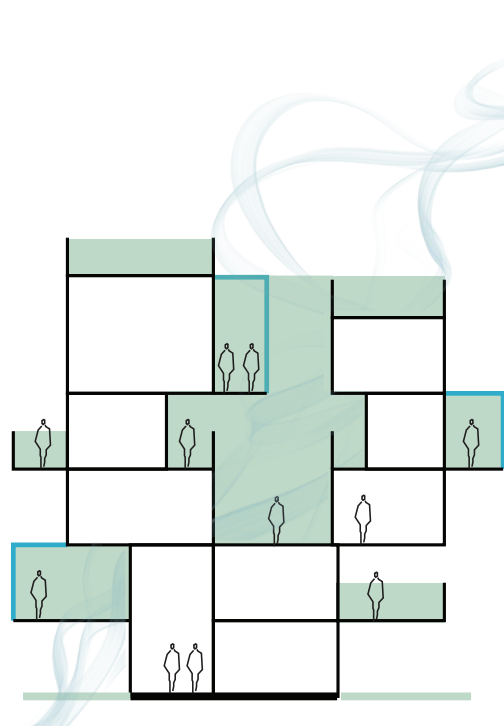
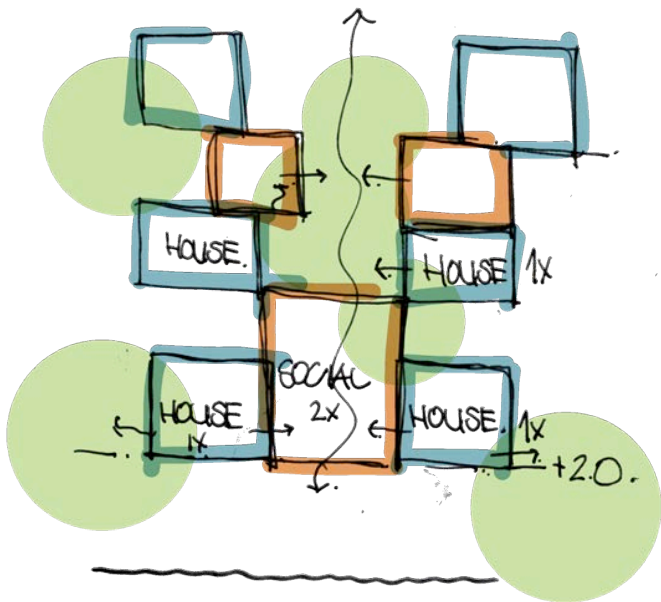


Sensory-Informed Architecture: Long-Term Care for Individuals with Mid to Late Stage Dementia

Table of Contents

January - June 2023	Design Progress
June 2023	Preliminary Review Presentation Content
August - November 2023	Design Progress
November 2023	Intermediate Review Presentation Content
November - December 2023	Design Progress
December 2023	Final Review Presentation Content



Site Selection Criteria

Supportive Neighbourhood Characteristic for Dementia

Sensory Engagement

- 

Why
- Direct sensory sensations of the environment help to remember & identify spaces

(Feddersen, 2014, pg. 11)
- Sense of Time

Seasonal Indications

(Dumurgier et. al., 2016)
- 

What
- Variety of Greenspaces

Parks

Greenways



Dunbar Fall Colours

(Wilson, n.d.)

Character of Place

- 

Why
- Unique spaces that to help identify with increase sense of belonging

(Feddersen, 2014, pg.11)
- 

What
- Unique Characteristics

Historic Significance



Vancouver Heritage Buildings

(City of Vancouver, n.d.)

Active Surroundings

- 

Why
- Decreased Loneliness

Providing Passive Observations

Community Inclusion

(Jones, 2018)
- 

What
- Neighbourhood Centres

Social & Activity Hubs

Medium-High Density

Multi-Family, Amenities



Vancouver Pop-Up Plaza

(City of Vancouver, 2021)

Site Accessibility

- 

Why
- Maintaining Relationships

Increasing likely hood of visitations from friends & family

(Jones,2018)
- 

What
- Variety of Access Route

Major Vehicle Routes

Public Transporation

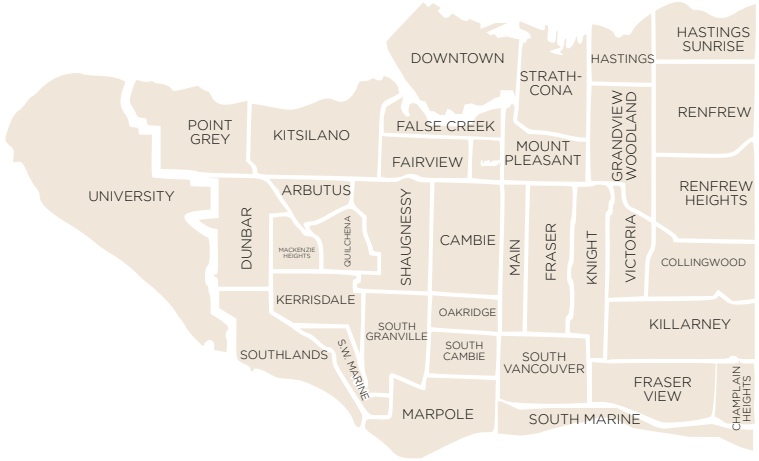
Greenways



Commercial-Broadway Station

(Translink, 2019)

Site Selection Criteria
Supportive Neighbourhood Characteristic for Dementia



Sensory Engagement

? What

Variety of Greenspaces
Parks
Greenways



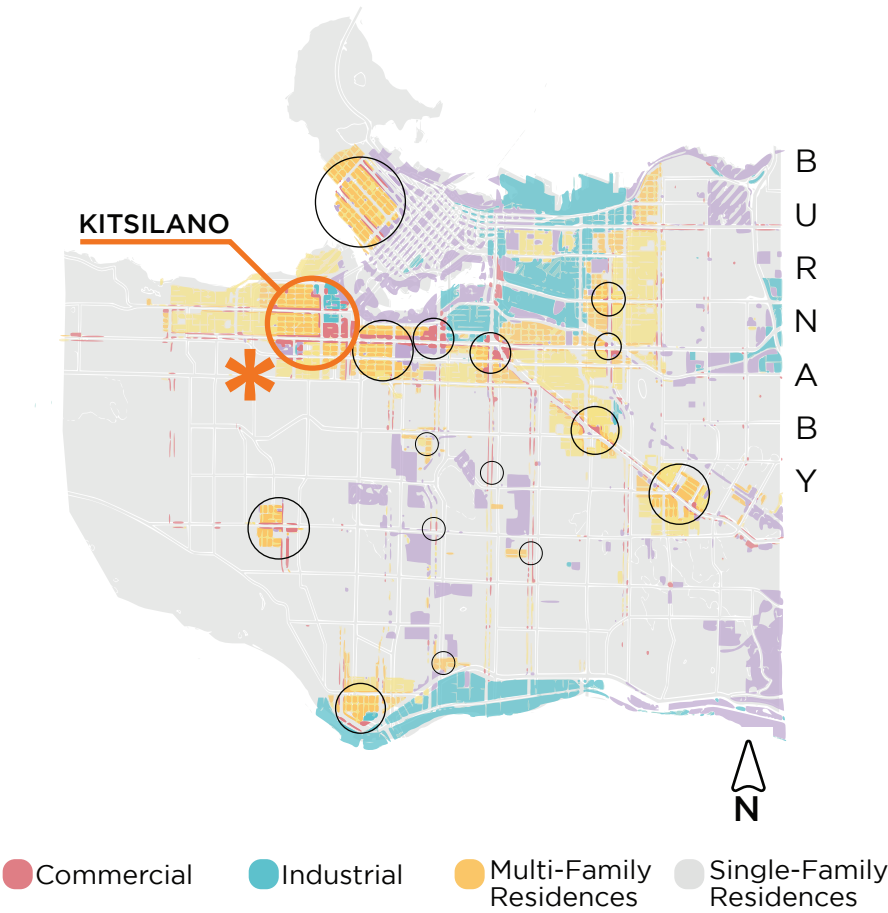
Vancouver Greenspaces
Parks & Greenways

Active Surroundings

? What

Neighbourhood Centres
Social & Activity Hubs

Medium-High Density
Multi-Family, Amenities

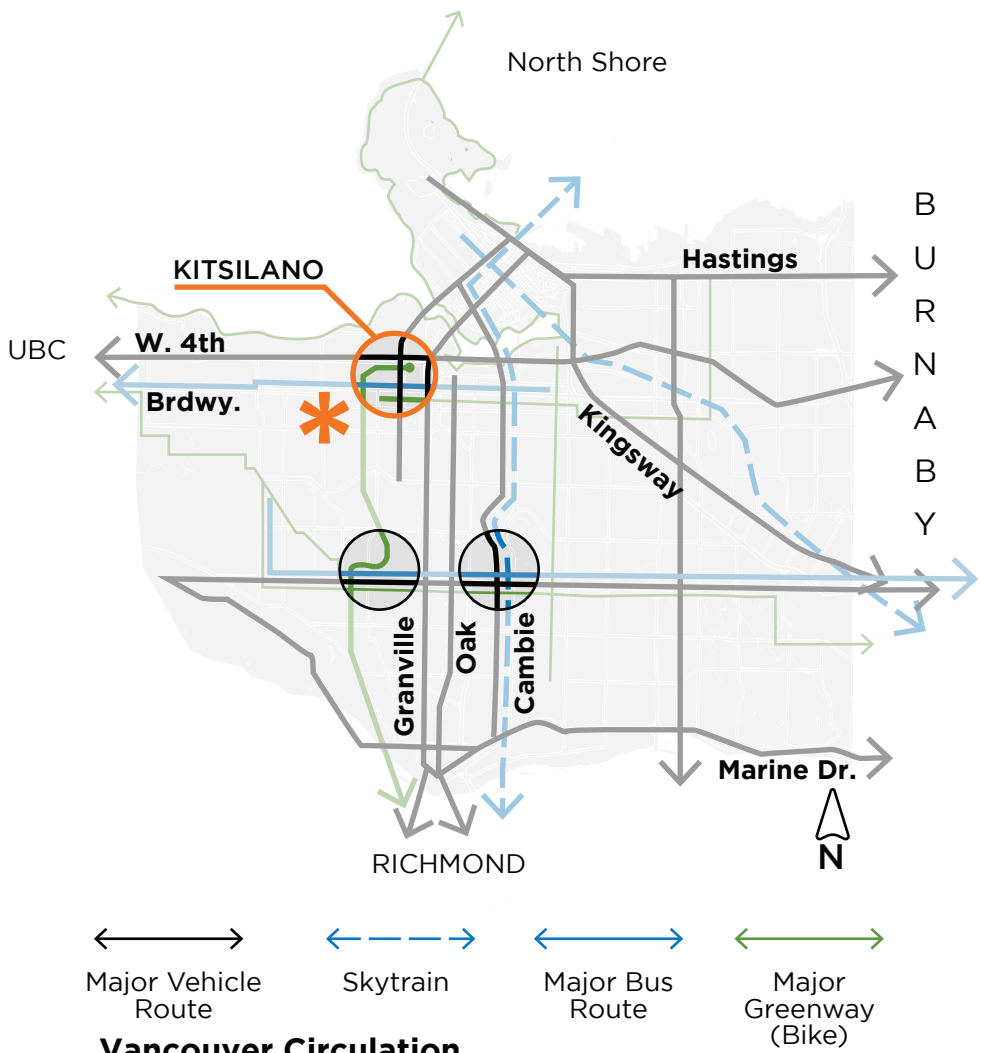


Vancouver Zoning & Density Map

Site Accessibility

? What

Variety of Access Route
Major Vehicle Routes
Public Transportation
Greenways



Vancouver Circulation
Public Transportation
Vehicle Routes
Greenways

Neighbourhood Selection: Kitsilano

Walkability Radius

Individuals living with dementia should
excercise up to 30 minutes a day
(Alzheimer’s Society, n.d.)

10min. walk = 0.5 km

0.5km Radius Circle



Sensory Engagement

? What

Variety of Greenspaces
Parks
Greenways



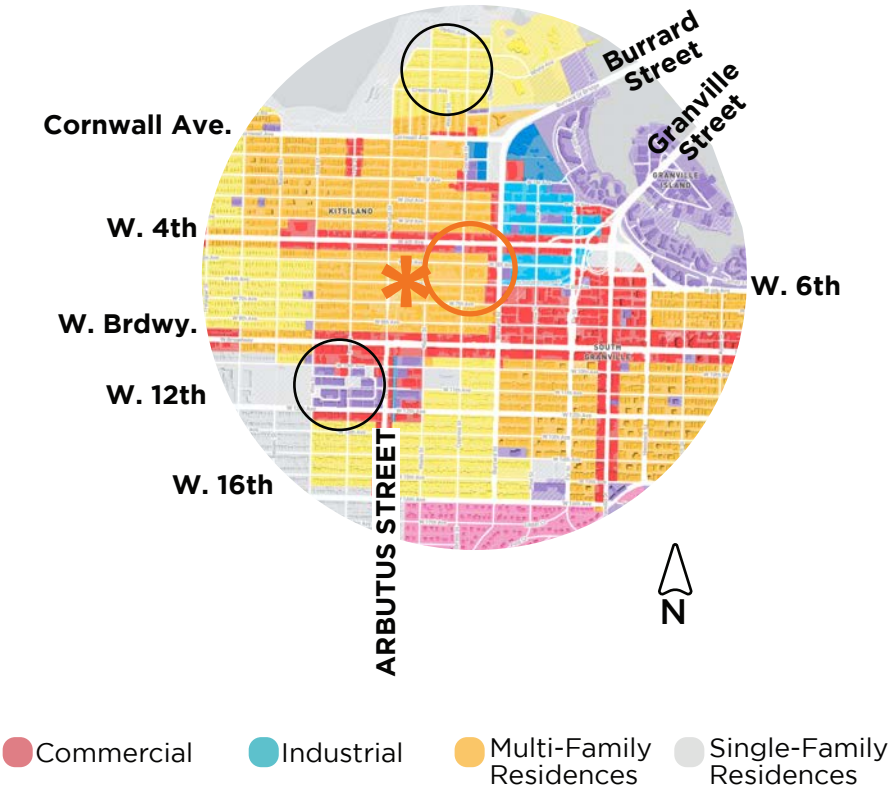
Vancouver Greenspaces
Parks & Greenways

Active Surroundings

? What

Neighbourhood Centres
Social & Activity Hubs

Medium-High Density
Multi-Family, Amenities

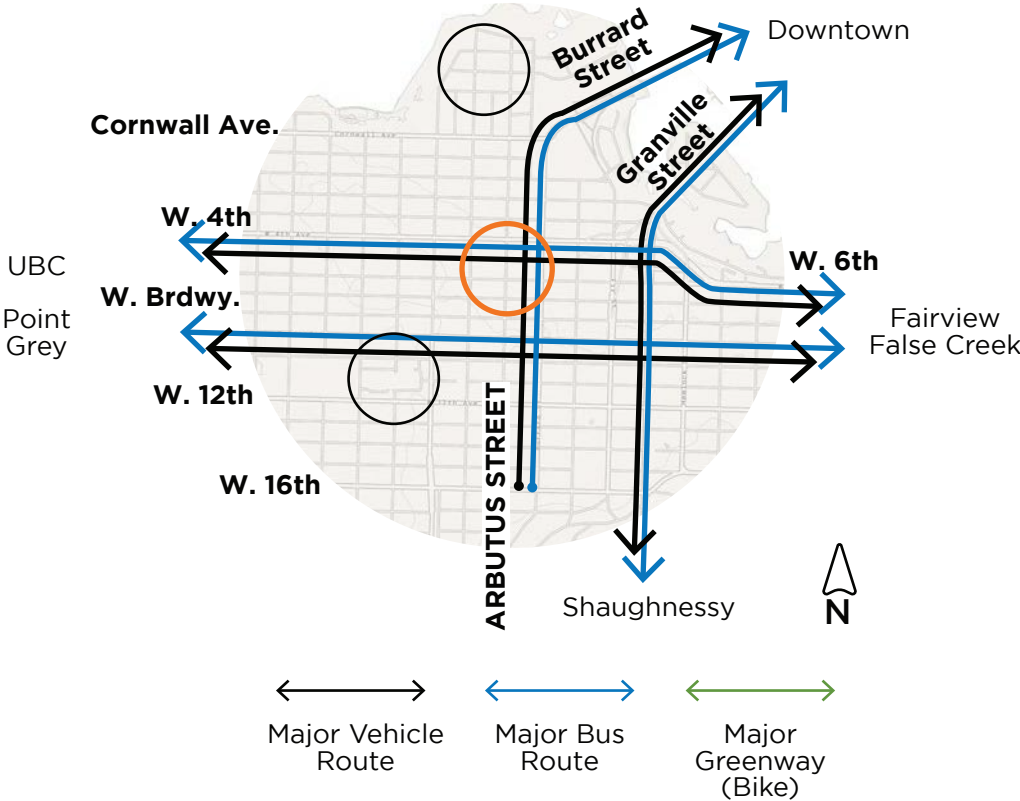


Vancouver Zoning & Density Map

Site Accessibility

? What

Variety of Access Route
Major Vehicle Routes
Public Transportation
Greenways



Vancouver Circulation
Public Transportation
Vehicle Routes
Greenways

Character of Place: Kitsilano
Micro Neighbourhood Profile

H Kitsilano's Oldest Intact Neighbourhood - Pre-WW1
(Heritage Vancouver, 2013)



2050 West 5th
(Heritage Vancouver Society, n.d)



2090 West 5th
(Heritage Vancouver Society, 2011)



2068 West 6th
(Heritage Vancouver Society, n.d)



Cypress
Community Garden
(Smith, n.d)



Arbutus Greenway
(City of Vancouver, n.d)



"City Farmer"
Demonstration Garden
(City Farmer, 2022)



Arbutus Coffee
(Heritage)
(Th3rd Wave, n.d.)



Historic Delamont Park
(Th3rd Wave, n.d.)



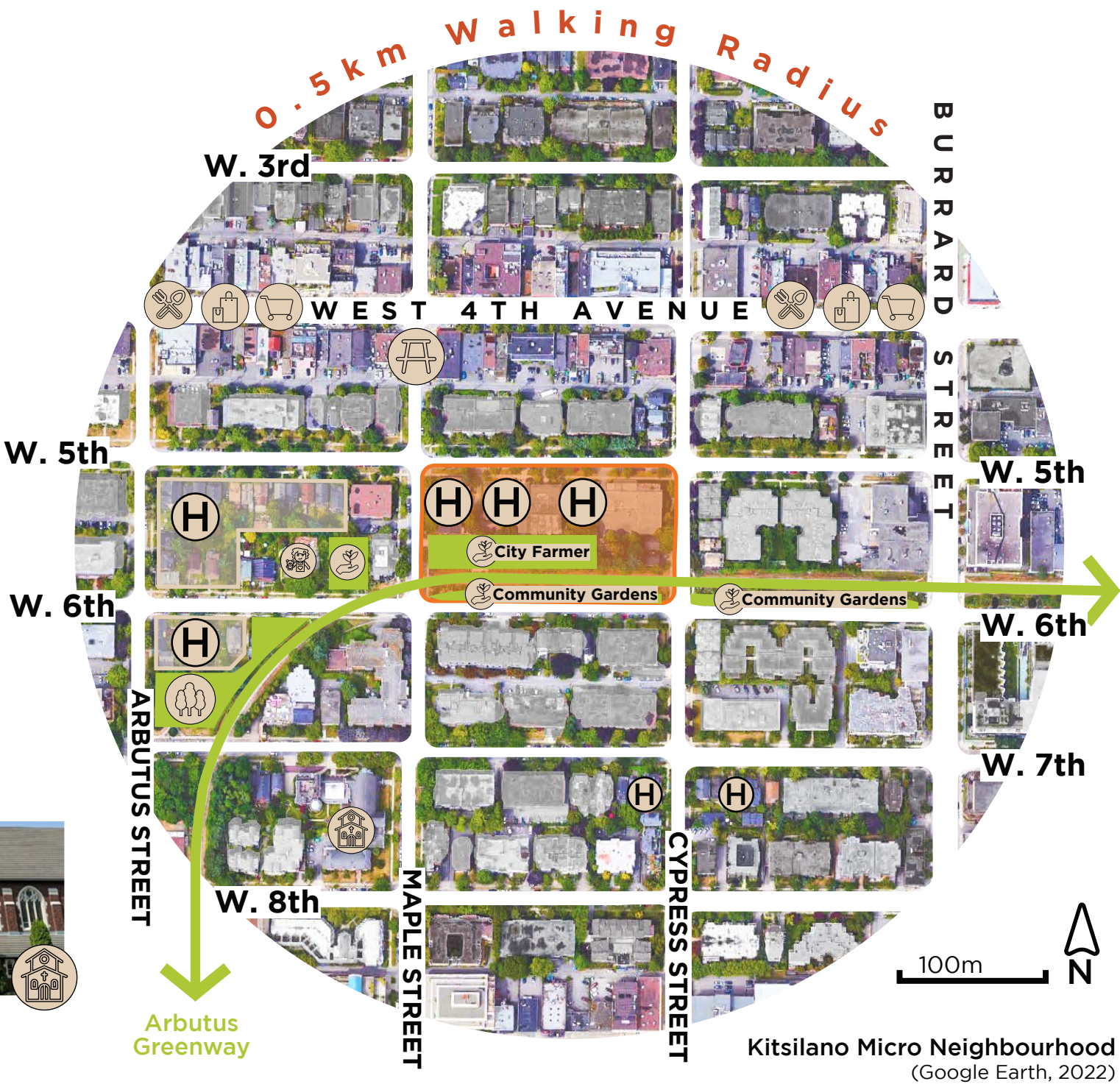
St. Augustine Parish
(Esterhuizen, 2018)



Maple Street & W 4th Neighbourhood Plaza
(City of Vancouver, 2021)



West 4th Street
(Google Earth, 2021)

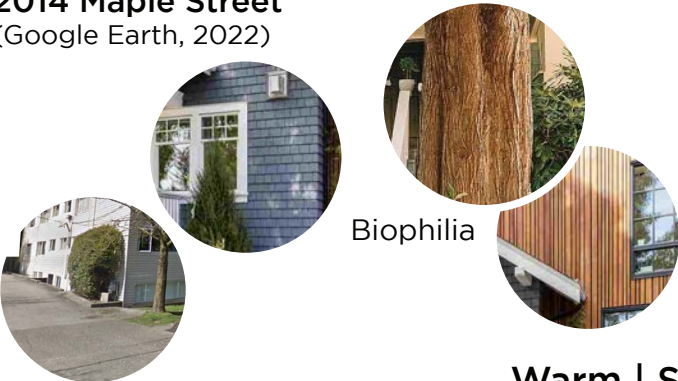


Character of Place: Kitsilano
Block Profile

Late 1980s
Multi-Family Homes



2014 Maple Street
(Google Earth, 2022)



Biophilia

Accessible

Warm | Soft | Vibrant



2080 West 5th Ave
(Stefan, n.d.)

H Early 1900s
Single-Family
Heritage Houses



2104-2108 Maple Street
(Google Earth, 2022)



Inaccessible
Social Space



2112 Maple Street
(Stonehouse Team, n.d.)



A Sensory Engaging Care
Residence for Mid-Late Stage Dementia



“City Farmer”
Sensory Engaging Environment

Compost Demonstration
Garden
Social & Activity Hubs

Education centre on growing
food in the city, composting &
home landscaping in
environmentally responsible
ways
(City Farmer, 2022)

City Farmer
Neighbourhood
Music Event
(City Farmer, 2022)



City Farmer Outdoor
Classroom
(City Farmer, 2022)



Arbutus Greenway
Visual Engagement
(City Farmer, 2022)

Site Inventory: Existing Structures

MF-1



Multi-Family (Side)
Early/Mid
(Google Earth, 2022)

SF-3




Single-Family Heritage House
Gabled Vernacular
(Google Earth, 2022)

MF-2



Multi-Family House Contemporary
(VLR, 2020)

SF-2



Single-Family House Contemporary
(Google Earth, 2022)

SF-1

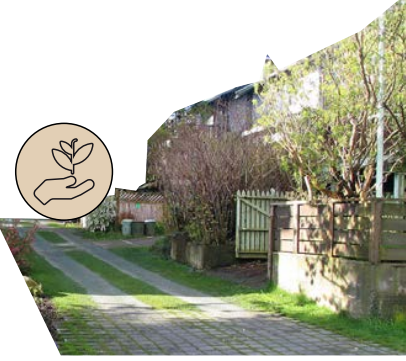



Multi-Family Heritage House
Gabled Vernacular
(Google Earth, 2022)

MF-1

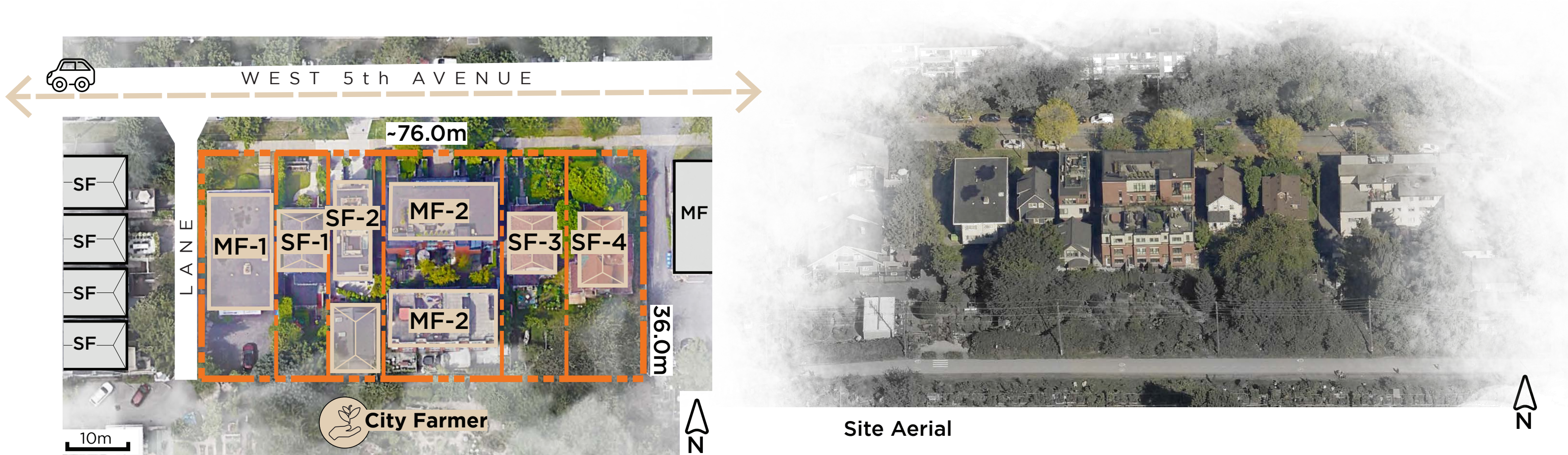


Multi-Family House Late 1980s
(Google Earth, 2022)



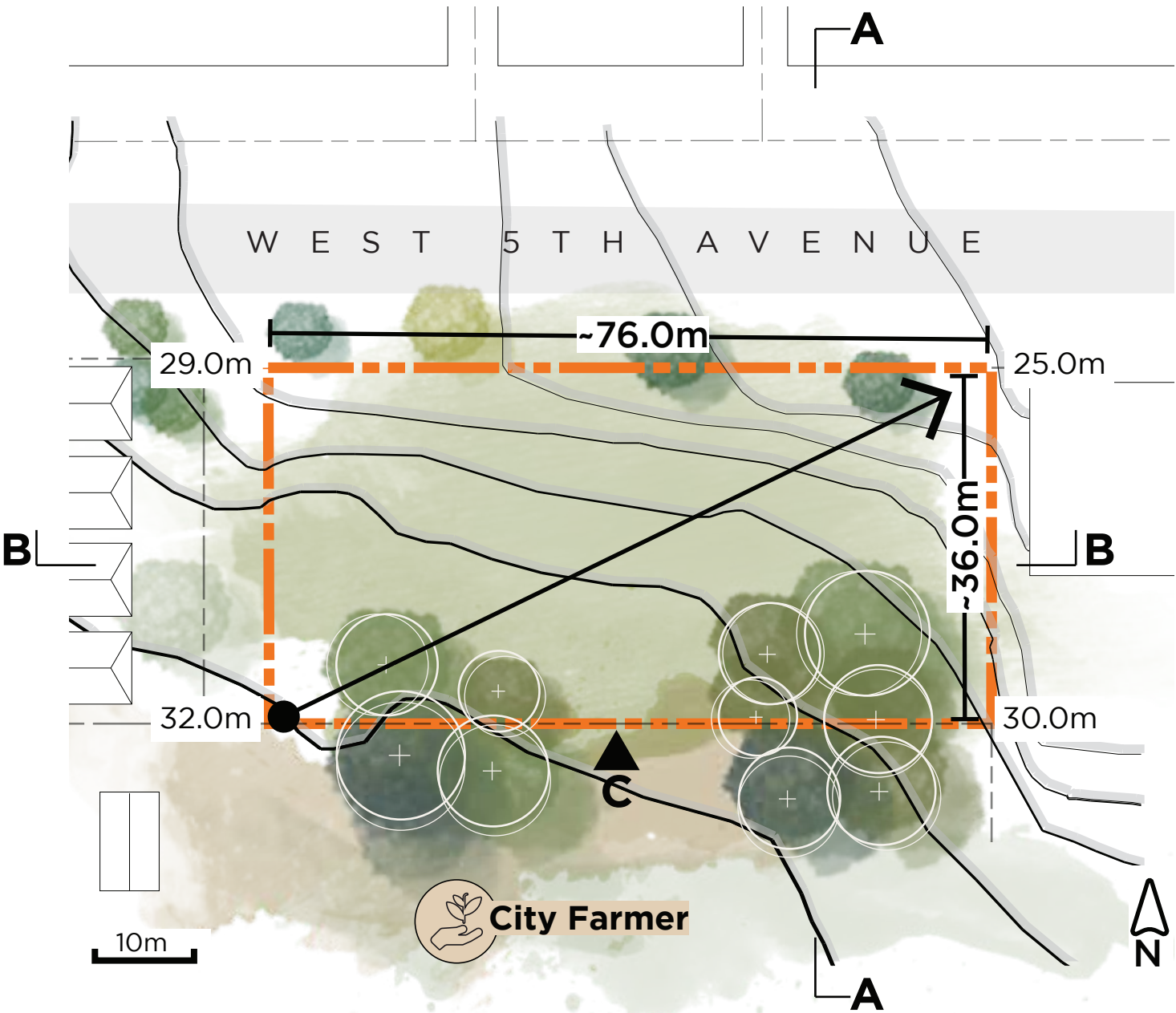
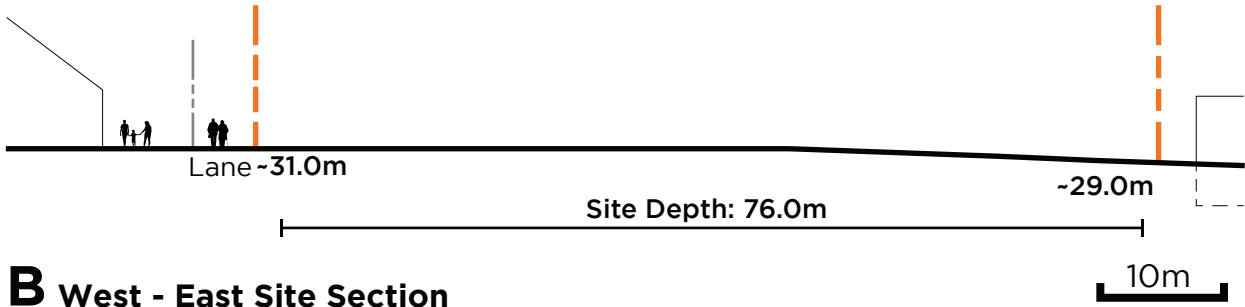
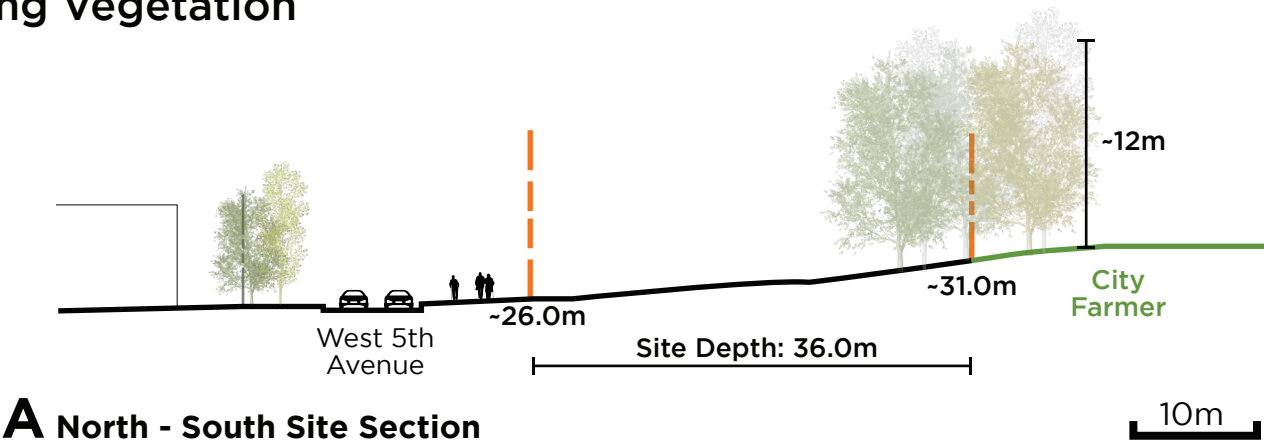
Single-Family Heritage Houses (Rear)
"Permeable Lane"
(City Farmer, n.d.)

Existing Site Streetscape: West 5th Avenue



Site Plan
Site Area: 2,700 m2

Site Inventory
Existing Vegetation



C West - East Site Section



West 5th Vegetation
May
(Google Earth, 2022)



West 5th Vegetation
June
(Google Earth, 2022)



West 5th Vegetation
October
(Google Earth, 2022)

Site Sensory Engagement
Visual



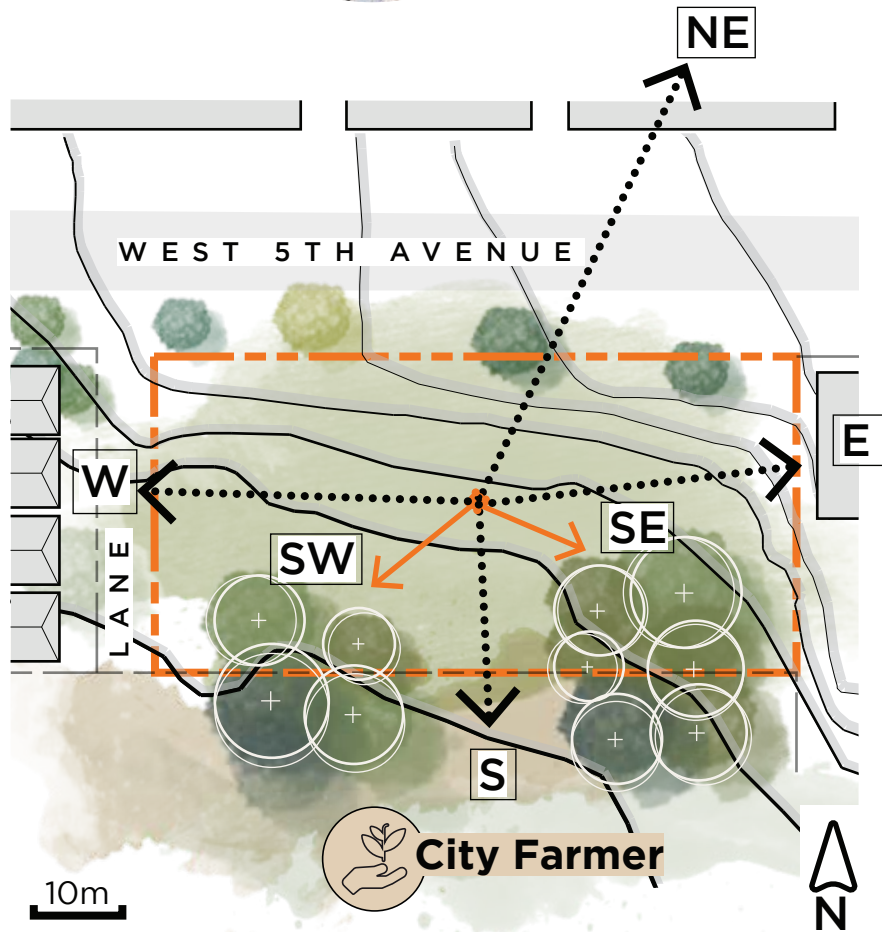
NE

Distant North Shore Mountains
Seasonal & Directional Orientation
Sensory Engagement
(Dyck, 2021)



W

Single-Family Heritage Housing (Rear)
“Permeable Lane”
Active Surroundings | Sensory Engagement
(VanMap, 2022)



E

Multi-Family Housing (Site/Parking)
(VanMap, 2022)



S

SW

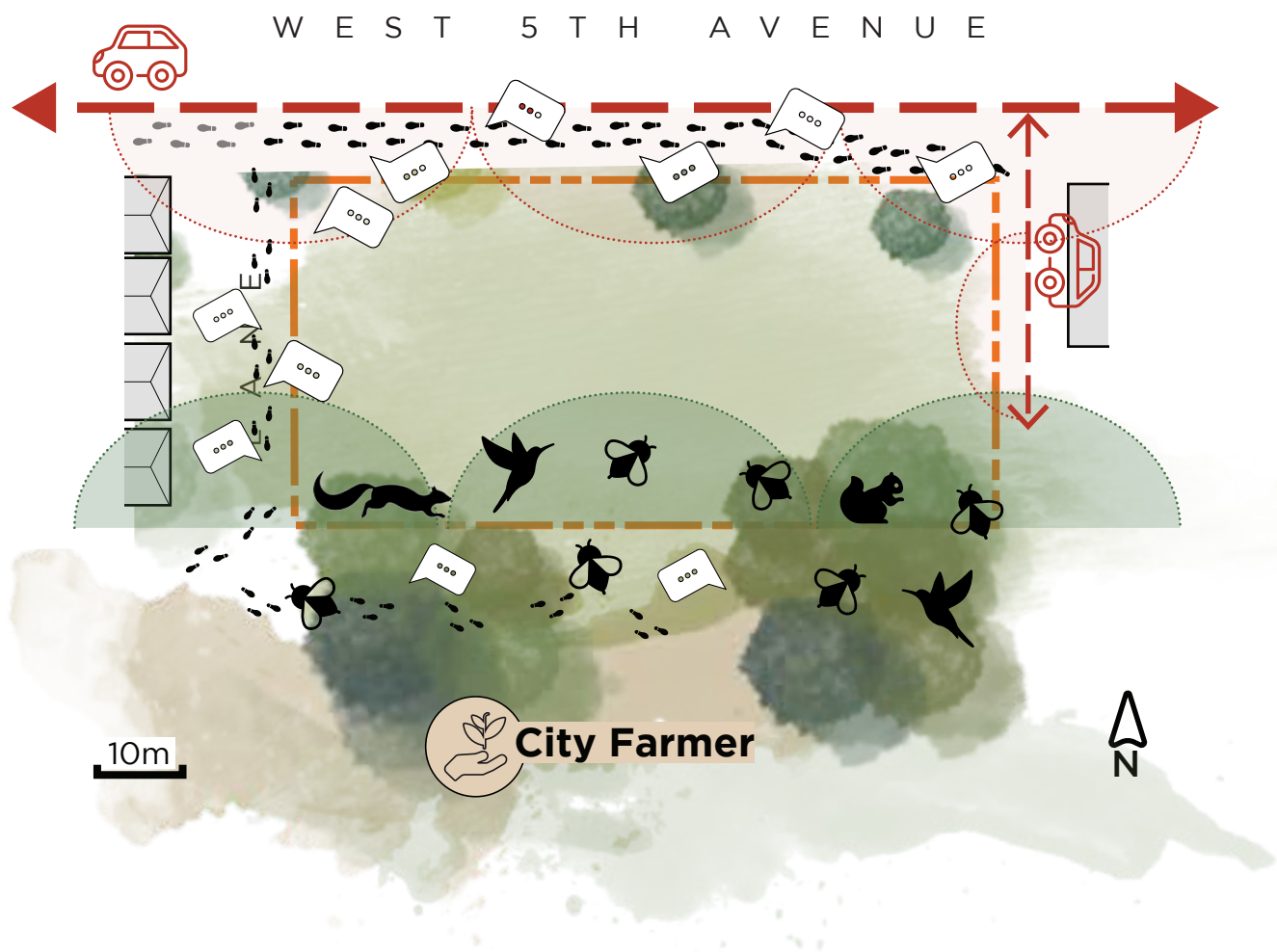
On & Off-site Softscaping
Seasonal & Directional Orientation | Sensory Engagement
(City Farmer, 2011)



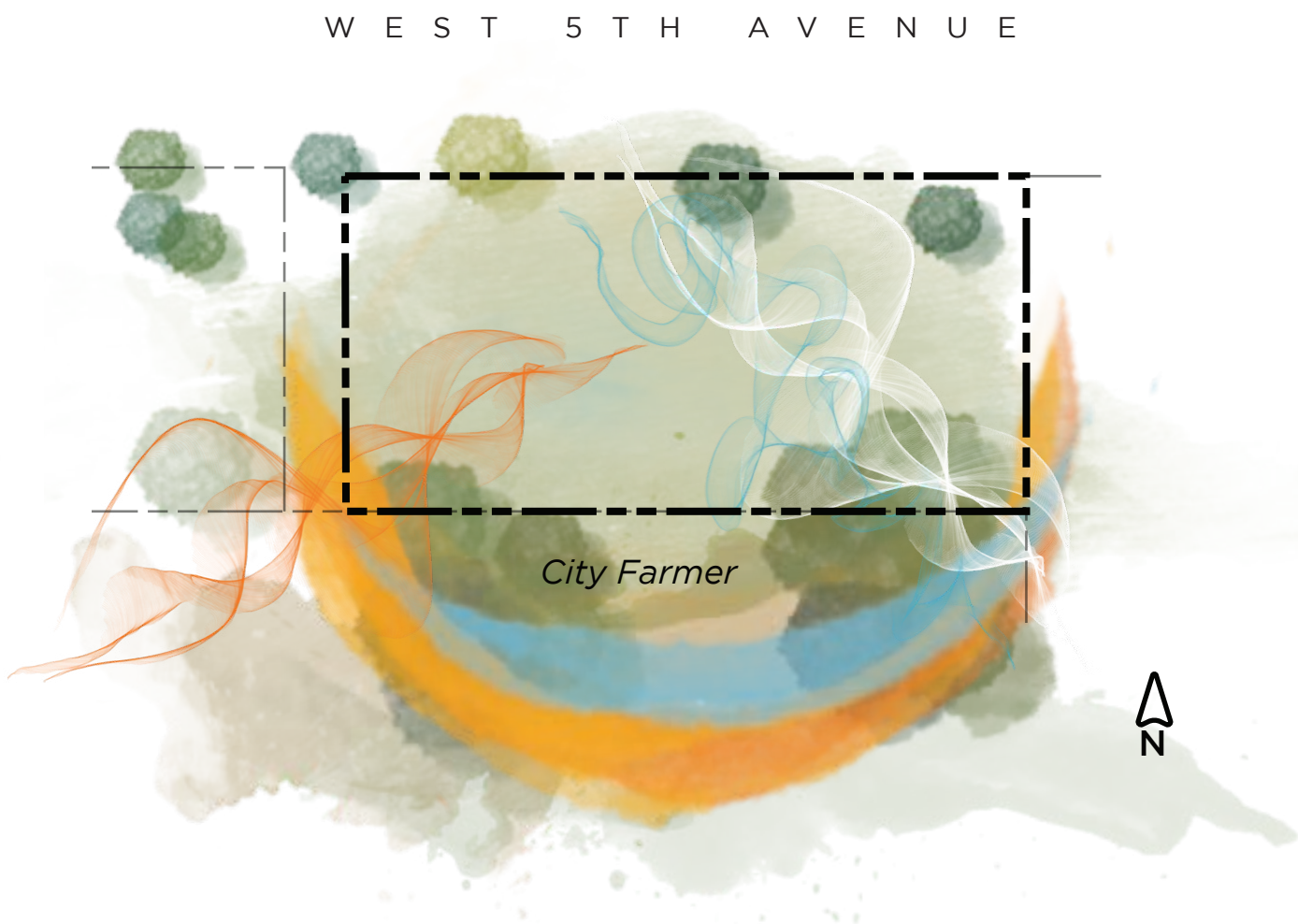
SE

On & Off-site Softscaping
Seasonal & Directional Orientation | Sensory Engagement
(City of Vancouver, n.d.)

Site Sensory Engagement
Aural & Tactile



Site Sensory Quality: Aural
Sounds of Nature, Life & Activities



Site Sensory Quality: Tactile
Sun Path
Seasonal Wind Patterns

Program Concepts: Small House Model of Care for Long-Term Care
The “Small House” model of care for dementia is rooted in the atmosphere of home: warm, comforting & predictable living spaces that people have created for themselves their entire lives (Wrublowsky, 2017, p.27)

? What

Scale of Living Environment

Small scale living clusters with shared amenities

(Wrublowsky, 2017, p.27)

Hierarchy and Variety of Spaces

Familiar spatial hierarchy to that of home

(Wrublowsky, 2017, p.27)

Why

Rooted in Atmosphere of Home

Improving resident quality of life & social engagement

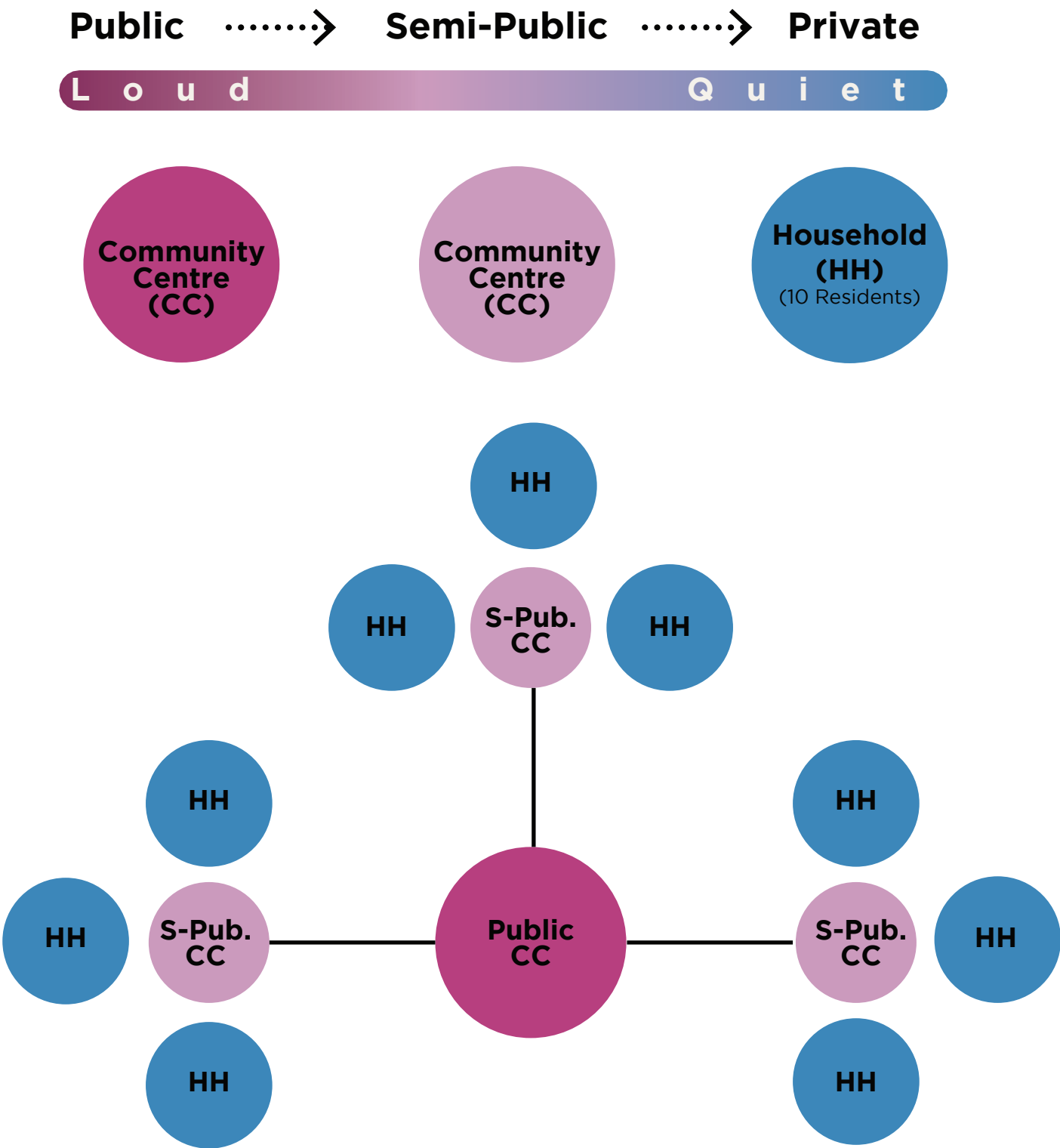
Improving staff & caregiver satisfaction

(Verbeek et. al., 2019, p.4)

Who

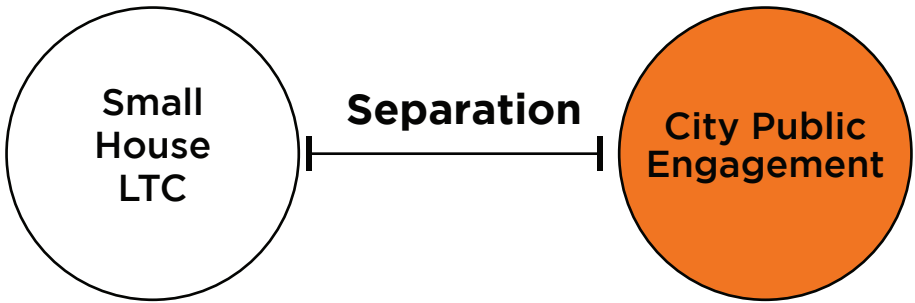
Internal Community:
Residents & Care Givers

External Community:
Resident’s Friends & Family



Typical Small House Model of Care:

Off-Site Public Engagement



The Village Langley
(Zimmer, 2019)

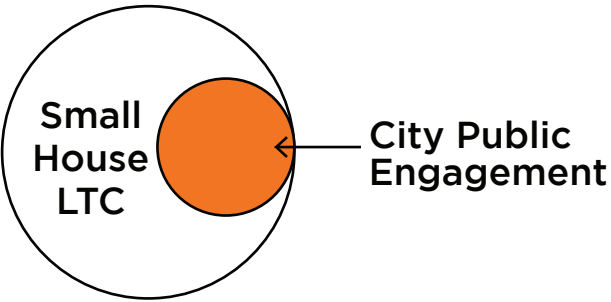


The Village Langley Aerial
(Google Earth, 2022)

2. Large Suburban Sites

Project Proposal

On-Site Public Engagement



2. Urban Context Response

Produce Market



Fresh Juice & Smoothie Bar



Vertical Greenspaces (Streeteasy, n.d.)



LaTerra Multifamily (OfficeUntitled, n.d.)

Vertical Building & Greenspace



Social engagements supports a sense of belonging

(Kerpershoek, 2018, p.2)

2. Sensory engaging spaces help people living with dementia orient themselves in spaces

(Feddersen & Lüdtkke, 2014, p.12)

Increased Density

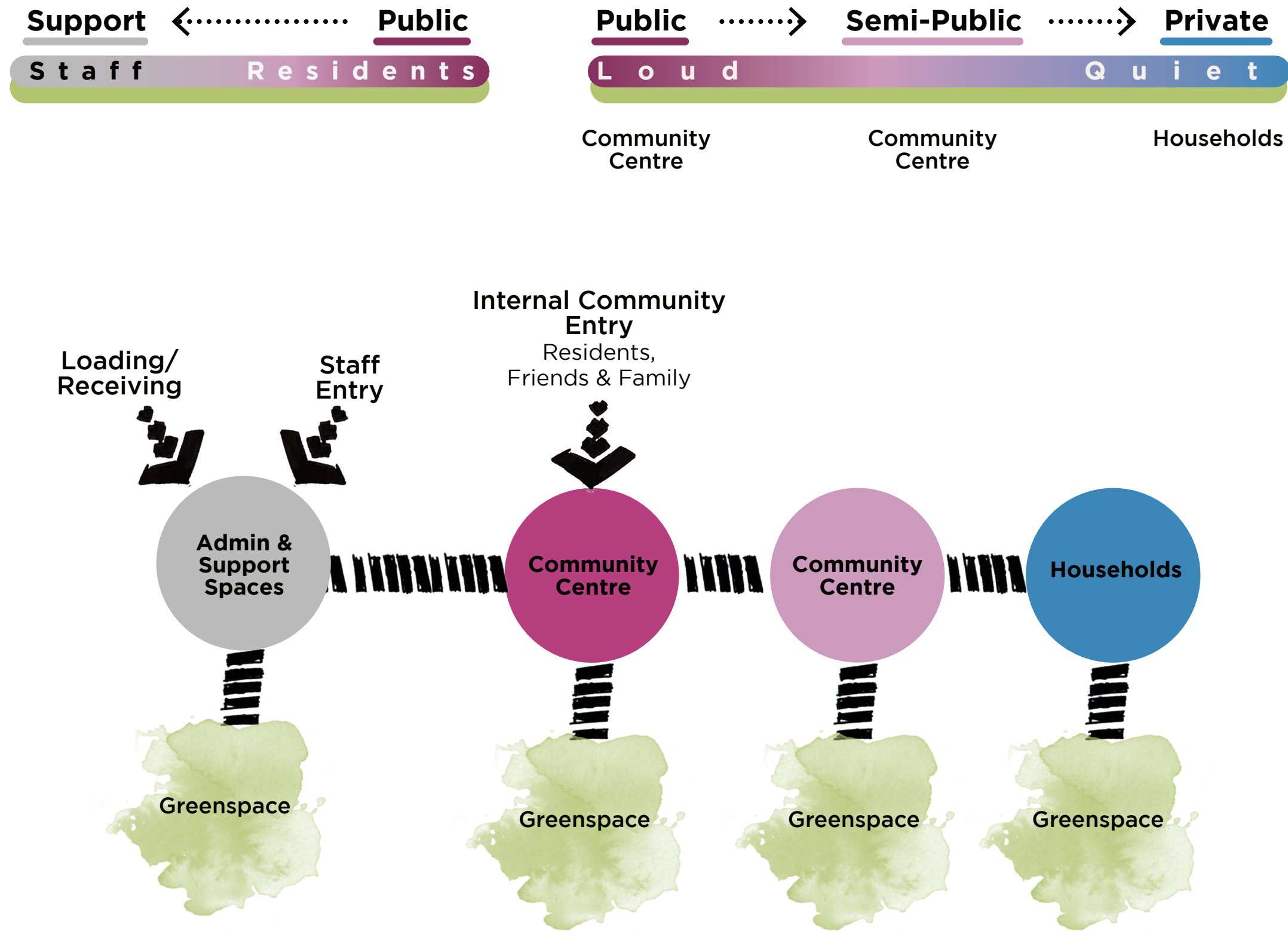


Green Bluff Terraced Apartments
(MapDesign, n.d.)

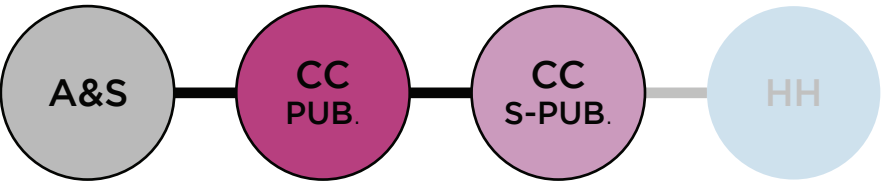


Green Bluff Terraced Apartments
(MapDesign, n.d.)

Spatial Relationships As a Whole
Spectrum of Spaces



Spatial Relationships: Community Centre as a Whole
Spectrum of Spaces



~ 800m2 **Community Centre**

230 m2 Common Areas

125 m2 Administration (Non front-line)

400 m2 Support/Service



What

Social hub for internal community

Service/Admin Core for residence

Who

Internal Community: Residents, Care Givers & Support/Service Staff

External Community: Resident's Friends & Family

Why

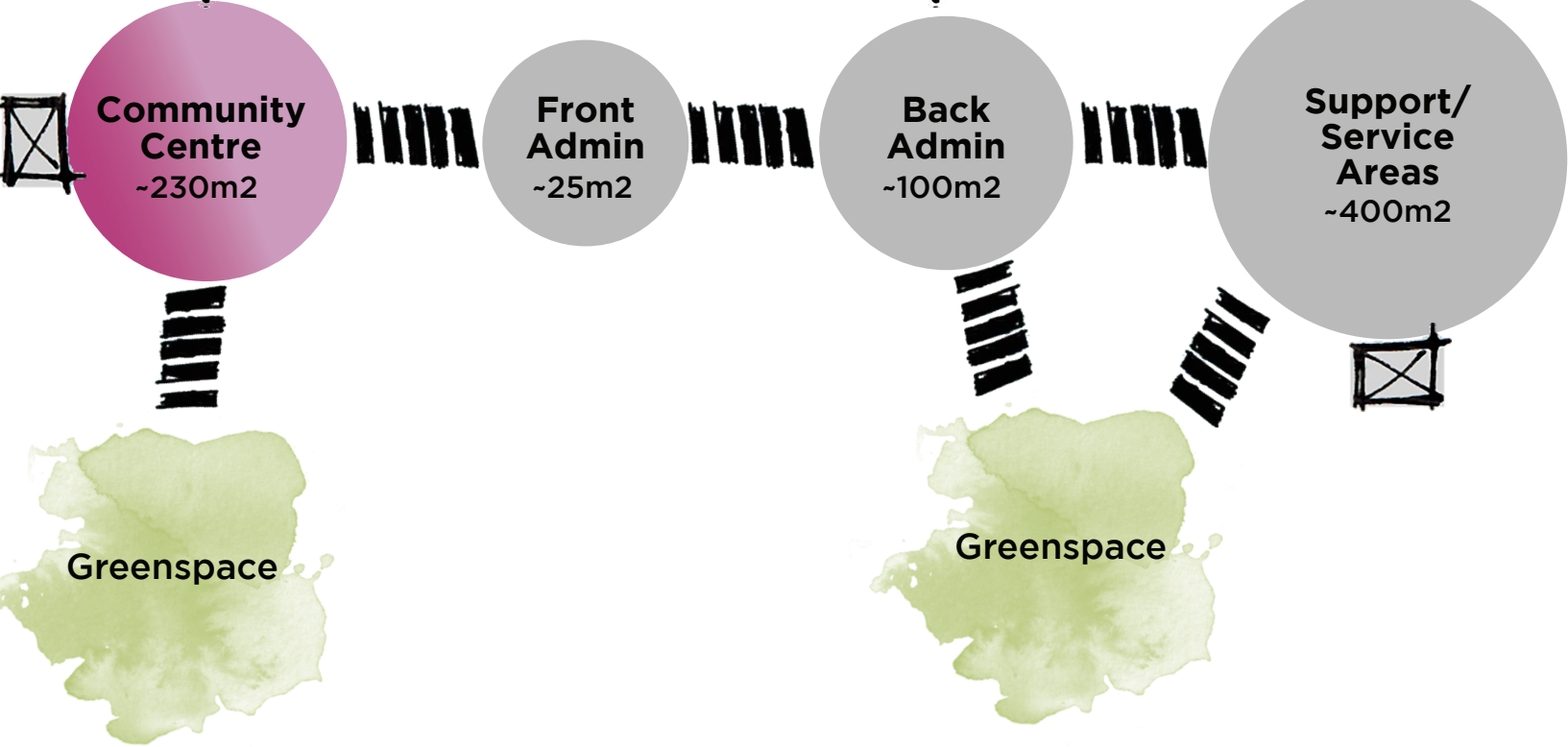
Access to care & support services that are not appropriate in the household

Providing social spaces outside of household

Internal Community Entry
Residents, Friends & Family

Staff Entry

Loading/Receiving



Primary Adjacency

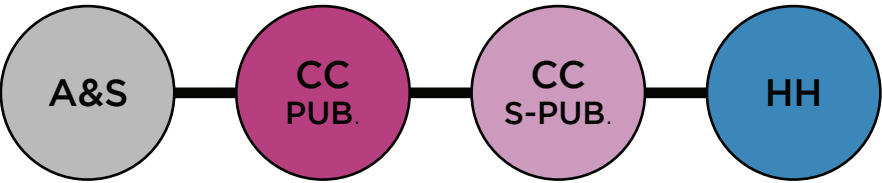
Vertical Circulation

Public

Semi-Public

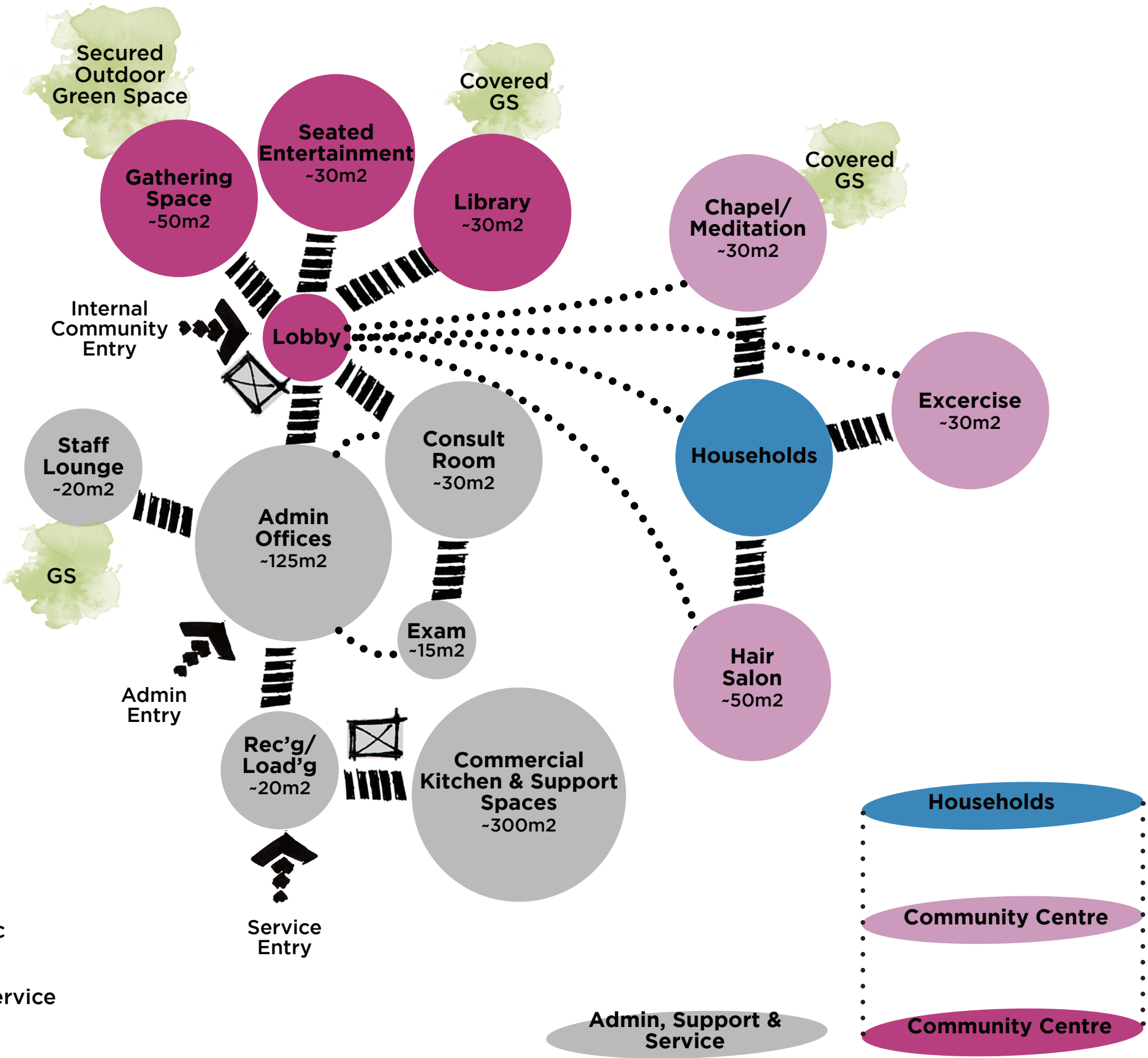
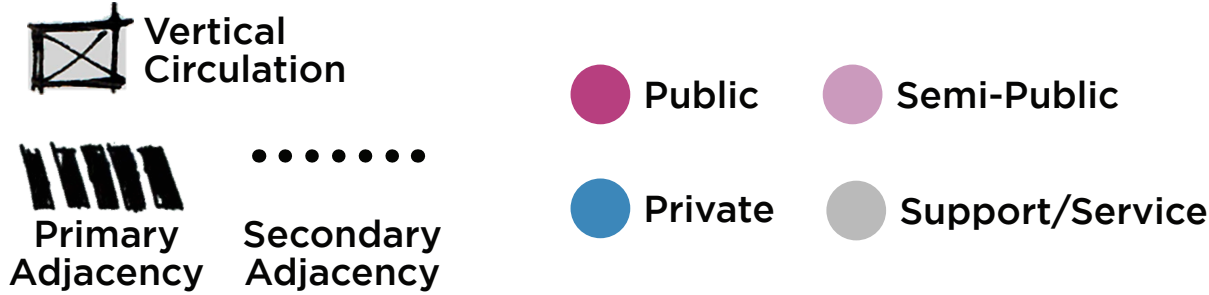
Support/Service

Spatial Relationships: Community Centre Program
Spectrum of Spaces



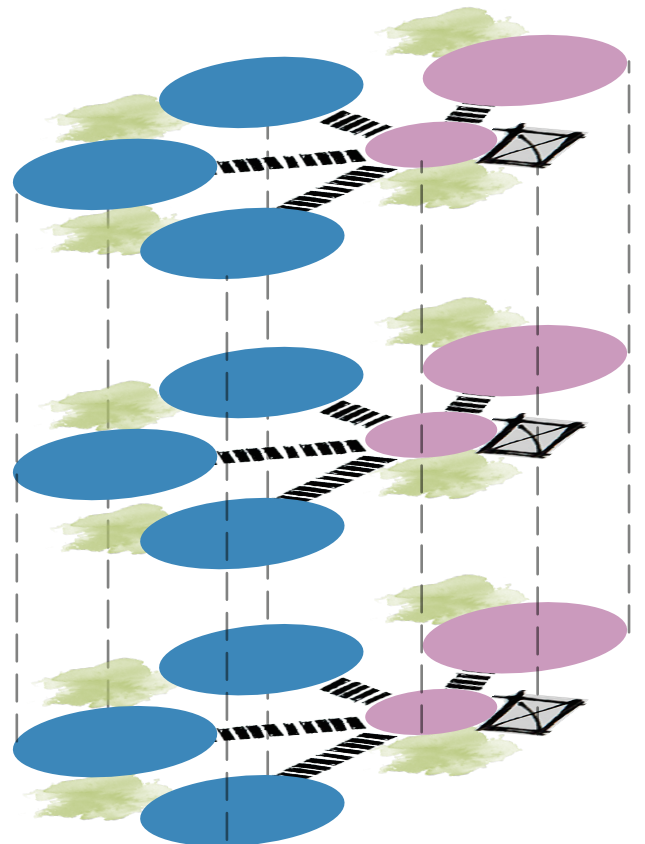
~ 800m2 Community Centre

230 m2	Common Areas
10 m2	Lobby
50 m2	Gathering Space
30 m2	Seated Entertainment
30 m2	Hair Salon
30 m2	Library/Reading Room
30 m2	Meditation/Chapel
50 m2	Exercise Gym
25 m2	Administration Areas: Front of House
15 m2	Reception
10 m2	Security Station
100 m2	Administration Areas: Back of House
10 m2	Staff Offices
10 m2	Director
10 m2	Nurse Leader
10 m2	Medical Director
10 m2	Social Worker
10 m2	Maintenance
10m2	Staff Toilet
20m2	Team Workroom
10 m2	Copy Room
20m2	Staff Lounge
400 m2	Support Areas
30m2	Consultation Room
15m2	Exam Room
15m2	Toilet Room
10m2	Maintenance Room
10m2	Housekeeping Closet
20m2	Receiving/Loading
300 m2	Kitchen + Supporting

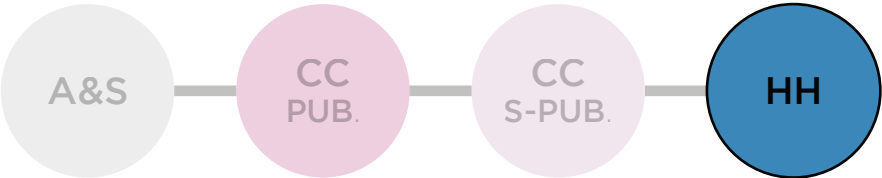



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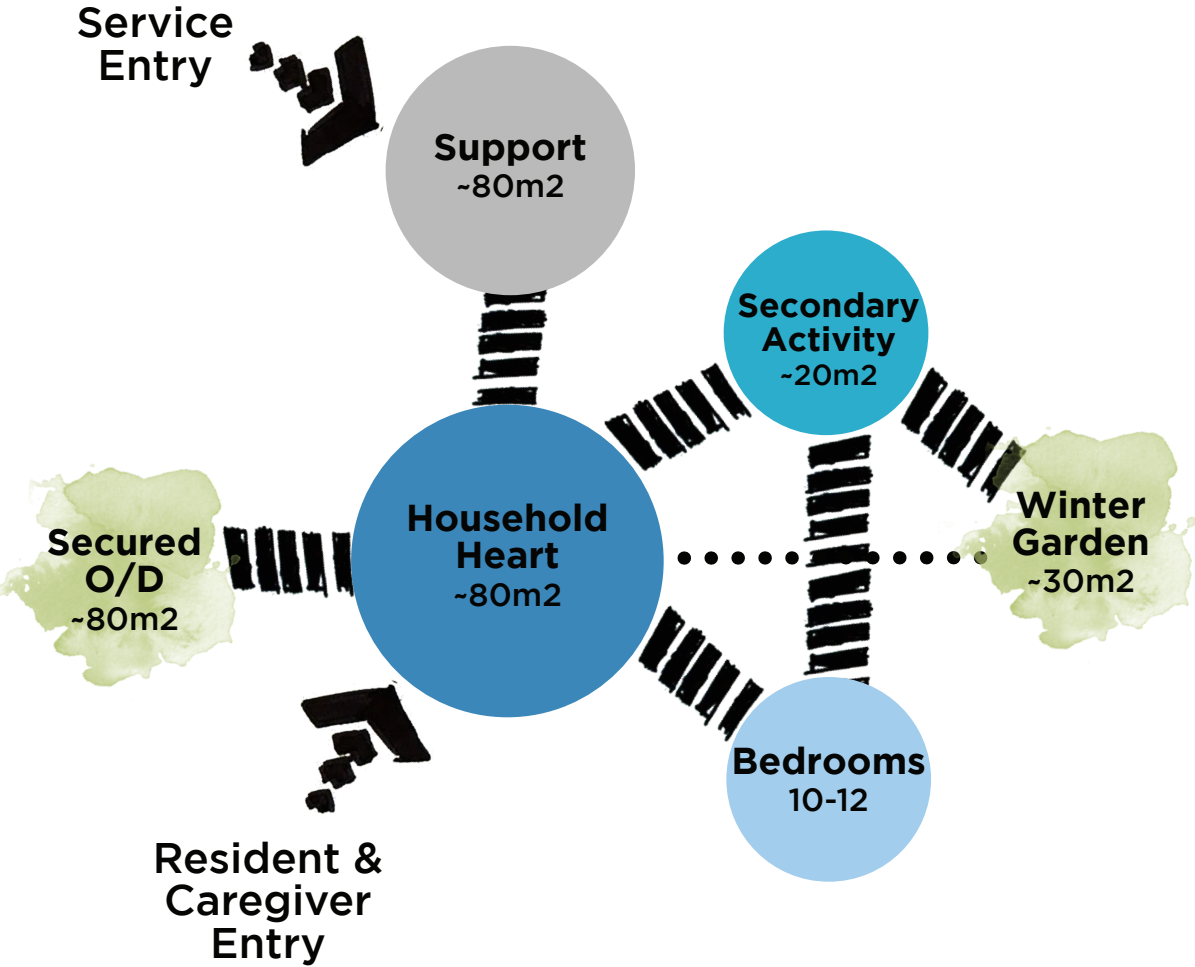
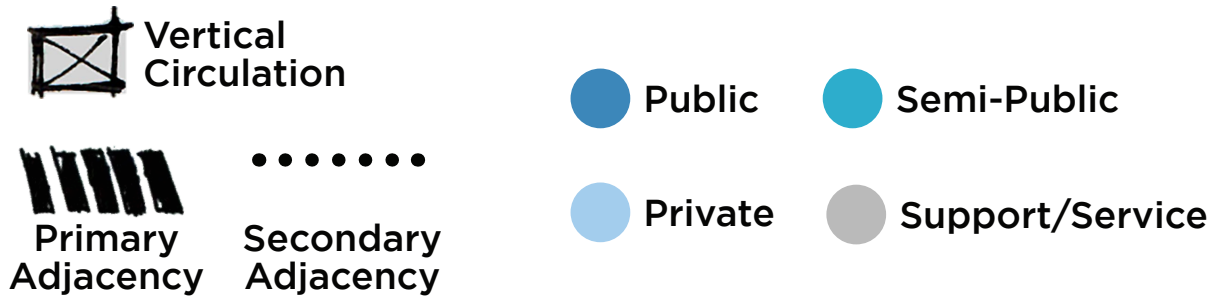
graph LR
    A[S]((A&S)) --- B[PUB.]((CC PUB.))
    B --- C[S-PUB.]((CC S-PUB.))
    C == D[HH]((HH))
  
```



Spatial Relationships: Household as a Whole

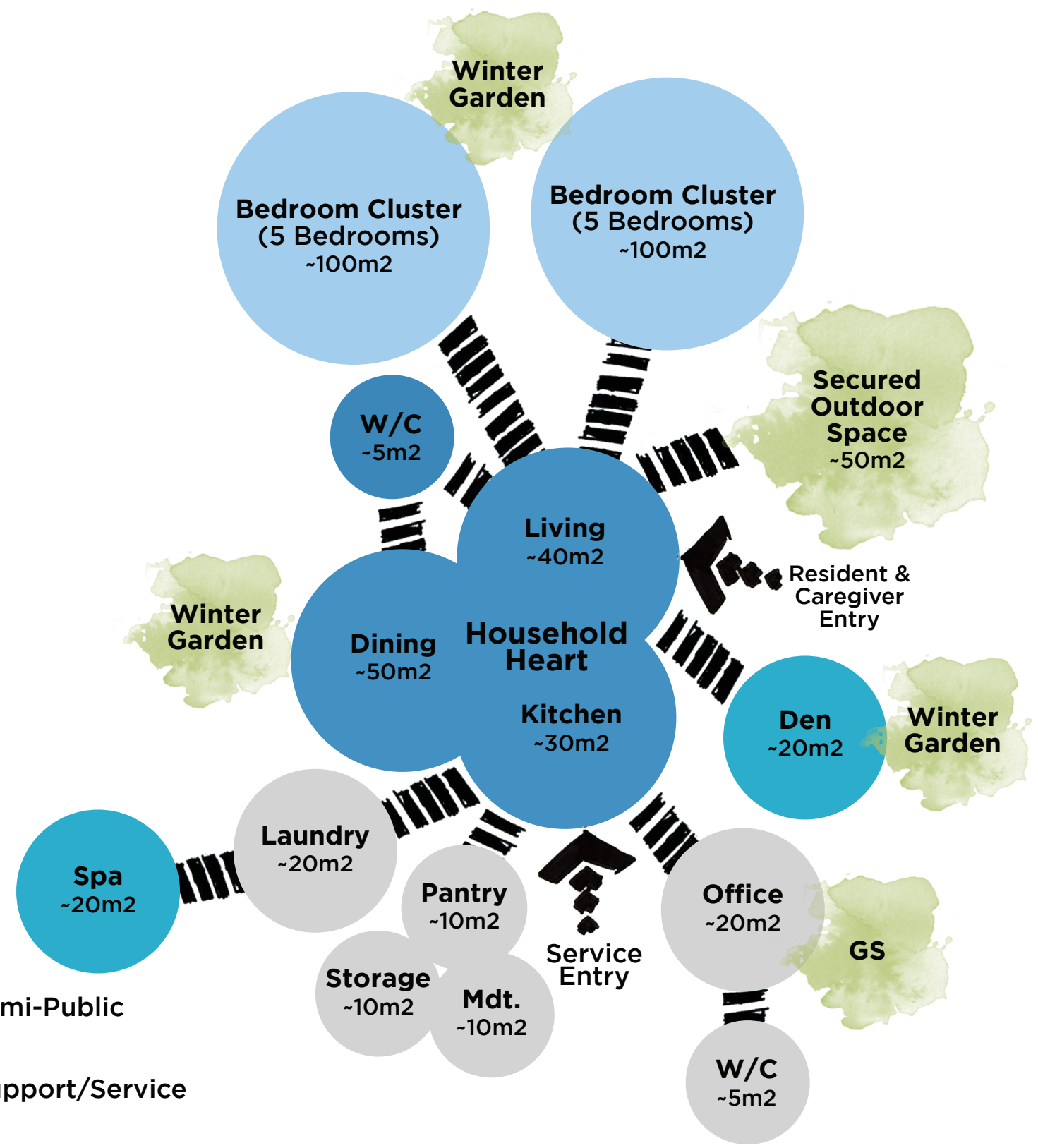
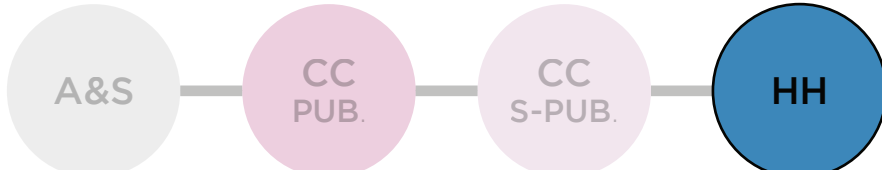
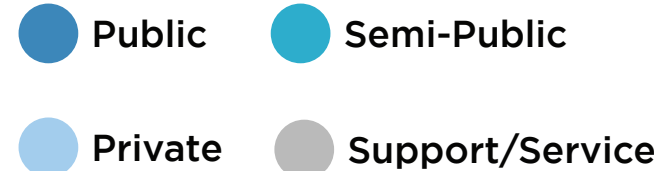
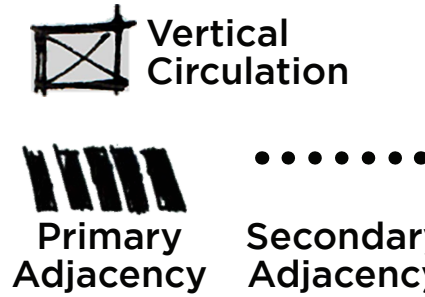


~ 400m2	Household
200 m2	Common Areas
30 m2	Kitchen
40 m2	Living
50 m2	Dining
5 m2	Powder Room
80 m2	Secured Outdoor Space
~50 m2	Secondary Activity ('Semi-Public')
20 m2	Den
30 m2	Winter Garden
~ 20 m2	Semi-Private
20 m2	Spa (bathing room)
~ 20 m2	Private
20 m2	Single Occupancy Bedroom with Private Ensuite
~ 50 m2	Support Areas
10 m2	Pantry
20 m2	Storage
10 m2	Medication Room
10 m2	Laundry - Clean
10 m2	Laundry - Dirty
~ 30 m2	Staff Space
10 m2	Toilet Room
20 m2	Office

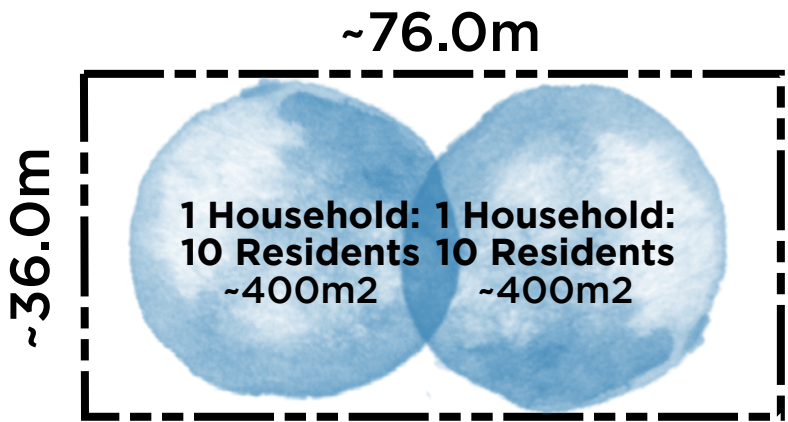
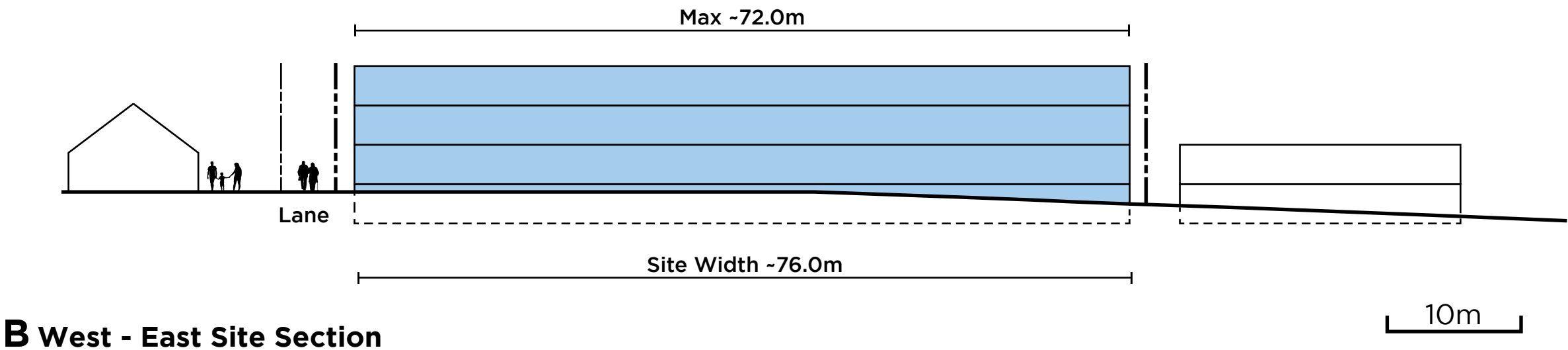
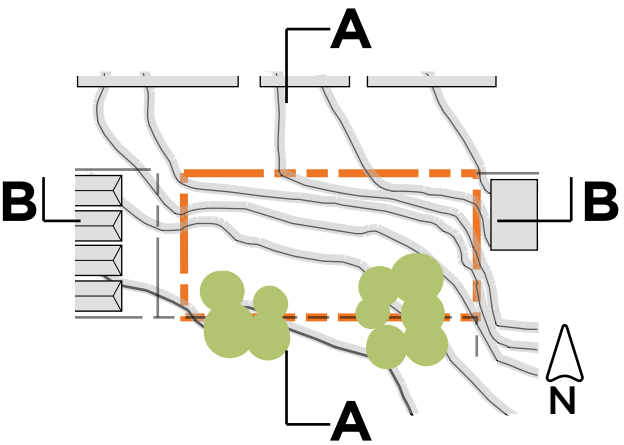
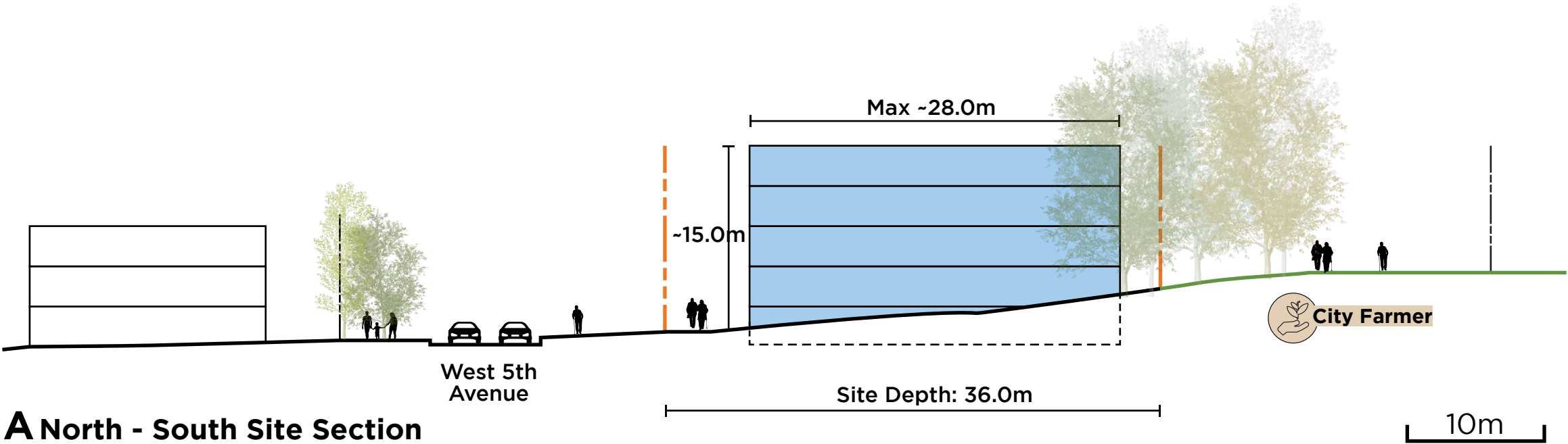


Spatial Relationships: Household Spaces

~ 400m2	Household
200 m2	Common Areas
30 m2	Kitchen
40 m2	Living
50 m2	Dining
5 m2	Powder Room
80 m2	Secured Outdoor Space
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10 m2	Laundry - Clean
10 m2	Laundry - Dirty
~ 30 m2	Staff Space
10 m2	Toilet Room
20 m2	Office



Massing Explorations: Site Density



2 Households Per Floor = 20 Residents Per Floor

4 Storeys of 8 Households = 80 Residents

5 Storeys of 10 Households = 100 Residents

6 Storeys of 12 Households = 120 Residents

(+1 Storey Public/Support Programming)

Floor Plate Household Density

Site Area: 2,700 m²

Massing Explorations: Driving Concepts

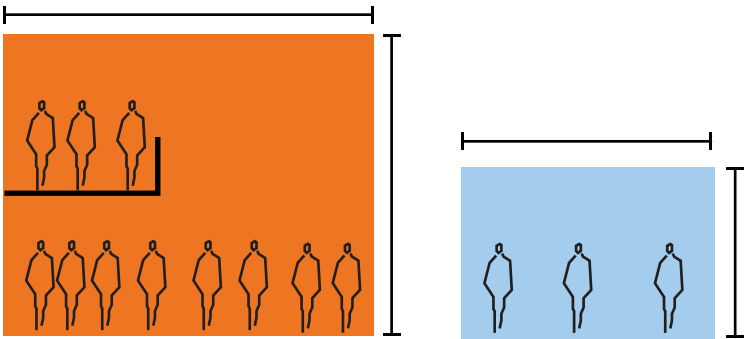
Sensory Engagement

Environmental Cues for Orientation

Sensory Quality of Spaces

Visual | Auditory

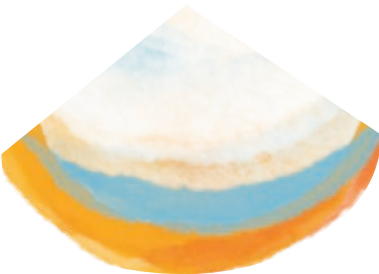
Environmental cues for spaces of togetherness or privacy
(Feddersen & Lüdtke, 2014, pg. 112)



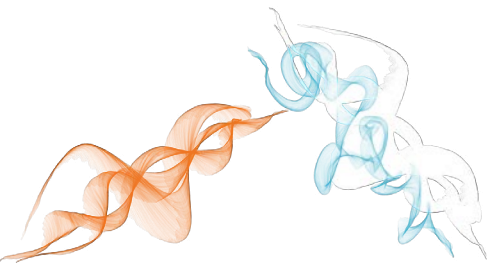
Public

Private

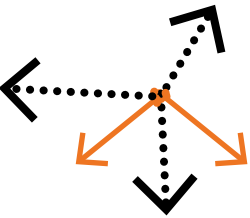
Site Sensory Inventory



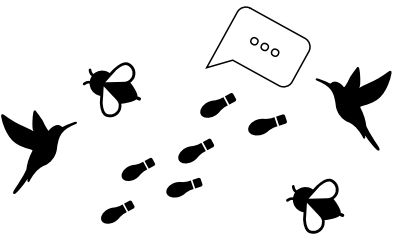
Visual & Tactile
Seasonal Sun Path



Tactile & Olfactory
Seasonal Wind Patterns

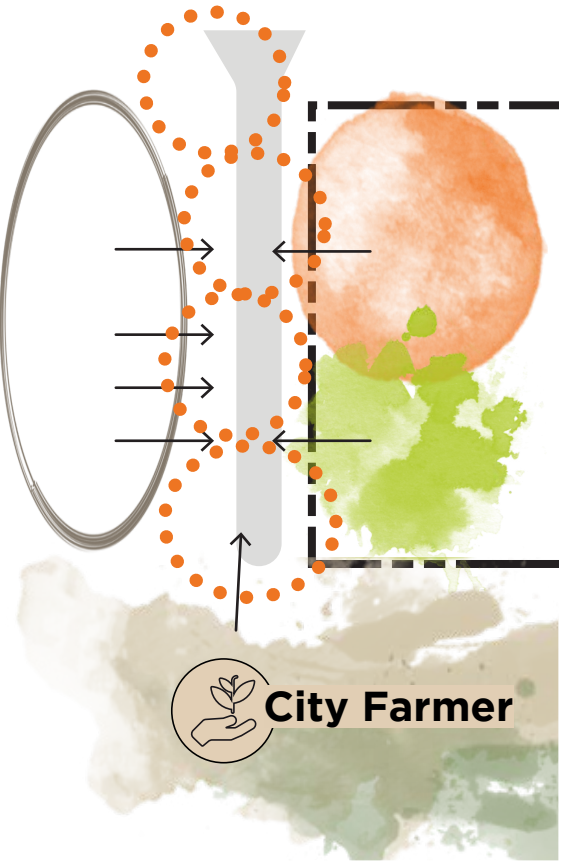


Visual
Near & Distant Views



Aural
Sounds of Nature & People

Urban Context Response



Sense of Belonging

Opportunity to create micro-community with proposed public engagement & existing surroundings



Winn Lane
(Escape, n.d.)

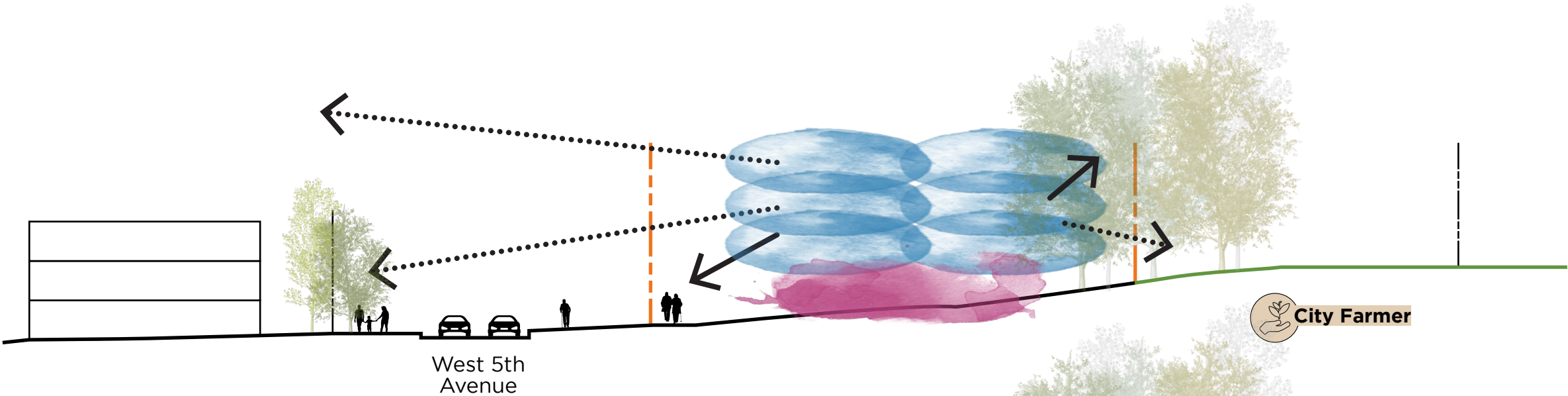
Vertical Response

Vertical organization of internal & external spaces

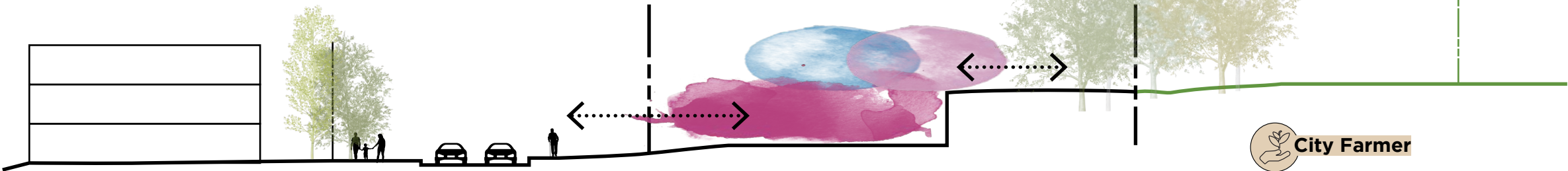


Multifamily
Residence
(Molter, n.d.)

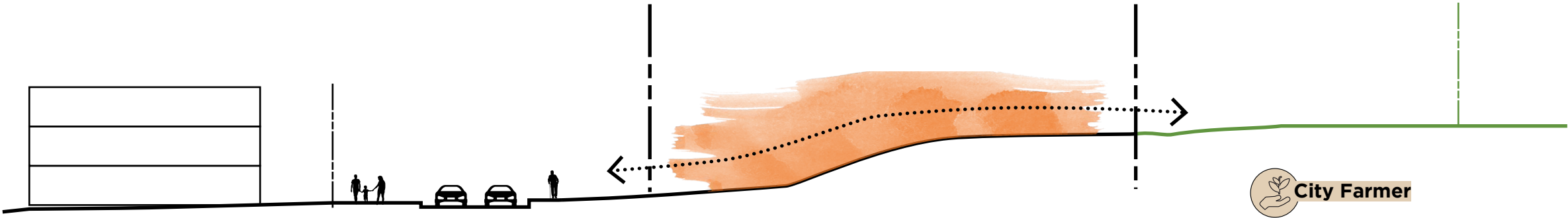
Beginnings of Massing Explorations



Visual Sensory Engagement
Distant & Near



Building & Site



Public Engagement

10m



Neighbourhood Engagement
Farm Market & Fresh Juice Bar



Community Centre
Public

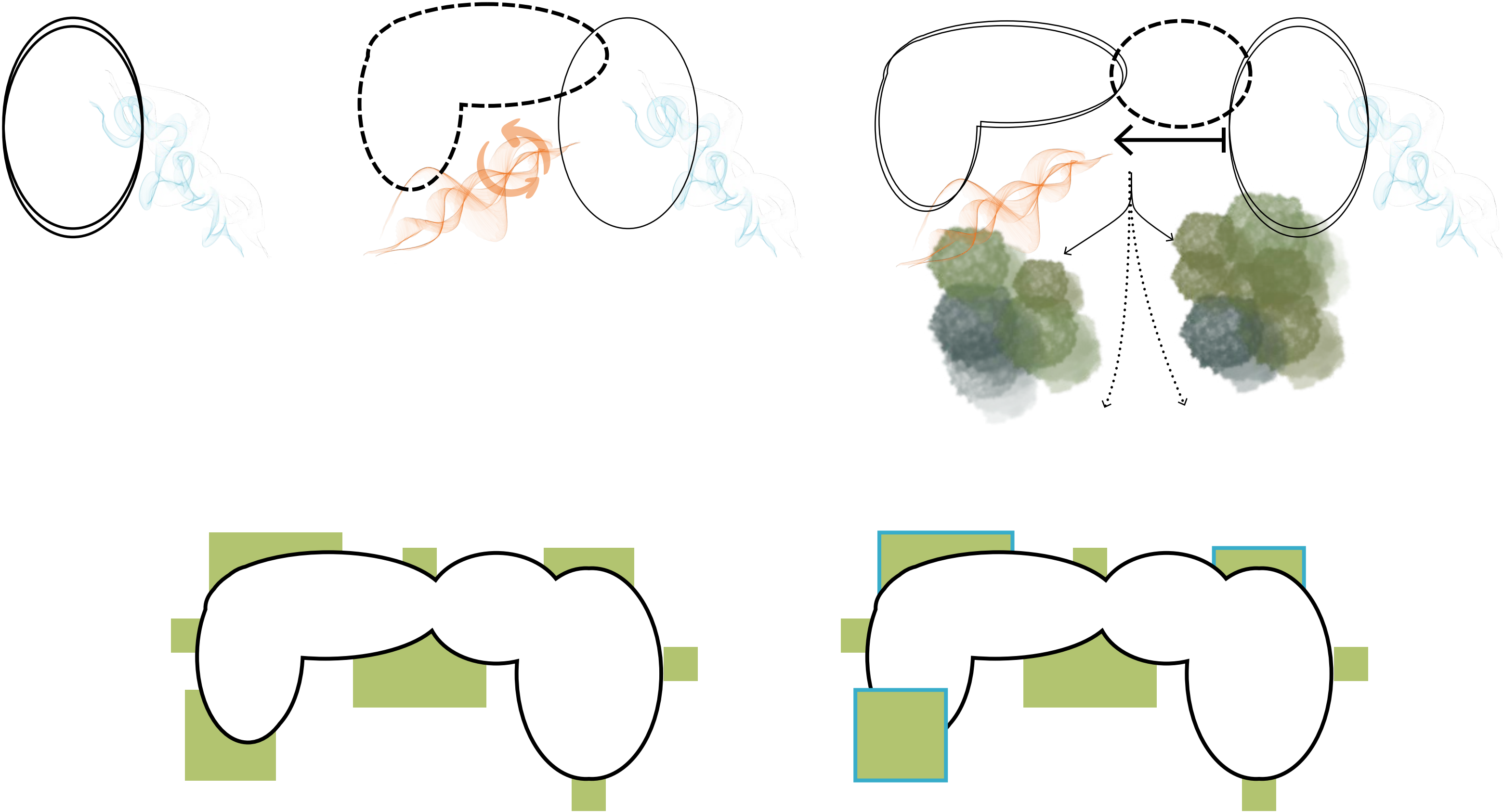


Community Centre
Semi-Public

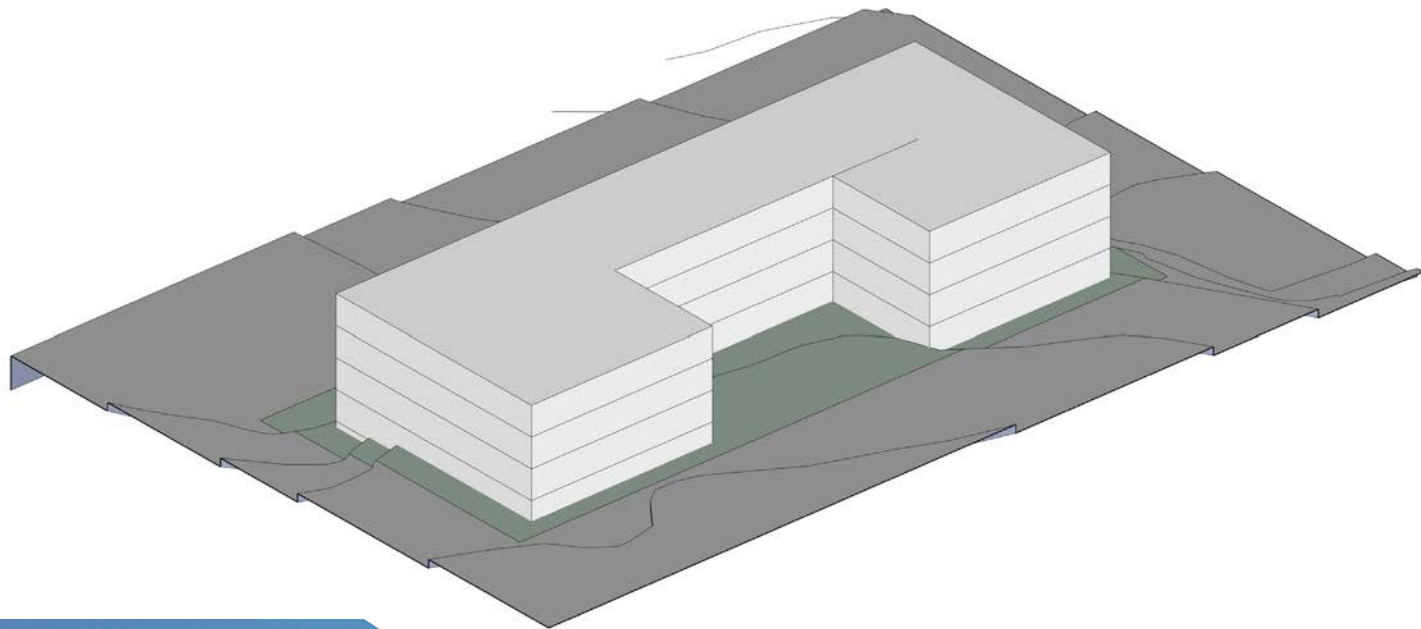


Household
Private

Beginnings of Massing Explorations: Site Response



**Beginnings of Massing Explorations:
Massing Study**

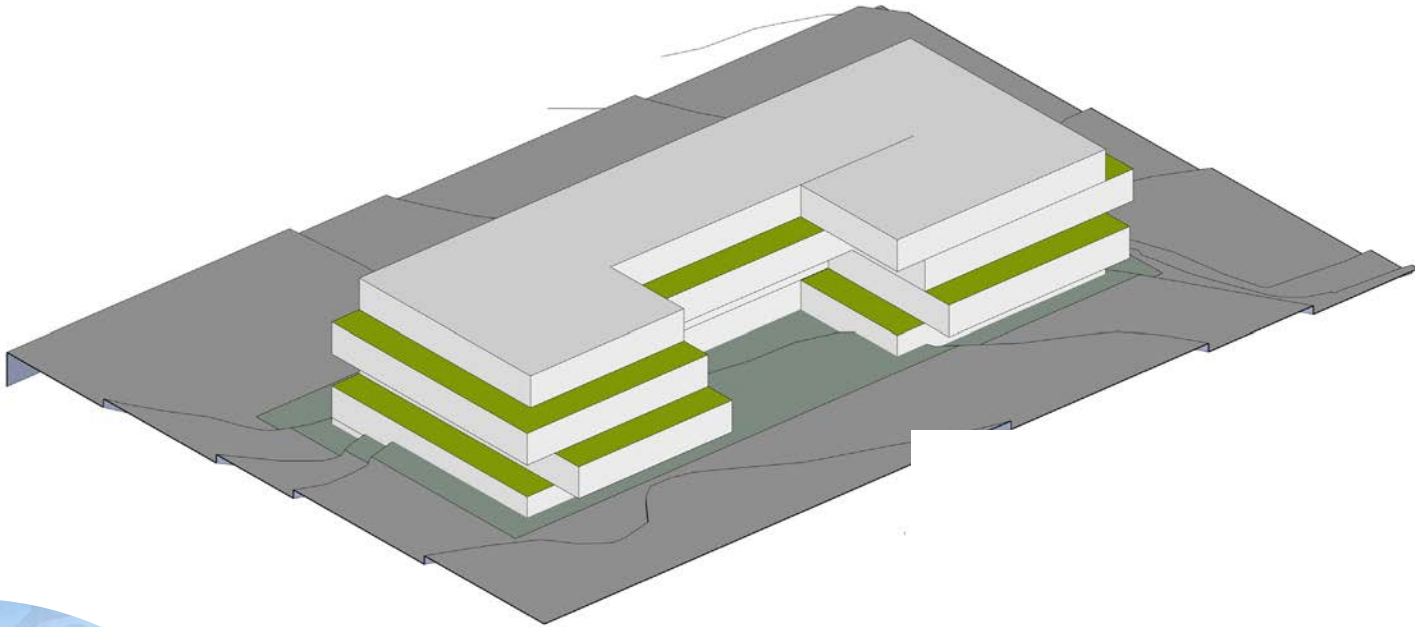


Heritage Retention
2156 West 3rd Avenue
(Google Earth, 2022)

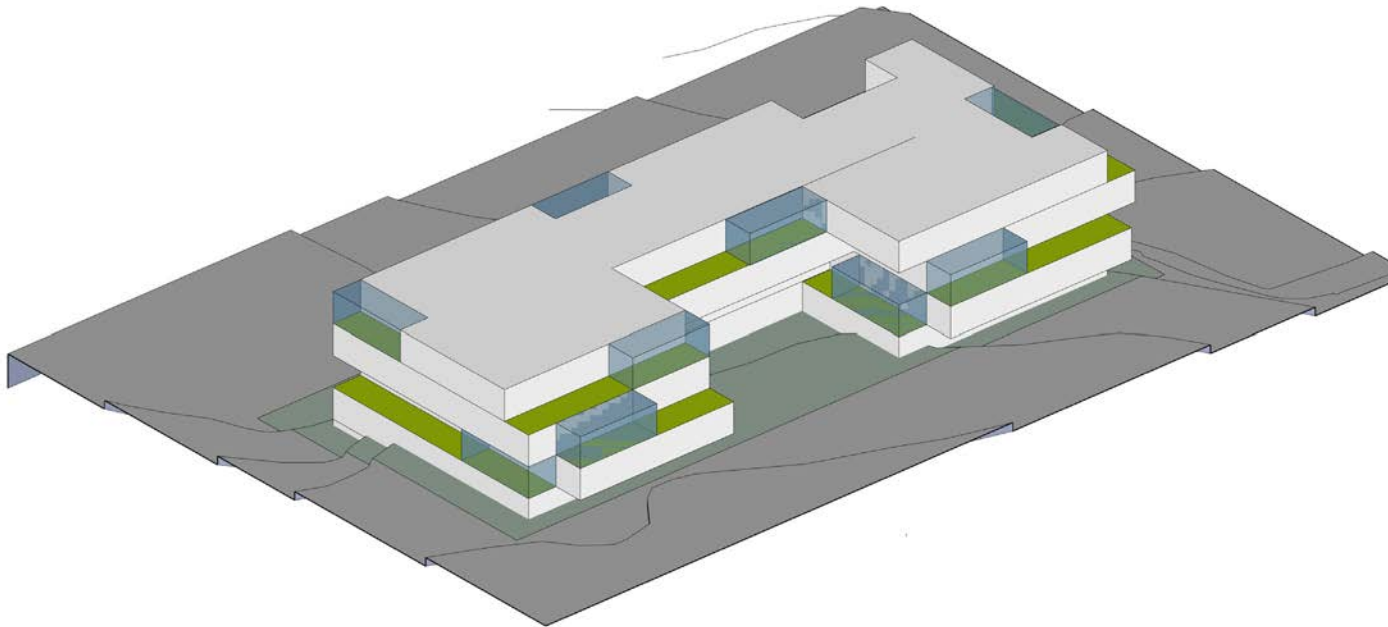
Heritage Retention
1269 West 8th Avenue
(Author, 2022)



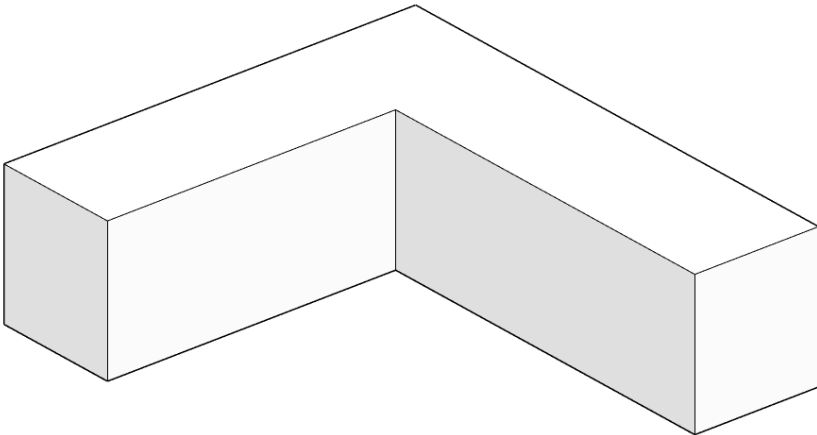
Rooftop Park
(Supplied, 2021)



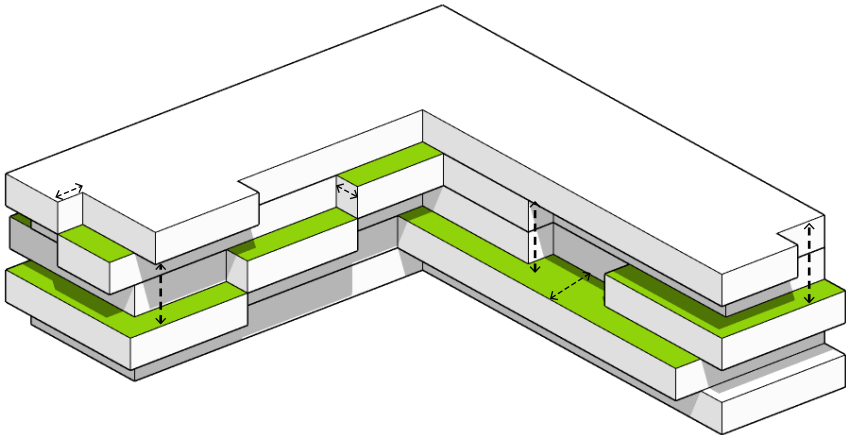
Multi-Family Greenspace
2711 Guelph Street
(Mount Pleasant)
(Unknown, n.d.)



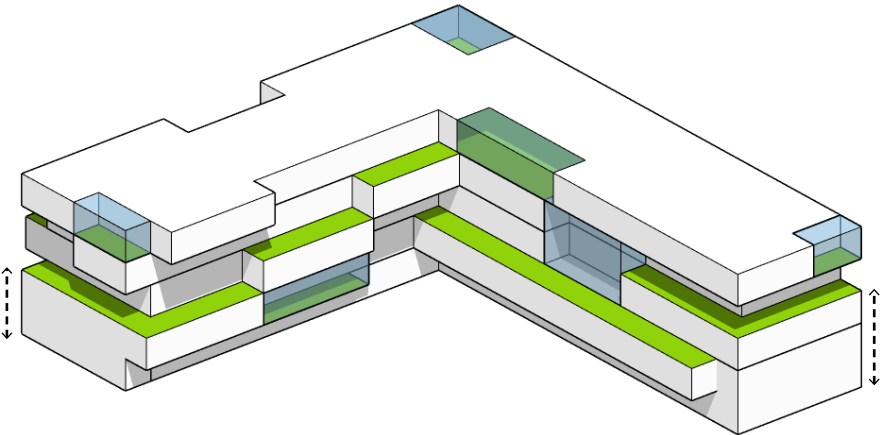
**Beginnings of Massing Explorations:
Massing Studies**



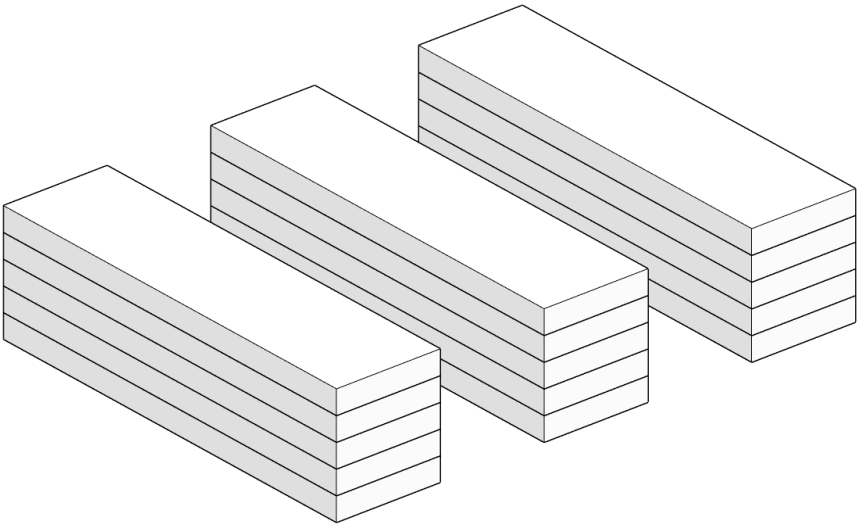
L-Shape Basic Form



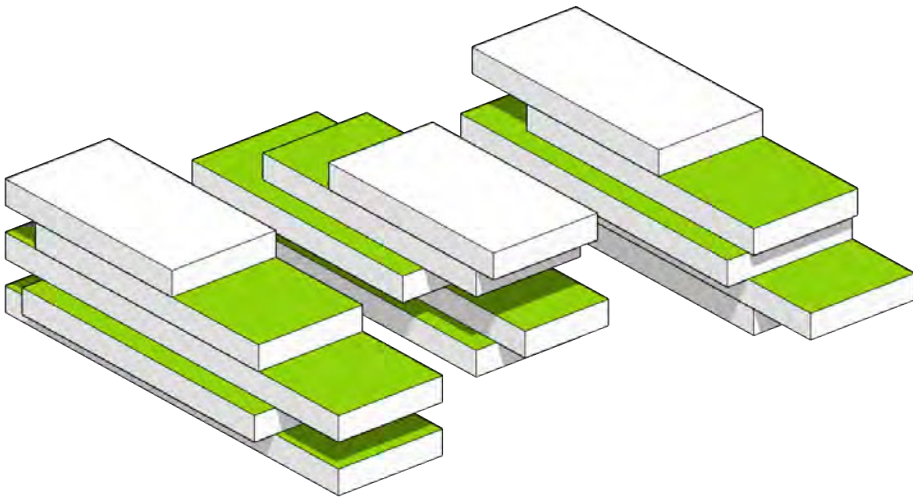
**L-Shape Exterior Push + Pull
& Exterior Greenspaces**



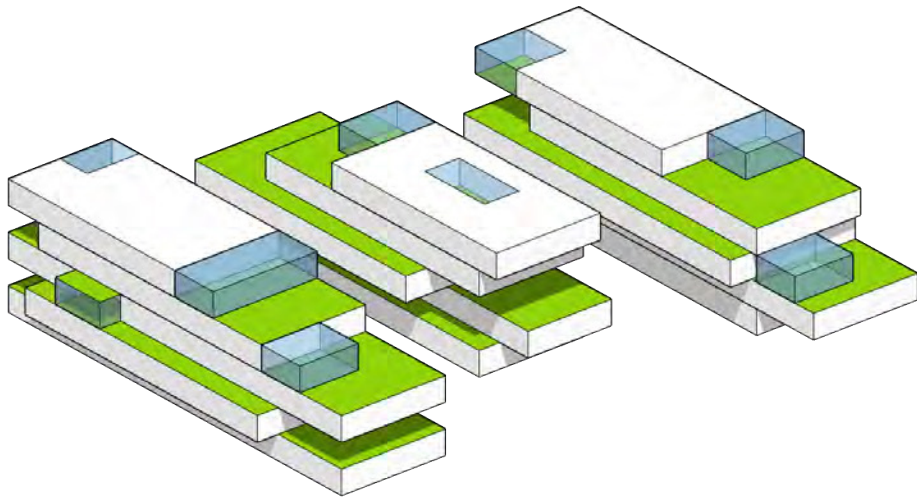
L-Shape Winter Gardens



Multi Block Basic Form

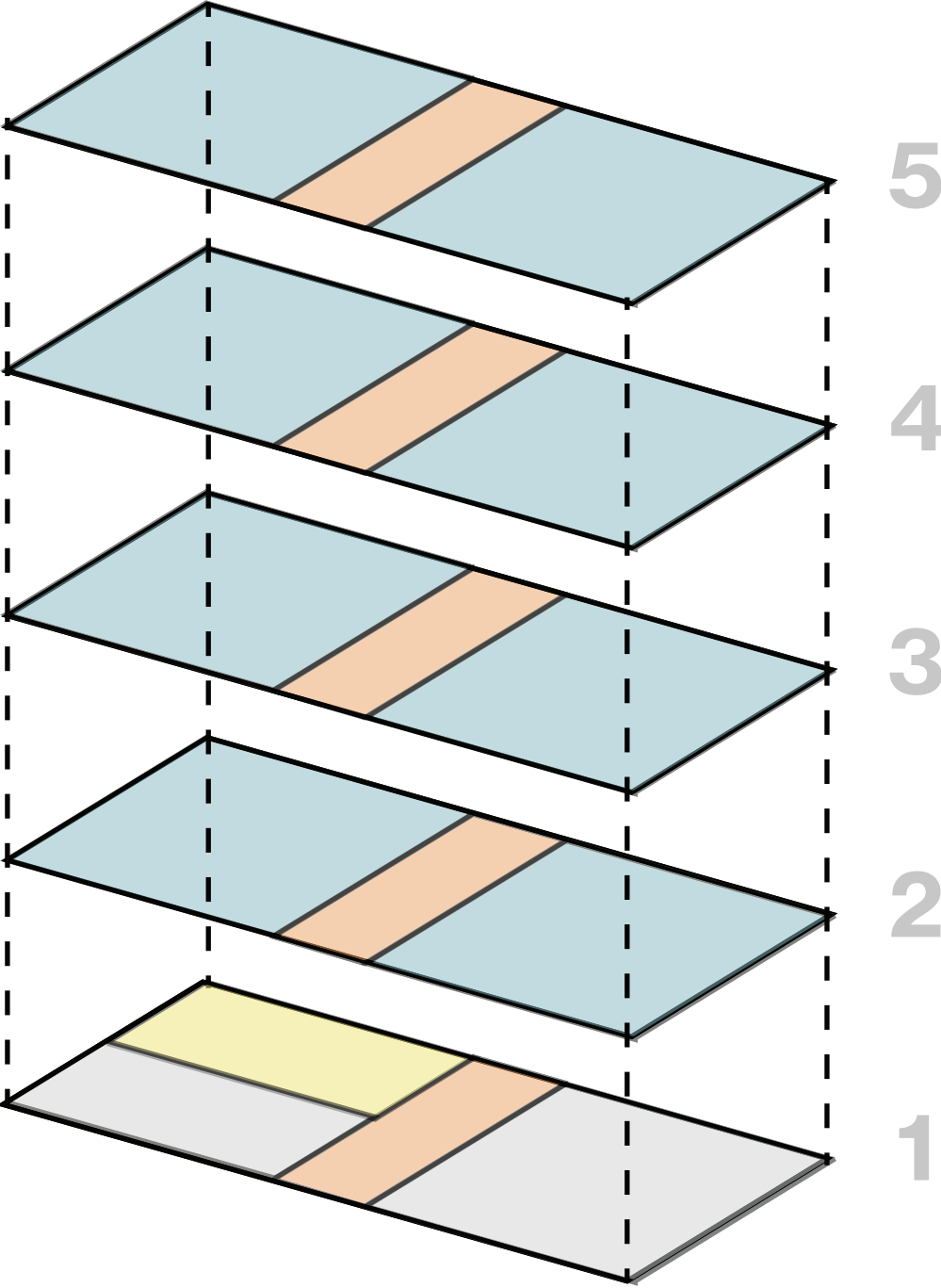


**Multi Block Exterior Push + Pull
& Exterior Greenspaces**



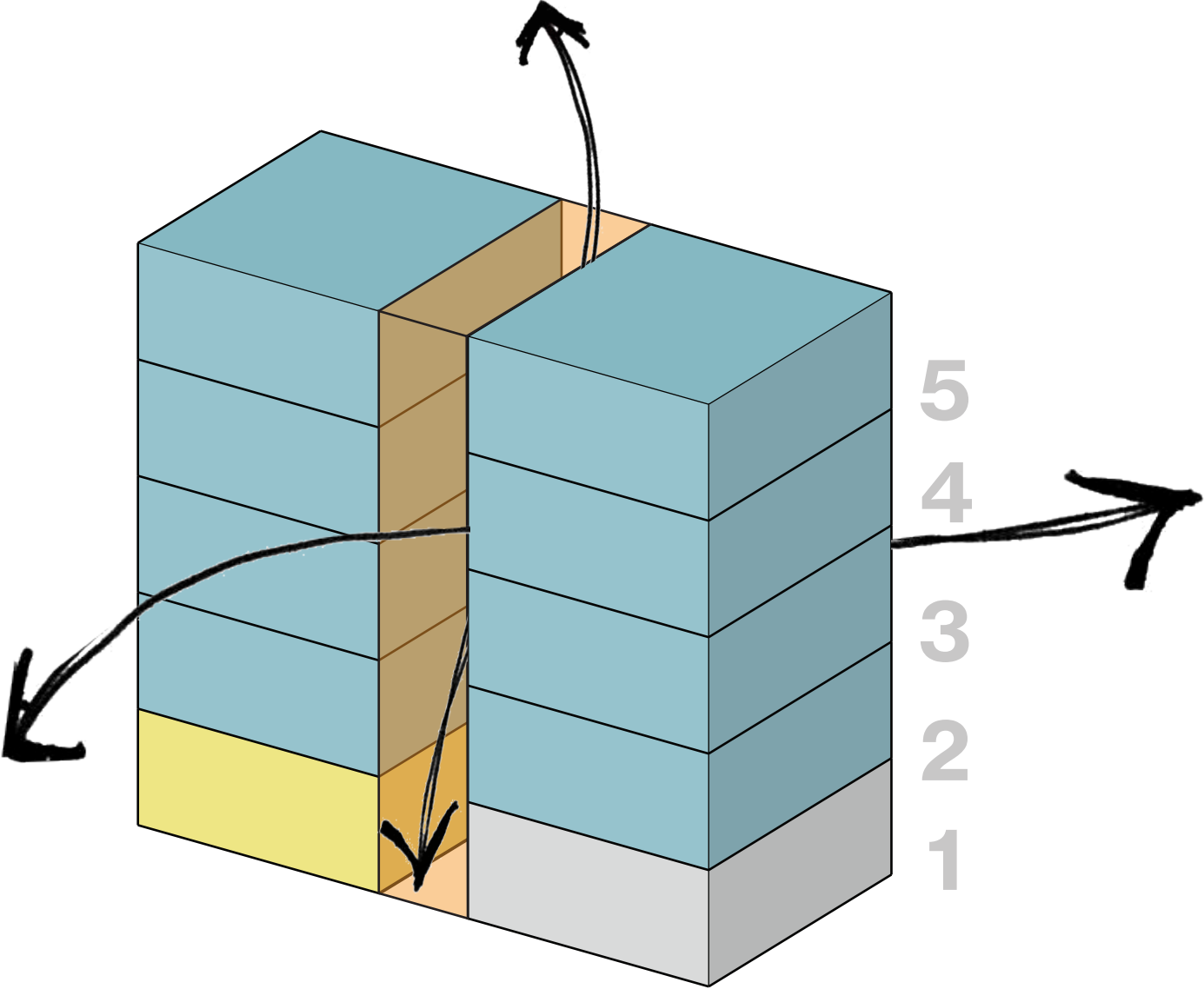
Multi Block Winter Gardens

Building Organization
Vertical Organization

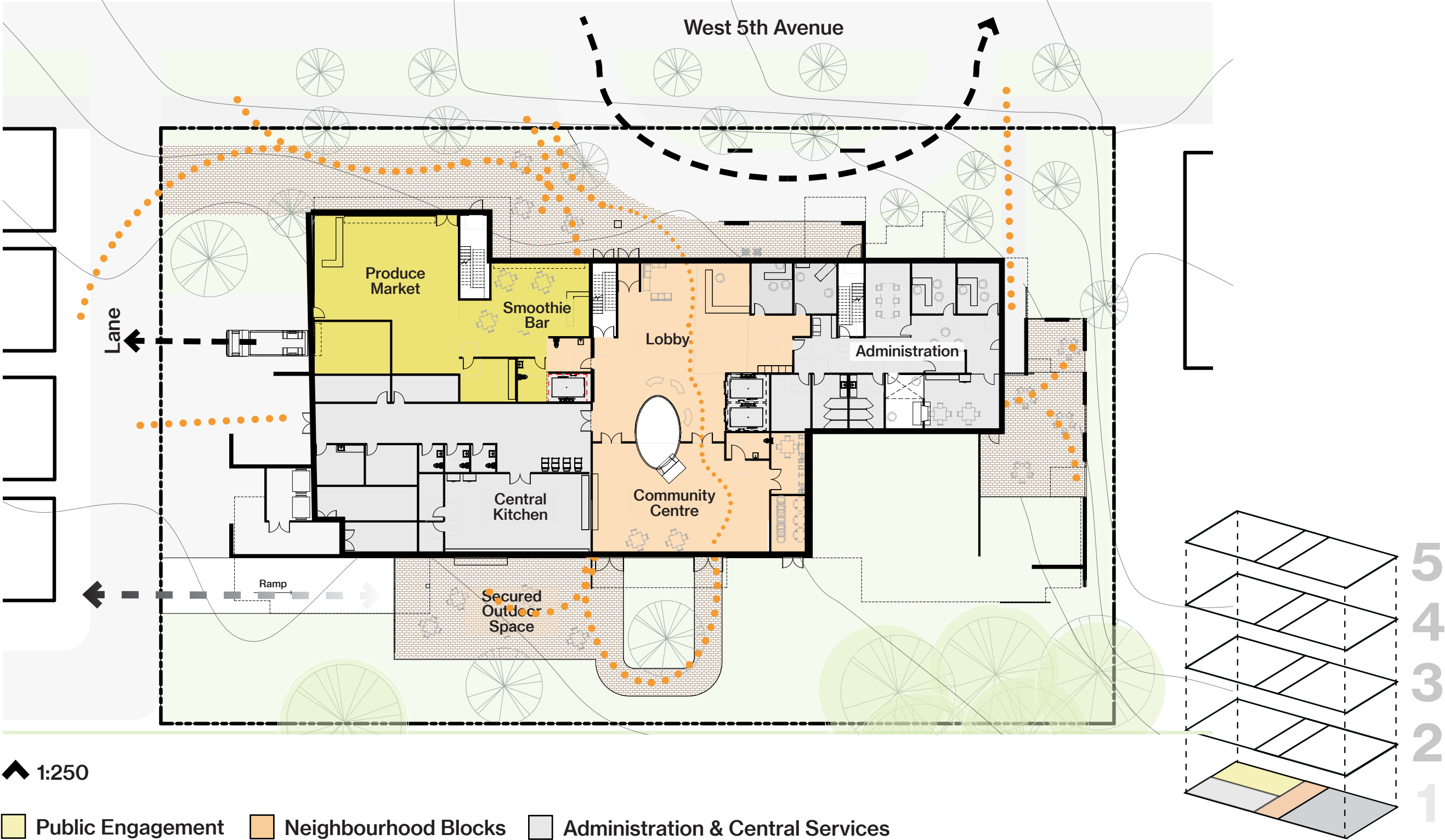


- | | |
|---|---|
|  Households |  Neighbourhood Blocks |
|  Public Engagement |  Administration & Central Services |

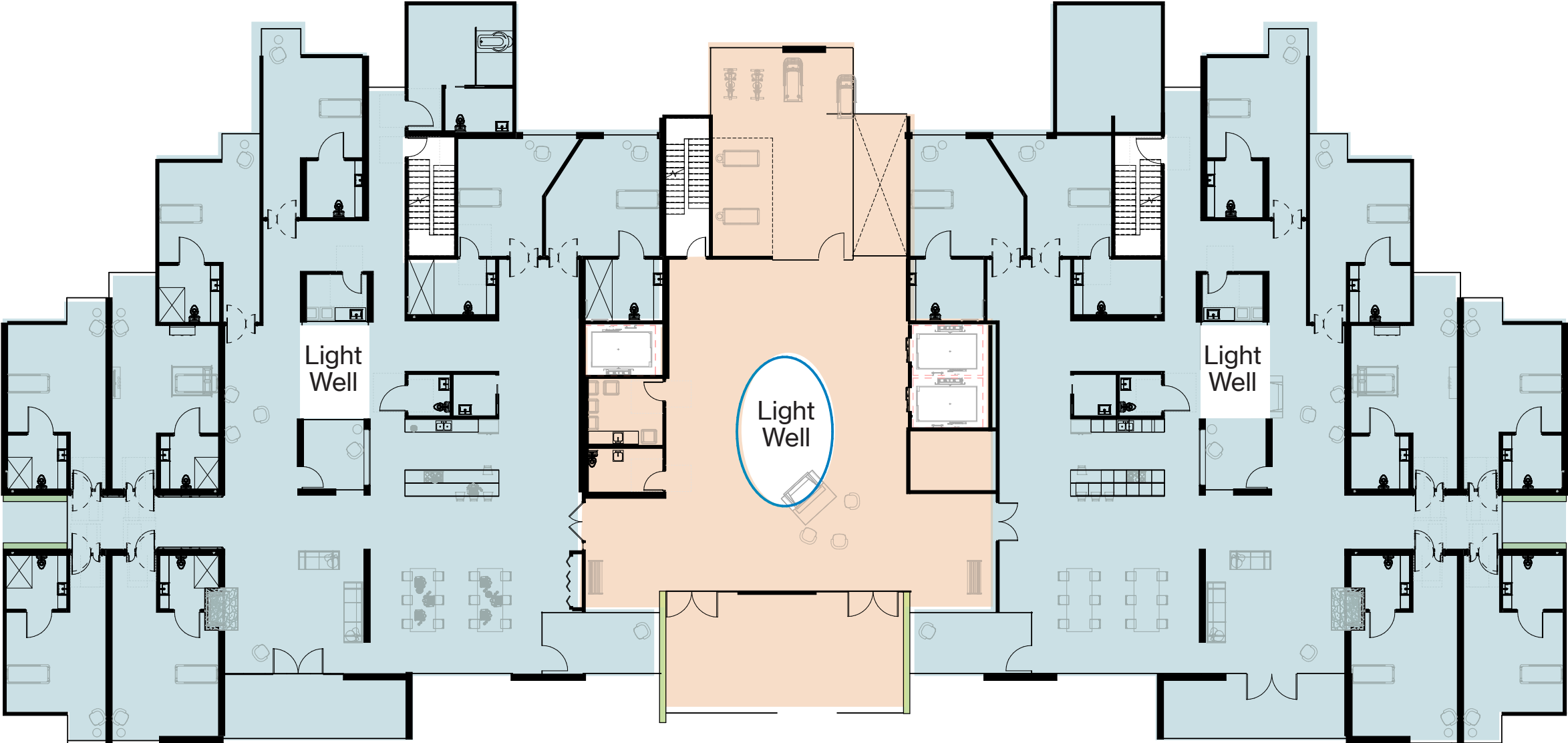
Building Connections



Building Organization
Ground Floor



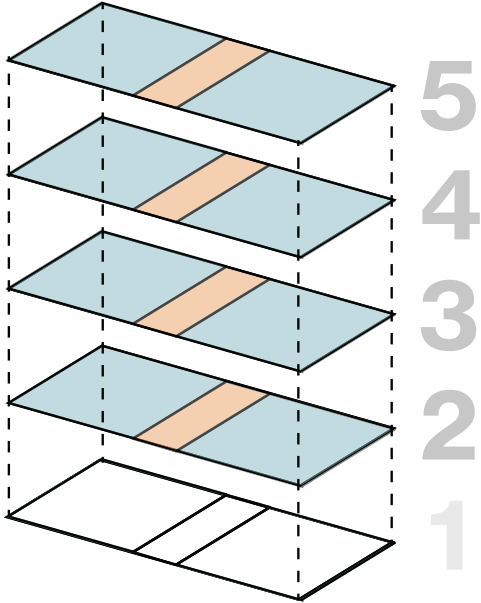
Building Organization
Typical Upper Floor Plate



▲ 1:250

Household

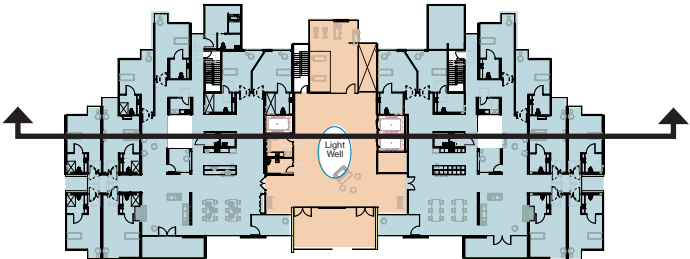
Neighbourhood Block



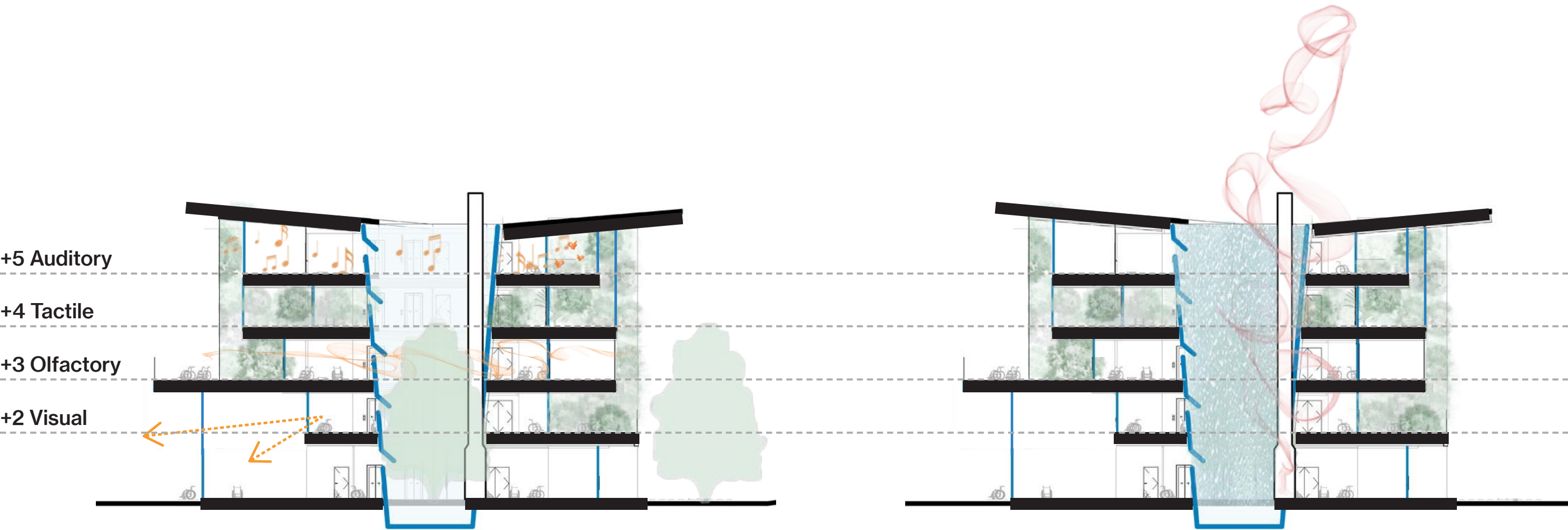
Building Organization
Building Section



1:250

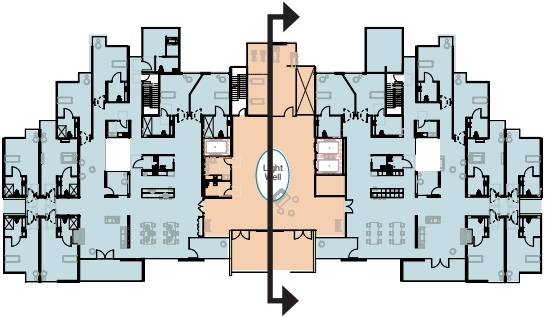


Building Organization
Sensory Interactions & Experiences



Vertical Sensory Neighbourhood Blocks

Neighbourhood Lightwell



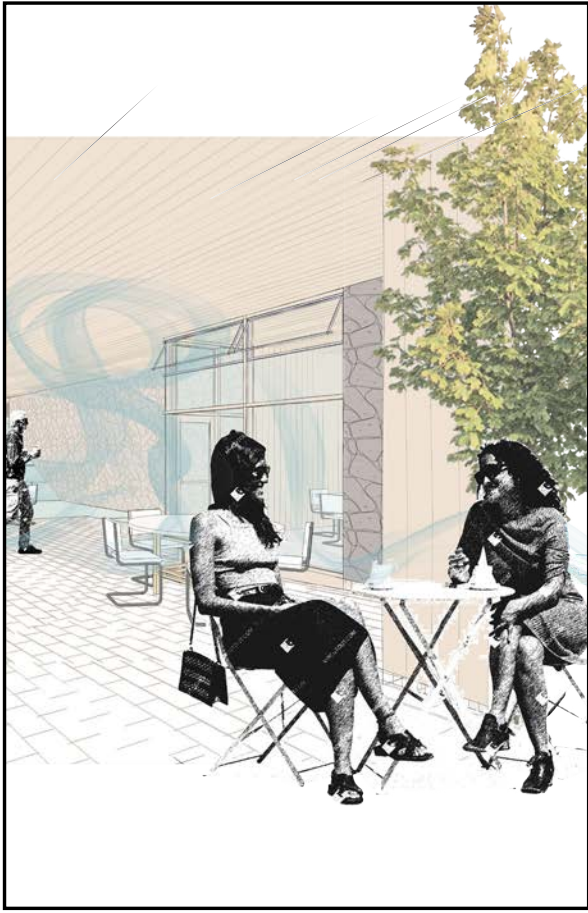
Experience of the Built Environment



Resident



Visitors (Friends & Family)



Staff



Public

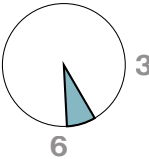
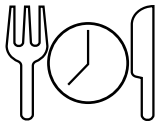
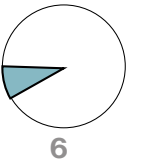
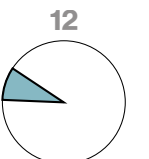
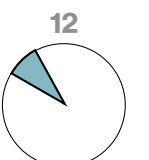
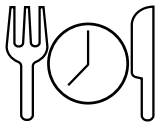
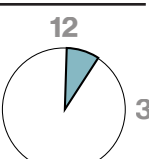
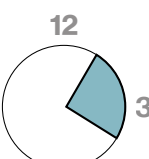
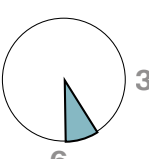
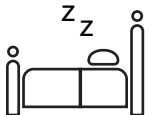
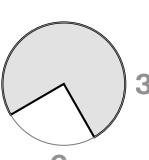
Experience of the Built Environment
Building Occupants



Chapter One: Residents

Experience of the Built Environment

A Day in the Life of a Resident: Schedule

	530 - 630am	Residents start waking up, getting dressed	
	800 - 930am	Mealtime - Breakfast	
	930 - 10am	Hygenic Activities	
	1000 - 1100am	Mid-Morning Activities Physically or Mentally stimulating activity Small walk, reading	
	1200 - 1000 pm	Mealtime - Lunch	
	1:00 - 4:00pm	Mid-afternoon Activity Physically or Mentally stimulating activity Physical Therapy Session (outside of household)	
	5:00 - 6:00pm	Mealtime - Dinner	
	8:00 pm +	Bedtime Preparation	

Building Organization
Sensory Informed Spatial Organization



Resident

Staff & Support

- Stimulating

+ Stimulating

Private

Bedroom
Bathing Room

Den
Greenhouse

Communal

Living
Dining
Kitchen

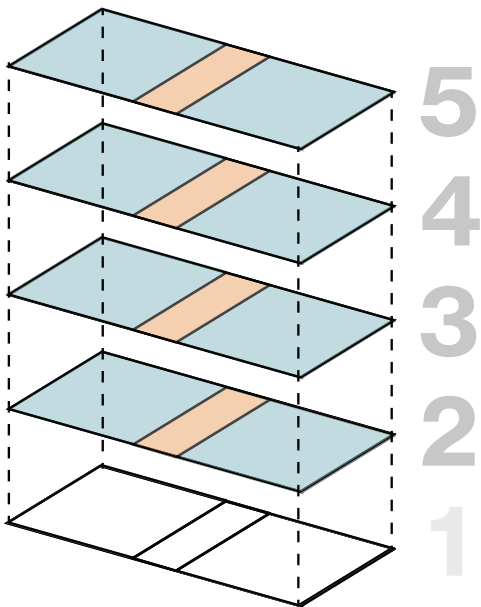
Staff

Laundry
Powder Room

Support

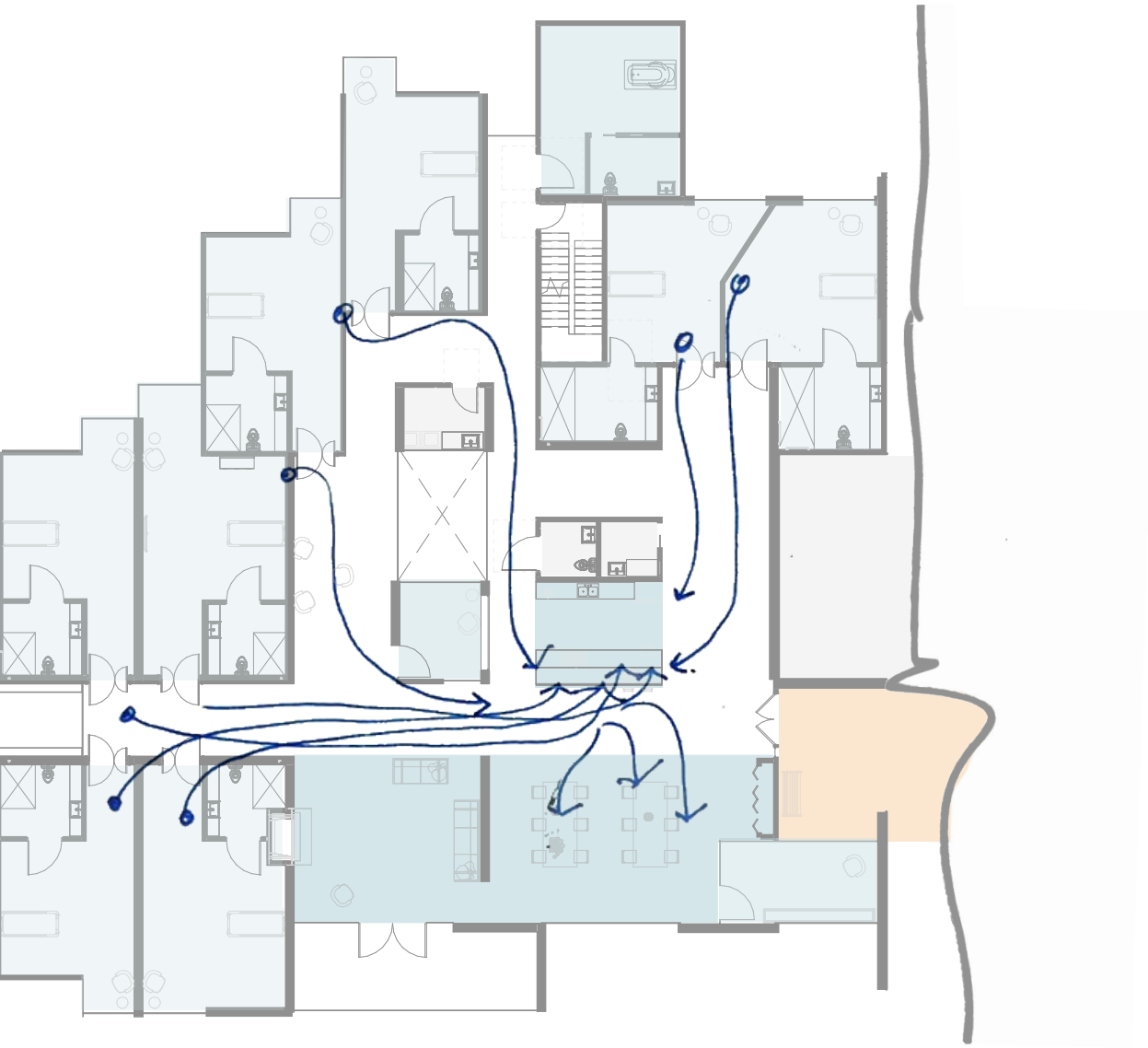
Medication
Pantry

Sightlines

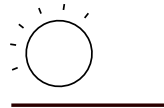
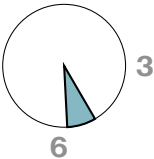


1:250 Typical Household Floorplan

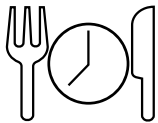
Experience of the Built Environment
A Day in the Life of a Resident: Movement Within Household



1:250 Pathways to Hub of Home from Bedrooms



530 - 630am Residents start waking up, getting dressed



800 - 930am Mealtime - Breakfast



930 - 10am Hygienic Activities



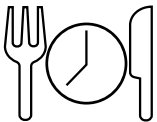
1000 - 1100am Mid-Morning Activities
Physically or Mentally stimulating activity
Small walk, reading



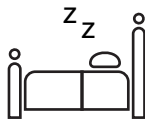
1200 - 1000 pm Mealtime - Lunch



1:00 - 4:00pm Mid-afternoon Activity
Physically or Mentally stimulating activity
Physical Therapy Session (outside of household)

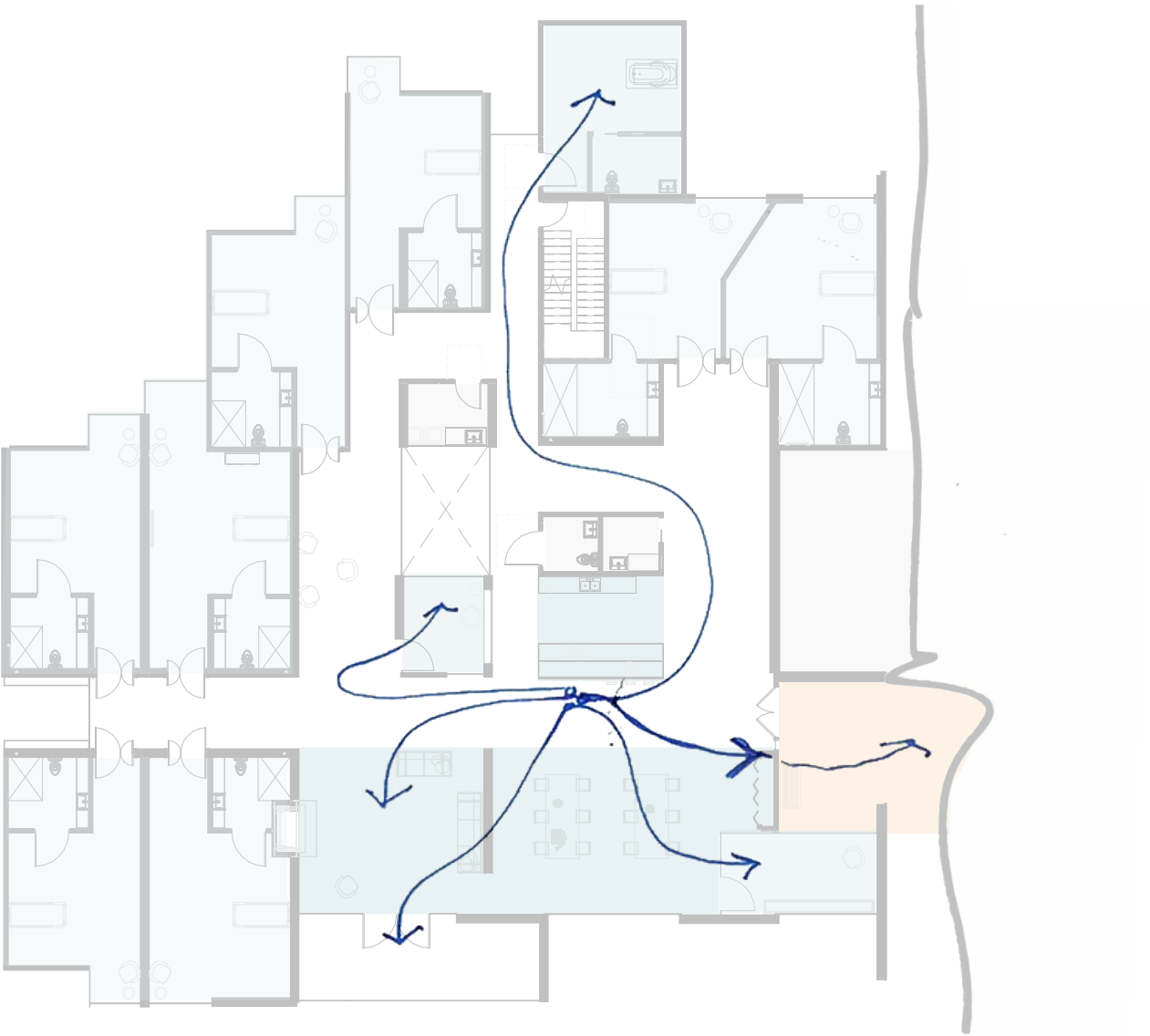


5:00 - 6:00pm Mealtime - Dinner



8:00 pm + Bedtime Preparation

Experience of the Built Environment
A Day in the Life of a Resident: Movement Within Household



530 - 630am Residents start waking up, getting dressed



800 - 930am Mealtime - Breakfast



930 - 10am Hygienic Activities



1000 - 1100am **Mid-Morning Activities**
Physically or Mentally stimulating activity
Small walk, reading



1200 - 1000 pm Mealtime - Lunch



1:00 - 4:00pm **Mid-afternoon Activity**
Physically or Mentally stimulating activity
Physical Therapy Session (outside of household)

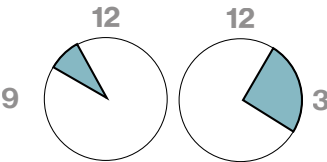


5:00 - 6:00pm Mealtime - Dinner

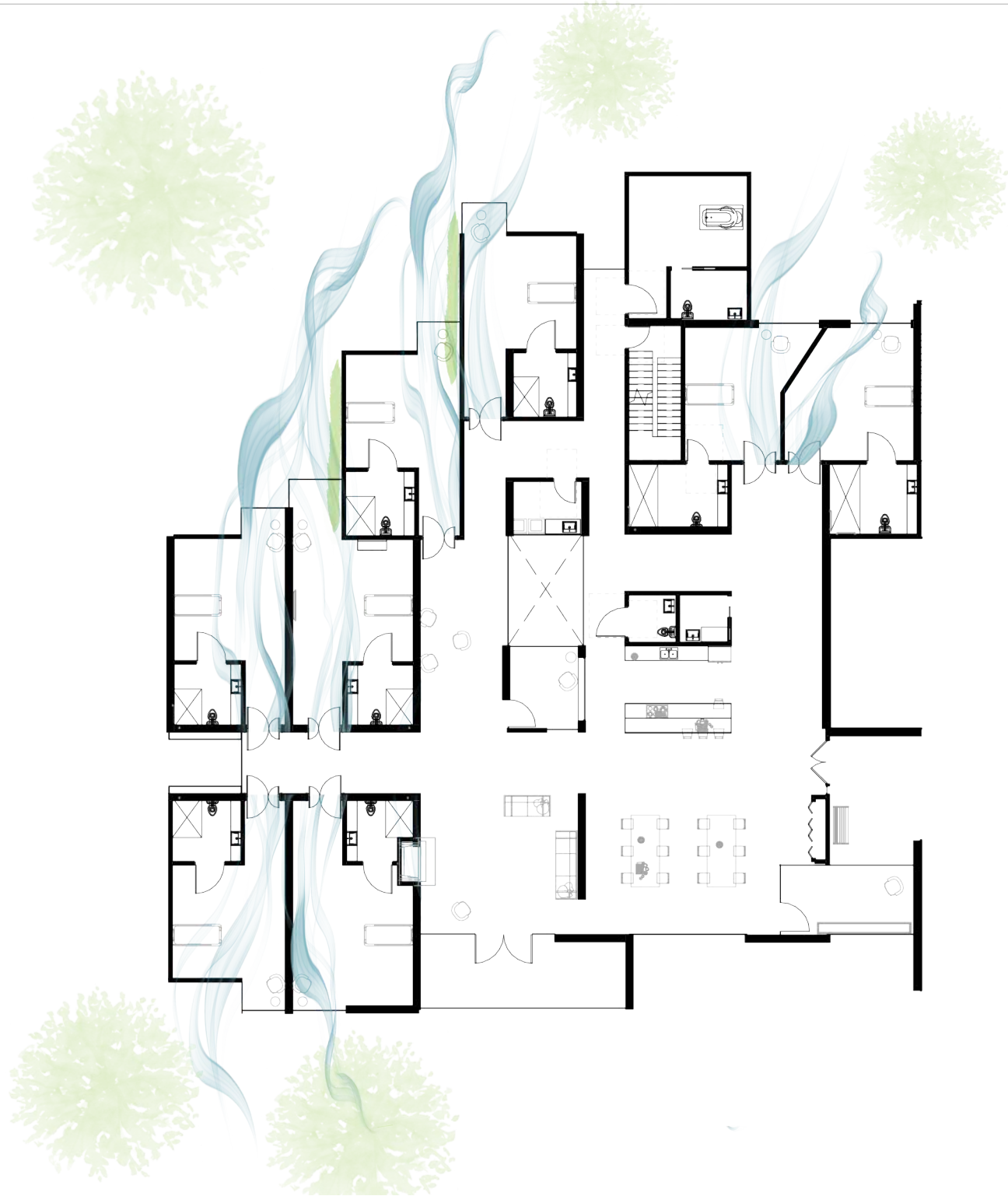


8:00 pm + Bedtime Preparation

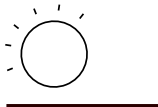
1:250 Pathways from Hub of Home to Other Spaces



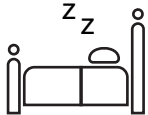
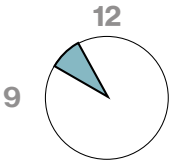
Experience of the Built Environment
A Day in the Life of a Resident: Bedroom Interactions & Experiences



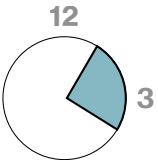
1:250 Typical Household Floorplan



Residents start waking up, getting dressed



Bedtime Preparation



Experience of the Built Environment
A Day in the Life of a Resident: Journey to Hub of Home

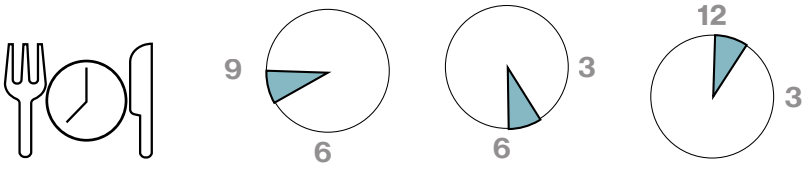


▲ 1:250 Spatial Organization for Visual & Olfactory Cues for Orientation of Time & Place

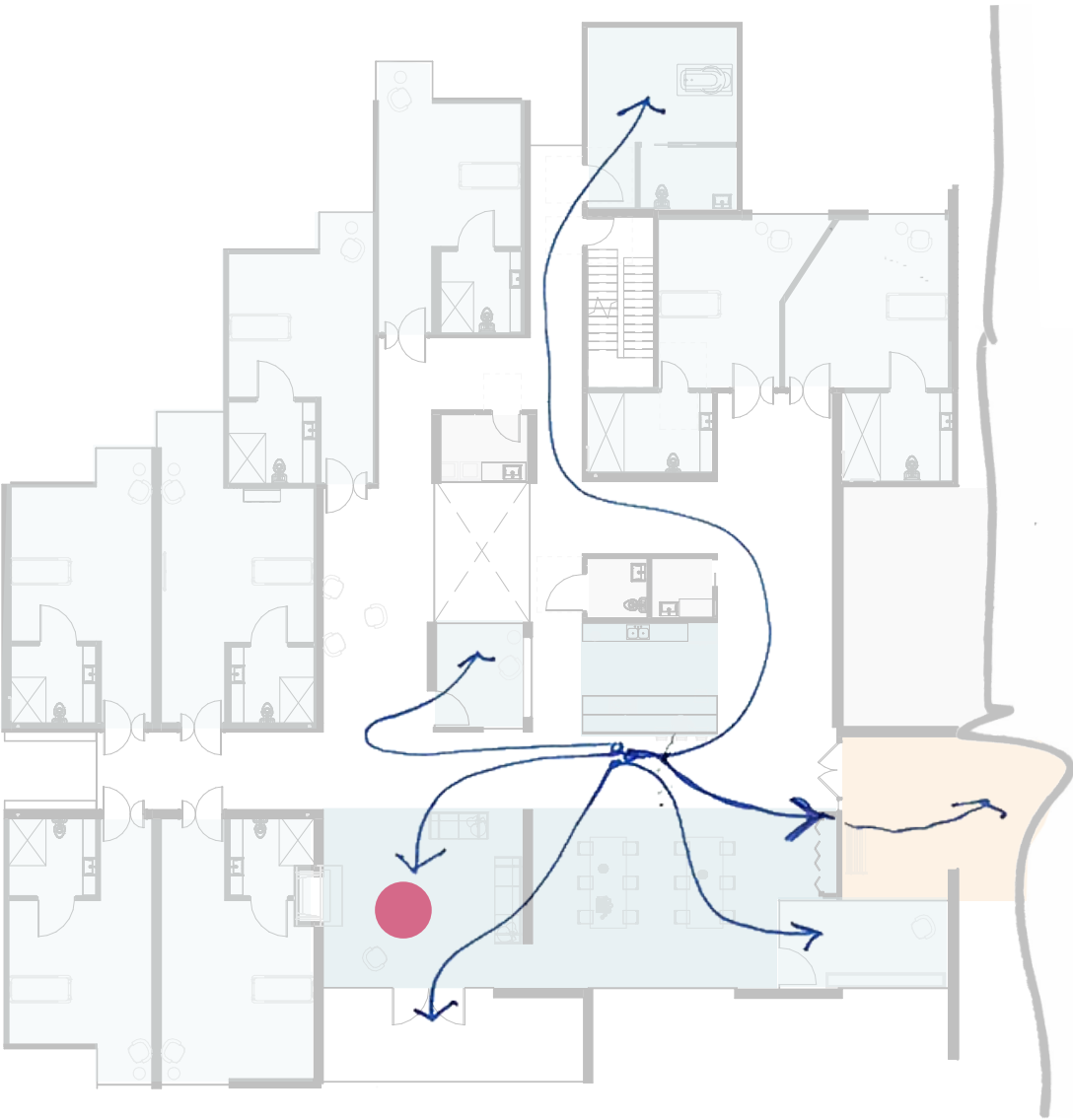
Experience of the Built Environment
A Day in the Life of a Resident: Mealtime Interactions & Experiences



1:250 Spatial Organization for Visual & Olfactory Cues for Orientation of Time & Place



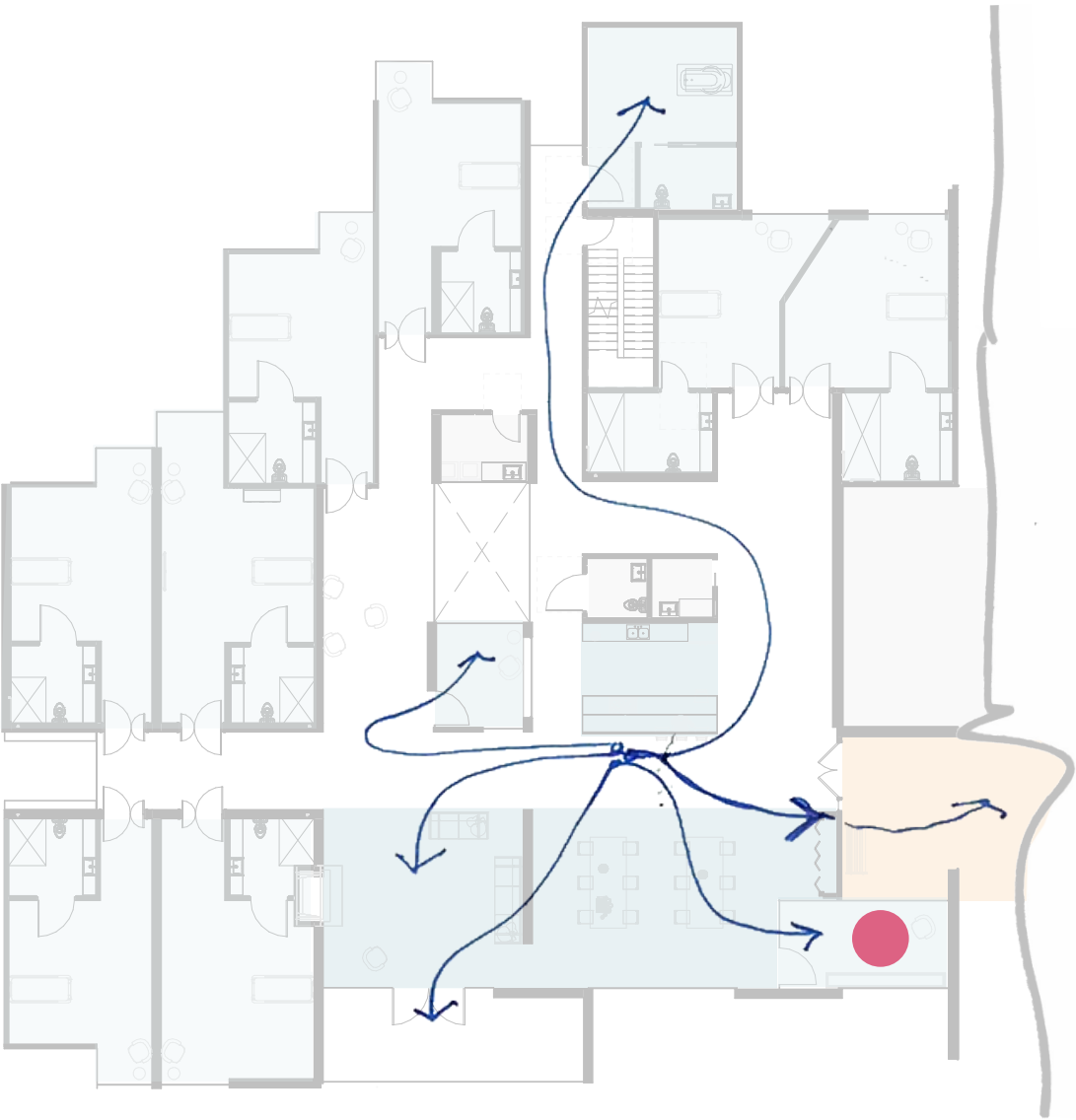
Experience of the Built Environment
A Day in the Life of a Resident: Living Room Interactions & Experiences



1:250 Household Walking Path: Living Room Node



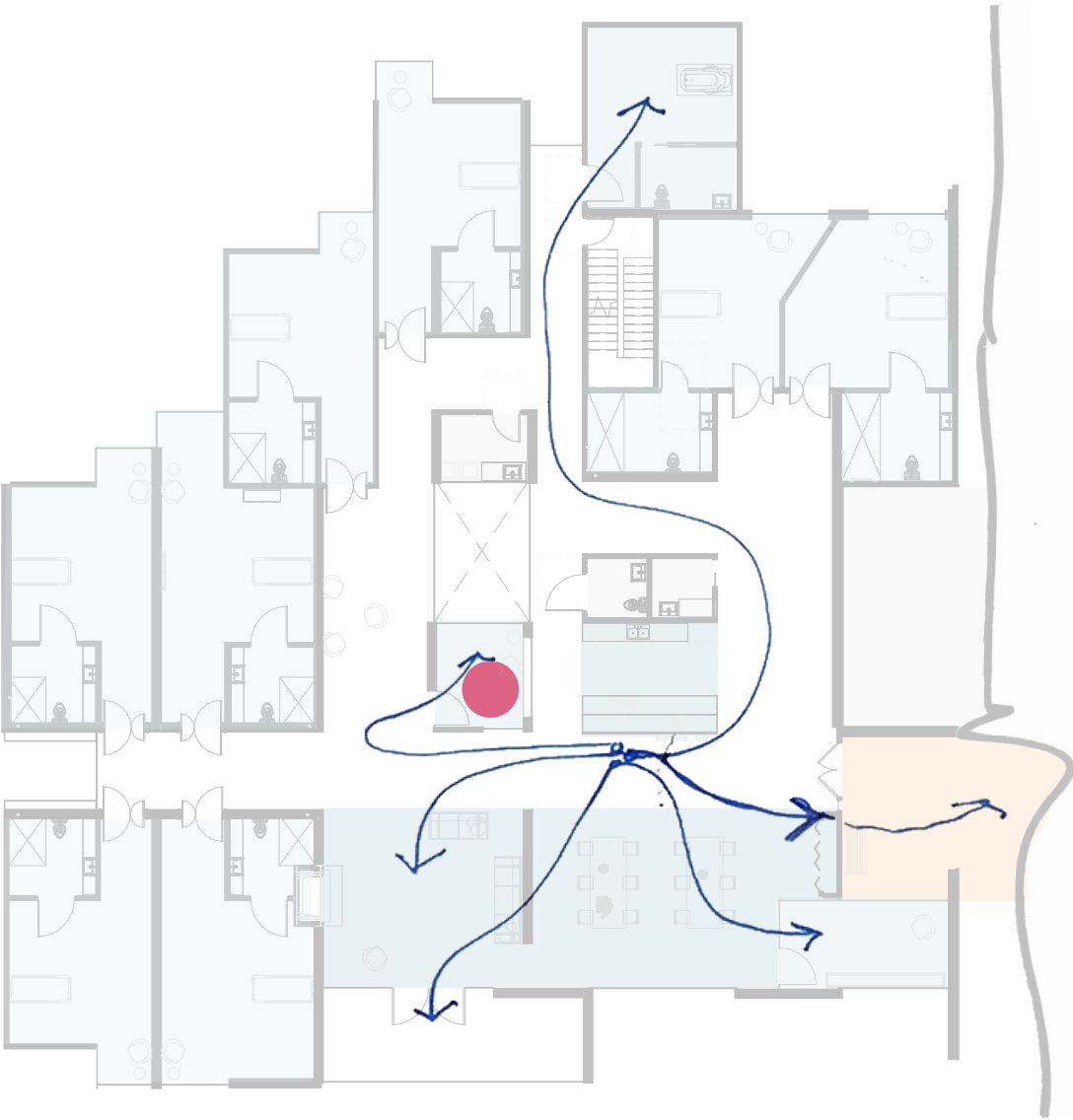
Experience of the Built Environment
A Day in the Life of a Resident: Greenhouse Interactions & Experiences



1:250 Household Walking Path: Greenhouse Node



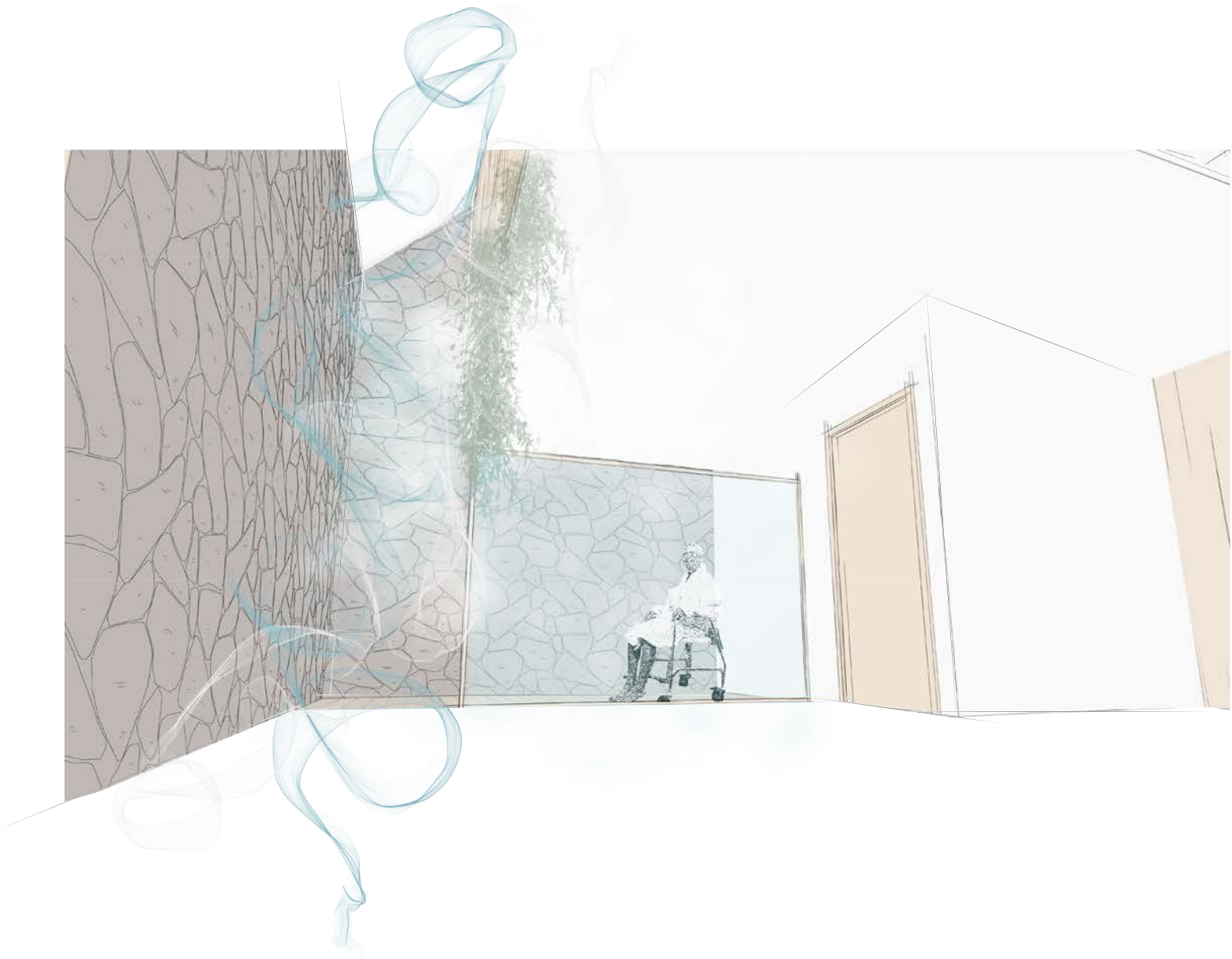
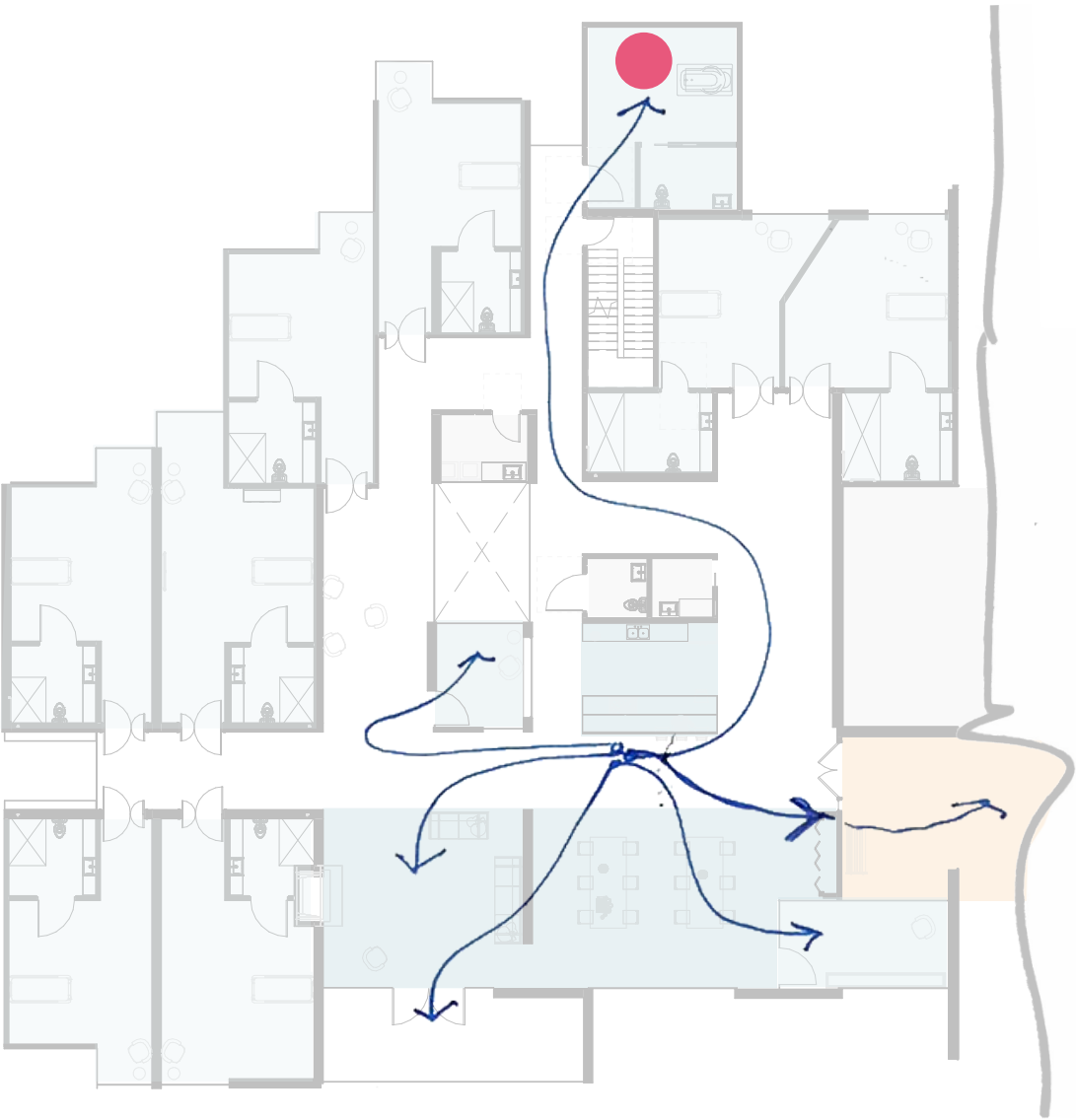
Experience of the Built Environment
A Day in the Life of a Resident: Den Interactions & Experiences



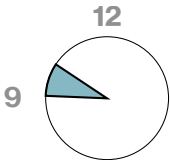
1:250 Household Walking Path: Den Node



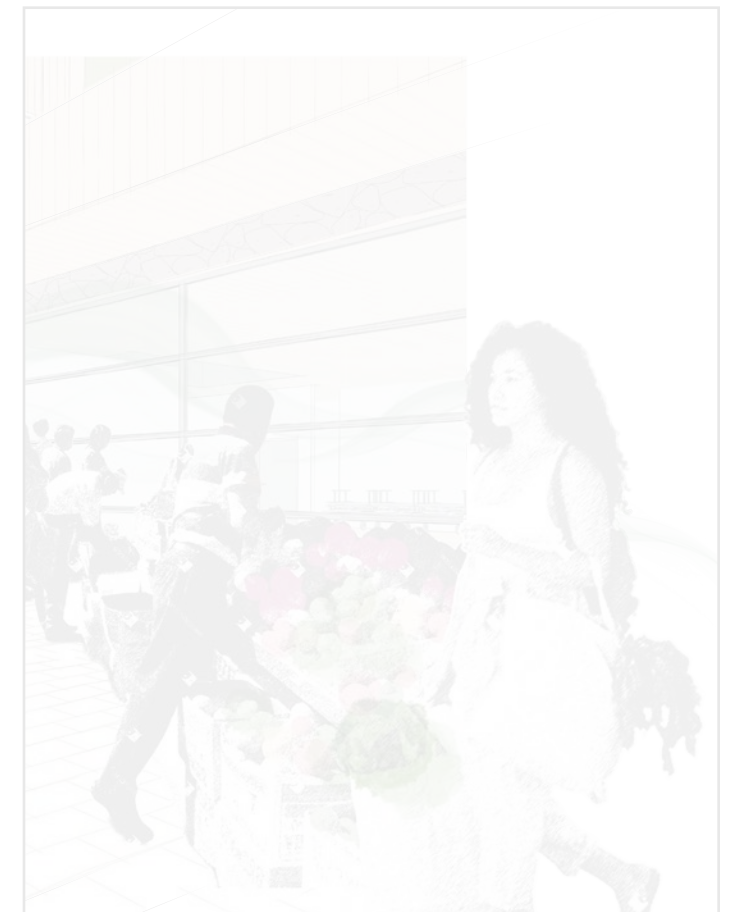
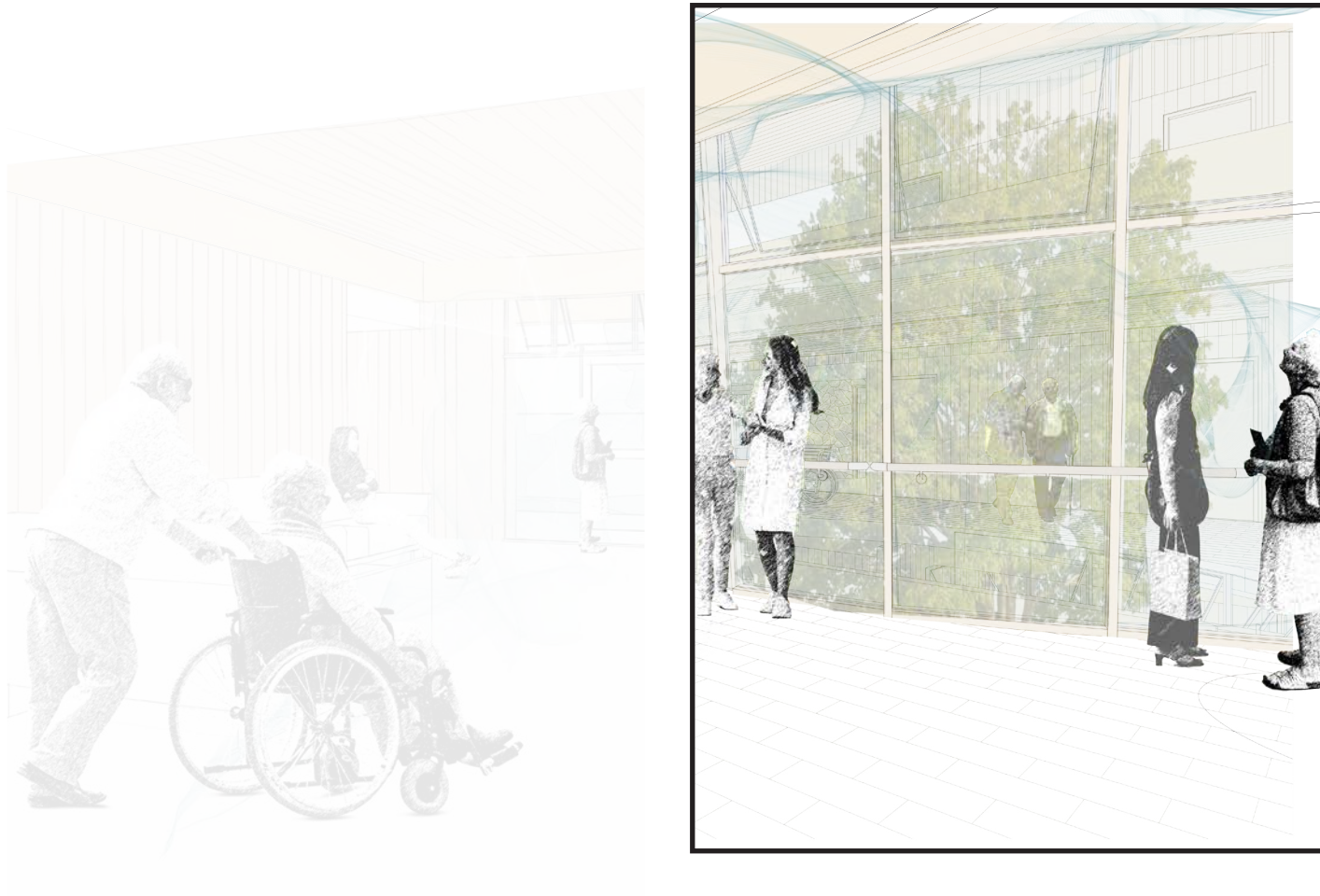
Experience of the Built Environment
A Day in the Life of a Resident: Bathing Room Interactions & Experiences



1:250 Household Walking Path: Bathing Room

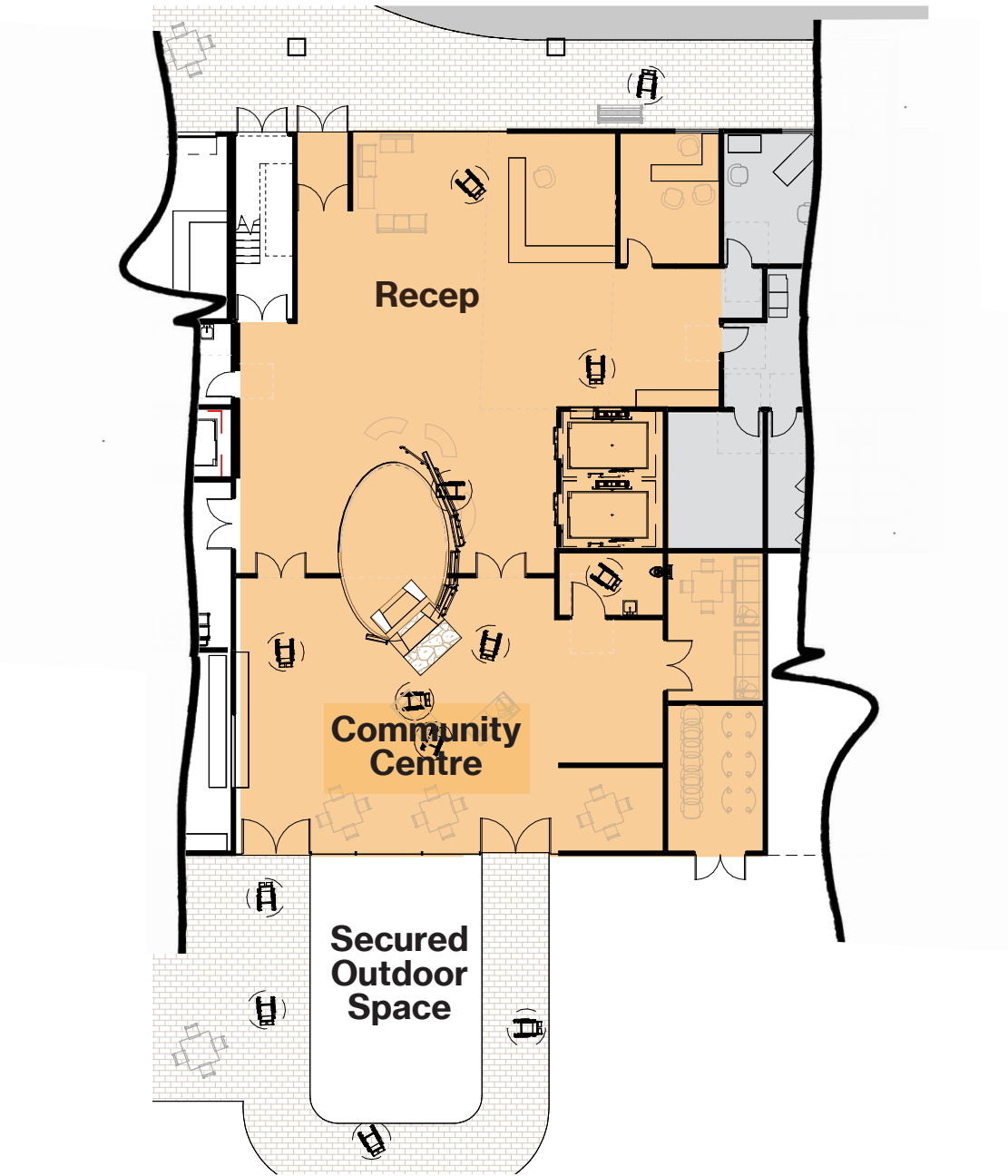


Experience of the Built Environment
Building Occupants



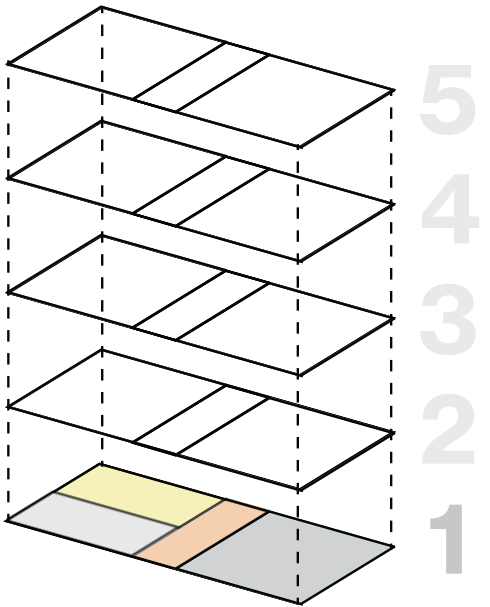
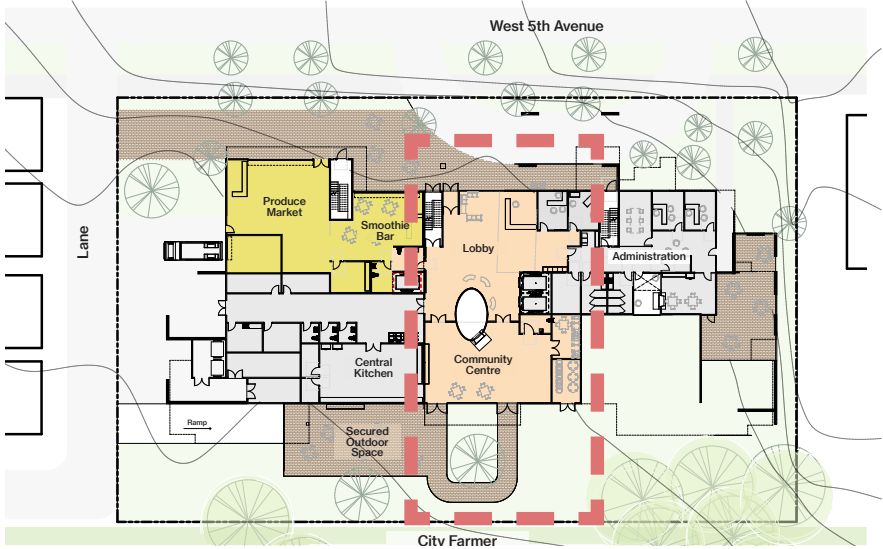
Chapter Two: Visitors

Building Organization
Ground Floor Lobby



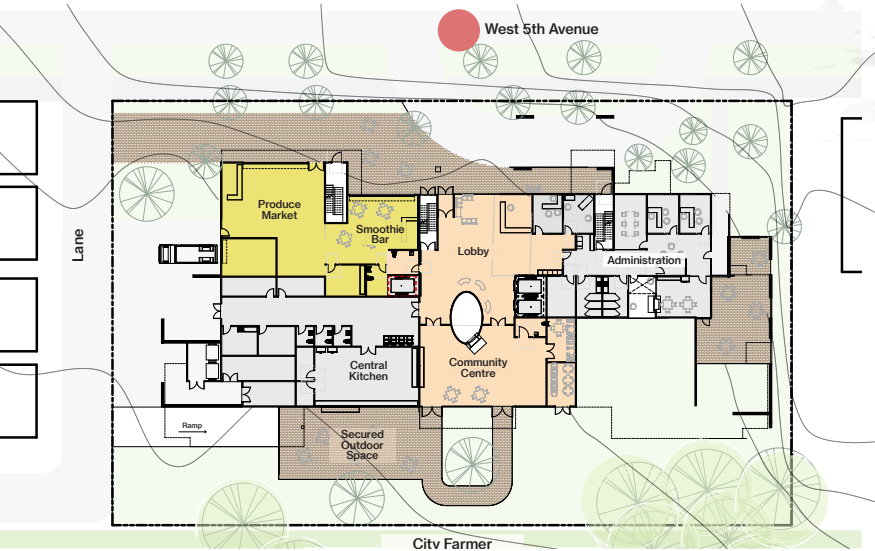
1:250 Ground Floor Lobby

- Ground Floor Lobby
- Reception
- Lobby
- Community Centre
- Secured Outdoor Space



5
4
3
2
1

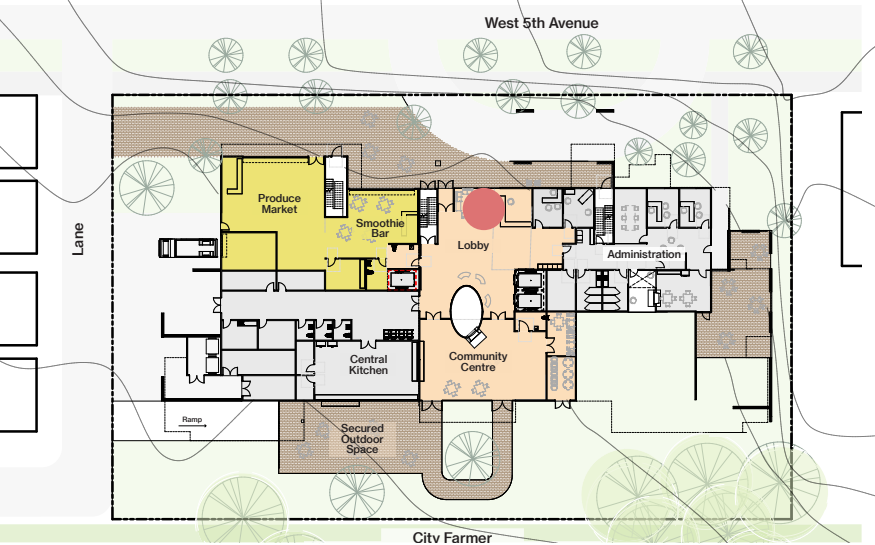
Experience of the Built Environment
Building Entry Interactions & Experiences



Keyplan: Ground Floor



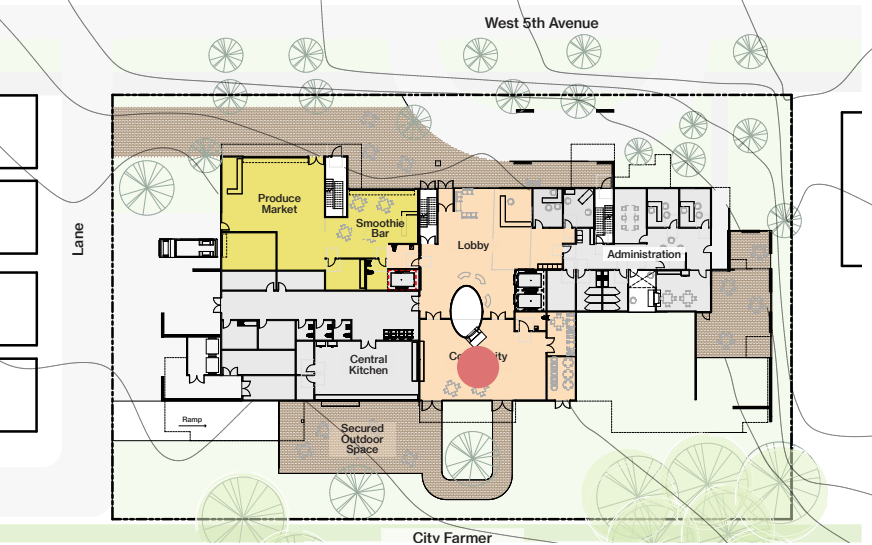
Experience of the Built Environment
Building Lobby Interactions & Experiences



Keyplan: Ground Floor



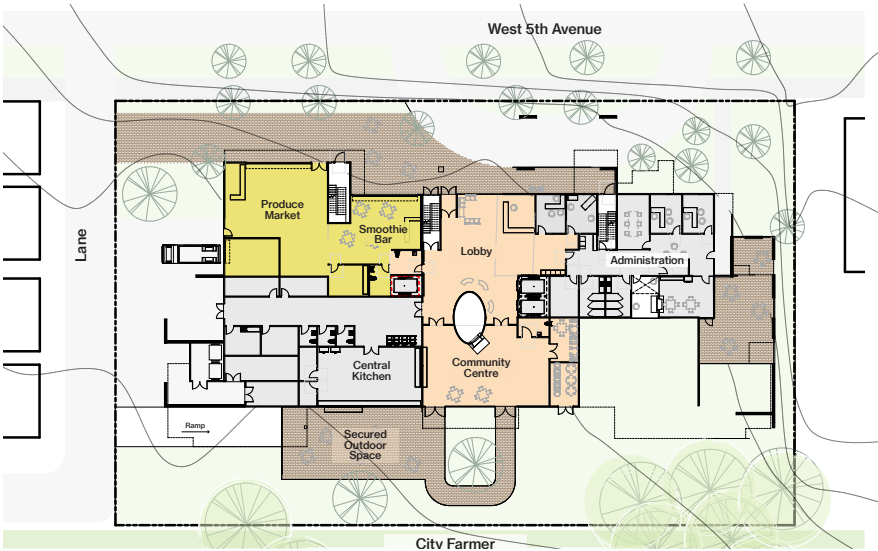
Experience of the Built Environment
Interaction & Experience at the Community Centre



Keyplan: Ground Floor



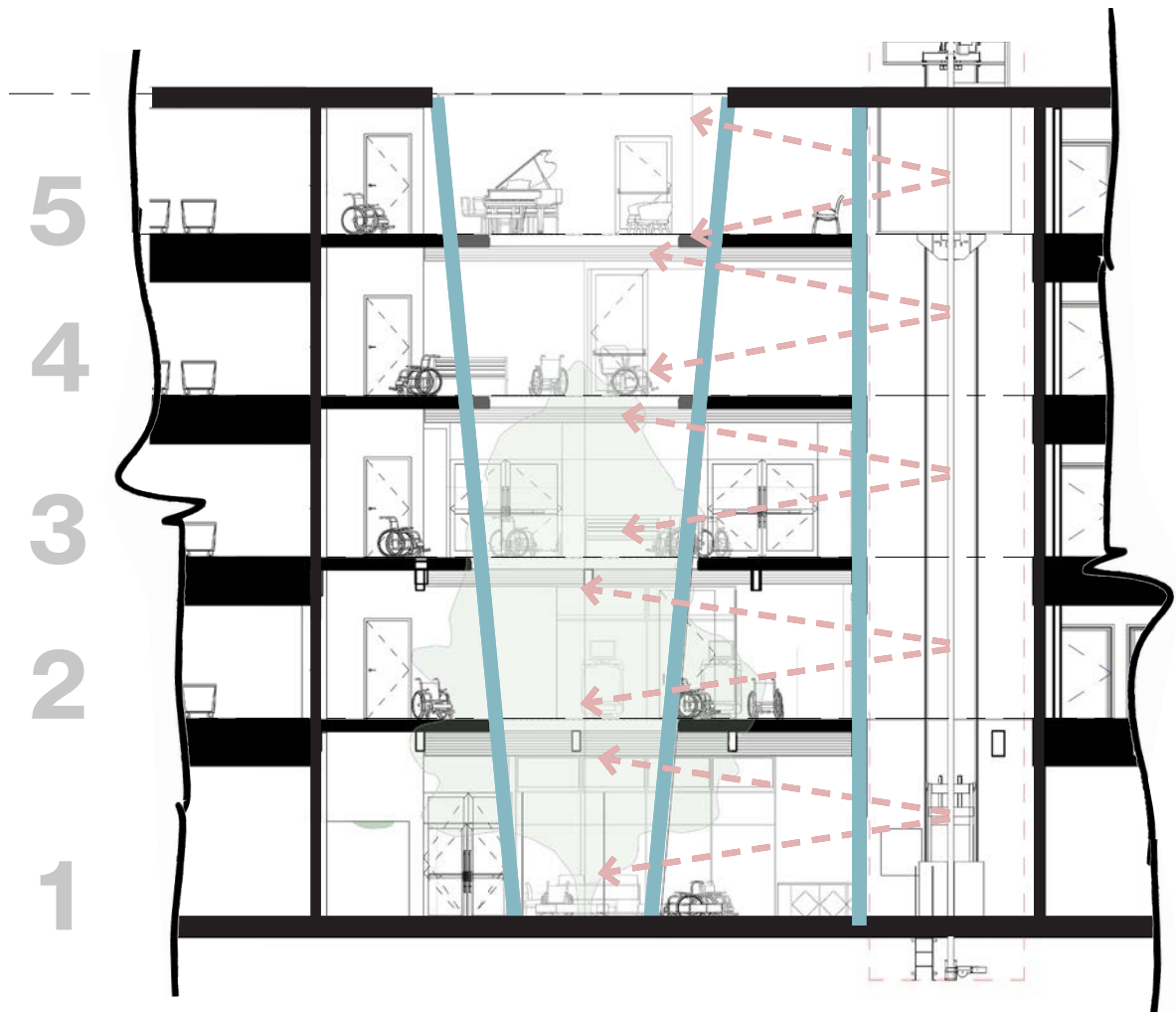
Experience of the Built Environment
Interaction & Experience at Secured Outdoor Space



Keyplan: Ground Floor

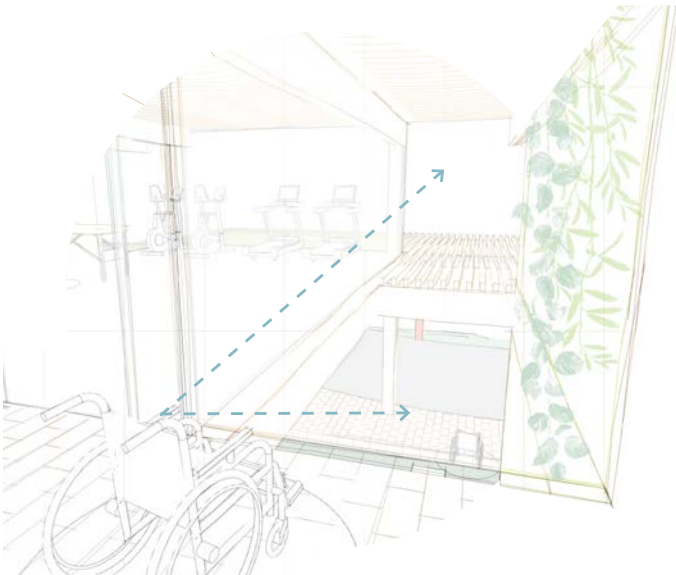
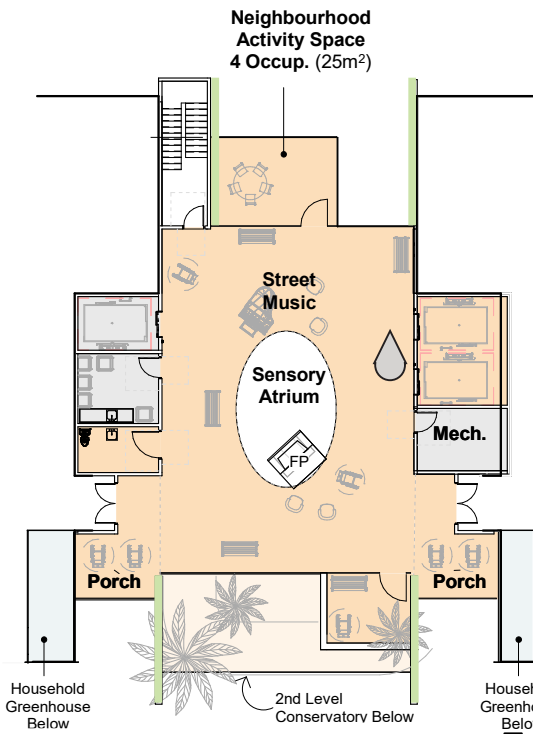
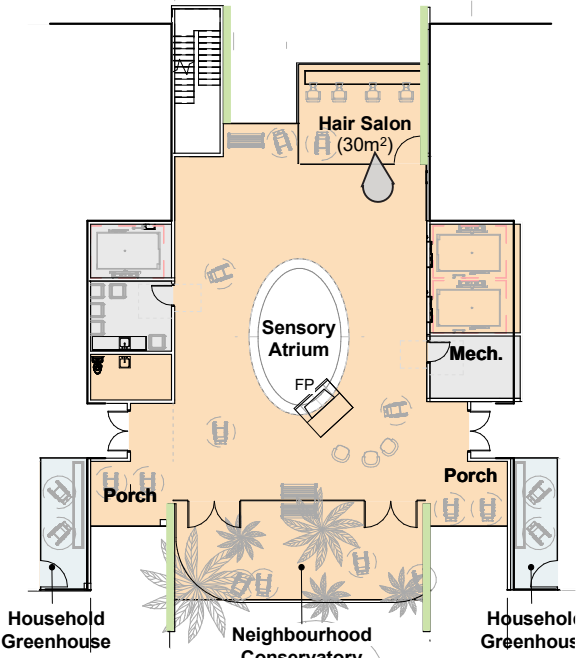
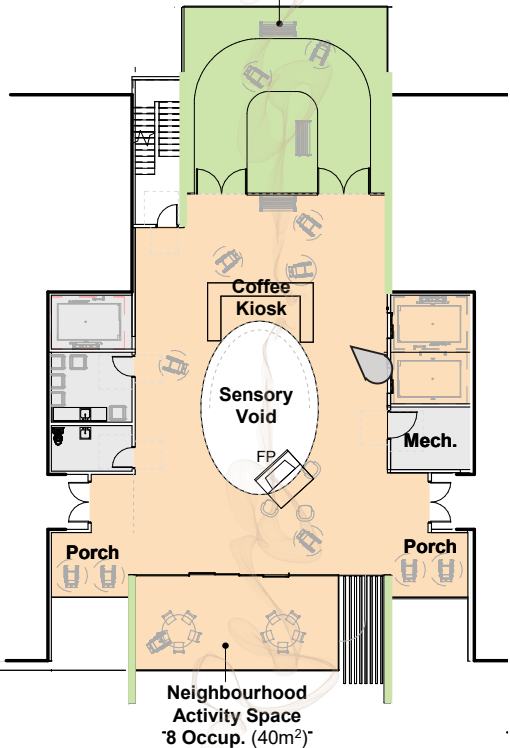
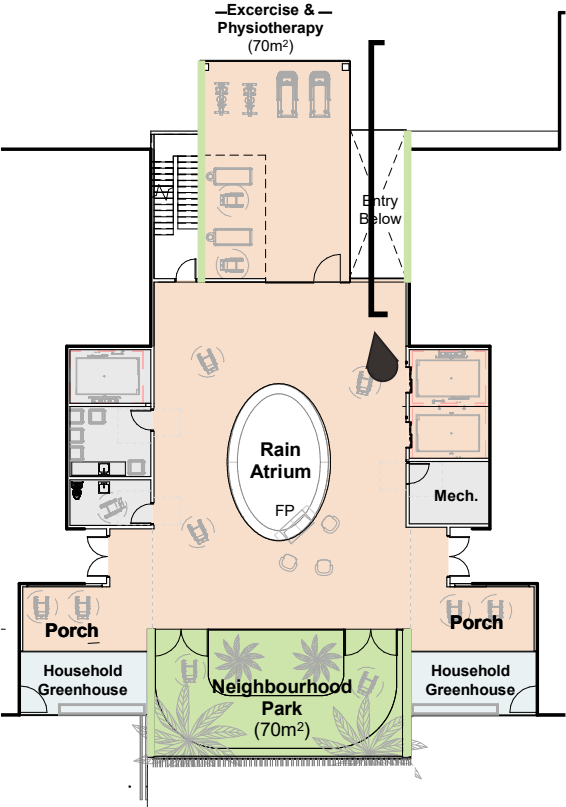


Experience of the Built Environment
Vertical Circulation



1:250 Section Through Elevators

Building Organization
Vertical Neighbourhood Blocks



2nd Floor Neighbourhood Block



3rd Floor Neighbourhood Block

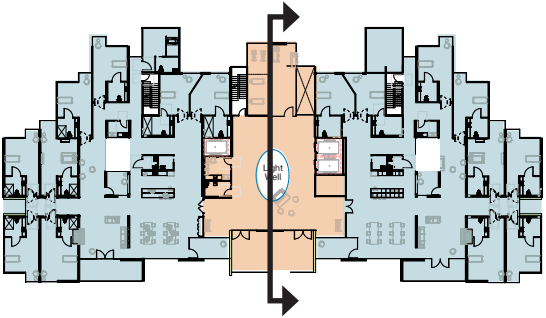


4th Floor Neighbourhood Block

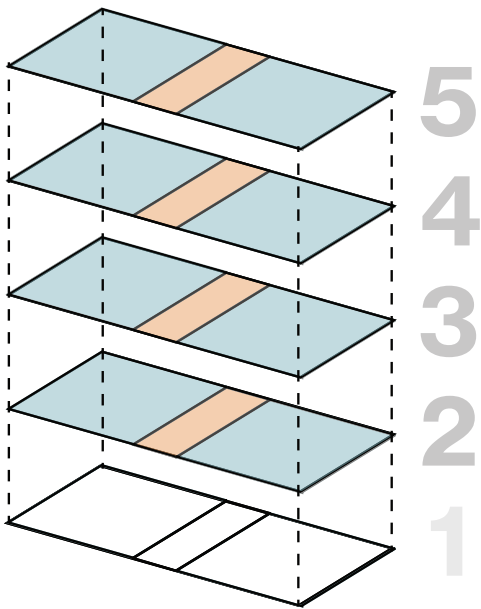
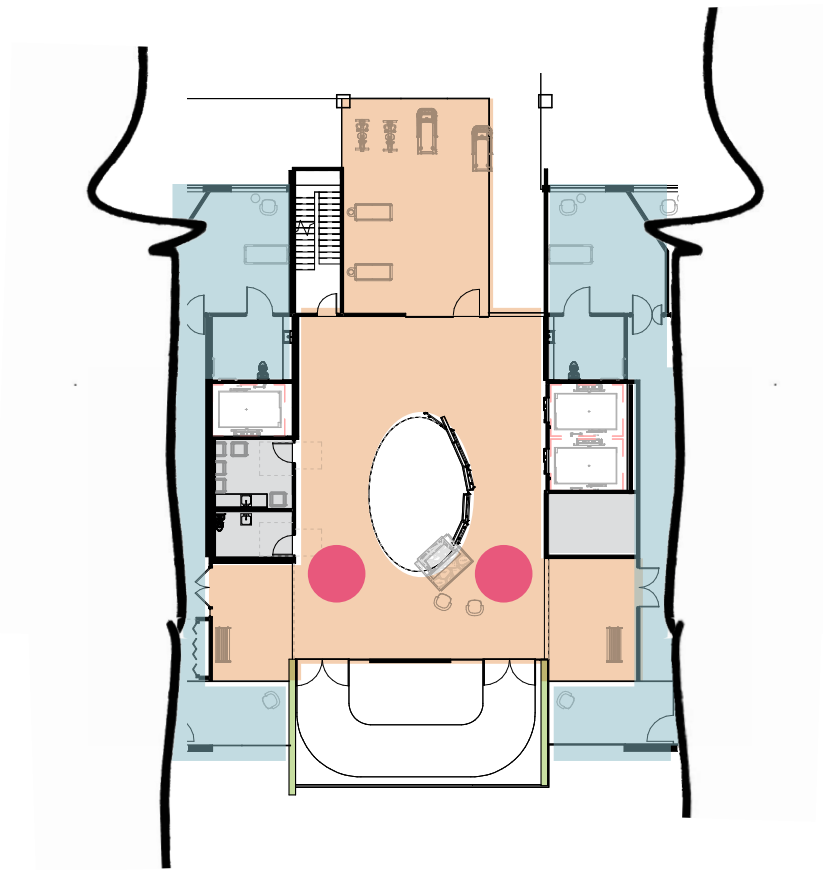


5th Floor Neighbourhood Block

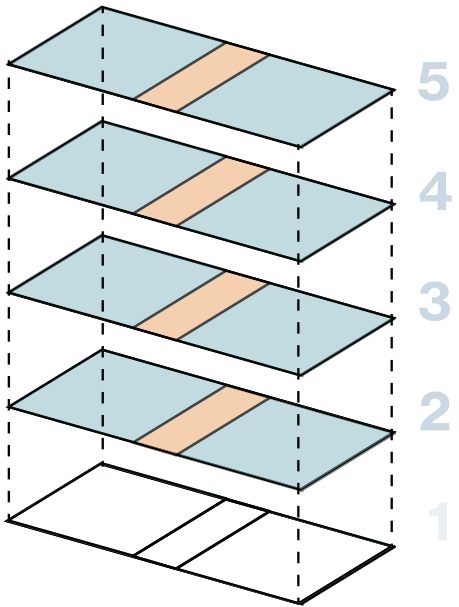
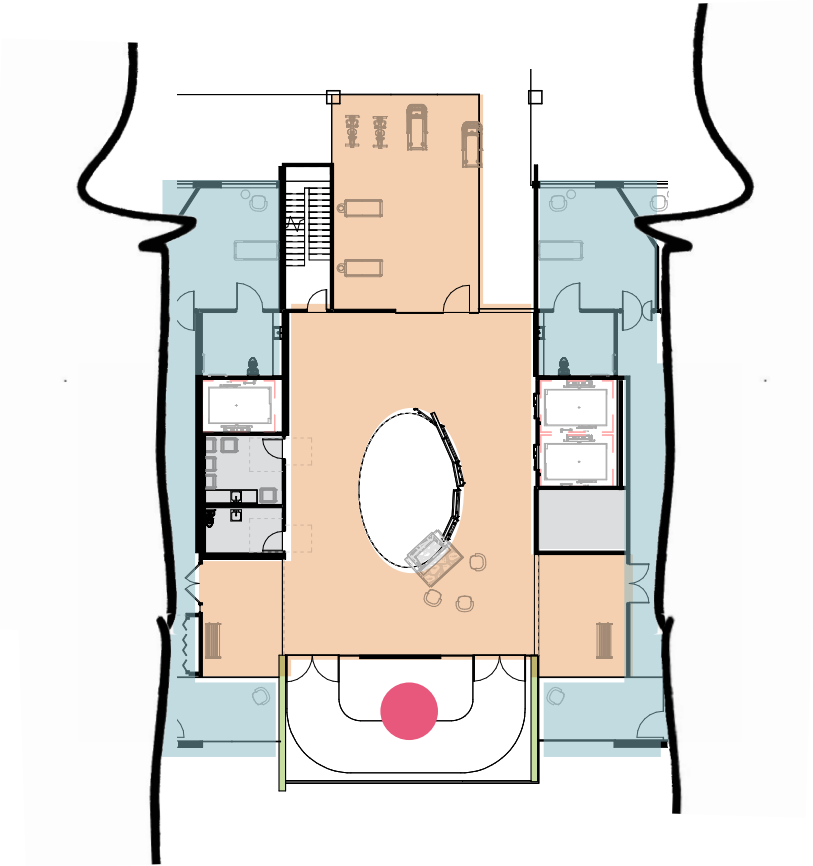
Building Organization
Sensory Interactions & Experiences



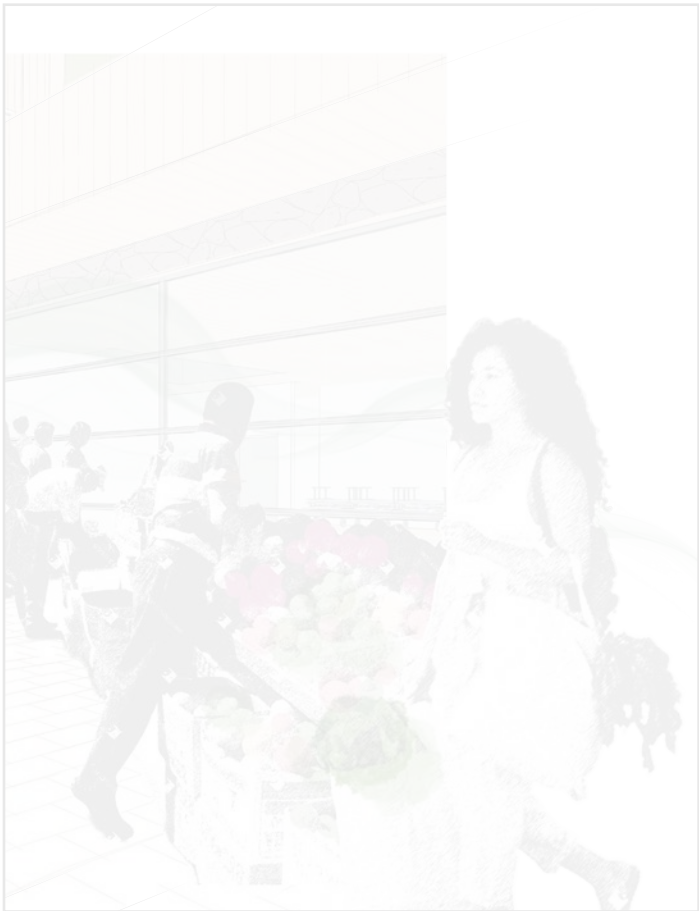
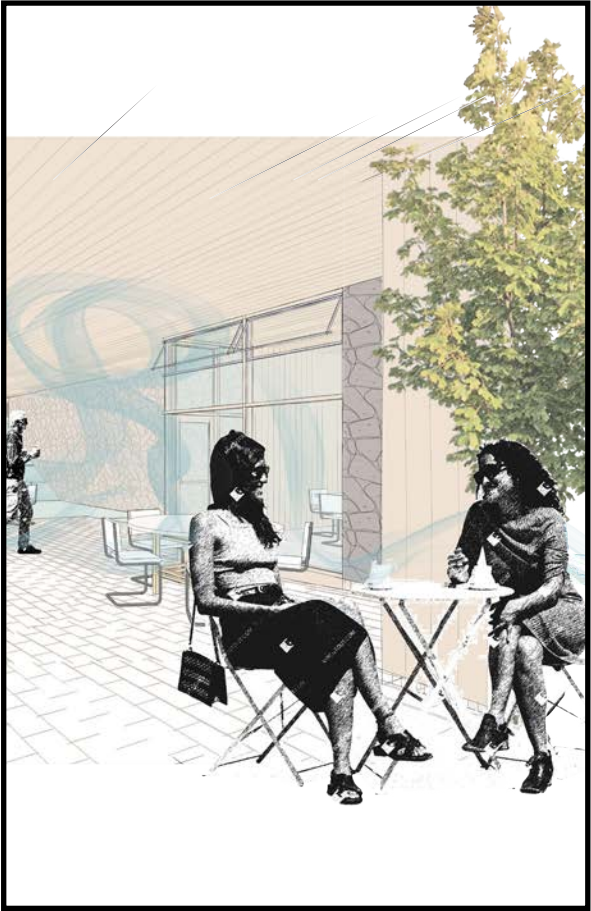
Through the Eyes of a Building Occupant
Interactions & Experience at Household Porch



Experience of the Built Environment
Interactions & Experience at Neighbourhood Green Space

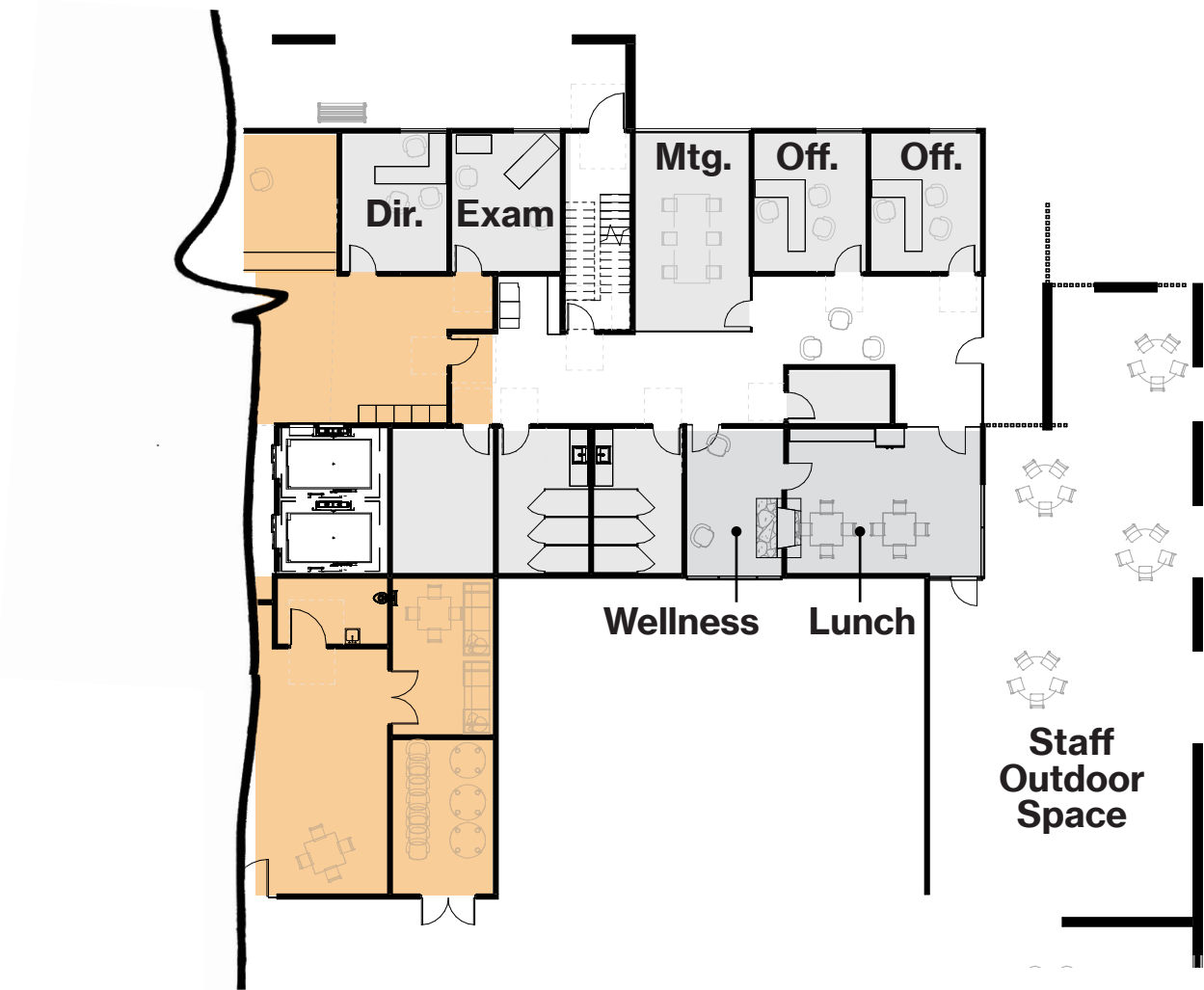


Experience of the Built Environment
Building Occupants



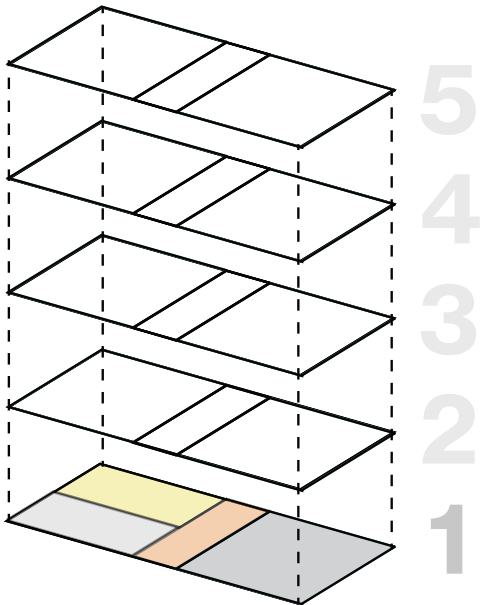
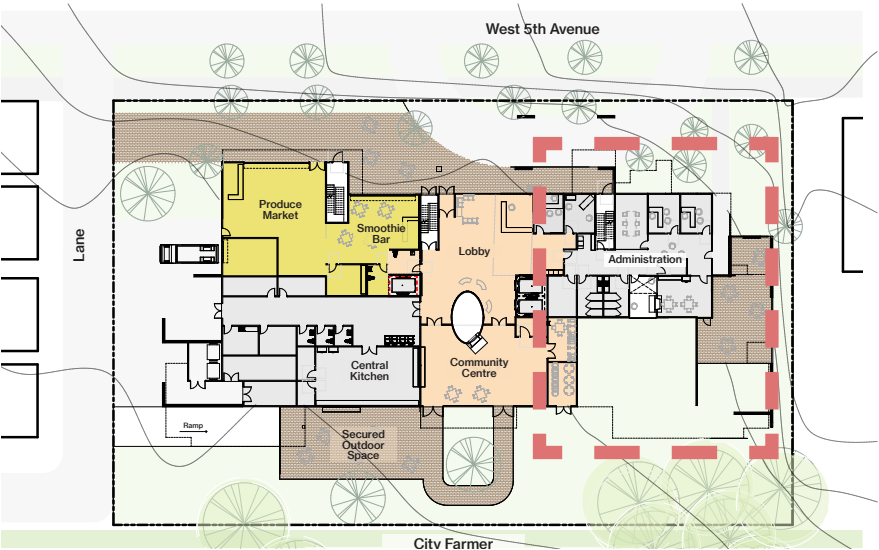
Chapter Three: Staff

Spatial Organization
East Administration Wing



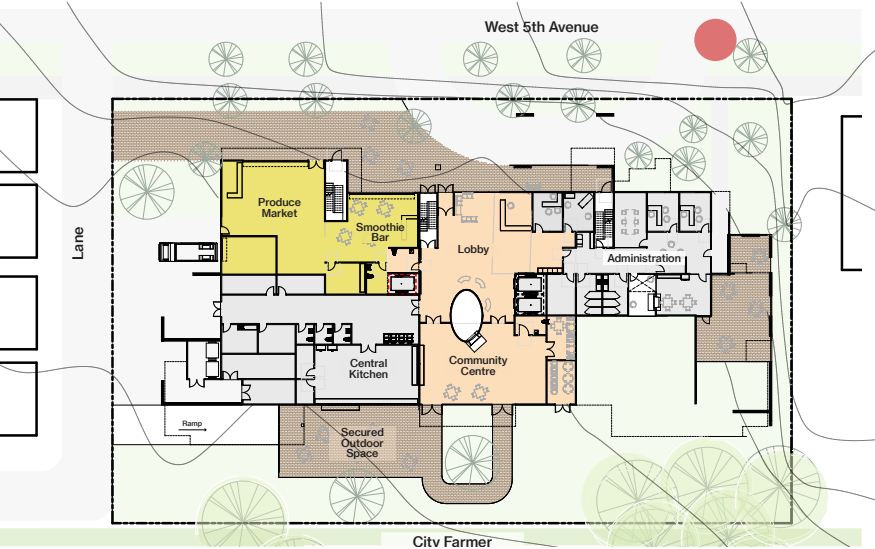
Staff Administration

- Director Offices
- Consultation Room
- Private Offices
- Meeting Room
- Staff Wellness
- Staff Lunch Room
- Staff Outdoor Space
- Washrooms
- Storage



1:250 Staff Administration Floorplan

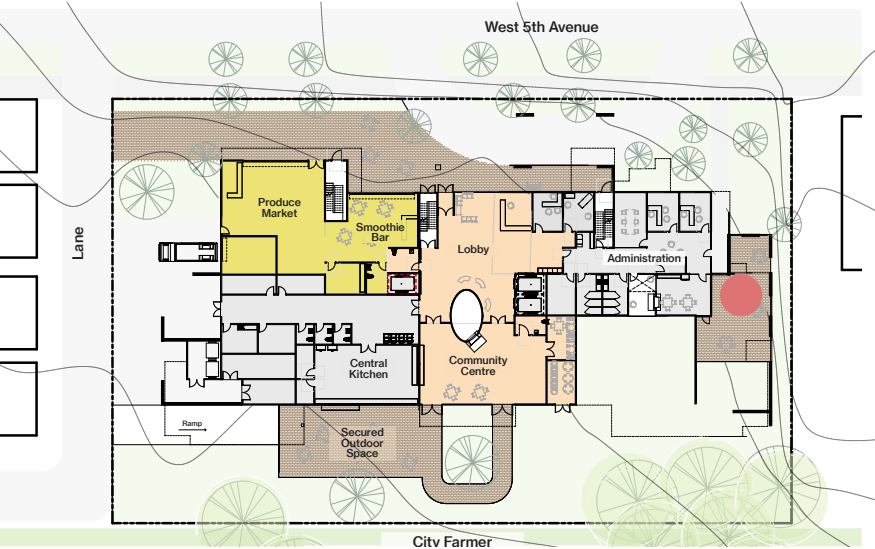
Experience of the Built Environment
Staff Administration Pedestrian Access Interactions & Experiences



Keyplan: Ground Floor



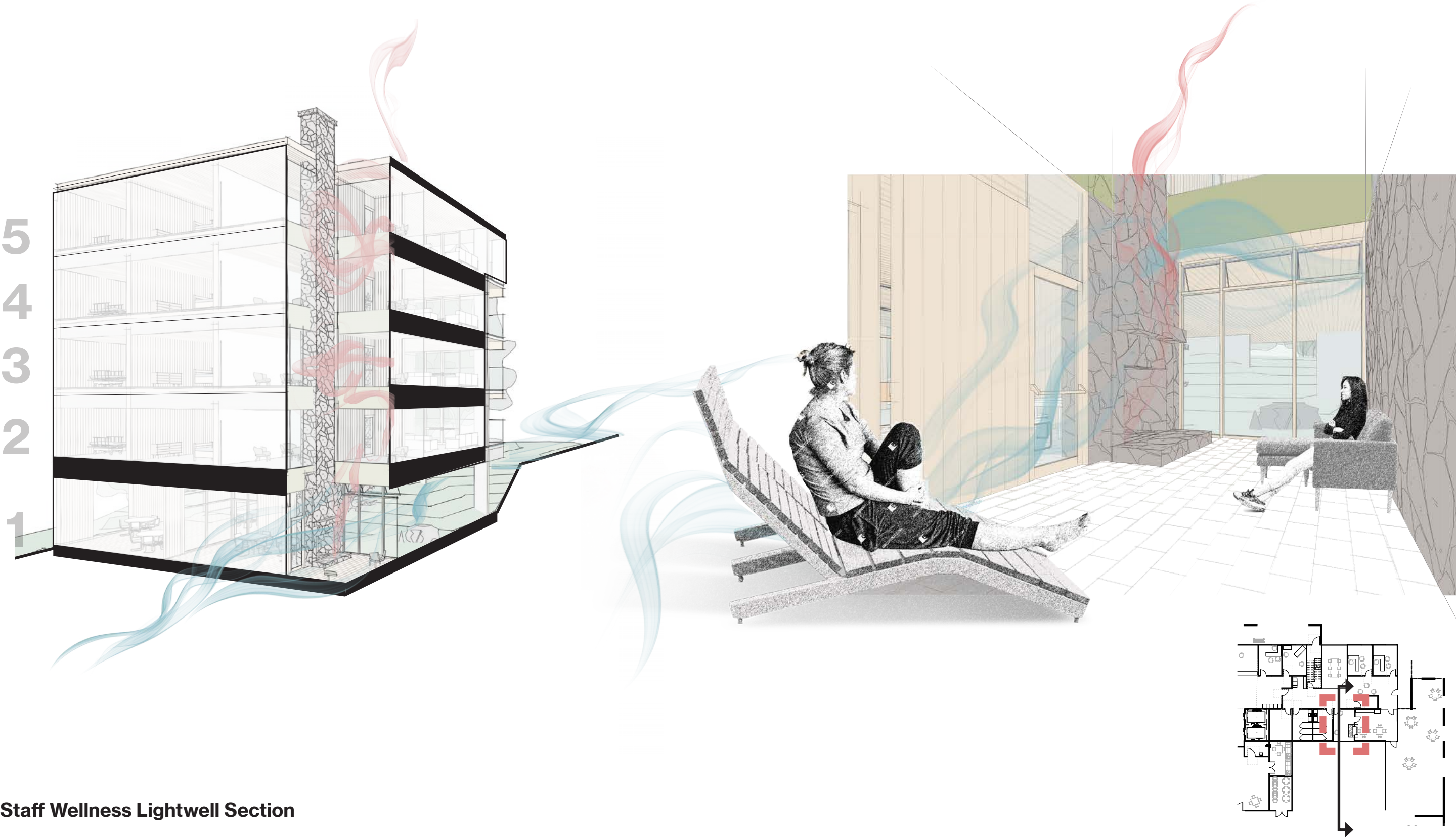
Experience of the Built Environment
Staff Outdoor Space nteractions & Experiences



Keyplan: Ground Floor



Experience of the Built Environment
Staff Wellness Lightwell Interactions & Experiences



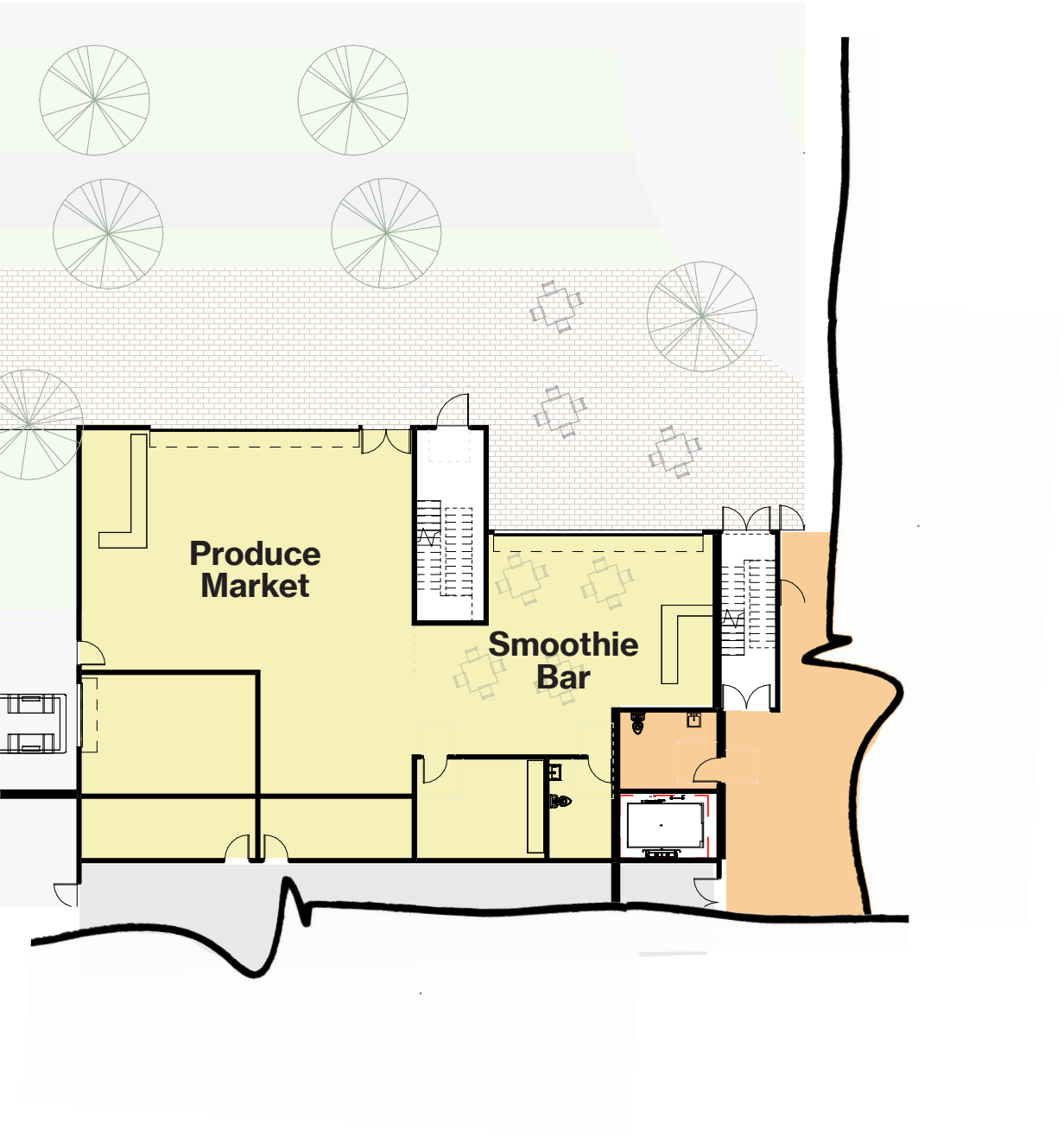
Staff Wellness Lightwell Section

Experience of the Built Environment
Building Occupants



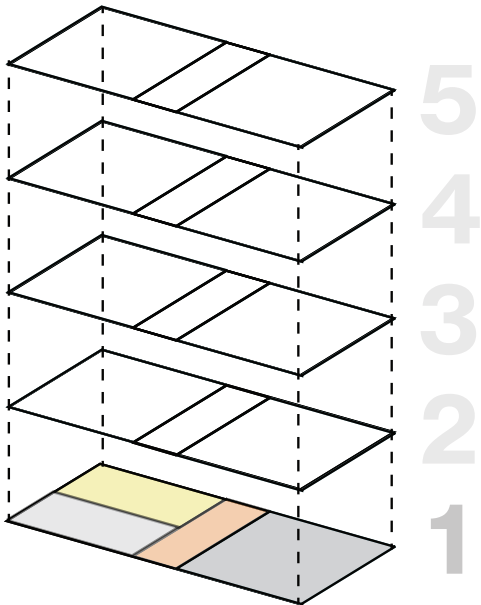
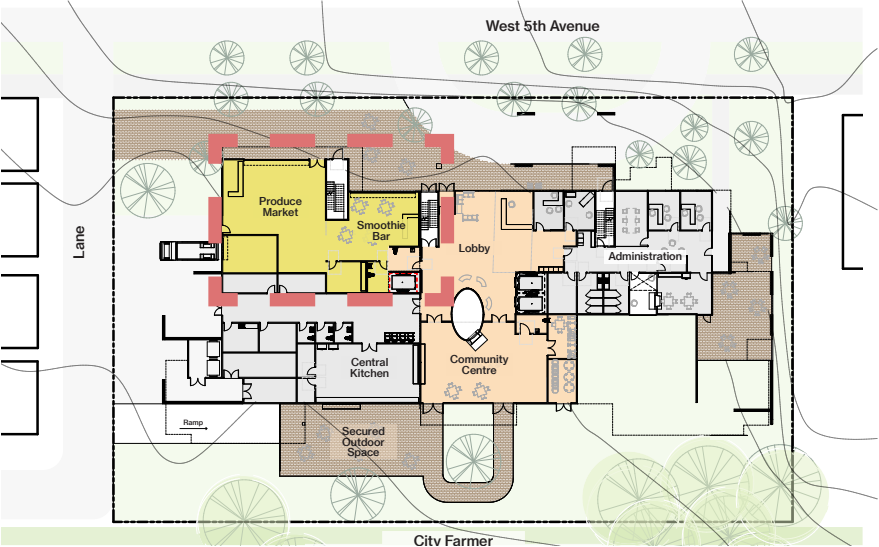
Chapter Four: Neighbours

Building Organization
Public Engagement

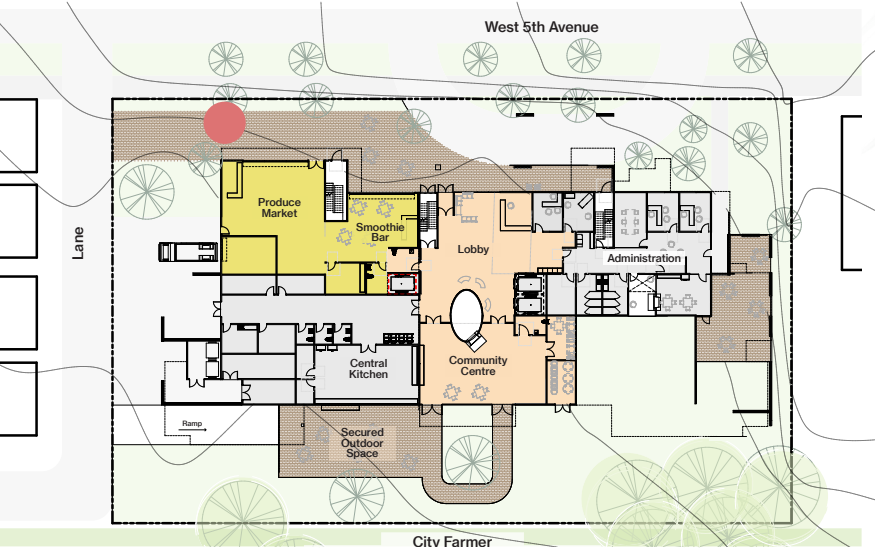


1:250 Public Engagement FloorPlan

Public Engagement
Smoothie Bar
Produce Market



Experience of the Built Environment
Produce Market & Smoothie Bar Interactions & Experiences



Keyplan: Ground Floor



Through the Eyes of a Neighbour
Sensory Informed Massing - North Massing



Through the Eyes of a Neighbour
Sensory Informed Massing - South Massing



Architectural Character
Sensory Informed Massing - East Massing



Architectural Character
Sensory Informed Massing - East Massing



Sensory-Informed Architecture: Long-Term Care for Individuals with Mid to Late Stage Dementia



Thankyou!