

10. Landscape Design

The background of the slide is a solid dark teal color. Overlaid on this background are several thin, light teal wavy lines that flow horizontally across the lower half of the image, creating a sense of movement and depth, reminiscent of topographical map contour lines or stylized waves.

10.0 Landscape Design

10.1 Landscape Design Strategy

10.2 Learning landscapes

10.3 Productive landscapes

10.4 Functional landscapes

10.5 Sustainable hard landscape

10.6 Landscapes

10.6 Wild Edge

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10.1 Landscape Design Strategy

Planting approach

The Silesia Project Landscape is designed as:

A place to learn in nature.

An extension of Gaia to seamlessly merge building and landscape.

A stunning place for visitors, students and community to enjoy.

A regenerative landscape - significantly adding to the biodiversity value of the site, district and region.

The landscape will include:

Productive landscapes - beautifully designed - to demonstrate the range of plants useful to people.

Functional landscapes including constructed wetlands and storm water retention ponds that also add to the biodiversity of the site

Sustainable hard landscape throughout.

A Wild Edge encircling the site - outside the paid area - for biodiversity and public access.

The main paid zone will have suitable infrastructure to create beautiful and changing night time experiences to attract visitors into the evenings, particularly in the darker months, so that the Silesia Project becomes a 'must see' attraction.

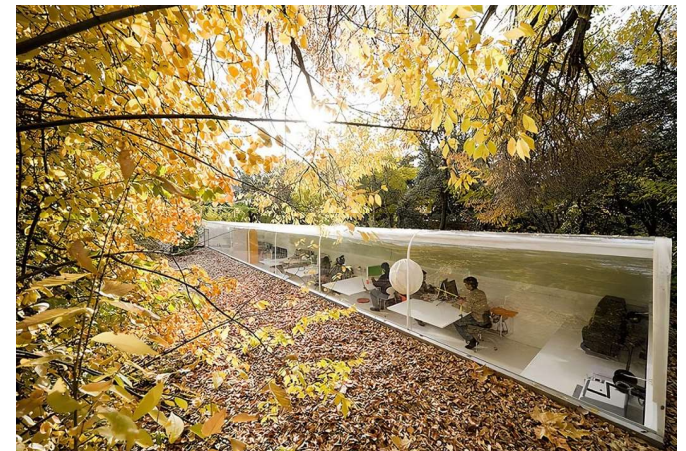


10.2 Learning Lanscapes

Outdoor classroom

Utilize the different atmospheres within the campus to allow students and visitor experience the diversity in the nature

- Use of local materials to build the classroom and reflect the regional resources.
- Iconic design to create a landmark and attract visitors.
- A variety of sized classrooms which respond to the range of needs and scale of teaching and learning.
- Learning in inspiring spaces of nature and “learning through doing”, using the materials that are provided by them.



10.3 Productive Landscapes

Food Production

The outdoor landscape around Gaia will be a celebration of productive plants to celebrate and demonstrate our dependence on the natural world. Productive landscapes will be designed to be both spectacular and beautiful.

Design productive, edible and permaculture gardens all interconnected through the future food learning centre.

All food grown within the campus cafés and food outlets within the park, or donated to community or charitable groups.



10.3 Food production



10.3 Productive Landscapes

Food growing: permaculture

Provide an approach to planting on multiple layers inspired by a nature of the Czechia forest.

Forest Gardens (AKA Food Forests) are modelled on the structure of a young natural woodland and are found in cultures all over the world.

Based on agroforestry practice, these landscapes utilise natural processes and symbiotic relationships between trees, shrubs, herbs, flowers, vegetables and fungi to create a multi-layered productive landscape for the benefit of plants, people and other creatures.

These garden spaces will link up with the activities of outdoor classrooms, and nature spaces for wellbeing, craft making and supporting a foraging network.



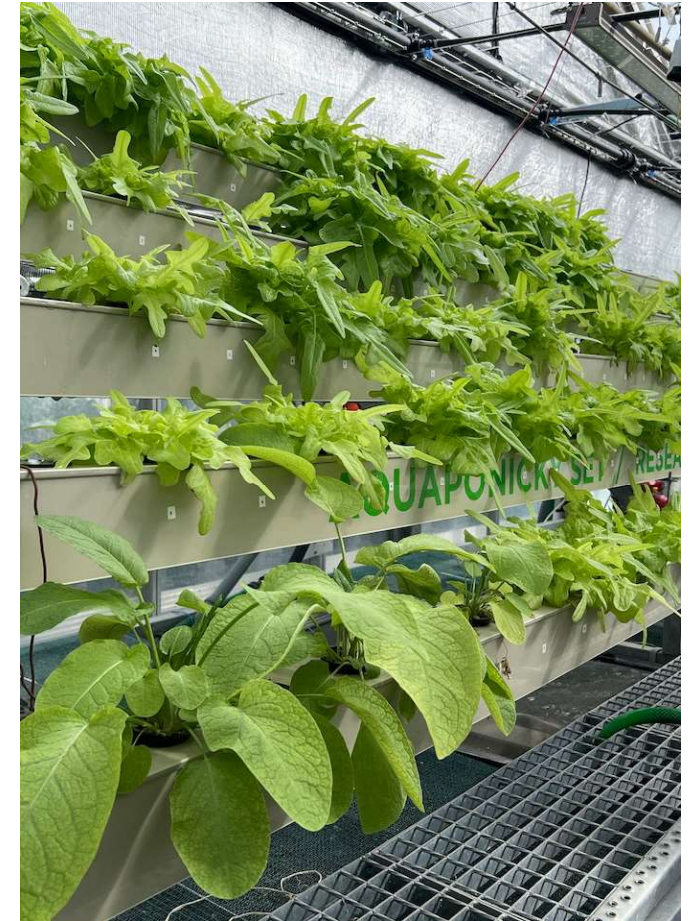
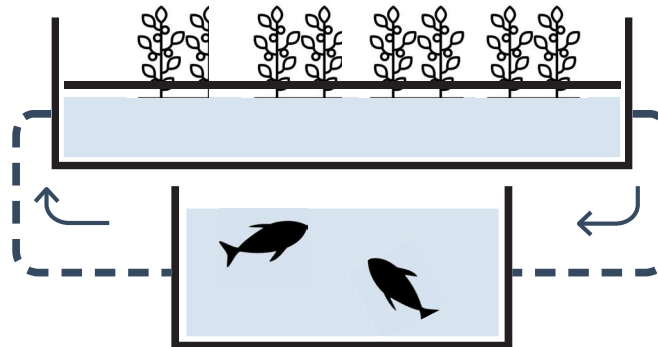
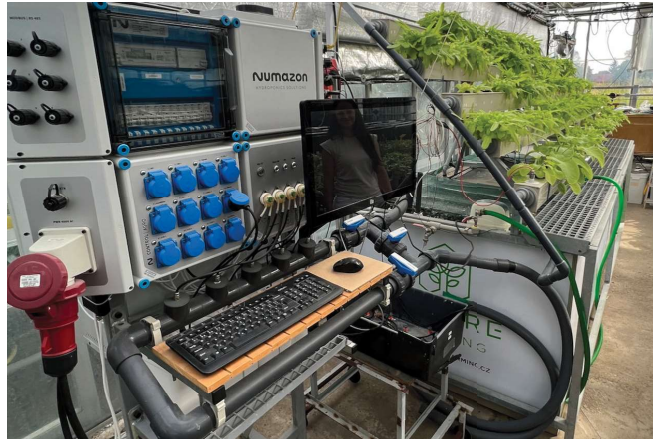
10.3 Productive Landscapes

Food growing : aquaponics

The application of aquaponics necessitates the use of fresh water in order to grow crops, using fish as a method of fertilising the crops and reed beds to filter the water in a closed system.

By combining the aquaponics system with user experience, the approach to the water features for the park becomes one which responds to the context and ensures the water features are more than just an aesthetic element.

Mendle University have expertise in developing and running food production aquaponic systems.



10.3 Productive Landscapes

Permaculture: Selected perennial productive plants



Allium Ursinum



Alnus Glutinosa



Ginkgo Biloba



Amelanchier Alnifolia



Salix Viminalis



Angelica Sylvestris



Fuchsia Riccartonii



Cornus Mas



Corylus Colurna



Cydonia Oblonga



chaenomeles Japonica



Corylus Avellena



Rubus Nepalensis



Juglans Ailantifolia



Ribes Nigrum



Prunus Avium



gaultheria Shallon



Elaeagnus Multiflora

10.3 Productive Landscapes

Edible Species



Beta Vulgaris Subsp. Vul-



Castanea Sativa



Malus Domestica



Cucurbita Spp



Capsicum Annuum



Cucurbita Pepo



Brassica Oleracea



Brassica Oleracea



Solanum Melongena



Solanum Tuberosum



Allium Porrum



Prunus Domestica



Prunus Persica



Spinacia Oleracea



Daucus Carota



Beta vulgaris



Juglans Regia



Solanum Lycopersicum

10.3 Productive Landscapes

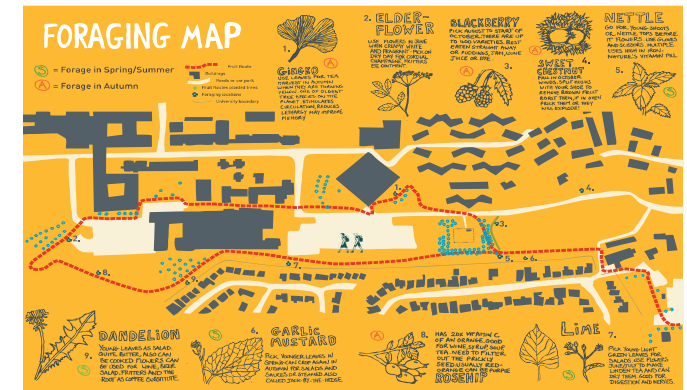
Productive landscape trail

Living exhibit of starch staple crops that feed the world: rice, wheat, maize, potatoes, soya. These plants form 95% of the calories we consume.



10.3 Productive Landscapes

Foraging trails to introduce students and visitors to seasonal edible crops



10.3 Productive Gardens

Permaculture Gardens - Dyes



Aesculus hippocastanum



Isatis tinctoria



Daucus carota



Rubia tinctorum



Indigofera tinctoria



Rheum australe

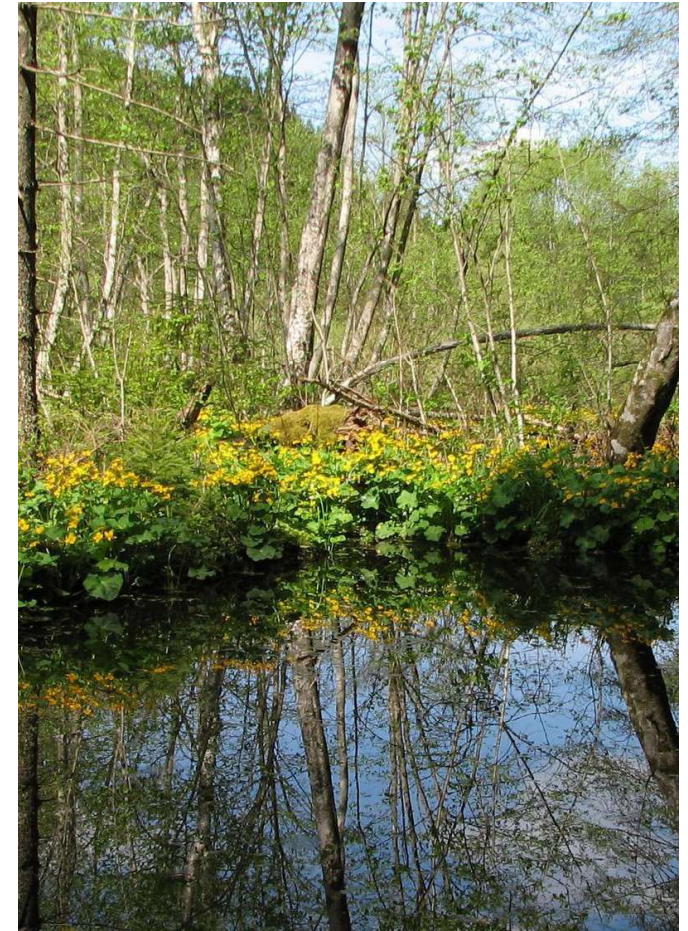


10.4 Functional Landscapes

Water conservation and recycling

Water management strategies applied by capturing stormwater run-off and utilizing black and grey water from activities within the site. Some water management strategies listed below:

- Provide constructed wetlands with special vegetation which organically treats black and grey water from the site. This treated water is reused for irrigation of non-edible landscapes.
- A series of retention and detention ponds will capture and hold surface water, creating dynamic landscapes with bio-filtrating planting to improve water quality before discharge.
- Use of local decorative aggregates and boulders to create hardscapes and reduce irrigation water consumption
- Use of permeable surfaces to promote groundwater recharge



10.4 Functional Landscapes

Flexible spaces

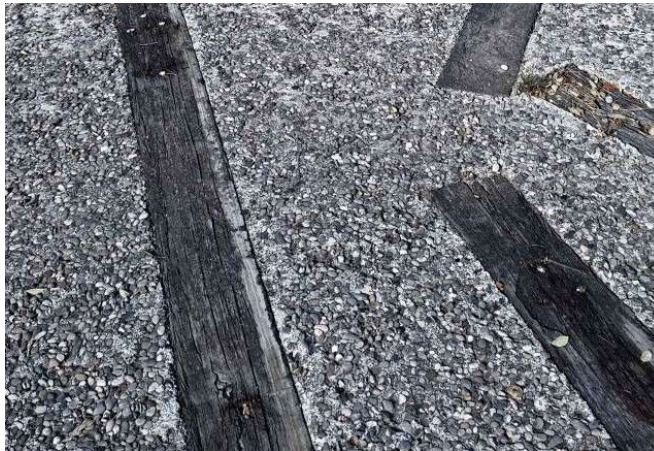
Flexible open spaces will be created for temporary events during spring - summer months. Large scale festivals like Flower Festival, food and music festivals or an annual harvesting season to showcase the locally grown food would attract a large number of visitors. While weekly activities like outdoor movies or farmer's markets would encourage visitors to visit multiple times.



10.5 Sustainable Hard Landscape

Hardscape

- Use of permeable surfaces which promote groundwater recharge.
- Where possible and appropriate, re-use and recycle construction material from old mine on this large site to minimise need to transport and dispose off site.
- Careful and minimal use of cement and concrete with high carbon-footprint.



10.6 Landscapes

Fibres and materials



Phyllostachys edulis (Bamboo)



Linum usitatissimum



Cannabis sativa



Tilia europaea



Phormium



Salix Viminalis



10.6 Landscapes

Permaculture Gardens - Perennial vegetables



Bunias orientalis



Allium x proliferum



Hemerocallis



Rumex acetosa



Helianthus tuberosus



Asparagus officinalis



Myrrhis odorata



Smallanthus sonchifolius



Claytonia sibirica



Cynara cardunculus



Phytolacca americana



Petasites japonicus



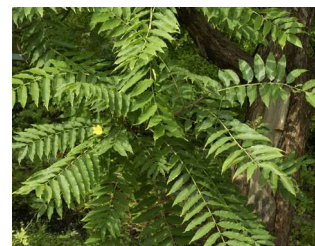
Sanguisorba minor



Hablitzia tamnoides



Phyllostachys edulis



Toona sinensis



Dioscorea japonica



Allium ursinum

10.6 Landscapes

Medicinal plants and healthcare



Calendula officinalis



Tanacetum parthenium



Oenothera biennis



Hypericum perforatum



Echinacea



Alchemilla vulgaris



10.6 Landscapes

Beer, brewing and fermentation



Apple cider



Quinceade



Beer and hops



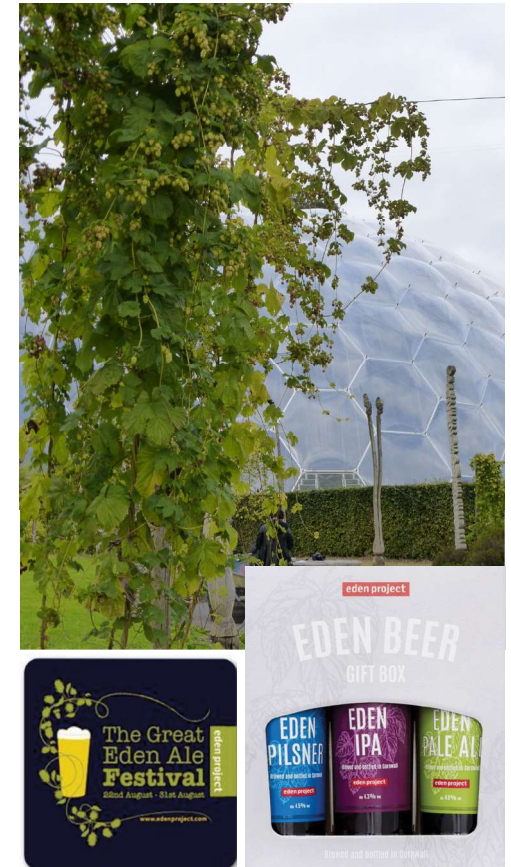
Elderflower champagne



Honey and Mead



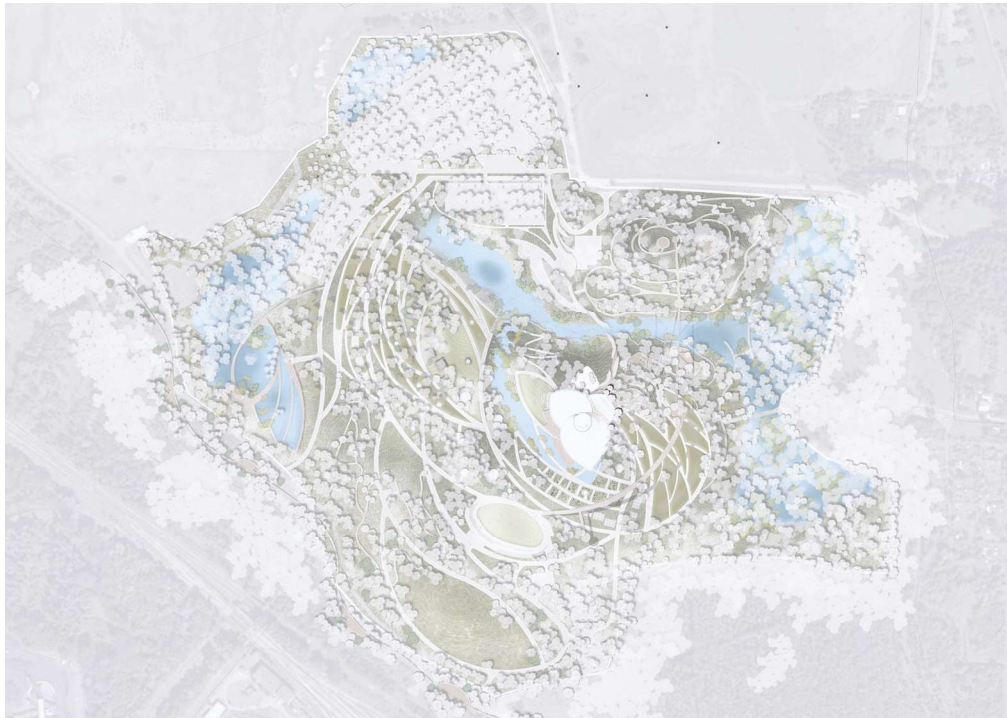
Sloe gin



10.6 Landscape Design Principles

Winter Garden

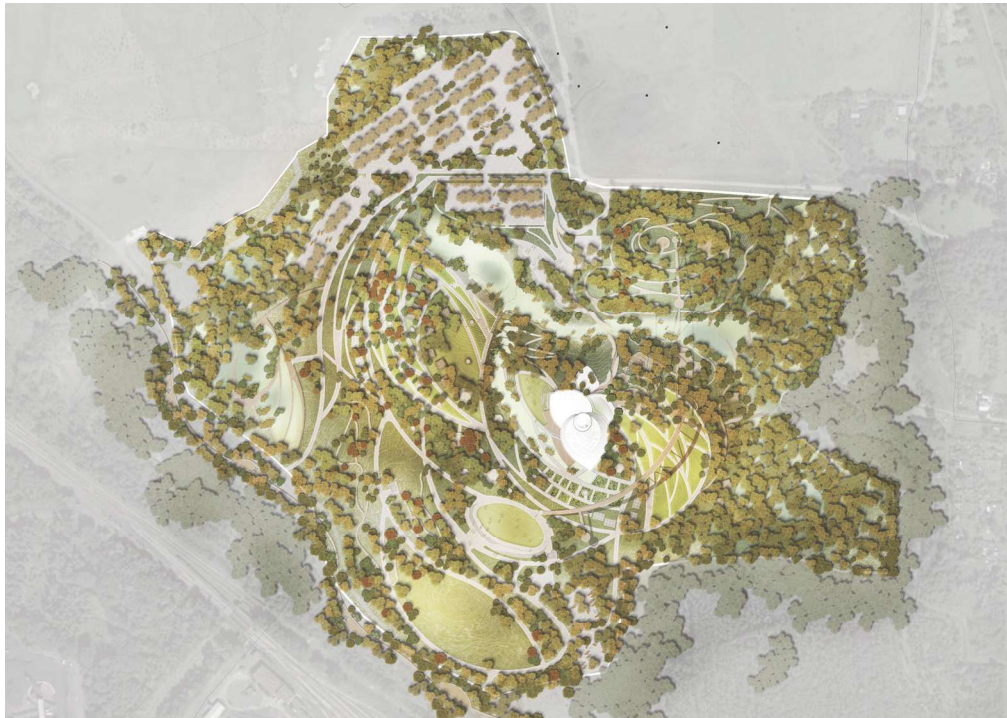
Celebration of plants in winter – coloured stems and bark, berries, seed heads, strong structure planting and plant forms.



10.7 Wild Edge

Foraging and stomping grounds

Shady, leafy and natural woodlands to encourage natural habitats for edible



10.7 Wild Edge

Ecology and biodiversity

The landscape design aims to:

- Enhance biodiversity of the site
- Create new resilient woodland to support biodiversity within the site and surrounding area.
- Create connected wildlife corridors and zones throughout the site. Provide nature trails through these corridors to encourage visitors to learn about and appreciate the biodiversity of the Czechia
- Mimic the natural habitat with a multi-layered planting strategy to attract different fauna groups.
- No use of pesticides and herbicides within the campus.



10.7 Wild Edge

Selected Native Trees



Alnus incana



Carpinus betulus



Betula pendula



Fagus sylvatica



10.7 Wild Edge

Selected Native Trees



Quercus cerris



Tilia x europaea



Acer platanoides



Larix decidua



10.7 Wild Edge

Culinary mushroom cultivation on logs and bio-waste



10.8 Night-Scape

