

BUILDING STUDY

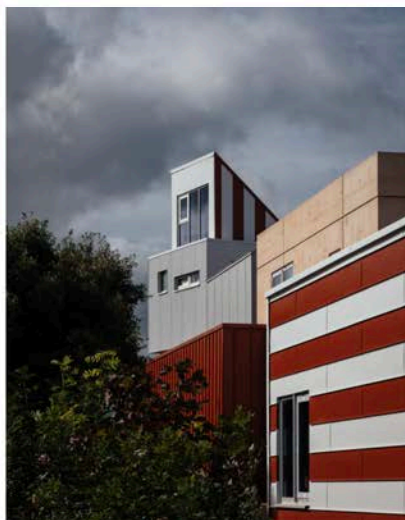
Invisible Studio's arts centre seeks to unlock Somerset seaside town's stagnation

Working with Onion Collective, a local female-led social enterprise, Invisible Studio and Ellis Williams Architects have created a harbourside arts centre that seeks to reverse the fortunes of Watchet, writes *Marwa El Mubark*

22 NOVEMBER 2021 . BY MARWA EL MUBARK. PHOTOGRAPHY BY JIM STEPHENSON

The countryside can be perfect territory for experimentation; a messy intersection of heterogeneity far removed from the homogenising forces of the city centre. This is even more so the case by the sea, where the historic role of ports and docks as natural points of confluence and cultural exchange creates the perfect environment from which a variety of unfiltered propositions for building might emerge. Invisible Studio's recently completed East Quay arts centre for the Onion Collective in Watchet, Somerset, is one such example.

Like many seaside towns along the west coast, Watchet is characterised by its disparate architecture; an eclectic mix of ramshackle cottages gradually becoming more industrial as you move towards the coast. This, coupled with its peripheral position as a remote seaside town, puts it in a fragile state of being sidelined and forgotten by mainland conversation. It was this context that spurred the formation of the Onion Collective social enterprise in 2011 – a local all-female-led, not-for-profit social enterprise – and which catalysed the search for an identity in a town that was fast at risk of having a false narrative forced upon it.



**INVISIBLE
STUDIO**

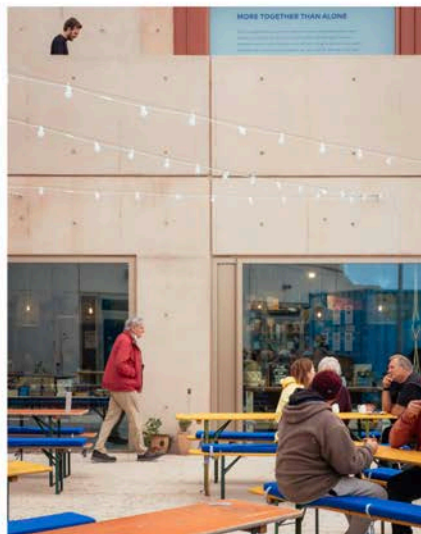
Working in collaboration with Invisible Studio, the collective held a series of community conversations over a two-month period with a wide range of stakeholders, from the Watchet Conservation Society and Harbour advisory groups to local youth clubs and schools. The input of young people was particularly key as Watchet had the lowest social mobility in the UK at the time – a direct consequence of lack of opportunity and aspiration compounded by a low cultural offering.

Over an eight-year period, a design brief began to emerge formed around a new arts and culture centre that captured a sense of 'emotion, collectivity, stability and future purpose'. As an enterprise founded on tackling the social, cultural and environmental barriers to a successful and thriving town, the Onions were interested in exploring an economic system that would reflect these values – values that were already evident within the community but yet to manifest in physical form.



However, rarely are the aspirations of a project so intrinsically intertwined and expressed in its brief, its genesis and the expression of its built output.

Given the site's location on the edge of an abandoned boatyard annexed from the town, it manages to achieve a strong sense of connectivity. This is expressed predominantly through a culturally diverse brief, enabling the overlap of a range of interrelated activities, featuring two art galleries, 11 artist studios, a geology workshop, a restaurant and educational spaces. This programme is not constrained to the site but extends outwards to the town, connecting physically to the many pathways permeating Watchet via an external walkway on the first floor linked directly to the town's coastal path. On this level, passers-by can watch and engage with makers occupying a range of workshop spaces. On the ground floor, the two arms of the building open out to accommodate a restaurant, café and shop, creating a shared public space with sheltered seating in what would otherwise be a very windy and exposed coastal condition.

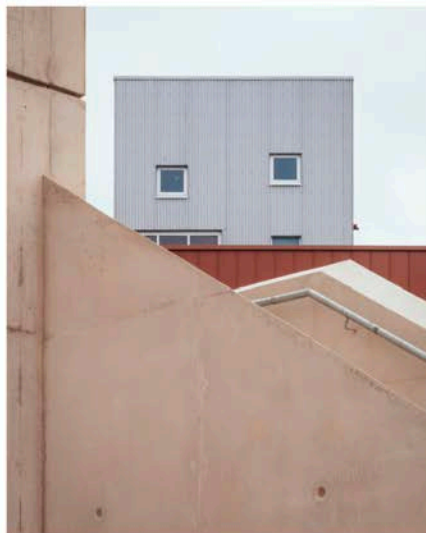
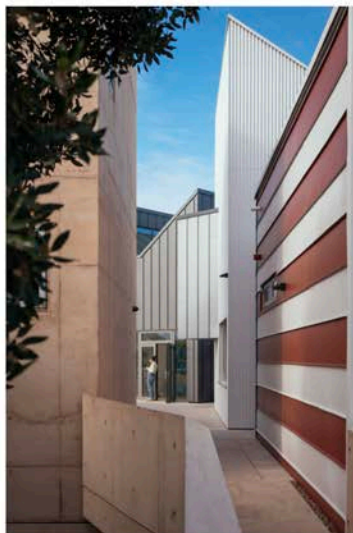


The successful realisation of these spaces involved a wide range of individuals and groups with a spectrum of expertise. Invisible Studio led the initial design process until Stage 3, after which Ellis Williams Architects took it to completion. The interior fit-out of the educational Creator Space was won by Pearce+Fægen, a young collective of architect-makers and engineers who extended their involvement to Year 8 students from local schools, bringing them into the design process assisted by environmental psychologist Helen King.

One danger of such an open brief and wide range of participants is that the result is ambiguous and fragmented. The formal expression narrowly escapes this through the design of a solid concrete plinth, which anchors the building, bringing stability and counterbalances the ad-hoc, heterogenous mix of corrugated metal pop-ups and projections above. This plinth is made of a fare-faced, salmon tone concrete that owes its colour to a red sandstone sourced from a local quarry. It grounds the building contextually to the site's geology. An old paper mill, which closed down in 2015, is now accommodated in the ground floor. This reestablishment of traditional industries adds a sense of familiarity and continuity to the building that might otherwise have been lost in the playful pursuit of transient, shed-like forms that carry a feeling of an ever-transforming spatial arrangement.



The importance of future flexibility to the collective is evident in the internal spatial arrangement with a brief underscoring the importance of a building that can 'take change and adaptation and the accumulation of real-life layer on layer on layer'. The challenge of designing a building that is 'loose fit and responsive, but at the same time cohesive' is resolved in the uniformity of internal materials, such as OSB floors and birch-ply wall linings, which reign throughout. These are not overly prescriptive and remain consistent from gallery spaces to inhabited accommodation, providing a resilient backdrop for a range of activities to take place. Some gallery rooms feature two entrances on either side, allowing the space to be subdivided into smaller rooms accommodating a variety of workshop uses. There is a certain efficiency to the fit-out of five holiday accommodation pods, which feature up to four types of reclaimed timber, from Ash to LVL to reclaimed timber floors; a sense of making do and getting by which seems appropriate for a site in the ever-changing context of the docks.

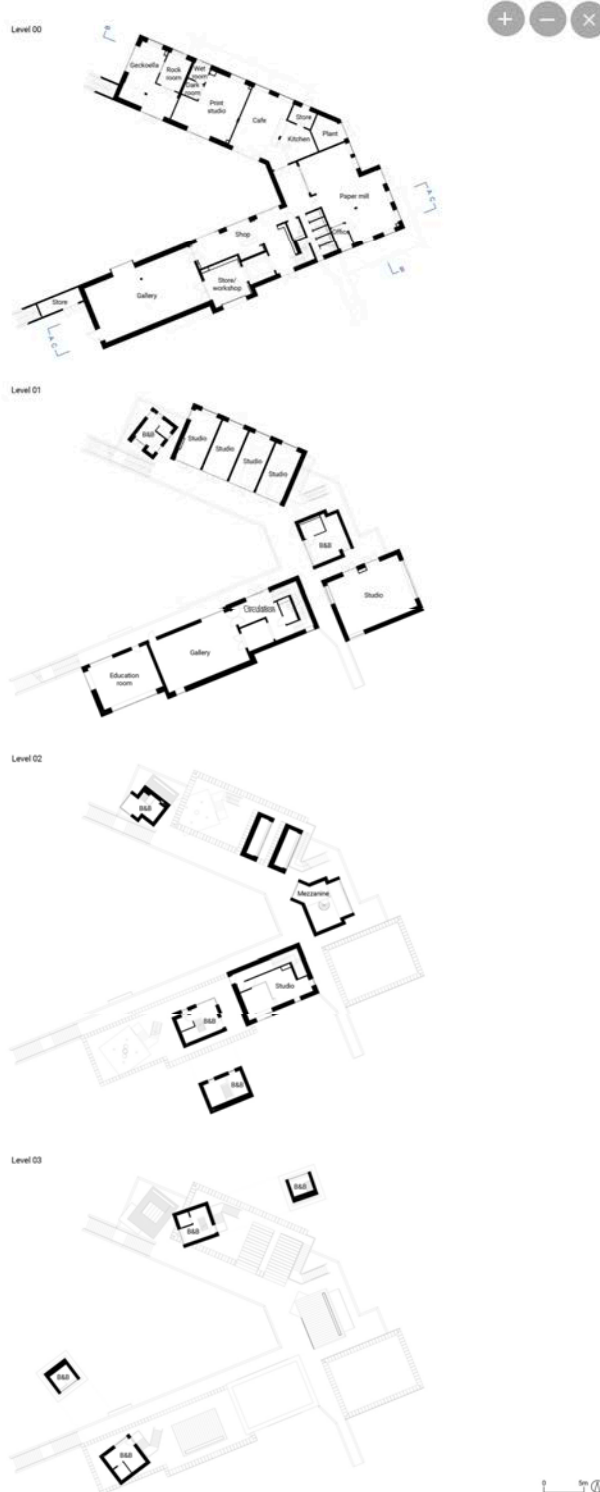


But unlike a traditional dock whose sightline is anchored by a singular lighthouse visible from the sea, the offbeat and playful character of the arts centre's external appearance marks a clear point of departure on the horizon of this town; a base for future adaptation and accumulation of real-life sediments of growth and transformation.

What does anchor it, however, is the strong ethos of collectivity and community that is so clearly expressed in the pride its instigators have in where they are from. It demonstrates what is lacking in many an accomplished architectural project; that in taking control of your identity you can create an architecture that mirrors the values of a community, and that in turn becomes embraced rather than rejected by it, and in time will grow to shape it.

Marwa El Mubark is an architect, writer, founder of a visual compendium and founding member of Afterparti

Plans



Architect's view

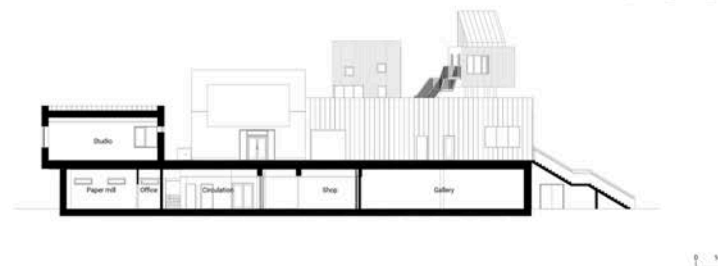
Invisible Studio worked through multiple options for the project over several years before settling fairly quickly on a strategy for this (final) incarnation of the scheme with the benefit of several years working with the Onion Collective. We never assumed the Onion Collective would be able to raise all the money for the project in one go, and so designed a scheme that could be constructed over many years, via a variety of procurement methods including self-build if needed. Consequently, the concrete 'plinth' is the backbone of the project, designed to be built as the first phase and contain all the major public elements and the public realm itself with the creation of a new courtyard, a first-floor street, and the extension of the esplanade, and the bridge into the South West Coast Path.

Above this, all of the buildings were designed as individual and separate elements that would sit on the plinth and could be delivered at any time. The next phase was conceived of as the larger studio spaces and education space, with the subsequent phases as the smaller studio spaces and accommodation pods. Through their placement, these would create smaller semi-public courtyards off the main first-floor street, which over time, invite change and another layer of occupation as courtyards get infilled or adapted by the people that work there. The informality and eclecticism of the proposal is a direct invitation for others to adapt and change, as an antidote to a more orthodox and controlling architecture that resists change. As it happens, the Onion Collective raised all of the money in one go, and the scheme was built as one phase, but the scheme will now be appropriated and adapted beyond what we could initially imagine, which is exciting.

Concrete has had a bad press recently for obvious reasons, but here, it was conceived of almost eight years ago when there was less focus on embodied energy. Navigating through the hoops of public procurement meant that it was difficult to change the original specification of the building. The concrete uses lower carbon GGBS in lieu of cement, and local pink sand. While of course we want to use less concrete, it is difficult at present to imagine a method of constructing the plinth in a different material that will work and age as well. It is super durable in a harsh environment, and never needs redecorating internally or externally, and absolves the need for finishes which in themselves can have significant carbon costs. In terms of other super durable materials, we could have used, brick has twice the embodied carbon of concrete, and the need to make decisions around carbon can never be made in isolation here. We all wrestled with using a less durable material that would need ongoing maintenance, but in the end felt reasonably comfortable with using concrete when it was so durable and would last many years, given the extraordinary social substantiality that the Onion Collective were helping deliver with the building.

Piers Taylor, architect, Invisible Studio

Section A-A



Engineer's view

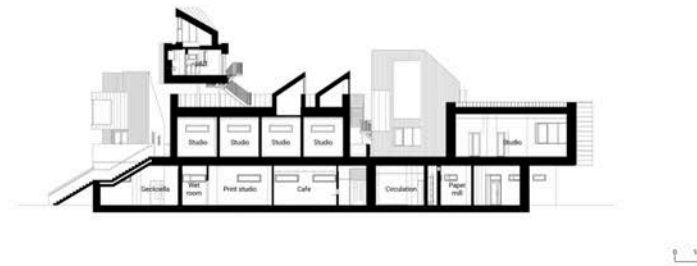
Watchet's East Quay is perched on poor ground behind an historic harbour retaining wall and exposed to strong winds and salty air, offering a challenging environment for the civil and structural design work.

The choice of structure followed function and aesthetic, resulting in a series of steel and timber frames supported on top of a reinforced concrete 'box'. The arrangement is irregular; the upper structures almost entirely off-grid or cantilevering in some way. Rationalised load paths, often sought by engineers designing buildings with unorthodox arrangements of different structures, was particularly challenging. Detailing the interactions between each structure to transfer loads and maintain heat and water barriers took meticulous care.

Internally and externally exposed, insulated, fair-faced concrete was proposed throughout. Good design, detailing and execution was required to ensure the concrete looks good now and in the future. The harsh coastal environment meant the reinforcement had to be specifically designed to prevent the early-age cracking during construction and also prevent cracking and spalling in the long term. A careful balance was found by placing the reinforcement close enough to the surface to prevent the early-age cracking during construction and yet with sufficient protective cover to the concrete.

Finally, the whole development is carefully supported on a stiff raft slab, minimising the high cost of piling in such problematic ground conditions. Working closely with the design team, Momentum contributed its experience and technical skills of quality-led design to help achieve the project's overall vision.

Richard Heath, director, Momentum



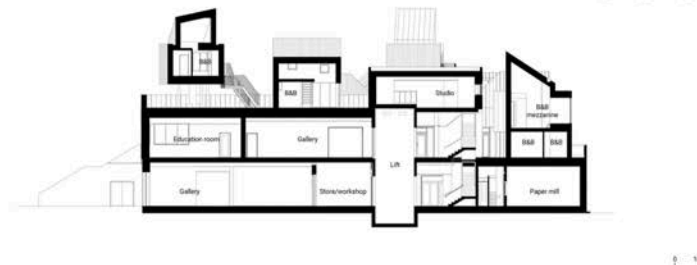
Client's view

East Quay stems from continued and repeated town-wide consultations and conversations led by Onion Collective, a locally grown, female-led social enterprise. These consultations began in spring 2014, asking: what does Watchet need for a stronger future? Collective priorities from a variety of voices, from schools, social clubs, community groups, businesses and public forums, voiced a desire for a stronger tourism offer, more jobs, culture and creativity, and to increase the sense of 'activity and vibe' on the quayside. Designs by Invisible Studio went back to community workshops each year until planning consent was granted. With each round of consultations, the design developed and changed accordingly.

The resulting building, designed by Invisible Studio and Ellis Williams, speaks of a wide ambition for the building to support enterprise, creativity, imagination, learning experiences and events; for architecture to speak of a future full of promise and joyfulness; somewhere that allowed playfulness and creativity to help us understand how we might navigate a troublesome future together. In the spirit of ongoing collaboration and a multi-handed project, the interiors of the accommodation pods and education space were designed and built by Pearce+Fægen. The resultant building also mirrors the best that Watchet itself has to offer, meaning generous, open public realm for exploration and incidental conversations and shared activity.

East Quay demonstrates how communities can drive regeneration in towns in ways that support the wellbeing of place, both in terms of people and planet. East Quay is exciting because it combines the best, most welcoming and creative thinking of communities with the professional expertise of business, together with the democratic ideology of public life. It's an example of how collaborative, community thinking can lead the way to a better future for our towns.

Georgie Grant, director, Onion Collective



Working detail

From the raft foundations to the first-floor deck, concrete has been used to its fullest extent. Acting primarily as the solid base structure, it provides almost the full envelope through the double skin wall arrangement as well as the external and internal finish to almost all the public spaces, including ceilings and floors and stairs. With the late addition of the local red sand, referencing the neighbouring sandstone cliffs, the concrete takes on a pinkish hue and provides a more welcoming internal atmosphere.

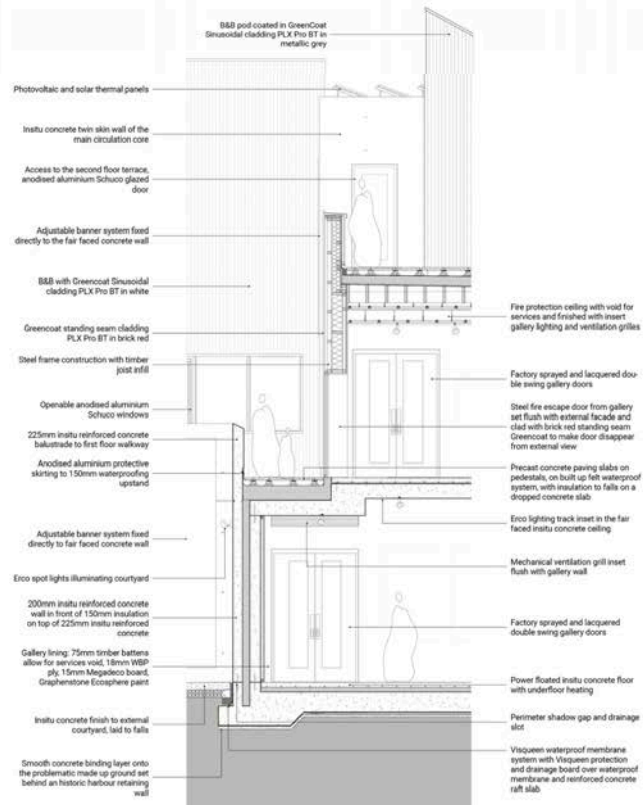
From the first floor upwards, a series of independent steel frames takes over to form the array of cantilevered studios, gallery, and an array of balanced B&B Pods through to the third level. A timber substructure infills these primary frames, which are then highly insulated and sealed to give an airtight envelope on which to wrap the metal cladding.

From the earliest concept, the choice of external cladding has changed on numerous occasions due to reasons both specific to the project and to wider national and international issues. The final choice of GreenCoat steel cladding fell into place just at the right time and fulfilled all requirements. Providing a variety of different formats, the GreenCoat colour-coated steel features a bio-based coating that uses a substantial portion of Swedish rapeseed oil instead of traditional fossil fuel oils. The steel is 100 per cent recyclable, and the paint/colour coating has no effect on the steel's recyclability since the paint layers are incinerated during melting of the steel.

As well as the overall complexity of the composition of forms and the need to conceal services within the main public spaces, the building sits within a harsh marine environment. This tempered the choice of all external materials as well as some of those internally, with anodised aluminium and stainless-steel elements used throughout.

Mark Anstey, architect, Ellis Williams

Working detail





Project data

Start on site November 2019
Completion date September 2021
Gross internal floor area 1,040m²
Construction cost £5.58 million
Construction cost per m² £5,625
Architects Invisible Studio and Ellis Williams Architects
Client Onion Collective
Structural engineer Momentum Engineering
M&E consultant Troup Bywaters & Anders
Quantity surveyor MEA Clark
Project manager Onion Collective
Landscape architect LT Studio
Acoustics engineer Hepworth Acoustics
Access consultant Access ID
Concrete consultant David Bennett Associates
Pod internal fit-out Pearce+Fægen
Principal designer Lucion Services
Approved building inspector Regional building control
Main contractor Midas Group
CAD software used Revit
Annual CO₂ emissions 49 kgCO₂/m² (estimate, including equipment)

Environmental performance data

Percentage of floor area with daylight factor >2% 50
Percentage of floor area with daylight factor >5% 15
On-site energy generation 6%
Heating and hot water load 101 kWh/m²/yr
Total energy load 157 kWh/m²/yr
Carbon emissions (all) 49 kgCO₂/m²
Annual mains water consumption Not supplied
Airtightness at 50Pa 3 m³/hr/m² (design value)
Overall thermal bridging heat transfer coefficient (Y-value) 0.03 W/m²K
Overall area-weighted U-value 0.3 W/m²K
Embodied/whole-life carbon Not supplied

COMMENT AND SHARE



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