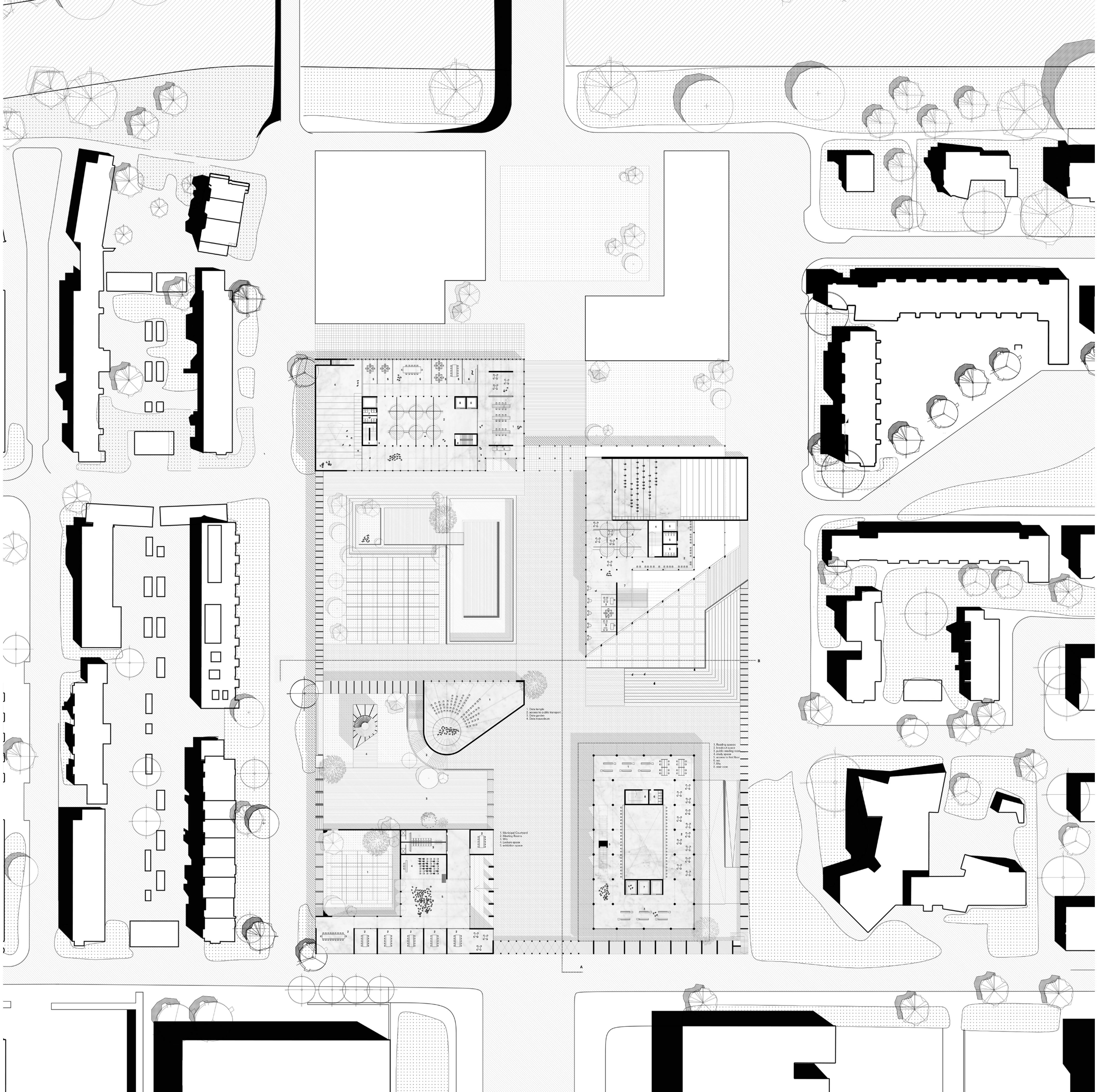

1. Data temple
2. access to public transport
3. Data garden
4. Data mausoleum
1. Reading spaces
2. breakout space
3. public reading room
4. study space
5. access to first floor
6. wc
7. lifts
8. stair core
1. Municipal Courtyard
2. Meeting Rooms
3. W/c
4. Lecture space
5. exhibition space

1. Waterstoage for data cooling
2. Public transport platform
3. Access to public transport
4. Underground transport link (PODS)

1.Base of Atrium
2. public lecture space (small)
3. Formal lecture amphitheatre
4. Access to external space
5. Lift
6. Wc
7. Access to ground floor
8. Amphtheathre

1. External 'making space'
2. Central working desks
3. Fabrication labs
4. Lift/ stair core
5. Wc
6. Access to ground floor

A

B

DATA MUNICIPALITY
Dermot Horgan

North

5000

Basement Floor 1:200

DATA MUNICIPALITY

Dermot Horgan

North

5000

Ground Floor 1:200

A

B

1. Data temple
2. access to public transport
3. Data garden
4. Data mausoleum

1. Municipal Courtyard
2. Meeting Rooms
3. W/c
4. Lecture space
5. exhibtion space

1. Reading spaces
2. breakout space
3. public reading room
4. study space
5. access to first floor
6. wc
7. lifts
8. stair core

1. Data bank
2. Data atrium
3. Reception
4. Research lecture space
5. Meeting spaces
6. Kitchen
7. WC
8. Lift/Stair core

1. Public/ university Lecture space
2. Reading space
3. Meeting/ university offices
4. Starcore
5. WC
6. Lift
7. Stair to basement
8. Void

DATA MUNICIPALITY
Dermot Horgan

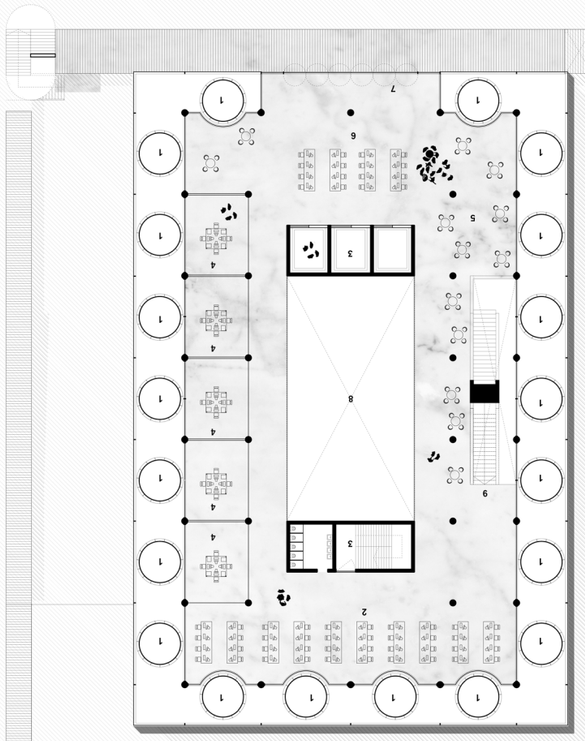
First Floor 1:200

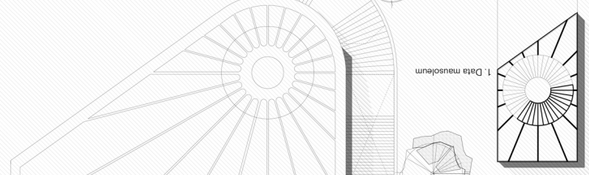
North

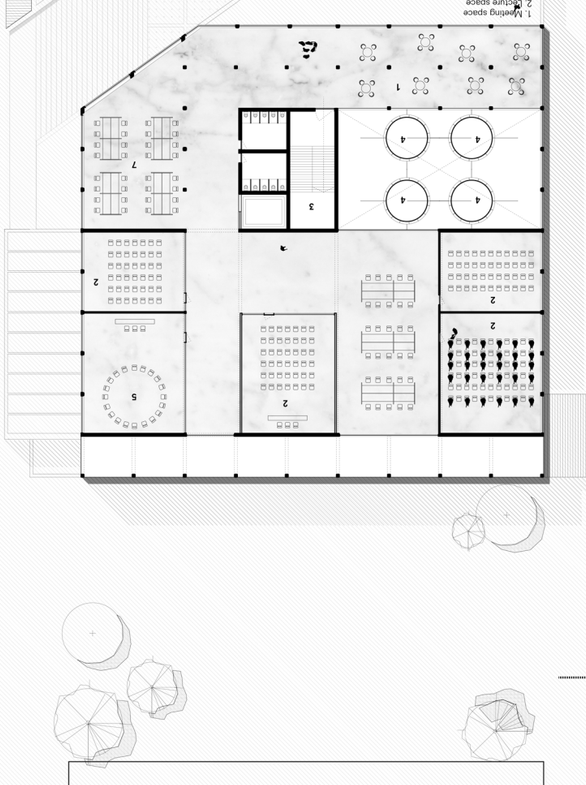
5000

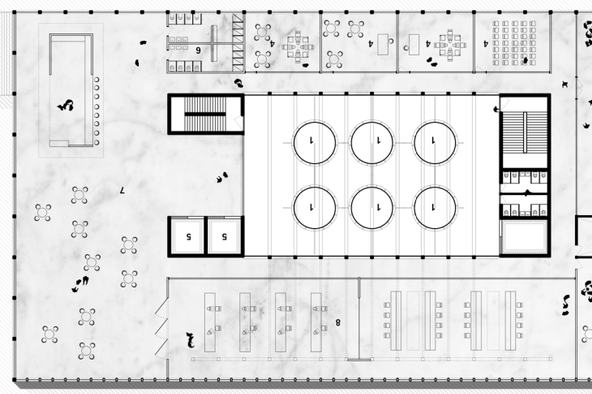
A

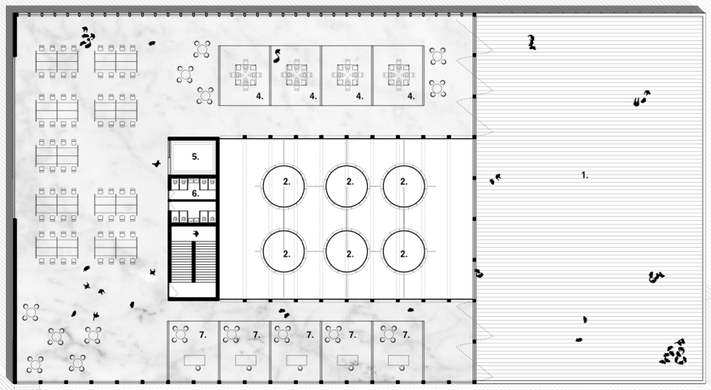
B





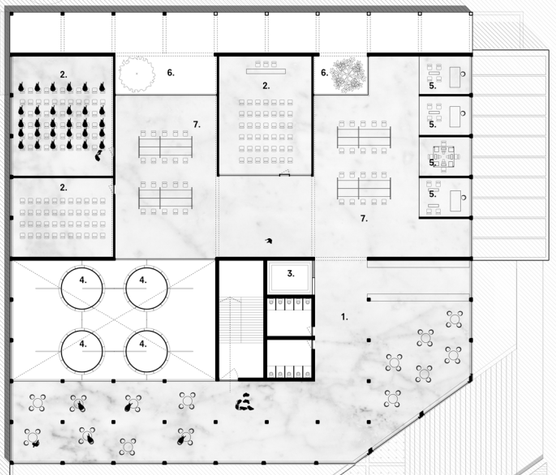




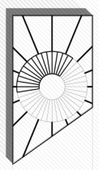


1. Covered External space/ roof terrace
2. Data Storage
3. Hot desk research space
4. Private meeting/ lecture space
5. lift core
6. Wc
7. Private Data bank offices

1. Meeting space/ university canteen
2. Lecture space
3. Lift Core
4. Data Storage
5. Private offices
6. External garden
7. Reading space

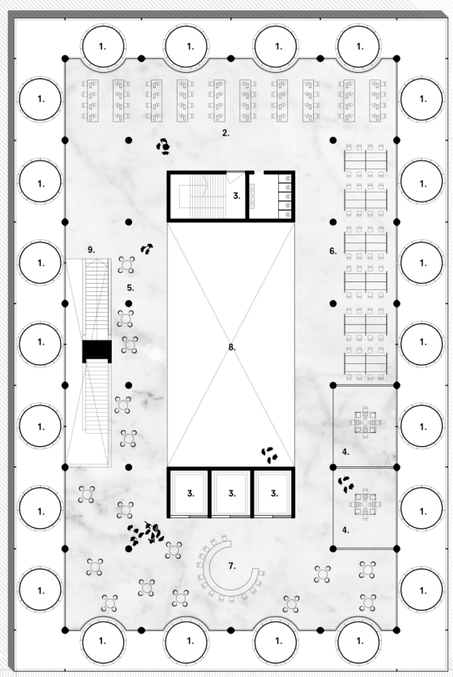


B



1. Data mausoleum

1. Data Storage
2. Computer space
3. lift/ stair core
4. Private study space
5. Break out space
6. Reading space
7. Public Cafe space
8. Atrium
9. Central Stair



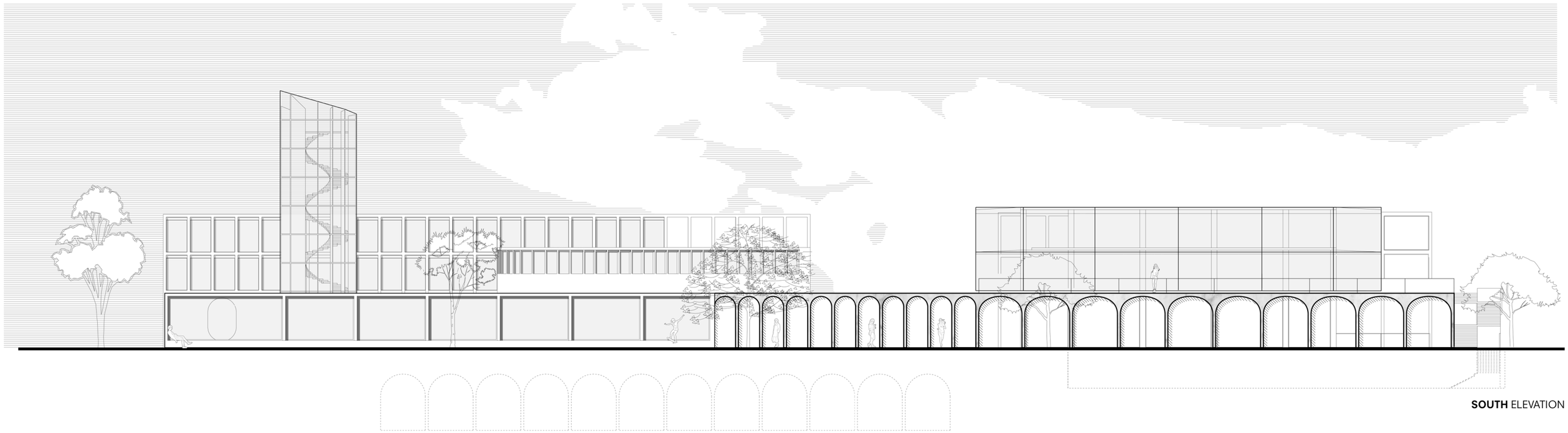
A

DATA MUNICIPALITY
Dermot Horgan

North

5000

Second Floor 1:200



SOUTH ELEVATION

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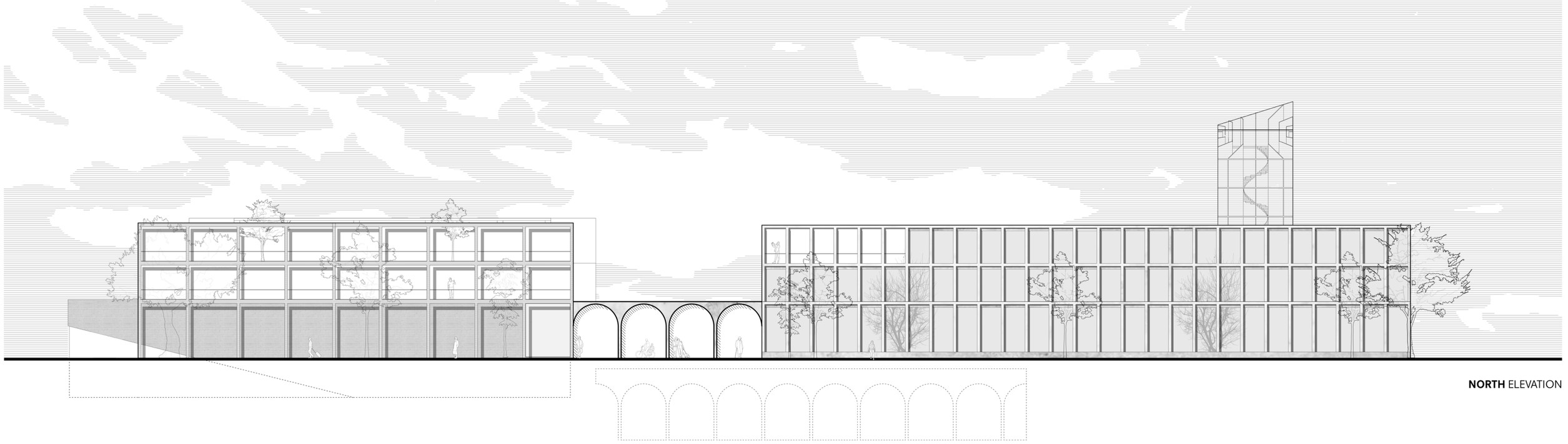
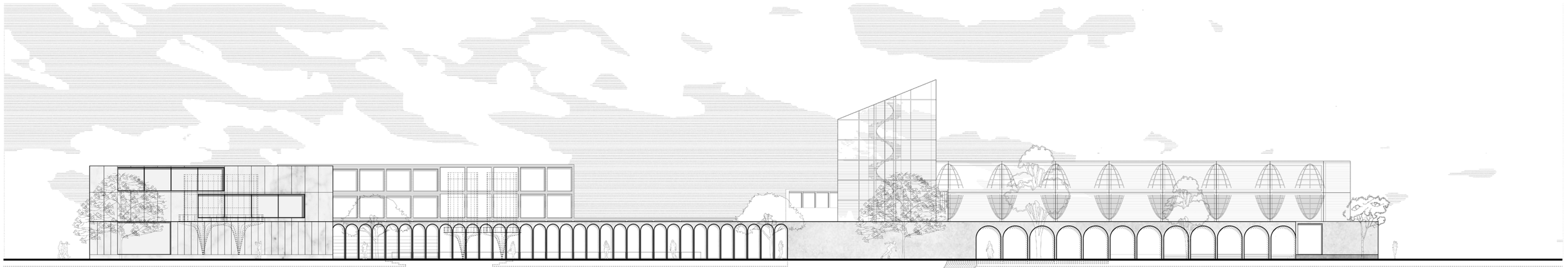
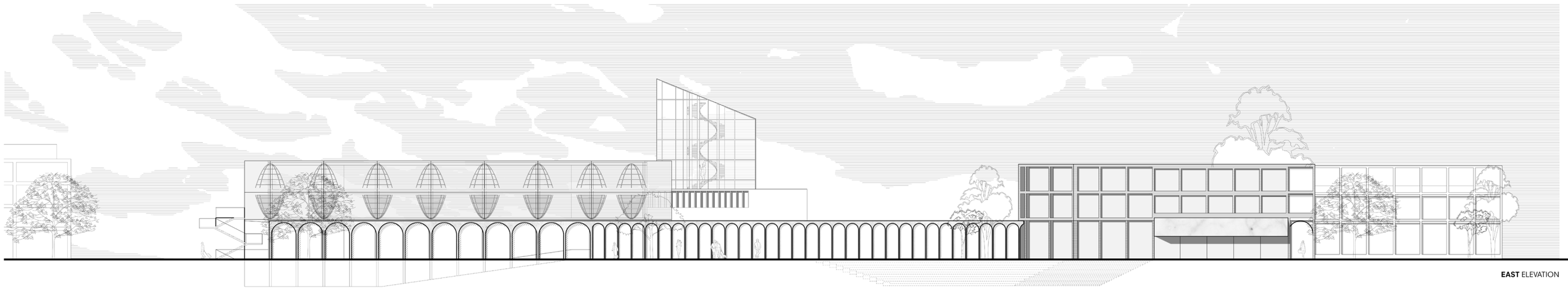


NORTH ELEVATION

10000.0



WEST ELEVATION



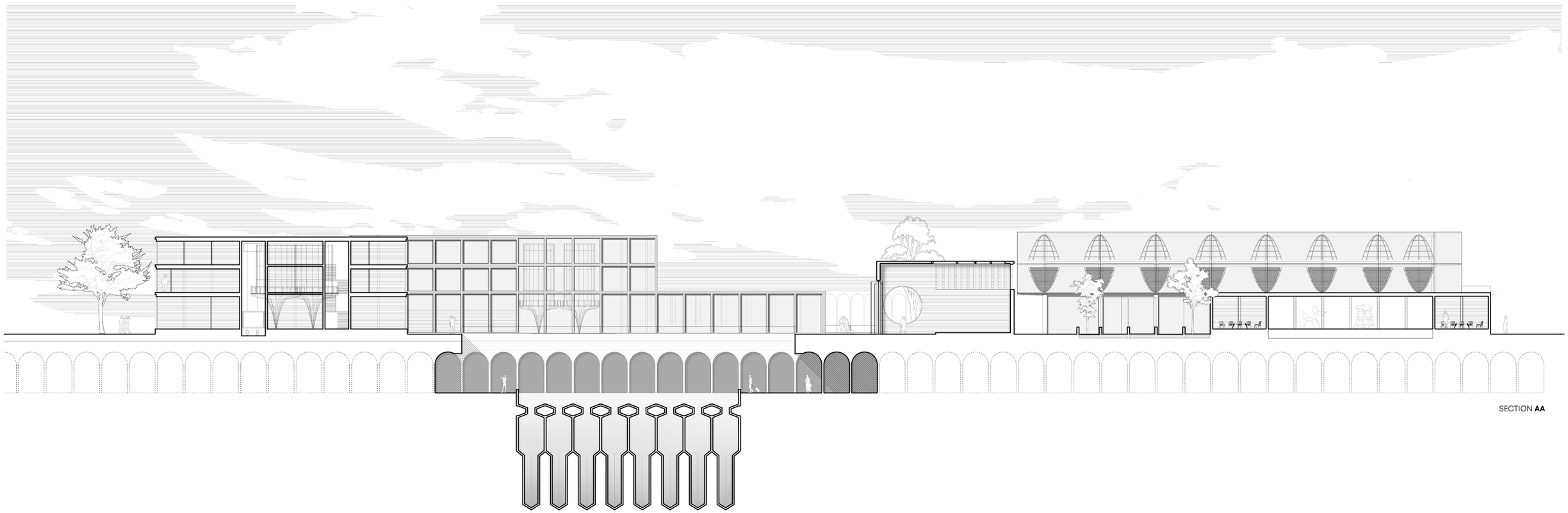
EAST ELEVATION

DATA MUNICIPALITY

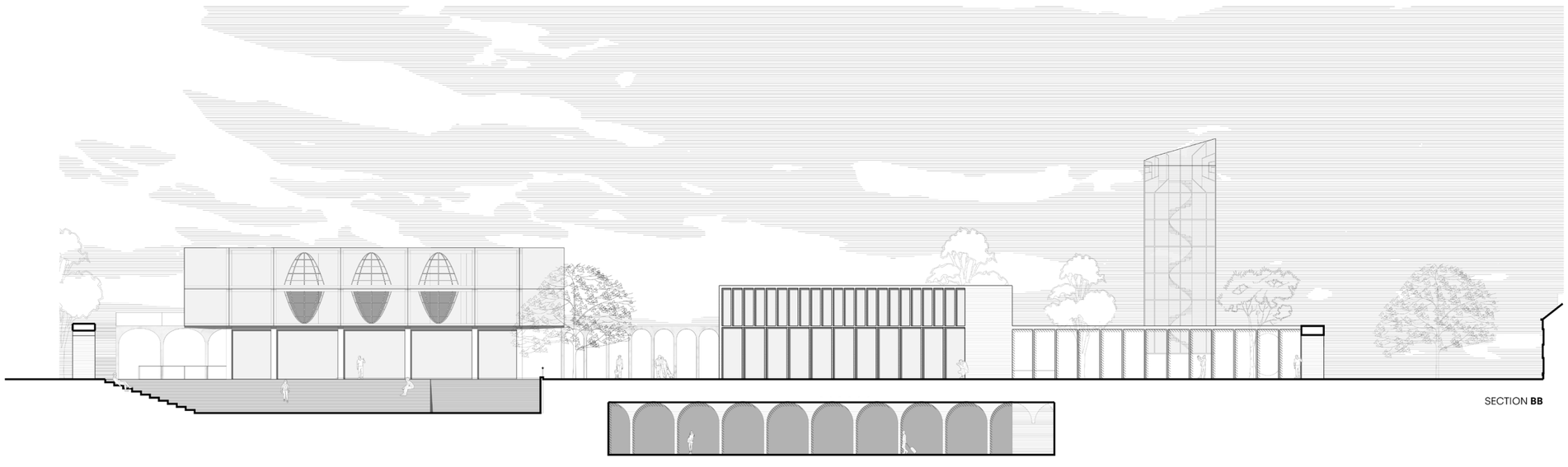
Oud Zuid

Dermot Horgan

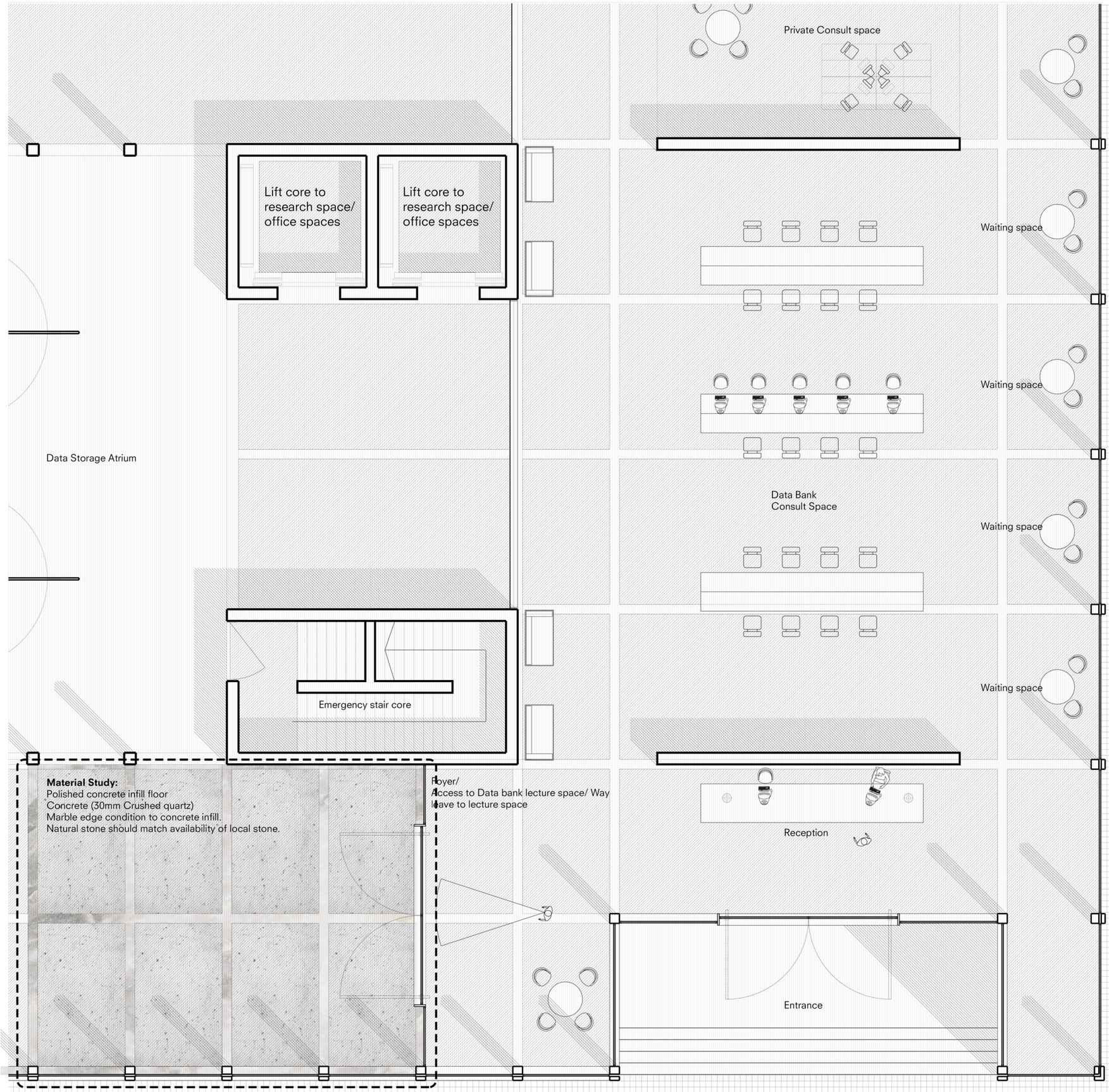
10000.0

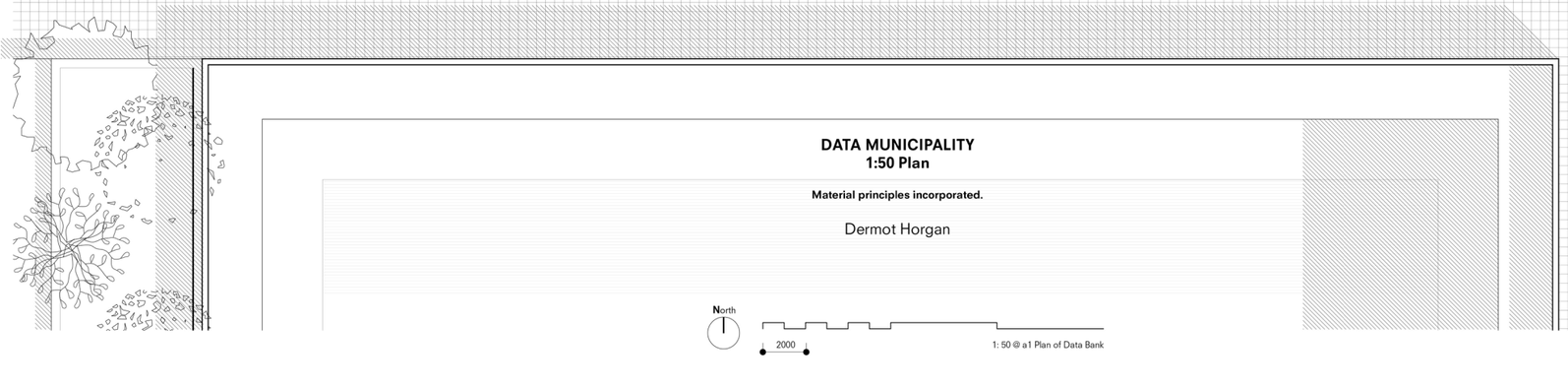


SECTION **AA**



SECTION **BB**





DATA MUNICIPALITY
1:50 Plan

Material principles incorporated.

Dermot Horgan

North

2000

1: 50 @ a1 Plan of Data Bank

Solar Gain
Amorphous Silicon Photovoltaic Glass.
Clear glass solar collector.
The collection of solar energy can be used to ensure all plant, heat exchange units and data cooling can occur in a completely carbon neutral condition. This in turn removes the stigma of Data cooling as an environmentally disasterious task.

Winter Condition
The peripheral spaces are warmed from the heat of the constantly maintained Data Atrium
Warm air is pulled in from the atrium crossing the room and heating the cool air of the space.

Summer Condition
The peripheral spaces are cooled from a fresh air intake system in the facade, this is drawn across the room using a HVAC system.

Exceptional warm: In exceptional heat (over 30˚) the heat exchanger in the Fresh air intake system uses cold water from the water storage or cooling capasity from the local municipality to cool air coming into spaces. The warm air is then drawn out of the space with the HVAC system.

Data Liquid

Data Liquid

Data Atrium
The space of the Data Atrium is kept at a constant 22˚ due to the water cooling system which pumps fresh cold water from on-site storage through a system of coils that in turn cool the suspension of nanoparticles that is 'liquid data'.

DATA LIQUID
Cold water is pumped through coils to cool the data liquid which is contained at a constant temperature.
This warm water is in-turn pumped into a shared aquafer that can be tapped into by local projects. ie. Local Swimming pool.

Fresh air intake at window opening

Heat exchanger in connection with cold water storage for Spring/ autumn cooling.

Hvac system:

Winter: Extract set to draw warm Air from the central Data Atrium in maintaing a constant 22˚ temperature.

Summer: Extract on atrium side set to extract from fresh air intake.
This intake (heat exchanger) is used in connection with cold water source (municipal capasity for tempteratures over 35˚) and internal water storage unit in all other occasions.

Cold water in.

Cold water in.

How water out

Warm Water:
This warm water is pumped into a shared aquafer lying between the Data Municipality and the Local Swimming pool, thus the warm water can be used to heat or at least aid in the heating of the swimming pool's huge warm water requirement.

Cold water out

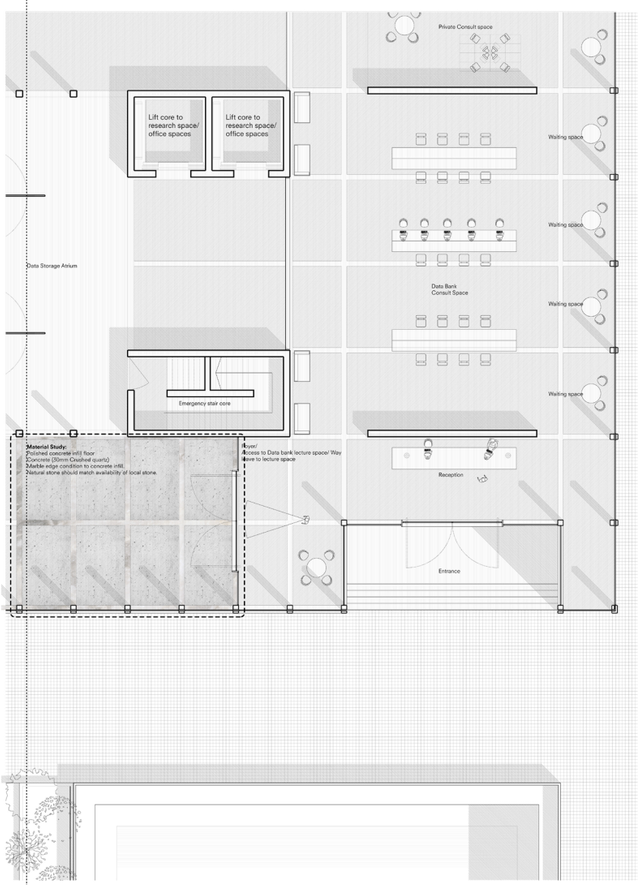
Cold water out

Water extraction here

Water pumped in here

Water Storage
Cold water storage tanks
Water contained and pumped around data coils

Water originally sources from canal water
Water returned to Aquafer for use in Local swimming pool



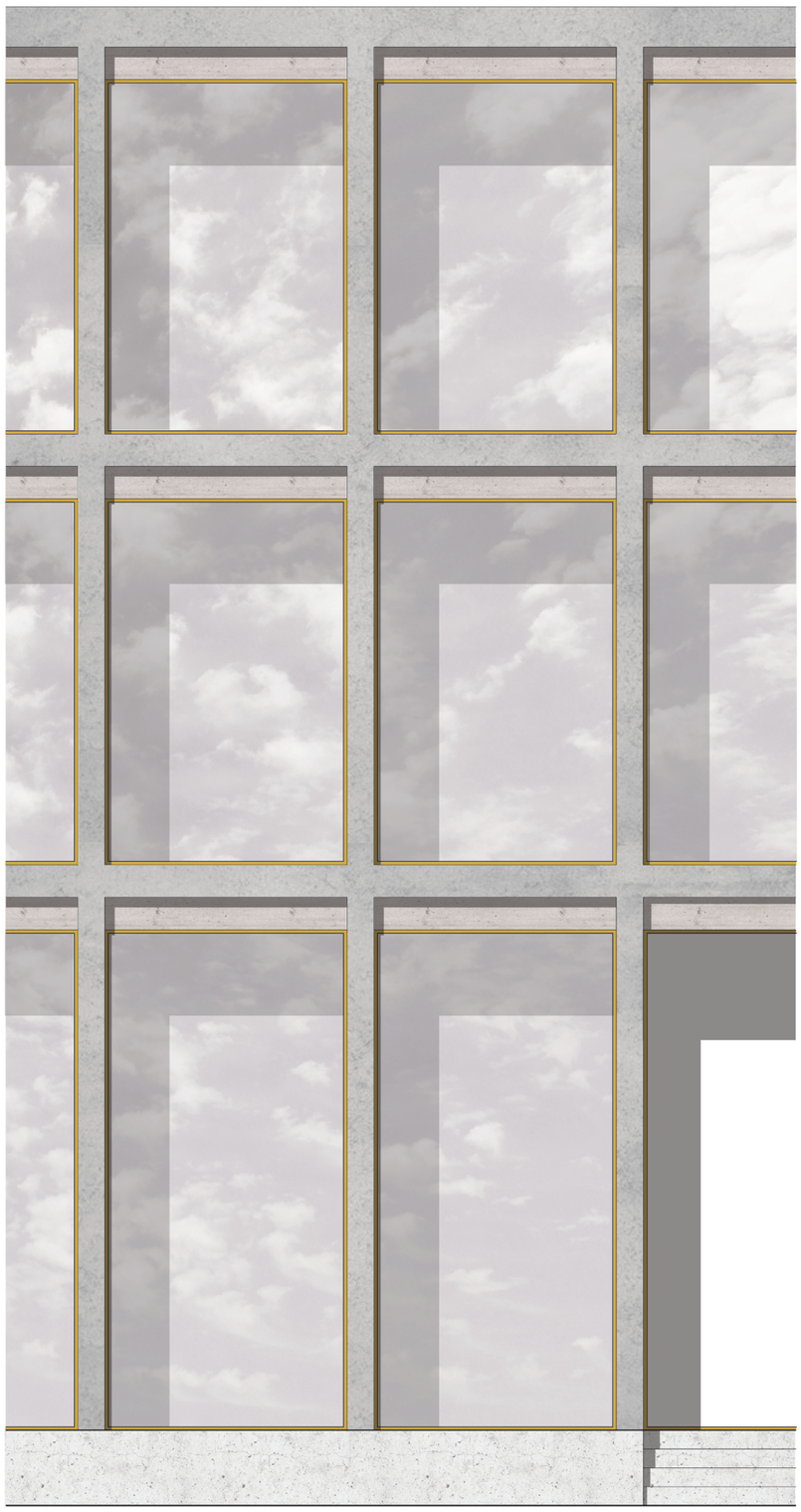
North
1:100 @ A0 Plan of DATA Bank

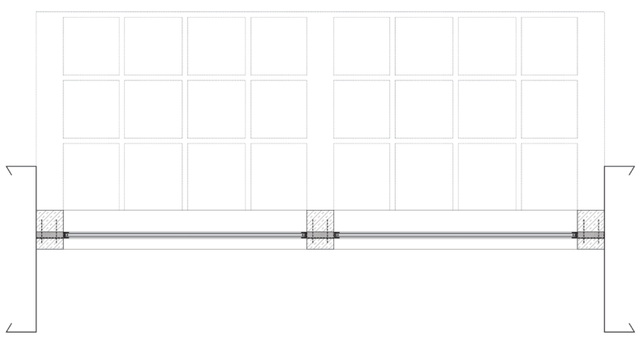
1:50 Section line

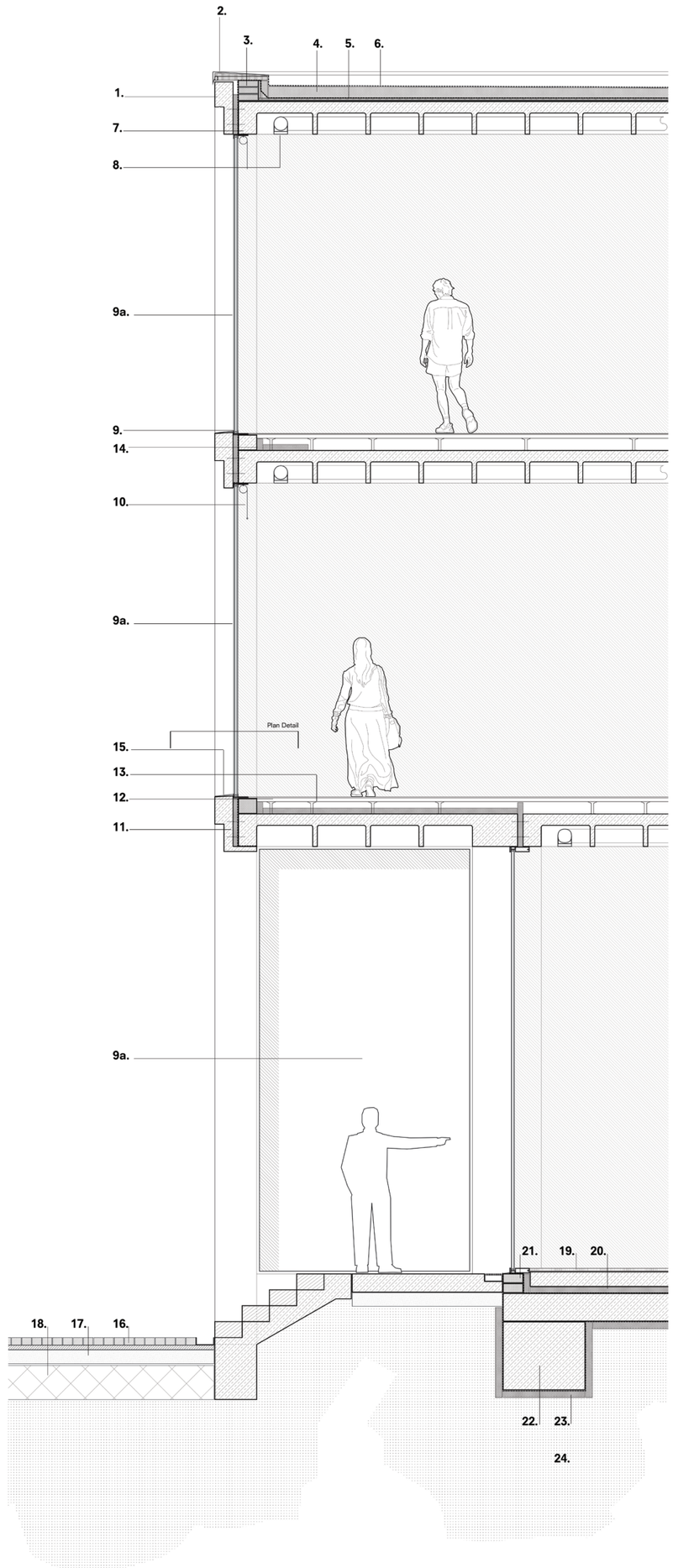
DATA MUNICIPALITY
1:50 Section/ Climate principles/ Material principles

Dermot Horgan

North
2000
1:50 @ A0







1. Acid etched precast concrete outer leaf 200 x 575mm
   Insulation attached to pre-cast concrete 75mm insulation
   damp proof barrier to insulation layer
   Decomo architectural precast concrete
2. Aluminium parapet capping
3. Foam glass perinsul SL insulating block
4. 150mm extruded polystyrene insulation board
5. Water/ damp proof course
6. non-woven polyester fleece 130-140 g/m2

7. Insitu concrete waffle slab
   500mm depth
   Spanning 2.5m grid
8. HVAC intake unit (drawing air from data atrium)

9. Double glazing unit
   2 x 8mm glazzing layer
9a. Glass type:
   Glass: SageGlass electrocromatic glazing for occupant comfort

   Steel casement window frame finished to architects specification
10. Internal blind fixed to window unit
11. External leaf tied back to internal structure
12. Raised floor finish
13. Adjustable floor pedestals
14. Insulation at edges to ensure cold bridge
15. Aluminium screen for water run-off

16. Lime stone blocks , External paving 85mm x 85mm
    Exposed aggregate finish
17. Sand layer 150mm
18. Concrete blinding layer 375mm

Ground floor build up:

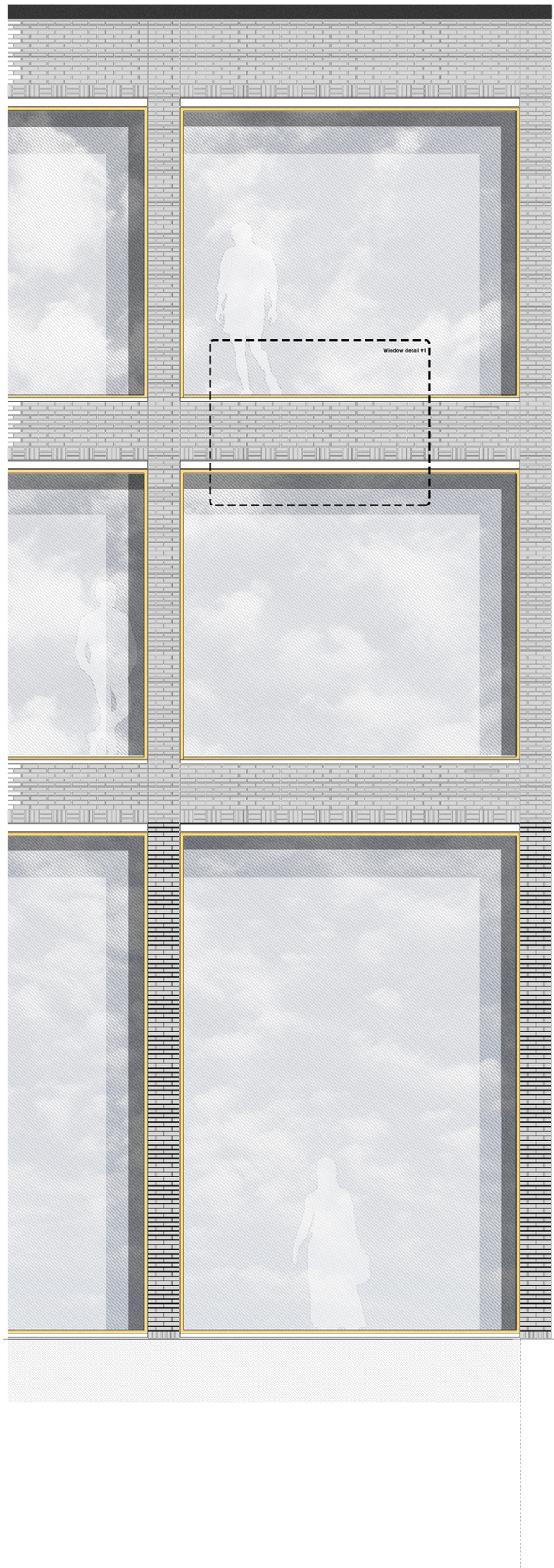
19. Polished concrete finish to Data bank floor 30mm
    Concrete floor slab 160mm

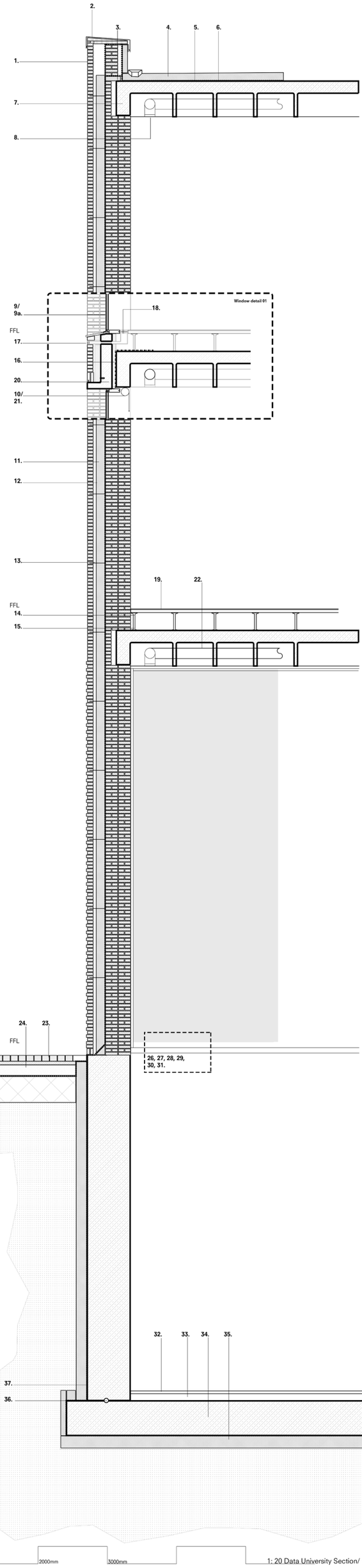
20. 75mm insulation board (Kingspan insulation board)
21. Insulated block (foamglass perinsul SL insulting block 100 x 215mm)
22. Concrete foundation to engineers specification
23. Insulation to foundation 100mm
24. Concrete pile construction to Engineers specidication

Insulation
In-situ concrete
Timber/ Floor finishes
Concrete blinding
Stone/ polished concrete finish
Brick
Sand layer
Hardcore
Insulative block

0m 1000mm 2000mm 3000mm

1 : 20 Data Bank Detail





Insulation

In-situ concrete

Timber/ Floor finishes

Concrete blinding

Stone/ polished concrete finish

Brick

Sand layer

Hardcore

Insulative block

1. Clay brick standard dimesion 65 x 100mm External and internal structural layer to engineers specifications
   Powder gray colour
   Stretcher bond
2. Aluminium parapet capping
   25mm plywood backing
   Tapered insulation board to underneath of plywood.
3. Foam glass perinsul SL insulating block
4. 150mm extruded polystyrene insulation board
5. Water/ damp proof course
   Kessel Water drain for roof water run-off.
6. non-woven polyester fleece 130-140 g/m2 to underneath of polystyerene insulation.
7. Insitu concrete waffle slab
   520mm depth
   Spanning 4m spans resting on structural brick leaf
8. HVAC intake unit (drawing air from data atrium)
9. Double glazing unit
   Aluminium screen: window frame finished to architects specification and RAL.
   2 x 8mm glazzing layer

9a. Glass type:
   Glass: SageGlass electrocromatic glazing for occupant comfort

10. Internal blind steel fixing
11. External leaf tied back to internal structure

12. Kingspan 120mm insulation board
13. Aluminium tie backs
14. Raised floor finish
15. Adjustable floor pedestals
16. Insulation at edges to ensure cold bridge
17. Aluminium screen for water run-off

18. Air intake
    Heat exchanger to climate consultant's specification
    Attached to municipal cooling capasity system

19. Raised floor tray
    Adjustable floor pedestals
20. Precast Concrete lintel 780 x 160mm
    Acid etching finish to architects specification
    Insulation to back 50mm

21. Internal blind for occupant comfort
22. Exposed finsh to waffle slab ceiling

23. Lime stone blocks ,External paving 85mm x 85mm
    Exposed aggregate finish
24. Sand layer 150mm
25. Concrete blinding layer 375mm

Ground floor build up:

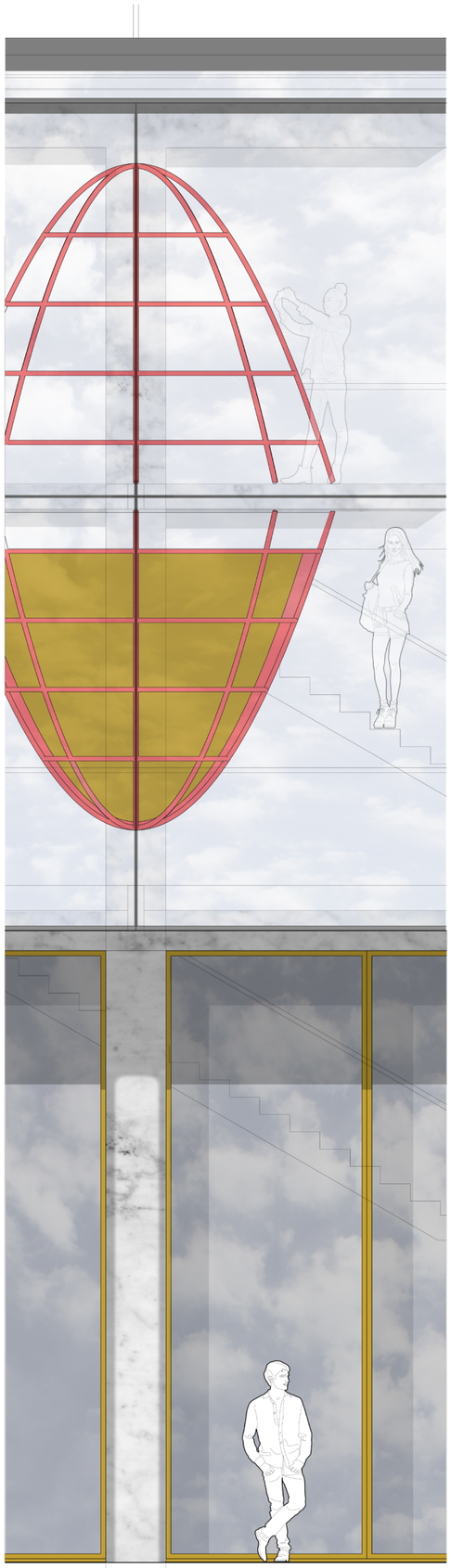
26. Polished concrete finish to University building 30mm
    Concrete floor slab 160mm
27. 75mm insulation board (Kingspan insulation board)
28. Insulated block (foamglass perinsul SL insulting block 100 x 215mm)
29. Concrete foundation to engineers specification
30. Insulation to foundation 100mm
31. Concrete pile construction to Engineers specidication

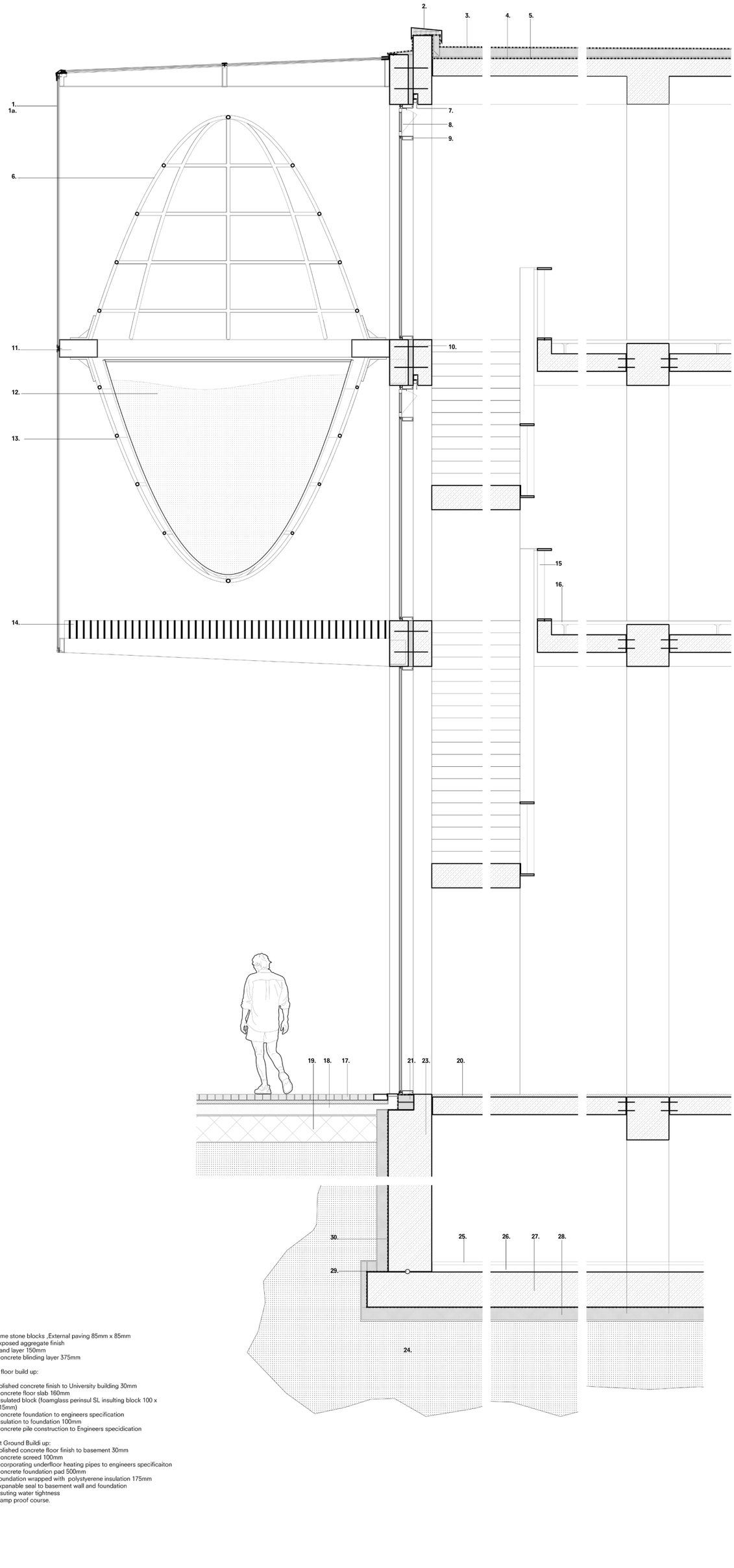
Basment Ground Buildi up:

32. Polished concrete floor finish to basement 30mm
33. Concrete screed 100mm
    Incorporating underfloor heating pipes to engineers specificaiton
34. Concrete foundation pad 500mm
35. Foundation wrapped with polystyerene insulation 175mm
36. Expanable seal to basement wall and foundation insuting water tightness
37. Damp proof course.

0m 1000mm 2000mm 3000mm

1: 20 Data University Section/ detail





Insulation

In-situ concrete

Timber/ Floor finishes

Concrete blinding

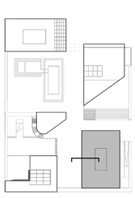
Stone/ polished concrete finish

Brick

Sand layer

Hardcore

Insulative block



1. Double glazing unit
   Aluminium screen: window frame finished to architects specification and RAL.
   2 x 8mm glazzing layer
1a. Glass type:
   Glass: SageGlass electrocromatic glazing for occupant comfort
2. Aluminium parapet capping
   25mm plywood backing
   Tapered insulation board to underneath of plywood.
3. Foam glass perinsul SL insulating block
4. 150mm extruded polystyrene insulation board
5. Water/ damp proof course
   Kessel Water drain for roof water run-off.
   non-woven polyester fleece 130-140 g/m2
   to underneath of polystyerene insulation.
6. Expandable steel data container
   Stainless steel hollow tube
   Ral 3024
7. Internal blind steel fixing
8. Internal double glazing unit
   Openable window for human comfort
9. Double glazing unit
   Aluminium screen: window frame finished to architects specification and RAL.
   2 x 8mm glazzing layer
10. Precast contruction to engineers specification
    Steel tie connection
    Insulation:
    Kingspan 120mm insulation board
11. Steel box structural support to glazing unit
    and Data containers
12. Liquid state DATA.
13. Hollow steel tubing used to cool liquid data in connectio with
    on-site water containers and municipal cooling capasity.
14. Steel fin construction for data container maintainance
15. Steel balustrade
    10mm thickness
16. Raised floor finish
    Adjustable floor pedestals
    Insulation at edges to ensure cold bridge
17. Lime stone blocks ,External paving 85mm x 85mm
    Exposed aggregate finish
18. Sand layer 150mm
19. Concrete blinding layer 375mm

Ground floor build up:

20. Polished concrete finish to University building 30mm
    Concrete floor slab 160mm
21. Insulated block (foamglass perinsul SL insulting block 100 x
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22. Concrete foundation to engineers specification
23. Insulation to foundation 100mm
24. Concrete pile construction to Engineers specidication

Basment Ground Buildi up:

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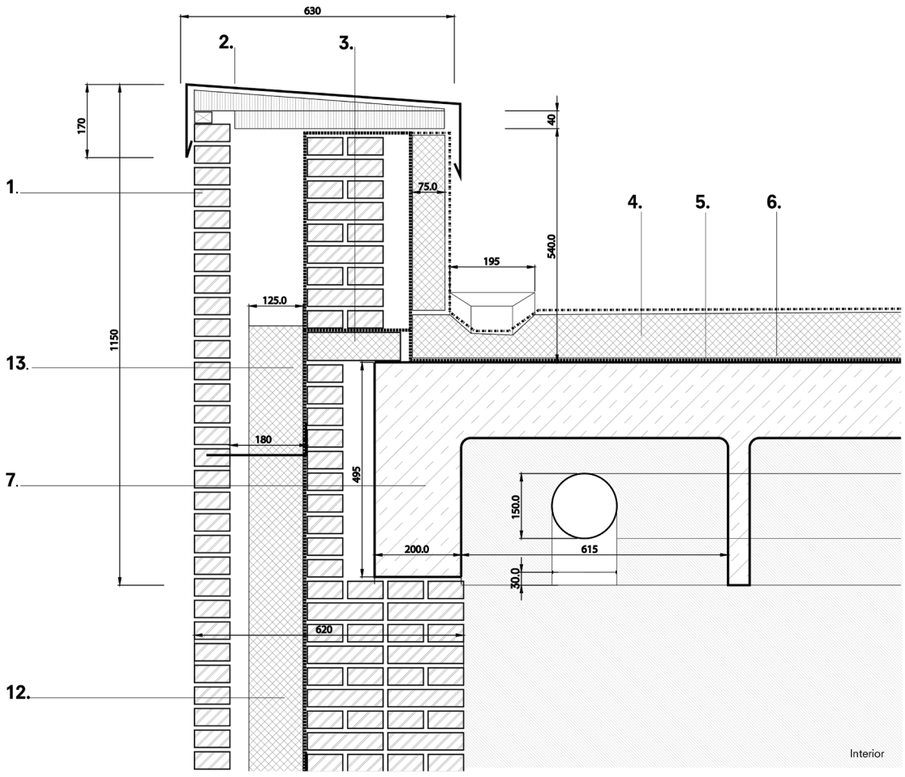
    Incorporating underfloor heating pipes to engineers specificaiton
27. Concrete foundation pad 500mm
28. Foundation wrapped with polystyerene insulation 175mm
29. Expanable seal to basement wall and foundation
    insuring water tightness
30. Damp proof course.

0mm | 1000mm | 2000mm | 3000mm | 4000mm

1:20 @ A0 Data library section + Elevation



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   to engineers specifications
   Powder gray colour
   Stretcher bond
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   25mm plywood backing
   Tapered insulation board to underneath of plywood.
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4. 150mm extruded polystyrene insulation board
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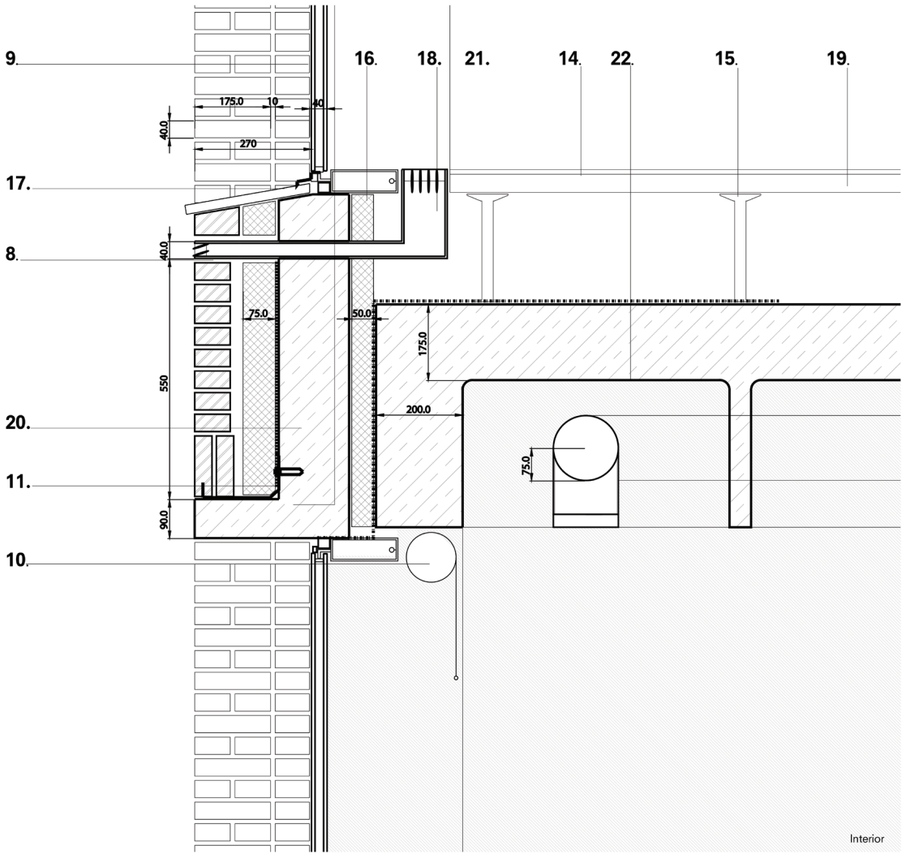
7. Insitu concrete waffle slab
   520mm depth
   Spanning 4m spans resting on structural brick leaf



8. HVAC intake unit (drawing air from data atrium)
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    Acid etching finish to architects specification
    Insulation to back 50mm

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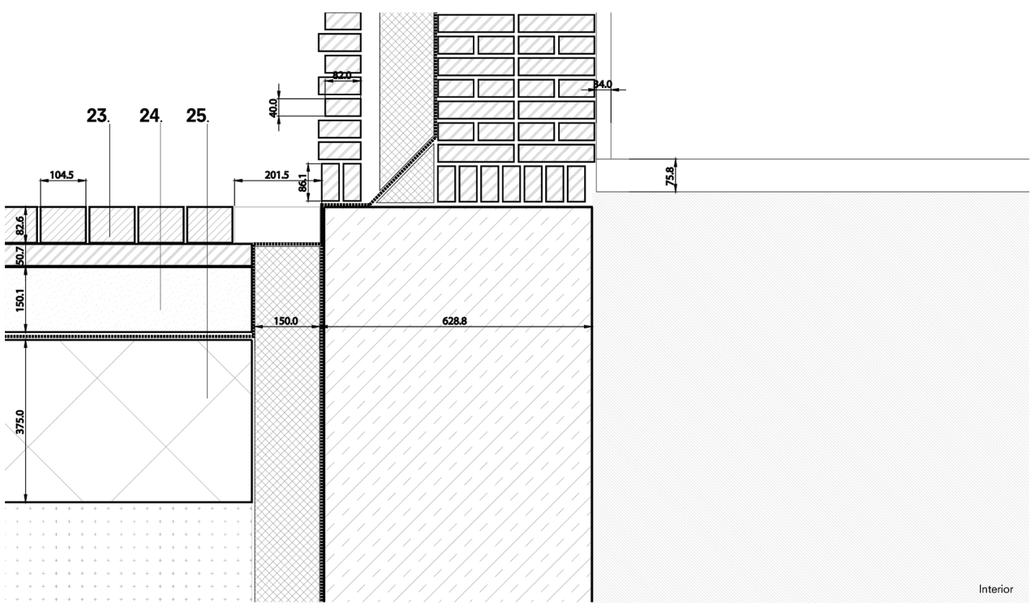

23. Lime stone blocks ,External paving 85mm x 85mm
    Exposed aggregate finish
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25. Concrete blinding layer 375mm

Ground floor build up:

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29. Concrete foundation to engineers specification
30. Insulation to foundation 100mm
31. Concrete pile construction to Engineers specidication

DATA MUNICIPALITY
Dermot Horgan

Insulation
In-situ concrete
Timber/ Floor finishes
Concrete blinding
Stone/ polished concrete finish
Brick
Sand layer
Hardcore
Insulative block

1: 5 Details of Data University Building

0mm 200mm 400mm