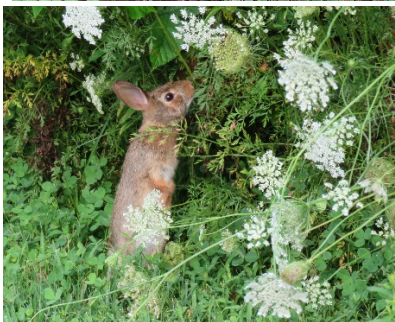


Crosslands Natural Areas Plan 2022 Update



Crosslands Natural Areas Committee

Draft # 9 - as of October 2022

2022 Crosslands Natural Areas Committee Plan
Draft #9– as of October 2022

MISSION STATEMENT

The NAC mission is to encourage resident involvement in the stewardship of the natural areas of Crosslands where resident volunteers can promote the ecological health of the woodlands, meadows, ponds and streams on the campus. Primary challenges common to all natural areas are a proliferation of invasive non-native plants and deer browse that prevents natural regeneration of tree seedlings in the woods.

Projects include invasive plant clearance and tree plantings to enhance the natural beauty of the landscape for the benefit of wildlife and for the enjoyment of present and future residents.

CURRENT OFFICERS 2022 – 2023

Co-Chairs: Jennifer Allcock and Barbara Grove. Secretary Mary Duncan. Treasurer: TBD

See **Appendix A** for Executive Committee members, **Appendix B** for NAC Bylaws and **Appendix C** for the 2021-22 Annual Report. For more information, see the NAC web page on the CRA web site.

NOTE: Residents with organizational skills are needed for leadership roles on the committee.

ORGANIZATION

An Executive Committee coordinates volunteer efforts dealing with Trails, Birding, the Big Woods committee and Woodland Workers. They meet regularly with the Grounds Supervisor to plan special projects, a process which can take at least 12 months as the special projects must meet specific criteria and be approved by the Grounds Supervisor.

CRITERIA FOR SPECIAL PROJECTS

- i) visible to a majority of residents i. e. results can be seen from cottages or apartments, and/or from the dining room or cafe

- ii) likely to promote interest from prospective residents i. e. visible in the Borderlands from the Drive, walkways and pathways
- iii) expected to have benefits for specific groups of interested residents, e. g. birders and/or hikers
- iv) deemed reasonable for elderly resident volunteers to accomplish
- v) likely to be accomplished in the short-run for the enjoyment of current residents AND/OR
- vi) long-term stewardship projects likely to benefit future residents e. g. tree seedlings added to the Big Woods.

NOTE: As can be seen from the 2019 plan (**Appendix D**), much has been achieved by resident volunteers, aka Woodland Workers (WW). A report on the status of tree seedlings in tubes can be found in **Appendix E**.

ACTIVITIES OF VOLUNTEERS, THE WOODLAND WORKERS (WW)

REMOVAL OF INVASIVE PLANTS. Partnered with one or more Grounds Staff members, Woodland Workers cut vines and alien shrubs that are damaging Crosslands' woodlands. After staff mow canopy gaps in the woods, the volunteers help prepare for and plant tree seedlings in tubes.

TREE PLANTING: a comprehensive 3-part plan to clear, plant tree seedlings in tubes, monitor and maintain them in areas most visible to residents was developed in 2019 and is almost completed.

NOTE: as Woodland Workers age out, new physically-able volunteers are needed to continue projects in the natural areas, in collaboration with Grounds staff.

NATURAL AREA ZONES - a description of the natural areas and their maintenance, and opportunities for volunteer activities are listed below. For easy reference, the campus is divided into 13 zones for monitoring and management projects – see **Map #1**. Twice annually, resident volunteers are responsible for monitoring one or more zones and reporting issues that require follow up by the Grounds Supervisor. **See Appendix F** for 2022 Monitor report forms and the list of invasive plants that inhabit the Crosslands campus.

ZONE 1. Crosslands Pond

Created as a stormwater collection area when Crosslands was first built, such water is collected from below parking lot 4 and the 400's. Aerators make it possible for wildlife to enjoy it, but its sloping edges have become havens for invasive plants and are hard to maintain. The pathway from the Center across the east end of the Pond is actually a dam below which excess water drains into Walnut Valley, and eventually into Bennett's Run. Eventually, the hope is that invasive plants can be controlled well enough by staff so that native grasses and wildflowers can eventually be sown around the pond.

ZONE 2. Walnut Valley

This valley begins at the dam and runs east through a grove of walnut trees to the edge of the Service Road and the vegetable gardens. The valley is a patchwork of habitats—a dense woods of Norway spruce, two copses and a scattering of walnut trees, a wetland meadow of hay grasses, milkweed, and blackberry briars, and upland former pastures. Special Project: To prepare for biannual mowing of the valley and its steep sides, Woodland Workers will aid staff in piling fallen branches. Eventually, seeds of native grasses and wildflowers could be planted.

Zone 3. Bennett's Run Riparian Area (a, b, c, d, f)

This small stream originates from ponds on the Longwood property and travels 2,000 ft west to east in the valley between the Crosslands and Kendal campuses. Invasive plants have been removed by contractors from most of the flood zone and > 300 tree seedlings were already planted by residents along the banks. The recent finding of a small bog area in 3c) allows for the possibility of a bog garden, a Special Project that might be developed by residents. NOTE:

Stream monitors provided by Stroud Water Research Center measure biological, chemical and physical variables regarding stream flow which are available on the NAC web site. At the initiative of Kendal/Crosslands residents, a Bennett's Run Watershed Conservation Plan has been developed by the Brandywine Conservancy. See link to the final report on NAC web page.

Zone 3e) Scott's Pond

Created behind the dam parallel with Bennett's Run, this Pond is fed from a tributary via a small pipe on the west end. The water exits into Bennett's Run from the east end guarded by a grill to keep back debris. The wildlife that inhabits this

pond includes: turtles, Great Blue Herons, ducks and hundreds of fish making it a very popular hiking destination for Kendal and Crosslands residents - and their families. A 2020 Scott's Pond Improvements Feasibility Study by LandStudies, Inc. to return the pond to a wetland has yet to be seriously considered. Special Project: A large old tree on the SE edge of the dam is severely undermined by the stream. To prevent the creation of a hole in the dam when/if this tree uproots, it should be carefully felled. Further measures to prevent breach of the dam should be seriously considered.

Zone 4. PL 1 Meadow is a small pocket meadow behind cottages #27-30.

Intensive work by staff and contractors has suppressed most perennial alien weeds, but staff lack the equipment needed to establish native grasses and wildflowers.

Zone 5. Bennett's Run Old Fields (aka the South Bank below Cadbury)

This savanna area is a patchwork of a few old trees, thin successional woods, tree plantings, and open areas dominated by invasive alien plants. It must be mowed at least twice annually to prevent the alien plants from seeding and eventually to establish native grasses and wildflowers. Shrubs in cages along the edge of the bank are intended to attract birds for residents to enjoy.

Special Projects

- a) Zone 5a) Gaps in existing woodland need to be cleared and planted with additional tree seedlings in tubes.
- b) Zone 5c) Monitoring and maintenance of 9 cages (each with three shrubs) along the top of the bank is needed twice a year. To create a park-like view, after staff mow this area, additional tree seedlings in tubes could be added in groups around existing trees

Zone 6. Bennett's Run North West Woods.

As is characteristic of woodlands in which many deer roam, it consists primarily of older trees with little evidence of replacement. Invasive plants have taken hold, especially in canopy gaps created by falling trees, from disease, old-age and/or climate change. In 2019 and 2020, staff and Woodland Workers cleared invasives from the woodland edge opposite Dyer and Evans and in 2020, staff and Woodland Workers planted 91 trees protected by tubes.

Special Project: Twice a year, after mowing between the rows, Woodland Workers monitor and maintain these tube-protected young trees.

Zone 7. West Meadow

Trails provide easy access to this popular 16-acre area in which a grove of American Chestnut trees was established in 2015. Cool-season hay and turf grasses mix with native grasses, wildflowers, and invasives. Annual mowing must occur at a time to avoid the ground-nesting period for birds. To supplement tree screens along Rte 926 and around the Chen corner, tree seedlings have been planted in tubes.

Special Project: a) Monitoring & maintenance of tree tubes by WWs is needed twice a year. Bluebird Committee members maintain the bluebird boxes that dot the campus meadows. b) Zone 7e) Clear invasives and vines from both sides of Perimeter Path (George's Trail) south of all cottages.

Zone 7 h) The eastern border of the West Meadow consists of a grove of Ailanthus trees - the favorite target for the Spotted Lantern Fly that negatively affects many other tree species on the campus. Special Project: remove all but one Ailanthus tree and prepare to treat roots for the following two-three years.

Special Project #2: If/when a proposed construction project is approved for the adjacent area: plan to replace the grove with trees that will screen the area within which the main generator is currently situated.

Zone 8. 926 Berm In 2011, K~C constructed a berm to screen the residents of parking lot 11 from the Route 926 corridor. Many of the trees planted in 2012 died, but those that survived are now 15 to 20 feet tall. Tree planting resumed in 2016 and more will be planted in fall 2022. Several invasive plant species are intermingled with grasses.

Zone 9. North Valley. Much of the valley is an alien weed dominated grassland. Grounds staff have tried to maintain the valley's open areas with annual or semi-annual mowing, but more aggressive grassland management is needed. During the past two winters, staff and Woodland Workers have worked to clear alien shrubs and briars from the banks of Cartmel Run. Special Project: Continued clearing of invasives is needed to connect the Perimeter Path to the path that runs from parking lot 13 to the Kirkpatrick tract.

Zone 10. Kirkpatrick Field margins. To buffer the Crosslands campus, K~C purchased the 47-acre Kirkpatrick tract. The east side and southeast corner of the property include some old trees, while a tenant farmer harvests hay from the level fields. Most of the sloping margins of the property, formerly pasture, have devolved into jungles of alien shrubs and vines. Clearing them would increase the

area in which the farmer could cut hay. Slopes too steep to farm could be planted to native grasses for grassland bird habitat. However, the restoration of this tract is beyond the capacity of the Grounds Staff and the Woodland Workers. It would require a grant or capital project funding.

Zone 11. Parking Lot 13 Pocket Meadow.

Routine mowing to control invasive plants is needed with replacement by native grasses and wildflowers when possible. In 2021, a grove of 40 tree seedlings was planted among trees along the eastern margin of woodlands. In 2022, a dense area of multi-flora rose opposite cottage #235-238 was cleared. Additional tree planting is under discussion.

Special Project 1 d) Monitoring & maintenance of tree tubes by WWs is needed annually.

Zone 12. East Woods. Except for a small remaining former hay meadow (Zone 13), the eastern edge of Crosslands consists of young successional forest with a few older trees along Bennett's Run. The northern portion of these woods is largely upland (areas 12b, 12c, 12d), while the southern portion is largely floodplain (12a, 3a). Abandoned pasture and field, the land quickly evolved into an old field thicket of young trees (black cherry, tulip poplar, red maple, black walnut, and ash) and a shrub layer of multiflora rose, Russian olive, Asian honeysuckle, and privet – all invasive plants. Staff and volunteers began clearing invasive shrubs from the area closest to the vegetable gardens in 1998. Potential Special Project. Along the Perimeter Path, continued clearance of invasive plants and planting of tree seedlings in tubes.

Zone 12c) A small triangular area bordered by trails and the woodland edge has been cleared of invasives. Special Project #1: add tree seedlings in tubes and add selected trees to the northern edge of the mini-meadow.

Zone 13. Savery Meadow is 1.2-acre remnant of a wetland hay field.

Zone 14. Native Plant Preserve (NPP).

The original NPP was located on the edge of the woodland near what was PL 15 in the 400s. Created by residents 15 years ago, the plants had become cramped and the area was overly shaded. To make room for the Mott cottages, in 2020, after the Woodland Workers cleared a 50' x 100' area of invasive plants, 35 shrubs from the original area were replanted in a fenced location along the Cross Trail opposite

west-facing Evans. Designed and managed by residents, this peaceful area is more accessible to residents and makes for a better display of primarily deciduous azaleas. A path from PL 5 leads to a platform overlooking the woods. This pathway also leads to a handicapped accessible gate into the NPP for residents using wheelchairs and walkers. During Earth Week, an annual Open House is held to welcome spring as the deciduous azaleas begin to bloom. Special Project #1: A forest overlook west of the NPP: From the north side of the Perimeter Path close to the SW corner of the NPP fence, a handicapped accessible path could be built to a raised platform with a view into a grove of huge Tulip Poplars.

Special Project #2. Resident volunteers are needed to weed and spread mulch on the beds, add wood chips to pathways and maintain the fence.

TRAILS - a resident Trails leader walks the trails daily, flags hazardous places, adds water bars to avoid erosion, and cuts back invasives from trail edges. New signage and message boards at key trail heads will soon be installed. A new map includes trails named for earlier residents who gave much time to their management. See **Map #2**.

BIRDING Many avid birders enjoy watching from “sits” on campus and on trips to more distant locations off campus. For a list of 179 species reported as seen on the campus since 1977, see the report in **Appendix H**.

BIG WOODS – (Map #3) is the wooded area between Crosslands and KAL where deer browse has reduced natural regeneration of trees to the point that the only young trees are beech – a species disliked by deer. Canopy gaps (created by fallen trees from root rot or wind shear) are also full of invasives - including spice bush, the only native plant disliked by deer. Plans to revegetate canopy gaps in a fenced area that includes the spray fields south of Bennett’s Run are under review. See **Appendix H** for a summary of the Big Woods Strategic Plan and **Appendix I** for web addresses of Power Point programs that address problems in the Big Woods. For more details, also see “Save the Big Woods” blue binder on the table in the Brooke Worth Room. NOTE: until a decision is made re a fence in the Big Woods to protect a given area from deer, exclosures may be used to protect new plants, but no tree seedlings in tubes will be planted in the NW Woods.

SUMMARY PROPOSED WW PROJECTS – as of July 2022:

- i) **TREE TUBE MAINTENANCE**
Zones 6, 7, 8 & 11: Monitoring and maintenance of trees in tubes to keep them free from weeds in the locations already planted (see orange zones in Map #1)
- ii) **INVASIVE CLEARANCE**
 - a) Zone 7e) Clear invasives and vines from both sides of the Perimeter Path (George's) Trail (south of any cottages) along Longwood boundary on the perimeter path/George's Trail in zones 6e, 7f, and 7g and the perimeter of Zone 6d).
 - b) Zone 9: Continued clearing of invasives to connect the Perimeter Path to the path that runs from parking lot 13 to the Kirkpatrick tract.
 - c) Zone 12: Clearance of mowed debris and stump freshening for herbicide application by staff.
- iii) **TREE PLANTING**
Zone 5a) Gaps in existing woodland could be planted with additional tree seedlings inside exclosures.
Zone 5c) Monitoring and maintenance of 9 cages (each with three shrubs) along the top of the bank is needed twice a year – AND, to promote the park-like view, regular mowing by staff is needed.
- iv) **OTHER: Zone 14: Native Plant Preserve** – volunteers are needed to weed, mulch and spread wood chips on pathways.

APPENDICES

- A. NAC Executive Committee members – as of September 2022
- B. NAC Bylaws updated as of 2022 - synopsis
- C. 2021-22 Annual Report
- D. 2019 Tree Planting Plan Status – as of August 2022
- E. Status of tree seedlings – as of August 2022

Map #1 – Natural Areas Zones (orange marks zones with tree tubes)

- F. Monitors' Report Forms and commonly found invasive plants

Map #2 – Crosslands Trails Map – revised as of April 2022

- G. Birding Report

Map #3 – Big Woods

- H. 2021 Big Woods Strategic Plan Executive Summary
- I. Web addresses for video recordings of Big Woods PowerPoint programs