

6. Masterplan



6.0 Masterplan

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6.1 Overview

The Silesia Project creates a completely unique place that will become an internationally recognised symbol of Silesia's transition from 'black to green.'

- › An educational campus like no other – a unique and inspiring place for students of all ages to learn in nature, year-round.
- › An exciting and interesting range of experiences for visitors to enjoy within a changing landscape curated by students and their professional mentors.
- › A new amenity for Karvina residents to enjoy and be proud of.
- › Creating a new ecology for our Lipiny site that contributes to the blue and green infrastructure of the region.

The Master Plan illustrates the range of activities proposed for the first phase of the project. It also creates a framework for future development allowing the site to evolve and grow over time in response to evolving education, business, community and operational needs.



6.2 Masterplan

Key

1. Entry plaza
2. Ticket booth
3. Portal bridge
4. The Gaia
5. Feature pond
6. Elevated pathway with zipline
7. Flower garden
8. Productive garden
9. Student accommodation
10. Existing lake, extended
11. Clearing
12. Constructed wetlands (wastewater treatment)
13. Adventure hill
14. Existing Wetland
15. Bio-corridor
16. Camping
17. Riverbank Trail



6.2 Masterplan: Pay Zone

Key

1. Entry Plaza
2. Farm to table café
3. Adventure hill
4. Existing lake
5. Valley
6. Nature play
7. Elevated pathway
8. Zip line
9. Flower garden
10. Productive garden
11. Outdoor Classroom
12. Research Patches
13. Open lawn
14. Phytoremedy pond
15. Student accommodation
16. The Clearing
17. Camping



6.3 Masterplan: The Gaia

Key

1. Entry Plaza
2. Hilly Trails
3. Zipline
4. Elevated Path
5. Flower Garden
6. Productive Garden
7. Terrace
8. Open Lawn
9. Stormwater wetland and lake
10. Outdoor Classroom
11. Demonstration gardens and exhibits
12. Treehouse
13. Student accommodation
14. The Clearing
15. Natural Classrooms



6.4 Focused areas



Entry Plaza with ticketing booth and small cafe to serve the visitors



Iconic sculptural bridge leads visitors to The Gaia



Adventure play focused on the hill with “zip line” across wetland. Amazing natural play for all visitors to experience

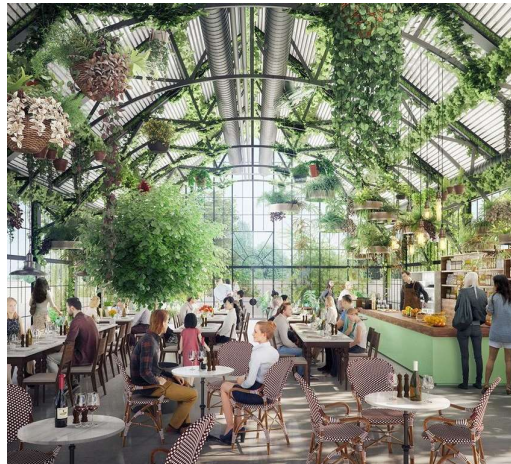


6.4 Focused areas - F&B structures

There is a confirmed F&B offering in The Gaia as well as opportunities for pop up locations around the site and a more permanent offering in the the public realm area that can act as a food hall to increase community connections.

As part of the operating model and through the Eden Project System our team will work with Silesia University to develop a food strategy similar to Eden Project Cornwall's and this will dictate dictate

The adjacent images share some inspirational direction for how we would look to design these spaces.



6.4 Focused areas - Ticketing & Entrance Kiosks

At this stage of the scheme's development the design team are exploring multiple options for the look, feel and operational considerations of the experience that takes visitors from the public realm into the paid for attraction.

Here you will find reference images that show our design inspiration.



6.4 Focused areas - Play Installations

The Eden Project team has extensive knowledge and experience with Play installations - and the aspiration of this site is to develop Czechia's best play throughout the public realm and paid for areas of the site.

These reference images share just a snapshot of potential development ideas.

The Eden Project Cornwall site is currently developing a large scale Play installation and the learnings from this exercise will also be utilised at the Silesia site.



6.4 Focused areas - Bridge Design

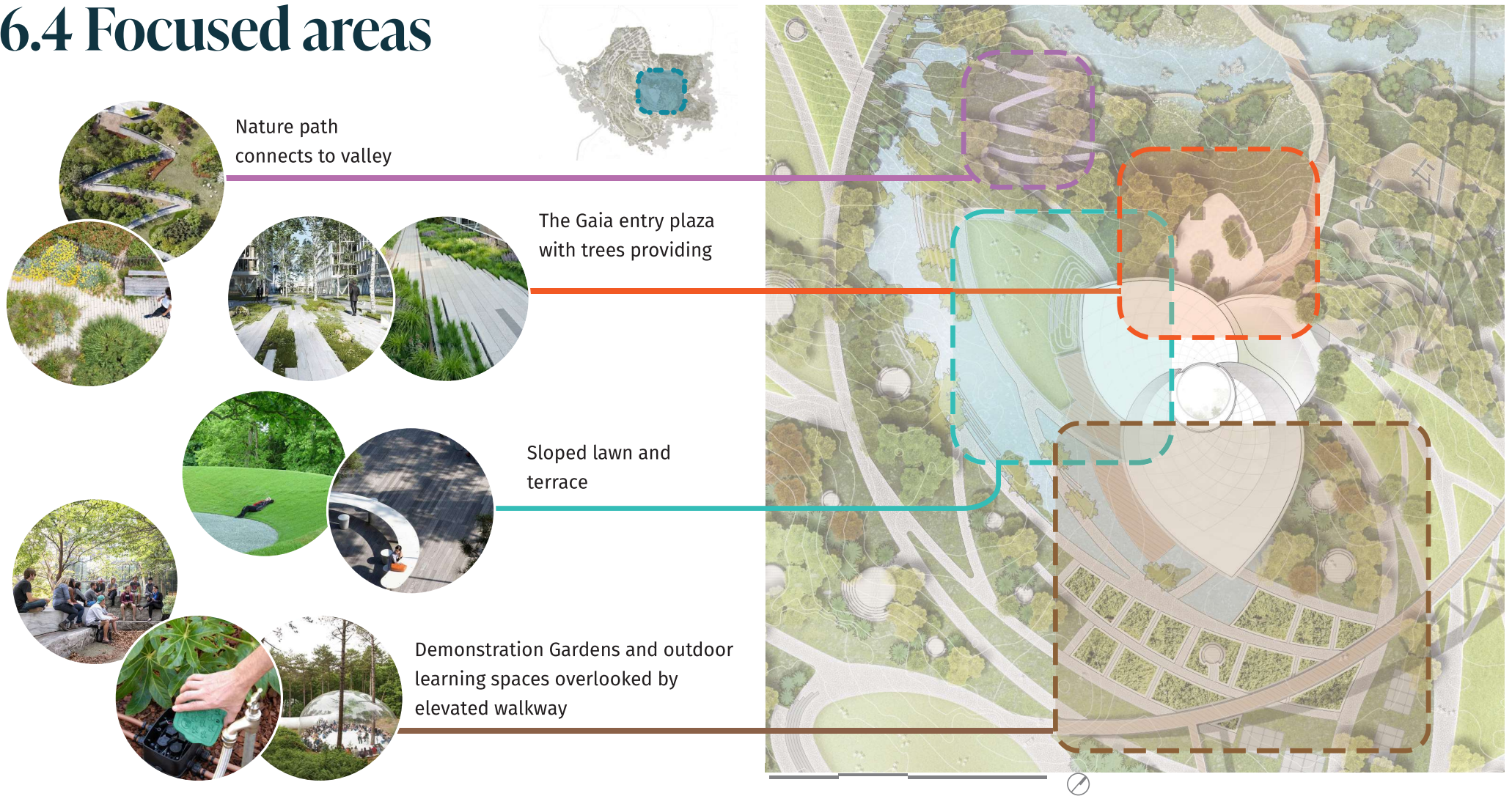
The developed masterplan has the inclusion of a bridge system that guides visitors towards The Gaia as well as additional overhead walkways.

Once we develop the scheme through detailed design, the project will be in a position to curate the Gaia entrance bridge, as well as the high level walk ways that compliments the masterplan and gives the wow moment required when approaching The Gaia.

These reference images give a view of our current design inspiration.



6.4 Focused areas



6.4 Focused areas



Existing lake with provision of amphitheatre steps offer relaxed spaces for university personnel



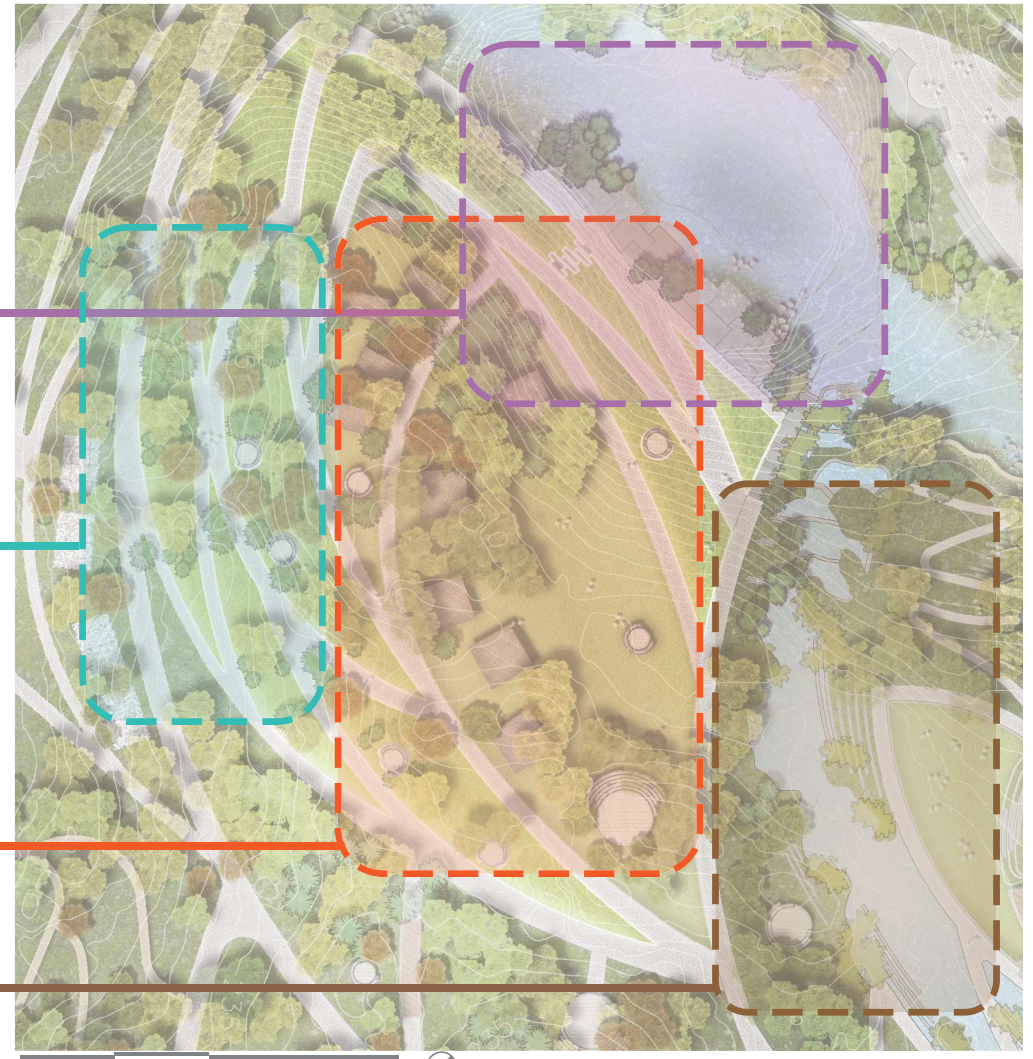
Permaculture gardens and pollinator planting



Student accommodation with fence



Stormwater catchment pond to capture water and snow melt from Gaia



6.4 Focused areas - Student Accommodation

The project concept is for students to learn in nature - and as part of this experience we would like students to live in nature also - while also utilising circular developed accommodation.

This reference images provide the inspiration for accommodation that we envisage would be available for the first 30 students. These students would then develop the accommodation for the next years cohort.

Inspiration comes from re-using structures, materials and even cabins from disused trains.



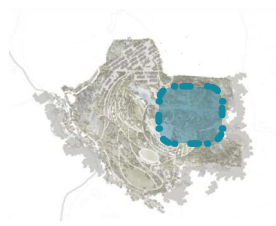
6.4 Focused areas



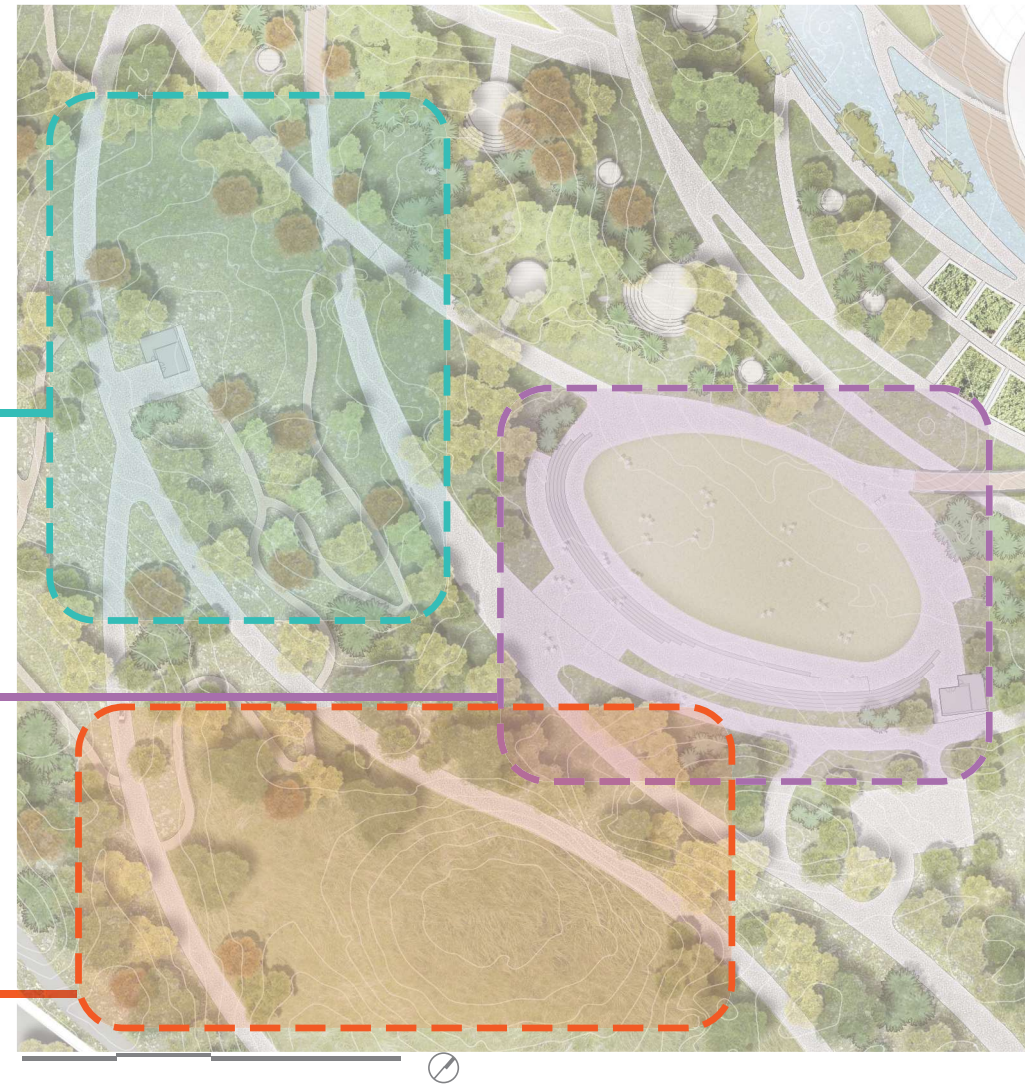
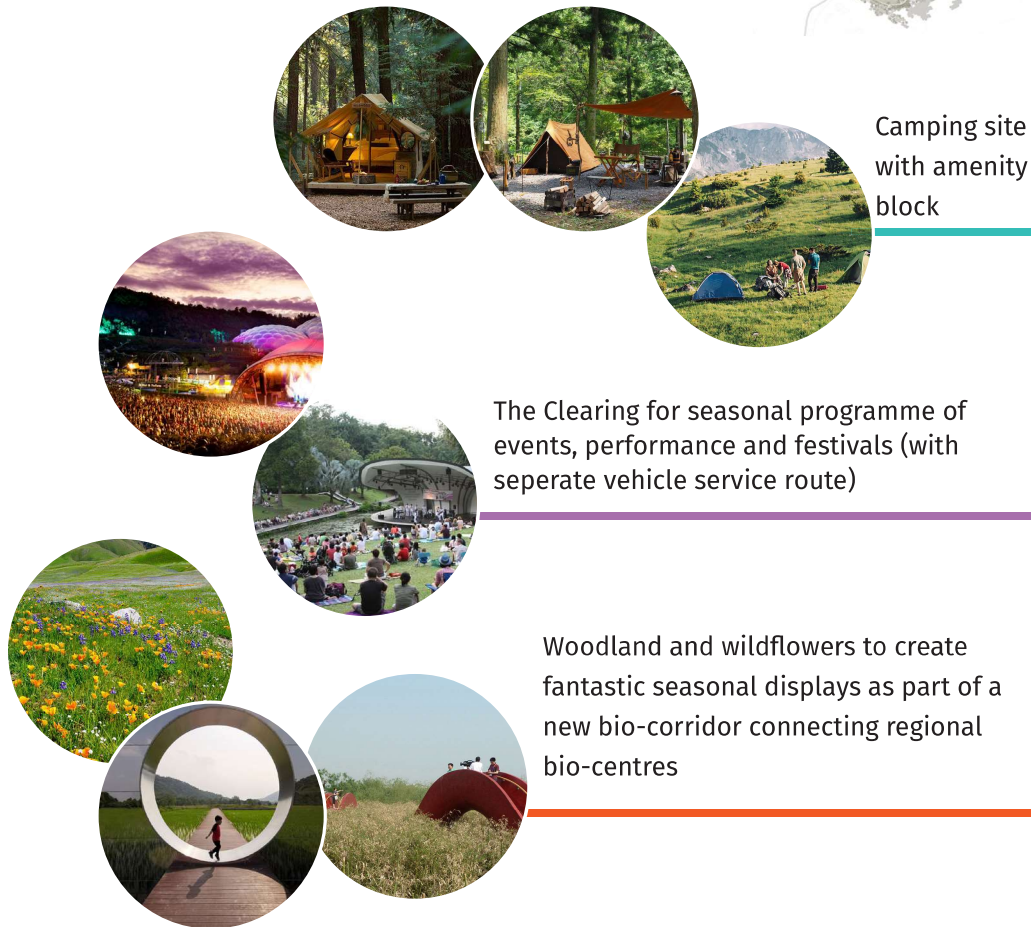
Elevated walkway to offer alternative routes and views to experience the gardens and activities



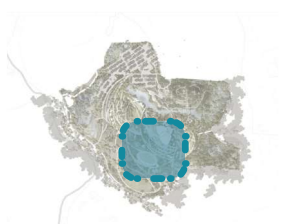
Spectacular productive and flower gardens with outdoor learning spaces and engaging visitor experiences



6.4 Focused areas



6.4 Focused areas

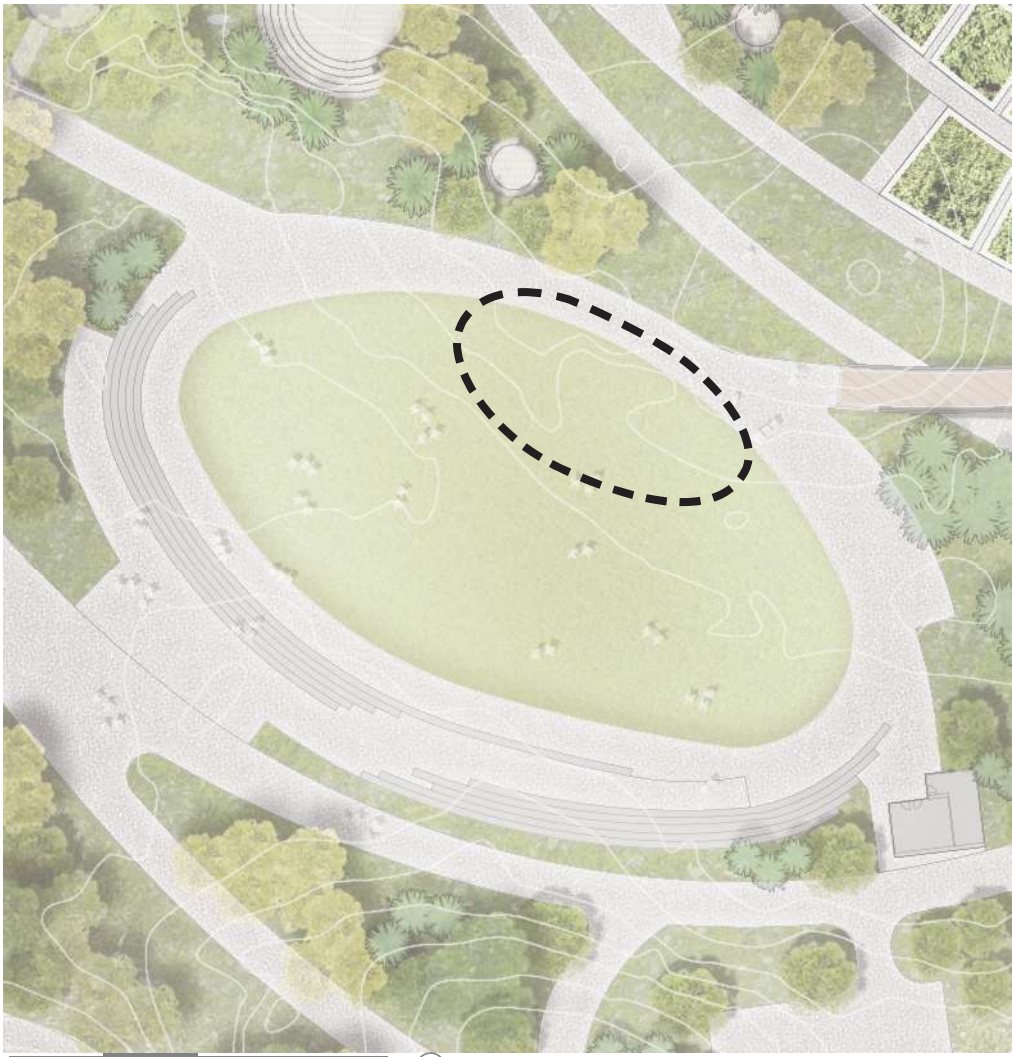


The Clearing

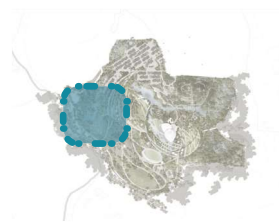
Capacity calculation

	lawn	amphitheatre	Total capacity
area / length	3000 sq.m	700 linear m	
space requirement	1pax/0.60 sq.m	1pax/0.50 linear m	
capacity	5000 pax	1400 pax	6400 pax

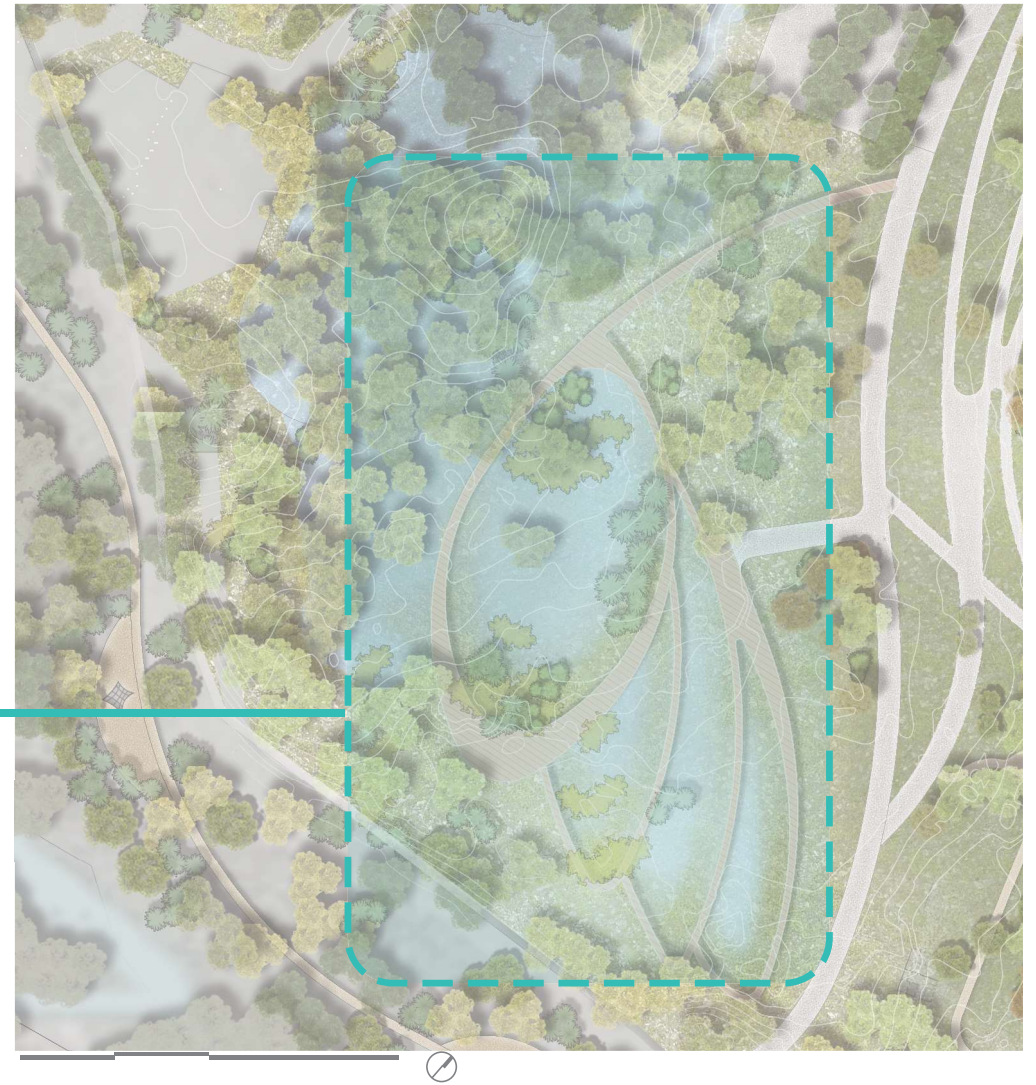
Total space	7150 sq.m
Lawn(stage zone excluded)	3000 sq.m
Amphitheatre	750 sq.m
◀ ┌ ─ ─ ─ ▶ Stage	700 sq.m



6.4 Focused areas



Constructed wetlands
with special vegetation
which organically treats
black and grey water



6.5 Beyond ‘Do No Significant Harm’

It is important to us all that the Silesia Project masterplan not only ‘Does No Significant Harm’, but goes beyond this to deliver a ‘regenerative’ place that improves the environment and ecology of the site. The DNSH Criteria (that apply to the Czech JTF Programme) will of course be integrated into the project. With particular reference to the Delegation Regulation for EU Taxonomy (version 26/06/2022):

Storm water will be retained and managed on site.

The Lipiny site is low lying and sits within the traditional river floodplain. Offsite, it is bounded to the west by a stream and biodiversity rich wetlands are developing in the eastern part of the site. The existing lake will be retained and new wetlands and water bodies added to create a range of habitats for wildlife as well as learning opportunities for students and visitors.

It is proposed that **waste water** will also be managed on site – treated naturally in phytoremediation ponds and wetlands. This will demonstrate the circular approaches that underpin the site concept.

Sustainable transport is fundamental to the Silesia Project. The masterplan is designed to be easily accessible from Karvina by pedestrians and cyclists and this will be the most convenient form of transport for students and local residents. Where vehicles are required for access to or moving around the site for operation and maintenance, these will be emission-free.

Public transport will be another means of access and an existing bus service runs along the main roads. In future, negotiations may lead to the bus turning into the site to drop off/pick-up. We also look forward to the tram which follows a similar route.

When the project opens in 2027, we realise that fossil-fuel cars and coaches will likely still be the main form of transport for visitors, staff and some students. Car parking is therefore provided in accordance with Czech requirements. Electric charging points will be provided. Society is in transition from fossil fuel vehicles to electric/emission-free and this can be accommodated in future phases of the project.

The masterplan aims to minimize any **environmental impacts** and **deliver significant net gains for nature**. This will be fully assessed as the project design process progresses.

The masterplan is designed to be resilient so that it can adapt to the unpredictable impacts of **climate change**. The site is naturally ‘wet’ and the masterplan is designed to ‘hold’ water within the site which will make the site and surrounding area more resilient to resilience to more intense rain events and extreme droughts.

6.5 Beyond 'Do No Significant Harm'

With advice from project partners at MendelU, trees will be selected for suitability and also diversity – to create a resilient woodland framework to the site.

Within the landscape, materials will be selected – as far as possible – to have a **low carbon footprint**, and be either recyclable, or from recycled materials. Eden Project team have experience in this from Cornwall.

Soil is one of our planet's most valuable assets. We understand that the Lipiny site has been capped with 500-800 mm soil and surplus is available in a stockpile on site. **Soil protection** will be particularly important during construction works. Ongoing management and maintenance will nurture the soil – including soil fauna and flora – by composting all organic material and returning it to the soil, creating a circular system. Early soil testing will be a project for students and this can be monitored on an ongoing basis.

The Lipiny site was disturbed by mining operations for more than two centuries. Despite this, biodiversity rich areas are developing on the edges of the site – to the east and west. The masterplan shows two **bio-corridors** in the public parts of the site – to the north and south – to connect these areas. The northern bio-corridor will be a mixture of wetland and woodland to connect the existing blue-green infrastructure. The southern bio-corridor will be predominantly

woodland to connect with the existing areas of woodland of regional significance.

To address the challenges of climate change, our thinking about what is 'native' is changing. To create a resilient tree cover across the site, this could include a mixture of **native** and but also introduce some 'near native' northern hemisphere plants. Project partners MendelU and students studying the biodiversity and horticulture of the site will monitor progress and control any **invasive species**.

For education purposes, the indoor Gaia Forest Earth will include **non-native** plants and many from the southern hemisphere. These will be living in a warmer, enclosed climate so there is minimal risk of these 'escaping' and becoming invasive in the outdoor climate.



6.6 Bio-corridor & Stepping stones

Enhance the biodiversity through connections

Establish tranquil, undisturbed natural areas on the property to serve as connectors and stepping stones for the fauna to reach the proposed national ecological network.

By enabling the wildlife to roam freely, the area's bio-diversity is enhanced.



6.7 Other Master Plan design principles

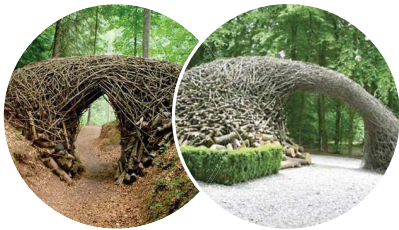
In addition to creating a 'regenerative' landscape with value to all nature (including people), the masterplan for our natural campus follows these principles:

- › Car parks at the northern edge of the site are easily accessible from the main Karvina-Ostrava road. No vehicles (other than e-vehicles for operational needs) within the campus.
- › Additional entrances for local people who will arrive by cycle or foot.
- › Work with the site's existing topography to minimise earthworks. Make the most of the existing high points for views and fun.
- › Gaia – our new indoor learning centre, visitor attraction and symbol of a new green future for the region - is at the heart of the site. Around this, the outdoor landscape delivers amazing natural play opportunities, as well as a stunning landscape for learning, and enjoyment to appeal to students and attract local and international visitors.
- › Adjacent to Gaia, a safe and defined area for students to stay and socialize in nature. Cabin style accommodation is proposed that can be expanded as needed. It can also be used for conferences and for visitors during holiday times.
- › The clearing is a flexible open area for a seasonal programme of activities including concerts and festivals. Also seasonal camping areas nearby that can be further developed for 'glamping.' It also has a separate 'service' access.
- › The 'paid' and 'student' areas are surrounded by a 'wild edge' with free public access for walking, jogging and foraging. This area is designed to optimize biodiversity value and to link developing natural areas of wetland and woodland to the west and east.



6.8 Featured trails

Journey on the flat landscape
allow all generations enjoy the
forest with artwork and landarts



Journey through the
forest with artworks
hidden in woodland



Elevated walkway weaving
through the wetland



Public path along the Stonavka
stream on the edge of the site
and connecting to the Karvina
Sea.



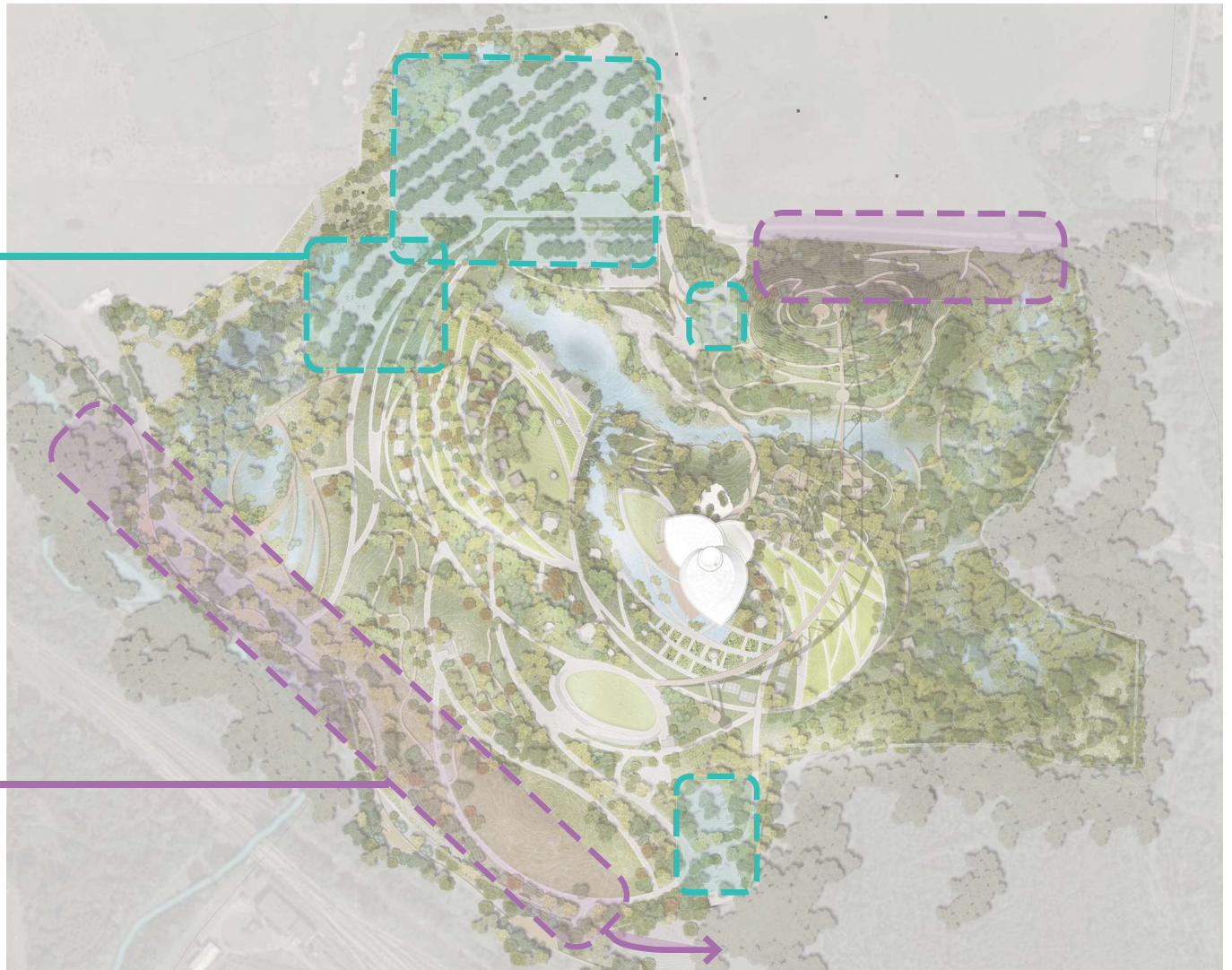
6.9 Wild Edge



Parking in
the park



Active Edge, Sports and incidental
play within a sculpted landscape in
future phases.

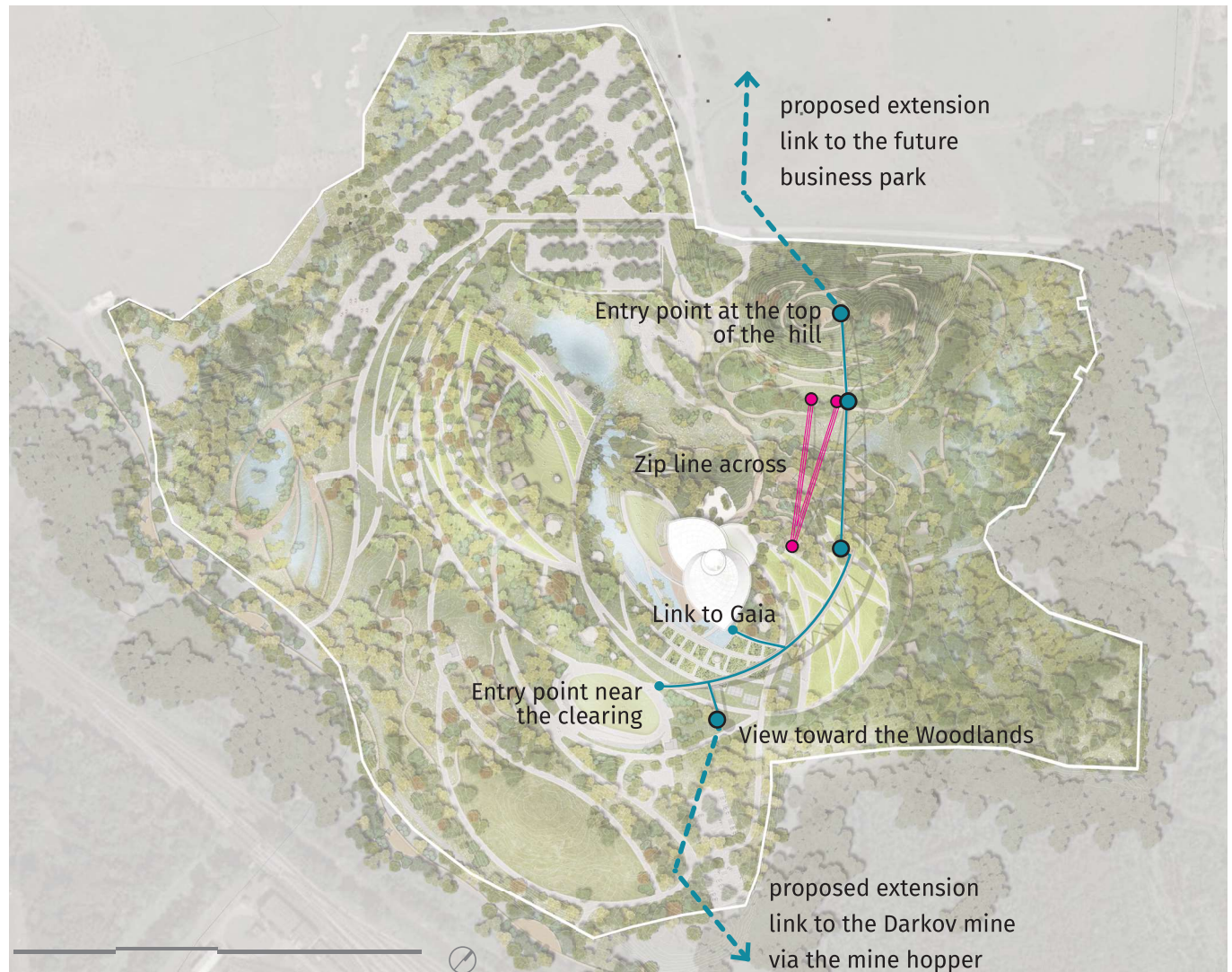


6.10 The Highway







Located in the paid zone, the highway provides visitors with a unique experience and opportunity to view various scenarios. Visitors are welcome to observe the action that takes place in the study and natural zones from a distance without actually interfering with the activities in progress.

The visitors could enter from the ground next to the clearing or begin their Highway journey from the hill. The highway can also be accessed from the Gaia. The exciting Zip Line Tower is connected to this route.

Future expansions are envisioned at both ends of the highway which would improve overall district connectivity and mobility.



6.11 Site Zones

-  Paid Zone
-  Student Zone
-  Student Zone with Visitor Access
-  Events areas (could be temporarily enclosed)
-  Free Access
-  Fences/Barrier




6.11 Site Zones

A destination for national and international visitors


Creating one of a kind experiences

Offering distinctive activities to attract local and international visitors to discover unique experiences in Karvina.

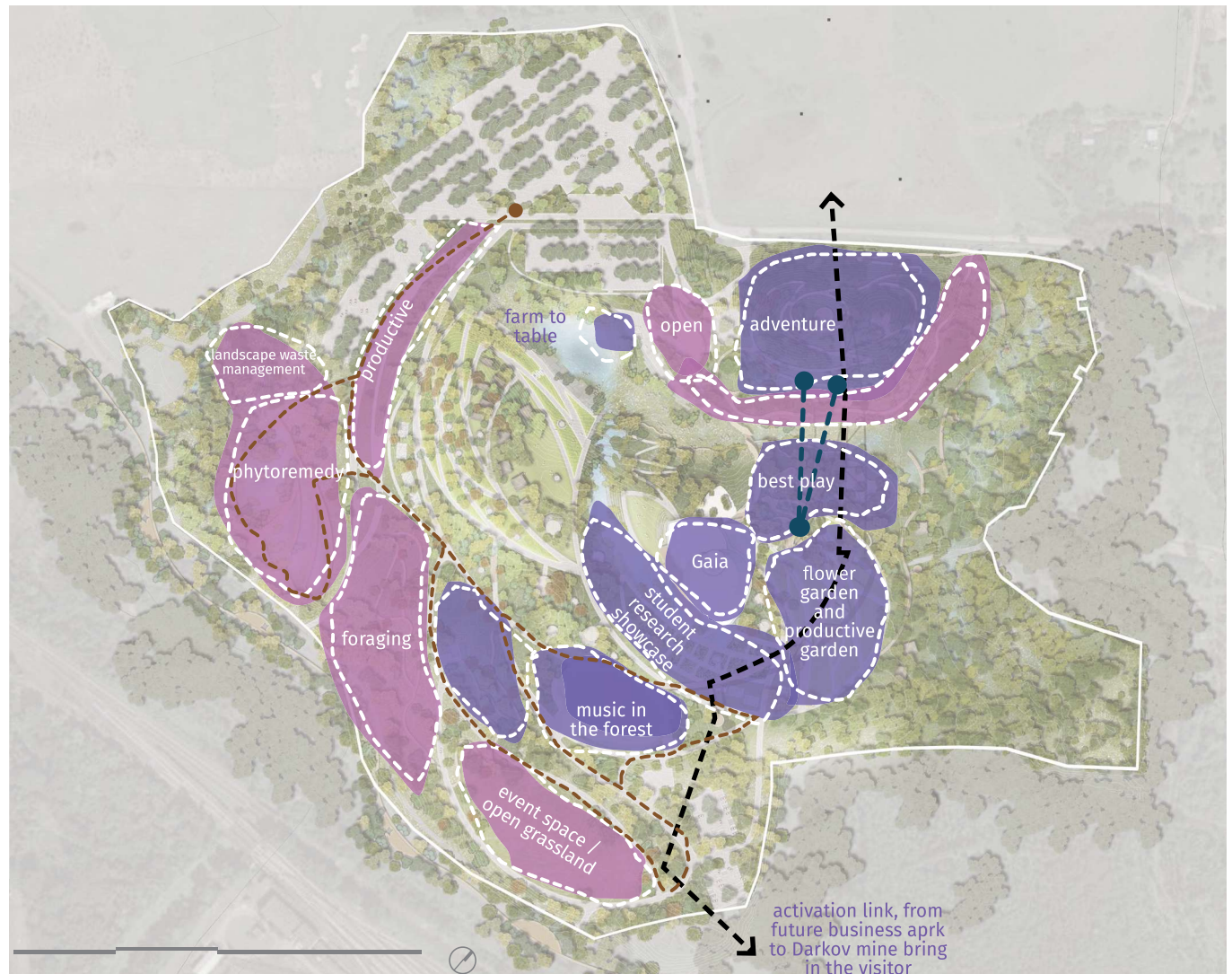


 Elevated pathway

 Zip line

 Winter trail along the South-West side

 Free access



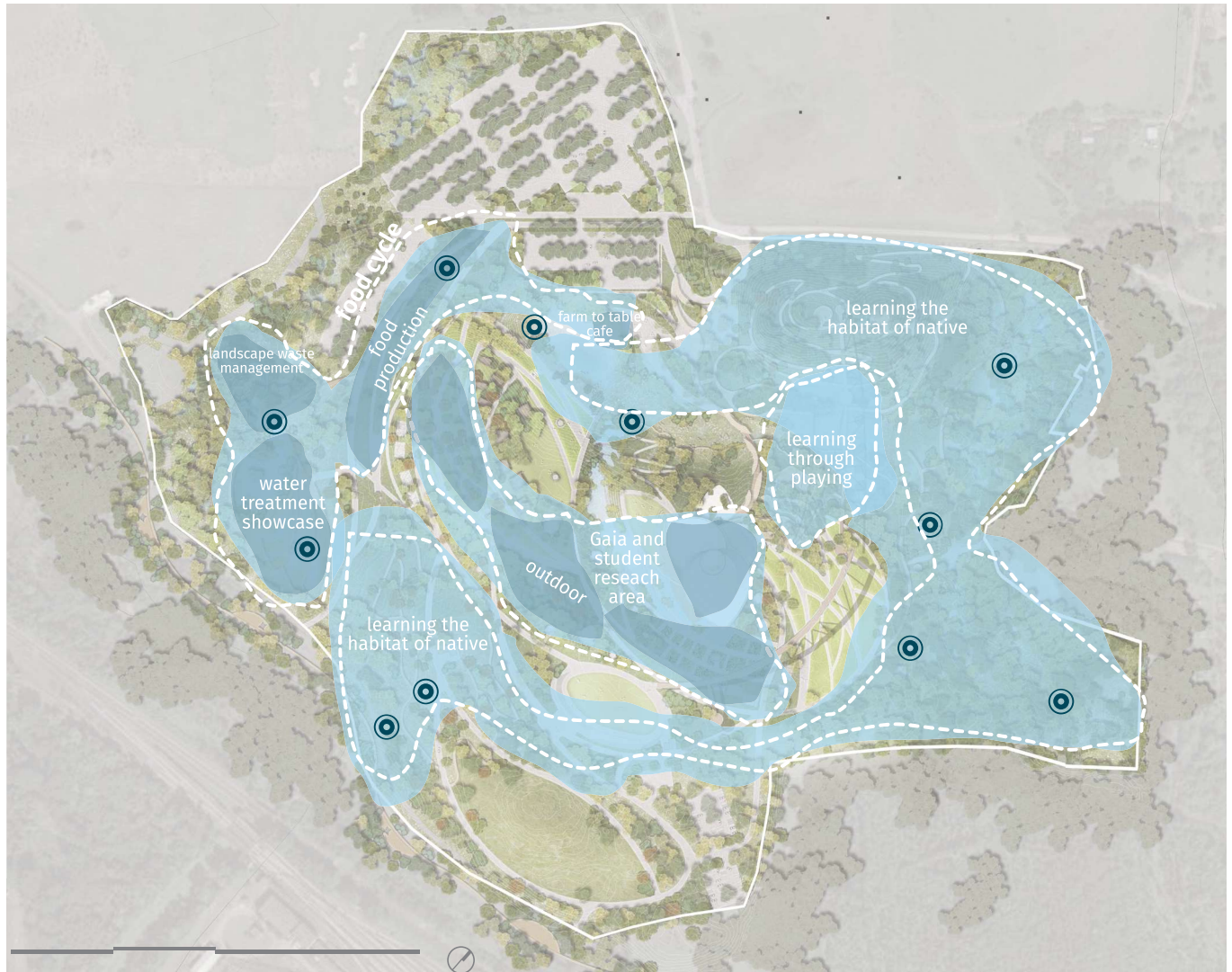
6.11 Site Zones

A regional learning and doing hub in the centre of Europe

Create a real-world learning experience

Learning is not just restricted to students and the typical classroom. Across their journey through the carefully designed landscape, visitors may learn about the water treatment processes, the food cycle from production to consumption, waste management and much more. Knowledge could also be acquired through curated nature play.

The various research sites are spread around the development, offering a variety of learning and experimentation opportunities.



6.11 Site Zones

A home for regenerative partners

Facilitating and enhancing natural process

The landscape is designed with spaces to attract innovators, businesses, thinkers, NGOs, practitioners and nature based organizations. Workshops and gatherings could be organized for like minded thinkers to encourage exchange of ideas and knowledge and to spark innovation.

Productive landscapes are used to treat water, produce food and decompose waste to inspire regenerative approaches through landscape design which could be adopted by others.



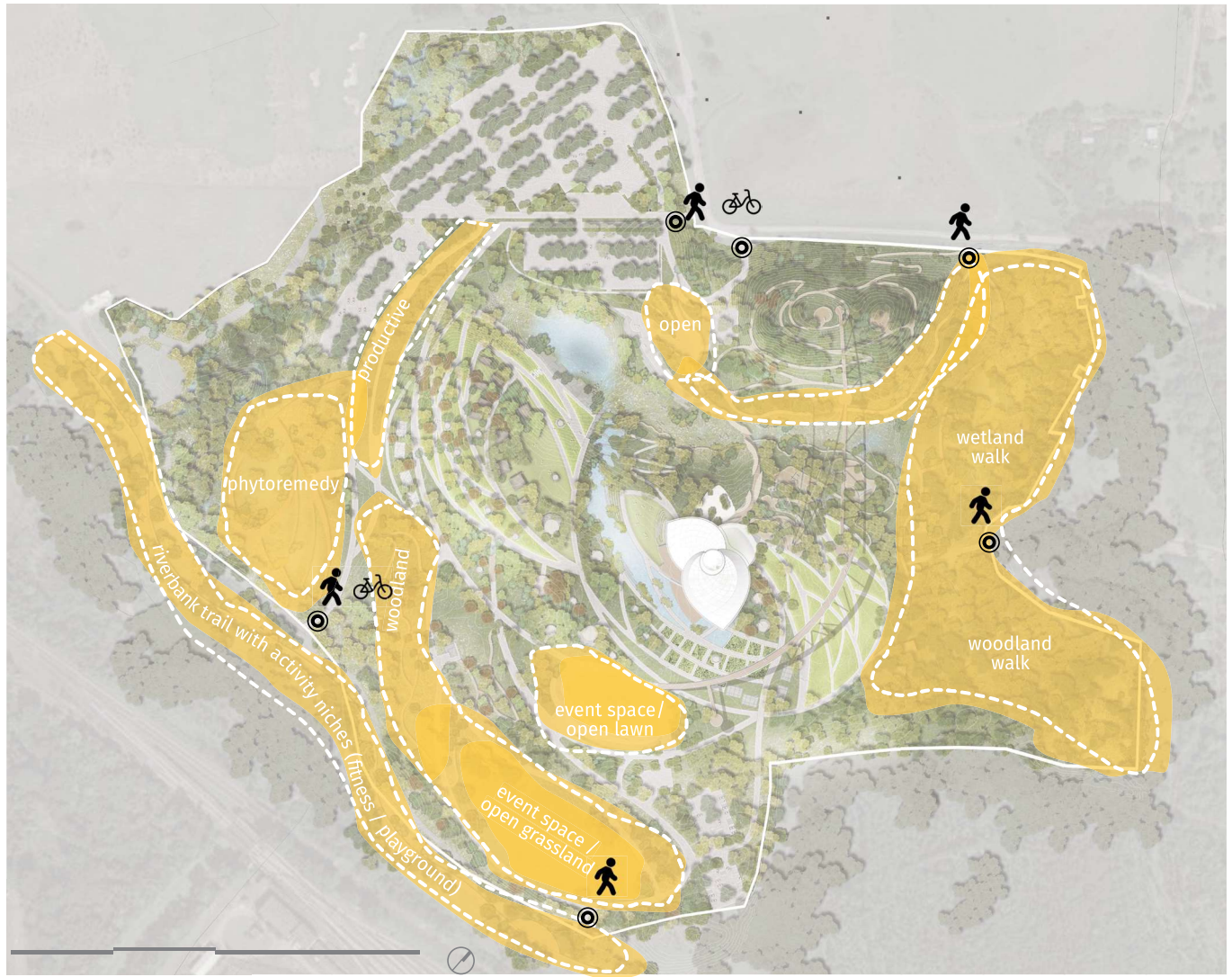
6.11 Site Zones

A new cultural hub for local communities

Ensuring everyone is catered for





Permeable access through the site improves community engagement and makes it all-inclusive. A variety of activities and interests are provided to appeal to a wide range of user groups regardless of age or status.

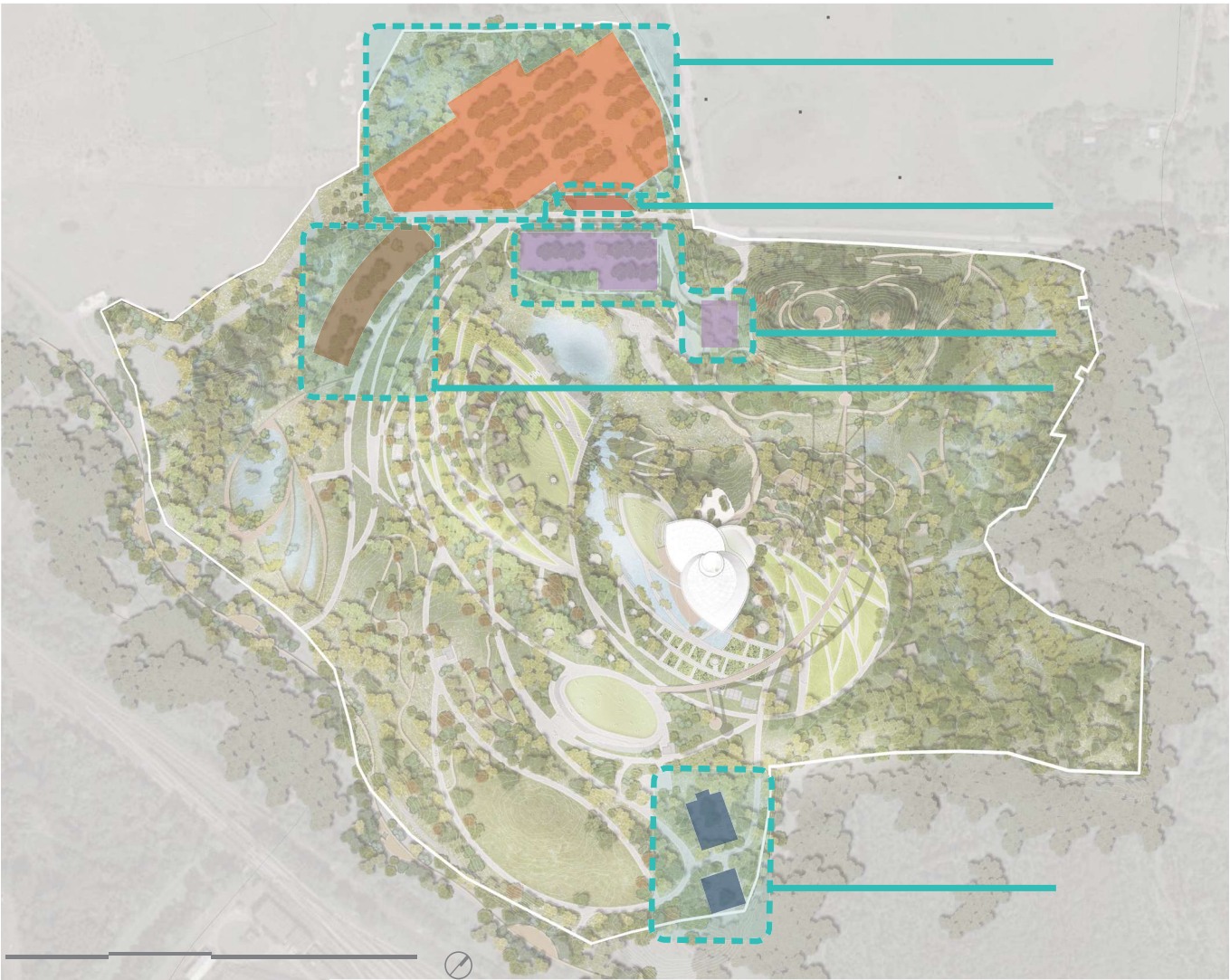
Incidental activity pockets are provided to energize the site's periphery.







6.11 Site Zones

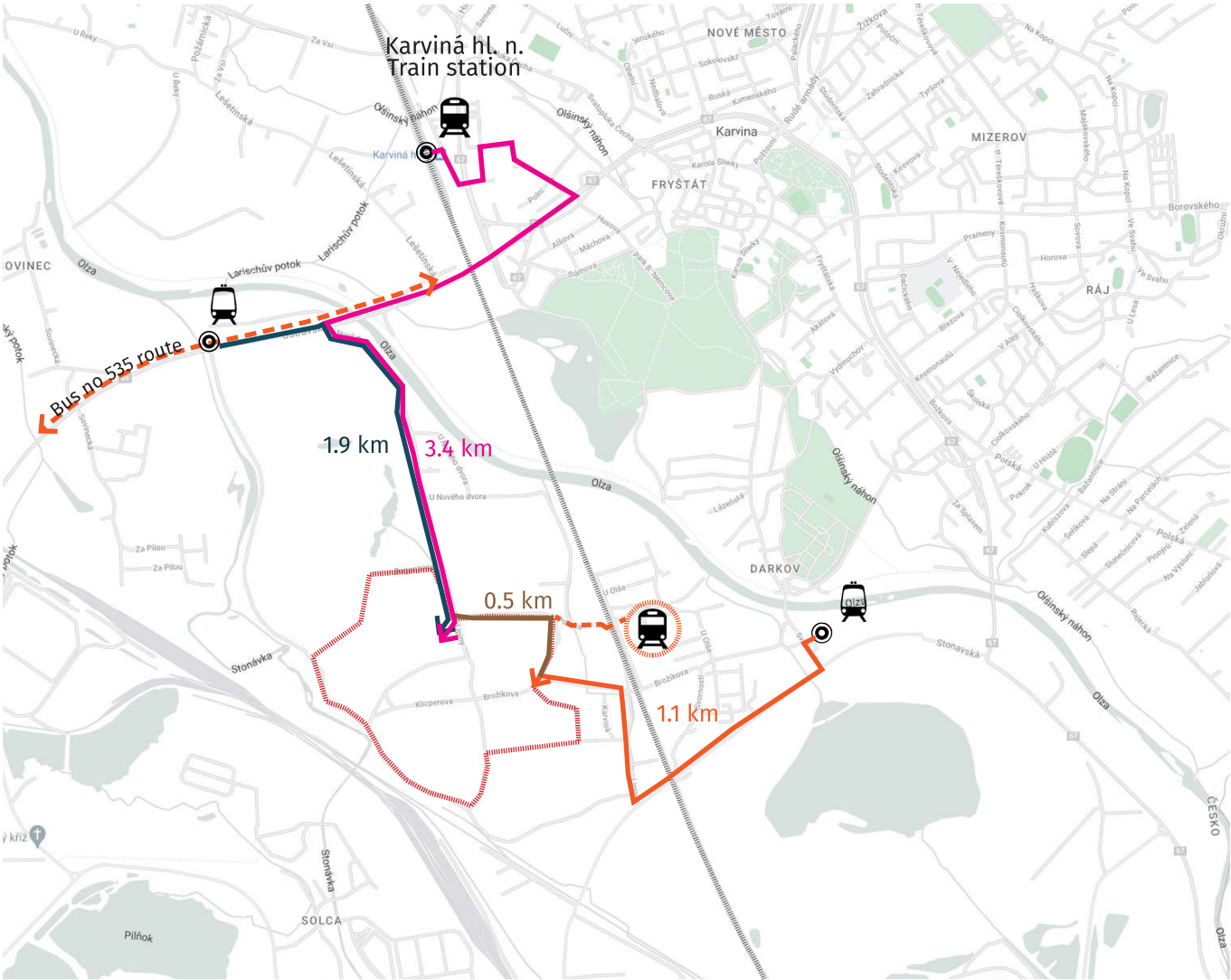
Parking

Total bus parking space	10
Total car parking space	1386
 Main parking	875
 Extension parking	175
 Entry plaza/staff parking	236
 West parking	100










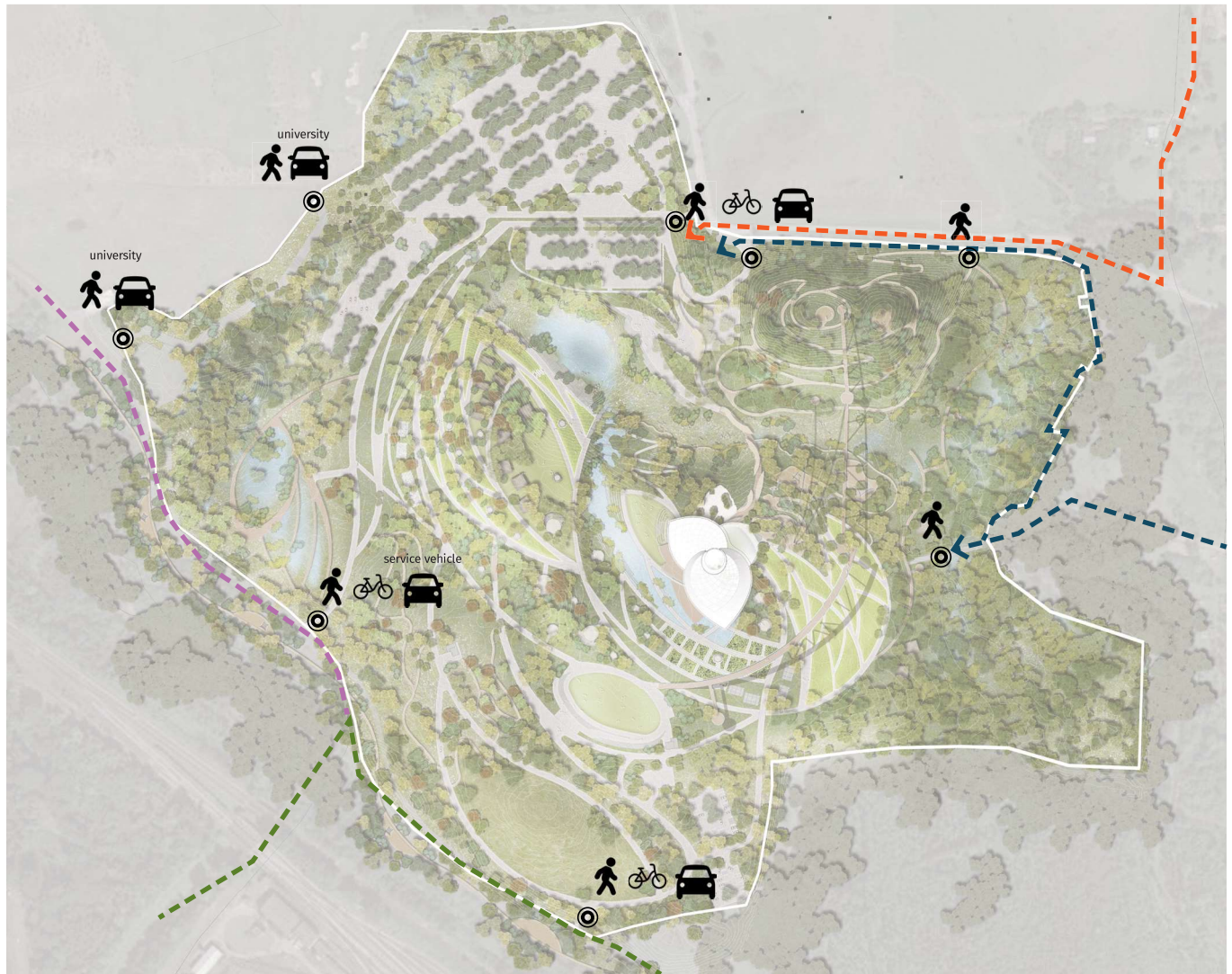
6.12 Accessibility

-  Tram stop
-  Existing Train station
-  Proposed train station
-  Site









6.12 Accessibility

-  Pedestrian access
-  Cycle access
-  Vehicular access
-  Pathway link to proposed train station and foot crossing
-  Proposed cycle route to site
-  Temporary cycle route
- 



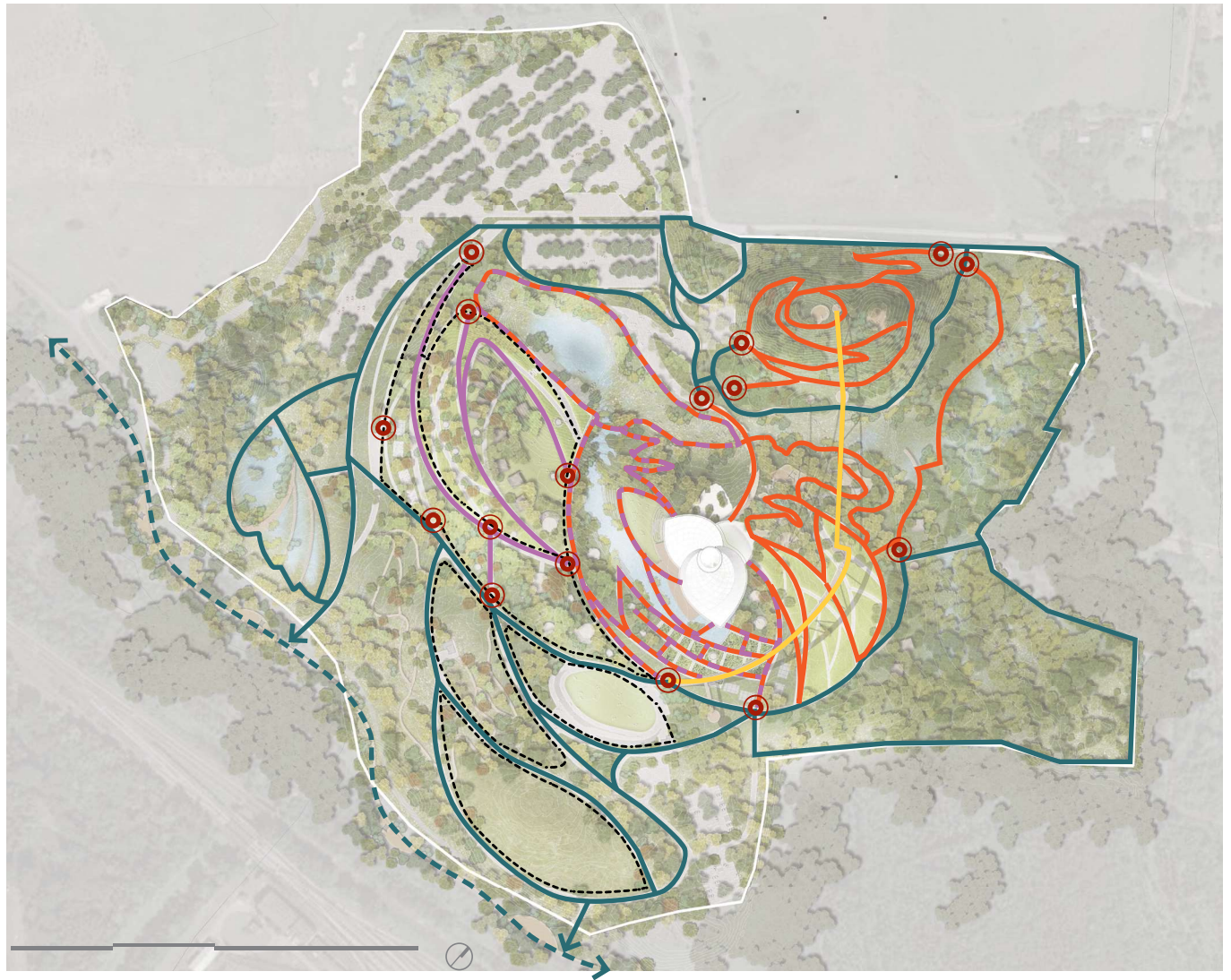
6.13 Vehicular route

-  Main entry
-  Gate
-  Existing roads
-  Primary roads
-  Service road - regularly use
-  Service roads - occasionally use



6.14 Circulations

- ⊙ Access control points
- ↔ Public route
- ↔ Student route
- ↔ Paid route - on ground
- ↔ Paid route - on ground/in student zone
- ↔ Paid route - elevated path
- Fences/Barrier
- ↔



6.14 Circulations

University staff and student route

Circulation from parking to student community and Gaia.



⊙ Access points



6.15 Existing terrain and pathway diagram

Minimize the earthworks

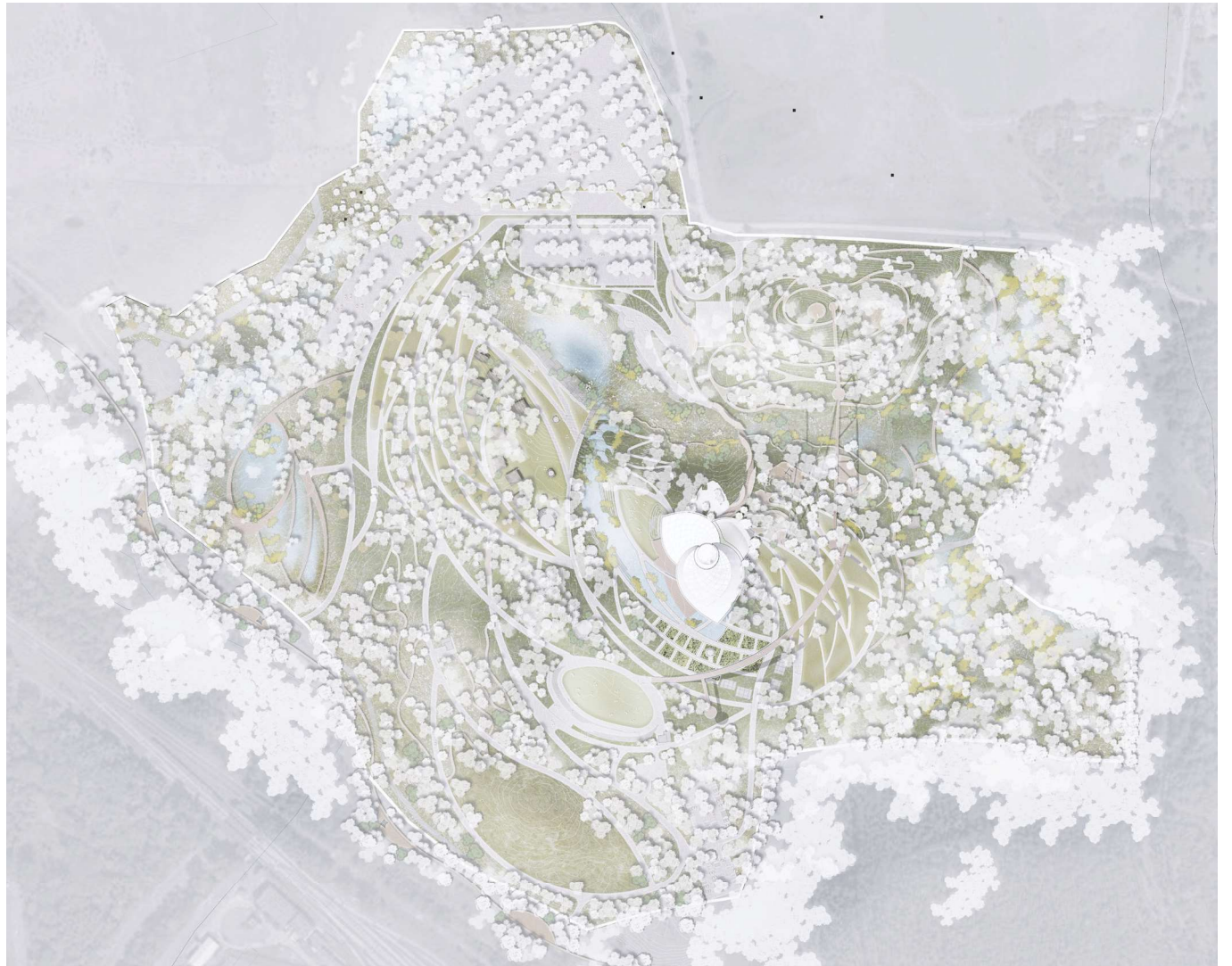
The existing topography would be respected while designing the circulation paths to minimize the cut and fill earthworks.

The main pathway would be designed with a gentle, comfortable slope to ensure that the visitors can effortlessly commute across the site.

The secondary routes and nature trails will be draped over the existing natural topography and be more undulating and challenging.



6.16 Winter



6.16 Spring



6.16 Summer



6.16 Autumn

