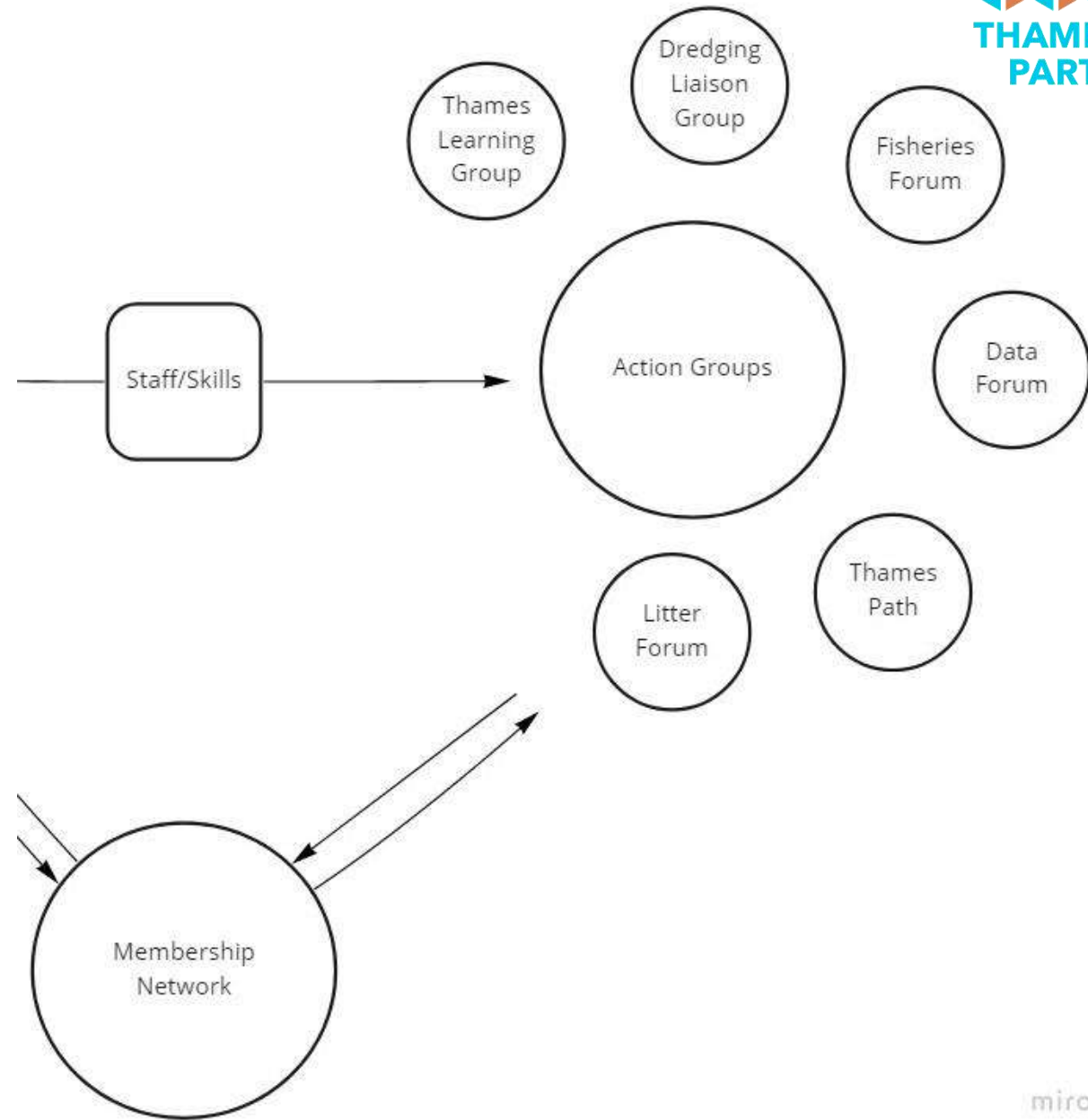
@ThamesEstPart





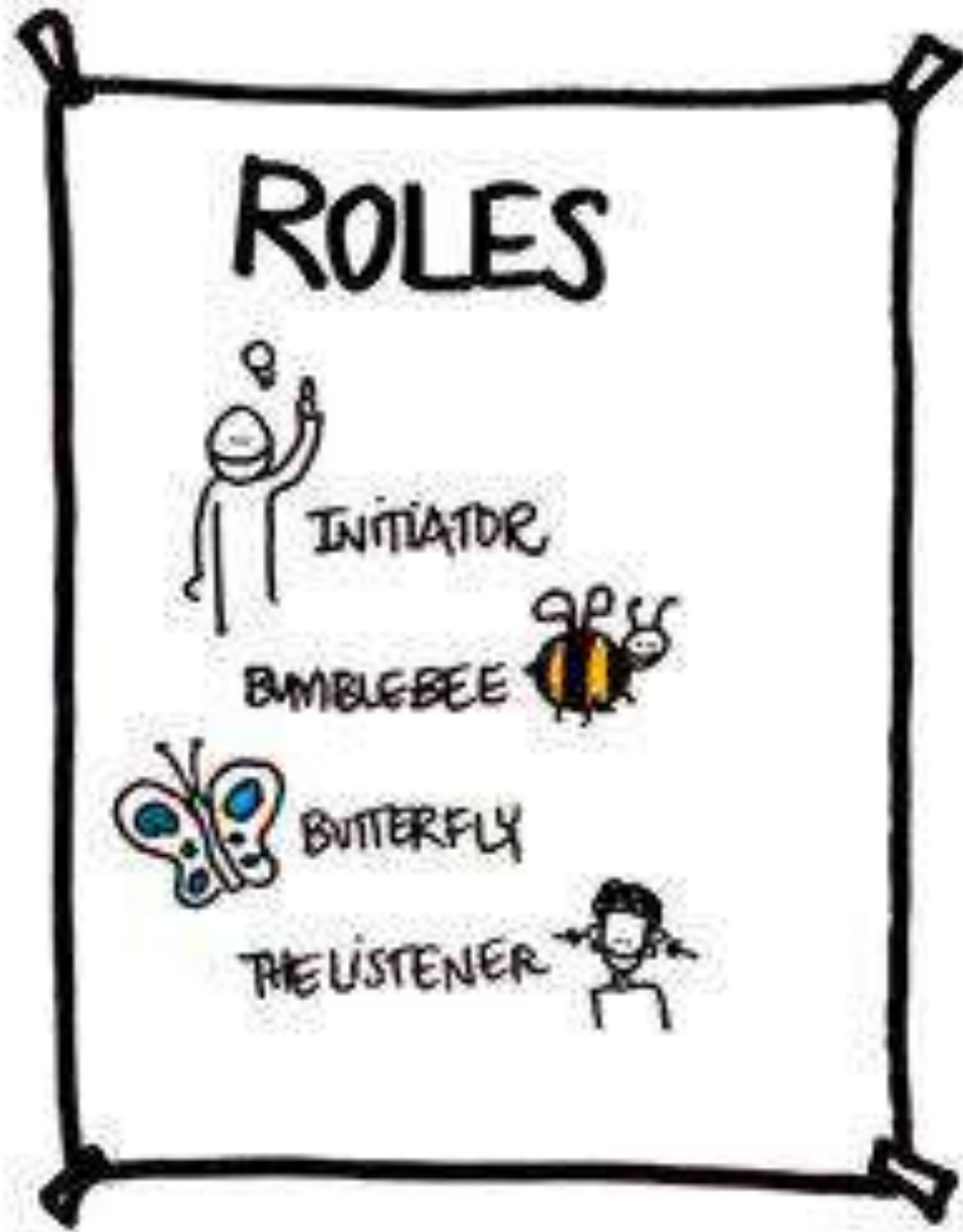
Workshops

- Five topics with a corresponding overarching question:
 - **Plastics and Litter** – How do we stop plastic pollution in the Thames?
 - **Skills and Training** – How do we tackle the skills deficit to meet our climate emergency?
 - **Communications and Behavioural Change** – How do we communicate better for behaviour change?
 - **Access and Interpretation** (digital, physical) – How do improve connections to the River?
 - **Finance and Funding** – How do we unlock funding and finance opportunities?



Open Space

Open Space is a powerful tool for engaging large and small groups of people in discussions to explore particular questions or issues. It can be used with groups of 10 to 1,000 people. It enables people with ideas and energy to connect, creating the opportunity to turn ideas into action.



- Question holder – lead & record the discussion
- Busy Bee - They flit from conversation to conversation, cross-pollinating conversations, bringing new ideas and fresh eyes to the table
- Butterfly – hanging out, drinking tea, thinking, personal reflection

4 GUIDING PRINCIPLES

+ 1 LAW



1. WHOEVER...



2. WHENEVER...

3. It's OVER...

4. WHATEVER



BE
PRODUCTIVE



Over to you!

- Suggest a question - you will be the 'question holder' and lead a small, informal discussion group on that topic
- Pick the type of conversation you want to host: problem solving / inspiration / collaboration / brainstorming / reflection
- Marketplace over lunch: submit a question on a post-it with your name or choose a discussion group to start with.



LUNCH & NETWORKING

PARTICIPATORY WORKSHOPS START AT 14:40

#TEPAnnualForum2019

@ThamesEstPart



PARTICIPATORY WORKSHOPS

14:40 – 15:50

#TEPAnnualForum2019

@ThamesEstPart



FINAL WORD FROM TEP

PHIL STRIDE

TREASURER, TEP

#TEPAnnualForum2019

@ThamesEstPart



WINE RECEPTION

16:00 – 16:40

#TEPAnnualForum2019

@ThamesEstPart

Our Trustees



Our Event Partners



BECKETT RANKINE
Marine Consulting Engineers



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