

The Tide Line

Reimagining Butler's Wharf



Stage 2 Report

Howard Miller Design

Structure Workshop

LudwigWillis Architects

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Introduction

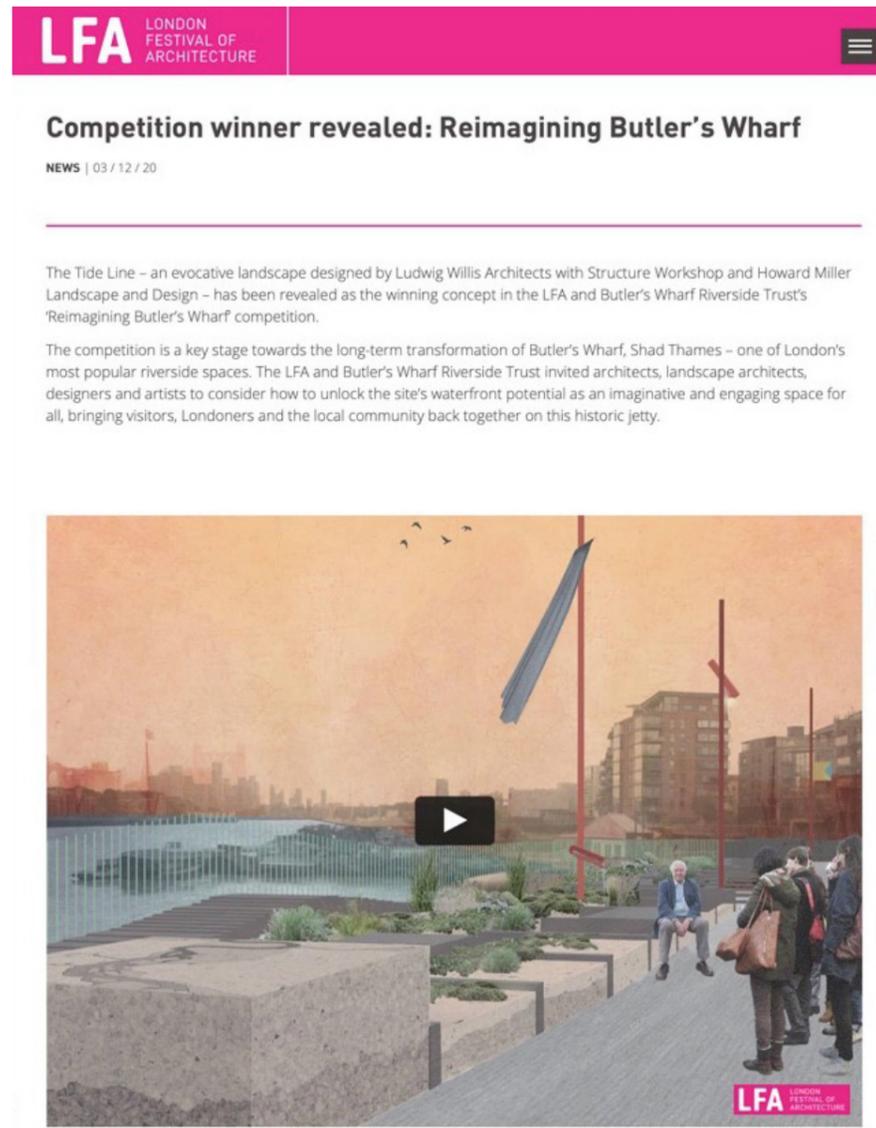
The Tide Line is the winning concept for the 'Reimagining Butler's Wharf' competition organised by the London Festival of Architecture (LFA) and the Butler's Wharf Riverside Trust (BWRT) and funded by Southwark Council's 'Cleaner Greener Safer' programme. The winning team of Ludwig Willis Architects, Structure Workshop, Howard Miller Design and River Walks are appointed to deliver RIBA Stage 2-3 and enable the BWRT to raise funding for the delivery of the scheme. BWRT are aiming to deliver or begin work in 2022 to celebrate the jetty's 100th anniversary.

Competition Process

The competition process began with an Expression of Interest in response to an Open Call by the LFA and BWRT in June 2020. From over 50 entries, 6 teams were short listed to develop a design concept. The shortlisted teams presented to the jury panel in an online interview in September 2020. In October 2020, a virtual exhibition featuring a 2 minute video of each design concept was launched on the LFA website providing an opportunity for members of the public to vote and feedback. The public feedback informed the expert jury panel of Paul Zara (director, Paul Zara Architects), Sarah Gaventa (director of the Illuminated River Foundation), Johanna Gibbons (partner, J&L Gibbons), David Ogunmuyiwa (principal, ArchitectureDoingPlace and Mayor's Design Advocate), Dr Emma Sanderson-Nash (chair, Butler's Wharf Riverside Trust), Ruth Slavid (journalist and editor) and Tamsie Thomson (managing director, New London Architecture). On 3 December 2020 it was publicly announced that The Tide Line was the winning concept for Reimagining Butler's Wharf.

Stage 2 Report

This document summarises the Stage 2 Concept Design for The Tide Line based on the competition submission. The report also explains the design team's response to the brief to illustrate our design approach and how we intend to collaborate and work with the client and broader stakeholders to develop and refine the project through Stage 3 Planning and Spatial Coordination. As such, the Stage 2 Report describes how the design strategy addresses initial client feedback and how the ongoing design process is envisaged as a meaningful dialogue as the project evolves.



London Festival of Architecture Press Release

Jury Comments

"The Butler's Wharf jetty is one of my favourite places in London and is somewhere that enchants residents and visitors alike. I'm really looking forward to working with the design team and Butler's Wharf Residents Trust to engage with everyone who uses the jetty as we work to realise its full potential as one of London's most unique public spaces. As a local design practice Ludwig Willis have clearly understood what makes the jetty unique, and have brought together a talented team around a very imaginative concept. I'm looking forward to seeing how that concept develops further and working towards its realisation."

Tamsie Thomson, managing director of New London Architecture

"We were delighted by the response to our competition which inspired such creative and thoughtful designs. The Tide Line by Ludwig Willis best reflects our aim for better seating, planting and lighting with the needs of businesses and residents uppermost in our minds. We like its minimalist and linear design, which feels like natural evolution rather than radical change and which sits peacefully beside nearby giants of Tower Bridge and Canary Wharf. Materials are drawn from recycled materials and it also has the potential to involve local craftspeople and trades at the delivery phase. We look forward to working closely with Ludwig Willis in the coming months to bring forward the final proposal and costings."

Emma Sanderson-Nash, Chair, Butler's Wharf Riverside Trust

Project Team

Client

Butler's Wharf Riverside Trust began as a sub-committee within Shad Thames Area Management Partnership (STAMP), leading on issues facing the community regarding the site known as 'the jetty' at Butler's Wharf, which was becoming increasingly neglected. In 2017, the sub-committee evolved into a resident-led campaigning group, the Friends of Butlers Wharf Riverside, and the 'Friends' became a registered charity in February 2020. BWRT meets 4 times a year and reports to STAMP and the Shad Thames Residents Association (STRA).

Steering

London Festival of Architecture celebrates London as a global hub of architectural experimentation, practice and debate. LFA have worked closely with BWRT to develop the client brief and guide the competition and selection process.

Design Team

The design team are all passionate about the River Thames and its potential to be a rich, diverse and inclusive public realm for residents and visitors. Each of us has encountered Butler's Wharf on many occasions, walking or cycling along the Thames Path or sailing past the jetty. Together we have a wide range of knowledge and experience specific to the opportunities and challenges the river location constitutes, from technical expertise to historical research.

Lead Consultant

Ludwig Willis Architects (LWA) is an emerging practice based in Southwark and founded on our expertise in realising projects with a social background. As lead consultant for the project LWA coordinates the design team and are the primary client contact. In addition to providing architectural services, LWA is the Principal Designer in accordance with CDM Regulations 2015.

Structural Engineer

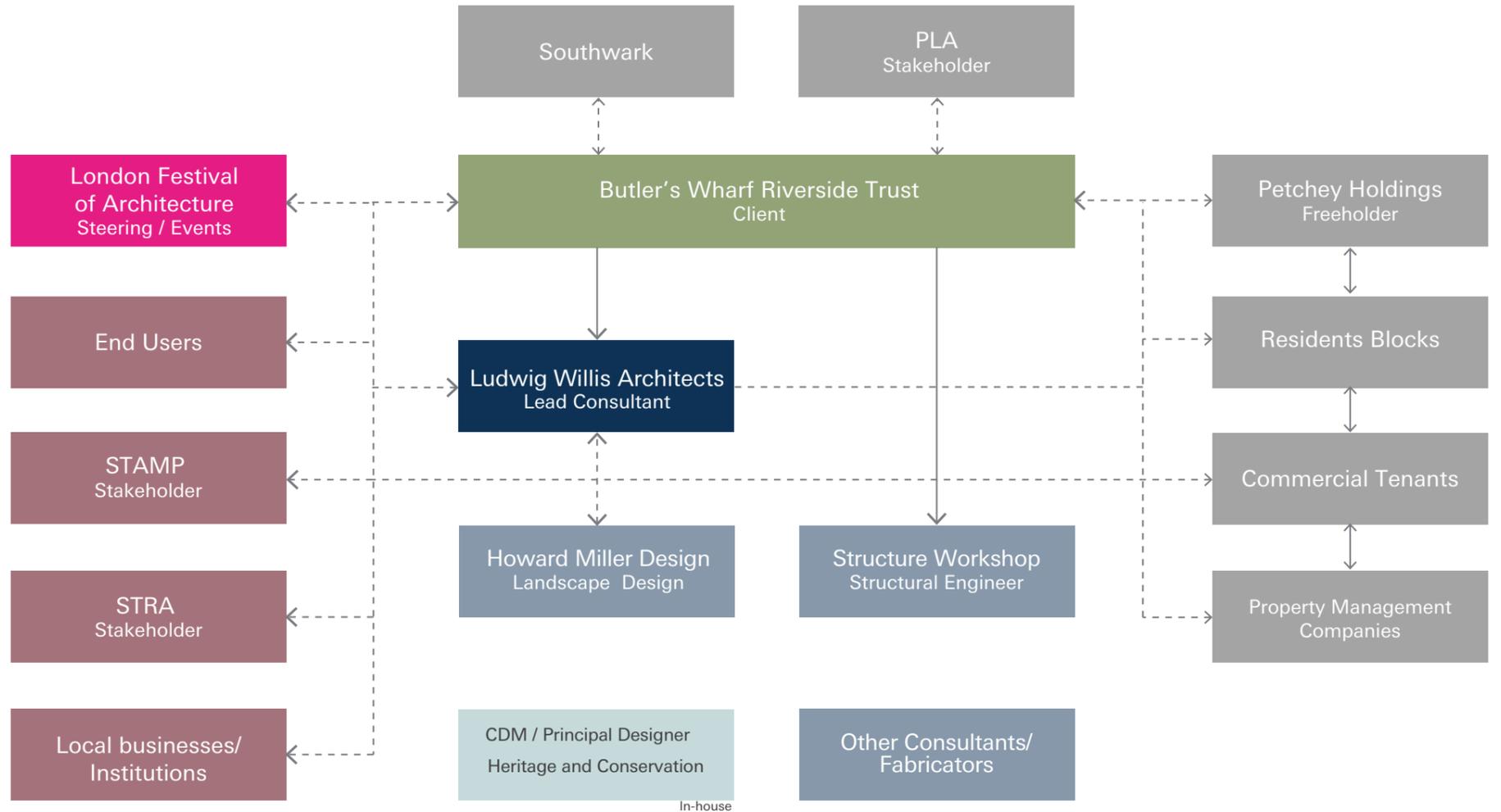
Structure Workshop is a progressive engineering design consultancy based in Southwark. Their role includes the structural design of new elements and integration of the proposal with the existing jetty structure.

Landscape Design

Howard Miller Design uses the latest knowledge, combined with a creative approach to design and deliver imaginative landscape projects that contribute positively to the happiness, health and productivity of the people and organisations that use them.

As part of the next stage in preparation for planning, fundraising and the long term adoption as public realm a number of other consultants will be able to advise on strategies, specifically:

- Quantity Surveyor (Cost plan)
- Lighting / M&E / Sustainability
- Transport consultant
- Wayfinding & Graphics (Southwark / Thames Path)
- Ecology if looking at wider river strategy



For approvals and statutory consent the Southwark's planning and conservation and public realm development team will be consulted (refer Southwark Streetscape Design Manual) as well as the Port of London Authority

Howard Miller Design

Structure Workshop

LudwigWillis Architects

Brief & Scope

“The riverside setting offers a sense of immortality and energy. The project has an opportunity to reveal the structure and the river that laps beneath visitors’ feet. The conclusion of the Tideway super-sewer will result in making the Thames significantly cleaner, resulting in improved conditions for wildlife and activity on the river. It is desirable that the selected design includes new planting, to encourage birds and insects, and to provide small places to sit and enjoy the view, to have a facility to share education and information about the people and their work here [...]

This opportunity therefore seeks to improve this important path and the experience it offers for residents and visitors. In particular, we are looking for designs that achieve the following:

- Create a sense of place
- Reflect the maritime, industrial and human history
- Emphasise and protect the views
- Connect people with the river and river activity
- Educate visitors
- Create a path for walking and quiet contemplation
- Provide green and sheltered seating
- Replace existing lighting with appropriate carbon neutralising lighting
- Enable opportunities for art
- Celebrate and bring together the community
- Encourage healthy habits
- Enable seasonal decorating such as at Christmas and other festivals”

Extract from ‘Reimagining Butler’s Wharf’ Open Call



Open Call Reimagining Butler’s Wharf



(c) Steven Ehrlich

1 The Commission

The London Festival of Architecture (LFA) and the Butler’s Wharf Riverside Trust (BWRT) invite architects, landscape architects, designers and artists to submit an expression of interest for our competition to develop a design solution that will enhance the hugely popular but unimagined riverside jetty which sits in the river in front of the warehouses of Butler’s Wharf.

The design competition is to select a winning design to improve this important path and the experience it offers for residents and visitors. The winning team will be appointed to deliver Stages 2 and 3 of the RIBA Plan of Work which will enable the BWRT to raise the funding for the delivery of the selected design scheme. BWRT is also in the process of resolving complex issues around ownership, responsibilities and potential adoption by Southwark Council. BWRT’s plan has been to aim to deliver or begin work in 2022 to celebrate the jetty’s 100th anniversary.



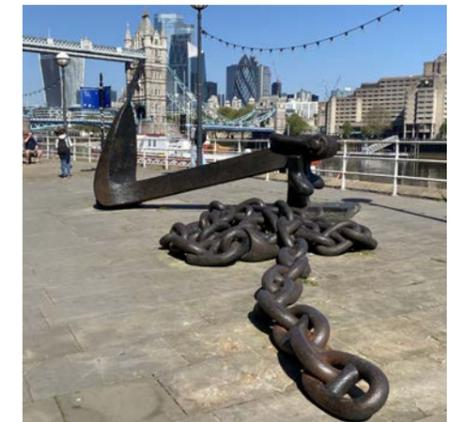
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2



3



4

Photos by Steven Ehrlich

1. As part of the brief existing wayfinding, signage, seating, lighting as well as the placement of nautical junk and art work are reviewed and integrated in the new design.

2. The existing planters are not consistent throughout the jetty and the planting not native or particularly beneficial for wildlife and the biodiversity of the site.

3. The existing promenade lighting is very bright for the residential units; festoon lighting was added - it is vital to rethink the overall lighting strategy but the re-use of existing may be more practical due to budget constraints.

4. The integration of artwork and is generally welcome; The glass pavilion in front of the Zaha Hadid Foundation (former Design Museum) can potentially be used in the interim but its plans in the long-term are yet to be confirmed.

Opportunities & Constraints

Opportunities:

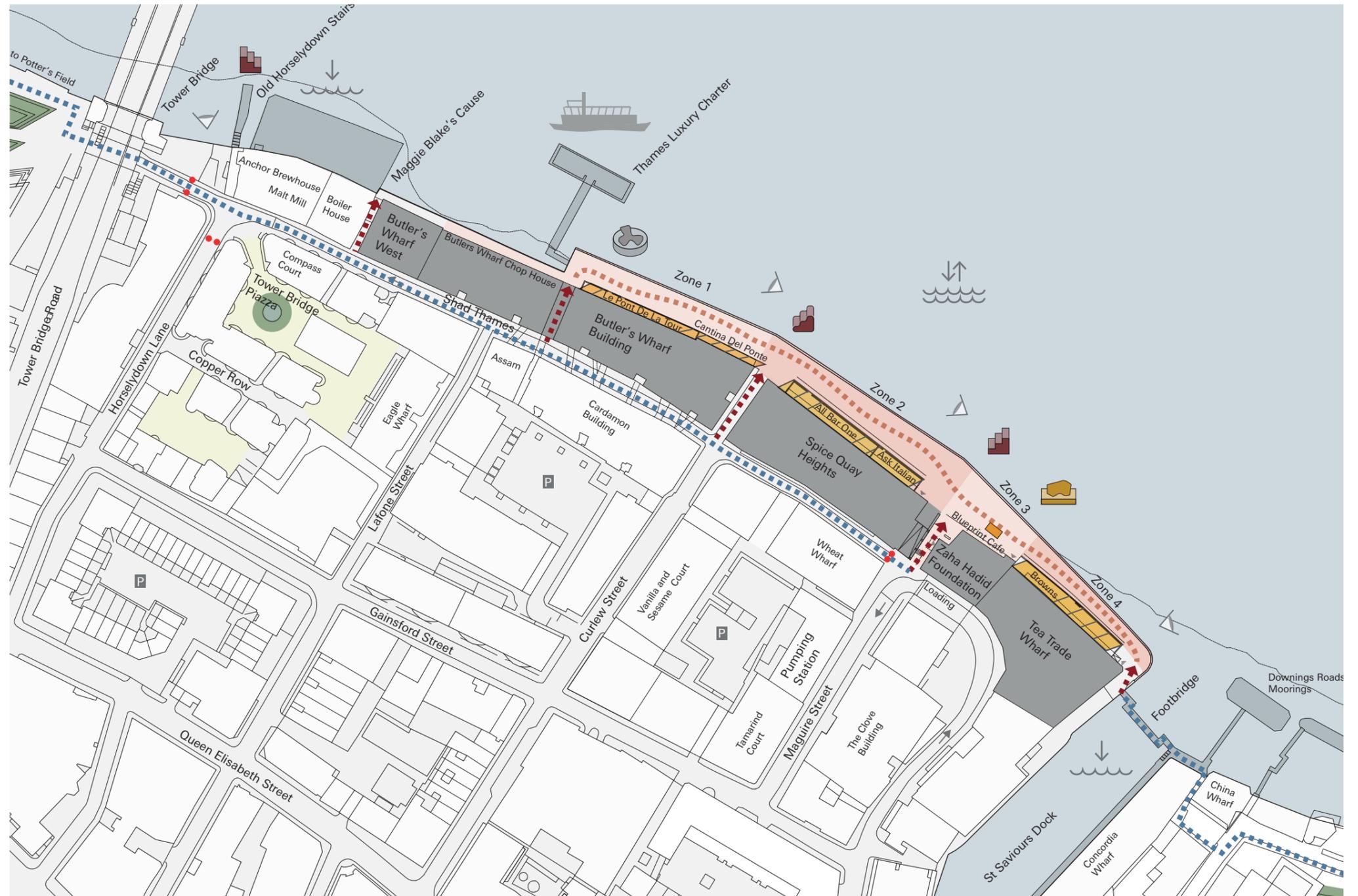
- Celebrating riverside location and its history
- Improve amenities for local residents/public
- Increase biodiversity and decarbonisation
- Educational agenda for environmental issues, awareness of river ecology
- Strengthen link as part of Thames path
- Ecological approach to planting mitigating high maintenance
- Use of local materials / fabrication
- Phased approach tailored to budget
- Flexibility of approach (refer implementation strategy)
- Increase value of amenities for adjacent properties

Constraints:

- Budget and funding requirements
- Complex stakeholder network
- Conservation area Tower Bridge and St. Saviours
- Legal complexities in terms of ownership and management (Refer Zones 1-4) but also opportunity to resolve these as part of this project
- Allow fast and slow movement along Jetty
- Relationship with existing bars and restaurants with external seating
- Practicalities such as bins, bike racks and water station to be considered and resolved
- Approval process for structural alterations (PLA)
- Transport and access requirements
- Fundraising requirements and roles

Risks:

- Complexity of moving elements
- Potential vandalism, antisocial behaviour
- Utility information - surveys for below/above ground services required
- Continuity from design through to construction
- Procurement route to be confirmed
- Structural condition, further surveys may be required



Context & History

“The site, known locally as ‘the jetty,’ comprises a concrete pier situated in the riverbed. The jetty is the section of the Thames Path that runs from St Saviour’s Dock footbridge to Butler’s Wharf West, in front of Tea Trade Wharf, the former Design Museum, Spice Quay Heights and Butlers Wharf. It forms the riverside walkway in front of what was originally the Butler’s Wharf Estate and has iconic views of Tower Bridge to the west, St Katharine’s Dock and Hermitage Moorings across the river and Canary Wharf to the east.

The earliest legal mention and drawing of the present structure is contained in a Port of London Authority licence dated 4 August 1920 ‘to construct an embankment at Bermondsey’, which replaced an existing smaller structure, and was finally licenced on 1 September 1922.

The site at Shad Thames is the largest collection of preserved Victorian warehouses in one place in the whole of London, comprising 15 separate buildings, which shaped both the industrial and river landscape during their active use between 1863 and 1973 before falling into disrepair. The site was then semi-derelict and became home to squatters, artists, film makers, and musicians.

Sir Terence Conran bought the Butler’s Wharf Estate in the 1980s and his development of the site represents one of the biggest regeneration stories in recent times. Conran created a ‘gastro-dome’ with open-backed restaurants and a thriving residential neighbourhood in the 80s and 90s to the present day. Towards the end of Conran’s sometimes-controversial regeneration, the jetty was decorated with ‘nautical junk’ obtained from a ship yard in Portsmouth. These anchors, chains and propellers remain today and are held in real affection.”

Extract from ‘Reimagining Butler’s Wharf’ Open Call



New Crane Stairs, Wapping



Horselydown Old Stairs, c1900

Port of London Authority Panorama, 1937

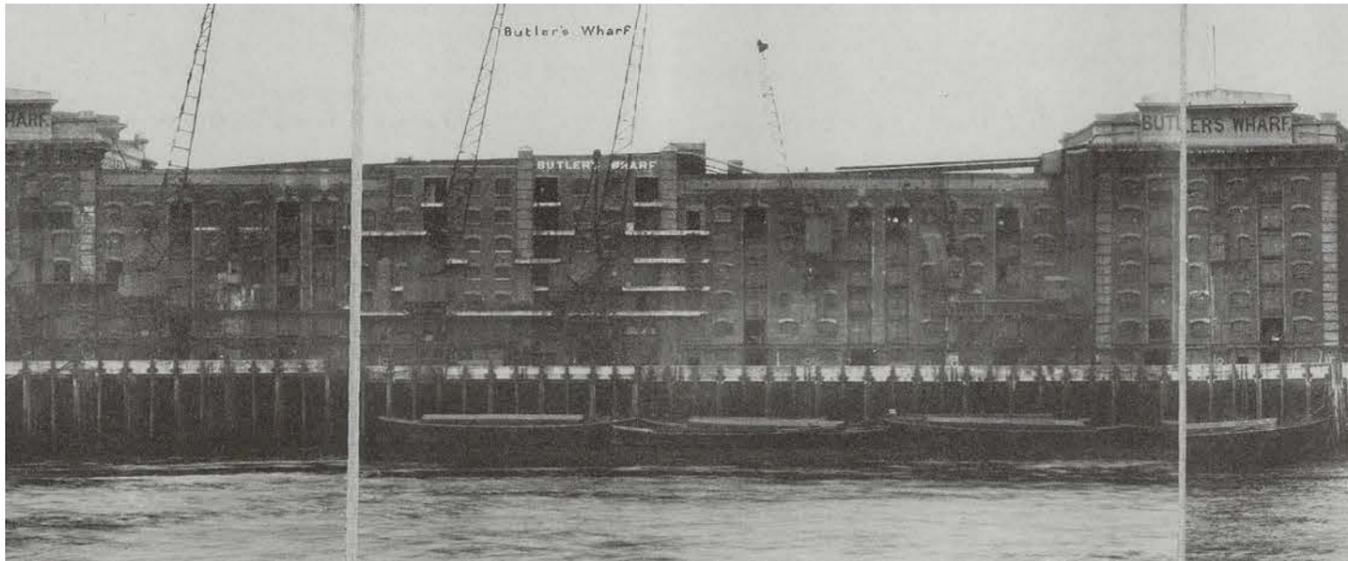
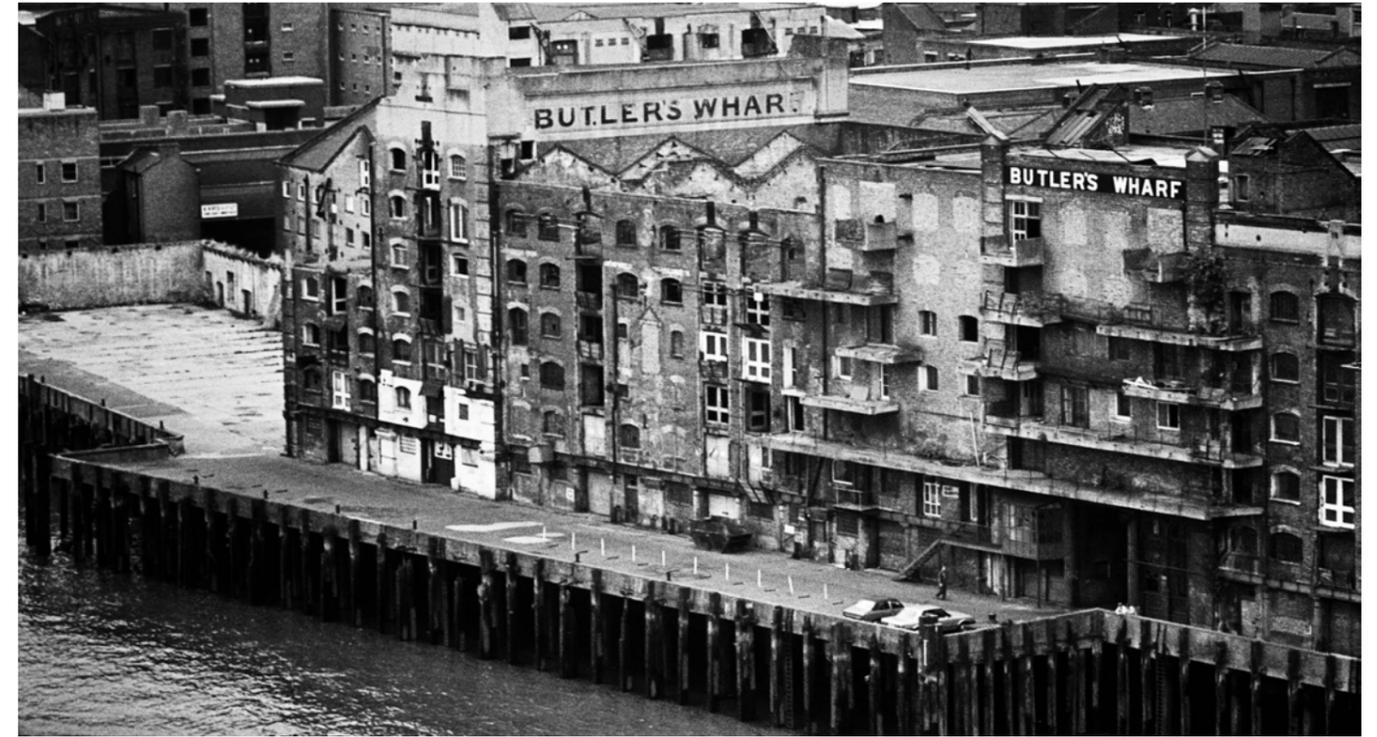




John Rocque's Map of London, 1746

Stairs and Layers

Lost watermen's stairs that historically provided access down to the water's edge are raised from the riverbed and manifest in The Tide Line landscape. Whilst George's and New Horselydown Stairs no longer exist they define the grain of the streets that now bring activity and access to the jetty. We intend to mark these points of exchange and transition to provide places of vantage and orientation upon the Jetty.



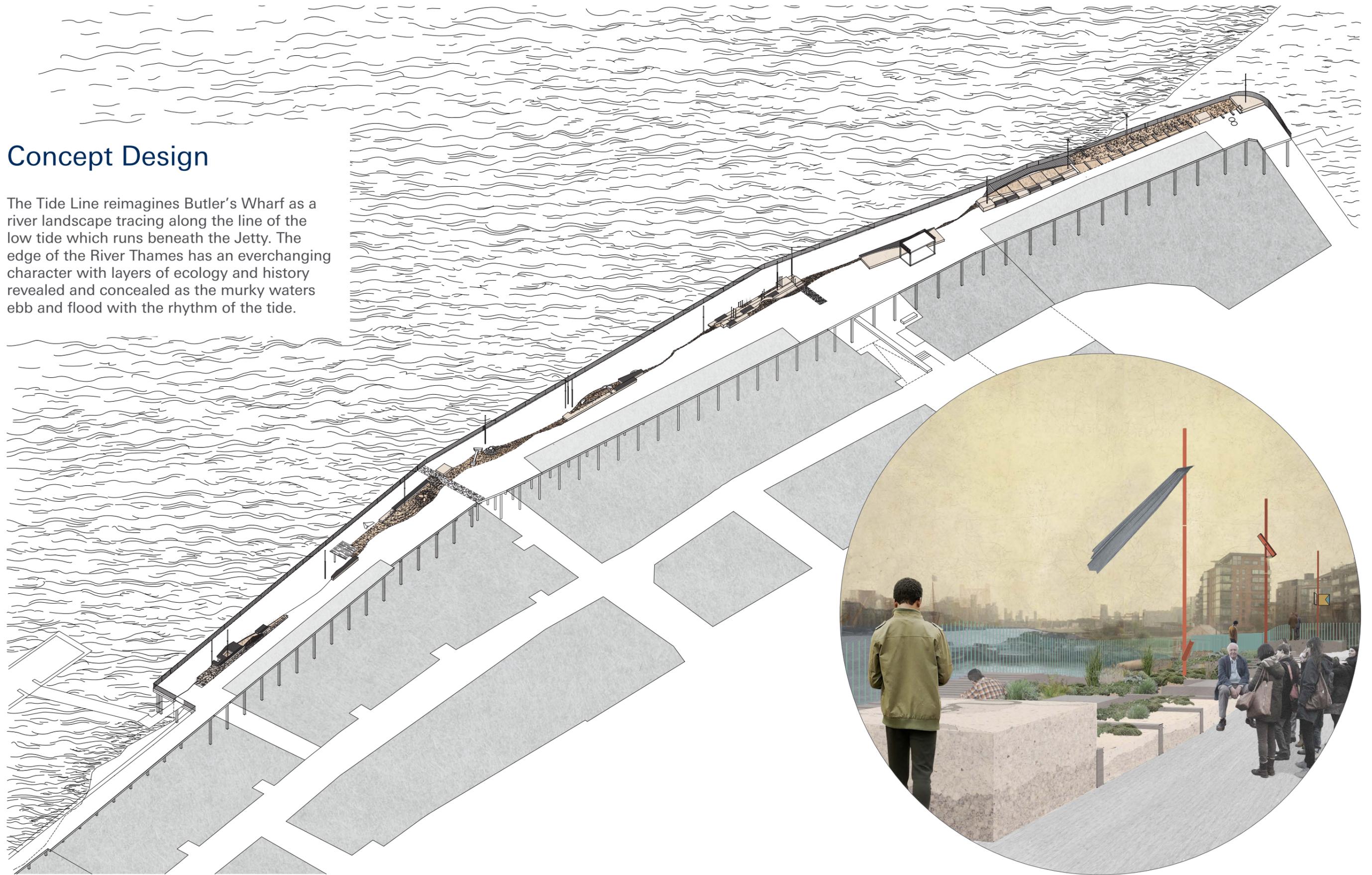
Howard Miller Design

Structure Workshop

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Concept Design

The Tide Line reimagines Butler's Wharf as a river landscape tracing along the line of the low tide which runs beneath the Jetty. The edge of the River Thames has an everchanging character with layers of ecology and history revealed and concealed as the murky waters ebb and flood with the rhythm of the tide.



The landscape of The Tide Line widens and narrows forming an archipelago with different kinds of riverside planting. Lost watermen's stairs that historically led down to the water's edge, become places of vantage and orientation for quiet contemplation. The changing course of the estuary from prehistory to the present day is shown in a sequence of cast river models made from aggregates that form the geological layers of the riverbed.

Along The Tide Line floating masts rise and fall as the river is subjected to the celestial motion of the moon. These playful installations provide armatures for wayfinding, lighting and act as instruments that measure and communicate the changing tidal environment.

The brackish water of the Thames Estuary, from the mud flats to the coastal shingle, sustain a specific ecology of flora which are planted along The Tide Line and irrigated by the river water. Through simple, integrated low energy solutions the proposal is inherently sustainable.

The Tide Line provides a breathing space from city life and enhances the island like atmosphere of the Jetty. The landscape promotes health, well-being and resilience for Shad Thames and the wider community inspiring curiosity about local and global ecology and habitats.



Tide Line Trail

Tracing the origins of the site to the outskirts of the medieval town of Southwark lies the bucolic landscape of Horselydown. Whilst the riverside has been transformed through centuries of industry, trade and urbanisation, today the Jetty retains this island like character. The Tide Line augments this sense of otherworldliness providing a breathing space from the bustling city silhouetted to the west and affording sanctuary for health and well-being as the river winds east to the horizon.

Shad Thames Trail

"The trail highlights features that make Shad Thames distinctive, from the riverside location and the 19th century industrial buildings, to the bold architecture of late 20th century regeneration and new developments. STAMP (Shad Thames Area Management Partnership) is a groundbreaking collaboration between stakeholders in and around Shad Thames. We bring together local residents, local businesses and Southwark Council to protect, enhance and celebrate the area's distinctive identity. Through our collaborative approach, we aim to make the Shad Thames area welcoming to all who live, work and visit here."

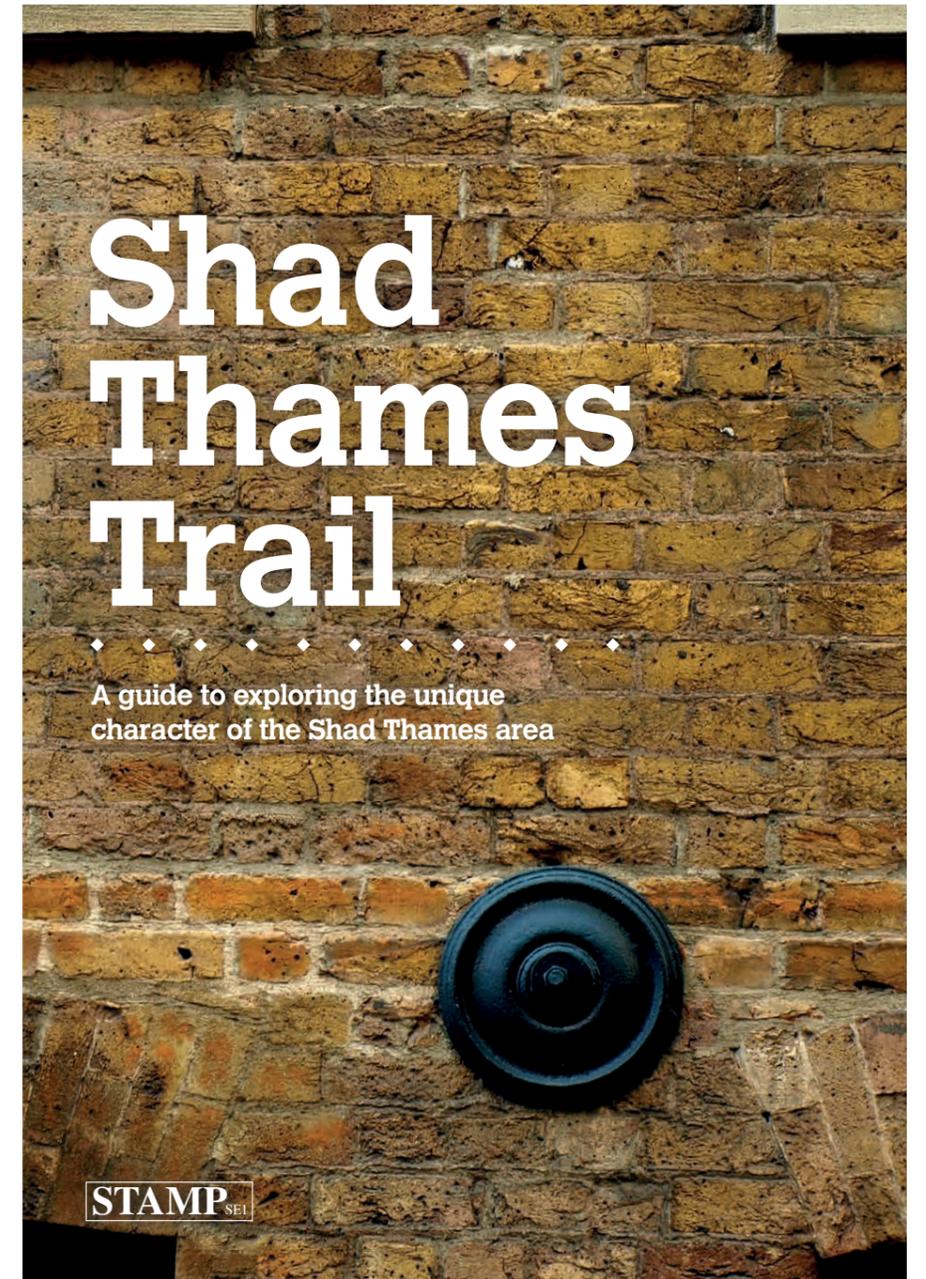
Extract from Shad Thames Trail Guide

Tide Line Trail

The Tide Line has the potential to become a part of the Shad Thames Trail including places for view and vantage, wayfinding and provision for art and the local community. The history of the river estuary and the nautical heritage of the site are embedded in the landscape, which can promote ecology and the environment through a sustainable long term vision.



Agas Map of Horselydown, 1561



Shad Thames Trail

- ① Horselydown Old Stairs
- ② Anchor Brewhouse
- ③ The Anchor Tap
- ④ Maggie Blake's Cause
- ⑤ St Saviour's Dock
- ⑥ Shad Thames Pumping Station

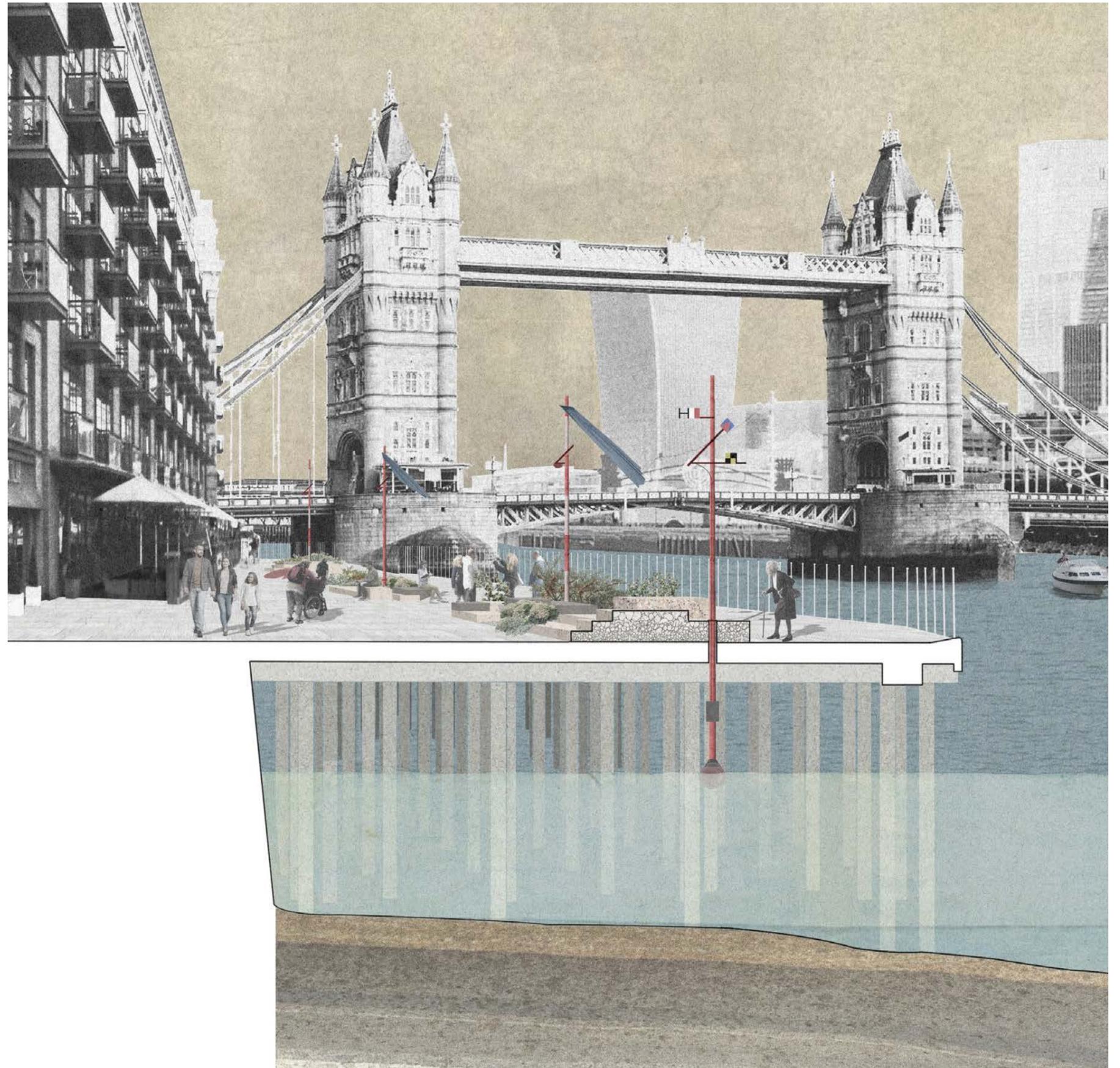
Tide Line Trail

-  View and Vantage
-  Wayfinding
-  Art and Community
-  River History
-  Ecology and Environment
-  Nautical History



Masts and Motion

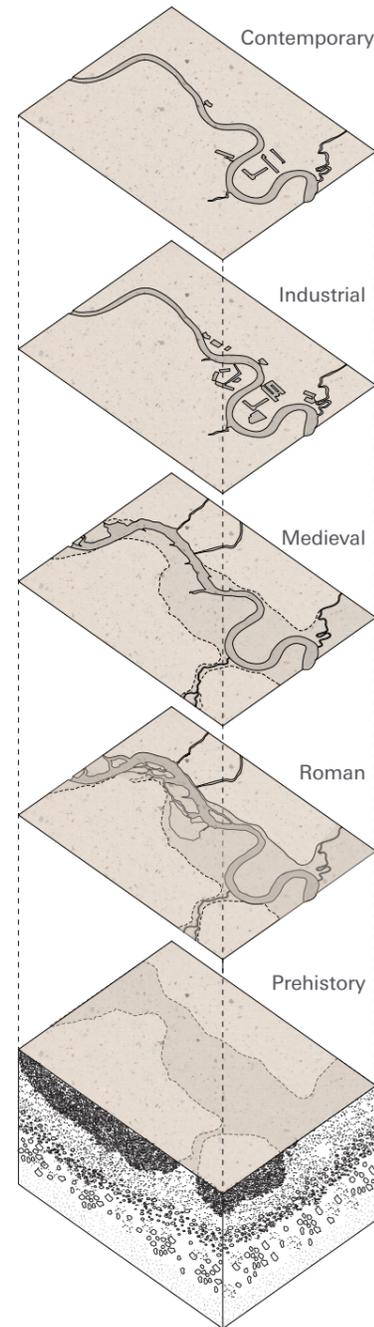
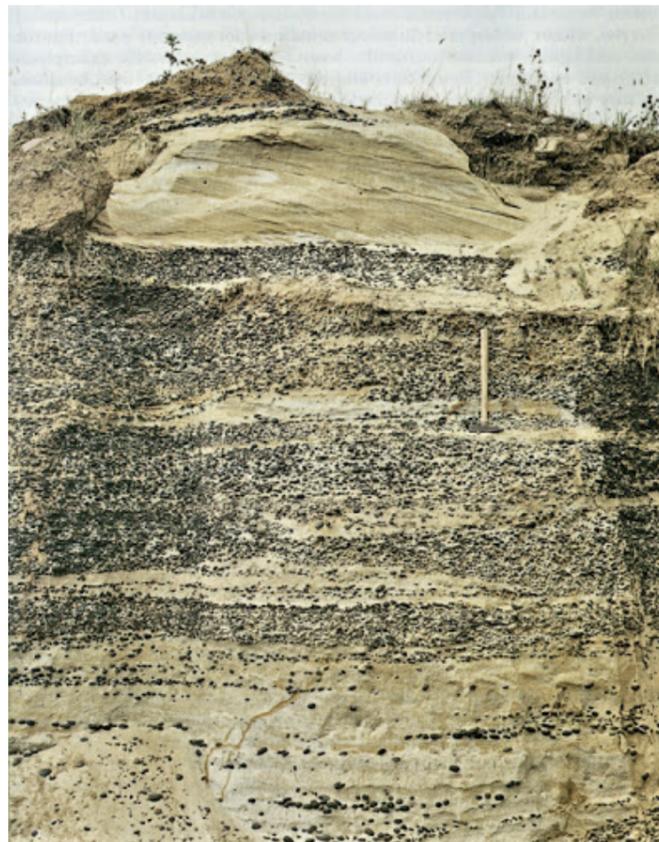
The Tide Line is marked with floating masts that rise and fall as the river is subjected to the celestial motion of the sun and the moon. They are located at strategic points along the jetty and provide armatures for wayfinding and lighting. The masts also act as instruments to measure and communicate the everchanging environment of the river edge, responding to fluctuations in the solar, lunar, tidal and wind conditions. River water is brought up to the deck with the tidal cycle by irrigation masts to periodically flood the salt marsh planting.



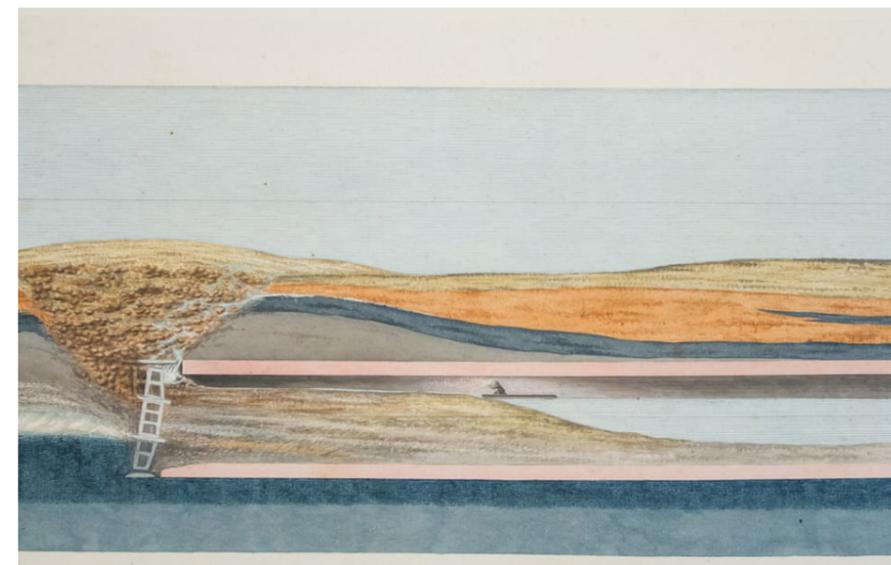
Cast River Models

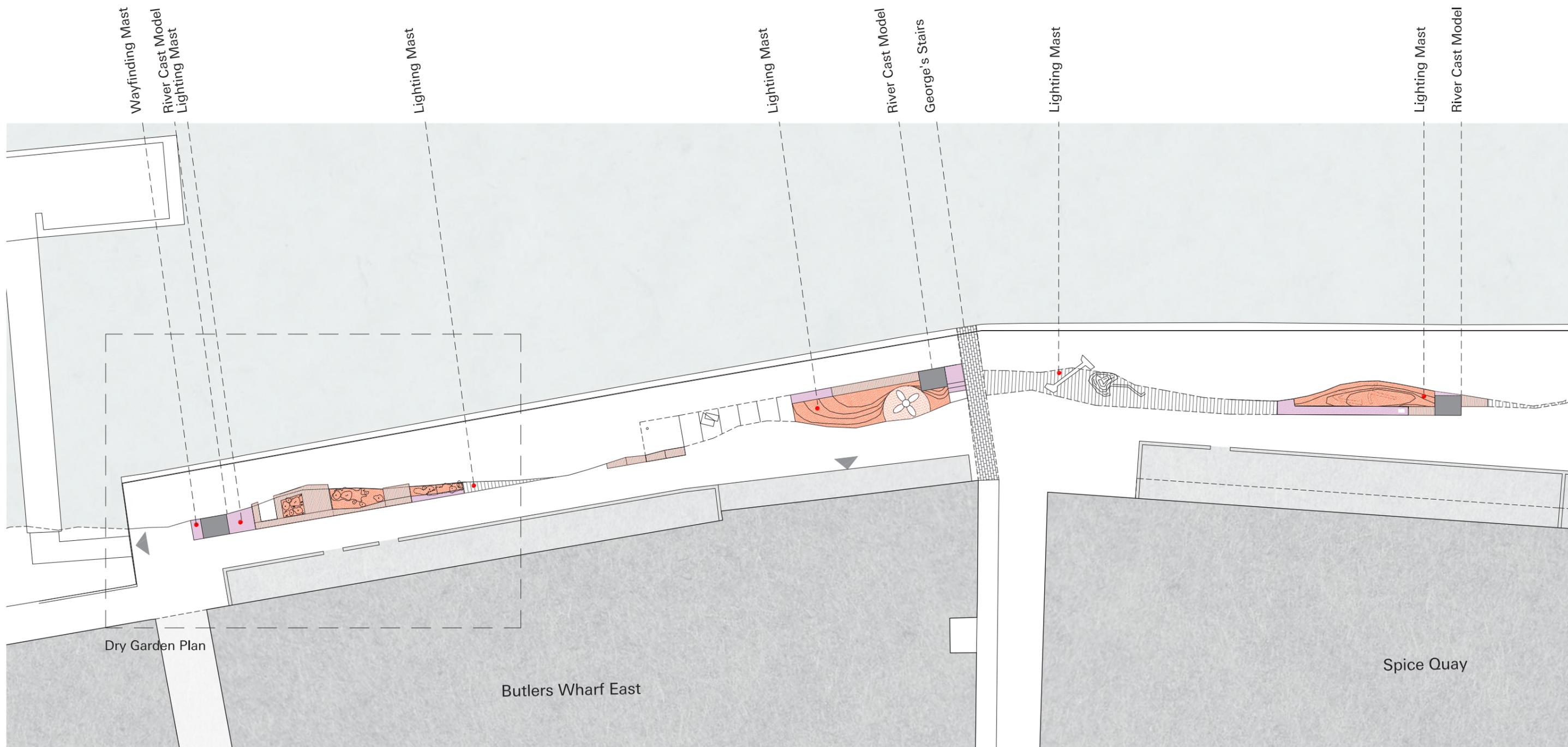
Along The Tide Line a series of 5 cast river models show the changing course of the river estuary from prehistory, through roman and medieval settlement, to industrial docklands and the present day. The cast plinths of the stairs, river models and seating are constructed from layers of different aggregates of chalk, clay, sand and gravel that form the riverbed.

Thanet Sand Formation



Roman London c.AD 75, Peter Froste; Thames Tunnel flooding under construction, Marc Brunel, 1827.



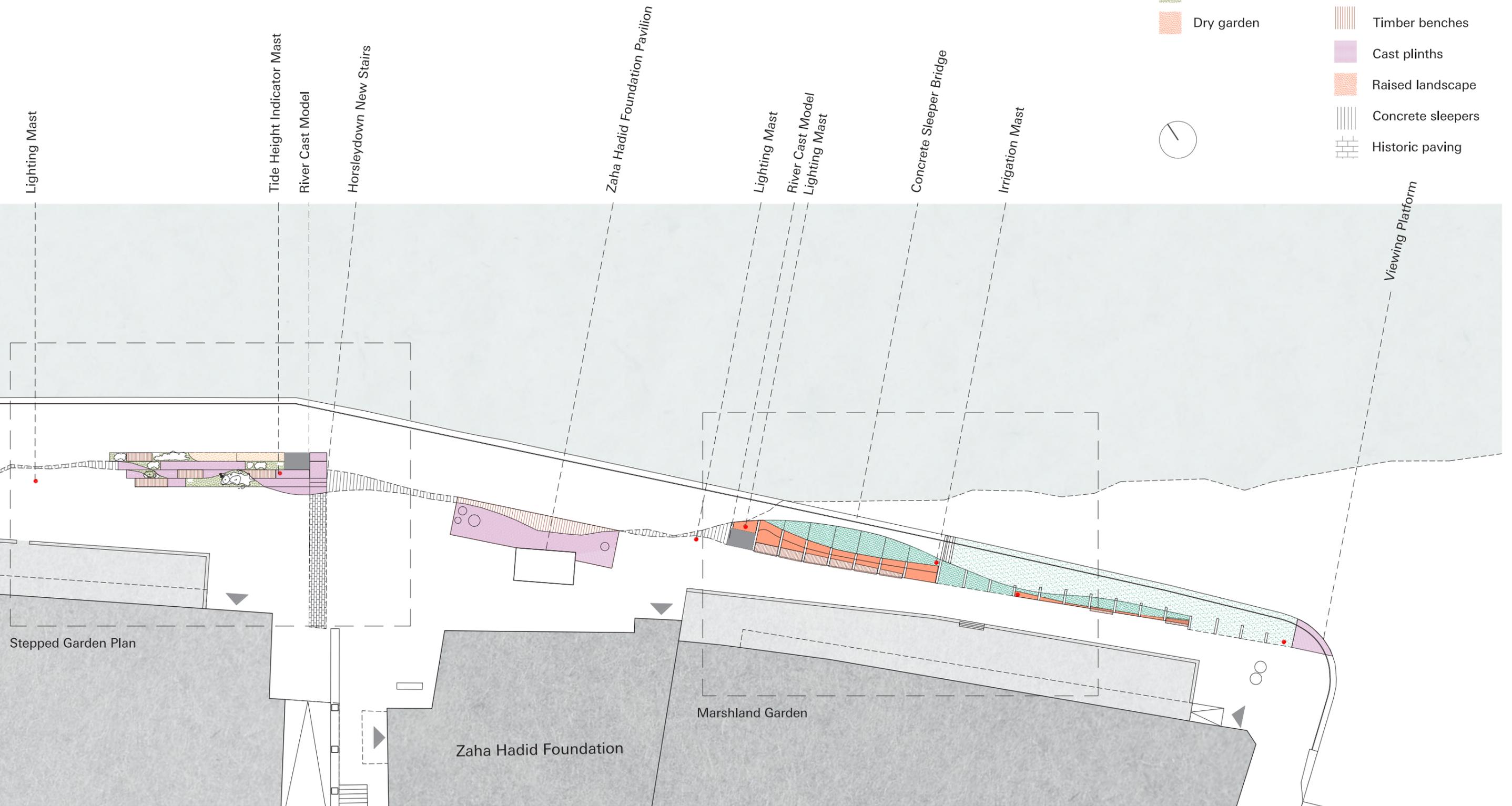


Planting Key:

- Marshland garden
- Stepped garden
- Dry garden

Installation Key:

- Cast river model
- Floating masts
- Timber benches
- Cast plinths
- Raised landscape
- Concrete sleepers
- Historic paving



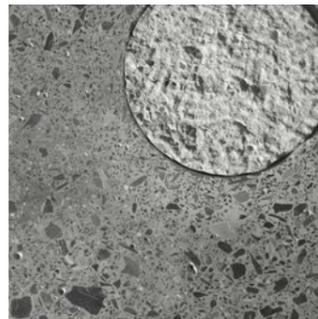
Stepped Garden Plan

Marshland Garden

Zaha Hadid Foundation

Dry Garden

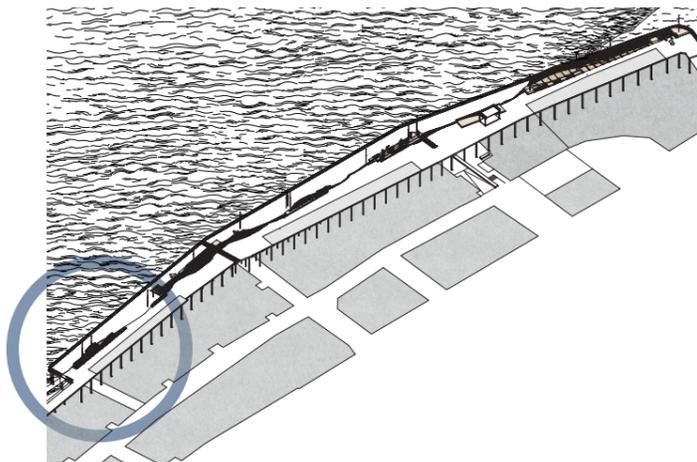
Dry flint garden with generous seating, planting and screening at different heights to provide privacy whilst maintaining openness as a meeting point and gateway onto the Jetty. A cast of the prehistoric river begins the sequence of historical layering. Masts provide lighting and wayfinding to Shad Thames and beyond to Southwark and the Thames Path.

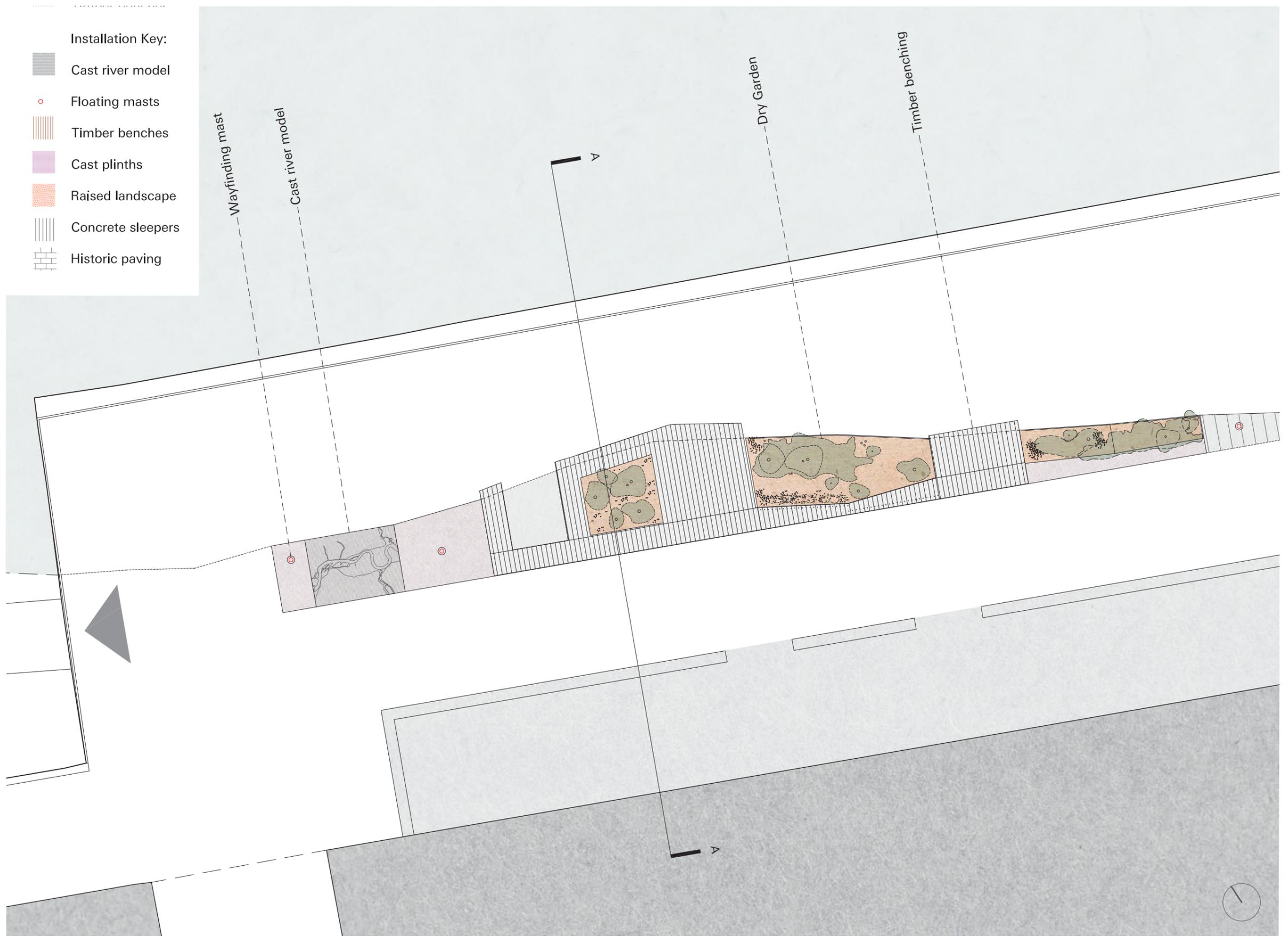


Exposed Aggregate



Flint Wall



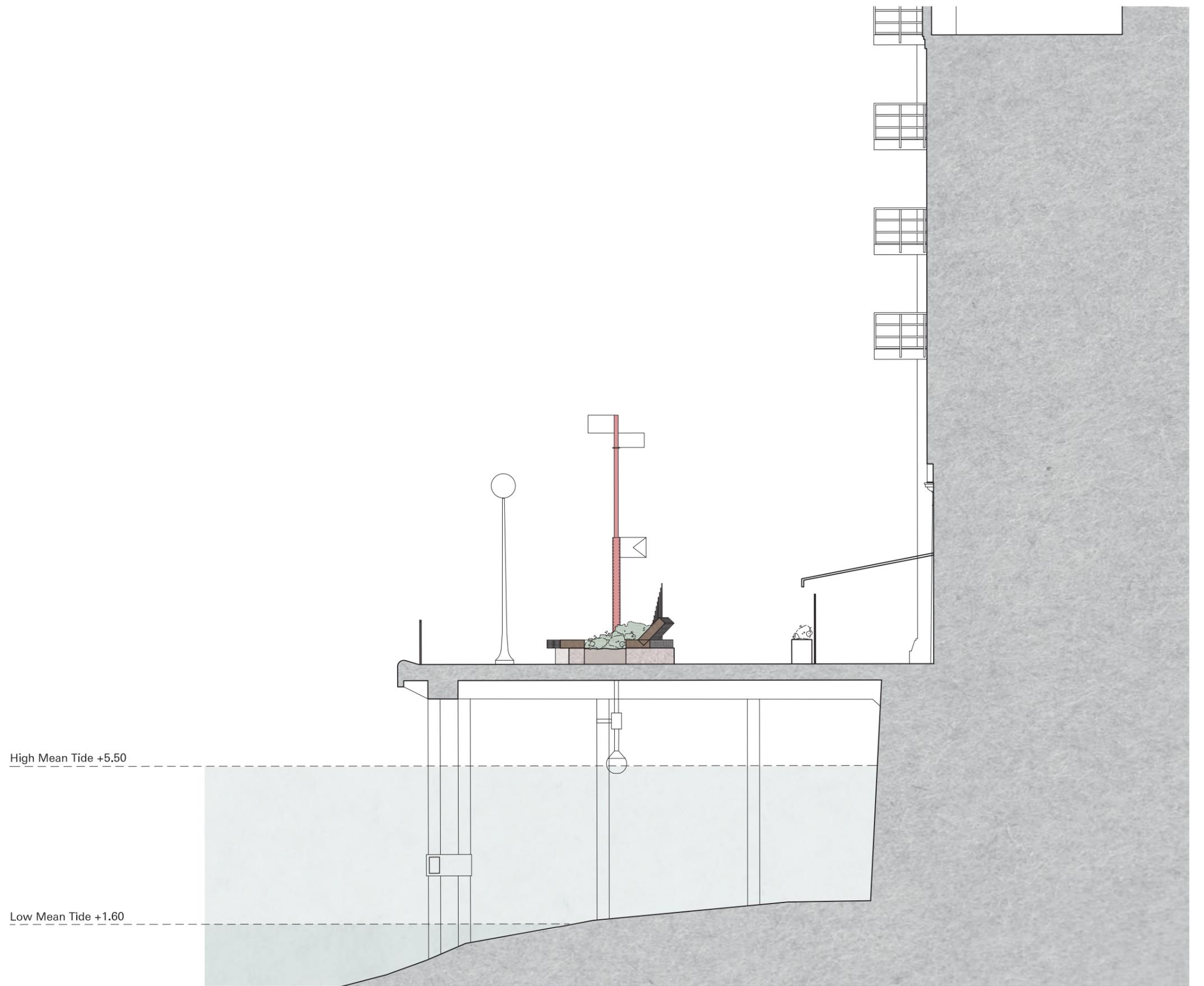


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High Mean Tide +5.50

Low Mean Tide +1.60



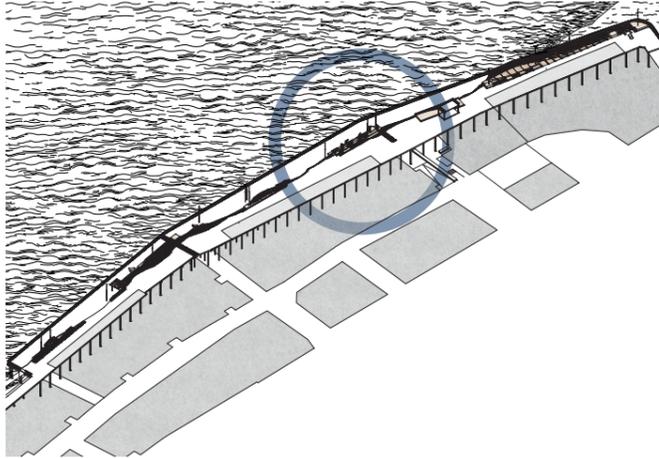
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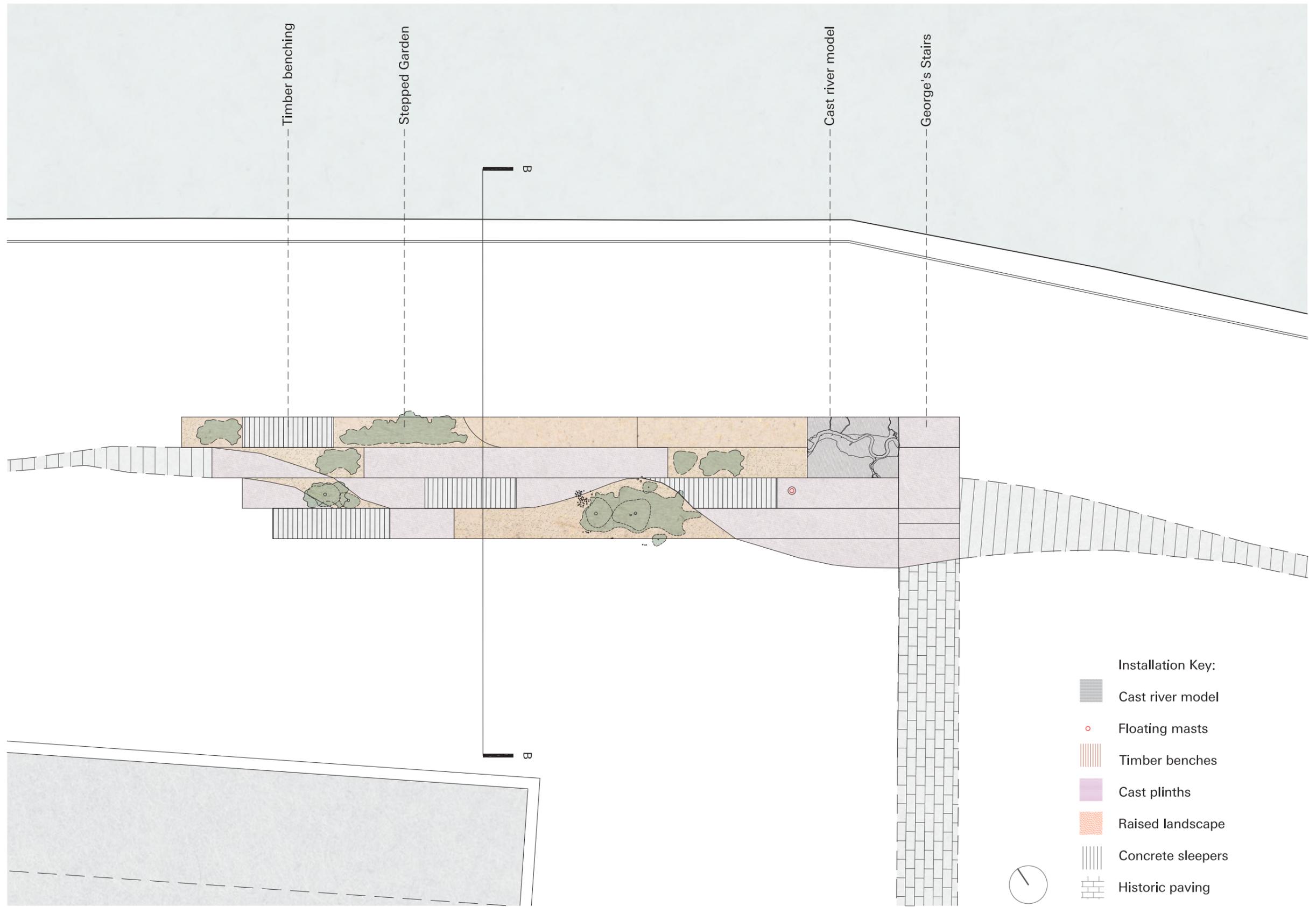
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Stepped Garden

A stepped profile references the historic Horselydown New Stairs and articulates the edge of the dry garden at this strategic access point on the Jetty. Layers of bound and exposed aggregate provide seating and a series of different sand and shingle beds for a variety of planting. The masts communicate tidal changes, wind and sound and reflect the environmental and atmospheric qualities of the island.



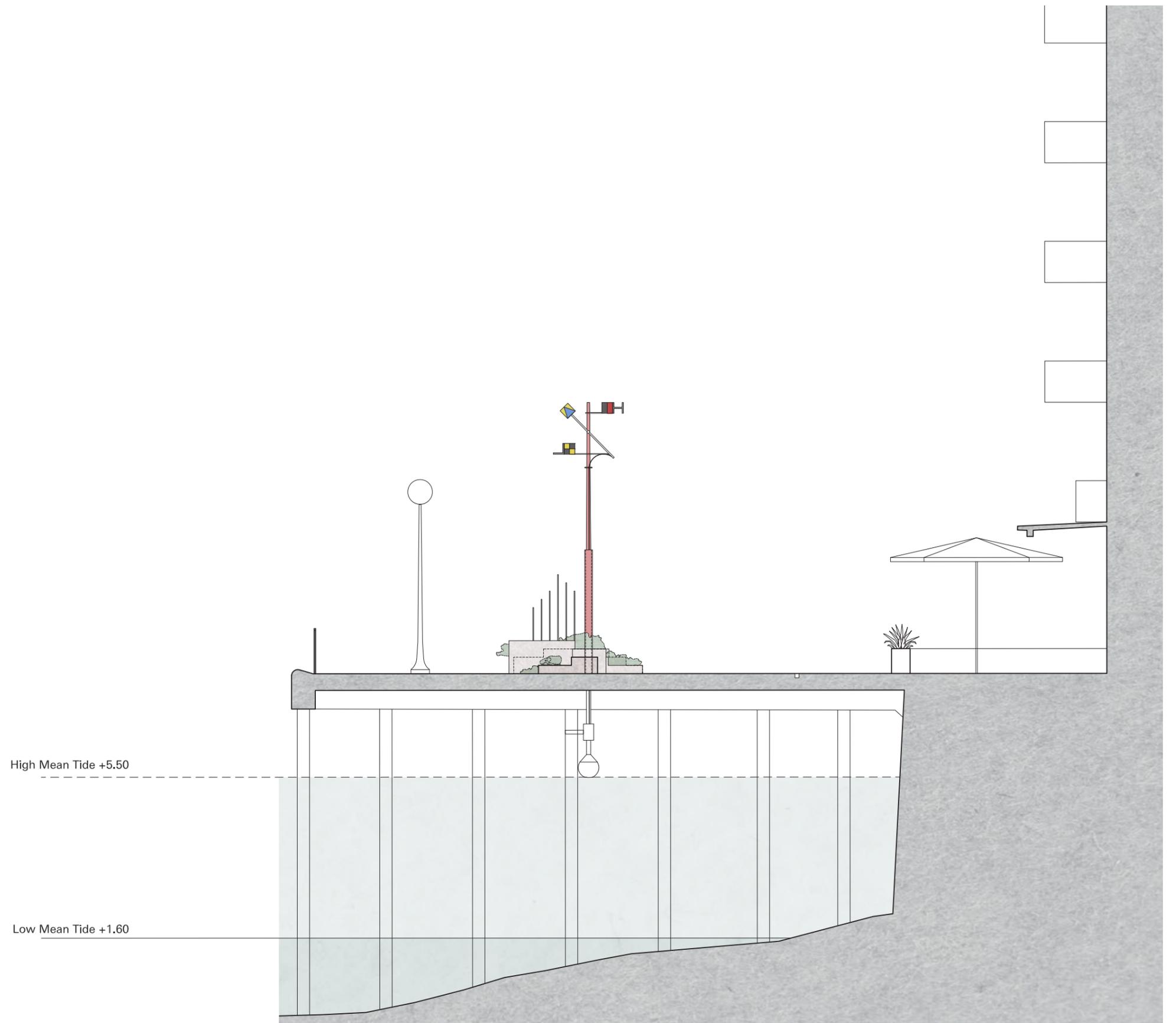


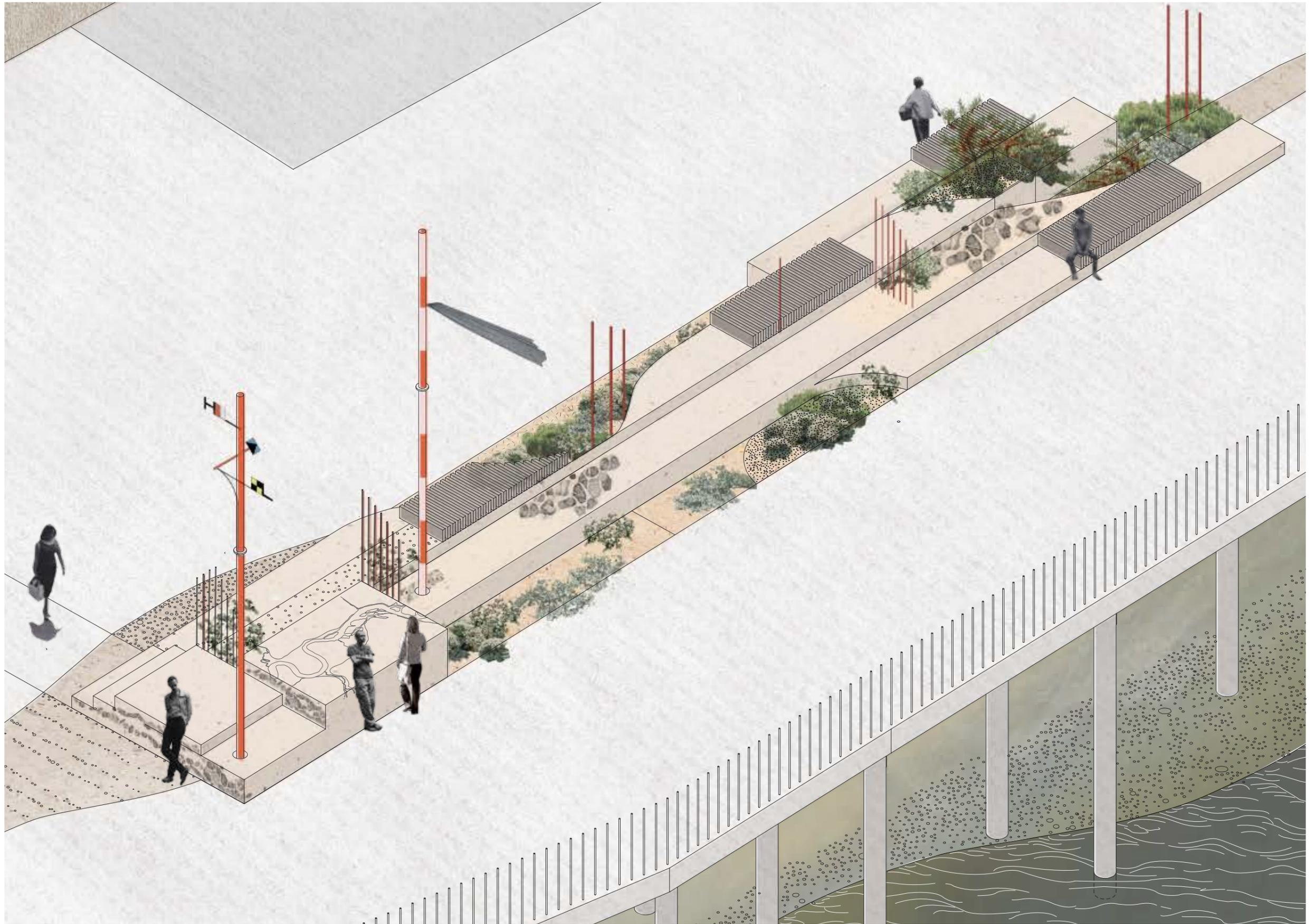
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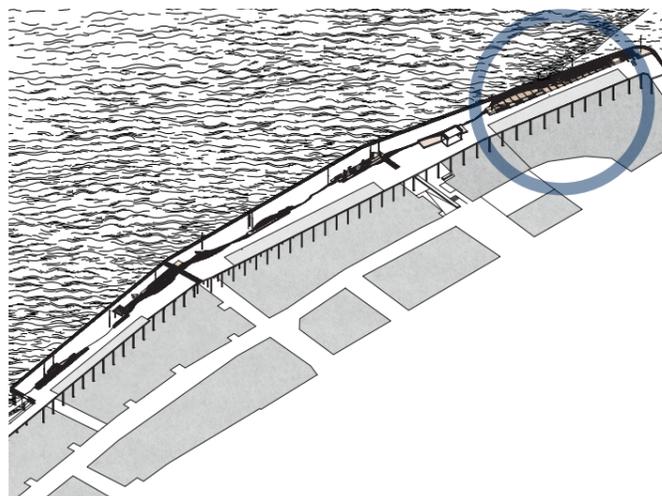
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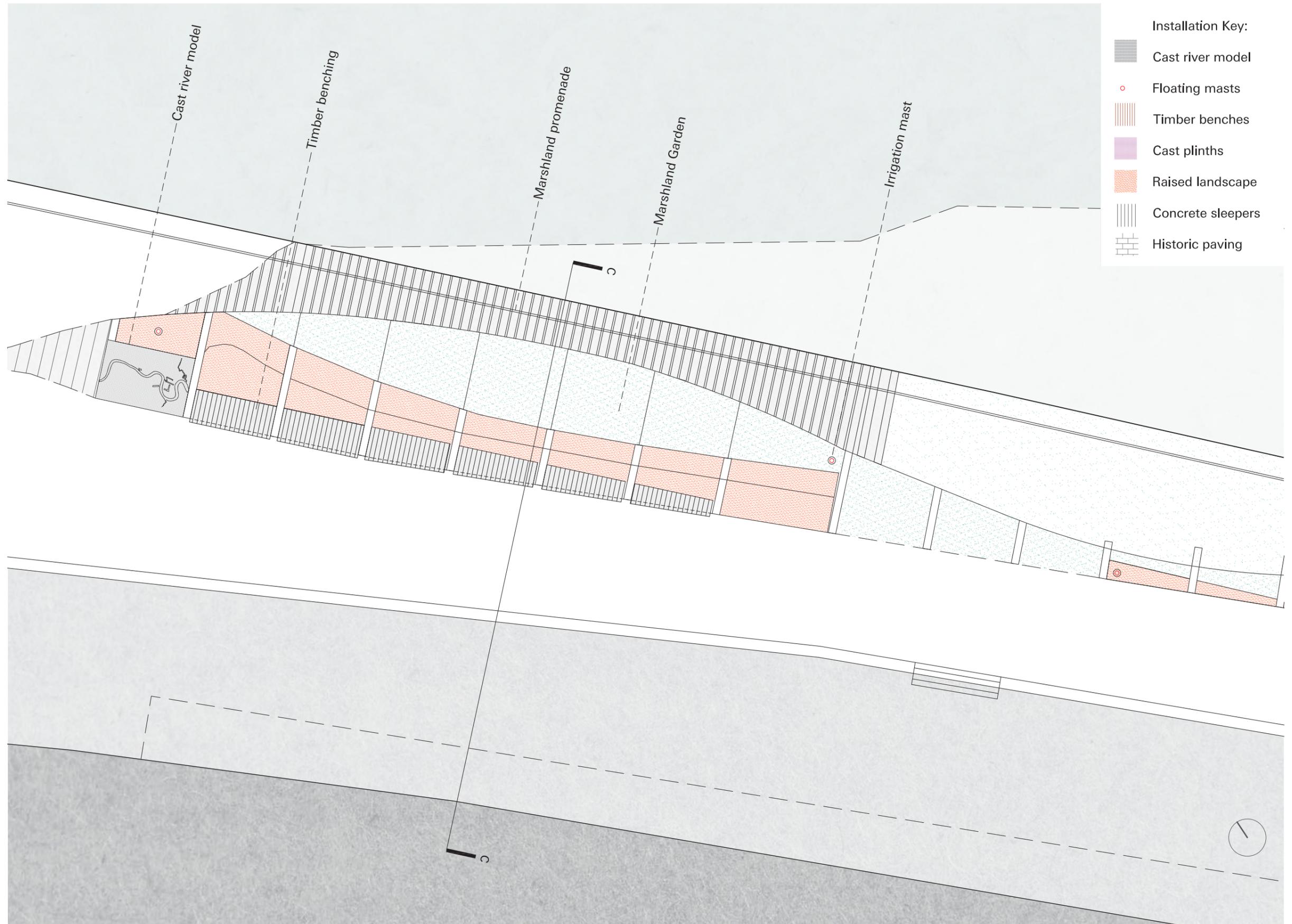
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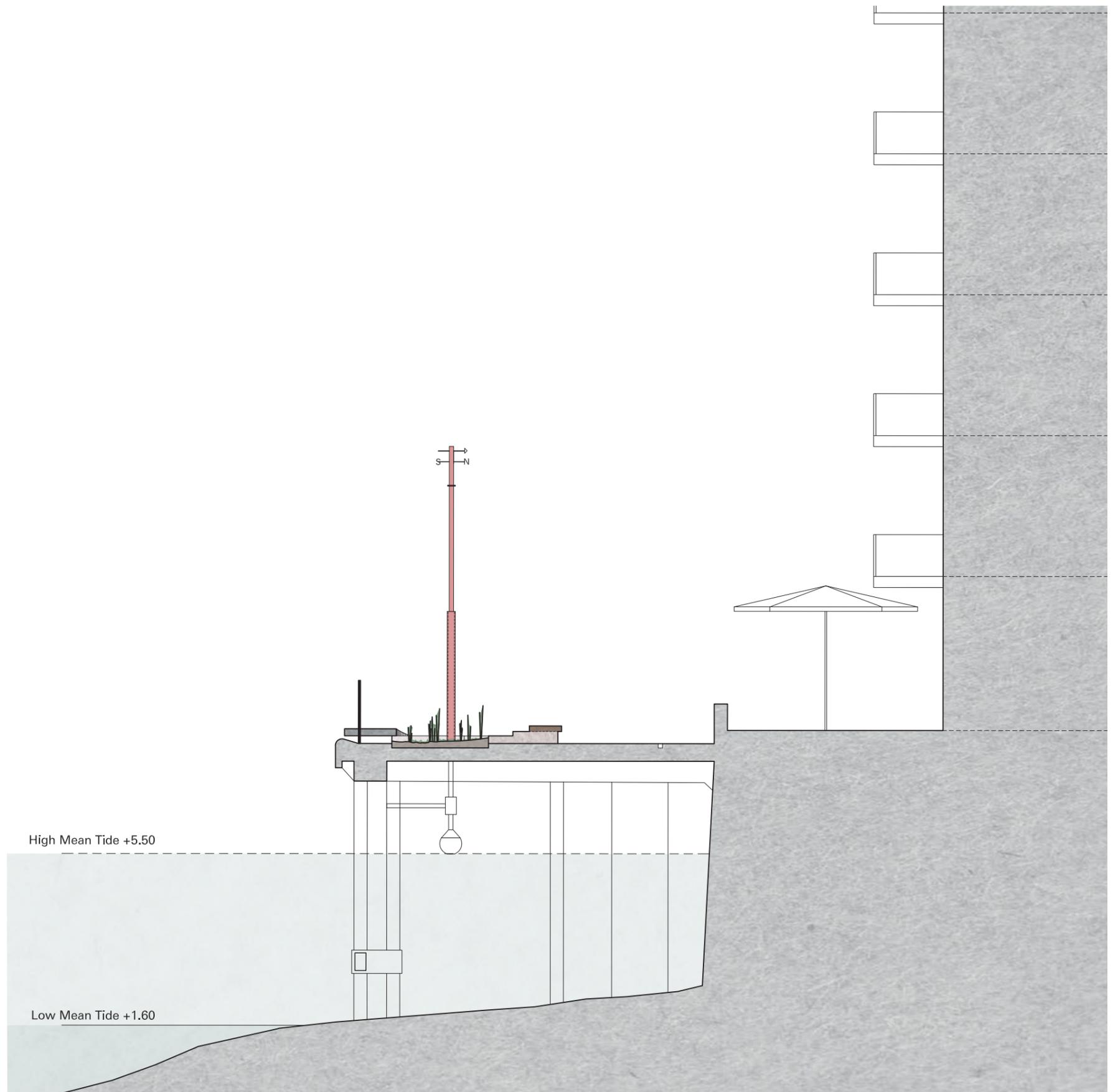
LudwigWillis Architects

Marshland Garden

The Salt Marsh garden features an irrigation mast that floods the mud flats with river water with the incoming tide and swings the other way with the ebb to trickle river water down the meandering beds. A riverside path allows visitors to walk the shoreline with seating provided on both sides of the plinths. Other masts provide lighting and wayfinding as the route winds east as part of The Thames Path.









Howard Miller Design

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Landscape

The brackish water of the Thames Estuary, from the mud flats to the coastal shingle, sustain a specific ecology of plants and flora. The Tide Line landscape is irrigated with river water and native species of planting that thrive in dry shingle or salt marsh.

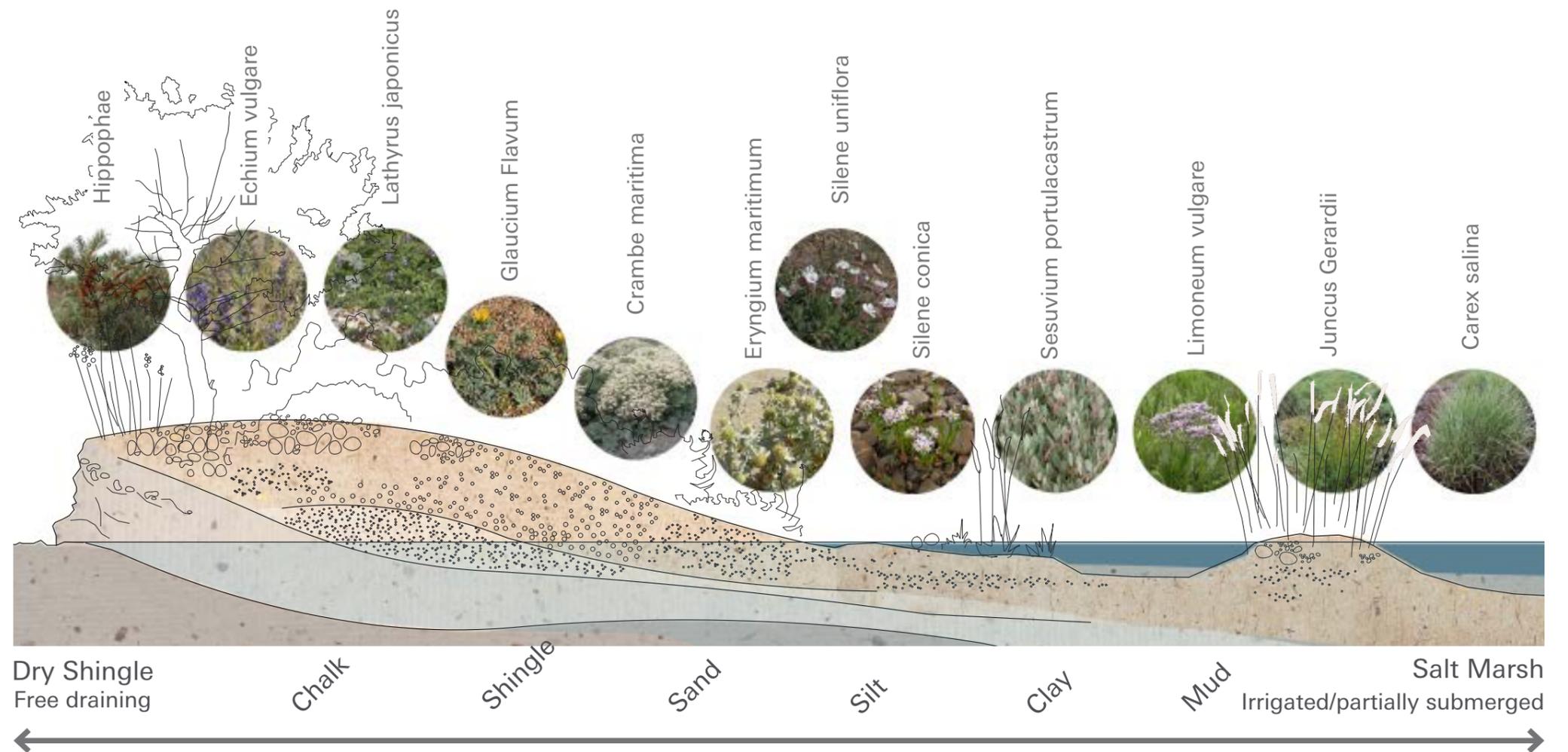
The planting design is not intended to be a literal replica of various estuarial ecosystems; it uses species from these ecosystems to create an atmosphere so that the link between Butlers wharf and the wider estuary is ever present. It is assumed that the ongoing maintenance burden should be low and accordingly our approach is to simulate the kind of rugged environments found about the estuary in the planters and to plant them with species that are adapted to suit that difficult condition, thereby excluding most weeds. This can be done by making the planting substrate either too wet or too dry for most plants, irrigating with saltwater, and controlling the amount of nutrient in the substrate.

The sketch design has experimental elements, for example, the saltmarsh planting scheme in a public realm setting such as this. With any experimental design there is a risk that the planting will not thrive as intended. We have a range of ideas to mitigate this risk including:

- Installing the planting in phases, and planning the initial planting as A-B tests so that we can learn what works best before deploying the better approach to the next area.
- Finding a plant nursery that has knowhow in growing saltmarsh and coastline planting to ensure that the nursery conditions will be similar to the planters proposed here.
- Concentrating on establishing colonies of a

single species in each bed rather than trying to create mixed planting schemes where different species will compete with each other. Variety will come from having lots of separate planting beds adjacent to each other.

- Planning the planters so that they can be modified to a more conventional planting scheme in case regular irrigation cannot be guaranteed due to budget restraints



Planting

Dry garden

The planting design for this area references the shale beaches and sandbanks of the lower Thames estuary. The substrate will be free draining gravel, grit and sand with a small amount of organic matter. This type of environment can host small stunted trees and shrubs such as *Pinus mugo*, and blocks of sea buckthorn and various grasses adapted to sand dunes.

Stepped garden

The stepped garden has a similar approach to the dry garden (free draining, low nutrient) but this garden is characterized by a set of stepped planting pockets and is more akin to an alpine garden. The idea here is to use a very sandy substrate with lower growing, flowering species such as sea thrift sea holly and that are at the scale of the step planters and can be appreciated by people sitting near them.

Saltmarsh garden

Taking inspiration from the salt marsh and mud flat landforms, this is the most technically challenging planting scheme. Beds will need to be flooded in the same way as a rising tide; rising slowly with very low levels of turbulence so that the fine silt particles are allowed to settle. The intention is to use a kinetic sculpture powered by the river tide, though it may be a pumped back-up system is needed. The substrate will need to consist of silt, mud and fine sand. Some of the planting area might be permanently submerged with water. Planting might consist of cord grass and salsify for the sandier more submerged areas, sea Purslane, sea Aster and sea Plantain for the less frequently submerged areas.

Irrigation

The pattern of climate change projected for London is that extreme weather events such as heat waves and droughts and flash floods will continue to become more prevalent and more severe. Dry gardens, by their nature are suited to this but planting in raised beds is more vulnerable to extreme drought than planting in the regular ground where ground water can linger for longer. We suggest that tap points are hidden discretely within reach of the planters so that the planting could be watered in an emergency situation. This would protect against the potential loss of planting in the case of a severe drought. The irrigation of the saltmarsh has been covered above.

Drainage

The planters will all need drainage. At present we have no survey for existing drainage and are working on the assumption that surface water currently runs off into the river. Water from the planters, especially the salt marsh planter will be salty and muddy; which may cause issues with directing it down regular drains (rust, blockage). This needs consideration and possibly consultation with key stakeholders at design stages 3 and 4.

Maintenance

Low maintenance does not mean no maintenance. The initial 2 years after planting will certainly need monitoring and potentially intervention may be needed to help the planting reach an equilibrium. Following this 2 year phase, checkups at regular intervals will be needed. We suggest that this bedding in is made part of the building contract for whoever installs the planting and includes



Armeria maritima



Eryngium Maritimum
Sea Holly



Sesuvium portulacastrum
Sea Purslane



Pinus Mugo



Hippophae rhamnoides
Sea Buckthorn



Carex Salina

a training session at the end of this period so that the know-how can be passed on to whoever becomes responsible after this. It may be prudent to include a small dowry in the funding bid to pay for this ongoing maintenance.

Ecology

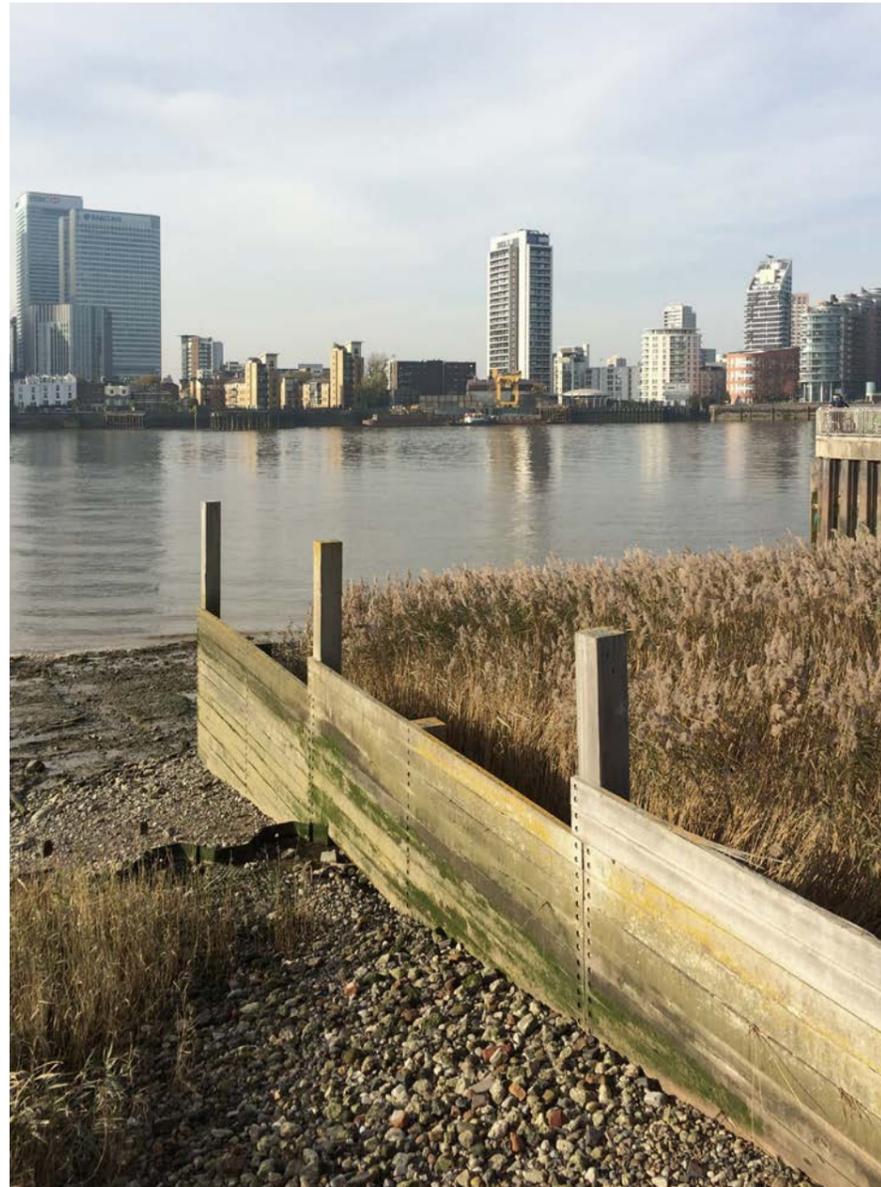
The global history and riverside location of the Wharf provides a context for responding to the ubiquitous challenge of climate change, which threatens opposing catastrophes of both drought and flooding. The archipelago of planting includes dry islands, with free draining sand and gravel and contrasting marshlands of mud flats.

Estuary Edges

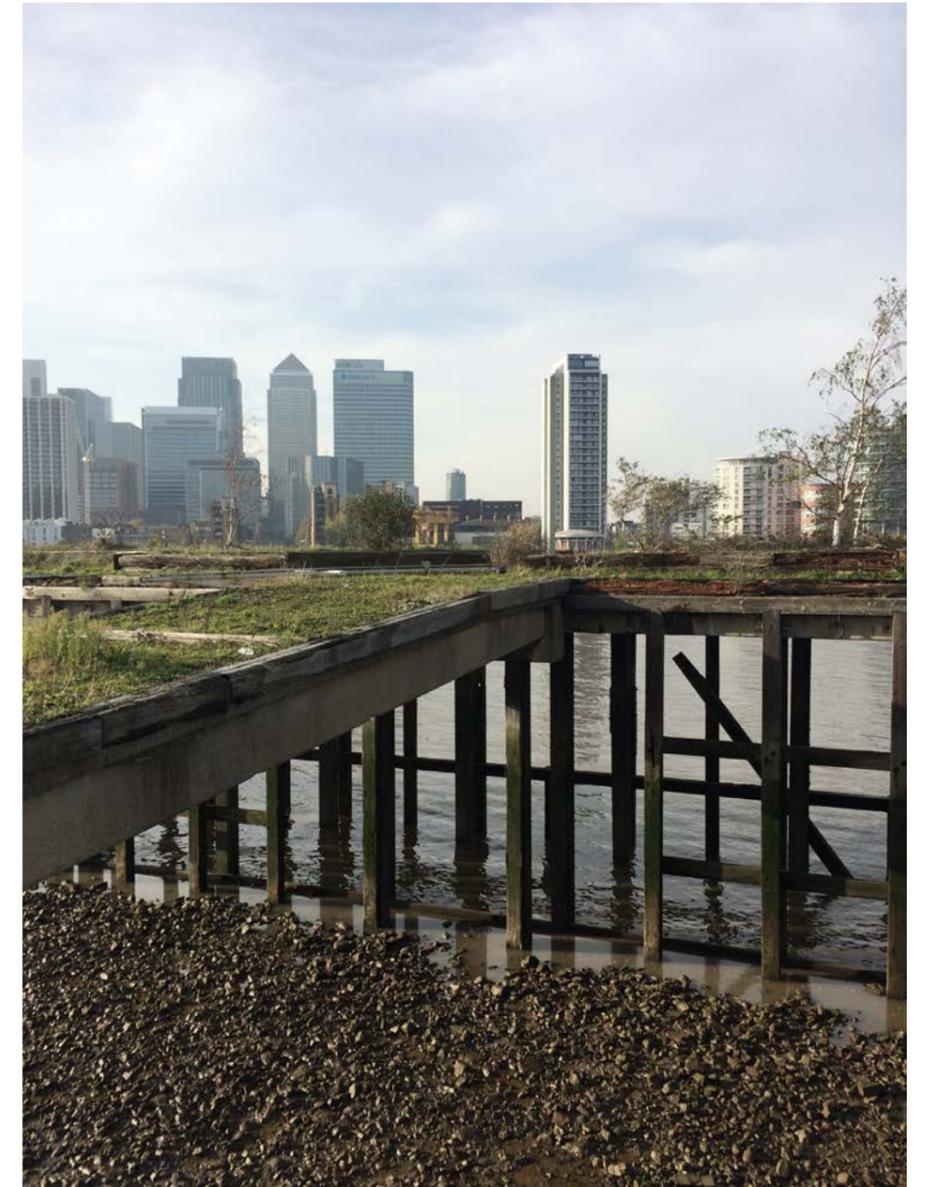
Co-ordinated by The Thames Estuary Partnership this project brings together stakeholders including the Environment Agency (TEAM2100), Port of London Authority, Institute of Fisheries Management and Tideway:

“Replacing brick, concrete, and metal tidal walls with a variety of habitats is what the Estuary Edges project is about. Estuary Edges is a ‘how to’ guide on ecological design for softening these ‘edges’ to encourage wildlife into urban estuaries. In our case study estuary, the Thames, only around 2% of the edges are natural. Increasing the habitat along the edges will have a significant positive ecological impact on plants, invertebrates, fish and birds [...]

Including features that improve public access and educate people about the local environment by making the unseen seen will vastly improve the public realm as well as bringing environmental and health and wellbeing benefits.”



Greenwich Peninsula Terraces, Estuary Edges



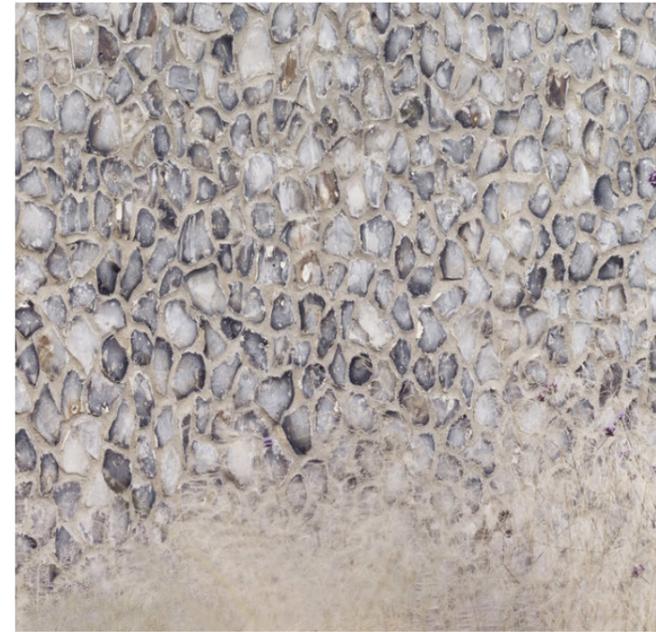
Green Jetty, Jonathan Cook Landscape Architects

Materials & Maintenance

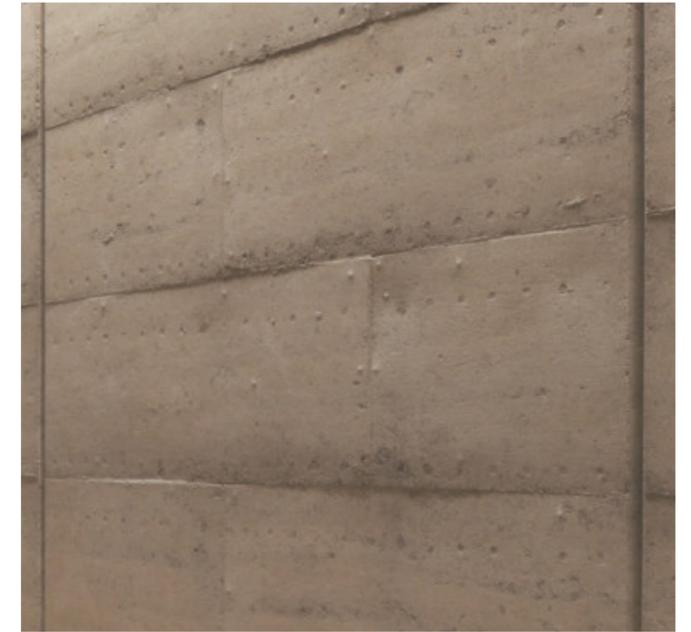
A robust palette of materials is used throughout. Cast plinth elements are formed using local and recycled aggregates from the Thames Estuary bound with lime. Locally sourced Sweet Chestnut timber is used for seating. Weathering steel forms edges for the planting beds and filigree steel profiles are used to create a new balustrade, maintaining views across the river.



Exposed Aggregate, Castle Burghausen



Flint Wall, Cassion Castle



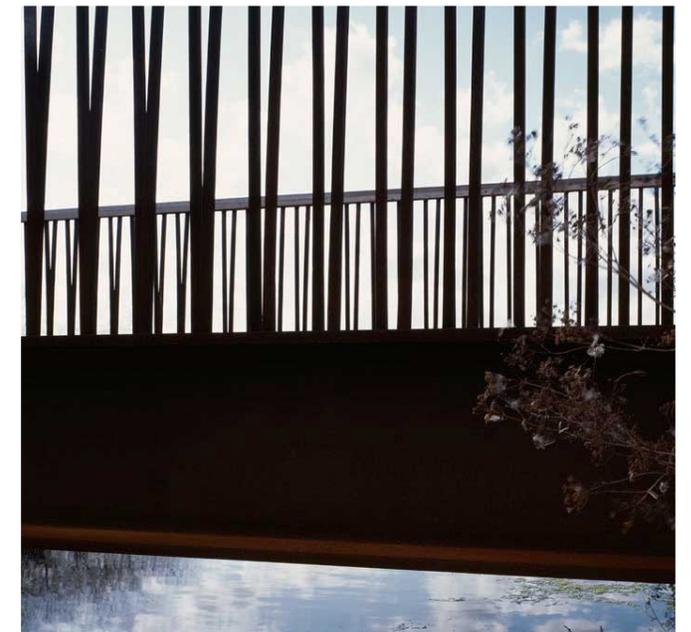
Rammed Earth, Waugh Thistlington Architects



Durable timber in robust sections, Dan Pearson



Weathering Steel, The High Line



Steel Balustrade, Rainham Marshes, Peter Beard

Structural Condition

“The jetty was constructed in the early 20th century. The wharf structures generally comprise reinforced concrete slabs supported by downstand concrete beams. These beams are supported on concrete columns, which bear on to or in to the ground, and also on to the brickwork face of the adjacent buildings [...]

The wharf in front of Spice Quay has been extended and has steel piles supporting a concrete slab. The outside face of the wharf is protected by a system of fenders which comprise a timber section, embedded in to the ground and supported by steel brackets back to the wharf [...] The wharf extends out to the river up to 20m at its widest point and about 5m at its narrowest.”

Extract from Structural Inspection Report 2018

4430/Butlers Wharf Jetties

Samuely
Consulting Structural Engineers

Appendix A: Photographs



Plate 1: typical view of rotten fenders

4430/Butlers Wharf Jetties

Samuely
Consulting Structural Engineers



Plate 5: Cracking to Spice Quay



Plate 6: Horizontal cracking to beam

4430/Butlers Wharf Jetties

Samuely
Consulting Structural Engineers

3. Conclusions and Recommendations

The overall condition of the wharf structures appears to be generally satisfactory. There are a few areas where minor rust spots are visible. These are probably caused by corrosion of the reinforcement either due to reduced cover, carbonation or chloride attack due to salts in the river water.

Carbonation is caused by the absorption of CO₂ into the concrete surface thus reducing the concrete's alkalinity and its ability to protect the reinforcing steel. This is an inevitable consequence of ageing of the concrete and is exacerbated by low levels of concrete cover the reinforcement and poor compaction.

Chloride attack is similarly in that it causes the concrete to lose its alkalinity and ability to protect the reinforcement. This is a particular issue in concrete elements near sea water and causes a unique form of dark rusting.

We do not think any remedial action is required at present as there is no clear evidence that the extent of corrosion has significantly worsened since our previous inspection. However we recommend that regular inspection are undertaken, say every 2 years, to monitor the condition.

We note above some specific areas where some action may be required.

- Timber fenders. In their current condition they are unlikely to resist an impact load. The Environment Agency and the Port of London Authority may have a view on this; presumably if one of them fails they then fall in to the river which again they may have a view on. It may be necessary to carry out repairs.
- Concrete beam/wall movement. The staining on the wall suggests that this movement is historic. The cause is not clear and could be due to impact or foundation movement. There does not appear to be any signs of movement in the wall nearby or in the concrete beams and columns. We suspect that the movement occurred soon after construction due to a pile settling. The condition should be monitored over time to see if it changes.
- Concrete spalling to the slab. This is an isolated issue. However there is now some exposed reinforcement and so it would be prudent to undertake a minor repair to reinstate the cover.
- Spice Quay cracks; these appear to have healed themselves but again we recommend monitoring.
- Beam cracking; this could potentially have loose concrete ready to fall in to the water. We recommend that minor repairs are carried out here as well in order to prevent further damage. However, monitoring of the situation would also be a sensible solution instead.

Structural Statement

Existing Condition

The structural alterations have been developed with a consideration of the existing structure. A desk study and visual survey of the existing structure is required to establish existing construction details more accurately and to assess the imposed live loads assumed in design.

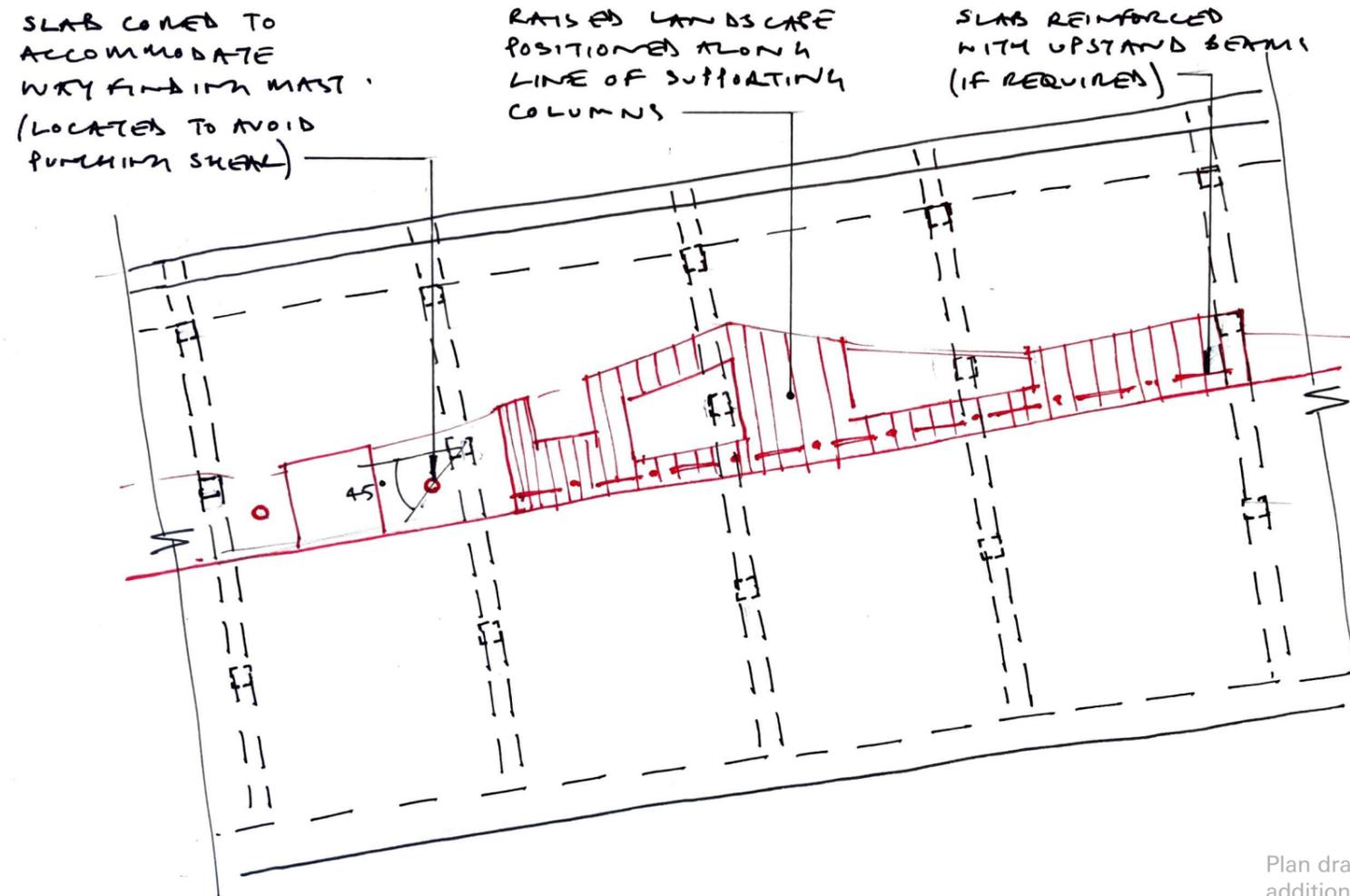
Any reports concerning existing defects, historical repairs etc. will also be considered.

Additional Loads

Wherever possible the additional loads due to the proposed landscape features will be designed to avoid exceeding the original imposed design loads.

Additionally, the landscape features will be positioned over beam and column positions, where the existing structure has the most capacity for additional load.

If required, the slabs will be reinforced with upstand spreader beams concealed within the landscape features.



Plan drawing showing strategy for additional loads

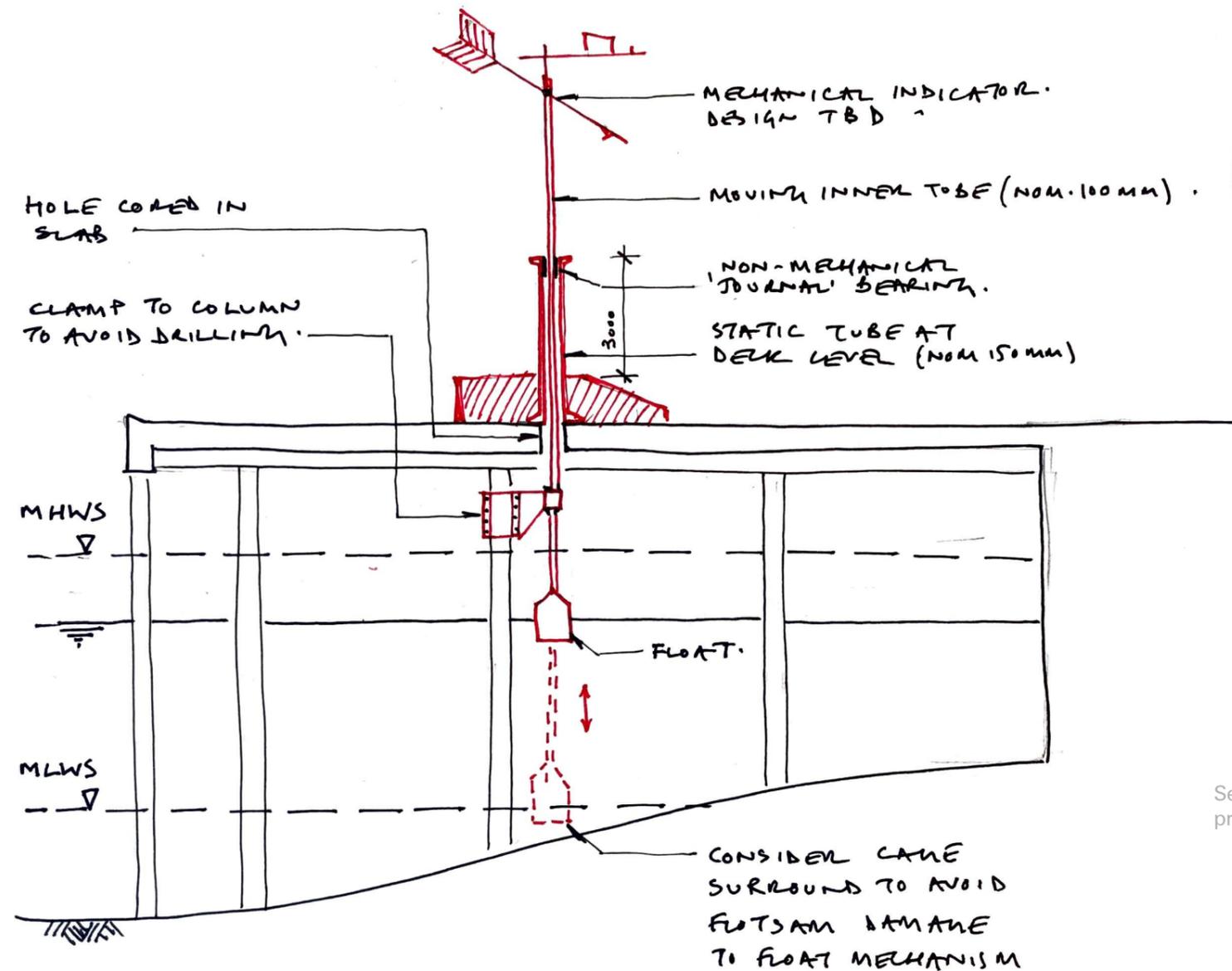
Alterations to the Existing Structure

It is proposed to diamond-core through the deck of the jetty to install the 'Wayfinding Masts'.

The locations of the cores will be carefully selected considering the constraints imposed by the existing structure and to work alongside the landscaping proposals. The locations of the cores are likely to be near to the existing columns to allow a lower bearing to be mounted on the column below the deck. However, not so close that the capacity of the slab to resist punching shear is compromised. Reinforcement exposed by the cores will be protected to prevent corrosion.

Approvals

The design will be developed in close collaboration with the owners of the jetty and their term engineers, to ensure that the alterations can be ratified and to avoid compromising the durability of the existing structure.



Section drawing showing design principles for structural concept

Services & Sustainability

Through simple, integrated low energy solutions, including recycled materials, natural irrigation and solar energy the proposal is inherently sustainable. Solar, lunar and terrestrial weather shelters generate energy with photovoltaic panels and form educational installations that harness energy from the sun, moon, tide and wind. In addition simple kinetic mechanism should be used where possible to support the educational and low-energy strategy.

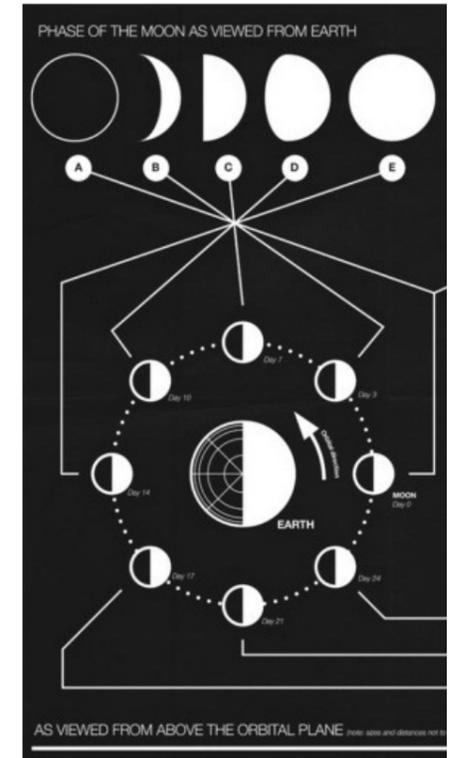
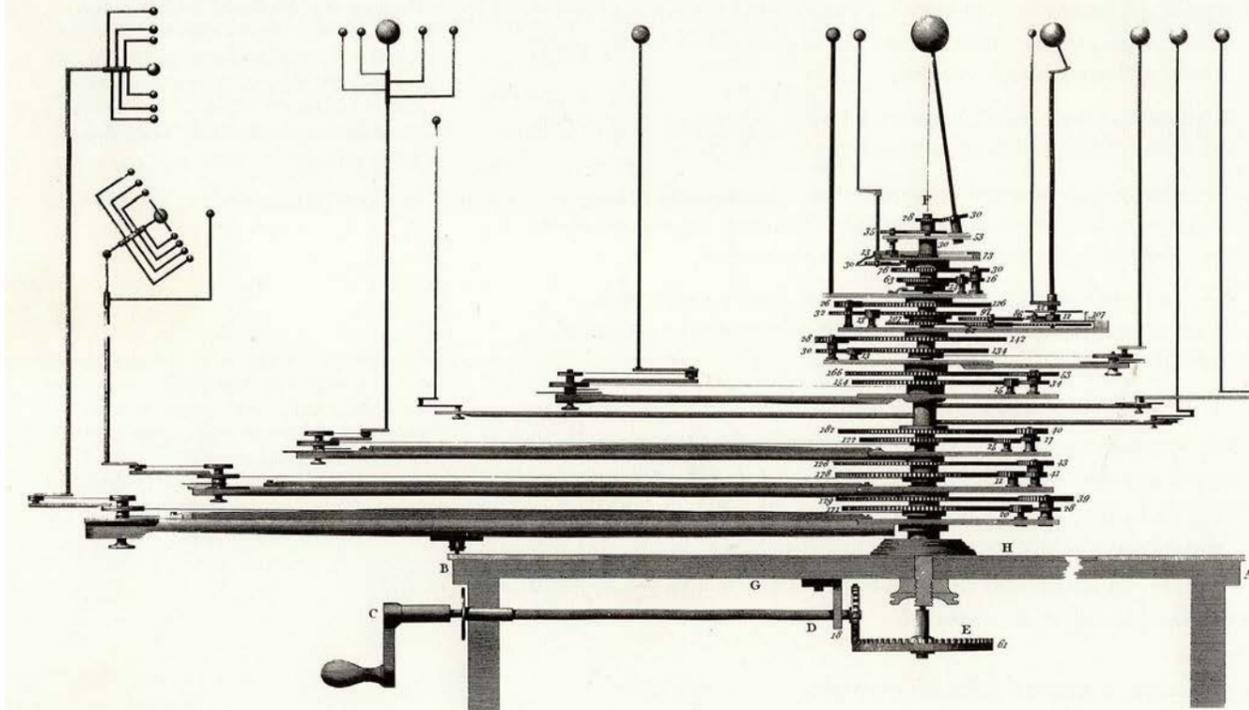
A survey of the existing utilities will be required to develop the design of the services further as part of the next stage. The infrastructure will also be considered as part of the overall maintenance strategy.

DIRECT methods for the display of three dimensions include making models, as in this 1570 edition of Euclid's *Elements*, where little paper constructions teach solid geometry. Models pleasingly represent the smooth surfaces of three-space, as in architectural miniatures and mathematical solids; more obstreperous statistical data however, call for computer analysis of data point clouds.

Narratives of the universe were impressively cranked up in orreries, simulations of our solar system (as known in 1800), with planets and their satellites rotating and orbiting. Although a triumph of gear ratios, the machines did commit a grave sin of information design—Pridefully Obvious Presentation—by directing attention more toward miraculous contraptionary display than to planetary motion.

Euclid, *The Elements of Geometrie* (London, 1570), with preface by John Dee, English translation by Henry Billingsley, fol. 314. A fine guide to various extra-dimensional elaborations in book design is Gay Walker, *Eccentric Books* (New Haven: Yale University Library, 1988).

William Pearson, "Planetary Machines," in Abraham Rees, ed., *The Cyclopaedia; or, Universal Dictionary of Arts, Sciences, and Literature*, Plates, Vol. IV (London, 1820), plate XI; and Henry C. King with John R. Millburn, *Gear'd to the Stars: The Evolution of Planetariums, Orreries, and Astronomical Clocks* (Toronto, 1978).



Lighting

Solar powered lighting is mounted on masts to provide safe levels for the main footpath and will be complemented with fittings at low level to create a balanced, subtle and atmospheric lighting strategy that is integrated in the new landscape; This will create an atmospheric lighting scheme and highlight the planting and landscape elements.

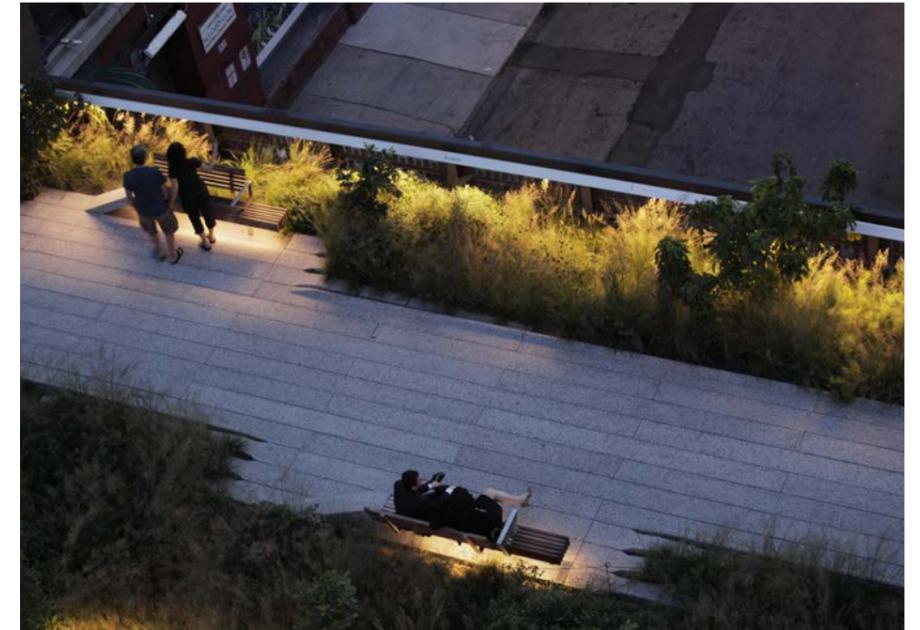
The existing lighting is very bright and dominant in relation to the adjacent residential properties at high level; Additional festoon lighting is partially in operation and creates an additional ambient light; it is considered to replace these as part of the long term vision for the site and the implementation of the new lighting will need to be planned carefully as a phased upgrade of the infrastructure and services.

In line with the sustainable design different options for the solar powered operation should be investigated including the coordination with solar panels on roofs of the residential buildings which are planned for the near future.

For recommendations on the location and feasibility of solar lighting refer to Lighting & Renewable Energy Report - Atelier 10 - 31/10/2018



Varied and atmospheric lighting, St Albans Cathedral, Studio Dekka



Local and linear lighting, High Line, New York



Lighting as part of landscaping, High Line, New York

Howard Miller Design

Structure Workshop

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Seating & Amenity

Seating

Different types of seating arrangements are proposed as part of the sequence of islands. The gardens closest to the access routes onto the Jetty accommodate for a variety of benches as meeting place other arrangements are more linear as part of the edging to planters or as a place for a short rest along the path. Subsequently some of the benches are a simple wooden construction without backrest whilst in other areas the depth of the seat is increased to allow for more relaxed seating with additional back rest. The exact layout of the benches will be developed as part of the next design stage.

Durable and sustainably sourced timber is proposed for the benches with robust detailing to ensure that the exposed elements weather well.

Water refill stations

Modern water fountains are a good way to support sustainable living and provide a functional feature as part of the urban landscape. The design will be integrated in the plinth forming the individual planters and placed on a strategic position.

Bins

Recycling stations will be provided as part of the proposal of a simple and practical design; it is proposed to have a reduced number of bins that are located at the cross routes linking the Jetty with Shad Thames; these will be developed with an efficient maintenance strategy in mind.



Bench type seating, High Line, New York



Lounge type seating, High Line, New York



Recycling bins



Michael Anastassiades, Drinking Fountain, V&A Museum



Djao Rakitine, Drinking Fountain, Selfridges

Wayfinding

The Jetty occupies a prominent location on the south bank of Thames Path with connections west to Bankside and The City and east around the Rotherhithe peninsula to Greenwich. To the south from Shad Thames there are connections to Bermondsey and the wider community of Southwark. Wayfinding strategies are envisaged across a range of scales from the strategic urban scale to the more immediate local context. There is a further an opportunity for the wayfinding and signage to uncover and communicate the history of the site and refer to the heritage of the Shad Thames Trail. There is also an ambition to transcribe the ecology of the estuary from the flora to the flood levels within The Tide Line.



Low Line, Better Bankside & Polimekanos



Voices in the Urban Forest, Gort Scott & Polimekanos



Seeds of Change, Aldo Rinaldi & Polimekanos



Walthamstow Wetlands, Kinnear Landscape Architects & Polimekanos

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Statutory Requirements

The jetty, as a structure in the riverbed which impedes river traffic, is seen by the Port of London Authority as 'works' in the river and is therefore subject to a number of River Works Licences. Over the years these licences have been reassigned and amended to reflect development here, including the addition of licences for balconies, outside dining and commercial entities. An extensive research exercise between the Trust and the PLA has resulted in the collection of over 40 different licences and presents a picture about rights and responsibilities that is very complex.

In summary, the structure is a chattel owned by the freeholders of the neighbouring buildings, in the case of Tea Trade Wharf, the former Design Museum and Spice Quay Heights this is Petchey Holdings Ltd.

Petchey are required to insure and maintain the site, the extent to which is the subject of debate. They recover licence fees, insurance and maintenance costs from residents and businesses in percentage terms that reflect their individual footprints. In addition, Petchey are paid fees for frequent filming on site.

Southwark Council take no responsibility for the site and make no contribution to its upkeep. The footbridge across St Saviour's Dock is owned by the Council and has been the subject of ongoing repairs since 2019, which reflects the bridge's significant use, bringing people on to the jetty in increasing numbers with corresponding wear and tear [...]

The Trust believe there is a compelling case for a long-term partnership with and eventual adoption of the site by Southwark Council. The details of this partnership are the subject of ongoing positive discussions.

Extract from 'Reimagining Butler's Wharf' Open Call

Pre-Planning

Prior to the preparation and submission of the planning application informal planning advice will be sought from Southwark Regeneration (Borough, Bankside and Bermondsey).

Planning & Conservation

In order to realise the proposal a full planning application will be required to the London Borough of Southwark. The following documents will be relevant to the application and offer standards for best practice design:

- The London Plan (2016)
- New Southwark Plan (2020)
- Southward Streetscape Design Manual (2020)
- Thames Path

The Jetty is located within both the Tower Bridge and St Saviours Dock Conservation areas. Subsequently the following documents will be referred to in developing the design in Stage 3:

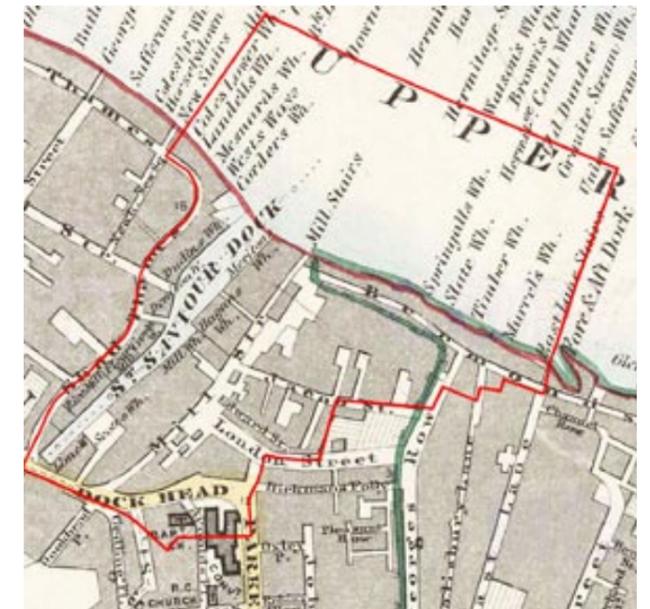
- Shad Thames Conservation Areas Management Plan (April 2014)
- Tower Bridge Conservation Area Appraisal (July 2003)
- St Saviours Dock Conservation Area Appraisal (July 2003)

It is anticipated that for the planning application the following documents will be required:

- Full Planning Application
- Conservation and Heritage Area Statement
- Access Statement
- Flood Risk Assessment



Stanford Map of London and its Suburbs 1862 overlaid with extent of Tower Bridge and St Saviours Dock Conservation Areas as shown in respective Appraisal documents



Stakeholder Engagement

The Tide Line is to be developed through an imaginative and inclusive design process that engages stakeholders and the local community in a dialogue through shared information and events. The consultation process presents an opportunity to explore themes of environment and ecology and become manifest in the landscape, which in itself is envisaged as a setting for education. The Tide Line is seen as an extension of the Shad Thames Trail and an opportunity to explore and reveal the rich history of Horselydown and the river.

“As a some time resident of butlers wharf and someone who has grown up on the river, i have a perspective and a very particular understanding of what it means to live with the tides. Ludwig Willis clearly have a profound understanding of this too. The thames is as much about mud as it is water; its tidal so twice a day the River becomes land. This is fundamental to their proposal and therefore represents a keen understanding and respect for the nature of the site.”

Public consultation October 2020



River Walks, Illuminated River with LFA, 2017

Given the ongoing pandemic the consultation on the project had to be adjusted to follow guidance on what is possible in terms of public meetings and site visits. The public exhibition of competition entries was published on a virtual platform, providing the opportunity to leave feedback on the different design ideas. The Tide Line received very positive comments from residents and public. Embarking on Stage 2 and 3 of the project to refine the brief and proposal, it was important to document the considerations and rational behind the initial design decisions to allow for a consistent and transparent design development. As part of this regular meetings with the Butler’s Wharf Riverside Trust, the LFA and the Design Team took place and the Stage 2 document serves as a report of the initial work together.

As part of the next Stage it is envisaged to reach out to a number of different stakeholders and to consult on the statutory requirements in terms of planning and adoption. A number of potential partners from the wider river community have also been contacted to start a broader dialogue that helps to develop the ecological and educational agenda of the project.

Fundraising will be an important factor in realising the project and it is important to explore different channels and opportunities.

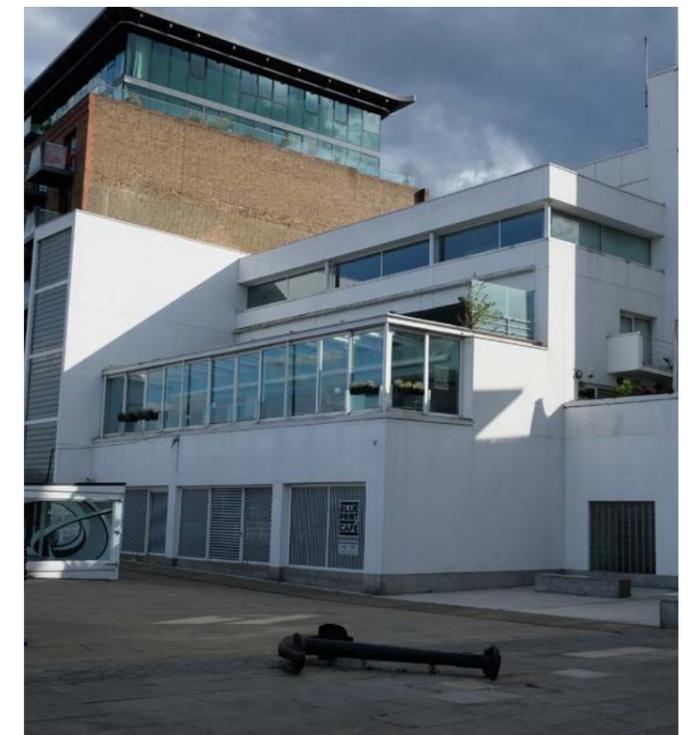
At the time of writing it can be anticipated that some public exhibition or event, at least outdoors can be planned for early Summer 2021.

The following opportunities have been suggested and will be discussed further

- Meetings with stakeholders
- Introductory exhibition in the glass tank in front of the Zaha Hadid Foundation
- Potential use of the ground floor of the Zaha Hadid Foundation for the purpose of exhibiting
- Large scale models and prototyping of materials as temporary installation on the Jetty
- Walk and/or talk as part of the. LFA programme in June; this year’s theme is Care and ties in with the proposal for a public realm promoting resilience and well-being
- These events are planned prior to the official consultation as part of the planning process



Howard Miller Design



Structure Workshop

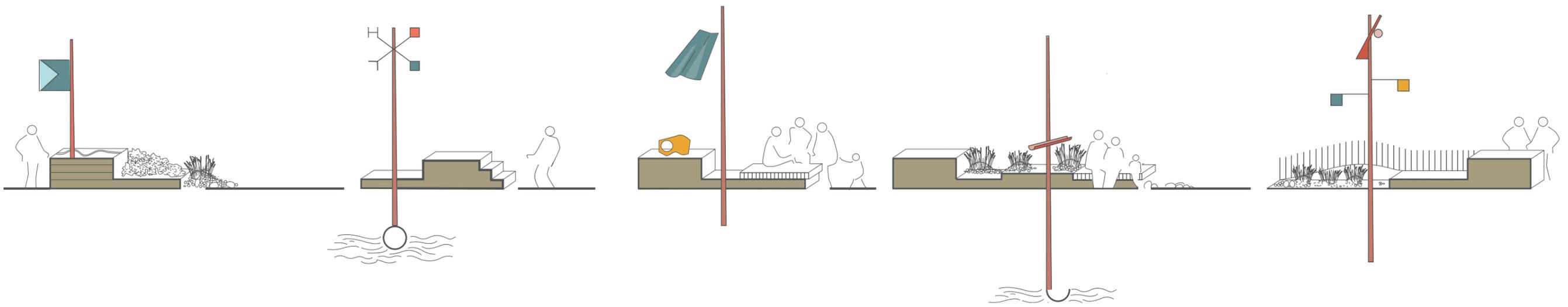
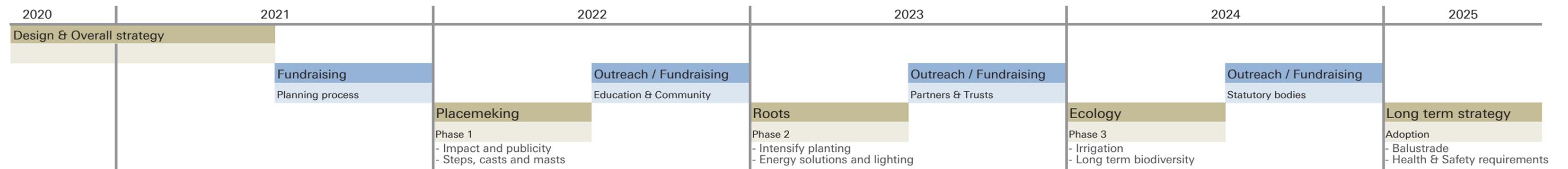
LudwigWillis Architects

Implementation

The Tide Line is a vision of a place to transform the Jetty at Butler's Wharf and is conceived as a rich and coherent concept to raise funds and support in order to realise the transformation. As such, the proposal can be read as a kit of parts that can be implemented over time as and when funding is raised. At present an application has been made to Southwark for CIL funding for North Bermondsey.

Sequence

Placemaking – for high impact to raise publicity and help with fundraising
 Outreach – focussing on Installations as educational tools and part of a learning strategy;
 Roots – Establishing and intensifying of planting to continuous landscape;
 Ecology – to ensure the long term biodiversity with infrastructure required as part of adoption, for example a new balustrade



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