

platformed: education & the futures of working landscapes

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Supervisors:
Rufus van den Ban
Victor Muñoz Sanz

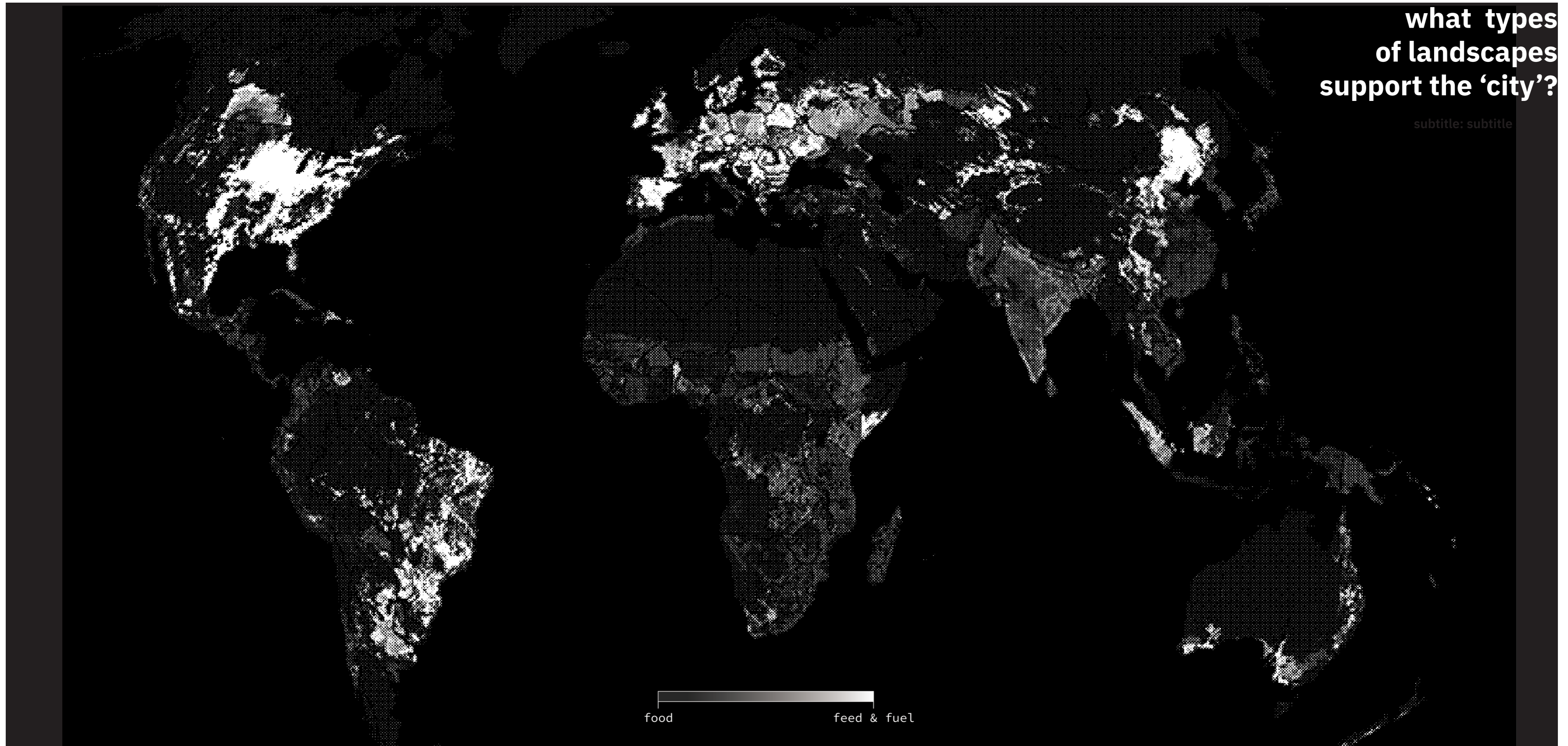
**what types
of landscapes
support the 'city'?**

subtitle: s



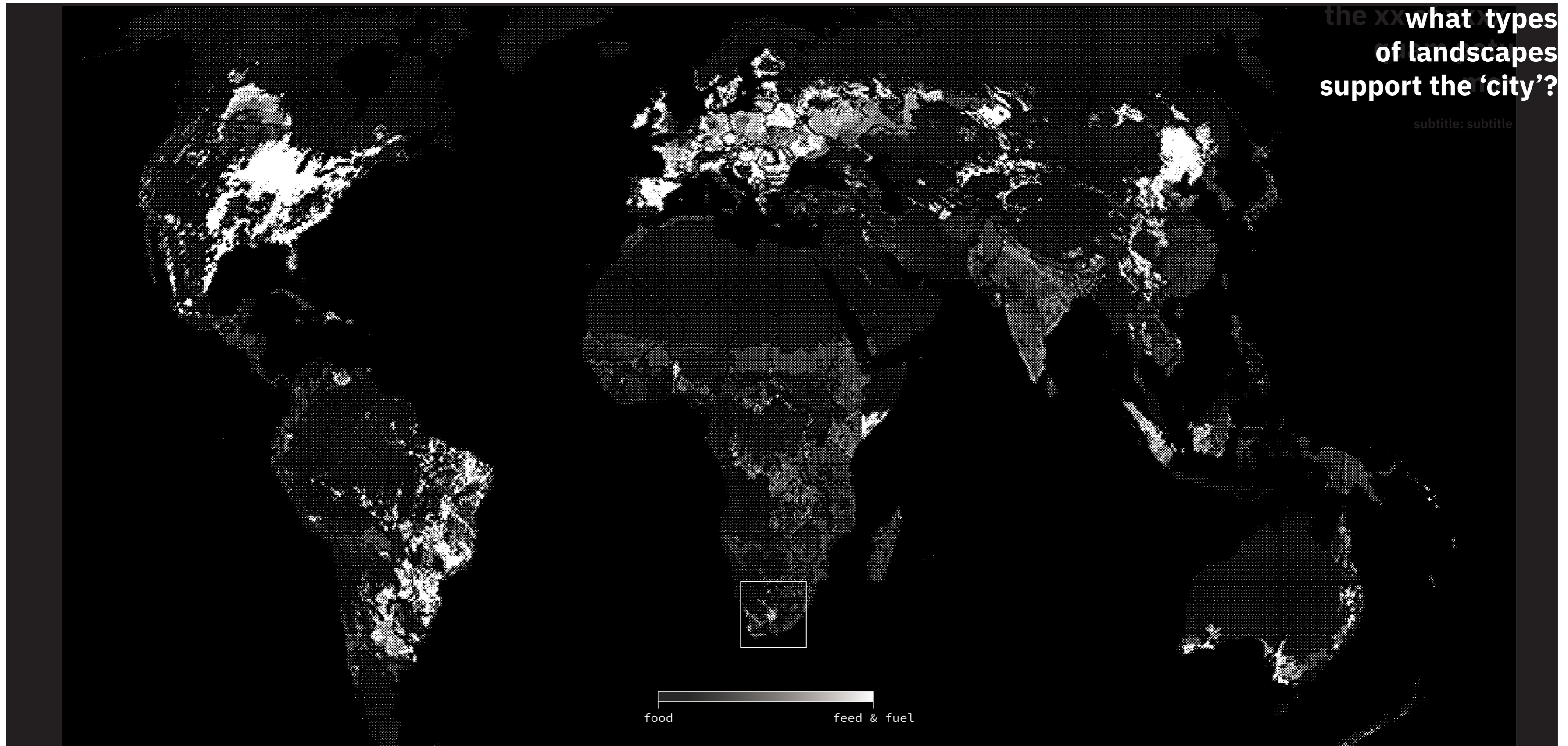
what types of landscapes support the 'city'?

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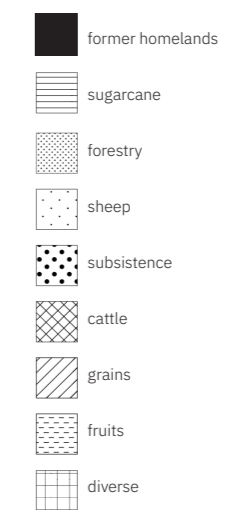
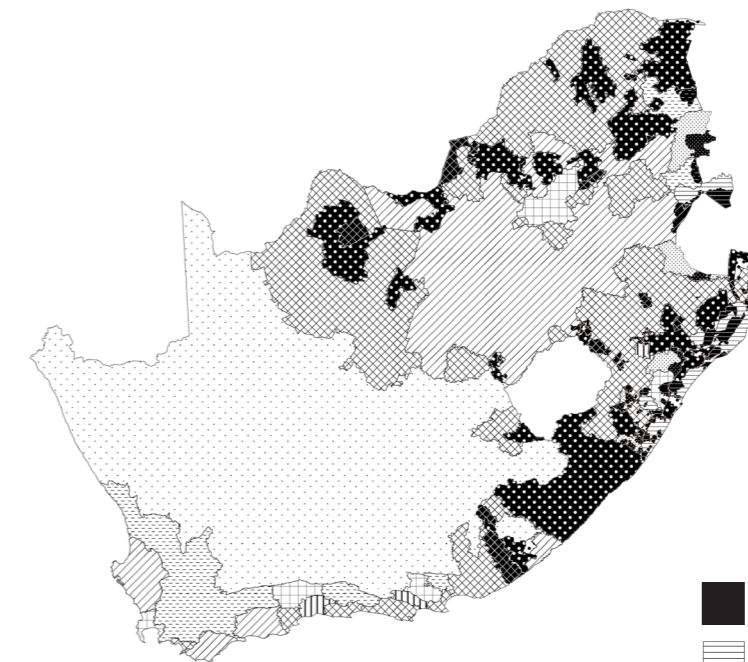
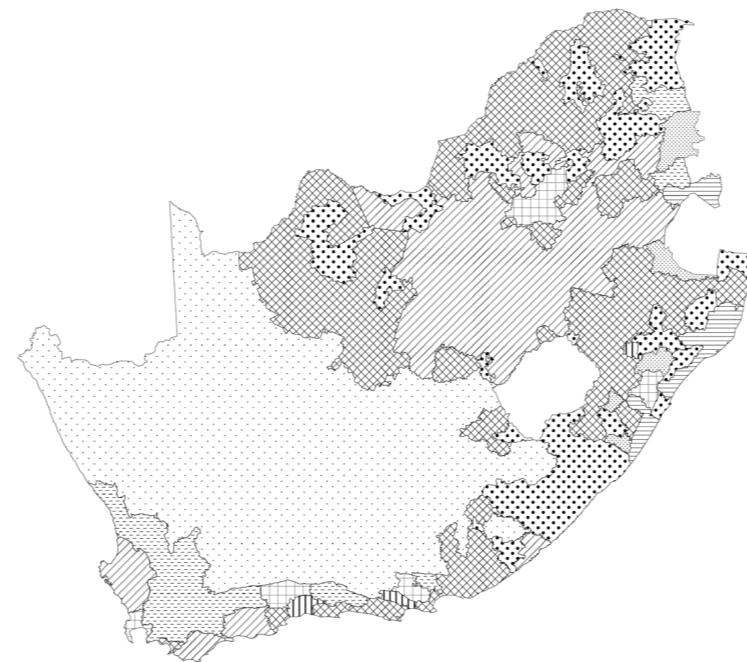
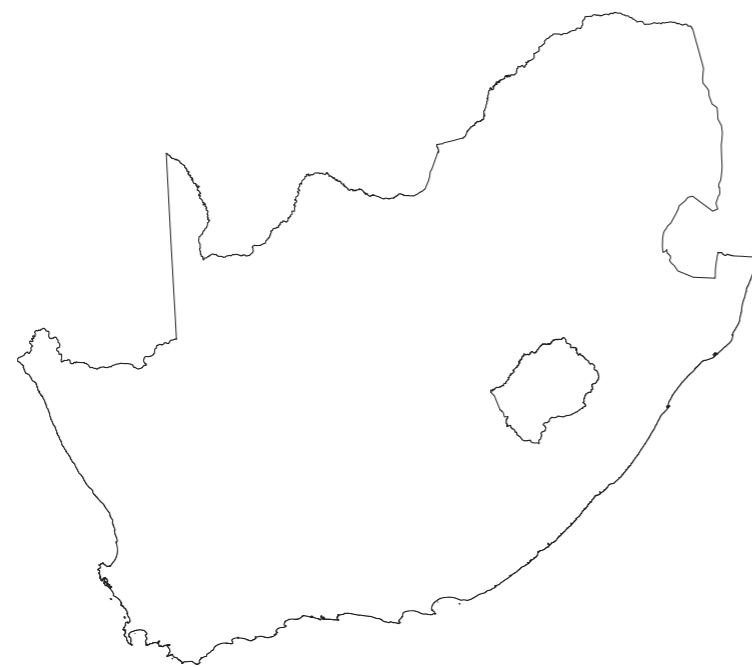
the xx what types
of landscapes
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subtitle: subtitle

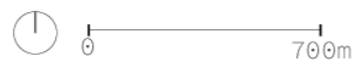
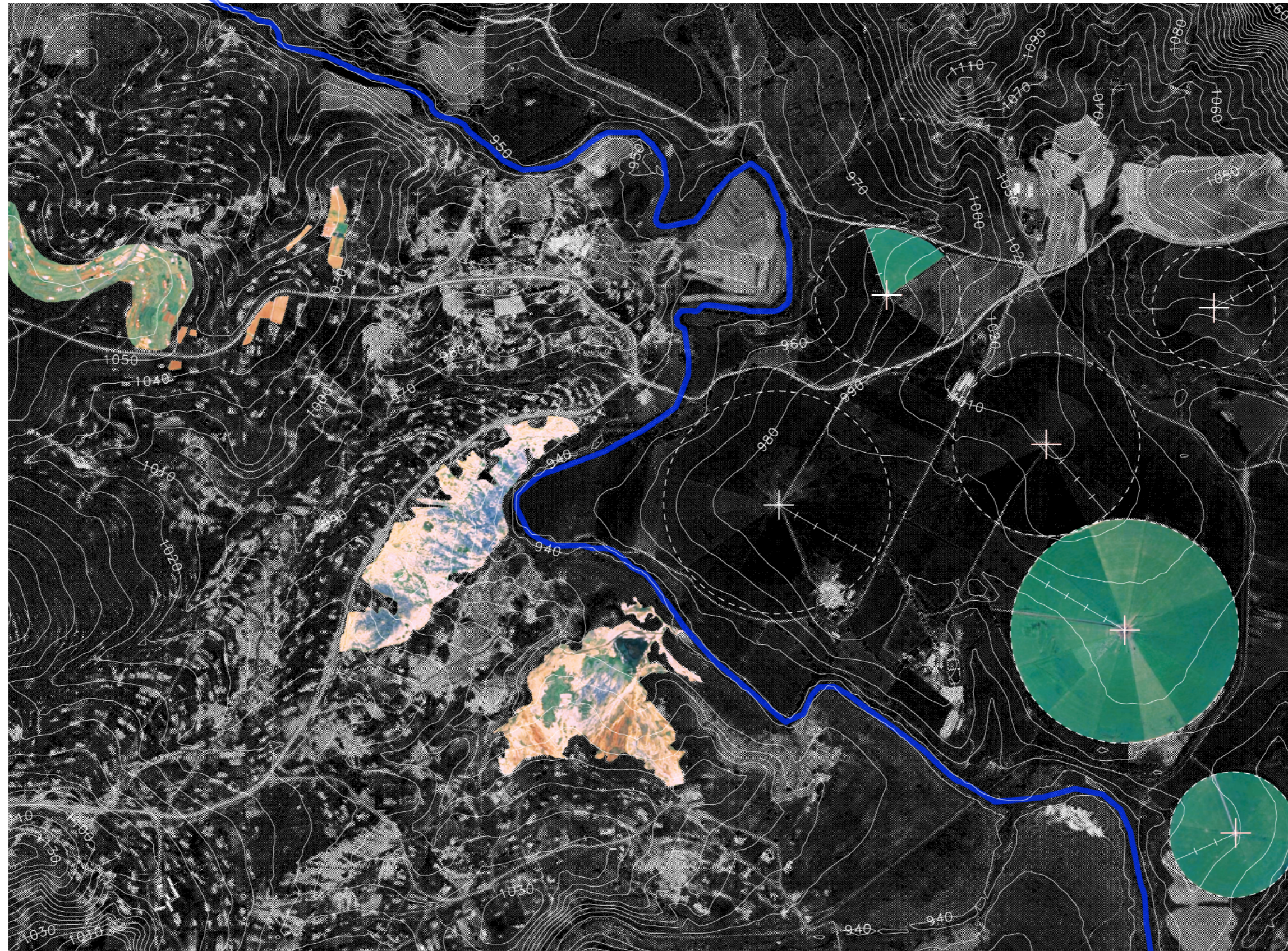


productive landscapes and South Africa


two major policies which shaped the way
south africa looks today are the
+1913 Land Act
+1953 Bantu Education Act



productive landscapes and South Africa



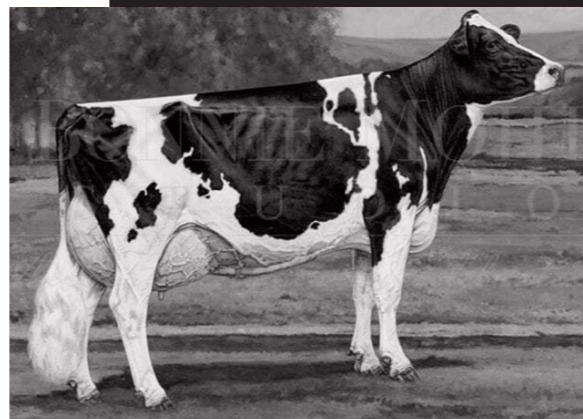
framework



KORE BUSTARD
(Ardeotis kori; ngweli / amagweli / masegweli)
Light brown and white below. It is possible that this is an old term, dating from earlier times, or, alternatively, borrowed from Xhosa or Zulu, as this ground-nesting species is not found in the humid, lush lowlands of KwaZulu-Natal. However, when questioned in the field, said it was named after a 'big bird', without being able to specify precisely which one.

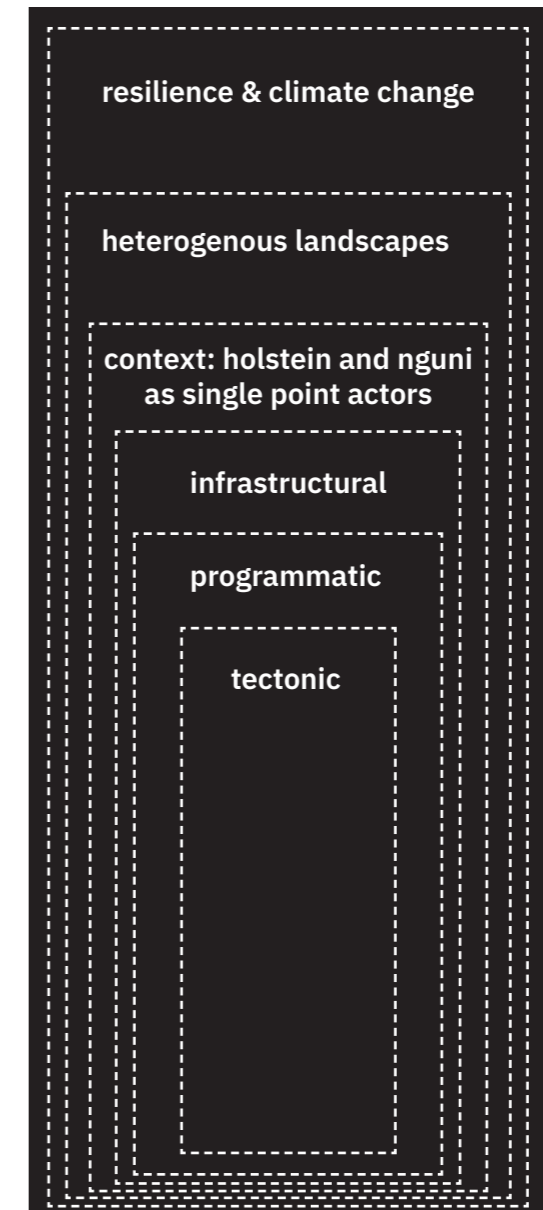
adapted to landscape

Nguni Cow
Leigh Voigt in Abundant Herds (Poland and Hammond - Tookes, 2004)



adapted to machine

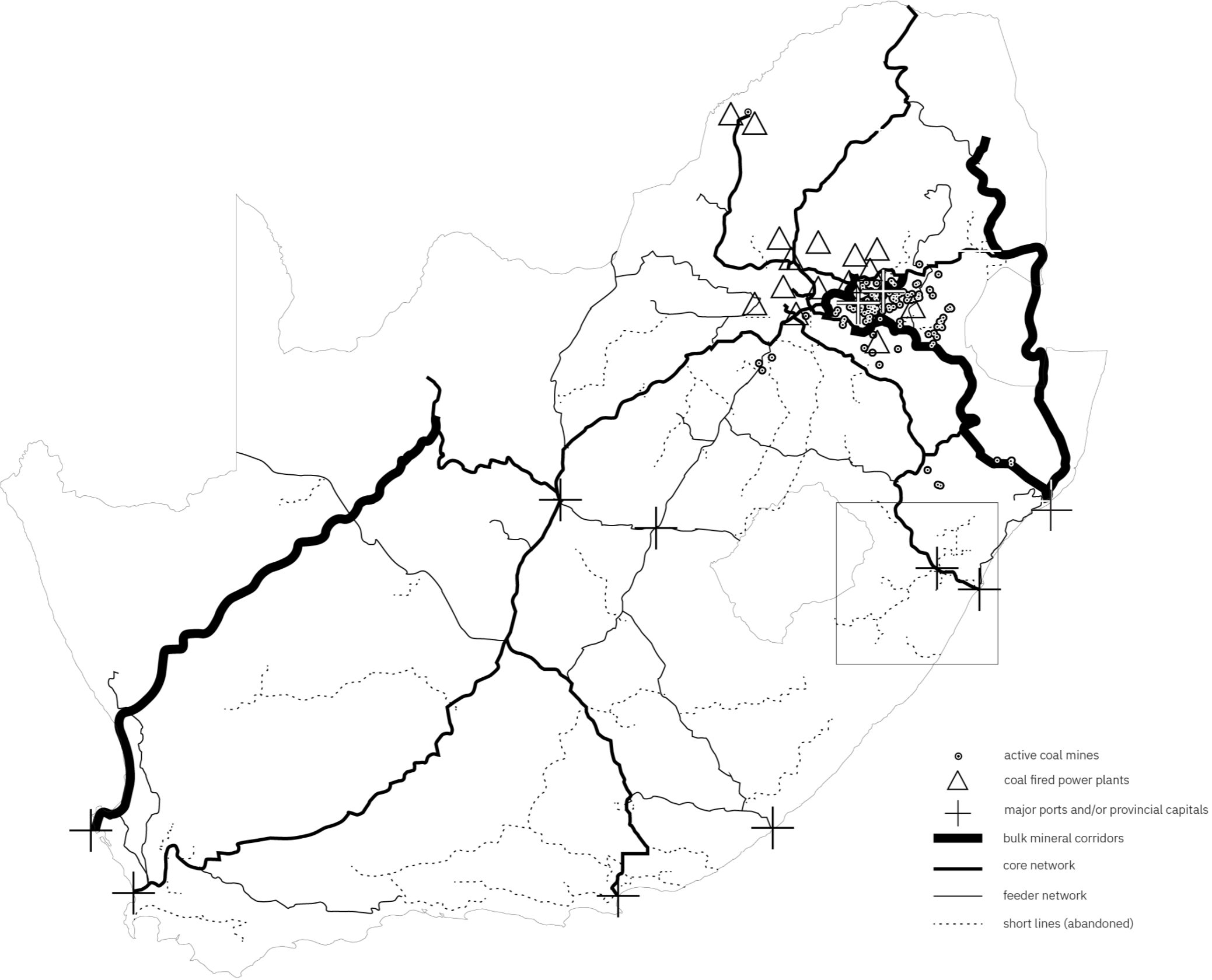
True Type Model Holstein Cow
Bonnie Mohr, 2012



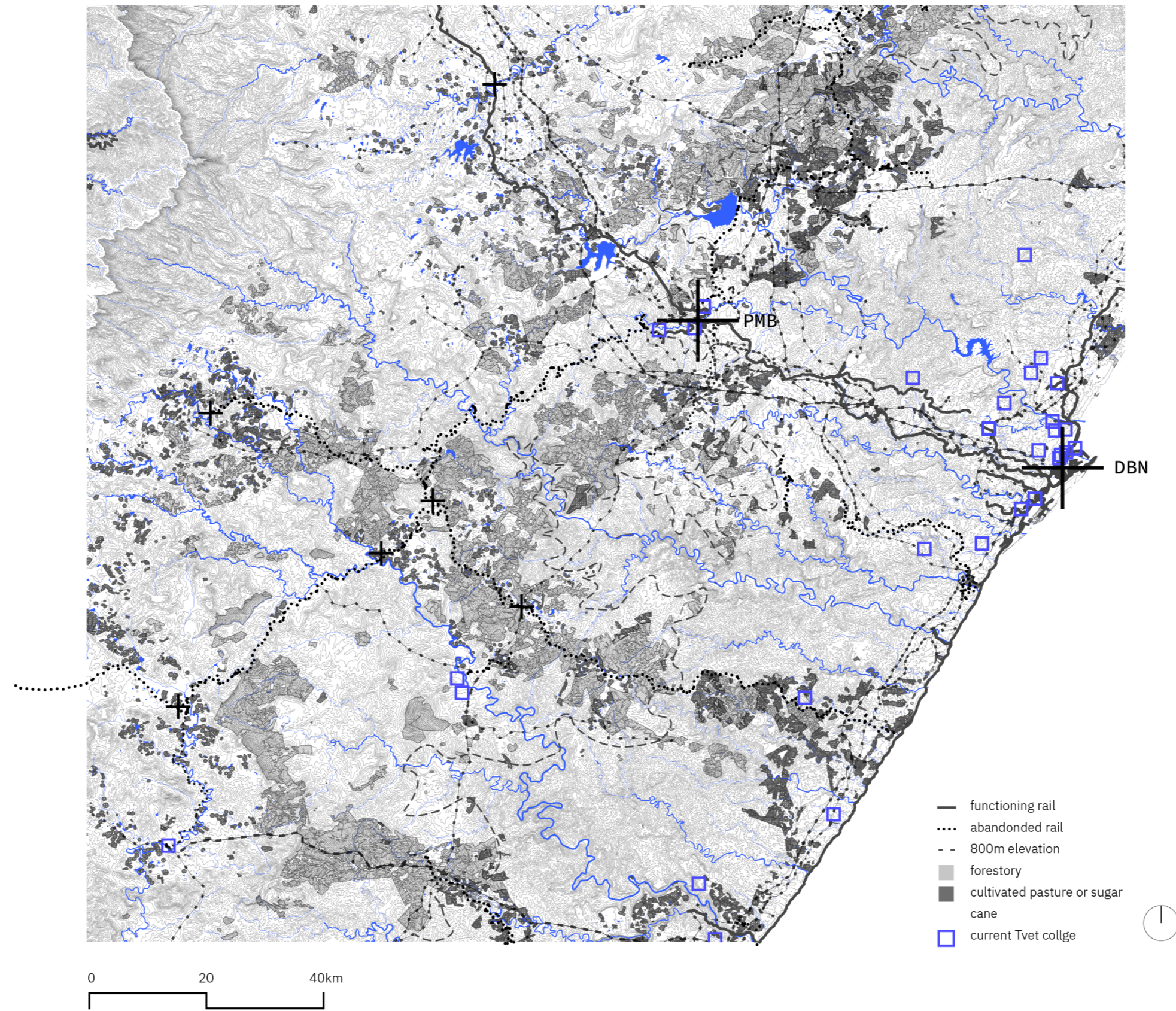
Design Framework

1. infrastructure

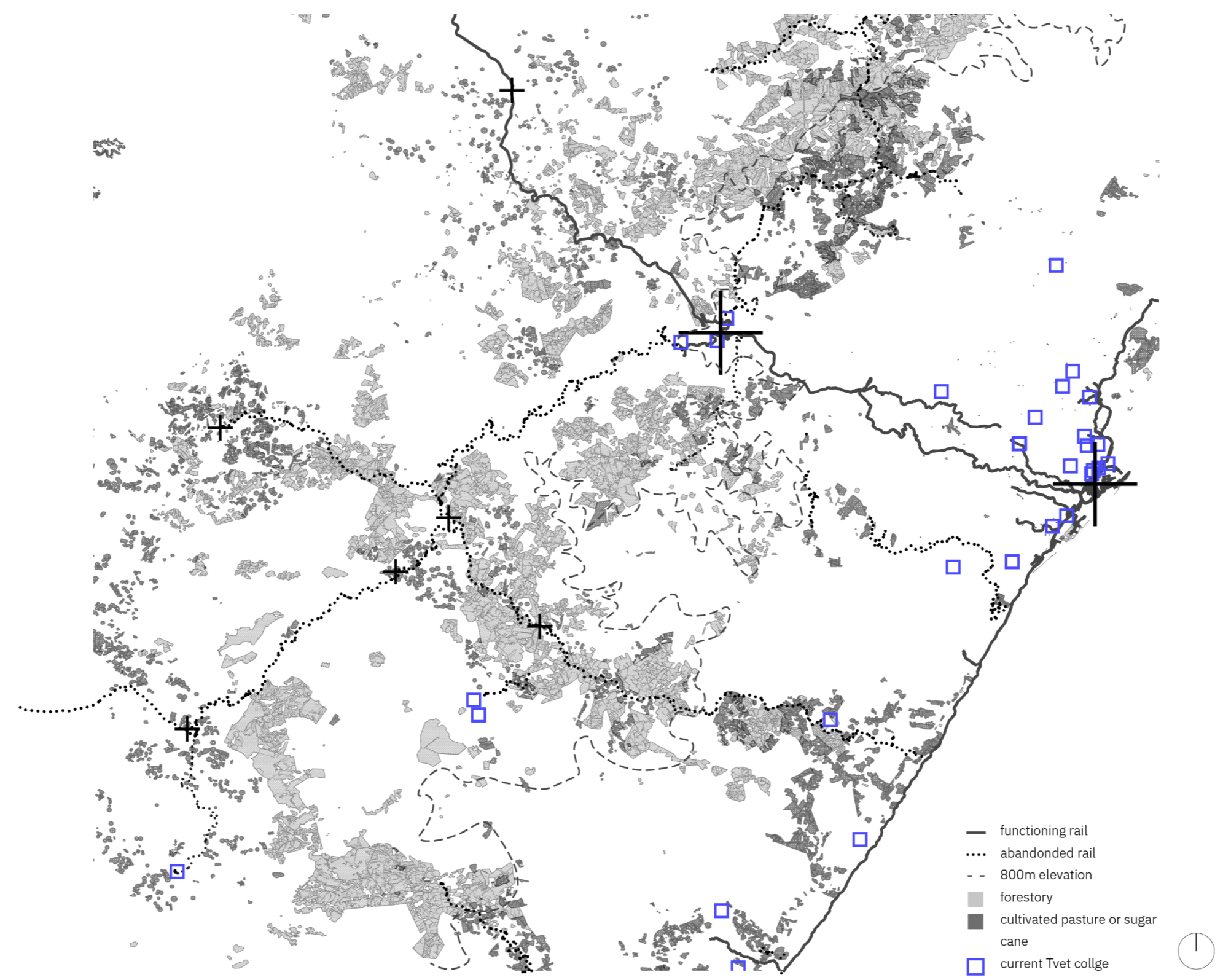
rail and energy infrastructure



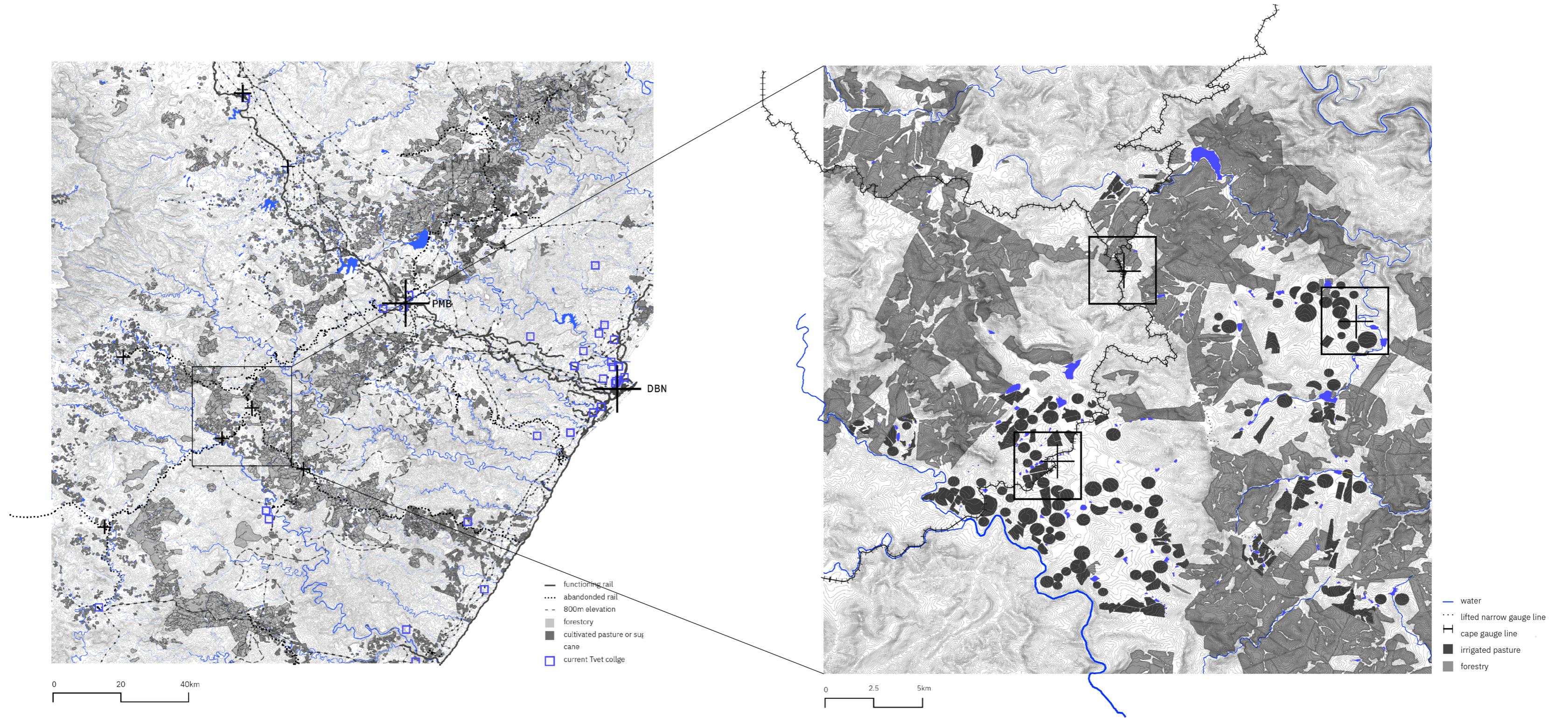
mapping infrastructure



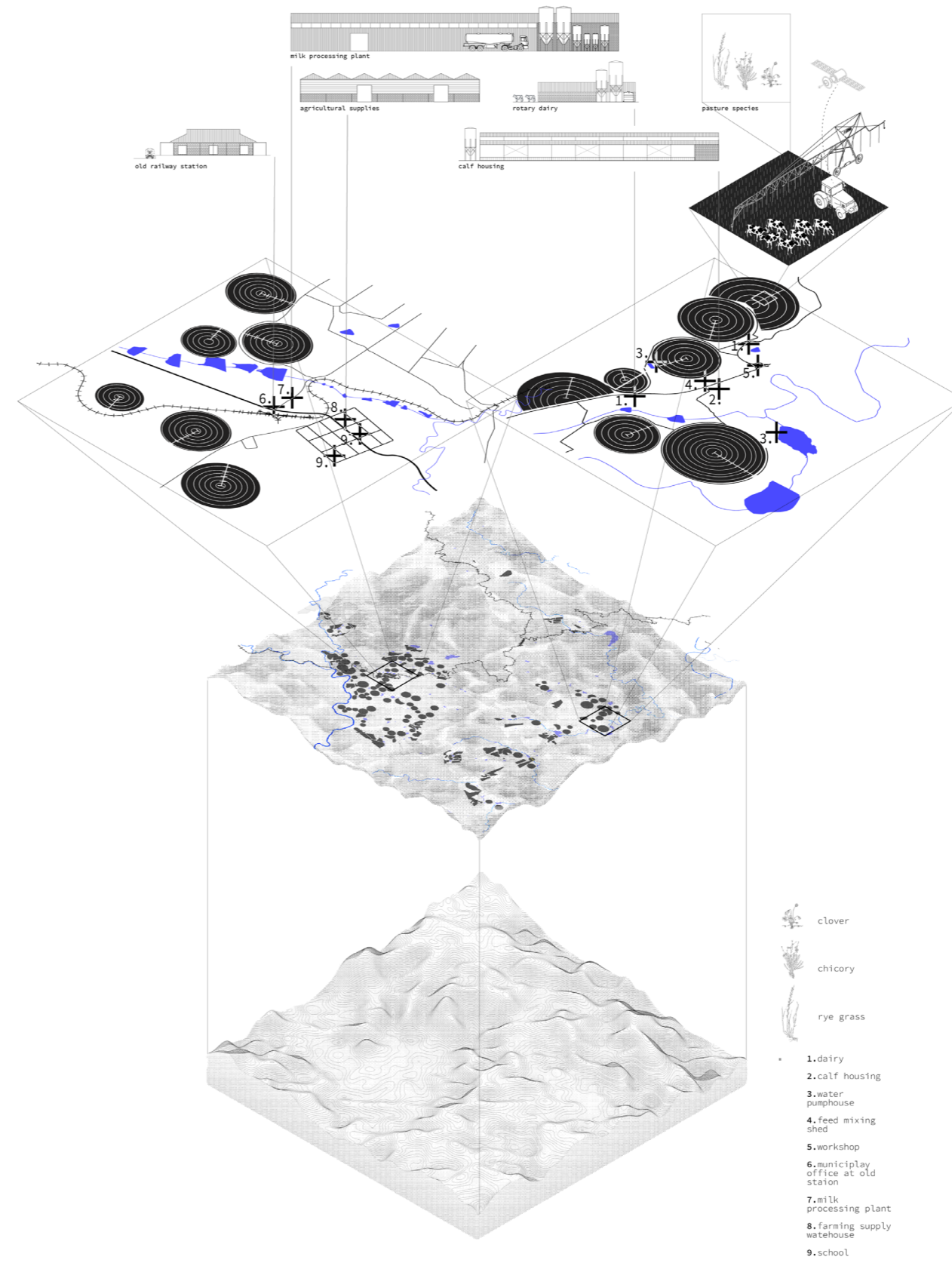
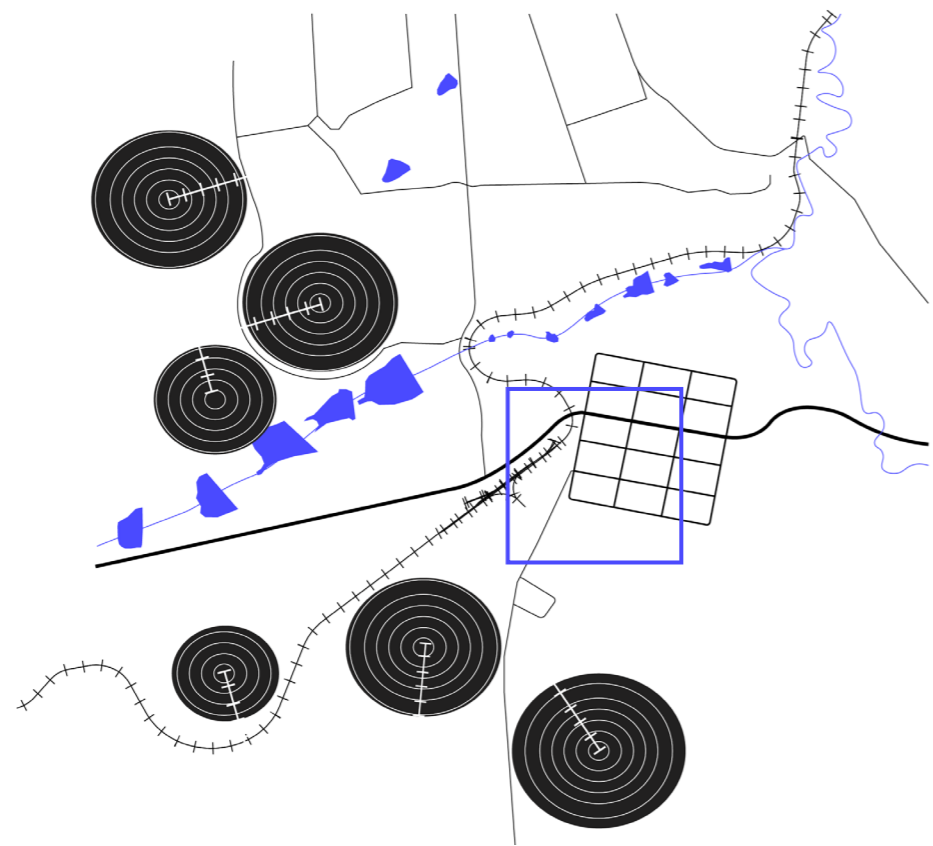
dislocation of knowledge and production infrastructure



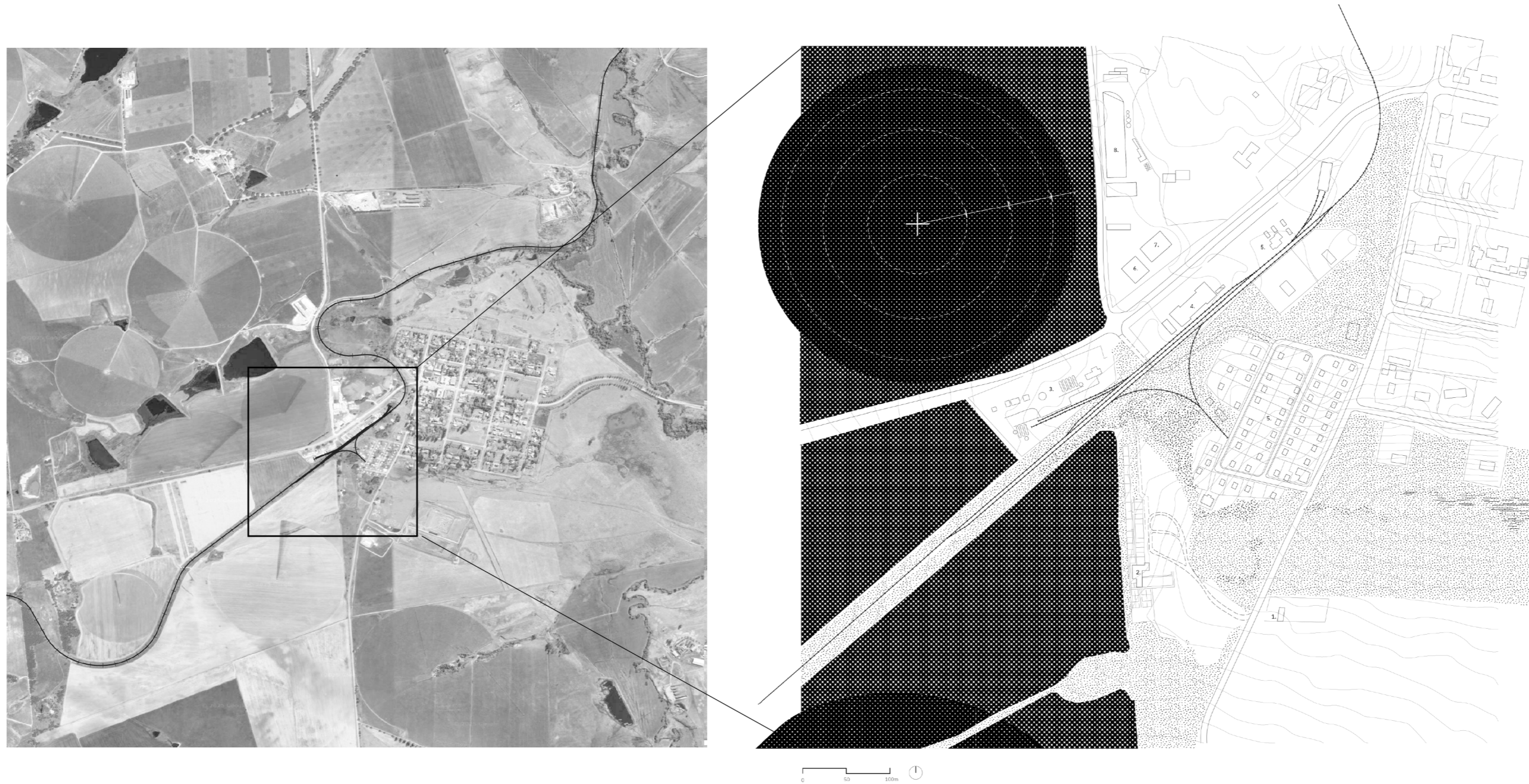
context & site



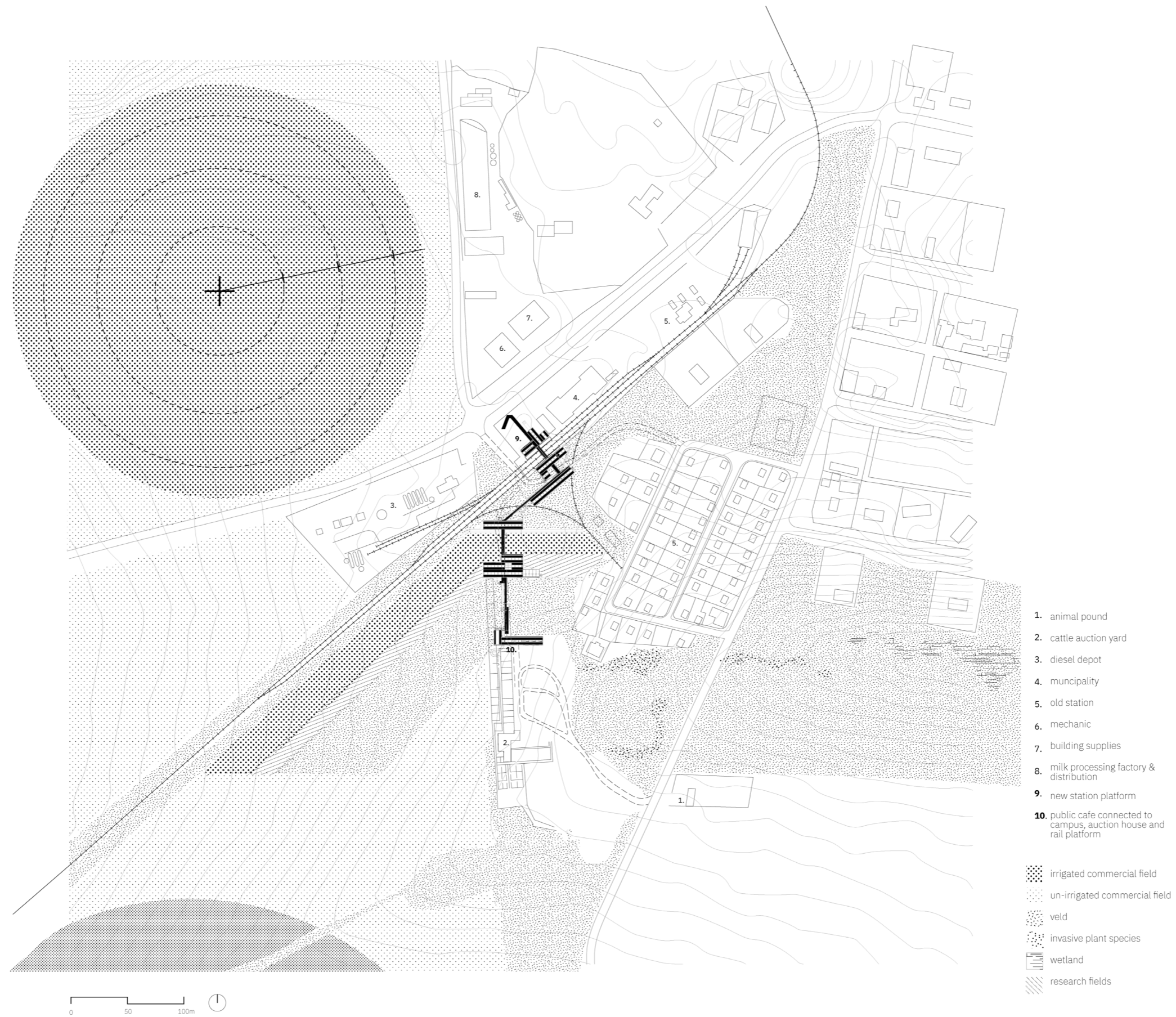
context & site



context & site



context & site



1. infrastructure

access and mobility

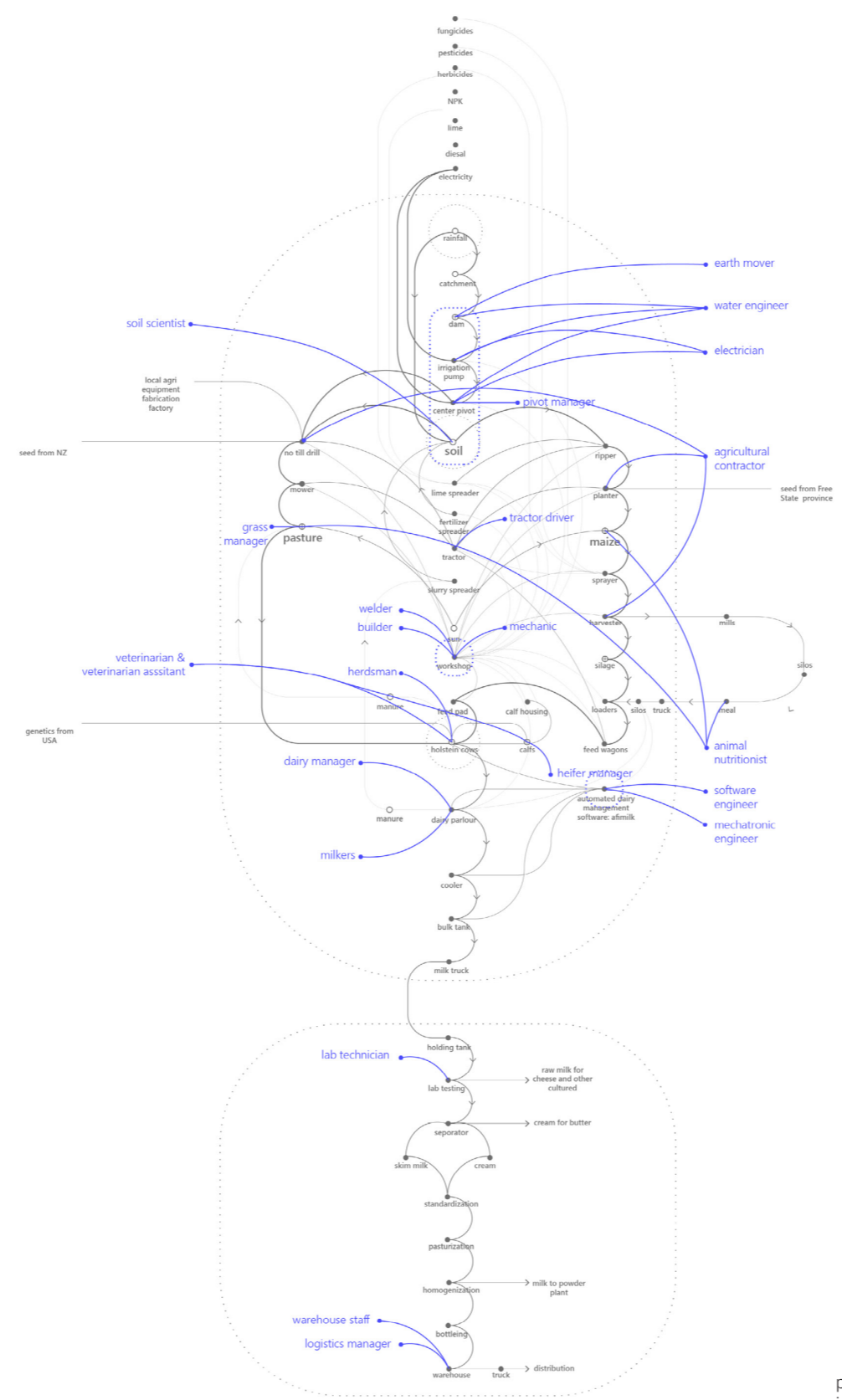
a rail platform which operates for local communities instead of the status quo set up around “segregated mineral extraction enclaves” (Ferguson, 2005)

education

what is the opposite of extractive infrastructure?
something which is generative, renews or adds value to systems

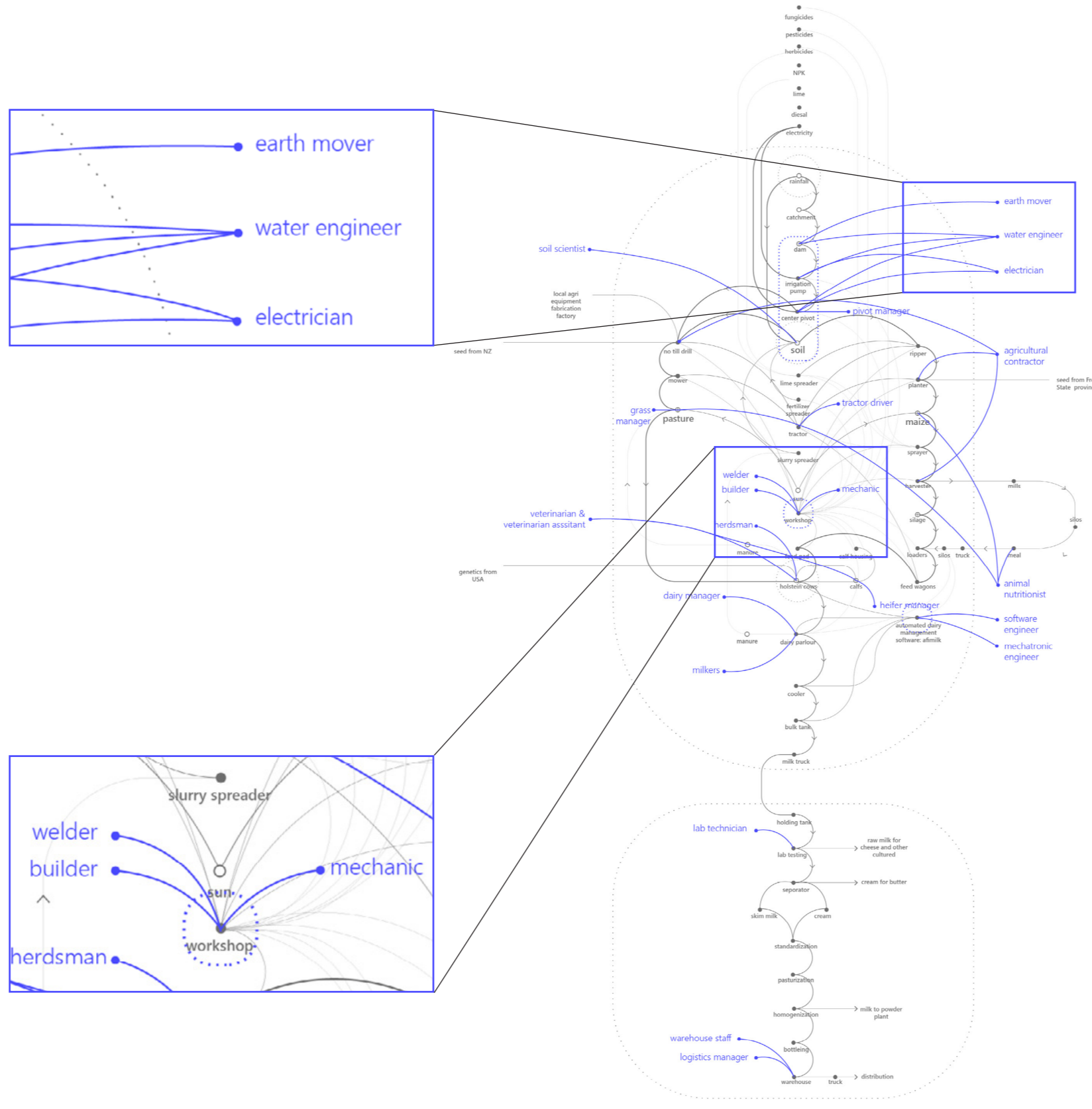
2. programme

workscapes: production and knowledge infrastructure



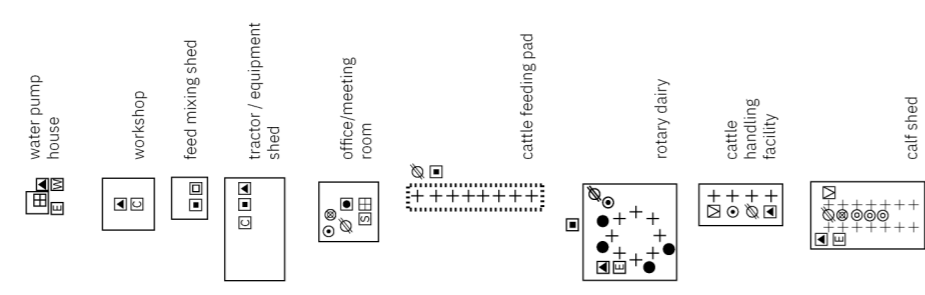
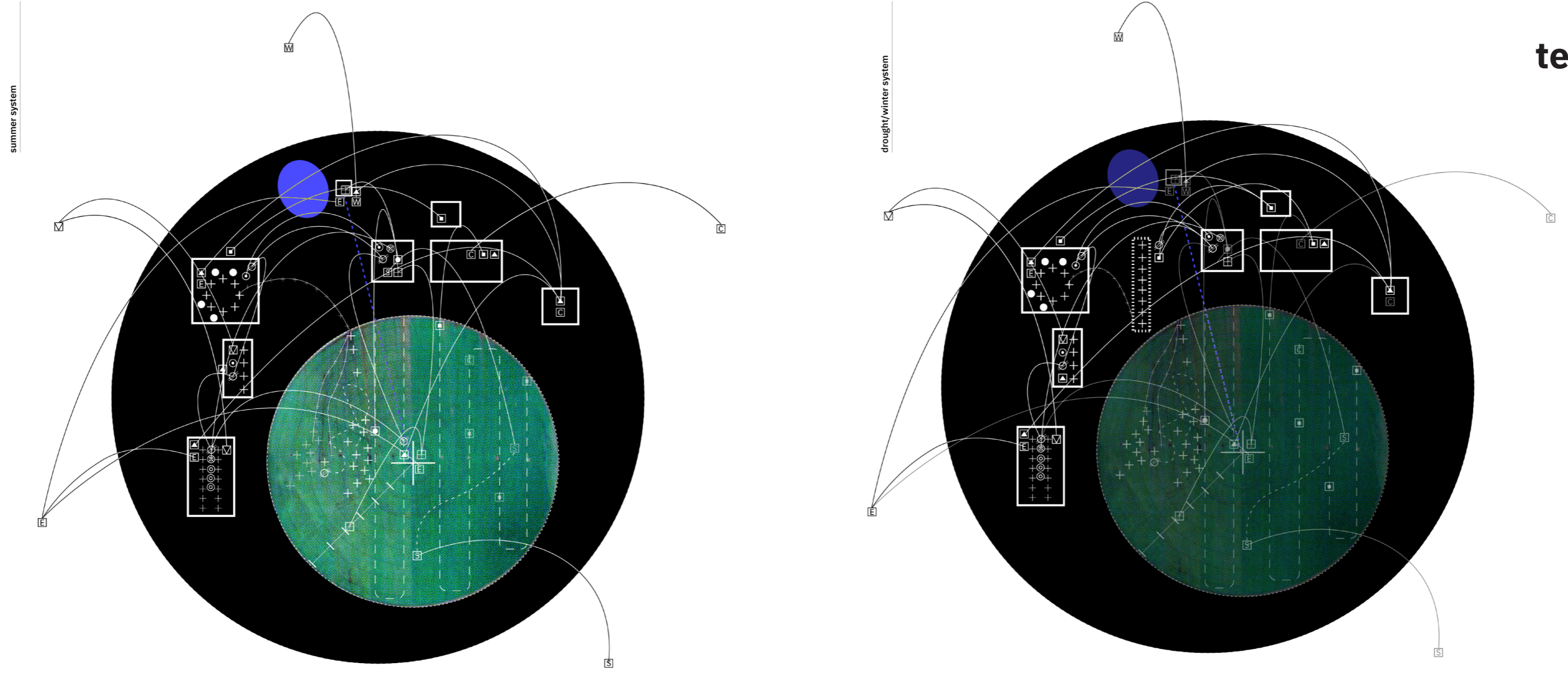
pasture based dairy farm knowledge and production infrastructure

workscapes: production and knowledge infrastructure



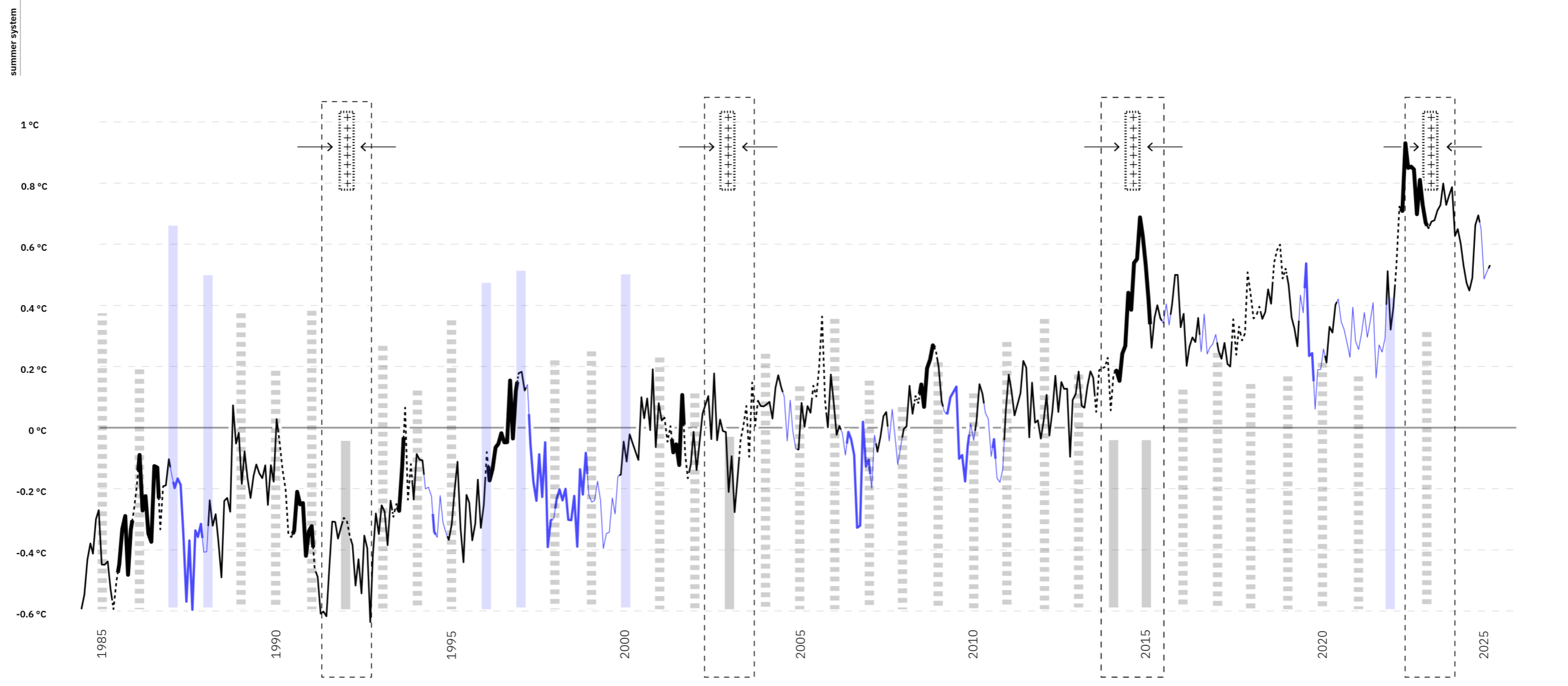
pasture based dairy farm knowledge and production infrastructure

workscapes: technology and climate



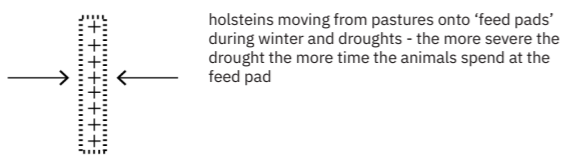
workscapes: technology and climate

graph plotting al nino and la nina events against average rainfall in KwaZulu - Natal, South Africa

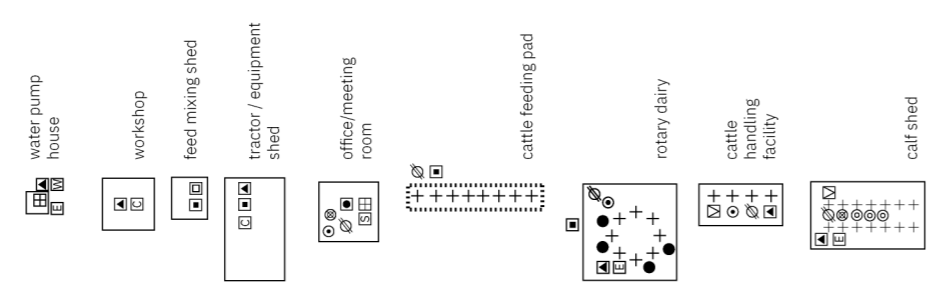
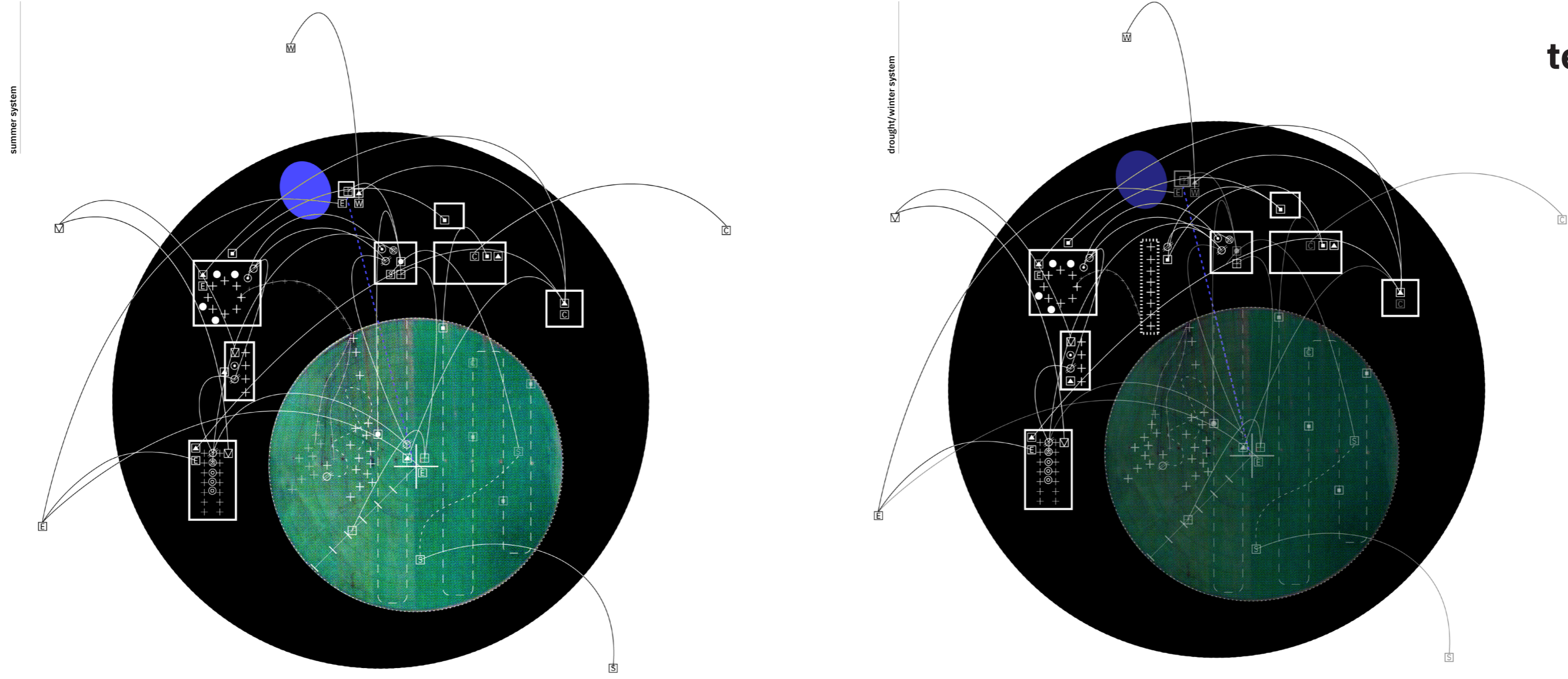


strong La Niña La Niña neutral El Niño strong El Niño

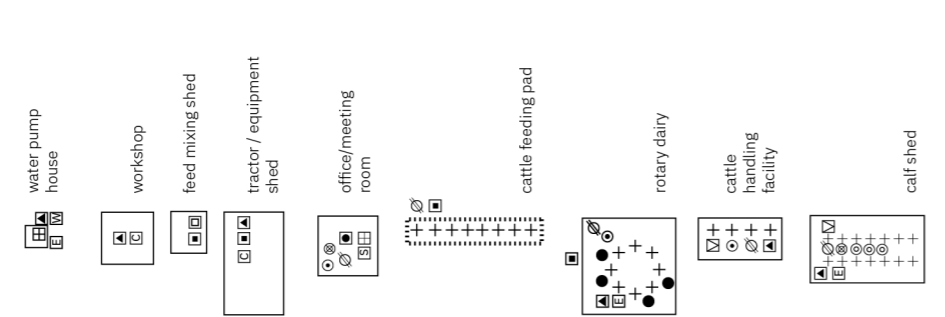
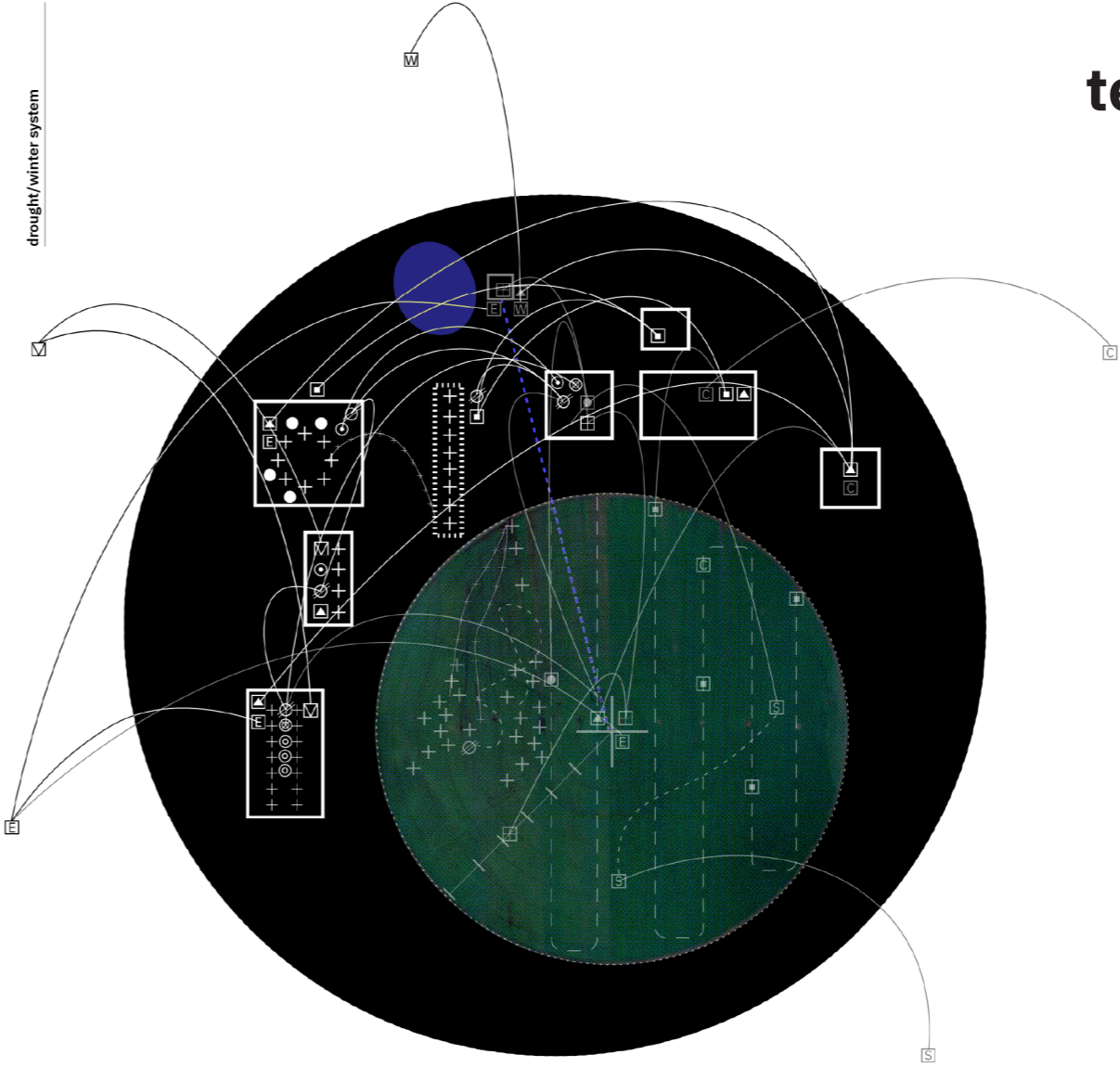
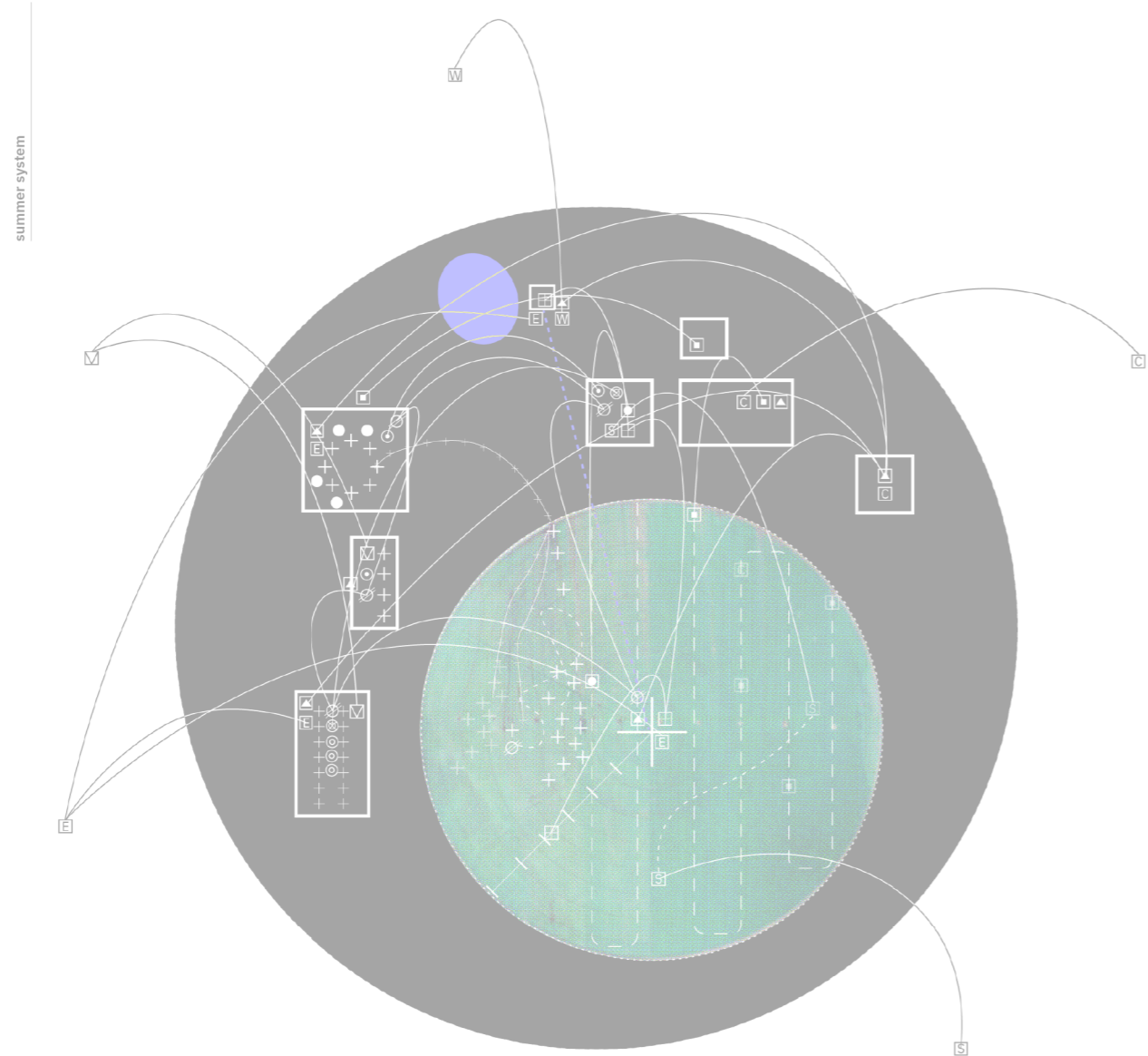
average rainfall above average rainfall below average rainfall



workscapes: technology and climate



workscapes: technology and climate



Uncertainty:

+ droughts
reduced rainfall over long period of time
reduced humidity
warm dry winds (berg winds)

+ floods
large cold fronts and storms
mini tornadoes
high rainfall over short period of time

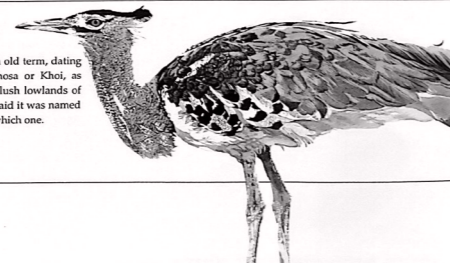
+ unpredictable weather
increased temperature highs and lows
high wind speeds
increased humidity highs and lows

+ problem solving and moving through different mediums
+ analogue and digital

from punctuations
to programme

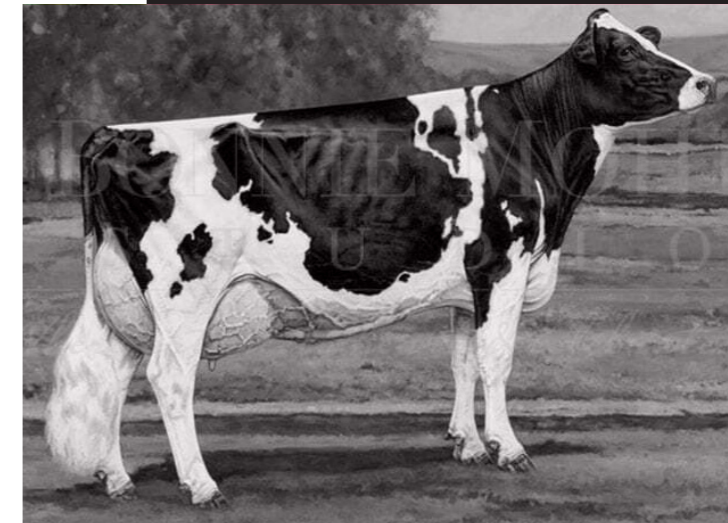


KORI BUSTARD
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adapted to landscape

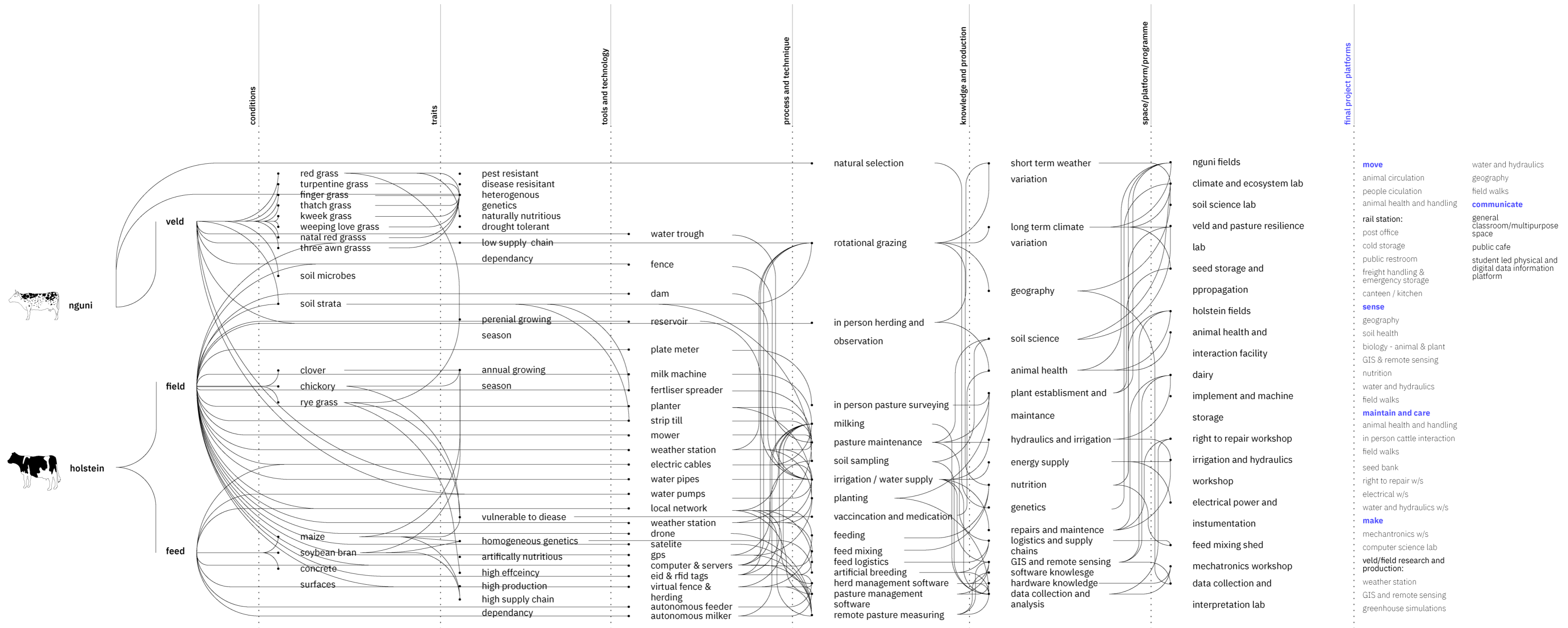
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Leigh Voigt in *Abundant Herds* (Poland and Hammond - Tookes, 2004)



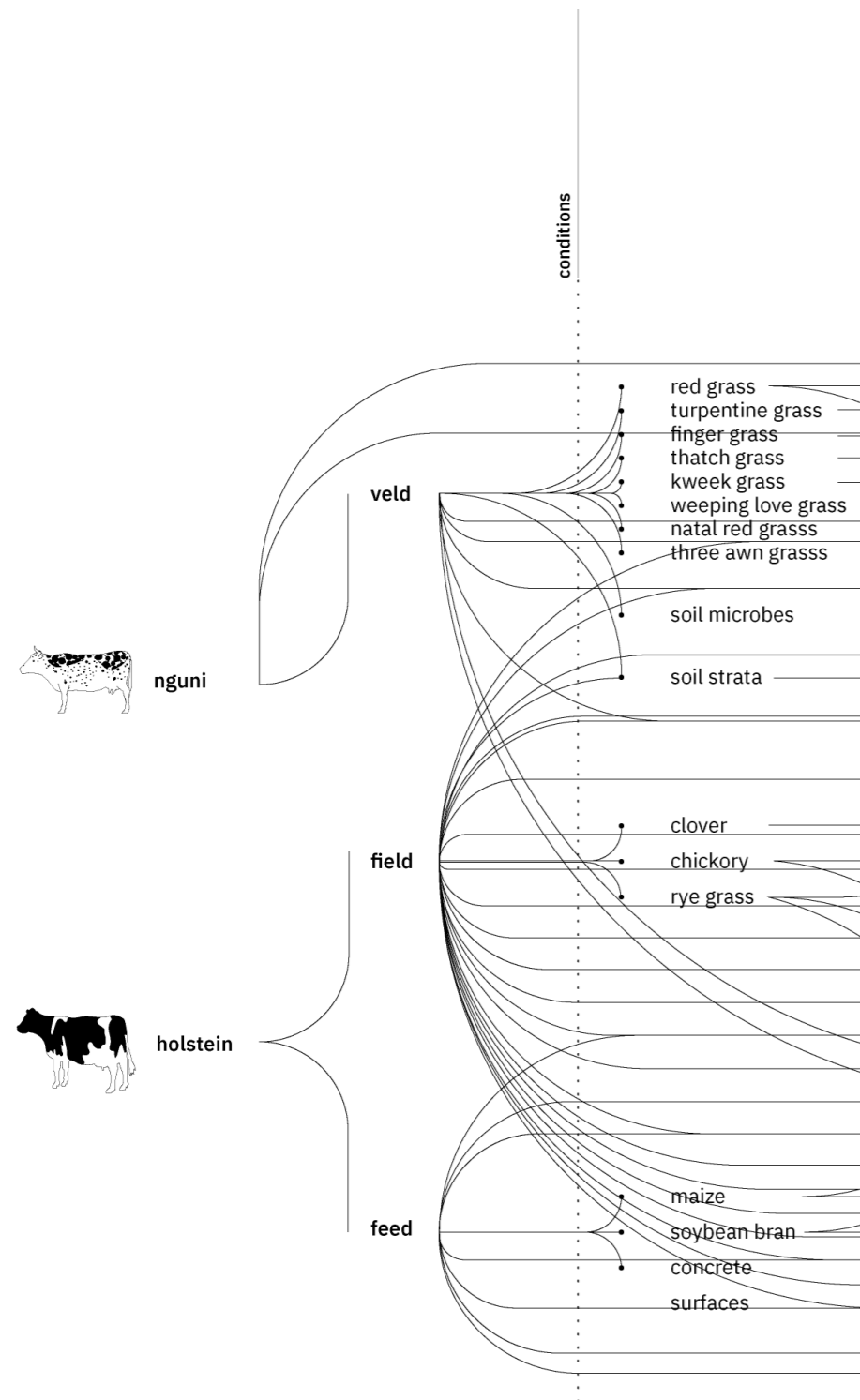
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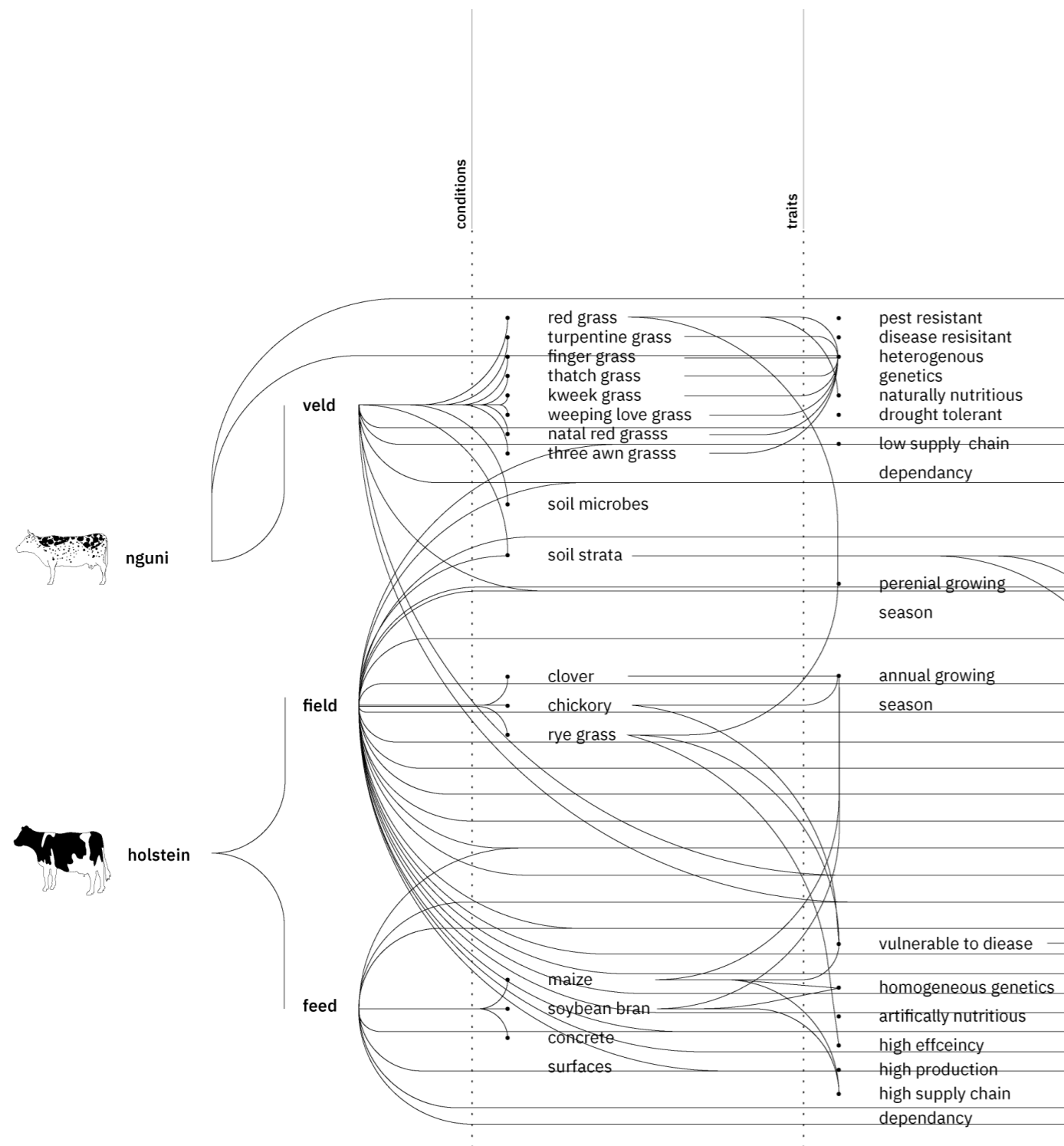
from punctuations to programme



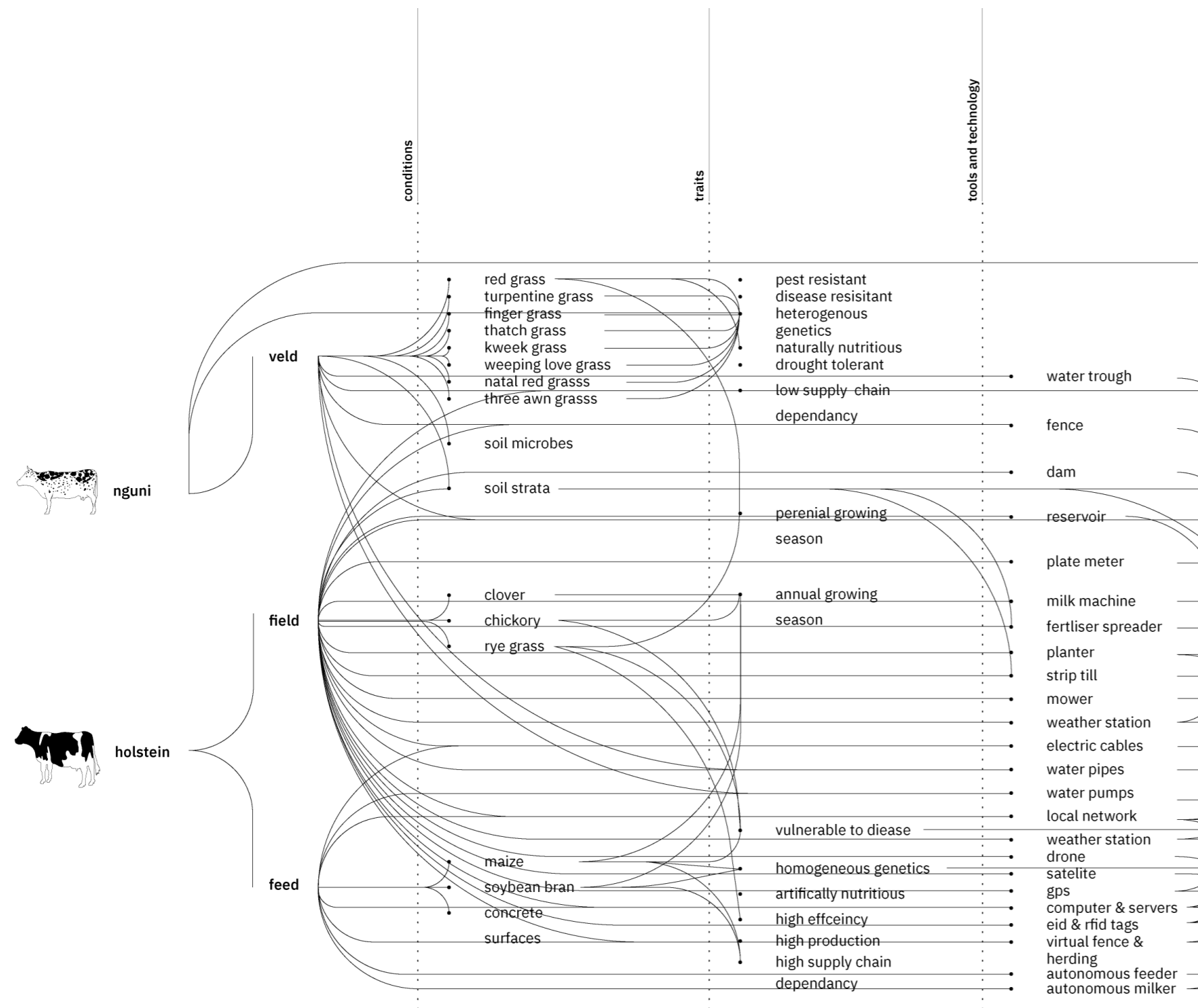
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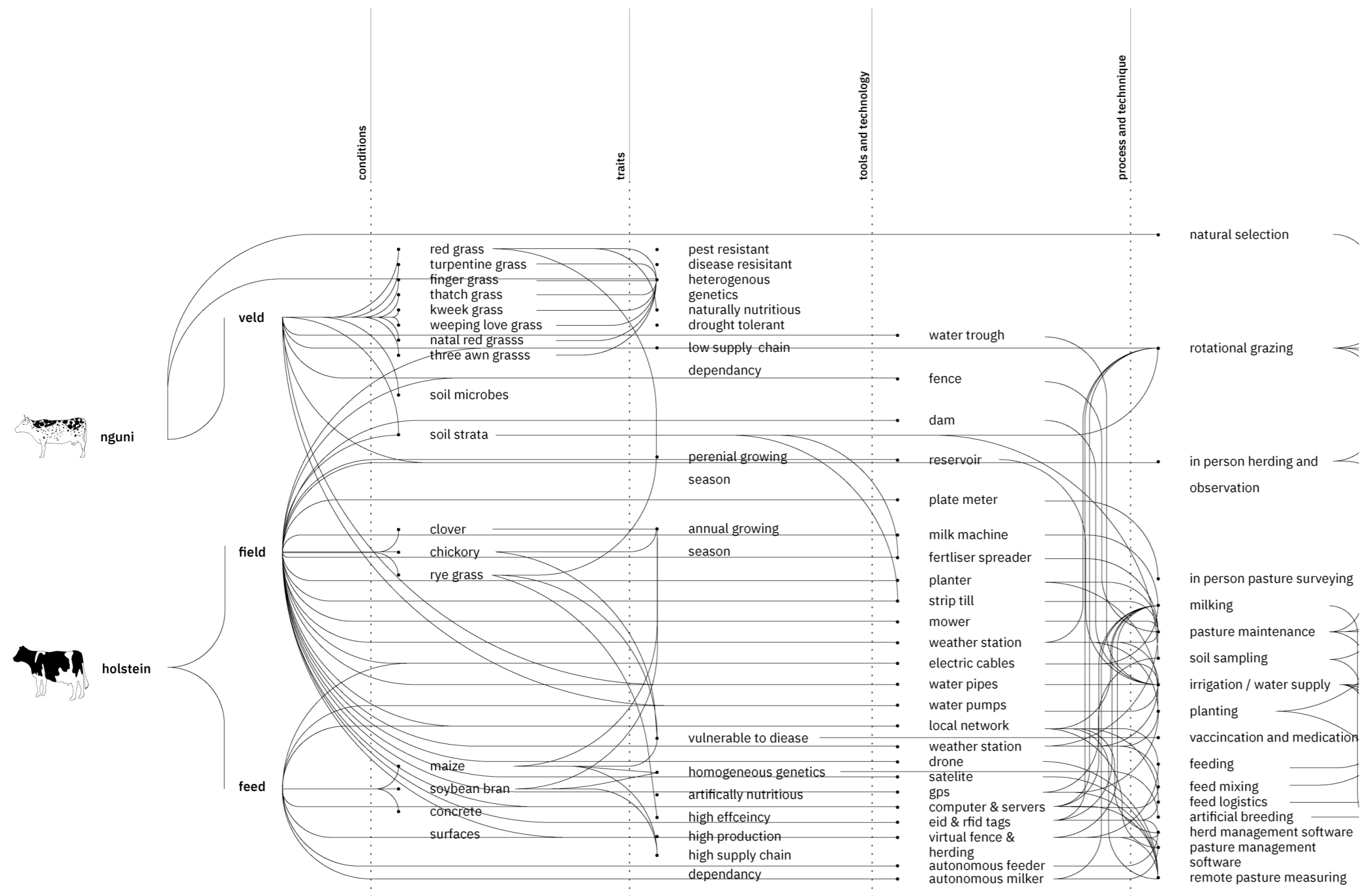
from punctuations to programme



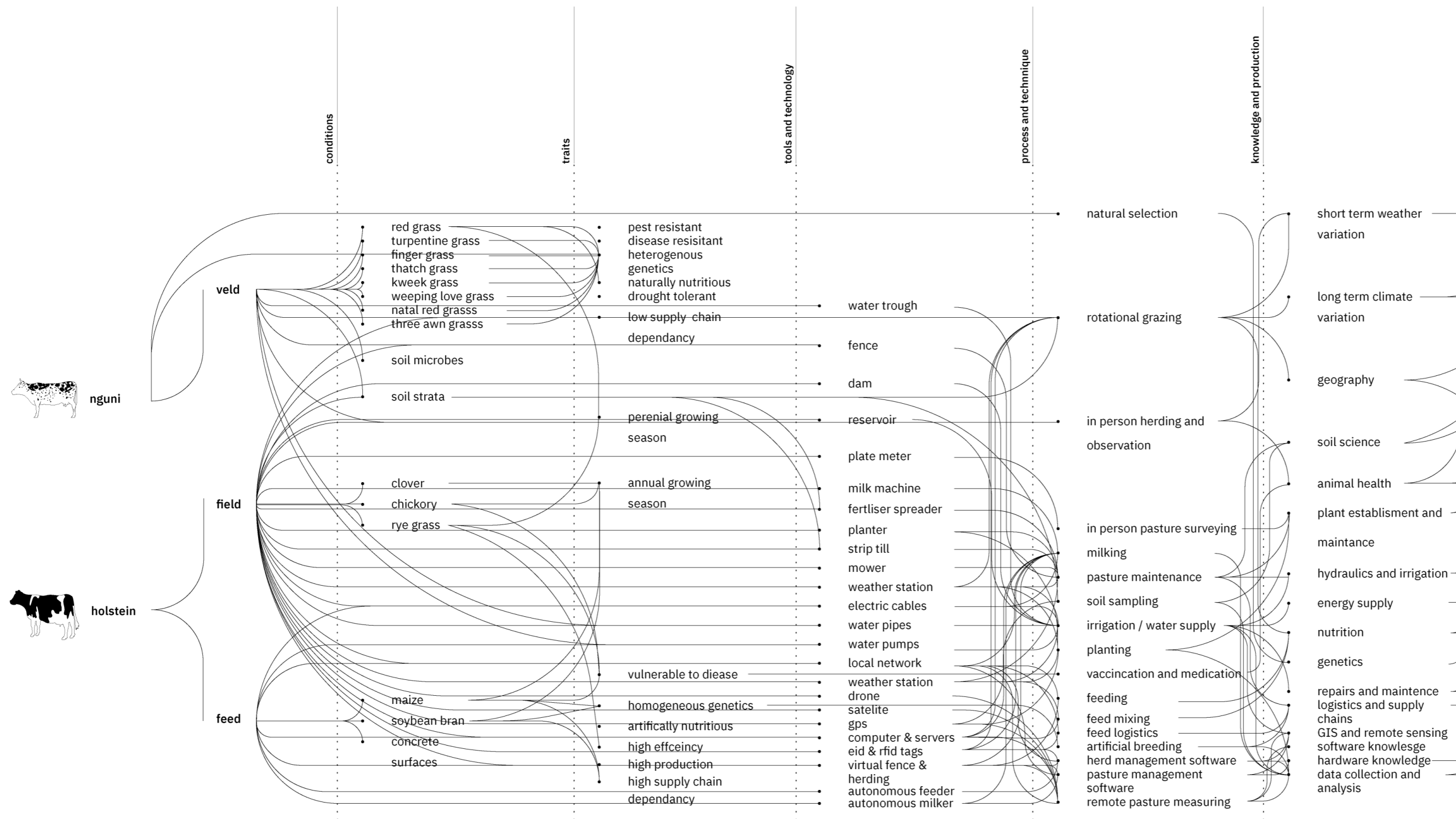
from punctuations to programme



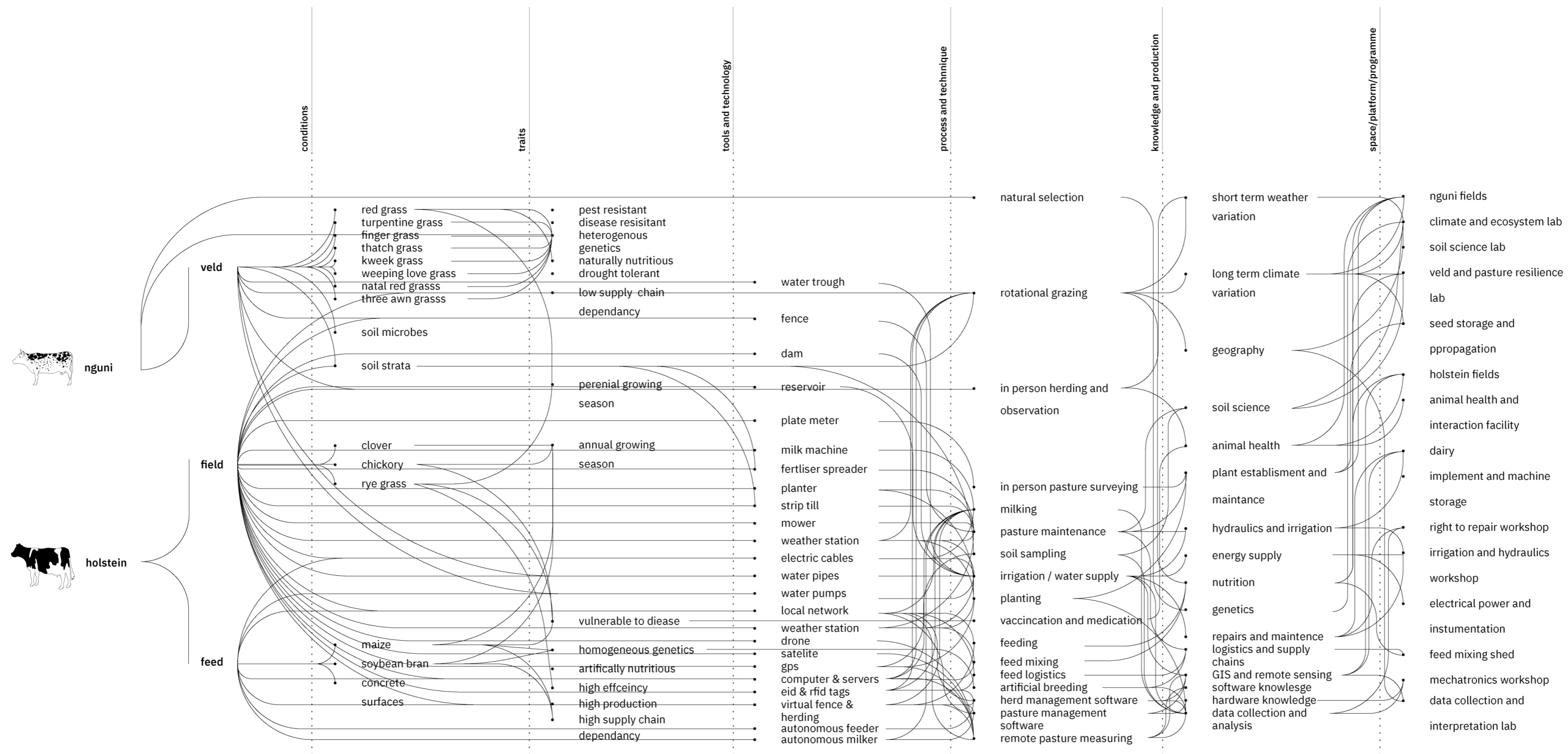
from punctuations to programme



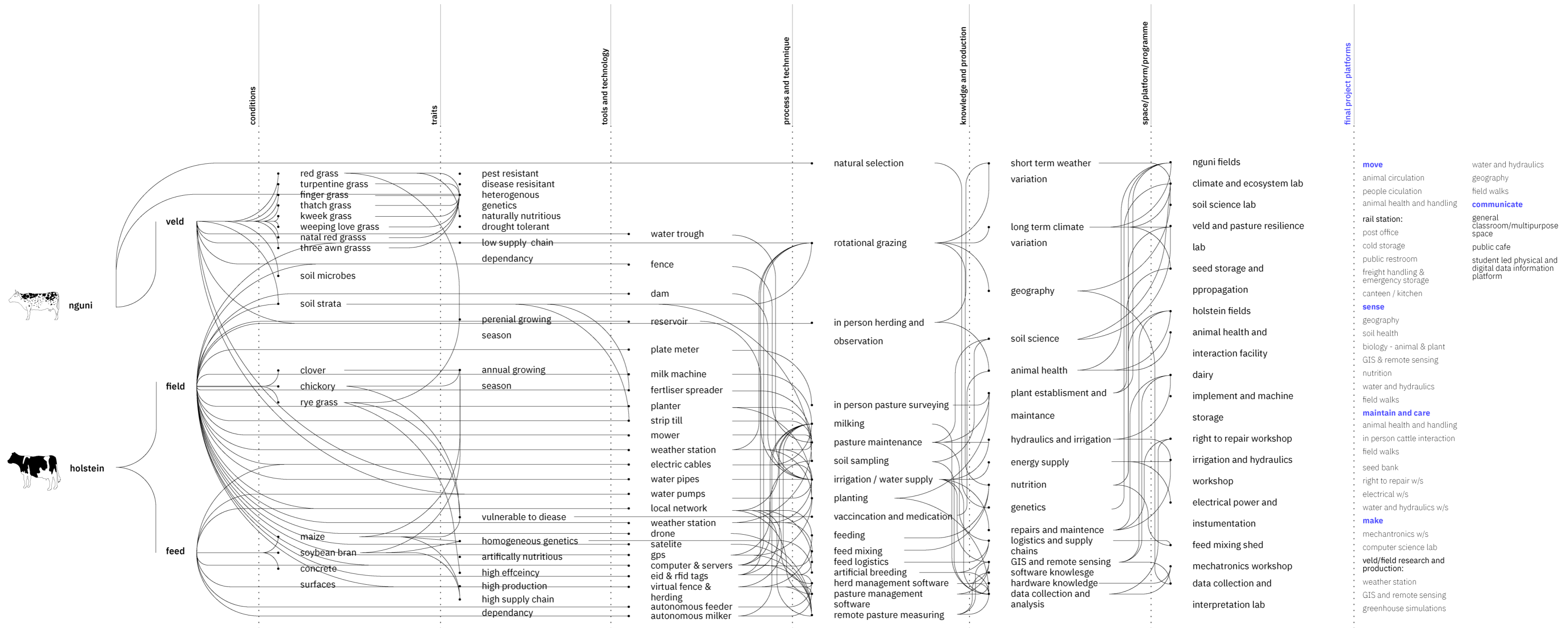
from punctuations to programme



from punctuations to programme



from punctuations to programme



from punctuations to programme

final project platforms

move

- animal circulation
- people circulation
- animal health and handling

rail station:

- post office
- cold storage
- public restroom
- freight handling & emergency storage
- canteen / kitchen

sense

- geography
- soil health
- biology - animal & plant
- GIS & remote sensing
- nutrition
- water and hydraulics
- field walks

maintain and care

- animal health and handling
- in person cattle interaction
- field walks
- seed bank
- right to repair w/s
- electrical w/s
- water and hydraulics w/s

make

- mechantronics w/s
- computer science lab

veld/field research and production:

- weather station
- GIS and remote sensing
- greenhouse simulations

water and hydraulics

geography

field walks

communicate

general
classroom/multipurpose
space

public cafe

student led physical and
digital data information
platform

2. programme

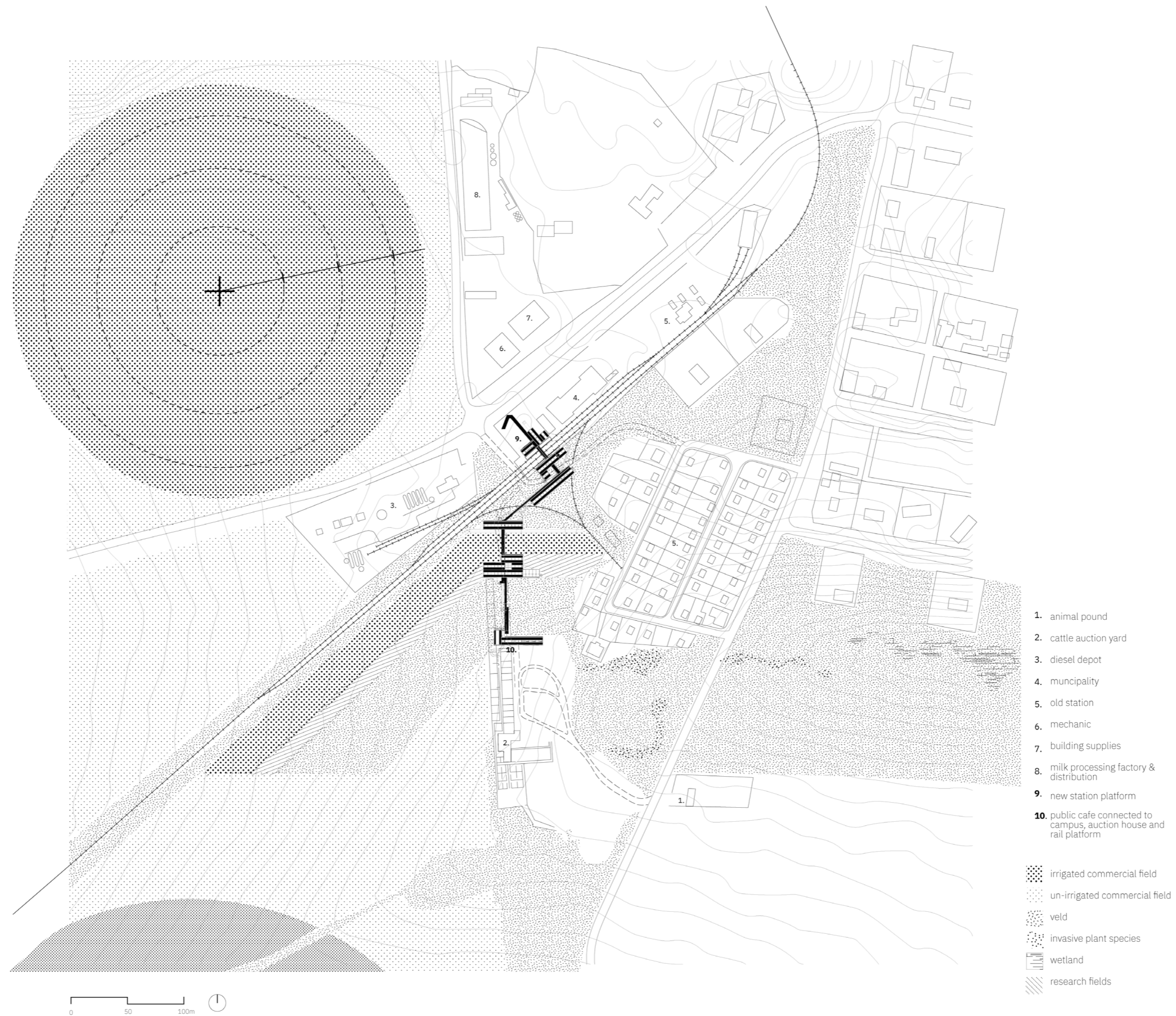
interweaving platforms

- +move
- +maintain and care
- +make
- +sense (to make sense, remote sense, analogue sense (sight, smell touch etc)
- +commnicate

heterogeneous: sets of relationships

- +knowledge & production
- +analogue & digital
- +living systems (humans, animals, plants, soil) & non living systems (machines & technology)
- +permanence & flexibilty

context & site



situating

cattle auction house

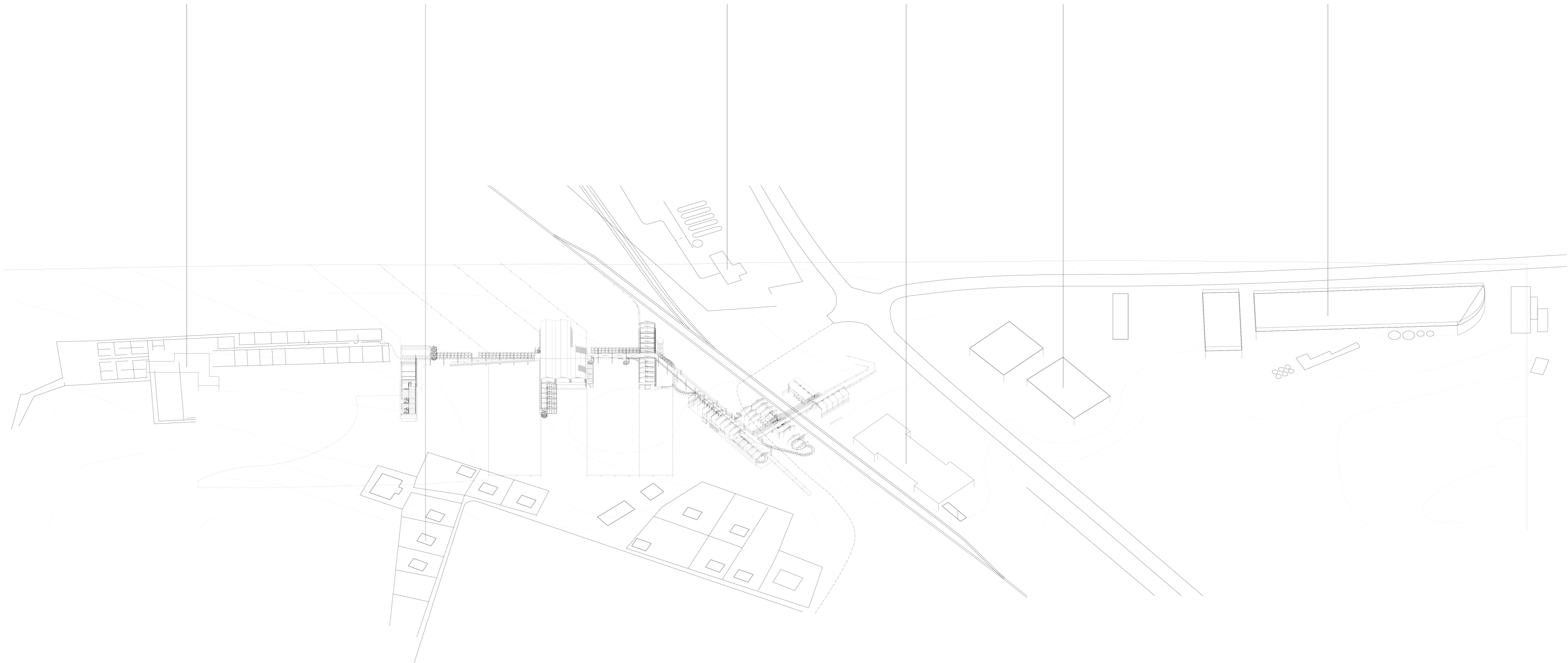
housing

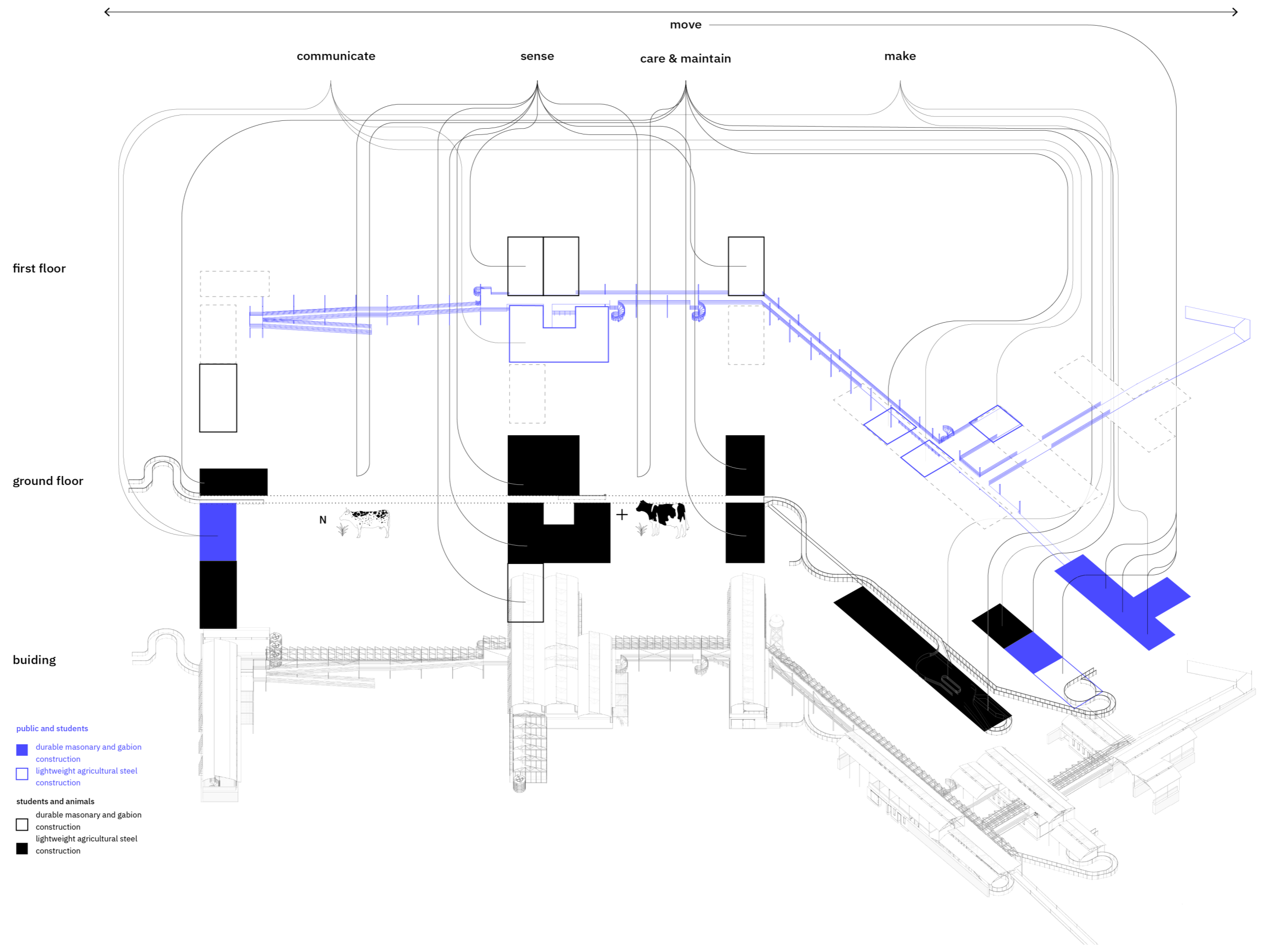
diesel depot

municipality head office

mechanic workshop & building supplies

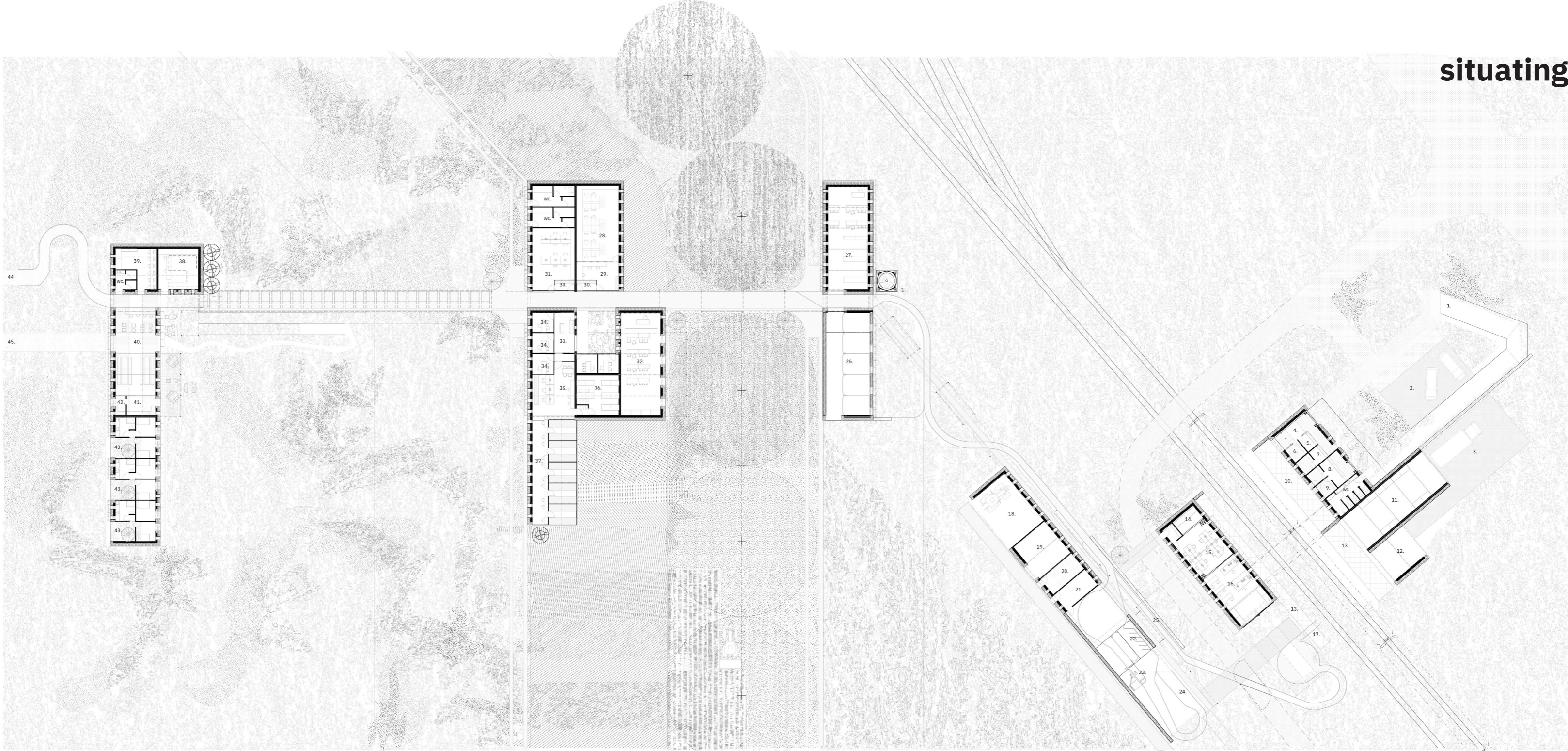
milk processing plant

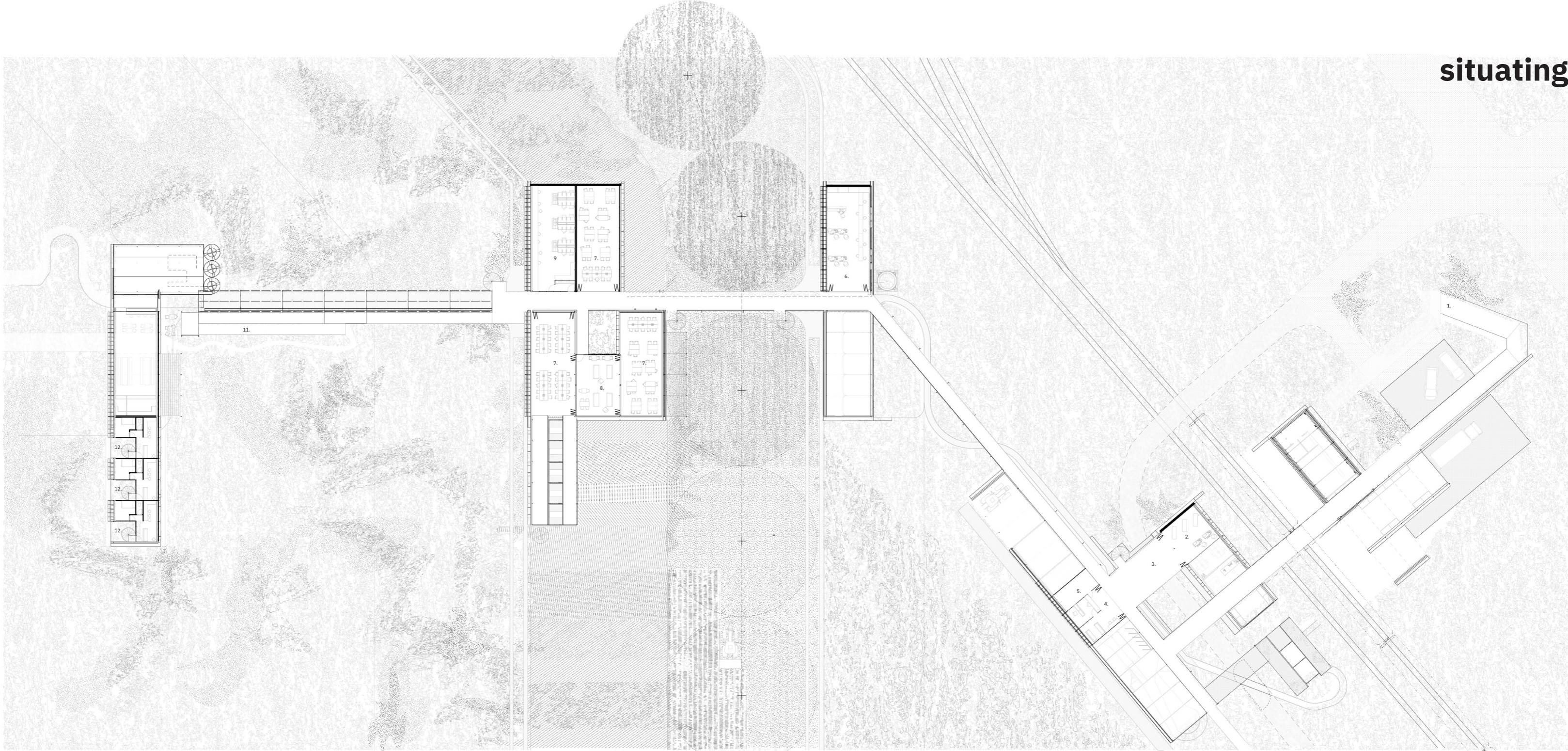




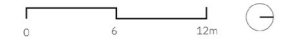
situating

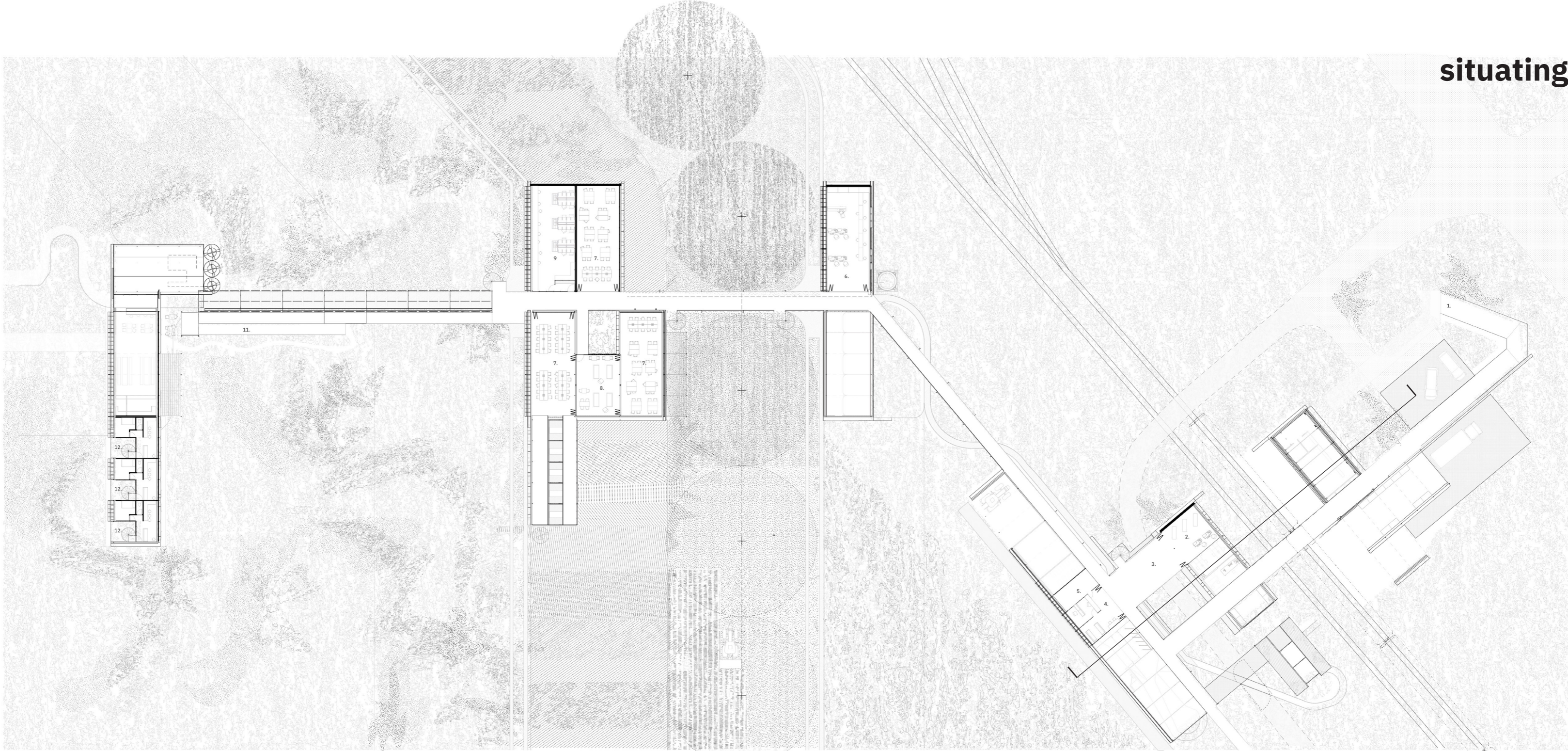
- 1. entrance ramp
- 2. public parking
- 3. freight & logistics parking
- 4. station concourse
- 5. information desk
- 6. office
- 7. small food kiosk
- 8. post office
- 9. cold storage
- 10. passenger and small freight platform
- 11. freight and emergency storage
- 12. small scale non crete brick manufacturing
- 13. freight platform
- 14. equipment storage
- 15. mechatronics workshop
- 16. right to repair workshop
- 17. cattle platform
- 18. machine and implement storage
- 19. feed mixing
- 20. battery storage
- 21. dairy office
- 22. swing over dairy
- 23. robot milker
- 24. cattle health and handling
- 25. lowered cattle walkway and protective wall
- 26. calf housing
- 27. geography
- 28. soil science lab
- 29. soil prep
- 30. clean room
- 31. animal and plant biology
- 32. computer science
- 33. lobby and kitchenette
- 34. offices
- 35. climate resilience lab
- 36. seed bank
- 37. experimental greenhouses
- 38. pump house and hydraulics lab
- 39. electrical power and instrumentation workshop
- 40. public cafe
- 41. kitchen
- 42. kitchen store
- 43. student accommodation cluster
- 44. cattle path to auction house
- 45. public path to auction house



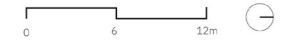


- 1. entrance ramp
- 2. gathering/meeting platform/plaze
- 3. student led physical and digital data/information platform
- 4. reception, offices and information
- 5. utilities and servers
- 6. remote sense lab
- 7. flexible 'home' class room
- 8. flexible relaxation space
- 9. generic multipurpose lab
- 10. ramp to veld and cafe
- 11. student accomodation cluster

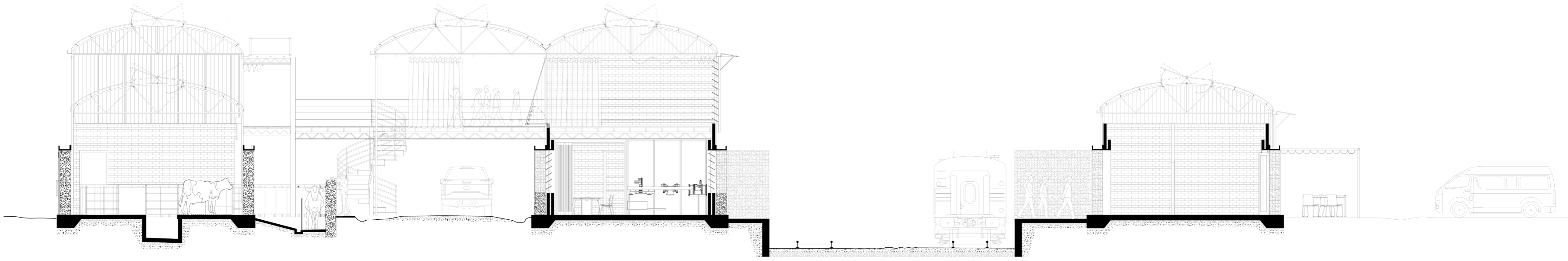




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situating



3. technique & tectonic

technique



Construction, Rockfontein Farm
Anna Hauff, 2025

technique

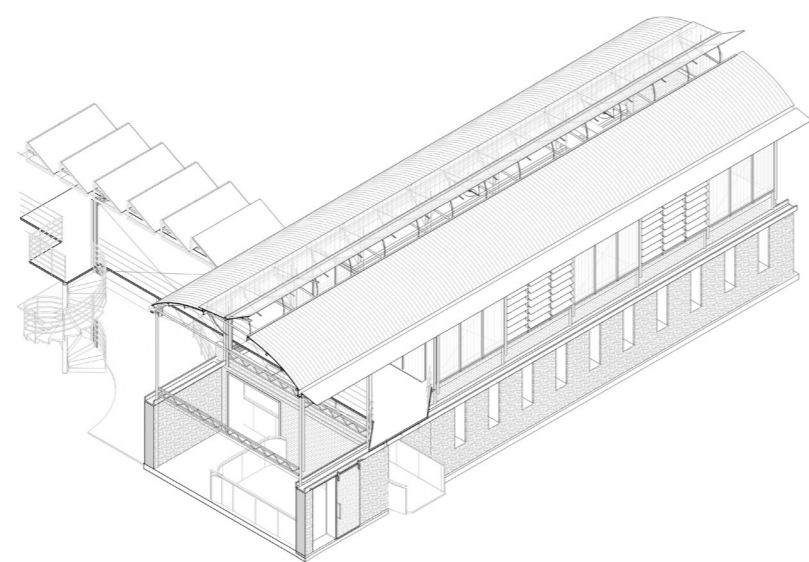


Stone shed, Rockfontein Farm
Anna Hauff, 2026

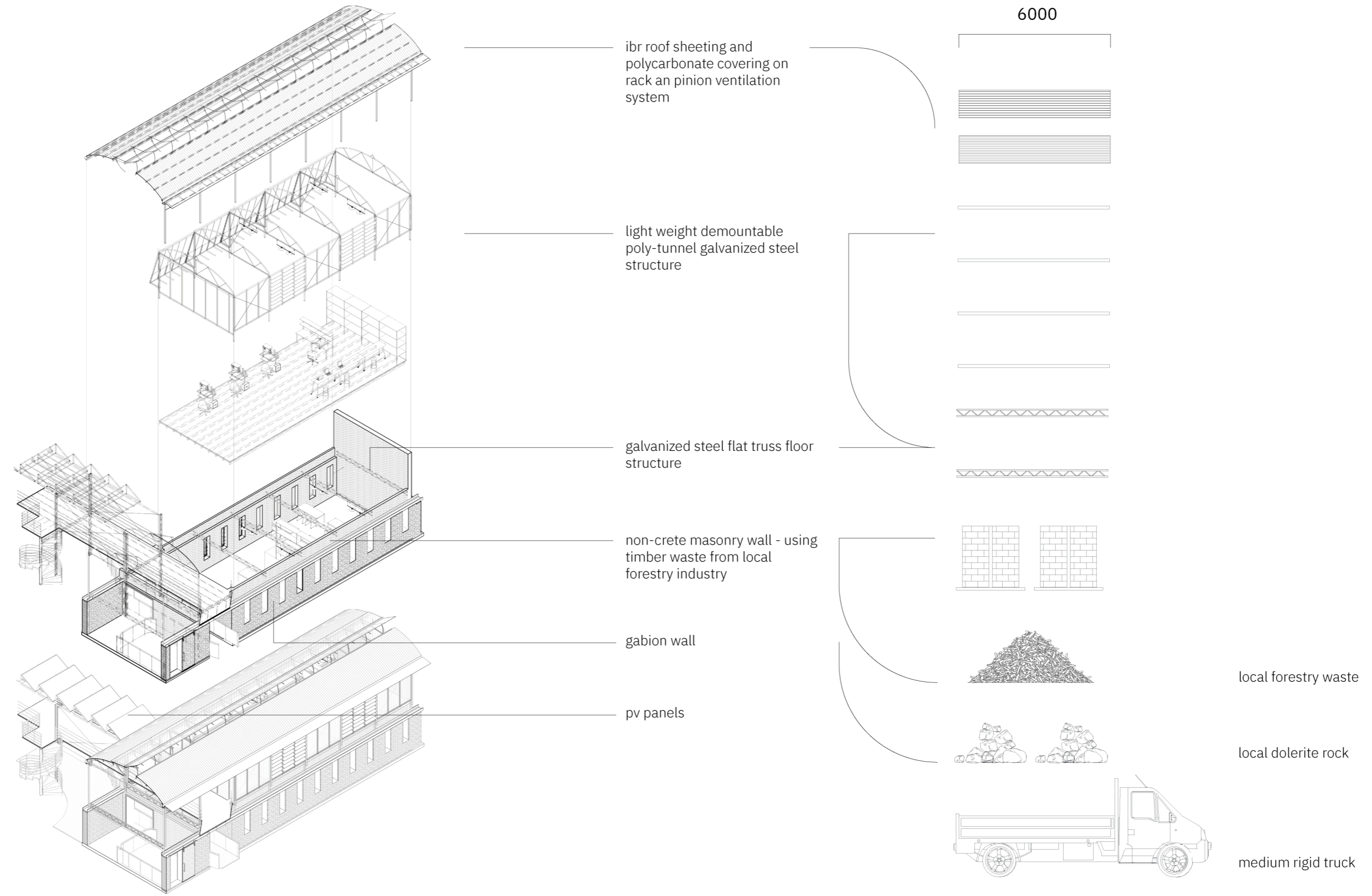
technique



Center-pivot Rockfontein Farm
Anna Hauff, 2026



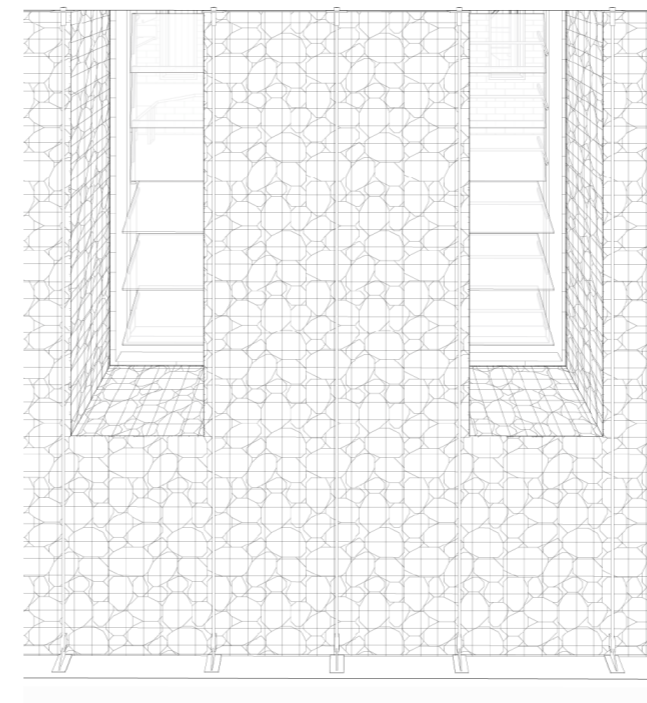
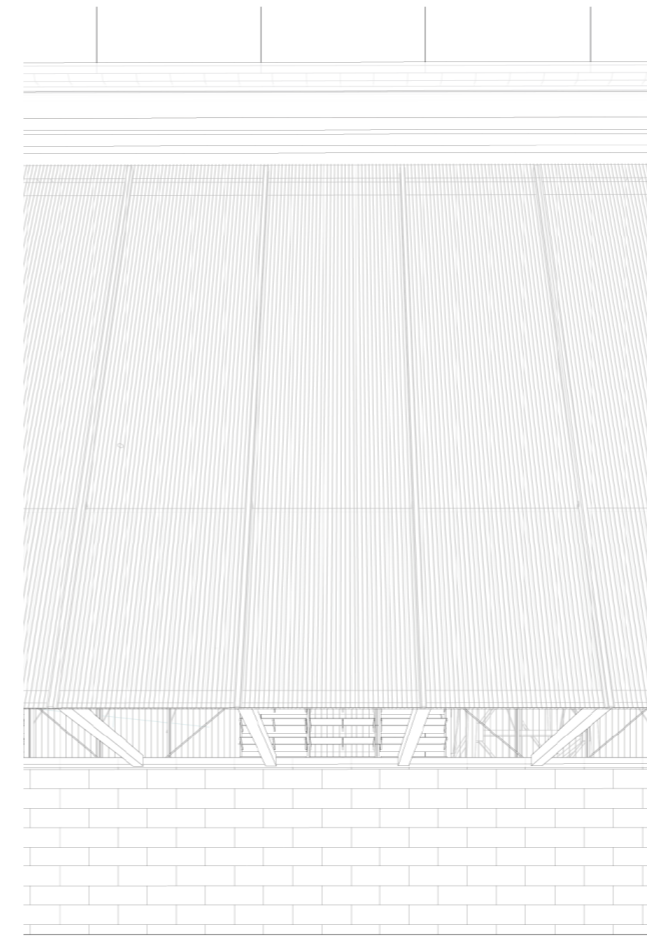
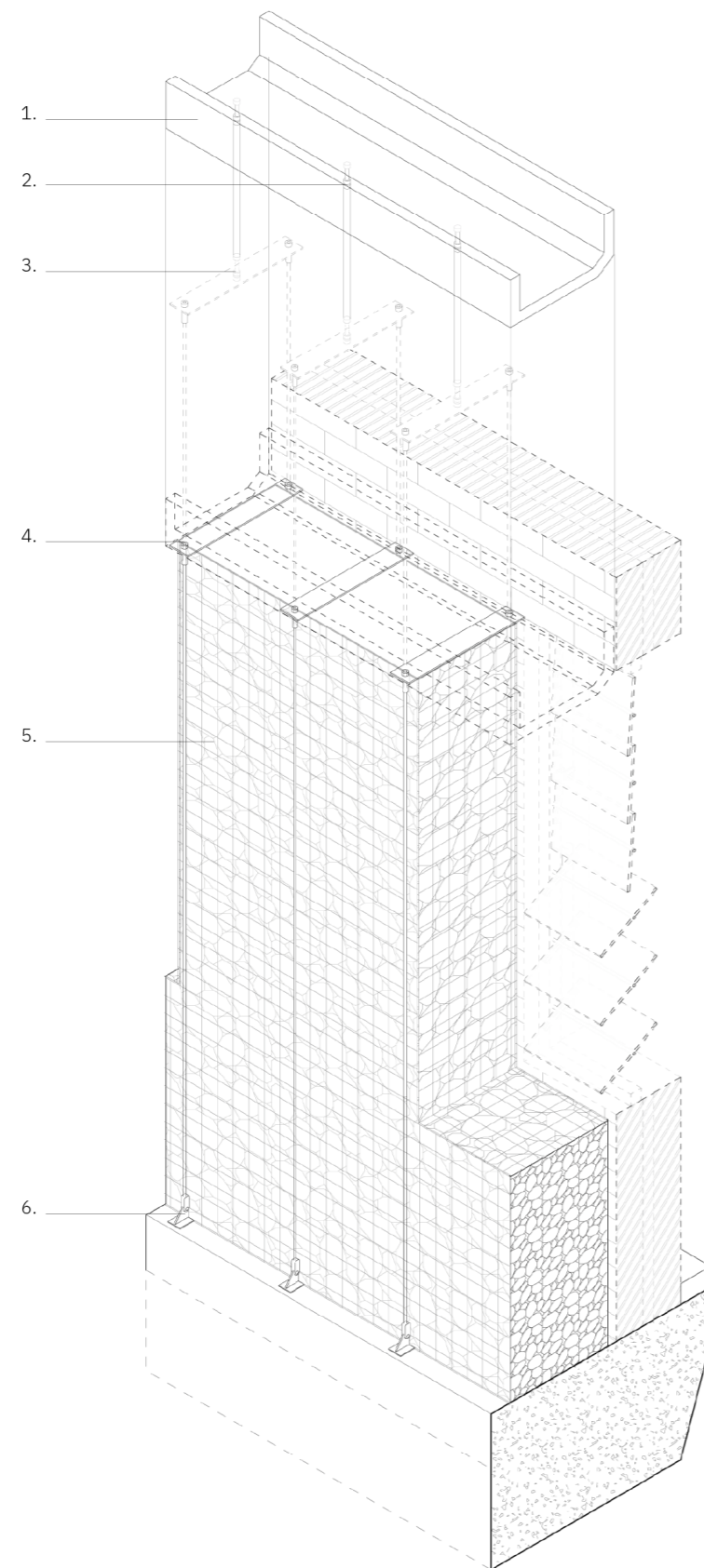
technique



technique

heterogenous construction

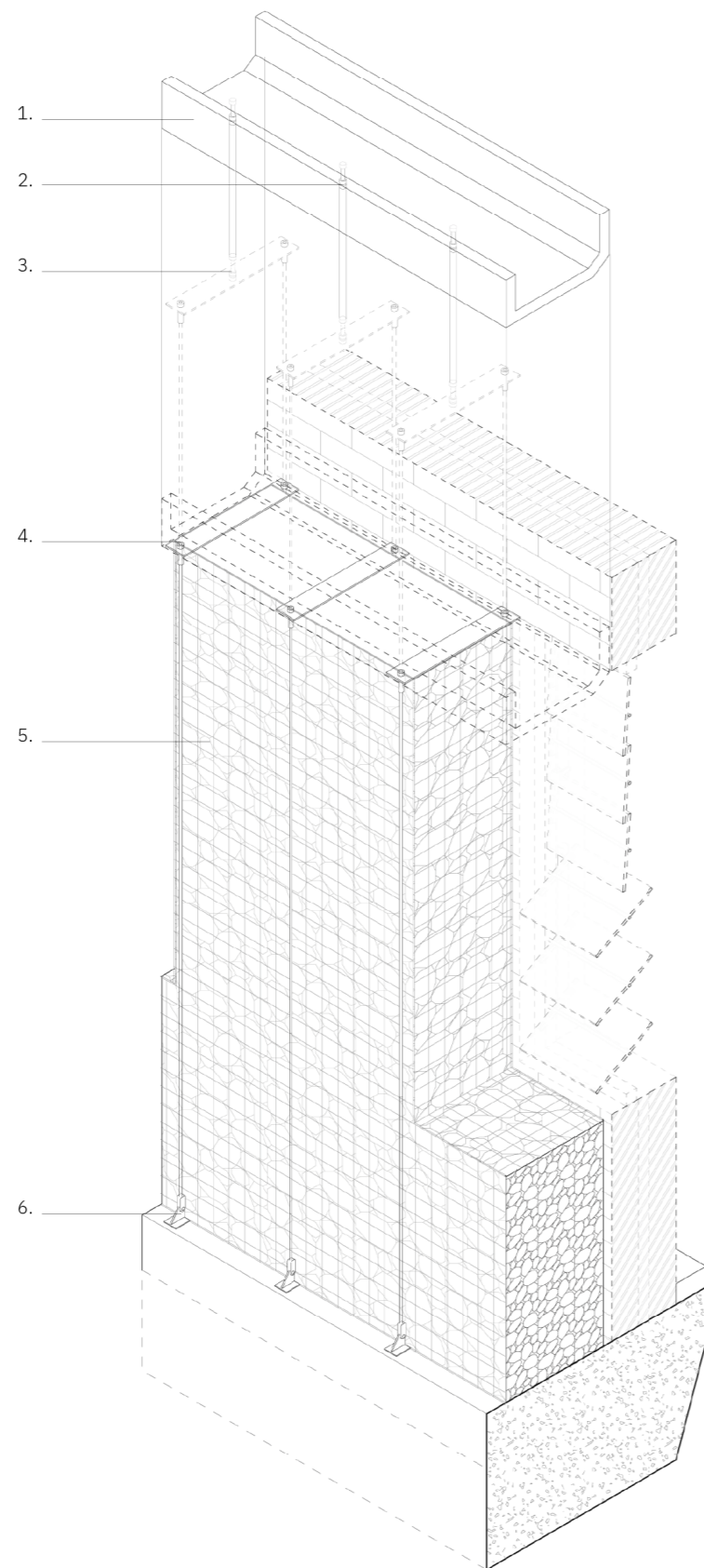
1. precast concrete gutter
2. precast holes for threaded bar
3. galvanized steel flat bar bolted to gutter. threaded rod fixed in place with a nut on either side of flat bar, then gutter placed on top with nut and washer
4. tension cable connected to galvanized steel flat bar
5. 400mm thick gabion baskets, each basket unit should have a wire internal windlass bracing tie. lacing wire or c rings to be used on all corners
6. tension cable anchored to concrete floor slab

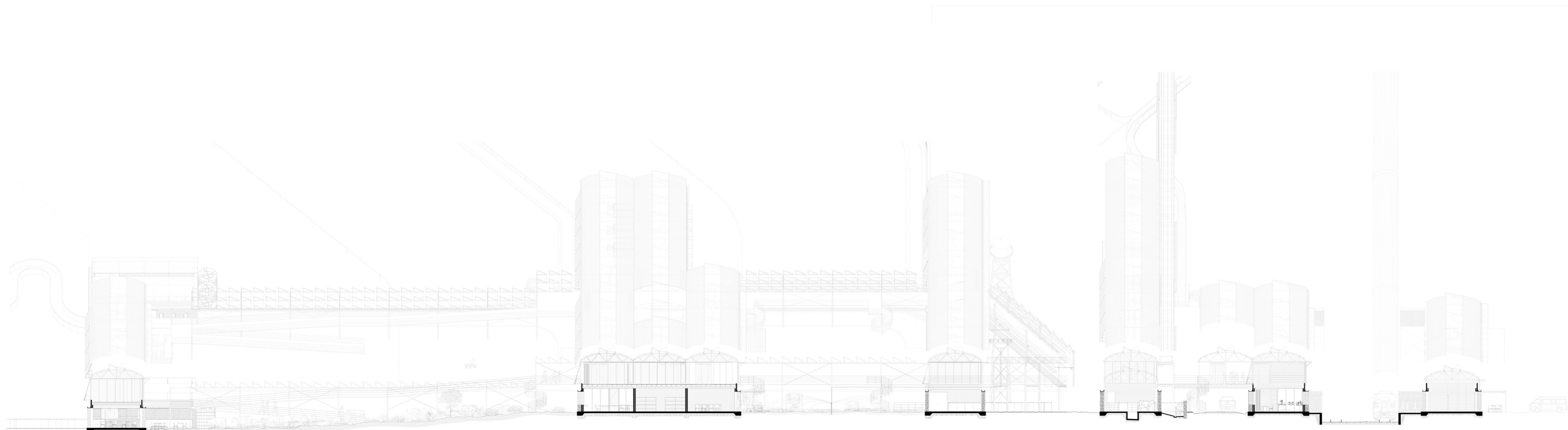


technique

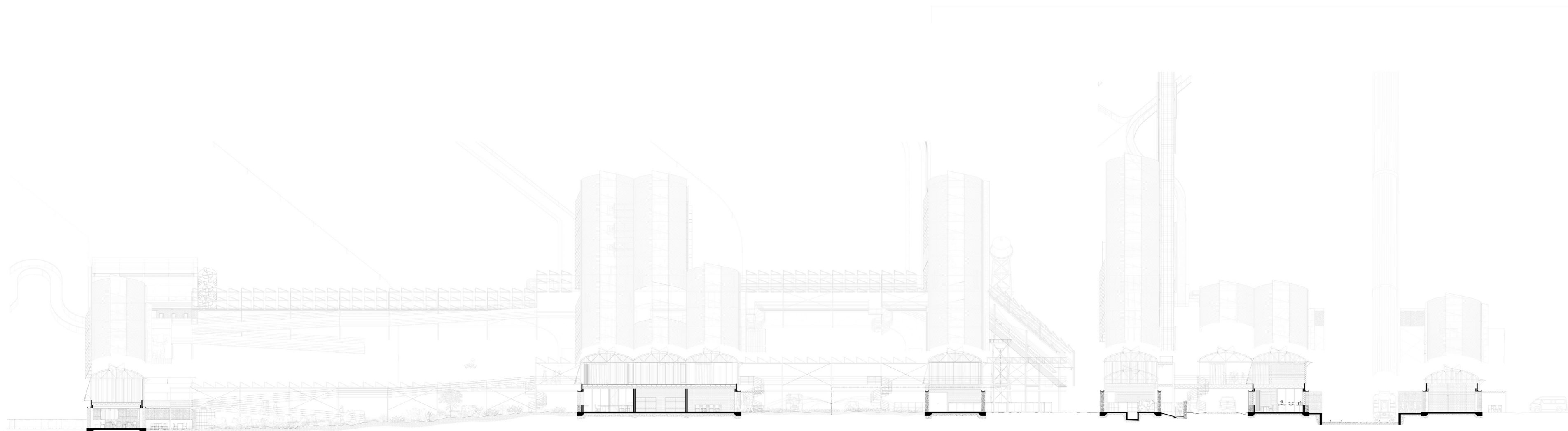
heterogenous construction

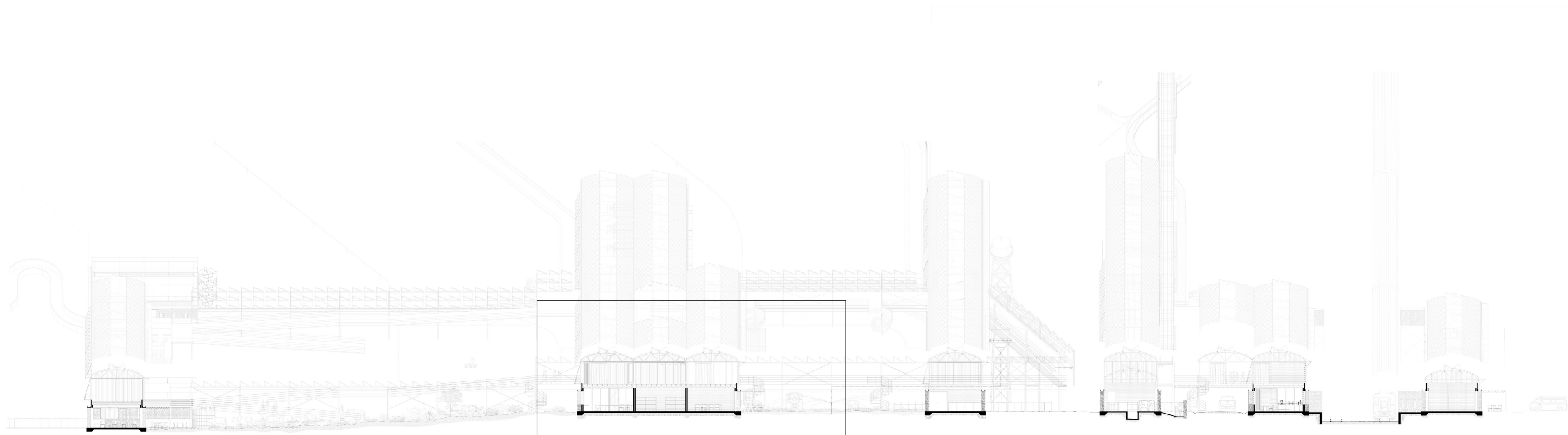
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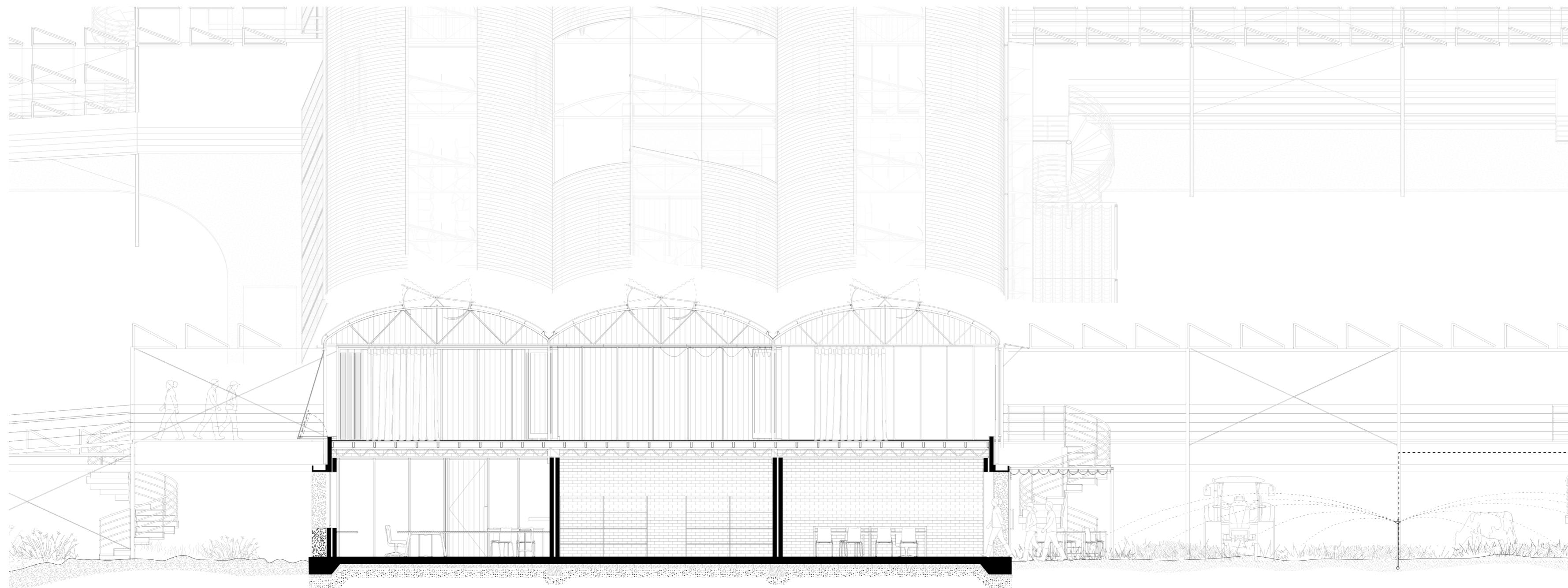


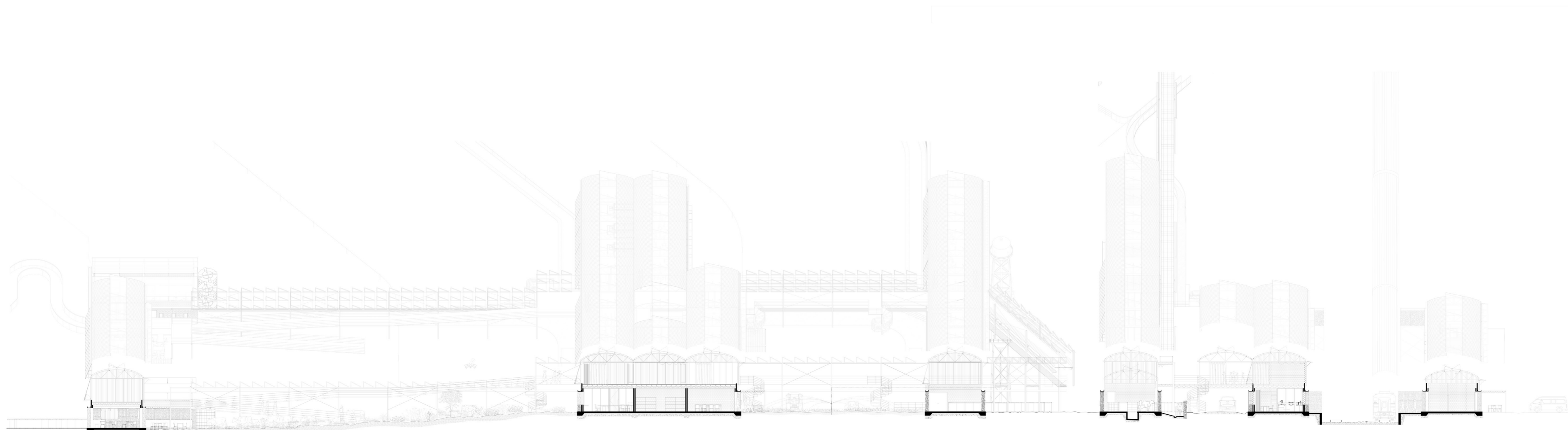


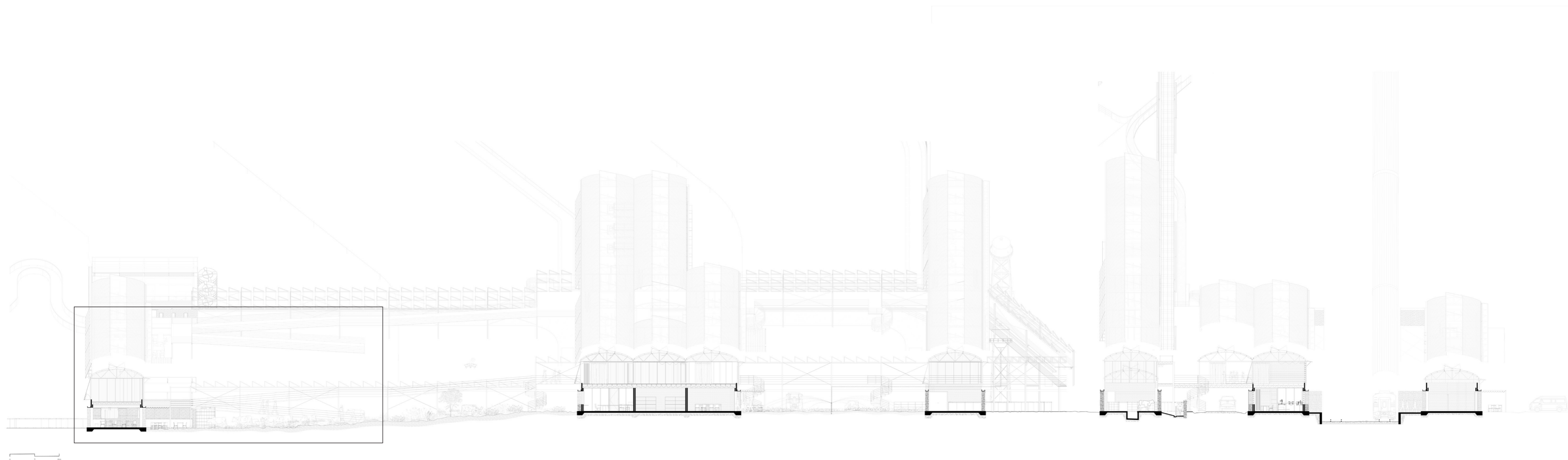
4. **synthesis**

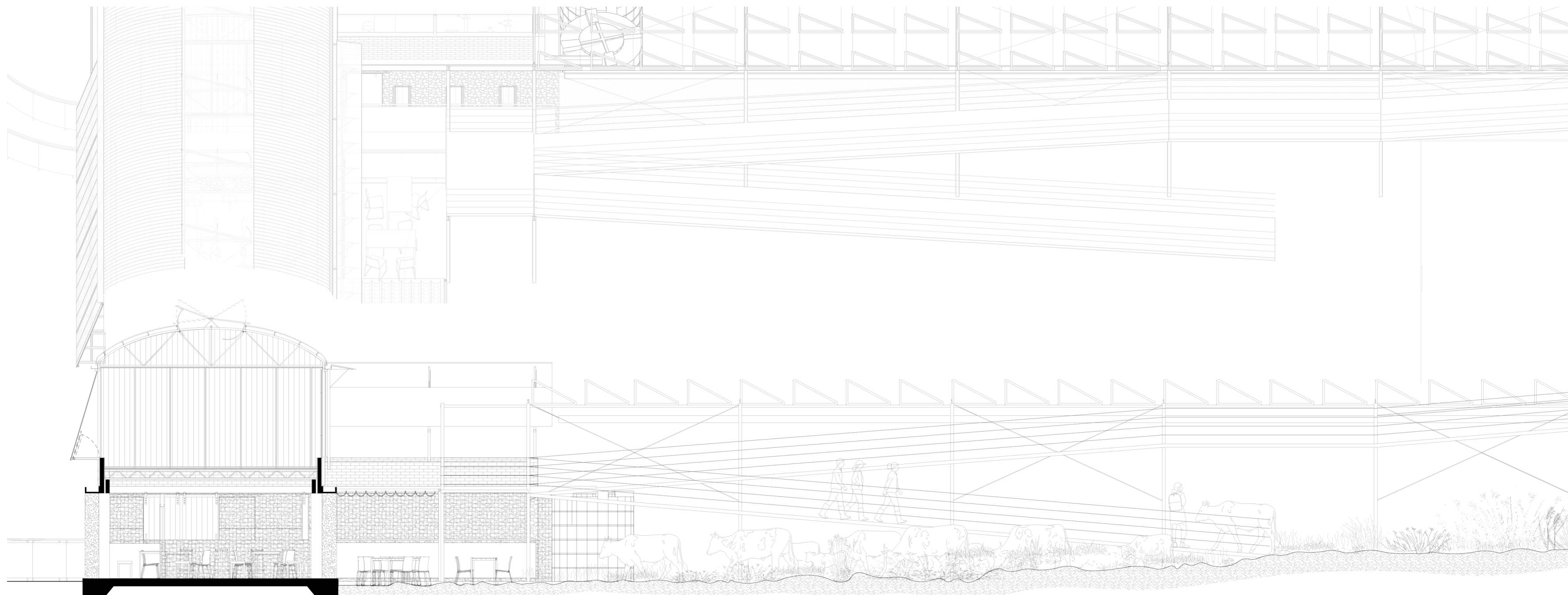


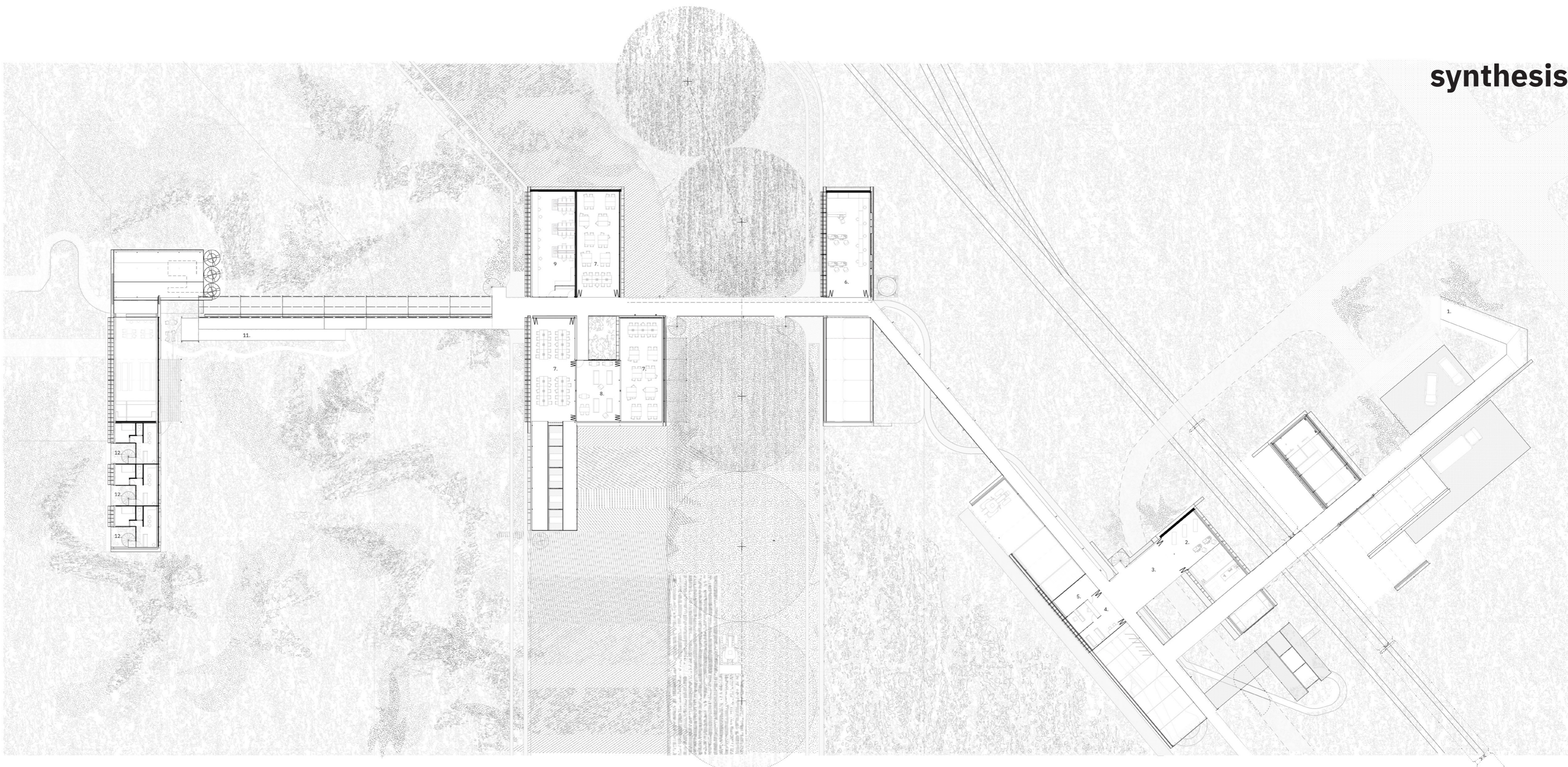




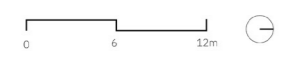


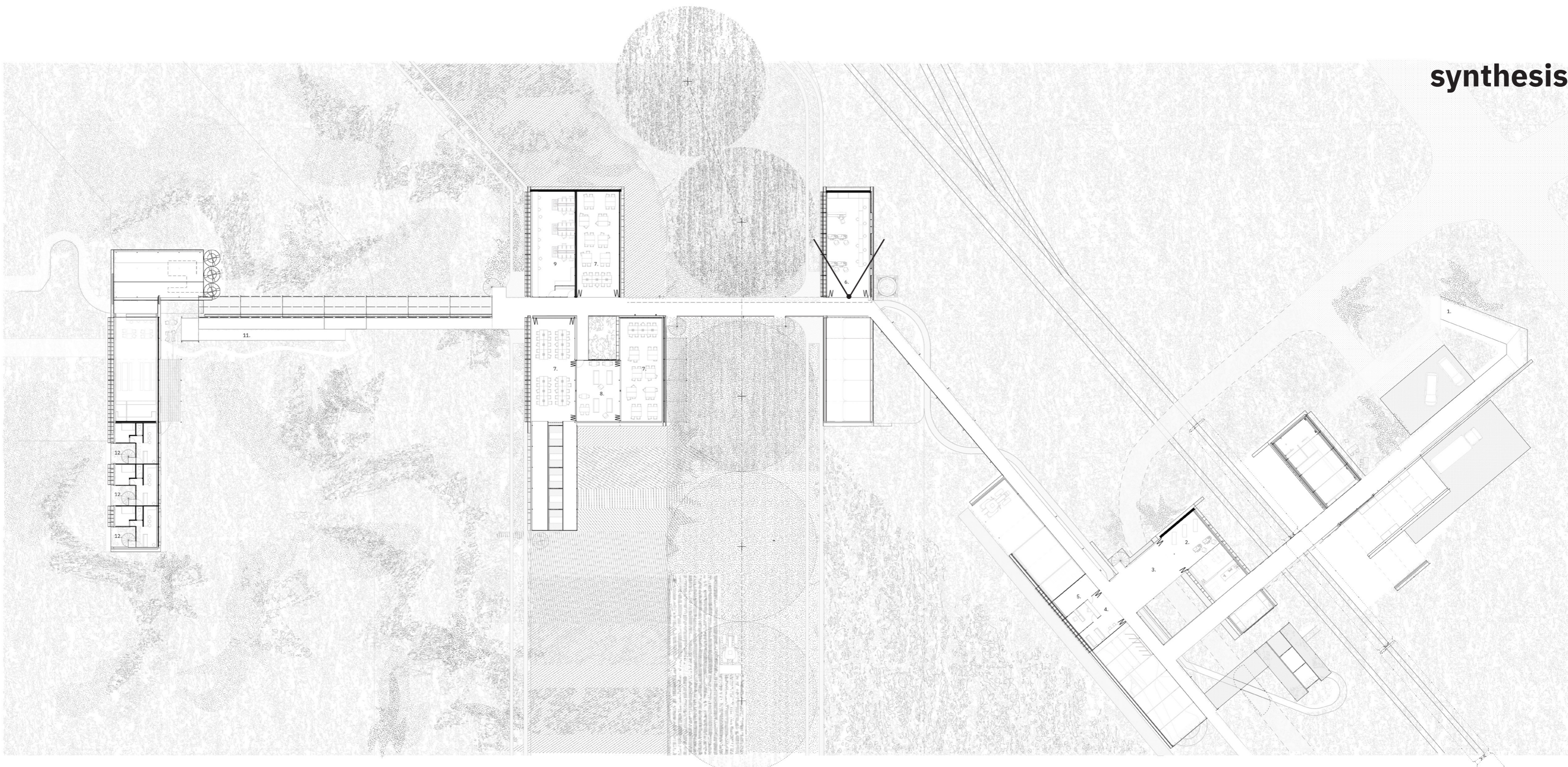




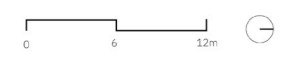


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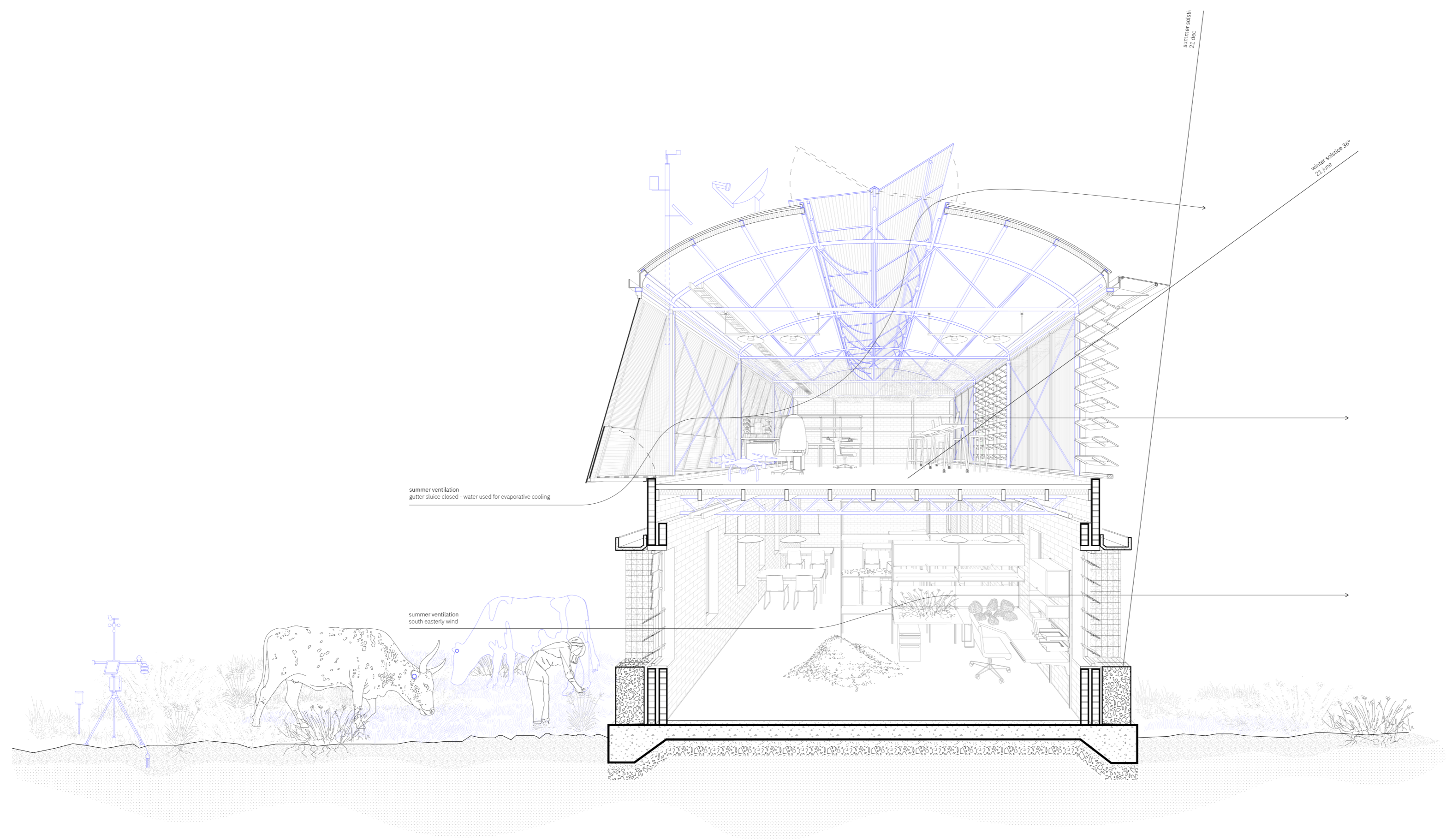




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- 4. reception, offices and information
- 5. utilities and servers
- 6. remote sense lab
- 7. flexible 'home' class room
- 8. flexible relaxation space
- 9. generic multipurpose lab
- 10. ramp to veld and cafe
- 11. student accomodation cluster



synthesis





synthesis

winter scenario

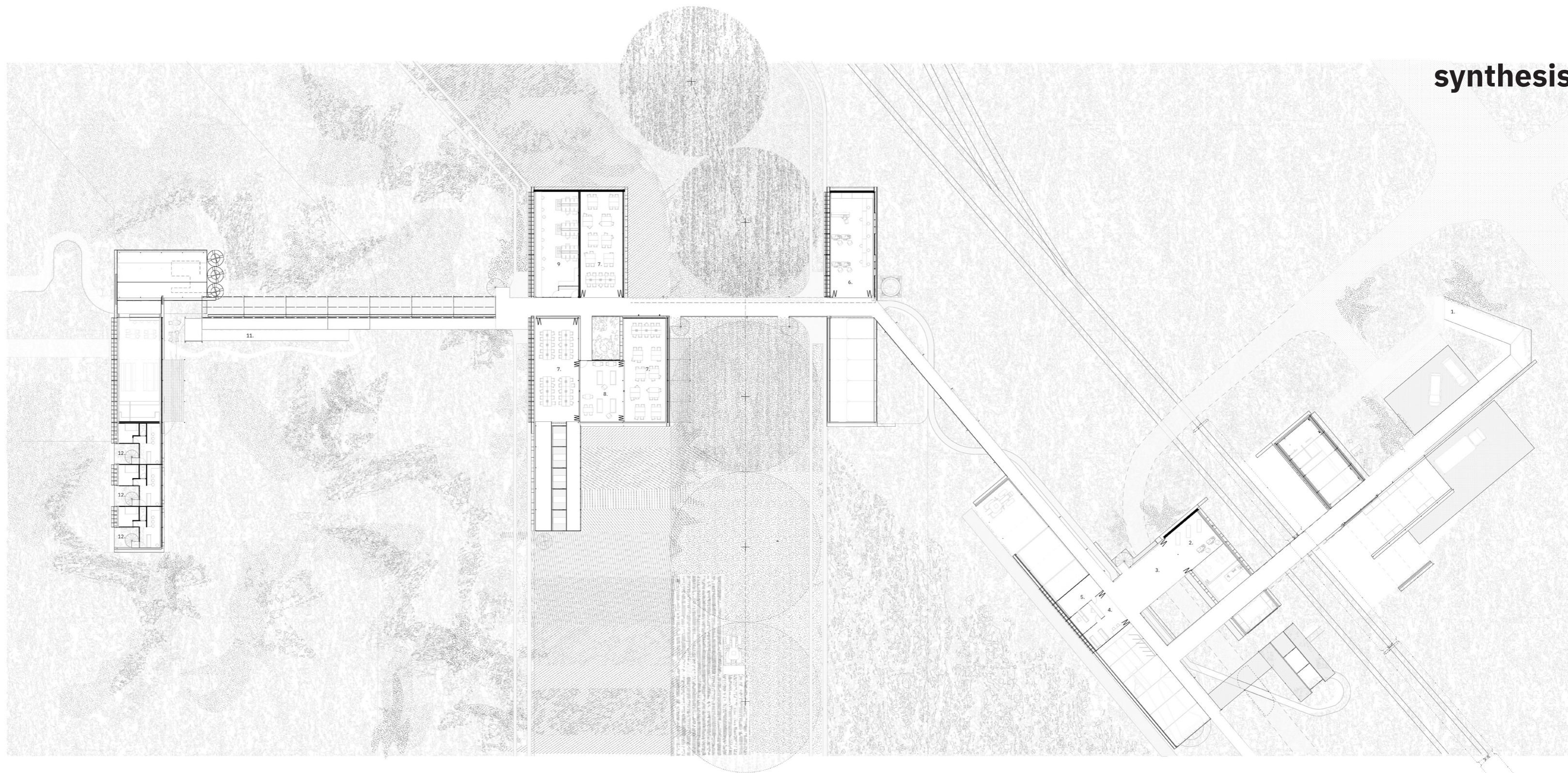


synthesis

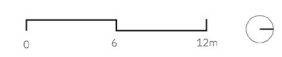
summer scenario

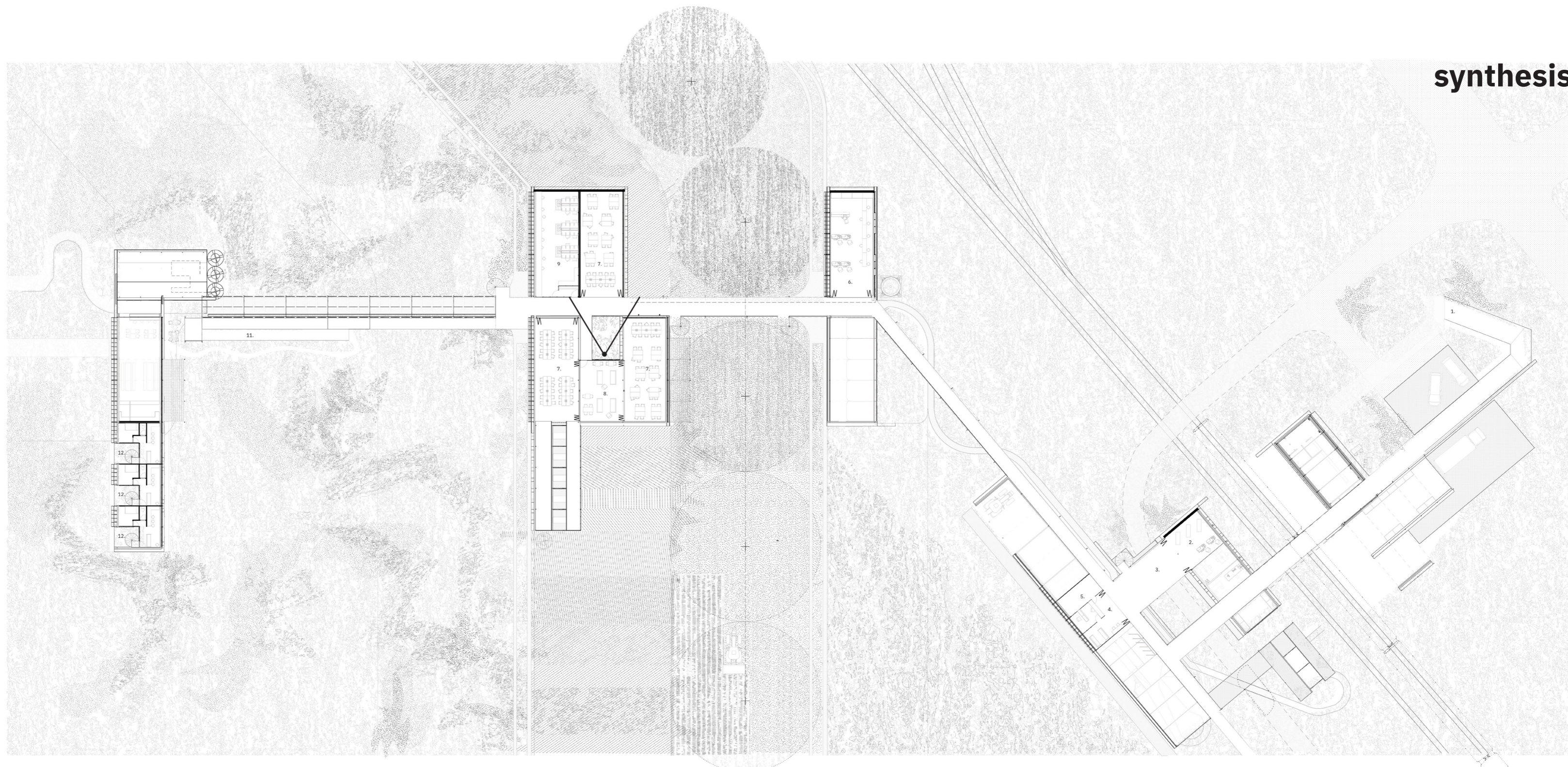
synthesis



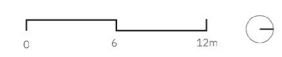


- 1. entrance ramp
- 2. gathering/meeting platform/plaze
- 3. student led physical and digital data/information platform
- 4. reception, offices and information
- 5. utilities and servers
- 6. remote sense lab
- 7. flexible 'home' class room
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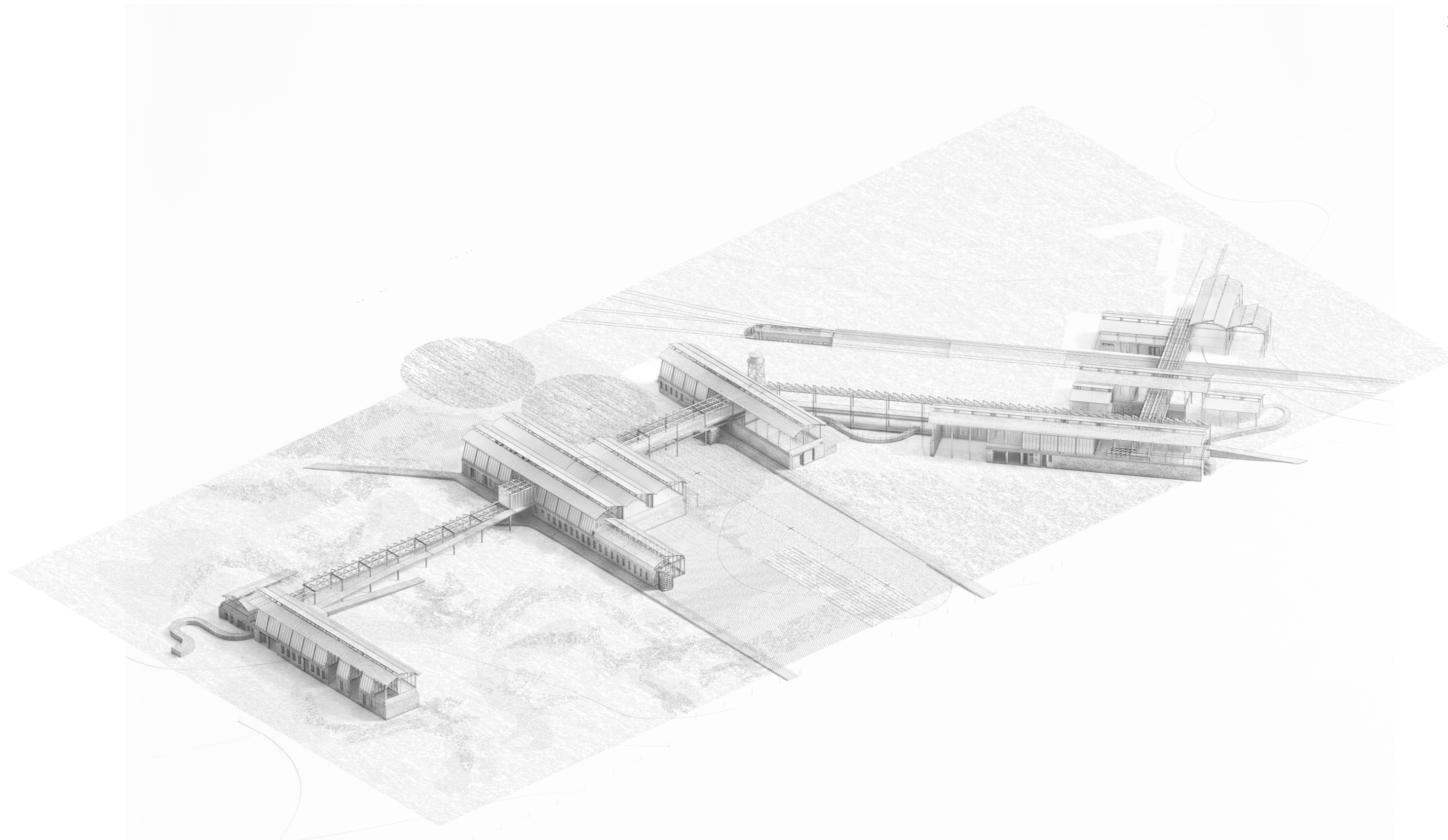


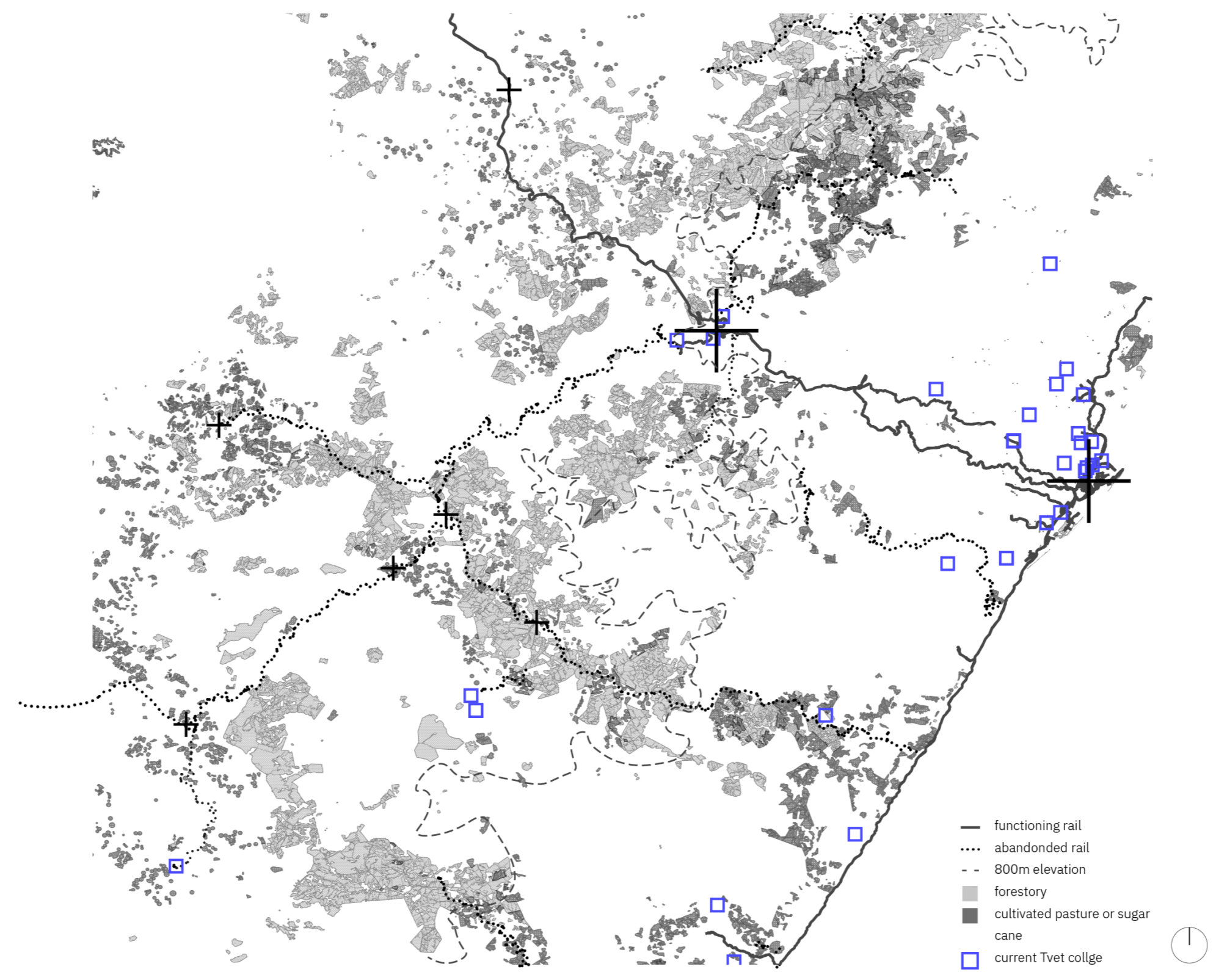
- 1. entrance ramp
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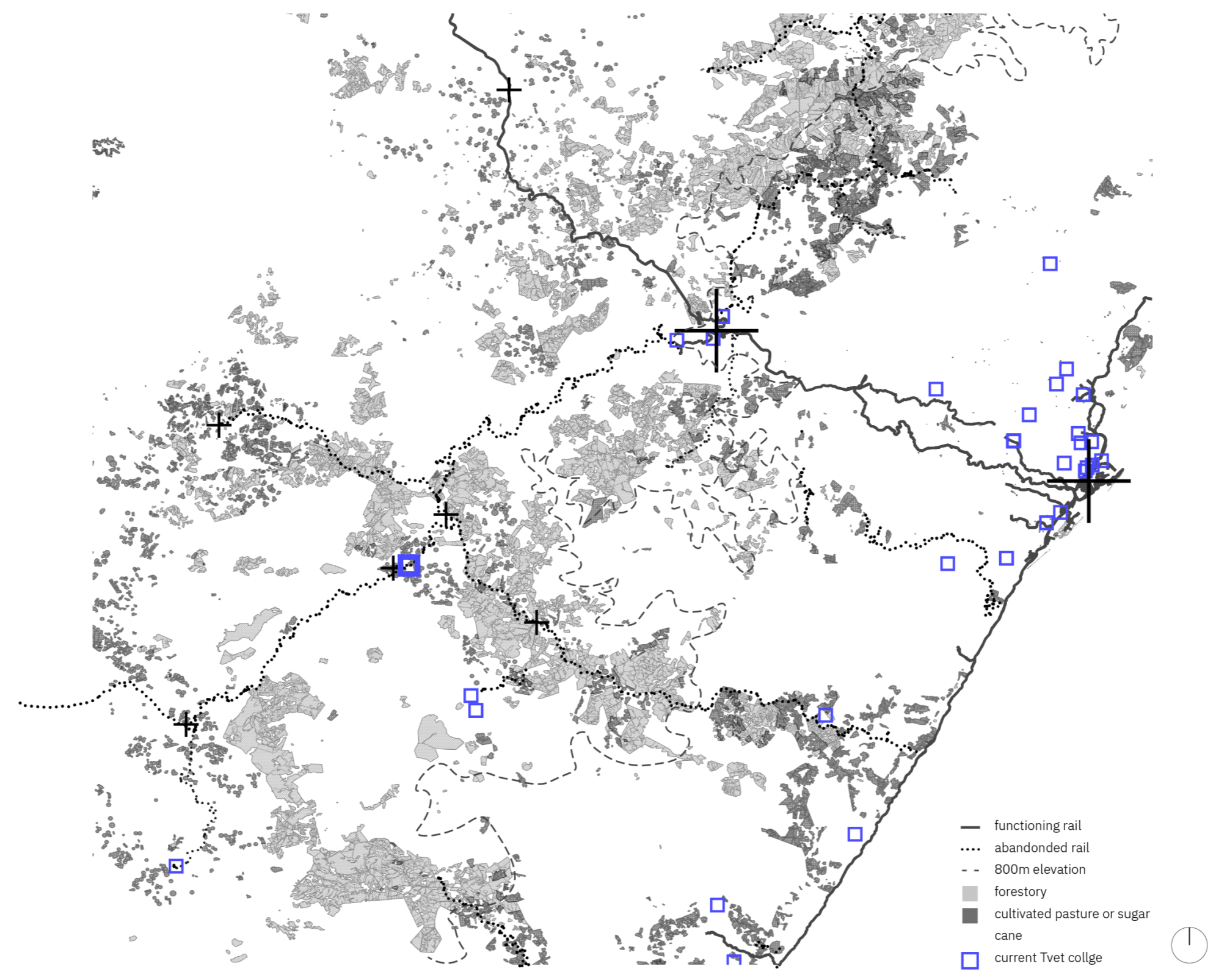


synthesis









thank you



Nguni Cows, Rockfontein Farm
Anna Hauff, 2024

thank you



Dairy Cows, Rockfontein Farm
Olivia Fauel, 2026