

Research Report

# DARKNESS IN URBAN SPACE

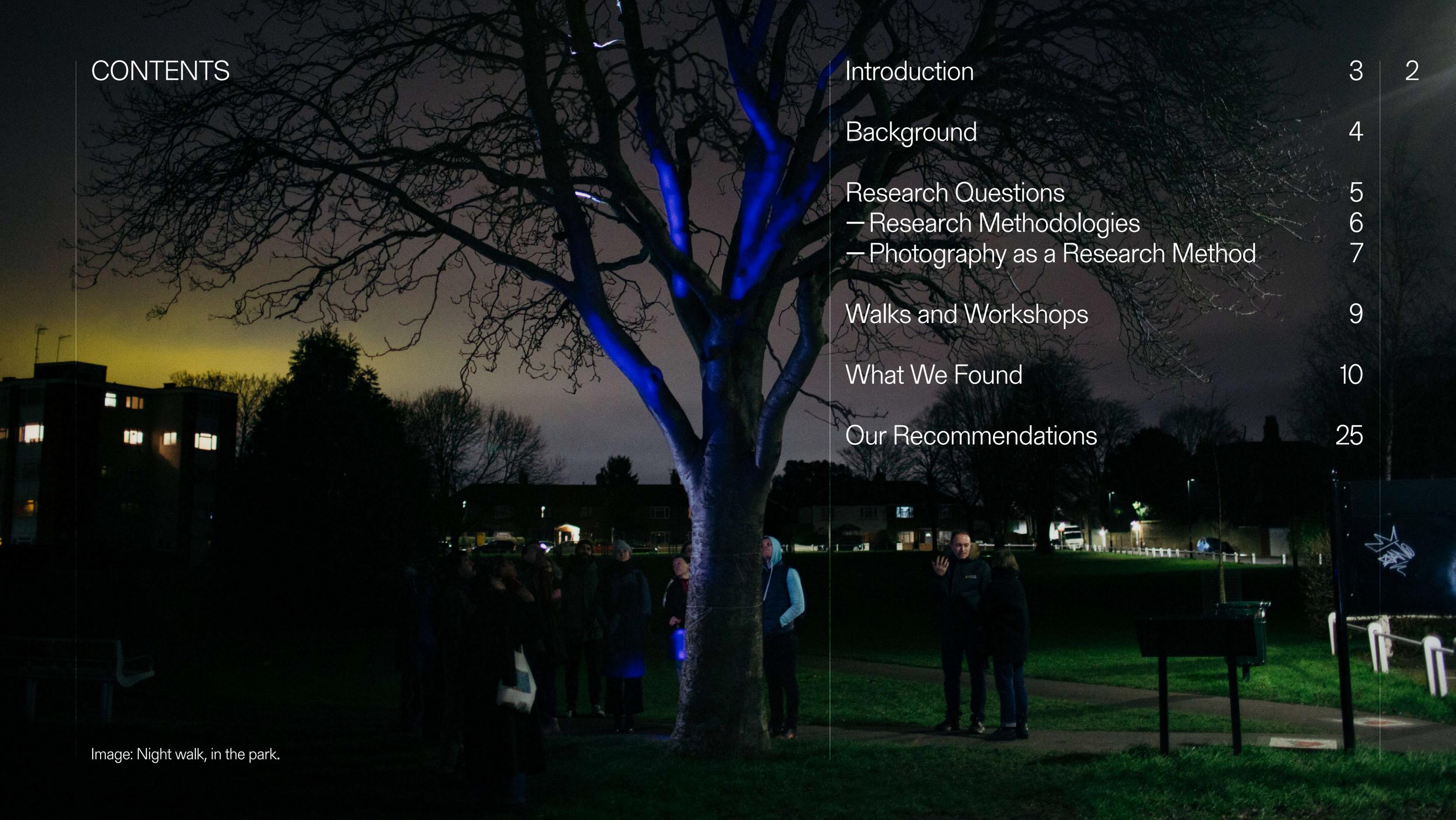
Kim Coleman / Harun Morrison, 2024



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Image: Night walk, in the park.



## INTRODUCTION

This document is the result of a year-long research project by artist-researchers Kim Coleman and Harun Morrison. It is designed to give policy-makers insights into needs for darkness in urban space.

Image: Marks on bench in the park viewed under UV torch light.

## BACKGROUND

In 2023 we were invited by Richmond Council's planning department in collaboration with the art service to address the following:

The UK experiences excess light pollution. Many of the borough's green spaces are intentionally left to be 'dark corridors' to avoid unnecessary artificial light that can disturb protected species like bats. However, choosing whether to light parks and open spaces is contentious: for many who use these spaces to walk dogs, commute to and from work, and for leisure, darkness can compromise their ability to use and enjoy the environment. The council also needs to ensure community safety.

The department chose to commission artists, as opposed to other researchers, in the hope they would approach research and share findings in novel ways that would engage policymakers.

# RESEARCH QUESTIONS

How is darkness used and experienced in urban spaces by different groups?

What are the needs for darkness in urban space?

How do these needs converge or diverge?

How can we communicate findings in a way that affects future policy?

## RESEARCH METHODOLOGIES

We chose a case-study area in Richmond with a residential zone, a youth club, parks, shops, a nature reserve, and a river, two miles from a major stadium.

We:

- ran monthly night walks and workshops over a year with community members, council staff, an ecologist, and local area experts. Groups ranged from a couple of people to over twenty. We organised walks in the day, at dusk (to experience a transition between light states), and at night.
- visited local initiatives and volunteer sessions led by local groups.
- emphasised 'deep hanging out' / working from the 'ground up' to activate local knowledge.
- held conversations and art exercises at the Youth Centre.
- engaged with research on lighting policy, artificial light at night, and light pollution.

## PHOTOGRAPHY AS A RESEARCH METHOD

Throughout the year, we used lens-based and cameraless photography as exploratory tools, resulting in the images in this document.

In workshops at the Youth Centre, we created anthotypes—photographic images made using photosensitive emulsions made from plants. Though these images rely on light to be made, they also rely on darkness: they fade if placed in sunlight.

We also went outside at night to expose photosensitive paper to artificial light. Searching for the correct conditions to do this—dark enough that the paper didn't become overexposed, and bright enough to capture an image—sharpened our sensitivity to light levels in the nocturnal landscape.

These photographic experiments foregrounded the productivity of darkness, emphasising its actual and metaphorical importance found in other elements of the research.

Image: Photogram made by exposing photosensitive paper to light in the park.

## WALKS AND WORKSHOPS

January

**Wolf Moon night walk**

ecologist Connor Butler led a walk exploring multi-species use of the area at night with residents, relevant professionals, and us.

February

**Wolf Moon workshop**

we used local maps to explore with young people where they go at night, what they do, and why.

**Snow Moon night walk**

we explored multi-species use of the area at night with young people and ecologist Connor Butler.

**Snow Moon daytime walk**

nature reserve walk with the local community group, Friends of Ham Lands.



March

**Worm Moon workshop**  
in Ham Youth Centre with young people.  
We worked with glow-in-the-dark materials  
as a means of sharing reflections on darkness.

May

**Pink Moon workshop**  
in Ham Youth Centre with young people.  
Introduction to working with photography  
using light-sensitive plant emulsions.

November

**Beaver Moon walk**  
we walked at sunset with artist and therapist  
Noemi Lakmaier, a wheelchair user.  
We discussed accessibility and safety relating  
to darkness (Source 13).

December

**Cold Moon night walk**  
we exposed photosensitive paper to artificial  
light as we walked the route.

# WHAT WE FOUND

Twickenham Stadium  
(1.5 miles)

1. FEAR OF THE DARK

2. DIFFUSE SKYGLOW

3. DARK REFUGES

7. NEW LIGHT

4. DARKNESS AND MULTI-SPECIES SOLIDARITY

6. FATAL ATTRACTION

5. DARKNESS ENABLES

..... Walking Route

River Thames

Reed Beds

Nature Reserve

Residential Area

Youth Club

Park

# 1. FEAR OF THE DARK

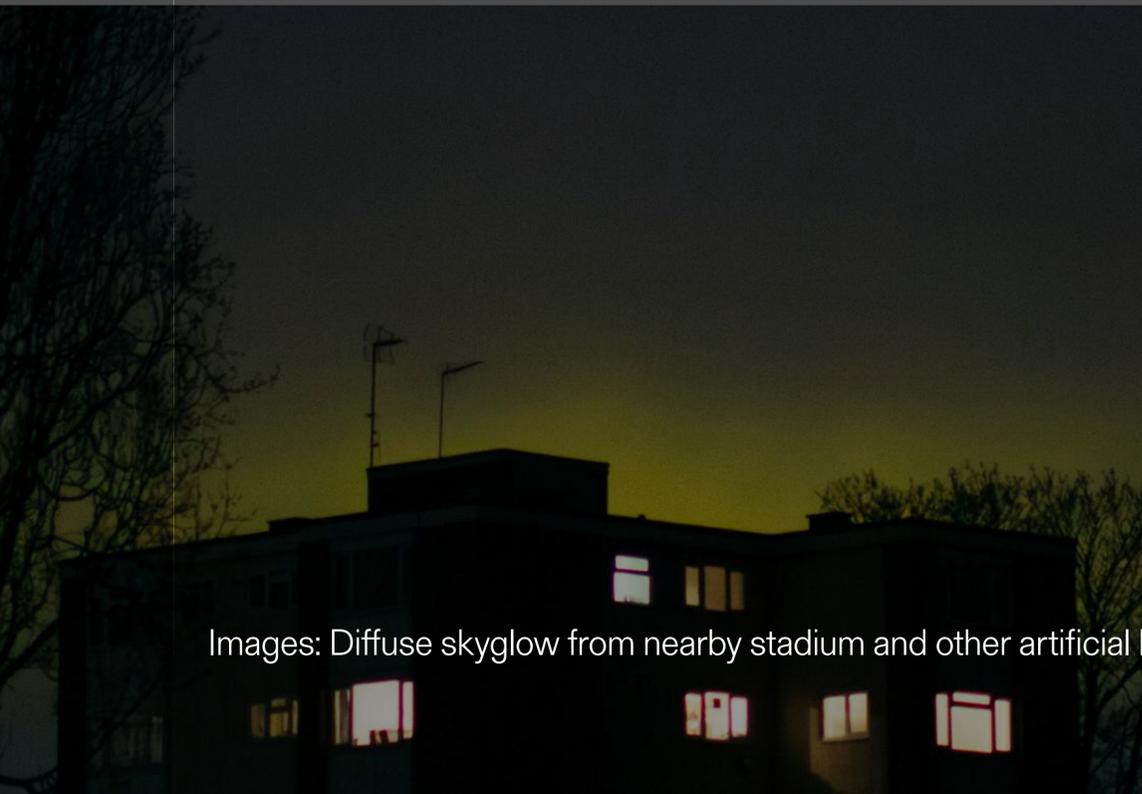
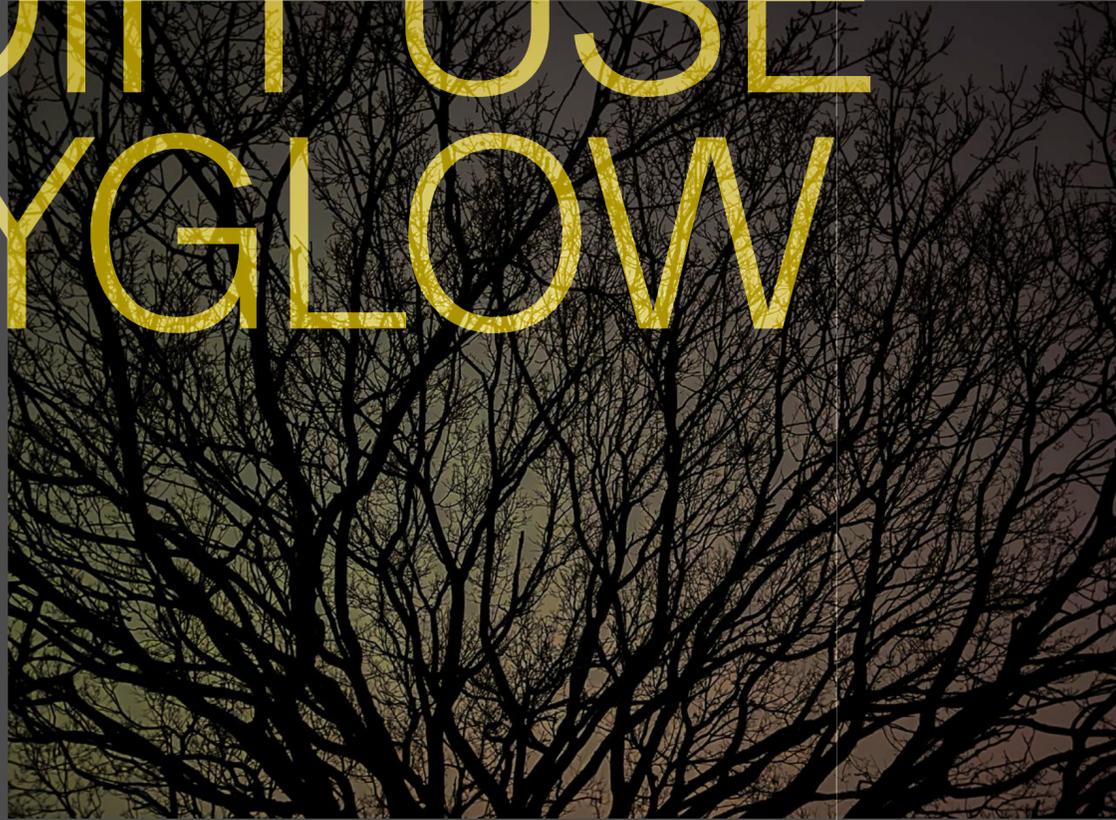


Images: Youth club members start a night walk where we use UV light to explore the surroundings.

Even if the presence of lighting, visible security, help-points and more staff assist in groups of young women feeling safer at night in parks, "sexist attitudes and gendered violence [...] are at the root of women's feelings of unsafety in dark public spaces and this needs addressing." (Source 3)

Spending time with local young people, we learnt that some girls, young women [and their guardians] feared the dark. "My parents are really strict and I don't go out much." "We're never alone at nighttime and our phones have to be charged."

# 2. DIFFUSE SKYGLLOW



Images: Diffuse skyglow from nearby stadium and other artificial light.

"Diffuse skyglow created by increasing bright artificial lighting at night impacts the physiology, behaviour, and fitness of insects." (Source 2)

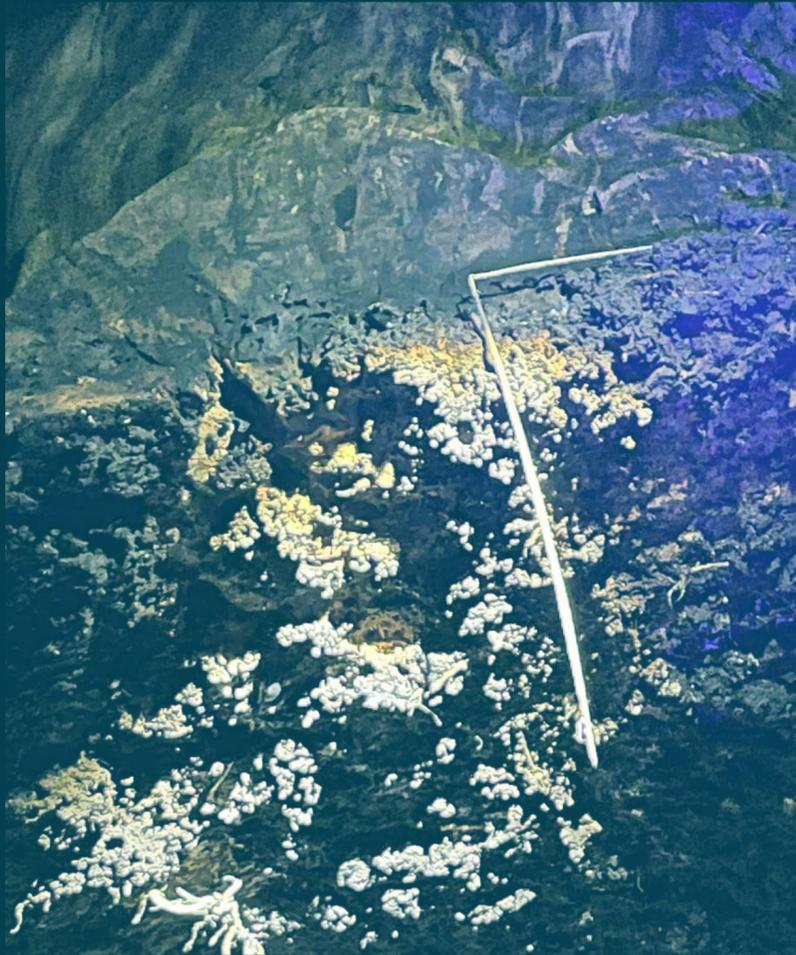
Sports pitch floodlight overspill has "a major impact on riverside habitats and the water body." (Source 4)

"A loss of human cultural experiences associated with naturally lit night skies" has been recorded. (Source 5)

Prolonging exposure to light "disrupts the circadian rhythm of mammals, causing several negative or modified physiological consequences." (Source 8)

Artificial lighting meant that the area rarely felt dark at night. Even on night walks through the nature reserve, the sky felt almost light. Floodlights from the stadium two miles away often turned clouds in the entire area a daffodil-yellow.

# 3. DARK REFUGES



Images: Observing more than human activity on the nature reserve.

“Closely spaced streetlights (...) can (...) act as a barrier” to the movement of insects fatally attracted to light as well as those repelled by it “fragmenting major swaths of otherwise suitable habitat.” (Source 12)

The lack of dark refuge from artificial light at night is suspected to “negatively impact human health including human day/night rhythms.” (Source 11)

From our walks with ecologist Connor Butler, we learnt how artificial light at night in the area forces behavioural change around it: the LED streetlights studding the main road between the nature reserve and the youth centre crosses the foraging pathway for light-avoiding bat species. The local stag beetles stay twenty metres from them—retreating from this light path into the nature reserve.

# 4. DARKNESS AND MULTI-SPECIES SOLIDARITY



Images: Nature reserve and reed beds at dusk and at night.

'[The nature reserve is] an amazing space with many layers and connecting stories.'  
— Friends of Ham Lands member, 2024

We learned that an area used for dog walkers and young families in the day might be engaged with by nocturnally active species, groups of young people, or queer groups for whom the dark is a tool to create much-needed environments for themselves. A member of Friends of Ham Lands explained how these night-users of the space are frequently misunderstood and need protection.

This is an example of multi-species solidarity: humans and non-humans needing social and spatial structures that support their intersection and coexistence.

# 5. DARKNESS ENABLES



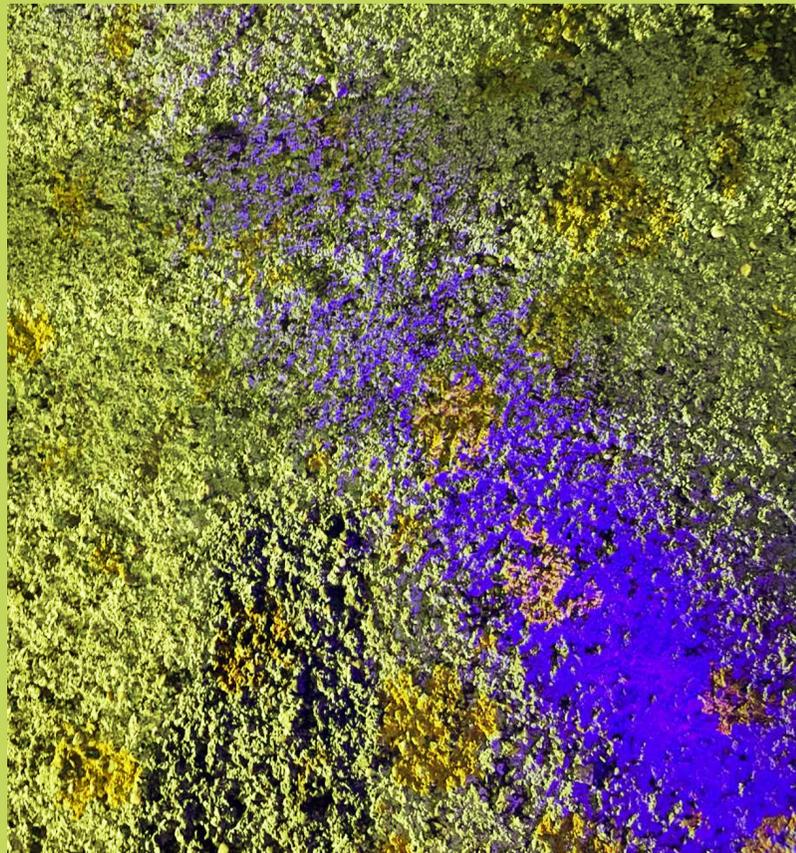
Images: The nature reserve as a social space.

“we love going down to the river at night”  
Youth group user, Ham Youth Centre (2024)

We found a love of the darkness in groups of young people and a feeling that darkness permitted different ways of exploring and occupying space. One group told us about a game they invented especially for nighttime, that relies on darkness.

Here darkness enabled engagement, intimacy, and openness. When it's dark enough that you can't see the other's face, a conversation can begin. Darkness offers protection against the surveillance of teenage social life by older adults.

# 6. FATAL ATTRACTION



Images: Evidence of fatal attraction.



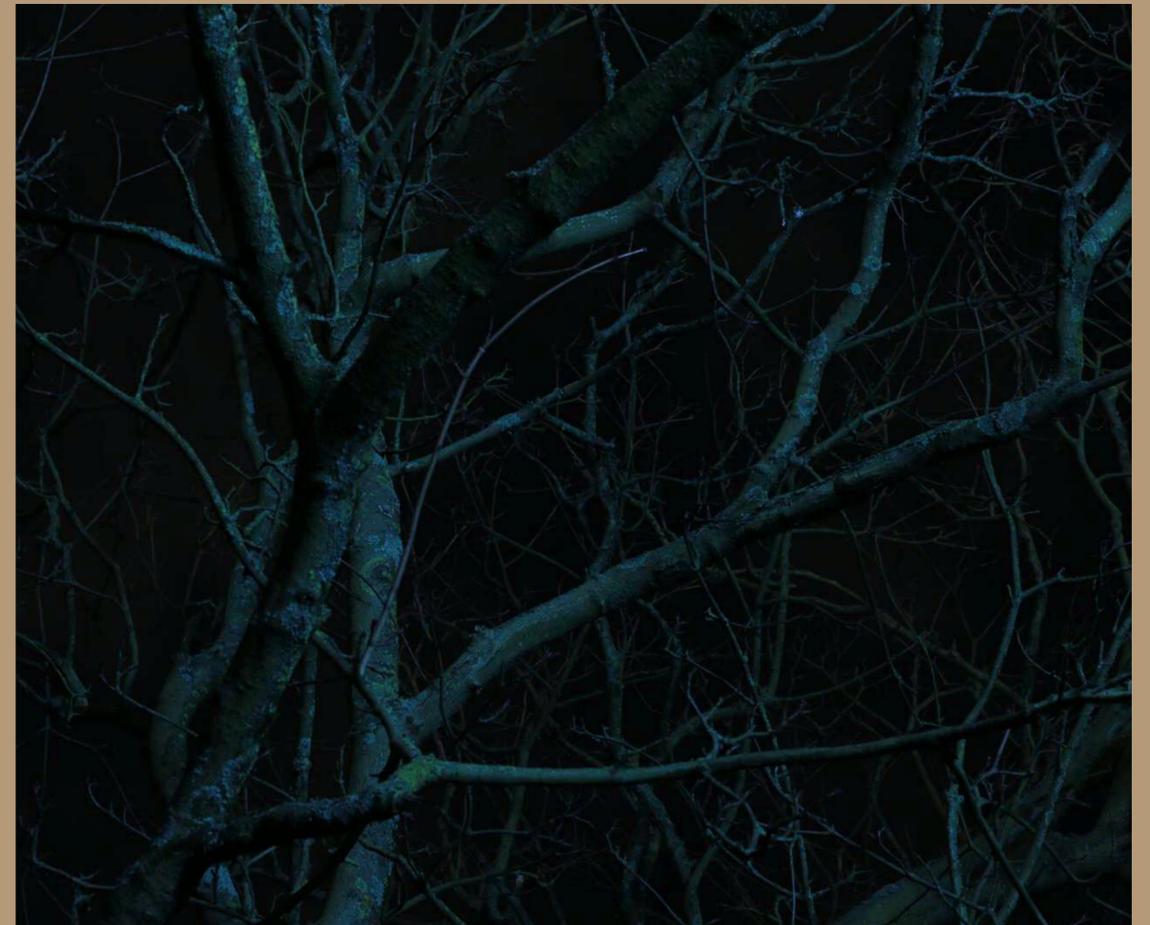
Like many new LED installations, Richmond's streetlights are 4000k white LEDs which, unlike their amber sodium predecessors, scatter light into the atmosphere, even when these are shielded or pointed to the ground. (Source 5)

"Fatal attraction has been estimated to result in 100 billion insect deaths per summer in Germany." (Source 10)

The increasing use of artificial light at night contributes to what has been described as an "insect apocalypse" over the last two decades. (Source 11)

On our night walks, we noticed rings of lichen around the base of streetlamps. Ecologist Connor Butler explained that important nighttime pollinators such as moths are 'fatally attracted' to light. The rings mark where the dead insects' bodies land and protein-consuming lichen flourishes on the biomatter.

# 7. NEW LIGHT



Images: Vehicles, domestic lighting, and LED signs illuminating the case study area.

“Over the past decade, the night sky has become nearly 10 per cent brighter each year because of artificial lights, mainly LEDs emitting glare—which is equivalent to doubling the sky brightness every 8 years.” (Source 6)

LED lighting is a low-cost and low-energy light form that has “revolutionised artificial lighting at night” since the early 2010s. (Source 10)

We observed an abundance of LED lighting at night, emitting from streetlights, billboards, shopfronts, cafes, advertising boards, private homes and gardens, porches, and car lights.

# OUR RECOMMENDATIONS

- Central government, local councils, and planners should recognise and respect the value of human and non-human access to darkness and incorporate this into their decision-making processes.
- Darkness should not only be understood as a social negative or generator of conditions for fear, but also as a vital part of urban life and a site of pleasure and community.
- Safety in public spaces shouldn't only be predicated on the illuminated/bright city, but also consider broader social factors.
- It should be recognised that both humans and non-humans need darkness for health.

- Lighting is one consideration among many for wheelchair users and those pushing prams or trolleys. Quality and evenness of surfaces and paths equally factor.
- There are environmental and financial advantages to using less artificial lighting at night.
- Achieving darker urban space can be welcomed by some communities and is technically simple to address compared to other major environmental problems.

## PROJECT

Kim Coleman is an artist based in London. Her co-authored and solo projects have been commissioned by The ICA, Frieze Projects, The City of Edinburgh, and Glasgow International. In 2023 she completed a PhD with Reading School of Art. [kimcolemanprojects.com](http://kimcolemanprojects.com)

Harun Morrison is an artist and writer based in London. He was recently an associate artist with Greenpeace UK and Designer and Researcher in Residence at V&A Dundee. [harunmorrison.net](http://harunmorrison.net)

## IMAGE CREDIT

- PG 2 Digital photograph, James Allan.  
 PG 3 Digital photograph, Kim Coleman.  
 PG 4 Digital photograph, Kim Coleman.  
 PG 5 Colour photogram, Kim Coleman (produced with Diego Hernandez).  
 PG 6 Colour photogram, Kim Coleman (produced with Diego Hernandez).  
 PG 7 Colour photogram, Kim Coleman (produced with Diego Hernandez).  
 PG 8 Digital photograph, James Allan.  
 PG 9 Digital photograph, James Allan.  
 PG 10 Vertical aerial photograph, Case study area © Environment Agency. Copyright and/or database right 2022, All rights reserved.  
 PG 11 Digital photographs, Kim Coleman.  
 PG 13 L+C: James Allan. R: Kim Coleman.  
 PG 15 Digital photographs, and inverted digital photograph, L+R: Kim Coleman. C: James Allan.  
 PG 17 Digital photograph, L+R: Kim Coleman. C: James Allan.  
 PG 19 Inverted digital photograph, Kim Coleman.  
 PG 21 Digital photographs, Kim Coleman.  
 PG 23 Digital photographs, L: James Allan, R: Kim Coleman.

All photographs 2024 unless otherwise stated.

Graphic design by Julie Kim

## THANK YOU

The Gyro Club, Grace Crannis, Beatrice McDermott, Genesis Adeleye, Andy Franzkowiak, James Allan, Diego Hernandez, Ben Skelton, the users of and volunteers at Ham Youth Club, Sharon Mehta and Friends of Ham Lands, Habitats and Heritage, Noemi Lakmaier, Nancy Collinge, Larry Botchway, Dawn Stevens, Daniel Hourigan.

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## COMMISSION

Richmond Council in partnership with Orleans House Gallery, Richmond. 2024



**CULTURAL  
REFORESTING**

Darkness in Urban Space is part of Cultural Reforesting, a decade-long, artist-led programme responding to the ecological crisis, exploring how we can renew our relationship with nature. This project was initiated by Richmond Arts Service, London Borough of Richmond upon Thames and involves collaborations with local and global partners, participants and cultures.

