ENDANGERED ECOLOGIES

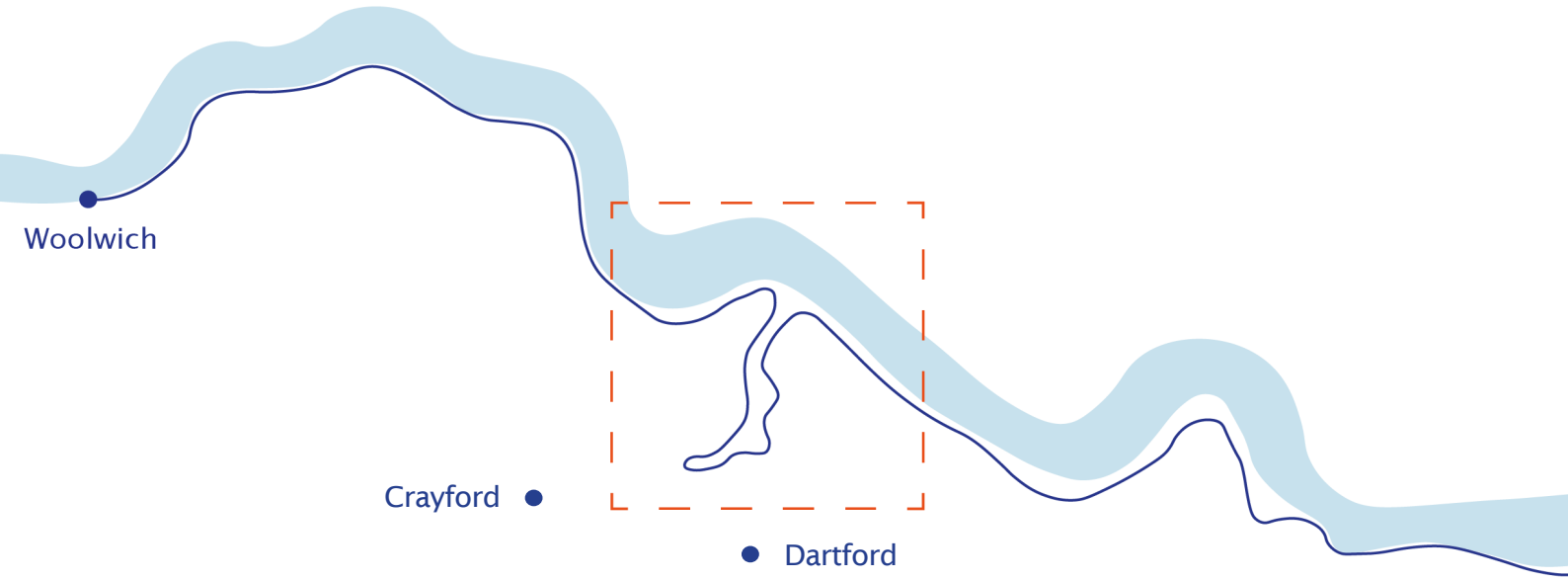
A COLLECTIVE VISION FOR THE FUTURE OF THE MARSHES

EXECUTIVE SUMMARY

A group of charities, local wildlife groups and specialists have come together to produce a vision for the marshes over the past few months. We have gained media attention and are beginning to collaborate with local councillors and MPs. This documents looks to assist the future development of the collaborative vision for the marshes. It also provides a feasibility study for a policy pilot project that focuses on the concept of 'custodians of landscape'.

My practice focuses on edgeland landscapes as a key to triggering a social and economic shift in how we view endangered natural spaces in our city. Through the act of walking though this landscape we have managed to meet people who are interested in this landscape, we have also made alliances with landowners and charities. The practice looks to facilitate multidisciplinary collaborations with the aim to bring attention to overlooked ecologies and landscapes that are really valuable for our environment.

The old flour mill acts as an anchor for this pilot project. Its strategic location connects the outer and inner marshes and provides a great working base for the charity that is already active on the marshes. The river Cray that runs through the marshes is a rare type of chalk stream, it is being restored and protected by this charity. Their stable, cool, nutrient-rich waters allow chalk streams to support an exceptionally high number of species – so much so that these habitats are sometimes described as "England's rainforests". The design for the mill reactivates this historically valuable space and provides a space for community, while creating better access onto the marshes.


Woolwich
Crayford
Dartford


Grain

SITE CONTEXT

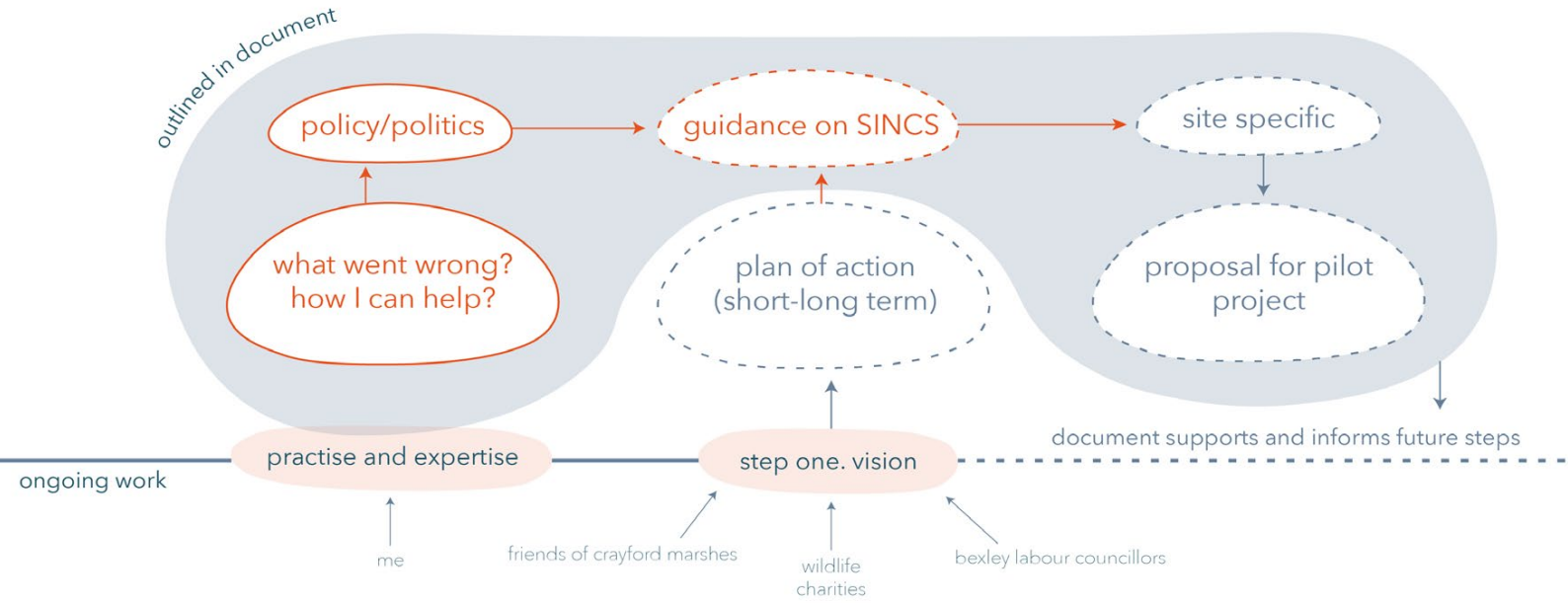
Crayford and Dartford Marshes are a picturesque and ecologically significant area located in Southeast England, approximately 15 miles east of central London. These marshes form a vital part of the Greater Thames Estuary and play a crucial role in the local ecosystem, they are environmentally and historically significant. Crayford and Dartford Marshes are situated along the banks of the River Thames, primarily in the London Borough of Bexley. The marshes extend between the towns of Crayford to the west and Dartford to the east, covering an area of approx. 3,500 acres.

The marshes serve as a vital habitat for a variety of bird species. During the winter months, these marshes become a crucial stopover site for countless avian travelers. These marshes act as a natural buffer against flooding. When the River Thames experiences high tides and storm surges, the marshes help absorb excess water, reducing the risk of flooding in nearby areas. Their strategic location and capacity to hold floodwaters is instrumental in protecting communities downstream. During the medieval period, the marshes were used for agricultural purposes. In the 19th Century the marshes served as a transportation route for goods, and industries like paper mills and chemical plants were established in the area. This industrial heritage left its mark on the landscape and the local economy. During World War II, Crayford and Dartford Marshes played a strategic role in the defense of London. In recent decades, there has been a growing recognition of the environmental and historical value of Crayford and Dartford Marshes.

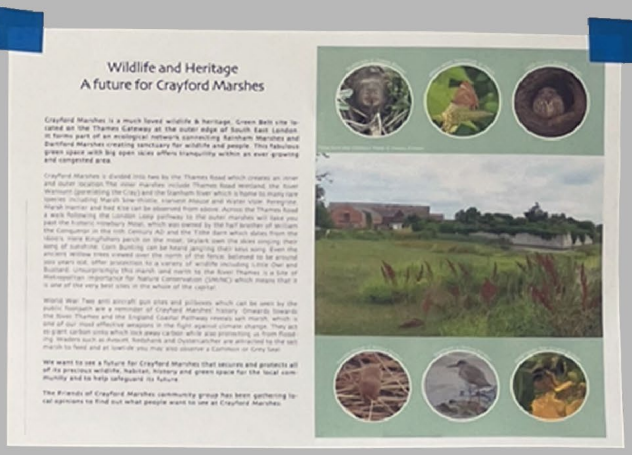
Conservation efforts have been initiated to protect and restore the natural habitats and historical features of the Crayford and Dartford marshes, however this has mostly failed over the past 20 years.

A collaboration with Friends of Crayford Marshes

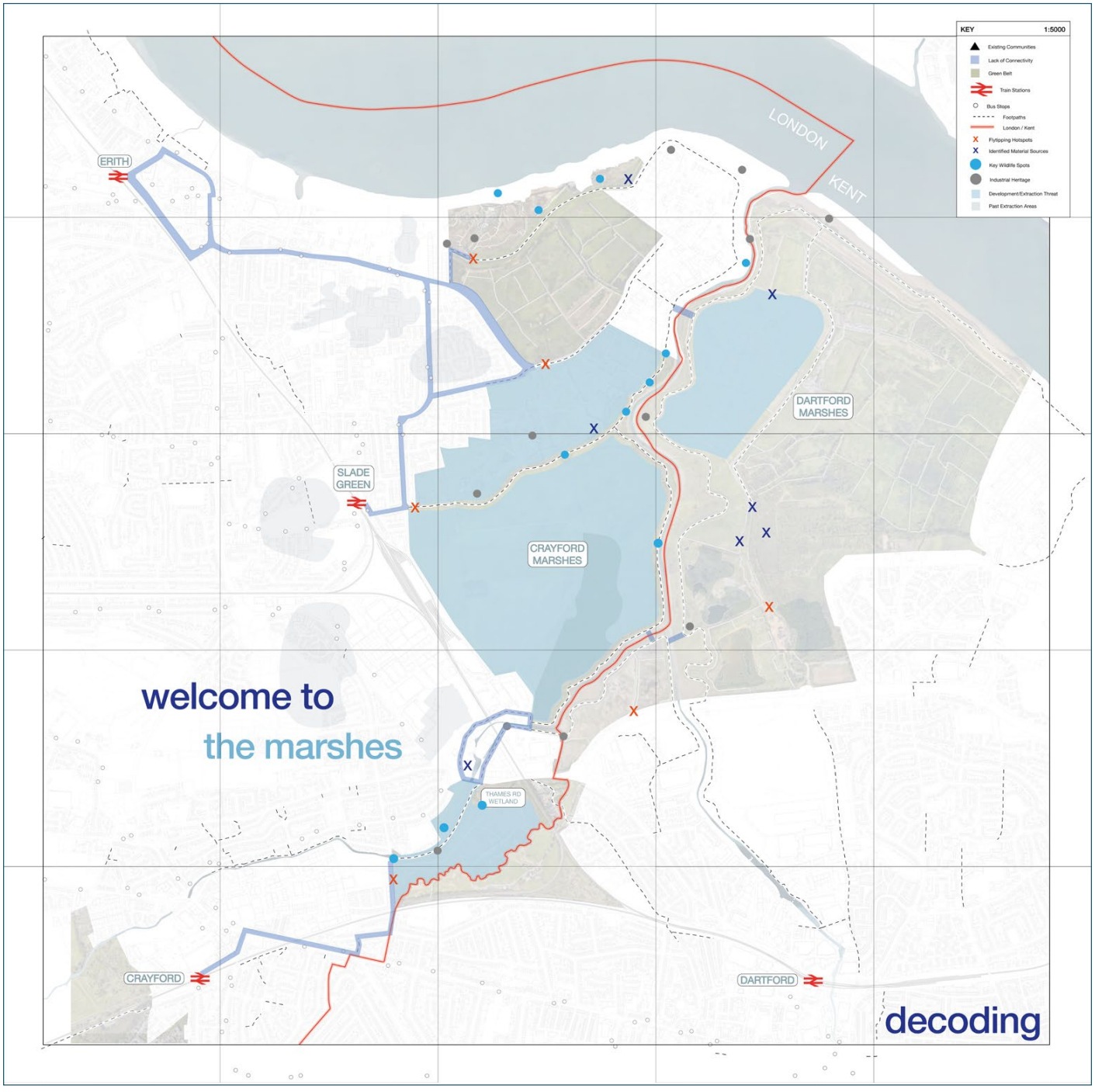
I have been working directly with Friends of Crayford Marshes to produce a vision for the marshes. They have previously worked on a vision for Swanscombe Peninsula and they managed to achieve a designation upgrade to Site of Special Scientific Interest (SSSI). We hope to bring attention to the marshes and use the vision as a tool to get support and funding in place to protect these marshes. I havve worked on producing this document over the past months and we plan to release it to the media in October with a meeting planned for November with the local MP, to try and secure their support for this vision. We have multiple charities already on board to back the vision. This documents looks to assist the future development of the collaborative vision for the marshes. It also provides a feasibility study for a policy pilot project that focuses on the concept of 'custodians of landscape'.



First Draft Shared for Comments 20.08.2023



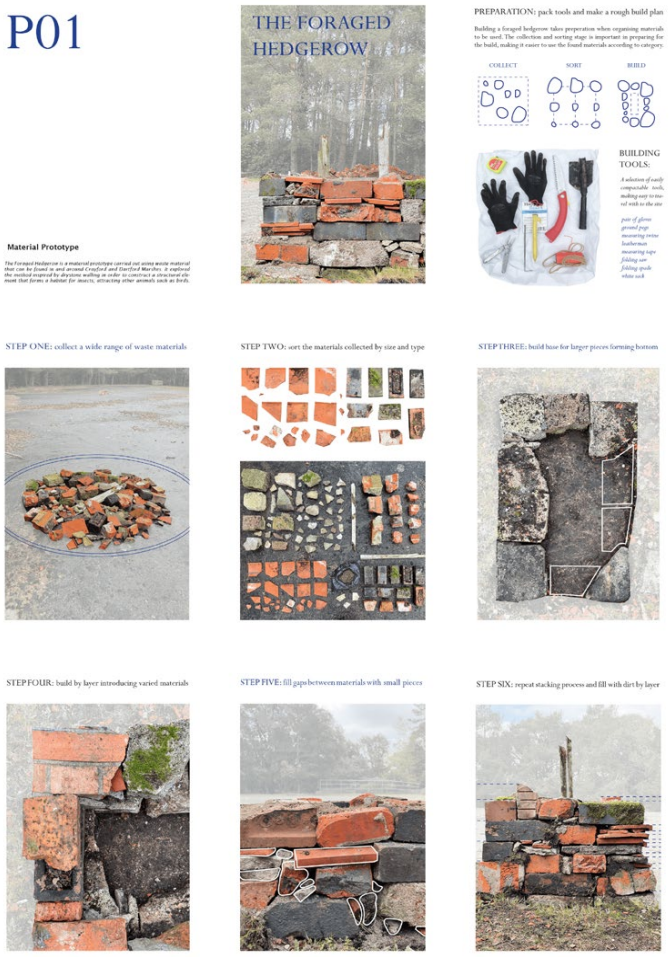
UNIT 4 CONTEXT



In Unit 4 I looked at how Crayford and Dartford Marshes are susceptible to a range of threats such as development, further extraction and flooding. The lack of access to the marshes is also a threat in itself as it conceals the value of that this landscape.

A Landscape Infrastructure of Resistance for Crayford and Dartford Marshes:

Located on the edge of Southeast London, the Crayford and Dartford Marshes are an overlooked landscape spanning an area of over 5km2. The fate of these edgelands is unknown, there is a growing interest from developers who are investing in large areas of the green belt, flooding is becoming a serious issue for the industrial estates, yet the wildlife is flourishing. These landscapes are deemed by many as unattractive; however, the qualities of these spaces display key elements of our history, industrial heritage, ecology and society all in one overlooked space.

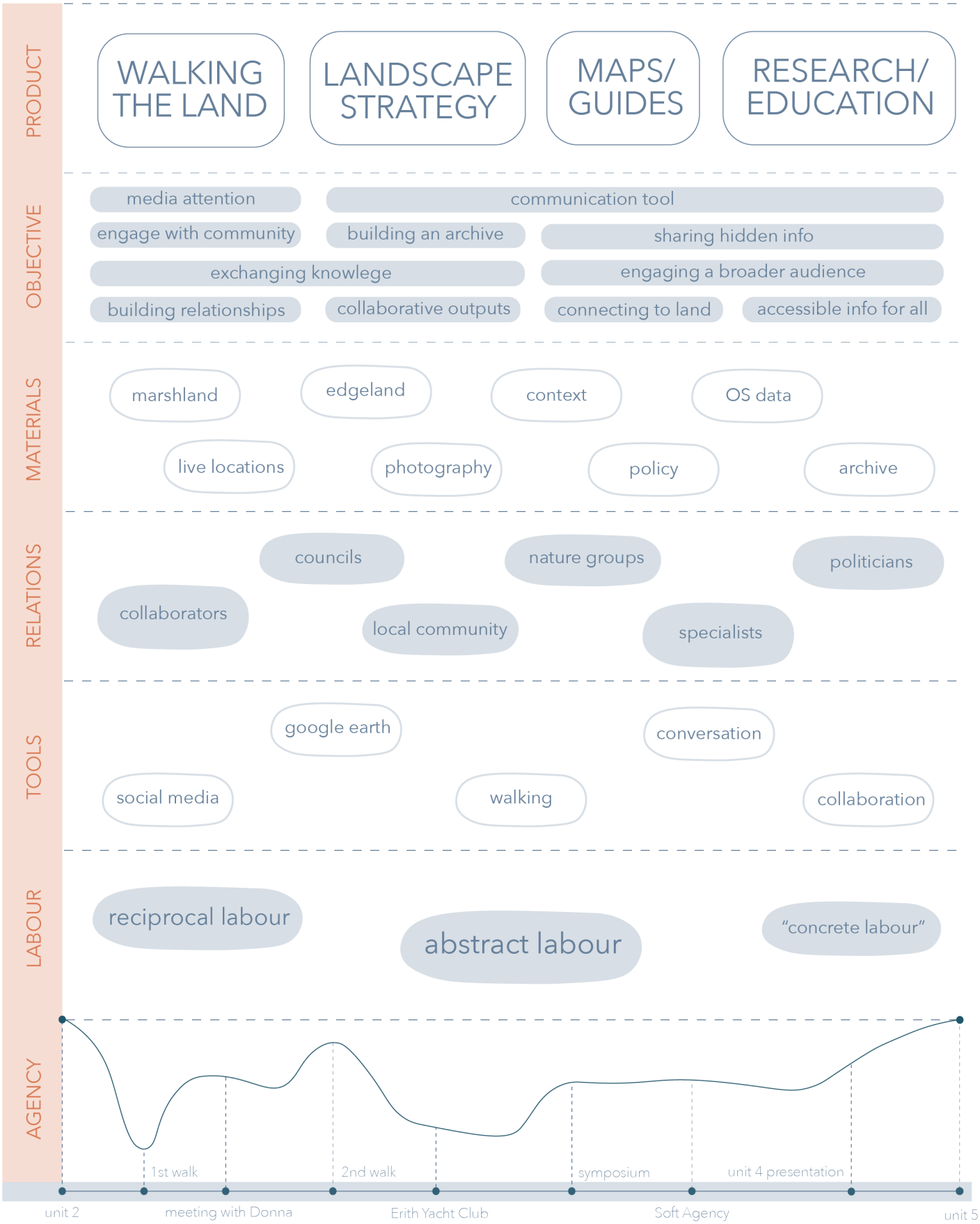


The proposal introduces an infrastructure of accessibility, a strategy for conservation of industrial heritage and protection of wildlife which resists the future commodification of marshes with more dominant capitalist approaches to land. The infrastructure also allows us to engage in speculation about the ways in which the landscape can change due to climate crisis and how it can be protected. These landscapes are deemed by many as unattractive; however, the qualities of these spaces display key elements of our history, industrial heritage, ecology and society all in one overlooked space. The proposal introduces an infrastructure of accessibility, a strategy for conservation of industrial heritage and protection of wildlife which resists the future commodification of marshes with more dominant capitalist approaches to land. The infrastructure also allows us to engage in speculation about the ways in which the landscape can change due to climate crisis and how it can be protected.


CARAVA
COFFEE ROASTE
Private Property
no trespassing

Practise/Practice

My practice offers a platform for knowledge exchange and strategy, with the aim to address complex landscapes that are in transition and pivotal in how we look to structure our future ecosystems on the edge of our city. My main outputs and methods are outlined below, illustrating the nature of my practise.



ENDANGERED ECOLOGIES

The practice begins with walking; moving through landscape and exploring edges, borders and unique ecologies. This opens a direct dialogue with our surroundings.

The core aim of the practice is to protect endangered landscapes through the diffusion of knowledge about how our land is utilised, percieved and distributed.

We working closely with progressive institutions and individuals, and we help them implement the change they have imagined.

We offer workshops that engage with landcapes directly, helping to unite communities and others and to reconnect with their natural surroundings.

A MANIFESTO

We work with the unseen and overlooked in order to highlight their potential and importance in creating social, environmental and economic value.

We provide a platform for knowledge exchange and an open archive to create better accessibility to informationabout our nation's landscapes.

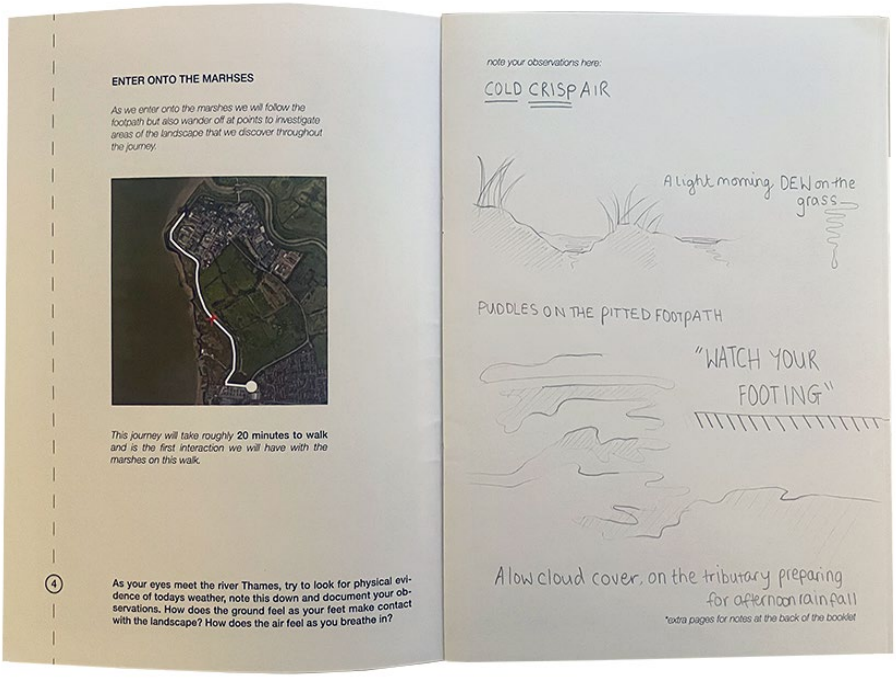
We challenge societies' perspectives of landscape and land use, creating engagement. distributing accesible information allowing people to connect with eachother in order to

We use our research as a tool to support secure various organisations who work with endangered landscapes with the aim to provide a tool to apply for funding opportunities.

FOR PRACTICE

Walking

Walking is a key method for research I have used throughout my work, it has provided an alternative perspective for understanding and reading space. When one begins to move through a space the environment around them is altered, shifted and transformed. Space in many ways defines the form and function of the built environment and there are ways in which walking complicates this notion of space.



Walking also serves as an opportunity to form relationships, and to grow bonds. Walking side by side encourages face-to-face interaction without the pressure of direct eye contact. This can make conversations feel less confrontational and more collaborative, allowing individuals to express their ideas and concerns more freely. It has been a key collaborative tool that I have used over the past two years.

Bexley campaigners ask for public's help to save Crayford Marshes

CPRE London was recently contacted by a local group in Bexley concerned that the Outer Crayford Marshes site has been bought by developers Berkeley Homes.

Added to this, the Bexley section of Inner Crayford Marshes, designated one of the best wildlife sites in London, is up for sale as a 'prospective development site'.

The Friends of Crayford Marshes is campaigning to save this much loved site located in Green Belt on the Thames at the outer edge of South East London. The site is protected Green Belt and a nature reserve with rare birds and seals, and has considerable historic interest, but is now under threat from being built over.

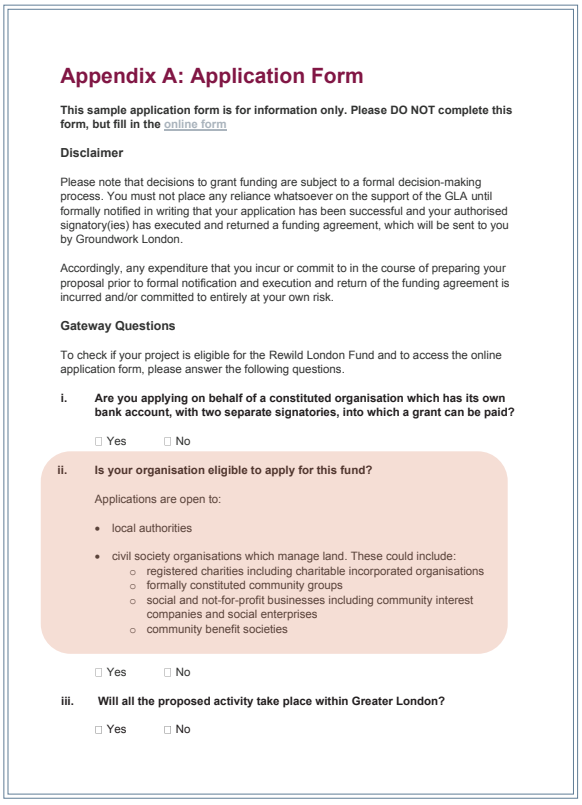

LAND
SCAPES
IN
MOTION


ACT 1: Dartmoor
Lucy Daw
ACT 2: Dartford Marshes
Dominica Piatek
ACT 3: River Thames
Elise Blackmore
ACT 4: Blackheath Common
Elliot Wedge
Landscapes in Motion is an audio experience which guides you on an individual spatio-aural adventure through the landscapes of CSM and beyond.
To begin, grab a pair of headphones and MP3 player below, or scan the QR code if you have your own headphones.

Funding Opportunities

London Wildlife Trust, in partnership with the Mayor of London, is supporting projects which will enhance and restore London's Sites of Importance for Nature Conservation (SINCs). These sites make up London's wildlife network and a core focus when taking action to rewild and recover nature in the city.

Successful applicants of the Rewild London Fund have been granted funding to improve, restore or create wildlife-rich habitats that will address the effects of climate and ecological emergency. The £850,000 fund, delivered by the London Wildlife Trust with commitment from Amazon's Right Now Climate Fund, will support 22 projects with around 116 hectares of priority habitat to be restored or created.



Appendix A: Application Form

This sample application form is for information only. Please DO NOT complete this form, but fill in the online form

Disclaimer

Please note that decisions to grant funding are subject to a formal decision-making process. You must not place any reliance whatsoever on the support of the GLA until formally notified in writing that your application has been successful and your authorised signatory(ies) has executed and returned a funding agreement, which will be sent to you by Groundwork London.

Accordingly, any expenditure that you incur or commit to in the course of preparing your proposal prior to formal notification and execution and return of the funding agreement is incurred and/or committed to entirely at your own risk.

Gateway Questions

To check if your project is eligible for the Rewild London Fund and to access the online application form, please answer the following questions.

i. **Are you applying on behalf of a constituted organisation which has its own bank account, with two separate signatories, into which a grant can be paid?**

☐ Yes ☐ No

ii. **Is your organisation eligible to apply for this fund?**

Applications are open to:

- local authorities
- civil society organisations which manage land. These could include:
  - registered charities including charitable incorporated organisations
  - formally constituted community groups
  - social and not-for-profit businesses including community interest companies and social enterprises
  - community benefit societies

☐ Yes ☐ No

iii. **Will all the proposed activity take place within Greater London?**

☐ Yes ☐ No

Organisation structures and funding

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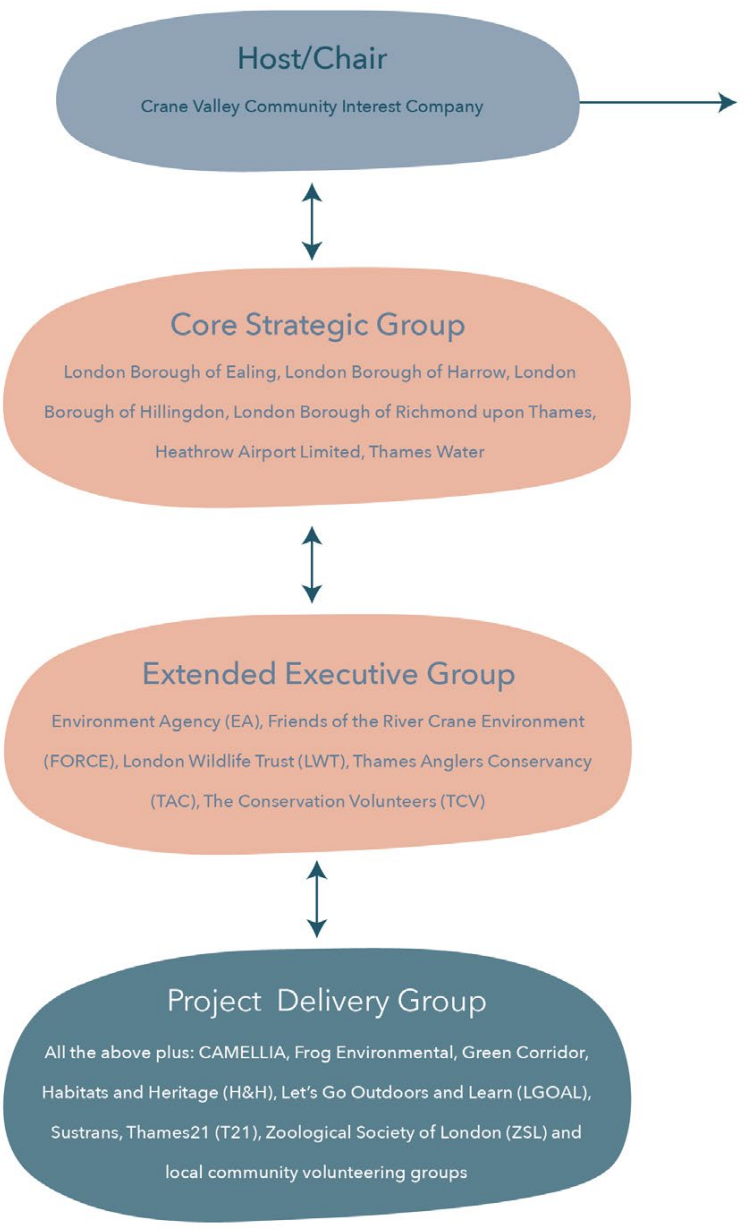
Rewild London Case Study



Helps scale interventions and attract capital investment to really make a difference on a larger scale. Can also receive funding for specific projects and donations from our dedicated supporters.

Social enterprises are businesses which trade for a social or environmental purpose. There are more than 100,000 social enterprises in the UK, contributing £60 billion to the economy and employing around two million people.

Multiple boroughs - Harrow & Hillingdon

Yeading Brook Unbound (London Borough of Harrow lead)

As part of the Crane Valley Partnership and in collaboration with local groups and volunteers, the ambitious, large-scale Yeading Brook Unbound (YBU) project will make lasting changes - both major and minor - to the Brook, its margins and adjoining areas within SINCs, parks and neighbouring allotments along its course - targeting locations and issues where greatest benefit can be achieved and engaging a wider community in its management, monitoring and ongoing improvement. Alongside making much needed, positive intervention on the ground, YBU will have a significant people focus, seeking in particular to involve community group members in survey, management and reporting activities where these presently don't occur and to help establish new groups where opportune, growing an involved, enthusiastic, and well-supported volunteer taskforce to care for individual sites and the wider environment of the Yeading. This will be critical to the project's legacy and to encouraging and enabling more nature and climate positive engagement.

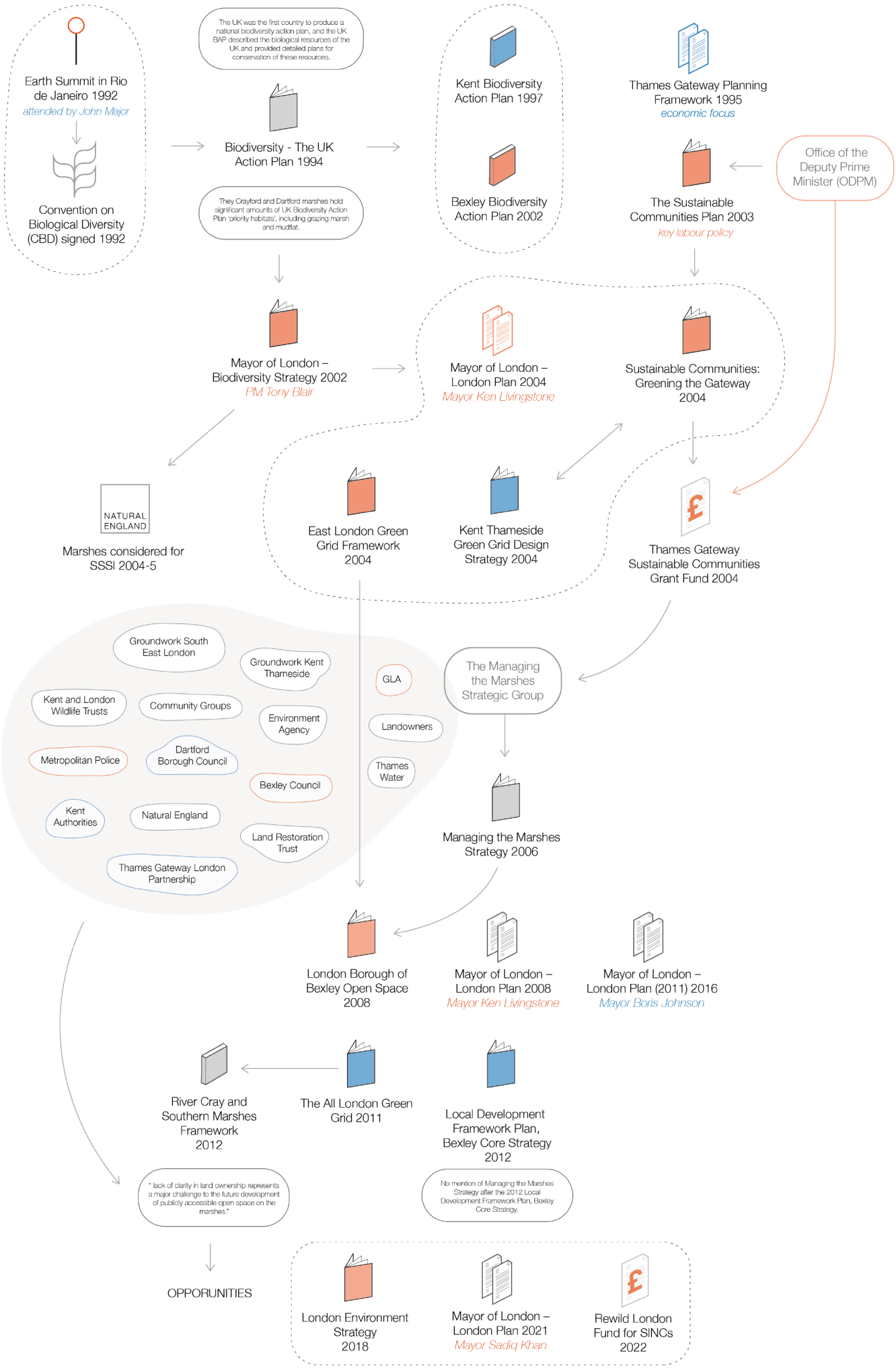
Timeline of Politics and Policy

KEY

- Neutral
- Conservative
- Labour

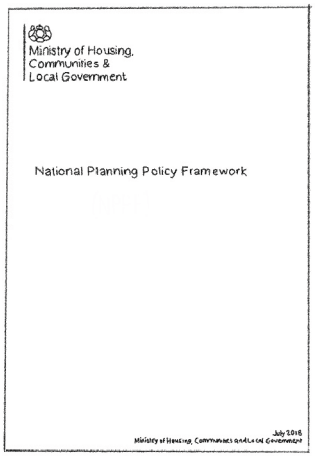
1990	John Major Elected as PM
	Environmental Protection Act
1991	
1992	Rio Conference
1993	Clean Air Act
1994	The Conservation Regulations
1995	Environment Act
1996	Wild Mammals Protection Act
1997	Tony Blair Elected as PM
1998	Aarhus Convention
1999	
2000	Ken Livingstone Elected as Mayor of London
	RCEP releases Energy: The Changing Climate
2001	Countryside and Rights of Way Act
	Creation of DEFRA
2002	
2003	
2004	The Hunting Act
2005	
2006	Natural Environment and Rural Communities Act
2007	Gordon Brown Elected as PM
2008	Department of Energy and Climate Change
	Climate Change Act
2009	Boris Johnson Elected as Mayor of London
	Heathrow Expansion
2010	David Cameron Elected as PM
2011	Energy Acts
	Royal Commission closed
2012	NPPF is published
2013	
2014	
2015	Paris Agreement
	Plastic Bag Charge
2016	Brexit Referendum - Theresa May Elected as PM
	Sadiq Khan Elected as Mayor of London
2017	
2018	25-year Environment Plan published
2019	Boris Johnson Elected as PM
2020	Amendments to the Climate Change Act
	COVID-19 pandemic
2021	COP26, Glasgow
	Environment Act 2021
2022	Lizz Truss Elected as PM
	Rishi Sunak Elected as PM
2023	Environmental Improvement Plan

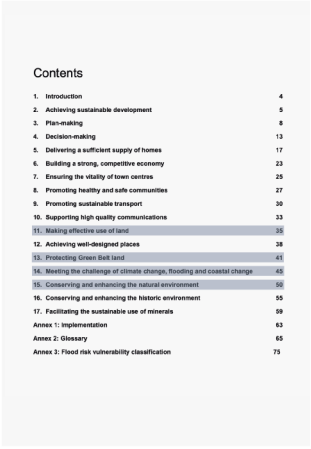
Policy and politics often go hand in hand, and in the case of Crayford and Dartford Marshes that is definately the case. There was a lot of work put into supporting and protecing this landscape at one point, until mention of it just disappeared. It's like the local council has erased it.


Earth Summit in Rio de Janeiro 1992
attended by John Major
Convention on Biological Diversity (CBD) signed 1992
The UK was the first country to produce a national biodiversity action plan, and the UK BAP described the biological resources of the UK and provided detailed plans for conservation of these resources.
Biodiversity - The UK Action Plan 1994
They Crayford and Dartford marshes hold significant amounts of UK Biodiversity Action Plan 'priority habitats', including grazing marsh and mudflat.
Kent Biodiversity Action Plan 1997
Bexley Biodiversity Action Plan 2002
Thames Gateway Planning Framework 1995
economic focus
Office of the Deputy Prime Minister (ODPM)
The Sustainable Communities Plan 2003
key labour policy
Mayor of London – Biodiversity Strategy 2002
PM Tony Blair
Mayor of London – London Plan 2004
Mayor Ken Livingstone
Sustainable Communities: Greening the Gateway 2004
NATURAL ENGLAND
Marshes considered for SSSI 2004-5
East London Green Grid Framework 2004
Kent Thameside Green Grid Design Strategy 2004
Thames Gateway Sustainable Communities Grant Fund 2004
Groundwork South East London
Groundwork Kent Thameside
Kent and London Wildlife Trusts
Community Groups
Environment Agency
Metropolitan Police
Dartford Borough Council
Bexley Council
Kent Authorities
Natural England
Land Restoration Trust
Thames Gateway London Partnership
GLA
Landowners
Thames Water
The Managing the Marshes Strategic Group
Managing the Marshes Strategy 2006
London Borough of Bexley Open Space 2008
Mayor of London – London Plan 2008
Mayor Ken Livingstone
Mayor of London – London Plan (2011) 2016
Mayor Boris Johnson
River Cray and Southern Marshes Framework 2012
The All London Green Grid 2011
Local Development Framework Plan, Bexley Core Strategy 2012
No mention of Managing the Marshes Strategy after the 2012 Local Development Framework Plan, Bexley Core Strategy.
" lack of clarity in land ownership represents a major challenge to the future development of publicly accessible open space on the marshes."
OPPORUNITIES
London Environment Strategy 2018
Mayor of London – London Plan 2021
Mayor Sadiq Khan
Rewild London Fund for SINCs 2022

Existing Relevant Policy

GOV - National Planning Policy Framework





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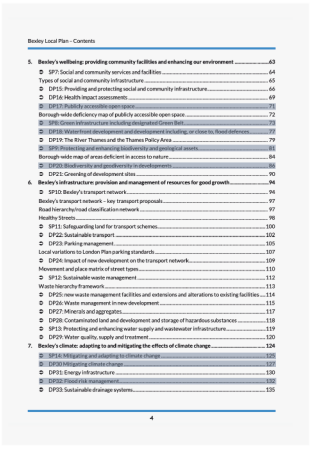
MAYOR OF LONDON - London Plan

Main contents

BEXLEY COUNCIL - Local Plan



Bexley Local Plan – Contents

4

Relevant sections in NPPF

11. Making effective use of land

13. Protecting Green Belt land

14. Meeting the challenge of climate change, flooding and coastal change

15. Conserving and enhancing the natural environment

Protection of landscapes and species is a broad and complicated topic. There are various areas of policy that can impact our natural landscapes, and it often becomes difficult to coordinate between these areas in order to achieve a desirable outcome for all. Now more than ever we need to make use of our natural recources to protect the future of our cities and mitigate the impacts of climate change. We need policy in place to push for protection of valuable landscapes, particularly the ones that are endangered and deteriorating due to lack of management and adequate statutory protection.

Relevant sections in London Plan

GG2: Making the best use of land

G1: Green infrastructure

G2: London's Green Belt

G3: Metropolitan Open Land

G4: Open space

G6: Biodiversity and access to nature

SI 5: Water infrastructure

SI 12: Flood risk management

SI 17: Protecting and enhancing London's waterways

The London Plan recognises existing green assets and suggests that the Mayor will work with boroughs and other strategic partners to enhance access to the Green Belt and to improve the quality of deteriorating areas. This is not reflected in the Bexley Local Plan.

Relevant sections in Local Plan

DP17: Publicly accessible open space

SP8: Green infrastructure including designated Green Belt

DP18: Waterfront development, etc.

SP9: Protecting and enhancing biodiversity etc.

DP20: Biodiversity and geodiversity in developments

SP14: Mitigating and adapting to climate change

DP30: Mitigating climate change

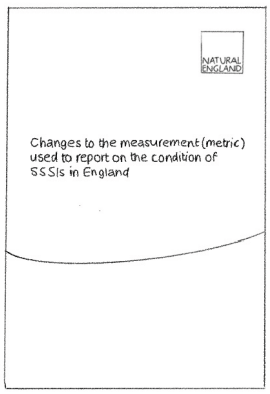
DP32: Flood risk management

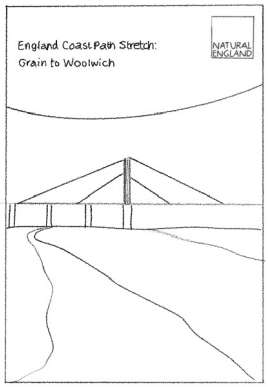
The local plan gives clearer guidance on future developments however does not really consider guidance on how to protect existing assets. There is a gap between policy and implementation, and there needs to be more information on how protected land should be managed and protected. The fate of these green spaces seems to rely on future development.

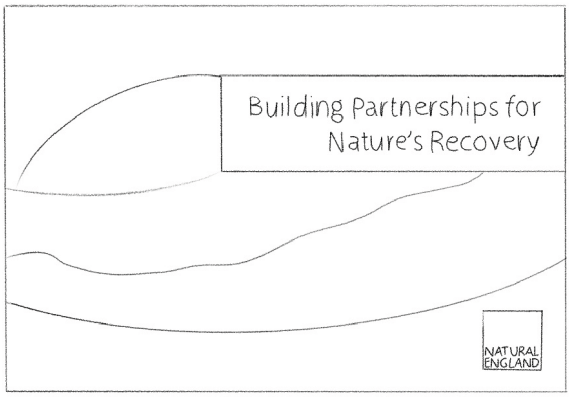
Existing Relevant Statutory Guidance

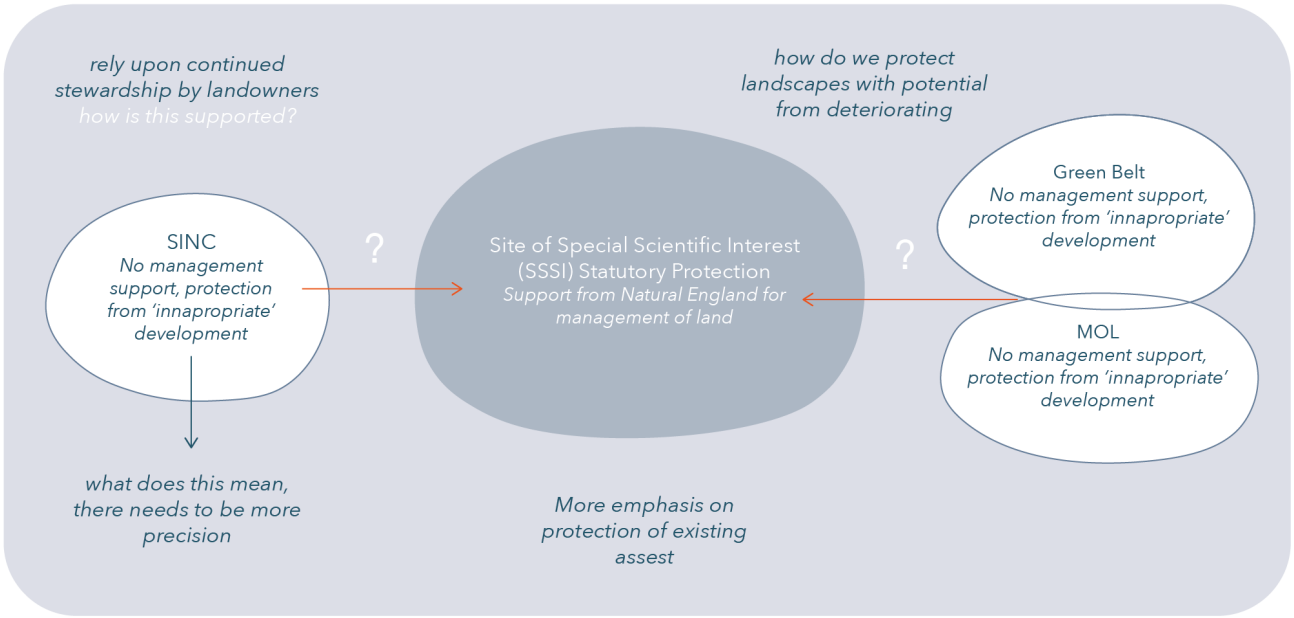
Natural England - Statutory Guidance

Responsibility for assessing and monitoring the condition of a SSSI lies with the appropriate statutory conservation agency Natural England, however many endangered sites in London are either SINC, Metropolitan Open Land or the Green Belt. Despite some of these landscapes displaying features that would classify them for consideration as SSSIs it seems there is a challenge in managing these landscapes so that they dont deteriorate.





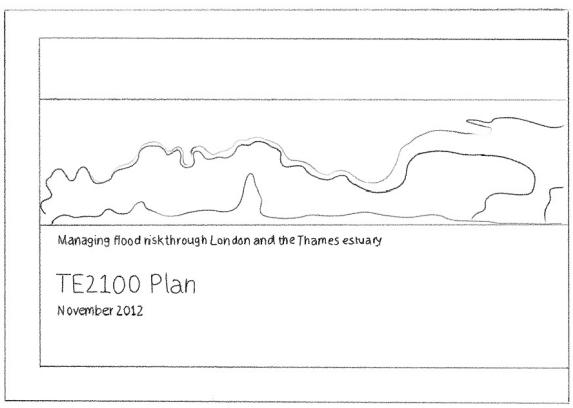


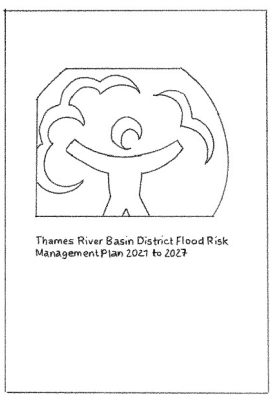


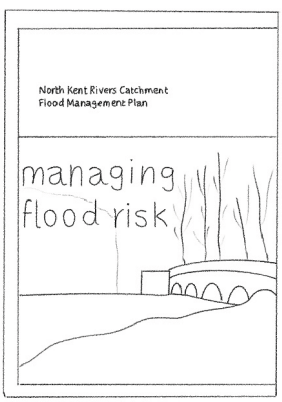
Identifying the gaps in designations and policy

Environmental Agency - Statutory Guidance

The Environment Agency's work managing flood and coastal risk, advising government and regulating industry protects people, helps wildlife thrive and promotes economic prosperity. A key document from the EA is The Thames Estuary 2100 Plan, it outlines how to manage risk and sets out a vision for the estuary's future.







National Planning Policy Framework

The NPPF focuses on statutory advice, therefore SINC related policy is not very clear in the document. It gives a broad overview on how to protect natural environment

Conserving and enchancing the natural environment

174. Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

175. Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework[58]; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

General approach no real guidance. Marshes have no statutory status and not metioned in development plan since 2012.

The 2005 marshes vision outlined a clear overview of an accessibility strategy. This was not applied to the marshes which means public access is bad.

Protecting Green Belt Land

137. The Government attaches great importance to Green Belts. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.

138. Green Belt serves five purposes:

a) to check the unrestricted sprawl of large built-up areas;

b) to prevent neighbouring towns merging into one another;

c) to assist in safeguarding the countryside from encroachment;

d) to preserve the setting and special character of historic towns; and

e) to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

The NPPF highlights the importance of species. The marshes have such unique habitats and species and should be considered for an SSSI providing statutory protection.

Habitats and Biodiversity

179. To protect and enhance biodiversity and geodiversity, plans should:

a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity[61]; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation[62]; and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

There needs to be further guidance from government on how to apply these policies in practice. There also needs to be support in facilitating these actions.

Is promote a strong enough word to use?

Most of Crayford Marshes has been purchased by Berkley Homes, they plan to build on the high point known to be a SINC and houses rare bird species on verge of extinction. How is the local plan allowed not to address this?

The designations on the marshes vary and it is confusing for most people to understand, this means that developers can take advantage of that lack of knowlege. The vision we are creating aims to make this information more available to the community.

Green Belt land is key for prevention of urban sprawl and safeguarding from inapropriate development, however it does not really forcus on protection of species and habitats.

The London Plan

The london Plan is great at identifying the actions that need to be carried out to protect SINCS, however the implementation of this in Bexley is not successful.

GG2 Making the best use of land

F protect and enhance London's open spaces, including the Green Belt, Metropolitan Open Land, designated nature conservation sites and local spaces, and promote the creation of new green infrastructure and urban greening, including aiming to secure net biodiversity gains where possible

Policy G6 Biodiversity and access to nature

A Sites of Importance for Nature Conservation (SINCs) should be protected.

B Boroughs, in developing Development Plans, should:

1) use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks
2) identify areas of deficiency in access to nature (i.e. areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them
3) support the protection and conservation of priority species and habitats that sit outside the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans
4) seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context
5) ensure designated sites of European or national nature conservation importance are clearly identified and impacts assessed in accordance with legislative requirements.

C Where harm to a SINC is unavoidable, and where the benefits of the development proposal clearly outweigh the impacts on biodiversity, the following mitigation hierarchy should be applied to minimise development impacts:

1) avoid damaging the significant ecological features of the site
2) minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site
3) deliver off-site compensation of better biodiversity value.

D Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process.

8.6.5 Development proposals that are adjacent to or near **SINCs or green corridors** should consider the potential impact of indirect effects to the site, such as noise, shading or lighting. There may also be opportunities for new development to contribute to enhancing the nature conservation value of an adjacent SINC or green corridor by, for example, sympathetic landscaping that provides complementary habitat. The London Environment Strategy includes guidance on identifying SINCs (Appendix 5) as well as habitat creation targets and a comprehensive list of priority species and habitats that require particular consideration when planning decisions are made. The London Wildlife Sites Board offers help and guidance to boroughs on the selection of SINCs.[138]

It is positive to see the consideration of natural site protection in this section. In the past this has been overlooked with more of a focus on economic value of land alongside growth and production.

Is 'should' a strong enough word? These sites NEED to be protected, and there needs to be more of a framework in place to support this locally.

There is lack of up to date information, often governments and local councils are using 10-20 year old data. There are nature groups who actively collect this date, they need to be supported by the government to provide collaboration.

How does the local council support this? There needs to be more of a framework in place and support for the communities that are doing this work voluntarily.

How do you judge whether harm is unavoidable? Where is the line? There needs to be more guidance on how to evaluate such sites appropriately.

How do you classify significant ecological features, does this relate to BAP species? Is this information up to date?

There needs to be more support in managing sites both for landowners and communitites, otherwise the sites will decline. The SSSI designations provides this support.

This is good guidance on the factors that should be considered when making these evaluations.

Bexley Local Plan

Bexley has made an effort to cover up the efforts that were made with protecting the marshes in the mid 2000s. There is no mention of the extensive work in the local plan.

POLICY SP9 Protecting and enhancing biodiversity and geological assets

1. In its planning decisions, planning policies and action plans, the Council will protect and enhance the borough's biodiversity and geodiversity assets, in line with national and regional policy, by:
   a. ensuring development in Bexley does not adversely affect the integrity of any designated European site of nature conservation importance;
   b. recognising the value of landforms, landscapes, geological processes and soils as contributors to the geodiversity of the borough by protecting designated Sites of Special Scientific Interest (SSSI), and Regionally Important Geological sites (RIGs) and Locally Important Geological sites (LIGs) and supporting their sustainable conservation and management;
   c. establishing clear goals for the management of identified geological sites, in order to promote public access, appreciation and interpretation of geodiversity;
   d. protecting, conserving, restoring, and enhancing ecological networks, Sites of Importance for Nature Conservation (SINC), Local Nature Reserves, Strategic Green Wildlife Corridors and local wildlife corridors, thus securing measurable net gains for biodiversity, recognising and promoting those sites where ecological value has increased to a higher grade of nature conservation importance;
   e. resisting development that will have a significant adverse impact on the population or conservation status of protected or priority species as identified by legislation or in biodiversity action plans prepared at national, regional or local level;
   f. protecting and enhancing the natural environment, seeking biodiversity enhancements, net gains for biodiversity and improved access to nature, particularly in areas of deficiency as illustrated by Figure 8, through new development and projects that help deliver opportunities for green infrastructure with preference given to enhancements that help to deliver the targets for habitats and species set out in the London Plan and local biodiversity action plans and strategies;
   g. enabling environmental education opportunities at the borough's schools, and investigating opportunities to involve the wider community in biodiversity or geodiversity restoration and enhancement through projects;
   h. ensuring landscaping schemes in development proposals use native plant species of local provenance; and,
   i. seeking opportunities to provide for greening of the built environment.

Implementation guidance

5.103 Bexley is home to a number of important wildlife species and habitats. Some species of plants and animals are afforded legal protection, for example under Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended). A number of habitats and species are identified in national, regional and local biodiversity action plans. The important contribution of sites of importance for nature conservation (SINC) and geodiversity value in the borough is recognised.

Implementation guidance

5.83 The watercourses in Bexley are a unique aspect of the borough, many of which are designated Sites of Importance for Nature Conservation. Consideration must be given as to how they can be positively incorporated, maintained, and enhanced as part of any future development. This includes incorporating ecological buffer zones adjacent to the watercourse, with a suitable bankside buffer of natural vegetation for wildlife.

There are no clear goals for the largest area of open space in this borough in this local plan, why?

What is the framework for this? There are a select few sites that are discussed but no focus on the ecologically most valuable landscapes.

Priority species identified on Crayford marshes, yet it has been partially sold off to a housing developer,in secret.

The value is recognised, but what next? There needs to be more guidance and support provided in the local plan for the marshes and other SINC sites.

The river Cray is a key chalk stream running through Bexley and needs a better strategy in place to support the work that Thames 21 and local wildlife groups have started to carry out.

It is difficult to understand in terms of policy why Bexley council is ignoring the marshes. It is such a strategically important piece of landscape ecologically.

Outline of legislation, designations and planning guidance relevant to biodiversity in London.

Planning

NPPF

The revised National Planning Policy Framework sets out government's planning policies for England and how these are expected to be applied.The Campaign to Protect Rural England has raised concerns about the streamlining of the revised NPPF, indicating that it treats land as a commodity, rather than as a finite resource.

London Plan

The strategic plan for London, setting out an economic, environmental, transport and social framework for development. It aims to protect and enhance London's open spaces, including the Green Belt, Metropolitan Open Land, designated nature conservation sites and local spaces promoting new green infrastructure.

Designations: European & international

These sites represent the very best of Europe's nature and are internationally important for threatened habitats and species. These sites are ambitious in their aim, requiring more than just the avoidance of species extinctions and habitats loss. Instead the objective is for all species and habitats covered to contribute towards their favourable conservation status (FCS).

Designation	Legislation	Responsibility	Priorities	Protection
Natura 2000	Natura 2000 is an EU-wide network of nature conservation sites established under the Habitats Directive (1992).	Designated by each member state.	European network of protected nature areas where certain species of animal and their natural habitats are protected in order to preserve biodiversity.	Natura 2000 sites are protected by a series of very strong tests. The onus is on protection, not compromise. All Natura 2000 sites are also SSSIs.
Special Areas of Conservation (SAC)	Designated under the Habitats Directive (1994) in Europe, and Habitats Regulations (Conservation (Natural Habitats, &c.) Regulations) in the UK.		Sites of European importance for habitats and species other than wild birds.	See 'Natura 2000'
Special Protection Areas (SPA)	Birds Directive (1979) in Europe, amended under the Habitats and Species Directive (1992), and the Habitats & Species Regulations (1994) in the UK.		Sites of European importance for wild birds.	See 'Natura 2000'
Ramsar sites	Ramsar Convention on Wetlands (1971)		Sites of international importance to birds containing 1% of a species' biogeographic population.	Ramsar sites among the most highly protected sites in UK. All Ramsars are also SSSIs. In practice, protection for Ramsar sites is as for Natura 2000 sites.
Metropolitan Green Belt / Metropolitan Open Land	Government policy on protection for the Green Belt is set out in chapter 13 of the National Planning Policy Framework (NPPF).	The Government expects local planning authorities (LPAs) to establish Green Belt boundaries in their Local Plans.	Designation is intended to protect areas of landscape, recreation, nature conservation and scientific interest which are strategically important.	Protected both by normal planning controls and an additional presumption against 'inappropriate development' within boundaries.

Designation: UK & London (Statutory)

Statutory sites have protection under UK, European and International law, while non-statutory sites are recognised in local planning as being of importance in the local area. Often, the most important sites will have more than one designation.

Designation	Legislation	Responsibility	Priorities	Protection
Sites of Special Scientific Interest (SSSI)	Designated by Natural England under NPACA - the National Parks and Access to the Countryside Act (1949), amended under Wildlife and Countryside Act (1981) and CRoW Act (2000).	Land owner or manager in consultation with Natural England.	SSSIs represent the UK's most important sites of biological or geological (or mixed) interest.	It is an offence to recklessly or intentionally damage an SSSI or disturb animals and birds on it. Owners and managers must give notice to Natural England before carrying out an 'operation likely to damage the special interest feature(s) of the SSSIs.
Local Nature Reserves (LNR)	Designated by local authorities under NPACA - the National Parks and Access to the Countryside Act (1949).	The local authority must have a 'legal interest' in the land.	LNRs are normally greater than 2 hectares in size and of local interest. Managed with conservation, opportunities for access and research in mind.	LNRs are a material consideration in planning. Local authorities have a considerable amount of control over what does and doesn't happen there.
National Nature Reserves (NNRs)	Designated under NPACA - the National Parks and Access to the Countryside Act (1949).	NNRs are managed, by Natural England, on behalf of the nation.	NNRs are established to protect the most important areas of wildlife habitat and geological formations in Britain, and as places for scientific research.	
Metropolitan Green Belt / Metropolitan Open Land	Government policy on protection for the Green Belt is set out in chapter 13 of the National Planning Policy Framework (NPPF).	The Government expects local planning authorities (LPAs) to establish Green Belt boundaries in their Local Plans.	Designation is intended to protect areas of landscape, recreation, nature conservation and scientific interest which are strategically important.	Protected both by normal planning controls and an additional presumption against 'inappropriate development' within its boundaries.

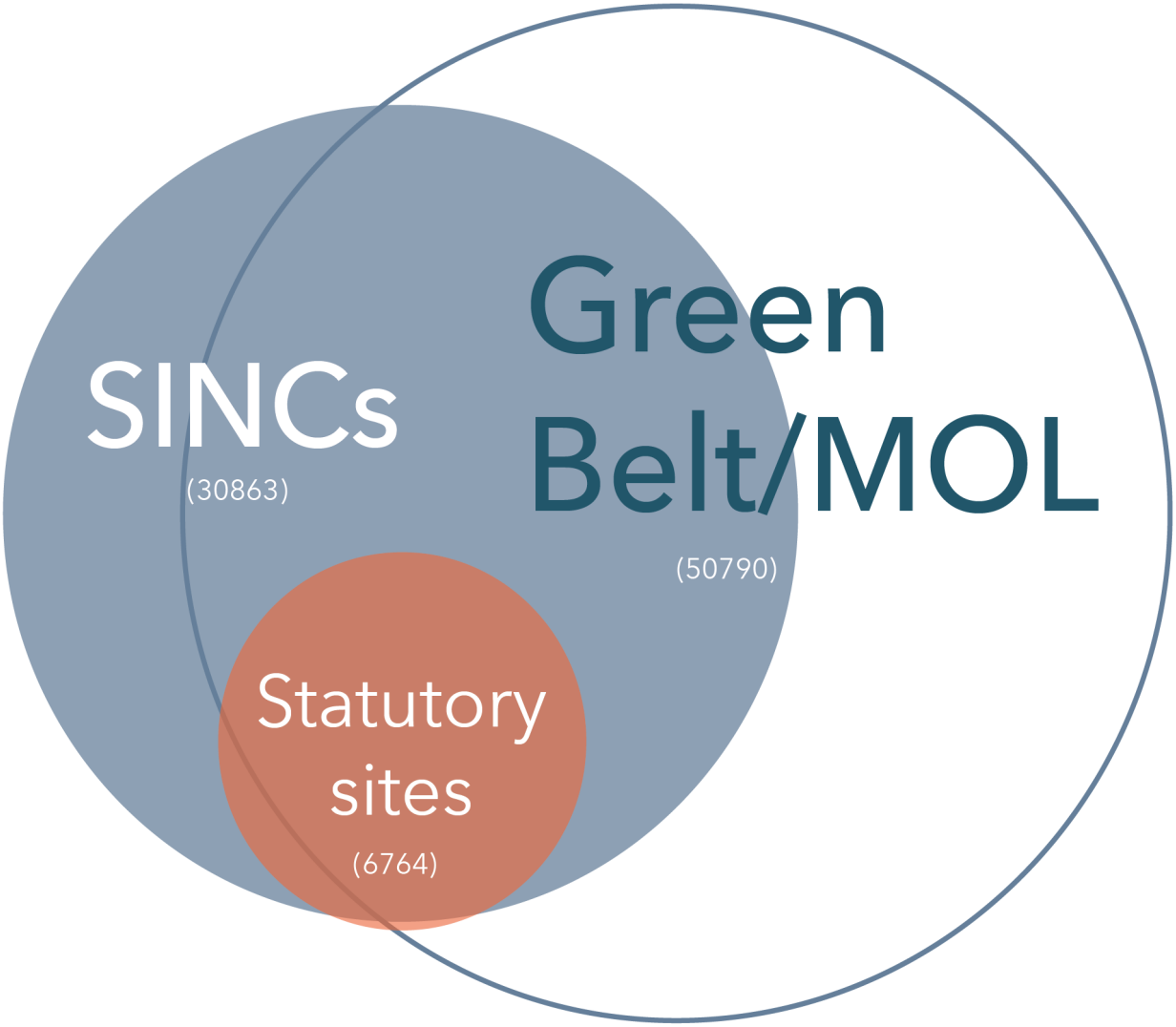
Designation: UK & London (Non-Statutory)

These are local sites that are designated by Local Planning Authorities. In London, SINCs are designated as one of a hierarchy of types.Sites of Metropolitan Importance are selected on a London-wide basis. Sites of Borough Importance (grade 1 and 2) are selected from candidates within each borough. Sites of Local Importance are the lowest tier, selected to redress any remaining local deficiencies.

Designation	Legislation	Responsibility	Priorities	Protection
Sites of Importance for Nature Conservation (SINC or SNCI)	Non-statutory designation. Identified and designated by Greater London Authority (GLA)		Chosen to represent the best wildlife habitats also of good access value for people.	Although not a statutory designation, SINCs are given some protection under the London Plan, in development plans and local development frameworks.

Area of Greater London covered by nature conservation designations and Metropolitan Open Land/Green Belt

**Areas in hectares*



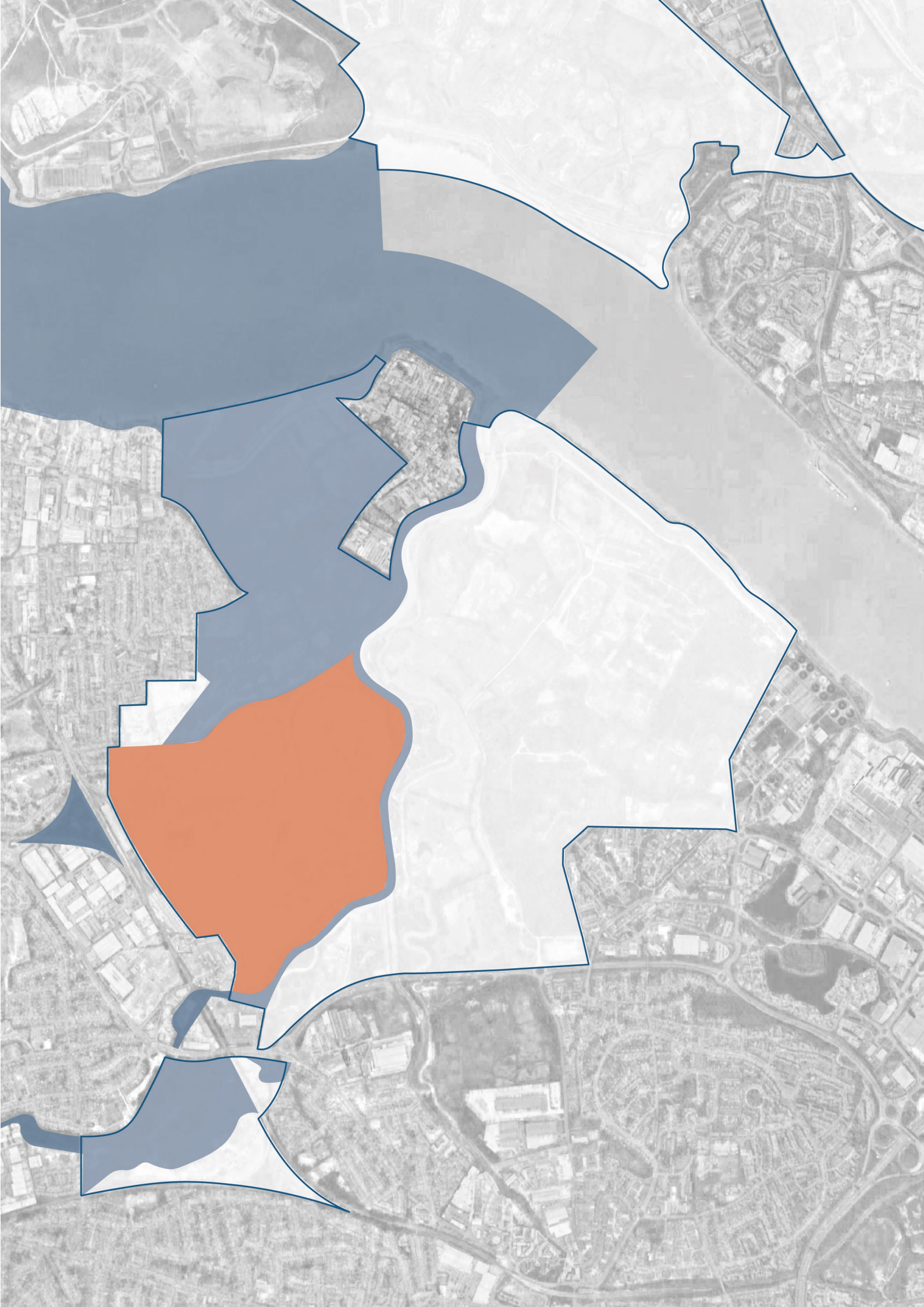
This shows that, overall, Green Belt or MOL within London covers 95% of land designated as a statutory site of importance for nature conservation under national or European legislation. It also shows that 59% of land designated as a Site of Importance for Nature Conservation (SINCs) and which is not within a statutory site is within either Green Belt or MOL. This is particularly significant as such SINCs are otherwise only subject to non-statutory protection which many consider to be insufficiently robust. Moreover, with the growing emphasis on the importance of connectivity between wildlife sites (Lawton, 2010), it is vital that the conservation value of the wider Green Belt and MOL beyond these designated nature conservation sites is properly recognised in policy and decision-making.

Statutory vs non statutory

Statutory bodies or organisations are defined by law or a statute, shaped by an Act of Parliament and set up by the Government to act in certain fields. A statutory designation is where a particular area or object is given special status or purpose by the acting body or organisation and defined in law.

A **non-statutory** designation is a status awarded by a non-statutory body under common law, formed by executive resolution or through the action of Government rather than in law or statute. Non-statutory designations however may be managed by statutory bodies and protected via other mechanisms as opposed to a specific law.

Designations, non-statutory and statutory in nature can be used to protect areas considered of value, scientifically, environmentally, historically and culturally. There are a number of known and accepted non-statutory designations which are material considerations within UK planning law and thus assessed during any planning application.



level of protection

metropolitan green belt

The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open. It is for local authorities to define and maintain Green Belt land in their local areas. The Government expects local planning authorities (LPAs) with Green Belts to establish Green Belt boundaries in their Local Plans.

Sites of Importance to Nature Conservation (SINC)

site of metropolitan importance

Sites which contain the best examples of London's habitats, including particularly rare species, rare assemblages of species or important populations of species, or sites which are of particular significance within otherwise heavily built-up areas of London. They are of the highest priority for protection.

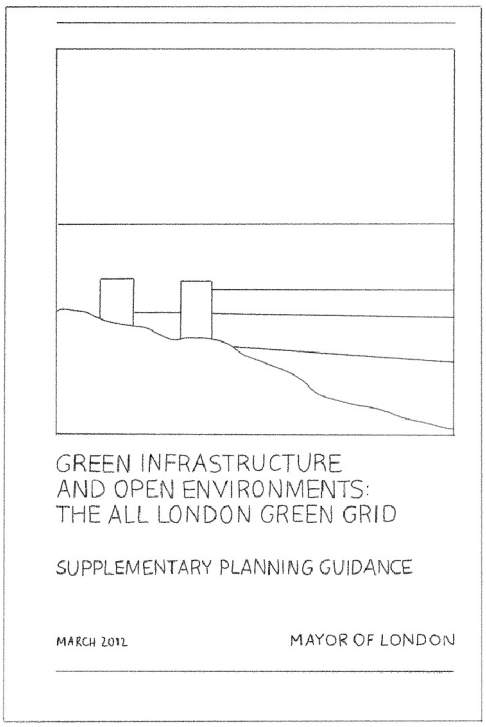
site of borough importance (grade one)

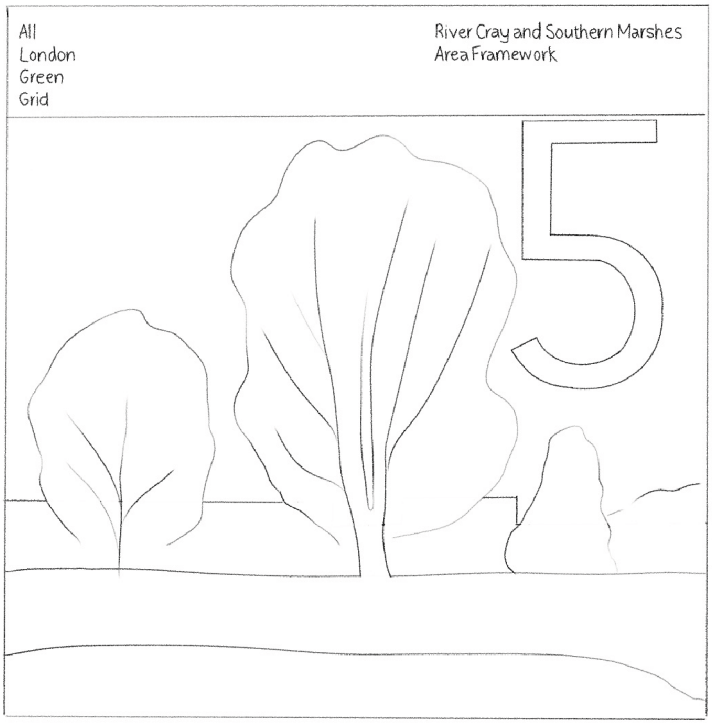
Sites which are important on a borough perspective in the same way as the Metropolitan sites are important to the whole of London. Although sites of similar quality may be found elsewhere in London, damage to these sites would mean a significant loss at a Borough level.

Existing Relevant Non-Statutory Guidance

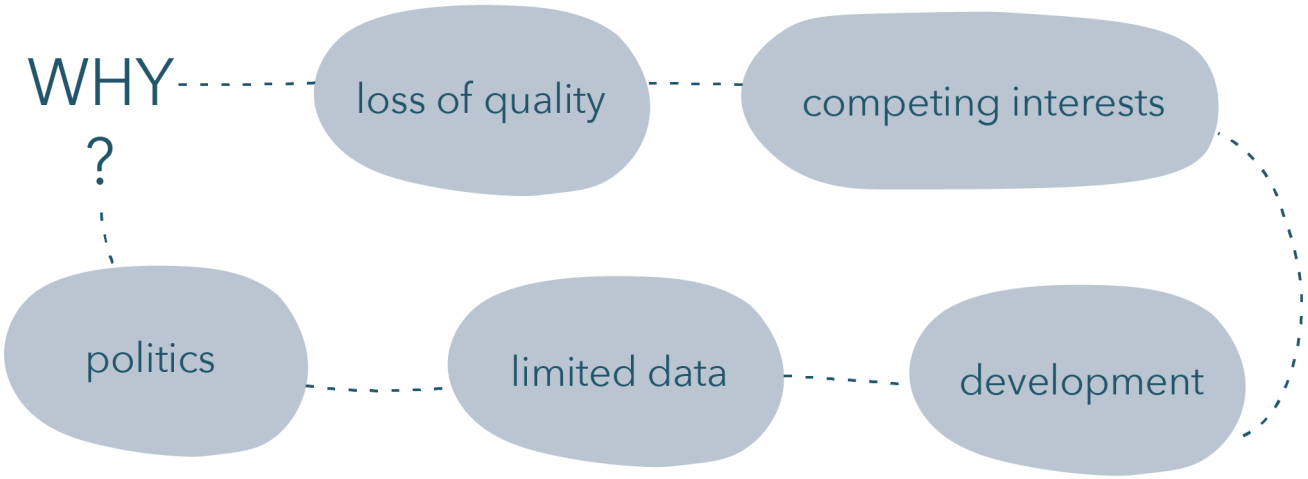
All Green Grid - Supplementary Planning Guidance

The All London Green Grid has been developed to provide a strategic interlinked network of high quality green infrastructure and open spaces that connect with town centre's, public transport nodes, the countryside in the urban fringe, the Thames and major employment and residential areas. This approach has been extremely successful in accelerating delivery of green infrastructure in East London through the East London Green Grid (ELGG).

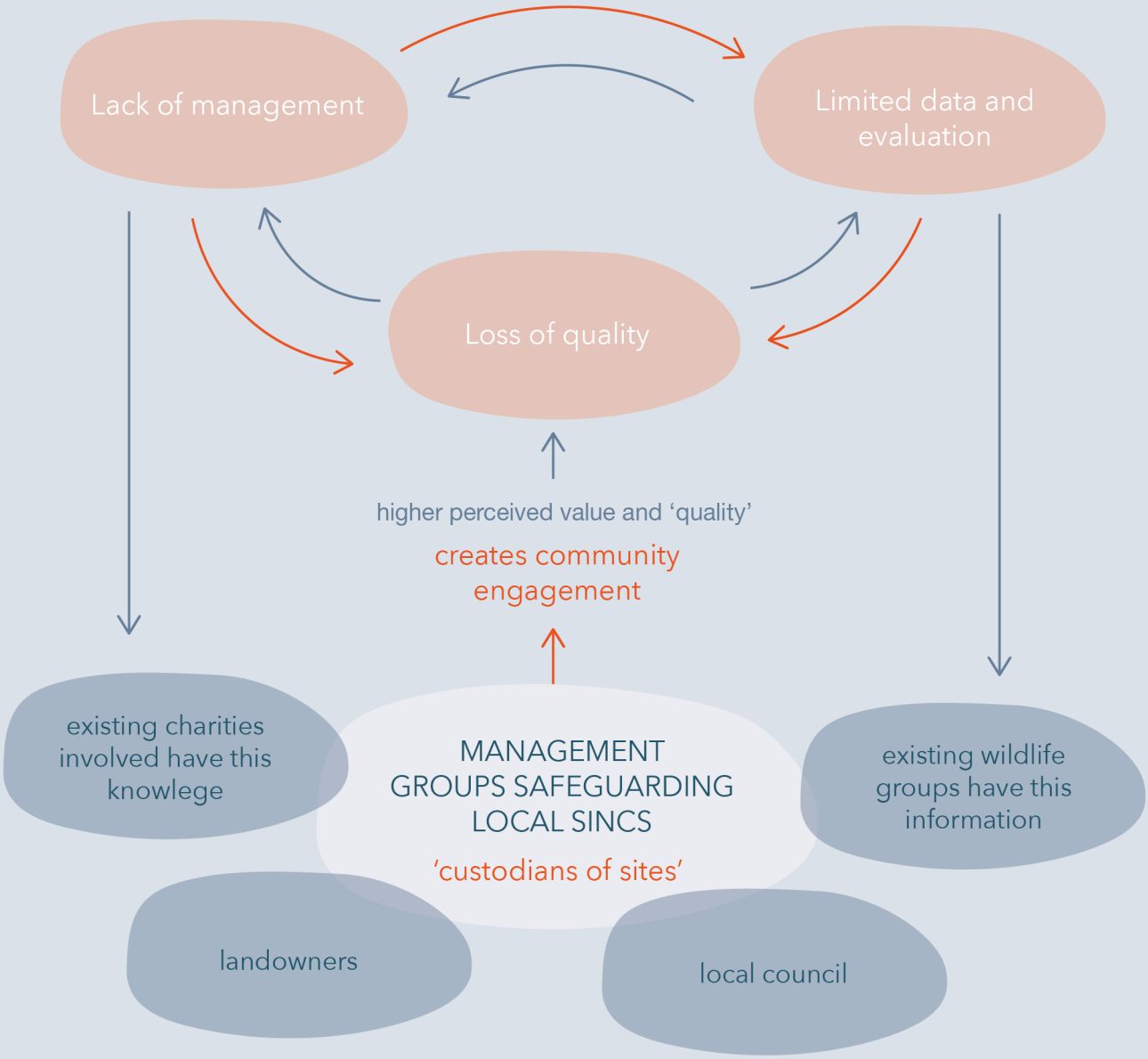




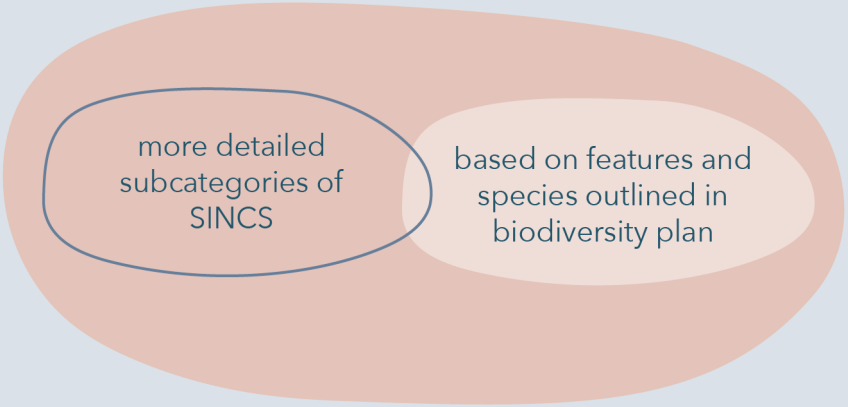
The Framework provides an extensive list of project identifications, outlined next steps, funding opportunities, cost outlines. Ten years on there is no visible progress and the marshes are deteriorating. No mention in the Local Plan and no strategy.



Main issues in safeguarding SINCs and proposed actions for local areas:



Proposed SINC designation alterations:



- highlights sites worthy of SSSI designations
- protects landscapes from deteriorating
- provides a hierachy and focus points for local authorities

London Wildlife Trust SINC Case study

view of Erith Quarry from across the valley

LOSING SPACES

ERITH QUARRY

Erith Quarry was an active minerals extraction site from the 1890s to the early 1980s. After quarrying ceased, the site was vacated and in the 1990s the site was given a dual designation; as a Borough SINC (in recognition of the Quarry's relative habitat value), and for redevelopment.

Planning permission was granted for residential dwellings and a new primary school with associated landscaping in March 2015. Ecology was an important consideration for this application; extensive ecological surveys were carried out before any designs were finalised. It was argued, as part of the permission, that the ecological value of part of the site was declining (mainly due to lack of management).

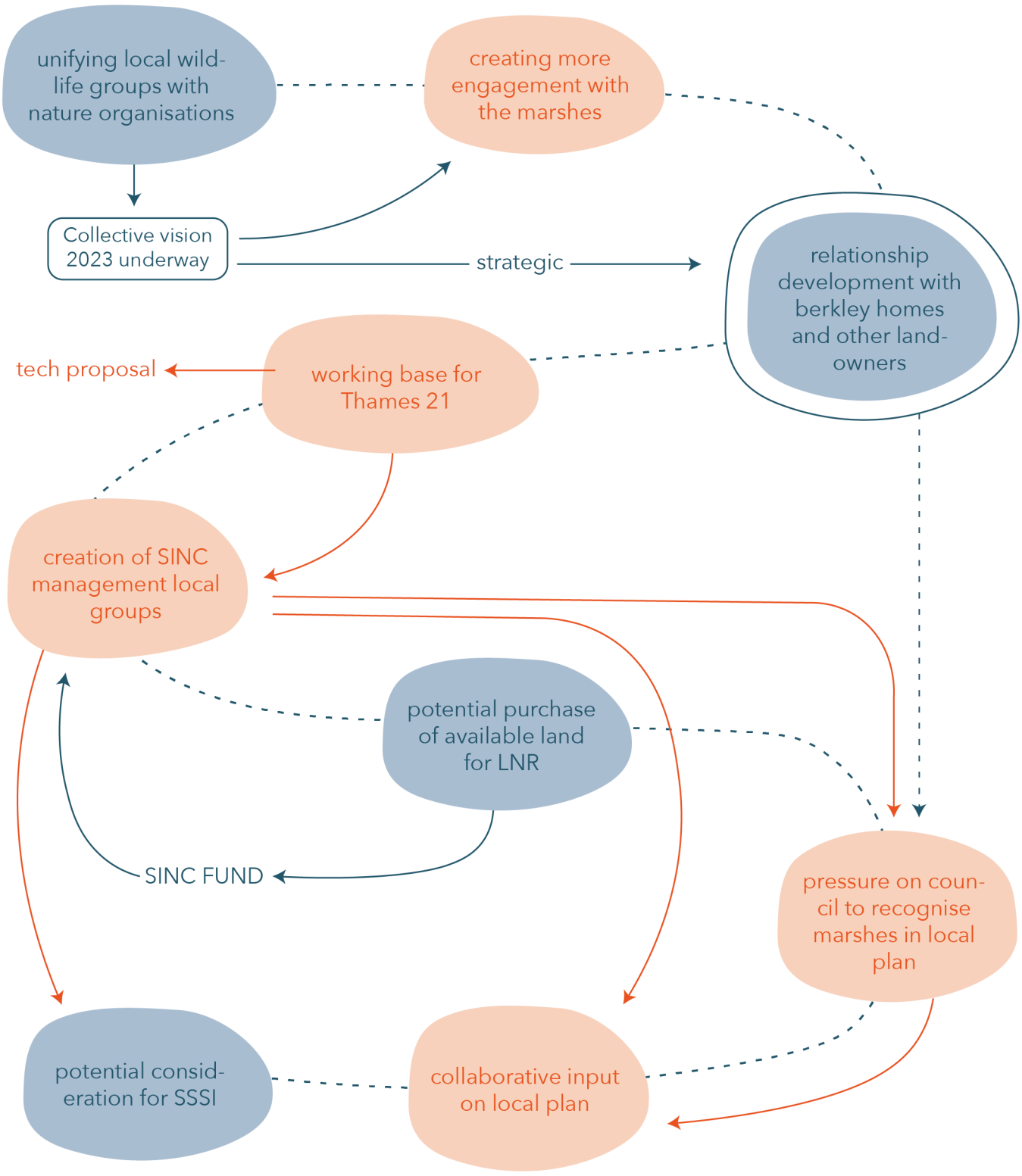
Although the approved development will reduce the area designated as a SINC (22.78ha) a principle behind the development was to protect and enhance the best habitats. 3.25 hectares of the best grassland was retained. Ponds will be created within this area, and the ring of woodland that surrounds the site will be enhanced through a plan delivered by a specially created management company.

The funding of nature conservation activities directed through 'planning gains' is very low. Department for Communities and Local Government figures for 2007/8 show housing development valued at £95bn nationally; of this £5bn in S106 contributions was made, with only £5m allocated to 'nature conservation'.

This is a case study from the 'Spaces Wild' Publication in 2015. It highlight the importance of managing SINCS particularly when there is an element of development introduced. The budget and consideration for nature conservation is very low, there need to be measures in place to protect these spaces and to work with developers,local groups and boroughs.

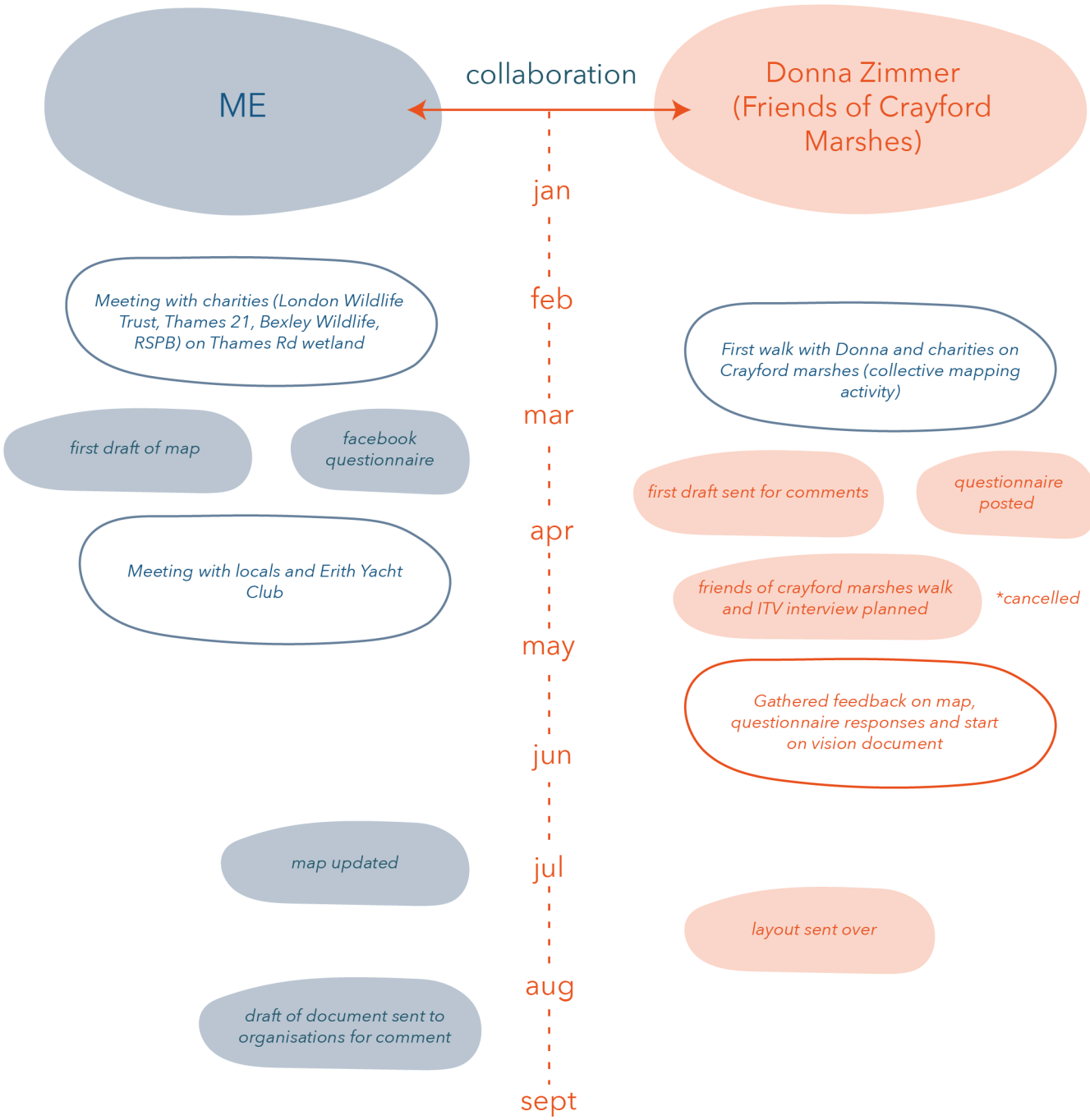
Potential impact of proposed policy on my site

This is a case study from the 'Spaces Wild' Publication in 2015. It highlight the importance of managing SINCS particularly when there is an element of development introduced. The budget and consideration for nature conservation is very low, there need to be measures in place to protect these spaces and to work with developers,local groups and boroughs.This is a case study from the 'Spaces Wild' Publication in 2015. It highlight the importance of managing SINCS particularly when there is an element of development introduced. The budget and consideration for nature conservation is very low, there need to be measures in



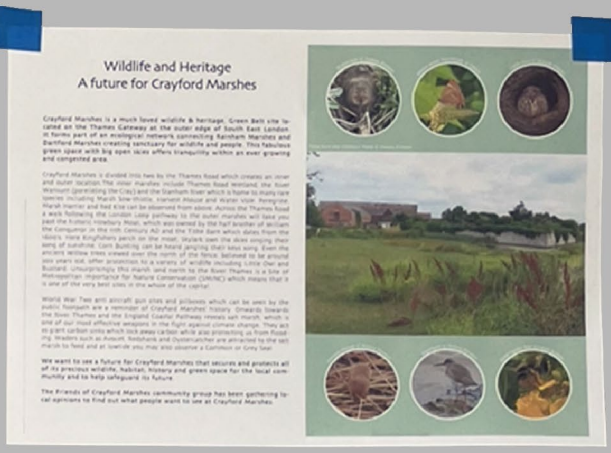
Collective Vision as First Step

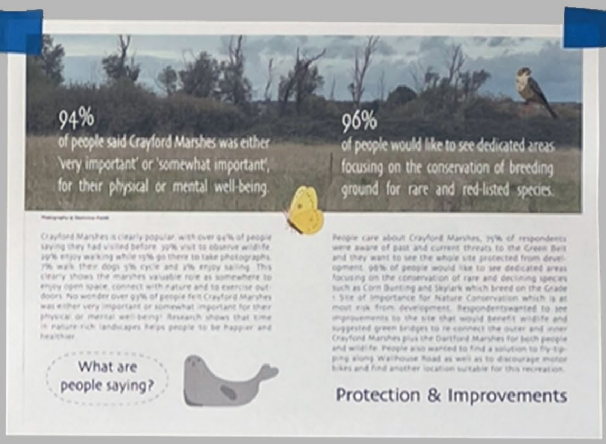
I have been working with on a collective vision this year, with the support of Friends of Crayford Marshes and various wildlife charities and organisation. I view this as a first step in mobilising towards a change in designation and policy. This vision will help for a support group that can make up the SINC management group as proposed, with support from Bexley.

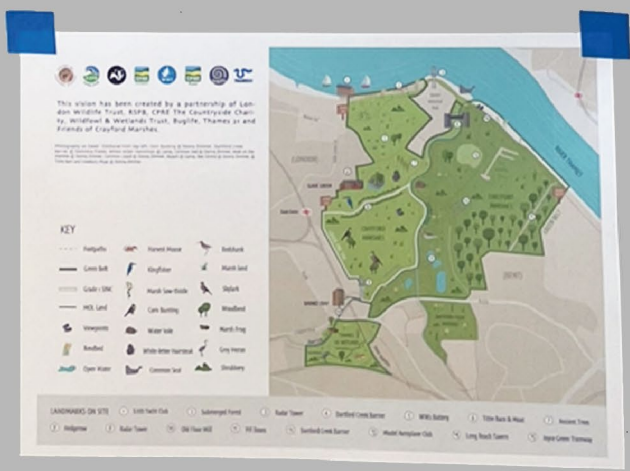


Planned release of vision at Erith Yacht Club: September 2023. Release to press in October 2023, with interview for ITV news.

First Draft Shared for Comments 20.08.2023



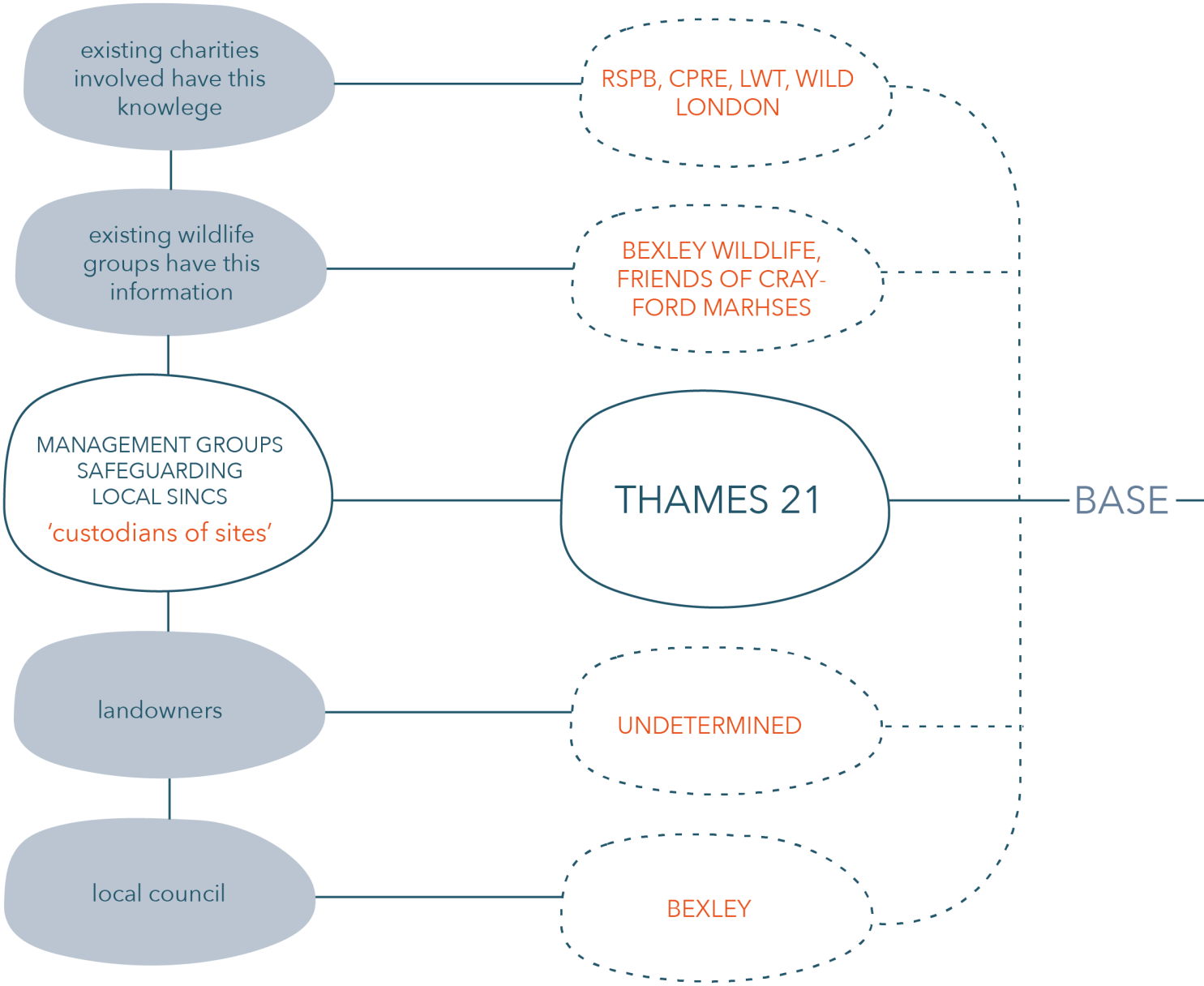




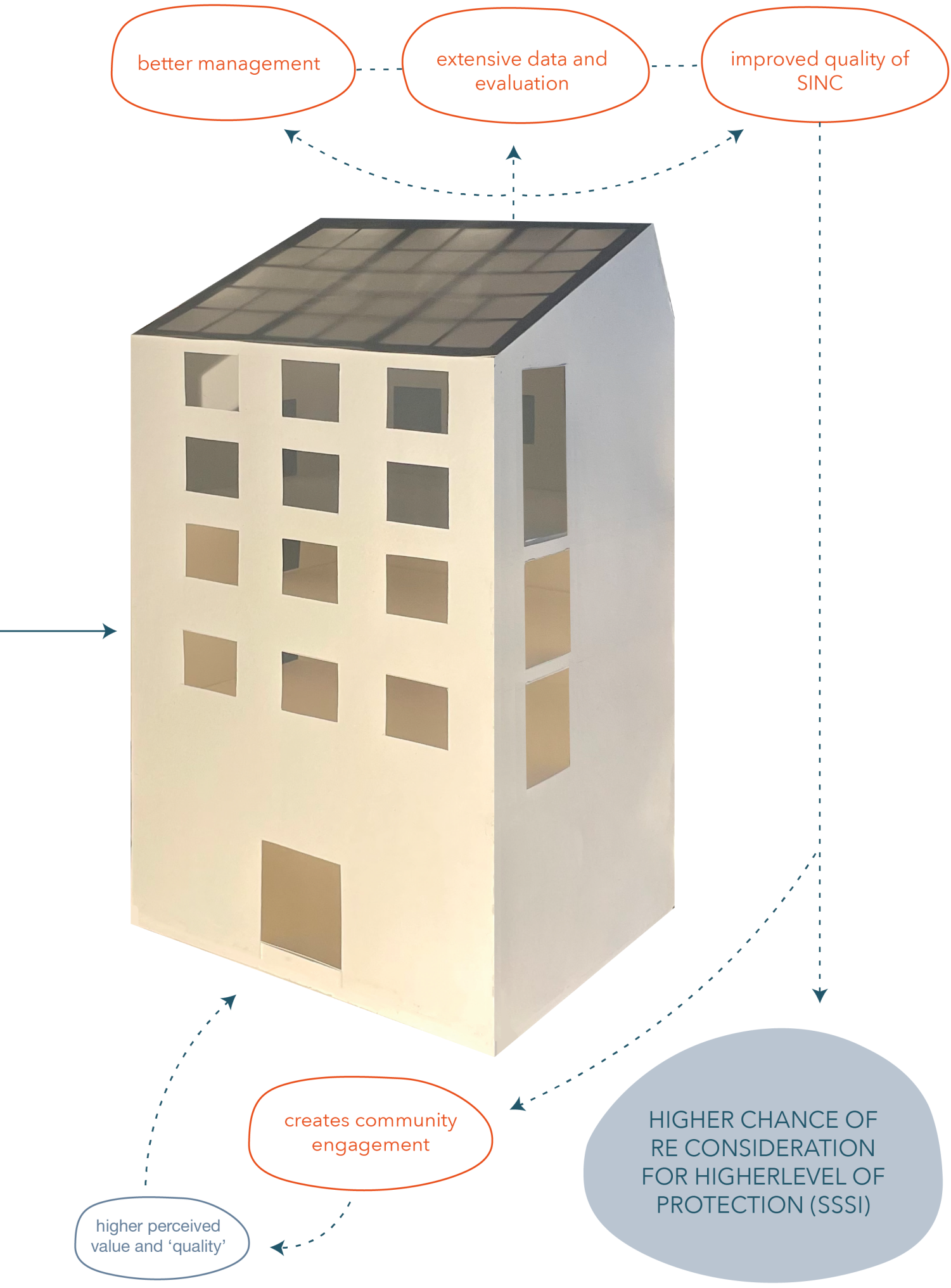
Crayford Old Flour Mill as an Anchor for Thames 21; A pilot for proposed guidance on safeguarding and management of SINCS

The Mill as a Pilot Project for Policy

The old flour mill acts as an anchor for this pilot project. Its strategic location connects the outer and inner marshes and provides a great working base for the charity Thames 21 that is already active on the marshes alongside local wildlife groups and volunteers.

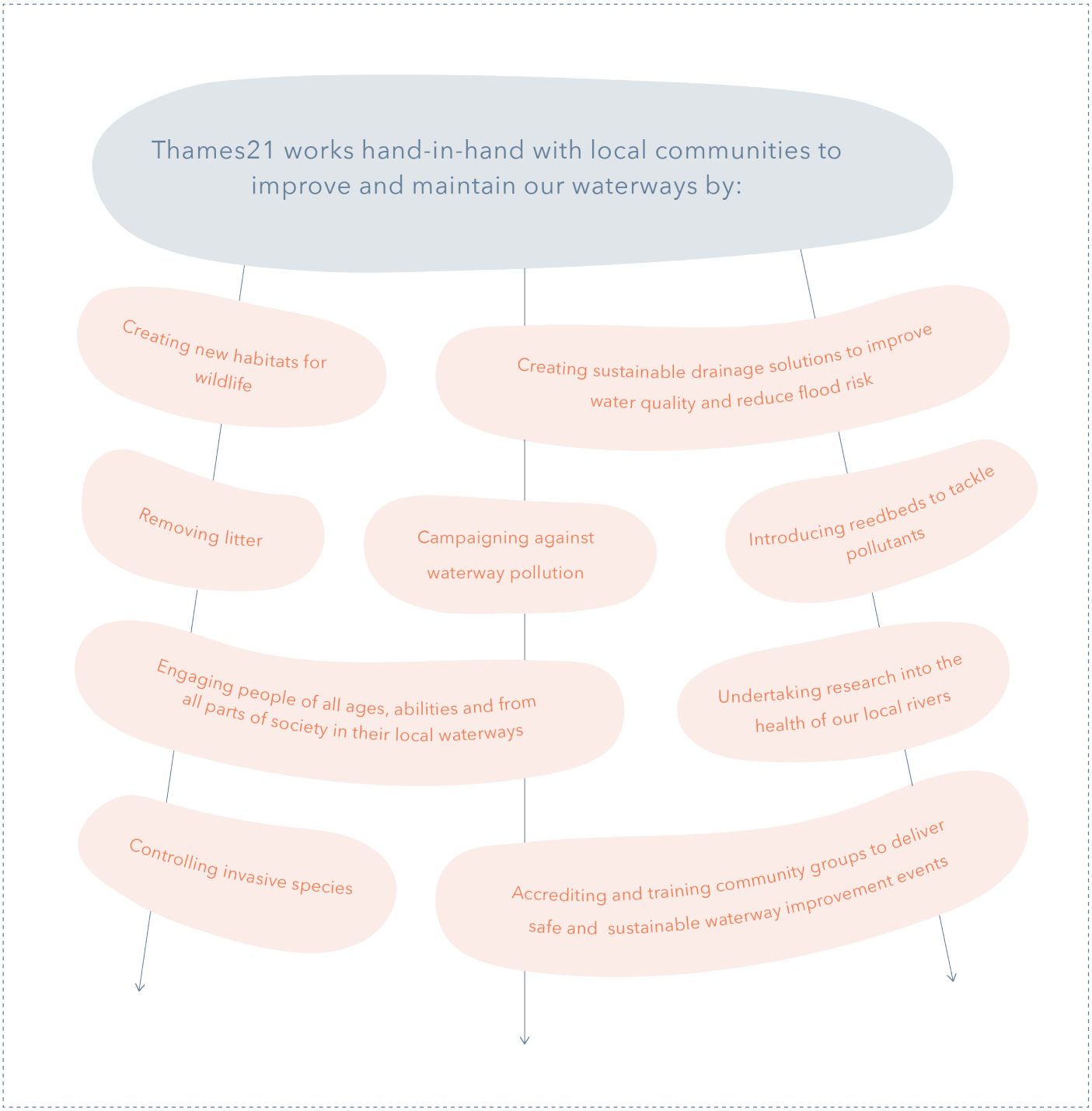


The river Cray that runs through the marshes is a rare type of chalk stream, it is being restored and protected by this charity. Their stable, cool, nutrient-rich waters allow chalk streams to support an exceptionally high number of species – so much so that these habitats are sometimes described as "England's rainforests". The design for the mill reactivates this historically valuable space and provides a space for community, while creating better access onto the marshes.


better management
extensive data and evaluation
improved quality of SINC
creates community engagement
higher perceived value and 'quality'
HIGHER CHANCE OF RE CONSIDERATION FOR HIGHERLEVEL OF PROTECTION (SSSI)

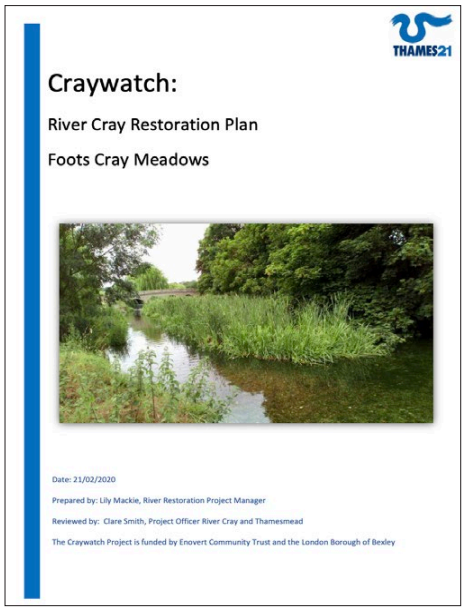
Thames 21 *(Custodians of the Landscape)*

"Thames21 is the voice for London's waterways, working with communities to improve rivers and canals for people and wildlife." Every year, they engage thousands of volunteers in the effort to clean and enhance the 400-mile network of waterways in the capital. Thames21 strives to revitalize overlooked waterways, making them accessible and enjoyable for all through inventive and tailored community strategies.



Thames21 evolved from a partnership programme backed by Keep Britain Tidy, the Port of London Authority, the Environment Agency, Thames Water, British Waterways, The Corporation of London, and 19 local authorities. It has since become an independent charity, sustained by funding from a diverse range of charitable trusts, companies, and public sources. It has a growing and diverse programme of water improvement projects across London.

The Craywatch Project *(Darent and Cray Catchment Partnership)*

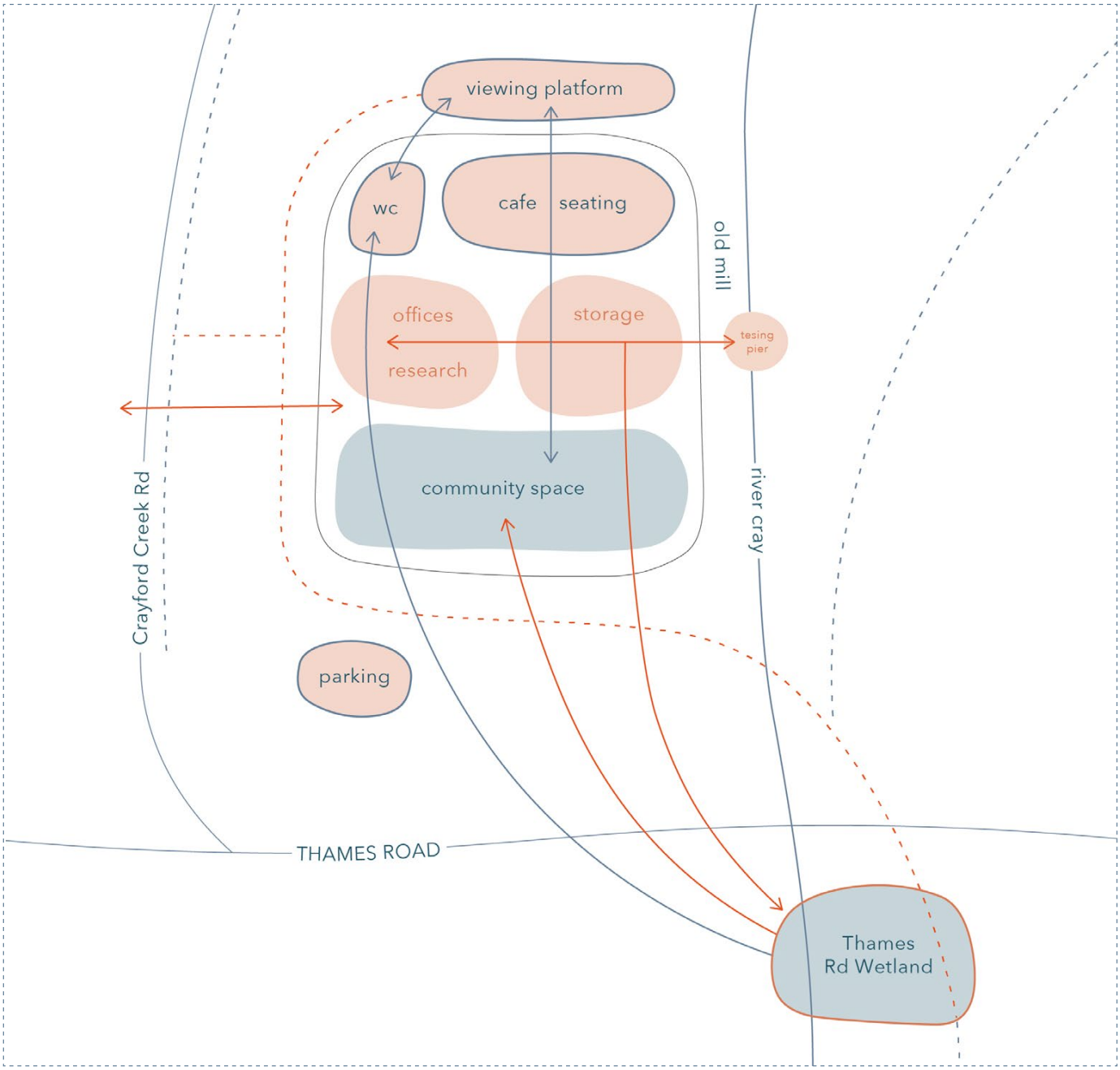


The River Cray is a chalk stream, rising from springs in Orpington, near Bromley, before flowing north to join the river Darent near Dartford and then the Thames. Chalk streams are one of our most special types of river – there are only around 200 chalk streams worldwide and 85% of them are in southern England. In their natural state, these rivers are rich in wildlife and picturesque, with gently-flowing, clear chalk-filtered water. The Cray is under multiple pressures; from plastic pollution and other litter; toxic chemicals from roads, abstraction (when water is removed for human use) and invasive non-native species. *The Craywatch Project supports the Darent and Cray Catchment Partnership vision: 'For the Darent and Cray to be a clean healthy river system with a sustainable flow which supports a diversity of wildlife by 2027'.*

The river restoration work proposed in the Craywatch Project plan is funded by Enovert Community Trust and the London Borough of Bexley. A lot of the work on the Craywatch project is at Thames Rd Wetland across from the Old Mill. The image below shows a volunteer group working with Thames 21 on TRW.

Use of Space (Client Requirements)

Having met and spoken with the Managing Officer from Thames 21 for this site, this has given a clear guidance on their needs and requirements for this site. A key requirement is to supply accessible toilet facilities, particularly for their volunteers working on the Thames Road wetland site.



A meting space would serve both the charity and community, with seperate offices for a research base. There is also a need for storage of tools as well as a testing pier on the river in order to monitor the river. The mill has an additional function as a landmark of the landscape and will connect the footpaths leading from the inner marshes to the outer marshes, they are currently fractured. The mill serves as a resting spot with a viewing platform and facilities for the users of the marshes.

1 Old Flour Mill	3 The River Cray	5 Crayford Creek	7 Thames Road
2 Crane Hire Company	4 Barnes Cray Area	6 Thames Rd Wetland	8 Crayford Marshes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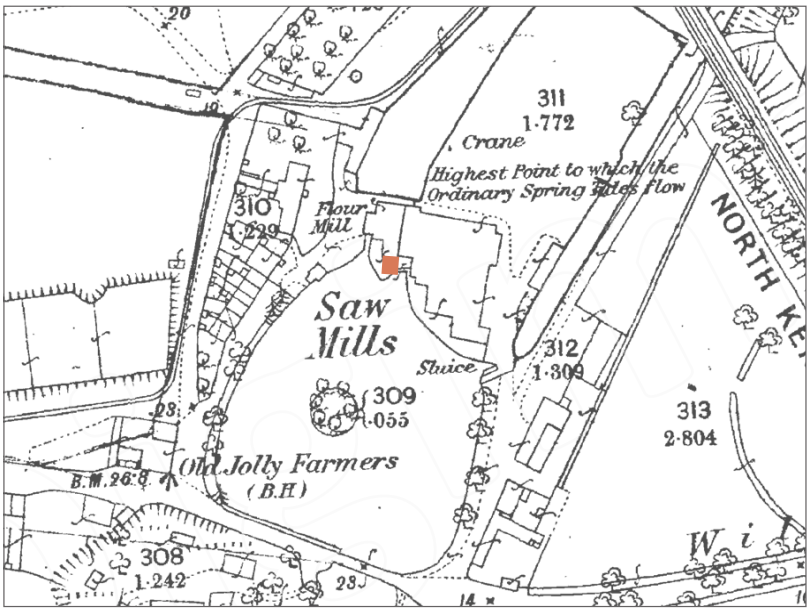
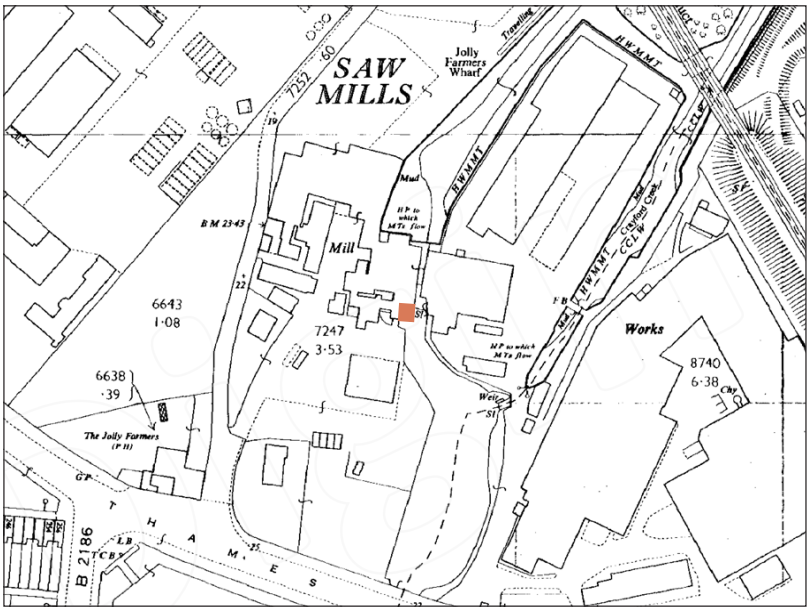
History of the Old Flour Mill



Position of mill today

OS map from 1880s



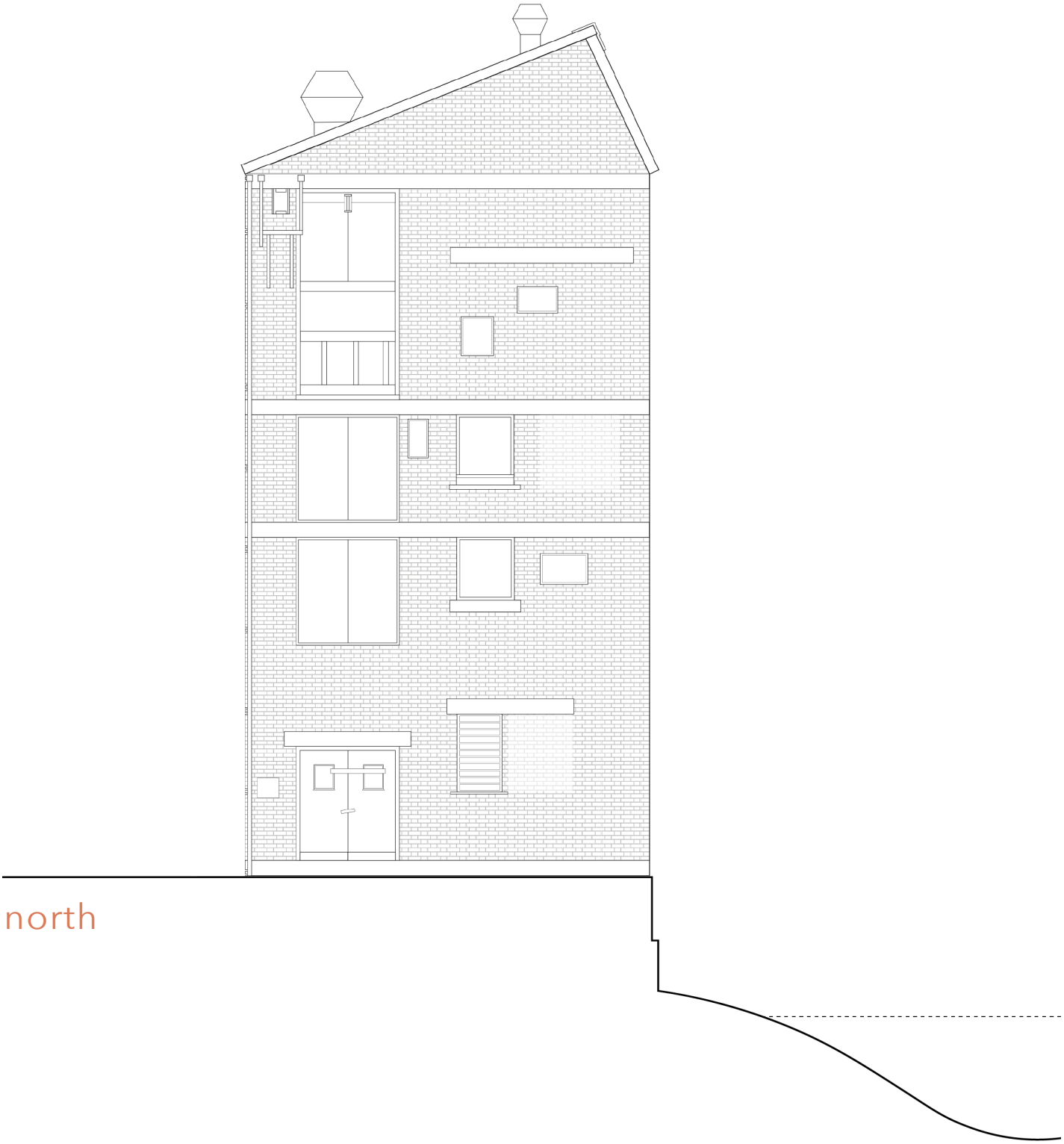
Position of mill today

OS map from 1980s

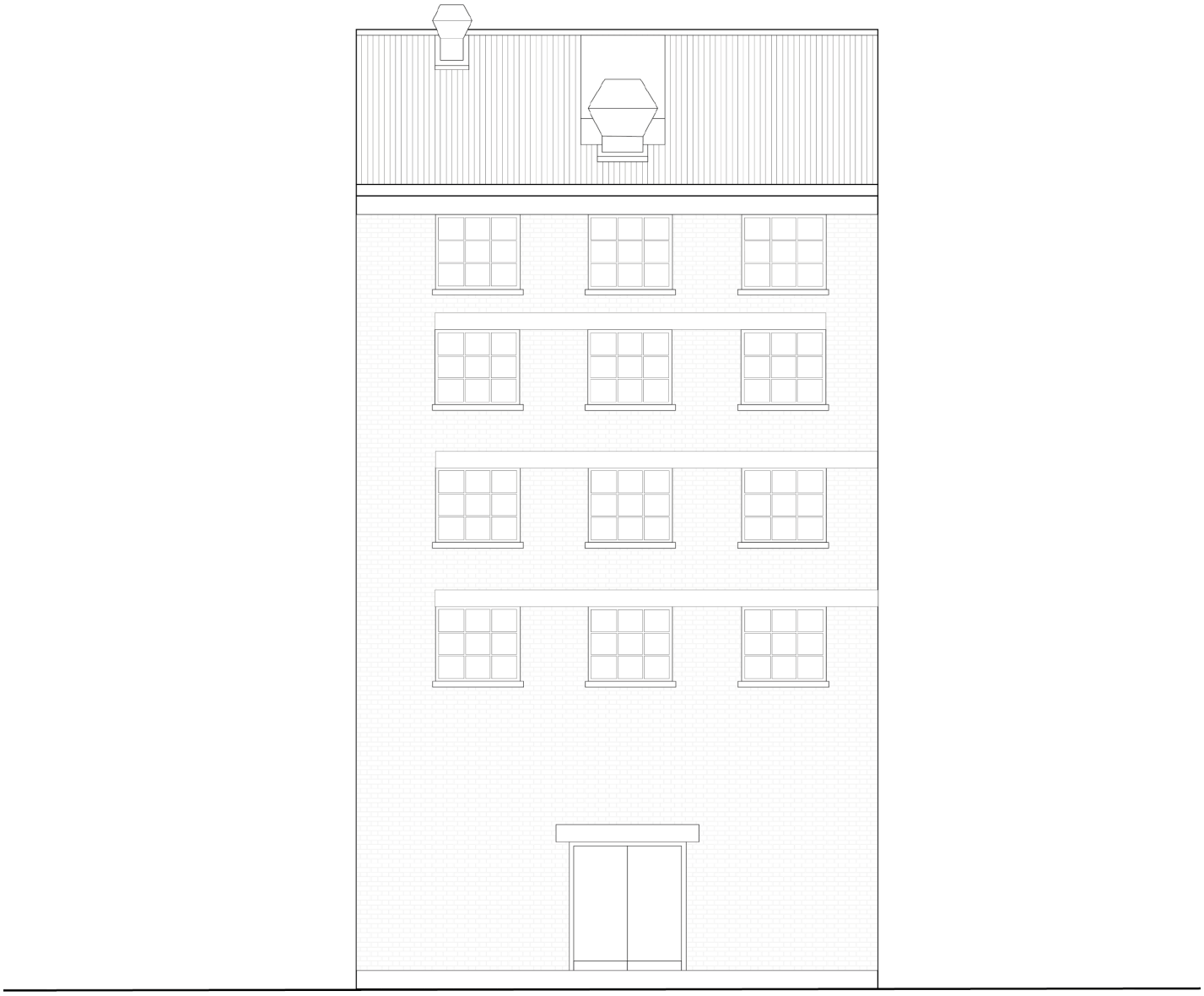
Originally the site of an iron mill in the 16th century. By 1817, and probably much earlier it was a flour mill, which is thought to have been constructed in that year. The waterpowered machinery was removed just before WW1. Crayford Flour Mills was a water powered corn mill, it was first built in the 19th century and used the water power of the River Cray to produce flour. It was a significant landmark in the area and played a big role in the production of flour for the wider region. The mill operated for many years but fell into disrepair and was no longer operational. In the early 20th century, the mill was purchased by Vitbe, they specialised in producing a flour that was high in protein and fiber. The mill was refurbished and modernised with new equipment, it continued to operate, it was then closed and partially demolished in two phases in 2004 and 2009.Today, little remains of the original structure however, the legacy and history of the mill continues to be remembered by locals. It is a key landmark in the landscape linking the marshes.

Images of demolition work

Existing Elevations

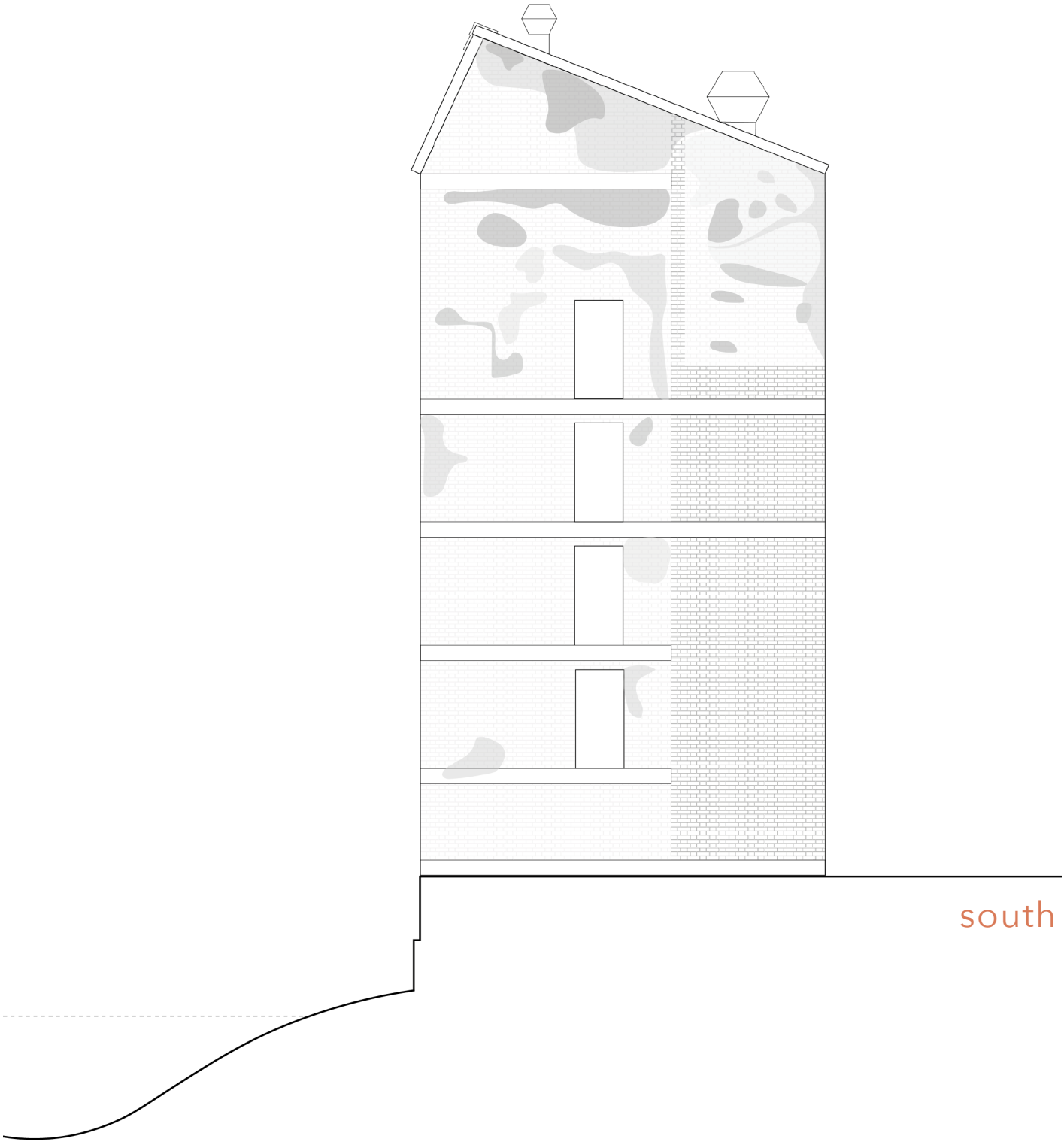


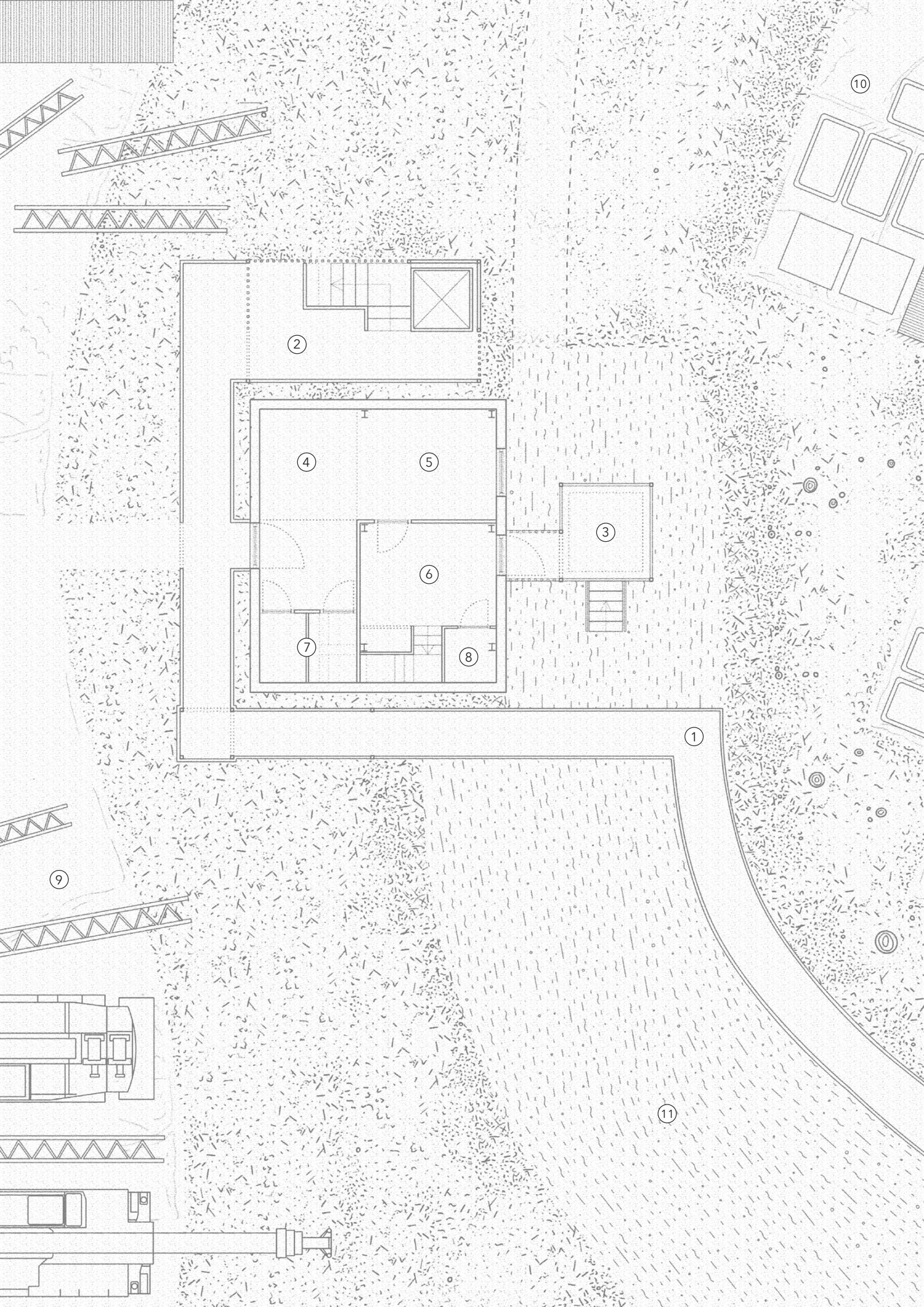
north



east

Existing Elevations


south


1
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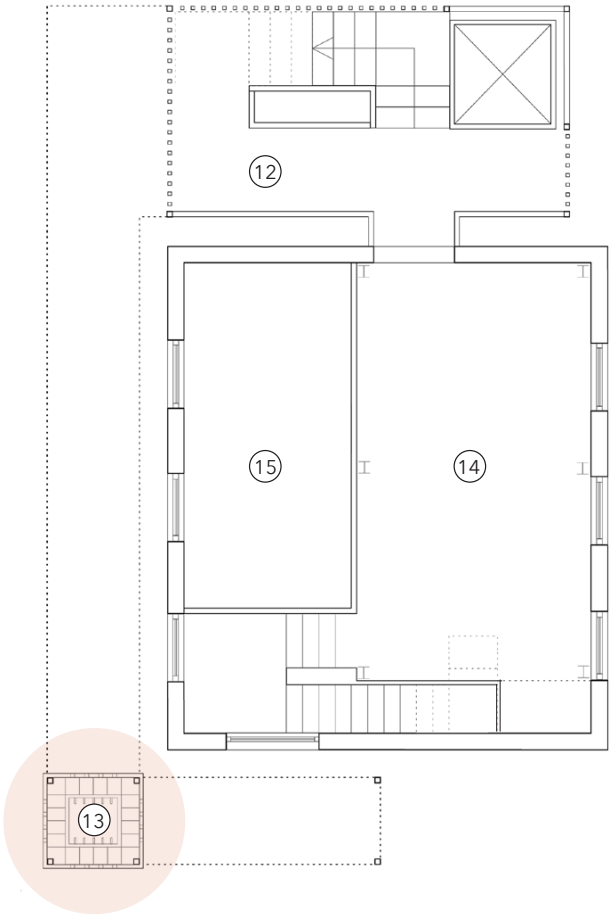
11

Proposed Mill Plan

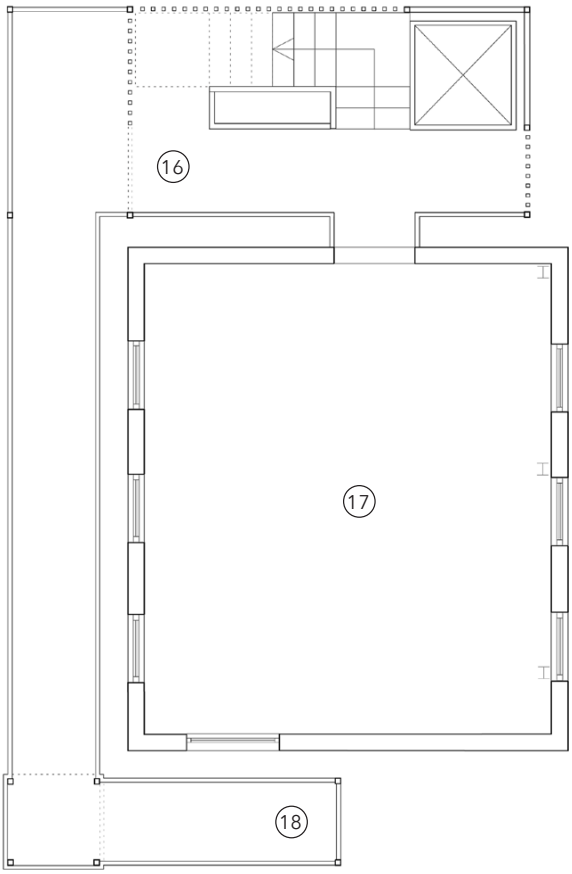
The proposal looks to create better pedestrian access, to provide a community space, to house a charity active on the river Cray and to restore a key industrial heritage building in Crayford.

Habitat feature to house Barn swallows and bats, species that are part of the existing marsh habitat. It was important to accomodate for species as well as humamn users.

First Floor Mezzanine Layout



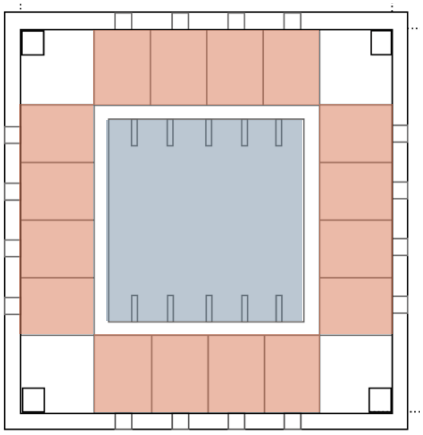
Second/Third Floor Layout



1. Pedestrian access from TRW
2. External staircase
3. River testing pier for Thames 21
4. Seating area for visitors
5. Cafe area
6. Private entrance for Thames 21
7. Accessible toilets
8. Private toilet for Thames 21
9. Crane industrial site
10. Recycling industrial site
11. River Cray
12. External staircase level 1
13. Habitat feature
14. Thames 21 meeting space
15. Seating area downstairs
16. Exernal staircase level 2/3
17. Office level 2, Community space 3
18. Viewing platform for visitors

Habitat Feature

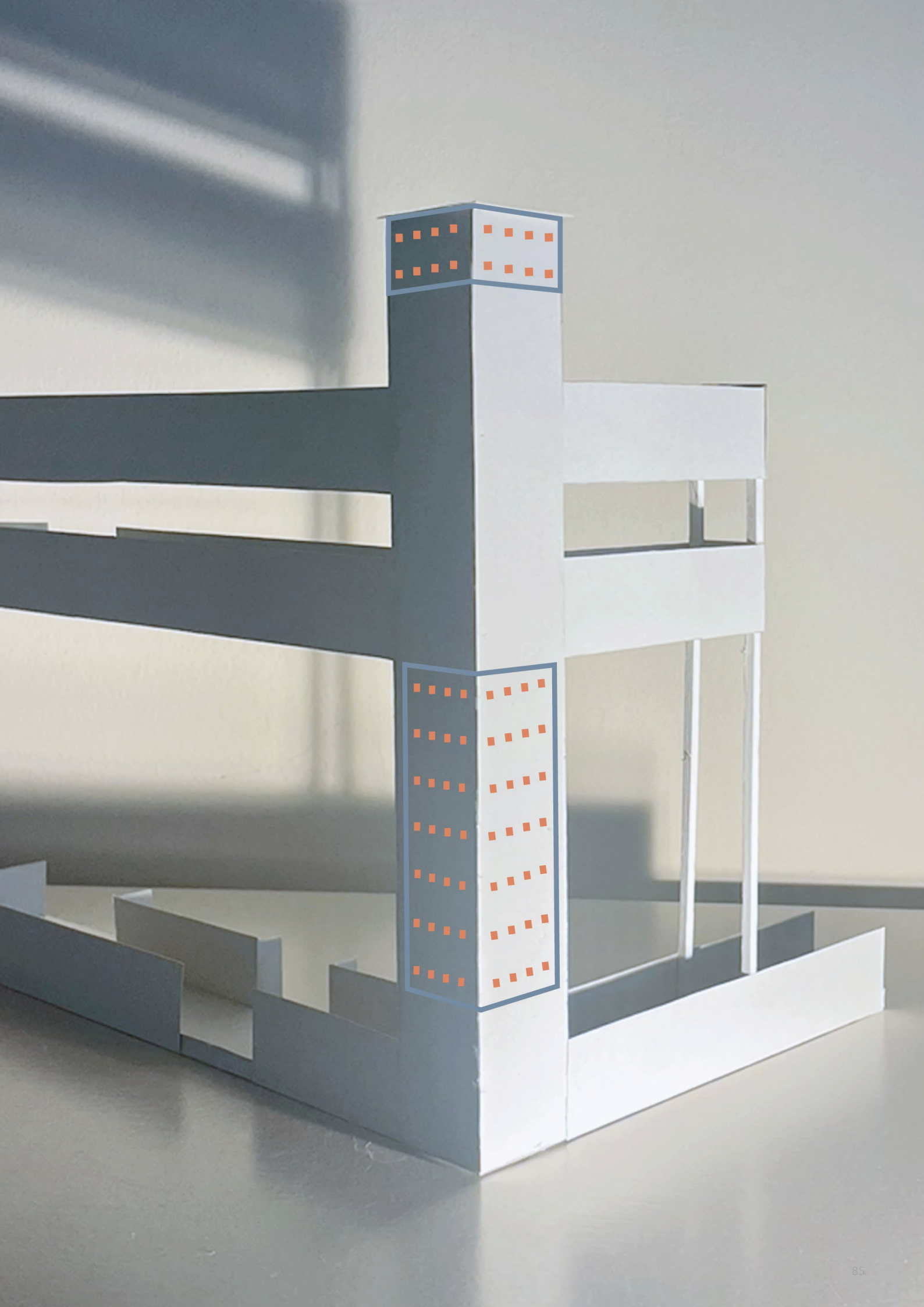
Habitat feature visable on proposed plan (First Floor Mezzanine level)



The unique habitat tower is designed to attract nesting barn swallows and roosting bats.

Wetlands and rivers provide an important foraging site for Barn Swallows. Swallows prefer outbuildings which provide dark ledges and nooks and crannies for nesting. These are cosy in cold weather and cool when it is hot. Swallows can enter a building through a very small hole and need very little light. They are also important in their role as insect predators in this particular habitat.

Bats are a vital part of our native wildlife, accounting for almost a third of all mammal species in the UK and occupy a wide range of habitats, such as wetlands, woodlands, farmland, as well as urban areas. These creatures offer valuable insights into the environmental condition, acting as predators of common night time insects and demonstrating sensitivity to changes in land use methods.

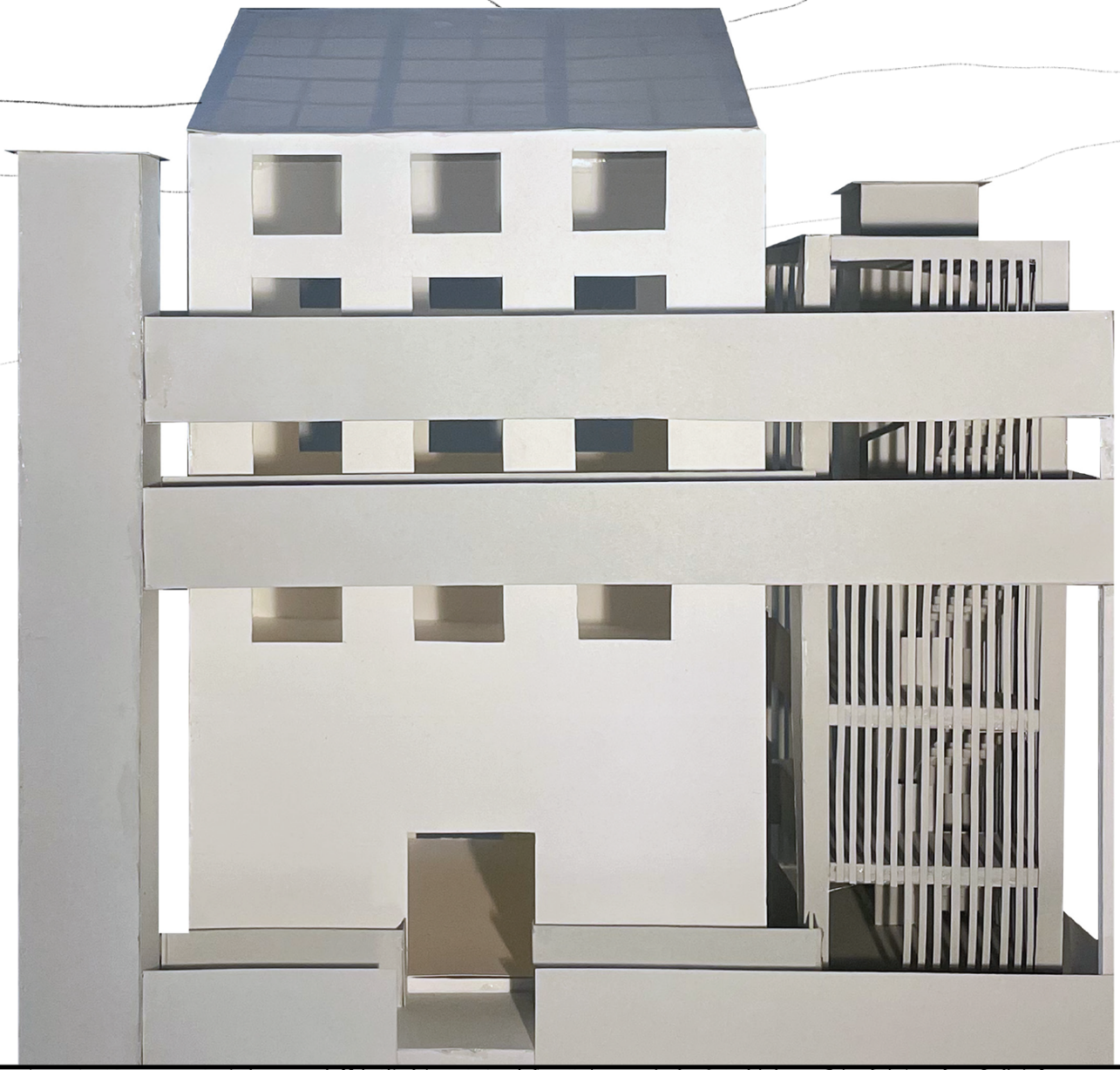


Proposal for Mill

west


OLD FLOUR MILL
south

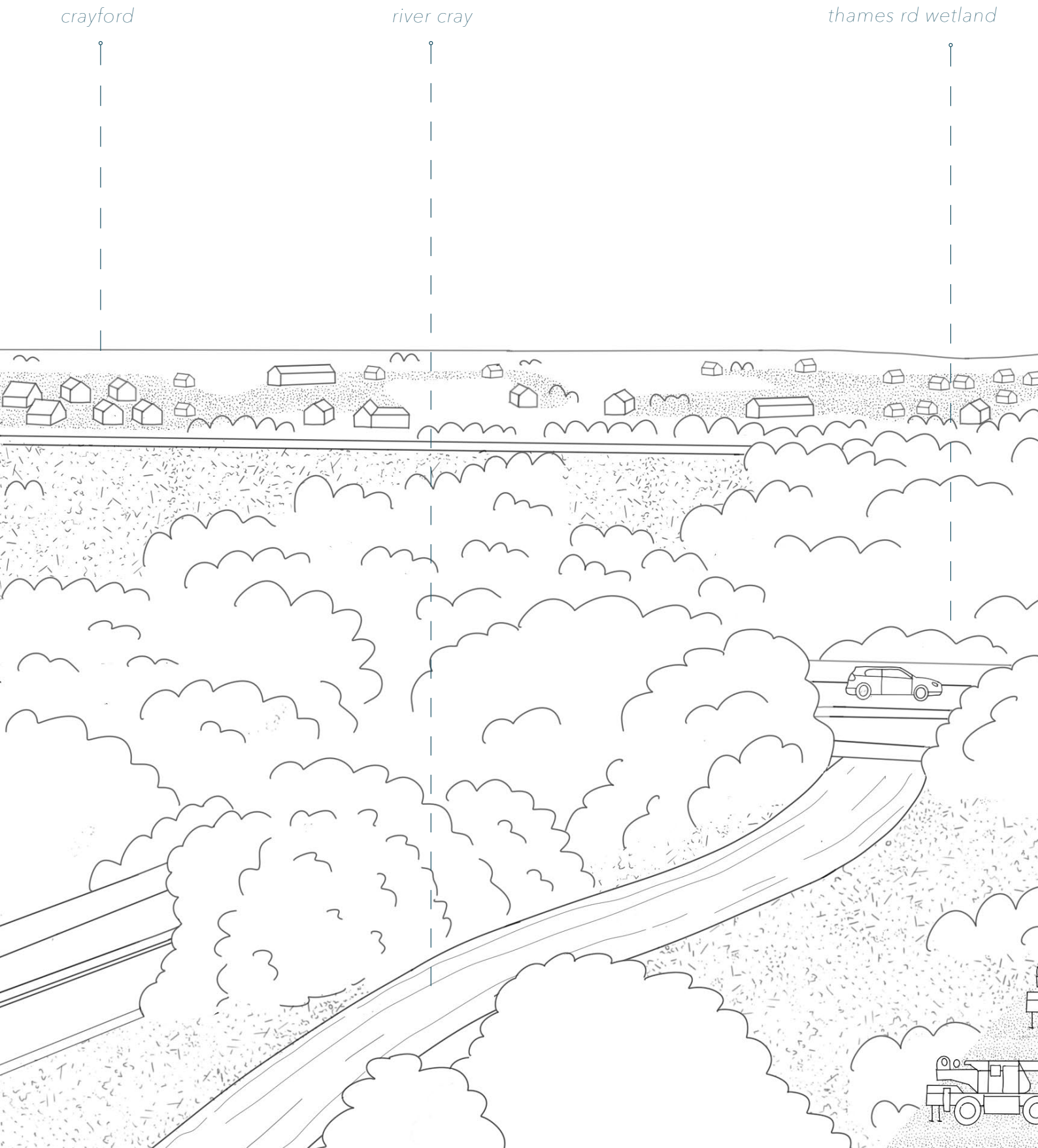
Proposal for Mill

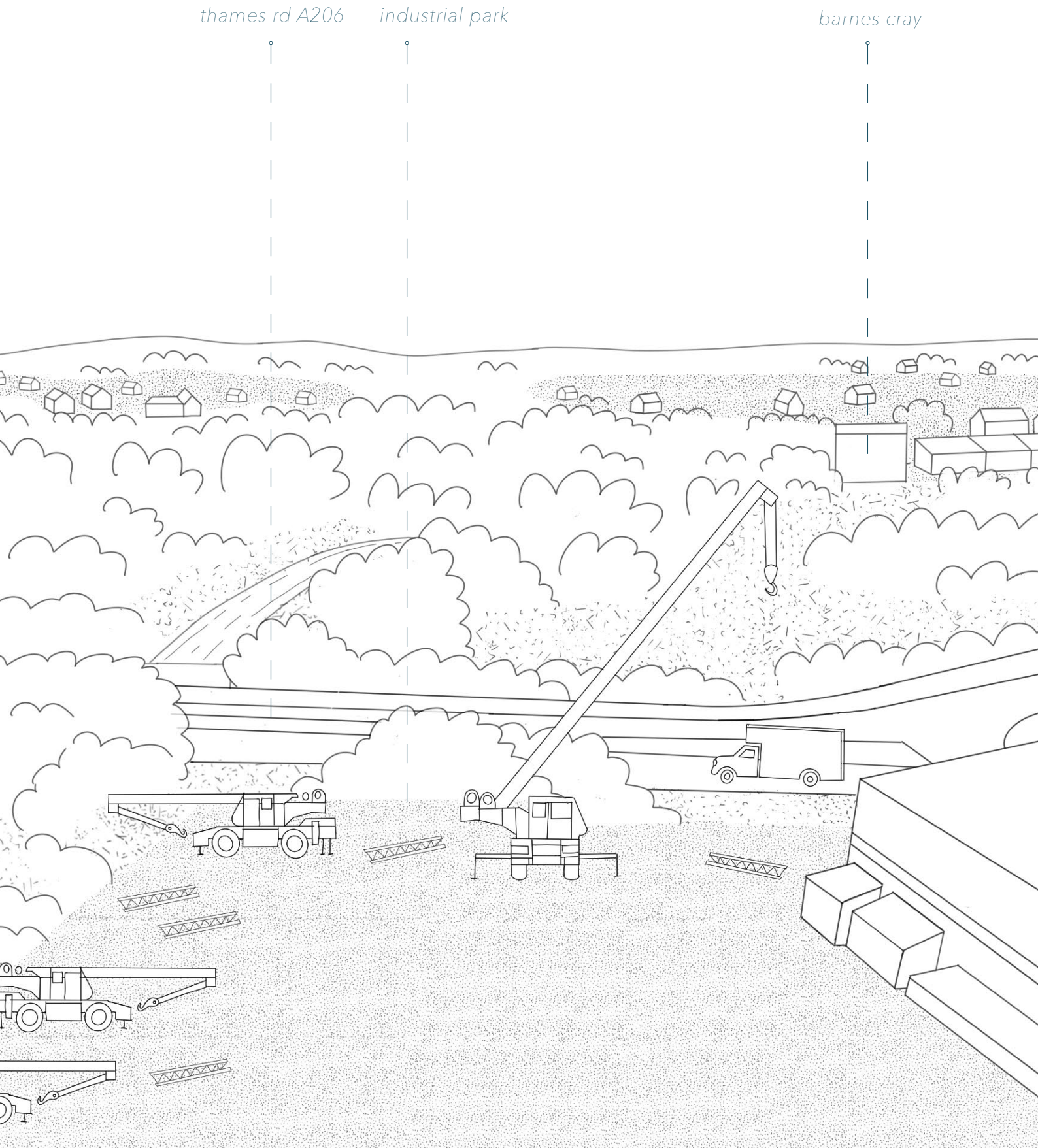


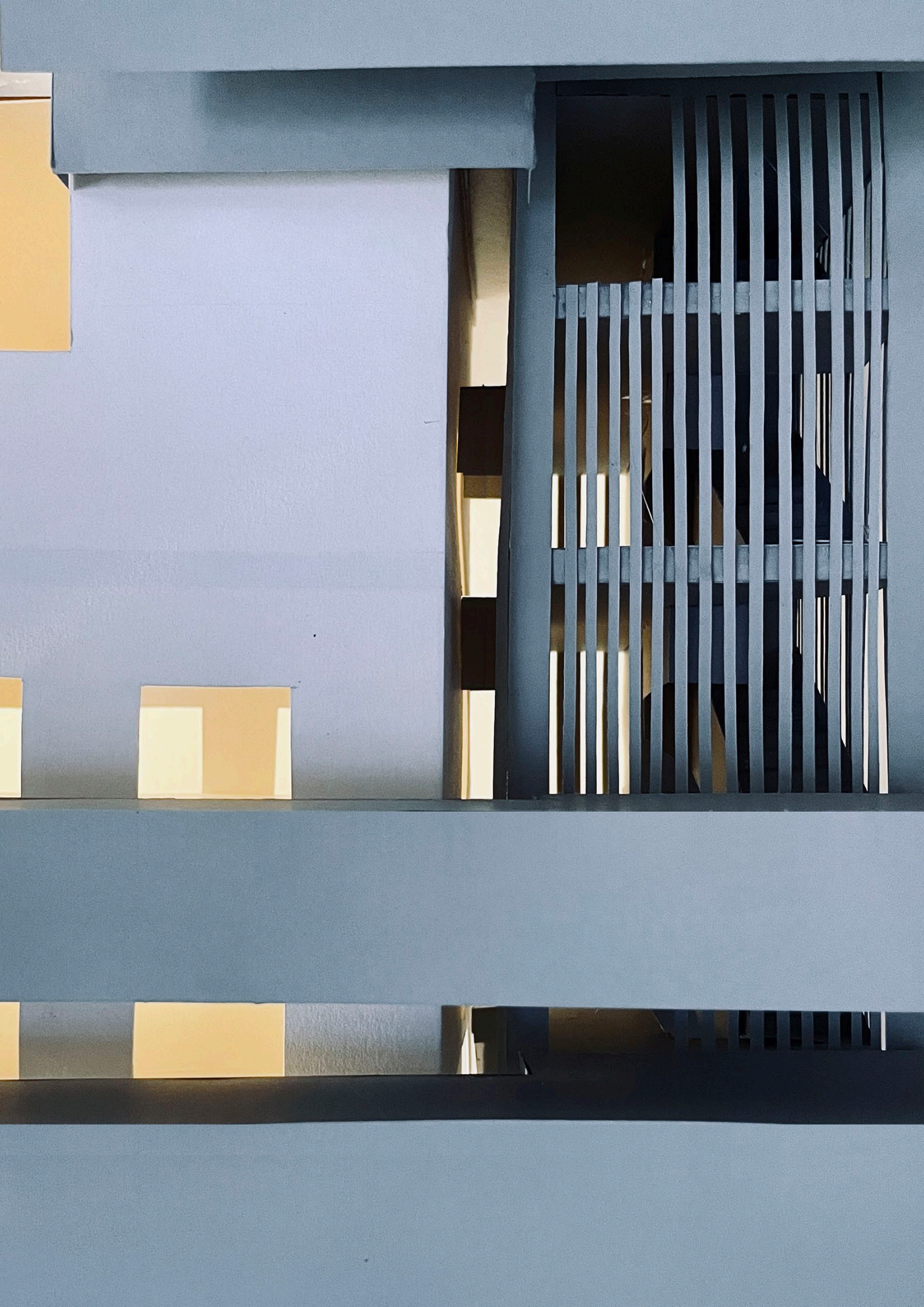
east


north

View from Mill looking South




thames rd A206
industrial park
barnes cray



Fire Strategy

The fire strategy considers a prescriptive approach due to the design of the existing mill being fairly uncomplicated. There would need to be an evaluation of the existing structure by engineers.

Minimum number of escape routes and exits from a room, tier or storey

Maximum number of persons	Minimum number of escape routes/exits
60	1
600	2
More than 600	3

The small scale of the building means that the capicity of the building is low and therefore the existing feature of the building will allow for one escape route that links to the external staircase serving the whole building.

Table 13 **Minimum width of escape stairs for simultaneous evacuation**

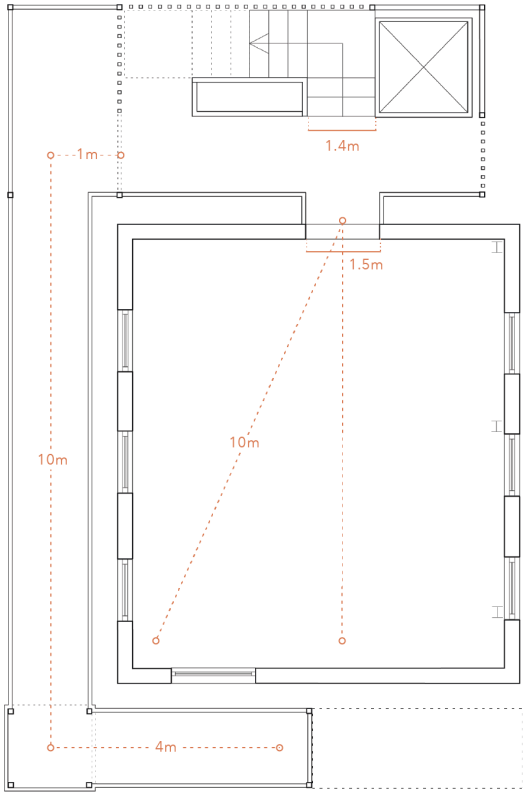
Dimensions in millimetres

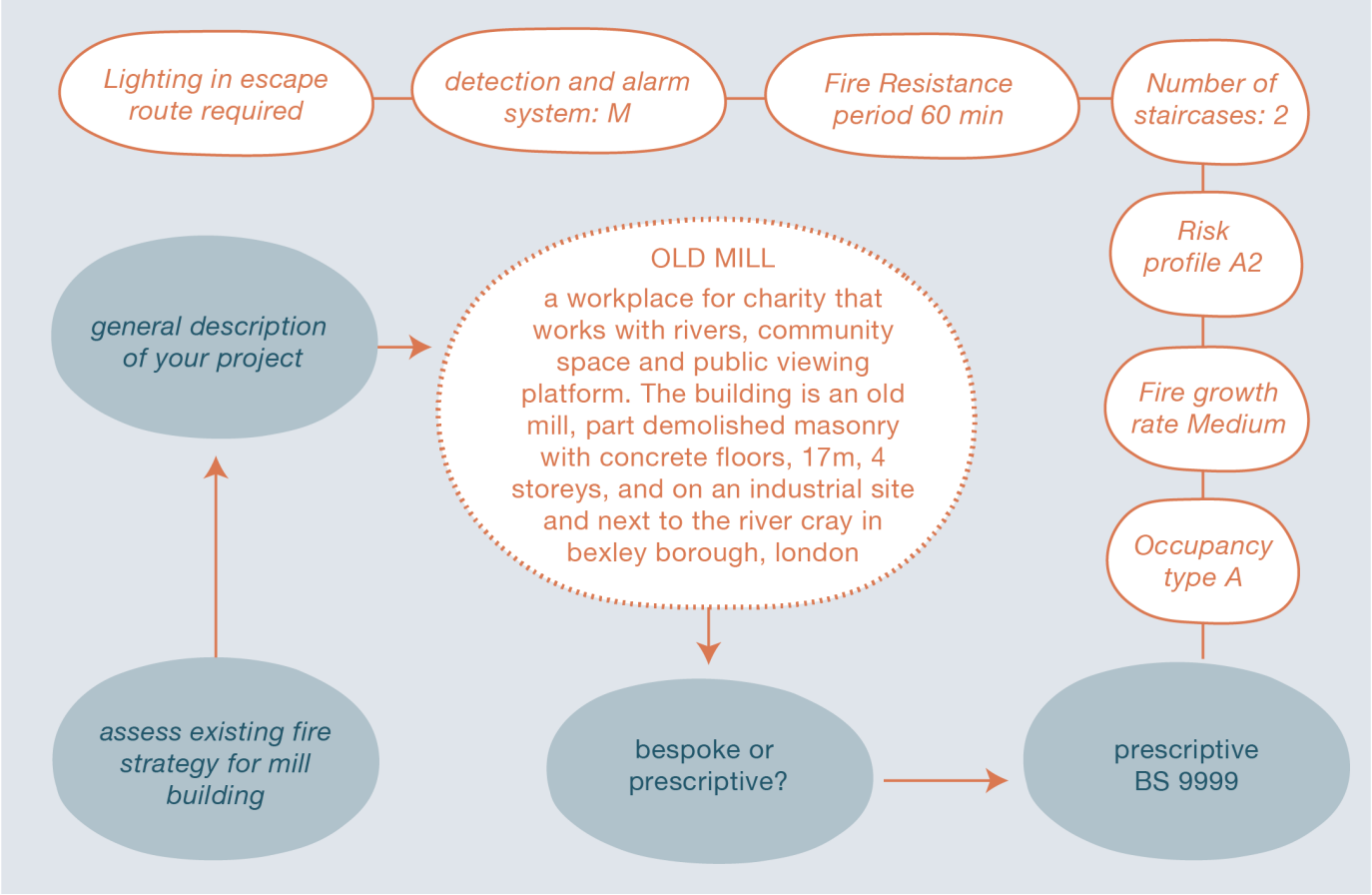
Risk profile	Minimum width of stair per person served over total number of floors served [A]									
	1 floor	2 floors	3 floors	4 floors	5 floors	6 floors	7 floors	8 floors	9 floors	10+ floors
A1	3.90	3.40	2.95	2.45	2.15	2.00	1.80	1.70	1.50	1.40
A2	4.50	3.80	3.25	2.75	2.45	2.20	2.00	1.90	1.70	1.60
A3	5.40	4.60	4.00	3.50	3.10	2.80	2.60	2.30	2.10	2.00

The 1.4m width of evacuation stair suffices for its low occupancy number and is appropriate in providing a safe escape. The escape route is required to have sufficient lighting installed for fire strategy.

Table 11 **Maximum travel distance when minimum fire protection measures are provided[A]**

Risk profile	Travel distance, in metres (m)			
	Two-way travel [B]		One-way travel	
	Direct	Actual	Direct	Actual
A1	44	65	17	26
A2	37	55	15	22
A3	30	45	12	18





Roof Construction Considerations

1 Manual opening vents in glazed roof

2 Universal Beam (254x146)

3 RHS hot finished beam (400x200)

4 Replacement slate roof on timber rafters

5 Double glazed units to patent glazing channels

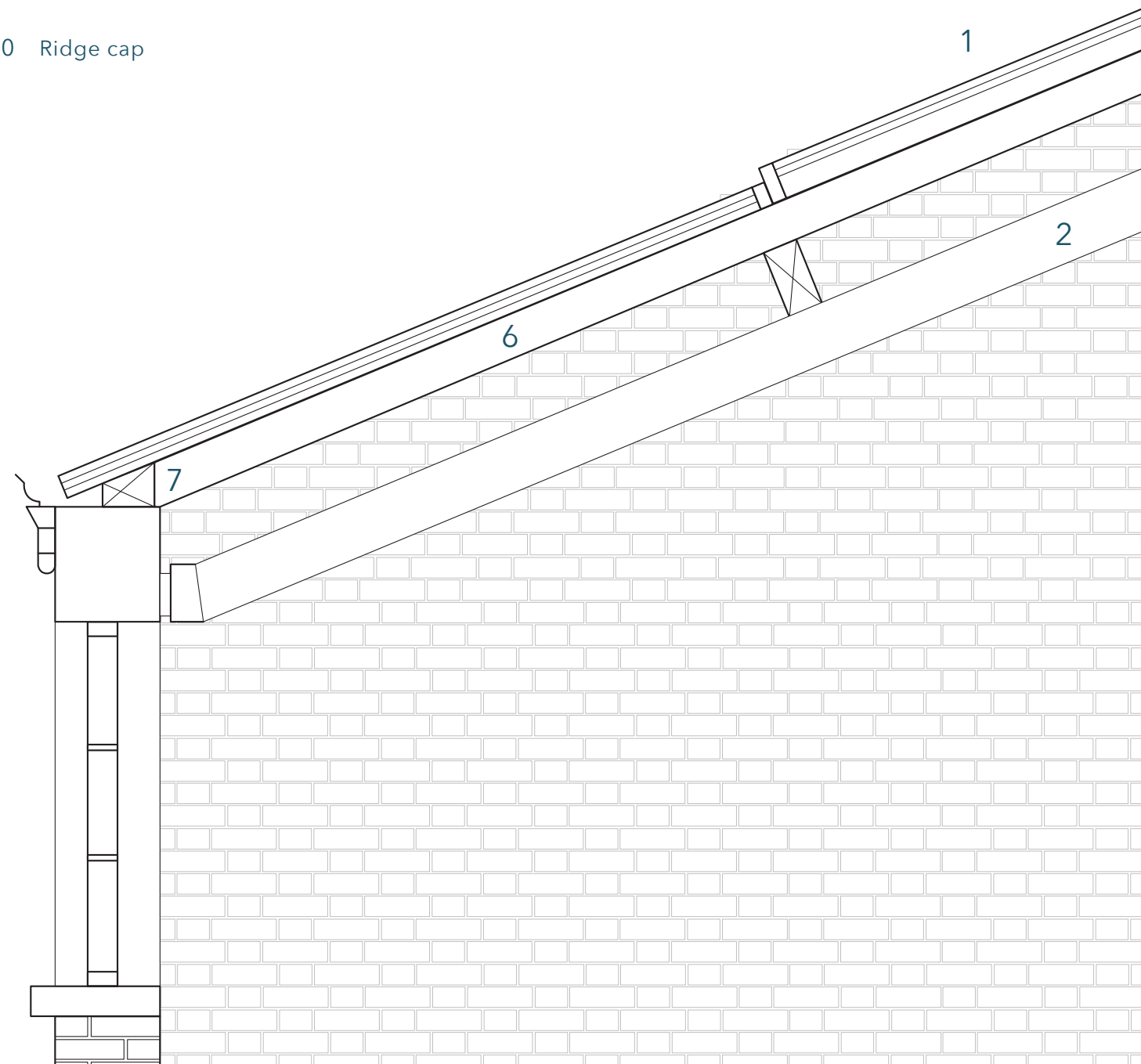
6 New timber rafters

7 Filler piece

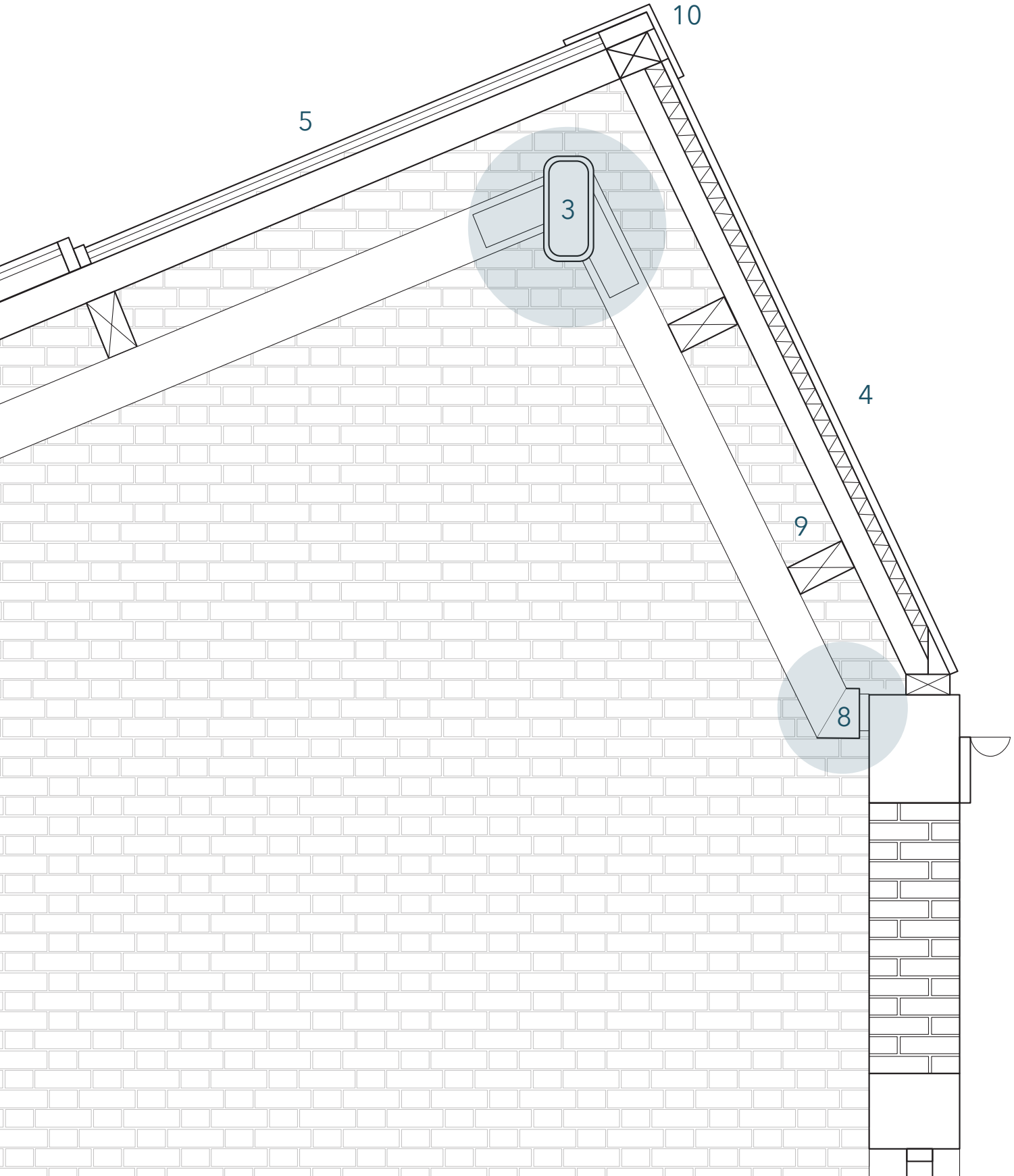
8 Fabricated steel section

9 New timber purlins

10 Ridge cap

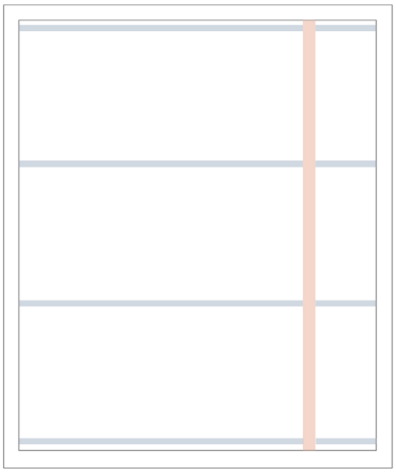


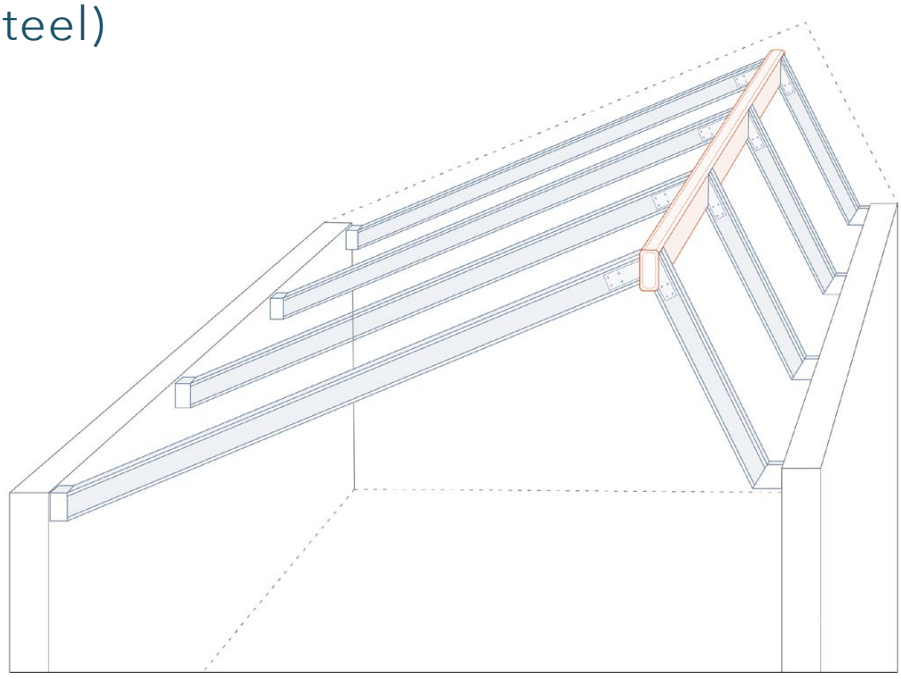
Due to the unusual shape of the roof the steel used needs to be considered carefully. The ridge beam would benefit as an RHS hot finished beam due to it's great resistance to stress. RHS beams also have economic advantages as well as a clean aesthetic. Coming off the ridge beam are standard universal beams with a fabricated section at the wall on the steep slope in order to achieve the desired roof slope.



Roof Construction (Steel)

Plan and Axonometric outlining the considerations for Roof Steelwork





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Universal Beam Selection

Section designation	Dimensions								
	Mass per metre	Depth of section	Width of section	Thickness		Root radius	Depth between fillets	Ratios for local buckling	
				Web	Flange			Web	Flange
	kg/m	h mm	b mm	t_w mm	t_f mm	r mm	d mm	c_w / t_w	c_f / t_f
305 x 102 x 33	32.8	312.7	102.4	6.6	10.8	7.6	275.9	41.8	3.73
x 28	28.2	308.7	101.8	6.0	8.8	7.6	275.9	46.0	4.58
x 25	24.8	305.1	101.6	5.8	7.0	7.6	275.9	47.6	5.76
254 x 146 x 43	43.0	259.6	147.3	7.2	12.7	7.6	219.0	30.4	4.92
x 37	37.0	256.0	146.4	6.3	10.9	7.6	219.0	34.8	5.73
x 31	31.1	251.4	146.1	6.0	8.6	7.6	219.0	36.5	7.26
254 x 102 x 28	28.3	260.4	102.2	6.3	10.0	7.6	225.2	35.7	4.04
x 25	25.2	257.2	101.9	6.0	8.4	7.6	225.2	37.5	4.80
x 22	22.0	254.0	101.6	5.7	6.8	7.6	225.2	39.5	5.93

(Tata Steel Interactive Blue Book)

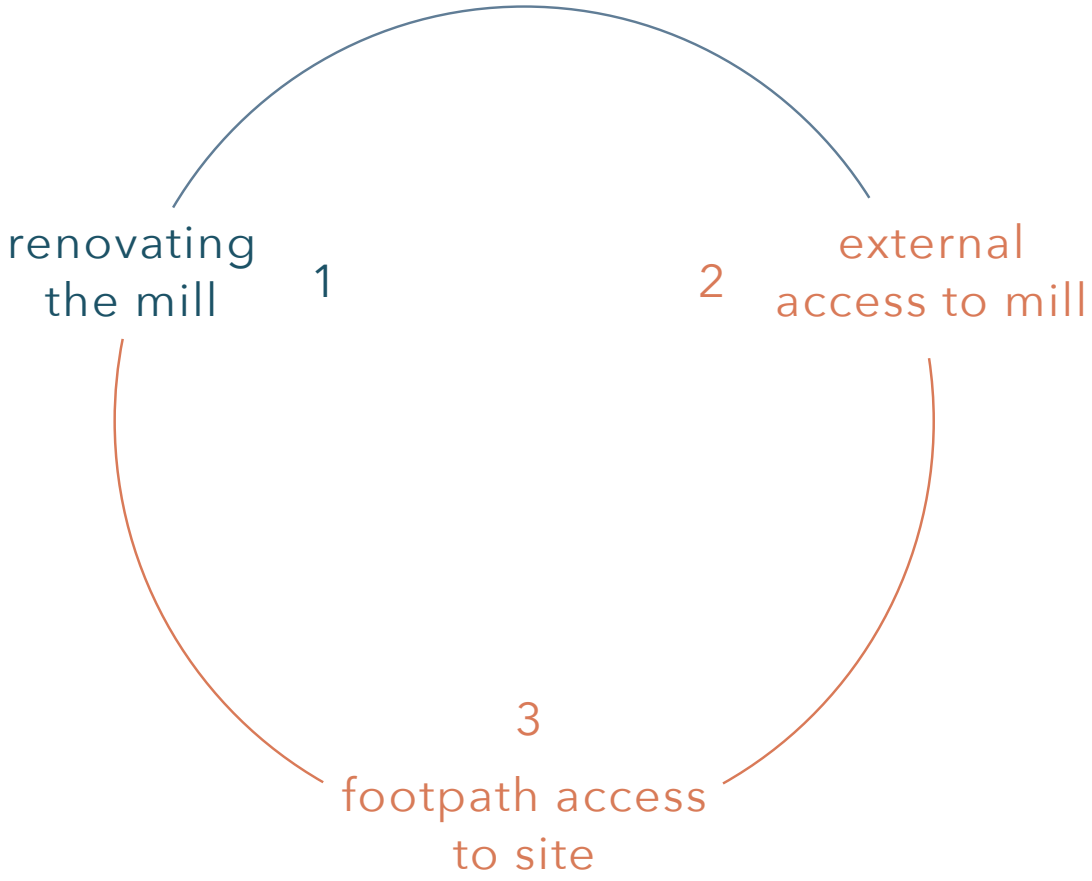
RHS Hot Finished Beam Selection

Section designation			Mass per metre	Section classification		Moment capacity		Limiting length	Second moment of area		Shear capacity
				Bending about x-x axis	Bending about y-y axis				x-x axis	y-y axis	
Size $D \times B$ mm	Thickness t mm	Readily available[1]	kg/m			M_{cx} kNm	M_{cy} kNm	L_c m	cm^4	cm^4	P_v kN
	10.0	✔	74.5	Plastic	Semi-compact	*348*	186	16.5	14300	3740	1420
	12.5	✔	91.9	Plastic	Compact	*421*	244	16.3	17300	4450	1740
	16.0	✔	115	Plastic	Plastic	*513*	298	15.8	21100	5320	2190
350 x 250	**6.3**		57.8	Slender	Slender	262	174	46.7	13200	7880	914
	8.0		72.8	Semi-compact	Slender	396	253	46.3	16400	9800	1150
	10.0	✔	90.2	Plastic	Semi-compact	488	358	45.8	20100	11900	1430
	12.5	✔	112	Plastic	Compact	*594*	474	45.4	24400	14400	1760
	16.0	✔	141	Plastic	Plastic	*731*	588	44.6	30000	17700	2220
400 x 200	**6.3**		57.8	Semi-compact	Slender	310	132	22.5	15700	5380	1040
	8.0	✔	72.8	Plastic	Slender	*417*	193	22.3	19600	6660	1320
	10.0	✔	90.2	Plastic	Slender	*509*	277	22.1	23900	8080	1630
	12.5	✔	112	Plastic	Semi-compact	*619*	387	21.8	29100	9740	2020

(Tata Steel Interactive Blue Book)

Constrycing the Proposal

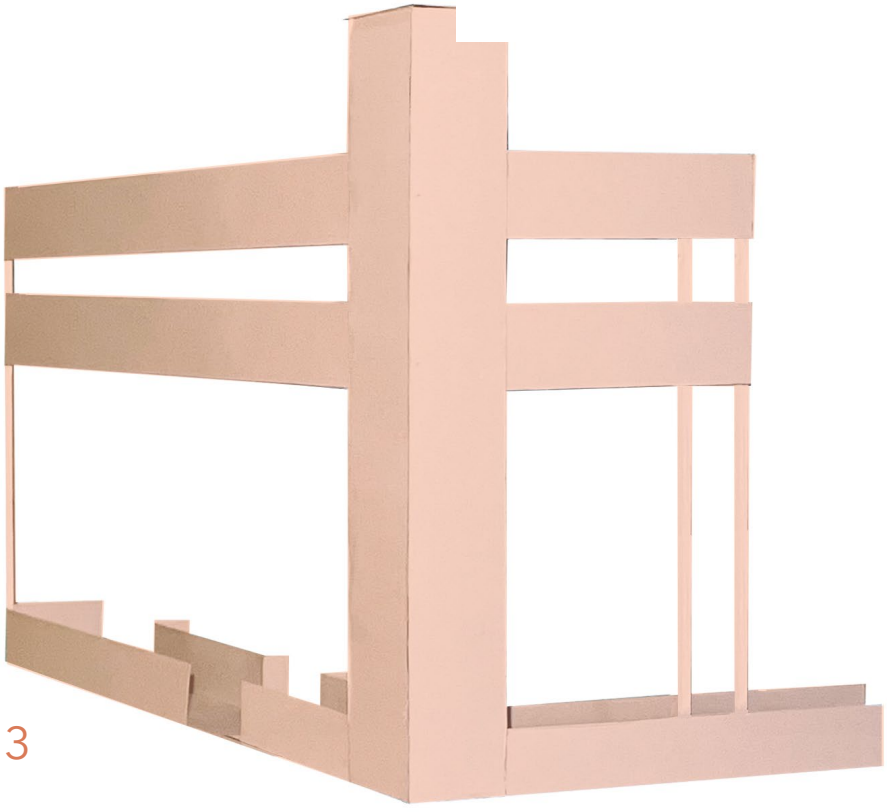
The mill will be constructed in three phases, first being the renovation of the existing mill building, then the external construction will begin with the staircase linking the levels of the mill and then footpath access that will eventually link Thames Road Wetland to Crayford marshes.



The mill is located on an industrial site and this makes access easy for material deliveries and installations as well as water and sewage connections. The industrial nature of the building allows for an alternative walking experience for the user while also providing a functional base for Thames

1

2



3

ENDANGERED_ECOLOGIES

CRAYFORD MARSHES AND MILL