

Robert Iain Ferguson

Portfolio / Design grounded in cross-disciplinary and cross-cultural thinking for inclusive, equitable and sustainable environments at all scales.



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Mothwalk

Context / Students reimagined a neglected berm near the Museum of Anthropology at UBC, Vancouver. Interventions were to engage humans or non-humans.

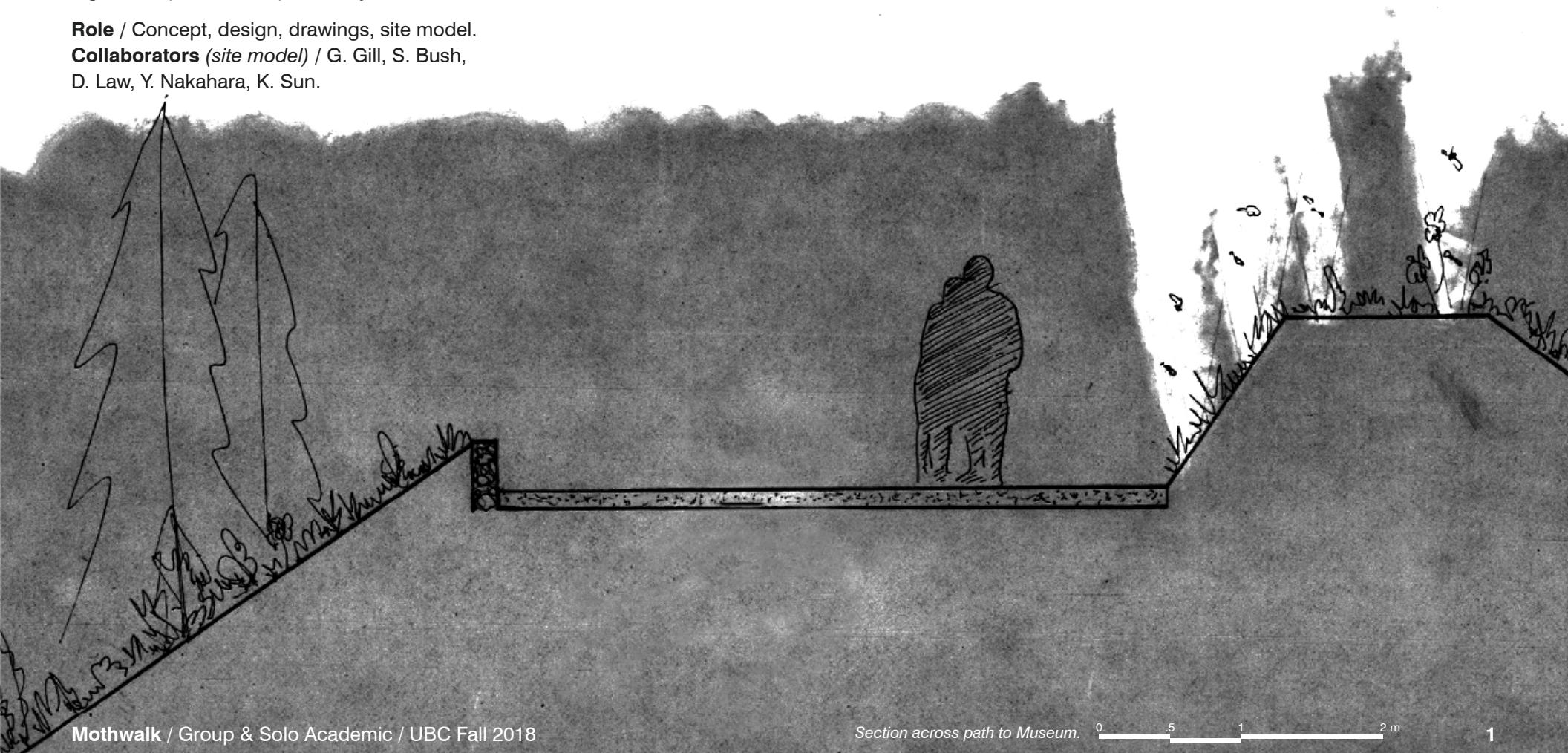
Design / In Mothwalk, ecological processes replace grading and planting as landscaping tools. Vertical spotlights are embedded in the ground to attract pollinators to wildflowers, beautifying the berm naturally. Dancing moths, lit from beneath, provide nighttime spectacle for passersby.

Role / Concept, design, drawings, site model.

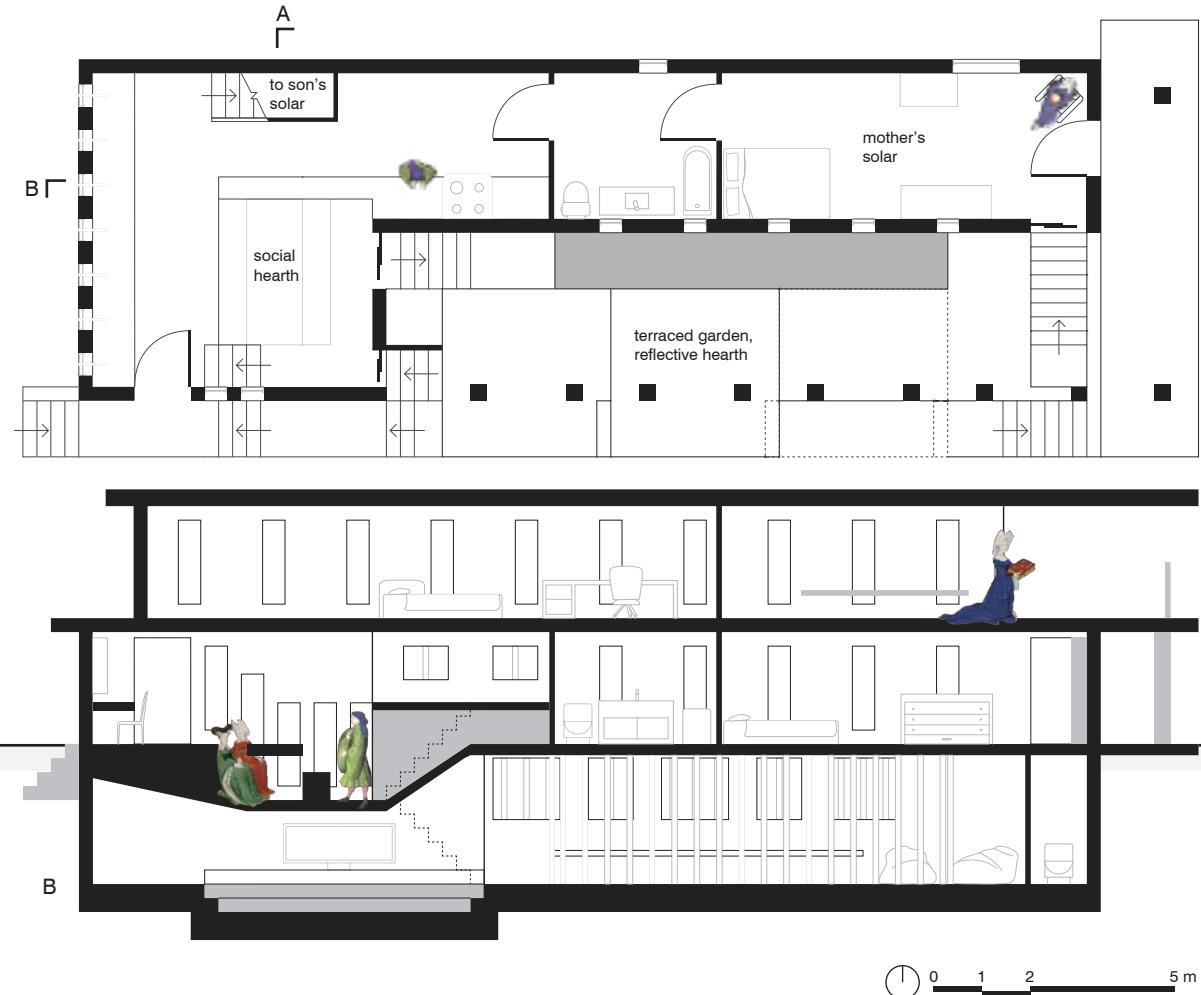
Collaborators (site model) / G. Gill, S. Bush, D. Law, Y. Nakahara, K. Sun.



Early site modelling in local grass led to a focus on processes and materials already natural to the berm.



Half the site remains available for another home, doubling the density of the lot.

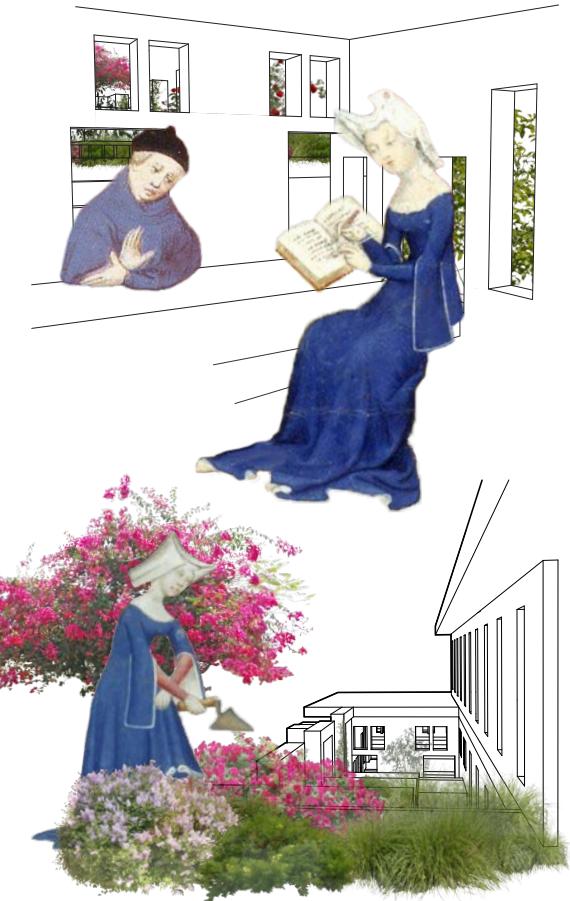


Hearth to Hearth

Context / Students were asked to design a home for themselves and a friend or relative, encouraging exploration of co-living, Missing Middle and affordability. The site is a narrow lot in Strathcona, a single-family neighbourhood of Vancouver.

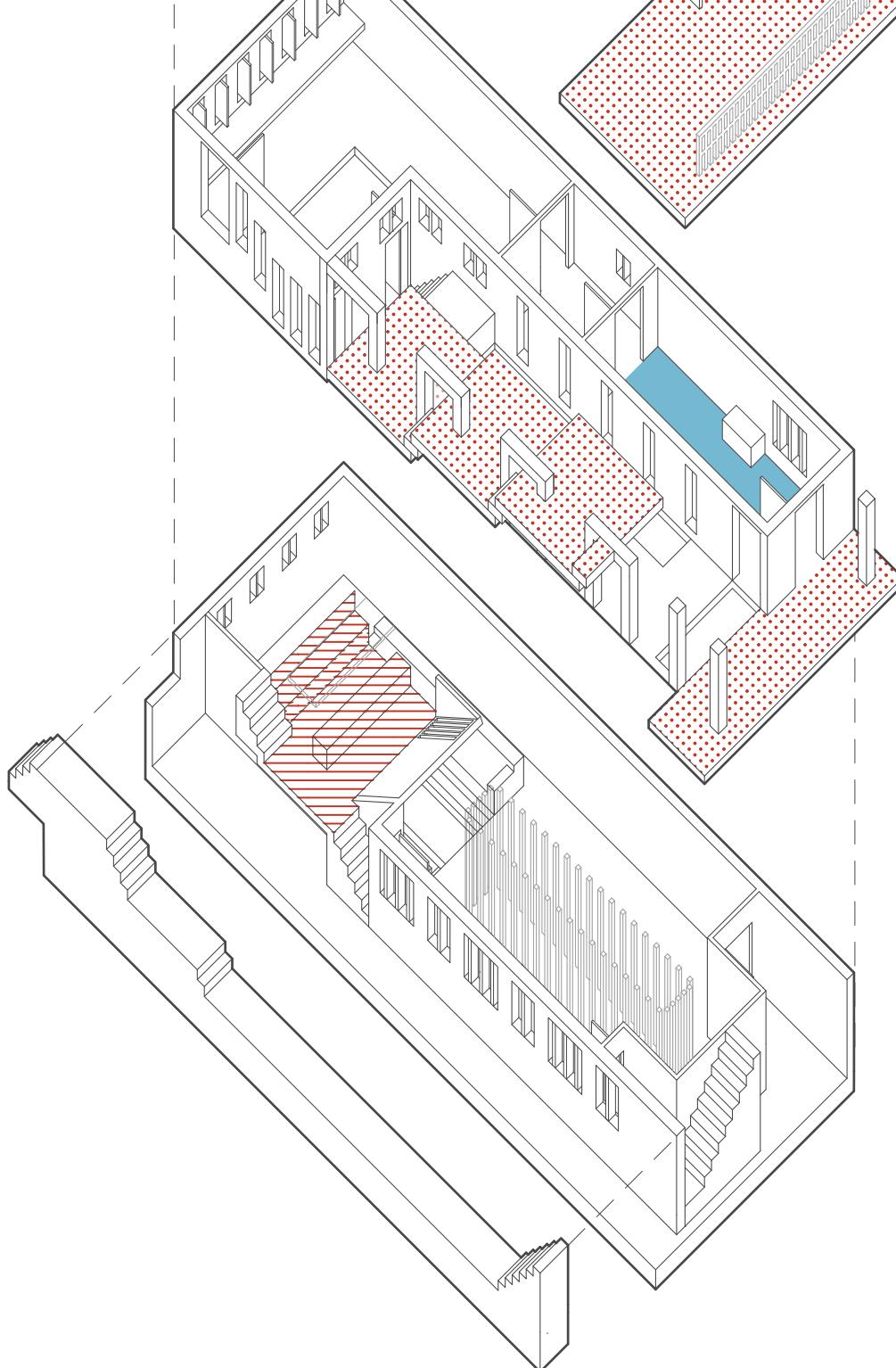
Design / Hearth to Hearth is a laneway house for my mother and me. Inspired by the medieval great hall of Northern Europe, the house blends our functional and emotional needs by uniting two symbolic hearths and two ‘solars’ within a large communal space where activities are negotiated and shared.

A blueprint for intergenerational living, Hearth to Hearth encourages synergies of need and ability, while maintaining privacy in a shared space.



*Social Hearth (above),
Reflective Hearth.*





Hearth to Hearth

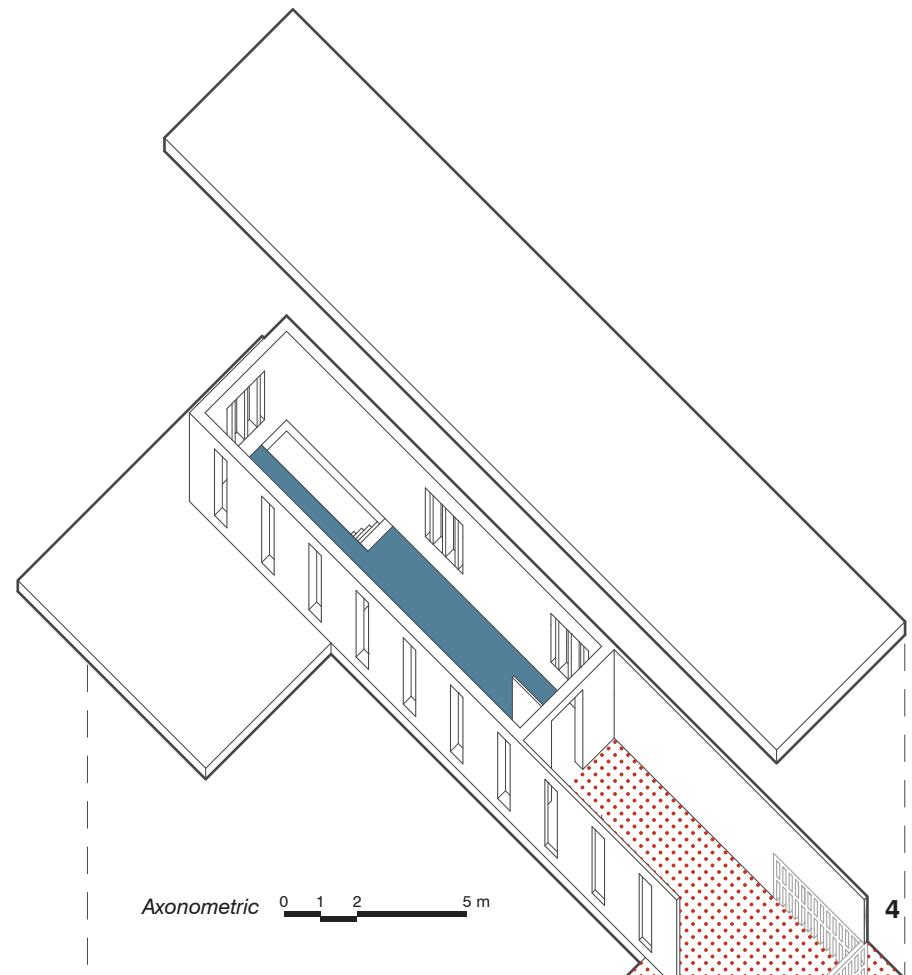
The solar was a private room to which one could retire from the great hall where the medieval family shared most daily activities.

My mother's solar sits within the **Reflective Hearth**, where the house opens to a terraced garden.

My solar hangs above the **Social Hearth** where the house pinches to create intimacy and enclosure around a sunken dining and living space.

● Son's Solar ● Mother's Solar

● Social Hearth ● Reflective Hearth



Axonometric 0 1 2 5 m

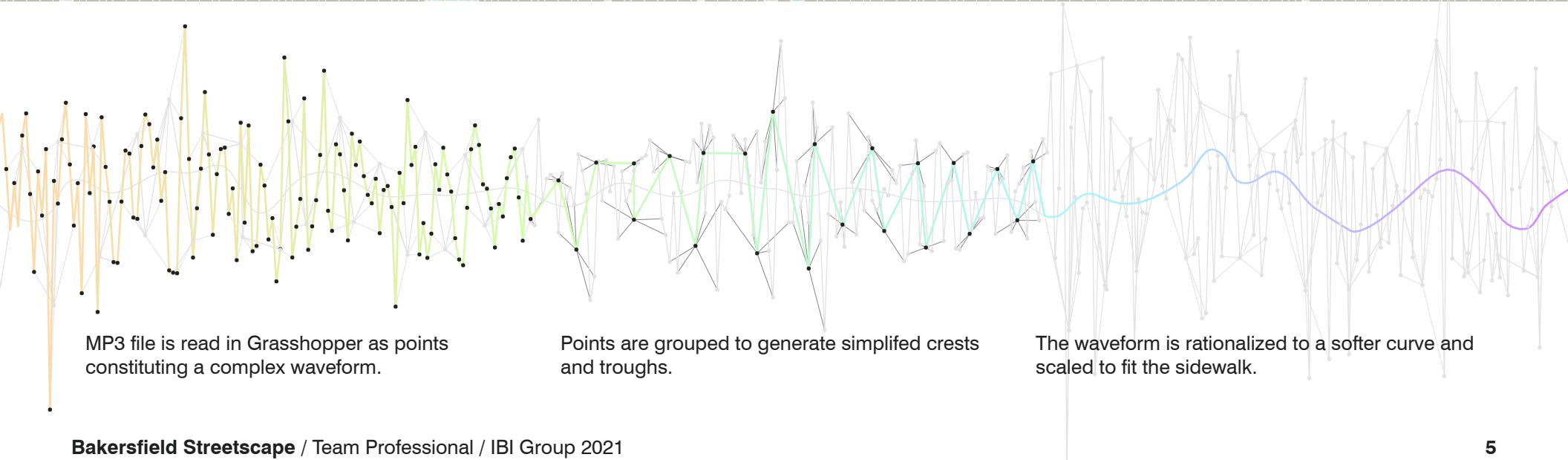
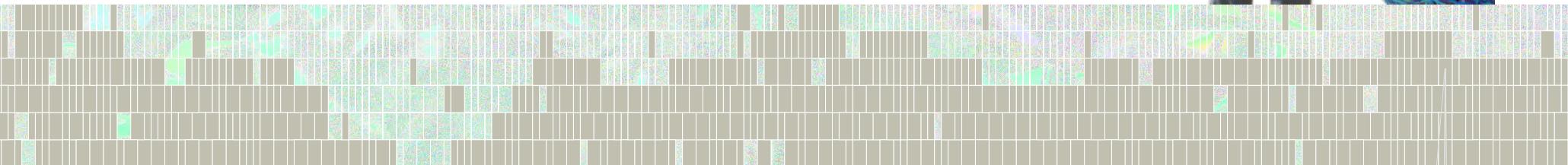
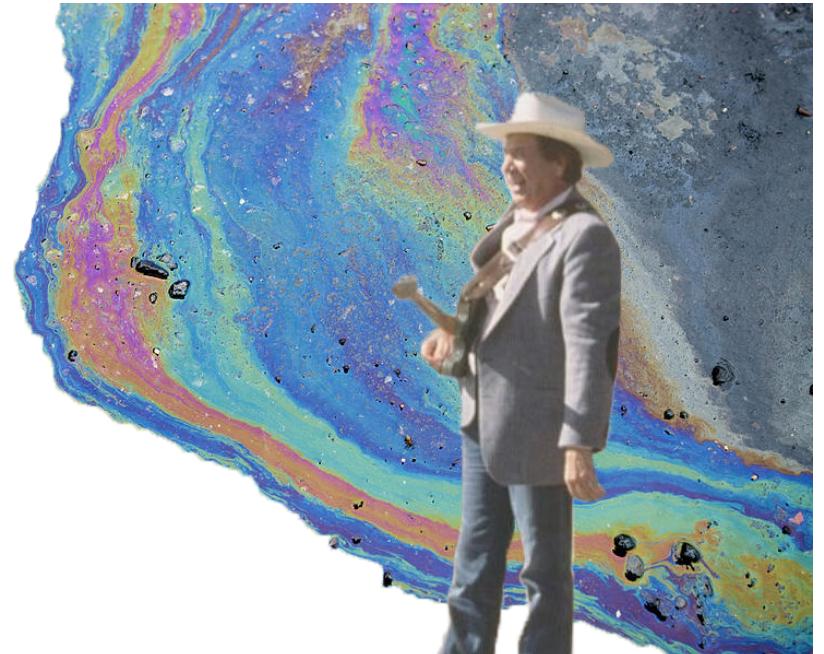
Bakersfield Streetscape

Context / In support of IBI's pedestrian-focused masterplan for downtown Bakersfield, this project represents the city's cultural history on the sidewalks of Chester Street.

Design / Buck Owens' country hit *Streets of Bakersfield* is abstracted parametrically as a human-scaled soundwave. The iridescence of concrete pavers made with recycled glass evokes Bakersfield's oil heritage and Buck's rhinestones. Wave crests create opportunities for street furniture, patios and parklets.

Role / Concept, parametric design, graphics.

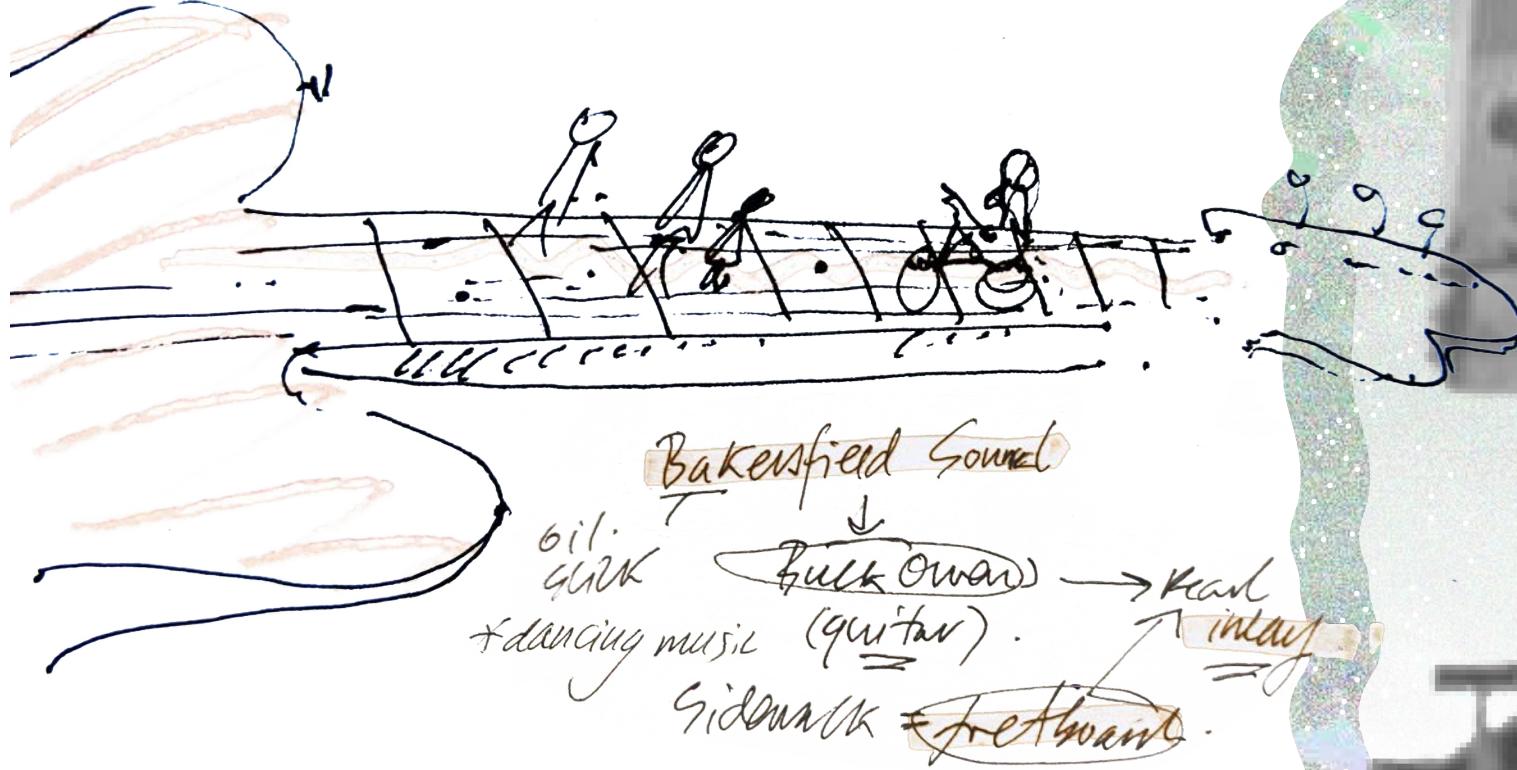
Collaborators / A. Lewis (*project manager*)



MP3 file is read in Grasshopper as points constituting a complex waveform.

Points are grouped to generate simplified crests and troughs.

The waveform is rationalized to a softer curve and scaled to fit the sidewalk.



Iridescent pavers recall
the past and inspire the
future of the Bakersfield
Sound.

Close & Commons

Context / Students were asked to design a live-work eatery for a restaurateur in Eihu Lane, Vancouver. The building was to invigorate the lane and fit within two parking spaces.

Design / Rising from a narrow gap between tower parkades, Close & Commons reimagines the Scottish 'Close' to activate the lane and provide access between streets. Residence, bistro, and public commons comingle in the building.

This is imagined as one of many similar interventions in the West End, forming a new network of circulation and public space, encouraging people into underused laneways.



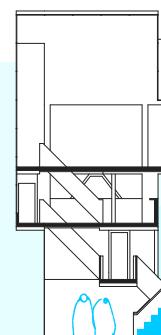
Vancouver, B.C.



Opportunities for Closes are 'common' in the West End.



Site and Close access in Eihu Lane.

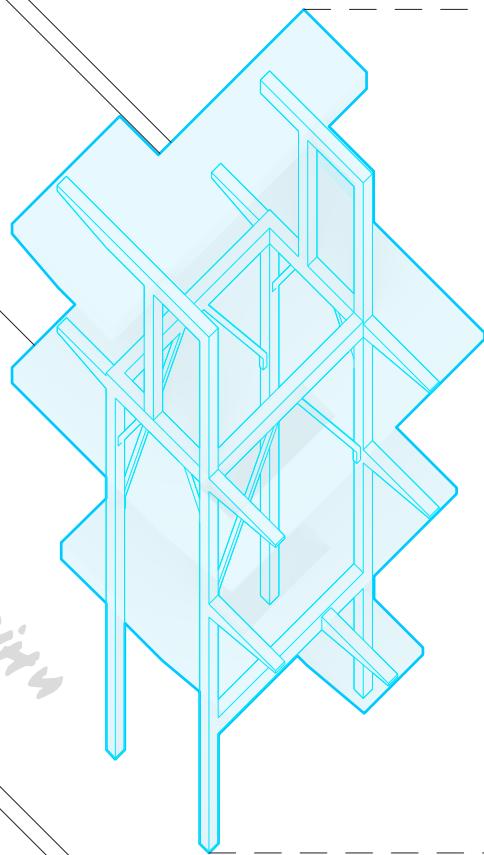


ALBERNI STREET

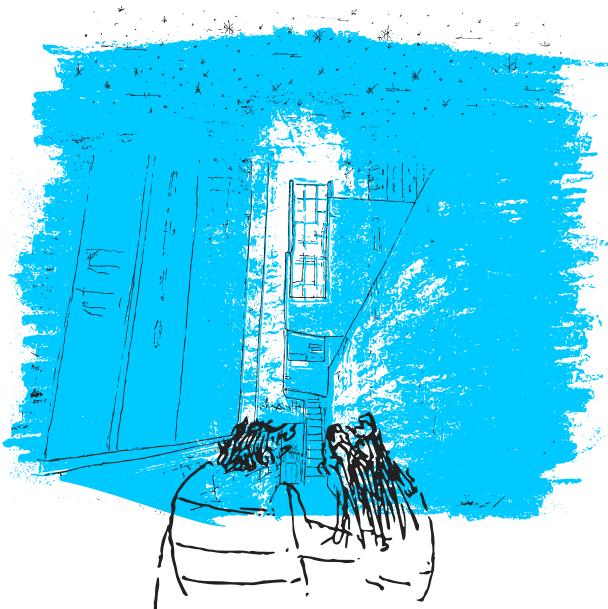
EIHU LANE

MORRISON STREET

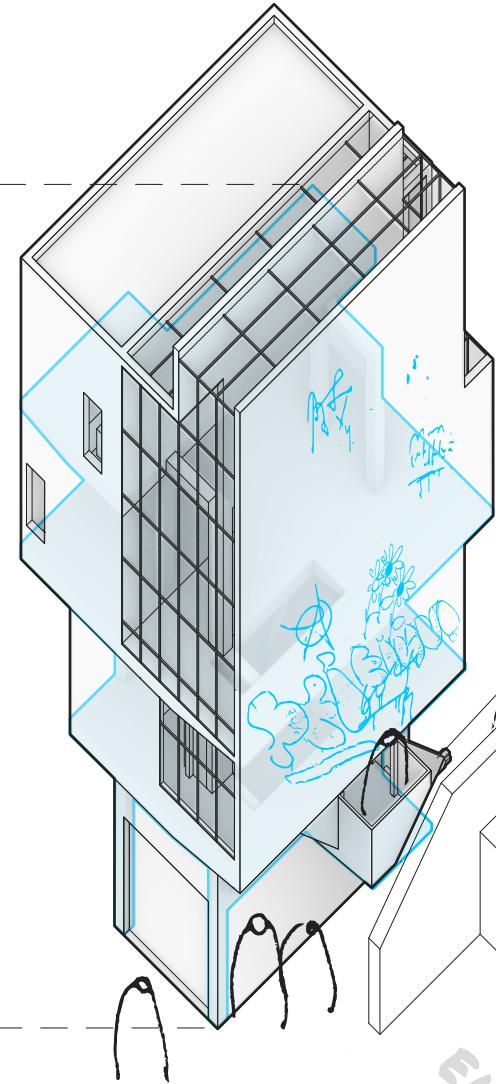
The building is a waypoint, activities visible in the solarium attracting passersby from Robson Street. From the Close, the rest of the exterior appears solid and closed, clad in the concrete brick of nearby parkades. The laneway facade reveals a negotiation of public and private.



A modified three-car parking stacker provides the structural skeleton.



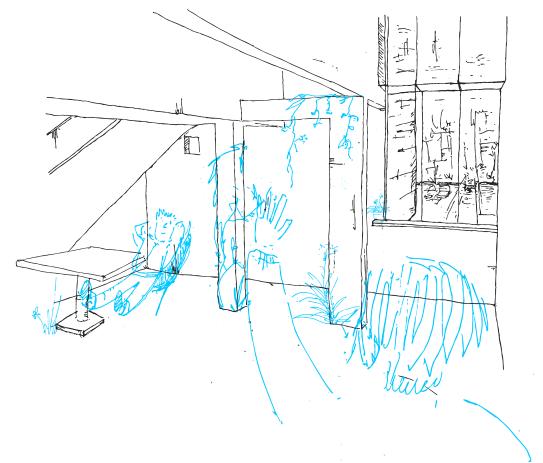
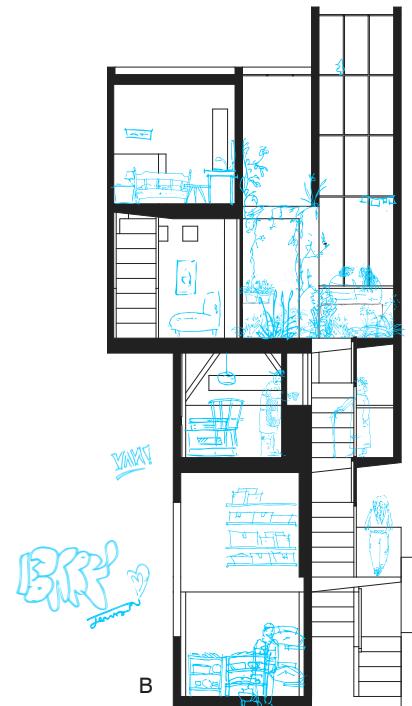
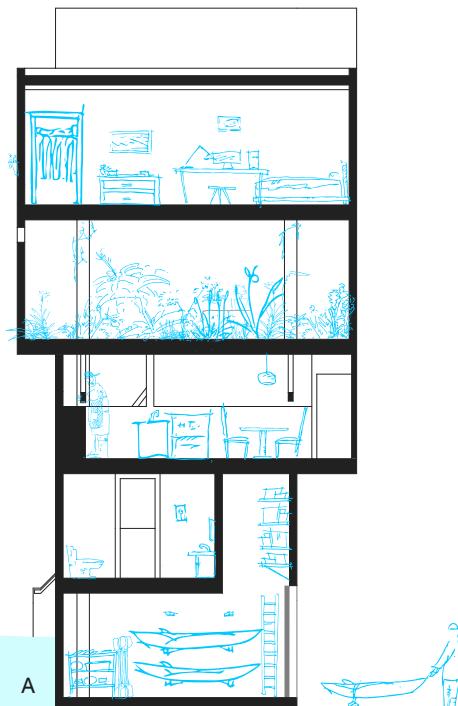
View of solarium from Close.



Axonometric 0 1 2 5 m



COLLECTIVE OWNERSHIP ENSURES SUCCESS
ON BLENDED PUBLIC & PRIVATE SPACES.



Public access is maintained between a flexible space for hosting local groups, a bar for customers, viewing platforms, a washroom and a solarium.

The owner is supported by these amenities, which attract patrons and expand the private residence. In return, the restaurateur stewards a safe, engaging, and inclusive community space.

Plan, sections 0 1 2 5 m

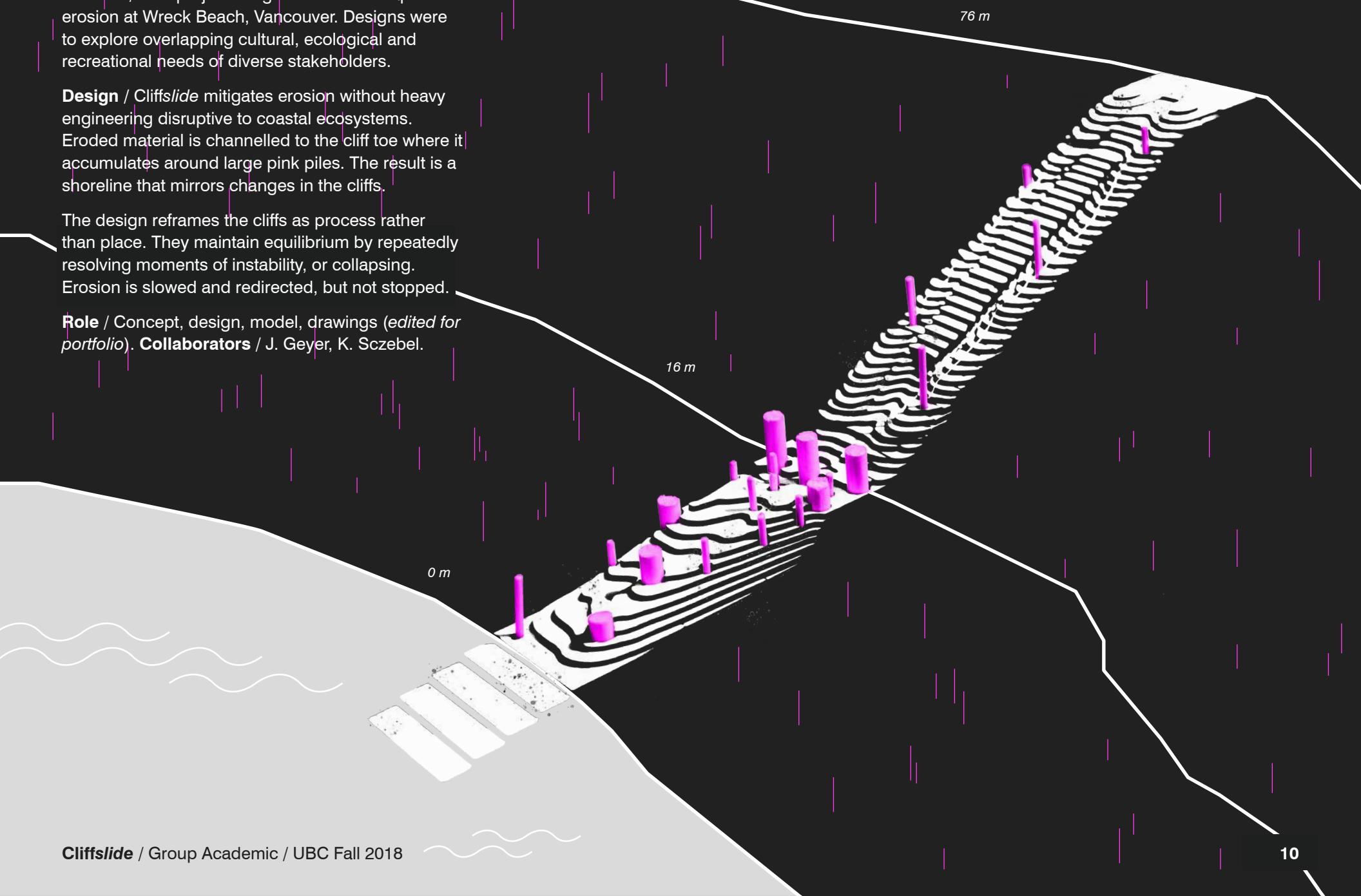
Cliffslide

Context / This project sought solutions to rapid erosion at Wreck Beach, Vancouver. Designs were to explore overlapping cultural, ecological and recreational needs of diverse stakeholders.

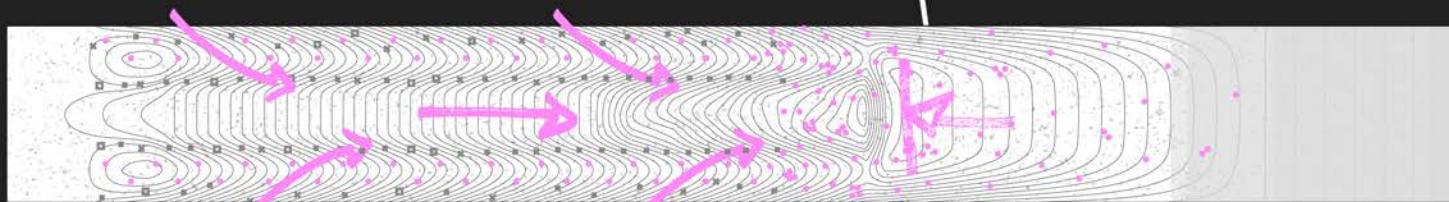
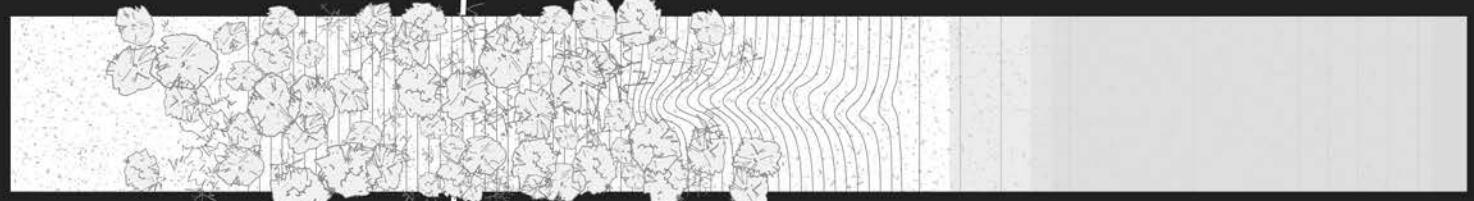
Design / Cliffslide mitigates erosion without heavy engineering disruptive to coastal ecosystems. Eroded material is channelled to the cliff toe where it accumulates around large pink piles. The result is a shoreline that mirrors changes in the cliffs.

The design reframes the cliffs as process rather than place. They maintain equilibrium by repeatedly resolving moments of instability, or collapsing. Erosion is slowed and redirected, but not stopped.

Role / Concept, design, model, drawings (*edited for portfolio*). **Collaborators** / J. Geyer, K. Sczebel.



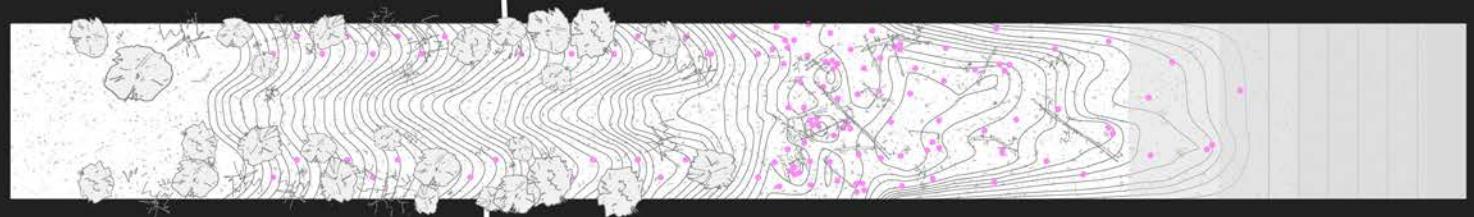
1 Evidence of localized subsidence is observed in areas of low vegetation.



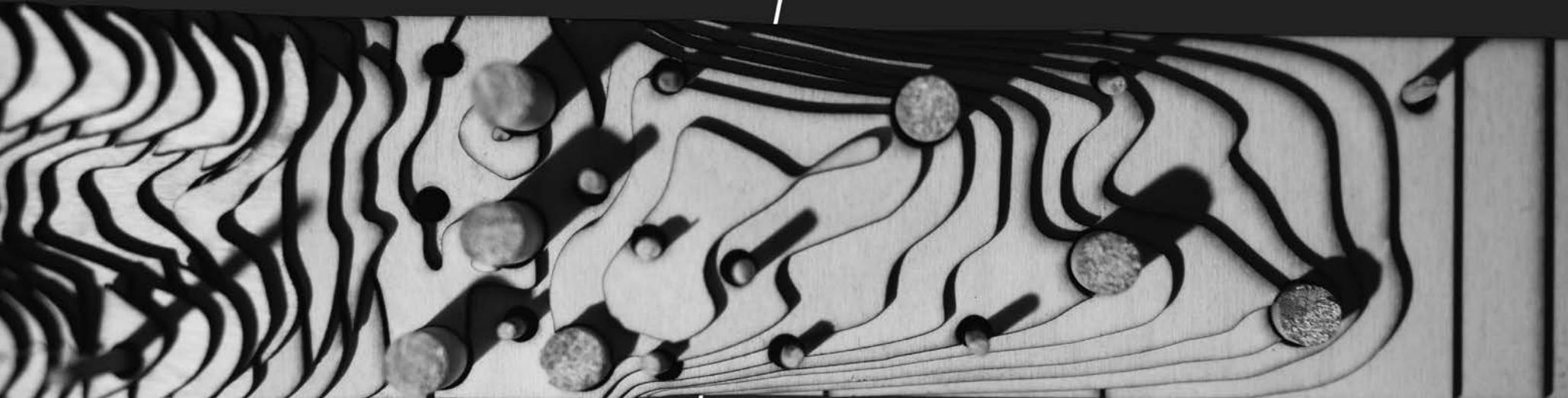
Planting / Dune grass, salmonberry (stabilizing ground cover) □ Poplar (fast growing) ■ Red alder (fast growing) × Douglas fir (slow growing)

2 High berms channel debris to the toe, where accumulation around piles fortifies against erosion. Edge planting slows slope collapse while permitting intermittent subsidence.

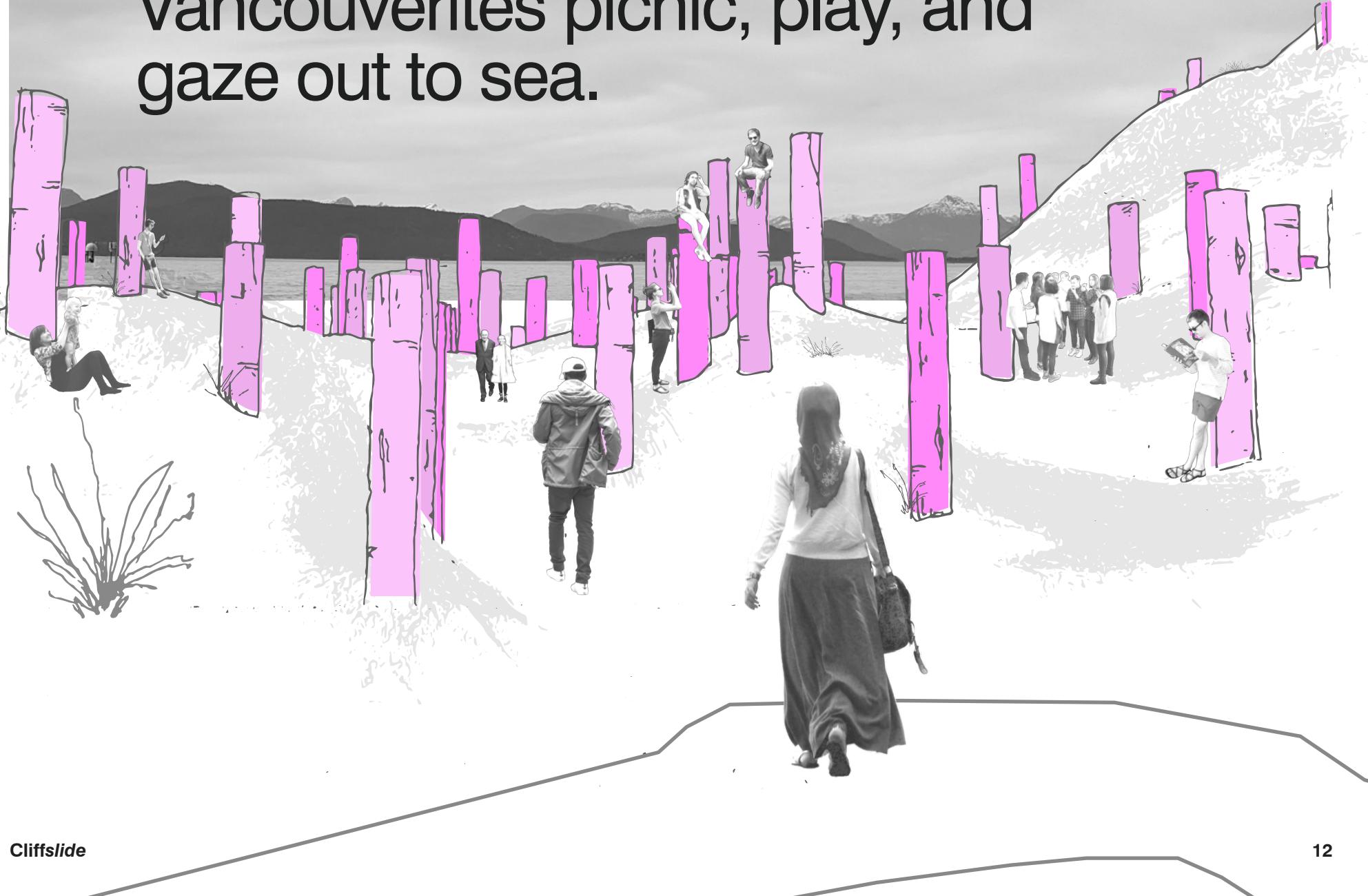
3 Erosion continues at a slower rate due to maturing slope vegetation and increasing build-up of material at the toe.



0 10 20 40 m



Piles control debris accumulation,
creating undulations where
Vancouverites picnic, play, and
gaze out to sea.



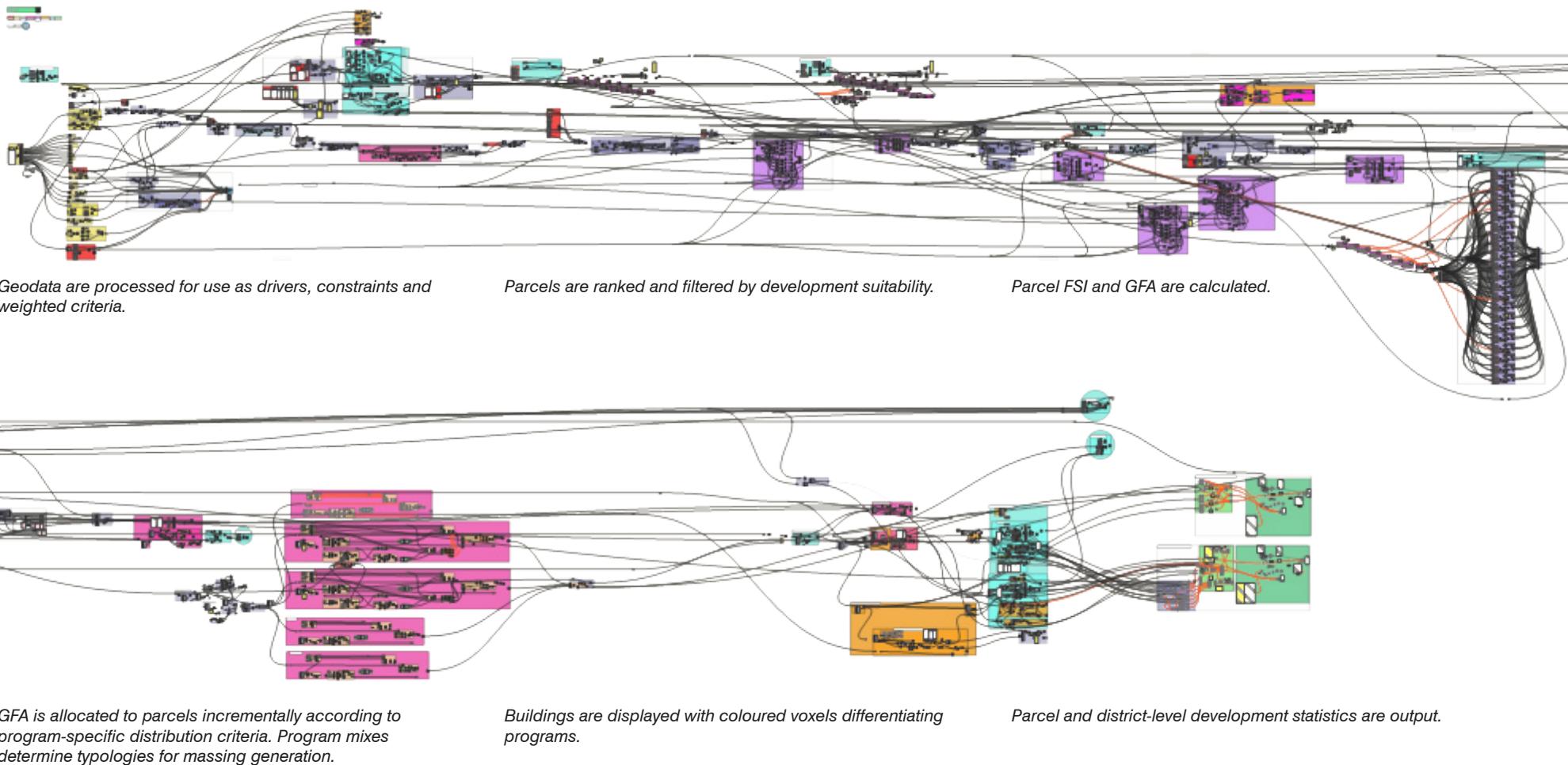
15-Minute City

Context / This parametric model was developed to quantify sustainable futures for central Cleveland and Detroit, informing a complete urban design vision and development strategy for both cities.

Design / 15-Minute City generates program-specific development to drive the growth of economically and socially robust communities. The model's benchmark for these is a neighbourhood in which residents can access daily needs within a 15-minute walk.

Role / Lead parametric designer

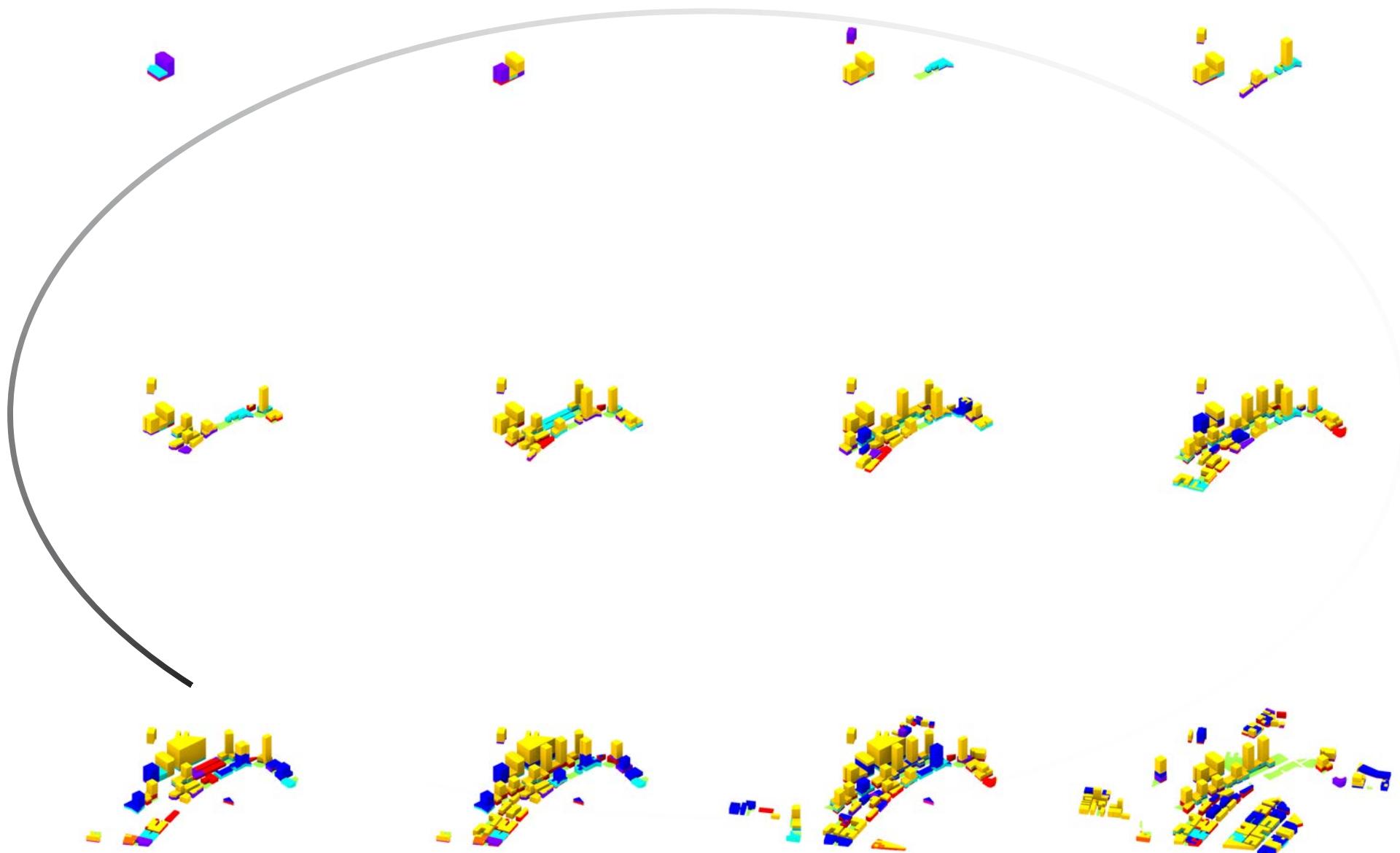
Collaborators / M. Lee, J. Fruithandler (*parametric design*), J. King (*project manager*).

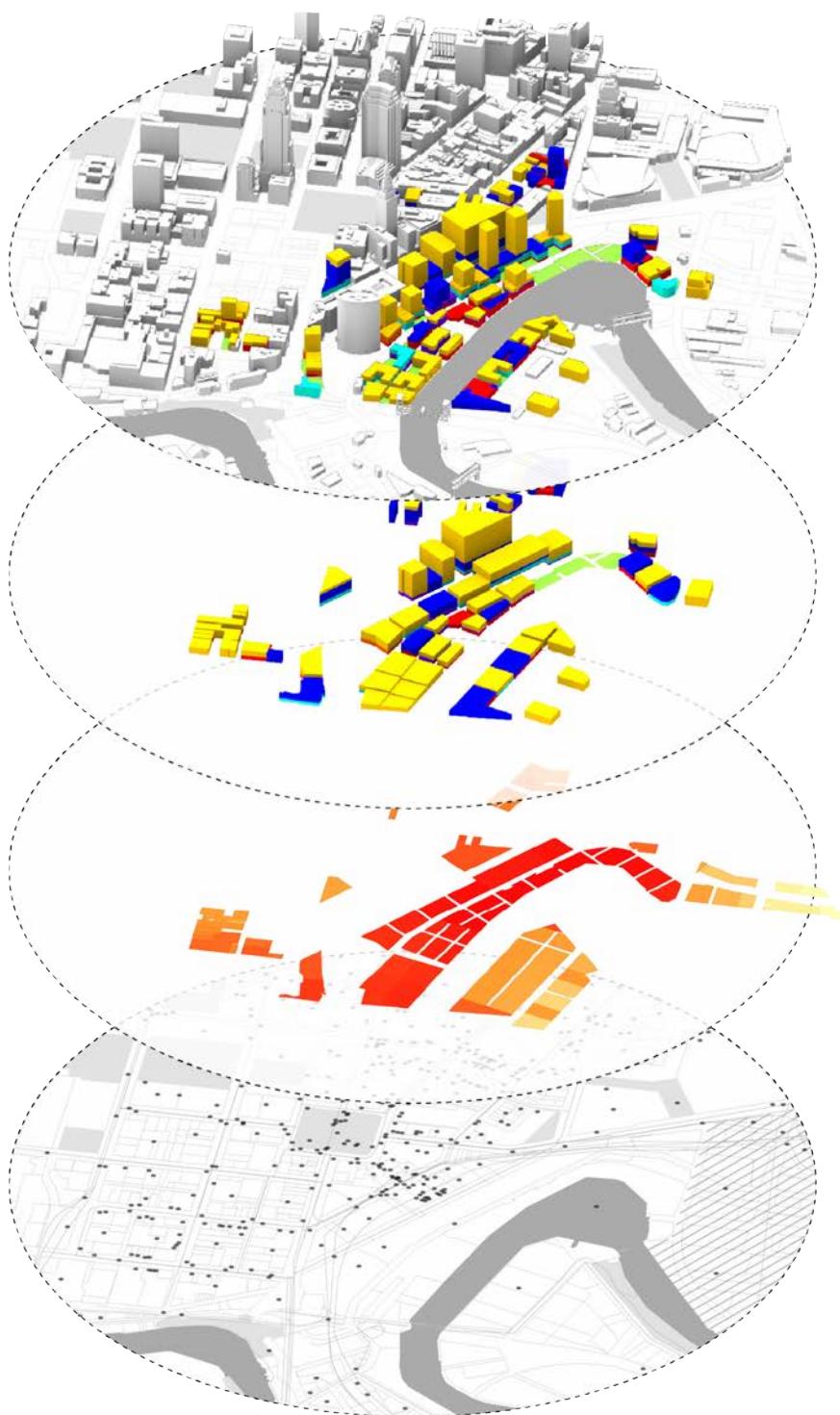




15-Minute City quantifies community needs to envision equitable, sustainable and vibrant neighbourhoods.

Per capita land use and amenity targets allow modelling of 15-minute neighbourhoods for current and future populations. This diagram shows 5% annual growth over 30 years.

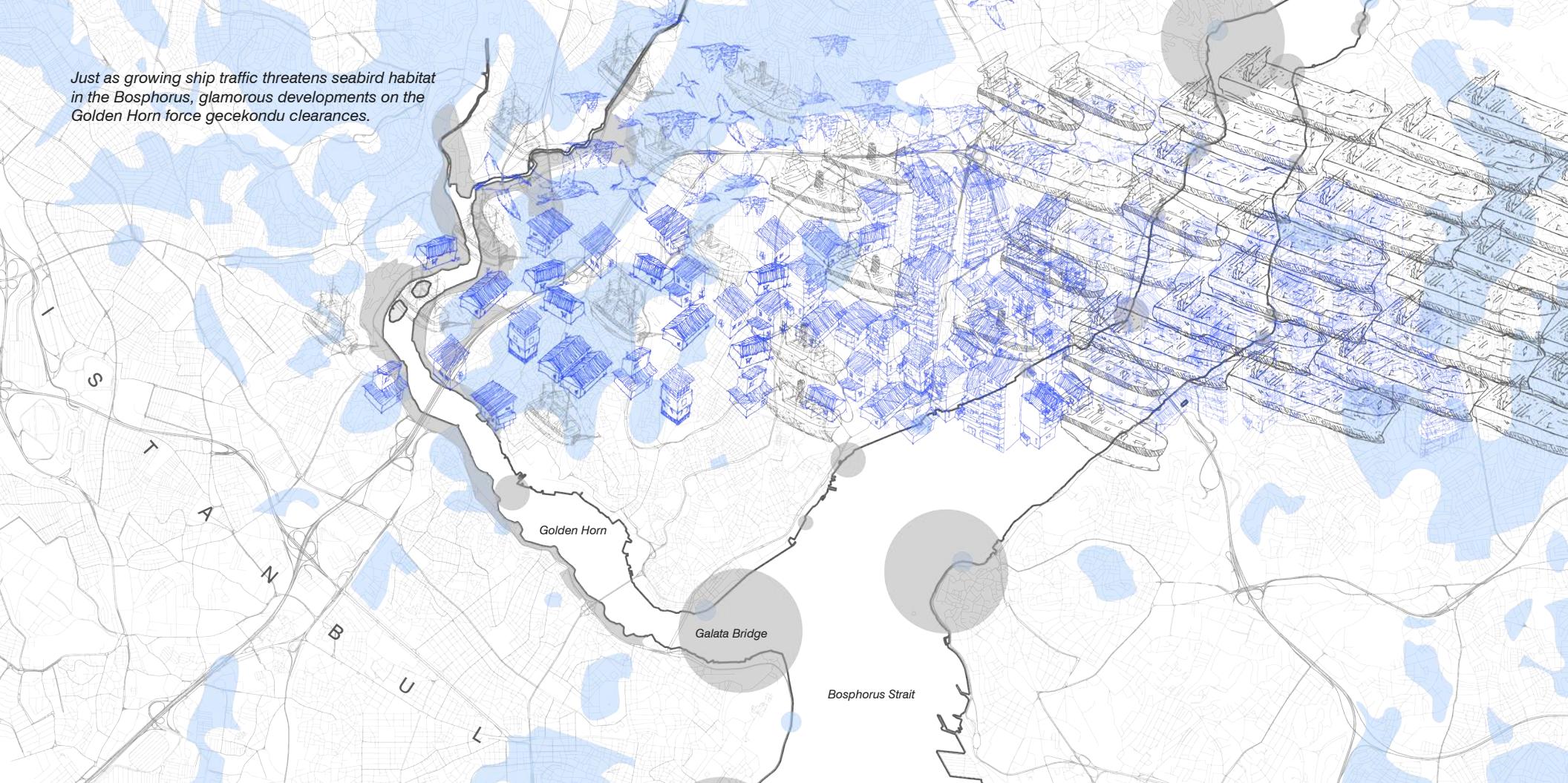




15-Minute City

- 1 Model Drivers** / Per capita land use and amenity data are used to project area targets for 21 programs. Spatial data, including employment, demographics and mobility networks inform development criteria.
- 2 Development Allocation** / Parcels are ranked against weighted criteria first for development suitability and then again to determine optimal density distribution across the district.
- 3 Program Allocation** / Parcels are scored for performance on program-specific criteria. These rankings are input to a Python script that attempts to optimally distribute each program. Simplified building massing reflects parcel FSI and program mix.
- 4 Notional Massing** / Buildings are generated by associating typologies with program mixes, accounting for GFA, open space dedication, tower separation, height restrictions and setbacks.

Just as growing ship traffic threatens seabird habitat in the Bosphorus, glamorous developments on the Golden Horn force gecekondus clearances.



TerminusPlus

Context / This project articulated the challenges and opportunities of depopulation in global cities. My team identified the Galata Bridge as a mechanism for connection in a future Istanbul characterized by sprawl and community isolation.

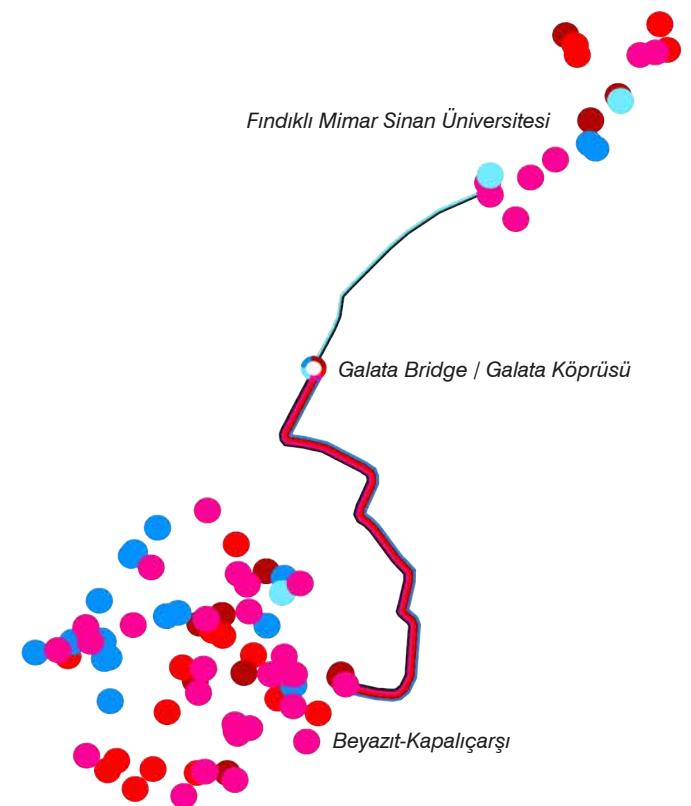
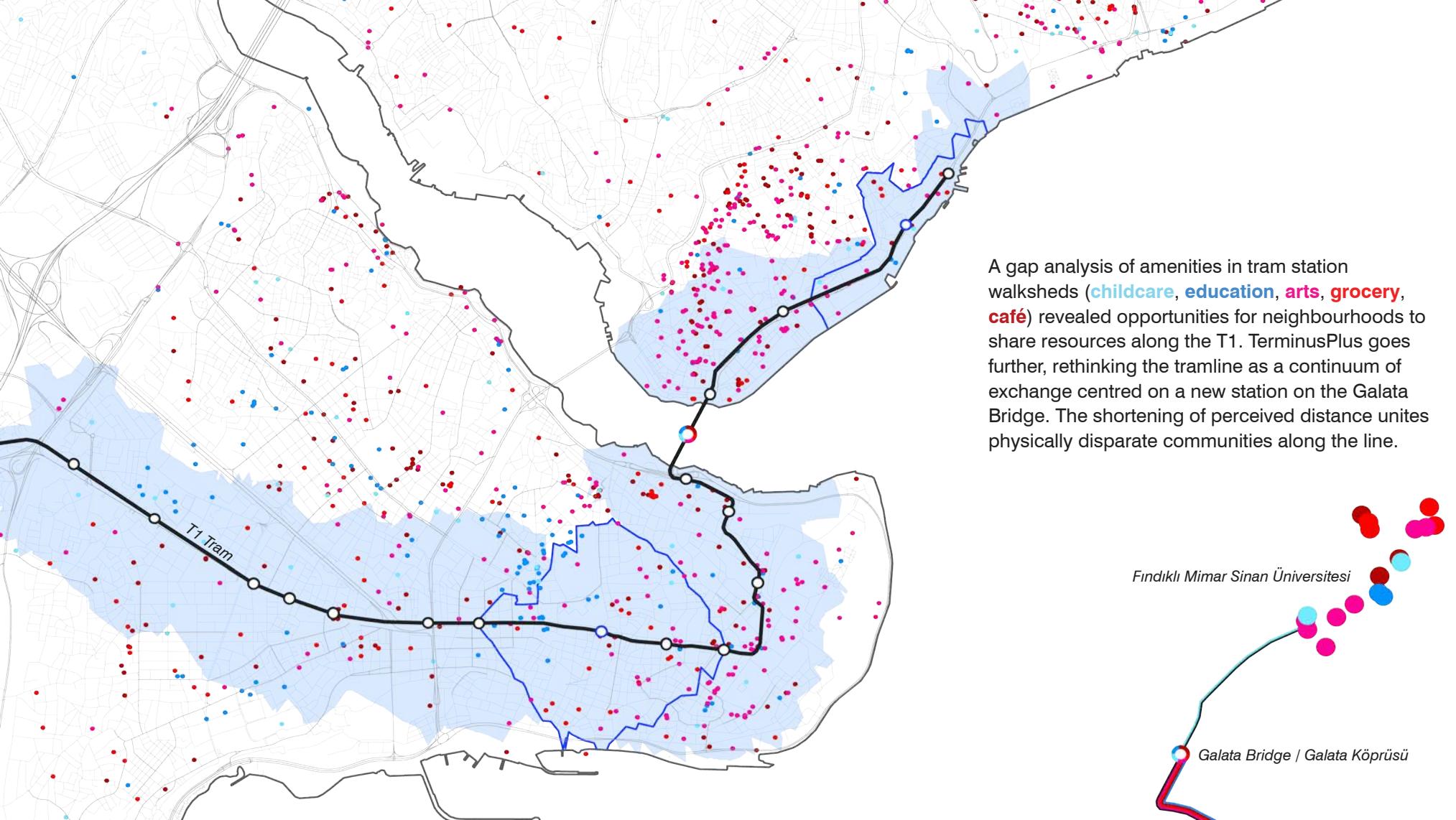
Research / This exploration maps the displacement of gecekondus in the 20th century as city planners pursued economic globalization. Today, formerly enmeshed communities are increasingly fragmented; depopulation may further isolation. This future calls for new means of social, cultural and economic exchange.



- Gecekondu sprawl, seabird habitat
- Urban renewal, hazardous material spills

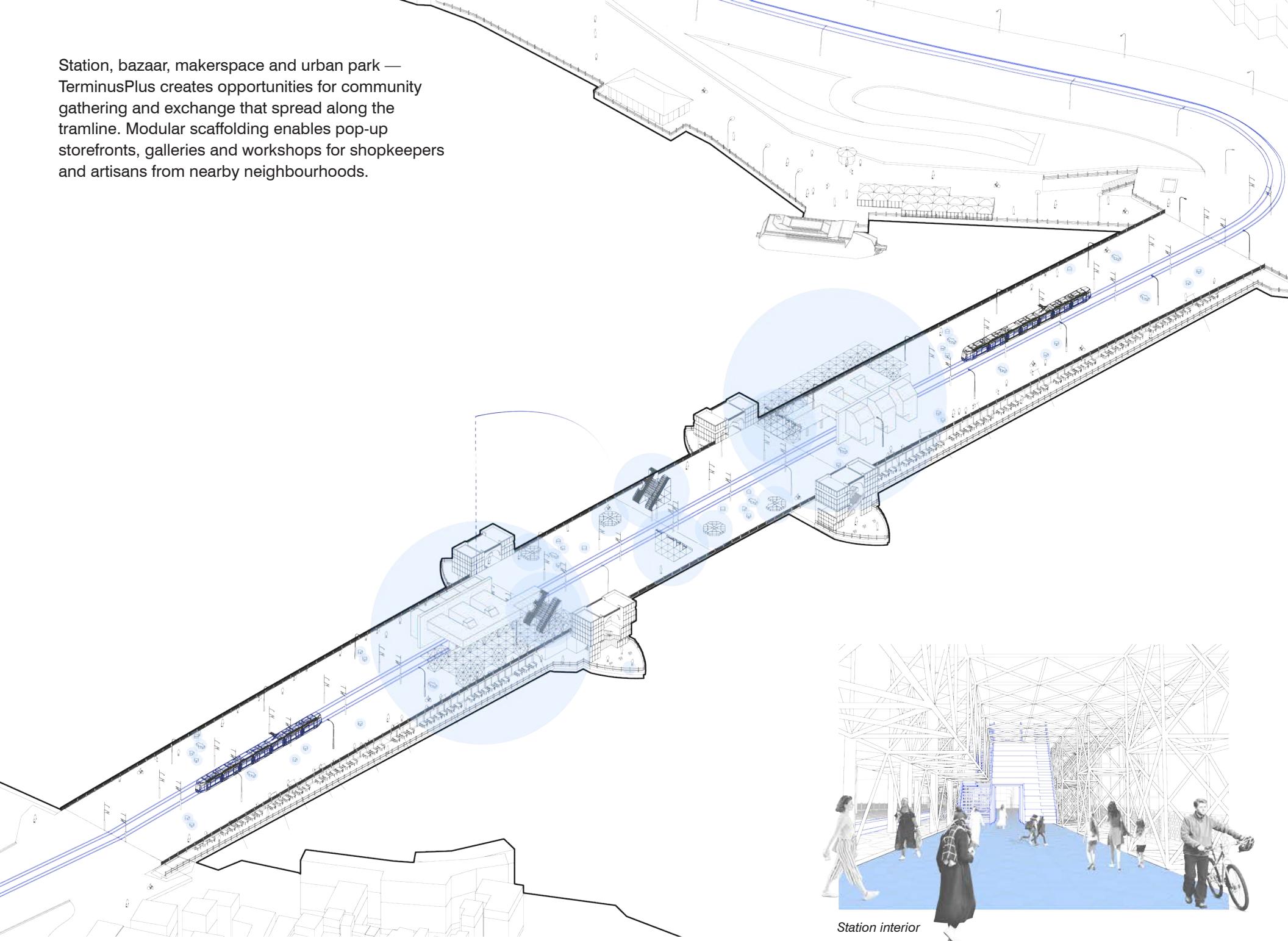
Role / Mapping exploration, design, drawings (*edited for portfolio*).

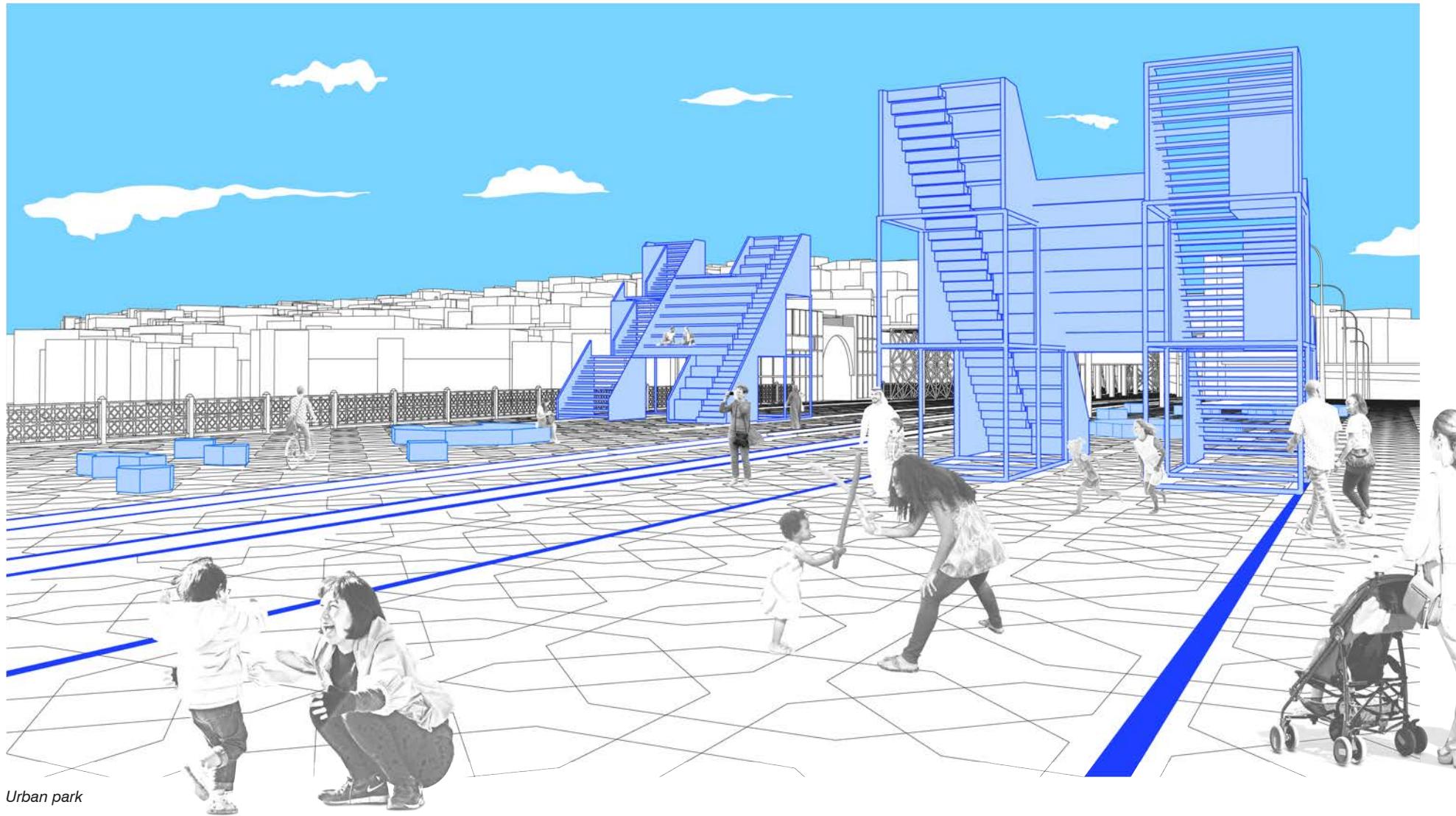
Collaborators / R. Ranta, P. Salonga.



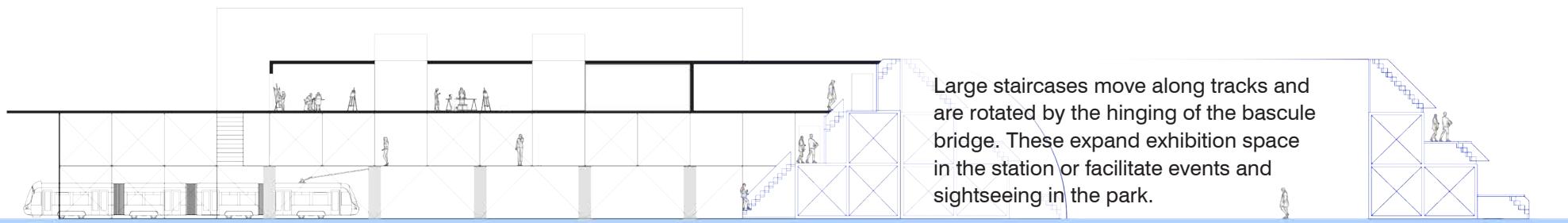
Amenity exchange between neighbourhoods on the T1.

Station, bazaar, makerspace and urban park — TerminusPlus creates opportunities for community gathering and exchange that spread along the tramline. Modular scaffolding enables pop-up storefronts, galleries and workshops for shopkeepers and artisans from nearby neighbourhoods.





Urban park



Large staircases move along tracks and are rotated by the hinging of the bascule bridge. These expand exhibition space in the station or facilitate events and sightseeing in the park.

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