

# Finding the Potential in Lines: Faults, Horizons, and City

*shaun rosier, phd  
virginia tech, school of design  
blacksburg, va + wellington, aotearoa*

*landscape first symposium  
landscape architecture program  
virginia tech*

## *about me*

*Tēnā kotou katoa / Greetings to you all*

*I tipu ake au I Wairarapa, Aotearoa / I come from the Wairarapa, New Zealand*

*I raro I te maru o te maunga o Tararuas / Raised under the shelter of the Tararua Ranges*

*Ko te māhu nga māunga o te whānganui a tara toku maunga / The many peaks of Wellington are my mountain*

*Ko te whānganui a tara toku whanga / The vastness of Wellington Harbour is my water*

*He Pākehā toku iwi / My people are Pākehā (NZ European)*

*E nohu ana au ki Blacksborg / I currently live in Blacksborg*

*Ko Shaun Rosier toku ingoa / My name is Shaun Rosier*

*E mahi ana au hei kaihoahoa whenia me kaihoahoa taone / I am a landscape-led urbanist and designer*

*Nō reira, tēnā kotou, tēnā kotou, tēnā kotou katoa / Therefore, greetings, thrice over*

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*content for today*

*the problem at hand*

*design research as method*

*studies in stone*

*the problem at hand*

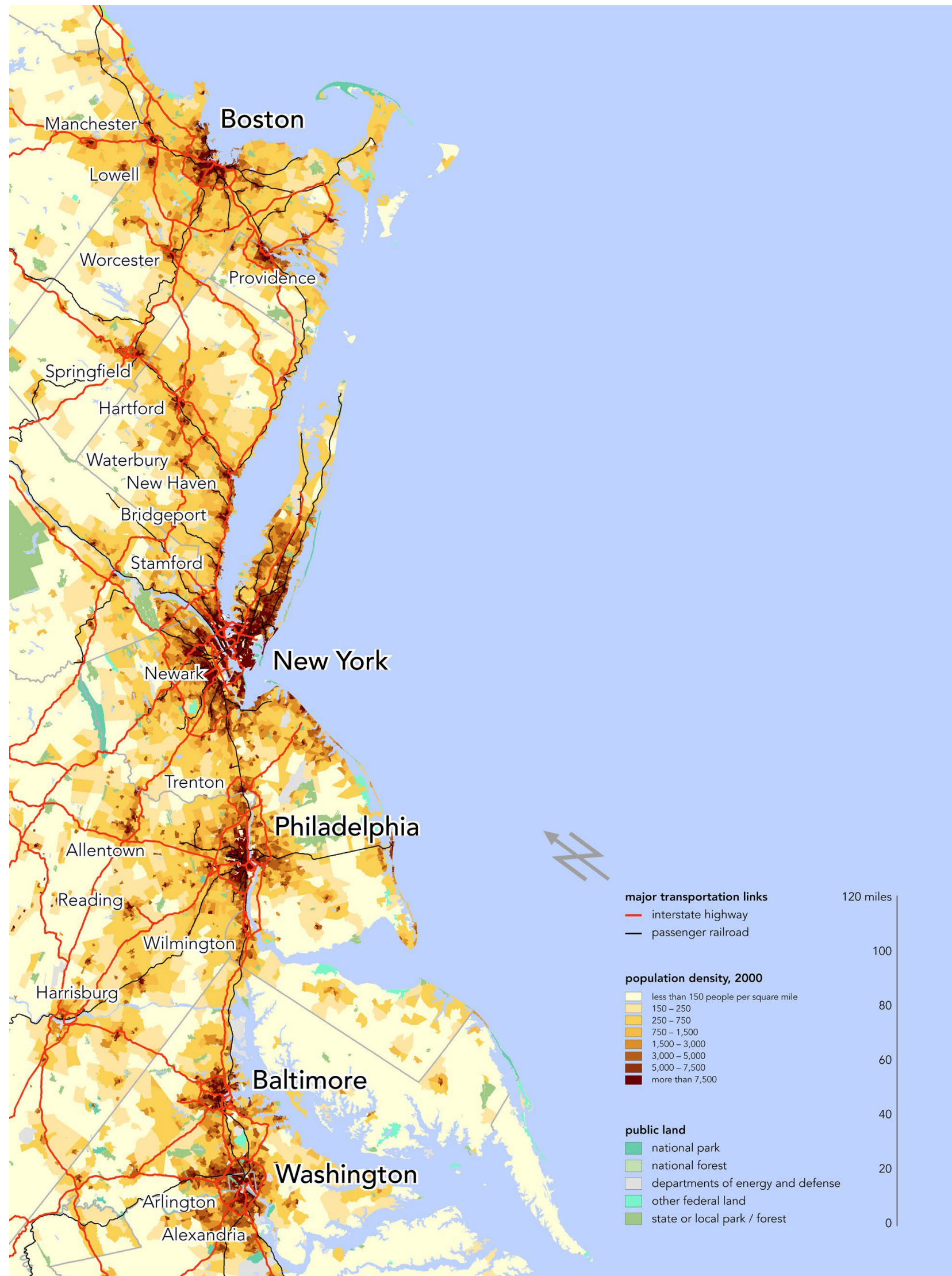
*Between 7-9% of total GHG emissions is from concrete*

*Kajaste, Raili, and Markku Hurme. "Cement Industry Greenhouse Gas Emissions—Management Options and Abatement Cost." *Journal of cleaner production* 112 (2016): 4041-52.*

*Miller, Sabbie A, Guillaume Habert, Rupert J Myers, and John T Harvey. "Achieving Net Zero Greenhouse Gas Emissions in the Cement Industry Via Value Chain Mitigation Strategies." *One Earth* 4, no. 10 (2021): 1398-411.*

*1:0.93 ratio*

*concrete to co<sup>2</sup> production*



22.6% of US GDP (2021) - 5.8 Trillion USD

3rd ranking in global GDP behind US, and China

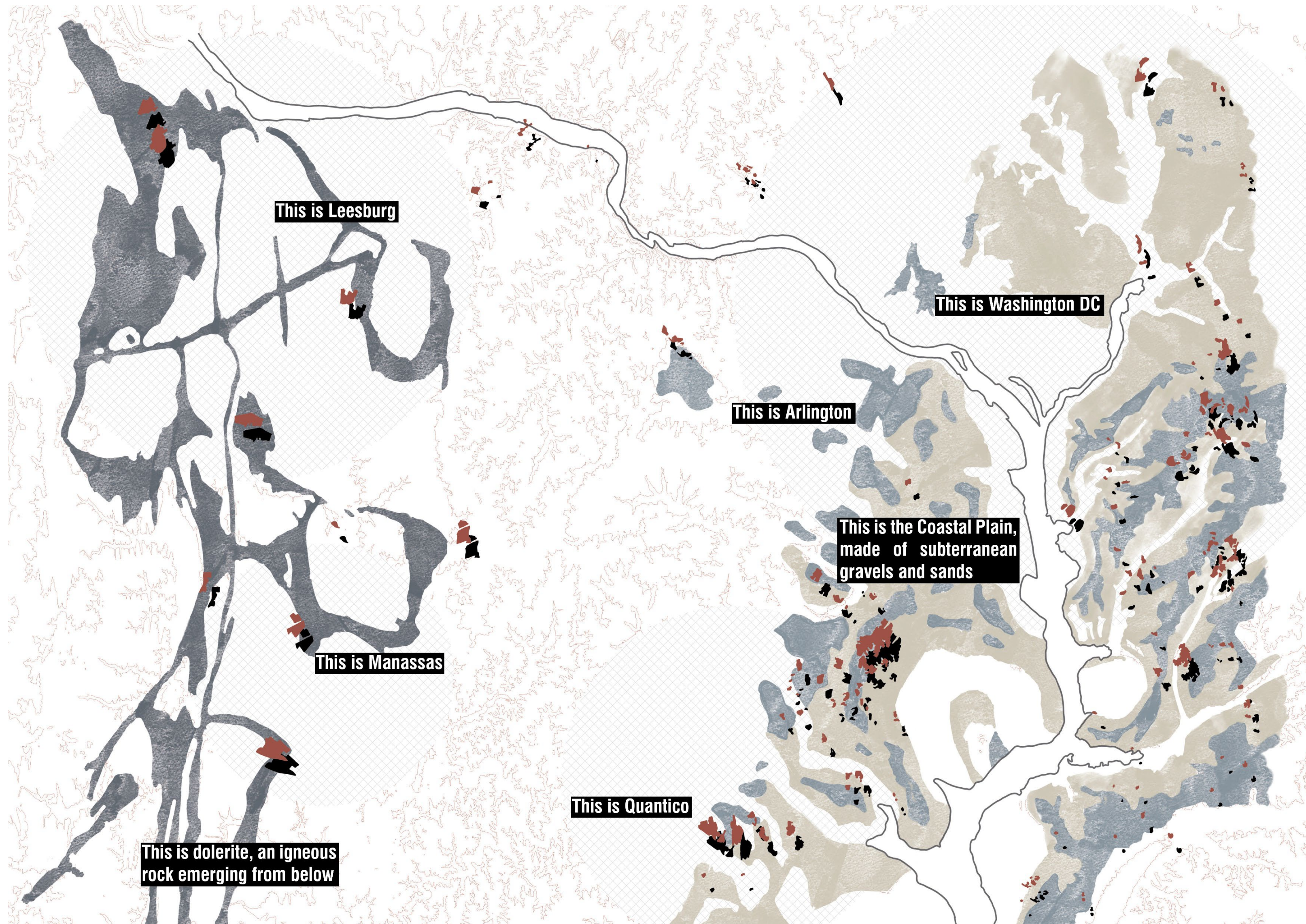
2% of total land area



*suburban area growth significantly outweighs  
population growth*

*megaregion-scale appropriation of geologic material*

*socio-cultural disconnect between life and  
consumption*



**This is Leesburg**

**This is Washington DC**

**This is Arlington**

**This is the Coastal Plain,  
made of subterranean  
gravels and sands**

**This is Quantico**

**This is Manassas**

**This is dolerite, an igneous  
rock emerging from below**





Design

Start laying out  
US elements first  
movement Parks,  
recreation ...

How can LA give  
expression to subterranean  
forces & material  
through Suburban  
Development?

1/4 inch circle = 100m diameter  
3/8 inch circle = 150m diameter  
3/4 inch circle = 300m diameter  
1 1/4 inch circle = 500m diameter

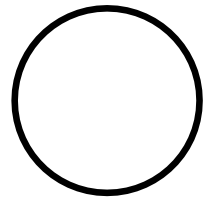
Drawn = 15000/16000

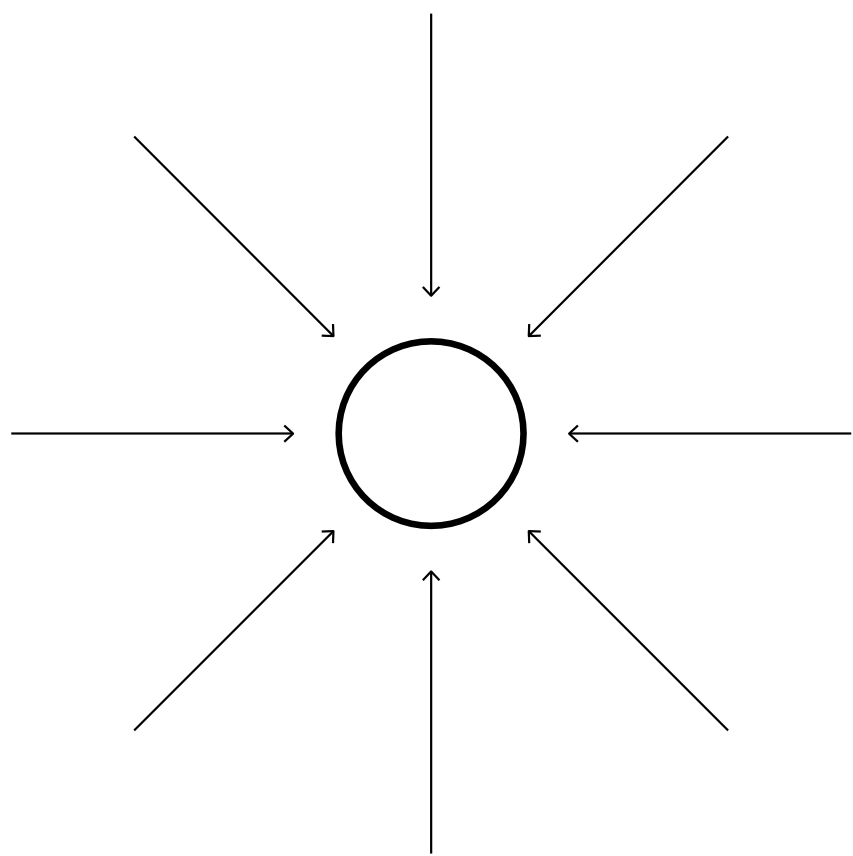
1 1/2 inch circle = 600m (big grid)  
circle

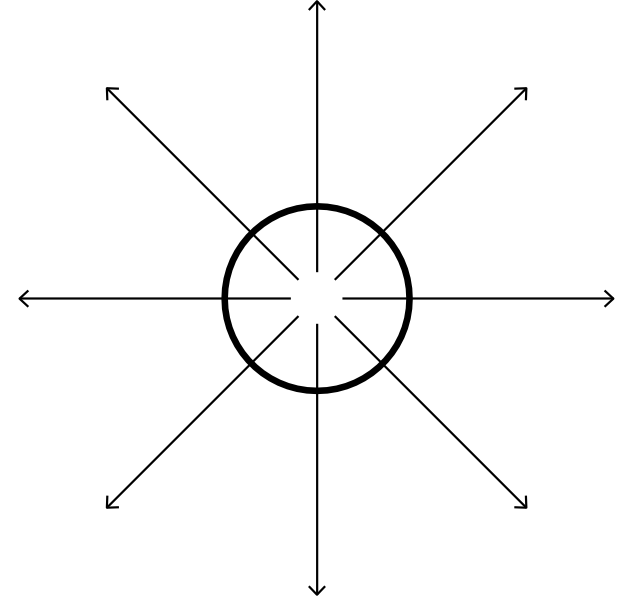
- Queens act as major  
paths  
- networks of Medium  
Small paths connecting  
throughout Suburban  
fields

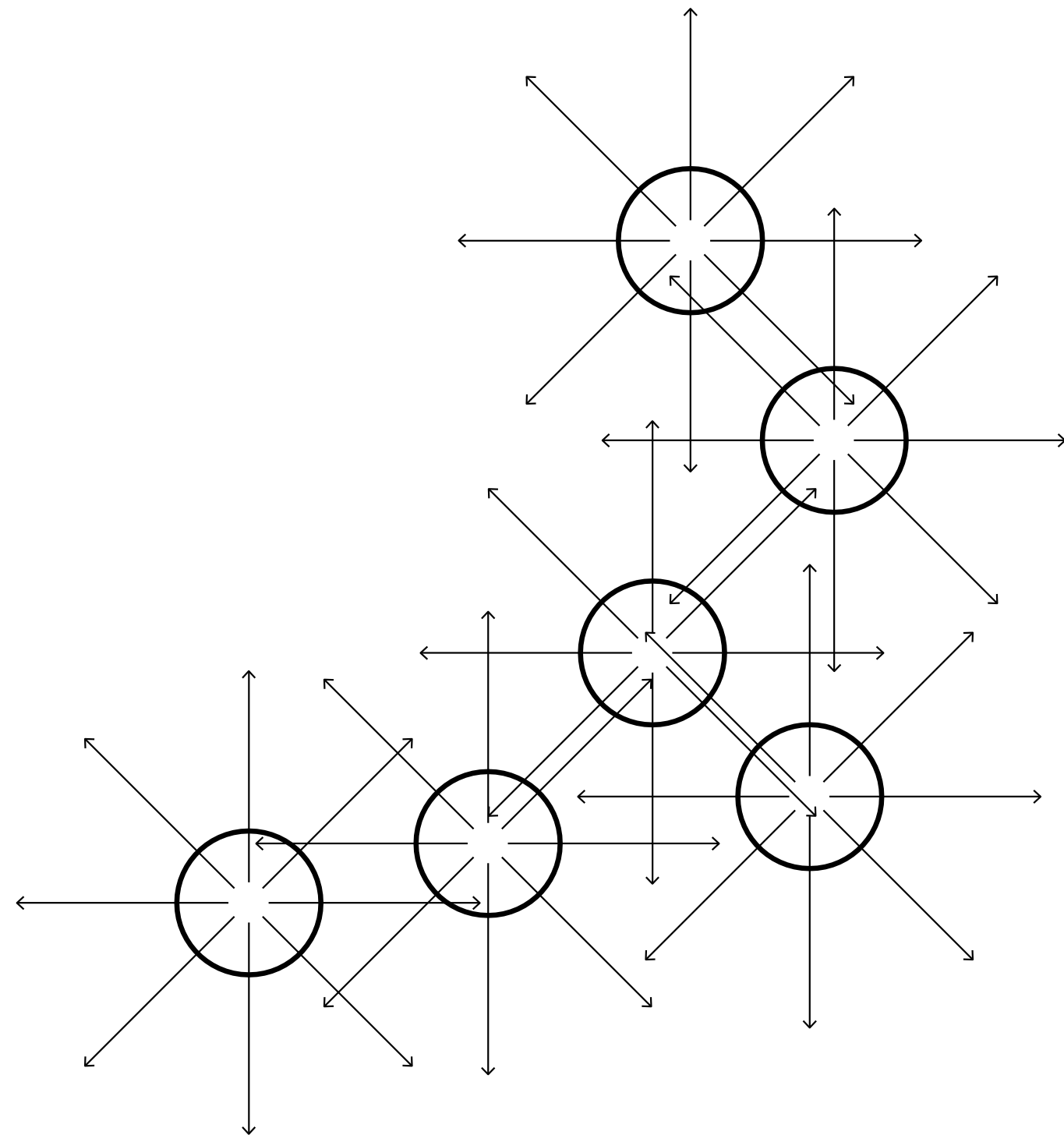
*How can landscape architecture give expression to geological material and forces through a (sub)urban development?*

*design/practice  
research as method*

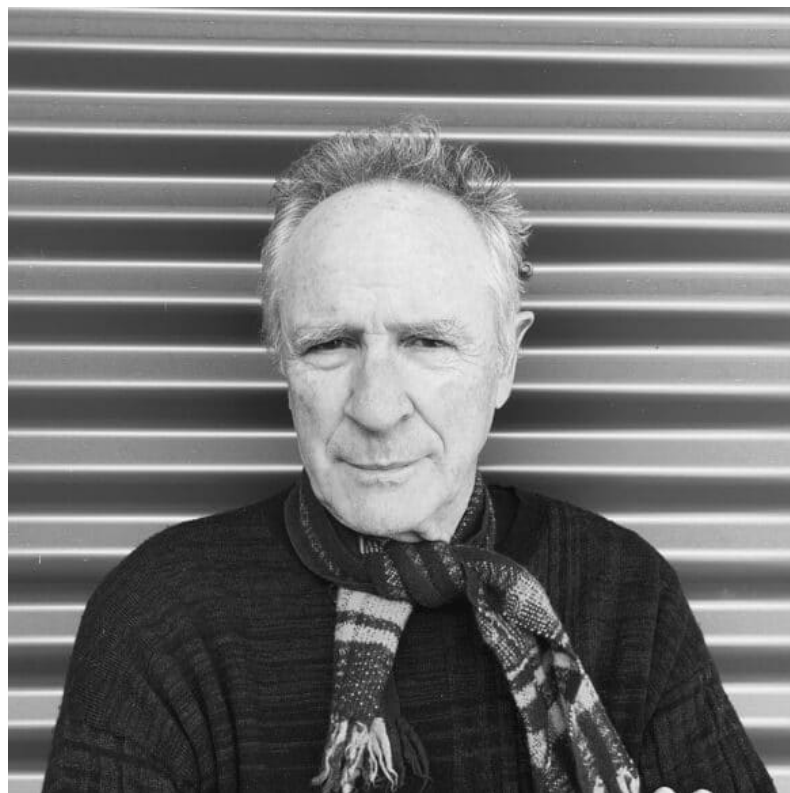








# *decolonising making and knowing*



Rod Barnett - Head of School, VUW School of Architecture  
Former Chair of LA at Washington University



Linda Tuhiwai Smith (Ngāti Awa and Ngāti Porou)  
Distinguished Professor at Te Whare Wānanga o  
Awanuiārangi

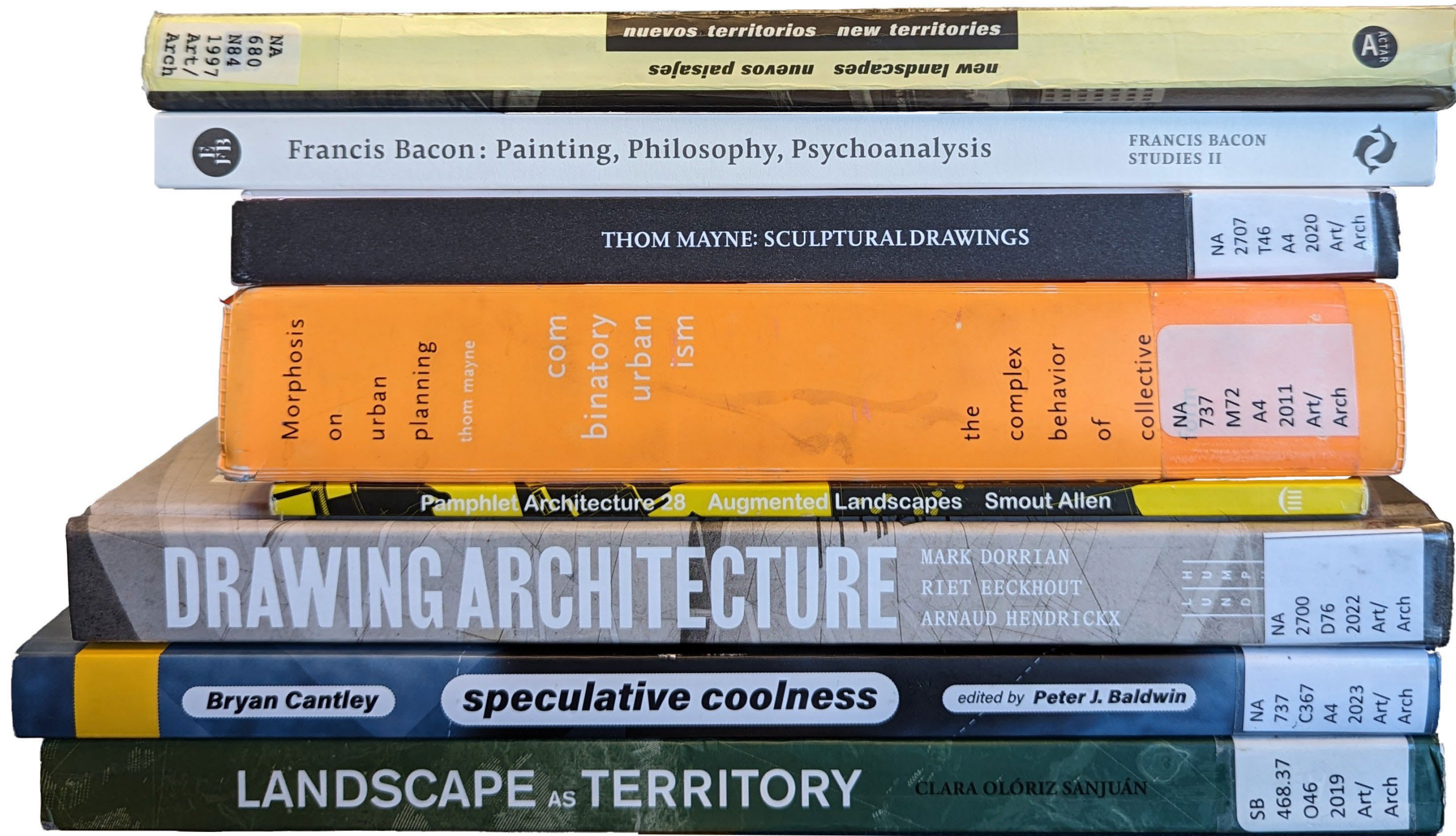
*western modernity is a conditioned by a  
disconnect with the world*

*Countering 'solutionism'*

*indigenous peoples and ways of knowing offers a  
way forward*

*living **with** instead of living **from***

***kaitiakitanga and utu** / stewardship and  
reciprocity*



thom mayne  
perry kulper  
bryan cantley  
riet eeckhout  
smout allen

ed wall  
james corner

francis bacon

stuart elden



*studies in stone*



Anthony Mich  
Library.

PRO-CRAFT

PAPER-MATIC



*sedimentation*

*the action or process of forming  
or depositing sediment*





23 March 2023





Instead of nine holes, 168 homes in Loudon County

On a Friday morning in mid-January, a lacy layer of snow blanketed the grass in the Woodlands at Goose Creek development.  
But workers were driving bulldozers and painting walls in that rising Loudon County community.

Dream Finders Homes is building 33 single-family and 125 townhouses, with a park, a tot lot, and ballfields.  
"This house layout works well. Everyone has their own space."

"I said, 'I can live here.'"



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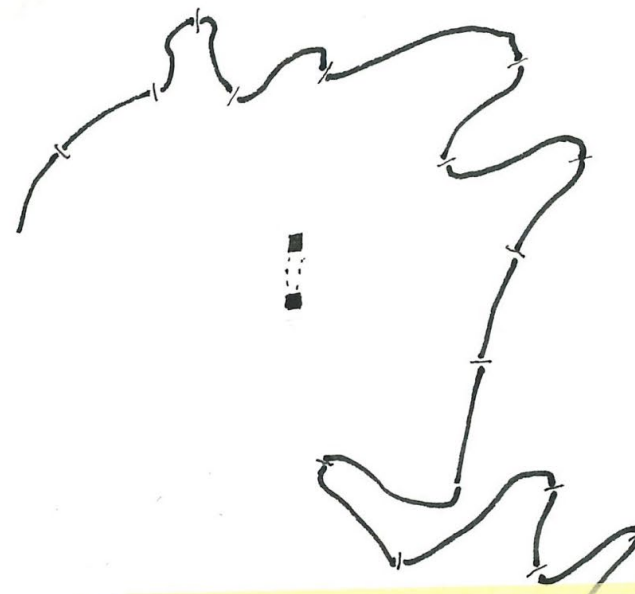
"I said, 'I can live here!'"



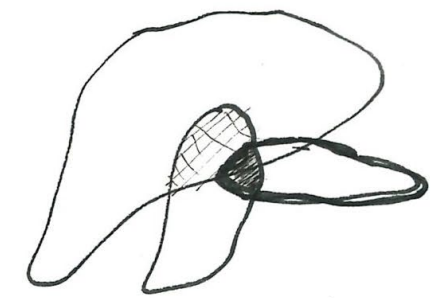


## Design Rules

- Parks to be located on topo points of inflection
  - Small neighbourhood parks in lower topo elevations w/ steeper topo
  - Medium suburb-scale placed on higher topo with landmark landmarks or inflections
  - Quonzoes serve as large city parks w/ distributed trail networks & access.
- Navigable links b/w parks/parklets that don't rely entirely on roadside footpaths.
- Catch & feeder roads run parallel to contours to allow tertiary roads to run perpendicular
  - houses step down slope facing opposite slopes &/or views down into creeks.
- Fault lines & geologic boundaries must be honoured through the design of open space or altering the built fabric in response to these subterranean lines.
- Increased density over existing or lower density compared to the surrounding urban field.
- High points for shared veg public space. → larger sense of LS
- low/med points for shared, neighbourly spaces → more intimate sense of LS



Landuse or Building ecology



Landuse ecology

How to extract some Power or potential from Stone w/ each of these Landuses??

↑ appropriate

↓ Paired w/ Rocky the stone underneath

That's the real BS value of this exercise...

Or Major roads first?

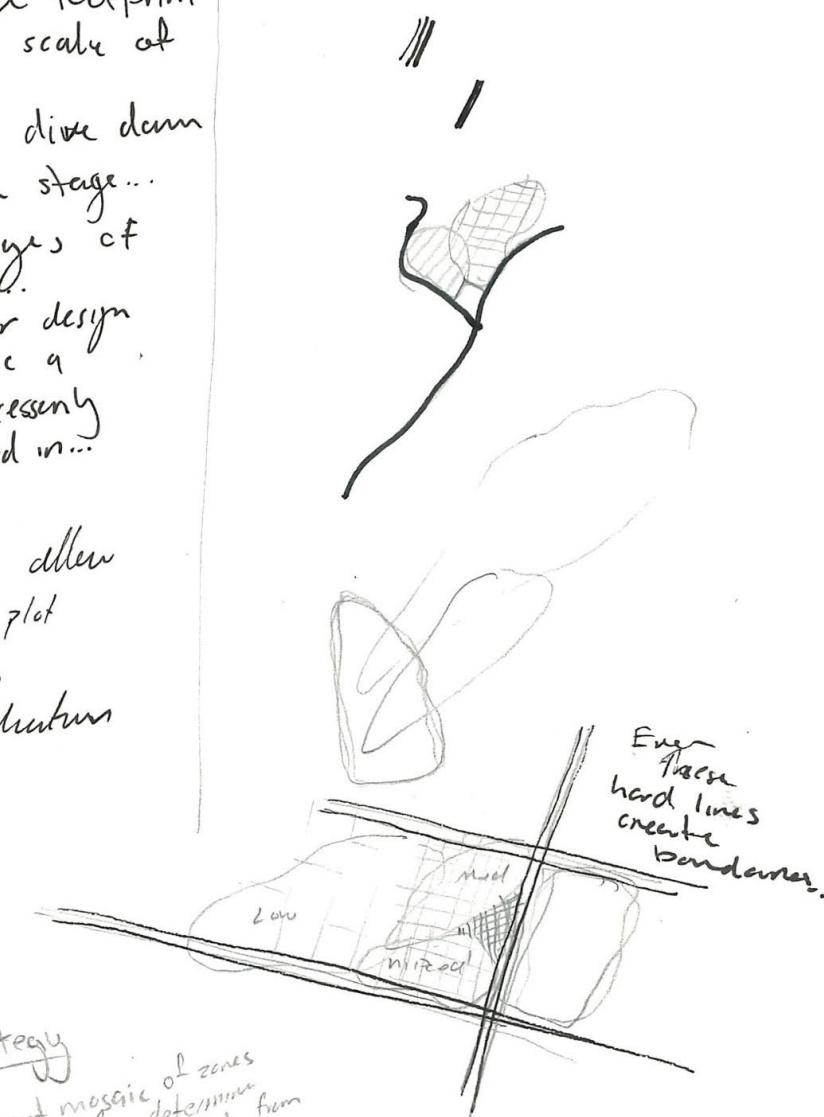
Order of operations...

- Public & Institutional
- Medium Density Residential
- BS box / Large Retail
- Commercial General
- Mixed use
- Low Density Residential

- BS box / large Retail
- low density housing
- Med density housing
- Commercial
- Mixed use
- Institutional or Public

Recreation + Vegetation = 01 ← already done...

- Not interested in cadastral & footprint layout at the masterplanning scale of this study
- - This will likely dive down & experiment at some stage...
- laying out zones & assemblies of relations & land uses.
- With mayer, fixing on anchor design mases, inserted to provide a fairly organized but not necessarily rigid envelope to be filled in...
- Building in enough flex to allow for individualism at the plot or local street level w/o losing or the overall coordination determined at MP scale.



Strategy

- layout mosaic of zones first & then determine major road layout from there...
- Relationship: Low zones, Typo, Recreation & program vegetation...
- Roads on emergent boundaries.

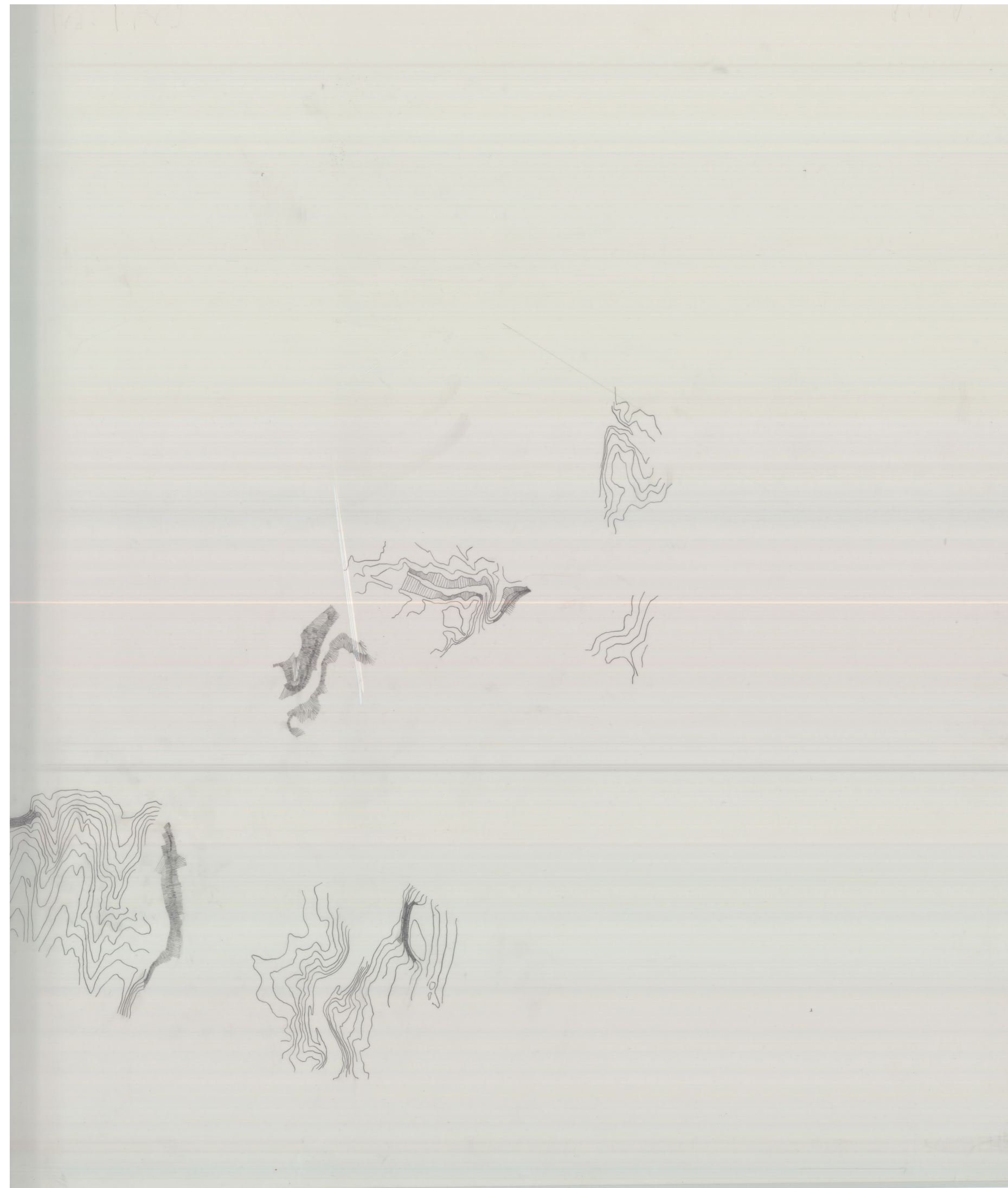


Roads constrain if laid down first, build up rest of CS structure first

why layout roads first when trying to design a post-urbanism oriented urbanism.

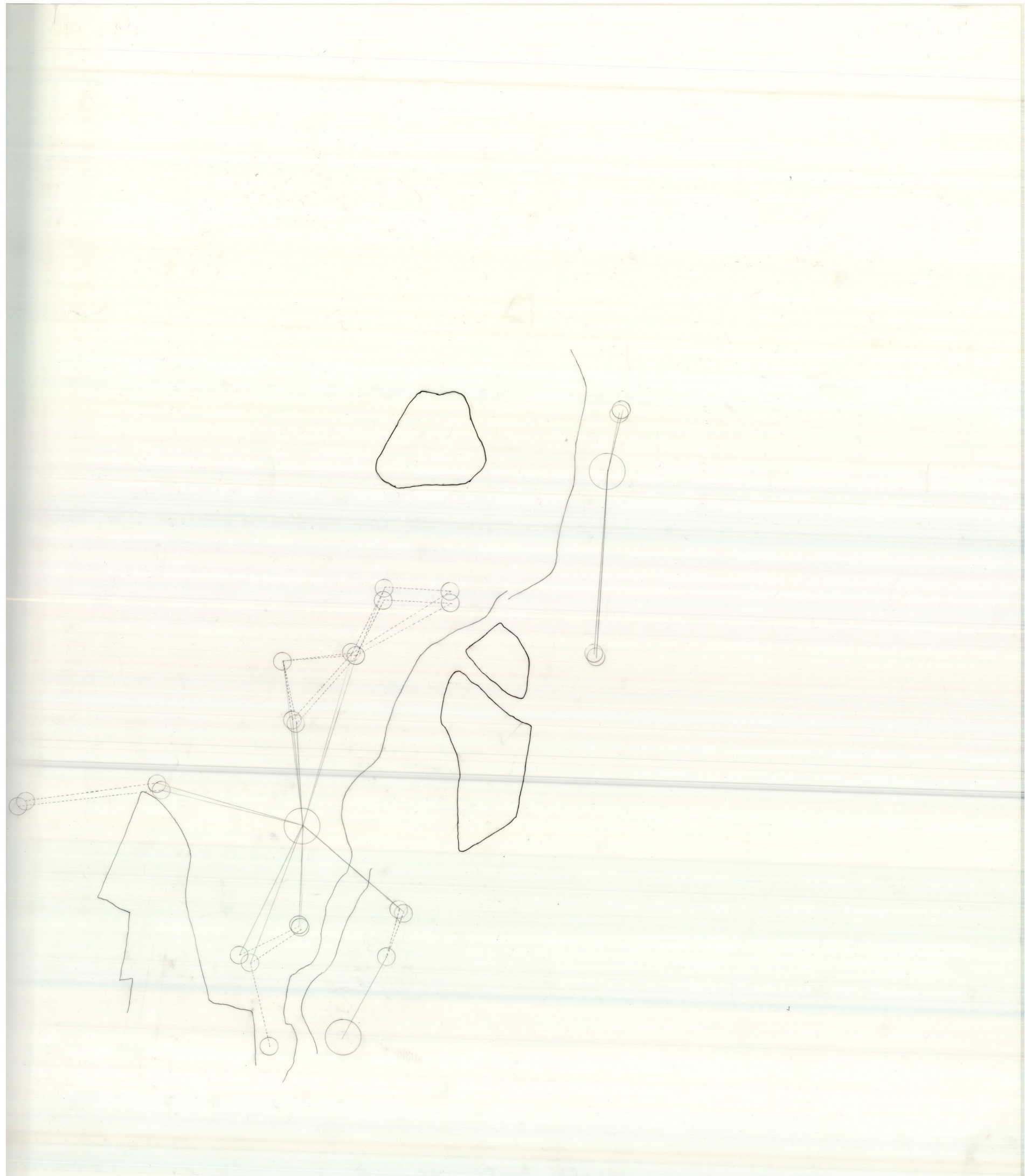
Landscape-led urbanism } → geologic-led urbanism

geologic-led urbanism





16 August 2023

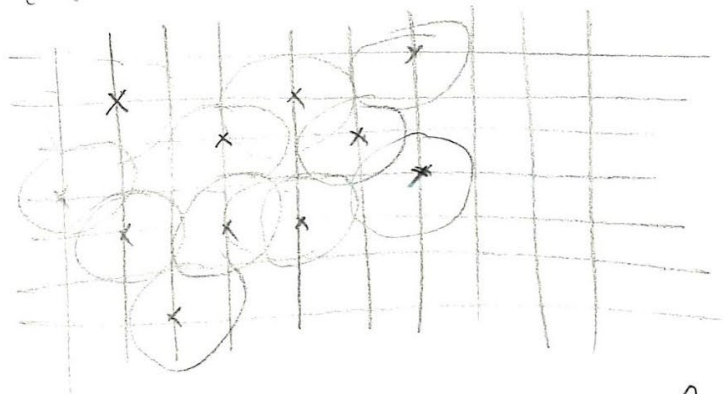




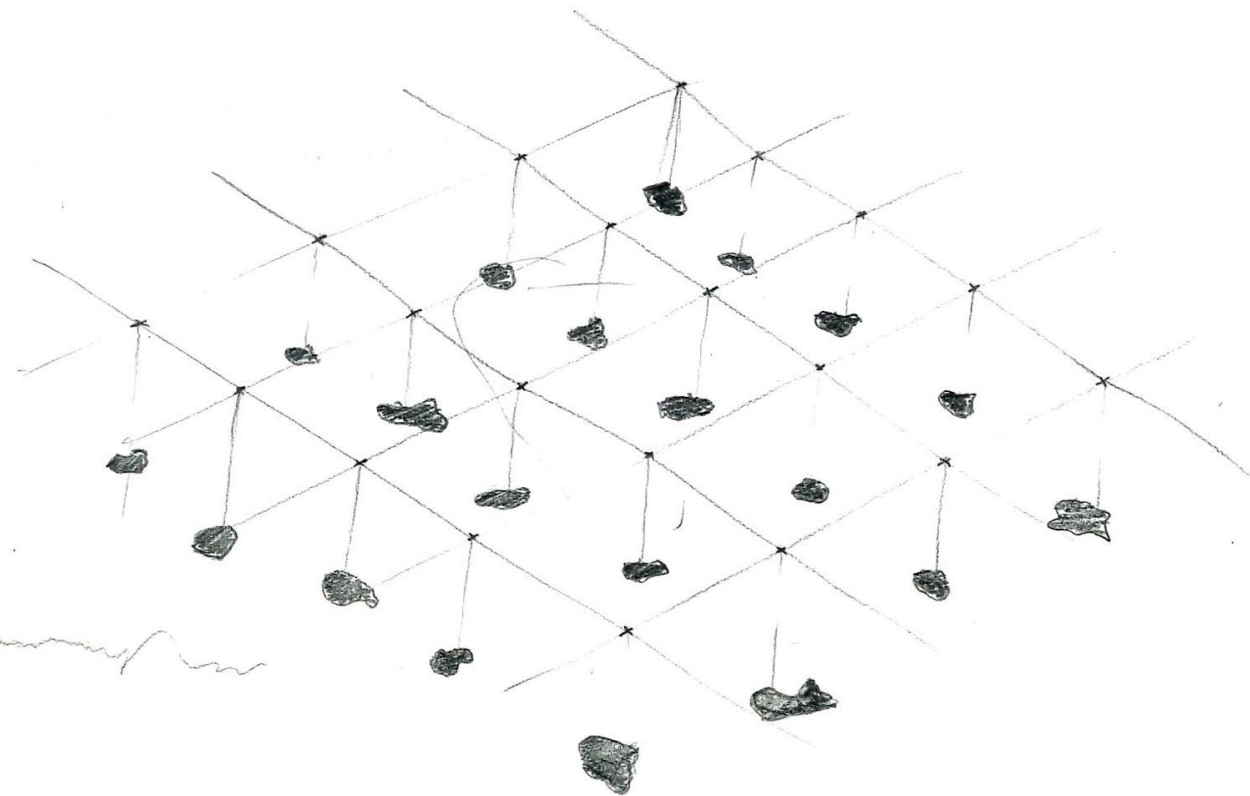
Localised Extraction within the suburban Area

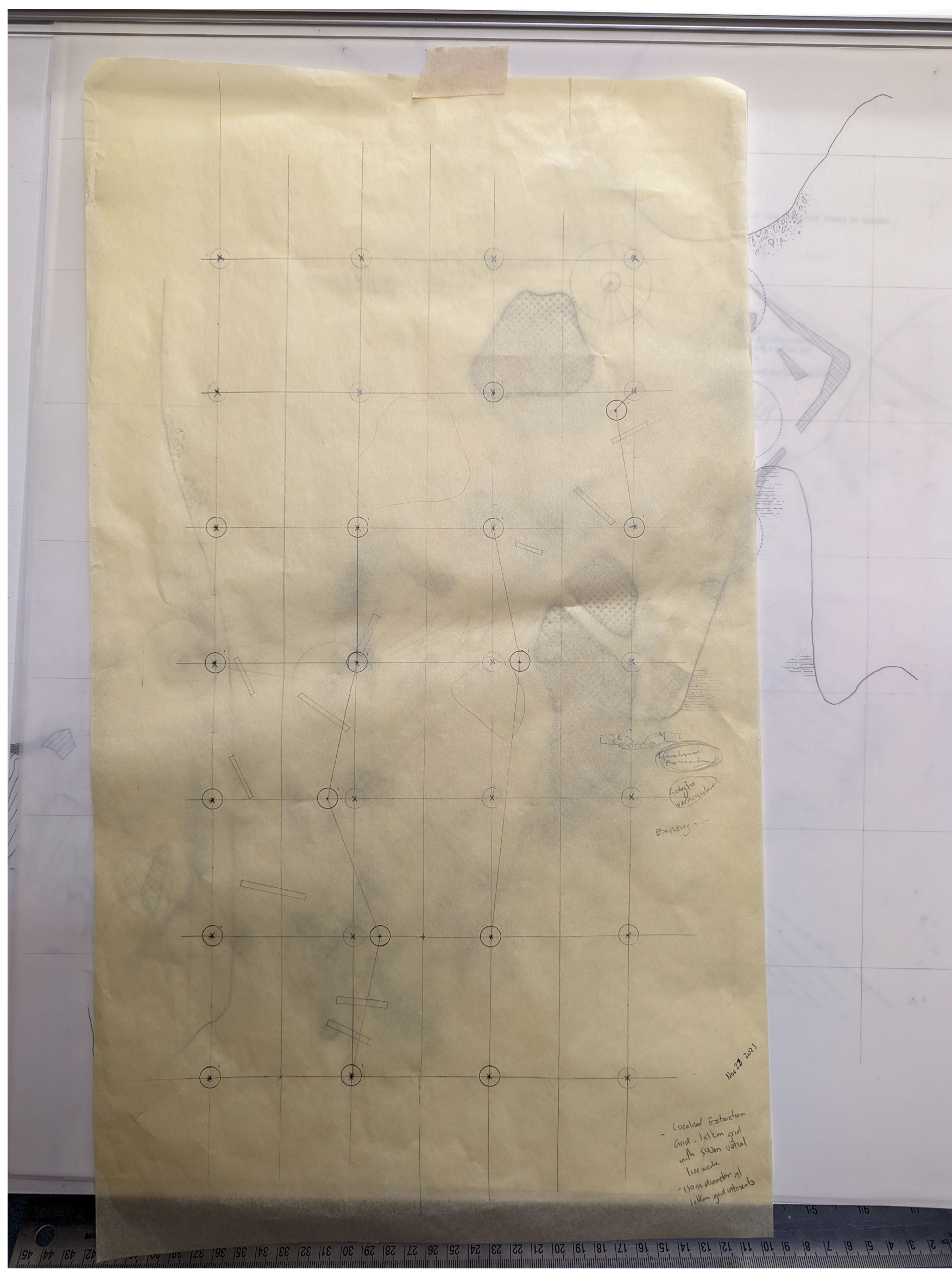
- Kulp talks of milling machines trucking across the U.S.
- Hokie Store = example of localised geology having a socio-cultural production.  
↳ could you have this at a suburb/ neighbourhood level??
- Vernacular / localised construction.

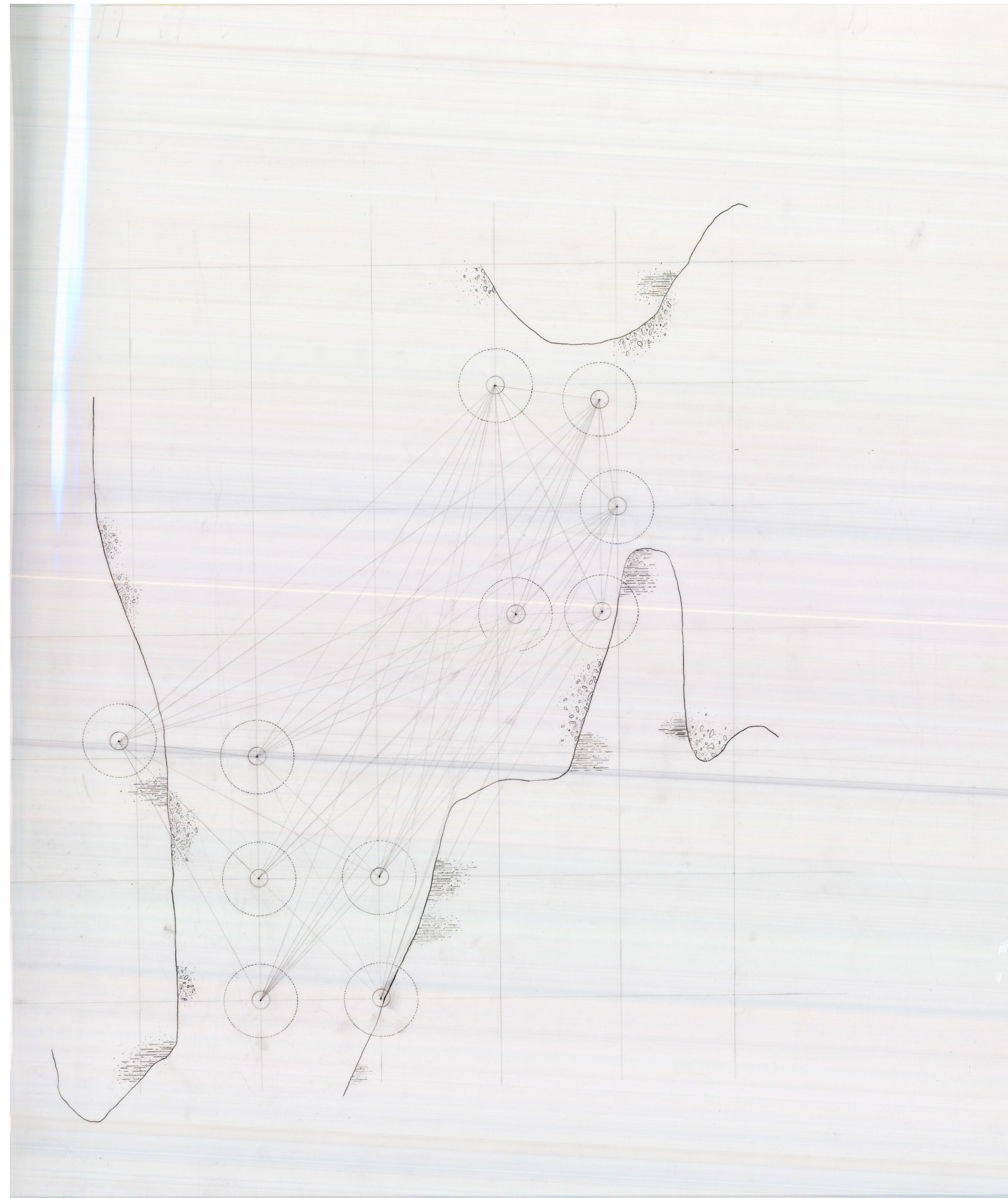
- how to determine areas of extraction??



- Determine a suitable radius & then overlay a grid to array these radius points across the U.S.
- Even or proportionate distribution of extraction sites.







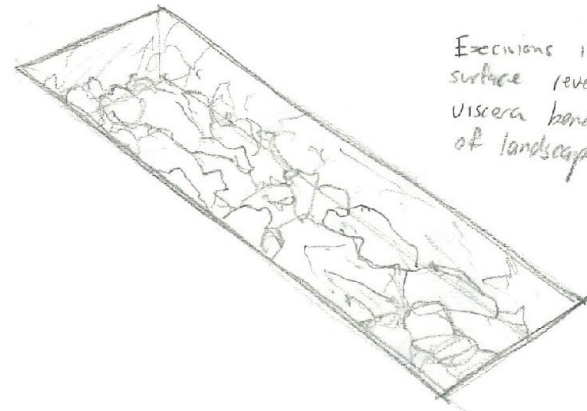
*supersaturation*

*the state of being supersaturated:*

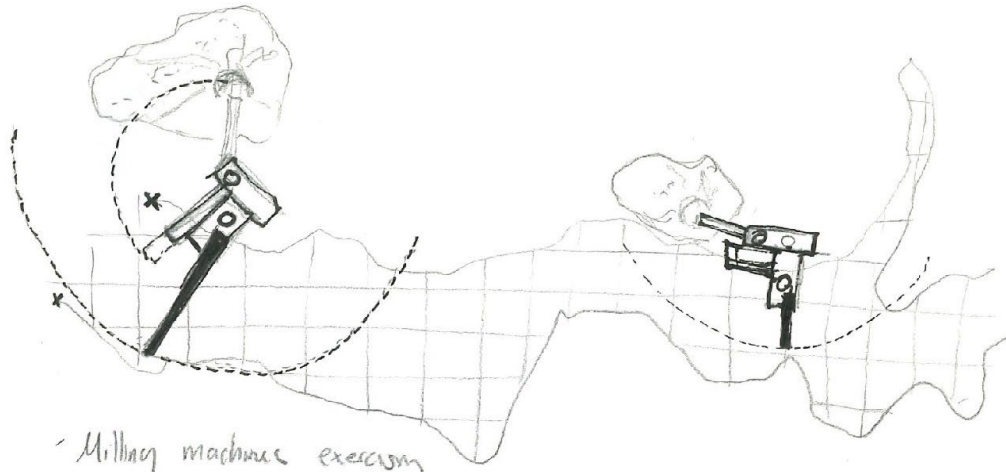
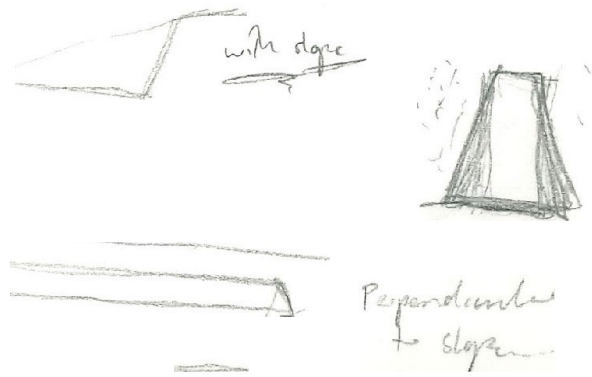
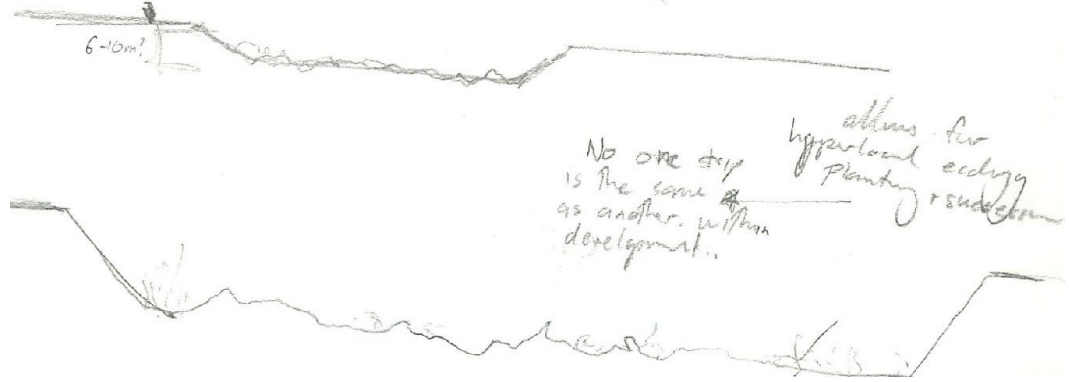
*containing more of a substance than can  
be absorbed*

17 December 2023

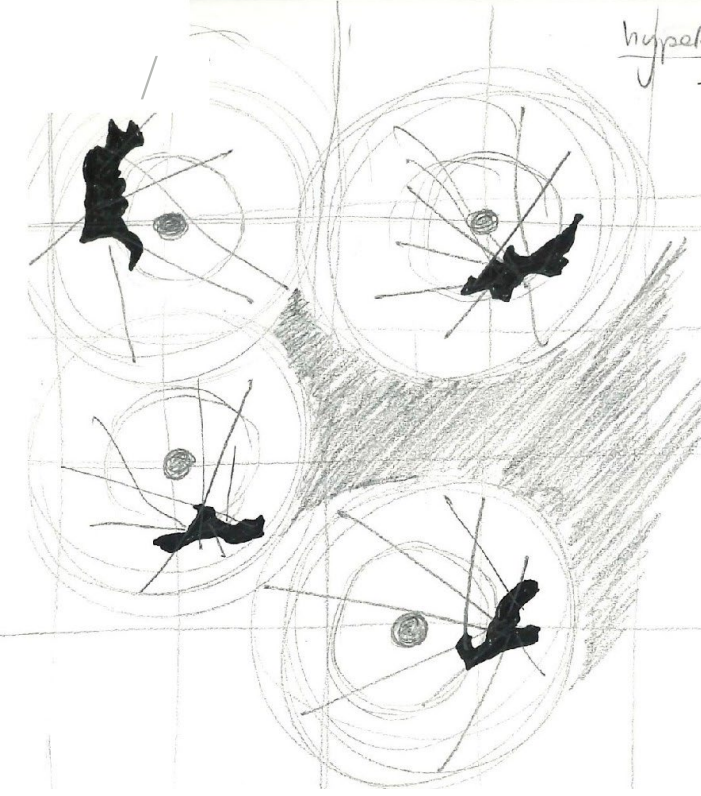
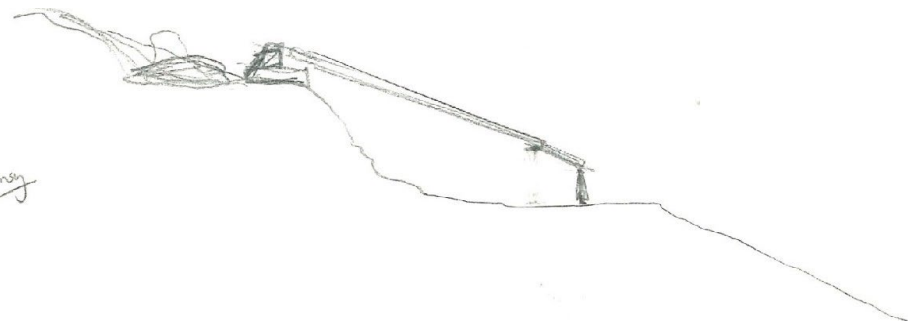




Excisions into the topographic surface revealing the geologic viscera beneath a thin sheet of landscape.



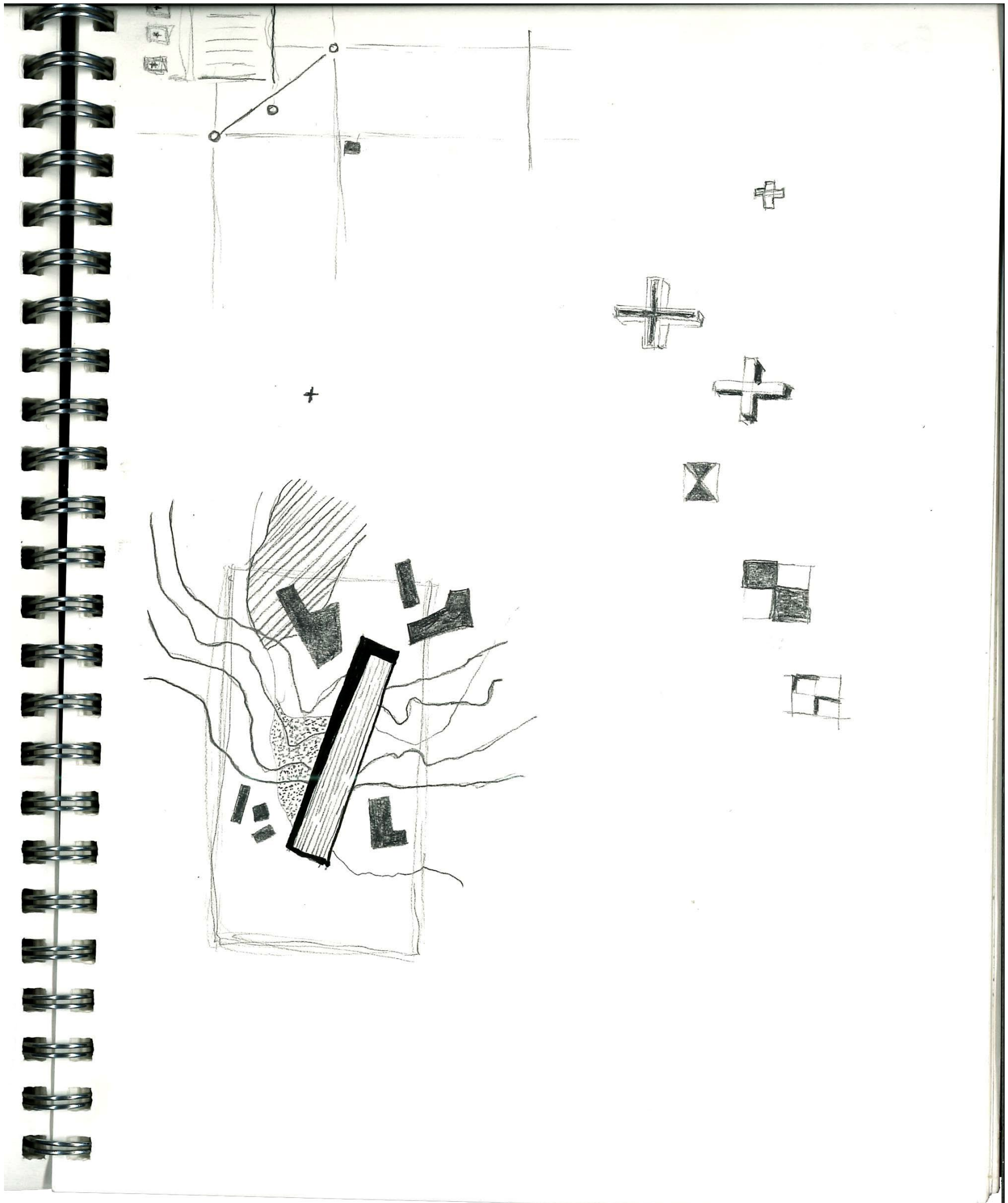
- Milling machines excavating material across the site.
- Distributed in pairs or triplets. (everything is always better in 3's)
- Find a datum. Find that datum - x & cut down to that depth. An irregular shape in XY dimension emerges, kept in check by a measured datum/measure in the Z axis.



hypotemacular Stone  
- Melbourne Stone  
bode a good touch stone on this.

[Void defined by boundaries]

What could that be???

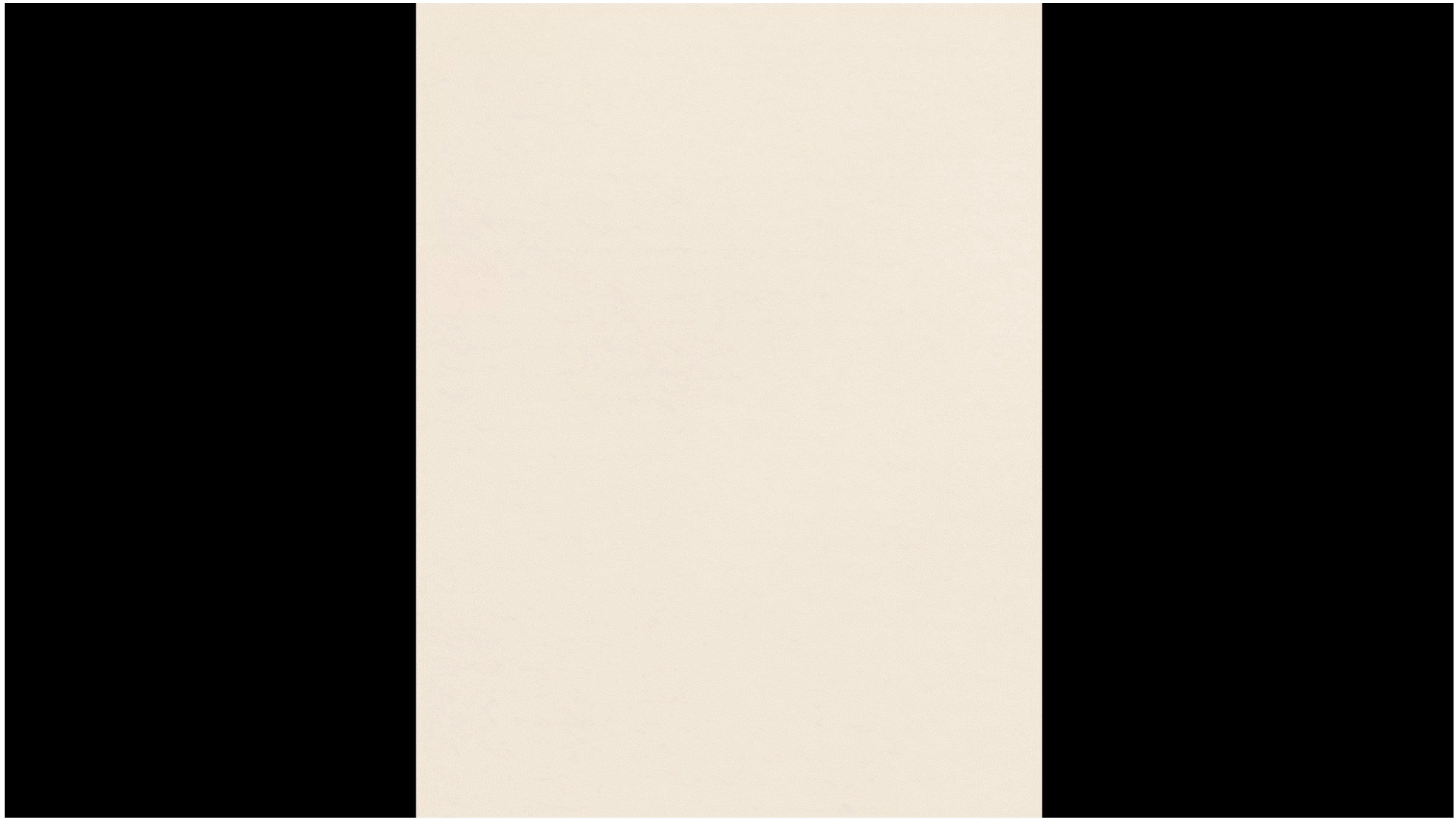






02 January 2024







*geologic urbanism*

*treating representation seriously*

*what could be*

*flex not fixed*

*stone as urbanistic device*

*How can landscape architecture give expression to geological material and forces through a (sub)urban development?*