



to flow together

Rain comes down through the alders,  
Its low conductive voices  
Mutter about let-downs and erosions  
And yet each drop recalls

The diamond absolutes.

-Seamus Heaney, *Exposure* (1975)

# Introduction

‘To flow together’ is the literal translation of the Latin word ‘compluvium’, a feature of the ancient Roman domus whereby rainwater is directed internally via roof opening and stored for domestic use.

This proposal takes the inward sloping form of the compluvium roof and explodes it into a series of cascading fabric planes suspended within a lightweight metal structure. This frame is elevated by four columns constructed from precast concrete manhole chamber rings. As rain falls, the ‘sails’ gather rainwater from above and all four sides, directing it down the planes, pitter-pattering to a central planter formed from a larger manhole chamber base. The planter is encircled with bench seating, creating a place to take shelter, commune, and experience the collection of rainwater.

The planter also functions as a water attenuation tank, storing water in layers of soil and crushed stone, demonstrating how simple technologies can regulate the influx of water into an already overloaded drainage network.

Materials proposed for the structure are primarily found within domestic and civic water infrastructure, letting users interact with normally unseen elements of daily life. The pavilion would also be fully demountable, allowing for reuse in future interventions, or for reintegration back into our water infrastructure.



Figure 1 - Rear elevation view

# Design Concept

As no site has been allocated, it is proposed that the intervention be constructed along the Lagan Towpath at the circular junction adjacent to the Gasworks and *Bottle Top 2000* by Mike Hogg. This allows the pavilion to engage with the threshold between land and water, providing a space for pedestrians and cyclists to rest.

In plan, To Flow Together consists of four columns and a central planter arranged in a quincunx formation. Bench seating is formed from rolled metal pipe around the planter, allowing for views of the River Lagan framed by the monumental columns.

A lightweight metal pipe frame rests atop the four columns, within which sailcloth is stretched taut between horizontal members. As the sails catch rainfall, users of the pavilion experience the shadow play of water flowing down the canopies, as well as the pitter-patter sound of the cascading flow. Additional waterproofing treatment can be applied if necessary.

Timber decking is raised from the ground using reclaimed pre-cast concrete drainage channels, encasing the bases of the columns and planter, and concealing the drainage discharge system. This plinth is accessible in four directions via ramps formed in the decking, providing universal access for users.

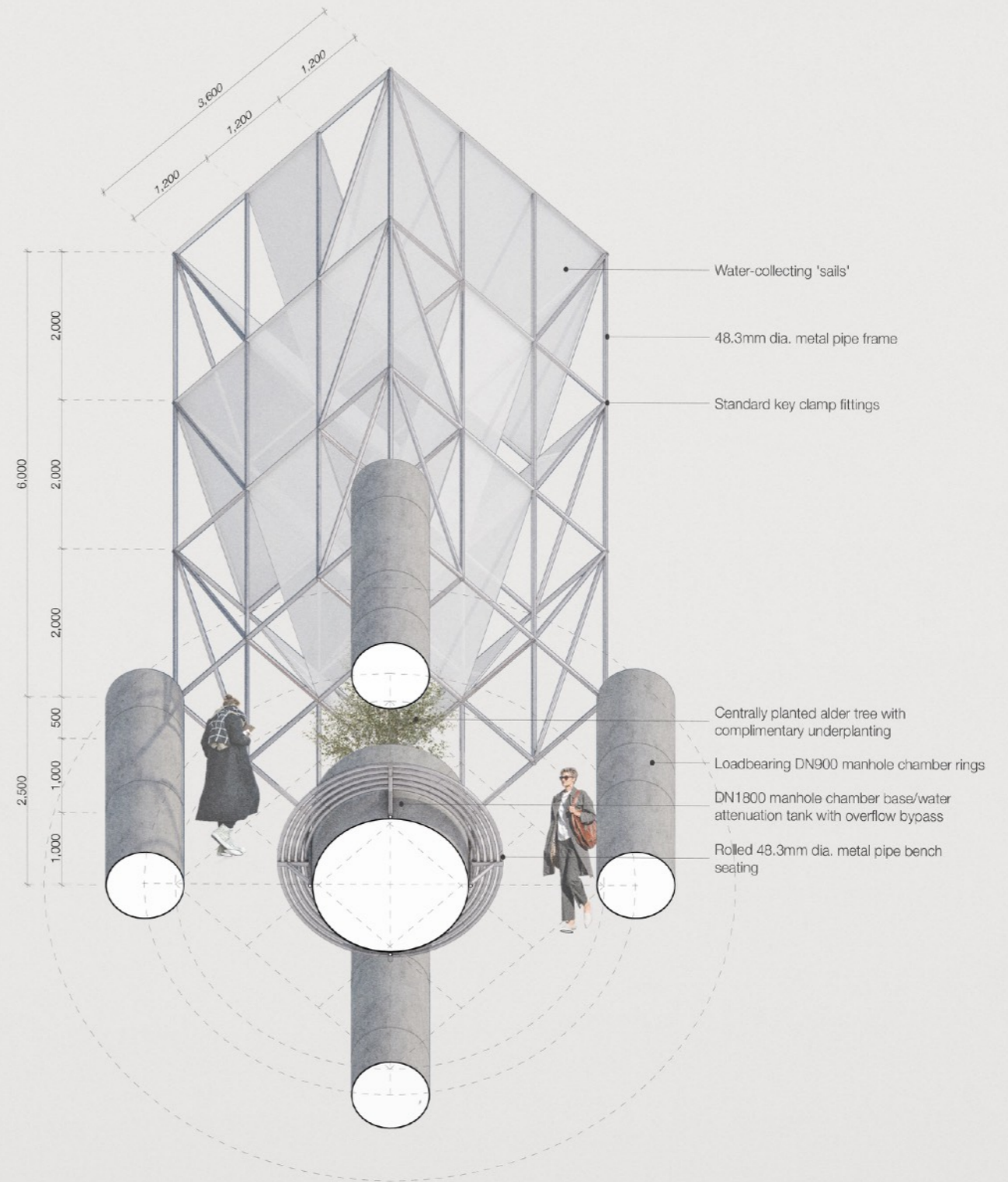


Figure 2 - Worm's-eye axonometric

# Material Wealth

To Flow Together is envisioned as 'bricolage', assembled using low-cost components found within domestic and civic water infrastructure.

The pavilion's four columns are constructed from 2.5m stacks of DN900 tongue and groove manhole chamber rings, while the central planter is a larger DN1800 manhole chamber base.

The lightweight metal frame will be either stainless or galvanised steel pipe, budget depending. Stainless steel is better suited for marine/coastal environments, while galvanised steel is a lower cost alternative. Standard key clamp fittings are also proposed to allow for demountability and re-use. The use of non-specialised methods of construction will also contribute to keeping costs within budget.

As elements utilised to construct the pavilion are 'off-the shelf' and modular, it is envisioned that where possible, they should be sourced as reclaimed material, or potentially from stocks that have been deemed not suitable for their intended purpose (i.e. chamber rings not suitable for use in manhole construction, but capable of supporting a lightweight metal frame). Local suppliers and contractors will be collaborated with in the sourcing of materials.

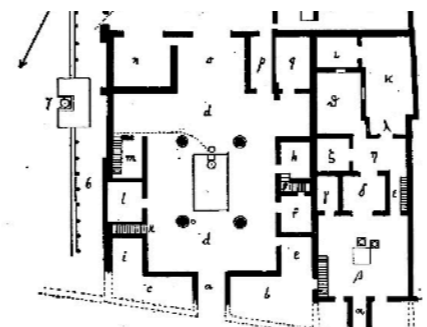
This, combined with the intended demountability and future re-use of all materials, is intended to disrupt the direction of material for landfill, and reduce the structure's embodied carbon.



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—TREES IN QUINCUNX.

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Figure 3 - Proposed site, Lagan Towpath

Figure 4 - Compluvium, House of the Silver Wedding, Pompeii

Figure 5- Plan of the House of the Silver Wedding, Pompeii

Figure 6 - Illustration of quincunx orchard layout

Figure 7 - Manhole chamber ring stacks

Figure 8 - Standard key clamp fittings

# Attenuating Circumstances

Water infrastructure across the UK and Ireland is struggling. NI Water is facing widespread capacity issues due to historical underinvestment, preventing development, inhibiting economic growth and contributing to a worsening housing crisis. Elsewhere, Thames Water is illegally discharging raw sewage into England's rivers and coastal areas due to capacity issues brought about by severe underinvestment and neglect. Many of these issues are consequences of a network that is unable to properly manage the quantity of water flowing through the system, an issue that is only going to worsen as we head ever further into the climate emergency.

To Flow Together is a small-scale example of a Sustainable Drainage System (SuDS). As water is gathered by the pavilion's sails, it is accumulated and stored within the central planter. The plants within it consume a quantity of the water, while the remainder is stored within the soil and layers of crushed stone. Water is released slowly using a flow restrictor, evening out the flow of water and reducing the impact of rainfall on the drainage network.

Hydrophilic planting which thrives in wet conditions is proposed for the planter. In reference to Seamus Heaney's 1975 poem *Exposure*, this planting will be anchored by a central common alder (*alnus glutinosa*), a native plant which commonly grows along the water's edge, and whose growth will be limited by the size of the planter.

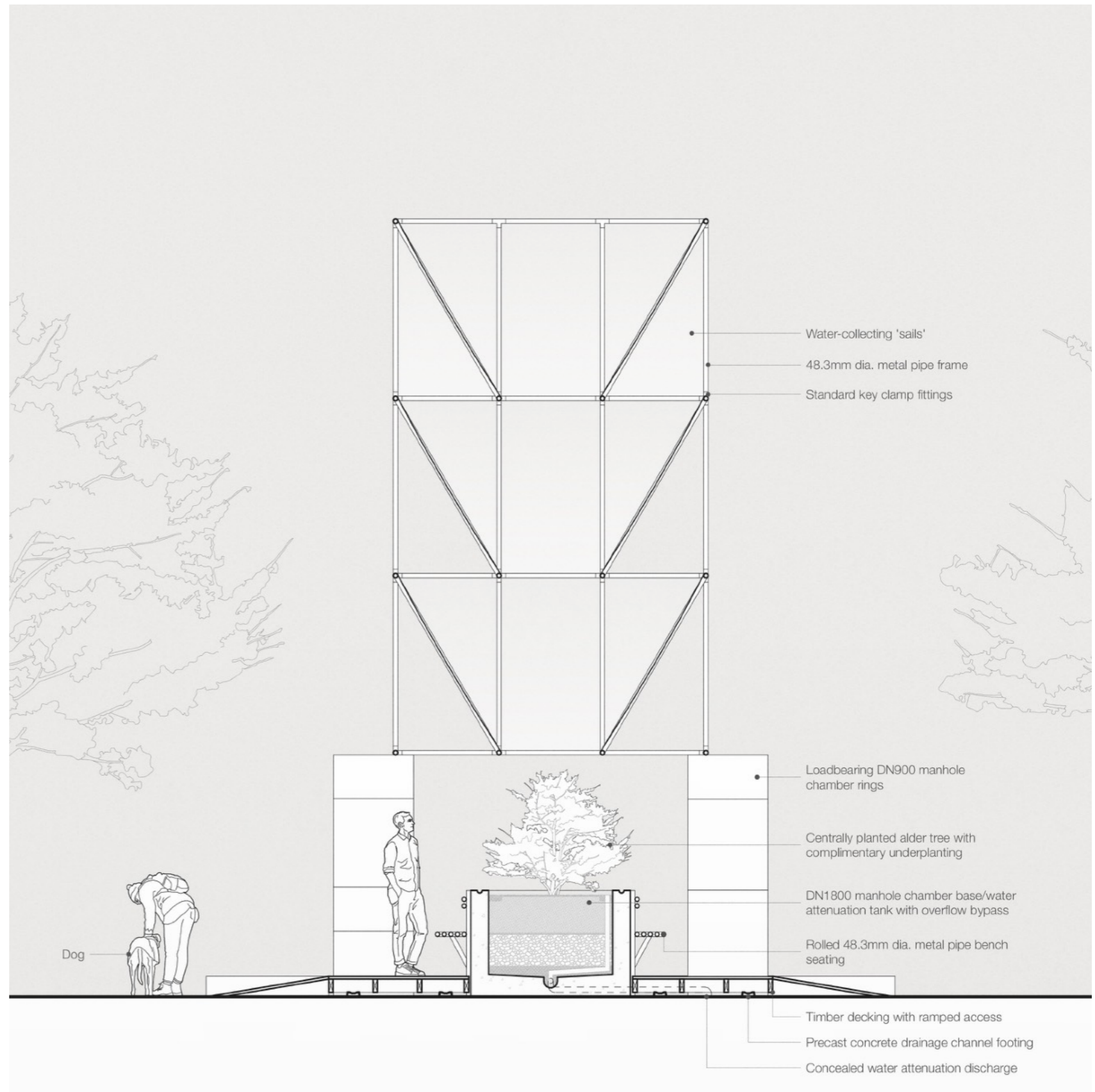


Figure 9 - 1:50 section

# Conclusion

To Flow Together proposes a placemaking pavilion that demonstrates how low-cost technologies can be implemented to lessen the burden of new and existing developments on our already stretched water infrastructure systems. It would also provide a place to meet and take shelter, embracing the visual and auditory experiential qualities of rainfall.

Budget permitting, lighting would be integrated into the metal frame, illuminating the sails to form a 'beacon', inviting people to explore the Lagan Towpath, a key part of Belfast's walking/cycling infrastructure that also ameliorates our impact on the environment.



Figure 10- View from Ormeau Embankment