

Siloed

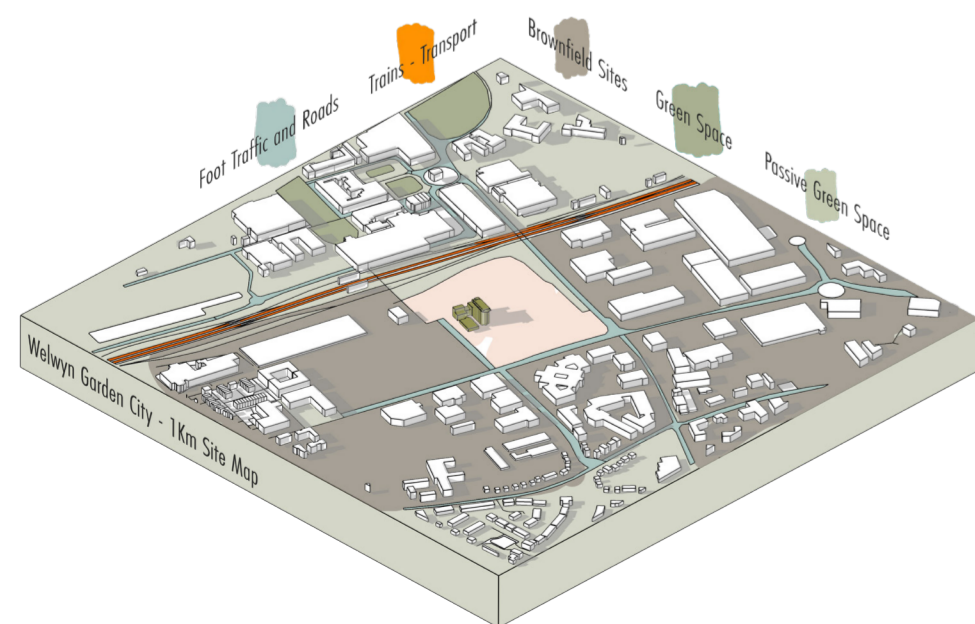
From Concrete Jungle To Urban Forest

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Through the application of green zones in our cities, my project Siloed will help to benefit the education of children and the wider population on the importance of carbon sinks on both us and our environment. With our design goals in mind, it is important that this design not only provides the space for healthy learning but also creates an example of how greener design can be achieved. Making the site self-reliant and carbon negative will help to lend itself as a symbol of what can be accomplished by those who experience the space.



Green Space Use in Welwyn Garden City within 5km of the site



Client

Carbon Store is a UK-based company that works with landowners to preserve and expand the forested areas in the UK to help benefit the carbon store and environment. This project will aim to benefit their cause by reintroducing carbon sinks back within the built environment to improve the quality of life.



1 Billion
1 billion trees have been planted by carbon store UK since 1948.



28 Million
28 million trees are planted every year.



15,000
15,000 hectares of woodland have been created since 2010.



1,000
1,000 years worth of experience between Carbon Store UK's management team.

The User - Children

Though my space intends to be all-inclusive, the primary user will be children between five and ten. Within Welwyn Garden City there are 14 primary schools with many more in neighbouring towns. It will be easily within reach for many school trips as well as for the general public with children. My space will specially cater for users within this age bracket, but I want the space to be accessible to all people.



Montesorri Theory

To design an effective space which can benefit the education of children, I will look to take influence from the work of Montessori and follow her principles. There will be a focus on allowing children to dictate their own learning pathways through the space, providing them with everything they need to learn and allowing them to experience their own way. For children seeing is believing and allowing them to explore the environments they are learning about means they can learn in a much more beneficial way.

Design Concept

Within my design, I have divided the space up into zones just like Howard's Garden City plan. The 4 primary sections are the children's play area, educational zone, café, and carbon sinks within the silo towers. These are all spilt by a grand avenue, which is aimed to mirror the Welwyn Garden's parkway. Though this is intended to divide the different sections of my design, it also will help to direct the users to the reception space which follows the forms and materials to help create a continuous flow. All spaces are layered between transition areas, functional spaces and green spaces which will act as an educational spaces as well as functional carbon stores.

Town Centre ← → Entrance

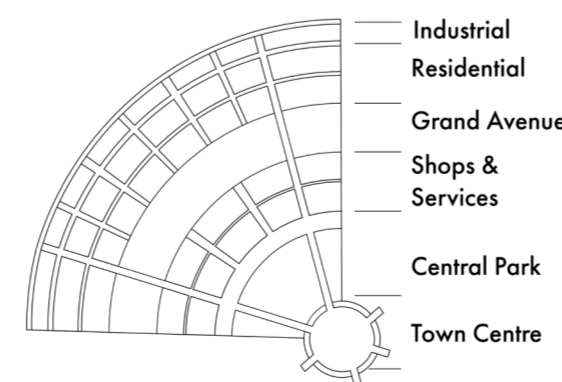
Central Park

Public Services ← → Education Space
Children & Exhibition

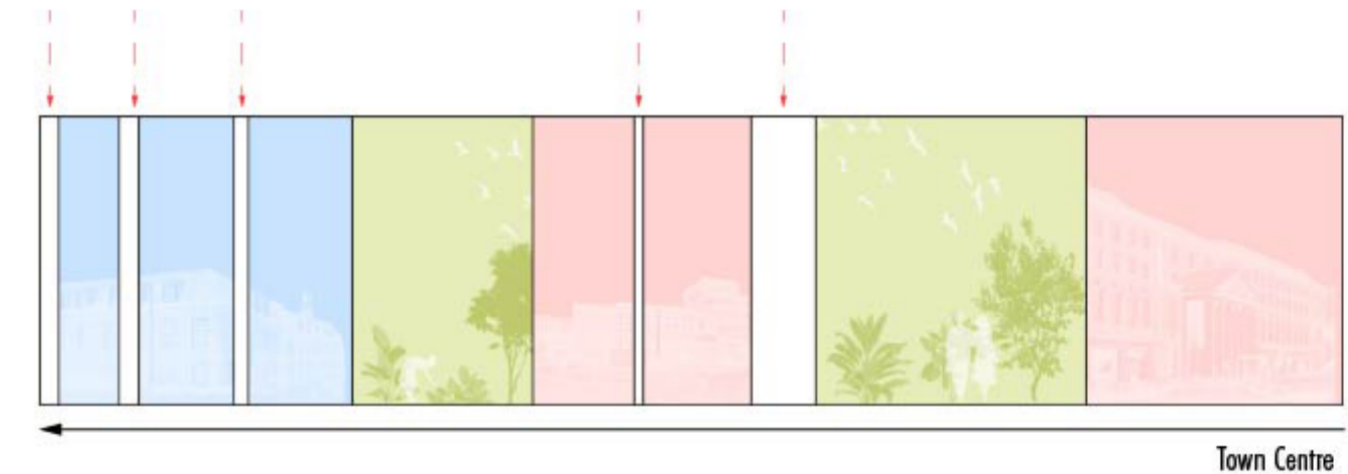
Grand Avenue

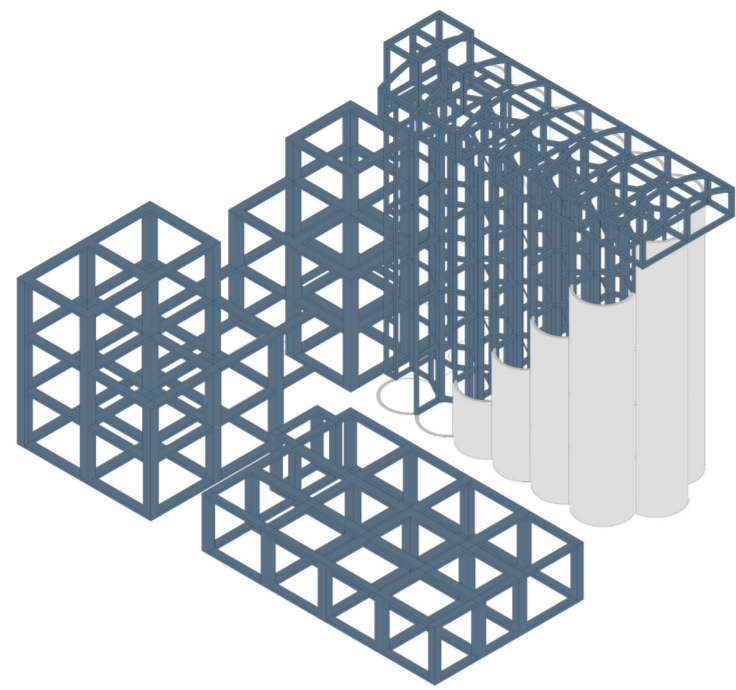
Semi-Public ← → Cafe - Toilets

Industrial ← → Staff Spaces

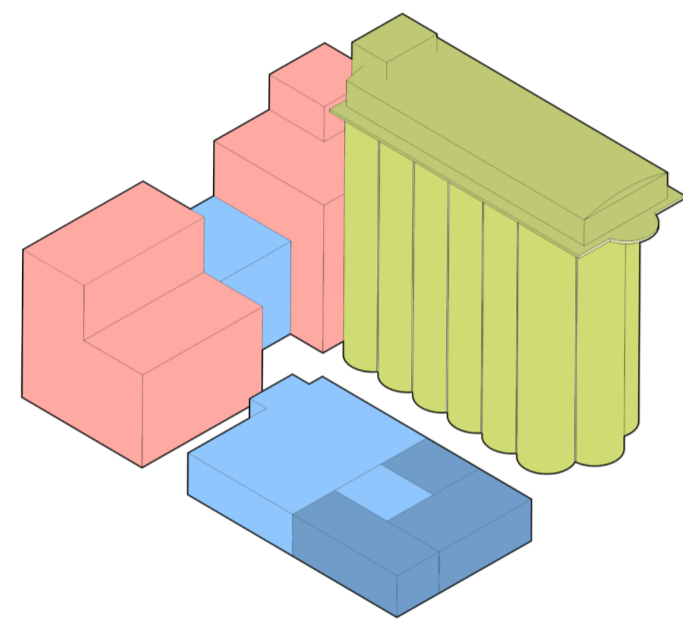


Concept Diagram



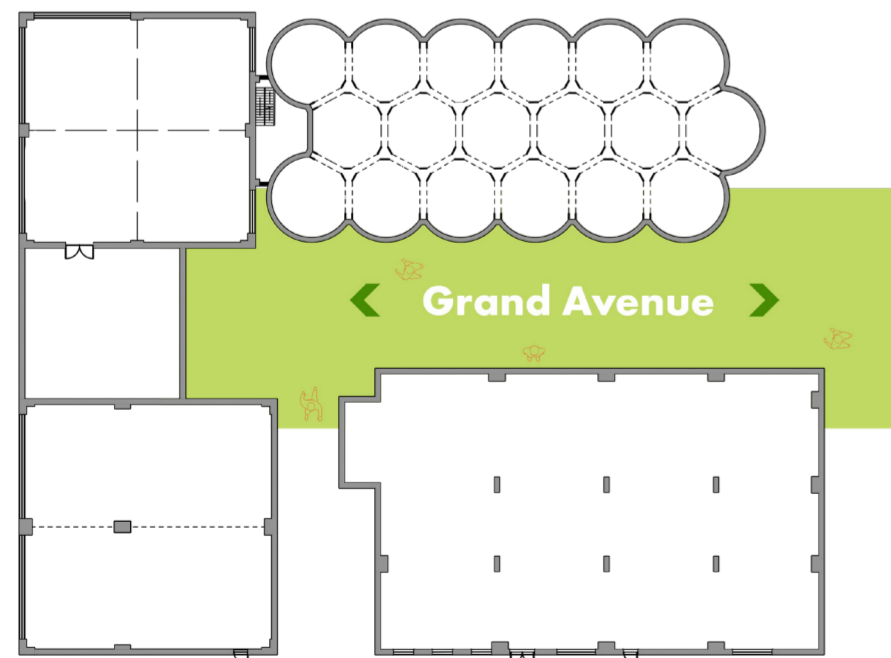


Structural Grid



- Staff Spaces ■
- Functional Spaces ■
- User Spaces ■
- Carbon Sinks ■

Spatial Arrangement



Grand Avenue Circulation



Silo Towers - Central Park



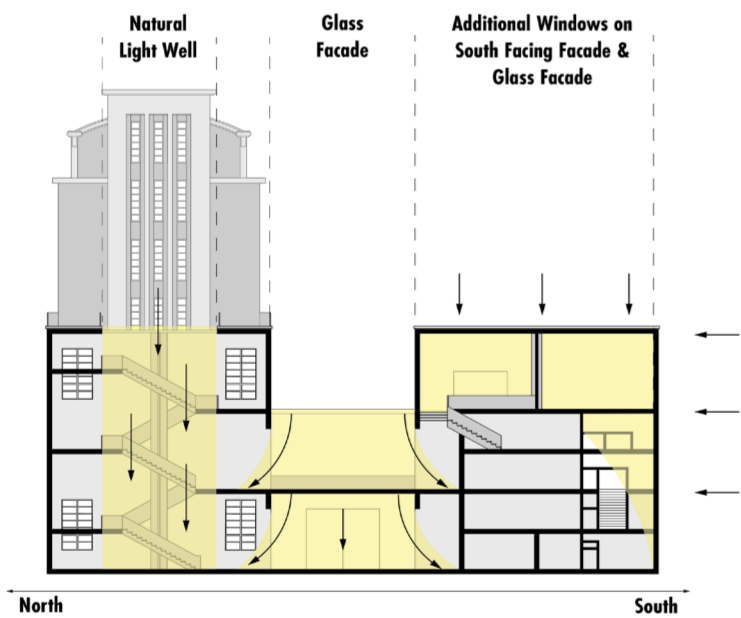
Grand Avenue



Initial Conceptual Collage



Educational Space



Considering the requirements plant needs to flourish, the design has therefore considered how natural light enters the building. The existing factory building has very few openings for light, with all the windows being on the western façade. In response to this, the addition of a light well will be introduced, this will allow for light to spill into the main education space and provide natural light into the carbon store here.

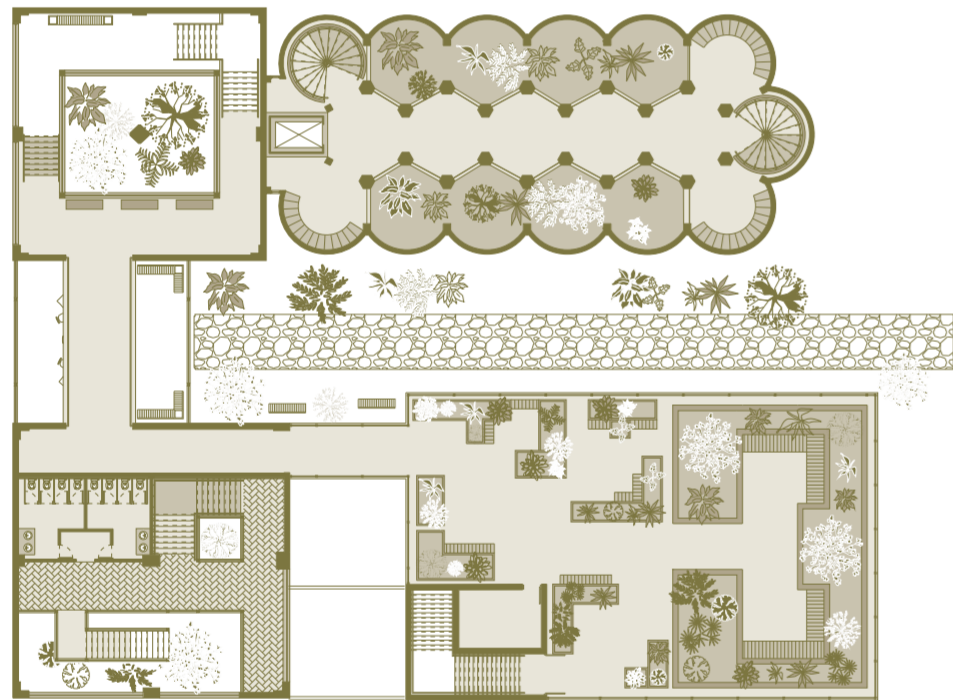
The reception space introduced between the two original factory buildings was previously bland with no windows or openings. In accordance with the conceptual language, the connecting space will aim to have a public feel and be transparent to the users. This whole section will use a glass façade, this will help to create a difference between spaces, so users know they are transitioning to another space while reconnecting to the grand avenue.



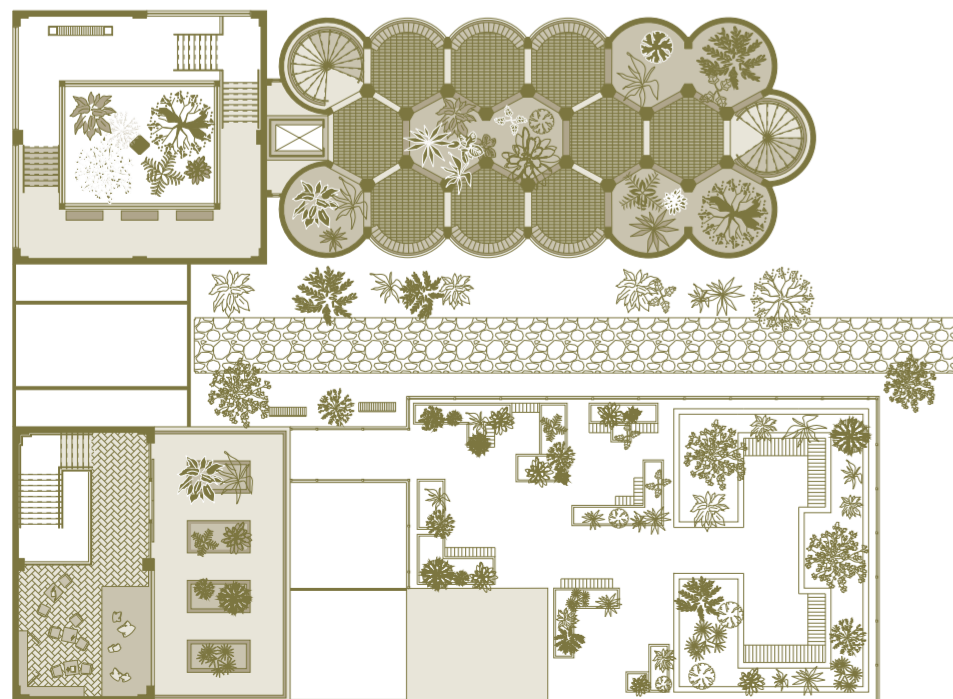
Children's Play & Learn



Ground Floor Plan



Second Floor Plan



Fourth Floor Plan

Central Garden

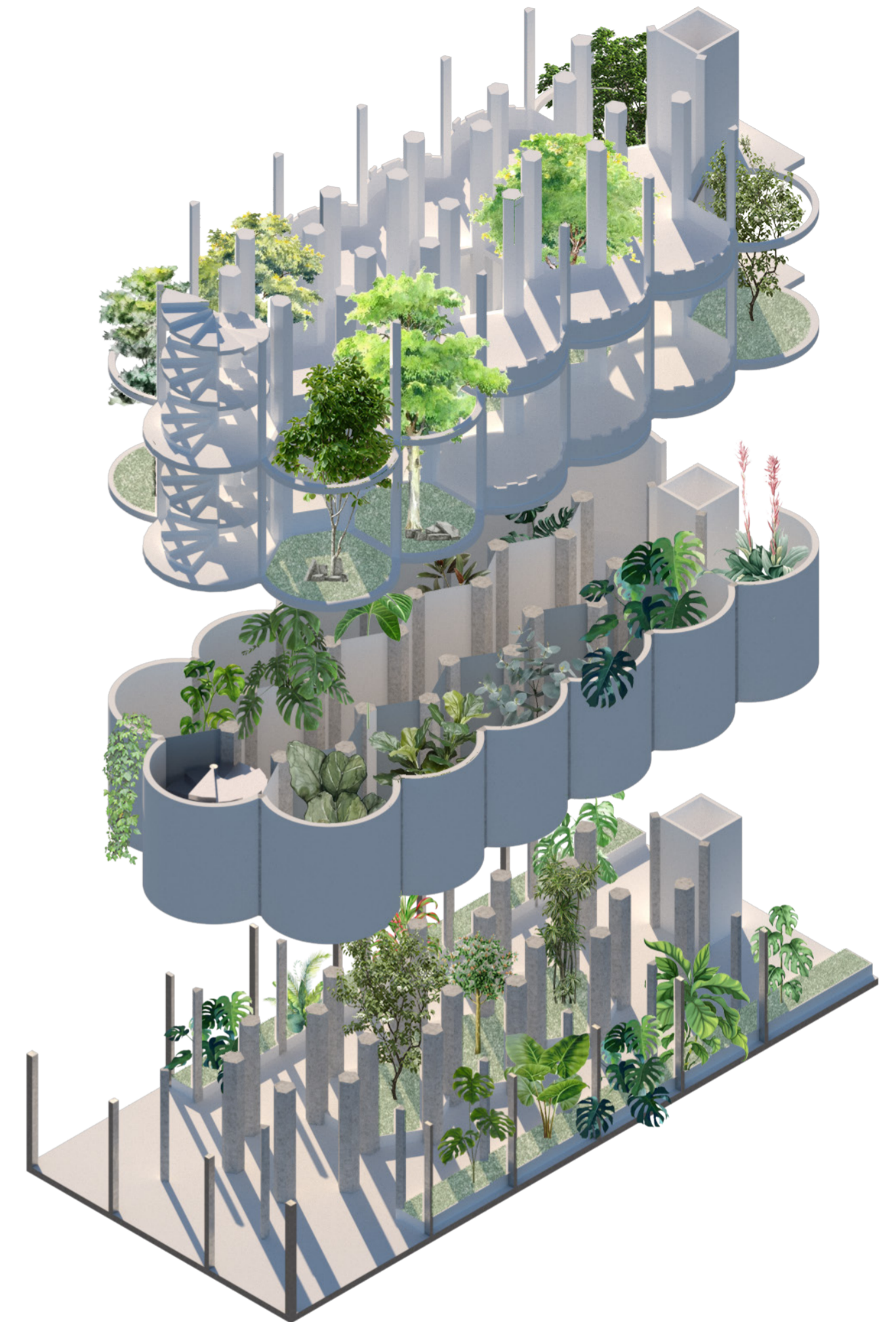
Like in the centre of Welwyn Garden City, I have decided to add a central park in the middle of the silos. Across multiple floors and a 15-metre-tall space is an open garden with multiple layers and balconies which weave in and around the garden and its canopy. This aims to create a social place to relax, helping to bring the experience of the benefits of green spaces within the city.

Terrarium Experience

The middle section of the silo towers is an education space with terrariums around the edge of the floor. People can walk through and experience many different environments and learn about their importance. The layout follows the principles of the garden city with circulation being surrounded by plants.

Greenhouse Gardens

The ground floor has a greenhouse environment which will focus on learning what plants can we grow in our homes. The use of a greenhouse on the ground floor to create a semi-transparent relationship with grand avenue allows for some privacy but continues the layering of vegetation.



Timber Flooring

Natural Elements

Timber Panel Finish



Existing Materials



Plastered Finish

Steel Structure

Concrete Flooring

New Materials

West Side - Education and Childrens Space

What previously made up the original factory resided on the west side of the site across two main buildings. This will now serve as two separate educational spaces, one specifically for children and one for the wider population. Both follow similar forms with a central garden which is a focal point of the design. In the main education, space circulation runs around this vertical open garden. Whereas the children have areas to climb, sit and crawl through the garden, allowing them to learn however they want which is in line with Montessori's theories.

Circulation

Silo Towers

As a major landmark in Welwyn Garden City, it is important that this is maintained for the site. I have implemented the garden city layout within my design. The bottom two layers are more focused on creating an educational exhibition space allowing users to observe aspects of the carbon store. The ground floor is a greenhouse-style garden as it allows for transparency from the grand avenue so the forms can be seen to flow throughout. It allows people to see in but it's still semi-private and cut off which is the same intention Howard wanted when introducing the green spaces within his designs. I have tried to represent the grand avenue within the silos creating an open garden halfway up, 10 metres above ground level. Introducing trees and other foliage it will create an open park like experience within the silos. By having an open space I can allow rain to naturally enter the site and filter through the levels creating a natural way of giving plants what they require.

