Artificial

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Introduction

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The history of the design process in the Global North has been a history of anthropocentrism – the belief that humans are separate from (and consequently superior to) the so-called 'natural' world. When one is designing a product, building or system, the process is often guided by insights and principles that place the human user at the centre. This is known as human-centred design – an approach to problem solving that prioritises the needs, experiences and values of people.

This has produced efficient, ergonomic and transformational design, but it has also contributed to a worldview where nature is understood as something to be acted upon: taken from, reconfigured and artificially reproduced in service of human needs and economic growth. These dominat, extractive relationships with nature – driven largely by white Western ideologies – are not natural. They are artificial, and they are at the root of ecological collapse.

Design Researchers in Residence: ***Artificial*** is a body of design research that challenges the boundaries of human-centred thinking. It interrogates the structures, systems and values that have led to generations of human separation from and dominance over nature. If something isn't natural then it isn't inevitable. If it's constructed, then it can be deconstructed and reconstructed.

Through site-based, material-led, beyond-human practices, each project in this body of research unpicks the synthetic, fictional relationships that are deeply entangled in our everyday lives. Artificiality is everywhere: in urban ecosystems; manufactured

materials; institutional knowledge, and political infrastructures. Constructed realities are all-too-often built on an assumption of human exceptionalism.

Christie Swallow invites you to convene with the parakeets in St James's Park, a thriving but controversial community of non-native birds roosting in the manicured, man-made green spaces of London. They ask you to listen closely to ***Paracologies*** and question who gets to belong in the 'weird ecologies' of imported urban nature.

Hani Salih draws us into the layered bureaucratic complexities behind the seemingly straightforward task of installing a heat pump in a British building. Applying a critical lens to planning policy, ***Hot Mess*** maps the invisible, and sometimes ancient, systems and ideas shaping where and how buildings are planned and built, and how these mechanisms impact the UK's transition to green energy.

Laura Lebeau invites you to dismantle your ideas about what 'things' are made of. Her research traces the environmental impact of mass-produced domestic appliances and asks: what is the role of the designer in the lifecycle of a product? ***Harmless Appliances*** pushes the needle towards regional production and local repair, and challenges the assumed immutability of mass-manufactured global supply chains.

Neba Sere opens a space to decolonise our understanding of plants. By sitting with the emotional and sensorial legacies of displacement, commodification and extraction, she imagines ***Ancestral Plants: Anarchive*** as a space of care,

collective learning and reconnection to lost knowledge. Her work gently guides us towards listening to and learning from the more-than-human world.

So, what are the limits of human-centred design in a more-than-human climate crisis?

If this research asks you to understand humans not as separate from, but as entangled within, complex ecological systems, then design practices and the ideologies that underpin them must be reconstructed. The natural and the artificial can no longer be kept in separate boxes, so we can no longer imagine our response to the problems caused by artificial constructions as simply a 'return' to the natural. The green transition is, therefore, not just about new materials or better sustainability metrics. It is about radically rethinking the relationships, systems and values that guide how, what and why we design. The result of this research is not final – it is in progress. You are invited to follow each line of inquiry and to challenge your own understanding. What is natural and what is artificial? What is fact and what is fiction?

This publication has three sections. The first questions the ***Rules and Dominant Structures*** each project identifies as being artificial. Next, it moves through site-specific, ethnographic, and data-informed research, to ***Unlearn and Relearn*** those structures within their real-world historical contexts. Finally, ***Multiple Futures*** explores how storytelling and 'making something visible' can be used as tools for moving towards reimagining our future.

Artificial has been designed as a space for learning – not passive absorption, but active engagement. As you go through each section, you are invited to question, collect, reframe and recontextualise each topic for yourself. The boundary between what is natural and what is artificial is not fixed, and neither is your life within the ecosystems that you inhabit.

LEXICON

Design research is a field dedicated to understanding and shaping the impact of design in the world. At its core, research is a process of investigation, experimentation and learning. A commitment to research usually involves striving for an alternative solution – a new material, a new process, a different way of designing a system or space.

Design research can take many forms, including mapping, prototyping, archival work and ethnography. Each approach is distinct. During their residencies, Christie, Hani, Laura and Neba have all developed their own methodologies and refined how and why they research.

Building a research practice is a personal journey. Design research draws from a wide range of disciplines – including architecture, craft, industrial design, material science, anthropology and art. Its interdisciplinary nature adds nuance and depth and allows for bridges to be built between disciplines.

This lexicon outlines some of those nuances. It is a tool for navigating the proceeding text and exploring the connections between the bodies of research within this publication and exhibition. For each term we have shared a description of how it is understood within the context of each specific research project, to illuminate the definitions, methods and outputs of each resident's research practice.

ENTRY	TERM	TYPE	DESCRIPTION
36, 42, 62	Ecologies	Definition	The relationships between organisms, animals, plants or single-celled life-forms, and their environment(s).
36, 50	Ownership	Definition	A legal framework that controls access to natural resources, particularly land, as a mechanism for gaining power, control and dominance.
30, 81, 117	Material	Definition	Refers to the substance or matter from which something is made. It is the physical component that constitutes objects, structures and environments in the world – ranging from natural elements like wood and stone to synthetic substances like plastic.
36, 81	Archive	Definition	An accumulation of historical records or materials, in any medium, or the physical facility in which they are located.
36, 42, 62, 72	Nature	Definition	The phenomena of the physical world, including plants, animals and land.
30, 54, 72, 110, 112	Policy	Definition	A principle or course of action set by an individual or organisation, typically serving as both a tool and product of governance.
30, 36, 93	Appliance	Definition	An electrical device designed to perform everyday tasks such as cooking, cleaning or writing, helping to make daily activities easier and more efficient.
36, 136, 50	Colonialism	Definition	The control and exploitation of another territory, its natural resources and people, by a foreign group or power.

ENTRY	TERM	TYPE	DESCRIPTION
62	Stitching	Method	The act of sewing or threading to join materials or information together.
50, 62, 110	Mapping	Method	The process of linking or associating nodes of information and actors influencing or relating to each other to facilitate understanding, organisation and to reveal the relationships and dynamics between them.
93	Disassemble	Method	The process of carefully and systematically taking a product apart to understand how it works and what it is made of.
36, 81	Decolonise	Method	The process of freeing institutions, systems or ways of thinking from the cultural, social and intellectual effects of colonisation. This involves dismantling colonial influences, salvaging knowledge, identities and perspectives of the Global South and deconstructing dominant Western thought.
124, 136	Listening	Method	The intentional act of attuning oneself to the surrounding environment, especially the subtle, strange or unseen. This involves perceiving and understanding what is present, often before it becomes visible or obvious.
42, 117, 139	Talking	Method	The process of speaking and engaging in verbal exchange with another person or group, used to share thoughts, express ideas, build understanding or create connection.
117	Repair	Method	The act of fixing or restoring something that is damaged, broken or not working to a functional condition.
81	Curate	Method	The act of thoughtfully gathering, selecting and organising information, objects or content to present in a meaningful way.
62, 124	Convening	Output	The intentional act of coming together, across species, through food, presence or sound to build relationships and mutual recognition.
50	Articulate	Output	To express something clearly and coherently.
62, 117	Localise	Output	To focus, adapt or concentrate something in a specific place, context or community, often making it relevant or responsive to immediate conditions, needs or supply chains.
81, 124, 136	Share	Output	To give, offer or make something like knowledge, an experience or a space available to others.
36, 110, 117, 125	Learning	Output	The act of giving attention to someone or something in order to understand and internalise information.
117, 110	Speculate	Output	The process of imagining that aims to open up and catalyse new perspectives to create space for discussion, debate and alternative ways of designing.
117	Prototype	Output	The first or preliminary version of an object or product from which other forms are developed.
140	Co-create	Output	To make or create something collectively and collaboratively.

The Nature of the Artificial

16

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LEILAH
HIRSON-COMLEY

If you open a dictionary to the word 'artificial' you will read something along the lines of *made by people, imitating something natural.*[1] Some examples might be provided – such as artificial intelligence, artificial flavourings or artificial insemination – presenting a range of natural systems, substances and spaces that have been synthetically engineered or reproduced. But this definition immediately raises a few questions, among them: is the artificial necessarily unnatural and where does this polarisation come from?

To explore, and perhaps begin to answer these questions, we may turn to etymology – a branch of linguistic science which studies the origin and evolution of words. In doing so, we would discover that the earliest common use of 'artificial' in the English language was in the 15th century CE, when the word meant 'man made' and *not* natural.[2] Here, the dichotomy is clear: that which is *crafted* by humans exists in opposition to that which is found in nature.

But 'craft' is a double-edged term; it can refer either to the handmade or to a sense of cunning, guile and deceit.[3] And this latter interpretation is synonymous with 'artifice' – another old relative of 'artificial'. Alluding to a clever trick or deliberate form of deception,[4] 'artifice' introduces an ethical contrast into the conversation, attributing positive moral value to that which is natural (*right*) and removing it from that which is not (*wrong*). This adds a sense of antagonism to the artificial – an impression which has filtered through to contemporary understandings and uses of the term.

Travel quite a bit further back through the etymological timeline to 1st century BC and we reach 'artificium' – the Latin word for an artistic profession or trade.[5] By contrast with 'artifice', 'artificium' suggests an honourable pursuit and a valued title; a marker of natural talent and deftly honed skills. The link with art stems from the Latin root 'artifex': an artist, maker or innately capable creator.[6] And this, in turn, suggests that there may be something fundamentally 'natural' about the human creation of art. In which case, have we come across a contradiction on our etymological journey? Has the 'artifex' turned the 15th-century understanding of 'artificial' on its head?

We are likely left asking more questions, including: is art (or anything else made by humans, for that matter) inherently natural or unnatural? And where do we draw the line between these two seemingly opposing states? This year's Design Researchers in Residence are questioning the oppositional thinking that often accompanies the artificial. In doing so, they are embracing the term's complex and layered history – one which resists simple binaries and challenges the very idea of a natural-artificial divide.

Design Researchers in Residence is Future Observatory's programme for design researchers, hosted at the Design Museum. The residency supports thinkers and makers from different disciplinary backgrounds at the start of their careers. The residents spend a year developing a new research project around a theme that responds to the climate crisis.

Design Researchers in Residence

Paracologies

How can selective narratives about nativity and natural-ness limit our imaginative responses to changing ecologies?

Paracologies invites you to convene with parakeets, a species of bright green bird that roost in the manicured parks of London. Through walking, stitching and inter-species worldbuilding, Christie Swallow's research asks you to move beyond an outdated idea of what is native and therefore natural – and asks you to question who gets to belong in the artificial ecologies of transplanted urban nature.

Through in-depth collaborations with musicians and performers, the project has fostered more-than-human communication by composing music for parakeets. Through the travails of the parakeet, Christie hopes to better understand how we might coexist on this damaged planet and foster solidarity across species boundaries.

CHRISTIE SWALLOW

Christie Swallow is an artist and designer who crafts new stories from old ideas. Their work engages with how the Anthropocene's configuration of humans and non-humans produced our present planetary crisis. With a background in architecture, their practice engages with ecology, technoscience and heterodoxy through methods of counter-mapping. Christie has previously undertaken residencies at the European Commission, the University of Birmingham and Hanger CIA. They were the 2020 recipient of the RIBA Boyd Auger Award and previously studied at The University of Cambridge and the Royal College of Art.

Hot Mess

How do the rules and systems that shape where and how buildings are constructed impact the UK's ability to transition its energy infrastructure to meet Net Zero targets?

Hot Mess maps the decision-making processes within the UK's planning system to explore how complexity is managed, often in contradictory ways, across different levels of governance. From local on-the-ground communities to developers, planners, civil servants and senior government officials, Hani Salih's research untangles the process of trying to install a heat pump to reveal the barriers embedded in the system.

Deploying lessons from systems theory, herd and swarm intelligence, and by studying how flows of resources in naturally occurring systems are managed and maintained, Hani invites you into a speculative model, rooted in nature-mimicry and less historically contingent ways of thinking about organising large interrelated systems.

HANI SALIH

Hani Salih is a researcher, writer and curator who works at the edge of a long list of disciplines, practices and ideas, connecting the dots. Hani's interests are informed by a foundation in critical spatial thinking and architecture, refined by further studies at the London School of Economics that led to a focus on the systems and infrastructures that shape our lives. Hani is a curator and moderator at De Dépendance in Rotterdam and was formerly Co-Curator of the International Architecture Biennial in Rotterdam (2024) and Senior Researcher at The Quality of Life Foundation.

Harmless Appliances

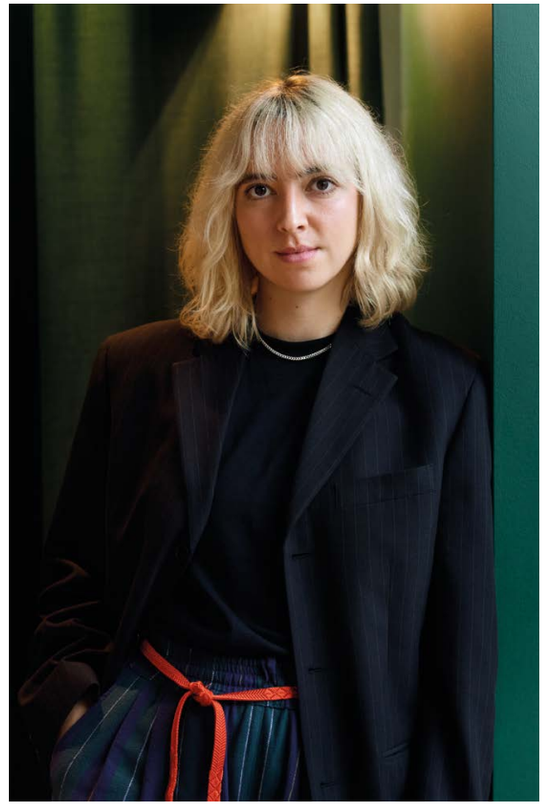
What is the role of the designer in the lifecycle of a product?

Harmless Appliances traces the hidden materiality of everyday objects to uncover the upstream impact of mass-produced domestic appliances, before they are even purchased. By focusing on a single, friendly vacuum cleaner, designed and manufactured in the UK, Laura Lebeau explores how the most ordinary object can reveal complex networks of material sourcing, manufacturing infrastructure and the potential for longevity through repair.

Exploring a transition away from synthetic 'product' materials for component manufacture, Laura's research pushes the boundaries of materiality. It imagines a harmless Henry that moves even further towards regional supply chains, facilitating hyper-local repairs with low-impact materials. In doing so, she challenges the assumed immutability of mass-manufactured global supply chains.

LAURA LEBEAU

Laura Lebeau is an industrial designer working across objects, tech and speculative design. Her work focuses on imagining radical sustainability strategies to define the future of consumer electronics, as well as experimenting beyond the expected aesthetic codes of technology. Laura has a master's in Industrial Design from the Strate School of Design. She spent five years at Map Project Office and is currently a Senior Designer at BLOND where she collaborates with some of the most innovative and well-known companies in the world.



Ancestral Plants: Anarchive

How do different spaces, voices and knowledge systems shape and alter our emotional and material relationships with plants?

Ancestral Plants: Anarchive invites you to decolonise your understanding of plants by examining the relationship between anthropocentrism and colonisation. Neba Sere and Umi Lovecraft reflect on the top-down structures of Western plant archives – dominated by hierarchies and classification systems – and contrast this with the highly emotional and sensuous legacies of plant displacement, commodification and extraction. The research starts with five key plants: Banana, Cocoa, Coffee, Palm oil and Sugar – cash crops that have played a foundational role in British economic wealth and continue to shape global consumption habits and exploitative labour conditions.

Anarchive opens up a space for care, collective learning and reconnection to devalued plant knowledge. Reimagining a new form of archive through oral histories, intangible knowledge systems and sensory entanglement, her work gently guides us towards listening to, and learning from, the more-than-human world.

NEBA SERE

Neba Sere is a spatial practitioner advocating for diversity and inclusion in the architecture profession. She is an associate professor at The Bartlett School of Architecture, UCL, where her research focuses on decolonisation and decarbonisation. Neba co-leads decosm Collective with Umi Lovecraft and is the Director of Black Females in Architecture. Her previous roles include Senior Project Officer with the Greater London Authority's Regeneration Team and leading youth projects at Build Up Foundation, where she is now a Trustee.

This section questions the rules and dominant structures that each project identifies as being ‘artificial’. Listen to the voices of plants, walk with ecologists, map systems for decision making and follow waste upstream to understand the artificialities underpinning each body of research.

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Rules and Dominant Structures

31

The Price of Convenience

LAURA LEBEAU

As an industrial designer, my work relies heavily on the creation and mass production of new things. When I say 'things', I mean it in the *material* sense: lamps, cups, knives, speakers, computers – any belonging that fills our lives and our homes, as simple or as complex as those be-longings may be. Manufacturing *things* at scale, however, involves long and complex supply chains, which impact both people and the planet. These impacts often fall out of sight of the designers. Whether the negative impact comes from extracting the materials; how they are transformed; or from what happens to them after – for example, when our beloved fridge is declared 'beyond repair' – the harm caused by these processes can be hard to track and measure. Often, it is not until a designer sees their own design in a landfill a few years after its launch that they start questioning their responsibility.

The environmental impact of manufacturing is staggering. According to a 2019 UN report on global resources, 50% of greenhouse gas emissions and 90% of biodiversity losses are caused by extracting and processing primary raw materials.[1] In Europe alone, about 8% of the total material consumption is dedicated to household goods, which are also the second biggest output from metal ores, after construction products and materials.[2]

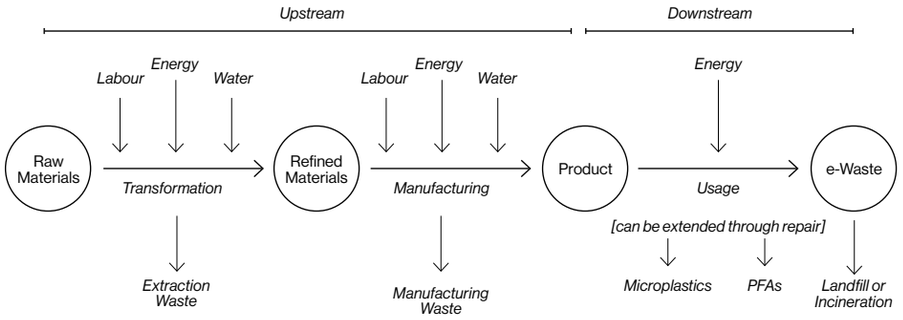
Design-as-usual, which often ends with a designer like me shipping 3D files to manufacturers in the Global South, and losing track of the supply chain from there, becomes harder and harder in the climate emergency and as conflicts over ores and minerals grow more common across the globe. These aren't ethical stances I was encouraged to interrogate in design school, but they are intrinsically linked to decisions I am paid to make. Unlike an oblivious consumer, I can't say I didn't know.

Many designers before me have explored the role of design in the depletion and waste of resources. In the 70s, critical design pioneer Victor Papanek admitted that:

'While the reasons for our poisoned air and polluted streams and lakes are fairly complex, industrial designers and industry in general are certainly co-responsible with others for this appalling state of affairs. [...] The designer -planner shares responsibility for nearly all of our products and tools and hence nearly all our environmental mistakes. He is responsible either through bad design or by default: by having thrown away his responsible creative abilities, by "not getting involved", or by "muddling through".'[3]

Despite this call for more radical and transformative design practices being over 50 years old, it feels very relevant today. Dieter Rams, who is regarded as one of the most influential Western designers of the 20th century, also expressed his feelings of regret and responsibility for the fact that mass production is one of the biggest causes of climate change.[4]

A lot of sustainable product design discourse focuses on repairability and tackling planned obsolescence and waste. This is a crucial issue, but there are fewer conversations surrounding the upstream impact of manufacturing, 'upstream' meaning everything that happens before a product is taken home and used for the first time. Figures from Canada, the US and Europe indicate that household waste accounts for between 2 and 9% of all waste creation.[5] The rest, 91–98%, happens upstream in primary industry, manufacturing, distribution and retail. This may seem unrealistic at first, but when you scrutinise supply chains for some of the most common materials used to produce household goods, it starts making a lot of sense.

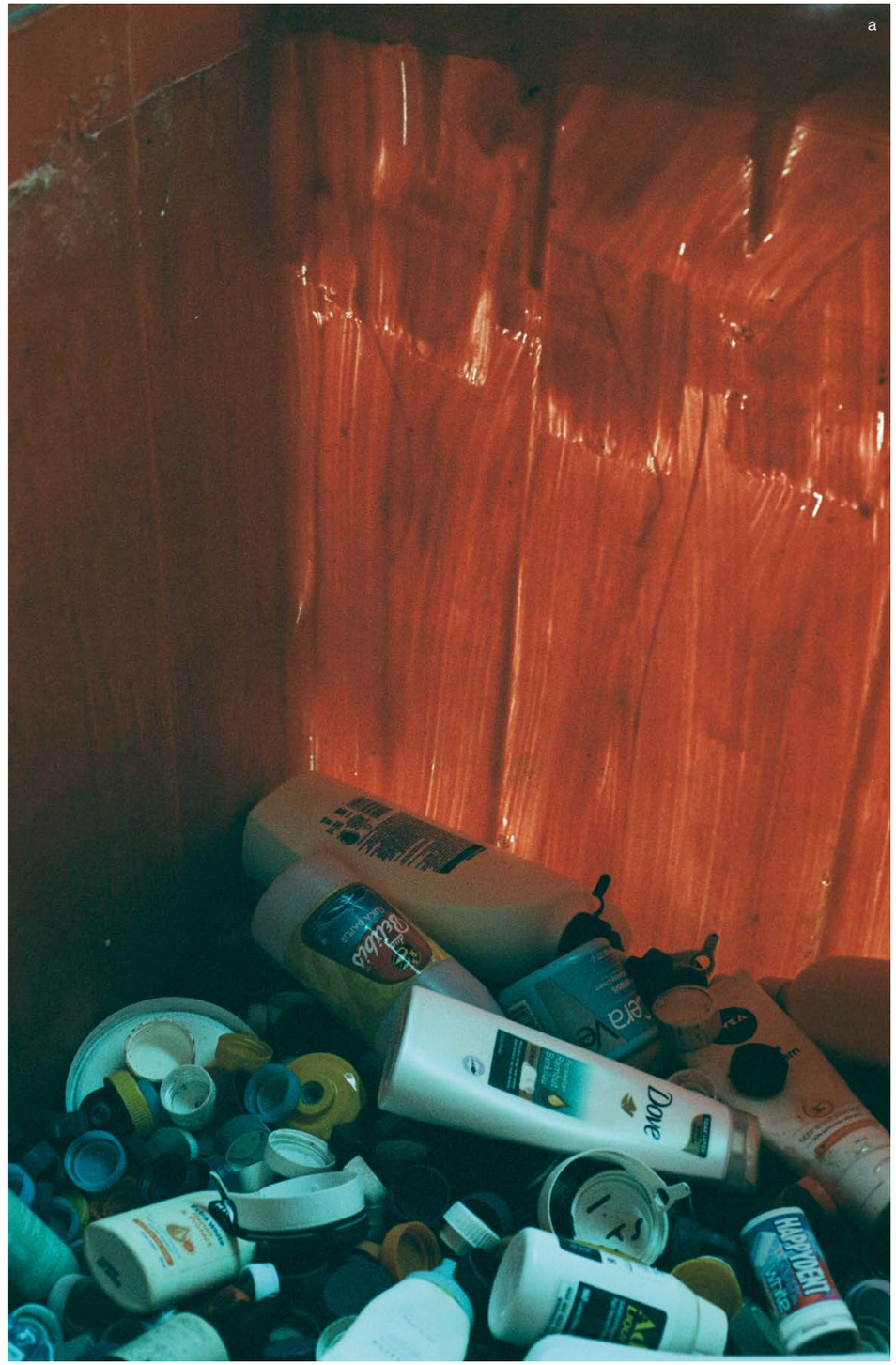


Let's look at copper: one of the most commonly used metals in the manufacturing of electronics due to its conductive properties. To extract 1 ton of copper from a mine, 426 tons of waste will be created.[6] This waste will usually be stored by the mines, in tailing ponds, slowly poisoning the surrounding soil and ecosystem due to the high concentration sulphur dioxide and slag. A similar process occurs when extracting other metals. In a typical operation in the ore mining industry over 98% of the excavated material becomes waste.

The harm caused by extracting key minerals used in electronics manufacturing often extends beyond the land. The mining of the unambiguously named 'conflict minerals' (tungsten, gold, tin and tantalum) is directly involved in financing war and genocide. Lithium and cobalt, essential for the manufacturing of the lithium-ion batteries found in most rechargeable devices (which many of us own and use every day), are both intertwined with growing concerns about corruption, water depletion and worker exploitation in Chile (for the former) and in the Democratic Republic of the Congo (for the latter).

Another backbone of modern product design is oil. It gets into supply chains as a fuel, moving materials to factories and goods to their destination markets, but also as a base ingredient; most commonly used plastics (including polypropylene, polyethylene, nylon, epoxy and more) are made directly from it. Outer shells, inner bearings, seals, coatings, fabrics... plastics are everywhere, and their production accounts for 5% of global carbon emissions. Then, as they are being used and slowly breaking down, they leech into the environment – into water, soil and living organisms (us included) – as microplastics. The additives used during the production of plastics, giving them their miraculously varied properties, are referred to as Forever Chemicals (or PFAs). Over the past decades they have leaked into our water and infiltrated our bodies and have been linked to liver damage, thyroid disease, obesity, fertility issues and cancer.

However we look at it, the way we currently manufacture our goods is inherently harmful to people and to the planet.



a

b

c

a Discarded plastic packaging made of PET, waiting to be melted and repurposed in Bali, Indonesia.

b Rio Tinto in Spain. The highly acidic, iron-rich water of the Rio Tinto in southwestern Spain is inhospitable to most plant and animal life. The deep-red hues of the water are caused by acidic runoff from rich sulfur ore deposits in the ground and are exacerbated by the area's long legacy of opencast mining.

c Scrap from a steelworks plant in Wales.

These harms extend far beyond the single metric of 'carbon emissions', often used to measure the environmental impact of a given product. As a designer and consumer, watching the accelerating production of cheap household goods, at scales comparable to the expansion of notoriously harmful 'fast fashion', it feels outrageously wasteful to send these short-lasting appliances to landfill knowing what it costs to make them.

Policies and regulations could do more to curb the spread of 'disposable electronics'. In the UK, a law was recently passed banning disposable vapes from the market: plastic devices which each contain a lithium-ion battery and are usually only in use for a couple of hours before being thrown away. With hindsight, it is legitimate to wonder how such products make it to the market in the first place. PFAs are sometimes used for years before a ban is put in place, only to be replaced by a similar compound straight away, which hasn't yet been proven to be harmful.

So what do we do? As a *things* designer, I am woven into a deeply flawed global supply chain, connected to land and people, which makes my work deeply political. The decisions I make from my comfortable London studio can have far-reaching consequences that I struggle to fully grasp. For a moment, let's imagine alternative ways to design, and move beyond attempting to change the industry from the inside (as this often proves futile), towards changing it from the outside, by decentralising our approach, and looking to open-source initiatives and local makers. It may be time to collectively reconsider our profession as designers: instead of making new things, we could facilitate the use and care of all that we have already made.

What would our world look like if design wasn't at the service of human convenience (material or economic), as it has been for the past century, but instead prioritised the regeneration of our planet and care for those who inhabit it?

Ancestral Plants: Anarchive[1]

Exploring the colonial legacies of ecological crises

NEBA SERE & UMI LOVECRAFT

What can the histories of plants teach us?

By looking at how plants were treated by humans during the height of British colonisation (mid-19th to early-20th century), we can sense and feel what Banu Subramaniam refers to as colonial embranglements.[2] Rather than using familiar terms (like 'intertwined'), the neologism 'embranglements' implies tension, disorder or something destructive – sensorial experiences which help us to empathise more with our plant ancestors. Such sensorial experiences also provide an entry point for investigating how colonialism uprooted natural orders and imposed the artificial systems that reshaped ecosystems, knowledge and identities.

Plant ancestors; poetic (rather than scientifically accurate) term adopted by decosm to foster empathy for and kinship with plant life. The term reframes plants as co-ancestors – beings entangled with human histories and deserving of the same respect and attentiveness given over to human lineages.

As a result of the British colonial project, plants have been renamed and commodified, landscapes have been carved into plantations, Indigenous agricultural practices have been disrupted and diverse ecosystems have been replaced with monocultures. Reviewing this history gives us a glimpse into the mentalities that led to the disconnection of humans and nature – the foundation of the ecological crises we now face.

What can we learn from the many Indigenous and Afro-diasporic communities that embrace ecocentrism, a worldview that treats humans and nature as part of a shared equitable ecosystem? And how might we embrace decolonial plant knowledge in new forms of archives and through intangible knowledge systems such as tacit knowledge,[3] or oral knowledge? Our search for decolonial plant knowledge started in colonial archives encountering our plant ancestors in a dried, pressed, logged, indexed, latinised way – stored alone in folders and locked into cabinets within herbaria.[4,5] This is quite at odds with the vibrant, full-of-life experience of the plants from our own diaspora upbringings, where spices, aromas, taste, tactility and medicine are central to our understanding of our plant ancestors.

The following five texts introduce bananas, cocoa, coffee, palm oil and sugar – five plant products which have played foundational roles in the British empire's expansion and economic dominance, shaping global consumption and labour exploitation to this day.

Told in their own voices, the parent plants trace their original birthplaces,[6] their artificial journeys across the globe and their treatment by botanists (or 'plant thieves'), whose practices were more akin to biopiracy than exploration.[7]

Samples of these plants have ended up in institutional archives where their Indigenous uses and histories have been erased. Here, their voices are heard.

a

b

c

a Born in the sacred groves of the Americas, I was cherished first by the Olmec then by the Maya and Aztec as a divine gift. When the colonisers arrived, they stripped me of my divinity, planting me across their empires, watered with the blood and sweat of enslaved labour. Now, I am the heart of a global industry, consumed in indulgence while my true cost is ignored. My cultivation scars the land, fuels deforestation, and perpetuates exploitation. Even pork, the flesh of another, leaves a smaller mark than I do. My bittersweet legacy lies not in sustenance, but in destruction – my sacred roots traded for profit and power.

b I hail from the rainforests of East Africa, a gift from nature. My beans, roasted and brewed, have awakened minds and fuelled creativity for centuries. Cultivated on plantations, the enslaved toiling under brutal conditions, their labour fuelling an insatiable demand. I have witnessed the displacement of Indigenous Mayan communities, and the destruction of ecosystems. Today, in the heart of Brazil, millions of workers are subjected to modern day enslavement (forced labour, debt bondage and inhumane working conditions) for me to be sold at a premium on your high street. Next time you savour me, remember my story and my words.

c I am the vibrant yellow fruit with sweet flesh, delighting taste buds around the globe. I was once a symbol of exotic allure, a coveted luxury. Behind the glamorous facade lies a harsh reality of exploitation and environmental destruction. In 1920s Somalia, a fascist Italian government commodified me for profit, while in the Caribbean, my cultivation has been fuelled by toxic chemicals, poisoning the land and its people to this day.

d

e

d I was born in the rainforests of the tropical world of Central and West Africa. My fruits, rich in oil, have been modestly harvested by hand for centuries. Expanded to a global scale, my oil is used in a myriad of products, from food to cosmetics. But my rise to global prominence has come at a steep cost. Cultivated in vast plantations in Southeast Asia, displacing rainforests and destroying the habitats of countless species. Deforestation, soil erosion and water pollution are many of my symptoms. And my Indigenous neighbours have been displaced and underpaid while I have brought prosperity to the colonists.

e I arrived in Barbados as a colonial crop, planted to fuel the empire's insatiable hunger for sweetness, and soon I stretched my green blades across nearly the entire island – 166 square miles – transforming it into a vast plantation, my presence entwined with the suffering of those forced to harvest me. Every year, my consumption grows and grows. Today, young and old are addicted to me causing serious long-term health issues.

Ecologie(s): Who gets to Belong?

CHRISTIE SWALLOW

All 'nature' is now artificial. Ecological networks have been shaped by humans through deforestation, radiation, pollution, damming of rivers and the introduction of species across regions.

Ecology – Eco from the ancient Greek *oikos* (house) and *-logía* (study of) concerns the relationship(s) between organisms and environment. Originally coined by Ernst Haeckel in 1866.[1]

As a consequence, formal knowledge systems are under increasing strain: 'Geology' can no longer be kept separate from 'Political Theory' and 'Botany' will not be kept out of 'Architecture'.

Kathryn Yusoff and I talked about this as we walked together through Greenwich Park.

KY *One of the legacies of the late 18th century is a series of academic disciplines that theorised an 18th-century world. Now, we're trying to understand the issues of the 21st-century – rapid climate change and biodiversity loss, etc. – using these same disciplines. The problem is that they don't capture the complexity of interdisciplinary relations because they divide the human, inhuman and non-human.*

Kathryn Yusoff is Professor of Inhuman Geography at Queen Mary University of London, and in her book *Geologic Life* (2025) examines how knowledge practices mediate both theoretical ideas but also enact real-world consequences on the ground and on bodies.

As these disciplines and dichotomies break down, we need new frameworks for understanding the artificiality of ecology. I took steps towards this by exploring walking as a method of direct engagement with these artificial natures – the parks, cemeteries and commons of urbanity. I invited thinkers and experts in this space to talk with me in walkalong interviews. Michal Huss and I walked, and talked about walking, in Clissold Park and Abney Park Cemetery.

Walkalong interviews – A qualitative research method consisting of a walking conversation through a locale. Each walkalong interview was undertaken at a park/greenspace recommended by the interviewee.

MH *Walking methods become such a useful way to intervene in the failures of other disciplines. With art and representation, whatever we do, it's not going to be perfect, it always seems to come with some problems. Things are left out. Because walking is such a temporary gesture, it is open ended and collaborative, so it provides a tool for dealing with this.*

Michal Huss is a Leverhulme Fellow and Lecturer in Architecture. Her work focuses on walking as methodology, and embodied memory practices.

a

They're Here: Who Gets to Belong?

Ecology is a study of relationships between organisms and their environment. It is therefore a study of home; and any study of home is always also a study of who gets to belong.

Nature has always been nomadic in its dwelling. No biota sits still for long, and especially not on an island like Great Britain. Ian Rotherham had this to say on our walk.

IR *As an island, the UK has a specific relationship with the nativity of its species. If you live on the continent, the distinction between a species native to France versus native to Germany is less obvious. We view it differently, though, because we are geographically cut off.*

Ian Rotherham is Emeritus Professor at the Advanced Wellbeing Research Centre, Sheffield Hallam University, Sheffield, UK.

As with the human realm, many people focus exclusively on the perceived dangers of migration. In ecology, some of these concerns have a legitimate grounding, backed up by evidence, and already the subject of mitigation efforts.

IR *I wouldn't diminish the problems that invasive species can cause; those problems are already here. There may well be more of them in the future. We're changing the environment so dramatically with nitrogen pollution and climate change that there will be knock-on effects. We can't wish them away.*

Human action has propelled the migration-driven shape of contemporary ecology. Through what Alfred Crosby called 'green imperialism', animals and plants have been the secondary agents of human-driven terraforming and the alteration of global ecosystems in the modern period. (15th century onwards).[2] Tim Blackburn and I reflected on this as we walked together through Hampstead Heath.

TB *Every point on the planet is different in terms of habitat and the species that those habitats home. Lots of different processes affect this, but ultimately there are three main drivers: speciation, extinction and immigration. Species move around. So everything in the UK is either an immigrant, or a descendant of an immigrant... Most of the*

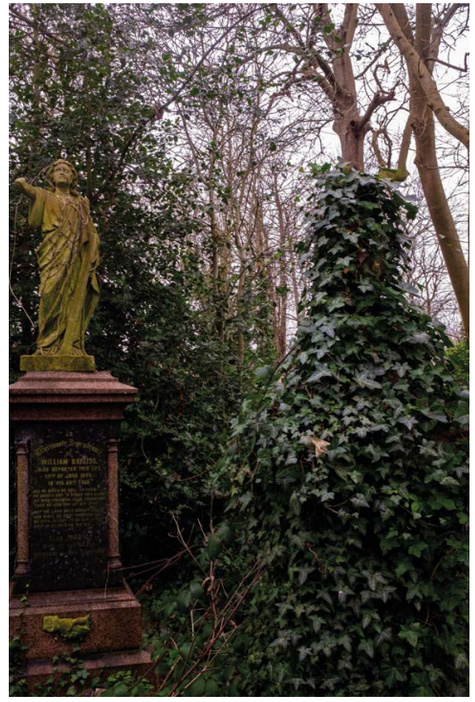
Tim Blackburn is Professor of Invasion Ecology at University College London. We walked together through Hampstead Heath.

a Parakeets roosting in London Plane Trees at Ring Road Square, Bermondsey

b Two memorials in Abney Park Cemetery

c A decaying ash tree in Hampstead Heath

b



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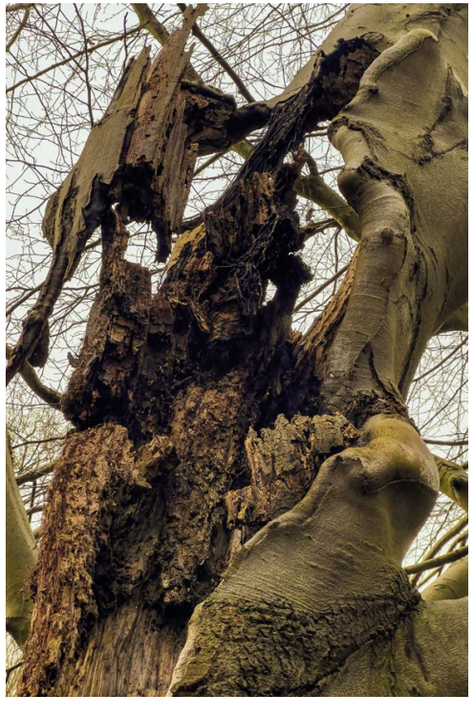

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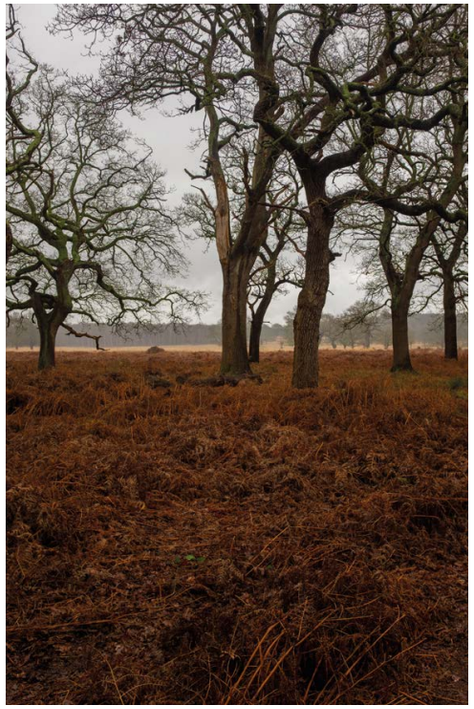

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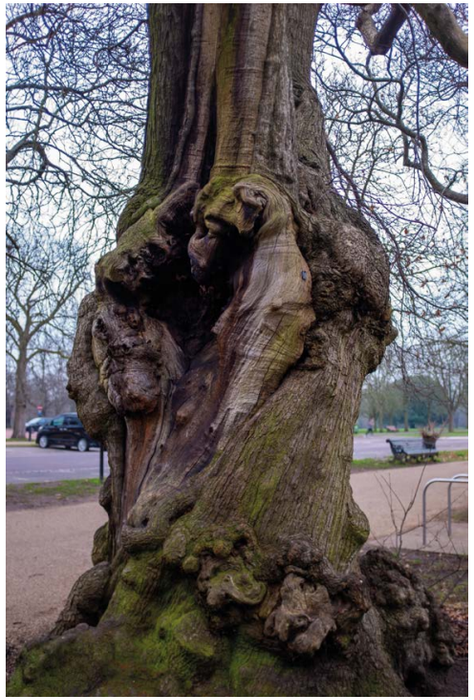


d Dormant bracken and bare oak trees in Richmond Park.

e An oak trunk in Greenwich Park, with large burls and knots from environmental stress.

species we have in the UK evolved elsewhere, and migrated here after ice sheets retreated 10,000 years ago. Species have always naturally moved around but now, humans are imposing ourselves on this process. We have accelerated the natural rate at which species go extinct by 100,000 times... human intervention has become equivalent to an asteroid strike.

Despite this, 'nature' continues to be popularly, and subconsciously, understood as something that is both static and separate from humans. Parakeets' presence in Great Britain shatters this false dichotomy. Witnessing these incongruently green birds within British urban spaces is weird. Parakeets are unexpected, but they also offer us a radical opportunity to think otherwise – what if all of nature is now 'matter out of place'?

Mary Douglas conceptualised dirt as being 'matter out of place', a framework that allows for agency in the labelling of dirt – who is deciding what is or isn't the right place?[3]

Hannah Peck is Deputy Director of Cool Earth. Her 2013 PHD thesis, is the most comprehensive contemporary count and analysis of Parakeet Populations in London.[4] We talked about parakeets together as we walked in Richmond Park.

HP *Now that there are so many parakeets, it would be an impossible task to get rid of them. Realistically, I don't know how you would even go about doing it. They're not causing a huge amount of damage, so I feel quite relaxed about their presence. And now that they have become part of the landscape, maybe others will accept them too.*

They're 'not from here', but then how did they get here? They're seen as a nuisance, but who decides what is a pest, what is unwanted? What counts as 'at home' in a particular ecosystem often comes down to time – at what point does a species acquire 'squatters rights'? I searched for the oldest records of parakeets within Great Britain, and came across a 2,000-year-old Roman wall fresco. Depicting two parakeets, the painting once stood near modern day Lime Street in the City of London.

A parakeet from two millennia ago. As proof of belonging goes, surely this is enough?

In truth, playing this kind of numbers game is a trap. What does it mean if parakeets have been here for 50

years, or 2,000 years? The point is they're here now. As Louise Fowler points out:

LF *Just because something has been here for 2,000 years doesn't mean it should or shouldn't belong any more than something that arrived more recently. It shouldn't dictate whether or not a group of people, or things, or parakeets belong.*

Against Origin Stories

The focus ought be on what exists today, not why or how it came to be. And yet parakeets do seem to require origin stories. The most common question I get is 'How did they get here?'

KY *Why do we start with the question of why they exist here? They are here – we're already in a relationship. A more interesting question would be to ask what that relationship will look like going forwards...*

As ecology becomes 'unhomely', or uncanny, the question of origin stories becomes more acute, which Daisy Hildyard and I discussed on our walk through Regent's Park.

DH *I don't like origin stories; I've never found them very interesting. Myths of origin have never spoken to me in the way that other old stories or beliefs have. There's something weirdly deadening about an origin story; it's a dead end.*

Daisy Hildyard is an essayist and author. Her most recent book, *Emergency*, infuses ecological and human stories revealing the intricate bindings of humans and artificial ecologies.

To have an origin story is to suggest that the subject is 'matter out of place', because it indicates a 'before'; an edenic time before nature became artificial. Today, we exist within human-altered ecology, where different human-nature entanglements unfurl in dramatically different ways across the globe.

The thriving parakeets are a loud (and distinctly green) example of an artificial nature. There is no singular 'ecology' to speak of, but rather multiple, artificial systems of relationality; instead of one singular ecology, there are myriad 'paracologies'.

Paracologies; 'Para' meaning beside or more-than, and 'ology' from the ancient Greek *oikos*, meaning house. This is a call to pluralise and develop new understandings beyond the monolith of ecology and the silo-ing of disciplines, exploring ways in which humans and more-than-humans negotiate 'nature' within its current artificial state. Paracologies is a study in which many studies fit, where *official* ecology and *unofficial* natures can exist alongside each other.

f

Land, Power and Planning

The allegory of good and bad government

HANI SALIH

‘Mud is a natural structure. Land is a social structure.’
Alastair Parvin[1]

It seems that, beyond voting in increasingly smaller numbers every five years,[2] engagement and trust in the processes of decision-making and government is in a bit of a slump.[3] According to the Office for National Statistics, 44% of people surveyed in the UK in 2023 said that they had little to no ability to participate in politics, with a further 63% stating they felt they had little to no confidence that they are able to have a say in what government does.[4] In this piece, I argue that this is not an accident, as the barrier to engagement in England has historically been rooted or mediated by resource (read land). By understanding the roots of how we decide on who gets to make decisions, speaking specifically to who has access to power in this process, we can begin to understand the problems and barriers to the ability to influence decision making in government.

Land and Power

Humanity has projected onto the natural a vast infrastructure of meaning-making networks that, in effect, are the foundations for the function of society. In this current organisation of contemporary society, the mechanisms that govern our everyday lives, be they financial or legal, are rooted inextricably with that which is concerned with ownership of land – a hangover of the feudal era.

Under feudalism, one’s relation and proximity to land ownership was used as a means of not only granting power but also holding it over others (fig a), namely through the control of increasingly smaller parcels of land. In England,

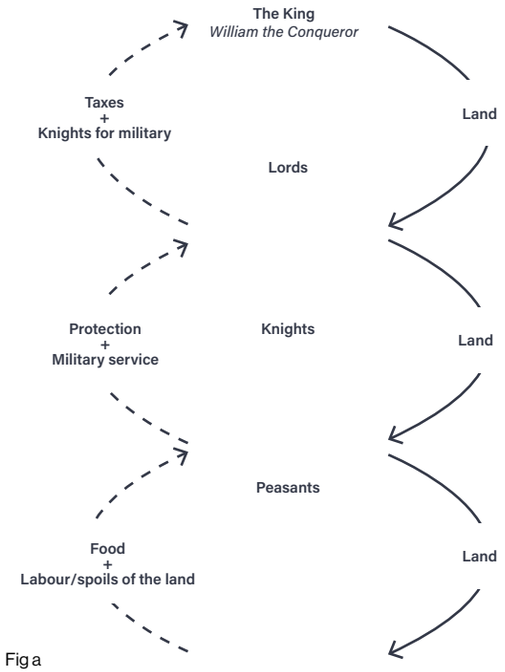


Fig a

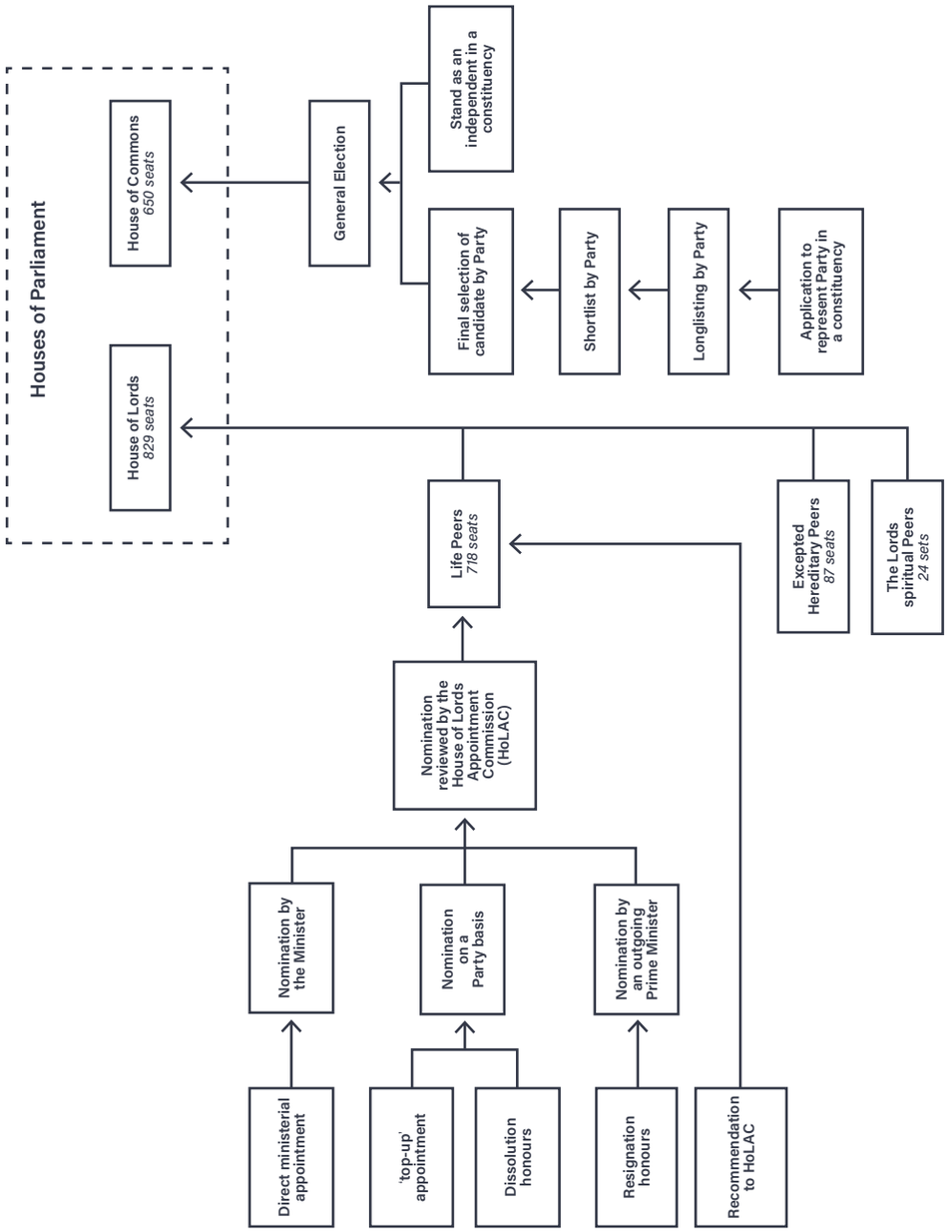
power was therefore articulated in different ways at each level of the feudal hierarchy – from peasants all the way up to the King. If you owned land, you owned leverage over someone else. Such was the impact of this mechanism of rule that it became the blueprint for the great British class system. Those who own land were often granted almost direct access to the mechanisms of power and decision making. By virtue of their accumulation of land (read power) and resource, they were granted an outsized amount of influence in discussions of law and policy, even sometimes setting the terms for these processes.

Today this is still very much the case, as the house of Lords forms the basis for the generation and additional scrutiny of bills in parliament.[5] But the process of obtaining a lordship (one of the few influential, yet non-democratically elected positions in government today) is still somewhat based on one’s proximity to power, or more appropriately, wealth and landownership (fig b). Be it through selection via the resignation honours or hereditary peerage.

The remnants of this relation can be seen in the murky waters of the Right to Buy Act introduced by Margret Thatcher. But in the 21st century this notion of ownership speaks to the exertion of control from the top down. Where freedom is tied closely to purchasing power.

The powers of the House of Lords, these days, are much more limited as a result of a string of reforms that have meant that Lords can only delay bills they disagree with, instead of outright blocking them. More recently, at the time of writing, a proposal by the current Labour government has moved to remove the already capped hereditary peers from the House of Lords altogether. The House of Lords is also not allowed to initiate any bills that have any effect on matters relating to taxation or public money.

Fig b



Human Above All

Throughout history, many (mostly men) have tried to post-rationalise humanity's centrality through religion, science and even morality. These attempts to construct such a positionality have manufactured the idea that a *specific kind* of person ought to be *the* decision-maker on behalf of wider society. This responsibility is based on the grounds of said person's 'moral virtue' rather than a truly meritocratic, democratic or representative process. In a post-feudal society, this kind of person was typically defined as those within the upper strata of society – land-owning and wealthy. The merit of their position in society is determined by their abundance of wealth and, by extension, land.

In feudal society, the Monarchy is typically thought of as ordained by God. It is therefore through this rubric that claim to land in a feudal system is still intimately linked to a religious justification.

As such, this *specific kind* of person was elevated to the status of someone ordained to set the terms for how we think about knowledge, law and ultimately the production of profit – the foundations for how we think about the arrangement of society, and the decisions we make within it.

A moralistic argument was based on a false corollary that humans are at the heart of the universe and have an inherent right to dominate it through expansion, colonisation and extraction. This post-rationalisation, over time, set in motion the principles that allowed the European colonial project to come to be. In certain instances, it is still the undercurrent through which international relations and geopolitics are formed and articulated.

These elements are at the heart of the challenge that the planning system faces. Both stem from a particular world view that centres the idea that land is a resource through which relations and proximity to power can be mediated. It is these assumptions, which I argue are artificial in their framing and conception, that this research project seeks to question.

Policy Palimpsest

Planning and land rights in this country have been formed and in-formed by the centuries old, landed gentry's claim to the notion of that which is 'rightfully' theirs. Today, policy is a patchwork of such claims, stitched together with a hundred years of incremental planning policy and reform that has attempted to correct and readdress these relations. The result of this continual layering of legislation in documents like the National Planning Policy Framework (NPPF), however, is a confusing and obfuscated set of mechanisms acting sometimes in parallel, other times in opposition, creating a cloud of confusion that does not provide an adequate path forward for meaningful and transformative progress. This process is best described as a palimpsest, where layers of a document are superimposed on top of each other, where previous layers leave a visible trace.

In Ambrogio Lorenzetti's *The Allegory of Good and Bad Government* (1338), the Italian painter pictures a system governed by good, morally upstanding citizens and politicians. This series of three fresco panels depicts the different outcomes that good and bad governance can have on society and the cities that said societies call home. This attempt to demonstrate the importance of good governance and, by extension, decision making by centring moralistic values such as *Fortitude, Prudence, Justice and Temperance.*[7]

The term palimpsest originates historically from the idea of scrolls that were inscribed and then inscribed again. These are documents that contain within them layers of changes that have accumulated over time. This is often seen to be the case in more ambiguous documents, where hard and more direct through lines are not as easily read.[8]

Conversations about the need for planning reform emerge every few years, often at the beginning of a new Prime Minsterial term. The focus of these debates is typically oriented around the need to 'streamline' the process to address the complexity and bureaucracy that has become synonymous with the planning system. As a result, blame is squarely laid at the feet of this process, pointing to the size and overreach of government as the reason for its failure to deliver homes to address the affordable housing crisis, for one. More recently, the current planning system was billed as the main barrier for the delivery of Labour's new '1.5 million new homes in 5 years' target.[9] The consensus among policy makers, planners and developers, therefore, does seem to be in the right place – the planning system isn't working. But this consensus fails to question the set of assumptions that underpin this very mechanism for decision making in the first place.

In the face of the poly-crises that define our current era, vast wealth inequality, the re-emergence of fascism and the collapse of the ecosystem to name a few, we must question a system system that carries within it a huge number of complexities and contradictions. A system rooted in ideas that have yet to be fully and meaningfully scrutinised.

A better, more holistic mechanism needs to be considered in order to adequately address these issues. Issues that speak to better access to housing for all, tackling stark inequalities and improving the quality of life of all regardless of their resources or proximity to resources.

REFERENCES & IMAGES

LEILAH HIRSON-COMLEY

1 Cambridge Dictionary, (n.d.). *Artificial*. Available at: https://dictionary.cambridge.org/dictionary/english/artificial (Accessed: 1 May 2025).
2 University of Michigan, (n.d.). *Middle English Dictionary: artificial*. Middle English Compendium. Available at: https://quod.lib.umich.edu/m/middle-english-dictionary/dictionary/MED2369 (Accessed: 3 April 2025).
3 Merriam-Webster, (n.d.). *Craft*. Available at: https://www.merriam-webster.com/dictionary/craft (Accessed: 2 May 2025).
4 Cambridge Dictionary, (n.d.). *Artifice*. Available at: https://dictionary.cambridge.org/dictionary/english/artifice (Accessed: 2 May 2025).
5 Lewis, C.T. and Short, C., (1879). *A Latin Dictionary*. Oxford: Clarendon Press. Entry: *Artificium*. Available at: https://www.perseus.tufts.edu/hopper/text?doc=artificium&fromdoc=Perseus%3Atext%3A1999.04.0059 (Accessed: 1 May 2025).
6 Lewis, C.T. and Short, C., (1879). A Latin Dictionary. Oxford: Clarendon Press. Entry: *Artifex*. Available at: https://www.perseus.tufts.edu/hopper/text?doc=artifex&fromdoc=Perseus%3Atext%3A1999.04.0059 (Accessed: 1 May 2025).

LAURA LEBEAU

1 United Nations Environment Programme (UNEP), (2023). *We're gobbling the Earth's resources at an unsustainable rate*. Available at: https://www.unep.org/news-and-stories/story/were-gobbling-earths-resources-unsustainable-rate (Accessed: 15 April 2025).
2 European Environment Agency (EEA), (n.d.). *Material footprints in European policy making*. Available at: https://www.eea.europa.eu/en/analysis/publications/material-footprints-in-european-policy-making (Accessed: 15 April 2025).
3 Papanek, V., (1971). *Design for the Real World*. London: Thames and Hudson.
4 Hustwit, G., (Director). (2018). Rams [Documentary]. Available at: https://www.hustwit.com/rams (Accessed: 14 April 2025).
5 Franklin-Wallis, O., (2023). *Wasteland: The Dirty Truth About What We Throw Away, Where It Goes, and Why It Matters*. London: Simon & Schuster.
6 Lepawski, J., (2014). *Reassembling Rubbish: Worldmaking from Things*. University of Toronto Press. Data for former Copper Queen Mine in Arizona.

a Harm and impact, mapped over an appliance's life. Diagram by Laura Lebeau.
b Discarded plastic packaging made of PET, waiting to be melted and repurposed in Bali, Indonesia. Photograph by Jess Gough.
c Highly acidic, iron-rich water of the Rio Tinto in southwestern Spain – inhospitable to most plant and animal life. The deep-red hues of the water are caused by acidic runoff from rich sulfur ore deposits in the ground and are exacerbated by the area's long legacy of opencast mining. Photograph by Jess Gough.
d Scrap from a steelworks plant in Wales. Photograph by Jess Gough.

NEBA SERE

1 Zaayman, C., (2023). *Anarchival Practices: The Clanwilliam Arts Project as Re-imagining Custodianship of the Past*. Berlin: ICI Berlin Press. Available at: https://press.ici-berlin.org/catalogue/doi/10.37050/wpc-ca-01~Anarchival_Practices.pdf (Accessed: 15 April 2025).
2 Subramaniam, B., (2024). *Botany of Empire: Plant Worlds and the Scientific Legacies of Colonialism*. Seattle: University of Washington Press.
3 Polanyi, M., (1958). *Personal Knowledge: Towards a Post-Critical Philosophy*. Chicago: University of Chicago Press.
4 Césaire, A., (1950). *Discourse on Colonialism*, p. 43. Translated by J. Pinkham. New York: Monthly Review Press.
5 Royal Botanic Gardens, Kew., (n.d.). *What is a herbarium*? Available at: https://www.kew.org/herbarium (Accessed: 14 April 2025).
6 Allaby, M., (2018). *A Dictionary of Plant Sciences*. 4th edition. Oxford: Oxford University Press.
7 Mooney, P., (1990s). Cited in Shiva, V., (2001). *Protect or Plunder? Understanding Intellectual Property Rights*. London: Zed Books.

a Elaeis guineensis, recorded in 1901. Image courtesy of Royal Botanic Gardens, Kew.
b Theobroma cacao, recorded in 1854. Image courtesy of Royal Botanic Gardens, Kew.
c Coffea arabica, recorded in 1816. Image courtesy of Royal Botanic Gardens, Kew.
d Saccharum officinarum, recorded in 1849. Image courtesy of Royal Botanic Gardens, Kew.
e Musa acuminata, recorded in 1893. Image courtesy of Royal Botanic Gardens, Kew.

CHRISTIE SWALLOW

1 Encyclopedia Britannica, (2025). 'Ecology'. Available at: https://www.britannica.com/science/ecology (Accessed: 14 April 2025).
2 Crosby, A. W., (1993). *Ecological imperialism: The biological expansion of Europe, 900–1900*. Cambridge: Cambridge University Press.
3 Douglas, P. M. and Douglas, M., (2013). *Purity and Danger: An Analysis of Concepts of Pollution and Taboo.* Hoboken: Taylor and Francis.
4 Peck, H. L., (2013). *Investigating ecological impacts of the non-native population of rose-ringed parakeets (Psittacula krameri) in the UK*. PhD thesis. Imperial College London.

a Parakeets roosting in London plane trees at Ring Road Square, London. Photograph by Christie Swallow.
b Two memorials in Abney Park Cemetery, London. Photograph by Christie Swallow.
c Decaying ash tree in Hampstead Heath, London. Photograph by Christie Swallow.
d Dormant bracken and bare oak trees in Richmond Park, London. Photograph by Christie Swallow.
e Oak trunk in Greenwich Park, London, with large burls and knots caused by environmental stress. Photograph by Christie Swallow.
f Fragment of a Roman Fresco depicting two parakeets found in Lime Street, City of London, dating from around 70AD. Image courtesy of Museum of London Archaeology.

1 Parvin, A., (2019). *Affordable Land*. Open Systems Lab.
2 Carter, P., (2012). *Policy as Palimpsest*. Bristol: Policy Press.
3 Statista, (n.d.). *Voter turnout in the UK*. Available at: https://www.statista.com/statistics/1050929/voter-turnout-in-the-uk/ (Accessed: 14 April 2025).
4 Parliamentary Office of Science and Technology (POST), (n.d.). *Democratic engagement and trust in parliament*. Available at: https://post.parliament.uk/democratic-engagement-and-trust-in-parliament/ (Accessed: 14 April 2025).
5 Office for National Statistics (ONS), (2023). *Trust in government*, UK: 2023. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/trustingovernmentuk/2023 (Accessed: 14 April 2025).
6 Institute for Government, (n.d.). *House of Lords*. Available at: https://www.instituteforgovernment.org.uk/explainer/house-of-lords (Accessed: 14 April 2025).
7 HM Government, (n.d.). *Chancellor Rachel Reeves is taking immediate action to fix the foundations of our economy*. Available at: https://www.gov.uk/government/speeches/chancellor-rachel-reeves-is-taking-immediate-action-to-fix-the-foundations-of-our-economy (Accessed: 14 April 2025).
8 Google Arts & Culture, (n.d.). *Allegory of Good Government*. Available at: https://artsandculture.google.com/asset/allegory-of-good-government/owH6OsVYaIFGMw (Accessed: 14 April 2025).
9 UK Parliament, (n.d.). *Money bills*. Available at: https://www.parliament.uk/site-information/glossary/money-bills/ (Accessed: 14 April 2025).

a The hierarchy between each stratum of society under feudalism, mediated through access to land. Diagram by Hani Salih.
b The House of Lords, situated within the wider lawmaking process. Diagram by Hani Salih.

This section moves through site-specific, ethnographic and data-informed research to ‘unlearn’ and ‘relearn’ the systems, spaces and supply chains that inform each resident’s research in their real-world historical contexts. Hang out with parakeets in St James's Park and disassemble Henry the vacuum cleaner to challenge your own understanding of everyday things, places and relationships.

62

Unlearn

Relearn

63

Traversing Artificial Natures

CHRISTIE SWALLOW

Parakeets are invasive. They invade popular ideas about nature. They disrupt understandings of who should belong, destroying conventional wisdoms about landscape.

Parakeets are not a naturally occurring species in the British Isles, but 'British Nature' is not something that has occurred naturally. These birds dwell within human-influenced habitats – landscapes created through millennia of human manipulation. By creating parks and gardens, forests and farmland, successive generations living on the British Isles have rendered its 'nature' artificial.

What counts as natural, or native, depends on when you start the story. Parakeets are thriving, and they're here to stay. But they've also been here, in one form another, all along; parakeet paintings have been found in Britain from as far back as the first century CE. They roost in the margins of 12th century English manuscripts. They've found refuge in London parks since the 17th century. Parakeet populations and the artificiality of British nature come together most visibly in St James's Park, the oldest royal park in London. St James's is an island of greenery bounded by royal and governmental architecture. It is also the locus of this essay. Over the course of the Residency, I have undertaken 'walkshops' through the park, following the parakeets, observing where they choose to hang out, what trees they eat fruit from and what trees they make nests in. Doing this, we can trace the artificial ecologies that otherwise go unquestioned.

Take this with you on a walk through the park. Trouble your conception of nature, question how and why we perceive some beings as 'natural' and treat others with disdain.

What follows are four stories, scattered along a route through St James's Park. Through these stories we start to see parakeets as part of what I call a 'Paracology' –

a parallel ecology of strange, artificial entanglements between humans and non-humans that has emerged within the Anthropocene.

The Mulberry Tree

Turn in from Birdcage Walk, and travel 418 years back in time to 1607 [Stop 1].

St James's Park is the most English park there is, because almost nothing in it is English. Since its creation in 1532, myriad animals, plants and trees have been introduced and nurtured in accordance with the shifting desires and ideologies of its royal landlord(s). This ancient mulberry tree is part of this history, its cultivation interwoven with the tale of the London parakeet. The tree is a remnant of a nationwide planting campaign, instigated by King James I of England (VI of Scotland).[1] Like the parakeet, these trees are native to South Asia. Mulberry leaves are eaten by silkworms, whose metamorphoses leave behind silken threads. King James dreamt of cultivating domestic silk to challenge the trade monopoly of the Silk Road peoples and nations, who stretched across Eurasia. Parakeets travelled west, along with silks and other luxuries, cementing the bird's identity as an eastern, 'Indian' bird. This was so much so that when, in 1492, Christopher Columbus spotted flocks of Hispaniolan parrots, resembling the Ring Neck parakeet, he believed he had discovered India.[2]

London's mulberry trees never successfully supported a population of silkworms. And yet, at least 800 of these trees live on across a city that also hosts thousands of parakeets.[3] Today, the birds forage for these mulberry trees' fruit and petals. They roost in adjacent London Plane Trees (a hybrid between the Oriental Plane and the American Sycamore) that adorn Birdcage Walk. The parakeets' choices of food and nesting sites reveal the artificiality of spaces we class as natural.

b

c

The Pelicans

Cross over the bridge, walk 531 Steps and 61 years forward to 1664 [Stop 2].

Who gets to belong in these parks? The question of what is natural versus what is artificial, and of which artificialities are accepted, has real and violent consequences. Parakeets are officially labelled as an 'invasive species'. As such, they can be shot, poisoned or trapped on private property without repercussion. In 2021, the UK government floated the idea of undertaking a cull of the birds – a systematic killing of ring-necked parakeets. Despite no conclusive evidence of their impact on native species, negative rhetoric around parakeets can bleed into concrete acts of violence.[4]

While parakeets are at risk of harm, other artificially introduced birds are protected. St James's Park supports a squadron of Pelicans, a population actively sustained since the Russian Ambassador gifted four birds to King Charles II in 1664.[5] Pelicans are native to neither Russia nor Britain. But for nearly 400 years the park's pelican population has been maintained through introductions of new individual birds, regular feeding and care. While the pelican population needs to be supported by human intervention, the Parakeets thrive because of the park's artificiality, navigating the city, living on introduced trees and non-native fruits.

The Pelicans stand out – as prominently 'other' or 'non-native' as their parakeet neighbours. Royal patronage protects them while parakeets are seen through a racialised lens as being 'immigrant' birds. But look closer and you'll notice so many facets of the park are 'other'. Across St James's at least 13 tree species have been introduced from overseas.[6] The artificial lake supports at least 14 different non-native waterbirds. This pelican population is itself porous, with a trespassing pelican living in Essex occasionally joining the St James's Park squadron.[7]

From Duck Island to Parakeet Island

Walk 744 steps and 203 years forward to Duck Island Cottage, 1867 [Stop 3]

Duck Island and its cottage now houses a bird sanctuary and conservation charity, but was once home to The Acclimatisation Society of the United Kingdom. Advocates for introducing species from British colonies into the heart of the Empire, the Society was small but had powerful backers. In 1867, the Society moved into the cottage, briefly becoming responsible for the park's pelicans and other waterbirds.[8] The Society sought to introduce, and 'acclimatise', species from the colonies for the purpose of sport, pleasure and utility, and even retraced the failed attempts of James I to cultivate silkworms and Mulberry trees.

In Britain, this movement failed to successfully acclimatise any introduced species, but acclimatisation societies were also networked across the Empire, reconfiguring nature(s) to resemble the flora and fauna of the 'motherland'. Their impact can be seen in the introduction of Eurasian species into Australia and the proliferation of British birds in the Americas. This deliberate effort to augment and transform landscapes flies starkly in the face of today's spirit of conservationism and rewilding; distorting and contorting 'nature' to fit a certain desired outcome.

In time, parakeets have formed their own 'societies'. Having been moved across continents they have become acclimatised to London's green spaces. Parakeets dwell within a city where there are more trees than humans, live among peoples, plants and animals from all over the globe, in natures that blend native and introduced species. They are themselves a hybrid; the result of interbreeding between feral subspecies native to Africa.[9] Where mulberry cultivation failed, and pelican populations need nurturing, the parakeet thrives, without a Society, without royal assistance, within these artificial natures.

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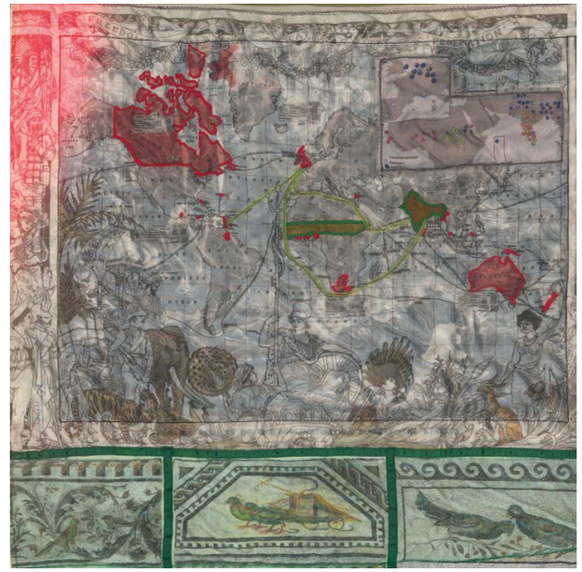

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PUNCH'S ALMANACK FOR 1863.
PROBABLE RESULTS OF THE ACCLIMATISATION SOCIETY.—THE SERPENTINE.

The Future Figs

Walk 137 steps and 75 years forward to 2100. Stop at the fig tree growing old at [Stop 4].

This fig tree is thought to be one of the oldest in the UK. While they're still comparatively rare, they're fast finding a home in Britain's changing climate.

By the end of this century, 40°C summers will be a frequent occurrence in London.[10] As temperatures rise, gardeners at the Royal Horticultural Society are retiring native British plants from their recommendations and suggesting you plant (among other things) fig trees in their place.[11] The two fig trees of St James's Park are a favourite for the parakeets.

Having long been prized and cultivated in South Asia, the fig and the parakeet are historically linked. Like the mulberry, figs and parakeets are being reunited in this artificial landscape, dwelling together within the ecologies of the Anthropocene. But the same climate breakdown affecting 'British Nature' will disproportionately affect the regions from which figs, mulberries and parakeets hail. Soon, parakeets and fig trees could well find their 'native' regions inhospitable. Given their entangled history and perilous future, what is our ethical obligation towards the individuals that find refuge here? How do we extend the care given to pelicans, or the fascination with mulberry trees, towards the whole of these artificial ecologies? How do we acclimatise ourselves to parakeets?

'In front of a backdrop of decline, where every species is reducing in numbers – how can you not celebrate seeing something thriving in the wild?'[12] – Nick Hunt, 2025

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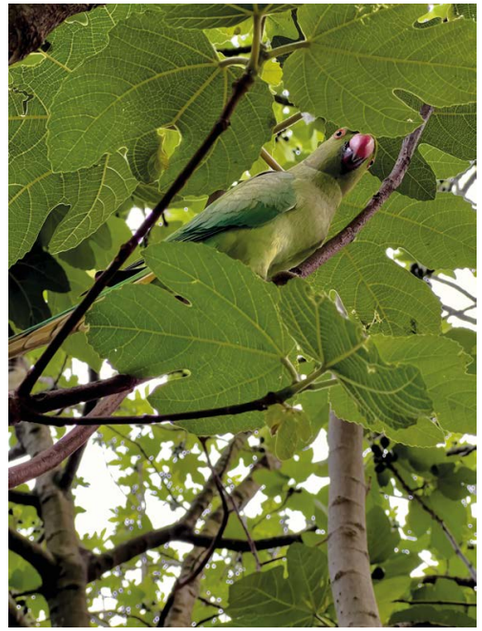

Heat Pumps: A Case Study

HANI SALIH

As we look towards different ways of living in the face of an increasingly omnipresent climate crisis lapping up against a huge cost of living crisis (driven by ongoing international energy supply problems), the quest to find a scalable, sustainable and genuinely affordable alternative to gas boilers is an important challenge. Heat pumps could provide a more efficient heating option for everyone in the long run, whilst cutting down the carbon impact of central heating compared to traditional boilers, and help us imagine a shift away from our national reliance on gas.

Heat pumps typically work by drawing heat from one location and transferring it into another, for example: by drawing heat from the air outside into the pump and transferring that heat into your home.[1] They are electrically powered, and use a heat exchange mechanism that does not involve combustion or directly release carbon dioxide into the atmosphere. As such, heat pumps are not only more efficient, but they are also far more environmentally friendly than the gas boilers which have long been the standard for heating homes across the UK. Heat pumps can also be used to cool houses in the warmer months, which boilers do not have the capacity to do.

Whilst adoption of heat pumps is currently being encouraged by the national government through strong financial incentives and grants, their journey to mainstream prevalence has hit a few speed bumps. These mainly relate to local planning and policy, and the complicated and opaque planning application process. The question of heat pumps and their deployment, therefore, sits at a particular intersection of issues relating to the climate crisis and issues relating to planning, governance and the energy sector.

In the following photo essay, you will find images captured during a week of heat pump installation work at Our Lady of Fatima Catholic church's community centre, in White City, West London. More specifically, these images show the installation of the new system and the upgrading of the radiators in the space to improve the efficiency and thermal performance of the heat pump system.

At the time of writing, despite their increased efficiency, heat pumps are generally more expensive to run than gas boilers because electricity is currently price-capped at a rate that is three times more expensive per unit (Kilowatt Hour) than gas. This is a policy issue, as the UK's energy regulation body Ofgem sets these tariffs. Some energy providers have started to offer specialist tariffs for those running heat pumps, which are a step in the right direction to addressing the issue of running costs. Those who are on these specialist rates have a lower overall running cost when compared to gas-boilers.[2]

a Our Lady of Fatima Catholic church is based in White City, West London.

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b The church is an active and longtime focal point for a community that has seen waves of change in the past 20 years due to the regeneration of the area.

c The church centres and frequently discusses the importance of considering the planet and the environment.

d Our Lady of Fatima has a community centre building that is actively used by the surrounding population, regardless of religious affiliation, and operates Warm Hubs, food banks and open social events.

'*One in ten households need to install a heat pump during the life of this Parliament to meet the UK's climate obligation... A 12-fold increase in installations over five years compared with the last five years.*'[3]

Nesta, 2024.

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‘*The median cost of installing an air source heat pump in England and Wales is £12,500.*’[4]

Boiler Upgrade Scheme Statistics, Department for Energy Security and Net Zero, February 2025.

e The installation at the community centre began with the replacement and upgrading of the existing radiators and their pipework in order to maximise the efficiency of the new heat pump system.

f From start to finish, the process took five days, with a little time needed at the end to adjust the system and iron out some minor issues with circuitry.

g In addition to the heat pumps, Our Lady of Fatima already has solar panels installed on the roof of the community centre. This will likely make a big difference in the economic efficiency of their heat pump system once it is up and running.

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h The installation was made possible via a VCSE energy grant – a funding opportunity initiated by the UK Government and delivered by Groundwork, a national organisation made up of a federation of independent charities that aim to *'support local communities and businesses to build capacity and resilience... achieve a just transition to net-zero and help nature recover in a way that reduces inequality and leads to better work and healthier, happier lives.'*[5]

i Our Lady of Fatima received their funding in October, carried out the necessary energy performance assessments, and had the heat pumps installed and running by March. This was a relatively fast process when compared to some other installations that required planning permission.

j A planning application was required in order to install the heat pump system. This process had some speed bumps, as the church's charity status created some confusion as to whether they would need to apply for planning permission, or if they could install the pumps using Permitted Development Rights.

'83% of adults surveyed felt that the UK is not investing quickly enough in alternative energy sources.'[6]

DESNZ Public Attitudes Tracker: Headline findings, Summer 2024, UK, Department for Energy Security and Net Zero, October 2024.

i

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k New piping and circuitry were installed as part of the new system. Where possible, existing piping and radiators were kept in order to minimise cost and waste.

l The heat pumps installed will provide enough heating capacity to keep the community centre warm for the foreseeable future and support its activities all year round.

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What is an Archive?

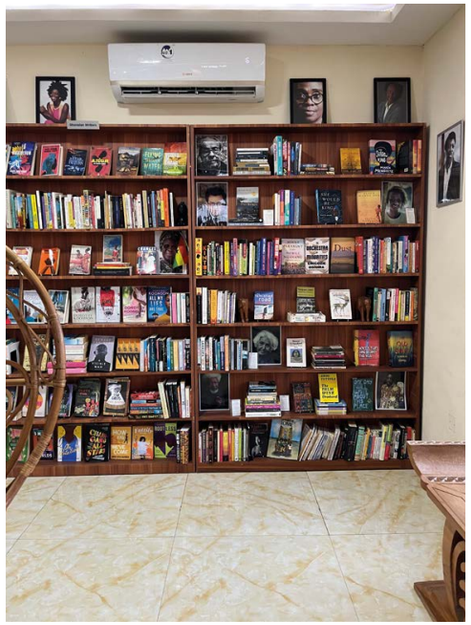
NEBA SERE

What is an archive? For me, it is piles of historical documents held in folders, dark spaces, dusty smells and institutional, intimidating, fortress-like buildings. It's inherently top-down, dominant and hierarchical even in terms of its etymology.

I took a journey through different archives, both colonial and what we might call 'decolonial' archives, as I sought to understand what an archive is and imagine what a decolonial archive could be. I was lucky to be able to explore two African archives on trips to Accra, in Ghana, and Asmara, in Eritrea, which I was able to compare with my visits to archives in London, England, where I live. The following is an attempt to describe the feelings and sentiments that came up through being in these spaces and engaging with the materials, people and histories present. What can I sense, hear, smell, feel, touch, taste?

Archive; term originates from the Greek arkheion (ἀρχεῖον), denoting the home or office of the archon – a public official tasked with preserving state documents. This etymology reveals the archive's historical connection to state power, exclusionary governance and institutional bias.[1]

Decolonial archive; term used by decosm to refer to a living, relational practice that centres the things that are often omitted or erased by institutional archives – oral histories, sensorial memory, lived experience and non-linear time.



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Library Of Africa and The African Diaspora (LOATAD) (Accra, Ghana. November 2024)

I feel lucky; a friend made an appointment and I can join them. I sit on a plastic-covered seat in a taxi, driving north from Accra. The streets are bustling – market stalls blur past; schoolchildren in yellow uniforms weave through traffic; and vendors tap on the windows.

After 40-minutes I arrive, sweaty, at the inconspicuous entrance of a yellow building. I ring and the metal gate opens into a large courtyard surrounded by a mezzanine. I am extremely excited because I've been following LOATAD from afar for years. All these books! I want to find a corner, tuck myself away, and read *everything*.

The curator greets us warmly and starts the tour, giving an overview of the collection's authors and the impact they had on Ghanaian society and the worldwide Black struggle. I recognise some titles that have had a profound impact on my life. We enter a room with first editions and original titles. I'm in a treasure box.

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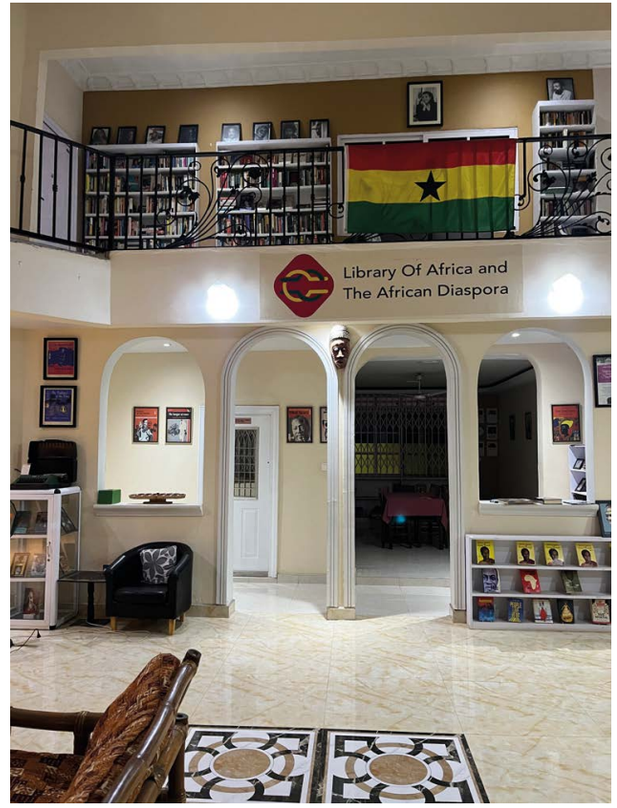

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Natural History Museum (London, UK. February 2025)

Email, proof of address, ID, visitor form, T&Cs. The botanist and curator share the museum's history as we walk up the stone stairs, past decorative terracotta bricks, columns, a huge piece of a tree, vitrines filled with dead insects and animals – some real, some fake. We move through an extension – a whitewashed building with bright lights and white walls. It feels clinical.

In a slither of a room sits the Hans Sloane Collection: books from the 17th century, beautiful mixed media works, drawings, 'specimens' presented like alien organisms and descriptive text. Hans Sloane was married to the daughter of a plantation owner. I feel uneasy. I encounter the cocoa pod *herbaria*, labelled, and bound in leather volumes. I leave the room. This involves key cards, multiple doors and lots of stairs.

I arrive at the 19th century collection. It's colder, filled with silver metal cabinets, classified by area, housing hundreds more 'specimens'. In the 'West Indies' cabinet, the sugar specimens sit in folders, all alone, stacked on top of each other, locked behind a metal door. I feel sad to see our plant ancestors stored like this, hidden away.

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You will see no pictures of this experience in honour of the host's wishes. Instead, I invite you to go and see it for yourself.

Jumbo Glass (Asmara, Eritrea. February 2025)

It's mid-afternoon, pleasantly warm with a little breeze. I walk through an industrial part of Asmara past, a bunch of school kids in bright green cotton shirts waving hello and smiling. I arrive at an industrial shed: Jumbo Glass. I wait for 30 minutes, snacking on peanuts.

The treasures pile up at the entrance. A bright red 1930s car. A 1970s glass cabinet holding books, photographs, letters, ceramics and more. The owner arrives, shaking hands with all 30 students. 'No pictures please, you are here to experience.' Inside, I am in a space without windows: it's fresh but there is a dusty smell. Suddenly, music plays from an old turntable and a video runs on a VHS. I am transported in time.

DIY shelving has been installed from floor to ceiling filled with everything you can imagine, from the small and personal (passports, notebooks, diaries), to larger collectibles (maps, books, records, film cassettes, cameras, Eritrean liquor), pieces of furniture and even cars. I feel extremely privileged and grateful to be here.

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Royal Botanic Gardens, Kew Library and Archives (London, UK. March 2025)

About 30 emails preceded this visit. Then I almost come down with a feverish bug, caught from my daughter, and worry I might not be able to make it. My partner takes half a day off so I can go at 1pm instead of the initially organised 10am. I cannot miss out on this.

The glass doors do not open automatically. It's dead silent. There are about four big tables with one person at each, flicking through books. I see Umi and wink hello. 'Please wash your hands at the sink first, then choose a table, but you must face us, please handle the books from the archive with care, foam wedge and paper overlay provided. Which item would you like to see first?'

Reading a chapter on 'The Treatment of Slaves' on sugar plantations in the 1820s makes me feel sick to my stomach.[2] It's a surreal experience. This writer seems to be pleased with himself. I feel light-headed. Book snaps shut. No time to process the words I just read before heading to the Herbarium next door to meet a chief Herbologist. 7 million dried, flattened 'specimens' await me.

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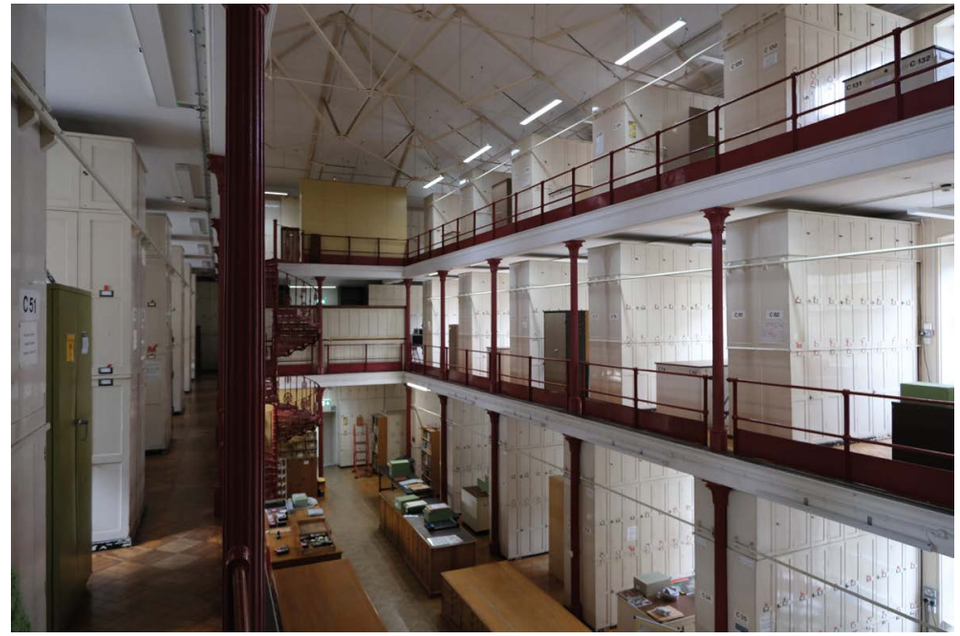

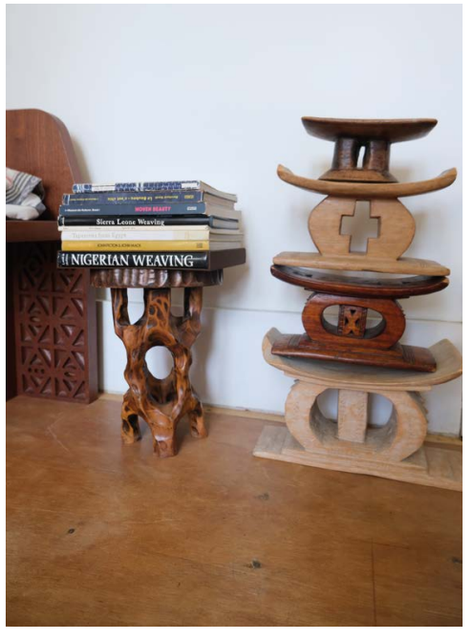

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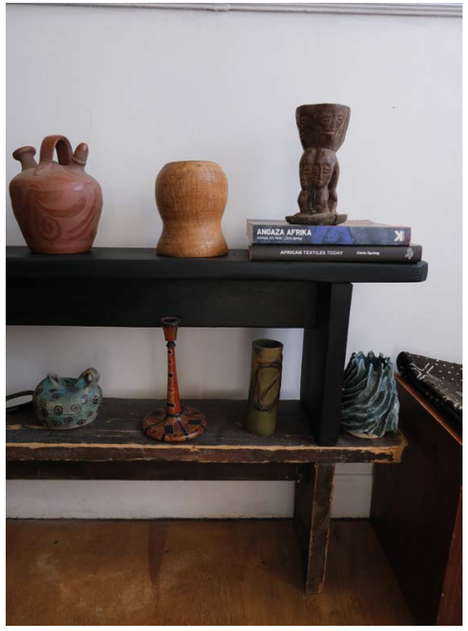

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Seedarchives (London, UK.
April 2025)

An email accommodating our visit outside of visiting hours. It's a sunny day, the warmest of the year, and a treat. I walk up to a large Victorian building that looks like an old government facility: 'The Trampery'. I ring 'Seedarchives'. With a friendly 'hello' the door opens and Christian walks out with a big smile. We hug, walk over beautiful Victorian tile mosaic floors and up a large stone staircase.

I'm greeted by incense and music, mellow and rhythmic. This feels like a second hug. On a woven rug, there is a table and low stools. One is Zimbabwean, another Ashanti, and one is in fact a headrest. The room is filled with antiques – mostly African – and books about African art, design and creativity. I sit down on an Igbo chieftain stool from Nigeria.

When Umi arrives, there are more hugs. Christian makes some coffee. This is a moment to cherish. It feels like we have made a new connection; collaboration opportunities are discussed and there is general excitement. Could this be a new friend for life? 'Come back anytime, even when I am not here.'

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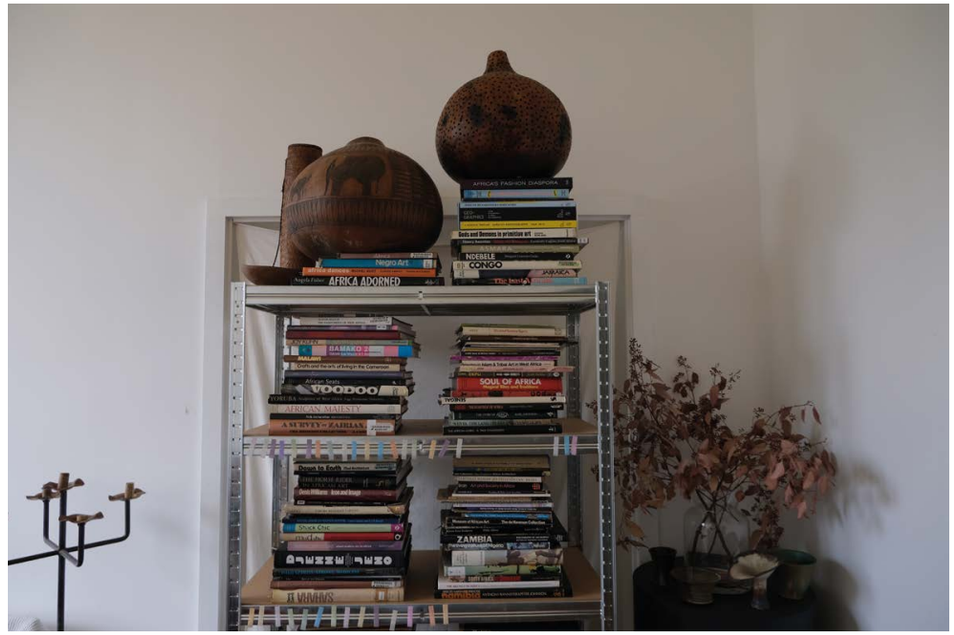


I am interested in the intersection of decolonial thought and ecological knowledge. To understand how histories of land, plants, extraction and resistance are stored, remembered and shared.

To move us towards a different understanding of the archive, Carine Zaayman uses the word 'Anarchive', describing it as 'a conceptual constellation that positions the past in relation to the present',[3] one that makes space for memory beyond the colonial record. It challenges the logic of linear time, proposing instead a non-linear temporality, grounded in 'immaterial networks of intersubjectivity' and sensory experience.[4] These archive trips are part of my own investigation into critical librarianship and collective curating as methods of holding together multiple voices, from multiple perspectives, allowing us to assemble fragmented and non-linear histories that help us better understand the present.

A decolonial archive might not look or feel like an archive at all. It offers the possibility of de-centring European narratives and offers us new ways of envisioning the future.

Materials in a Vacuum

LAURA LEBEAU

If you live in the UK, you are probably familiar with 'Henry hoover' – so familiar, in fact, that you might not even notice 'him' anymore. Since 1981, despite rising competition from low-cost alternatives produced overseas, Somerset-based company Numatic has been manufacturing Henry vacuum cleaners in their factory in South West England. Every minute, more Henrys roll off the assembly line than babies are born in the UK, and one in four British households owns one. The quirky red appliance is ubiquitous; it shows up in all kinds of spaces: private and public, humble and opulent. From an outsider's perspective, however, Henry is a fascinating design anomaly.

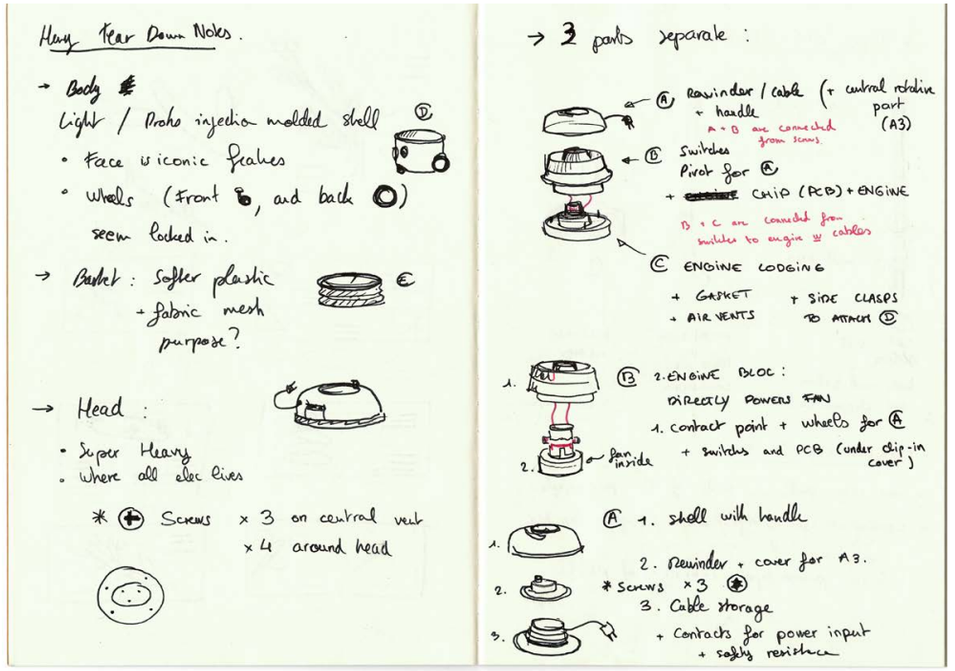
Henry is an ideal case study for rethinking everyday appliances. Practically unchanged on the outside since its launch, the design is well known for surviving multiple falls down the stairs, and also allows for almost endless repairs as new parts remain compatible with old ones. What is a Henry made of? Where do those materials come from? And how are they transformed into the friendly red cylinder we all recognise?

Part of understanding the design of home appliances involves assessing their environmental impact. This is often done through a Life Cycle Analysis (LCA), a method that calculates CO_2 emissions from raw materials, manufacturing and usage. But LCAs rarely account for other environmental and social impacts like embodied water, microplastic dispersal, the use of forever chemicals (PFAs) or exploitative labour practices. In many cases, the data required to assess these factors is hard to access or simply doesn't exist.

Rather than an LCA, this piece offers a material analysis of the Henry vacuum cleaner. This approach goes beyond emissions and looks at what it really takes to produce one of the most familiar appliances around. To do this we completely dismantled a Henry (without breaking it).

Most of its components are made of single materials, which made it possible to weigh each part individually and calculate their relative impacts by weight. The majority are made from ABS, polypropylene, TPE and stainless steel, with the majority of additional materials found in the electronics, and the motor.[1]

Even the most ordinary appliance can reveal complex networks of material sourcing, manufacturing infrastructure and environmental trade-offs. The data below is cross-referenced with values from material libraries, environmental databases and published studies to estimate broader impacts, and this analysis aims to make the hidden material realities of familiar objects – like Heny – more visible.



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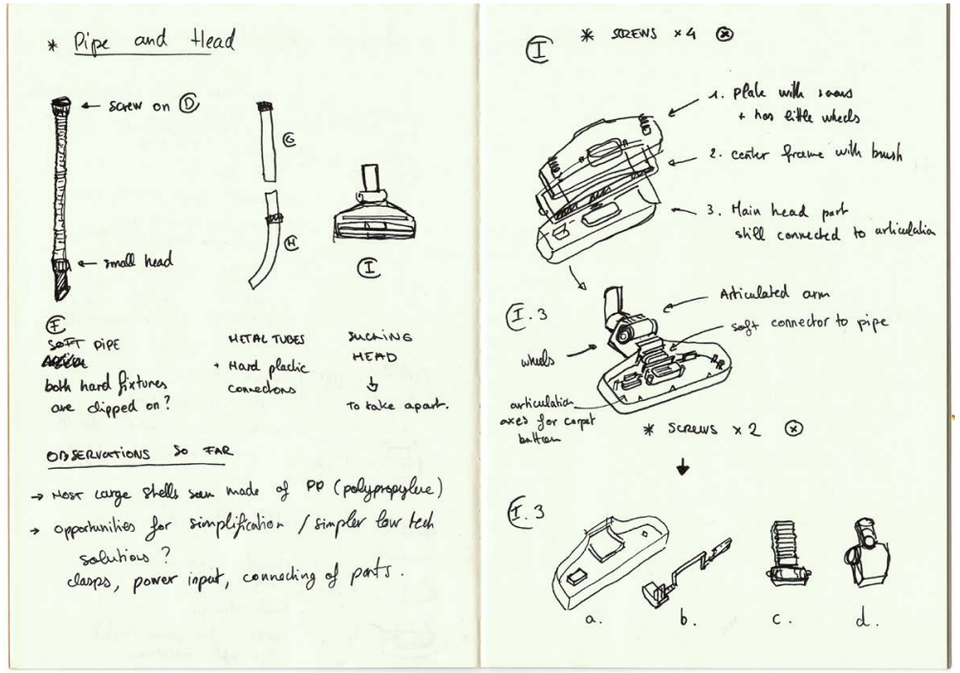

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NOTES	PART ID	DESCRIPTION	MATERIAL	WEIGHT (kg)	EMBODIED CARBON (kg)	EMBODIED ENERGY (MJ/kg)	EXTRACTION INTENSITY (kg/kg)	MICROPLASTIC POTENTIAL	PFA POTENTIAL
	A1	Hat shell	ABS	0.54	2.484	59.4	2.106	Yes	Yes
	A2	Spinning hat disc	ABS	0.24	1.104	26.4	0.936	Yes	Yes
	A3	Cable storage	Polypropylene	0.29	0.783	28.42	1.218	Yes	Yes
	A4	Cord copper	Copper	0.15	0.78	10.65	26.85	No	No
	A5	Cord insulation	PVC	0.35	0.84	28.7	1.19	Yes	Yes
	B1	Motor cover	Polypropylene	0.85	2.025	73.5	3.15	Yes	Yes
Third party supplier	B2	Motor	n/a	2	n/a	n/a	n/a	n/a	n/a
Material? Foam?	B3	Motor padding	n/a	0.012	n/a	n/a	n/a	n/a	n/a
	B4	Hatch for switches	Polypropylene	0.02	0.054	1.96	0.084	Yes	Yes
	C1	Bottom disc	Polypropylene	0.495	1.3365	48.51	2.079	Yes	Yes
	C2	Motor casing	Polypropylene	0.135	0.3645	13.23	0.567	Yes	Yes
	C3	Motor gasket	TPE	0.095	0.8075	105.45	0	Yes	Yes
	C4	Side clasps	Polypropylene	0.038	0.1026	3.724	0.1596	Yes	Yes
	D	Red body shell	Polypropylene	0.75	2.295	83.3	3.57	Yes	Yes
	D1	Red wheel cover	Polypropylene	0.03	0.081	2.94	0.126	Yes	Yes
	D2	Back wheel axis	ABS	0.022	0.1012	2.42	0.0858	Yes	Yes
PP + TPE	D3	Back wheels	Polypropylene	0.158	0.4266	15.484	0.6636	Yes	Yes
	D4	Front wheels	Polypropylene	0.09	0.243	8.82	0.378	Yes	Yes
Fabric + TPE	E	Filter basket	Polypropylene	0.17	0.459	16.66	0.714	Yes	Yes
	E1	Filter stiff disc	Polypropylene	0.08	0.216	7.84	0.336	Yes	Yes
	E2	Paper bag	Paper	0.035	0.0455	0.98	0.063	No	No
	F1	Flexible tube	TPE	0.53	4.505	588.3	0	Yes	Yes
	F2	Sucking nozzle	Polypropylene	0.052	0.1404	5.096	0.2184	Yes	Yes
	G1	Straight tube	Stainless steel	0.2	1	16.2	3.58	No	No
	G2	Angled tube	Stainless steel	0.26	1.3	21.06	4.654	No	No
	H1	Switches and PCB	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	H2	Hat connectors	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Third party supplier	I1	Sucking head top plate	Polypropylene	0.112	0.3024	10.976	0.4704	Yes	Yes
Third party supplier	I2	Sucking head middle plate	Polypropylene	0.059	0.1593	5.782	0.2478	Yes	Yes
Third party supplier	I3	Sucking head brush plate	Polypropylene	0.067	0.1809	6.566	0.2814	Yes	Yes
Third party supplier	I4	Sucking head pivot	Polypropylene	0.142	0.3834	13.916	0.5964	Yes	Yes
	I5	Sucking Head tunnel	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	S1	All screws	Stainless steel	0.035	0.175	2.835	0.6265	No	No
	S2	Sucking head springs	Stainless steel	0.0026	0.013	0.2106	0.04654	No	No
SUM				**8.0096**	**22.7078**	**1209.3296**	**54.99744**		

NAME	EMBODIED CARBON /KG	EMBODIED ENERGY/KG (MJ)	EXTRACTION INTENSITY/KG	MICROPLASTIC POTENTIAL	PFA RELEASE POTENTIAL
Polypropylene	2.7	98	4.2	Yes	Yes
ABS	4.6	110	3.9	Yes	Yes
TPE	8.5	1110	n/a	Yes	Yes
Copper	5.2	71	179	No	No
Stainless steel	5	81	17.9	No	No
Paper	1.3	28	1.8	No	No
PVC	2.4	82	3.4	Yes	Yes

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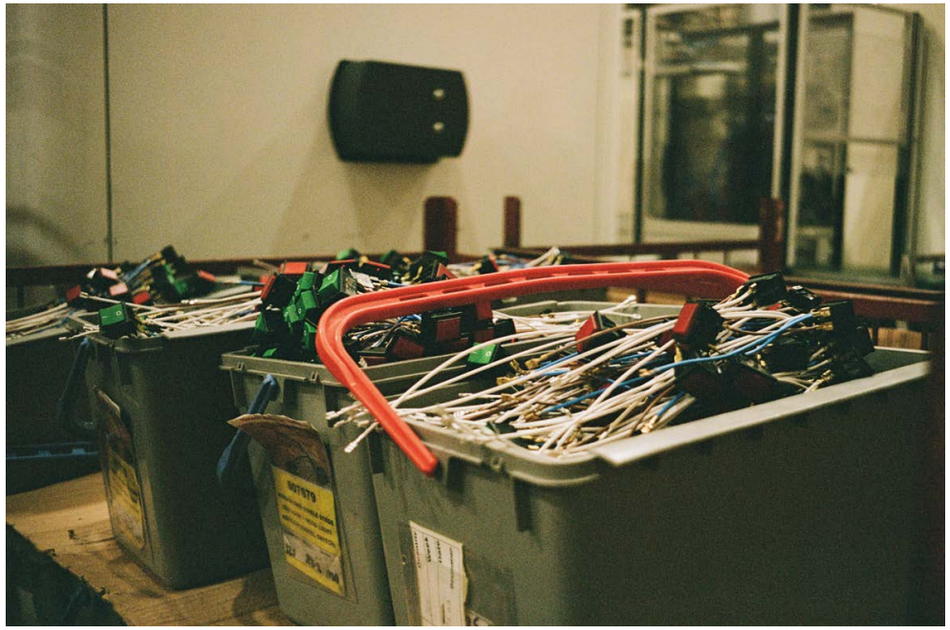

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SILVERING ON REELERS
SHORT MOULDING
MISSING CASTERS
HOSE NECK ISSUE
CONTAMINATION

i

REFERENCES & IMAGES

CHRISTIE SWALLOW

1 Laurence, J., (1727). *A New System of Agriculture. London*: J. Hyde and E. Dobson.
2 Boehrer, B. T., (2004). *Parrot Culture: Our 2,500-Year-Long Fascination with the World's Most Talkative Bird*. Philadelphia: University of Pennsylvania Press.
3 Foundation, T. C., (n.d.). 'Live Map of Mulberry Trees, Morus Londinium'. Available at: https://www.moruslondinium.org/osmmap/ (Accessed: 22 February 2025).
4 Peck, H. L., (2013). *Investigating Ecological Impacts of the Non-native Population of Rose-ringed Parakeets* (Psittacula krameri) in the UK (Doctoral dissertation, Imperial College London).
5 St James's Park, (n.d.). 'The Royal Parks'. Available at: https://www.royalparks.org.uk/visit/parks/st-jamess-park#:~:text=Did%20you%20know%20that%20pelicans,visitors%20from%20around%20the%20world (Accessed: 22 February 2025).
6 Packman, G., (2020). 'A History of St James's Park Through Trees' [Talk, October 2020]. Available at: https://thethorneyisland-society.org.uk/ttis/index.php/events/189-a-a-history-of-st-james-s-park-through-trees-talk-by-greg-packman (Accessed: 22 February 2025).
7 Hayes, A., (2025). 'Walkalong interviews with Christie Swallow' [Interview, 21 February 2025].
8 Knox, T. (n.d.). 'An Historical Account of the Bird Keeper's Lodge in St James's Park, Duck Island Cottage'. Available at: https://www.londongardenstrust.org/features/dicframe.htm (Accessed: 22 February 2025).
9 Jackson, H., et al., (2015). 'Ancestral origins and invasion pathways in a globally invasive bird correlate with climate and influences from bird trade', *Molecular Ecology*, 24(16), pp. 4269–85. doi:10.1111/mec.13307.
10 Gill, T. and Birch, T., (2024). 'Climate Change: What Will the UK Look Like in 2100?, The Eco Experts'. Available at: https://www.theecoexperts.co.uk/news/climate-change-uk-2100 (Accessed: 22 February 2025).
11 Horton, H., (2025). 'Fig and almond trees thriving in UK thanks to fewer frosts, RHS says', *The Guardian*, 2 January. Available at: https://www.theguardian.com/environment/2025/jan/02/fig-almond-trees-thriving-uk-thanks-to-fewer-frosts-rhs (Accessed: 22 February 2025).
12 Hunt, N., (2025). 'Walkalong interviews with Christie Swallow' [Interview, 7 February 2025].

a Paraquilt. Photograph by Christie Swallow.
b Mulberry Tree with parakeets in St James's Park, London. Photograph by Christie Swallow.
c Mulberry Tree with structural support in St James's Park, London. Photograph by Christie Swallow.
d 'Paracologist' with parakeet in St James's Park, London. Photograph by Christie Swallow.
e Detail (1) from Paraquilt. Scan by Christie Swallow.
f Detail (2) from Paraquilt. Scan by Christie Swallow.
g Paraquilt on 'walkshop' in St James's Park, London. Photograph by Christie Swallow.
h Parakeet in fig tree in St James's Park, London. Photograph by Christie Swallow.

HANI SALIH

1 Salix Finance, (2021). 'What are heat pumps and how do they work?' Available at: https://www.salixfinance.co.uk/news/what-are-heat-pumps-and-how-do-they-work (Accessed: 9 May 2025).
2 Karen Lawrence, (2024). 'Heat pumps vs boilers: the key things you need to know'. *Which?*. Available at: https://www.which.co.uk/reviews/ground-and-air-source-heat-pumps/article/heat-pumps-vs-boilers-aGFzZ6o6YtXw (Accessed: 9 May 2025).
3 NESTA, (2024). 'One in ten households need to install a heat pump during life of this Parliament to meet UK's climate obligations'. Available at: https://www.nesta.org.uk/press-release/one-in-ten-households-need-to-install-a-heat-pump-during-life-of-this-parliament-to-meet-uks-climate-obligations/ (Accessed: 9 May 2025).
4 Department for Energy Security and Net Zero, (2025). 'Boiler Upgrade Scheme statistics: February 2025'. GOV.UK. Available at: https://www.gov.uk/government/statistics/boiler-upgrade-scheme-statistics-february-2025 (Accessed: 9 May 2025).
5 Groundwork, (n.d.). 'About Groundwork'. Available at: https://www.groundwork.org.uk/about-groundwork/ (Accessed: 9 May 2025).
6 Department for Energy Security and Net Zero, (2024). 'DESNZ Public Attitudes Tracker: Headline findings, Summer 2024, UK'. GOV.UK. Available at: https://www.gov.uk/government/statistics/desnz-public-attitudes-tracker-summer-2024/desnz-public-attitudes-tracker-headline-findings-summer-2024-uk (Accessed: 9 May 2025).

a Our Lady of Fatima Catholic church front, London. Photograph by Hani Salih.
b Our Lady of Fatima Catholic church garden, London. Photograph by Hani Salih.
c Our Lady of Fatima Catholic church hall, London. Photograph by Hani Salih.
d Community Centre Green Mural at Our Lady of Fatima Catholic church c, London. Photograph by Hani Salih.
e Old radiators removed from Our Lady of Fatima Catholic church, London (5). Photograph by Hani Salih.
f Delivery of new heat pumps to Our Lady of Fatima Catholic church, London (6). Photograph by Hani Salih.
g New heat pumps delivered to Our Lady of Fatima Catholic church, London (7). Photograph by Hani Salih.
h Drilling holes for new radiators at Our Lady of Fatima Catholic church, London (8). Photograph by Hani Salih.
i Mounting of new radiators at Our Lady of Fatima Catholic church, London (9). Photograph by Hani Salih.
j Toolbox for heat pump installation at Our Lady of Fatima Catholic church, London (10). Photograph by Hani Salih.
k Pipe cutting for heat pump installation at Our Lady of Fatima Catholic church, London (11). Photograph by Hani Salih.
l Final location of heat pumps at Our Lady of Fatima Catholic church, London (12). Photograph by Hani Salih.

NEBA SERE

1 Gilroy, P., (1993). *The Black Atlantic: Modernity and Double Consciousness*. London: Verso.

2 Roughley, T., (1823) *The Jamaica Planter's Guide: Or, A System for Planting and Managing a Sugar Estate or Other Plantations in That Island and Throughout the British West Indies Generally*, p.77. London: Longman, Hurst, Rees, Orme, Brown, and Green. Reprinted by Cambridge University Press. Available at: https://www.cambridge.org/core/books/jamaica-planters-guide/4AD119BE-1420889FF280E093DC41AABC (Accessed: 8 May 2025).

3 ICI Berlin Press, (n.d.). Anarchival Practices: *The Clanwilliam Arts Project as Re-imagining Custodianship of the Past*. Available at: https://press.ici-berlin.org/catalogue/doi/10.37050/wpc-ca-01 (Accessed: 15 April 2025).

4 Zaayman, C., (2023). *Anarchival Practices: The Clanwilliam Arts Project as Re-imagining Custodianship of the Past*, pp. 14–15. Berlin: ICI Berlin Press. Available at: https://press.ici-berlin.org/catalogue/doi/10.37050/wpc-ca-01~Anarchival_Practices.pdf (Accessed: 15 April 2025).

a, b, c LOATAD – Library of Africa and the African Diaspora, Accra, Ghana (1). Photograph by Neba Sere.

d, e, f Natural History Museum, London, UK (1). Photograph by Neba Sere.

g, h, i Royal Botanic Gardens, Kew – Library and Archives, London, UK (1). Photograph by Neba Sere.

j,k, l Seedarchives, London, UK (1). Photograph by Neba Sere.

LAURA LEBEAU

a, b Henry hoover parts. Drawings by Laura Lebeau.

b – i Henry hoover production at Numatic factory, Somerset. Photograph by Laura Lebeau.

This section explores how storytelling and ‘making something visible’ can be used as a tool for moving forward and reimagining our future. From understanding why the UK’s current planning system is failing, to exploring how music can be composed for non-human audiences, each resident investigates how we might consider alternative approaches for solving multi-faceted, multiplying problems and move towards a sustainable future(s).

110

Multiple Futures

111

Planning Amid a Storm

Understanding the wider context of planning and decision making

HANI SALIH

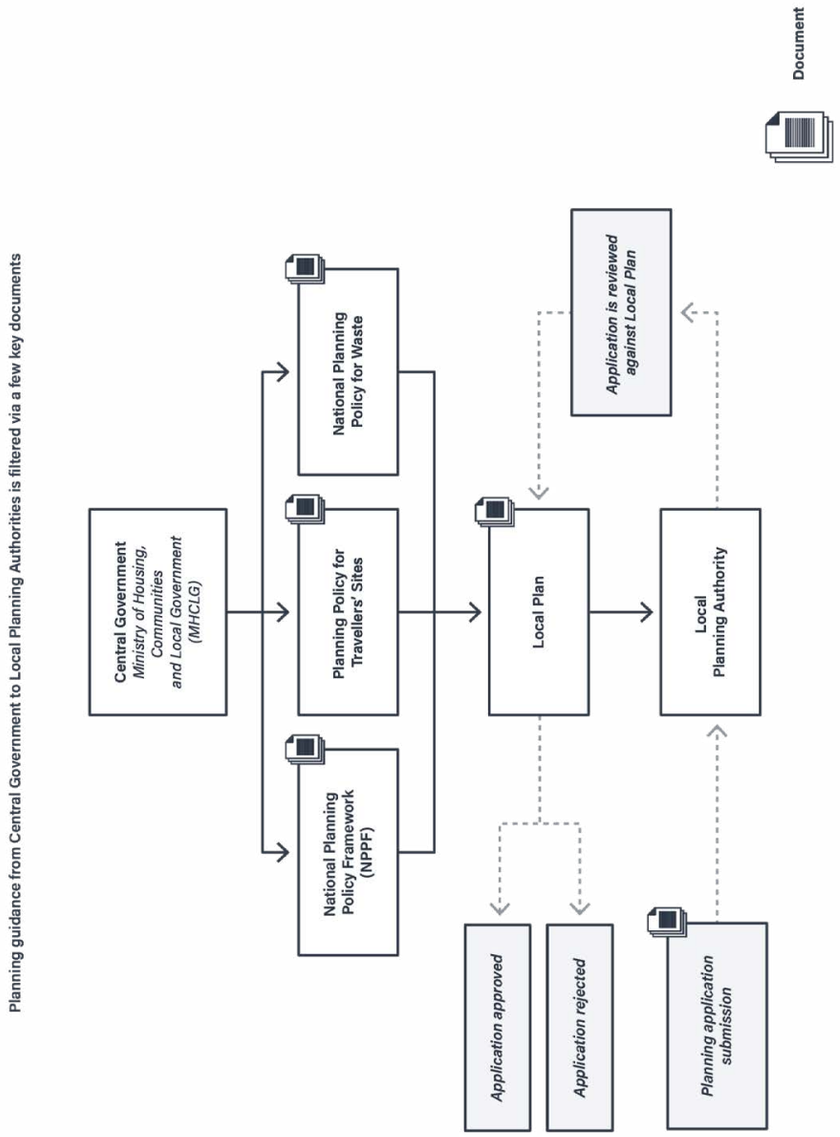
The National Planning Policy Framework (NPPF) is one of the main tools that the UK government uses to determine the kinds of buildings that are built, and their locations. It is a document, written and published by the Ministry for Housing Communities and Local Government (MHCLG), that local authorities use to inform their priorities and guide local plans. More generally, it sets out the government's economic, social and environmental planning policies in England.

Documents like the NPPF are an important point for intervention, as they often have an outsized impact on the bigger picture. Scientist and systems analyst Donella Meadows calls such documents 'leverage points'.[1]

To learn more about these leverage points, I spoke with people involved in every stage of the decision-making mechanism – from local authorities to national government. What follows is my conversation with Warren Lever – an urban designer, planner and heritage professional with more than 20 years' experience working with and for local authorities in England. By exploring why the current system is failing, we begin to consider alternative approaches for designing our future streets, neighbourhoods and towns.

HANI SALIH: I wanted to speak to you to get a local authority perspective, as that is where the decisions about planning from a national scale touch the ground.

WARREN LEVER: Well, there's a debate about how much local authorities get involved with planning matters, from extensions at the back of buildings to changes to front porches. Over the last 15–20 years, those in charge of the National Planning Policy



Framework (NPPF) have slowly added more into the 'Permitted Development Rights' bucket and less into the bucket for formal planning permission. There are exceptions, mainly relating to heritage and environmental constraints, and the government is trying to strike a balance. But this is where the complexity begins.

Permitted Development Rights, more formally known as General Permitted Development, came into effect in 2015.[2] The legislation gave householders the right to make changes to their homes, i.e. extensions or adjustments, without having to go through the formal planning application process. The guidelines concerned with what can be done are set out by the Ministry of Housing Communities and Local Government (MHCLG).[3]

The complexity is exacerbated by an endless stream of changes to the NPPF; we get used to one version and 12 months later, it looks completely different. In fact, everything in the NPPF has been fiddled with five times over but the revisions aren't meaningful or transformative. It lacks a bold vision, and there is an issue with clarity. To address this, the government publishes planning policy guidance to sit alongside the NPPF. This singular document has replaced PPGs – Planning Policy Guidance documents, of which there used to be twenty-odd, each focused on different subjects. This change, combined with reduced resources and capacity in local authorities, means that proper process, with the right level of oversight and guidance, is often overlooked. It just becomes a game of pushing planning applications through.

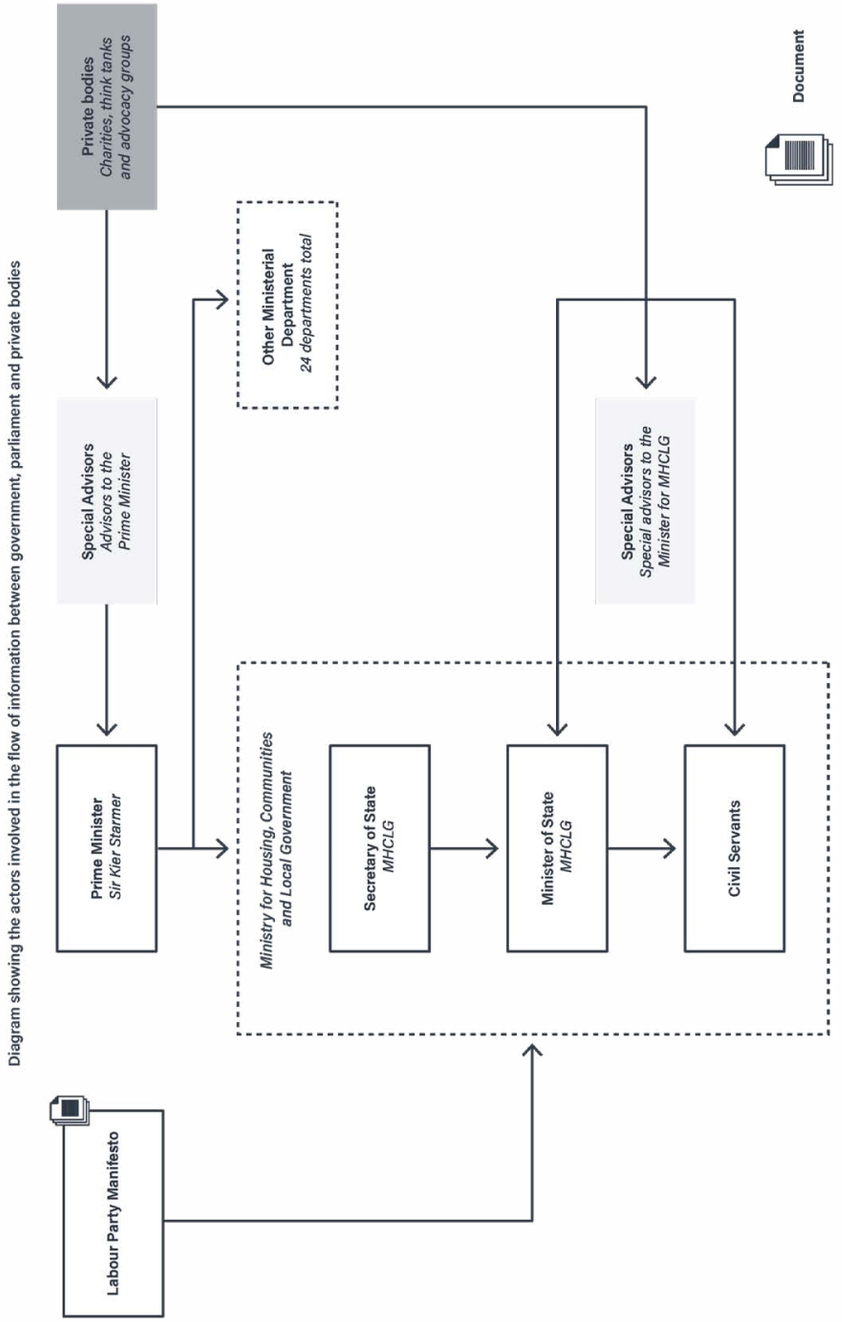
HS What was the reason for changing from a thorough system to this more general one?

WL It was part of the austerity drive. The NPPF came in around 2012 off the back of some streamlining under the Labour government, and during David Cameron's tenure as Prime Minister. It was part of the mindset that fussy guidance wasn't needed; one high-level document would do the job. In simplifying the process, however, gaps were created elsewhere. And because it was all done at pace, supplementary guidance hasn't been able to keep up.

The MHCLG was previously known as the Department for Levelling Up Housing and Communities (DLUHC) under the previous Conservative government (2021-2024).

HS It sounds like it's a matter of stretched planning departments. Is the pinch point in the resources available to planners or the constant adjustments to the NPPF?

WL The Ministry for Housing, Communities and Local Government (MHCLG) issue a draft of the NPPF



for consultation, to which all the relevant stakeholders (lawyers, developers, local authorities) respond. Revisions are then made, informed by the current government's priorities, but lots of room is left for interpretation. That leads to appeals – a process which is quite frustrating for local authorities, as it means nothing gets a chance to bed in or be reviewed.

WL The other issue is the churn of local planning officers. Month on month, we lose them to either the private sector or retirement. As a result, you end up with gaps in the system which can take six to eight months to fill. You also lose local knowledge and understanding.

HS Every election cycle, there seems to be a call to overhaul the planning system. Do you think that's warranted, or is it a matter of providing local authorities with more resources?

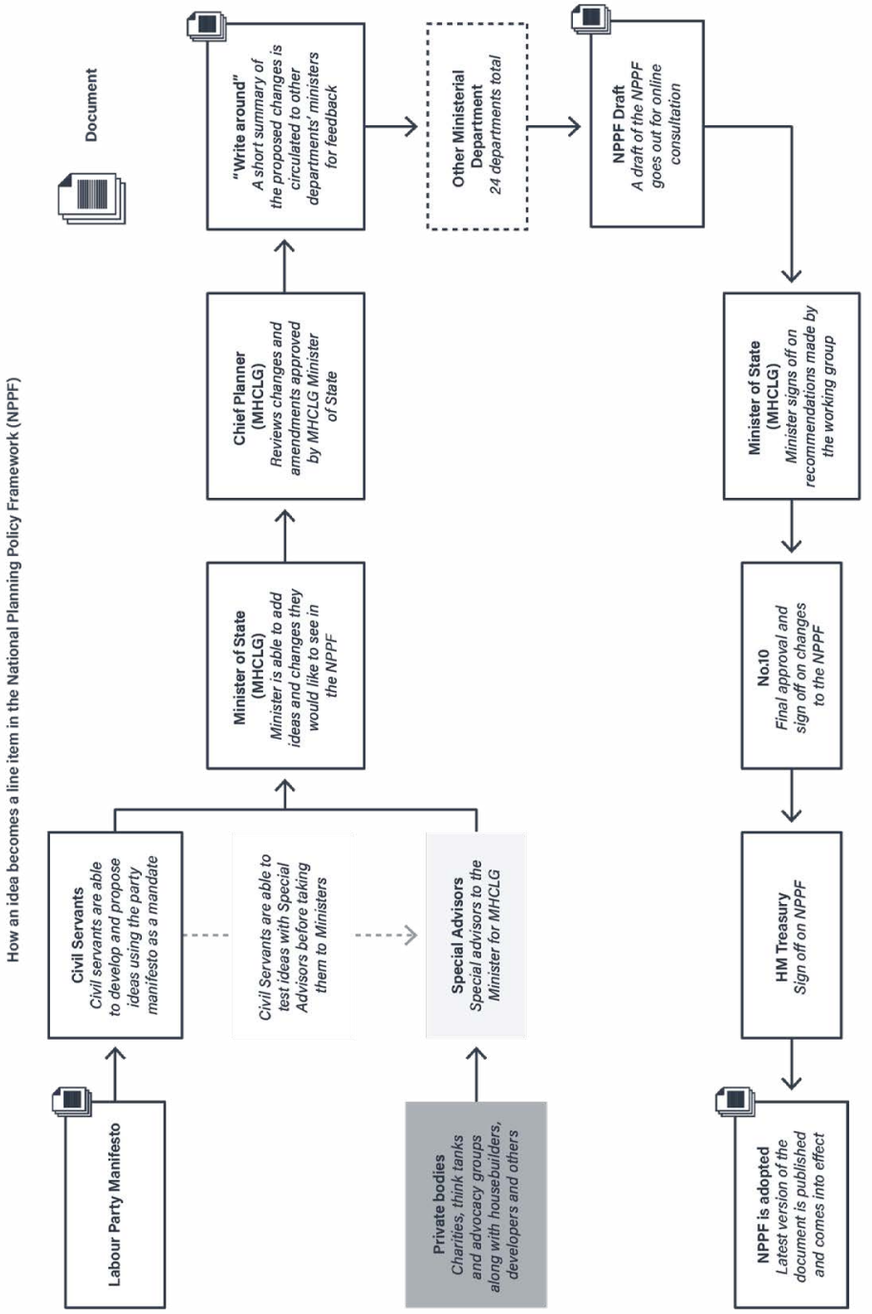
WL Planning authorities are stretched, pay is poor and there is political opposition to their allocation of sites. But when target numbers of houses haven't been delivered, planners get the blame. That's quite demoralising; planners want to drive innovation and shape new places. Actually, we don't have that much control – we allocate sites, but we can't force a developer to build.

We've also seen a real decline in the public realm. Local authorities used to clean and weed streets regularly but they don't do much of that anymore. Local communities were meant to pick up the slack, but the infrastructure and funding was never provided. In fact, in some places, it was stripped out completely; funding for libraries, children's centres and other public works has been aggressively reduced.

There's a big issue around 'siloed' approaches in the built environment. Biodiversity Net Gain (BNG), for example, has been siloed away from the overall project of providing cohesive, climate-resilient, people-friendly green infrastructure. As long as a small pocket of green space is provided, the BNG box can be ticked and the green-light is given to lay down tarmac everywhere else.

Siloing often refers to instances where organisations work in tandem, or in parallel (separated by their specialisations), but don't communicate, stopping the exchange of key information across these streams.

Biodiversity Net Gain (BNG) is a measure introduced in late 2023 to ensure that natural habitats are created and improved as part of any development. As the name suggests, the aim is for developments to provide an overall net gain in biodiversity in sites of construction.[4]



HS How can design help us to challenge these siloed approaches? Is there another way forward for the planning system?

WL Recently, I've been looking to Regenerative Design for inspiration. It's focused on a whole system approach that emphasises the link between planetary habitats and human health – a methodology with the potential to inform the redesign and regeneration of our built environment. To tackle issues with the planning system, I think we need to adopt some of these principles and start thinking in a much broader and more cohesive way.

Regenerative design is a process that emphasises the importance of co-existence between human and natural systems over the long term. With the aim of living within planetary means, but also delivering a net positive outcome for people and planet.

Reimagining Manufacturing

Conversations with makers shaping new futures

LAURA LEBEAU

Thomas Lomée from OpenStructures

LL Can you introduce OpenStructures and share why you set it up as an independent project?

TL The initial ambition was – and still is – to rethink how we design objects. Most products are designed with retail as the primary focus. Once it's sold, everyone steps away. We asked ourselves: how can we design with the entire lifecycle in mind? From assembly and repair to disassembly, reuse and recycling? The answer led us to modular design, which creates flexible, resilient objects that can evolve.

We then asked: could we upgrade modularity to fit a networked world? Could we build a system that's not controlled by a single company but developed collaboratively by a community of designers, artists and makers? Inspired by the success of Wikipedia, we envisioned a shared system, open for contributions but with quality control.

We started by developing a framework grid, drafting design principles and inviting designers to experiment with them. Over time, OpenStructures has become a continuous exploration of modularity and openness – a large-scale experiment in learning by doing.

LL Your studio has an innovative approach to materials and parts. Can you explain your process and why it is important?

a

b

TL At the core of our approach is the OpenStructures grid, based on 4 × 4 cm units, which informs everything we do. We work with corresponding diameters like 40 mm, 20 mm, 10 mm, and 5 mm, using matching screws and components, such as M5 and M10 screws.

The first step was identifying existing components that fit these dimensions. Over time, we've built a database of these parts. We document, photograph and upload them online, ensuring the system grows organically. Rather than reinventing the wheel, we build on existing standards; the 4 × 4 grid is already common. By leveraging widely used components, proven to be functional and effective, we integrate seamlessly with existing manufacturers, making our system practical and accessible.

Ideally, all raw materials fit some of these requirements: biodegradable, recyclable, locally sourced and cradle-to-cradle certified. In practice, that's often difficult or expensive, so we work with what's available. But modular design allows us flexibility; today's plastic part can be swapped for a bioplastic tomorrow, without redesigning the whole object. We design with the assumption that better materials will be available in the future. The key to making this work is ensuring the system allows reuse to happen. Context and time matter; how long will the object last? When will it need updating?

LL What are the benefits and challenges of a radically sustainable approach to designing?

TL The biggest challenge is restriction. As designers, we're used to choosing any material, size or form we want. Initially, we struggled with, for example, sticking to M5 screws instead of M6 or M8. It seems like a small difference, but when designing for a system, those small details matter. If you mix incompatible parts, the system falls apart. Through trial and error, we realised that working within restrictions creates long-term benefits: consistency, modularity and flexibility. The hard part is convincing others – especially fellow designers – that limiting creative freedom in this way is worth it. But restrictions, when applied thoughtfully, can drive creative exploration and innovation. And when you see the system in action,

you understand the logic. As people begin to see the value of adaptable, flexible design, it could change our understanding of beauty and value.

LL How do you think design and manufacturing will change in their relationship to material extraction over the next ten years, and how does OpenStructures contribute to those futures?

TL The driving force behind change will probably be market demand. If consumers prioritise circular lifecycles, full recycling and sustainable practices, industries and policies will adapt to meet those demands. Designers play a crucial role in shifting public perception. Our job at OpenStructures is to create prototypes of circular products – tangible, appealing and clearly beneficial – so people see that they can be practical and attractive.

Design is about more than new objects; it's about crafting the narrative around the entire life cycle of that product, including its future adaptations, repairs, reuse and recycling. This phase – where the product is repurposed or recycled – is an area of design that remains largely untapped but is crucial for sustainability.

Tom James (founder) and Mariam Eish (Assistant Producer) from Absolute Beginners

LL Can you introduce Absolute Beginners and share why you set it up?

TJ Absolute Beginners is a new kind of factory, where local young people are paid to learn how to make everyday products in radically sustainable ways. We run paid workshop programmes where young people learn how to make a single product from scratch, using local waste materials, simple tools, and off-grid or low-carbon power. They gain skills and experience they might need for jobs in the creative or green economy. It's also about starting a conversation on what we consume, how we produce and how we could build an economy that doesn't cook the world.

LL Your studio has a radical approach to materials use. Can you explain why it is important?

TJ We don't know who makes our stuff or how – it just appears at the big Sainsbury's or Primark. There's a total disconnect between us and the things we use. And we know this economy – based on virgin materials, global shipping and single-use products – is so harmful to the planet, to people. I've got two kids, and I've worked on climate change for ten years and nothing has changed in that time! We can't carry on like this.

LL What are the benefits of a local, radically sustainable approach to designing, and the challenges that come with it?

TJ For me, a huge benefit is that the material is free. London is overflowing with stuff – there are 9 million people here. Another project – called Metronome – makes steel drums out of scrap metal. It's said that said we live in a 'wanton' culture – meaning shameless. That stuck with me. Also, I love reusing stuff. Taking street waste and turning it into something valuable is powerful.

ME One of the benefits for me is doing stuff by hand. So much of our lives is behind screens – phones, laptops, uni work... This is real. You're physically present. At the beginning, I wasn't sure I could do it, but now I'm so much more confident!

LL What about challenges?

TJ Our 'Low Speed Plates' project, using clay being dug out of the site of the new HS2 station was really hard. People make pottery in Stoke-on-Trent because the clay there is perfect. We naively thought we could just make it work with any old clay in London, and even though we worked with an amazing ceramicist called Phil Root, we still came up against a lot of challenges because the material was so hard to work with. And the labor – using reclaimed materials – takes way more effort. Processing them is intense. We can't compete with mass production, so it must be a different economy, a different idea of value.

ME Sometimes we learn the hard way that our idea isn't realistic. For our plates project, we wanted to do it all off-grid initially. But it would've taken years to make 120 plates and bowls by hand. We had to compromise and use electric kilns from local studios instead. That's okay.

TJ Exactly. Our early projects were 'pure' – off-grid, handmade – but not usable. Now we're more pragmatic. If you push too hard on purity, the results don't work, and no one enjoys the process.

LL How do you think design and manufacturing will change in their relationship to material extraction over the next ten years, and how does Absolute Beginners contribute to those futures?

TJ There are two answers to this question. The first is hopeful: in ten years this becomes normal. Maybe a carbon tax encourages reuse, big changes come from policy. In that case, we're driven out of business because Amazon does it better – but the world is saved.

The second version: nothing changes, we shoot past 1.5° warming, and everything gets harder. Cheap stuff from Asia stops coming abundantly, because the world is in chaos and it can't get here. Then we'll be constrained to make things ourselves again. Either way, this is the future. It's not enough to make slightly greener versions of things. We need more systems-level thinking.

ME One person doing things differently is not enough. You need a whole community doing it together and it needs support so they aren't taken down by unfair competition. Every project makes me ask: what more am I capable of? What to take on next?

c

d

Pandemonium

Creating Music for Birds

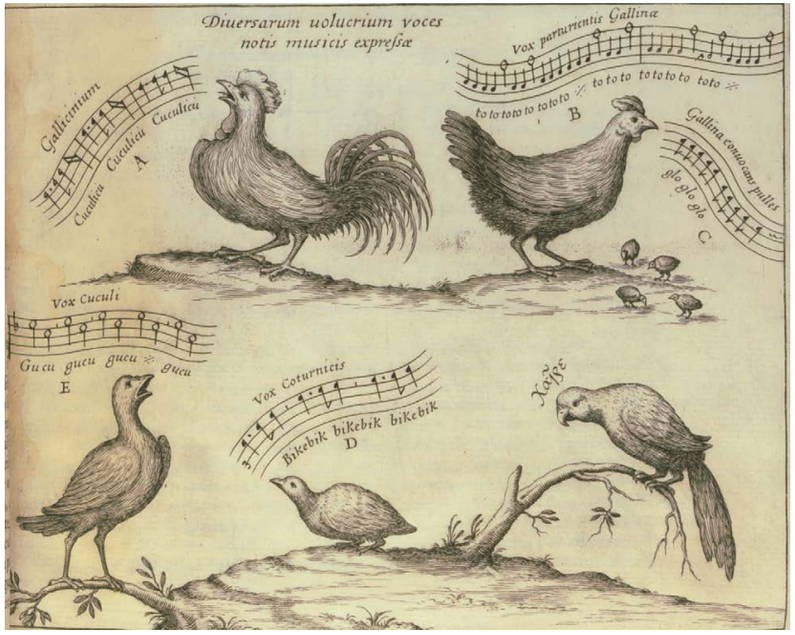
CHRISTIE SWALLOW & JESSICA ROCH

Parakeets are stakeholders, not test subjects, of urban ecology. In a project performed through dialogue, finding meaningful ways to have an exchange with parakeets was essential. They needed to be part of the conversation. Parakeets have lived alongside humans for millennia, and can mimic our languages, but communicating through human speech presupposes that cognition, or intelligence, must fit an anthropomorphic mould. Instead, I wanted to explore how we might design more-than-human ways of convening with our fine feathered friends, creating methods of communicating that bend human creativity to the parakeets' needs, rather than forcing the parakeets to 'speak human'.

A group of parakeets is known as a 'pandemonium', a word which can mean uproar, excitement or chaos. Parakeets convening might be considered (by humans) disorderly; a clammering of rapid, high pitched calls. But, to fellow parakeets, an intricate chorus of complex speech is unfurling. Collaborating with musician and composer Jessica Roch, I set out to find ways to enter the pandemonium, to converse with parakeets beyond mimicry and towards using music as a way to create a shared forum.

Working from new and archival audio recordings of parakeets, Jessica notated different elements of the parakeet's repertoire, transcribing the birdsong in multiple ways. Slowed down, the calls often revealed hidden slides and rhythmic detail. From her notation, Jessica created *Pandemonium: Music for Parakeets* – a two-part composition using the language of London's parakeets as source material. Composing for a non-human audience posed a unique challenge, but within their apparently chaotic cacophony, the birds revealed a compelling logic all their own.

In *Pandemonium*, flute, violin and soprano perform the parakeet 'language', while various synthesisers evoke the urban soundscapes in which the birds have learned to thrive. This visual essay outlines the historical context of parakeet and interspecies communication, before illustrating our collaboration while creating *Pandemonium*.



a

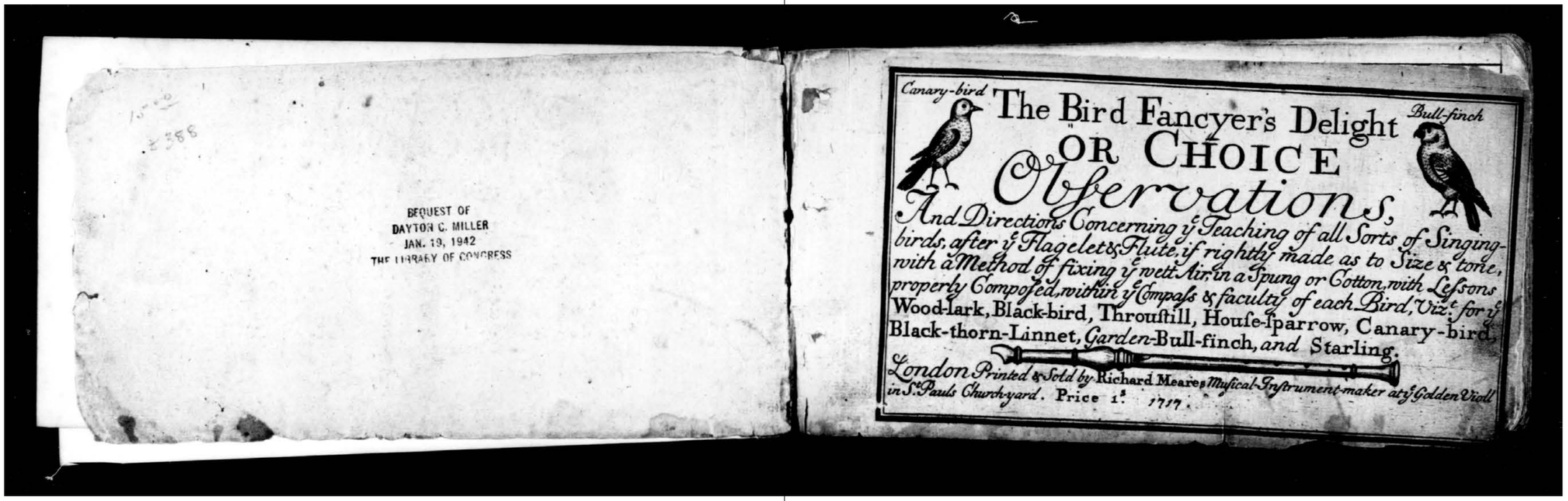
c

a Illustration from Athanasius Kircher's *Musurgia Universalis* (1650). This encyclopedia on music included the songs of various birds, which Kircher used to emphasise the 'naturality' of music. A parakeet is depicted in the bottom right corner, saying 'χαῖρε', meaning 'hello' (or 'hail') in ancient Greek, rather than singing notes.[1]

b Frontispiece of *The Bird Fancyer's Delight* (1717). This sheet music was sold to be played to caged birds (later editions included parrots) so as to forcibly alter their birdsong – players were instructed to cover the birds' cages and repeatedly play the sheet music to their captive kin. As with *Musurgia Universalis, The Bird Fancyer's Delight* is intended to make birds perform on human terms.[2]

c *His Master's Voice* (Francis Barraud, 1899) depicts Nipper, a terrier, peering into a gramophone. Most famously used as a logo for the HMV record label, the painting could be seen to depict an attempt at interspecies communication at the inception of a new technology.

b



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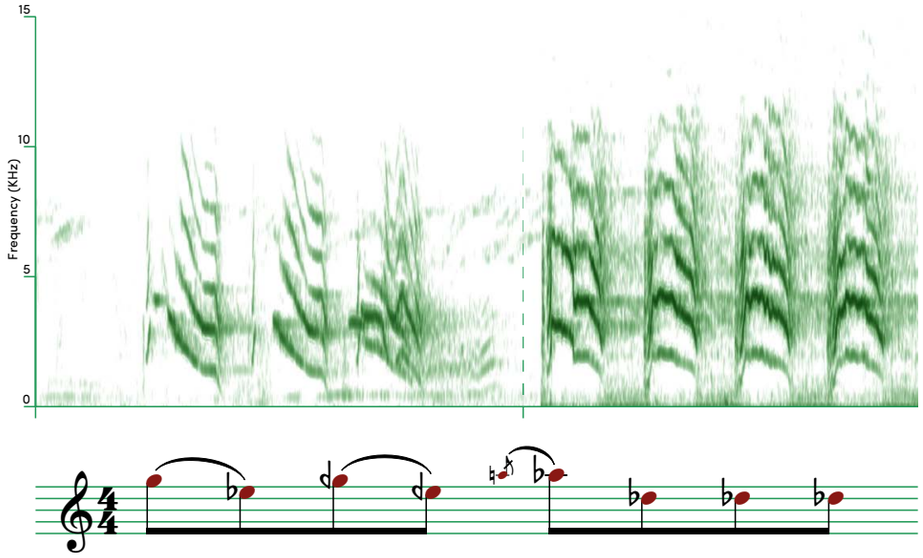
d Beatrice Harrison performing to wild nightingales in her garden alongside her pet dog and aviaries containing parrots, 1924. Harrison's cello performances were the first outside broadcasts made by the British Broadcasting Corporation (BBC).[3]

e Front and back side of the Voyager Golden Record. An edition of this record was attached to both of Nasa's Voyager spacecrafts, launched in 1977. The record contained recordings of sounds from around the earth, photos transcoded as analogue signals, and was addressed 'TO THE MAKERS OF MUSIC – ALL WORLDS, ALL TIME'.[4]

f Parakeet chicks peeking out from a cavity nest. Parakeets learn to communicate and make music by listening to their surroundings. Because the parakeets that live in London are the offspring of escapee captive birds, and roost in communities, their language has developed unique structures over time, evolving both in response to their community's growth but also incorporating fragments of learned human language.[5]



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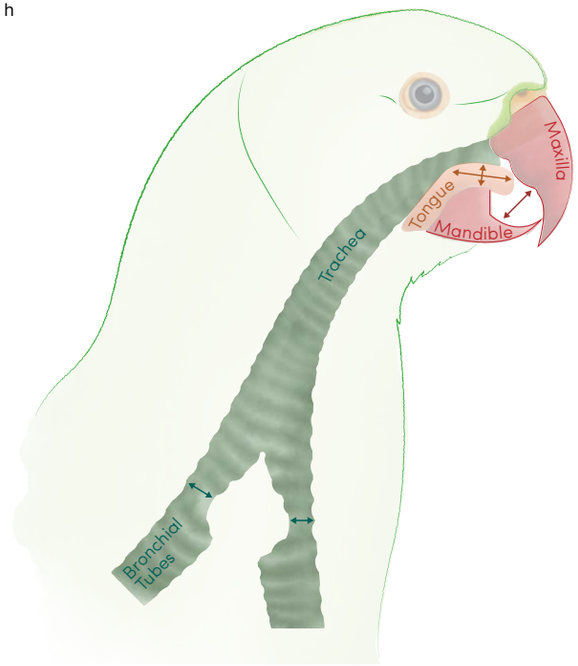

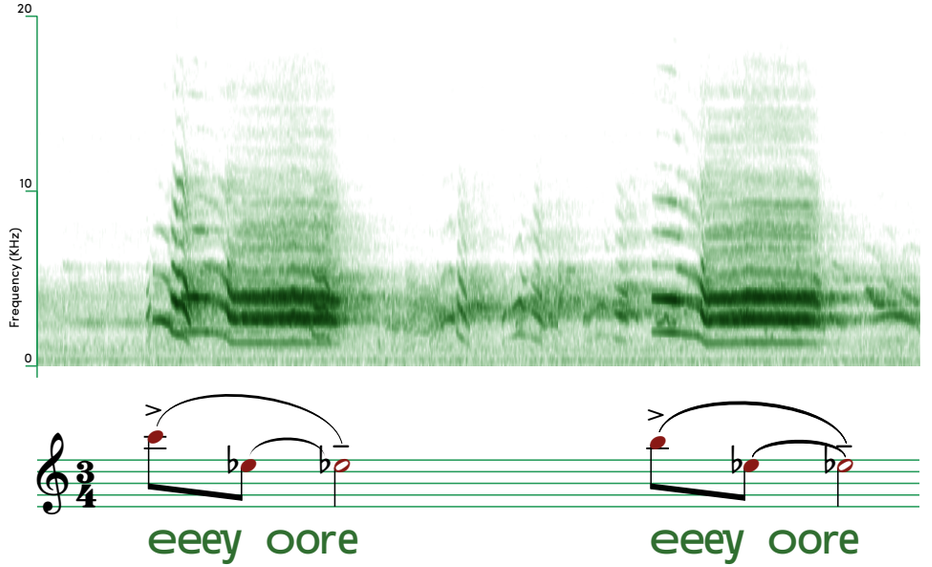

i

g Notated recordings of parakeet contact calls in Niger (within parakeets' 'native' zone) versus London (a zone in which they are 'invasive'). While the rhythm of their song can vary randomly, a distinct difference in pitch is noted for parakeets within London, showing the development of a 'local dialect' in the song.

h Simplified diagram of a parakeet's syrinx. Arrows indicate movement involved in parakeet sound production. Where humans have a larynx as their 'voicebox' the parakeet's syrinx allows for two simultaneous and unique sounds to be generated from either bronchial tube.

i Notated recordings of parakeet song from London. Parakeets in the capital have developed their own unique dialect, most notably with the 'Eeyore' sound. This sound may have developed in response to their environment, or from once-captive birds sharing mimicry of human phrases and noises with their fellow feral birds.

j

Pandemonium - The "language"

Jessica Roch

Contact calls

♩ = 86

[source S140415605 Contact Call]

Notes - fluttertongue?

♩ = 92

poco rit

[S140415605 Contact Call into warble]

Notes - violin & cello?

♩ = 118

[s142236659 Contact Call]

♩ = 122

[s142236659 Contact Call 4]

♩ = 94

[S142625847 Contact Call - Into Warble]

♩ = 102

3

sfz

[S142625847 Contact Call 2]

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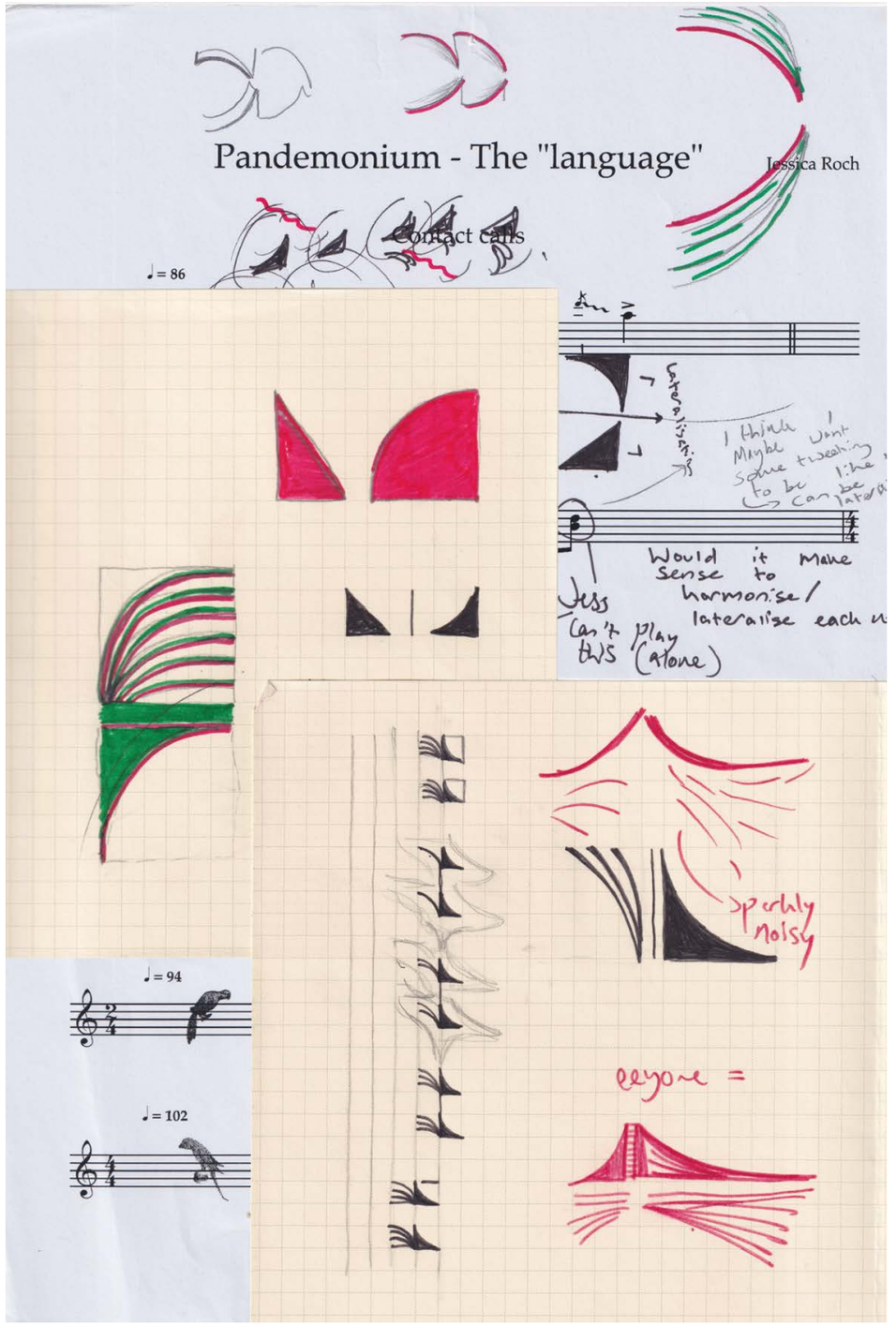

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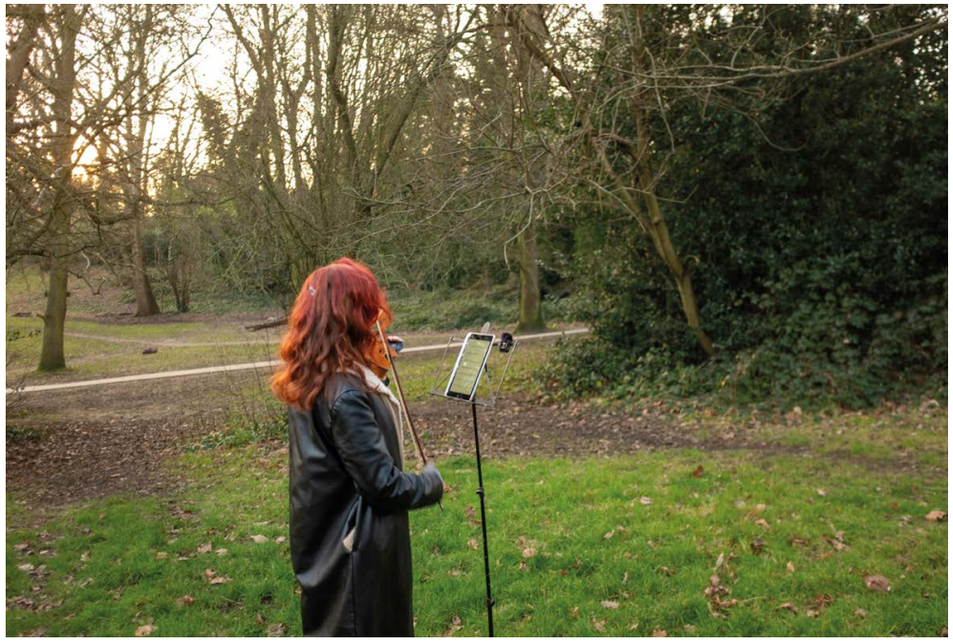


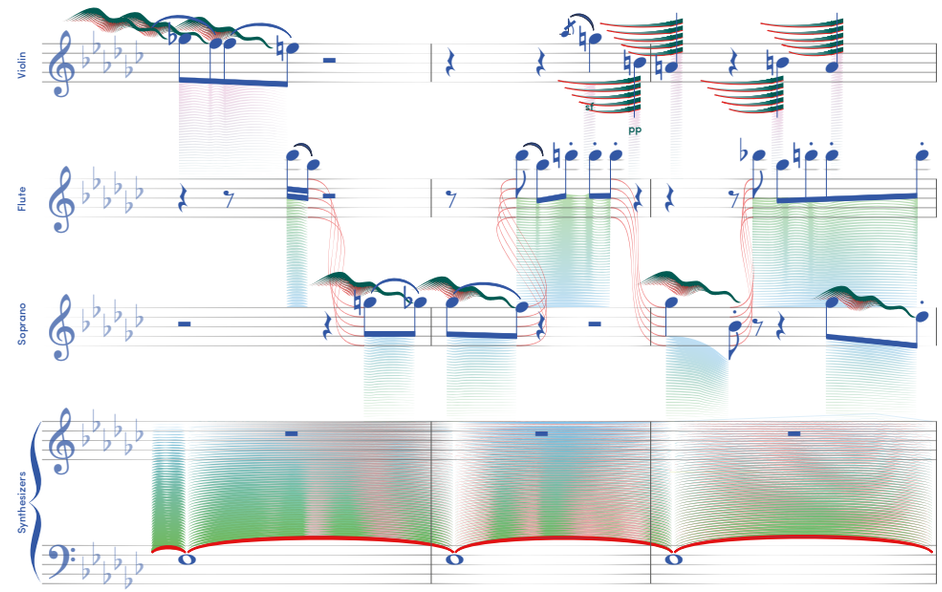
j Excerpt from Jessica Roch's 'Notation of Parakeet Birdsong'. This was developed from field research in the form of recordings captured around London, and transcribed into modern, Western stave notation.

k Development of a graphic score. Graphic scores represent music through symbols and imagery. For this project, Jessica and I wanted to create a 'hybrid' graphic score, blending classic stave notation with novel symbols, reflecting the unique and complex sounds London's parakeets make.

l Jessica live-testing the notation in front of an audience of parakeets in Crystal Palace Park.

m Section of the graphic score from Movement 1 of *Pandemonium* – 'Contact Call'. The flute comes together with the Soprano's voice, mimicking the duality of the parakeet sound-producing anatomy. The violin brings in the sound of another parakeet, calling in response to the first, while the synths reflect the urban soundscape in which the parakeets exist.

m



Cane & Kana

A Fictional Dialogue

UMI LOVECRAFT

You are entering a world suspended between reality and fiction, where the root messages of colonised plants resonate through the earth. This ethereal realm exists outside of conventional time. Here, '**Cane**', a defiant Jamaican Sugar Cane, stands alongside '**Kana**', a Bajan Sugar Cane plant whose voice has been muted by the trauma of enslavement. Cane and Kana converse through their roots by means of a mystical 'mycorrhizal conversation', transposing survival knowledge from one island to another. Their stories unfold against the backdrop of two islands pivotal in the history of sugar, that have borne the brunt of colonial exploitation and the bitter legacy of the sugar trade.

With them we traverse a history that begins with the origins of sugarcane cultivation. Sugarcane, originally native to Southeast Asia, was brought to the Caribbean during the age of exploration. Its cultivation in Jamaica and Barbados was intensified to feed an insatiable European demand for sugar, turning these islands into hubs of the global sugar economy, always at the cost of human suffering and ecological damage.

This dialogue highlights the contrasting responses of these islands to colonial oppression. Jamaica, with its fierce legacy of resistance, and Maroon communities who inhabited the island's rugged mountainous terrain, stands in contrast to Barbados, where densely populated sugar plantations and a comparatively flat topography, presented a landscape where, for the enslaved, there was nowhere to hide.

Listen intently as Cane and Kana, challenge the centuries-old silencing of plant voices imposed by anthropocentrism. Their stories, grounded in the rich yet tumultuous history of their lands, speak to the enduring quest for dignity and liberation. They inspire a vision of the future where freedom blossoms from the roots of resistance.

Performed by Derhaveland Thompson & Michele Eastman

During the performance recording, words and phrases have been modified by performers according to their lived experiences and colloquialisms.

CANE (with a robust and spirited tone) Eh, sistren from over de sea, how yuh standin' under de heavy hand of de 'Massa'?

KANA (voice trembles like the shiver of leaves) It's a hard burden. This island... it's carved up into more than 300 plantations, with no corner left untouched. Since the Bussa Rebellion, the crack of the whip only grows louder, the chains heavier.

CANE Mi feel yuh pain. But yuh know, we too have tales of flames and fury. Back in December '31, we rose up under Samuel Sharpe surrendering ourselves to the fire without fighting back... we stopped drinking the soil to dry ourself up and fuel the flame.[1] Our sacrifice set the cane fields ablaze, choosing the fire of freedom over the shackles of slavery.

KANA How could you? How could you let your brother and sister cane burn like that?

CANE I understand it may seem harsh, my friend. But sometimes, the fire that purifies is also the one that renews. Our ancestors knew that sacrifice is sometimes the only path to liberation. We viewed the plantations as shackles, and by setting them ablaze, we were breaking free from our bonds. We transformed our pain into power, our flames into a beacon of freedom.

KANA But the agony, the fear... how do you endure it?

CANE It's not easy, my sister. The night skies were alight with flames, the soil was too hot to root in, and the air was thick with the smoke of our own kin. But remember this – every cane that burned was a torch for liberty.

Samuel Sharpe understood that without a strong uprising, freedom would never arrive.[2] We needed to make the world take notice, to hear our cries.

KANA And what of those who remained? Those who couldn't be carried to the hills by the sea breeze or the Maroons themselves?

CANE We grieve for them, deeply. But their sacrifice laid the groundwork for the continuation of our struggle. Each plant that burned, each spirit that rose from the ashes, joined a chorus so loud that even the most indifferent master could not ignore. We rise from the soil we once enriched, and we grow stronger than before.

[...]

KANA From this day, my fibres will carry the courage of Bussa, the resolve of those who dared to dream of rebellion. We are more than the yield of the harvest; we are the bearers of hope. We hold the intelligence to undo all their wicked, evil, bad mine ways...

You didn't give me your name?

CANE The botanists used to call me *Saccharum officinarum*, a lofty name, isn't it? (chuckles softly) But around here, in di mountains, they just call me 'Cane'.

KANA (with a soft laugh) Indeed, that is quite grandiose. I am also dubbed *Saccharum officinarum*. In the fields of Barbados, however, I lack such a spirited nickname. Perhaps it's time I adopted one reflective of our new-found discourse. 'Kana' is one of the original words for sugar cane in the Caribbean, used by the Arawak people. How about you call me Kana?

CANE Beautiful. Dem see us and think we just sugar – something sweet for dem tea. They nah know di stories we carry in every stalk, di songs of freedom woven into our very fibres.

KANA It is our duty, then, to carry these narratives forward.

CANE Yes, I! Let's make sure our voices, our true names, echo long into di future, louder dan any Latin name could ever penetrate. We are di bearers of history, di sweet taste of freedom on the horizon. Stand tall, my friend. Together, we can reshape the future, one root message at a time.

[END]

REFERENCES & IMAGES

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1 Meadows, D., (1999). *'Leverage Points: Places to Intervene in a System'.* The Sustainability Institute. Available at: https://donellameadows.org/wp-content/userfiles/Leverage_Points.pdf (Accessed: 9 May 2025).

2 Legislation.gov.uk, (2015). *'The Town and Country Planning (General Permitted Development) (England) Order 2015'.* Available at: https://www.legislation.gov.uk/uksi/2015/596/made (Accessed: 9 May 2025).

3 Ministry of Housing, Communities & Local Government, (2019). *'Permitted development rights for householders: Technical Guidance'.* Available at: https://assets.publishing.service.gov.uk/media/5d77afc8e52744a27cdb2c9e9/190910_Tech_Guide_for_publishing.pdf (Accessed: 9 May 2025).

4 Department for Environment, Food & Rural Affairs, (2023). *'Biodiversity net gain'.* GOVUK Available at: https://www.gov.uk/government/collections/biodiversity-net-gain (Accessed: 9 May 2025).

a The filtering of planning guidance from Central Government to Local Planning Authorities via a few key documents. Diagram by Hani Salih.

b The actors involved in the flow of information between government, parliament and private bodies. Diagram by Hani Salih.

c The process by which an idea becomes a line item in the National Planning Policy Framework (NPPF). Diagram by Hani Salih.

LAURA LEBEAU

a Turntable designed by Nicolas Hervé within the OpenStructures grid. Image courtesy of OpenStructures.

b Table, sink and drawers, all designed within the OpenStructures Grid. Image courtesy of OpenStructures.

c Absolute Beginners workshop in Park Royal, London. Photograph by Laura Lebeau.

d 'Low Speed Plates and Bowls' on display, made with locally excavated clay from the High Speed 2 works. Photograph by Laura Lebeau.

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1 Kircher, A., (1650). *Musurgia Universalis bird song. Digitised by University of St Andrews Library*. Available at: https://commons.wikimedia.org/wiki/File:Kircher-musurgia-bird-song.jpg (Accessed: 19 April 2025).
2 Meares, R., (1717). *The Bird Fancyer's Delight; or, Choice Observations*. London: R. Meares. Digitised by the Library of Congress. Available at: https://www.loc.gov/item/42000836/ (Accessed: 19 April 2025).
3 National Science and Media Museum, (n.d.). 'Broadcasting Sounds of Nature: From Beatrice Harrison to David Attenborough'. Available at: https://www.scienceandmediamuseum.org.uk/objects-and-stories/broadcasting-sounds-nature-beatrice-harrison-david-attenborough (Accessed: 19 April 2025).
4 NASA Jet Propulsion Laboratory, (2025). *Voyager Record Cover*. Flickr. Available at: https://www.flickr.com/photos/nasa-jpl/30251407953/in/album-72157676187916186/ (Accessed: 19 April 2025).
5 Shah, S., (2011). *Rose-ringed Parakeet Chicks in Hollow Trunk*. Available at: https://commons.wikimedia.org/wiki/File:Babies_of_Rose-Ringed_Parakeet_in_hollow_trunk.JPG (Accessed: 19 April 2025).

NEBA SERE

1 Jones, H. C. and Lovecraft, U., (2017). *'Ancestral Architecture: Decolonising Rum – Fresh Milk Barbados Residency'*. Fresh Milk Barbados. Available at: https://freshmilkbarbados.com/tag/hannah-catherine-jones/ (Accessed: 8 May 2025).
2 Honeychurch, L., (2003). *Negre Mawon: Freedom Fighters in the Caribbean*. Roseau: Pont Casse Press.

ADITIONAL SOURCE MATERIAL

- Hochschild, A., (2005). *Bury the Chains: The British Struggle to Abolish Slavery*, pp. 142–45. London: Pan Macmillan.
- Anonymous, (c. 1800–1850). *Historical Plantation Map, Drax Hall Estate, Saint George, Barbados*. Consulted during the Fresh Milk Barbados residency by Umi Lovecraft and Hannah Catherine Jones, 2017.
- Craton, M., (1982). T*esting the Chains: Resistance to Slavery in the British West Indies*. Ithaca: Cornell University Press.
- Turner, M., (1995). *From Chattel Slaves to Wage Slaves: The Dynamics of Labour Bargaining in the Americas*. Bloomington: Indiana University Press.
- Barbados Folk Singers, (1964). *Sugar Cane. On: The Barbados Folk Singers – Vol. I* [Vinyl LP]. Barbados: WIRL Records. Available at: https://www.youtube.com/watch?v=mV7O17bH058 (Accessed: 8 May 2025).
- Gilroy, P., (1993). *The Black Atlantic: Modernity and Double Consciousness*, pp. 74–8. London: Verso.
- Mooney, P., (1990s). Cited in Shiva, V., (2001). *Protect or Plunder? Understanding Intellectual Property Rights*. London: Zed Books.
- Zaayman, C., (2023). *Anarchival Practices: The Clanwilliam Arts Project as Re-imagining Custodianship of the Past*, pp. 14–15. Berlin: ICI Berlin Press.

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ABSOLUTE BEGINNERS

Absolute Beginners is a new factory for Park Royal Estate, where young people can learn how to make basic goods in radically sustainable ways. We want to build an alternative, low-impact economy, where we make and use the things we need ourselves.

DECOSM

Co-led by Neba Sere and Umi Lovecraft, decosm is a London-based collective aiming to respond to concerns around social, environmental and spatial inequalities in our built world. We co-develop tools to explore how to decolonise and diversify city-making in education, practice and in the places we live, bringing together spatial practitioners and people from all walks of life to nurture this collective process.

ÉMILIE LOISELEUR

Émilie is a designer and arts educator. Research-led, critically engaged and with a focus on visual storytelling, her projects span many disciplines – from publications and websites to exhibitions and community engagement projects. Through in-depth research and conversations with clients and communities, she seeks to uncover the stories that define a space or project, ensuring that each reflects the needs, values and aspirations of those it serves. She is a Lecturer at Central Saint Martins.

JESSICA ROCH

Jessica is a London-based composer, multi-instrumentalist, arranger and improviser. Classically trained from a young age, she began her musical journey learning violin and piano and led her first children's orchestra at the age of nine. She now composes music for film, installations and games, often exploring communication across perceived boundaries – between mediums, genres, instruments and now species.

KAYE SONG

Kaye is a designer and architect whose work explores how our environments are made, and remade, through both built form and visual storytelling. Her practice spans the creation of practical spaces and art installations, grounded in material reuse, flexible structures and collaborative construction processes. Kaye's design approach embraces dynamic landscapes and seeks to work in rhythm with ever-shifting natural environments, focusing on low-carbon, light-touch methods that prioritise accessibility to green spaces.

LOUIS POHL KOSEDA

Louis is an Artist whos work explores the city, people, and behaviour through conceptually rigorous yet simple means. His recent work draws on East London's visual language to reflect social issues in the UK. Using abstract figures and mnemonic cityscapes, his work depicts the interplay of social and physical worlds.

NUMATIC

Numatic delivers sustainable, reliable cleaning solutions from the UK, including cordless, janitorial and floorcare systems. Trusted as the UK's most reliable vacuum brand, Numatic prioritises longevity, efficiency, serviceability and recyclability. With tailored support and durable design, Numatic empowers industries with productivity-focused equipment built to last.

OPENSTRUCTURES

OpenStructures (OS) is an open modular construction system that promotes circular material flows and facilitates re-use and repair. OS allows to build things together at a moment in time, where anyone is connected to everyone, and everything can be produced everywhere. It links modularity to collaborative innovation and new decentralised production techniques and results in a more sustainably built environment.

UMI LOVECRAFT

Umi Lovecraft is a designer, educator, and founder of insider–outsider, a non-profit bringing together those on a mission to build the world we actually want to live in. Trained in architecture and rooted in art practice, she co-leads decosm and lectures Responsible Design at LCC. Her 13+ years of design expertise weave participation, inclusive design, and collective imagination to empower and deepen collective consciousness.

WARREN LEVER

Warren is an urban designer, planner and heritage professional with more than 20 years' experience working with and for local authorities in England.

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Artificial

DESIGN RESEARCHERS IN RESIDENCE 2024/25

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This publication features the work of the 2024/25 Design Researchers in Residence. It accompanies an exhibition held at the Design Museum which runs from June 2025 to September 2025.

Artificial examines the perceived boundaries separating what is 'natural' and what has been created by humans, finding that the two are in fact intricately intertwined. Showcasing the work of Christie Swallow, Hani Salih, Laura Lebeau and Neba Sere, the research begins to unravel the invisible relationships woven into everyday life, including urban ecosystems, manufactured materials, political infrastructures and institutional knowledge.

You are invited to follow the lines of enquiry and ask what is natural and what is artificial? What is a fact and what is a fiction?

Design Researchers in Residence is Future Observatory's programme for emerging design researchers hosted at the Design Museum. Future Observatory is a national programme for design research supporting the UK's response to the climate emergency. It is coordinated by the Design Museum in partnership with the UKRI Arts & Humanities Research Council (AHRC).

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