

MANCHESTER SCHOOL OF ARCHITECTURE



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**MSA
LIVE 22**

Team

Ayesha Sharma (M Arch 01)

Lucy Hobbs (M Arch 01)

Maira Tini (M Arch 01)

Zain Alsharaf (M Arch 01)

Anasya Amanda Putri (BA 01)

Ayanna Jackson (BA 01)

Emily Martin (BA 01)

Meena Abdula (BA 01)

Yashwa Rajapreyar (BA 01)

Adan Hussain (BA 02)

Akeefah Tasnia (BA 02)

Dominika Struminska (BA 02)

Mara Ileana Croitoru (BA 02)

Yan Tung Mak (BA 02)

Reem Talal M Bakir (MLA 01)

Partners

Martenscroft Nursery School & Children's Centre is an inner-city nursery school and children's centre in Hulme providing high quality holistic services for children aged 4 months to 5 years old. They strive to address issues regarding inequality faced by the children and their families, such as inadequate housing, health issues (obesity, poor mental health, asthma) and below national average of children reaching a good level of education at the end of the Early Years Foundation Stage.

By encouraging a fun, engaging and vibrant learning environment, the children are able to explore and express their individuality. The school also holds high value in diversity and inclusivity for children of all abilities and backgrounds.

They recognise the need to provide an outdoor learning environment for children, especially in Hulme where there is a limited number of green spaces available for the community. This collaboration is a starting point for the school to realise their vision of providing the Hulme community with a shared green space for outdoor relaxation .

We would like to thank Jane Rogers and Debbie Keary from Martenscroft Nursery School, as well as Dr Christina MacRae from Manchester Metropolitan University who gave us continuous support throughout this project. We would also like to extend our appreciation to Harry Thorpe from Caukin Studio who has given us useful insights on designing for (and with) children.

Agenda

We are a student-led team working collaboratively with Martenscroft Nursery School & Children's Centre to design an accessible multi-generational sensory garden for children and families of the Hulme community. The garden will be a place for the community to get away from it all, where time stops and demands on life are temporarily non-existent. We invite children to explore their senses through a series of installations that will provide a sensory stimulation critical to healthy brain development. This would support physical fitness, health, mood and cognition as well as introduce gardening and plant care from a young age. Moreover, the design of the sensory garden and installations considers how children of all physical and mental abilities could interact and use these spaces, thus enhancing and optimising their outdoor play and learning experience.

The concept of the masterplan is designed based on the ordering of senses, which is sight, sound, touch, smell and taste. Therefore, users will be able to experience the sequential stimulation of these senses as they are guided by carefully designed pathways through the sensory garden. Adhering to the concept of designing for the children, the theme of the sensory garden will follow the story and form of a caterpillar, and its journey of becoming a butterfly. Its life cycle from a caterpillar, to a cocoon, and finally a butterfly, informs the form of the landscape and structures on site. The garden consists of a quiet zone and an activity zone which are ergonomically designed for children and adults. Visual connectivity is also prioritised in the design of the masterplan in order to enable children to explore the sensory garden freely whilst allowing parental supervision from all corners of the site.

Additionally, the team created a prototype model to demonstrate the sensory experiences through the garden. It takes the form of a caterpillar, with circular pods containing interactive elements to stimulate the sense of sight, sound, touch, smell and taste. The children will be able to interact with the model in order to get a sense of the experience they will gain from the proposed sensory garden.

Design Process

Sensory Workshops

The workshops were divided into three sections that would target skills, production and presentation. We would initially present a skills workshop to the students to introduce them to various software such as Illustrator, Photoshop, Revit, AutoCad and Sketch Up. Students engaged with these workshops well and would develop skills required for the next section.

After completing initial site analysis through site conditions, materiality exploration and site sketches, students proceeded with precedent studies into existing multi-generational gardens and spaces and explored how to design a garden appealing to all audiences of various abilities and ages. Here, they developed skills in creating collages as well as mood boards to translate their design ideas.

Students were able to use design skills learnt during the workshops to create sensory collages that would target ways children interact with their sight, sound, touch, scent and taste. These collages would then be used to develop sensory prototypes for children to interact with through a prototype model that would translate the final architectural concept of the garden in an interactive way.

The final section of the workshops were presentations, in which students used many methods of presenting their ideas. Students would individually present their collages and mood boards, would formally present and develop parti models and sensory collages in groups and would informally discuss initial concepts of master-planning and storyline development to each other.

Overall, the workshops not only gradually introduced the students to the project, but allowed them to explore methods of design outputs, architectural and sensory concepts and development of a relevant storyline that would appeal to our target audience.

Image Top Left (Right):
A model exploring "sight"
- different shapes with
coloured transparent
material to reflect light.

Image Top Right (Right):
A model exploring "sight"
- suspended shapes with
differing textures and
colours.

Image Middle-Left (Right):
A model exploring "sight"
- a tunnel system with
exposure to light and dark.

Image Bottom (Right):
A collage exploring
"scent" - an open slide
with exposure to different
scented plants.



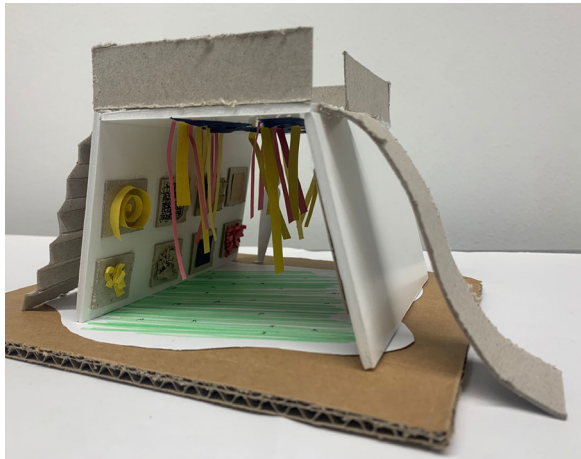


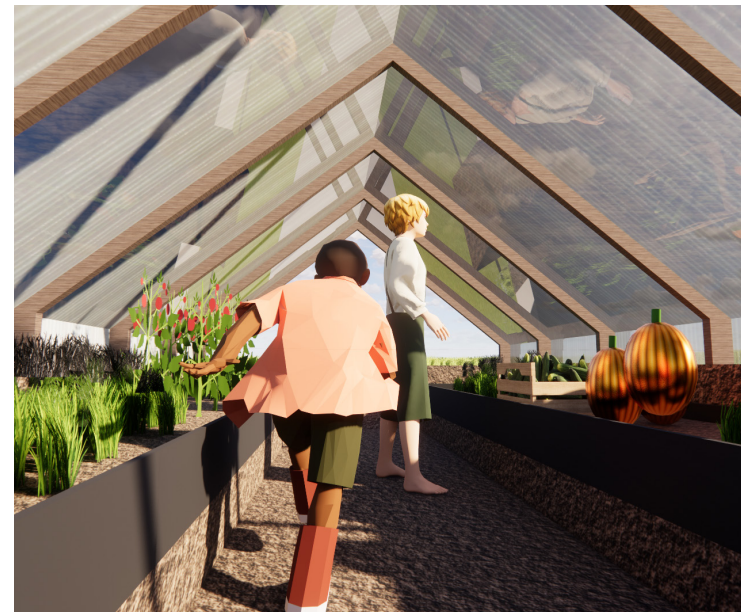
Image Top:
A model exploring "touch"
- textures could be
incorporated beneath a
slide, adding level changes
and a diverse experience.

Image Middle:
A model exploring "touch"
- a textured wall in the
corner could display
varying textures to interact
with.

Image Bottom:
Exploring "touch" - a
concept sketch of the
interactive textured wall.



A collage exploring
"sound" - the sense could
be explored both naturally
with the inclusion of wind
chimes, and physically with
the addition of outdoor
instruments.



A 3D render exploring
"taste" - a greenhouse
could provide children the
opportunity to learn about
natural foods and spices.

Proposal

Concept

The route through the sensory garden follows the story and form of 'Cai' the caterpillar, and its journey to becoming a butterfly. Its life cycle from a caterpillar, to a cocoon, and finally a butterfly, informs the form of the landscape and structures on site.

The caterpillar is visible on site through the landscaping, which follows circular forms which are themed by different senses. The cocoon is shown through the mound in the South of the site, which holds various Its final butterfly form is represented by the canopy, which covers the amenities (kitchen, storage and toilet), as well as outdoor seating.



Image (Left): Concept story of 'Cai' the caterpillar, which follows the route through the site.

Image Top (Right): Axonometric of the proposal.

Image Middle Left (Right): Perspective view of the outdoor instruments to explore sound.

Image Middle Right (Right): Perspective view of the route through the site.

Image Bottom Left (Right): Perspective view from the mound.

Image Bottom Right (Right) Perspective view of the canopy.



Senses

Sight

The sight aspect of this proposal focuses on immersing the eyes with bright colours, reflectivity and geometry, all fixed to natural wooden frames. The children will be able to interact with the space through their individual perception and imagination.



Sound

Wooden wind chimes, instruments and variation of flooring allows the children to discover sounds. The children are able to compose and explore how their bodies and movement, as well as the wind, shapes the noises around them.



Touch

Bumpy, soft, and coarse are all textures felt in this pocket. Materials like pebbles and sand, as well as sealed sensory bags and planting, heighten the children's understanding of the abundant surfaces.



Smell and Taste

This pocket enhances both hearing and taste through natural greenery. The space adopts plants like mint, lavender and lemon to create an alluring aroma, which the children can further immerse themselves in through eating.

Image Top Left:
Scent collage - a slide is surrounded by planting of various aromas

Image Top Right:
Taste collage - edible plants are situated around the site for visitors to try.

Image Middle Left:
Sound collage - outdoor instruments will allow visitors to experiment with the sense.

Image Middle Right:
Touch collage - a wall in the corner displays different textures to experience.

Image Bottom:
Sight collage - an archway with various hanging shapes greets visitors.





Model

The model translates the masterplan in an interactive and fun way for the children to interpret. Through Cai the Caterpillar, the model incorporates sensory prototypes that reflect the sensory activities within the garden. In order of the senses: sight, sound, touch, scent and taste, each prototype provides a sensory experience for the children to understand the various spaces.

Given that our target audience were 3-4 year old children, this model and storyline was deemed the most efficient way of translating an architectural concept to them. Through an interactive, sensory and creative manner, children were able to perceive the architectural drawings in relation to the model itself. Prior to presenting the model, we described the journey through the masterplan from the lens of Cai the Caterpillar, in which it would interact with the various sensory activities through the garden.



Image Top (Left):
Site Plan

Image Bottom (Left):
Site Section

Image Top Left:
Full frontal view of the
model.

Image Top Right:
Full back view of the
model.

Image Middle:
Closer view of the flowers
on the model, representing
"sight".

Image Bottom:
Closer view of the "scent"
cylinder, containing various
fresh, spicy and fragrant
aromas.



Outputs & Reflection

Working with such a young age group to develop an architectural production was quite complex. From planning the sensory explorations for children to ethical considerations in dealing with them on site, there was a responsibility to ensure a cohesive, yet intriguing development was presented to them while maintaining within ethical boundaries.

The children interacted with the model with positive attitudes and were able to translate the sensory experience of the masterplan in relation to the model. This was a successful output as they engaged with our explanation of the garden as well as the story of Cai the Caterpillar.

Upon reflection, this was a challenging yet rewarding experience of designing for children through the development of a sensory experience, as well as a multi-generational garden for their learning development and growth.



Image (Left):
Photo of the team at
Martenscroft.

Image Top Left (Right):
Final model at
Martenscroft..

Image Top Right (Right):
Children interacting with
the model

Image Middle-Top Right
(Right):
Children interacting with
the model

Image Bottom Left (Right):
Final notice board at
Martenscroft

Image Middle-Bottom
Right (Right):
Children interacting with
the model.

Image Bottom Right
(Right):
Children interacting with
the model.



ABOUT

Each year the MSA LIVE programme unites M Arch. year 01 with B Arch. year 01 and 02 and M Land. Arch 01 in mixed-year teams to undertake live projects with external partners to create social impact.

LIVE PROJECTS

All MSA LIVE projects are live. A live project is where an educational organisation and an external partner develop a brief, timescale, and outcome for their mutual benefit.

SOCIAL IMPACT

All MSA LIVE projects have social impact. Social impact is the effect an organization's actions have on the well-being of a community. Our agendas are set by our external collaborators.

EXTERNAL PARTNERS

MSA LIVE projects work with many organisations: charities, community groups, social enterprises, community interest companies, researchers, practitioners and educators.

STUDENT-LED

Our MSA masters students take the lead in the project conception, brief development, delivery and co-ordination of a small project. Other cohorts joined for an eventful 2 weeks of activities at the end of the academic year.

KNOWLEDGE TRANSFER

Working in teams within and across year groups and courses; MSA students participate in peer to peer learning. In addition, collaborators, participants and students engage in the transfer of tangible and intellectual property, expertise, learning and skills.

LARGE SCALE

This year approximately 550 students from 4 cohorts in MSA have worked on 35 projects with partners.

QUESTIONS

For questions about MSA LIVE please contact the MSA LIVE team:

msalive@mmu.ac.uk

BLOG

live.msa.ac.uk/2022

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