
COURSE SYLLABUS - GEOG 2400E

INTRODUCTION TO SUSTAINABLE CITIES

Instructor Details

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Course Description

The city of the future isn't a distant sci-fi fantasy; it's a reality we are building right now, one policy, one innovation, and one community decision at a time. As the climate emergency, the biodiversity crisis and the rise of inequality pose new threats to our present-day reality, urban landscapes are on the front line of action. How do we transform our dense, bustling cities into climate-resilient, equitable, and sustainable havens for all? This course is your invitation to answer that question, providing a critical introduction to the principles of sustainable urban development.

As one of the world's most dynamic and diverse cities, London will be your living laboratory and classroom. We will move beyond abstract theory to investigate the real-world intersections of sustainability policy, design, technology, and community action. Together, we will explore key questions faced by policymakers, practitioners, and scholars: *Who holds the power to shape our sustainable future? Whose knowledge informs these decisions? Sustainability for whom - and who is left out of the vision?*

Students embark on an experiential learning journey through:

- Strategically selected field trips to sites of environmental and social urban transformation;
- Interactive workshops that connect theory with real-world observations;
- Facilitated group discussions analysing on-the-ground challenges; and
- Structured reflection exercises to synthesise personal and academic insights.

This unique pedagogical approach creates an unforgettable learning experience where the city itself becomes both classroom and catalyst for new understandings. By the end of the course, students will have gained the knowledge, analytical frameworks, and hands-on tools necessary to contribute to meaningful change in cities worldwide.

Course Objectives

London will be the canvas through which students will acquire a robust conceptual framework for analysing the environmental, social, and economic dimensions of sustainable cities. Students will critically assess how sustainability is translated into urban policy and practice and investigate the complex interplay between environmental interventions, technological innovation, and existing social structures, with a focus on equity and justice. Ultimately, students will develop a nuanced understanding of the power dynamics between stakeholders who shape the future of our cities.

Course Learning Outcomes

Upon successful completion of this course, students will be able to:

- Articulate the core principles and multi-dimensional challenges (environmental, social, economic) of sustainable urban development.
- Analyse the key infrastructure systems and policy frameworks that enable sustainable transformation in cities, using London-based and global examples.
- Evaluate the efficacy and equity of policy responses and technological solutions aimed at urban sustainability and climate adaptation.
- Identify the roles, interests, and influences of various stakeholders in advancing (or hindering) sustainable urban development.
- Apply foundational principles of sustainable urban design, mobility, housing, and infrastructure to analyse real-world contexts.

Course Instructional Methods

This course blends dynamic in-class sessions, interactive discussions, and immersive field trips with asynchronous learning components. Through a mix of individual and group assignments, students will bridge theory and practice, applying their knowledge to real-world urban sustainability challenges.

Grounding itself in the *Whole Person Learning Approach*, this course creates space for dialogic exchange while inviting students to consider multiple perspectives. The *7 Stages Model* structures our cyclical learning process, cultivating adaptive thinking skills. By integrating the *Ikigai* framework, the course ensures theoretical knowledge translates into purposeful action, encouraging students to apply the 'why' and 'how' of sustainable urban practice to both their professional and personal lives.

Course Topics

The course structure examines urban sustainability through two integrated lenses:

- Critical Infrastructure Systems: buildings and energy, water and sanitation, transport, food systems, and green spaces
- Key Enabling Frameworks: urban policy, technological innovation, sustainable finance, and environmental equity

This dual approach reveals how sector-specific challenges intersect with systemic drivers of sustainable urban transformation.

Weekly Breakdown

The course is organised into weekly modules. Each module focuses on a specific aspect of sustainability and climate adaptation in the urban environment, using London as a primary case study but drawing parallels with other cities globally. Required reading and research are expected to be completed in advance of each topic.

Week	Date	Module	Location	Assignment*
Week 1	14 Jan	Introduction	Classroom	
Week 2	21 Jan	Sustainable Cities: a historic overview	British Museum	
Week 3	28 Jan	Transport	Classroom + London Transport Museum	
Week 4	4 Feb	Buildings and Energy	Classroom + Barbican	Essay
Week 5	11 Feb	Food Systems	The Felix Project Volunteering	
Week 6	18 Feb	Technological Innovation	Classroom + King's Cross Redevelopment	
Week 7	25 Feb	Water and Sanitation	Richmond Riverside	Group project
Week 8	4 Mar	Mid-term break		
Week 9	11 Mar	Sustainable Finance	Classroom + Sky Gardens	
Week 10	18 Mar	Urban Policy	Olympic Park	
Week 11	25 Mar	Environmental Equity	Barnes Wetland Centre	PechaKucha Presentation
Week 12	1 Apr	Green Urban Spaces	Natural History Museum	
Week 13	8 Apr	Systems thinking	Orleans House Gallery Woodland and Gardens Volunteering	
Week 14	15 Apr	Presentations	Classroom	Ikigai Collage
Week 15	22 Apr	Close and reflection	Classroom + Tate Modern	

Notes:

**In addition to the specific assignments, every week, students must also present news of the week and a reflective journal, which are part of the grading and assessment.*

Course Assignments and Grading

The course employs a balanced assessment approach designed to support continuous learning while avoiding high-pressure final exams. The graded components are strategically distributed throughout the term to reinforce concepts progressively:

- **Engagement (20%)**
 - Weekly study summaries and current event analyses- 10%
 - Participation and reflective journal entries- 10%
- **Applied Learning: Critical Thinking (60%)**
 - Essay (Week 4)- 20%
 - Group project (Week 7)- 20%
 - PechaKucha presentation (Week 11)- 20%
- **Creative Reflection: Non-linear Thinking (20%)**
 - Ikigai collage (Week 14)- 20%

Assignment Instructions

- **Weekly study summaries and current event analyses**, to be submitted before each class (apart from weeks 01, 08, 14 and 15) with:
 - Choice of two reference materials to be revised. Why did you choose the material? What stood out?
 - Choice of news relating to the topic of that week from a news organisation regulated by the Independent Press Standards Organisation (IPSO) see list <https://www.ipso.co.uk/complain/who-ipso-regulates/>. Include: (1) the headline of the news, date, source/link; (2) what surprised you? (3) What concerned you? and (4) What inspired you?
- **Participation and reflective journal entries**, during and after class, as follows:
 - Contribution to class discussions, with reflections, questions, curiosity and respect to other students' points of view.
 - Reflective journal answering the following questions: (1) What did you notice in class? (2) What stood out to you regarding the topic of the class? (3) What resonated more (or less) with you, and why?
- **Essay**
 - Select one of the course topics and write a 1,000-word case study with an analysis of how the topic contributes to sustainable cities. Explore the role of public investment, private development, or policy programmes that have been implemented in a given city (or cities). Include the market/political context, who is impacted and how, what is being done to address inequity, and what solutions could/should be undertaken. If not a London-based example is chosen, students must also explain how the topic manifests in London.
- **Group project**
 - Prepare an application to the National Lottery Heritage Fund for the improvement of an area of the city that you care about. Include pictures and a description of the current and future condition. See details at: <https://www.heritagefund.org.uk/>
 - Include an Annex with why the project is important to the group, how you decided as a group on the project and how your roles in the project were defined and who was responsible for which role.
- **PechaKucha presentation**: A leader's profile- where your preferred topic meets their Ikigai
 - Choose a leader who advocates for your preferred topic within the Sustainable Cities course and explore their life story to determine if/how their personal and professional life is aligned with the Ikigai concept and with your preferred topic.
 - Record a PechaKucha presentation about how the person's life reflects their Ikigai and their contribution to your preferred topic. See details about Petchakutch presentations at See more guidance at <https://www.pechakucha.com/students>
 - Your PechaKucha Video presentation should clearly show the connection between the topic, the person's work/actions and how it relates to the person's Ikigai.

- **Ikigai collage**

- Make a collage and an accompanying didactic panel about you and the Sustainable Cities course. Your collage should include core elements: (1) Why did you choose to take the course (i.e. personal connection); (2) What was the most important insight/learning you had in the course? (3) How does all this experience relate to your Ikigai; and (4) How will you put your learning into practice once they go back to the US (i.e. what will you do differently)?
- Create a didactic panel to accompany the collage, with: (1) a collage title; (2) your name; and (3) a short explanation of the elements it contains and what they represent (250-500 words).

Reading List

Given the interdisciplinary nature of this course, no single textbook comprehensively covers all aspects in detail. For those interested in a deeper understanding of the Doughnut Economics and Ikigai, the following books are recommended:

- Raworth, K. (2017). Doughnut economics: seven ways to think like a 21st-century economist. Chelsea Green Publishing.
- García, H., Miralles, F., & Cleary, H. (2017). Ikigai: the Japanese secret to a long and happy life. New York: Penguin Books.

Each class has a thoughtfully curated selection of reference materials available online, from academic articles to videos, podcasts and news articles (*please flag any malfunctioning links*).

Students should approach the reading list with intellectual curiosity, actively selecting texts and videos that align with both their personal interests and individual learning objectives. We encourage students to take ownership of their learning journey.

In addition, students are encouraged to find additional academic sources by using Litmaps.com- an AI-powered research tool. By using Litmaps, students will gain a deeper understanding of topics, discover relevant literature, and enhance their research skills.

WEEK 1 INTRODUCTION [@CLASSROOM]

The first week will set the context of the course. Students will get to know one another: “Who are we?” and “Why are we here?”, explore the Whole Person Learning Approach, review the course outline, consider sustainable cities to examine the context of humans as part of the environment using the doughnut economics as a portal to reimagine the future and Ikigai as a lens for action.

- **Sustainable cities and climate change**

- UN Sustainable Development Goal (SDG) 11- Sustainable Cities and Communities webpage: <https://globalgoals.org/goals/11-sustainable-cities-and-communities/>
- UN Environment Programme (UNEP) Cities and climate change page: <https://www.unep.org/explore-topics/resource-efficiency/what-we-do/cities-and-climate-change>
- C40 Cities webpage and its London profile page: <https://www.c40.org/>
- Deutsche Bank: Are sustainable cities a solution to climate change? Webpage: <https://www.db.com/what-next/responsible-growth/cities/>
- World Bank: Sustainable Cities Must Become Central to Climate Change Strategies blog (2023) <https://www.worldbank.org/en/news/feature/2023/06/26/sustainable-cities-must-become-central-to-climate-change-strategies>
- University of Cambridge’s Sustainable Cities Blueprint for Urban Climate Action webpage: <https://www.jbs.cam.ac.uk/2025/sustainable-cities-blueprint-for-urban-climate-action/>

- **Doughnut economics**

- Book Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist, Kate Raworth (2018)
- Video TED talk Kate Raworth: <https://youtu.be/1BHOflzxPjI?t=30>
- Websites <https://www.kateraworth.com> and <http://www.stockholmresilience.org/research/planetary-boundaries.html>

- **Ikigai**

- Book: Ikigai: the Japanese secret to a long and happy life. New York: Penguin Books. García, H., Miralles, F., & Cleary, H. (2017).
- BBC article (2017) Ikigai: A Japanese concept to improve work and life <https://www.bbc.co.uk/worklife/article/20170807-ikigai-a-japanese-concept-to-improve-work-and-life>
- YouTube Video: Finding meaning in everyday life "IKIGAI" https://youtu.be/PQrub29_nRo?si=4ohnM-1DLO2ntDlj
- Okuzono, S. S., Shiba, K., Kim, E. S., Shirai, K., Kondo, N., Fujiwara, T., Kondo, K., Lomas, T., Trudel-Fitzgerald, C., Kawachi, I. & VanderWeele, T. J. (2022). Ikigai and subsequent health and wellbeing among Japanese older adults: Longitudinal outcome-wide analysis. The Lancet Regional Health- Western Pacific. <https://doi.org/10.1016/j.lanwpc.2022.100391>

WEEK 2 SUSTAINABLE CITIES: A HISTORIC OVERVIEW [CLASSROOM + @BRITISH MUSEUM]

In Week 12, students will explore the relationship between cities and environment and social change through a historical lens. By analysing artefacts from the past and present, they will investigate how urban lifestyles have evolved over time. Against this historical backdrop, the session will encourage critical reflection on the impacts of urban sprawl on the environment and society.

- **Why Sustainable Cities?**
 - Density & emissions: <https://www.nature.com/articles/s41467-019-11184-y>
 - Urban Heat Island effect: <https://www.sciencedirect.com/science/article/pii/S0198971515300089>
 - Water scarcity: <https://www.edf.org/article/what-has-californias-flooding-and-drought-got-do-climate-change>
 - Greenwashing: <https://www.bloomberg.com/news/articles/2023-03-20/report-suggests-rampant-greenwashing-in-food-sector>
 - Carbon neutrality: https://www.climateactionreserve.org/wp-content/uploads/2019/10/201910_Citywide-Carbon-Neutrality.pdf
 - Fossil fuel subsidy: <https://www.nature.com/articles/d41586-021-02847-2>
- **British Museum**
 - Museum map: <https://www.britishmuseum.org/visit/museum-map>
 - British Museum's Mesopotamia galleries with City of Ur artefacts (together with Penn Museum (Philadelphia), the British Museum hold the only artefact collections known to originate from early Mesopotamian suburbs) and related article-The Suburbs of the Early Mesopotamian City of Ur (Tell al-Muqayyar, Iraq) <https://www.journals.uchicago.edu/doi/epdf/10.1086/725907>
 - Museum Representations of Roman Britain and Roman London: A Post-colonial Perspective <https://www.cambridge.org/core/journals/britannia/article/museum-representations-of-roman-britain-and-roman-london-a-postcolonial-perspective/08BD8000BDE8A03FFEE1DA15AB403E4>
 - The Reading Room <https://www.britishmuseum.org/about-us/british-museum-story/architecture/reading-room>
 - The Great Court at the British Museum: <https://www.fosterandpartners.com/projects/great-court-at-the-british-museum>
 - British Museums Building Development Framework: Towards the future (2019) <https://classroom.google.com/w/Nzc0NTAwNzYwNzE1/tc/ODAwMjc5Nzg5NTgz>

WEEK 3 TRANSPORT [@CLASSROOM + LONDON TRANSPORT MUSEUM]

In week 2, students will embark on a unique field trip to the London Transport Museum to critically examine how transport systems shape urban life, using London's mobility evolution as a living case study. Students will analyse how historical transport decisions continue to influence contemporary challenges, from low-emission zones to micromobility innovations such as e-bikes and e-scooters. The session will challenge students to consider transport not just as infrastructure, but as a lens for understanding broader urban power dynamics and social change.

- **Academic Articles**
 - Beijing congestion charge: <https://fairbank.fas.harvard.edu/research/blog/can-unlucky-number-4-be-lucky-too-how-the-chinese-superstition-about-4-made-possible-a-study-on-the-health-effects-of-air-pollution-in-beijing/>
 - London congestion charge: <https://www.sciencedirect.com/science/article/abs/pii/S0166046220302581>
 - Fare-free transit? <https://escholarship.org/uc/item/93p7h6dv>
 - Personal travel: <https://escholarship.org/uc/item/8943b1xm>
 - Introduction: https://www.researchgate.net/publication/310482186_The_Urban_Transport_Crisis_in_Emerging_Economies
- **News Articles**
 - Bexley village businesses blame Ulez expansion for falling trade (2025) <https://www.bbc.co.uk/news/articles/cgk3r4k8z00o>
 - London's low emission zones save lives and money (2025) <https://www.bath.ac.uk/announcements/londons-low-emission-zones-save-lives-and-money-new-study-finds/>
 - London council to slash e-bike hire costs with fare cap and take on 'wild west' parking <https://www.standard.co.uk/news/london/hackney-council-reduce-ebike-hire-costs-parking-lime-b1240990.html>
- **Websites**
 - UK Transport statistics: <https://www.gov.uk/government/statistics/transport-statistics-great-britain-2024/transport-statistics-great-britain-2023-summary>
 - Transport for London Cycleways webpage <https://tfl.gov.uk/modes/cycling/routes-and-maps/cycleways> and cycle routes page <https://londonblog.tfl.gov.uk/2020/03/10/cycling-routes/?intcmp=58775>
- **London Transport Museum**
 - London Transport Museum webpage <https://www.ltmuseum.co.uk/>
 - London Transport Museum highlights capital's cultural venues in tube poster series <https://museumsandheritage.com/advisor/posts/london-transport-museum-highlights-capitals-cultural-venues-in-tube-poster-series/>

WEEK 4 BUILDINGS AND ENERGY [@CLASSROOM + BARBICAN]

In week 3, students will visit the Barbican, learn about the history of the development and what has changed since then. Students will walk the gardens, galleries and coffee shops/restaurants to observe how residents and visitors use the space.

- **Academic Articles**
 - UHI & energy: <https://www.sciencedirect.com/science/article/abs/pii/S2212095517300172>
 - Green gentrification: https://www.researchgate.net/publication/262888105_'It's_not_for_us'_Regeneration_the_2012_Olympics_and_the_gentrification_of_East_London
- **News**
 - Swimming pools: <https://insideclimatenews.org/news/11042023/why-your-swimming-pool-may-be-worse-for-urban-water-scarcity-than-climate-change/>
 - Social housing (UK): <https://www.theguardian.com/society/2016/jul/13/aylesbury-estate-south-london-social-housing>
- **Institutional Reports**
 - EPBD improvement: https://www.bpie.eu/wp-content/uploads/2016/08/EPBD-paper_Eng.pdf
 - Energy rating systems: <https://www.imt.org/wp-content/uploads/2018/02/ComparingBuildingEnergyPerformanceMeasurementFINAL.pdf>
 - Municipal retrofit programmes: Urban Efficiency II: London - Business Energy Challenge- C40 Cities: <https://www.c40.org/case-studies/urban-efficiency-2-business-energy-challenge/>
- **Barbican**
 - Barbican webpage and “our story” and “how we are changing” pages of the website: <https://www.barbican.org.uk/>
 - Barbican Living webpage and “Flat electrics and heating” page of the website: <https://www.barbicanliving.co.uk/>
 - Brutal and Beautiful: The Story of London’s Barbican blog: <https://heritagecalling.com/2022/02/28/brutal-and-beautiful-the-story-of-londons-barbican/>
 - Barbican, 1969: The development of the Barbican Estate following World War II video: https://youtu.be/vLPLJsoVq8k?si=_e9lixSaqCQ98Buw

WEEK 5 FOOD SYSTEMS [@THE FELIX PROJECT VOLUNTEERING]

In week 10, students will consider the complexity of food systems and the impact of food insecurity and poor nutrition on Londoners. By volunteering with The Felix Project (pending approvals), students will unpack the paradoxes of urban food systems through hands-on engagement in one of London's leading charities in the frontline response to hunger and waste. The session invites students to reconsider simplistic narratives of scarcity, and broaden their understanding of how policy, economics, and geography shape who eats well in cities.

- **Academic Articles**
 - Schmutz, U., Kneafsey, M., Kay, C. S., Doernberg, A. & Zasada, I. (2017). Sustainability impact assessments of different urban short food supply chains: examples from London, UK. *Renewable Agriculture and Food Systems*. <https://doi.org/10.1017/s1742170517000564>
- **News Articles**
 - Free school meals: London's mayor launches £130m scheme for primary pupils (2023) <https://www.bbc.co.uk/news/uk-england-london-64677228>
 - Way to grow: the rise of London’s city farms (2025) <https://www.ft.com/content/5b600226-43b1-4549-819b-8dc3fbbb64e9>
- **Websites**
 - UN Sustainable Development Goal (SDG) 2 – Zero Hunger: <https://www.un.org/sustainabledevelopment/hunger/>
 - Feeding Britain charity: <https://feedingbritain.org>
 - Trussel Food Bank charity: <https://www.trussell.org.uk/>
 - Good Food Local case studies <https://www.sustainweb.org/good-food-local/case-studies-london/> and The London report <https://www.sustainweb.org/good-food-local/london/>
- **Videos**
 - BBC’s Documentary: Breadline Kids <https://www.youtube.com/watch?v=v3GDxEYl6Qg>
 - BBC's Documentary footballer Marcus Rashford's campaign for free school meals: <https://www.bbc.co.uk/iplayer/episode/m000qq41/marcus-rashford-feeding-britains-children>
 - Documentary showing food poverty from a child's point of view: https://youtu.be/ZMvaemJZi_U https://youtu.be/ZMvaemJZi_U
- **The Felix Project and Tower Hamlets Borough**
 - The Felix Project website <https://thefelixproject.org/> and impact report <https://thefelixproject.org/about/our-impact>
 - Tower Hamlets Borough Statistics https://www.towerhamlets.gov.uk/lgnl/community_and_living/borough_statistics/borough_statistics.aspx

WEEK 6 TECHNOLOGICAL INNOVATION [@CLASSROOM + KING’S CROSS REDEVELOPMENT]

In week 7, students will examine how technology drives urban change through a dual exploration of theory and practice. The session begins with a critical discussion of smart city concepts in the classroom, analysing both the potential and pitfalls of technological solutions in urban planning. Students will then visit the King’s Cross redevelopment to observe these principles

in action. Through this juxtaposition, students will interrogate: When does innovation serve the public good versus private interests? Can urban tech avoid becoming a 'fading luster'? How do we avoid the isolation of Songdo while pursuing sustainability? The session aims to move beyond binary thinking about technological solutions in cities.

- **Technological Innovation**

- Wicked Problems of Smart Cities: <https://www.mdpi.com/2624-6511/2/4/31>
- Urban climate tech: https://link.springer.com/chapter/10.5822/978-1-61091-850-3_3
- Why the Luster on Once-Vaunted 'Smart Cities' Is Fading: <https://e360.yale.edu/features/why-the-luster-is-fading-on-once-vaunted-smart-cities>
- Smart cities: <https://www.bloomberg.com/news/articles/2018-06-22/songdo-south-korea-s-smartest-city-is-lonely>
- Sterling, Bruce. (2018) Stop Saying 'Smart Cities.' The Atlantic: <https://www.theatlantic.com/technology/archive/2018/02/stupid-cities/553052/>

- **Kings Cross Redevelopment**

- King's Cross webpage: <https://www.kingscross.co.uk/about-the-development>
- Urban Plan King's Cross Project Snapshot: <https://urbanplan.uli.org/resources/overview/project-snapshots/kings-cross/>
- Allies and Morrison King's Cross Case Study: <https://www.alliesandmorrison.com/projects/kings-cross>
- The Guardian Article (2024) 'Nervous of its own boldness': the (almost) radical rebirth of King's Cross <https://www.theguardian.com/artanddesign/2024/apr/28/the-almost-radical-rebirth-of-kings-cross-london-alison-brooks-architects-cadence>

WEEK 7 WATER AND SANITATION [@RICHMOND RIVERSIDE]

In week 6, students will explore how the River Thames and the green nature spaces around Richmond are intrinsically linked to clean water/sanitation. Students will also visit one of Thames Water Pumping Stations and discuss the Thames Water Teddington Direct River Abstraction (TDRA) Project, a £250 million scheme to abstract 75 million litres of water a day from the River Thames at Teddington Lock (and pumping back treated sewage into the river).

- **Academic Articles**

- Why we need a new economics of water as a common good (2023) <https://www.nature.com/articles/d41586-023-00800-z>
- Waste management in a more unequal world: centring inequality in our waste and climate change discourse (2020) <https://www.tandfonline.com/doi/abs/10.1080/13549839.2020.1801617>

- **News Articles**

- Agriculture pollution: <https://www.theguardian.com/environment/2023/mar/24/uk-farming-causes-over-quarter-cities-particle-pollution-study>
- LA water crisis: <https://www.latimes.com/opinion/story/2023-03-23/california-storms-groundwater-water-shortage-drought-sigma>
- Thames Water data reveals raw sewage discharges in rivers rose 50% in 2024: <https://www.theguardian.com/business/2025/mar/18/thames-water-data-reveals-raw-sewage-discharges-rivers-2024>
- UK bans bonuses at Thames Water and five others for pollution failures: <https://www.reuters.com/sustainability/boards-policy-regulation/uk-bans-bonuses-thames-water-five-others-pollution-failures-2025-06-05/>
- National Government bypasses local authorities with the TDRA <https://www.theguardian.com/business/2024/jan/11/thames-water-attempt-launch-water-recycling-project>
- Thames Water CEO resigns after sewage spills <https://www.bbc.co.uk/news/business-66035897>
- The UK government is updating water company insolvency laws as fears grow over the financial health of the privatised monopolies <https://www.ft.com/content/378dcb3e-4559-489d-b4f1-f959bd3de920>
- In charts: how privatisation drained Thames Water's coffers <https://www.theguardian.com/business/2023/jun/30/in-charts-how-privatisation-drained-thames-waters-coffers>
- I worked on the privatisation of England's water in 1989. It was an organised rip-off <https://www.theguardian.com/commentisfree/2022/aug/16/i-worked-on-privatisation-england-water-1989-failed-regime>

- **Webpages**

- UN Sustainable Development Goal (SDG) 6 - Ensure availability and sustainable management of water and sanitation for all: <https://sdgs.un.org/goals/goal6>

- **Videos**

- Thames Water vide: Where our water comes from <https://www.youtube.com/watch?v=Ddhx9mQc5oY>
- Earth Lab- World Beneath Our Feet: Disgusting 'Fatberg' Found In London Sewer (2017) https://www.youtube.com/watch?v=3j_axpk0a7Q
- National Geographic's video about Sewage Treatment East London *Where Does Your Sewage Go?* <https://www.youtube.com/watch?v=YW6GBciRHLg>
- Weird History YouTube channel: *Smelly Facts About London's The Great Stink of 1858* https://www.youtube.com/watch?v=Au_Ut95-Ml0, *What Hygiene Was Like During the Industrial Revolution* https://www.youtube.com/watch?v=Uan6pbm_nfQ and *What Was Hygiene Like In The Victorian Era?* <https://www.youtube.com/watch?v=EnYzMu8OiOQ>
- Absolute History YouTube channel: How Sewers Improved Victorian Health & Safety | How Victorians Built Britain <https://www.youtube.com/watch?v=ru50TmW3yck>

- **Richmond and Thames Water Teddington Direct River Abstraction (TDRA)**
 - Richmond Council Climate Emergency (declared in 2019) website page https://www.richmond.gov.uk/news/press_office/campaigns_and_events/climate_emergency and Richmond's 2023 Climate Emergency Strategy Action Plan https://www.richmond.gov.uk/media/2iforh2v/richmond_climate_emergency_strategy_action_plan.pdf
 - Thames Water Discharge tracker: <https://www.thameswater.co.uk/edm-map>
 - Thames Water Teddington Direct River Abstraction (TDRA) <https://thames-wrmp.co.uk/tdra/>

WEEK 8 MIDTERM BREAK

No reading required.

WEEK 9 SUSTAINABLE FINANCE [@CLASSROOM + SKY GARDENS]

In week 11, students will critically examine how London's financial district is navigating (or not) the transition to sustainable finance- from green investment pledges to tangible climate action. From the symbolic heights of the Sky Garden, students will observe the tension between the City's gleaming sustainability rhetoric and the reality of its carbon-intensive infrastructure below. Through guided discussions, they will analyse: Can financial hubs truly drive systemic change, or does profit still outweigh planetary priorities? How do public-private partnerships (PPPs) in urban projects balance risk and sustainability?

- **Academic Articles**
 - Urban transport PPPs: <https://www.wri.org/research/private-investment-public-transport>
 - Championing sustainable finance: the UK's global offer <https://www.theglobalcity.uk/championing-sustainable-finance>
- **News Articles**
 - Cost of climate inaction: <https://www.nytimes.com/2021/04/22/climate/climate-change-economy.html>
 - The City of London is ready to lead the charge in green finance (2025) <https://www.cityam.com/the-city-of-london-is-ready-to-lead-the-charge-in-green-finance/>
- **Websites**
 - C4C finance toolkit: <https://www.centreforcities.org/reader/mapping-britains-public-finances/executive-summary/> and Green Finance Report <https://www.c40.org/wp-content/uploads/2022/04/Green-Finance-In-Cities.pdf>
 - Mayor of London Green finance page: <https://www.london.gov.uk/who-we-are/city-halls-partners/london-sustainable-development-commission-lsdc/green-finance>
 - The Global City's Sustainable Finance Hub webpage: <https://www.theglobalcity.uk/sustainable-finance> and the Transition Finance Council page <https://www.theglobalcity.uk/sustainable-finance/opportunities/transition-finance/transition-finance-council>
- **Sky Gardens**
 - About the Sky Gardens <https://skygarden.london/what-is-sky-garden/>
 - London's Sky Garden: the more you pay, the worse the view (2025) <https://www.theguardian.com/artanddesign/architecture-design-blog/2015/jan/06/londons-sky-garden-walkie-talkie-the-more-you-pay-the-worse-the-view>
 - Sky Garden Blog (2023) <https://tomscrow.medium.com/the-sky-garden-d6f442795b0a>
 - City's iconic Sky Garden hits 10 million visitors <https://news.cityoflondon.gov.uk/citys-iconic-sky-garden-hits-10-million-visitors/>

WEEK 10 URBAN POLICY [@OLYMPIC PARK]

In Week 4, students will examine how urban challenges are translated into real-world solutions. A field visit to London's Olympic Park will showcase groundbreaking approaches to sustainable urban development. Among its innovative features, the site incorporates rainwater harvesting for toilet use, solar energy generation, and excess power redistribution to the grid. These sustainable practices are part of the lasting legacy of the 2012 London Olympic and Paralympic Games, demonstrating how forward-thinking urban policy can shape cities for the future.

- **Academic articles**
 - A new urban narrative for sustainable development: <https://www.nature.com/articles/s41893-022-00979-5>
 - Karppi, I. and Vakkuri, J. (2020). Becoming smart? Pursuit of sustainability in urban policy design available at https://trepo.tuni.fi/bitstream/handle/10024/120758/becoming%20smart_2020.pdf?sequence=2
 - Cavada, M. (2022). Designing Policy for Cities. Proceedings of the International Conference on Evolving Cities. <https://doi.org/10.55066/proc-icec.2021.42>
- **Webpages**
 - World Resources Institute Cities page <https://www.wri.org/cities>
 - London School of Economics and Political Science- Urban Age programme page <https://www.lse.ac.uk/cities/urban-age>
- **Videos**
 - Ricky Burdett on Shaping Cities in an Urban Age- 'On Cities' Masterclass Series Apr 2021 <https://www.youtube.com/watch?v=E1sqTOKwxQ8>

- 7 principles for building better cities- Peter Calthorpe TED talk https://www.ted.com/talks/peter_calthorpe_7_principles_for_building_better_cities?utm_campaign=tedsread&utm_medium=referral&utm_source=tedcomshare
- Enrique Peñalosa on Why Equality in Cities Begins with Sidewalks <https://www.youtube.com/watch?v=fldWDIRibe8>
- Urban Age Debates: Cities in the 2020s: Humanising the City https://www.youtube.com/watch?v=kDC4_YWR9o4
- **About the Olympic Park**
 - Key facts and figures: <https://www.queenelizabetholympicpark.co.uk/-/media/key-facts-summary-june-2020.ashx>
 - Overview <https://www.queenelizabetholympicpark.co.uk/-/media/qeop-our-story-2020.ashx>
 - Infographic <https://www.queenelizabetholympicpark.co.uk/-/media/park-infographic.ashx>
 - London Legacy Development Corporation <https://www.queenelizabetholympicpark.co.uk/our-story>
 - Olympic Park Environmental Sustainability webpage: <https://www.queenelizabetholympicpark.co.uk/our-story/how-we-work/environmental-sustainability>

WEEK 11 ENVIRONMENTAL EQUITY [@BARNES WETLAND CENTRE]

In week 5, students will attend a guided tour of the Barnes London Wetland Centre - a living example of how biodiversity in urban settings is important and how it can transform the lives of the animals and the people who have access to it.

- **Academic articles**
 - Slum upgrading and climate change adaptation and mitigation: Lessons from Latin America (2020) <https://www.sciencedirect.com/science/article/abs/pii/S0264275119301040>
 - Climate change, equity and the Sustainable Development Goals: an urban perspective (2017) <https://journals.sagepub.com/doi/epub/10.1177/0956247816677778>
 - Environmental justice and health: the implications of the socio-spatial distribution of multiple environmental deprivation for health inequalities in the United Kingdom (2010) <https://rgs-ibg.onlinelibrary.wiley.com/doi/10.1111/j.1475-5661.2010.00399.x>
 - The relationship between early life course air pollution exposure and general health in adolescence in the United Kingdom (2025) <https://www.nature.com/articles/s41598-025-94107-w>
 - Envisioning environmental equity: climate change, health, and racial justice (2023) [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(23\)00919-4/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(23)00919-4/fulltext)
- **News articles**
 - Urban wetlands 'could improve wellbeing in deprived UK areas' (2022) <https://www.theguardian.com/environment/2022/jul/06/urban-wetlands-could-improve-wellbeing-deprived-uk-areas-report>
 - The rich, poor and the earth (2017) <https://newint.org/features/2017/07/01-equality-environment>
 - Dramatic fall in London's levels of deadly pollutants after Ulez expansion (2025) <https://www.theguardian.com/environment/2025/mar/07/london-air-pollution-down-since-ulez-expansion-study>
- **Holistic take on cities and equity**
 - Short film Powers of 10 Links to an external site., written and directed by Charles and Ray Eames for IBM in 1977, the film was an adaptation of the book K. Boeke (1957) Cosmic view: The universe in 40 jumps, J. Day: https://youtu.be/OfKBhvDjuy0?si=SPi2XiYxUq_3TPaa
 - World Bank (2023) Thriving: Making Cities Green, Resilient, and Inclusive in a Changing Climate <https://openknowledge.worldbank.org/entities/publication/7d290fa9-da18-53b6-a1a4-be6f7421d937>
 - Visualizing the Footprint of Highways in American Cities (2020) <https://www.visualcapitalist.com/visualizing-the-footprint-of-highways-in-american-cities/>
- **London Barnes WTT**
 - WTT webpage <https://www.wwt.org.uk/wetland-centres/london>
 - 20 Years of the London Wetlands Centre https://youtu.be/5RCEox0t2uk?si=HTtS_Plq1-3xfyY5
 - BBC article (2025): Celebrating 25 years of London's 'extra lungs' <https://www.bbc.co.uk/news/articles/cwyw72eqn5vo>

WEEK 12 GREEN URBAN SPACES [@NATURAL HISTORY MUSEUM]

In Week 9, students will explore the transformative power of green urban spaces through an immersive visit to the Natural History Museum (NHM) and its gardens. The session begins by examining how humanity's evolving relationship with nature - from early survival to modern urban life - has shaped our physical and psychological dependence on natural environments. As students walk through the NHM's gardens, they will engage their senses to observe how green spaces mitigate the stresses of city living, foster biodiversity, and create communal hubs. This experiential learning will be paired with critical discussions on the role of green spaces in urban design and policy.

- **Academic Articles**
 - To beat the heat, cities need to scale up green infrastructure: <https://www.stockholmresilience.org/research/research-stories/2025-02-17-to-beat-the-heat-cities-need-to-scale-up-green-infrastructure.html>
 - UK green space: https://www.designcouncil.org.uk/fileadmin/uploads/dc/Documents/urban-green-nation-summary1_0.pdf
 - Green space benefits: https://leaf.leeds.ac.uk/wp-content/uploads/sites/86/2015/10/LEAF_benefits_of_urban_green_space_2015_upd.pdf

- **News Articles**
 - On rooftops and in tunnels, city farms lead food revolution: <https://www.theguardian.com/environment/2019/feb/10/urban-farming-feeding-cities-of-the-future>
 - Equity of access to green space: <https://citymonitor.ai/community/with-green-space-equity-its-all-about-proximity-and-quality>
 - RHS drives the importance of small green spaces <https://www.prolandscapermagazine.com/2025/06/12/rhs-drives-the-importance-of-small-green-spaces-says-robert-myers/>
- **Natural History Museum and Gardens**
 - National History Museum's *Our Broken Planet YouTube Series* https://www.youtube.com/playlist?list=PL6w4ihPqk5_JPPgFuU8duzfnhlyOOWRgo
 - The Urban Nature Project page <https://www.nhm.ac.uk/about-us/urban-nature-project.html>
 - Gardens are a haven for wildlife and people in the heart of London <https://www.nhm.ac.uk/visit/galleries-and-museum-map/our-gardens.html>

WEEK 13 SYSTEMS THINKING [@CLASSROOM + ORLEANS HOUSE WOODLAND AND GARDENS VOLUNTEERING]

Week 13 consolidates the course through a systems thinking lens, requiring students to re-examine all material researched and visited sites- from King's Cross to the Transport Museum - as interconnected urban systems. To put all the knowledge into practice, students will take part in a volunteering session at Orleans House Woodland and Gardens. After the session, students will consider how small volunteering activities relate to the broader system of sustainable urban transformation.

- **Academic articles**
 - Kutty, A. A., Abdella, G., Kucukvar, M., Onat, N. & Bulu, M. (2020). A system thinking approach for harmonizing smart and sustainable city initiatives with United Nations sustainable development goals. *Sustainable Development*. <https://doi.org/10.1002/sd.2088>
 - Bai, X., Surveyer, A., Elmqvist, T., Gatzweiler, F. W., Güneralp, B., Parnell, S., Prieur-Richard, A. H., Shrivastava, P., Siri, J. G., Stafford-Smith, M., Toussaint, J. P. & Webb, R. (2016). Defining and advancing a systems approach for sustainable cities. *Current Opinion in Environmental Sustainability*. <https://doi.org/10.1016/j.cosust.2016.11.010>
 - Salvia, G., Pluchinotta, I., Tsoulou, I., Moore, G. & Zimmermann, N. (2022). Understanding Urban Green Space Usage through Systems Thinking: A Case Study in Thamesmead, London. *Sustainability*. <https://doi.org/10.3390/su14052575>
- **News Articles**
 - The McChrystal Afghanistan PowerPoint slide: can you do any better? (2010) <https://www.theguardian.com/news/datablog/2010/apr/29/mcchrysal-afghanistan-powerpoint-slide>
- **Websites**
 - The Presencing Institute <https://www.presencing.org/> and it's U-Theory framework page <https://www.presencing.org/theoryu>
 - u-school for Transformation resources toolkit: <https://www.u-school.org/resources>
 - The Systems Thinker <https://thesystemsthinker.com/>
 - Whole Person Approach I*We*All of Us blog: <https://www.consultancy.aretterra.com.br/story-whole-person-approach/>
 - Tools for Systems Thinkers: The 6 Fundamental Concepts of Systems Thinking <https://medium.com/disruptive-design/tools-for-systems-thinkers-the-6-fundamental-concepts-of-systems-thinking-379cdac3dc6a>
 - Systems Practice Workbook https://mapthesystem.cuni.cz/MTS-40-version1-systems_practice_workbook.pdf
 - UK Gov Guidance: An introductory systems thinking toolkit for civil servants <https://www.gov.uk/government/publications/systems-thinking-for-civil-servants/toolkit>
- **Videos**
 - Why use a systems practice? <https://vimeo.com/174541762?fl=pl&fe=ti>
 - Systems thinking for a better world | Rebecca Mills | TEDxAuckland <https://youtu.be/d53-nyFzoVI?si=6vpwOQYBATsk1M3V>
- **Orleans House Gallery, Woodlands and Garden**
 - Orleans House Gallery webpage: <https://www.orleanshousegallery.org/> (and history page <https://www.orleanshousegallery.org/history/courting-hanoverians>)
 - Orleans House Woodland and Gardens page <https://www.orleanshousegallery.org/visit/the-woodland-and-garden/>
 - Orleans House Ecosystem Plan 2021-31 <https://www.orleanshousegallery.org/wp-content/uploads/2024/05/Orleans-House-Gardens-Ecosystem-Plan-2024-Public-Based-on-V12-1.pdf>
 - Orleans House protected Landscape view from Richmond Hill: <https://www.orleanshousegallery.org/history/the-landscape-and-the-thames/>
- **Richmond Council Services and Funding**
 - Councils Services webpage: <https://www.richmond.gov.uk/services>, including volunteering page https://www.richmond.gov.uk/services/voluntary_and_community_sector/volunteering_richmond
 - Council budgets and spending page: https://www.richmond.gov.uk/budgets_and_spending
 - BBC article on Council's legal action over 'unfair' funds formula <https://www.bbc.co.uk/news/articles/cvgm2n57xlgo>
 - The Guardian article 'I don't live in a mansion. It's a 1930s house': Richmond residents react to council tax rise <https://www.theguardian.com/uk-news/2025/nov/27/mansion-tax-richmond-residents-react-council-tax-rise-budget-2025>

- o Rightmove Happiest Place to Live Index (2025): Richmond-upon-Thames emerged as the happiest borough in London, and the second happiest place in the country: <https://www.rightmove.co.uk/news/articles/property-news/happiest-places-to-live-2025/>

WEEK 14 PRESENTATIONS [@CLASSROOM]

No reading required. Students will present their collages, give and receive feedback from classmates.

WEEK 15 CLOSE AND REFLECTION [@CLASSROOM + TATE MODERN]

Students will gather and acknowledge what has gone well, what progress has been made, what has been learned, and what can be taken from all of that into the next phase of their lives when they go back to the US. The groups will have a chance to celebrate the time spent together and say 'Goodbye'.

- **Tate Modern**

- o 25 years of Tate Modern <https://www.tate.org.uk/visit/tate-modern/anniversary-highlights>
- o History of Tate Modern <https://www.tate.org.uk/about-us/history-tate/history-of-tate-modern>
- o Paper All Systems Go: Recovering Jack Burnham's 'Systems Aesthetics' <https://www.tate.org.uk/research/tate-papers/05/all-systems-go-recovering-jack-burnhams-systems-aesthetics>
- o Paper The Grid as a Checkpoint of Modernity <https://www.tate.org.uk/research/tate-papers/12/the-grid-as-a-checkpoint-of-modernity>

Academic Integrity

You have joined an academic community and you are expected and required to act honestly regarding the work you submit for assessment in your courses. Academic integrity is closely related to the concept of good academic practice.

Any attempts to cheat, fabricate, plagiarise, collaborate without authorisation, participate in academically dishonest activities, and/or facilitate academic dishonesty will be viewed as a breach of this regulation.

Attendance Policy

Regular attendance is essential in order to achieve a passing grade in a course. A class constitutes lectures, student presentations, discussions, seminars, field visits, tests, and examinations. In addition, **under UK Home Office regulations class attendance is mandatory.**

In addition to physical presence in class, a student's class **participation score** is based on the mastery of assigned course readings as reflected in a consistent, valid contribution to class discussions, in-class exercises, and in asking questions that enrich the on-going discourse. Occasional participation will have a negative impact on a student's participation score.

Class attendance is formally recorded and incorporated into a student's final grade.

Attendance is taken at the beginning of each class. Any student arriving late to class by five minutes or more will be marked absent for that session, unless the tardiness is excusable. (Note that commute time from a residence hall/class/placement site is not usually a valid excuse.)

In the event of an anticipated absence, it is the responsibility of the student to contact the faculty member in advance to request approval. Absence from class does not relieve a student of responsibility for assignments. Unexcused absences/assignments will be appropriately reflected in grading. Class absences are deemed excused at the discretion of the faculty member and may require documentation.

An excused absence or an excused reason for being late to class is any documented emergency and/or acute illness or injury directly involving the student. **Unexplained absence is not permitted.**

Late Submission of Written Work

Written work may be submitted later than the due date only with express permission from the faculty. Credit is not given for work received late, except in exceptional circumstances of personal illness or similar. Documentation of exceptional circumstances from a third party, such as a doctor's note, may be required. Any extensions made beyond the last class meeting must be committed to writing and include information on the exceptional circumstances that require the extension, the nature of work yet to be submitted, and the date by which the work will be received. If said work is not received by the agreed extension date, barring further exceptional circumstances, the work will not be given credit.

AES' policy for complaints and academic appeals

AES policy for complaints and academic appeals can be found at <https://angloeducational.com/complaints-policy/>