

A Vision for Land Use at Tremont's Second Campus

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**GREAT SMOKY
MOUNTAINS
INSTITUTE AT
TREMONT**

Introduction

Tremont plunged into novel territory when we purchased land in Townsend for a second campus. As long-term tenants of the national park, we have maintained infrastructure and programming areas at our Walker Valley campus since our founding in 1969. Until now, however, we have never needed to address the sorts of questions faced by landowners:

What do we do with this place? How do we take care of the land? How can we nurture a mutually beneficial relationship with this land?

The purpose of this document is to begin addressing these questions. It is meant to be in conversation with and complementary to the strategic design process of our second campus, which seeks to achieve the Living Building Challenge (LBC). However, whereas the LBC focuses primarily on the built environment and its interactions with the natural world, this document devotes attention to the stewardship of the land. This is not intended to be a comprehensive land use planning document but rather one that outlines our principles for making decisions.

Our stewardship practices will vary across the land, depending on the ecological and cultural context of the site. A metaphor for this is a stream moving downhill, gathering volume, and changing shape. In the headwaters of the second campus, the forested areas of Orchard Grove, located immediately adjacent to and downstream of Great Smoky Mountains National Park, the park's wilderness management principles will largely inform our decision-making.

As the stream continues and joins other bodies of water, so too will we invite other voices and influences into the conversation as we implement nature-based solutions that benefit people, society, and the economy. We will strive to work towards net-zero carbon and connect to the community while enhancing the value of the land. The old Headrick farm and surrounding area offer rich potential for furthering Tremont's mission in ways that are not currently possible at our Walker Valley campus inside the park, including demonstrating the richness, health, and beauty that can germinate when humans participate with the land.

We will evaluate the impact of our decisions, both on the land and on the community at large, and make changes as we continue to learn. It is this cyclical and regenerative character of education and the earth from which we take inspiration.

Principles

This is a living document that will grow and evolve as we continue to learn. We regard knowledge as dynamic, producing new insights over time, as modeled by our [learning cycle](#). However, the core values outlined below should persist and not shift with each fiscal year or change in leadership.

Tremont staff and stakeholders should hold themselves accountable to the land by periodically revisiting and reflecting on the principles below and integrating them into our internal work culture and programming.

- **Respect the cultural heritage of the landscape.** Honor and highlight the relationship to the land of those who came before us including the Cherokee whose ancestral homeland it remains and the Headrick family.¹
- **Learn from the land.** Regard ourselves as co-creators with the land rather than apart from it, and guide our guests toward the same.² Experiment wisely and learn from our mistakes.
- **Think long-term.** Plant literal and figurative seeds that will, for example, bear fruit when Tremont celebrates our 100th anniversary.
- **Heed regenerative agriculture principles³** when making land-use decisions.
- **Foster positive feedback loops.** Prioritize those projects that will generate energy and financial security, and relationships that will benefit future work.
- **Consider the participant experience at every step.** Regard all land as a learning space and every project as a teaching opportunity in “participatory ecology” on a

¹ “I know folks who *say* they own land. But then they pass away. And the land is still there,” says our neighbor Delmar Caylor. We should keep in mind that we’re not the first ones here and we will not be the last.

² “To see and respect what is there is the first duty of stewardship” – Wendell Berry. See [Appendix A](#) for a description of how the process of designing *with* the land mirrors our learning cycle.

³ Regenerative Practices:

- Let be what is good. Respect processes already working within the system. Alter only what will make the land healthier, recognizing that ecosystem health & human health are intertwined.
- Promote biodiversity, including around buildings, and protect sensitive habitats.
- Build biologically active, mineral-rich soils.
- Encourage plant growth to capture maximum solar energy and feed soils and people.
- Mitigate climate change through carbon sequestration.
- Effectively capture, store, protect, and recycle water.

living and interactive landscape. Visitor management and public involvement should be seen as important management tools and part of an ecocentric management philosophy.

- **Increase social cohesion and connection to the land.** Build relationships and seek and share wisdom by collaborating with the Eastern Band of Cherokee Indians, colleges, universities, neighbors, researchers, volunteers, civic organizations, and others.
- **Respect the carrying capacity of the land and our own limits.**

A Brief Description of the 2nd Campus

In 2019 and 2020, Tremont collected baseline data on the property through an ecological survey that provided observations on flora, fauna, and ecosystems throughout the property. For the purposes of this document, we divide the land into three tracts based on historical land use, topography, and access:

The **Orchard Grove tract** is ~145 acres and begins where the jeep road ascends steeply up the mountain and borders the national park.

The **Orchard Hollow Entrance** refers to the ~5 acres located between Orchard Road and the mountainous jeep road.

The **Headrick tract** encompasses 45 acres and lies north of Orchard Road. It includes the meadows, the old barn, and the brick house.

Orchard Grove *wilderness*

“Wilderness preservation is a gesture of planetary modesty and a badly needed exercise of restraint on the part of a species notorious for its excesses.”

Roderick Frazier Nash, *Wilderness and the American Mind*

For many years large sections of Great Smoky Mountains National Park have been managed as *de facto* wilderness in anticipation of a future time when Congress will include it in the Wilderness Preservation System. The landmark Wilderness Act (1964) defines wilderness in part as undeveloped land “retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions....”

At its Walker Valley campus, Tremont’s daily practices, programs, curriculum, and identity have been heavily influenced by wilderness values by virtue of our location inside the national park. Wilderness comes naturally to us, you might say. The Orchard

Grove tract is virtually indistinguishable from adjacent federal land, and we will strive to maintain its wilderness character while working to increase biodiversity through some planting and invasive removal. Elsewhere in the region, human development has obliterated critical wildlife habitat, turning the park into an “island” wilderness; in contrast, Orchard Grove will provide a buffer between the park and the rest of the second campus.

Orchard Hollow Entrance

ecotone

As the jeep road descends and reaches its starting point at the foot of the mountain near Orchard Road, the landscape changes dramatically. Mature woods transition to a heavily impacted forest community dominated by invasive species, with a small field near the gate entrance.

This space represents an “ecotone,” a transition area between two ecological communities. A farmhouse, tobacco barn, and other structures once stood here, thus its disturbed and semi-open character. Ecotones are often biologically rich and diverse. This area will be managed neither as wilderness nor solely with human needs in mind and will instead embody an ecotone in both practice and principle by modeling the collaborative role humans can play with nature.

We will accomplish this in part by nurturing plants in configurations that integrate or mimic native ecosystems. Among our goals will be to provide forest products, including food, medicine, shade, habitat, and woody materials for humans. We will actively participate in this process by pruning, planting, mulching, and otherwise shepherding these ecological communities to maximize benefits to people and the land. While doing so we will plan for the character of this area to change over time as the forest matures.

Headrick tract

participatory landscape

A patchwork quilt characterizes the Headrick tract. Interwoven into the landscape are fields, several distinct forest communities, and small streams. Encompassing all this is a community comprised of farms, forests, businesses, and residences belonging to our Townsend neighbors. This is where infrastructure will be located, making it the heart of the second campus.

This tract has a rich history of land use. Kate and Howard Headrick settled it in the 1940s, building the brick house and the barn, farming, and raising their three sons. Today’s landscape largely reflects their livelihoods. Prior to the Headricks, the Miller family once resided in a long-gone house near the abandoned theater.

Cherokee and pre-Cherokee people lived along the Little River for thousands of years prior to European encroachment. Honey locust and dogbane are associated with Cherokee culture, and both are present here, making it possible that they are ethnobotanical traces of Cherokee or pre-Cherokee settlement.

Past agricultural practices have resulted in erosion, compacted soils, degraded stream habitat, and the introduction of numerous invasive species. Yet despite these disturbances, substantial biodiversity flourishes here as represented by an observed 34 bird species and 280 plant species. Among these are four birds of conservation concern and several rare plant species, including critically imperiled woodland grass.

Work in this tract will focus on [reframing the role of humans in the natural world](#). The Living Building Challenge will set a new standard as a flagship project for our region by demonstrating how the build environment can do more good, rather than less harm. The land use in this tract will complement this work by providing a variety of ways in which humans can have a positive impact on the landscape.⁴

We will continue the legacy of human use of the Headrick tract, following the principles of regenerative agriculture to restore soil health, grow healthy plants, capture carbon and responsibly use water on the land. The Headrick tract will serve as an opportunity for educational programming that provides a counternarrative to the industrial food system. Through intensive management, this area will demonstrate how food production and sustainable forestry can result in positive impacts for land and for people. The layout of this area should be strategic, creating opportunities for participant engagement (see Zones of Use, [Appendix B](#)). For example, annual gardens and other intensively managed areas should be located near living and dining spaces so that a direct connection between land, labor, and food is woven into the fabric of each day. In contrast to the other tracts, the human fingerprint will be evident on most, if not all, of the Headrick tract.

In Practice

We will strive to pursue projects that achieve the following outcomes: 1) educate people to live healthier lives, 2) nurture mutually beneficial relationships, 3) improve the health of the land, and 4) provide practical solutions to salient issues.

⁴ For example, currently roughly $\frac{1}{3}$ of human-caused greenhouse gas emissions are generated through extractive land-use practices. If adopted on a broader, global scale, regenerative agricultural practices that prioritize solar energy-capture and soil-building have the potential to sequester over 50 gigatons of carbon over the next thirty years; for comparison, this is roughly on par with the impact of full conversion to solar energy (per data published in 2017 in *Drawdown: the most comprehensive plan ever proposed to reverse global warming*).

The Orchard Hollow field and Headrick tract present a unique opportunity to demonstrate how promoting healthy ecosystems and providing for human needs are integral to one another. As stewards of this land, we will proactively participate in the ecology of this place.

Our vision for the land calls for us to imagine what is possible, and we will continue to reshape this vision as we work with the land. The following section is intended to serve as an example of projects derived from our principles, and is not intended to be prescriptive. We will phase in projects according to organizational needs, capacity, and infrastructure, as outlined in the guidelines below. Specific projects that should be prioritized first are outlined in [Appendix C](#).

Five-year vision

Guidelines: Maintenance of existing resources takes priority, followed by projects that support construction, provide leverage for friend- and fundraising, and require minimal infrastructure.

In the Orchard Grove tract: Healthy hemlock forests are maintained. Trails and the backcountry campsite continue to expand, improve, and receive regular use through programming. Plots of medicinal plants expand to provide opportunities for programming around restoration ecology and forest farming.

In the Orchard Hollow entrance: Invasive species are removed, and in their place, an early successional food forest is established, providing opportunities for educational engagement, and storytelling to leverage for fundraising. A greenhouse or polytunnel provides a place to start seedlings.

In the Headrick Tract: White pine is selectively harvested from the north woods for the construction of the dining hall and the main building. Native plants are rescued from construction sites and replanted in appropriate areas, which in conjunction with invasives removal, creates rich, biodiverse habitats. Meadows are managed using fire to promote views, biodiversity, and native species. A pond is constructed in the low-lying draw in the meadow, allowing for water retention and habitat creation. Perennial and annual plantings, including a Cherokee garden, pollinator gardens, and a small annual “kitchen garden” adjacent to buildings, provide educational opportunities.

Participants experience programming that focuses on understanding whole systems, cycles, biomimicry, succession, and other regenerative processes. Teachers, community members, and other participants help design the curriculum for the future.

Within each of these projects are numerous opportunities to meet goals outlined at the beginning of this section.

Example: A food forest is a perennial planting of edible plants that mimics the layers of a forest, including groundcover, understory, mid-story, and canopy. Though establishing one takes time, the process itself will provide opportunities for community engagement and storytelling to promote the second campus. Ways in which a food forest will help achieve our goals include:

Educating people to lead healthier lives: All phases of establishment provide opportunities for education, from involving community members and participants in the planting process to working with college groups and researchers. Food forests are easily scaleable for landowners, schools, and urban front yards, so participants can easily apply techniques and skills at home.

Nurture mutually beneficial relationships: Several researchers have expressed interest in partnering with Tremont on research related to food forests. Additionally, the products of a food forest offer many opportunities for building relationships with small businesses and the local community.

Improving the health of the land: Food forests contribute to water quality by capturing and storing water, both in the soil and in the woody stems of plants, improve soil health through no-till, perennial plantings, and provide many habitat niches through their “multi-tiered” structure, thereby promoting biodiversity.



Providing solutions to salient issues: Food forests sequester carbon through quick initial growth and long-term maintenance. Though Tremont may only have an acre or two of a food forest, if many homeowners replicate this idea and plant native food-producing, pollinator-attracting plants in their yards, then the patchwork of habitat will amount to significant carbon sequestration while also contributing to landscape-scale conservation. Additionally, food forests provide long-term, resilient, food sources for people, contributing to food security.

Ten-year vision

Guidelines: Projects that require significant infrastructure can now be implemented. Additional land management staff, including a garden manager, will need to be hired.

In the Orchard Grove tract: Two trails, one from Fall Branch and the other from Rush Branch, connect to Chestnut Tops trail, forming a 5-mile loop. Cultivation of medicinal understory plants provides a model that participants can apply in their own household economies.

In Orchard Hollow entrance: The early successional food forest has a mid-story and understory, with some areas managed through coppicing. Sections incorporate animals for silvopasture.

In the Headrick Tract: Animals are integrated into the landscape and management-intensive grazing is used to maintain healthy meadows. An approximately two-acre production garden/farm situated either in the draw on the slopes near the pond, or in the bottom, provides at least 20% of the food for the dining hall. As participants enter the dining hall, they pass through a Cherokee garden, perennial edible garden, and a small kitchen garden. Additional restoration plantings are constructed in selected sites around the campus, including along the banks of Fall Branch, where the deeply incised streambanks are restored to a gentle, meandering creek.

Participants stay in housing on-site and eat food that is produced locally and on-site, while participating in programming that allows them to experience regeneration through education, agriculture, community building, and other lenses. *Members of our local community* gather on the porch of the dining hall before attending a public evening presentation or live music.

100-year vision

Orchard Grove tract: Mature, old-growth oak and pine thrive on the ridges. In the coves, silverbell, cherry, old-growth tulip poplar, and other hardwoods provide deep shade. Wolves howl at night.

Orchard Hollow entrance: A patchwork of edible forest is established. In some areas, mature pecan, walnut, and chestnut dominate, while in others an early successional forest is managed through coppicing. Nuts are harvested and processed as staple food crops, such as flours. Wood harvested from coppicing is used in crafts and for fuel. Animals continue to be grazed in silvopasture.

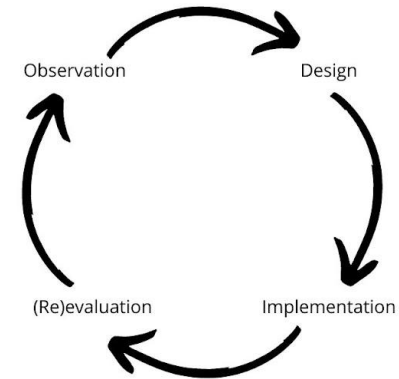
Headrick tract: Old-growth oaks shade the north woods, providing acorns for people and animals. The fields are part of a broader patchwork of biodiverse habitat created by the

backyards of landowners across the region who have converted their yards to native plants. Soils are rich from years of grazing and cultivation. Food is still grown in the gardens. Fall Branch meanders through the bottom, with banks stabilized by native cane and pawpaw.

Community: The second campus continues to serve as a hub for community-building and connection, and our programs ground people in what it means to be human.

Appendix A. Design process for projects

Each project will undergo an adaptive, iterative design process, allowing feedback from the land to inform and modify our management. This process mirrors our [learning cycle](#) that we implement during our programs.



Observation: Observations of the soil types, wind patterns, current species, topography, etc. What opportunities does the site present?

Design: Using our observations, combined with an understanding of ecological and social relationships, to design projects that meet our goals.

Implementation: Act, respecting the limitations of the land and the people involved.

(Re)evaluation: Determine whether the actions lead to the desired outcomes, and if not, what changes we need to make.

Appendix B. Zones of Use (for planning locations of projects)

Projects that require daily attention should be located close to high-traffic areas, such as residences and the dining hall. In this way, a relationship to the land becomes part of the daily routine. People might, for example, walk through a garden or food forest on the way from their dorm to the dining hall. This will serve both as a reminder of the connection between land and food and to minimize maintenance; an annual garden planted next to the dining hall is more likely to be weeded, watered, harvested, and incorporated into meals than one located in a distant corner of campus.

In the parlance of “zones of use” (see diagram), areas that benefit from incorporation into daily routine life are considered Zone 1 areas.

Zones 2-5 follow a pattern of increasing physical distance from the central “hub” of activity. At the same time, they are correlated to a decreasing frequency of regular maintenance. Note that the zones aren’t necessarily concentric in practice and may overlap.

Examples of how other projects might fit into these zones:

- Zone 2: *requires frequent maintenance:*
 - Management intensive grazing on the meadows

- Food forests
- Pollinator gardens
- Zone 3: *requires occasional attention*:
 - Planting native woodland species
 - Ponds
- Zone 4: *minimal intervention*:
 - Forest farming
 - Coppice wood
 - Selective timber harvest
- Zone 5: *kept "wild"*:
 - Sections bordering the national park
 - Select areas of the backcountry which only have trail building and maintenance



Appendix C. Projects to prioritize moving forward

Rescue native plants from areas slated for construction and replant them in native plant gardens.

Remove invasive species in target areas. This includes the Orchard Hollow entrance and significant portions of the Headrick tract. The smorgasbord of invasives includes English ivy, oriental bittersweet, winged euonymus, Japanese honeysuckle, mimosa, bush honeysuckle, Chinese privet, and autumn olive.

Plant a food forest at the Orchard Hollow entrance. See above for details.

Selectively log white pines for construction: The forest at the north end of the Headrick tract is transitioning from mid-succession to later hardwoods. The white pines in this stand are aging out and will soon begin to naturally fall. Selectively logging these trees will contribute to the construction of buildings, while facilitating succession toward an oak-dominated hardwood forest.

Incorporate additional perennial and annual gardens into the master plan.

As program participants leave their dormitories, walk to the dining hall, or head to their meeting places, the human fingerprint on the landscape should be immediately visible and integrated into the daily routine.

Specifically, perennial gardens and annual gardens that require daily maintenance should be located proximate to the dining hall so that the direct connection between land and food is apparent to all. In addition, we should consider the location of the production garden,

which will supply a higher volume of food for the dining hall, possibly locating it in the upper Meadows, rather than in the Bottom.



Design water capture systems into the master plan:

The low-lying draw in the upper field has a catchment area large enough to feed a pond, while also being situated high enough so that water storage is practical. Water from this pond could gravity-feed to the lower fields, providing natural irrigation of any plantings, while also providing a water reserve for fire suppression. A pond would take advantage of the saturation that occurs in the field each spring, while promoting biodiversity, adding beauty to the landscape, and providing educational opportunities.



Work with the national park to begin the process of acquiring permission to connect to the park's trail network. A trail network is critical for long-term programming. We should prioritize the process of gaining permission to connect to Chestnut Top Trail in two places: the headwaters of Fall Branch near the high point on Chestnut Top trail, and the headwaters of Rush Branch, about a mile from the Chestnut Top trailhead at the Townsend Wye. In the short-term, trail construction could be a pathway for local community engagement and could provide an educational opportunity for a youth trail

crew. In the long-term, these connections will provide large enough loops for all-day hikes and solo hikes, which are critical components of programming.