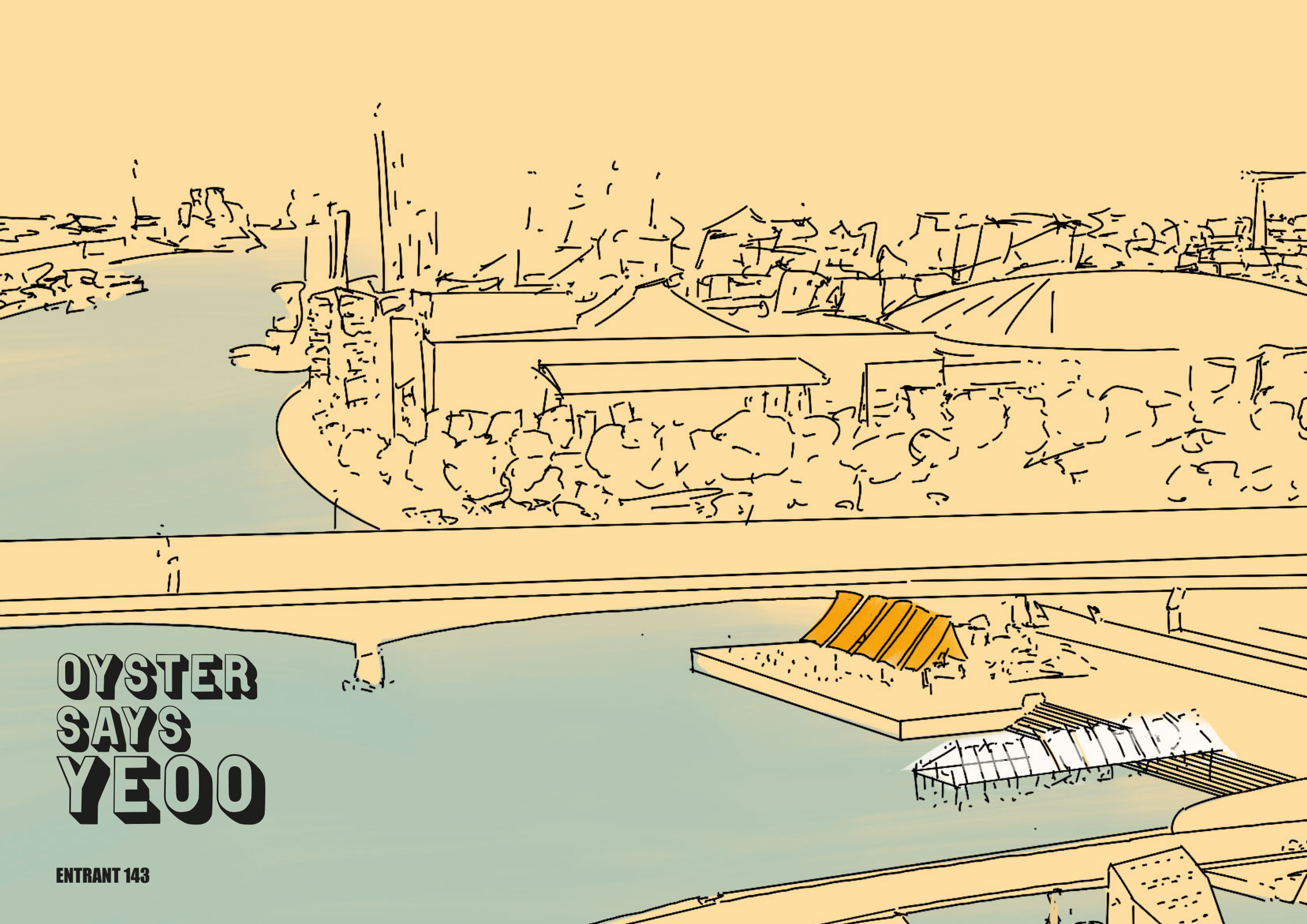

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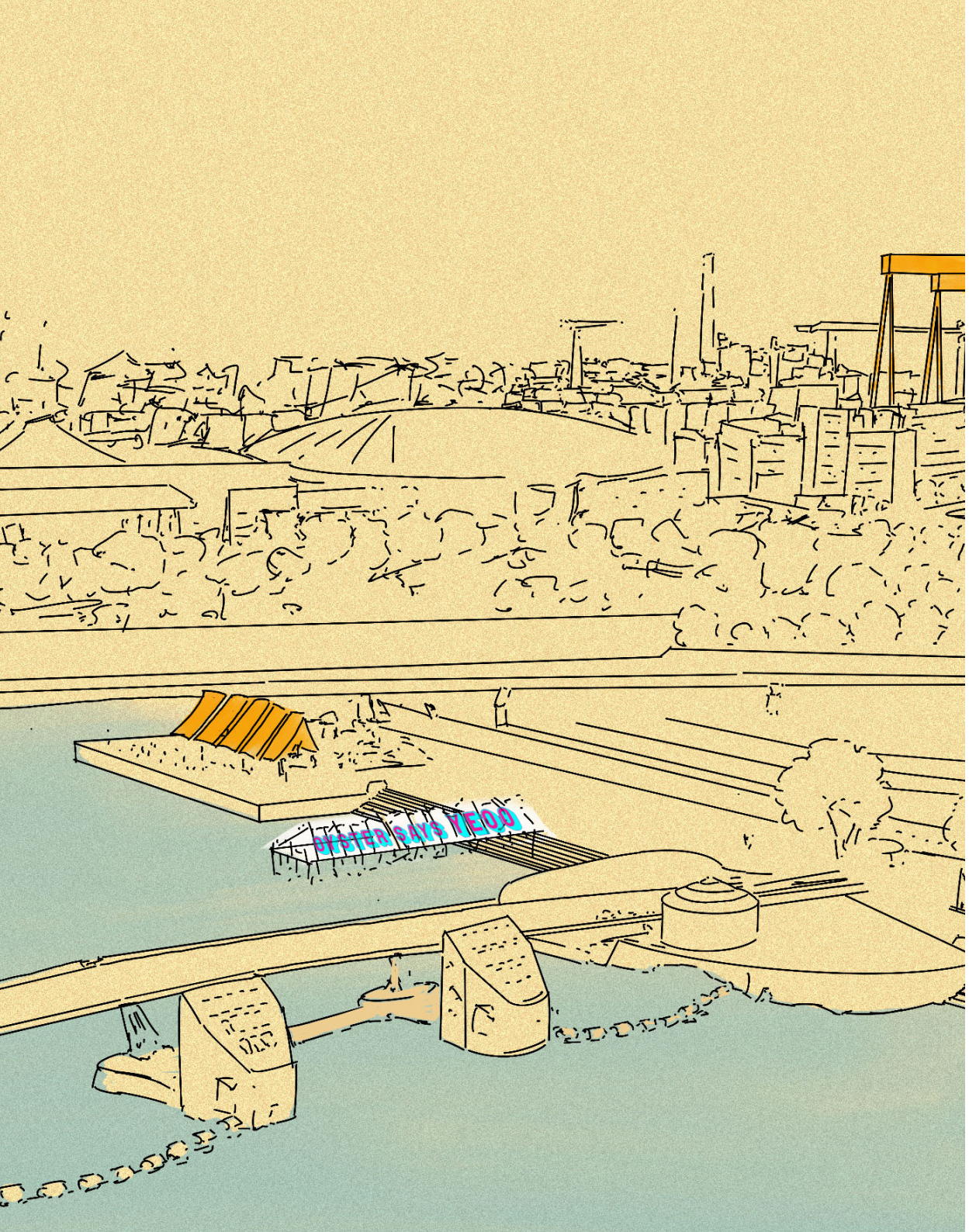
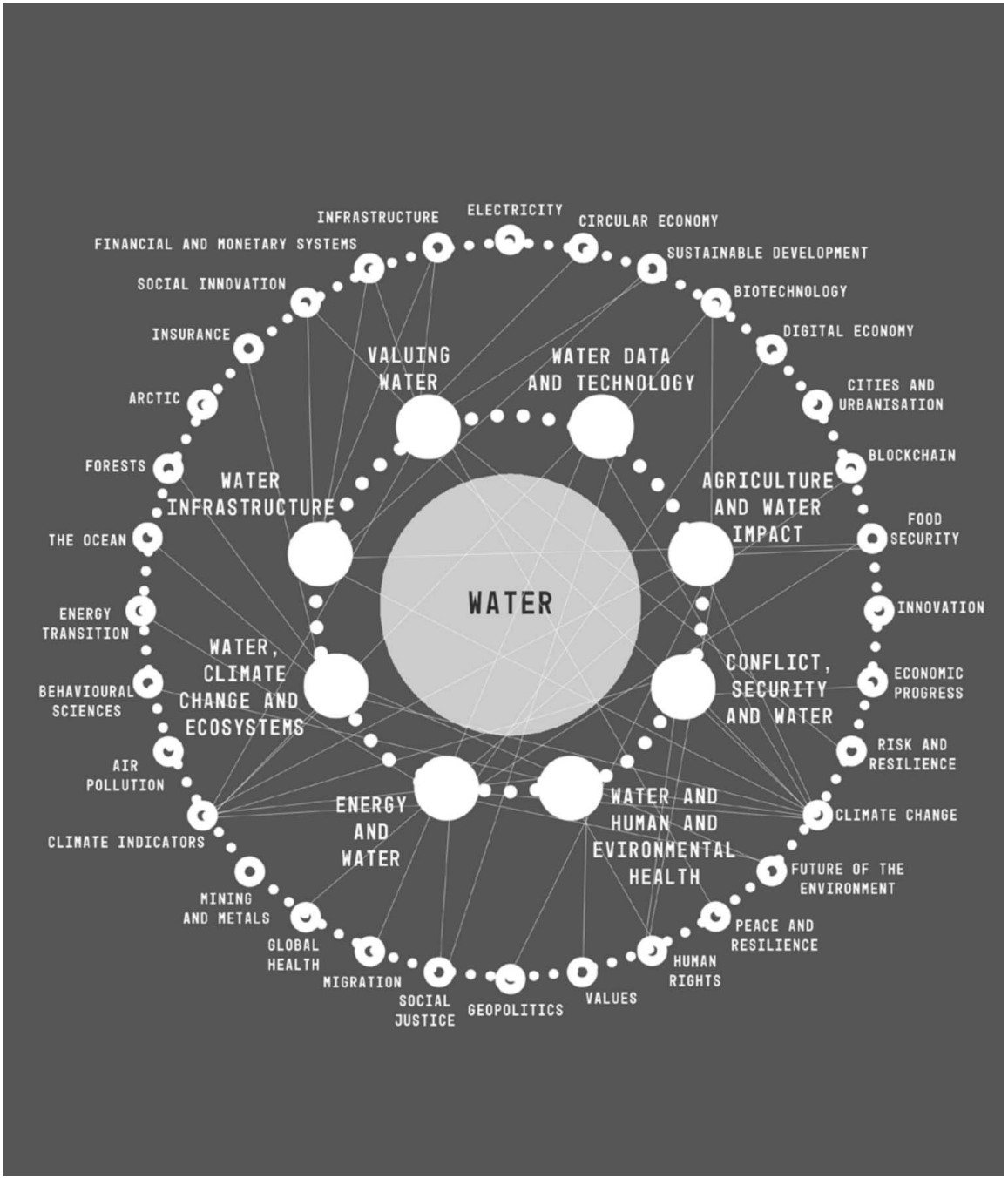


OYSTER SAYS YEOO

A pilot proposal for a bioreceptive concrete column seeded with native oysters in Belfast.

Part public installation, part ecological infrastructure designed to make water visible, alive, and valued again.

This project invites people to think differently about how we live with water... as something to be cared for, not fought against.



WATER

Our relationship with water is a Super Wicked Problem; complex, interconnected, and self-inflicted.

The question is not how to stop water, but how to collaborate with it.

Design can help us prototype that new relationship.

THE SITE: QUEENS QUAY

Proposed location: beside Native Coffee, along the public waterfront.

Highly visible, accessible, and socially active - an ideal point of encounter between people and the water.

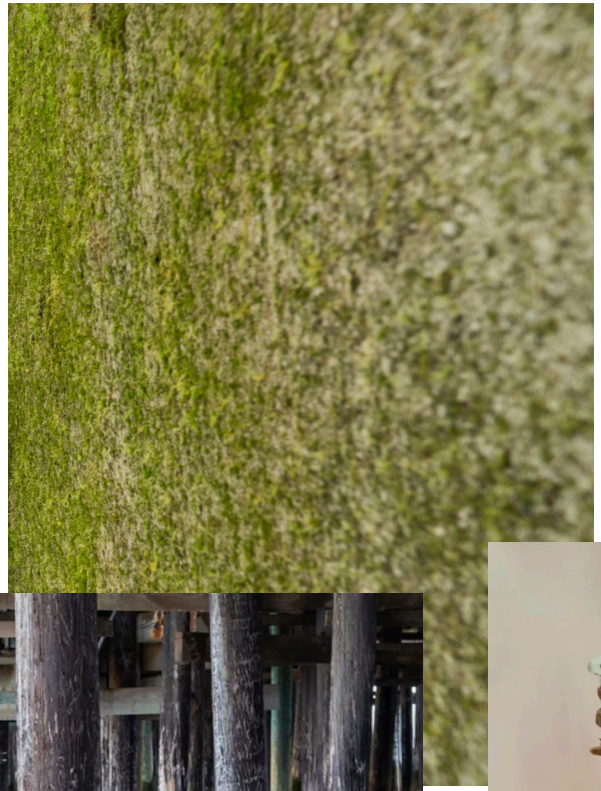
An ecologist will guide site selection to ensure suitable salinity, flow, and biodiversity potential.

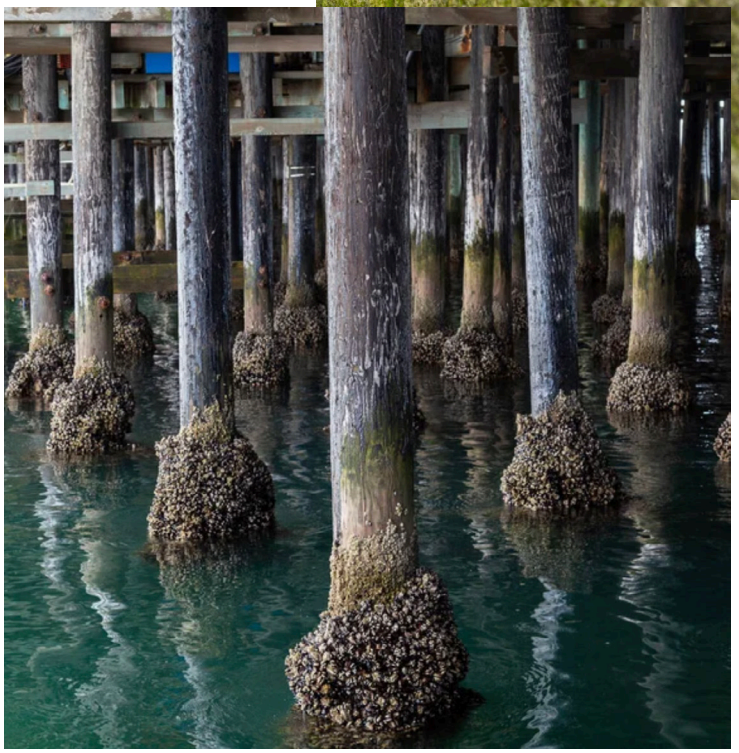
PRECEDENT

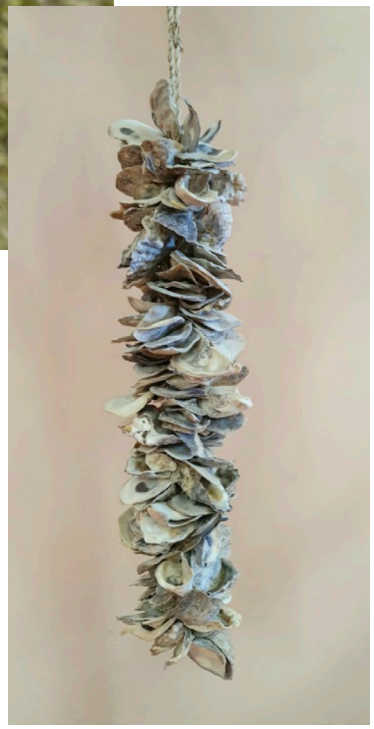
Inspired by the Living Breakwaters project in Staten Island, Oyster-tecture at MoMA, and Angsila Oyster Scaffolding Pavilion by CHAT Architects.

These projects showed how reef structures can clean water, protect coasts, and rebuild ecosystems.

Oyster Says Yeoo translates that thinking to Belfast's scale and context.







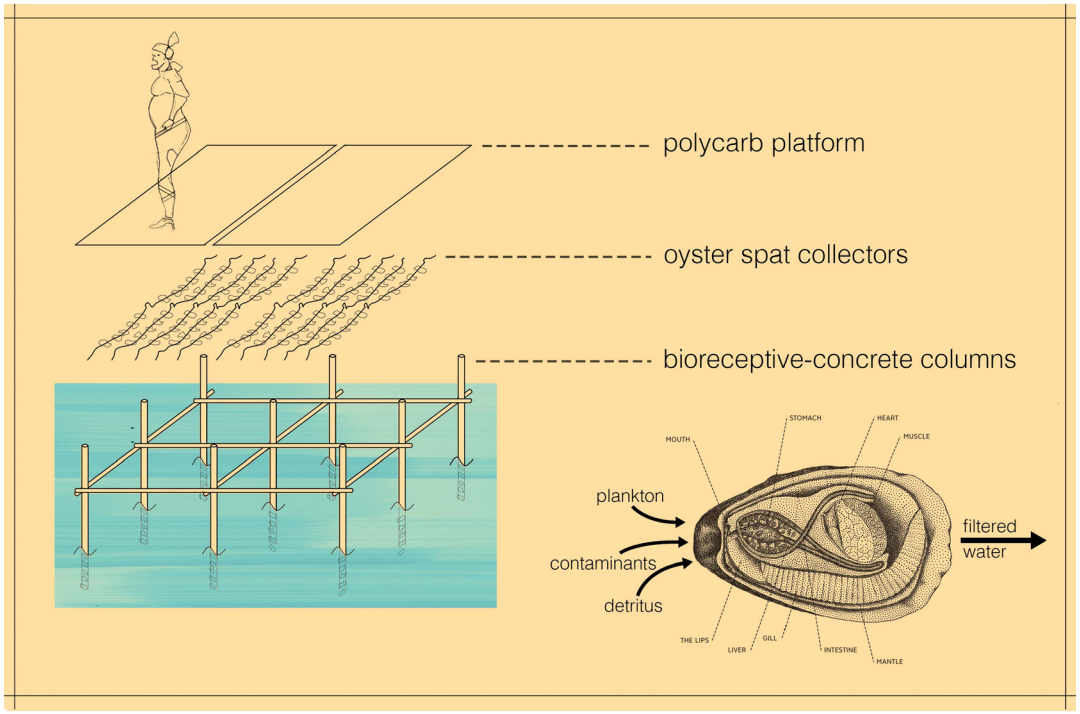
THE CONCEPT

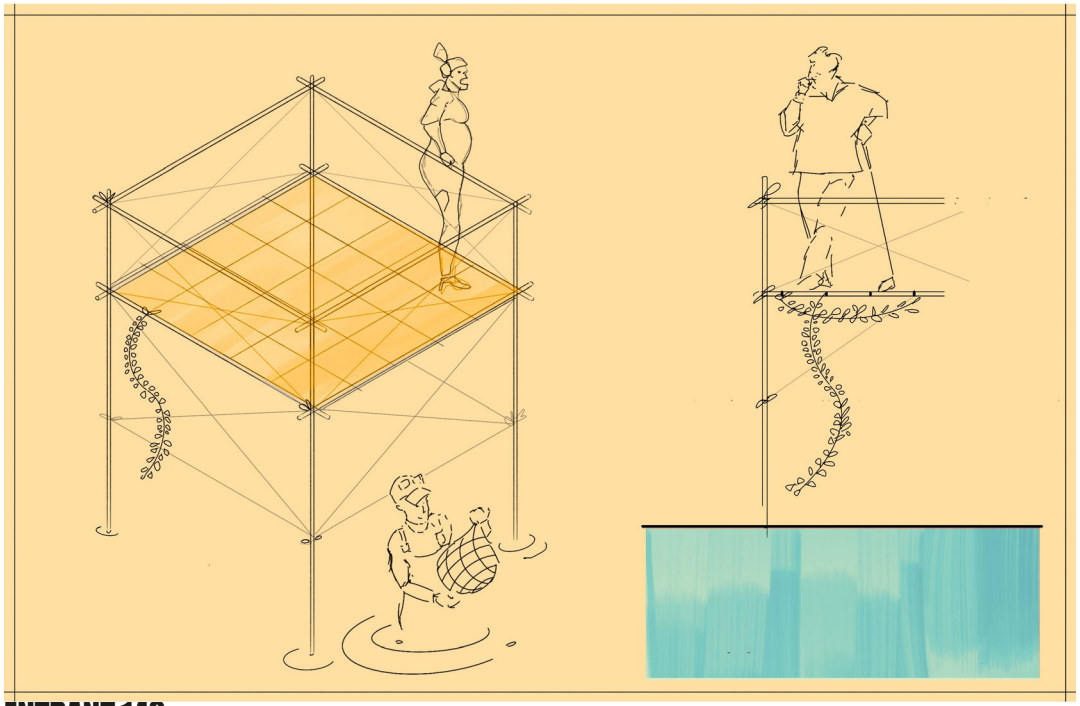
A single module - with columns cast in bioreceptive concrete containing recycled shell aggregate.

Partially submerged, its textured surface encourages oyster attachment and marine colonisation.

It filters the harbour water, improves clarity, and acts as a vertical marker of change.

One module now; a field of columns later.





MATERIALS & MAKING

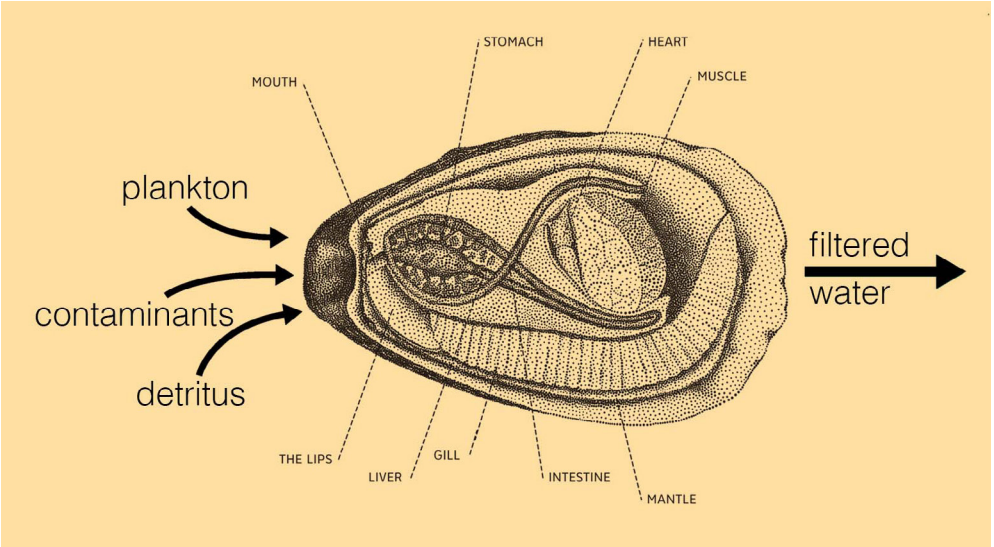
Columns are bioreceptive concrete mix with shell and sand for micro-texture.

Low-cement, locally sourced aggregates via JP Corry.

Designed for replication and easy casting.

The column becomes both structure and habitat - not architecture that occupies, but architecture that hosts.

Above, a low tech polycarb surface allows people to walk above the oysters and peer down into their habitat.

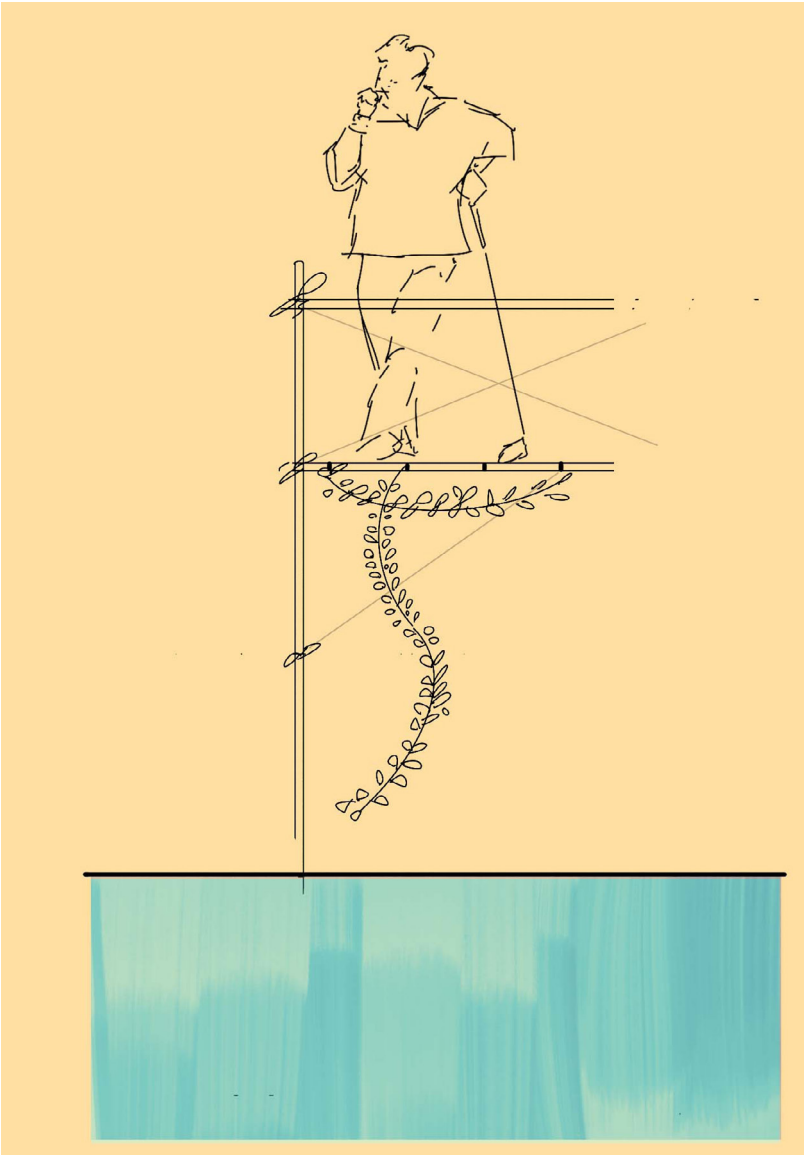


ECOLOGICAL FUNCTION

Each native oyster can filter up to 200 litres of water per day.

Collectively, they improve water quality, enhance biodiversity, and stabilise sediment.

The column provides a test case for future reef expansion along the harbour edge.



PUBLIC INTERFACE & FUTURE VISION

In the future, harvested oysters could supply a small kiosk or cafe, completing a circular food loop.

This phase isn’t about consumption but connection - tracing the link between clean water, healthy ecosystems, and local livelihoods.

SCALING THE IDEA

Start small, measure impact, then replicate.

The first module acts as a prototype for modular reef infrastructure across Northern Ireland's rivers, loughs, and ports.

Each new site deepens ecological resilience and public awareness.

CULTURAL RESONANCE

Belfast's industrial past shaped its waterfront.

Today, that same infrastructure can host regeneration - shifting from extraction to restoration.

The project reframes the quay as a place of production again, but this time of life, not industry.

Oyster Says Yeoo is a small but deliberate act of repair.

It connects material science, ecology, and design storytelling to imagine cleaner, more generous futures for Belfast's waters.

A local gesture that makes a small move with global relevance.

Oyster Says Yeoo

A pilot architecture for living water

Northern Ireland's relationship with water is changing. Once a symbol of abundance and purity, it is now an indicator of crisis. Lough Neagh's algal blooms, sewage discharges, and deteriorating ecological ratings illustrate a system under stress. Despite our reputation for rainfall and rivers, the very waters that shaped our settlements are being suffocated. This project begins from that contradiction - that in a land of plenty, water has become both ubiquitous and endangered.

Oyster Says Yeoo is a proposal for a small but deliberate act of repair: a module of bioreceptive concrete columns seeded with native oysters, installed along Belfast's public waterfront at Queens Quay (beside Native Coffee). The project is part prototype, part provocation - a living, material experiment that asks what architecture can do when faced with ecological collapse. It moves away from the defensive logic of sea walls and barriers, and instead positions design as an act of collaboration with non-human agents.

Framing the Problem

Water in Northern Ireland exemplifies what Rittel and Webber described as a wicked problem - complex, multi-causal, and resistant to resolution. In truth, it is super wicked: we are both the cause and the potential solver, time is running out, and existing institutions are ill-equipped to act. The crisis of water quality and the crisis of climate adaptation are inseparable. The challenge is not simply technical - it is temporal, cultural, and ethical.

From this perspective, Oyster Says Yeoo operates as a micro-scale negotiation within a much larger wicked field. It does not promise to "solve" anything. Instead, it performs as a design provocation - a test of how small, site-specific, regenerative acts might accumulate into wider ecological change. The project aligns with the Research by Design methodology at the heart of our designs, using iterative prototyping, framing, and evaluation to navigate complexity through material exploration.

Context and Site

Belfast Harbour has long been a space of industrial productivity - a landscape of extraction, fabrication, and export. Its physical form and cultural memory are tied to making: shipbuilding, steel, and coal. Yet beneath its surface lies another history - one of lost ecologies, dredged estuaries, and buried oyster beds. For centuries, native oysters (Ostrea edulis) thrived in Belfast Lough, filtering and cleaning the water. Overfishing, pollution, and urban runoff decimated them, erasing an invisible infrastructure of care.

In 2023, Ulster Wildlife and Belfast Harbour began reintroducing oysters through suspended nursery cages - the first in a century. Oyster Says Yeoo extends this initiative into the public realm, making restoration visible and participatory. By positioning a module beside Native Coffee, the project inserts ecological function into an everyday social setting. People encounter the column not as distant environmental data but as a physical, living presence - a reminder that regeneration can coexist with urban life.

Design Concept

The installation consists of a series of vertical columns - approximately 2.4 metres high - partially submerged within the harbour edge. The column is cast from bioreceptive concrete, a material developed to encourage biological colonisation through controlled porosity, low alkalinity, and a textured surface. Crushed oyster shells and local sand aggregates are used to enhance micro-texture, creating a scaffold for algae, mussels, and oysters to attach.

Within weeks of immersion, early biofilm begins to develop, forming a living patina. Over time, native oysters seeded by a collaborating ecologist attach and multiply, creating miniature reef habitats that filter the surrounding water. Each oyster can process up to 200 litres per day, removing particulates, nutrients, and pollutants, while stabilising sediments and improving water clarity. The column thus performs as both architectural object and ecological mechanism - an artefact that mediates between human culture and marine process.

The design embraces the principle of incremental scalability: start with one, learn, and expand. The

prototype acts as a proof of concept, generating data on growth rates, colonisation, and water quality. If successful, a field of columns could be deployed across the harbour - a distributed reef network that evolves organically rather than being imposed.

Precedents and Lineage

The project draws inspiration from SCAPE's Oyster-tecture (MoMA, 2009) and the Living Breakwaters in Staten Island, which demonstrated how design and ecology can co-produce resilient coastlines. Like those precedents, Oyster Says Yeoo reframes infrastructure as habitat, merging construction with regeneration. However, where SCAPE's work operates at the scale of the shoreline, this proposal operates at the scale of the encounter. It is deliberately modest - an invitation to imagine a larger future through one tangible, graspable object.

This lineage also extends conceptually from Belfast's own industrial heritage. The city that once produced ships for global trade now prototypes a vessel for environmental healing. The concrete column becomes a contemporary echo of its maritime past - another engineered artefact, but this time designed to host life rather than resist it.

Material Logic

The use of bioreceptive concrete is both symbolic and technical. Conventional concrete is often seen as lifeless, impervious, and environmentally costly. Here, it is re-cast as a porous, welcoming material - one capable of hosting rather than merely enclosing. The mix is low-cement, using recycled shell aggregate sourced from local waste streams. Its surface is ribbed and irregular, encouraging water turbulence and providing grip for marine organisms.

The formwork allows modular replication; each column can be cast locally using accessible fabrication methods and supported by materials sponsorship from JP Corry. The aim is to demonstrate that regenerative design need not rely on exotic technologies - it can emerge from rethinking the materials already embedded in our industrial systems.

Ecological and Social Value

Beyond filtration, the reef column generates a range of co-benefits. The colonised surface provides refuge for juvenile fish and invertebrates, while attenuating wave energy and promoting sediment stability. These ecological effects accumulate slowly, visible not through spectacle but through persistence.

Socially, the installation acts as a point of conversation and education. Situated beside an active pedestrian route, it links daily routines - grabbing coffee, walking the dock - to the unseen life beneath the surface. Over time, the oysters could seed further along the harbour edge, forming the basis of a sustainable aquaculture network. A future kiosk might sell Yeoo Oysters - food literally grown from the city's own waters - closing the loop between ecology, community, and economy.

Temporal Thinking

This project operates across multiple timescales: ethical, technological, and displaced time. Ethically, it challenges the short-termism of urban development, foregrounding stewardship over ownership. Technologically, it re-positions material innovation as ecological empathy. Displaced time acknowledges that the full impact of climate action will unfold beyond our own lifetimes.

The oyster becomes a temporal teacher: slow, accumulative, patient. It filters continuously, builds incrementally, and reminds us that repair is measured not in days but in decades. Oyster Says Yeoo therefore functions less as a finished object and more as an ongoing process - an architectural verb rather than a noun.

From Coal to Coral

The project also resonates with a broader transition visible across the post-industrial landscapes of Ireland and Britain: from extractive infrastructures to regenerative ones. The same design intelligence once devoted to mining, shipbuilding, or power generation can now be redirected towards ecological restoration. If the pithead baths of the coal era were architectures of human cleansing, then these oyster columns

might be read as their marine counterpart - architectures of environmental cleansing.

This shift from coal to coral, from carbon to calcium, encapsulates a profound re-orientation of values. It is not about nostalgia for lost industry but about continuity - transforming material and social knowledge into new forms of stewardship.

Conclusion

Oyster Says Yeoo is a small but intentional experiment in designing with life. It demonstrates how architecture can act not only as a container for human activity but as a collaborator in ecological processes. Through material, site, and narrative, it translates global climate discourse into a local gesture - something measurable, buildable, and communicative.

In doing so, it aligns with the aims of The Water Canon competition: to celebrate, question, and reimagine our relationship with water. Where traditional infrastructure resists change, this project invites it. Where architecture once defined boundaries, it now blurs them - between object and organism, city and sea, present and future.

In essence, Oyster Says Yeoo is both a prototype and a proposition. It reminds us that even in an era of crisis, design retains the capacity to act - to test, to adapt, and to hope. The future of Belfast's water will not be decided by a single gesture, but by a multitude of small, cumulative acts of care.

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