

YORKLANDS GREEN HUB



OPENING GREEN DOORS TO THE FUTURE

HISTORY AND SITE CONTEXT

The Yorklands Green hub site is a 36 acre parcel of land located at the Guelph Correctional Centre in the South East corner of Guelph. The site has a rich historical, ecological, architectural and cultural history. In the 20th century, Provincial Secretary W.J. Hanna developed a transformational vision for the Guelph Correctional Centre as a place of reform rather than simply punishment.

Since its opening in 1910, the Guelph Correctional Centre site has been a working farm (crops, animals and greenhouses), a military convalescent hospital, a woolen mill, a cannery, a wood furniture builder; an abbatoir; a machine shop to teach skilled trades and it has been the manufacturer of car license plates. It has also been a research site for the University of Guelph's Ontario Agricultural College and the Ontario Veterinary College.

Located on site are landscaped features built by the inmates such as dry stone walls and water features. One of the dry stone walls surrounds the site with only a few openings for access. There are also ponds, wetlands and several native tree and shrub species on site that are home to many species of wildlife. On the West side of the site is Clythe Creek which connects to the Eramosa River; designated as a Canadian Heritage River in an urban environment. The site connects to the Royal City Trail and Eramosa Trail and in close proximity to the University of Guelph and the Arboretum. Visitors can Access Yorklands Green Hub by bus, bicycle and car.

The land use surrounding the site is industrial and commercial with some residential.

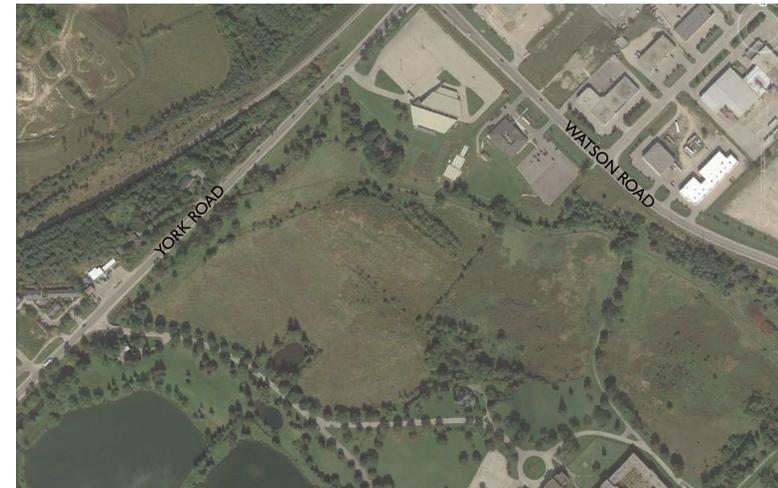
After the Guelph Correctional Centre closed as a reformatory in 1996, the site has some limited access.

THE SITE TODAY

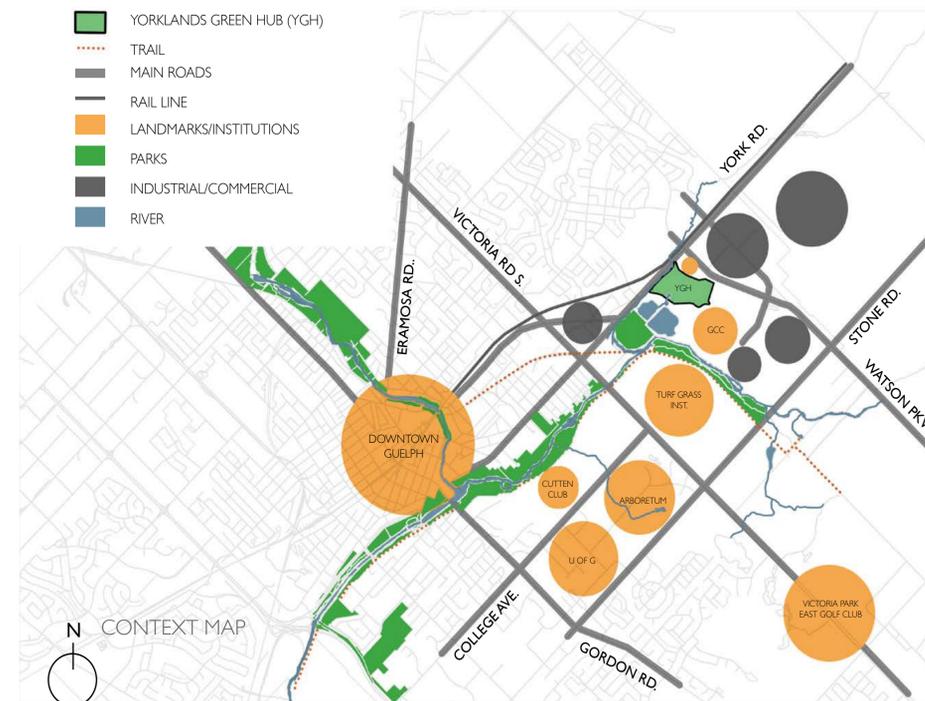
Today, the site is of interest to a newly formed nonprofit group of Guelph citizens calling themselves the Yorklands Green Hub. The group has connections to local and provincial groups wishing to secure part of the Guelph Correctional Centre Lands to promote sustainability and resilience in Guelph with respect to energy, food, water use, active transportation and waste management. The group was formed out of a City of Guelph sponsored initiative: The Guelph Community Wellbeing Initiative in May 2013. The Yorklands Green Hub group has asked Infrastructure Ontario to enable long term access to the 36 acre parcel of the Guelph Correctional Centre which is currently designated as 'unused provincially owned land'; sole use of the Superintendents House and the Gate House and partnered use of the Guelph Correctional Centre Administration building as a provincial exhibit for best practices of environmental innovators and other events.

Organizations supporting and involved with the Yorklands Green Hub:

FarmStart, Future Watch, Transition Guelph, NetZeroCity-Guelph, Guelph Environmental Leadership, Grand River Environmental Network, Guelph Centre for Urban Organic Farming, Ontario Streams, Eden Mills Going Carbon Neutral, Food and Water First, Council of Canadians – Ontario Chapters, Guelph Wellington Coalition for Social Justice, University of Guelph - Ontario Agricultural College: Plant Agriculture, Landscape Architecture, International Institute for Critical Studies in Improvisation, Grand River District School Board



ARIAL PHOTO OF YORKLANDS GREEN HUB



VISION

The Yorklands Green Hub groups vision for the site is to create a self sustaining research, education and demonstration centre that will work in collaboration with governments, institutions, private sectors and community led organizations to ensure that the rich historical and ecological value of the site is reflected in its redevelopment. This vision aligns with the vision and principles of the Guelph Innovation District to:

- Create sustainable and energy efficient infrastructure
- To protect what is valuable
- Grow innovation and business and employment opportunities
- Promote a healthy diversity of land use and densities
- Establish a balanced mobility system
- Create an attractive and memorable place

DESIGN GOAL

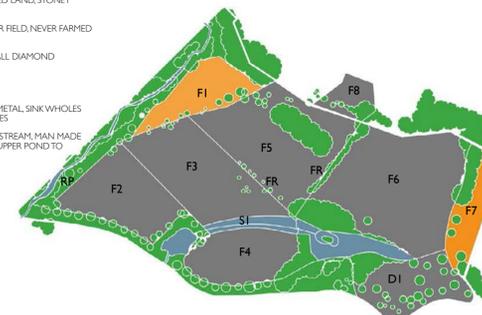
From the vision and ideas generated by the Yorklands Green Hub group, a design goal was developed for the site:

The Yorklands Green Hub will strengthen the community by bringing together people, educational institutions, businesses and organizations to learn, work, play, share and create with the common purpose of being engaged stewards of our land, food, water, energy and overall well-being.

INVENTORY AND ANALYSIS

PHYSICAL FEATURES AND AGRICULTURAL SUITABILITY

- F1 BEST LAND FOR VEGETABLES
- F2-F4 STONEY GRAVEL BASE DRAINED BY TRENCH
- F5 MUCK SOIL WITH LARGE ROCKS
- F6 POORLY DRAINED LAND STONEY
- F7 FORMER SOCCER FIELD, NEVER FARMED
- F8 FORMER BASEBALL DIAMOND
- FR FENCE ROWS
- D1 BURIED SHEET METAL SINK WHOLE DUE TO BURIED TREES
- S1 UNDERGROUND STREAM, MAN MADE TUNNEL - DRAINS UPPER POND TO LOWER POND
- RP RIPARIAN EDGE



CIRCULATION



YORKLANDS GREEN HUB

DESIGN CONCEPT AND INFLUENCE

CONCEPT

The Yorklands Green Hub is an ecologically healthy and balanced education, recreation, demonstration and research hub where visitors can not only learn about nature and living more sustainably but also improve their overall well-being by reconnecting with nature. Through the design of this site, members of the community will be inspired to gather together to grow their own food, rehabilitate our local ecosystem, express creativity and live more sustainably. The Yorklands Green Hub will improve local food security, provide educational opportunities and celebrate growing food for the benefit of all species.



PERMACULTURE AND FOOD FORESTS

What is Permaculture?

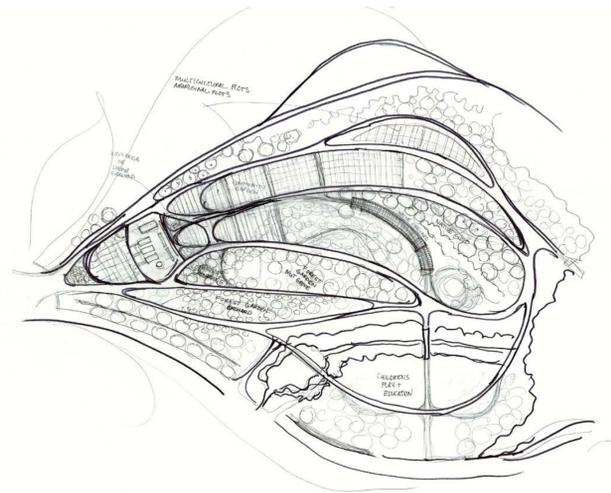
"The conscious design and maintenance of agriculturally productive ecosystems which have the diversity, stability, and resilience of natural ecosystems"- Bill Mollison

Three foundational ethics and principles in permaculture:

1. Care of the Earth
2. Care of People
3. Sharing the Surplus

PERMACULTURE DESIGN PRINCIPLES

1. Protracted and thoughtful observation rather than protracted and thoughtless labour.
2. Start small. Make the least change for the greatest effect.
4. Obtain a yield. The yields of a system are theoretically unlimited
5. Stacking Functions #1 – All elements in the design should serve multiple functions.
6. Stacking Functions #2 – All functions in the system should be served by multiple elements.
7. Stacking Functions #3 – Stack elements in vertical and horizontal space as well as in time.
8. Maximize diversity. Diverse elements with diverse functional relationships create resiliency.
9. Catch and store energy.
10. Use local, on-site resources and biological resources. From repurposing and reusing materials like broken concrete, tires or bricks to growing our own fertilizers.
11. Produce no waste.
12. Relative location. Create functional relationships between diverse elements in the design. Integrate, don't segregate.
13. Law of Return: Whatever we take, we must return. Do not export more biomass (carbon) than can be fixed within the solar budget.
14. Maximize edge. "Edge", in ecological terms, is the dynamic place where two different eco-systems meet, i.e. a meadow and a forest, mountains and ocean, prairies and foothills. These "edges" tend to have the most ecological diversity and the most productivity.
15. "The problem is the solution."
16. Plan for decreasing intervention over time – "the designer becomes the recliner" Bill Mollison was fond of saying that "work can be considered a failure of design."

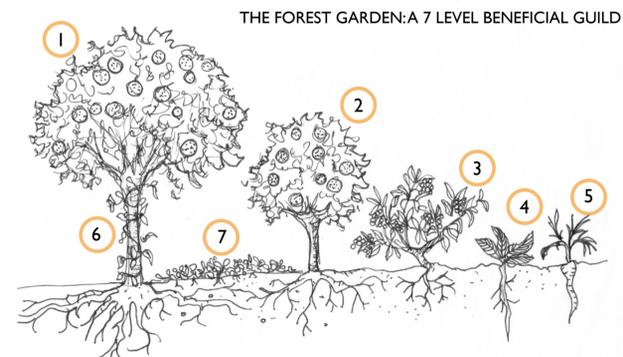


DESIGN DEVELOPMENT SKETCH

What is a Food Forest?

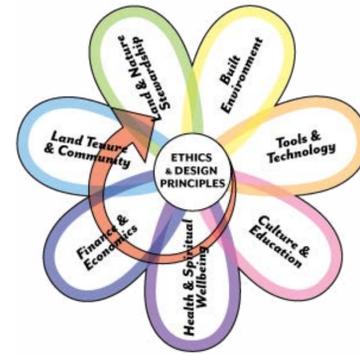
A food forest is a gardening technique or lands management system, which mimics a woodland ecosystem by substituting edible trees, shrubs, perennials and annuals. Fruit and nut trees make up the upper level, while berry shrubs, edible perennials and annuals make up the lower levels. The Yorklands Green Hub Forest Garden will combine aspects of native rehabilitation with edible forest gardening.

The gardens at the Yorklands Green Hub are meant to be a representation of permaculture based living within an urban agriculture site through the model of forest gardening.



THE FOREST GARDEN: A 7 LEVEL BENEFICIAL GUILD

1. CANOPY (LARGE FRUIT & NUT TREES)
2. LOW TREE LAYER (DWARF FRUIT TREES)
3. SHRUB LAYER (CURRANT & BERRIES)
4. HERBACEOUS (COMFREY & BERRIES)
5. RHIZOSPHERE (ROOT VEGETABLES)
6. SOIL SURFACE (GROUND COVER, EG, STRAWBERRY, ETC.)
7. VERTICAL LAYER (CLIMBER, VINES)



FOOD, ENERGY & WATER

LOCAL FOOD

One of the Yorklands Green Hub goals is to encourage people to favour local sustainable food. Therefore, the site will provide space and opportunity for allotment gardens, CSA's, community gardens, hoop houses and vertical gardens. The site will also promote soil enhancement, composting, pollination and apiaries. As well, the site will provide opportunities to educate the community about local food harvesting, preparation, storage and preservation.

ENERGY

The Yorklands Green Hub will encourage and demonstrate energy efficiency and the sustainable use of energy, maximizing the potential for Guelph to become a Net Zero City. The YGH project will dramatically boost Net Zero's ability to create a future where the City of Guelph, in partnership with the Net Zero City Initiative, will achieve the targets set out in the Guelph Community Energy Plan to: 1.) Use 50% less energy per capita (electricity, gas, water and transportation and 2.) produce 50% less greenhouse gas per capita by 2031.

The Yorklands Green Hub will:

1. Reduce carbon footprint and greenhouse gas emissions use up to 90%
2. Use and demonstrate sustainable renewable energy use through education and demonstration of solar, wind, geothermal and biomass throughout the site
3. Create jobs, help families, support innovation in a new generation of energy saving products and services.



WATER

The Yorklands Green Hub will also demonstrate wise water use, groundwater protection as well as conservation and recharge. Rainwater harvesting will also be demonstrated on site through rain barrels and rain gardens. The Yorklands Green Hub will also demonstrate run-off management strategies to reduce contamination of groundwater and prevent erosion and flooding and encourage groundwater recharge. Additionally, the wetland at the Yorklands Green Hub is a species-rich habitat that performs valuable ecosystem services such as flood protection, storm water retention, water quality enhancement, groundwater recharge and carbon sequestration.

PRECEDENTS



NEW FOREST FARM - WISCONSIN, USA

A Perennial permaculture farm in the Driftless Area of Southwestern Wisconsin. At the farm they grow chestnuts, hazelnuts, pine nuts, apples and many perennial fruits and nuts. They also raise cattle, pigs, chickens, and turkeys.



EVERGREEN BRICK WORKS - TORONTO, ONTARIO



GUELPH CENTRE FOR URBAN ORGANIC FARMING - UNIVERSITY OF GUELPH

YORKLANDS GREEN HUB MASTER PLAN



YORKLANDS GREEN HUB

GOAL

The Yorklands Green Hub will strengthen the community by bringing together people, educational institutions, businesses and organizations to learn, work, play, share and create with the common purpose of being engaged stewards of our land, food, water, energy and overall well-being.

PROGRAMMING

- Willowbank Gate House**
The Willowbank Gate House will serve as a community kitchen and meeting place for visitors of the site.
- Urban Agriculture Hub**
Upon entering the site, visitors are introduced to the Urban Agriculture Hub. Here visitors will find a number of different site features that encourage hands-on interaction. Signage will illustrate functions so that visitors can learn about the site and its features. Hoop houses, rain water barrels, urban agriculture plots, an outdoor classroom, a bake oven and harvest area, market stand, converted shipping containers, murals, public art and sculptural garden provide a variety of experiences to visitors for education, recreation and play. Basic compost bins located next to the greenhouses will encourage all users to take part in the composting process.
- Urban Agriculture Plots**
For families or members of the community to grow their own food. The community garden will be inclusive and accessible to people of all abilities and will focus on skill building and recreation. Partner organizations will share resources and develop the capacity to hire a coordinator for the site. This will allow programming, training and volunteer management that will benefit all of the users and contribute to the sustainability of the garden. The Community Garden will utilize raised beds for ease of accessibility as well as plots for larger-scale production of annual vegetables. Plots will be used in sustainable farming and permaculture education, horticulture training or other educational purposes. This area provides hands-on learning experiences for students and community members.
- Food Forest**
The Food Forest is modeled after a perennial farm, modeled on native ecosystems, to produce abundant food, fibre and fuel while restoring critical ecosystem services. The Food Forest at Yorklands Green Hub will grow abundant crops, build soil, and enhance wildlife habitat and biodiversity.
- Berry Patch**
For educational experiences in canning or just picking them right off the bush and enjoying
- Apiary**
The apiary will be located near the food forest and urban agriculture plots. The apiary will provide valuable pollination to all species onsite. The apiary will also allow an area for users to learn about bee keeping, honey harvesting and the essential services bees provide to our natural environment. The apiary will be located amongst trees, shrubs and water to provide a comfortable environment for the colony.
- Rain Gardens**
These beautiful and water efficient gardens capture run-off water so it filters slowly into the ground and helps recharge the aquifer. The rain gardens are planted with moisture tolerant plants native to Guelph.
- Native Vineyard Pergola**
A pergola growing with native grape vines provides a beautiful shaded walk between the food forest and Native Plant Garden.
- Event Forest Garden**
This garden provides a colourful backdrop for wedding ceremonies or other events.



A



B



C



D

- Childrens natural playground - Perspective A**
This space includes many site features to instill the sense of wonder in children and encourage unstructured play. A natural playground with a slide and viewing tower, stepping stones, sand play, a willow house, native plantings and outdoor amphitheatre are just a few site elements that can be found here.
- Gathering Plaza with water feature**
For education and group meeting
- Administration Building**
This building will be used as conference centre, exhibition centre for the historic importance of the site and to demonstrate current and experimental water, energy, and food exhibits and potentially become an Ontario Environmental Exhibition for the 21st century. This building could also host cultural events such as art shows and theatrical performances.
- Superintendents House**
The Superintendents House will be repurposed for use as a community food hub, office or interpretative centre for demonstration and education on renewable energies, wise water use and sustainable transportation. It will be a place where elementary and highschool students can come and learn about sustainable practices, growing and preparing food, composting, wise water use and the importance of wetland and aquifer protection.
- Native Plant Garden and Viewing Tower**
Plants in this garden are native to Guelph and require very little supplemental watering. This garden can be used to educate the community and students about the beneficial qualities of these plants as well as Indigenous people history. Workshops can be held on such topics as Wildcrafting, Herbology and Native Plant Garden Design. Students, teacher and community members can explore this garden to view the abundance of local food and medicine. Rocks and seating will be placed strategically to allow for places to rest, observe and contemplate. The straw bale Viewing Tower allows for visitors to view the Yorklands Green Hub grounds from an elevated viewpoint.
- Interpretive Wetland and Discovery Boardwalk**
Wetlands are the rarest habitat in Southern Ontario and at the Yorklands Green Hub visitors will be educated on their importance. As visitors travel along the meandering boardwalk, signs will inform them of the plant and animal species in the area and the importance of wetlands. The wetlands will provide storm water management, bird habitat, pollinator habitat and educational and research opportunities.
- Pond with Stepping Stones**
The stepping stones offer an alternative route for those who are feeling adventurous and an opportunity to interact closely with the water.
- Daylighted Stream**
- Open Multipurpose Area**
This space has the possibility to host a variety of events such as weddings and art shows. It will also serve as a gathering space for education, play and recreation.
- Childrens Garden**
Located next to the Superintendents House, the Childrens Garden is a place where children get to have hands-on experience with growing plants/food. Children can learn about how to grow and harvest as well as how to prepare the food they harvest. **Also located here are tracking solar panels.**
- Open Lawn Area with Gathering Pavilion**
This space is a passive area with a pavilion in the middle that will be a gathering area as well as have information on the history of the site. In this space, visitors can lounge on the open lawn under the trees.
- Stepped Planting Wall - Perspective B**
- Intepretive Trail with Trees**
- Trail system**
The trail system at Yorklands Green Hub enables all visitors to have a variety of experiences. Along the trail there are information panels educating visitors about the park and encouraging engagement. There are also places to gather, sit or stop and rest.

OBJECTIVES

- The YGH will provide hands on learning experiences for children and adults.
- The YGH will have partnerships with organizations, businesses and institutions for employment and education/research opportunities
- The YGH will promote local food production and security and provide space for urban agriculture and demonstrate sustainable farming practices
- By cultivating delicious food right around the corner and partnering with other local artisans, the YGH will provide a food experience that respects our bodies, our planet and our shared tomorrow.
- The YGH will encourage and support the attraction of green businesses to the Guelph Innovation District.
- The YGH will provide indoor and outdoor spaces for group instruction
- The YGH will provide education opportunities with growing food and cooking.
- The YGH will use on site and nearby landscape features (wetlands) as educational tools.
- The YGH will exercise wise water use, storm water management and demonstrate wetland and river conservation and aquifer protection
- The YGH will provide facilities for research and education on site.
- The YGH will provide outdoor education and recreational opportunities.
- The YGH will create and make connections to existing trail systems
- The YGH will acknowledge and preserve the historical significance of the site and site features.
- The YGH will utilize existing infrastructure on site such as the Superintendents House, Willowbank Gatehouse and Administrative Building.
- The YGH will promote and educate on soil enhancement, composting and nutrient cycling systems.
- The YGH will provide space for apiaries/bee hives.
- At the YGH native plants will be used to support and encourage pollination and biodiversity as well as foster awareness of ecological services at human scale while balancing urban agriculture production requirements for sun exposure.
- At the YGH microclimates will create shade and shelter to enhance comfort in responsible and effective environmental action through developments that are land, energy and waste efficient.
- The YGH will strive to be carbon neutral and will use renewable energy sources.
- The YGH will accommodate and encourage active and sustainable transportation (bicycle riding and public transportation) and limit onsite vehicular movement whenever possible to existing driveways.
- Sitting areas at the YGH will allow for a range of public oriented activities.
- Building design at YGH will be designed to compliment the existing historical buildings and stone work on site.
- The YGH will cater to a variety of user groups and be accessible to all through the use of ramps, pathways and raised planting beds throughout the site.
- The YGH will provide employment opportunities.
- The YGH will provide informal spaces for relaxation, meeting and study.
- The YGH will provide places for food service and eating
- The YGH will preserve and enhance views in and out of the site.
- The YGH will provide community leadership.
- The YGH will reflect community identity through its design.
- The YGH will harmonize features that enhance awareness, experience and understanding of values associated with food and sustainability.



URBAN AGRICULTURE CROPS

EXISTING TREES

EVENT FOREST GARDEN

NATIVE PLANT GARDEN AND VIEWING PAVILION

FOREST GARDEN

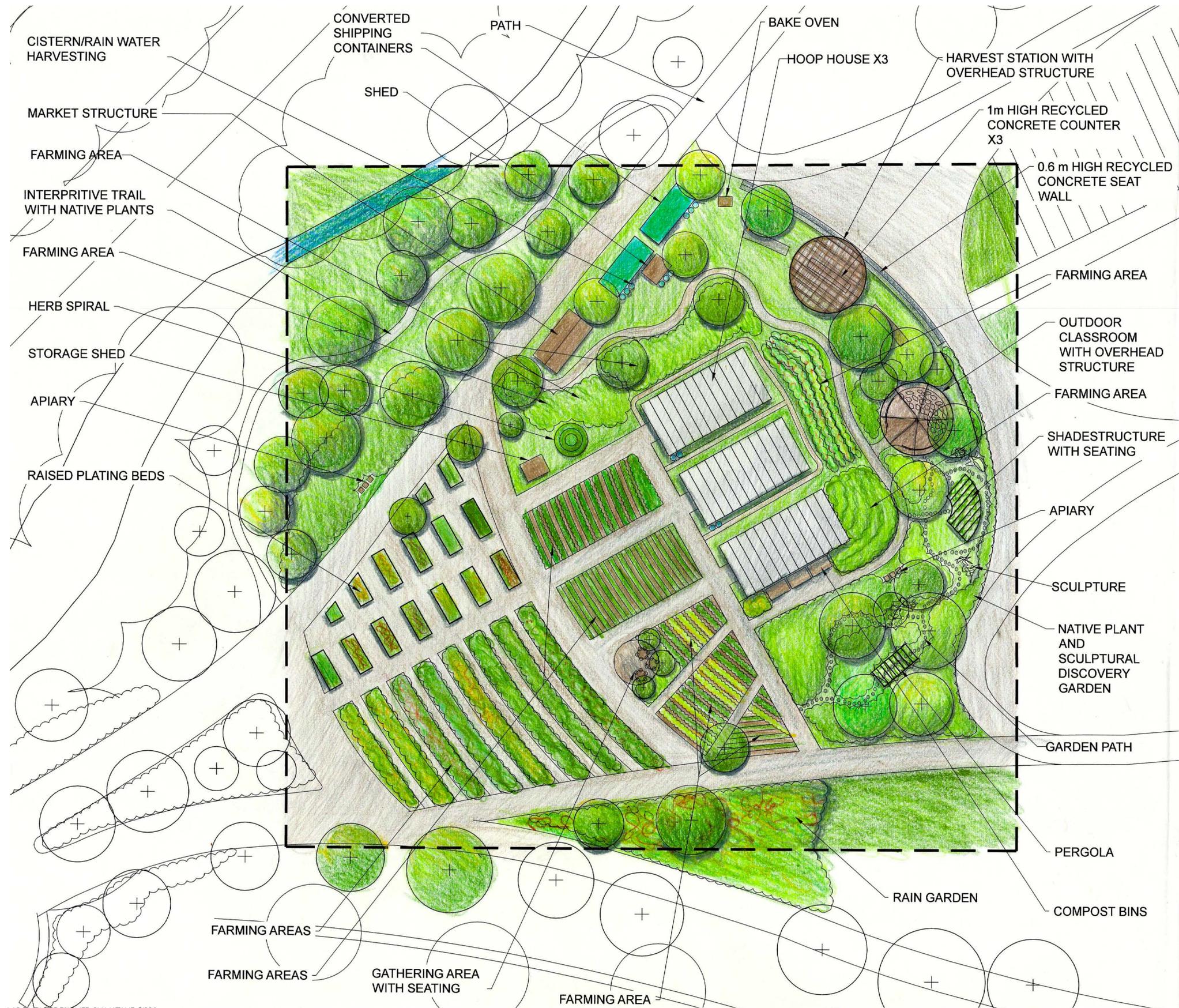
DAYLIGHTED STREAM WITH RIPARIAN EDGE

ELEVATION A - A

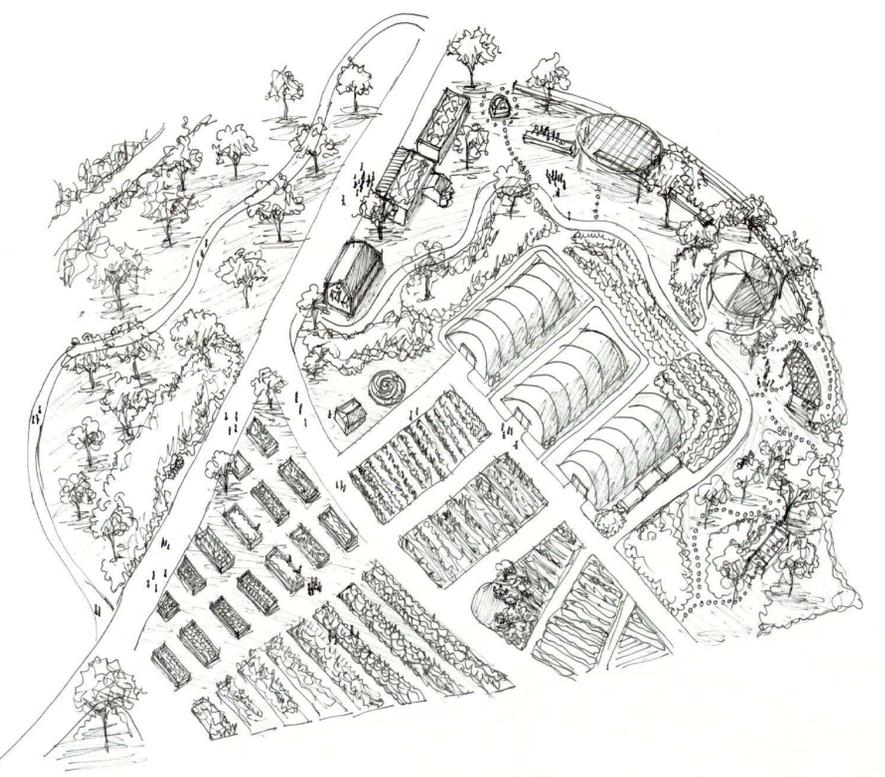
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YORKLANDS GREEN HUB

DETAIL DESIGN - URBAN AGRICULTURE HUB



KEY MAP



YORKLANDS GREEN HUB

IMAGE INSPIRATION

