Nature Play and Learning Places

MASTER PLAN

Hitchcock Center

EDUCATION FOR A HEALTHY PLANET

Prepared in partnership with Abound Landscape Design, Berkshire Design Group, designLAB architects and Conservation Works.

Introduction

The Nature Play and Learning Places Master Plan is the culmination of an intensive planning and design process that has taken place over the last year and a half. The genesis of this plan, however, began in 2013 when the environmental educators, staff, board, volunteers and community stakeholders of the Hitchcock Center began a visioning process to expand its environmental education center and programming to more effectively meet the complex environmental needs of the 21st century. This included designing and constructing a new facility to meet the highest standard of green building in the world.

The Center completed and relocated to its revolutionary new "living" environmental education center in the fall of 2016. With this move, the Center experienced a 25% growth in the number of program participants and visitors annually—from 8,000 to 10,000 people, 70% of whom are under the age of 18. Program plans are in place to continue this growth, with an additional 20% projected by the year 2020.

With this plan, the Hitchcock Center will complete its vision in creating a world-class environmental education center that can meet urgent environmental literacy needs of our community, state, and region.

The **Nature Play and Learning Places Master Plan** was developed in direct response to the sharp decline of time children spend outdoors and in contact with nature. The negative consequences of this trend include children's reduced physical health, lack of knowledge about nature, and related misconceptions about human dependence on the natural world. The World Health Organization now recognizes the interdependence of human health and ecosystem health. The positive, innate bond between human wellbeing and nature is supported by environmental health science. Childhood engagement with nature is the key to cementing this relationship for generations to come.

Learning through and in nature is an educational imperative of the Hitchcock Center. It requires new ways to safely attract children into natural settings and to reintegrate the experience of nature into childhood. Such action will help to set the stage for a new generation of healthy, active children growing up both loving nature and understanding human dependence on healthy ecosystems.

Through the Hitchcock Center's **Nature Play and Learning Places** plan, grounds will be enhanced to create new and engaging educational experiences for children and families in the natural world. Imaginative, thought-provoking activity settings will include entrances, pathways, plants (trees, shrubs, native perennials, permanent edible landscapes, vegetable gardens), natural surfacing, natural construction, permanent play structures, multipurpose lawns, meadows, landforms/topography, animals, aquatic settings, sand/dirt settings, gathering places, program bases/outdoor storage, signage, and boundaries.

The Center will use its new **Nature Play and Learning Places** to grow and expand:

- Programs that encourage more diverse audiences by implementing culturally sensitive, fully accessible, and inclusive design and program strategies;
- Professional development programs for K-12 teachers and early childhood educators;
- New partnerships with healthcare professionals to foster greater awareness of the health benefits of nature play;
- Children, youth and family programs including the Nature Play and Girls Into the Wild, Nature Preschool, Summer Camp, Homeschool, and School Field Trip Programs; and
- The nature play movement beyond the Center as a demonstration site to inspire and educate parents, caregivers, teachers and schools, community and childcare centers, community leaders and policymakers, and other individuals, groups and organizations.

According to the North American Association for Environmental Education (NAAEE), "Environmental education (EE) teaches children and adults how to learn about and investigate their environment, and to make intelligent, informed decisions about how they can take care of it."

Environmental literacy is a key outcome of effective environmental education. Environmental literacy is defined as "a fundamental understanding of ecological principles, the systems of the natural world, and the relationships and interactions between natural and human-made environments." NAAEE defines an environmentally literate person as "someone who, both individually and together with others, makes informed decisions concerning the environment; is willing to act on these decisions to improve the well-being of other individuals, societies, and the global environment; and participates in civic life." The primary elements of environmental literacy are described as cognitive (knowledge and skills), affective and behavioral, and interactive and developmental in nature.

Nature play is a powerful means to achieve environmental literacy, yet it is largely underrepresented in the field of environmental education. Theories of experiential education contend that cognitive learning in early and middle childhood can be more effective if preceded by spontaneous play, free exploration, and direct, personal discoveries in nature. If not, later stages of cognitive development, served only by "disembodied," abstract knowledge from indirect, secondary sources (print and visual media), will be less likely to motivate the kind of strong personal convictions that lead to environmental action.

The Hitchcock Center's **Nature Play and Learning Places** project is designed to provide outdoor sensorimotor experiences early in life to embed in a child a strong foundation for cognitive understanding and connection to the natural world.

Here, parents, neighbors, and peers can gather and serve as informal educators and companions. As a demonstration site, it will help inform child development centers, schools, and organizations how nature play and learning places can extend the continuum of learning and understanding. Working with teachers, children and families, the Hitchcock Center environmental educators will strengthen the practice of nature play and learning experiences to help the next generation become environmentally literate, to acquire strong environmental values, and move human culture in a more sustainable direction.

Portions of this narrative were excerpted from the **National Guidelines for Nature Play and Learning Places: Creating and managing places where children engage with nature** by Robin C. Moore. These national guidelines, supported by the Natural Learning Initiative, National Wildlife Federation and the U.S. Forest Service, helped to inform this Master Plan.

The Living Building Challenge

In the fall 2016, the Hitchcock Center for the Environment concluded Phase One of our *Building for the Future* campaign, raising $5.8 million and opening the doors to a beautiful and inspirational, 9,000 square foot "living" environmental learning center. We are grateful for every gift and grant that allowed us to:

Design and construct a building that meets the most advanced measure of sustainability in our built environment in the world through the Living Building Challenge.

Triple our capacity for educating the next generation of environmental decision makers, advocates, and leaders through three flexible and adaptive state-of-the-art educational classrooms, a welcoming and engaging Visitor Center, and a community meeting room.

Today, our net zero energy building harvests and recycles its own water, uses composting toilets, and was constructed with responsibly sourced, nontoxic materials. It is a powerful teaching tool that supports a new approach to achieving environmental literacy in the 21st century.

Existing Conditions & Amenities

In 2015, the Hitchcock Center executed a ground lease securing 2.44 acres of land owned by Hampshire College as its new home for the next 95 years. It is located at the base of the Mount Holyoke Range, sits on a hilltop with grand views of the Pelham Hills, provides access to multiple public transportation routes, and is part of a village center established by the Town of Amherst's Master Plan that includes Atkins Farm Country Market, the Eric Carle Children's Book Museum, Yiddish Book Center—all major tourist destinations—Hampshire College and the Applewood Retirement Community.

Prior to occupying the Center's new site, it was an abandoned old apple orchard overgrown with many invasive and nuisance plants, including Poison ivy, Glossy Buckthorn, Multiflora rose and American bittersweet.

When assessing site conditions prior to constructing the Center's new building, arsenic contaminated soils from long-term pesticide use were discovered. A total of 6-9 inches of topsoil had to be removed and buried under the Center's parking lot as a remediation measure. The result was a site "scrubbed" clean of all vegetation.

After completing the construction of the Center's new 9,000 square foot environmental learning center, healthy new topsoil was delivered and new landscaping was put in place. This included:

- Two multi-purpose lawn areas – the Den and Nest Play Yards (located to the immediate east and west of the building);
- Varied native shrubs and hedgerows including Winterberry, Inkberry, Bayberry, High bush Blueberry, Red Twig Dogwood and Witch Hazel;
- Varied native trees including Red Maple, Sugar Maple, Beech, Crab Apple, Tupelo, Pin Oak and Hawthorne;
- A native fern garden including Ostrich Fern, Interrupted Fern and Cinnamon Fern;
- A native bird and pollinator garden including

Butterfly Weed, Joe Pye Weed, Anise Hyssop, Black Eyed Susan, Little Blue Stem, Pink Muhly Grass, Drumstick Allium and New England Aster; and
- A rain garden, bioswale and constructed wetland including Swamp Milkweed, Common Rush, Indian Grass, Fox Sedge and Blue Flag Iris.

Geotechnical studies performed prior to constructing the Center's new building were used to inform this Master Plan. This plan also builds off of the initial landscape plan developed by Stephen Stimson Associates.

The **Nature Play and Learning Places Master Plan** identifies ten activity settings or "zones" that will integrate into the current landscaping to transform the outdoor areas immediately adjacent to the building into active, engaging places to explore and discover the natural world.

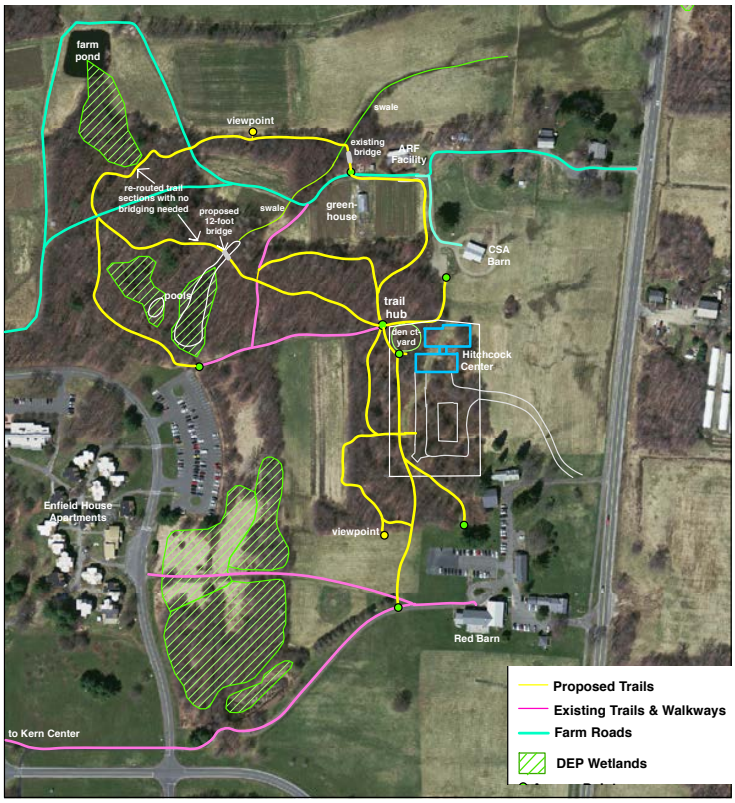
An important element of this Master Plan is the installation of a human-made pond for aquatic study. A feasibility study to construct this pond was commissioned through the civil engineering design firm, Berkshire Design Group.

Approximately 1.4 acres of the Center's 2.44-acre lease area will be developed as part of this Master Plan. Each zone is located strategically to take advantage of specific landscape features and site amenities—a hillside for a tiered water play structure, an existing bioswale for a river rock bed and mud play area, and a dense thicket where a small maze of pathways will be cut to create a "play pocket" are just a few examples. Siting of the **Nature Play and Learning Places** zones were evaluated against safety and risk management considerations as the site abuts a college and the Hitchcock Center's nature trails connect the site to miles of fields, forests and woodlands.

All locations represent highly visible areas for easy supervision and all are viewable from inside the building. Some areas will be fully enclosed with natural fencing or bounded by thick vegetation while others will remain open for more structured play and learning.

Other considerations in siting and constructing each zone include:

- Meeting and/or exceeding the Americans with Disabilities Act (ADA) compliance requirements;
- Soil and light conditions that support the use of native species for all new landscaping; and
- Compliance with Living Building Challenge certification requirements including the use of locally sourced, sustainably harvested and nontoxic building materials.



NATURE TRAILS OF THE HITCHCOCK CENTER

The Hitchcock Center contracted with Conservation Works, a professional interpretive trail design-build firm, to develop and implement a preliminary nature trail network in 2016-2017. The trail plan created four loops, each offering access to a different habitat for ongoing study and research. This includes trail access to wetland, vernal pool, woodland, meadowland, and forest habitats. Plans are underway to improve this trail system to meet Mass Audubon's best practices for developing and operating universally designed interpreted trail experiences. This includes meeting or exceeding ADA requirements. This accessible trail system is an integral component of the **Nature Play and Learning Places Master Plan.** For more information, see page 14.

Design Process

The **Nature Play and Learning Places Master Plan** meets a critical need identified in the Center's Vision 2020 Strategic Plan (2013-2020). Planning for the **Nature Play and Learning Places** project began as early as 2012 when the Center launched its two-phased capital campaign and development project. Phase One of the *Building for the Future* capital campaign involved an intensive planning and design process to create the Center's new 9,000 square foot environmental education center. The Center concluded Phase One in 2016 with the successful completion of a $5.8 million capital campaign and the construction of the Center's new home.

Phase Two of the *Building for the Future* capital campaign was initiated in 2017. The Hitchcock Center hired Owen Wormser of Abound Landscape Design to facilitate a more focused design process to finalize the **Nature Play and Learning Places Master Plan** as part of Phase Two. Over 100 consulting hours and six planning and design sessions with the Center's environmental education staff and other community stakeholders informed the completion of this plan. This included meeting with our staff of eight exceptionally skilled nature play and outdoor learning practitioners with a combined 150 years of experience working with parents, caregivers, K-12 teachers, early childhood educators, and, most importantly, children.

The Master Plan optimizes the basic landscape plan developed by Stephen Stimson Associates and builds off design sessions that brought together over forty board, staff, volunteers, and community members in over twelve stakeholder workshops and design sessions led by designLAB architects as part of Phase One.

Additional input and direction to finalize this plan was also provided by:

- Berkshire Design Group (engineering studies, pond feasibility);
- Conservation Works, Inc. (nature trails)
- Conway School of Landscape Design (two student design charettes);
- designLAB architects (teaching pavilion)
- Virginia Sullivan, designer, teacher, educator, founder of Learning by the Yard and author of Lens on Outdoor Learning; and
- Bridgit Litchfield, Master Gardeners of Western Massachusetts, lead volunteer coordinator for the Hitchcock Center's demonstrations gardens.

Owen Wormser of Abound Landscape Design

Conway School of Landscape Design Charrette

The Master Plan

The **Nature Play and Learning Places Master Plan** includes ten activity zones. The locations are shown below and on page 9. Highlights include:

ZONE 1
Native Wildflower Meadow & Permaculture Garden
- Edible Perennial Tree & Shrub Grove
- Native Wildflower Meadow w/ Pathways
- "Why are Native Meadowlands Important" Interpretive Display

ZONE 2
Water Play & Shady Grove Area
- Dry Riverbed w/Bridge
- Shady Retreat w/Seating
- Terraced Water Play Structure

ZONE 3
Mud Play Area
- Mud Play Pit & Mud Kitchen
- Rain Barrel w/ Hand Pump
- Storage Shed

ZONE 4
Den Play Yard
- Eastern Box Turtle Enclosure
- Fairy House Village
- Living Willow Structures
- Locust Log Climbing Structure
- Multi-purpose Play Lawn
- Picnic Area

ZONE 5
Discovery Yard
- Interactive Play Structures
- Nature's Story Walk
- Magnifying Science Station
- Making & Tinkering Area
- Play Thicket and Rotting Log
- Picnic Area
- Twig Fence & Gateways
- "Why is Nature Play Important" Display

ZONE 6
Teaching Gardens
- Accessible Garden Beds (10)
- Demonstration Compost
- Native Fruit Trees
- Rain Water Catchment Feature
- Storage Shed

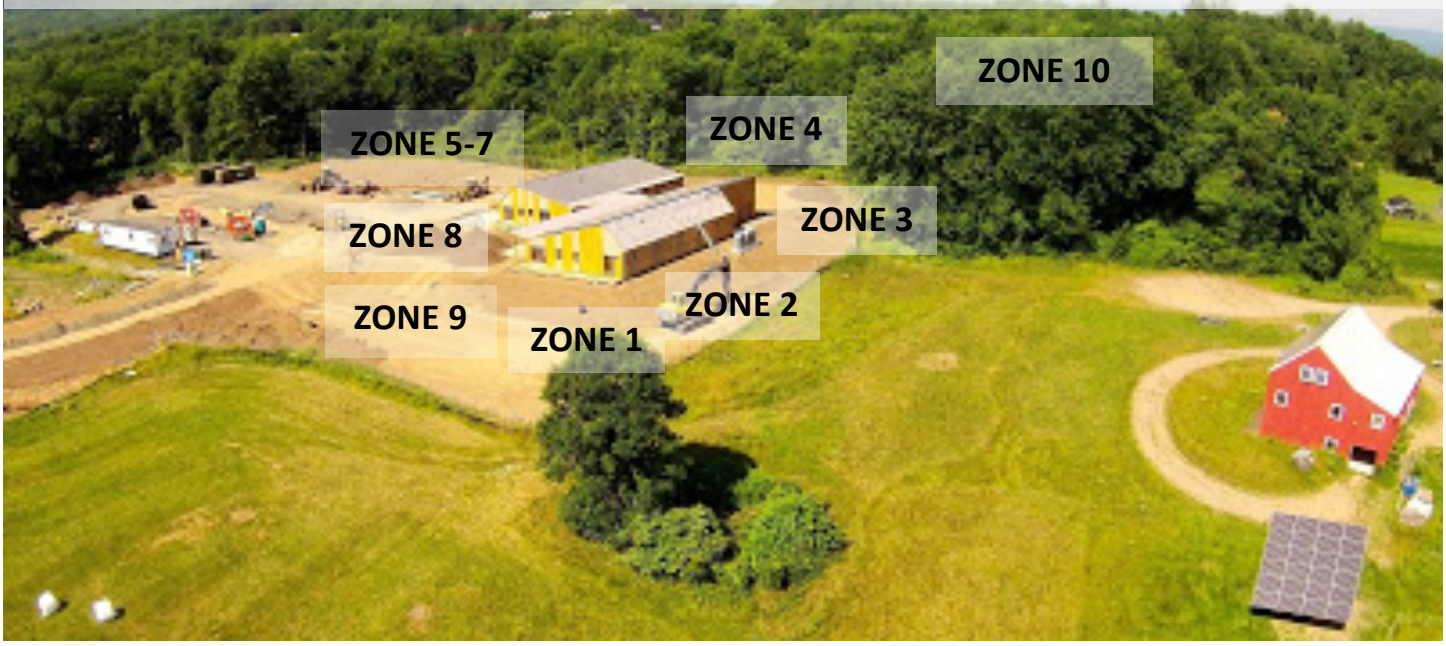
Zone 7
Teaching & Gathering Places
- Teaching Pavilion
- Teaching Circle

ZONE 8
Nest Play Yard
- Bird Feeding Stations
- Human-scale Bird's Nest
- Multi-purpose Play Lawn
- Picnic Area

ZONE 9
Teaching Pond & Aquatic Study Area
- Accessible Pond Platform
- Teaching Pond
- Aquatic Study Area Interpretive Display

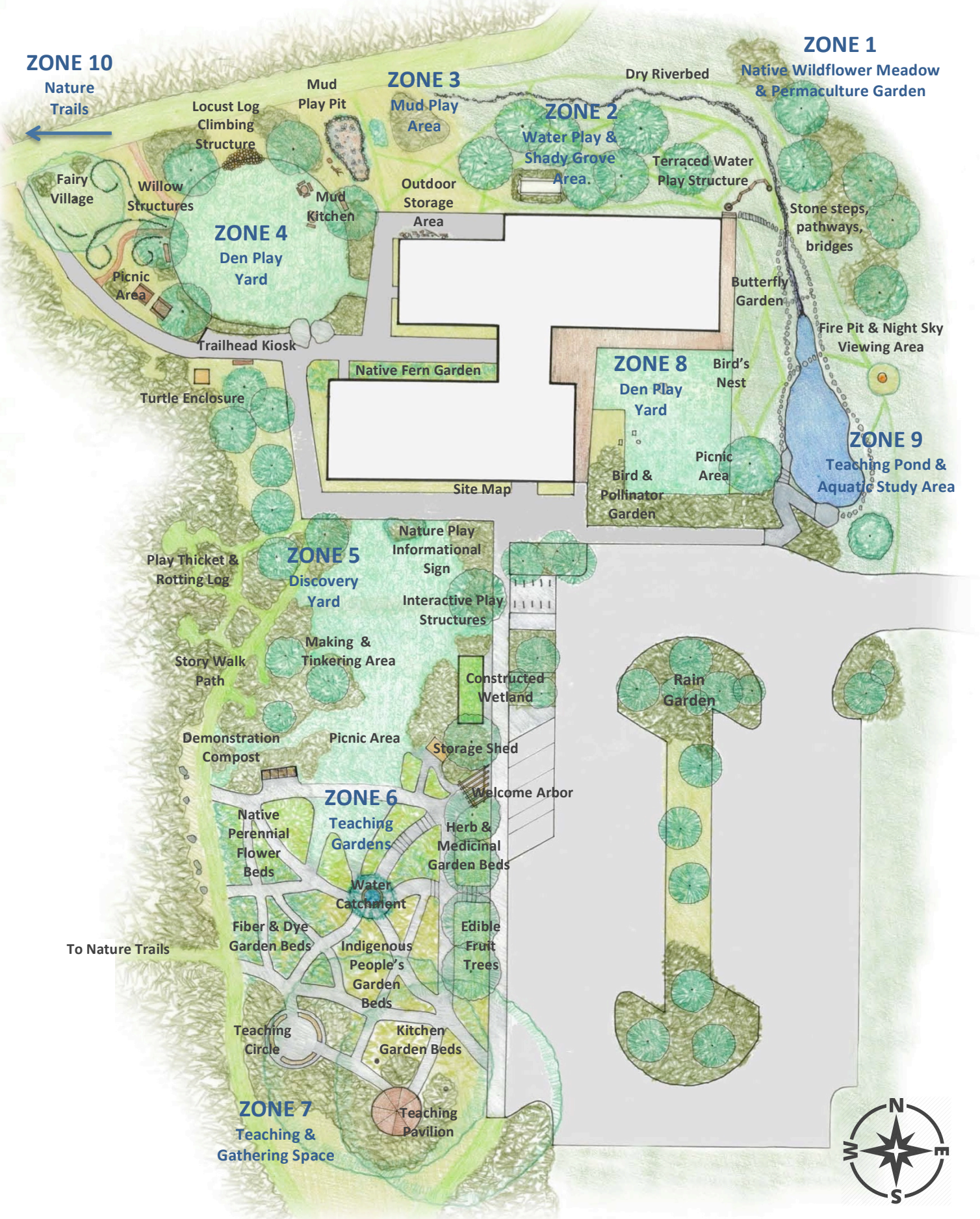
ZONE 10
Nature Trail Network
- Accessible Nature Trails
- Trailhead Kiosk
- Directional & Interpretive Signs

View of site under development in 2015 with future locations of Nature Play and Learning Places Activity Zones.



Existing conditions

Existing conditions


ZONE 10
Nature Trails
ZONE 1
Native Wildflower Meadow & Permaculture Garden
Dry Riverbed
ZONE 3
Mud Play Area
Mud Play Pit
Locust Log Climbing Structure
ZONE 2
Water Play & Shady Grove Area.
Terraced Water Play Structure
Fairy Village
Willow Structures
Mud Kitchen
Outdoor Storage Area
Stone steps, pathways, bridges
ZONE 4
Den Play Yard
Picnic Area
Butterfly Garden
Fire Pit & Night Sky Viewing Area
Trailhead Kiosk
Native Fern Garden
ZONE 8
Den Play Yard
Bird's Nest
Turtle Enclosure
ZONE 9
Teaching Pond & Aquatic Study Area
Picnic Area
Site Map
Bird & Pollinator Garden
Nature Play Informational Sign
Play Thicket & Rotting Log
ZONE 5
Discovery Yard
Interactive Play Structures
Making & Tinkering Area
Story Walk Path
Constructed Wetland
Rain Garden
Demonstration Compost
Picnic Area
Storage Shed
Welcome Arbor
ZONE 6
Teaching Gardens
Native Perennial Flower Beds
Herb & Medicinal Garden Beds
Water Catchment
Fiber & Dye Garden Beds
Edible Fruit Trees
To Nature Trails
Indigenous People's Garden Beds
Teaching Circle
Kitchen Garden Beds
ZONE 7
Teaching & Gathering Space
Teaching Pavilion
N
W
E
S

ZONE 1

Native Wildflower Meadow & Permaculture Garden

This activity zone will provide unique learning especially for observing insect, plant and bird life. It will be a place of great diversity and offer abundant opportunity to observe seasonal changes. Pathways will lead children through carefully planted areas and interpretive displays will promote meadowland conservation and stewardship education. It will serve as an active study site in support of the Center's Monarch Butterfly tagging, Bluebird and Kestrel nesting box and other citizen science programs.

Permaculture garden principles will promote systems thinking and ways we can apply patterns and relationships in nature to human habitation.

A fire pit and night sky viewing area with circular seating will be constructed to orient eastward from the top of a hill for full moon gatherings and other educational programs and special events.

ZONE 2

Water Play & Shady Grove Area

Large trees such as oak and maple will be planted next to a recently planted Sumac Grove to offer a shady retreat from the sun during the hot summer months. A terraced water structure will be constructed to channel water down a hillside to a dry riverbed when it is raining and from rain barrels when it is not. During a good rain, the water terrace will create a waterfall that can be heard from inside the building.

The dry riverbed will also fill with water as a storm water management tool controlling water flowing off the sloping site eastward to a bioswale leading through the meadow area below.

Here children will learn about the properties of water, the water cycle, water flow patterns, water conservation and erosion through observation and experimentation.

ZONE 3

Mud Play Area

Oh the joys of mud! Children have always been drawn to mud puddles and dirt as a part of their play. Mixing soil, water, and other natural materials like pebbles, leaves, or grass provides children endless possibilities for learning and fun. Many of us have fond memories of creating mud pies, digging for worms or making streams and valleys in the mud. But it's not just about fun.

Children benefit from messy, muddy play. Science shows that today's sanitized world is actually contributing to increased levels of childhood allergies and asthma. Exposure to dirt and germs works to prime a child's immune system to prevent allergies. Yes, it's actually healthy for children to get muddy!

This area will include a mud play pit, mud kitchen, a rain barrel with hand-pump plus storage for buckets, tools, utensils, pots and pans, and other materials and supplies for imaginative play.

ZONE 4

Den Play Yard

The Den Play Yard will be a fun and fanciful place. It includes a large multi-purpose play lawn for structured and unstructured games to foster cooperation and team building. A picnic area under a grove of shady trees offers parents, caregivers, and playgroups a place to gather while children play freely. Nearby, a grove of willows will be planted and when they mature (they mature quickly), they will be manipulated and bent to create a variety of creative and playful willow structures and tunnels. The willow structures will lead children to a secret fairy village designed to inspire imagination and promote hours of unstructured play. Building materials and supplies will be available for children to continue to add to the fairy village. An outdoor enclosure for our Eastern Box Turtle will be constructed as an observation area for one our beloved teaching creatures – Speedy!

ZONE 5

Discovery Yard

The Discovery Yard is located on the south side of the building. Here children can explore, discover, and play in a variety of settings that include: a Making and Tinkering station, where children can use building materials to create “Rube Goldberg” type structures, build forts, and other inventions; a Magnifying Science Station, where children can observe plant parts, rocks, and other natural objects up close; Story Walk—a series of permanent structures to display laminated pages from rotating children's books along an outdoor path to build children’s literacy skills; a play thicket with a maze of pathways and a rotting log to dissect; and interactive play structures that include a nature abacus, log peg play, tree cookie puzzles, ladybug tic tac toe, and much more. The Discovery Yard will be fully enclosed with benches and picnic tables for parents and caregivers to sit and relax.

ZONE 6-7

Teaching Garden & Gathering Places

The Teaching Garden will be accessible to people of all abilities and include child-friendly, playful garden spaces. Up to ten garden beds will include flower and seed dispersal, dye and fiber, herb and medicinal, indigenous culture, and edible garden areas surrounded by fruit trees, raspberry and blueberry bushes. A beautiful water catchment structure will be constructed as one of the garden’s main water sources, along with a demonstration composting area.

A teaching pavilion, where groups of up to 30 can be seated, will further serve as a functional learning environment for Hitchcock Center programs. A more informal teaching circle will also be constructed to serve the same purpose but without a roof. See page 14 for more information.

Definition of nature play and learning places

"A designated, managed area in an existing or modified outdoor environment where children of all ages and abilities play and learn by engaging with and manipulating diverse natural elements, materials, organisms, and habitats, through sensory, fine motor and gross motor experiences."

ZONE 8

Nest Play Yard

The Nest Play Yard offers a third multi-purpose play lawn east of the building with panoramic views of the Pelham Hills and portions of the Mount Holyoke Range. It is named "Nest" because it sits high on top of a hill and is a popular place for bird and hawk watching.

A human-scale bird's nest will be constructed to reinforce the bird's-eye view this play yard offers. Bird feeding stations and a butterfly and pollinator garden will fringe the lawn space for ample wildlife viewing. A wooden deck bounds the yard on its west and north sides where Adirondack chairs will invite people to sit, relax and take in the views.

Signage

There will be a comprehensive communication system that can be easily read and understood by people of all ages, cultures, and abilities. Signage will support a feeling of exploration and discovery by providing cues and information to enhance the learning process. Layout, typographic style, and materials used will blend harmoniously with the natural surroundings and building. They will provide important way-finding information about pathways and destinations for all users. Signage will include: directional, interpretive, identification, inspirational and instructional signs.

Pathways

Primary pathways will be accessible routes designed to meet federal and state guidelines and to provide access to all activity zones. Natural ground surfacing is a low cost material and will be used throughout the site to control soil erosion, reduce muddy conditions, define areas for group activity, and function as a safety surface.

Boundaries

Some areas will provide full spatial enclosure to give parents and caregivers a sense of security when their child is at play. The enclosed areas will allow parents and caregivers to relax more and let their children run free. Other areas will not be fully enclosed and are designed for direct interaction with an adult, whether it is a Hitchcock Center environmental educator or a parent/caregiver.

Entrances

Entrances will be created to serve as portals to the nature play and learning activity areas. Welcome! Play freely! Have fun! Playful, child friendly, naturalized entrance designs will convey positive messages to attract visitors and put them at ease. This will include arbors, trellises, willow tunnels, and other naturally constructed structures.

The Pond Ecosystem

A critical need for the Hitchcock Center is an accessible pond ecosystem to support its growing aquatic field study program. When the Center moved to its current location, it lost access to a farm pond immediately adjacent to its former site. This farm pond supported over 30 school field trips representing over 600 pre-K-6 schoolchildren. The Center's field trip program is growing with 20% more students visiting the Center since its opening.

A feasibility study was completed by Berkshire Design Group to establish a pond within the Center's lease area adjacent to the Zones 1 and 8 on the east side of the building. Though the conclusion of this study found the pond feasible, there are a number of additional action steps needed to finalize this plan. This includes ensuring that the pond can be built in compliance with the Living Building Challenge, securing necessary approvals from Hampshire College, the Hitchcock Center's land lessor, and evaluating the ongoing maintenance costs. As a result, it is recommended that the pond be categorized as a second phase of this Master Plan pending further study.

"The potential exists to create a pond or similar water feature in the location identified. The pond would require lining the bottom with either a clay or rubber membrane to effectively hold water. Both options provide flexibility with respect to final pond shape, depth and complexity. With a careful, knowledgeable, and deliberate approach, we feel a naturalistic pond could be a fantastic addition to your ecological education program."

Chris Chamberland, Civil Engineer
Berkshire Design Group

Nature Trails

Working in close partnership with Pete Westover of Conservation Works, Inc., and other important community stakeholders including Hampshire College, a rudimentary nature trail system was developed and implemented on land immediately adjacent to the Center's new living building in 2016.

Trails are well integrated into the landscape, with all potential environmental impacts identified and addressed in the planning and design process. A series of trail loops enable visitors the opportunity to complete multiple circuits to visit several unique habitats and ecosystems that include meadows, a vernal pool, woodlands, and a successional forest.

Hitchcock Center nature trails also can connect to a much broader trail system where people can extend their hiking range to include the New England Scenic Trail and the Mount Holyoke Range.

Accessibility and inclusion are major priorities of the **Nature Play and Learning Places Master Plan.** To advance this priority, the Center will improve its trail system to:

- Meet or exceed Americans With Disabilities Act (ADA) compliance;
- Incorporate universally designed interpretive features including a trailhead kiosk with maps and guides, educational and sensory stops with interpretive signage and navigation resources including possible audio directions, guide ropes, curbing, and handrails;
- Create more inclusive outdoor experiences for all, including individuals who have not traditionally had independent access to natural areas and interpretive experiences; and
- Interpretive signs and displays to develop a strong connection to nature, a greater understanding of the natural world and conservation-minded behaviors.

A trailhead kiosk will be constructed in the Den Play Yard that will include a comprehensive trail map, a chalk- or whiteboard to record seasonal sightings, and additional interpretive and identification guides to use along the trails.

The Teaching Pavilion

The Teaching Pavilion is considered one of the highest priorities of this Master Plan and will enable the Center's environmental educators to gather classrooms and groups for extended learning in the outdoors. It will be connected to the Zone 5 and 6—Teaching Gardens and Discovery Yard, an area filled with beauty and inspiration.

designLAB architects, the designers of the Center's new living building, will develop a final design that will be naturalistic and blend into the surrounding landscape while ensuring that the pavilion will comply with all Living Building Challenge certification requirements, including the use of locally sourced and nontoxic materials.

The pavilion will be a covered outdoor classroom approximately 500 square feet (s.f.). The pavilion may also include a green roof and trelliswork as an armature for vines and shade.

The Teaching Pavilion will meet ADA requirements and will accommodate up to 30 people at any given time. This represents a typical classroom size and will be an important resource for the Center's K-12 School, Adult and Children, Youth and Family Programs.

An open Teaching Circle will be constructed to accommodate up to 15 people. It will include either a single or double row of full circle or half circle wooden benches with a center stage area, similar to the fire pit and night sky viewing area in Zone 1.

Community Engagement

"Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has."

—Margaret Mead

Volunteer labor will help to construct a significant portion of the Hitchcock Center's **Nature Play and Learning Places Master Plan**. Volunteers will be recruited, organized and supervised by two paid project leaders — Casey Beebe, Hitchcock Center's Community and Special Projects Manager, and Owen Wormser of Abound Landscape Designs. One of the reasons the Center hired Owen Wormser, in addition to his beautiful and creative designs, is his exceptional experience in leading successful community build projects.

Casey and Owen will develop a project timeline, job descriptions, and skill requirements needed to facilitate volunteer recruitment. A small volunteer coordinating committee may also be convened to supplement their efforts led by volunteer Master Gardener Bridgit Litchfield.

Volunteer labor will be recruited from:

- The five college community including students in landscape, engineering, and architecture fields of study;
- Members of local permaculture, pollinator, farming and gardening, and cohousing communities;
- Teachers, play groups and parent organizations;
- The business community including the Amherst Rotary Club, Amherst Area Chamber of Commerce, and Amherst Club; and
- Hitchcock Center members and program participants.

Donations of tools, building supplies, and planting materials will be sought through All States Construction, Amherst Farmer's Supply, Cowl's Lumber, Hadley Garden Supply, New England Wetland Plants, Home Depot, Lowes, and other regional and local building and landscape supply companies.

Workshops will also be held in conjunction with the community build process to help people learn about composting, constructing raised garden beds, using native plants to promote greater biodiversity and ways to transform their lawns, neighborhoods and schoolyards into active nature play areas and habitats.

Casey Beebe and volunteer install a new log play area adjacent to the Den Play Yard.

Bridgit Litchfield and volunteer deliver mulch for the Hitchcock Center gardens.

Project Budget & Management

The estimated budget for the **Nature Play and Learning Places Master Plan**, including the accessible nature trails and teaching pond, is below. The Hitchcock Center's *Building for the Future* Capital Campaign Committee, a highly committed group of volunteers, along with the Center's Development Team, are implementing a comprehensive fundraising plan to secure gifts and grants needed from individual, foundation, government and business sources.

Design & Administration		
Project Manager		$ 20,000
Community Build Volunteer Coordinator		$ 13,000
Design & Permitting		$ 12,300
Bookkeeper		$ 2,500
	Subtotal	**$ 47,800**
Construction Materials & Labor		
ZONE 1 - Wildflower Meadow/Permaculture Garden		$ 8,650
ZONE 2 - Water Play/Shady Retreat		$ 10,200
ZONE 3 - Mud Play Area		$ 3,750
ZONE 4 - Den Play Yard		$ 4,000
ZONE 5 - Discovery Play Yard		$ 7,350
ZONE 6 - Teaching Gardens		$ 25,000
ZONE 7 - Teaching Pavilion & Circle		$ 55,000
ZONE 8 - Nest Play Yard		$ 2,500
ZONE 9 - Teaching Pond*		$ -
ZONE 10 - Nature Trails		$ 90,000
Fencing, Signage and Outdoor Interpretives		$ 20,000
	Subtotal	**$ 226,450**
Contingency (5% of direct expense)		$ 11,323
	TOTAL**	**$ 285,573**

** pending further study*
*** includes estimated $60,000 in-kind materials and volunteer labor*

Adequate staffing combined with strong community engagement is key to the successful implementation and management of the Center's new **Nature Play and Learning Places** project.

After opening the new Hitchcock Center to the public in the fall of 2016, staffing levels were increased by 1.0 full-time equivalent to manage and maintain the Center's expanded facility and grounds. New areas of responsibility include:

- Coordinating, managing and overseeing all professional contractors involved with developing and implementing the **Nature Play and Learning Places Master Plan** including Berkshire Design Group (pond), Abound Landscape (nature play areas, teaching gardens), designLAB architects (pavilion), and Conservation Works (trails);
- Recruiting and supervising all volunteers for the community build process in close partnership with Owen Wormser of Abound Landscape Design; and
- Coordinating and supervising a core group of volunteers charged with the ongoing weekly maintenance of the Center's nature play areas, gardens and trails. This requires an expansion of the current garden and trail volunteer base of 2-3 volunteers per week to 3-5 Nature Play and Learning Places volunteers per week. Approximately 12-15 volunteer hours per week will include weeding, pruning, mulching, sweeping, raking, watering, and general oversight responsibilities to ensure that all areas are in good working order.

Cost estimating provided by Abound Landscape Design, Berkshire Design Group, designLAB architects, and Conservation Works.