

site plan

- context (sound and nearby land use)

sections

- Slope, vegetation

cube diagram

- 5 senses
- above: grading, sun
- at: circulation, shade (enclosure), access to space, critters
- below ground: water table, soil type

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workflow:

site plan base

concept plan

schematic site plan A

sections A1,2

perspectives A1,2

schematic site plan B

sections B1,2

perspectives B1,2

concept statement

compile sketches

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Research on autism

Autism

- Neurological and developmental disorder that affects how people interact with others, communicate, learn, and behave
- A “spectrum” disorder, wide variation in the type and severity of symptoms
 - many individuals with autism have difficulty in processing everyday sensory information and in cognitive functions, often compounded by sensorimotor dysfunction that can include *difficulties in sensory responsivity and motor movements*
- There are many hurdles to overcome in independent travel, such as *dealing with regulations and encountering many unknown people*
 - this can then lead to people with autism avoiding going out or being unable to make journeys, leading to social isolation.

How does your selected health concern relate to the site?

The site is situated at UBC

- Cities or urban environments can be difficult to navigate due to cognitive and social challenges inherent within the Built Environment
- Suffer from social isolation → Create a safe space, reduce anxiety when in urban environments
- A garden catered to autistic students, a moment of respite
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What symptoms do they suffer from?

- Hypersensitivity
 - Light
 - Very bright light can be distressing to those with an oversensitivity, bringing on headaches.
 - A lack of light can cause objects to become blurred or darkened for those with under-sensitive sight.
 - Noise
 - Construction noise, unexpected noise level
 - “avoid(s) big parks as they are too busy. Small pocket parks near home are better.”
- Proprioceptive and dyspraxic challenges due to impaired sensorimotor skills
 - Avoid uneven surfaces

How does it affect your design?

- Avoid sensory stimuli overload
- An uninterrupted, smooth and safe journey

What do autistic people need? What can help them heal?

This approach can be summarized into three general design strategies that were found to have a positive effect on autistic behaviour-

1. the general reduction of sensory input through manipulation of the built environment,
 2. the organization of space to allow for predictability, and
 3. the provision of space to mitigate sensory overload
- Sensory Zoning
 - Grouping of spaces with similar sensory stimulation levels together, into high, moderate and low stimulation zones
 - Transition spaces should be used between these zones
 - Transition Zones
 - Help users to adjust their senses as they move from one level of stimulus to the next, neutral colours, useful at entry points to large, enclosed shopping centres
 - low stimuli with ideally, no unexpected objects or activities present and with clutter completely removed.

- (i) Inclusion of translucent panels above exit walkways, thereby helping mediate between the interior and exterior realms where daylight would be slowly introduced.
- (ii) Inclusion of wayfinding tools such as maps or models.
- (iii) Use of low arousal colours such as cream (not yellow or white) used for walls.
- (iv) Ensuring the area is kept clean and rid of any obstruction.
- (v) Ensuring that construction work should adhere to very clear guidelines relating to foot-path width and pre-agreed hours when using heavy machinery.

- (i) Advertisements, street art and elements that might constitute visual distraction are made illegal on identified transition streets.
- (ii) Bollards are used only when essential and space between bollards is appropriate,
- (iii) Greenery is added to the street,
- (iv) Colours of buildings are muted,
- (v) Cyclists dismount and skateboarders walk,
- (vi) Signage would be painted on the pavement rather than on poles,
- (vii) Traffic speed is lowered.

- Provision of dedicated quiet places in the city/ Escape Space

- (i) incorporate comfortable street furniture,
- (ii) keep the space free of too many stimuli,
- (iii) add greenery,
- (iv) reduce bright, fluorescent lighting.

- Provided there is effective upkeep, this could be a safe place of refuge.
- Such spaces equate in character to quiet rooms in an educational environment. They
- should not, however, be isolated or distant as they need to facilitate integration. In effect, what is needed is quiet that is readily accessible, as described as:
 - “Space to go to, without being far away from everything else”

- Compartmentalization of large spaces

- The individual does not feel forced to leave the park; rather, they can move on from a distressing area to a more serene area. This deals with the issue of isolation and exclusion highlighted in the focus group.

- Providing a variety of activity spaces allows a person to engage in social activities on their own terms.
- the organization of spaces in a series of monofunctional compartments, allowing for single activities and smaller numbers of users
 - from complete enclosure using walls and partitions, to the moderate enclosure using carefully placed furniture and variances in levels, to
 - a minimalistic definition using perhaps colour, pattern and finishing material to define each space
- Acoustics
 - reduction of internal and external noise sources through various means, such as
 - cavity walls, soundproofing and sound absorbent materials, spatial configuration to reduce echoes and isolation of sound-emitting building systems and avoidance of sound-emitting fixtures such as fluorescent lighting
 - the provision of spaces with reduced noise, at various levels, to allow students to *accommodate themselves to different background noise levels, and to mitigate their reliance on this accommodation.*
- Utilizing technology before journeys
- Improving safety and signage

More broadly,

- The general form of the garden and the features within reference and take inspiration from the surrounding area
- Material: Cedar Leaves
- Typologies: Shape of the site, building form

- (1) Design cohesion and clarity
 - a. Legible – remove complexity by legibly defining spaces and delineating transitions between them.
 - b. Predictable – provide consistent spatial sequencing.
 - c. Navigable – prioritizing cohesive circulation with smooth, wide pathways.
- (2) Light, colour, and sound
 - a. Light/colour
 - i. Provide relief from the sun via shaded areas and/or vegetation.
 - ii. Avoid harsh artificial light.
 - iii. Utilize non-reflective surfaces.
 - iv. Select low-arousal colours.
 - b. Acoustics
 - i. Prioritize low noise levels throughout the design.
 - ii. Consider the acoustic qualities of every space typology.
 - iii. Select materials to attenuate noise, particularly from vehicular traffic.
- (3) Sensory self-regulation
 - a. Sensory seeking
 - i. Create areas of sensory interest (sound, light, wind, plantings, activity levels, etc.) where users can self-regulate the amount of engagement with sensory information.
 - ii. Incorporate responsive sensory elements (interactive or revelatory design features.)
 - b. Refuge
 - i. Provide small, private retreat spaces away from high sensory information (shaded, quiet spaces set away from active areas and circulation, especially vehicular.)
- (4) Safety and security
 - a. Wayfinding
 - i. Include clear, consistent signage, including orientation maps.
 - ii. Consider using visual aids with pictures, words, or non-abrasive colours.
 - iii. Minimize clutter that may be visually distracting.
 - b. Safety
 - i. Select high-quality, non-toxic materials, site elements, and fixtures which are long lasting and will require less maintenance and repair.
 - ii. Prioritize non-slip paving materials.
 - iii. For children: secure entrances for enclosed spaces as with any play space.

Sense of Seclusion and Shelter (less stimulation) + Areas that are more exposed (more stimulation) → to accommodate needs across the spectrum

Windbreak and Sound barrier (from site observation)

Planting Goals

*check soil type

Sensory experiences	Visual	Smell	Touch	Sound	Options
	*variations Seasonal changes; Colour palette; Plant texture and habit to create layers; focal trees to focal points, interesting bark?	Scented/unscented; aromatherapy;	Plant texture; growth habit	Wind brushes through the leaves; sounds from cohabiting critters (bees, cicadas etc.)	
Windbreak and Sound barrier					
Sense of Seclusion (less stimulation)	Muted tone, mid-tall plants, somewhat dense or climbing, colour: neutrals, green to blue-green	Grassy or unscented			
Areas that are more exposed (more stimulation)	Deciduous, canopy break, shorter in height, seasonal interests (pops of colour)	Soothing smell, flowers	Plants that can be harvested (gardening for students to train motor skills), a mix of textures (loose/dense, tall/ short)		Japanese stewartia (0.5m-1m), Orangebark stewartia (4.7-9m),

Hedge plants:

Hybrid yew. Dwarf English yew, Thuja occidentalis, Tsuga canadensis, dogwood

bioswale

Red osier redwood,

fiscal