HARDIE PROPERTY MASTER PLAN

BOROUGH OF FOX CHAPEL, PA

JUNE 10, 2020

PASHEK MTR

PASHEK MTR

MOSHIER STUDIO
ARCHITECTURE • INTERIORS • PLANNING • SUSTAINABLE DESIGN

PNHP

ACKNOWLEDGMENTS

Study Committee

Carrie Casey Leemuis	
Michael J. Schiller	
Jessica DeMoise	
Wesley W. Posvar	
Gary J. Koehler	
Jay S. Troutman	
Liz Nelson	
Nan Bennett	
Peggy Jayme	
Mandy Steele	Guest Member

Fox Chapel Borough Council & Mayor

Walter A. Scott, III	Mayor
Andrew C. Bennett	President
Jay S. Troutman	Vice President
Harrison S. Lauer	Council Member
Betsy Monroe	Council Member
Mandy Steele	Council Member
Thomas A. Karet	Council Member
Frederick C. Leech	Council Member

TABLE OF CONTENTS

EXECUTIVE SUMMARY

BACKGROUND

The Borough of Fox Chapel has purchased the Hardie property on Old Mill Road to add to their extensive park system. With the acquisition of the Hardie property the Borough now features a continuous chain of parks running north to south in the center of the Borough. The property is located between Riding Meadow Park and the Old Squaw Run Trail along the western banks of the Squaw Run stream. The Borough sought to develop a plan for the new park space and how it would best fit into their existing system.

GOALS

Some of the goals for the park, as determined by the master plan study committee include:

- To protect and leverage the natural beauty of the site
- To re-align existing trails and incorporate new trails through the site to connect with other parks and neighborhoods
- Provide creative stormwater solutions to increase community resiliency
- Determine how dogs will use the site, since the neighboring parks have off leash dog spaces
- Form partnerships with community assets, like schools and Beechwood Farms
- Address safety and security concerns due to the seclusion of the site
- Determine the value and cost of reusing existing structures, if not reusing then commemorating the history of the site
- Design a park space that is low maintenance

ANALYSIS

The 17 acres of the Hardie property consists of approximately ten acres of steep wooded hillsides, with the remaining seven acres in the low lying floodplain valley of Squaw Run. Squaw Run, a high quality stream, flows along the eastern edge of the property. A tributary stream flows from the northwestern corner of the property to meet Squaw Run, bisecting the floodplain valley. Both Squaw Run and the tributary stream have been highly altered by human development in and around the site. Both streams are channelized and restricted on the site to allow for more flat usable area in the valley. The fields in the valley of the property, part of the historic floodplain, frequently have saturated soils, even the lawn area by the house is consistently moist. Between the two fields is a large manmade pond that is heavily silted and has a healthy growth of algae. The wooded hillside, though not old growth forest, is mature and consistent with western Pennsylvania native forest typologies.

There are two structures on the site, one is the Hardie residence, and the other is a barn. The original residence on the property was built back in the 1930s and renovated into its current conditions in the 1970s. The barn was likely built when the residence was renovated in the 1970s. The structures have been left vacant for some time now and both would need repairs to return them to a usable state. The house, if it were to become a public building, would need more extensive renovations to meet current building codes and standards for larger volumes of use.

The majority of the developable site on the Hardie property is within the 150' riparian buffer required for a high quality stream by the Pennsylvania Department of Environmental Protection. A waiver or exception would need to be obtained to complete development of the park plan. Since the focus of these changes are to restore and improve the natural state of the area, as well as to abate flooding threats downstream it is likely that development of the park plan can be coordinated with the Pennsylvania DEP as a waiver to the buffer regulations.

CONCEPT DEVELOPMENT

Concepts for the park were developed after the initial study committee meeting and the first community meeting. Two concepts were prepared, both based on natural stream formations, a beaded stream concept and an oxbow stream concept. The beaded stream concept used more traditional green infrastructure strategies for stormwater management. The beaded stream concept also has more facilities and parking with an entry drive, bus drop off, outdoor classroom, picnic pavilion, and a meandering trail system. The oxbow stream concept modifies green infrastructure function into the natural form of an oxbow stream with surrounding wetlands. The oxbow concept has no vehicular access to the property, only trails, with one pavilion, an interpretive plaza, and a few viewing platforms along the trails for users to linger and relax. Both plans create a trail system on the property that extends to the existing Old Squaw Run Trail. Both plans also extend into the Riding Meadow Park property to make the most of the stormwater infrastructure along Squaw Run.

The two concepts were reviewed by community members at the second community meeting and further reviewed by the study committee after the community meeting. After reviewing the concepts, it was determined that the oxbow concept was the preferred design, with additional modifications to meet the desires of the community and committee.

MASTER PLAN RECOMMENDATIONS

The final master plan design was guided by the input from the community and project study committee. The final master plan is a passive park with a system of nature trails, a small interpretive plaza, a couple of small nature viewing areas, and an extensive green stormwater infrastructure corridor. The trails in the plan provide a wide range of user experiences, taking visitors along the western, wooded hillside, as well as looping through the floodplain valley. The park also offers a variety of learning opportunities; 1) history of the site and region; 2) native ecological education; 3) green infrastructure and stormwater education. As designed the stormwater corridor and wetlands have the potential to hold about 1.3 million gallons of water, this capacity would need to be verified by a subsequent study after the master plan is adopted. It is recommended that the new park adopts the rules and regulations for park spaces Fox Chapel as defined by the Borough zoning ordinance, which includes hours from sunrise to one hour after sunset.

Hardie Property
Master Plan

Borough of Fox Chapel

PASHEK MTR

COST AND PHASING

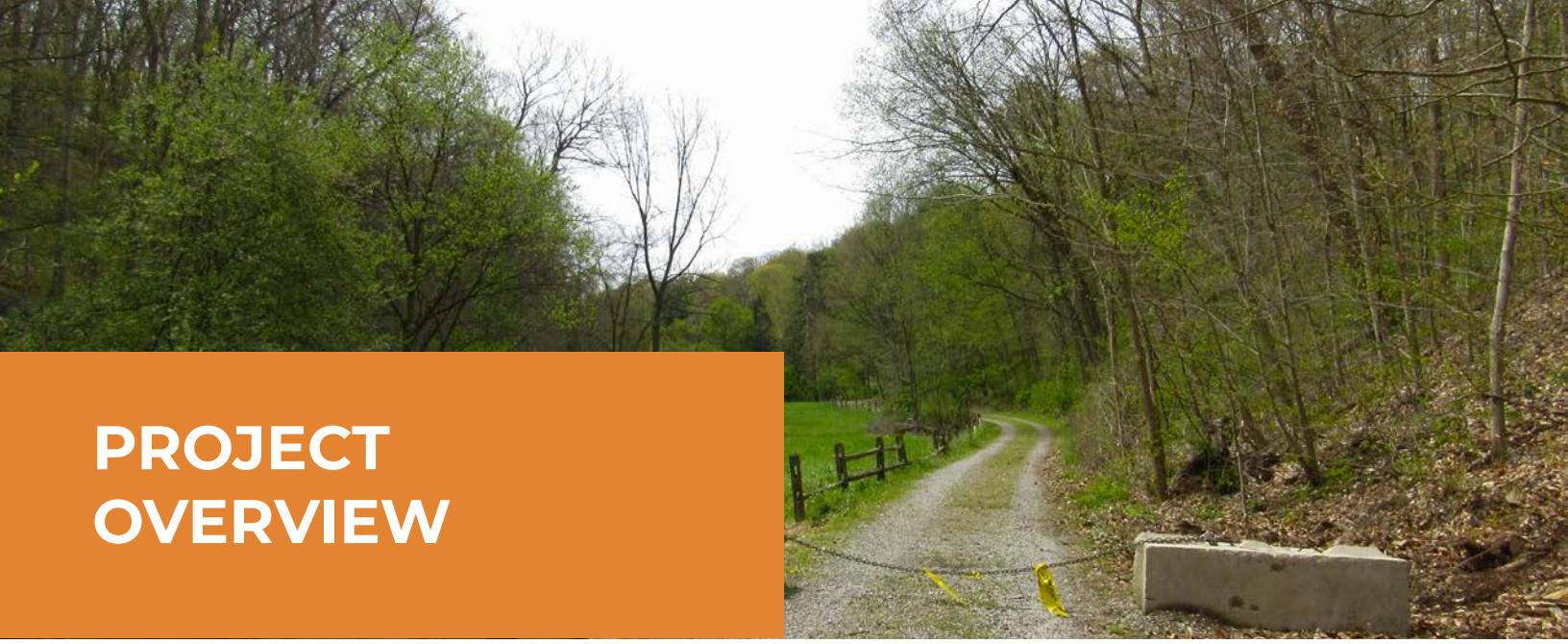
Planning level opinions of probable initial capital costs were developed for the proposed improvements to the Hardie property. Recognizing it may be cost prohibitive for the Borough to construct all of the improvements at one time, we recommend the improvements to the Hardie property be completed in a series of three logical phases. The first phase would be site preparation, like removing the structures, a mowed trail path and re-routing the Old Squaw Run Trail to allow for immediate trail use of the site, and a stormwater study to refine the plans for the green stormwater infrastructure corridor. The second phase would be developing the majority of the trail system, the interpretive plaza, parking area, and completing some of the plantings and signage. The last phase would be to develop the green stormwater infrastructure corridor and complete the trails system, plantings, and signage.

The costs of the three phases of improvements are arranged according to the phasing, with the projected costs for each corresponding phase detailed in the spreadsheets on subsequent pages. Depending on the Borough's ability to raise funds for these improvements, this phasing plan may be expedited or lengthened as required to meet the Borough's needs. Due to increases in construction costs over time, the projected costs should be escalated to account for schedule and market conditions.

Estimates of the capital investment costs required to construct the improvements proposed for the Hardie property are summarized in the table below. The estimates of capital investment costs were projected by estimating the construction costs in 2020 dollars and escalating those costs on an annual basis by 4%, over the projected implementation period of six years.

Year of Implementation	Phase 1 Total*	Phase 2 Total*	Phase 3 Total*
2020 Planning Level Opinion of Probable Costs	$136,000	$344,000	$2,226,000
Year 0 - 2020	$136,000		
Year 3 - 2023		$387,000	
Year 6 - 2026			$2,816,000
Total Cost over Six Years			**$3,339,000**

*Costs rounded to the nearest $1,000.

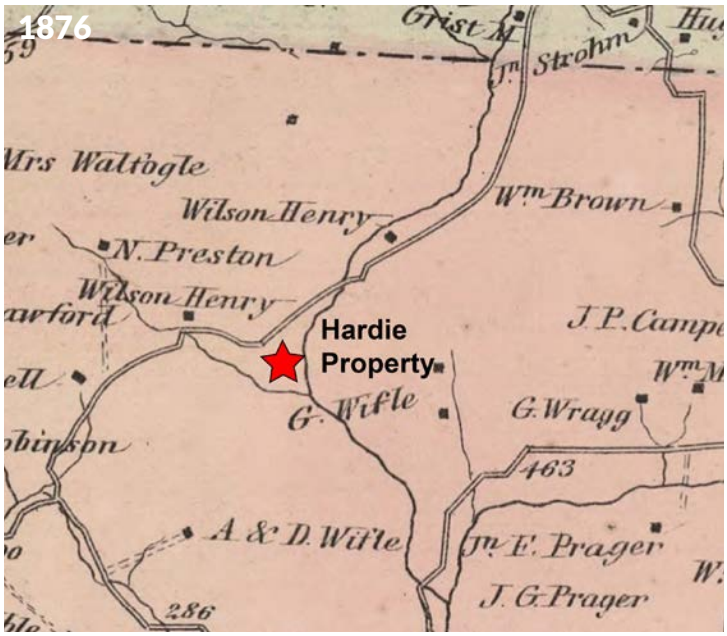


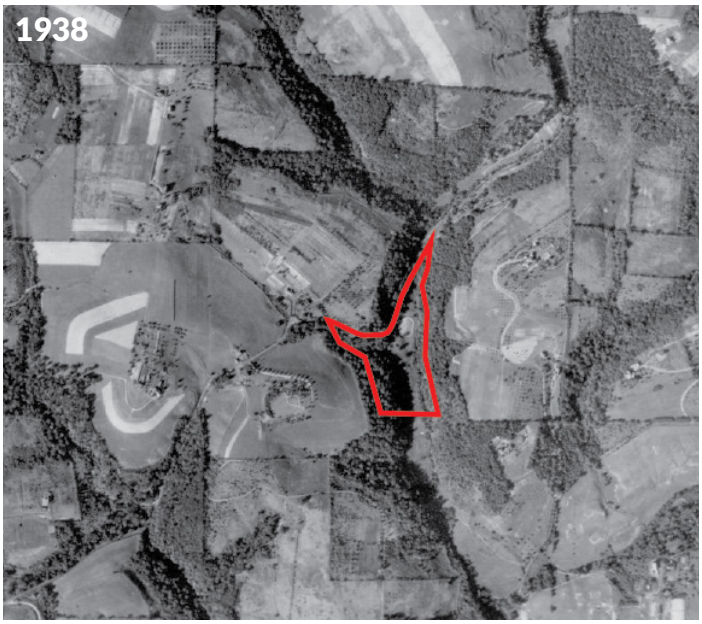
PROJECT OVERVIEW

HISTORY

Fox Chapel Borough purchased the Hardie Property on Old Mill Road in early 2019. Prior to the Borough ownership the property was owned by the Hardie family, which bought the property in 1975. According to property records the Rogers family owned the property from 1968 to 1975, and the Sherts family owned the property from 1951 to 1968. A historic property map from 1876 lists the property owner as a G. Wifle.

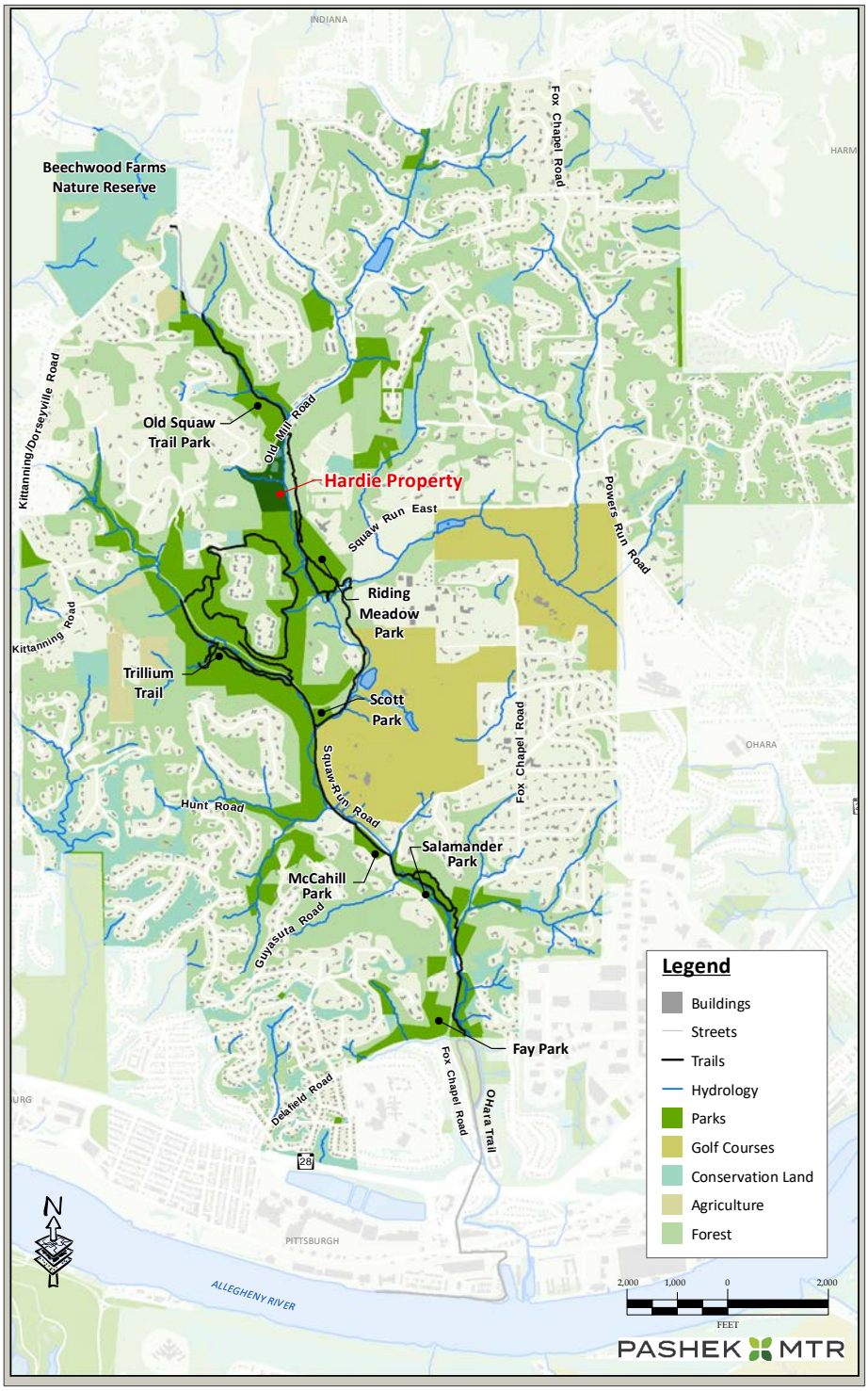
Aerial imagery of the property going back to the 1930s shows the land in a similar state as current day. The only difference is that the house was remodeled and expanded by the Hardie family, but the location is the same as the original cottage. Otherwise the property included the pond, meadows and fields, and woodlands in the same locations and similar state as present day. Squaw Run and the small tributary on the property appear to be in the same location in the 1930s imagery as present day.





BACKGROUND

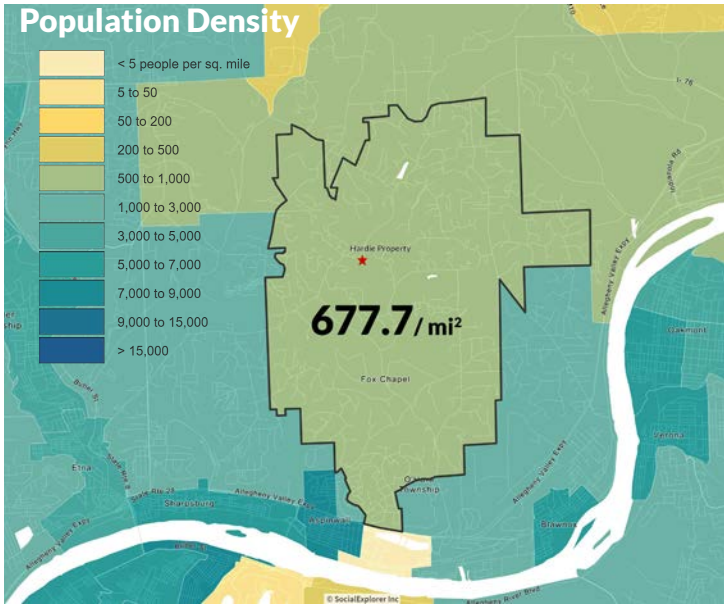
Fox Chapel Borough was established in the 1930s. Prior to the 1930s the area that is now the borough was incorporated into the townships of O'Hara and Indiana. The Borough is approximately eight square miles in size. The majority of the properties within Fox Chapel are residential, and the Borough prides itself that 10% of the land is allocated to park land and open spaces. The Borough has a chain of parks running north to south through the middle of the Borough, stretching from Beechwood Farms Nature Reserve in the north and Fay Park in the south. Currently there is a gap in the park chain, between Riding Meadow Park and Old Squaw Run Trail Park, the Hardie property is the missing link that will connect the parks into a continuous chain.



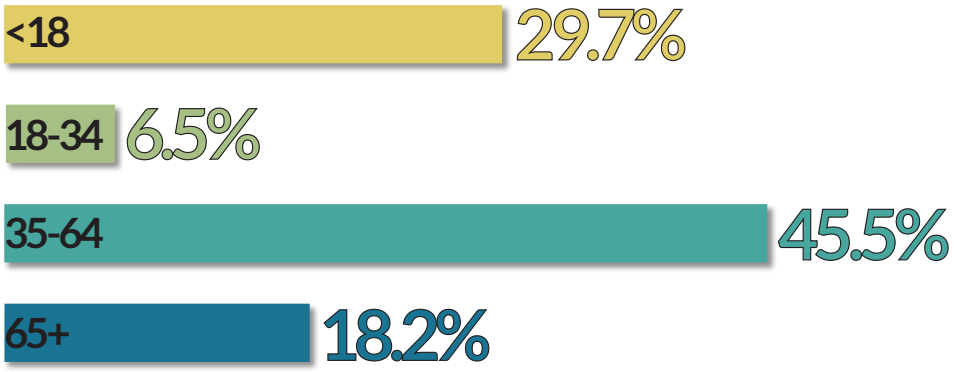
POPULATION AND DEMOGRAPHICS

POPULATION **5,331**

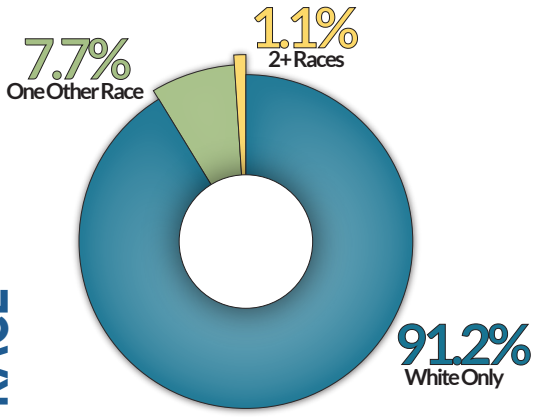
According to the 2018 American Community Survey five-year estimates the population projection for Fox Chapel is 5,331 residents. This equates to a population density of 677.7 residents per square mile, less than the Allegheny County average of 1,666 residents per square mile.. The median age for the Borough is 49 years, with over 45% of the population ranging in age from 35 years to 64 years. The population of Fox Chapel is almost equally split between genders, female and male. The bulk of the residents in the Borough, 91.2%, identify as white.



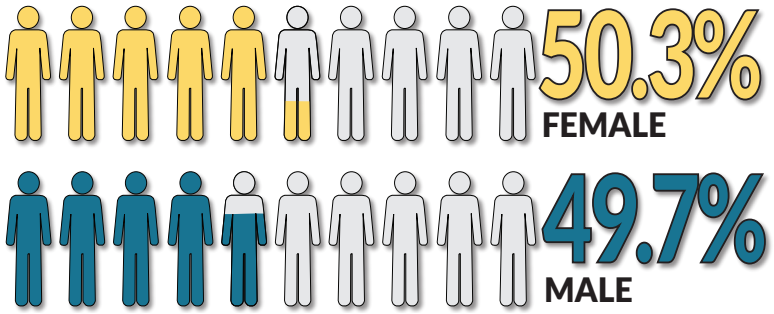
AGE



RACE

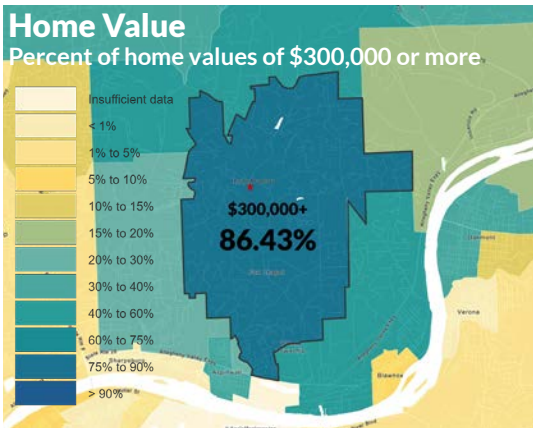


GENDER

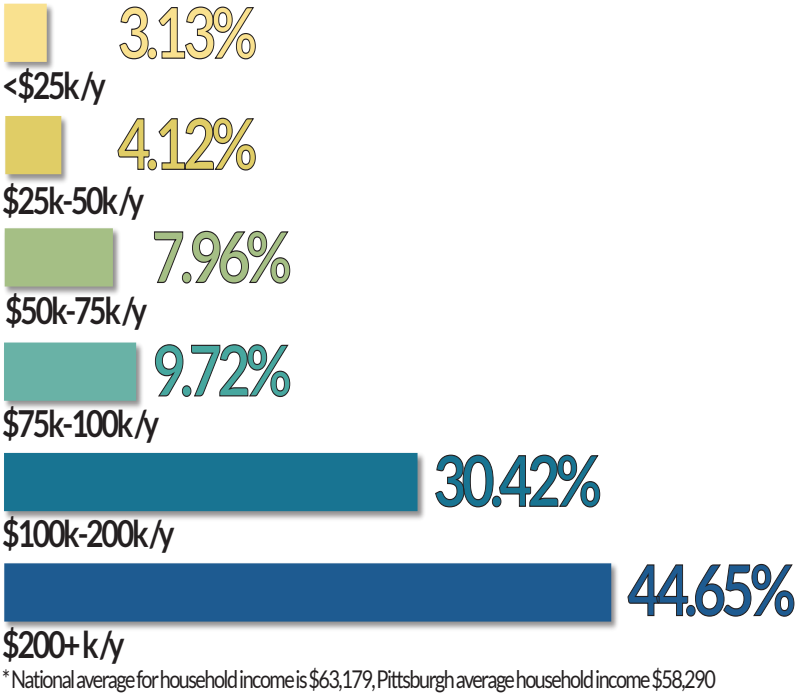


HOUSEHOLDS

1,821



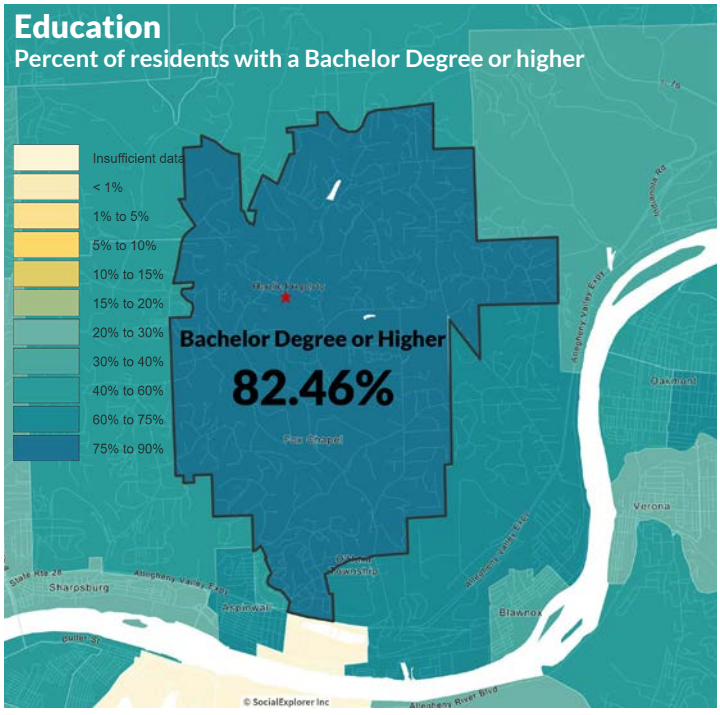
HOUSEHOLD INCOME



*National average for household income is $63,179, Pittsburgh average household income $58,290

The community has approximately 1,821 households, averaging 2.9 people per household. The majority of households in the community have an average income well above the national average, $63,179 per household, and regional average, $58,290 per household. Home values in the borough average significantly higher than the Allegheny County average of $171,000 with Fox Chapel's average at $622,000, and over 80% of the properties over $300,000.

More than 82% of the residents in Fox Chapel have a bachelor's degree or higher. Work transportation for residents of the Borough mainly consists of individual vehicle commuters, with small percentages of commuters carpooling or working from home.



TRANSPORTATION

EXISTING COMMUNITY PLANNING

The Borough of Fox Chapel boasts 10% of the land as open space and park land. With this in mind, Fox Chapel completed a master plan for their park system in 2006. Though the Borough did not own the Hardie property at the time, the existing Old Squaw Run Trail was already adjacent to the property and the parks, Riding Meadow and Old Squaw Run Trail Park, were well established. Some of the recommendations of the master plan reflect on these areas, which now correspond with the plans for the Hardie property park master plan. Some of the topics that relate to the Hardie property master planning include:

- Managing invasive plants especially in utility corridors
- Redesigning the parking on Old Mill Road to allow vehicles to exit without needing to back into the road
- Improving stream crossings
- Adding wayfinding signage
- Mitigating stream bank erosion

PURPOSE, GOALS, & OBJECTIVES

The motivation of developing the Hardie property into a park in Fox Chapel comes from the desire to complete the last gap in the chain of parks that extend north to south through the Borough. The property is perfectly located between Riding Meadow Park and the Old Squaw Run Trail, and currently is the only missing link in the chain of parks. The property contains open meadows, steep wooded hillsides, Squaw Run stream and a second tributary with a beautiful waterfall over the slate ledge. The Borough wants to preserve and protect the unique natural beauty of the site. Due to the history and the varying natural features of the site it provide a unique hiking experience and opportunities for education. The property also has the opportunity to partner with neighboring organizations such as the Audubon Society of Western Pennsylvania. Safety is a priority for the site since it is secluded and not easily accessed. Access to the site is also something that is needed. A small parking area and opportunity for access for people of all ages and ability to experience the natural beauty of the site is proposed. In the first committee meeting some of the goals for the park included: trail connections to adjacent parks, connect to neighborhood to the west of the property, allow dogs whether on leash or off, protect the natural value of the site, sustainability, a sanctuary, connect with partners, safety and security, costs and challenges of maintaining structures, tell the story of the property, maintaining with limited resources, and creative ways to address stormwater resiliency.

GOALS

- Protect and harness the natural beauty of the site
- Re-align and incorporate trails to connect parks and neighborhoods
- Creative stormwater solutions to increase community resiliency
- Consider dog use of new park and trails
- Form partnerships with community assets like Beechwood Farms
- Consider precautions for safety and security on the site
- Determine if residence could be reused, if not at least keep chimney
- Keep cost and resources to maintain low

INVENTORY & ANALYSIS

SITE INVENTORY

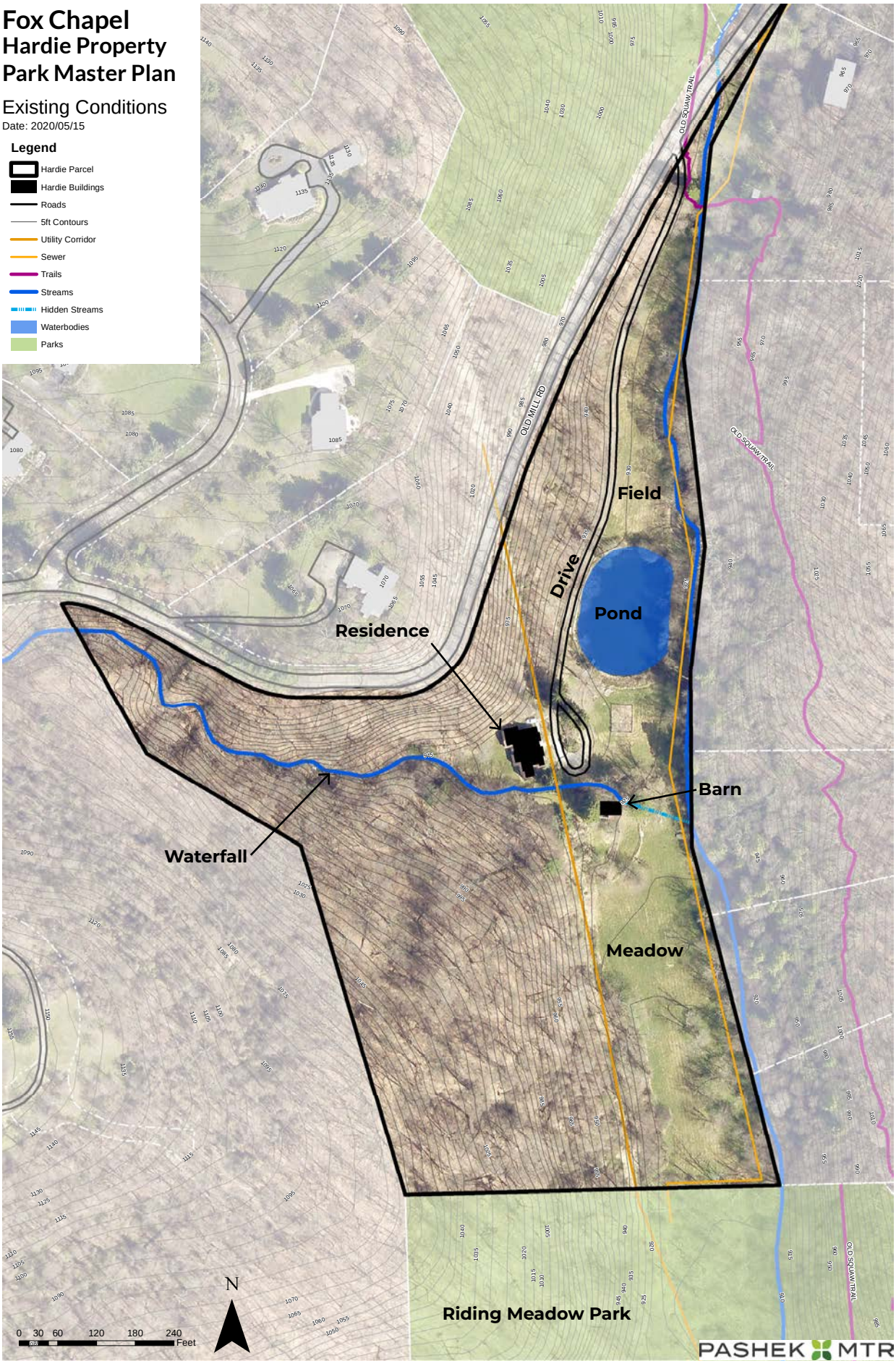
The Hardie property is located on Old Mill Road adjacent to Squaw Run stream. The property is approximately 17 acres of land with Old Mill Road on the north edge of the property, residential properties to the east and west of the site, and Riding Meadow Park on the south edge of the property. Just across Old Mill Road is one of the entrances to Old Squaw Run Trail along the Squaw Run stream. Squaw Run, a high-quality stream, runs along the eastern edge of the property. A second tributary stream runs from the northwest corner of the property by Old Mill Road over to Squaw Run on the east side of the property. The north and west sides of the property are covered in wooded slopes, while the east side of the property has fields and meadows with a large pond. The drive enters from the northeast corner of the property, off Old Mill Road, adjacent to the bridge for Squaw Run. The drive then winds to the house and barn near the center of the property. Overhead power lines run north south through the property crossing in front of the house and along the eastern edge of the hillside. A sanitary sewer system runs along the eastern and southern edge of the property. The sewer line along the eastern edge runs adjacent to the Squaw Run stream, with some of the manholes exposed along the stream banks. On the hillside to the east of the property, across Squaw Run, Old Squaw Run Trail runs through the residential properties connecting Riding Meadow Park to Beechwood Farms to the north. This trail is currently the only connection between the parks.

A Pennsylvania Natural Diversity Inventory (PNDI) report was completed on the Hardie property in January of 2020. The report indicated no known impacts to threatened or endangered species, or species of special concern on the property. The site is within the range of the Indiana bat, since their habitat is focused on the woodlands of the site, and the woodlands are planned to be retained there was no concern on adverse effects to the species. A full copy of the PNDI report is included in Appendix E.

Fox Chapel
Hardie Property
Park Master Plan

Existing Conditions

Date: 2020/05/15



SITE ANALYSIS

SLOPE ANALYSIS

The Hardie property is a part of the greater Allegheny Plateau, in the Pittsburgh Low Plateau region. This region is known for its undulating, folding hills and valleys of shale, siltstone, and sandstone. On the Hardie property nine acres of the site is situated on steep hillsides with slopes ranging from 15% to well over 40%. These steep slopes limit development which is why the structures and the most man-made changes to the site are in the flatter valley area of the site. The steep wooded slopes of the property offer mature woodlands and natural views, which is part of the natural allure of the site.

LANDCOVER

Due to the steep slopes limiting development on the site, the site has over ten acres of forest. Forests also cover the steep slope areas beyond the property. These slopes are classified as sensitive steep slope conservation areas and provide an environment for unique plant and animal communities to develop. The lower, flat valley of the property offers even more unique habitat areas with wetlands, wet meadows, and the riparian woodland along Squaw Run stream.

Invasive plant species are prevalent in the scrubby wooded boarders around the fields, pond, and house. The fields themselves are a mix of weeds since it has been years since they were actively maintained. The woodlands on the hillside are mostly native, with a few scattered invasives like Norway Maple. Additional details on existing invasive plants on the site are included in the forest stewardship plan section of this report.

HYDROLOGY

The Hardie property contains two streams, one is Squaw Run, and the other is a small unnamed tributary that runs into Squaw Run from the west side of the property. Squaw Run is classified as a high-quality warm water fish stream. According to FEMA the floodplain of Squaw Run is widest at the north and south ends of the property, where the stream bank is low, the floodplain in the other areas is mostly within the stream bank due to a steeper bank edge. The floodplain at the north end of the property is a wetland area. There is also a wetland area to the west of the man-made pond on the site. Though the low, flat area of the site is designated as moderately well drained soils, accounts of the property, as well as multiple site visits show that the fields and meadows are frequently wet. This wet valley is likely due to the fact that all the surrounding slopes drain into the flat plains of the valley before reaching Squaw Run. The tributary stream on the site also features a beautiful slate ridge waterfall just west of the residence. Both the tributary stream and Squaw Run are highly modified and channelized through the site. A section of the unnamed tributary is in a man-made channel, and culverted under the existing drive to the barn. This channelization has caused extensive erosion along the stream banks, leaving steep, three to four foot, ledge banks in some areas along the site.

Since Squaw Run is classified as a high-quality stream there are additional regulations for construction activities. The Pennsylvania Department of Environmental Protection (DEP) requires a 150' buffer from the high-quality stream for any disturbance. Exceptions to this regulation are if the area disturbed is under one acre, or if the disturbance is more than 150' from the stream bank. Waivers for the setback can be obtained for projects if they abate a substantial threat to public health or safety or meeting the buffer requirements is not feasible due to features of the site. Activities that are allowed within the buffer, with DEP permission, include trails and restoration projects.

The majority of the developable site on the Hardie property is within this 150' buffer. A waiver or exception would need to be obtained to complete development of the park plan. Since the focus of these changes are to restore and improve the natural state of the area, as well as to abate flooding threats downstream it is likely that development of the park plan can be coordinated with the Pennsylvania DEP as a waiver to the buffer regulations.

Fox Chapel
Hardie Property
Park Master Plan

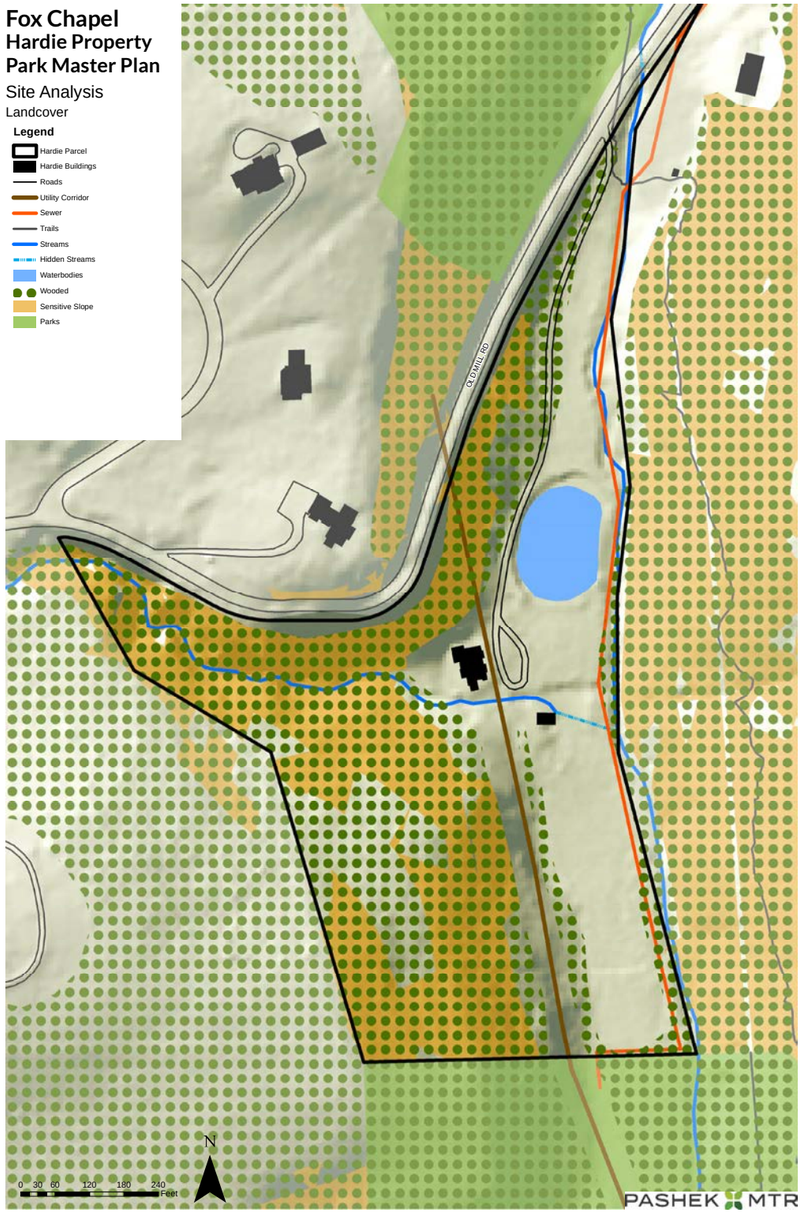
Site Analysis

Slopes

Fox Chapel
Hardie Property
Park Master Plan

Site Analysis

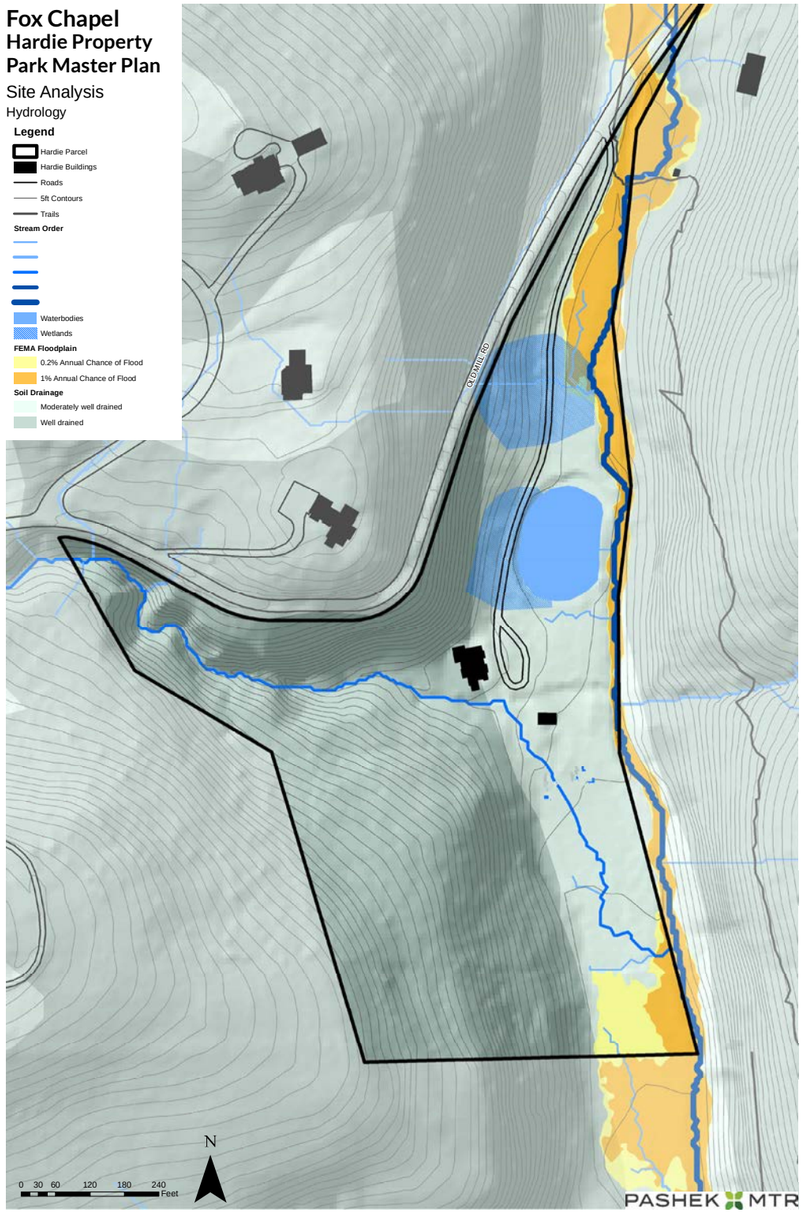
Landcover



Fox Chapel
Hardie Property
Park Master Plan

Site Analysis

Hydrology



ACTIVITIES & FACILITIES ANALYSIS

The topography and hydrology of the site limit park development. Fortunately, the goals of the park set by the community are for a passive park with trails proposed. Though the slopes may limit uses for the park space, various trails can be incorporated into even the steep hillsides.

The new park will focus on preservation of the natural beauty and ecosystems on the site, environmental and historical educational opportunities, and a system of trails throughout the property. Trail surfaces would be natural surface, with some trail surfaces of aggregate, gravel, mulch, and earth. Boardwalks would be constructed where it is important to get park visitors to unique areas of the park. The existing forest system will be restored, by eliminating invasive species and fostering the development of native plant communities. Incorporation of the green stormwater infrastructure corridor would also increase habitat diversity, allowing for a wider range of plant and animal communities to develop. This unique and diverse range of natural systems will provide opportunities for education through educational signage, interactive areas, and wildlife viewing spaces.

This park space, considered a connector park and not a destination park, will have limited facilities. For this master plan, pavilions and restrooms were not included. It is expected that park users will predominately be neighbors from the neighborhoods around the park, and users that want to go from Riding Meadow Park to Old Squaw Run Trail. Eventually, when the Hartwood Trail is completed, there may be more use from through trail users.

STRUCTURAL ASSESSMENT

Moshier Studio assessed the house and barn on the property on December 19, 2019. Moshier was also able to review drawings for the house addition prepared by Curry Martin Highberger Klaus Architects. The property is connected to municipal water and sewer supply, as well as Duquesne Light.

The original house was built in the 1930s, it was a single-story house just over 1,000 square feet, with a full basement. This original cottage was owned by the Fred Rogers family from 1968 to 1975. When the Hardie family purchased the property in 1975 they decided to expand the house for year-round function. The building additions were completed in 1976, expanding the first floor and basement, as well as a partial second floor. After the addition to the house, there were four bedrooms and three bathrooms at 3,700 square feet. The condition of the house is typical of non-use, wood siding has signs of mold and decay as well as some woodpecker damage. The transite panels likely contain asbestos, the doors and windows show signs of condensation, the basement shows signs of moisture even with the sump pumps. Interior finishes are mostly sound, some of the flooring is in disrepair and the skylights have signs of leaking. The original stone fireplace is in good condition, while the kitchen appliances are all at the end of their life.

Photos courtesy of Tom Sherts

Moshier assessed the house for two potential reuse conditions, 1) residential; 2) public use. If the house were to be used as a residence again all the deferred maintenance, and some updating would be needed including removing the transite, replacing the siding, upgrading insulation, replacing doors and windows, insulating the basements, and updating the kitchen and bathrooms. To change the use of the house from residential to public use it would need to meet the provisions of the 2015 International Existing Building Code. This includes upgrading the structure of the building to increase the live load of the first floor from the current 40 psf to 100 psf. Upgrading plumbing and fixtures to accommodate higher occupancy levels and meeting ADA compliance with accessible access to the structure as well as an accessible restroom facility.

The existing barn was likely constructed at the same time as the house additions in the 1970s. It consists of an open single floor space for farming equipment as well as a walkout basement with space for two stables. The barn is covered in the same wood siding as the house, and only has access to electricity. Reuse of the structure as a storage structure or a pavilion would require minimal changes, though Moshier would recommend replacing the siding on the structure.

The conclusion of the structural assessment by Moshier Studio is that for the residence to be reused as a residence, the house would require catching up on deferred maintenance and some updating. Converting the structure for public use would require extensive upgrades to the structure and additional parking. Reuse of the barn as a storage structure would require minimal changes.

After reviewing the recommendations of Moshier Studio, as well as committee and public input, it was determined that reusing the structures is not necessary for new park use, though some of the participants expressed a desire to retain the stone fireplace and include historical education signage on the house.

FOREST STEWARDSHIP PLAN

A conservation assessment was completed on the site in November 2019, by Ephraim Zimmerman, an ecologist and science director at the Pennsylvania Natural Heritage Program. The assessment breaks down the property into five sections:

1. Squaw Run channel and bank
2. The floodplain
3. The upland forest
4. The tributary stream and waterfall
5. The pond

The Squaw Run stream is highly channelized along the east edge of the property with the bank in some areas three to four feet high. Along the stream is a narrow strip of successive forest with native tree species like boxelders, black cherry, black walnut, and hawthorns. The understory and herbaceous plants in this strip are mostly invasive species with bush honeysuckle, multiflora rose, privet, garlic mustard, pachysandra, Japanese stiltgrass, and lesser celandine. The stream has a slate bottom in most areas that is visible due to the excessive erosion from the channelized stream.

The floodplain, which is the entire valley of the property, not just the FEMA floodplain, has been entirely modified from its original conditions to allow for human use and development of the property. This modification pushed the stream to the east edge of the valley, when originally the channel would have been more centralized. The valley would have been a part of the historic floodplain for Squaw Run but with the development of the pastures the area was elevated so that it is no longer in the floodplain. The fields, primarily used as hay pastures remain open and grassy, shrubby invasive plants line the edges of the fields. The soils in the fields are wet, and likely contain stones and remnants of the original streambed under the soil layers.

The upland forest takes up the majority of the property, all along the west side of the valley. These forests, though not old growth, are mature and indicative of typical native western Pennsylvania upland forests. The forests are classified as Dry Oak – Mixed Hardwood forests on the upper slopes and dry areas, and a Tuliptree – Beech – Maple Forest in the mid and lower slopes. Some of the tree species found on the slopes include red oaks, white oaks, sugar maples, red maples, and American beech trees. There are some invasive shrub species and a few invasive Norway Maple trees mixed into the forest. The area with the most invasive plants is the areas cleared for the overhead power lines.

The tributary stream with the waterfall that flows from the western side of the property is mostly shaded by the upland forest. Closer to the stream there are eastern hemlocks, Christmas ferns, and wood ferns. The waterfall is over fifteen feet tall tumbling over a slate ledge. The

bottom of the stream channel is also slate. The soils where the stream runs behind the house are very wet, indicating that the stream would have spread out in the area if it had not been channelized by development. The stream section that runs adjacent to the house and down to Squaw Run is through a constructed channel.

The pond on the site was constructed between the two pastures on the raised valley. The water in the pond is likely fed from a small natural tributary and drains through an underground pipe. The pond is heavily silted and covered with algae growth.

After a review of the site Ephraim Zimmerman had several recommendations for the property.

RECOMMENDATIONS

UPLAND FOREST

- Maintain forest cover
- Control invasives
- Plant small native trees and understory in powerline right-of-way
- Control invasives in right-of-way
- Remove garbage and debris

SQUAW RUN / FLOODPLAIN / POND

- Restore floodplain by reconnecting with Squaw Run
- Drain and remove pond allowing tributary a natural connection to Squaw Run
- Remove all structures
- Plant native floodplain vegetation - look at Sycamore Floodplain Forest for plant communities

SYCAMORE FLOODPLAIN FOREST

TREES

- Sycamore (Platanus occidentalis)
- Box-elder (Acer negundo)
- River birch (Betula nigra)
- Silver Maple (Acer saccharinum)
- Green Ash (Fraxinus pennsylvanica)
- Black Walnut (Juglans nigra)
- Black Willow (Salix nigra)
- Black Maple (Acer nigrum)

SHRUBS

- Silky Dogwood (Cornus amomum)
- Gray Dogwood (Cornus racemosa)
- Ninebark (Physocarpus opulifolius)

PERENNIALS / ANNUALS

- Jewelweed (Impatiens spp.)
- Clearweed (Pilea pumila)
- False Nettle (Boehmeria cylindrica)
- Wood-Nettle (Laportea canadensis)
- Stinging Nettle (Urtica dioica)
- Wild Germander (Teucrium canadense)
- Jack-in-the-Pulpit (Arisaema triphyllum)
- Green-Dragon (Arisaema dracontium)
- Goldenrods (Solidago spp.)
- Wingstem (Verbesina alternifolia)
- Riverbank Wild-Rye (Elymus riparius)
- Winterberry (Ilex verticillata)
- Northern Arrow-wood (Viburnum recognitum)
- Highbush Blueberry (Vaccinium corymbosum)
- Sedge (carex intumescens/lurida)
- Short Hair Sedge (Carex crinita)
- Marsh Fern (Thelypteris palustris)
- Beggar-Ticks (Bidens frondosa)
- Dotted Smartweed (Persicaria punctata)
- Floating Mannagrass (Glyceria septentrionalis)
- Bugleweed (Lycopus uniflorus)
- Jumpseed (Persicaria virginiana)

VINES

- Riverbank Grape (Vitis riparia)
- Poisen-Ivy (Toxicodendron radicans)

For more information: http://www.naturalheritage.state.pa.us/Community.aspx?=16025

DESIGN PROCESS

INVENTORY

ANALYSIS & EVALUATE

STAKEHOLDER ENGAGEMENT

RECOMMENDATIONS

IMPLEMENTATION STRATEGIES

IMPLEMENTATION

IMPLEMENTATION STRATEGY PRIORITY RESPONSIBILITY	COST FUNDING SOURCE PARTNERS

PUBLIC INVOLVEMENT

STUDY COMMITTEE

The project to develop a master plan for the Hardie property was guided by a study committee appointed by the Borough. The committee consisted of nine community members who provided regular input and guidance on the plan development. The committee met three times over the course of the plan development, in November 2019, January 2020, and April 2020. The first committee meeting focused on brainstorming project goals, scheduling project meetings and deadlines, developing questions for the community survey, and identifying people for the key person interviews. The second study committee meeting occurred after the two public meetings, this meeting focused on debating and summarizing the input gathered during the community meetings on the project and conceptual design plans. The last committee meeting reviewed the draft master plan to provide additional input and discuss more details of the park plan, future development, maintenance, and other specific concerns. Lastly, at the final committee meeting the committee voted on whether to reuse the house and the barn on the property. The committee unanimously voted to not reuse the structures, but rather to keep the chimney, and deconstructed the buildings so that the materials could be reused, both in the park and elsewhere.

MEETING #1
GOALS

- Protect and harness the natural beauty of the site
- Re-align and incorporate trails to connect parks and neighborhoods
- Creative stormwater solutions to increase community resiliency
- Consider dog use of new park and trails
- Form partnerships with community assets like Beechwood Farms
- Consider precautions for safety and security on the site
- Determine if residence could be reused, if not at least keep chimney
- Keep both park development costs and maintenance expenses as low as possible

MEETING #2
THEMES

- Practical
- Effective stormwater
- Trail along road
- Keep natural
- Protect sewer line
- Maintain existing trails
- Connect to Lockhart trail and old bridle trail
- Trails to push strollers on
- Increase parking capacity
- Educate visitors

MEETING #3
SPECIFICS

- New trail connection to old bridle trail would require trail easement, since on neighboring property
- Green infrastructure acts like an overflow stream, it will not have flowing water at all times (may want to show on plans the different conditions)
- Trails will include ones for dogs on leash, off leash, and some that do not allow dogs
- Vehicle access to site for utilities and security
- Phasing plan and strategies for project

PUBLIC MEETINGS

Two public meetings were held to gather community input on the development of the master plan since the community expressed a desire to be a part of the process during a meeting with mayor Alex Scott prior to the initiation of the master planning process. The first public meeting for the park master plan took place in December 2019, not long after the first committee meeting. This first public meeting focused on introducing the community to the project, the property, and brainstorm ideas on how the property could be developed into a park. The second public meeting was in January 2020, this meeting was to review and gather community input on the two conceptual park plans that had been developed.

MEETING #1

TOPICS

Activities
1. Hiking
2. Trails
3. Dogs on leash
4. Birding
5. Connection

Trails
1. Natural surface
2. Connections
3. Limit disturbance
4. Walking
5. Nature

Facilities
- None
- Restrooms

Use for large storm events
- Yes
- Drain Pond
-Wetlands

Other
- Restore to natural state
- Remove structures
- No off-leash dogs
- Low maintenance
- No parking
- Native plants
- Flood control

MEETING #2

TOPICS
- Keep chimney
- Dogs on leash
- Stormwater
- No vehicle access
- Keep natural
- Add parking to Old Mill Rd
- Restore to natural system
- Natural trail system
- Low maintenance
- No new structures
- Connect to existing areas
- Positive environmental impact
- Keep simple
- Keep existing trails
- Bike riders
- Limit boardwalks
- Family Friendly
- Phasing
- Minimal change
- Improve stream crossings

COMMUNITY SURVEY

Since it is not always possible for community members to attend the public meetings the planning team and study committee developed an online community survey, so that residents could provide their ideas and input. The survey ran from December 2019 to April 2020 and gathered over 300 responses. A summary of the survey results is provided below.

1. Have you hiked the trails from Riding Meadow Park to Beechwood Farms?

Yes - 67% No - 33%

2. Would you like to have trails on the Hardie property?

Yes - 97% No - 3%

3. What is your preferred trail surface?

Mowed turf - 15% Hard surface - 15% Natural soils - 70%

4. Dog allowed on leash or off leash?

Off leash - 30% No dogs - 18% On leash - 52%

5. Would you prefer stream crossings to be:

Natural - 15% Stepping stones - 71% Bridge - 14%

6. What park facilities would you like to see in Fox Chapel:

size of the word in the word cloud corresponds to the frequency of the response.

7. Active uses for the new park

Restrooms - 44% Picnic area - 35% No active - 34% Off leash dog - 29%

8. Approach to site development:

Minimal impact - 91% Engineered construction - 9%

15. Which borough parks have you visited?

Salamander - 64%	Riding Meadow - 65%	Scott - 32%
Lockhart loop - 44%	Trillium Trail - 73%	McCahill - 49%

16. How often in past year did you visit a borough park?

0 times - 7%	1 to 3 times - 19%	4 to 7 times - 18%
8 to 12 times - 15%	More than 12 - 41%	

17. Activities you have participated in at the parks:

size of the word in the word cloud corresponds to the frequency of the response.

KEY PERSON INTERVIEWS

As a part of the community engagement for the Hardie property master plan Pashek + MTR conducted some key persons interviews with people around the community. The study committee identified the people they wished to have participate in the interviews.

Key people interviewed:

- Mandy Steele – Borough Council and neighbor of the Hardie property
- Mrs. Heberle – Neighbor adjacent to Hardie property
- Jim Bonner – Director of the Audubon Society of Western Pennsylvania
- Alex Scott – Mayor of Fox Chapel
- Hiller Hardie – member of Hardie family, former owners of the property

Though topics varied from each individual the most common thread among the interviews was to have the property be a passive, natural park with trails and connections to the existing park system. Other common themes from the interviews include removing all the structures on the site, using the valley for stormwater mitigation, allowing at least some dog use on the site, creating a partnership with the Audubon Society, removal of the pond since it is a liability, utilizing the site for education, and addressing security concerns of the site.

A couple of the interviews brought up concerns about traffic on Old Mill Road, indicating a desire that access to the park through the trails is encouraged and not driving, as well as traffic calming to allow for safe crossings. Education came up in a few of the interviews and that the site, especially if used for stormwater, offers opportunities to educate children as well as all park users. Almost all the interviews reflected the desire to really focus on the natural beauty of the site and highlight features like the waterfall for visitors to enjoy. Most of the interviews reflected a desire to remove the structures on the property, Hiller Hardie mentioned that it would be nice to keep something of the original cottage, like the stone fireplace to commemorate the history of the site. Mayor Alex Scott brought up the idea to honor the Hardie family, and their contribution, in the naming of the new park. Below is a quick look at the topics from the interviews, full transcripts from the interviews are included in Appendix D of this report.

KEY PERSON INTERVIEWS

TOPICS

- Trail & park connections
- New trails
- Remove house and barn
- Dog use
- Natural park
- Stormwater mitigation
- Partnerships
- Waterfall
- Education
- Traffic & Parking
- Security
- Remove pond
- Native plants
- Low maintenance
- Honor Hardie family
- Preserve fireplace
- Stepping stone crossings
- Passive, no active recreation

DESIGN CONSIDERATIONS

DESIGN & PLANNING PROCESS

The master planning process is developed over three phases: 1) discovery; 2) vision; 3) road map. The discovery phase is investigating the history and current conditions of the site, determining opportunities and constraints. This is completed through background research, site inventory, and site analysis. The second phase, vision, is guided by the community input. The vision for the site is provided by the direction and goals of the community members. The last phase is the road map, identifying goals and vision of the community and creating a master plan that reflects those goals. Developing the master plan relies on cycling back to the other phases, often referred to as "feedback loops", to refine the initial concepts into a master plan that meets the goals of the community within the constraints of the site.

CONCEPTS

After the initial study committee meeting and the first public meeting, conceptual park master plans were developed for the Hardie property. Two concepts were developed for the site, one concept referred to as beads, the other is oxbows. Both of these concepts used natural stream formations as the basis of the design forms. We developed two different concepts, each with a different emphasis on park development to push discussion on what the residents want leading to the final master plan. Often the final master plan is not one of the concepts but the best parts from each concept. In this case each concept represented different means of park use and different stream configurations for the green infrastructure.

Hardie Property

Park Master Plan Concept: Beads

Borough of Fox Chapel
January 15, 2020

Scale: 1" = 50' - 0"
Contours: 10'

PASHEK MTR

BEADS

The beads concept refers to the design of the green infrastructure in the park space, inspired by bead streams formed by glacier movement and melting. The beaded design is similar to more traditional stormwater green infrastructure practices, it is a system of interconnected wetlands and ponds that run through the site.

The main park entrance is along Old Mill Road, using the existing trail entrance and drive. The drive continues to a bus drop off roundabout and several accessible parking spaces. In this plan the main structure of the house is removed and an outdoor classroom is built with the existing stone fireplace at one end. This outdoor classroom acts as the main feature of the park and serves visiting classes. Interpretive signage on the history of the site would be incorporated around the stone fireplace. Behind the outdoor classroom is a small trail that leads to a viewing platform over the stream so that visitors can see the slate falls. Near the bus drop off, not far from the outdoor classroom there is a picnic pavilion and open lawn space for events and gatherings.

The main feature of this concept design is the green infrastructure. A chain of wetlands and ponds form a system down the spine of the park for stormwater and flood mitigation. The trail system through the park weaves among the wetlands and ponds allowing visitors to experience all the different spaces the beads create. A five-foot-wide accessible trail loop circles through the middle of the site, and can be accessed from the drop off area. The rest of the trails on the site would be three-foot-wide, single track, natural surface trails. Boardwalks and viewing platforms are incorporated in the trail system where the trails cross the wetlands and ponds. The plan also includes a bird blind area between the constructed wetlands and the existing stream of Squaw Run.

OXBOWS

The oxbow concept uses a green infrastructure corridor that is based on a more natural oxbow stream form. This design would create a more natural looking system to manage stormwater and flooding. It also allows a larger potential capacity to temporarily hold stormwater in large events.

In this concept there is no vehicular access to the park, the main entrance is still along Old Mill Road where the current drive enters the property. The main, five-foot-wide, accessible trail follows along the existing drive to the middle of the property near the existing house. The existing house would be torn down, in its place would be a plaza, over the footprint of the old cottage with the stone fireplace. Attached to the plaza would be a small viewing platform, and the remaining basement of the house would be turned into a wetland area. The plaza and platform would include interpretive signage on the history of the property and the conversion of the house basement into a wetland. A small trail and overlook behind the plaza allow visitors an area to view the existing waterfall.

Directly across from the plaza space, cantilevered over the green infrastructure corridor, is a pavilion overlooking the valley of the park. The main five-foot-wide accessible trail loops from the entrance of the park, on Old Mill Road, around to the plaza and pavilion, and across the stormwater channel. The green infrastructure corridor is designed to look like a

LEGEND

- Stormwater Wetland
- Vernal Pool
- Meadow
- Boardwalk
- Mowed Lawn
- Trees

Waterfall
Existing Stream
Viewing Platform
Rogers Interpretive Plaza
Wetland in Foundation Remnants
Pavilion with Viewing Platform
Viewing Platform
Trail 5'
Seating Area
Proposed Corridor
OLD MILL ROAD
Trail 5'
Trailhead
Existing Parking
To Existing Trail
Trail 3'
Existing Stream
Trail 5'
Boardwalk
Vernal Pool
Bird Blinds
Vernal Pool
Squaw Run
To Existing Trail
Squaw Run

PRECEDENT IMAGES


OXBOW STREAM


WETLAND


WETLAND IN FOUNDATION


NATURAL SURFACE TRAIL


TIMBER PAVILION


TRAILHEAD KIOSK


TRAIL MARKERS


VERNAL POOL


BIRD BLIND


INTERPRETIVE SIGNS


BOARDWALK

Hardie Property

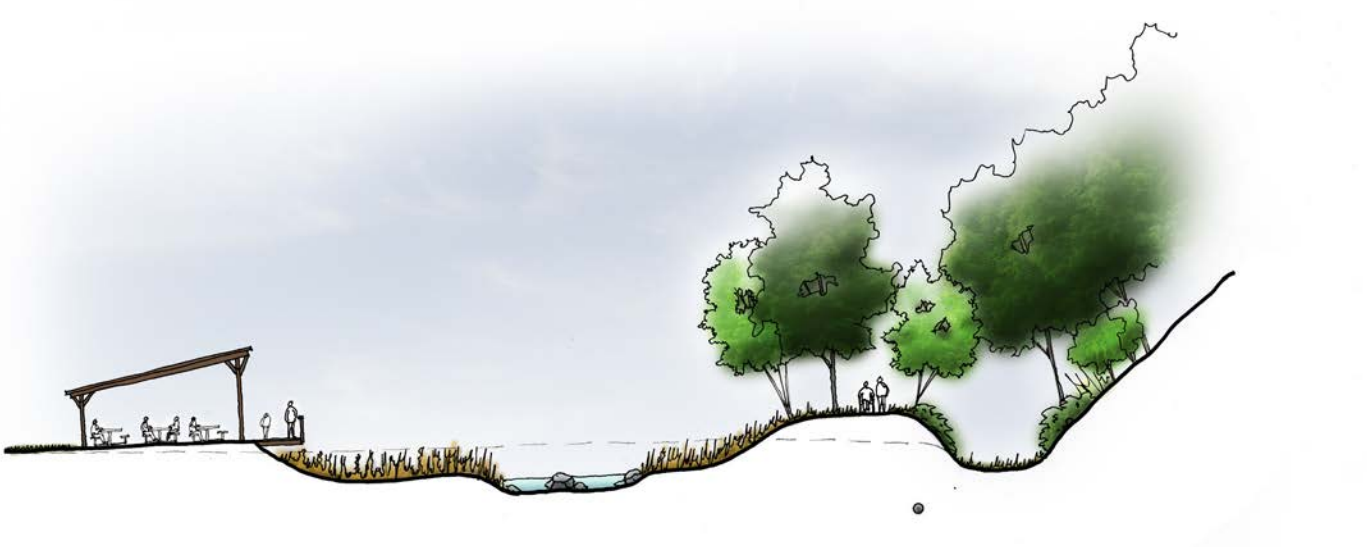
Park Master Plan Concept: Oxbows

Borough of Fox Chapel
January 15, 2020

Scale: 1" = 50' - 0"
Contours: 10'

PASHEK MTR

natural stream pattern nestled into a wide depression of wetlands that could flood during storm events. Along sections of the corridor are small diurnal pools that would provide seasonal wildlife habitat. The trail, with boardwalks and viewing platforms, provides spaces for visitors to linger and learn about the green stormwater infrastructure as well as the natural habitats. Linear bird blinds are scattered along the trail between the corridor and Squaw Run. The remaining trails off the main trail are small, three-foot-wide, natural surface trails that connect to the existing trail systems.



DRAFT MASTER PLAN

The draft master plan was developed based on the feedback provided by the community at the January community meeting, as well as the study committee during the January meeting. Both meetings concluded that the preferred design form was the oxbow design. The community and committee expressed wishes to not have park visitors drive on the property, and to keep the design as simple and natural as possible while still meeting all the original project goals.

Access to the site is provided by a trail that follows the current access drive. The main trail loops throughout the park. The main difference with the trail system in the draft compared to the concept is there are fewer boardwalk areas, the trail stays mostly to the edge of the wetlands, and only crosses the channel in two locations, once with a boardwalk and overlook, and a second time with a culvert. The plan still utilizes the meandering, natural, oxbow stream pattern for the green infrastructure corridor and keeps many of the same features. No pavilions or large structures are incorporated because after the community and committee review of the concepts most participants did not feel that a shelter was necessary and provided additional cost and maintenance. Lastly, the trail system was expanded to connect with more of the existing trails and surrounding neighborhoods.

Hardie Property
Draft Master Plan

Borough of Fox Chapel
April 13, 2020

PASHEK MTR

FACILITY DESIGN GUIDELINES

It is important to provide facilities that are accessible to all park visitors. Furthermore, it is important that all facilities be designed and located in accordance with recommended standards and guidelines to minimize liability. The following is a summary of applicable standards and guidelines related to facilities being considered for the Hardie property. In, general, the master plan is designed so that the main areas of the park are fully accessible meeting ADA guidelines from the parking area on Old Mill Road, the main trail loop through the park, and the interpretive plaza space. Further there is accessible parking in the new parking area design on Old Mill Road. Though the small, three-foot wide, natural surface trails are not considered accessible, they do meet the guidelines of sustainable trail development.

ACCESSIBILITY REQUIREMENTS & GUIDELINES FOR PARKS

Ensuring accessibility to all facilities not only accommodates those with disabilities, but also makes it easier for the general public to use the facilities. Municipalities must take steps to provide accessibility for all park users.

Accessibility, in design terms, is described by the Americans with Disabilities Act (ADA), which guarantees equal opportunity for individuals with disabilities to participate in the mainstream of public life. To do so, the ADA sets requirements for facilities to prevent physical barriers that keep people with disabilities from participating. When recreational facilities are built or altered, they must comply with the ADA standards by providing an accessible route to the area of use and spectator areas. With regards to complying with ADA, the following standards and guidelines must be taken into consideration:

Access Board guidelines on Recreation Facilities: https://www.access-board.gov/guidelines-and-standards/recreation-facilities/guides

Access Board guidelines for Outdoor Developed Areas: https://www.access-board.gov/guidelines-and-standards/recreation-facilities/outdoor-developed-areas/final-guidelines-for-outdoor-developed-areas

2010 ADA Standards for Accessible Design: https://www.ada.gov/2010ADAstandards_index.htm

Forest Service Accessibility Guidebook for Outdoor Recreation and Trails: https://www.fs.usda.gov/managing-land/national-forests-grasslands/accessibility/resources

Penn State Center for Dirt and Gravel Road Studies regarding trails: https://www.dirtandgravel.psu.edu/center/trails

2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

Portions of 2010 Standards that are highly relevant to park design:

Accessible Routes (Chapter 4)
Parking spaces (Chapter 2, Section 208 and Chapter 5, Section 502)

Accessible Routes

All accessible features must be connected by an accessible route.
Requirements:

- Less than 2% cross slope.
- Less than 5% grade running slope, unless ramped.
- If running slope grade exceeds 5%, must be ramped. Vertical changes in level can be no more than ¼". Stairs do not meet this requirement and cannot be part of an accessible route.
- Surface must be firm, stable, and slip-resistant.
- Width: DCNR requires a 5'- 0" minimum accessible route width to allow for two-way travel and passing. This is wider than the width required under the 2010 Standards.

Accessible Parking

Accessible parking spots must be adjacent to an accessible route. All accessible elements must be connected to accessible parking by an accessible route.

- Paving required in parks, not at trailheads.
- Clearly marked, with correct signage.
- Car spaces should be at least 96" wide.
- Van spaces should be at least 132" wide and next to a 60" wide access aisle.
- Access aisle should adjoin an accessible route.
- Required number of accessible spots depends on the total number of spaces in the facility.
- Fine amounts should be posted under the accessible parking sign.

GUIDELINES FOR OUTDOOR DEVELOPED AREAS

Where the 2010 Standards are not applicable, the Standards for Outdoor Developed Areas may provide guidance on achieving accessibility.

Outdoor Recreation Access Route (Section 1016)
Outdoor Constructed Features (Section 1011)
Viewing Areas (F246 and Section 1015)
Picnic Facilities (F245)
Trails (F247 and 1017)

Outdoor Recreation Access Route vs. Accessible Route

Accessible Routes apply to facilities covered by the 2010 Standards. Outdoor Recreation Access Routes apply to facilities covered by the Guidelines for Outdoor Developed Areas.

- Running slope grades may be as steep as 10% for short segments.
- Surfaces must be "Firm and Stable" but are not required to be "Slip-resistant."
- Obstacles may be higher than ¼", although stairs are still non-compliant.

Outdoor Constructed Features

Outdoor constructed features consist of:

- Picnic facilities
- Fire rings, grills, fireplaces, and wood stoves
- Trash and recycling receptacles
- Water hydrants
- Utility and sewage hookups
- Outdoor rinsing showers
- Benches
- Telescopes and periscopes

How many of each type of feature must be accessible?

All features located in an accessible camping unit or picnic unit. For common-use features, the required number of accessible units will depend on the total features provided.

Constructed features must have clear ground space:

- Space for wheelchair users to approach and use accessible features.
- Must be level, firm, and stable.
- Must provide adequate clearance.
- Specific guidelines located in Sections 305 and 306.

Viewing Area Guidelines

- Clear ground space on Outdoor Recreation Access Route.
- Unobstructed view between 32 and 48 inches above clear ground space.
- Slope no steeper than 1:33 or 1:48 for asphalt, concrete and boards.
- Firm and Stable Surface.
- Turning space.

Trails

Distinctions between trails, outdoor recreation access routes, and accessible routes:

- A trail is used primarily for recreational purposes.
- Accessible routes and outdoor recreation access routes are used primarily to connect elements, spaces or facilities within a site.
- Trails are held to less stringent standard than Accessible Routes.

Accessible Trails and Boardwalks

- 6' minimum width; 10' maximum width
- Maximum 5% slope
- Surface firm and stable
- Rest areas with benches approximately every 300'

Allowable Running Slopes of Trails		
Steeper than	**But not steeper than**	**Maximum length**
1:20	1:12	200 Feet
1:12	1:10	30 Feet
1:10	1:8	10 Feet

Trail Signs

Trail signs, where provided, should include:

- Length of the trail or trail segment
- Surface type
- Typical and minimum tread width
- Typical and maximum running slope
- Typical and maximum cross slope

SUSTAINABILITY GUIDELINES

To fully align with the project goals, the Hardie property should fully employ the elements of sustainable park and trail design. The master plan has applied many of these guideline and principles in the design. All the trails in the plan were designed to meet the sustainable trail design standards, this makes sure the trails can easily be maintained and used for many years without concerns of things like erosion. Also, the incorporation of a wide range of native plant communities and ecological variety, the site would allow for increased ecological diversity. This includes microecosystems of vernal pools, riparian corridors, wetlands, meadows, and wooded hillsides.

THREE PILLARS OF SUSTAINABILITY

To align with project goals and ultimately to be successful, the Hardie property should must be designed to be physically, ecologically, and economically sustainable. This includes:

Physical Sustainability. Designing trails to retain their structure and form over years of use and under forces of humans and nature is a key factor in sustainability. Trail use promotes change, so trails must be designed in anticipation of change to ensure that they remain physically stable with appropriate maintenance and management.

Ecological Sustainability. Minimizing the ecological impacts of trails and protecting sensitive natural and cultural resources is fundamental in sustainable trail design and development.

Economic Sustainability. For any trail to be sustainable, the implementing agency or advocacy group must have the capacity to economically support it over its life cycle. Developing and committing to a long-term maintenance strategy is a critical aspect of a successful trail program.

SUSTAINABLE PARK DESIGN

Pennsylvania Department of Conservation and Natural Resources (DCNR) publishes guidelines and encourages sustainable design through grant-making.

"Creating Sustainable Community Parks and Landscapes, A Guide to Improving Quality of Life by Protecting Natural Resources," provides valuable recommendations on how to implement sustainable practices into design, maintenance, and operations of parks across the Commonwealth. The guide can be obtained from: www.docs. dcnr.pa.gov/cs/groups/public/documents/document/d_000620.pdf

These practices are based on the following principles:

- Maintaining and enhancing trees and natural landscaping
- Connecting people to nature
- Managing stormwater naturally
- Conserving energy
- Integrating green design and construction

RIPARIAN BUFFER

Riparian forest buffers serve as a transition from land to water. They filter the sediments and pollutants from farm fields, residential lawns and roadways to help keep them from reaching the water. Pennsylvania Department of Conservation and Natural Resources (DCNR) encourages the enhancement riparian buffers through grant funding and according to these principles for sustainable development in areas near streams:

Generally, the wider and more diversely planted the buffer, the more likely it will be to provide positive benefits.

A forest buffer is described by the U.S. Department of Agriculture as incorporating three zones that have different functions, planting strategies and management applications (unmanaged forest, managed nut/fruit trees and shrubs, and managed woody florals and forbs).

In buffers, it is a good idea to consider native plants, avoid invasive species, and include a mix of deciduous and evergreen trees.

SUSTAINABLE TRAIL DESIGN

The trails should meet the following objectives:

- Connect positive, and avoid negative, control points
- Sustainable trails lead users to desired destinations such as water features, historic sites, vistas, interesting landforms and user facilities; while avoiding wet areas, steep slopes, critical habitats, and other culturally or environmentally sensitive areas.
- Keep water off the trail
- Erosion is the number one problem for sustainable trails. It damages trails, is expensive to repair and diminishes the users' experiences. Water is the primary erosive force. Trails that collect water or channel water will be both environmentally and economically unsustainable.

- Follow natural contours
- Trails lie on the land in three ways:
    1. Fall Line Trail - along a fall-line, parallel with the direction of the slope
    2. Flat Trail - on flat ground with little slope or cross slope
    3. Contour Trail - along the contour with subtle elevation changes. Of these types of trails, only the contour trail easily sheds water and is thus sustainable.
- Keep users on the trail
- When users leave the trail tread, they widen it, create braided trails, and create social trails. These can cause environmental damage and raise maintenance costs. Users leave the trail when it becomes eroded or wet, or when the trail does not meet their needs or expectations.

Trail Design Considerations

Ultimately, a sustainable trail design will most often be a contour trail that connects desired control points by contouring along the sides of slopes while making subtle changes in grade.

Important considerations in sustainable trail design include:

- Trail corridor
- Tread design
- Tread drainage
- Changes in trail grade
- Drainage solutions
- Tread reinforcement & trail structures
- Trailhead design
- Signage and markings
- Trail gates and barriers
- Bridges
- Landscaping with native plants

Five Essential Elements of Sustainable Trails

Finally, trails should incorporate these design techniques:

The Half Rule: A trail's grade shouldn't exceed half the grade of the hillside or side-slope that the trail traverses. If the grade does exceed half the side-slope, it is considered a fall-line trail. Water will flow down a fall-line trail rather than run across it.

The 10 Percent Average Guideline: Generally, an average trail grade of 10 percent or less is most sustainable because this aids planning, applies to most soil types, minimizes user-caused erosion, allows design flexibility, helps future reroutes, and accommodates undulations.

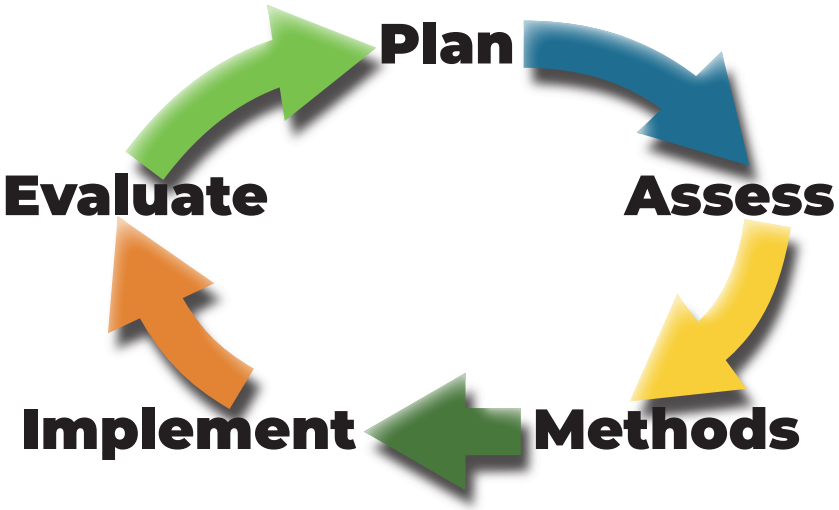
Maximum Sustainable Grade: The maximum grade for a trail length of longer than 10 feet should be identified and calculated early in the planning process. Planning for these very steep segments should consider soil type, presence of rock, annual rainfall amount, grade reversals (dips and rises), types of users, number of users and difficulty targets.

Grade Reversals: Dips and rises should be included because they force water to exit the trail at the low point of the grade reversal before it can gain more volume, momentum and erosive power.

Outslope: As a trail contours across a hillside, the downhill or outer edge of the pathway should tilt slightly down and away from the high side. This tilt, called an outslope, encourages water to sheet across and off the trail instead of funneling down its center.

INVASIVE PLANT MANAGEMENT

Management of invasive species on properties such as the Hardie property is necessary to help preserve the natural beauty of the site. The Borough should adopt an adaptive management approach for invasive management on the site both as they develop the site into a park and after the establishment of the park to keep invasive species out of the native ecosystems.



Steps in Adaptive Management Approach:

1. Plan. Define conservation goals and objectives for the site.
2. Assess. Complete an assessment of the site to determine what invasive plants exist and impede on the conservation goals and objectives.
3. Methods. Determine preferred methods of control for the invasive plants.
4. Implement. Develop a plan to implement controls, this includes evaluating what control methods are most effective
5. Evaluate. Monitor, evaluate, and adjust invasive species management as necessary, always referencing the defined conservation goals and objectives.

INVASIVE MANAGEMENT TECHNIQUES

For the Hardie property invasive control methods would mostly be manual control, with occasional application of chemical control to mitigate more aggressive plant varieties. Many of the invasive plants on the site can be controlled by cutting them down, or completely pulling the plant from the ground. This control would need to be repeated with some of the invasive species such as privet, honeysuckle, and multiflora rose to maintain control. Chemical control may be necessary to control populations of herbaceous invasives such as Japanese Stiltgrass.

In phase one of the master plan the goal would be to eradicate as much of the invasive plant populations as possible, but repeat control measures will be needed to maintain invasive control. This means that additional treatments will be needed after the initial removal of invasives. Also, even with the new plantings management will be needed to deter establishment of weeds and invasive plants, such as mowing meadows once a year (or every two years), this is detailed in the maintenance section of the report.

There is a wide range of ways in which to manage invasive species, the effectiveness of the techniques depends on the invasive plant species as well as specific site conditions. Below is a summary of the common management tools used to control invasive plants. For additional information on invasive plant management and invasive plants in Pennsylvania please see: https://www.dcnr.pa.gov/Conservation/WildPlants/InvasivePlants/Pages/default.aspx

Manual Control

Manual control methods include techniques that do not use chemicals, such as herbicides, and require either human action or mechanical tools. The most commonly utilized form of manual control is hand-pulling or pulling a plant with a tool or machine. Pulling can be effective at removing many invasive shrubs and seedlings, but often needs to be completed regularly to control species with large seed banks or complex root systems. Another method of manual control is mowing or cutting, this method is especially effective at controlling seed production and restricting growth. Species that can easily regrow from the remaining root system are not effectively managed by mowing unless the mowing in completed multiple times inhibiting growth.

Prescribed Burning

Controlled burning to inhibit plant growth, or rejuvenate plantings, has been used for centuries. The process of burning, can kill off some invasive plant species while encouraging some native species to propagate. It works in similar ways as mowing and cutting but has different effects since the burning can improve soil conditions, and some plant seeds require burning conditions to propagate.

Soil Covers

Utilizing soil covering, such as mulch or planting fabric, can limit weed seed germination. This method is best used around established plantings since the mulch can also inhibit target species seed germination as well.

Chemical Control

After manual controls, chemical controls are the most common methods used to treat invasive species, especially the invasive plants that are not easily controlled by manual techniques. Chemical control utilizes herbicides to kill the invasive plants. There is a wide range of herbicides available, some are broad-spectrum and will kill anything it comes in contact with and some have specific properties that only kill a certain type of plant. It is important if chemical controls are used in conservation to make sure that the products used are not harmful to the native, desired plants, are safe for human use, and have a short life in the environment so that they will not harm new plants or damage the surrounding environment. Utilizing chemical control should be a low priority management strategy, since it can have numerous undesirable risks to the environment.

Biocontrol

Biological control leverages animals, insects, fungi, or other microbes that are natural predators of the invasive species to control the plants. The goal of biological control is more to reduce the abundance or impacts of the invasive plant on the environment. Biological controls can be a risky control method since the introduction of the control agents includes more species and microbes that are not native, there are risks that it could have adverse effects much the same as the invasive plant species itself.

Controlled Grazing

Controlled grazing is a control method that is growing in popularity. This method utilizes an animal, often goats or sheep, to graze on the land and consume the invasive plants. This method of control is much like cutting or mowing but uses an animal instead of a tool. Grazing has been found very effective on some invasive plant species and is best preformed on large areas of invasive plants over several years to provide the best control.

INVASIVE	LOCATION	CONTROL
Woody		
Norway Maple	Upland forest areas	Hand pull seedlings, cut and remove trees
Bush Honeysuckle	Upland forest, along streams, in utility right of way, wooded edges of fields	Repeated mowing, cutting or burning, foliar application of herbicides in the spring or fall
Multiflora Rose	Upland forest, along streams, in utility right of way, wooded edges of fields	Mow or cut then apply herbicide, or foliar application of herbicides in the spring or fall
Privet	Upland forest, along streams, in utility right of way, wooded edges of fields	Mow or cut before summer seeding, or foliar application of herbicides in spring
Herbaceous		
Garlic Mustard	Along streams, in utility right of way, floodplain fields	Repeated mowing or cutting before summer seeding, or selective herbicide application in early spring or late fall
Pachysandra	Along streams, in utility right of way, floodplain fields	Hand pulling, careful to get all roots
Japanese Stiltgrass	Along streams, in utility right of way, floodplain fields	Repeated hand and/or tool removal before fall seeding, or selective herbicide application for large populations
Lesser Celandine	Along streams, in utility right of way, floodplain fields	Hand or tool removal, careful to remove bulblets, or broadleaf herbicide application

MASTER PLAN RECOMMENDATIONS

MASTER PLAN

The plan for the park on the Hardie property emphasizes the natural beauty of the site and strives to create a relaxing and restful space for visitors to experience. The site features steep wooded hillsides, a lowland valley, and two streams, one with a waterfall. These features alone make the site a desirable place to visit. The plan builds on these features to meet the goals and desires of the community. These goals included creating a passive park space to commune with nature, educate visitors on the history of the property, and use the park to help mitigate flooding events in Squaw Run.

The community should keep in mind that the majority of the developable site on the Hardie property is within the 150' buffer required for a high quality stream by the Pennsylvania Department of Environmental Protection. A waiver or exception would need to be obtained to complete development of the park plan. Since the focus of these changes are to restore and improve the natural state of the area, as well as to abate flooding threats downstream it is likely that development of the park plan can be coordinated with the Pennsylvania DEP as a waiver to the buffer regulations.

ENTRANCE SEQUENCE

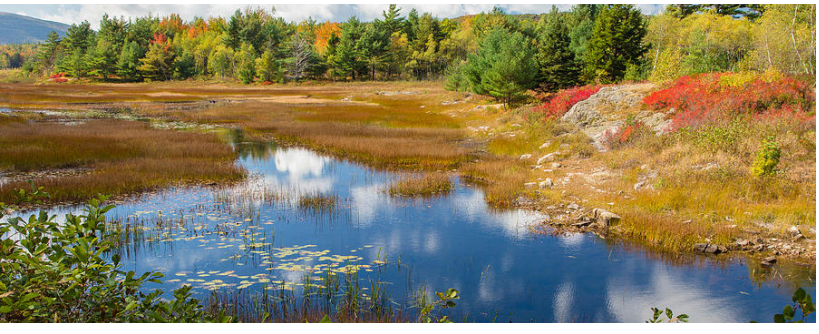
The main entrance to the new park is located off of Old Mill Road. Visitors can park in the expanded parking area across Old Mill Road from the Hardie property. The expanded parking allows for a few more

Hardie Property
Master Plan

Borough of Fox Chapel

Scale: 1" = 50' - 0"
Contours: 2'

PASHEK MTR

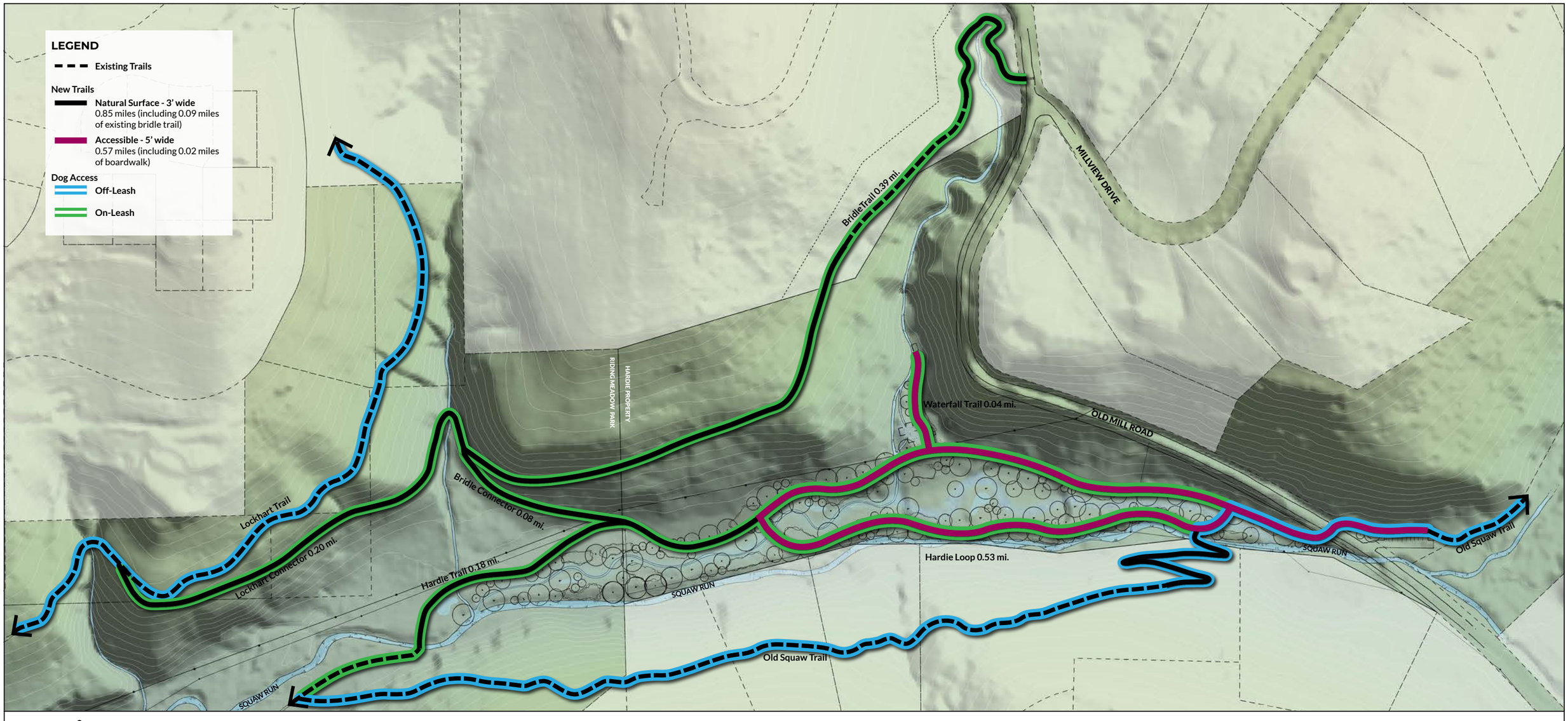


vehicles, a designated accessible parking space, and the new orientation provides vehicles with a space to back up without having to back into Old Mill Road. At the improved parking area there is a trailhead kiosk with maps and information on not just the Hardie property features but the park and trail system throughout Fox Chapel. Visitors can then cross Old Mill Road to enter the new park at the current drive entrance. The new park is not designed for public vehicle entrance. Maintenance and utility vehicles will be able to navigate the site. The existing drive will be converted into a part of the park trails.

TRAIL SYSTEM

The trail entering the property from the parking area on Old Mill Road is a five-foot-wide accessible trail, with five-foot shoulders on each side. The trail follows along the existing drive lane to the interior of the property. This accessible trail loops through the property, across the wetland area and back out to the parking. This half mile loop allows for visitors of all abilities to be able to park and explore the property with ease. The trail crosses the wetlands and green stormwater infrastructure corridor in two places, one of the crossings is a boardwalk with a viewing platform, the other crossing is a raised trail over a culvert to allow the channel to continue under the trail. The culvert area was included to allow utility vehicle access along the east edge of the property, specifically for the sewer line that runs adjacent to Squaw Run.

A five-foot-wide trail leads from the interpretive plaza space, in the location of the existing house, to a viewing platform for the slate ledge waterfall between the two hillsides. A three-foot-wide natural surface trail continues past the boardwalk area and into Riding Meadow Park. The trails cross Squaw Run in two locations, once along the north end of the property and once down at the south end of the green stormwater infrastructure corridor. Both crossings would be left natural with simple stones to allow trail users to connect to the existing Old Squaw Run trail on the east side of the stream. There is also a three-foot-wide natural surface trail that connects the Hardie trails to the Lockhart Trail. This connector trail expands to connect to the old bridle trail and ends on Old Mill Road across from Millview Drive. The bridle trail extends through the adjacent property and would require a trail easement, like the existing Old Squaw Run Trail to the east of the property. This trail connection allows access to the property and the existing trail system for community members in the Millview Drive neighborhood. These trails not only help connect the dots between the existing parks to the north and south of the property but provide additional opportunities for users to explore the property and existing trail systems.



Hardie Property

Master Plan - Trails Diagram

Borough of Fox Chapel

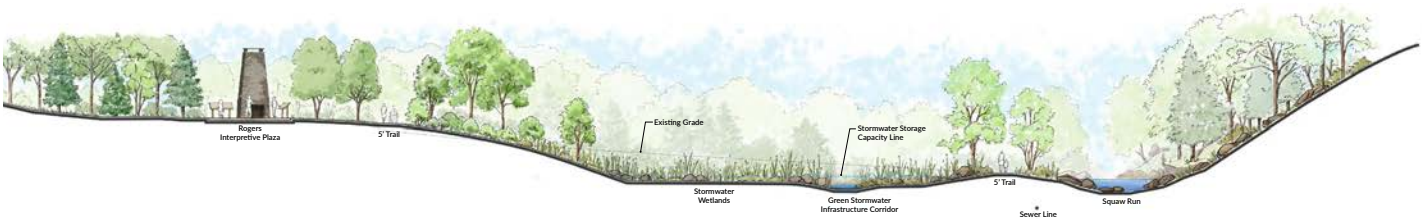
PASHEK MTR

DOG ACCESS

As noted in the trail diagram graphic, dog access on the trails and park will vary. After careful consideration the committee came up with a plan for dog access on the trails. The existing trails, Lockhart and Old Squaw Run Trail, are already designated for off-leash dog access, and this access would remain on the trails. All the new trails including Bridle Trail, the Lockhart Connector Trail, Bridle Trail Connector, Hardie Trail, Hardie Loop, and the Waterfall Trail will be designated as on-leash dog access. This access will be defined by the trail signage in the park.

GATHERING SPACES

The park includes three small group gathering spaces as well as several individual seating areas with benches. The three gathering spaces include the interpretive plaza, the waterfall overlook, and the boardwalk viewing platform. The interpretive plaza is a 20 x 30 foot area that includes the existing stone fireplace from the original house. This space also connects to the wetland area that is created from the basement remains of the house. The plaza space allows for small groups to gather with interpretive signs on the history of the property as well as information on the basement wetland green infrastructure. The waterfall overlook is a small viewing space on a flat area close to the fall. This small space could include educational signage on the geology and native ecology of the steep wooded hillsides. The last group gathering space is the viewing platform on the boardwalk, this space would allow visitors to view the green stormwater infrastructure corridor with the oxbow shape and wetlands, with educational signage on climate change as it impacts us and more specifically stormwater management and how the system functions to address an increasing amount of local flooding. The plaza and boardwalk viewing platform are designed to accommodate a class of students, if local schools would like to use the site for education. The area are small enough that they can be used by individuals visiting the park as well. Scattered along the trail system are benches for trail users to be able to rest, relax, or reflect within the park space.



LANDFORMS

The existing wooded slopes on the site remain untouched in the design, with the only changes being to accommodate new natural surface trails. The valley of the site, which at some point was converted into meadows, fields, and a large pond is where the most change occurred. The modification of the landforms in the valley of the property allows the property to work as a natural stormwater system as well as help to return the area to a more natural state, prior to the development of the property as a residence, pastureland, and manicured fields. The fields are converted into a depressed corridor with sloping wetlands and small vernal pools. The area between these new wetlands and the existing stream is build up into a wooded berm that serves as a buffer between the stormwater system and the existing stream, while also providing the opportunity to develop a healthy riparian forest along the edge of the property. The changes in the existing topography in the valley of the site allows for more topographic diversity, which leads to more ecological diversity on the site. This diversity provides for a more dynamic experience for users and improves the diversity of the native plant and animal communities in the area.

STORMWATER

The valley of the Hardie property, adjacent to the existing stream Squaw Run, offers a unique opportunity for stormwater management and flood mitigation. The green infrastructure for the master plan includes a defined corridor space with a wide swath of wetlands that can handle flood conditions in large storm events. The main corridor connects to Squaw Run on the northeast edge of the property, the corridor then meanders through the valley of the site with curves and oxbows to direct water flow, and then ends south of the property in Riding Meadow Park. The main corridor would not have running water at all times, only during wet periods when Squaw Run swells beyond its capacity. The water flowing from the waterfall will travel through the newly created meandering stream, eventually connecting with Squaw Run to the south.

Hardie Property

Master Plan - Storm Conditions

Borough of Fox Chapel

Scale: 1" = 50' - 0"
Contours: 2'

PASHEK MTR

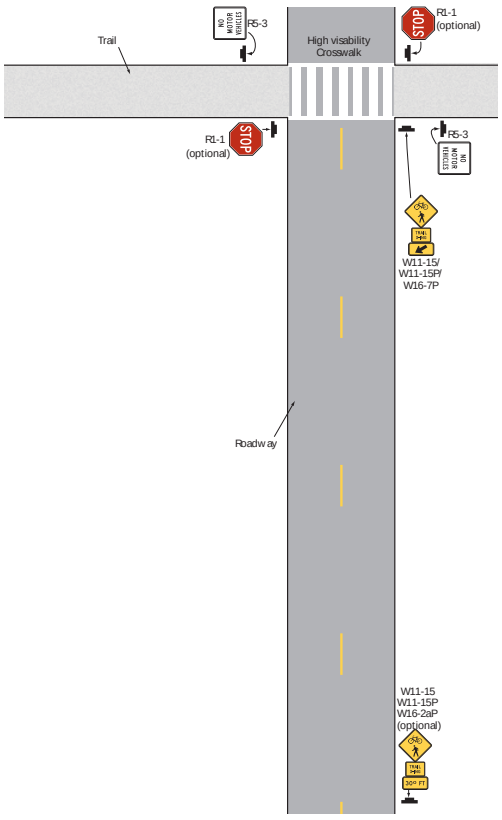
This part of the corridor would likely have a small amount of running water throughout the year.

Surrounding the green stormwater infrastructure corridor through the site is a depressed wetland area. This wetland area is designed to flood and hold stormwater during large storm events. Since much of the existing valley is wet meadows and fields, this depressed area would likely have wet soils year-round, making it perfect for wetland plant communities. Scattered through the wetland would be vernal pool areas, that are slightly more depressed and allow for water to pool during the wet seasons of the year. These vernal pools, which are common in the area, provide habitat for sensitive wildlife like salamanders. As designed the stormwater corridor and wetlands have the potential to hold about 1.3 million gallons of water, this capacity would need to be verified by a subsequent study after the master plan is adopted.

The green infrastructure system on the site could provide some flood relief to properties downstream while providing a diverse range of natural habitats on the park property. These combined benefits provide a unique opportunity for education, not just for students but all park visitors on the impacts of climate change in relation to the development and needs for innovative stormwater management strategies to mitigate negative impacts. It is recommended that a stormwater study of the site is completed by an environmental engineer in phase one of the master plan implementation. This stormwater study would evaluate the stormwater storage potential of the proposed site design through Hydrologic Watershed Analysis, providing valuable insight into stormwater detention goals for the site as well as guidance towards next steps for design and planning. The analysis would include stormwater modeling, recommendations, and risk assessments.

OLD MILL ROAD CROSSING

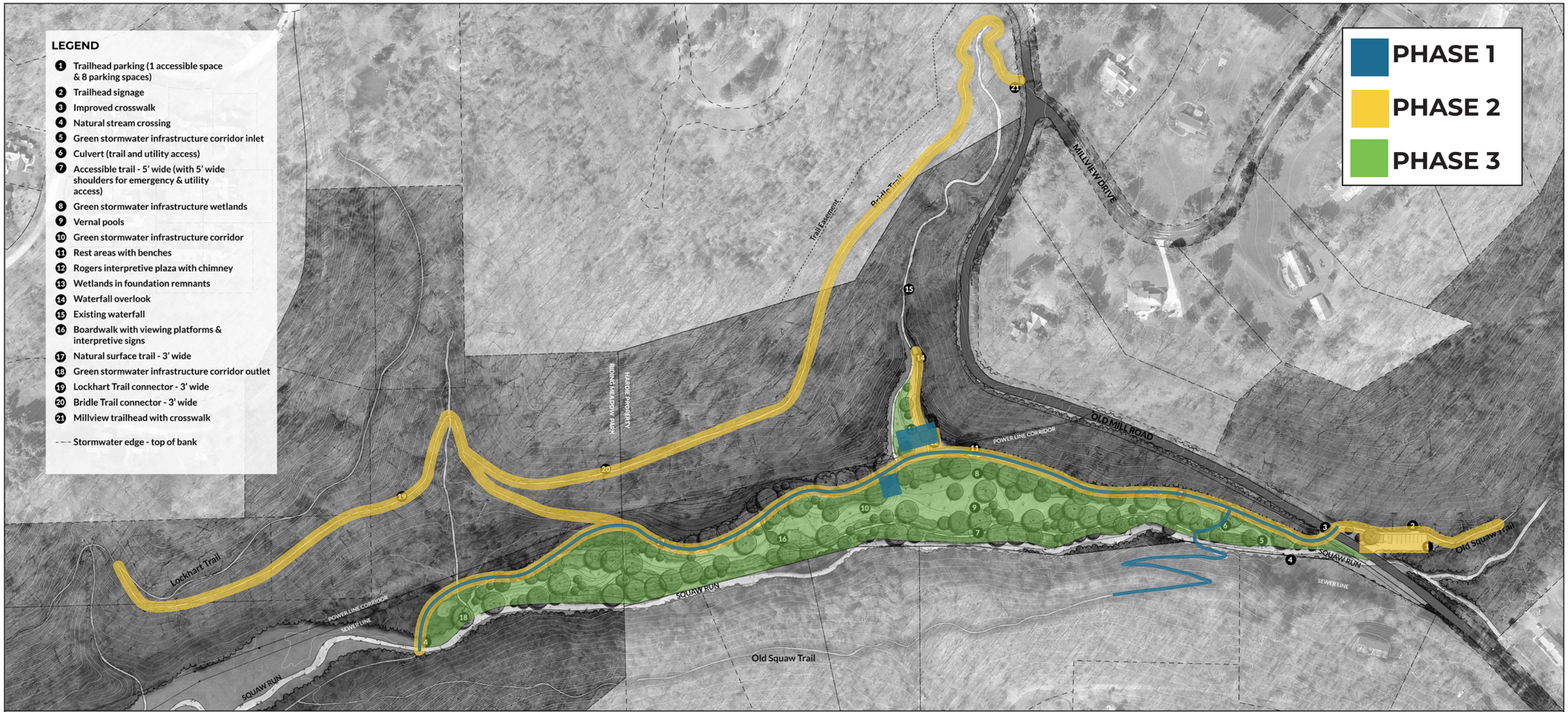
Currently there is a simple crosswalk crossing Old Mill Road from the parking area on the north side of the road to the Hardie property on the south side of the road. This crosswalk is simple striping on the roadway and a single traffic sign for drivers noting the crossing. Due to concerns expressed by the community and observations during site visits recommendations to improve the safety of the crossing were required as a part of this master plan recommendations. Though the roads have the required driver sight distance to the crosswalk, with the slopes, curves, and frequent high speeds of the drivers the safety of crossing is a concern especially since the new plans improve the trailhead parking on Old Mill Road, and the crosswalk is the only accessible access to the site. First, we would recommend the Borough use a combination of markings and signage identified in the Federal Highway Administration Manual on Uniform Traffic Control Devices, Chapter 9. The diagram below illustrates the types of signs and markings used in a trail crossing. The Borough should also consider installing either a permanent or temporary speed radar sign on the road coming down the hillside from the west to monitor speeds. Lastly, the Borough could increase police presence on the road to check from motorists that are traveling above the speed limit of 25 miles per hour on Old Mill Road.



COSTS & PHASING

Planning level opinions of probable initial capital costs were developed for the proposed improvements to the Hardie property. Recognizing it may be cost prohibitive for the Borough to construct all of the improvements at one time, we recommend the improvements to the Hardie property be completed in a series of three logical phases. . The first phase would be site preparation, like removing the structures, and a stormwater study to refine the plans for the green stormwater infrastructure corridor. The second phase would be developing the majority of the trail system, the interpretive plaza, parking area, and completing some of the plantings and signage. The last phase would be to develop the green stormwater infrastructure corridor and complete the trails system, plantings, and signage.

PHASE 1	
1. Remove house & barn	Remove house and barn down to the building foundations. The basement and stone chimney on the house will be preserved for use in phases two and three.
2. Re-route Old Squaw Run Trail	The section of the Old Squaw Run Trail at the north end of the property will be re-routed with a new stream crossing.
3. Mowed trail route	The main, proposed trail route will be cut through the property to provide trail use until further trail development in phases two and three.
4. Invasive plant species control	A control plan for the invasive plant species on the property will be implemented. This plan, though some measures will be ongoing, will provide an initial eradication of the invasive plants on the site.
5. Stormwater study	To further the green stormwater infrastructure the elements of the master plan a stormwater study should be conducted by an environmental engineer. This study will provide insight on the stormwater capacity and engineering that is required to make the park function to help control flooding in large storm events.
PHASE 2	
1. Trails	All trails, except those that cross the green infrastructure corridor will be installed.
2. Parking lot renovation	The parking area across Old Mill Road will be renovated to allow for improved parking safety and a few additional parking spaces.
3. Crosswalk improvements	The crosswalk from the new parking area to the park will be improved with additional safety measures on the road to increase user safety to access the park.
4. Interpretive plaza	The Fred Rogers Interpretive Plaza will be constructed adjacent to the preserved chimney. The footprint of the plaza will match the footprint of the original cottage.
5. Amenities	Amenities such as benches, trail signage, and interpretive signage will be installed in the areas of completed construction.
6. Plantings	Plantings bordering the completed trail and plaza construction can be installed. Any plantings that would be disturbed by the earthwork for the green stormwater infrastructure will not be completed until phase three.
PHASE 3	
1. Green stormwater infrastructure corridor	Earthwork and soil work to construct green stormwater infrastructure corridor through the park site. Construction of foundation wetlands.
2. Trails	Remaining trails around the green corridor will be installed.
3. Boardwalk	The boardwalk area with overlook will be installed after the green corridor earthwork is completed.
5. Amenities	The remainder of the trail signage, seating areas, and interpretive signage will be installed in the park.
6. Plantings	Remainder of the plantings for the site will be completed. This includes the wetlands, meadows, and tree plantings both in and along the green corridor.



Hardie Property
Master Plan

Borough of Fox Chapel

PASHEK MTR

The costs of the three phases of improvements are arranged according to the phasing, with the projected costs for each corresponding phase detailed in the spreadsheets on subsequent pages. Depending on the Borough's ability to raise funds for these improvements, this phasing plan may be expedited or lengthened as required to meet the Borough's needs. Due to increases in construction costs over time, the projected costs should be escalated to account for schedule and market conditions.

Estimates of the capital investment costs required to construct the improvements proposed for the Hardie property are summarized in the table below. The estimates of capital investment costs were projected by estimating the construction costs in 2020 dollars and escalating those costs on an annual basis by 4%, over the projected implementation period of six years.

Year of Implementation	Phase 1 Total*	Phase 2 Total*	Phase 3 Total*
2020 Planning Level Opinion of Probable Costs	$136,000	$344,000	$2,226,000
Year 0 - 2020	$136,000		
Year 3 - 2023		$387,000	
Year 6 - 2026			$2,816,000
Total Cost over Six Years			**$3,339,000**

*Costs rounded to the nearest $1,000.

Hardie Property Master Plan - Phasing Costs

Opinion of Probable Construction Costs (Includes costs on adjacent park properties)

Prepared by Pashek + MTR

Item Description	Quantity	Unit	Unit Cost	Total Item Cost
Phase 1 - Site Prep and Stormwater Study				
Removals and Site Preparation				
Barn and House Removal	1	LS	$50,000	$ 50,000
			Subtotal Removals and Site Preparation	$50,000
Site Improvements				
Natural Surface Trails (3' wide)	600	LF	$10	$ 6,000
Stream crossing boulder placement	1	LS	$7,500	$ 7,500
Trail Obliteration (scarrifying and sapling planting)	1	LS	$7,500	$ 7,500
			Subtotal Site Improvements	$21,000
Planting & Landscape Features				
Invasive Species Removal and Habitat Restoration	1	LS	$50,000	$ 50,000
			Planting & Landscape Features	$50,000
Stormwater Study				
Stormwater Study	1	LS	$15,000	$ 15,000
			Subtotal Stormwater Study	$15,000
			TOTAL PHASE 1	$136,000
			2020 Implementation	$136,000
Phase 2 - Trail Connections				
Removals and Site Preparation				
Pavement Removal (excess gravel at end of driveway)	1	LS	$2,500	$ 2,500
Misc removals (gates, signs)	1	LS	$1,500	$ 1,500
Clearing and grubbing (trail head parking)	1.0	LS	$3,000	$ 3,000
			Subtotal Removals and Site Preparation	$7,000
Site Improvements				
Earthwork (5' wide ADA trail on new ground)	900	CY	$15	$ 13,500
Earthwork (Trail head parking)	325	CY	$15	$ 4,875
Gravel Parking (trail head)	600	SY	$22	$ 13,200
Old Mill Road Crossing Improvements	1	LS	$12,500	$ 12,500
Fred Rogers Interpretive Plaza (20'x30' concrete)	67	SY	$115	$ 7,705
ADA Trail - 5' (Trail Surface Aggregate on existing drive)	500	SY	$20	$ 10,000
ADA Trail - 5' (Trail Surface Aggregate on new surface)	260	SY	$25	$ 6,500
Culvert and Endwalls over existing tributary	1	LS	$12,000	$ 12,000
Natural Surface Trails (3' wide)	5,000	LF	$10	$ 50,000
Stream crossing boulder placement	1	LS	$7,500	$ 7,500
Benches	2	EA	$2,500	$ 5,000
Wheel stops	9	EA	$200	$ 1,800
Trail Head Sign	1	EA	$12,000	$ 12,000
Interpretive Signs	2	EA	$4,500	$ 9,000
Trail Mile Markers (0.1 mile for all new trails only)	9	EA	$750	$ 6,750
Trail Intersection Signs	6	EA	$1,200	$ 7,200
			Subtotal Site Improvements	$179,530
Planting & Landscape Features				
Shade Trees	30	EA	$450	$ 13,500
Topsoil (misc for planting)	100	CY	$40	$ 4,000
Seeding - Meadow	1,000	SF	$0.50	$ 500
Seeding - Lawn along ADA trails and plaza area	15,000	SF	$0.25	$ 3,750
			Subtotal Planting and Landscape Features	$21,750
Erosion and Sedimentation Controls & Misc				
ESC controls	1	LS	$25,000	$ 25,000
			Subtotal ECS Controls	$25,000
			SUBTOTAL PHASE 2	$233,280
Contingency			*15%*	$34,992
Bonds and Insurance and stakeout and mobilization			*10%*	$23,328
			SUBTOTAL PHASE 2 CONSTRUCTION COST	$291,600
Survey, Design, Engineering, Permitting			*18%*	$52,488
			TOTAL PHASE 2	$344,088
			2023 Implementation	$387,052

Phase 3 - Stormwater Infrastructure and Accessible Loop Trail

Removals and Site Preparation					
Clearing and grubbing	1.0	AC	$8,000	$	8,000
			Subtotal Removals and Site Preparation		$8,000
Site Improvements					
Earthwork (cut)	15,000	CY	$10	$	150,000
Earthwork (fill)	12,000	CY	$10	$	120,000
Haul away material	3,000	CY	$35	$	105,000
Miscelaneous stone work	1	LS	$100,000	$	100,000
Special Soils	1	LS	$115,000	$	115,000
Miscelaneous Stormwater controls	1	LS	$150,000	$	150,000
Miscelaneous trail repairs	1	LS	$25,000	$	25,000
Earthwork (5' wide ADA trail on new ground)	300	CY	$15	$	4,500
ADA Trail - 5' (Trail Surface Aggregate on new surface)	860	SY	$25	$	21,500
Culvert and Endwalls	1	LS	$50,000	$	50,000
Boardwalk - (6' wide with railings & piles)	830	SF	$120	$	99,600
Benches	5	EA	$2,500	$	12,500
Interpretive Signs	2	EA	$4,500	$	9,000
Trail Mile Markers (0.1 mile for all new trails only)	4	EA	$750	$	3,000
Trail Intersection Signs	2	EA	$1,200	$	2,400
			Subtotal Site Improvements		$967,500
Planting & Landscape Features					
Shade Trees	60	EA	$450	$	27,000
Understory Trees	60	EA	$350	$	21,000
Shrubs	250	EA	$85	$	21,250
Seeding - Meadow	180,000	SF	$0.50	$	90,000
			Subtotal Planting and Landscape Features		$159,250
ESC and Misc Utilities					
ESC	1	LS	$50,000	$	50,000
Utility work (sewer lining)	1	LS	$100,000	$	100,000
			Subtotal Planting and Landscape Features		$150,000

			SUBTOTAL PHASE 3		$1,284,750
Contingency			*30%*		$385,425
Bonds and Insurance and stakeout and mobilization			*12%*		$154,170
			SUBTOTAL PHASE 3 CONSTRUCTION COST		$1,824,345
Survey, Design, Engineering, Permitting			22%		$401,356
				TOTAL PHASE 3	$2,225,701
				2026 Implementation	$2,816,222

	GRAND TOTAL	$2,705,789
	GRAND TOTAL WITH ESCALATION	$3,339,274

Notes:
Opinion of Probable Construction Costs is made based on the experience and qualifications of Pashek + MTR, Ltd and represents reasonable judgment based on familiarity with the industry. Pashek + MTR, Ltd. has no control over the cost, or availability of labor, materials or equipment, or over market conditions or the provider's method of pricing. Pashek + MTR, Ltd cannot and does not guarantee that the opinion of probable cost provided the Owner will not vary from the actual cost experienced by the Owner.

MAINTENANCE & OPERATIONS COSTS

WALKING TRAILS

MAINTENANCE PLAN STATEMENT OF INTENTIONS

To provide a safe, level, debris-free trail surface suitable for pedestrian activities or bicycle riding. Staff and/or volunteers will perform weekly trail inspections. Episodes of inclement weather that cause erosion of aggregate/natural surfaces or debris will be addressed at the earliest opportunity.

Although the maintenance needs at Hardie property will be minimal due to passive nature and sustainable design, it is our understanding that the Borough may need to hire additional seasonal staff, increase the part-time employees hours, or contract out the work which will be necessary to maintain Hardie property. In addition to the manpower required for maintenance of the park, it may be necessary to purchase equipment such as a tractor.

WALKING TRAIL INVENTORY

Aggregate Trails (0.55): Trail will be top dressed and compacted with matching material to maintain a surface free of ruts or other tripping hazards. Stabilization of surface material may be achieved using various urethane-based products in areas that consistently experience water erosion.

Natural Trails (0.82): Trails will be maintained to provide a stable surface for hiking, walking and biking activities.

MOWING AND TRIM OF TRAIL EDGES

Approximate Acres of trail edge (1.2 acres)- Approximate time required 1-2 hours per week/28 weeks (April-October)

Satisfactory turf coverage will be mowed and trimmed as needed to maintain a height-of-cut (HOC) between 2.5” and 4” to be determined by the Borough. Clippings will be side discharged or mulched into the turf canopy.

SEEDING

Thin or bare areas deemed unacceptable will be documented and addressed by priority. Renovation will consist of soil cultivation, seeding, and fertilization using a “starter” type product. Methods of renovation will be determined by site restrictions, equipment, labor, and material availability.

TRIMMING

Obstructions requiring hand trim work (such as: fences, permanent structures, and other immovable objects) will be assessed and addressed as needed.

MEADOWS

Meadow Acres (3.25)- Approximate time required: 2 hours annually

Meadow should be mowed annually to prevent invasive species from thriving. Approximate time required 2 hours. Other meadow maintenance should be on an as needed basis.

MAINTENANCE ITEM	HOURS OR MATERIAL	RATE	COST
Trail edge mowing and trimming	2 hrs / week @ 28 weeks	$25 / hour	$1,400
Meadow mowing and trimming	4 hrs / year	$25 / hour	$100
General Maintenance	1 hr / week @ 32 weeks	$20 / hour	$640
Trail Maintenance	Chip / stone / seed	$28 / ton	$200
ESTIMATED ANNUAL COST			***$2,500 - $4,000***
Commercial tractor		$10,000	$10,000

SAFETY & SECURITY

The first step to providing safety and security for the Hardie property park space is to apply the same rules and regulations, defined by the Borough, that are applied to the other park properties in the community. Hours for the new park space should match the hours for the rest of the Borough parks, from sunrise to one hour after sunset. Other definitions of littering, vandalism, and conduct should be established as stated in the Borough's Parks and Recreation Rules and Regulations (Chapter 241 of the Borough of Fox Chapel zoning ordinance), included in Appendix J.

The safety and security of those visiting the property, improvements on the property, and adjacent properties is a high priority. First and foremost, those looking to for a location to exhibit deviant behavior or commit a crime generally want to do so in an area that is secluded, with little risk that they will be caught in the act. Therefore, making improvements to the Hardie property that will increase the use and visitation of the property is the first step towards increasing safety and security. Visitors to the park serve as the 'eyes and ears' of the property and should be encouraged to report any issues they may observe while on the property.

Next, the park must be designed with safety and security in mind. Crime Prevention Through Environmental Design (CPTED) is a philosophy that incorporates a set of principles during the design process to anticipate and to deter criminal activities by designing spaces to reduce the opportunities for criminal activities.

The four main principles of CPTED:

1. NATURAL SURVEILLANCE

The fundamental premise is that criminals do not wish to be observed. Surveillance or the placing of legitimate 'eyes on the street' increases the perceived risk to offenders. This may also increase the actual risk to offenders if those observing are willing to act when potentially threatening situations develop. So, the primary aim of surveillance is not to keep intruders out (although it may have that effect) but rather, to keep intruders under observation.

- Design the space to allow visibility by legitimate users and keep unwanted behavior under observation
- Make the offender's behavior more easily noticeable
- Provide a good visual connection between spaces and activity areas within the park

2. TERRITORIAL REINFORCEMENT

Natural access control relies on fences, shrubs, and other physical elements to keep unauthorized persons out of a particular place if they do not have a legitimate reason for being there. Properly located entrances, exits, fencing, landscaping and lighting can subtly direct both foot and vehicular traffic in ways that decreases criminal opportunities.

While access control is more difficult in areas that are entirely open to public use, there are other techniques for controlling access in these circumstances. For example, nonphysical or 'psychological' barriers can be used to achieve the objective of access control.

These barriers may appear in the form of signs, paving textures, nature strips or anything that announces the integrity and uniqueness of an area. The idea behind a psychological barrier is that if a target seems strange, or difficult, it may also be unattractive to potential criminals.

Because any strategy that fosters access control is also likely to impede movement, careful consideration should be given to access control strategies. Such strategies may limit the opportunity for crimes but should not hinder the mobility of potential victims.

- "My area/Your area"
- Use design elements such as sidewalks, hardscape, landscaping, and low fencing to help distinguish between public and private areas
- Clear displays of ownership encourage respect for property and discourage unwanted use
- Sends message that investment has been made

3. NATURAL ACCESS CONTROL

People naturally protect a territory that they feel is their own and have a certain respect for the territory of others. Clear boundaries between public and private areas achieved by using physical elements such as fences, pavement treatment, art, signs, good maintenance and landscaping are ways to express ownership. Identifying intruders is much easier in such well-defined spaces.

Territorial reinforcement can be seen to work when a space, by its clear legibility, transparency, and directness, discourages potential offenders because of users' familiarity with each other and the surroundings.

- Use landscape elements to deny admission to unwanted behavior targets
- Create a perception among offenders that there is a risk in selecting the target
- Use signs to direct visitors to appropriate activity areas, entrances and parking
- Limit access without completely disconnecting the use

4. MAINTENANCE AND MANAGEMENT

This is related to the neighborhood's sense of 'pride of place' and territorial reinforcement. The more dilapidated an area, the more likely it is to attract unwanted activities. The maintenance and the 'image' of an area can have a major impact on whether it will become targeted.

Another extension of the concept is that territorial concern, social cohesion and a general sense of security can be reinforced through the development of the identity and image of a community. This approach can improve not only the image of the population has of itself, and its domain, but also the projection of that image to others.

With clear spatial definitions such as the subdivision of space into different degrees of public/semi-public/ private areas and the raising of standards and expectations, the level of social estrangement would decline. This is known to be related to reduction in opportunities for aberrant or criminal behavior, such as vandalism.

Maintenance and management need to be considered at the design stage, as the selection of materials and finishes will impact on the types of maintenance regimes that can be sustained over time. For example, plant material should be selected for its size at maturity to avoid blocking of sight lines.

- Cleaning, repairing, and landscaping needs to be performed routinely
- Repair or abate vandalism as soon as possible
- Encourages use of the space for the intended purpose and discourages abnormal and asocial use
- Maintenance sends a signal that someone cares about the space and is likely to defend it against intruders or vandalism

- Keep shrubs trimmed to 2 feet and prune lower branches of trees up to 6 feet for open site lines ("6-foot, 2-foot rule")

The four CPTED principles are translated into various planning and design strategies that enhance security. These strategies can be categorized as follows:

1. PROVIDE CLEAR SIGHT LINES

- Is it possible to see most of a small park or play area from the street?
- Do housing or commercial establishments overlook small parks or the edges of larger parks?
- Do paths have unimpeded sight lines, especially where they curve or change grade, so that people can see into and out of an area?
- Are landscape materials chosen and maintained so that they don't block sight lines from the street or along paths?
- 6-foot, 2-foot rule - plants should be under 2' in height or over 6' in height
- Thin out brushy undergrowth to create permeability along trail corridors
- Prevent ambush areas/hiding spots
- Create frequent access points in parks and trails
- Create vertical and horizontal clear zones for sight distance
- Keep parking areas flat and open to allow for sufficient visibility and surveillance

2. PROVIDE ADEQUATE LIGHTING

- Is lighting adequate enough for a person to get a good look at someone else from a reasonable distance (12 to 15 feet away)?
- Are landscaping elements chosen and maintained so that they don't block the light?
- Are lights placed in areas where nighttime activity is appropriate, and not placed in inherently unsafe areas not intended to be used at night?
- If the park is intended for night use, then how well does the lighting illuminate pedestrian walkways? Is it __very poor, __ poor, __ satisfactory, __ good, or __ very good?
- Are there scheduled nighttime activities (e.g., baseball games or evening nature walks) that bring people into the park after dark?
- In parks where nighttime activities such as tennis or evening walks are scheduled, are the activities clustered and properly lit?
- Are principal access routes to nighttime activity areas properly identified, and is their use encouraged? Are they properly lit so that potential hiding areas are visible?
- Are nighttime routes made more visible by improving sight lines to them and by giving priority to patrols?
- Is there a buddy system or jogging club to ensure nighttime joggers' safety? This depends on the number of users, which may be greater in larger parks.

3. MINIMIZE CONCEALED AND ISOLATED ROUTES

- Design paths to have a border of low-lying or high-branching vegetation, as opposed to trees and bushes that offenders can easily use as entrapment spots
- Could anyone hear you if you shouted for help?
- Do shrubs and fences enclose the park so that passersby cannot see into it?
- Is there a visible "active edge" that attracts activity and allows use without penetrating the park's interior?
- How far away is the nearest person to hear a call for help?
- Does anyone patrol the area? If so, how often?

4. AVOID ENTRAPMENT

- Provide a choice of routes to and from areas of the park.
- Provide more than one entrance or exit
- Provide activity anchors located near movement predictors

5. REDUCE ISOLATION

- Plan safe and strategic activities to encourage the intended use of the space
- Group walks/group bike rides - street level activities such as markets, fairs, and festivals, in key community areas
- Increase the number of people using a space, thereby enhancing visibility, social comfort and control

6. PROMOTE LAND USE MIX

7. USE OF ACTIVITY GENERATORS

- Locate activity generators along park edges or clustered together
- Provide flexible seating to give people choices
- Site restrooms near existing activities

8. CREATE A SENSE OF OWNERSHIP THROUGH MAINTENANCE AND MANAGEMENT

- When community takes ownership of a public space, crime cannot win
- The more a facility is used the less likely it will attract unwanted or asocial behavior
- During planning use inclusive public engagement
- Engage community leader groups
- Post rules and expectations for public space - Impose quick, fair, and consistent consequences for violations
- Helps foster safe, orderly, and predictable behaviors
- Address maintenance and vandalism concerns within 24 hours of being reported
- Use vandalism-resistant materials
- Ensure vegetation is properly maintained to CPTED standards
- Use low-maintenance landscaping and architectural materials
- Ensure proper trash collection and removal
- Consider anti-litter campaign
- Identify the parties responsible for park maintenance
- Provide mown edges along paths or near plants and trees indicate that these areas are naturalized through intent rather than neglect
- Place signs to encourage visitors to pack trash out

9. PROVIDE SIGNS AND INFORMATION

- Signage creates a sense of place
- Indicates the park or facility is maintained and “owned” (territorial reinforcement)
- Helps establish a sense of safety for users
- Mile markers can help law enforcement with collocating in event of emergency
- Locator codes are becoming more popular on trails
- Provide clear directions to major points of interest
- Clearly indicate—using words, international symbols, and maps—the location of telephones, toilets, isolated trails, heavily used routes, and park activities
- Locate signs at decision points, such as the intersection of two major paths
- Provide locator maps with an enlargement of the immediate area to indicate where people are in the park and where the closest park headquarters and exit routes are
- Indicate on signs where and how people can get help and report maintenance problems
- Clearly post the park’s hours of operation and park rules, and emergency contact information

10. IMPROVE OVERALL DESIGN OF THE BUILT ENVIRONMENT

- Public art creates perception of ownership
- Art can act as “eyes”
- Engages community artists
- Brightens energy in unanticipated spaces

National Crime Prevention Council’s Crime Prevention Through Environmental Design Guidebook provides detailed guidance and checklists of CPTED strategies that should be referenced and applied as the design of improvements to the Hardie property are further refined.

Another aspect of CPTED is involving and engaging in the community. It is well known that the more sense of ownership that residents have within the park, they more interested they will be in protecting it. Therefore, we recommend the Borough continue to involve its residents in the planning, design, management, programming and maintenance of the park to establish that sense of ownership.

Further, the Fox Chapel Borough Police Department should be actively involved during the planning and design of the park. As such:

- Invite police to public meetings to talk with residents about crime misconceptions
- Understand local law enforcement resources and limitations
- Ask for and take into consideration their thoughts and concerns on how to address safety and security of the park

Partner with Relevant Groups

- Community planners and local government: policy
- Local leaders: community leadership and support
- Bicycling and walking advocates: programs and funding opportunities
- Educators and parents: programs, community interests
- Volunteers and interested citizens
- Business Owners
- Faith-Based Organizations

Ambassador Programs

- Many are volunteer organizations
- Citizen group of "eyes and ears" for parks and trails
- Effective for maintenance, safety, and patrolling
- Encourages and promotes use
- Diversity
    - √ Do larger parks provide recreational opportunities beyond team sports and children's play—e.g., community gardens, small zoos or farms, puppet shows and plays, and seniors' activities—to encourage a diversity of users?
    - √ Do park activities and design encourage a diversity of users, or do some users take over the park and drive out other users?
    - √ Are downtown parks designed to accommodate a range of activities (e.g., space for street vendors, street entertainers, concerts, picnics, food services, and green markets), even if they are intended primarily for passive use?
    - √ Do scheduled park activities accommodate a range of interests and park users?
- Surveillance
    - √ How often can the police provide formal park surveillance?
    - √ Do park personnel know how to respond to various types of emergencies?
    - √ Do park personnel receive security training?
    - √ Is there a park safety plan that incorporates printed matter, signs, and interpretive programming?
    - √ Does the police department have an officer responsible for safety within the parks?
- Isolation

People often decide to go to the "wilder" areas of the park to be alone with nature, seeing only trees and shrubs and hearing only birds chirping. But isolation and reduced visibility also increase the risk of crime.

Items to consider include:

- √ Could anyone hear you if you shouted for help?
- √ Do shrubs and fences enclose the park so that passersby cannot see into it?
- √ Is the park above or below grade and hidden from the street?
- √ Is there a visible "active edge" that attracts activity and allows use without penetrating the park's interior?
- √ How far away is the nearest person to hear a call for help?
- √ How far away is the nearest emergency aid, or security personnel?
- √ Can you see a sign directing you to emergency assistance?
- √ Does the property, its trails, and activity areas have adequate cell phone service?
- √ Does anyone patrol the area? If so, how often?

SECURITY

The Borough of Fox Chapel should maintain an appropriate plan for security of the property. The plan should address three primary areas of security: 1) prevention of undesired access; 2) protection of adjacent properties; and 3) safeguarding people and possessions.

PREVENTING UNDESIRED ACCESS

ATVs and off-road motorcycles are prohibited on the Hardie property. Unfortunately, restricting access to the property for these vehicles would be impossible. However, deterrents such as rock piles or other constructed barriers can be placed in areas where these vehicles are known to access the property.

The Borough of Fox Chapel Police should strictly enforce existing state and local laws concerning ATV and off-road motorcycle use of local roads and enforce trespassing laws against violators in the park.

PREVENTING ACCESS TO ADJACENT PRIVATE PROPERTY

In addition to preventing unlawful access to the park, visitors should be deterred from intentionally or unintentionally traveling onto private property surrounding the park. There are several trails that enter/exit the park from private property. The existing trails on private properties are located within trail easements established with the property owners. For any new trails that cross into private property, like the Bridle Trail, we recommend the Borough of Fox Chapel meet with these landowners to determine whether they are interested in providing a trail easement through their property to allow this access. Signs should be posted at the perimeter indicating that visitors are approaching private property and that trespassing onto the property is prohibited. Such signs will allow local police departments to enforce this restriction.

These methods will not assure unlawful trespassing onto private property but will establish the fact that it is prohibited. Assistance will be needed from surrounding property owners to assure that their private properties are protected from unlawful use.

Education will also be of great benefit to protecting the property of surrounding landowners. Visitors to the property should be educated to understand the rights of private property owners and should be trained to be respectful and considerate. Users should be encouraged to obey all posted signs and rules including perimeter signs or markers indicating the property boundaries and private property beyond. This should be included on the park map and information guide.

PROTECTION OF LIFE AND PROPERTY

There will be many issues in protecting people, including staff, volunteers, visitors, and guests. Security concerns will include vandalism and theft of both park and private property. Such concerns include issues of disputes and disagreements, illegal activity, disobeying of property rules and regulations, vehicle, parking, and traffic issues, accidents and emergencies, and violence.

- All staff and volunteers should be trained in matters related to security. This includes:
- An awareness of security issues.
- A clear understanding of property rules and regulations.
- An understanding of the differences between violating park rules and breaking laws.
- Methods of dealing with difficult people.
- Ways to defuse difficult situations.
- Knowing when to call law enforcement officials.
- Knowing and understanding the safety and security plan.
- Knowing the consequences of violations.

CONSEQUENCES FOR VIOLATING PROPERTY RULES AND REGULATION

The Borough of Fox Chapel should consider developing a policy that establishes consequences for violating rules and regulations that are not enforceable by local authorities under the criminal code. Options to consider in the policy include:

- Verbal explanation of the rule and warning not to violate again.
- Written warning not to violate again.
- Short-term suspension of property privileges.
- Long-term suspension of property privileges.
- Permanent termination of privileges.
- Referring criminal and trespassing or other criminal violations to local police for investigation and legal follow through.

A safety planning team should develop policies and procedures for monitoring parking areas, trails and use areas of the property to enhance security of all areas of the property. Staff and volunteers will need to watch for issues of security as they go about their routines and report any suspicious activity to local law enforcement. The rules for the property need to address security measures as well as safety.

Although enforcement begins with staff and volunteers, it will also be necessary to utilize law enforcement agencies to assist in addressing those incidents that violate the law. The Borough of Fox Chapel should meet with the local police department to discuss responding to incidents, accidents, and emergencies.

COMMUNICATION PROTOCOL

A communication protocol also needs developed to provide for quick response to incidents on the property. If a report is made to local authorities, staff or volunteers, there needs to be a communication protocol to allow contact with the appropriate person to respond to the incident.

Cell phone service is generally adequate and available throughout most of the property. Many people carry cell phones for personal use. This provides an easy way for users to communicate when incidents occur. A phone number should be posted in a variety of locations including kiosks, signs, brochures, maps, and in an information guide telling visitors how to report an incident or accident.

INCIDENT REPORTS

Incident reporting is vital to understanding, responding to and planning for all types of incidents. Most incidents deal with safety or security of staff, volunteers or visitors. A copy of the PA DCNR Incident Report Form is included in this report. Criminal incidents reports will be completed by, and filed with, the local police department.

Incidents should be digitally tracked through the same or similar system as outlined earlier in this chapter. This will allow management to track locations and types of incidents to identify trends that need to be addressed. Recurring types of incidents may indicate the need for better education of visitors to the property, a change in rules or enforcement, or program adjustments. Incidents that continually occur in certain locations may suggest the need for additional security measures such as trail re-routes fencing or increased patrols.

Incident Reports also provide a written report that may be valuable to the Borough in case of future litigation dealing with a particular incident. It is therefore essential that the reports provide correct and detailed information about each incident.

PA DCNR Incident Report Form is located in Appendix H.

RISK MANAGEMENT PLAN

A risk management plan for the park is of the highest importance to assure the safety of the users and to minimize the liability exposure of Borough of Fox Chapel staff and board members.

When property and programs are provided for public use, every precaution should be taken to ensure user safety. Documentation of all risk management procedures is essential, not only for good record keeping and maintenance scheduling, but also to provide evidence in case of legal action.

Every area and program provided within the park should have its own risk analysis and management plan. This risk analysis should include:

1. Identification of the risk. Identify what it is about the program or area that provides a risk. Identify the anticipated frequency of injury or loss associated with the risk. Determine how frequently an incident is likely to occur. Is likely to happen frequently, occasionally, or rarely?
2. Assessment of loss potential. Assess what type of injury is likely from the risk. Is it likely to cause fatal or severe injuries, major or minor injuries or simple injuries? The same questions should be asked about potential financial implications of the risk. Is the potential financial loss so critical that Park may need to be closed to the public? Or would the loss be moderate or minimal?
3. Determination of the response. Determine what changes could be made to minimize the risk. Will there need to be major changes made in the program or use areas? Will minor modifications of the program or use area reduce the risk sufficiently? Is the risk so great that you should not provide the program or use area? Is the risk limited enough that no change is necessary?
4. Identify what can be done to minimize or limit the risk. Should signs be posted; should the ages be limited; should trail grades be changed? Should railings of fences be installed? There are dozens of possible adjustments that can be made to limit the risks of a facility.

The potential risk and impact of the risk should be analyzed against the policies of the Borough of Fox Chapel to determine its appropriateness at the park. This type of assessment and comparison will strengthen the management of the risks associated with this type of area. This should not be a one-time analysis; it should be ongoing. As risk is observed within any use area or program, it should be assessed and tracked to determine if changes are needed. Additionally, the Borough's response should be documented.

Staff, paid and volunteer, should be integrally involved in the ongoing risk management within the Park. Staff should be trained in safety procedures and should be expected to be constantly aware of the condition of use areas. Staff should be trained to recognize and post unsafe conditions, prevent the use of unsafe equipment and facilities, and report safety hazards, in writing, so they can be remedied in a timely manner.

Regularly scheduled safety inspections should be conducted by trained staff, paid or volunteer, at every use area and trail available for public use. Written work orders should be issued for needed repairs and completed work should be documented. Adequate liability insurance must be kept up-to-date. As new programs and use areas are developed, liability insurance coverage should be revised to reflect new conditions. Regular communication with the insurance carriers is necessary. Both risk to users and insurance costs may be reduced if all offerings can be brought into compliance with current safety standards and guidelines.

The risk management functions should be the responsibility of the Borough Public Work's Director. The Borough Public Work's Director should work closely with the Borough Council or any designated community safety committee to assure quick and effective responses to safety hazards. A safety committee should meet annually, at a minimum, to discuss and amend the Risk Management Plan as necessary.

ROUTINE TRAIL ASSESSMENTS

Trails and use areas should be assessed for safety and maintenance deficiencies periodically during the peak season. Assessments should be conducted in such a way that safety hazards are corrected as soon as possible. Hazards or deficiencies can be corrected when they are found. If hazards or deficiencies cannot be corrected immediately, the location, date, time, and type of hazard should be recorded, reported and scheduled for repair.

A record of assessments and corrective actions should be kept. This will allow staff to identify trends in types and locations of repairs and provide a written record of corrective actions made. Such records will provide an added level of protection in liability for accidents or injuries caused by trail deficiencies.

The Pennsylvania Trail Design & Development Principles: Guidelines for Sustainable Non-Motorized Trails proposes a Trail Assessment Form which is included in Appendix I. This form can be adapted for use in the park.

REPORTING HAZARDS

A system should be in place that will allow staff, volunteers and visitors to report hazards they discover. Each report should be responded to in a timely manner.

As a key component to reporting hazards, staff and volunteers should be trained and required to look for potential hazards when they visit the property. Similar reporting methods can be used for both staff and visitors.

A simple form can be developed to record the hazard location and description, date and time discovered, name of the person reporting the hazard, and a description of the needed repairs. This report could be in the form of a small tablet that is carried by staff and volunteers. There should be a centralized location where the form is to be turned in. A staff person should be assigned to gather the reports at a specified frequency and to determine how the situation needs to be addressed.

The same form should be available on-line where visitors can complete them on their own. It should be clearly described where the forms should be submitted. There could be return boxes located next to the forms or at the main office or security office. A schedule must be established for the collection of the forms. Once collected, the reports should be passed on to the appropriate staff person to determine how to handle the situation.

Signage at trailhead kiosks must encourage and explain to visitors how to report hazards. The signs should indicate that hazards can be reported to staff by completing the on-line Hazard Report Form.

APPENDICES

PASHEK MTR

HARDIE PROPERTY MASTER PLAN

STUDY COMMITTEE MEETING - NOVEMBER 6, 2019, 9:00 AM

Attending: Carrie Casey Leemhuis
Mike Schiller
Jessica DeMoise
Wesley Posvar
Gary Koehler
Jay Troutman
Liz Nelson
Sara Thompson
Jim Pashek

Meeting Minutes

Goals of the Project:

After introductions, the Committee brainstormed Goals for the project, including:

- Study the potential for realigning the existing trail east of the property to within the property; is that a good idea? How can we connect residential properties west of the property and Old Mill Road to the park (historical old horse trail running from Old Mill Road down to the stream)?
- This park connects two off-leash dog parks; heavily used now by dog walkers; expectation that this will be allowed to continue; recognize that dog areas in the parks are often very wet.
- Understand the value of what we have on the property (beautiful natural space) and making sure the plan protects those unique features. Fox Chapel parks system has largely been natural spaces along stream valleys, celebrated for their natural beauty. Think of the Hardie property as a "sanctuary for wildlife and human life." Plan for sustainability.
- Consider partnerships including Beechwood Farms, Shadyside Academy, others.
- Be aware of the secluded nature of the property and the challenges that presents for safety and security.
- Have a clear understanding of the costs and challenges of keeping the Hardie residence. The decision to remove must be based on data and professional expertise; maybe the chimney can be retained to help tell the Hardie and Rogers story.
- Given limited park resources, consider the costs of maintaining the property once "developed."
- Think of creative ways to address stormwater management; maybe the basement of the house could be a detention basin to prevent water from flowing from residential developments above the property along Old Mill Road; resiliency.

- Incorporate a funding strategy for implementation of the plan.
- Make "evidence-based decisions" when planning for the park.
- An early decision will be whether to make the park a "destination" park or a "connecting" park. A destination park may have significant infrastructure including parking, bus turn arounds, restrooms. Indoor meeting space and associated stormwater management structures. A designation park might need to be planned to accommodate non-residents demands.
- Plan should incorporate educational opportunities, both natural and historical.
- Park planning should include nearby land like the existing parking (park?) off Old Mill Road.
- Trail surfacing should be considered including mowed turf, native soil and constructed surface (aggregate or reclaimed asphalt materials); use or develop a trail standard.

Other notes:

- Any plans for vehicle access onto the property must consider the poor sight distance as one pulls out of the Hardie Property (may need to be a right turn only exit).
- Borough should provide the consultant with the sales agreement concerning any restriction(s) to the type of use the Hardies placed on the property.

Public and Study Committee meetings

The Proposal for the project by Pashek+MTR included 2 public meetings and 4 study committee meetings. After some discussion, it was decided to have three public meetings; one in December to share "principles for the park" identified by the study committee and then listen and record comments from residents; a second public meeting in January to share preliminary, conceptual alternatives and obtain feedback from residents and a third meeting presenting the Master Plan to Council in March. The public meetings will be advertised in as many communication channels as possible; a post card will be mailed to all residents advertising the meetings and providing the link to the survey. The public meetings will be held at the Borough building on:

December 12, 2019 at 7pm
January 15, 2020 at 7pm
March 16, 2020 at 6pm

There will be material the study committee will need to review over the next few weeks including the meeting flyer and survey draft. It was thought that comments could be offered via email. Therefore, the next study committee meeting will be held when it is determined to benefit the project. Potentially, we may not have a study committee meeting until early January. Likely there will be study committee meetings later in January and in February and March as the master plan is prepared. There is a Park Commission meeting in December to update the group.

Advertising the Public Meetings:

It was decided that the Borough will mail a post card announcing the public meetings and provide a link to the questionnaire. Pashek+MTR will provide a post card graphic that the Borough will send to the printer. The printer will mail the cards bulk mail rate, arranged to arrive in homes about two weeks before the December public meeting. The same graphic will be used to create 11x17 posters for posting by the study committee members and the Borough. Borough will post the meeting dates on Nixle and website. Additional post cards will be printed and provided to study committee members to hand out at various events that Fox Chapel residents might attend. The cards and posters should emphasize that we are seeking input from Fox Chapel residents.

Community Questionnaire

Various information that could be generated by the questionnaire:

- What facilities are needed?
- Should the park be a "connector" park or a "destination" park?
- List goals and ask them to be prioritized.
- Ask an open-ended question like "is there anything else that you would like to share with the study committee?"
- Maybe preference to whether the park is developed as an active park or a passive park.
- What kinds of outdoor things do you and your family like to do? This could be a fill in the blank or a list could be provided to be checked off.
- A similar question might ask what the respondent and their family has done in the parks recently.
- A question could try to explain the park system and how McCahill serves as the active recreation park, Riding Meadow as an off-leash dog park and the others as open space preserved with trails.
- We should give them an opportunity to provide us an email so we can send out future info about the park master planning and other park related information.
- Should parks be used to slow down stormwater/flooding?
- Consider asking funding questions: (1) whether they would be willing to donate to the Hardie Property Park acquisition or development and (2) whether the respondent would be willing to increase taxes for park maintenance and improvements.
- Demographic info might include the age of the respondent and the ages and number of family members in the household.

Key Person Interview suggestions:

- Representative of Shadyside Academy
- Alex Scott, Mayor
- Audubon Society – Jim Bonner

- Dempsey Bruce, Public Works Director
- Police and Fire Chiefs
- Hillier Hardie
- Dennis Sheedy, dog owner representative
- Father Alex Shuttleworth – Christ Church (also Community Day School)
- Garden Clubs
- Marion Alig, Fox Chapel Land Trust
- Mandy Steele, park property neighbor
- Jan Heberle park property neighbor
- Neighbor across the street from Heberle

The above is a summary of the conversation held during the study committee meeting for the Hardie Property Park Master Plan on November 6, 2019. Please let us know if there are any corrections required.

Sara Thompson, RLA
sthompson@pashekmtr.com

PASHEK MTR

HARDIE PROPERTY MASTER PLAN

STUDY COMMITTEE MEETING – JANUARY 27, 2020, 9:00 AM

Attending:

Carrie Casey Leemhuis
Mike Schiller
Jessica DeMoise
Wesley Posvar
Gary Koehler
Jay Troutman
Liz Nelson
Nan Bennett
Peggy Jayme
Sara Thompson
Jim Pashek

Meeting Minutes

Responses to the Master Plan Concepts:

Notes from the committee regarding the two or three most important thoughts today about the master plan concepts:

- The community wants a very practical solution
- Most effective way to address stormwater
- Put the trail on the existing road
- A better story needs to be told explaining the benefits of stormwater detention on the site and how that meets MS4 requirements
- There seems to be an interest in keeping the property "natural"
- Master planning should include how this plan affects borough land as part of Riding Meadow Park
- Do what is best for stormwater
- There was surprise at the first public meeting that there was interest in just leaving the property alone
- Another was encouraged with the public's desire to keep the park part of a natural system
- Most thought the bus turnaround was a non-starter
- Does the school have the capacity for environmental education?
- Concern with sewer line protection (in terms of grading for storm ponds) given the sewer running along the current stream
- There was also concern expressed with the stream undercutting the manholes which has happened in other locations, most recently in Scott Park
- Access to the Sanitary Manholes for servicing and access for the power company to maintain the ROW through the property were noted
- It is important to maintain the link of the existing trail from Riding Meadow Park to Beechwood Farms. Preference was to maintain both the existing trail on the hillside and a new trail along the stream valley

- The next iterations of master plan should include the various borough trails in a more prominent graphic way, including the Lockhart Trail and the old horse trail connector to Millview neighborhood
- There did not seem to be much preference for keeping the house. Maybe the chimney and foundation tracery of the old Rogers' cottage. Possibly use the remaining basement for stormwater detention.
- The next plan (draft master plan) should show tree massing
- The next plan should have some construction costs along with estimates of maintenance costs
- Most did not want asphalt paved trails but the ability to push strollers on the trail was valued
- Most thought we should not park on the property; there was thought of increasing the parking across Old Mill Road; some thought of adding a few parking spaces (3-5) at the entrance into the park
- It was noted that what is there now is human-made and not technically "natural;" the pond is constructed; the stream straightened many years ago and fill placed for the meadows – so public interest in "keeping it natural" is an interesting dilemma
- Stormwater management is really important as this park is at the bottom of 20% of the watershed in Fox Chapel and redirecting water into the park during storm events could reduce flooding downstream
- Beside the connecting trails mentioned, there is interest in additional trails in the park
- There was concern that a significant portion of the stream is not on the park property. If the stream were modified, permission would need to be granted by these property owners
- There was a question as to whether this was the best place in the borough to spend a significant amount of money on stormwater management to reduce flooding along Squaw Run; no borough wide analysis is being done to identify areas for stormwater management not hydraulic calculations to determine the best "bang for the borough's buck" in terms of stormwater management
- We have been discussing since this fall whether this is a "destination park" like the Trillium Trail or is this a connecting park, another link in the trail system; it seemed that consensus was that this should not be a destination park simply because of the inability to provide parking
- It was suggested that it is important to consider how we educate visitors. Especially children to the importance of environmental protection, the stewardship of people from previous generations in the Borough and the challenges we face with climate change (more extreme storm events)

Next Study Committee meeting

The next meeting will be the study group in about 6 weeks (mid-March) to review and discuss the draft master plan and preliminary cost estimates. A final park study committee will be convened

about 6-8 weeks later to review the master plan document (mid to late April). Then a presentation will be made to Council, likely in May.

The above is a summary of the conversation held during the study committee meeting for the Hardie Property Park Master Plan on November 6, 2019. Please let us know if there are any corrections required.

Sara Thompson, RLA
sthompson@pashekmtr.com

PASHEK MTR

HARDIE PROPERTY MASTER PLAN

STUDY COMMITTEE MEETING – APRIL 13, 2020, 10:00 AM VIA ZOOM

Meeting Minutes

1. Sara opened the meeting by reviewing key points from the January meeting minutes.
2. Sara then reviewed the draft master plan, trail diagram, section, and cost estimate. The draft modifies the Oxbows concept. Major changes included:
    a. Modified the existing parking across the street by expanding the parking spots and adding accessible parking space as well as a formal trail head kiosk.
    b. Reduced the amount of boardwalk to reduce maintenance.
    c. A culvert at the beginning of the proposed stormwater channel allows for utility truck access along the sewer line.
    d. Showed existing trails on adjacent properties and added connections to those trails.
    e. We kept part of the Bridal trail that is the most sustainable. It is located on adjacent private property. The Borough will need to request an easement/access to this trail.
    f. Proposed a safer, less steep access to the Bridal Trail from Millview Drive.
    g. The draft master plan does not show any picnic pavilions or other structures.
    h. The house is shown as demolished except for the chimney and a concrete plaza is shown to provide an outdoor gathering space for environmental education.
    i. Benches and interpretive signs are shown scattered throughout the proposed trail system.
    j. The proposed accessible trail system, including the loop trail and waterfall trail, consists of 0.57 miles. Proposed natural surface trails consists of 0.85 miles.
    k. A quick calculation of potential stormwater capacity showed that the proposed design could store at least 1.3 million gallons but could probably store a lot more. This is a very conservative number.
3. The following comments/questions were made by committee members:
    a. In regard to the bridal trail being located on adjacent private property, it was suggested that an easement be developed and signed with the property owner similar to the easement entered into for the trail from Riding Meadow to Scott Park between Borough and Shadyside Academy.
    b. Will the "overflow stream" always have water in it?
        i. No, only during storm events. Pashek + MTR may adjust the graphic representation to make the overflow channel less blue as it would most likely be dry most of the time. The exception being where the existing small tributary flows into the proposed channel.

c. Should the tributary connect directly into Squaw Run instead of the proposed channel for permitting reasons?
    i. This can't happen as it reaches the proposed channel first. It will eventually flow into Squaw Run, just further downstream. It shouldn't affect permitting that much as we will already need permitting for the larger storm channel.
d. Will the 5' wide accessible trail be wide enough for utility vehicles?
    i. The plan allows for a 5' wide shoulder on either side of the trail, thereby allowing occasional maintenance vehicles to drive the corridor. This could be reduced to 3' on either side to reduce maintenance and still allow for vehicular access.
e. There was much discussion about dog use on the trails. It was decided that:
    i. Dogs could continue to use the Old Squaw Trail and Lockhart Trail for off leash as these are already off leash trails.
    ii. The proposed connector from the Lockhart Loop to the old Bridal Path trail, including the Bridal Path Trail would allow dogs on leash.
    iii. All the other trails in the valley would be no dogs for now with the option of the Park Commission allowing dogs on leash at some time in the future. During the discussion, the following points were made:
        1. There are plenty of off leash areas already, off leash dogs discourages families with small children from using the park, negative environmental impact of dogs and their humans tromping through wetlands.
        2. The above conclusion maintains traditional dog use on trails in the Borough now, there are significant number of dog users in the borough and they will turn out in support for their dogs.
f. There was discussion about the benefits to the borough of storing stormwater and whether the amount stored was a significant amount of that in the Squaw Run watershed.
    i. Although PMTR had a rough guess of the amount of storage, 1.3 mil., a subsequent hydrologic study of that watershed is recommended to answer that question.
g. There was a concern about vandalism or unwanted partying activities at the Fred Rodgers plaza.
    i. No shelter was recommended, the plaza and chimney from the Rogers cottage would be retained. This was in response to concern about a gathering place for teen age drinking
    ii. Police and emergency vehicles can still drive down the initial accessible trail portion up to the plaza if need be.
h. There was a brief discussion of the cost estimate, more about phase one. Everyone agreed that phase I could consist of the main trail connections through the property to connect to adjacent trails. The group wanted an idea of what portion of the cost estimate would include phase 1.
    i. PMTR will modify the cost estimate to break out phasing.

Next Study Steps

1. Pashek + MTR will adjust the cost estimate and send out to the group in the coming weeks.

2. A draft report will be sent to the Committee for their review by May 15th. Comments will be due back to Pashek + MTR by May 26th so that we can make revisions in time for the Council meeting in June.
3. Mandy offered to coordinate with Wes and the property owner where the Bridal Trail is located to discuss requesting permission for a future trail easement.

Sara Thompson, RLA
sthompson@pashekmtr.com

PASHEK MTR

Hardie Property Master Plan Study Committee

Vote to Remove the House and Barn on the property

Votes by email on April 13 - 16, 2020

Yes or No	Name	Comments
Yes	Wes Posvar	The House and Barn are history, but building/construction materials should be recycled/reused/repurposed wherever possible.
Yes	Carrie Casey	I vote yes to remove the house and barn
Yes	Mike Schiller	Yes, remove the buildings, BUT the buildings should be "deconstructed" - not demolished. We need to get Mike Gable from Construction Junction out there to look things over and claim whatever CJ wants BEFORE any demo'g starts. I know Mike and can make that call if the team wants me to - though I think Jay Troutman probably has a connection back to CJ as well. (and Michelle, my wife, has been pushing the architects to do more deconstruction, also - she will appreciate us doing the right thing here.) We'd want to get Mike Gable inside the structures - can we do that? Who has access/keys?
Yes	Jay Troutman	Remove.
Yes	Jess Demoise	Yes to exploring opportunity for material salvage so long as activity can be completed in a reasonable time frame given current restrictions.
Yes	Liz Nelson	Also in agreement: Remove and salvage if possible
Yes	Lois Folino	Good decision.
Yes	Peggy Jayme	I agree that the house and barn should be demolished, saving/ repurposing as much of the material as possible.
Yes	Nan Bennett	my vote would be to raze both structhres, salvaging materials as possible/practical
Yes	Jim Pashek	I vote for removing the house and salvaging what can be saved by conjunction junction

APPENDIX B - PUBLIC MEETING DATA

What kinds of activities should be planned for this park?
Hiking
Walking trails
On leash dog trails
Birding
Connector trails (especially from Riding Meadow)
Horse trails
Dog park
Ice skating
Fishing
Picnic shelter(s)
Nature exploration/reflection
Wildflower fields
Keep the park natural
Salvage Hardie house/upgrade
Benches
Educational opportunities, perhaps using the existing Hardie house as an educational center, focused on science education
Bike trails
Connection to kid's pool (???)
ADA trail
Pavillion using the stone fireplace with a nod to Mr. Rogers
Natural picnic areas
"Introductory" hikes for groups like the Ramblers (she would coordinate see page 15 of Scanned Comments)
Pavillion
Level field area for activities
New building/barn
Activities for kids/youth
Area for ecological studies for FCA students
None
Outdoor yoga
Very few (no sports)
Out of the way playground, maybe
Parking
Meditation area near waterfall
Historical education (previous owners: Hardies, Tom Sheetz, Mr. Rogers)

What kind of trails would you see in this new park?	
Natural (no asphalt or cement)	15
Connecting trail to Riding Meadow	5
Minimal disturbance	5
Walking	5
Nature trails	3
On-leash dog trails	3
Raised walking in flood plain areas	3
Natural rock	2
Connecting trails	2
Trail along stream to waterfall and back	2
Well-blazed for people who are easily distracted	2
Looped (raised over wetland, parallel "dry" trail along lower west edge)	2
Low maintenance	2
One mowed path	1
Mowed loop path around perimeter	1
Mowed path around/through meadow	1
Horse	1
Preserve existing trail above property (behind church) and connect to Riding Meadow	1
Crushed limestone	1
Biking (separate from walking)	1
None	1
Meandering (not straight)	1
Well-drained	1
Similar to Squaw Run Park	1

Are there other park facilities the Borough should offer, even if not at the Hardie property?	
None	6
Restrooms	5
Pickleball	2
Off leash dog areas	2
Utilize facilities already in place	1
Keep at Macahill: ice skating, basketball	1
Less is better	1
Metal vs. Wood walkways	1
Another ice rink	1
Playground	1
Birdhouses	1
Bat houses	1
Children's park	1
If house is to be used, make it like Beechwood (perhaps a Mr. Rogers house)	1
Facilities need to enhance the neighborhood feel	1
Ample parking	1

Should the park be used to mitigate large storm events?	
Yes	21
Drain pond	3
Depends on how it would effect other activities, cost, how much it would detract from park, etc.	3
Develop wetlands for this purpose	3
If the Borough can fund it through grants and donors, including the ongoing maintenance	2
Dam should be breached with planning and should be remediated to wetland, perhaps with channeling of Squaw Run through the wetland	1
Significant stream restoration, including riffle-run construction, wetland construction, etc.	1
No	1
Unsure	1
Add trees to absorb water	1
Showcase techniques used with signage	1
Worth consideration	1
No as the impact would be small and the effort to enlarge it would compromise the park's other uses	1
Will it work given the volume of water?	1

What else should we be thinking about as we plan for this park?	
Restore to an all-natural state	3
Connect (trails within the park, to other trails in other parks)	3
Tear down house and barn	3
No buildings	2
No off-leash dogs	2
Drain the pond	2
Low maintenance	2
No parking, concrete, bathrooms, horse trails	2
Hardie family chooses the name of the park	2
Reintroduce native perennials, shrubs and trees	2
Use as much as possible for flood control	2
Ample parking	2
No use of resident tax-payer dollars (majority of Borough park users are not residents)	2
Honor past property owners (Hardies, Mr. Rogers)	2
How to use the house	2
How children will use the park	2
Rehabilitate the pond or drain it	1
Intentional use of wet meadow	1
Wild flower gardens	1
Use the house as an educational center, open based on volunteers	1
Use the house as a science center for school groups	1
Use Beechwood as a model for use of the house	1
Off-leash dog area	1
Storm water management	1
Follow Hiller Hardie's specific site condition information (see page 10 of Scanned Comments)	1
Flood control and awareness is key	1
Identify entrance	1
Add trees	1
Keep it simple	1
Keep its character	1
Keep the public informed	1
No liabilities (fishing, skating, etc.)	1
Do not name the park after Mr. Rogers	1
Gardens	1
What is the water source of the house? Septic? What's it condition?	1
Parking below Riding Meadow and above near Beechwood	1
Minimal structures	1
Trail maintenance	1
Who will maintain the trails and other facilities? Road crew is already overworked	1
Enforcing the rules of the park (e.g.: keep out bikes, horses, drugs, etc.)	1
How the park will be funded	1
No environmental center (we have Beechwood)	1
Drinking water	1
Benches	1
What are the best practices of other boroughs with similar parks?	1
How will it enhance real estate values?	1
Mark historical significance	1

PASHEK MTR

HARDIE PROPERTY PARK MASTER PLAN

PUBLIC MEETING – JANUARY 15, 2020, 7:00 PM

Meeting Minutes

Discussion items:

- Sara Thompson and Jim Pashek presented the progress of the Hardie Property Master Plan to the group.
  - Welcome and Overview
    - Introductions
    - Review the Master Planning process
      - The project is about half way through the visioning step in the planning process
  - Information gathered so far
    - Architect review of the house
      - Conclusion: To convert the structure for public use poses significant challenges and costs, since the requirements of loading and safety for public use are much more extensive than residential use.
    - Community questionnaire results as of 2020/01/06 (316 responses)
      - Most common responses include: desire for trails, preference for natural trails, minimize environmental impacts of development, design to retain stormwater surges from large rain events
      - Other comments include: restrooms on site, picnic shelters, off leash dog areas, and a desire to keep the park design for passive recreation
    - Key person interviews so far
      - Comments:
        - Don't duplicate functions of other parks
        - Public visibility
        - Connect existing parks
        - Natural trails
        - Remove the house
        - Existing pond attractive nuisance or liability
        - Create a wetland park or stormwater sponge for flood mitigation
        - Connection to Fred Rogers
        - Education on climate change
        - Limit dog activities / not off leash

- Review of Design Concepts
  - Two concepts were presented:
    - Beads – This concept includes trails, signage, a couple of new picnic pavilions, a bus drop-off, accessible parking, and stormwater management in the form of a series of wetlands and ponds in which Squaw Run would overflow into during large storm events.
    - Oxbows – This concept includes trails, signage, one new pavilion, and re-routing Squaw Run through the site in the form of Oxbows and constructed wetlands in order to expand storage for stormwater and further slow down the water.

Small Group Discussions:

After the presentation, participants were asked to think about each of the concepts

- Comments from the groups:
  - Group 1
    - Parking- some additional parking spaces on Hardie property side of Old Mill Road, to reduce the need to cross the street to get to the park
    - Keep the chimney, but have fewer structures in the park
    - Allow dogs on leash
    - Stormwater management
    - No road into the property
    - Keep it natural
  - Group 2
    - Restore site to a natural system
    - Walking trails
    - Logical connection of stormwater features
    - Natural / permeable trail system
    - Low maintenance
    - Keep relic of existing buildings
    - No new buildings
    - Natural seating areas
    - No interior road with parking / bus access
    - No unnecessary liabilities
  - Group 3
    - No parking on property, maybe add a few additional parking spaces to the existing parking area on Old Mill Road
    - Connection with existing trails and parks
    - Natural trails
    - No pavilions
    - Allow dogs on leash
    - No roads on the property
    - Design should have the greatest positive environmental impact

- Group 4
  - Connection between existing trails / parks
  - Keep design simple (low maintenance)
  - No pavement on property, except maybe some parking at the entrance along Old Mill Road
  - Allow dogs on leash
  - Keep existing adjacent trail – trails for different uses and groups
  - No pavilions
- Group 5
  - Connection between existing trails
  - Limit the amount of boardwalks
  - Keep chimney
  - Limit structures, even bird blinds
  - More parking
  - Stormwater should not be main focus but is an opportunity
  - Will bike riders use this?
  - Wild berries and more trees, natural vegetation
- Group 6
  - No dogs or only allow dogs on leash
  - Hard to cross stream, difficult to reach existing trail across Squaw Run
  - No cars or buses on the site
  - Remove the house
  - As natural as possible / minimal changes to the property
  - Quantify stormwater benefits
  - Family friendly trails / uses
  - Phasing plan is needed

Next Steps:

- Pashek + MTR will meet with the project study committee on January 27, 2020 to review comments collected from the two public meetings.
- Pashek + MTR will use the comments from the public meetings, along with the data gathered from the community questionnaires and key person interview to prepare a draft master plan.

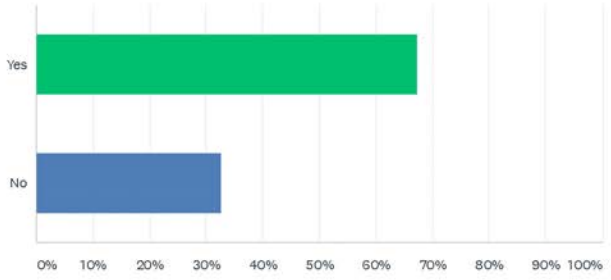
The above is a summary of the conversation held during the public meeting for the Hardie Property Park Master Plan on January 15, 2020. Please let us know if there are any corrections required.

Sara Thompson, RLA
sthompson@pashekmtr.com

APPENDIX C - COMMUNITY SURVEY RESULTS

Q1 Have you ever hiked the trail from Riding Meadow Park northward toward Beechwood Farms?

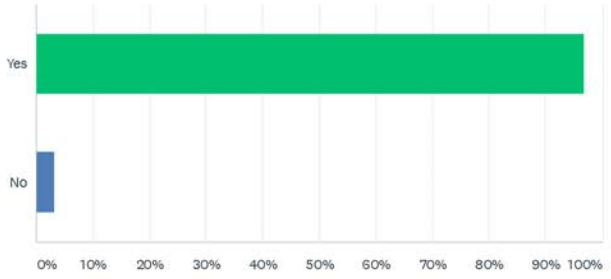
Answered: 316 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	67.41%	213
No	32.59%	103
TOTAL		316

Q2 Would you like to see trails within the Hardie Property?

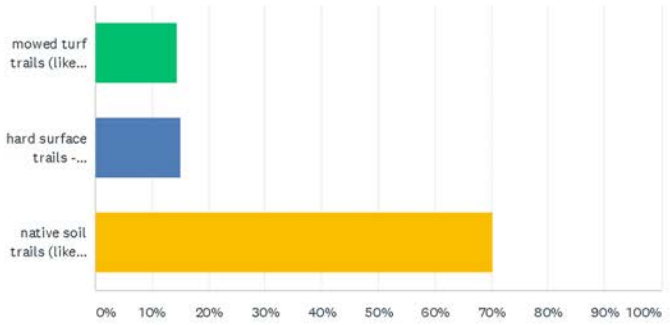
Answered: 315 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	96.83%	305
No	3.17%	10
TOTAL		315

Q3 If yes, would you prefer (choose one):

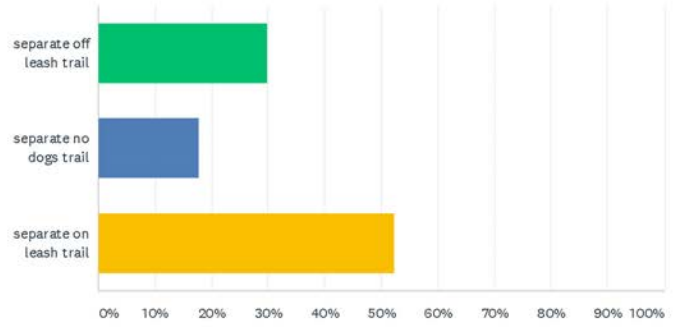
Answered: 310 Skipped: 6



ANSWER CHOICES	RESPONSES	
mowed turf trails (like those in Salamander Park)	14.52%	45
hard surface trails - aggregate or reclaimed asphalt (like the trail from McCahill to Scott Park)	15.16%	47
native soil trails (like the current connecting trail from Riding Meadow Park to Beechwood Farms)	70.32%	218
TOTAL		310

Q4 If trails are provided in the new park, would you suggest the Park Commission allow leashed dogs on the trails? (Note: the only place where dogs are permitted to be off leash on Borough property is Riding Meadow Park and the Lockhart Loop.)

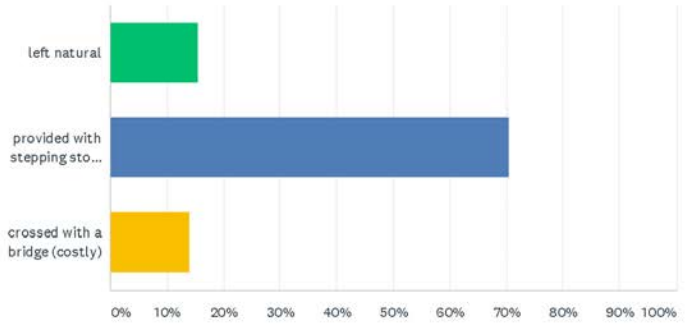
Answered: 310 Skipped: 6



ANSWER CHOICES	RESPONSES	
separate off leash trail	30.00%	93
separate no dogs trail	17.74%	55
separate on leash trail	52.26%	162
TOTAL		310

Q5 Our trails cross dry and wet streams. Would you prefer that trail crossings be:

Answered: 316 Skipped: 0



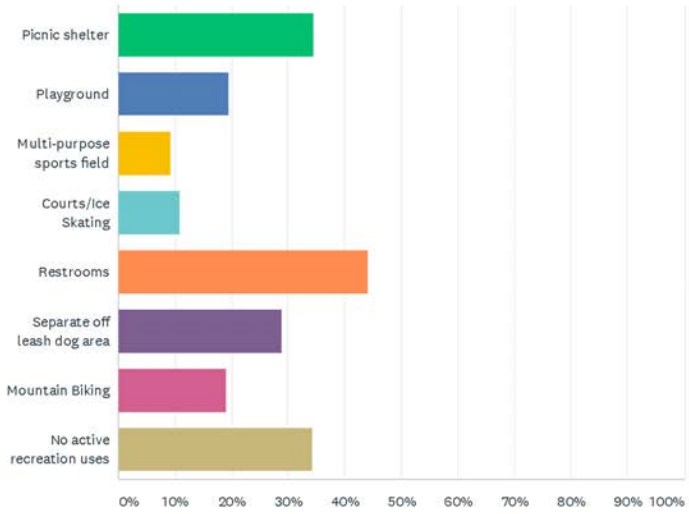
ANSWER CHOICES	RESPONSES	
left natural	15.51%	49
provided with stepping stones (some cost)	70.57%	223
crossed with a bridge (costly)	13.92%	44
TOTAL		316

Q6. What park facilities are missing that you would like to see in Fox Chapel, whether located at the new park property or another existing park?

None	28	Road department storage	1
Restrooms	25	Wildflower / wet meadows	1
Trail maps, signage, markers	24	Wheelchair access	1
Mountain biking / biking trails	23	Repair baseball fields at McCahill	1
Sheltered gathering area	15	Better water drainage	1
Seating	10	Bridge crossing at dog park	1
Playground	10	Better seasonal access to dog park	1
Spray park and pool	9	Connection	1
Educational signage	9	Disk golf course	1
Picnic area	8	Separate small and large dog park areas	1
Repair / improve existing trail (erosion,water)	7	Better maintained facilities	1
Water fountain	7	Larger skating rink	1
Fitness / activity stations	7	Soccer fields	1
Natural playground	6	Remove commuter parking	1
Less dog trails / space	6	Cross country skiing	1
Fenced dog park	6	Dog wash station	1
Least impact	5	First Aid / Emergency Station	1
More parking	5	Phone charging station	1
More trails	5	Roads not pedestrian and bike friendly	1
Fishing	5	Access to Millview Drive	1
Pickleball	4	Stable	1
Sport fields / courts	4	Zip line	1
Stormwater management	3	Horse riding trails	1
Off leash dog trails	3	Vending machines	1
Skateboard / BMX park	3	Stage / Amphitheater	1
Nature center	3	Safety signage	1
Sledding hill	3	Pond for dogs	1
Native plantings	2	Bridge at Scott Park	1
Garbage / trash cans	2	Outdoor classroom	1
Wildlife houses	2	Children biking areas	1
Ice Skating	2	Bird sanctuary	1
More trail access without cars	2	Yoga / exercise class space	1
Meditation garden	2	Formal landscaping	1
Lawn activities / games	2	Outdoor art center	1
Water access	2	Climbing wall	1
Dog waste bags / stations	2	Food Trucks	1
Accessible trails	2	Fred Rogers museum	1
Fire pit / Grills	2	Tow rope for winter	1
Riparian / Stream ecology	1	Indoor facilities	1
Flood mitigation	1		

Q7 McCahill Park is the Borough's active recreation park with ballfields and a small playground. Most of the other Borough parks are passive parks with trails except for Riding Meadow Park which is primarily an off-leash dog park. Understanding there would be a need for parking and stormwater management structures that would add development costs, would you encourage active uses at this new park like (choose all that apply):

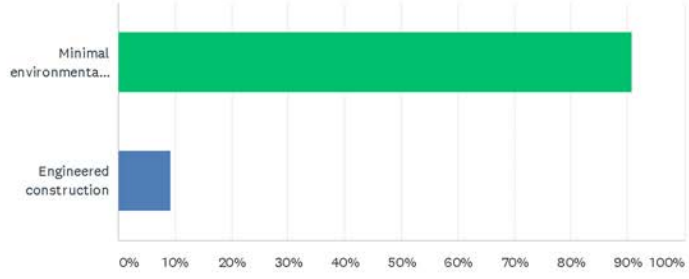
Answered: 304 Skipped: 12



ANSWER CHOICES	RESPONSES	
Picnic shelter	34.54%	105
Playground	19.41%	59
Multi-purpose sports field	9.21%	28
Courts/Ice Skating	10.86%	33
Restrooms	44.08%	134
Separate off leash dog area	28.95%	88
Mountain Biking	19.08%	58
No active recreation uses	34.21%	104
Total Respondents: 304		

Q8 The new park is largely a wet stream valley with wooded steep slopes. Not much of the land is easily developed. There are two approaches to developing the site: (1) not to encroach on undevelopable land, or (2) engineer and seek permits to build infrastructure and facilities. Which approach do you think should be followed (choose one)?

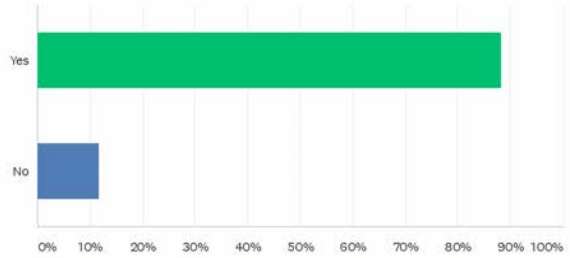
Answered: 313 Skipped: 3



ANSWER CHOICES	RESPONSES	
Minimal environmental impact	90.73%	284
Engineered construction	9.27%	29
TOTAL		313

Q9 In response to recent flooding events, the Park Commission has discussed uses to create attractive, environmentally sensitive stormwater management basins in the park to help with stormwater surges during significant rain events. Do you think we should consider this use of the park?

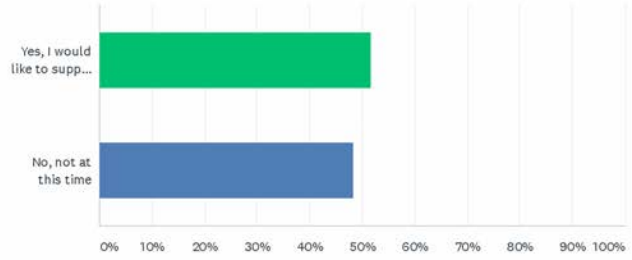
Answered: 310 Skipped: 6



ANSWER CHOICES	RESPONSES	
Yes	88.39%	274
No	11.61%	36
TOTAL		310

Q10 The Hardies sold the property to the Borough at a significant discount with the stipulation that the land remain a park. Would you be willing to provide a donation to help with the acquisition of the park? The Borough has raised more than half of the purchase price through private donations and grants. Would you be willing to donate to help complete the acquisition of the park?

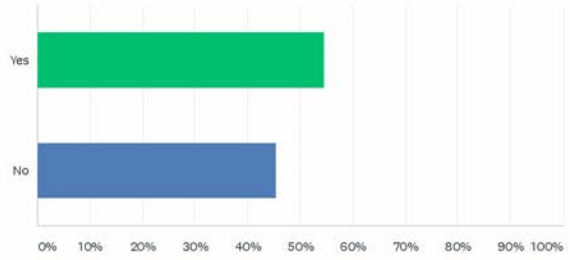
Answered: 311 Skipped: 5



ANSWER CHOICES	RESPONSES	
Yes, I would like to support the acquisition and preservation of the Hardie property	51.77%	161
No, not at this time	48.23%	150
TOTAL		311

Q11 The Borough's public works department is in charge of park maintenance, repairs and improvements. They do an amazing job but their time working in the parks is limited by the needs of road building work, leaf collection, snow removal and recently, flood damage remediation. One way to increase funding for parks is to increase taxes slightly to generate an annual funding stream that goes directly to park maintenance and improvements. Would you recommend Council consider increasing taxes specifically for parks?

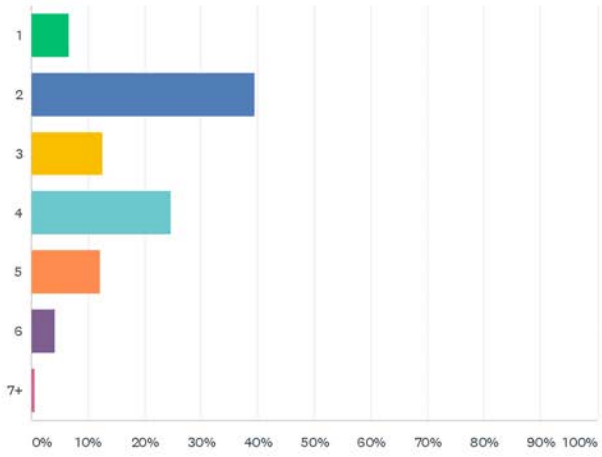
Answered: 310 Skipped: 6



ANSWER CHOICES	RESPONSES	
Yes	54.52%	169
No	45.48%	141
TOTAL		310

Q12 How many people are in your household?

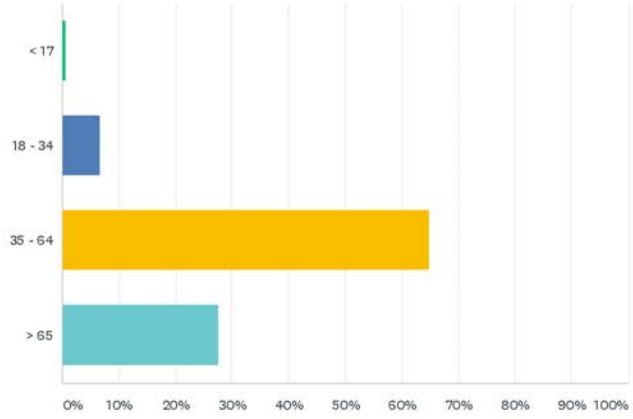
Answered: 313 Skipped: 3



ANSWER CHOICES	RESPONSES	
1	6.71%	21
2	39.62%	124
3	12.46%	39
4	24.60%	77
5	12.14%	38
6	4.15%	13
7+	0.64%	2
Total Respondents: 313		

Q13 What is your age?

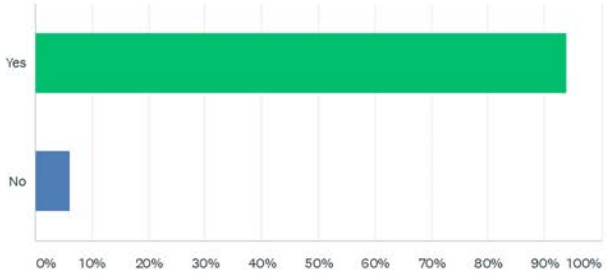
Answered: 311 Skipped: 5



ANSWER CHOICES	RESPONSES	
< 17	0.64%	2
18 - 34	6.75%	21
35 - 64	64.95%	202
> 65	27.65%	86
Total Respondents: 311		

Q14 Are you a Fox Chapel resident?

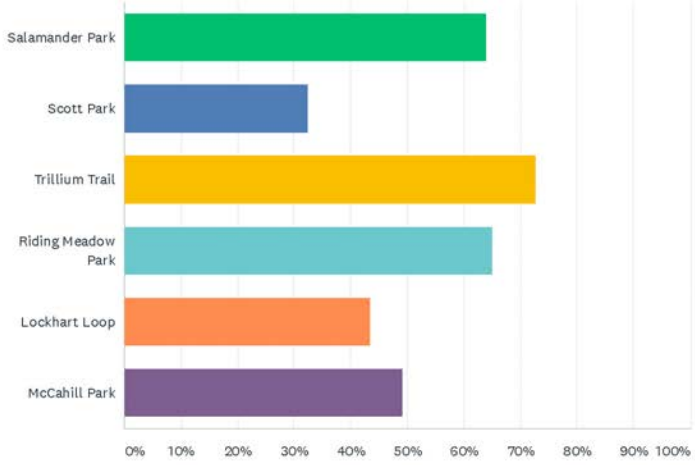
Answered: 313 Skipped: 3



ANSWER CHOICES	RESPONSES	
Yes	93.93%	294
No	6.07%	19
TOTAL		313

Q15 Which Borough parks have you or a member of your family visited in the past year? (choose all that apply)

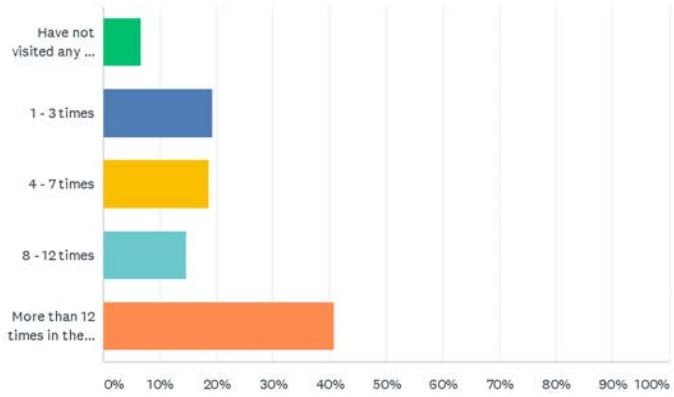
Answered: 287 Skipped: 29



ANSWER CHOICES	RESPONSES	
Salamander Park	64.11%	184
Scott Park	32.40%	93
Trillium Trail	72.82%	209
Riding Meadow Park	65.16%	187
Lockhart Loop	43.55%	125
McCahill Park	49.13%	141
Total Respondents: 287		

Q16 How often in the past year have you or someone from your household visited a Fox Chapel park?

Answered: 312 Skipped: 4



ANSWER CHOICES	RESPONSES	
Have not visited any of the parks	6.73%	21
1 - 3 times	19.23%	60
4 - 7 times	18.59%	58
8 - 12 times	14.74%	46
More than 12 times in the past year	40.71%	127
TOTAL		312

Q17. In the past year in what kinds of park activities have you participated, whether in a Fox Chapel Borough park or another park?

Hiking	169
Walking	87
Dog walking	73
Playground	61
Sports	52
Running	40
Picnic	39
Biking	25
Off leash dog	21
Bird watching	14
Events	13
Mountain Biking	8
Nature	8
Education	6
Dog park	5
Ice skating	4
Recreation	4
Pond / Stream	4
Fishing	4
Playing	4
Relaxation	3
Cross Country Skiing	3
Photography	2
Climbing	1
Paddling	1
Wildlife	1
Volunteering	1
Horse riding	1
Socializing	1
Cat walking	1
Skating	1
Canoeing	1
RC Car racing	1
Geocaching	1
Segway	1

APPENDIX D - KEY PERSON INTERVIEWS

Interview with Councilwoman-elect Mandy Steele on November 27, 2019

Mandy lives very near the property and has been interested in this property for public use for years. She is also very interested in the borough addressing stormwater runoff and how that can reduce future flooding.

She hopes future plans will incorporate “Stormwater sponges.” Plans should focus on innovation in wetland stream storage. Also, need to use floodplain plants. She sees this park being developed as a wetland park to help out overflow problems along Squaw Run.

She sees a link between the borough’s work on this park and the past owners Fred Rogers. She is imagining combining these two ideas into the “Fred Rogers Climate Change Center for Children.” She thinks this has lots of potential for raising funds. Believe there may also be a Heinz connection.

She sees this park as being one of the first parks in the country that addresses Climate Change in a significant way. She thinks this would sell well within the community.

She thinks parking should be limited, maybe 3 accessible parking spaces. Otherwise, access would be through use of the trails.

A new trail along the valley from Riding Meadow northward should be constructed through the park, making passage easier than the existing trail that is constructed on a steep hillside above the stream.

Mandy was willing to reach out to potential funders and to help with grant writing.

She was hoping that the park might develop a nature center for kids, maybe reusing the Hardie home.

The slopes are prone to slides. There was a major slide that was just repaired below Old Mill Road. During that construction, traffic was suspended at times. It got her thinking that maybe consideration should be given to closing Old Mill Road. More hill slides are likely to take place in the future.

She was concerned about neighbors to the park spraying herbicides that might get into the stream.

Cars travel Old Mill very fast and should be monitored to slow cars down.

There should be consideration with partnering with ASWP. She has noticed a Herron on the site for the past three years.

She suggested keeping dogs on leash for the lower part of the park to avoid plant damage from the dogs. Consider off leash trails in the upper areas of the park.

Highlight the waterfalls.

It is important that the educational opportunity regarding water and riparian corridors be encouraged.

Mandy has talked to Larry Sweigert about this park and he supports the trail connections.

Mandy has worked tirelessly for several years to help make sure the Hardie property is used for conservation purposes.

Interview with Mrs. Heberle on 12-4-19

Mrs. Heberle is the neighbor immediately north of the Hardie Property. She and her husband built the house about 40 years ago. The existing trail has run through the southern edge of her property and has caused problems for her.

Her first goal would be to reroute the existing trail so that it does not require trail users to cross her property. Set up a stepping-stone crossing of the creek further south so that people can walk up to Old Mill Road on the Hardie Property driveway. The current easement is close to her garden shed and she has had vandalism from trail users. She is very worried about liability from trail users wandering onto her property.

She feels that the Hardie house is in bad shape, is dangerous and should be removed.

The existing Hardie ponds should be fenced in to protect kids. She thinks the meadow on the southern end of the property is attractive and looks very natural and could be used for nature oriented interpretation and trails.

She is concerned about any activities that would require parking. Would not like to see a parking lot on the Hardie property. Need to avoid planned activities that would bring a “truck Load” of people because of the limitations for parking.

There have been horrible storms the past two years. The park should be a nature park.

There have been problems with kids hanging out near the existing parking lot across the street from her house. Lots of people wading in the creek.

She is getting the property surveyed to define where her southern boundary is as it relates to the Hardie property.

She is glad the borough purchased the property.

Notes on conversation with Jim Bonner, Executive Director of Audubon Society of Western PA on 1/10/20

I asked Jim if they would consider setting up a satellite center for environmental education. He was not especially interested. He wondered why he would set up a facility that would require supplies and other materials stored at the Hardie property when Beechwood Farms is so close.

He went on that he would be concerned about the lack of visibility from Old Mill Road and would assume that anything that he kept there would be vandalized.

He would only want to consider running programs if the site was uniquely different from other environments that they already run programs from. Jim was very familiar with the property and felt it was another example of stream valley ecology and that environment was well represented in other areas already managed by the ASWP.

From his review of the site, he recommends that the development in the park be low impact development, maybe trails connecting Riding Meadow to Beechwood Farms.

If people are planning to market the site as a "stormwater sponge," then the publicity must be laser focused so as not to confuse potential visitors. He would not recommend a smattering of messages on a variety of topics.

Jim indicates that the Hartwood Trail seemed to be moving forward and would likely generate more trial use through this area in the future. This also means more non-Fox Chapel trail use.

He encourages the use of native plants.

Mayor Alex Scott interview on 1/10/20

He saw as the vision for this park as one of a “Natural Park.” One that connected other existing parks. Trail connectivity came up several times during our conversation.

Alex thought that we should remove the Hardie home and barn. He did not see a real benefit to keeping. He would consider a shelter but would probably prefer no structures in the park.

Anything that is proposed will have to be maintained. The Public Works staff are stretched thin and often with their public sewer work through the year have difficulty getting to park issues. He would not like to add facilities that would require an increase in borough maintenance costs.

He is also concerned with the traffic that might be generated by the use of the park.

He was open to the idea of using the park for stormwater retention but did not want to lose the primary purpose of the park which is to provide a safe trail connection between Riding Meadow and other parks and trials south of there and trails and Beechwood Farms and eventually to Hartwood Acres County Park.

Alex suggested I talk to Jay Troutman regarding dog users in the park. He has headed up conversations between the borough and dog users.

He suggested that the Hardie family be honored for their reduced sales price of the property and their subsequent generous cash donation to the park. He thought the park should be called “Hardie Meadow Park” or something similar that connotated natural park use. In addition to the naming of the park, he thought there should be other ways of recognizing their contributions through signage and the borough website. There was discussion about having a park name unveiling in the summer of 2020 to celebrate the Hardie and other donors’ participation in settling the debt created by purchasing the park.

Alex suggested we also talk to Tom Sherts who was the owner of the property before it was sold to the Rogers family. Mr. Sherts attended one of our public meetings and shared some photos from when his family owned the property.

Alex referred us to the master plan for the community developed by Eszra Stiles in about 1956.

He thought we should coordinate with ASWP to have the park certified as a bird-friendly facility.

Notes from a conversation with Hiller Hardie on April 16, 2020

Mr. Hardie is one of 4 surviving siblings. They agree on the development of this park as a passive park. Their father purchased the property from the Rogers in 1976.

He realizes that the house is not in good condition and that it would be OK to demo. He did wonder if the Rogers cottage could be preserved with the fireplace to serve as a picnic pavilion.

He hoped that there would not be a playground or other active recreation.

He was down on the property this past weekends with his wife and their dogs and he ran into 20 other people, most with dogs, many neighbors he knew. He thinks it will be hard to ban dogs from the site and difficult to enforce if there is a ban. Mr. Hardie has 5 dogs.

He thought the waterfall was a nice amenity and there was a terrace there that one could enjoy looking at the waterfall.

He has fond memories of the pond. It was dredged shortly after they purchased the property. At that time, they had a dock on the stream side of the pond and the pond was dug 12 feet deep so they could dive in off the dock. They had a wire strung across the pond (like a zipline). They stocked the pond with small mouth bass and bluegills. He realizes that if the borough dredged the pond that deep there would be the potential for people getting injured and suing the borough. Sensitive to litigation potential.

Mr. Hardie mentioned that there is a large rock along the stream south of the barn, that is a nice area to view the stream. There is a natural hole in the stream there.

APPENDIX E - PNDI REPORT

Pennsylvania Department of Conservation and Natural Resources Project Search ID: PNDI-701269
PNDI Receipt: project_receipt_430_old_mill_road_701269_FINAL_1.pdf

1. PROJECT INFORMATION

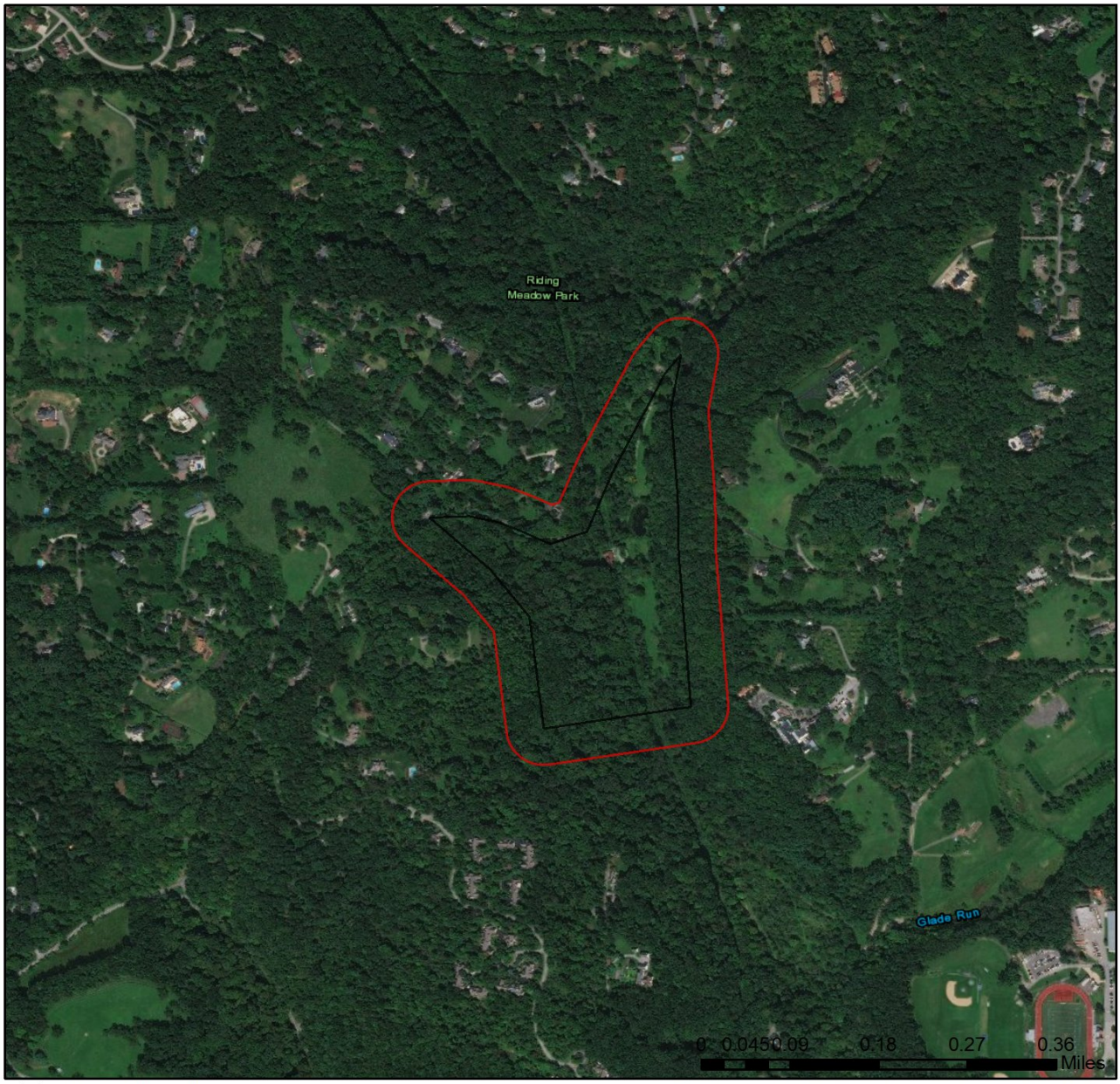
Project Name: **430 Old Mill Road**
Date of Review: **1/14/2020 02:59:23 PM**
Project Category: **Recreation, Other**
Project Area: **27.21 acres**
County(s): **Allegheny**
Township/Municipality(s): **FOX CHAPEL**
ZIP Code: **15238**
Quadrangle Name(s): **GLENSHAW**
Watersheds HUC 8: **Lower Allegheny**
Watersheds HUC 12: **Squaw Run**
Decimal Degrees: **40.528992, -79.897336**
Degrees Minutes Seconds: **40° 31' 44.3696" N, 79° 53' 50.4111" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

430 Old Mill Road

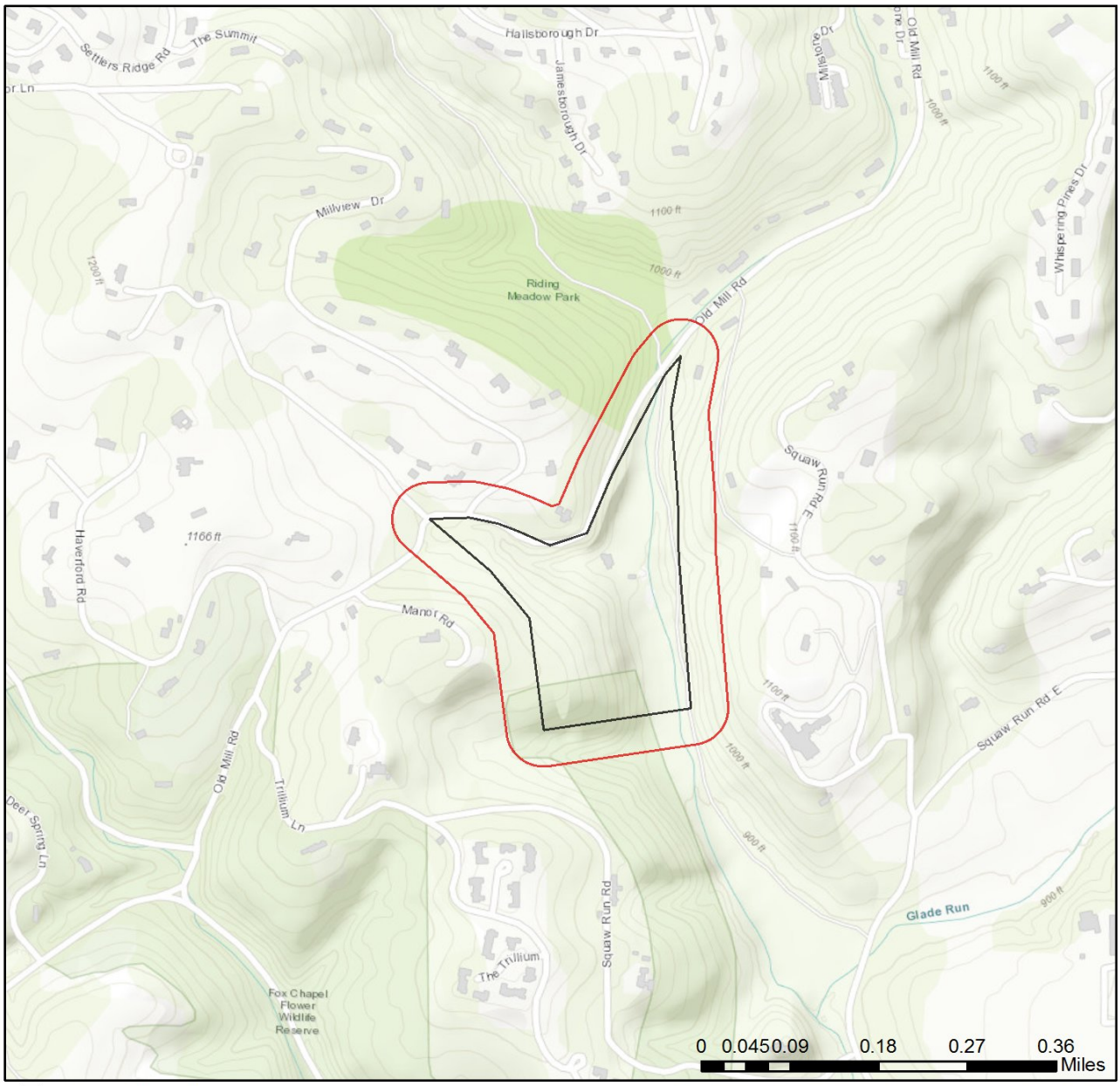


Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

430 Old Mill Road



Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,

RESPONSE TO QUESTION(S) ASKED

Q1: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).
Your answer is: No forests, woodlots or trees will be affected by the project.

Q2: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?
Your answer is: No

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service
RESPONSE:
No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: SARA POWELL
Company/Business Name: LENNON, SMITH, SOULERET ENGINEERING, INC.
Address: 846 FOURTH AVENUE
City, State, Zip: CORAOPOLIS, PENNSYLVANIA, 15108
Phone: (412) 264-4400 Fax: (412) 264-1200
Email: spowell@lsse.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Sara E Powell
applicant/project proponent signature

01/14/2020
date

APPENDIX F - STRUCTURAL ASSESSMENT

MOSHIER STUDIO
ARCHITECTURE • INTERIORS • PLANNING • SUSTAINABLE DESIGN

8 January 2020

James Pashek
Pashek + MTR
619 East Ohio St.
Pittsburgh PA 15212

Via email

Re: Report on Hardie Property
Fox Chapel Borough

Moshier Studio was asked to assist Pashek +MTR in evaluating a structure in Fox Chapel Borough as the Borough considers the future use of the property. Fox Chapel purchased the former Hardie residence, a 17.23 acre parcel at 430 Old Mill Road, in July 2019. The property contains a pond, and an existing house and a barn, both of which were occupied just before the sale.

Possible uses for the property are being discussed. It is located adjacent to Old Squaw Trail, which could provide walk-in access to the site and its natural waterfall. There had been some interest in converting the house to public use for environmental education or event rental. This type of use would require development of parking on the site, and a need to improve sight distance along Old Mill Road.

I visited the site on December 19, 2019 with Jim Pashek and Borough Manager Gary Koehler to assess the condition of the existing house and barn, with an eye toward its suitability for future public uses. We were fortunate to be able to reference some of the construction drawings prepared for the addition to the house by Curry Martin Highberger Klaus Architects.

UTILITIES AND SITE

The site is served by municipal water and sewage, and a gas line. Power is provided by Duquesne Light. Of note is an overhead transmission line that crosses the property very close to the front of the house. The house and barn are not located in a flood plain.

Behind the house is an existing retaining wall about 6'-8' in height constructed of soldier piles and wood lagging. Vegetation around it is overgrown. The house is accessed via a narrow farm lane with a steep hillside to the west and a pond to the east.

HOUSE

The house was constructed in several phases beginning in the 1930's. The Fred Rogers family owned it as a summer cottage in the 1960s and early 1970s. In 1976 the existing 22' x 55' single-story house with basement was expanded to the south; this addition consisted of a full basement and first floor, with a partial second floor. The total area of the house is now about 3700 square feet with 4 bedrooms and 3 bathrooms. Of note is the large entry space, about 11' x 35', and the large living room, about 23' x 17', which contains a fireplace. The previous living room became a family room of 19' x 15', also with a fireplace.

The addition is wood-framed, with 2 x 10 rafters, 2 x 4 wall studs and 2 x 10 floor joists. Insulation at the roof is 6" batts and at the walls is 3 ½" batts. Foundation is 10" reinforced concrete masonry units, with no insulation on the walls or the floor joists. The floor elevation in this area of the basement is 1'-7 ½" lower than the basement of the original house and provides adequate headroom. The floor framing in the older part of the house consists of 2 x 6 joists which have been sistered in some locations and have a limited live load capacity.

1501 Reedsdale Street Suite 301 Pittsburgh Pennsylvania 15233 • P: 412.361.5302 • F: 412.361.7302 • www.moshierstudio.com
Cherie H. Moshier, AIA, NCARB • Gary Moshier, AIA LEED® AP BD+C

Attic floor joists in this area have been insulated. Roof framing in this area appears to be 2 x 8s. Windows and doors feature insulated glass units; a few single-pane windows remain from the original construction. Exterior materials on both areas of the house consist of vertical cedar siding with transite panels at the ground level. The roof covering is asphalt shingles.

Condition of the House

The borough drained the plumbing system and turned off heat in the house, so the condition of those systems is unknown. One of the two bathrooms on the first floor is unchanged from the original house and the other was built in 1975. The roof was snow-covered during our site visit. If the original shingles were still in place, they would be 44 years old, so it is likely the shingles have been replaced. Gutters and rainwater conductors appear to be operational. Exterior wood siding shows decay and mold on all sides at the ground level, at corners, and above door and window heads. There is woodpecker damage higher on the walls. The transite panels were likely asbestos-containing at the time they were installed. Existing doors and windows show evidence of condensation from the moisture present in the house.

Basement walls show discoloration and dampness along the west elevation, where the grade pitches toward the house. There is a sump pump in this area.

Interior finishes are generally sound. Tile flooring in the entryway has been patched in several spots, probably due to excessive deflection of the substrate or a poor installation. Skylights above the living room fireplace have either leaked or been the source of condensation, and the wood walls below them are stained and damaged. The stone fireplace in the family room appears to be in good condition. The kitchen cabinets and appliances are at the end of their useful life.

Reuse of the House

If this structure were to continue as a residence, I would recommend that the transite panels be removed, and the flashing details at the sills be reworked. The cedar siding could be replaced with a cement-board product to provide a similar appearance while preventing future deterioration. This could provide an opportunity to introduce continuous insulation/sheathing to the exterior side of the studs and upgrade the insulation in the stud cavity. This would also require modifications to the detail at the roof edge. Doors and windows should be evaluated for reuse or replacement, and the basement walls should be insulated. Both the kitchen and bathrooms should be updated.

Were the house to be used for public purpose such as environmental education or event rental, its occupancy group under the current building code would change from **R** Residential to either **B** Business (if for use by fewer than 50 people) or **A-2** Assembly (if greater than 50 people and if food is served). Any change in occupancy would require compliance with the 2015 International Existing Building Code provisions in Chapter 10.

Neither sprinklers nor a fire alarm system would likely be required for an Assembly or Business occupancy of this size. Structurally, the required live load on the first floor would increase from 40 psf to 100 psf for an assembly use, which would require modifications to the existing first floor framing in both the original house and in the addition. Plumbing fixture counts would need to be checked for the new occupant load.

Compliance with ADA would be required. This would consist of at least one accessible entrance connected to accessible parking, and an accessible route to the area of primary function, which includes accessible toilet rooms and drinking fountains. The second floor area is less than 3,000 square feet, so an accessible route to this area would not be required.

BARN

The barn was designed at the same time as the house addition and presumably constructed in 1975. It consists of a single floor for vehicle and hay storage, with a partial walk-out basement for two stables. The foundation is 10" concrete masonry units, the floor under the stables is 2 x 8s, the hayloft floor framing is 2 x 12s, the walls are 2 x 4s and the roof structure is 2 x 10s or 2 x 12s over the hayloft and 2 x 10s over the garage. The two garage bays have a dirt floor. Exterior materials are the same wood siding as the house addition; the low-slope roof over the garage bays is built-up roofing and the pitched roof over the hayloft is asphalt shingles. The building is uninsulated and unheated. There is electric service and minimal lighting.

Condition of the Barn

The structure of the barn is in good condition, but the same deterioration of the wood siding has occurred here. Although the roof was snow-covered during the site visit, neither built-up nor asphalt roofing has a 44-year life, so they have either been replaced or need replacement. Gutters and downspouts appear operational.

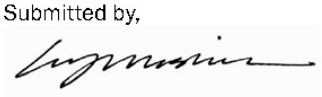
Reuse of the Barn

No proposed use for this building has been suggested. It's in good enough condition to be reused for its original purpose, or a concrete floor and garage doors could be added for use as a garage. Replacement of the deteriorating wood siding with cement board siding is also recommended.

CONCLUSION

While keeping the property as a residence requires only addressing deferred maintenance items, converting the property for commercial use would require extensive upgrades to comply with code and will impose a parking requirement that the site would have difficulty meeting. Reuse of the barn structure as a walk-in overlook facility or for storage of trail maintenance equipment could be feasible.

Submitted by,



Cherie H. Moshier, AIA, NCARB

APPENDIX G - CONSERVATION ASSESSMENT

PENNSYLVANIA NATURAL HERITAGE PROGRAM

CONSERVATION SUMMARY FOR PASHEK + MTR LANDSCAPE ARCHITECTS

Hardie Property, Fox Chapel, PA

DRAFT Report

Pennsylvania Natural Heritage Program
Western Pennsylvania Conservancy
December 2, 2019

Pennsylvania Natural Heritage Program
Western Pennsylvania Conservancy
800 Waterfront Drive
Pittsburgh, PA 15222

OVERVIEW

The Natural Heritage Program at Western Pennsylvania Conservancy at Western Pennsylvania Conservancy (PNHP) was contracted by PashekMTR Landscape Architects to conduct a brief conservation assessment/site visit of the Hardie Property, an approximately 30-acre property in Fox Chapel, PA, along Squaw Run, a tributary of the Allegheny River.

The Hardie property was recently purchased by the borough of Fox Chapel represents a key connector between several publically accessible open spaces owned by the borough and was purchased to provide passive recreation opportunities and to protect open space.

The following represents the results/findings from a site visit by Ephraim Zimmerman, Ecologist/Science Director for PNHP, conducted on November 27, 2019. The purpose of the site visit was to obtain an assessment of the property from an ecological perspective, primarily addressing two themes identified by PashekMTR during public meetings and discussions with borough personnel and key stakeholders.

- Understand the value of what we have on the property (beautiful natural space) and making sure the plan protects those unique features. Fox Chapel parks system has largely been natural spaces along stream valleys, celebrated for their natural beauty. Think of the Hardie property as a "sanctuary for wildlife and human life." Plan for sustainability.

- Think of creative ways to address stormwater management; maybe the basement of the house could be a detention basin to prevent water from flowing from residential developments above the property along Old Mill Road; resiliency.

DESCRIPTION OF THE SURVEY EFFORT

Ephraim Zimmerman visited the Hardie Property, an approximately 30-acre property in Fox Chapel, PA, along Squaw Run, a tributary of the Allegheny River on November 27, 2019, which flows south through the property. The survey was not intended to be comprehensive botanical/ecological survey of the parcel, but rather to provide a rapid assessment of general condition and context of the site, identify any ecological concerns, and provide future management and restoration recommendations to PashekMTR.

The survey was a rapid walk through the entire site and the borough-owned property to the north, slowing in areas of interest including Squaw Run and its floodplain, the upland forest area, and small stream/waterfall on the western side of the property.

SURVEY SUMMARY

The Squaw Run creek valley runs north-south bordered by a steep, west-facing forested slope on the eastern side of the creek (river left) and a more moderately sloping east-facing slope on the western side of the property. A small stream and waterfall bisects the western side of the property entering Squaw Run about ½ way through the property. There is a small farm pond on floodplain, with no distinct inlet; there is an impoundment. Adventive and old field plant species dominate the landscape at the entrance to the property off Old Mill Road. Squaw Run and its floodplain are narrowest at the north end of the property flowing through a culvert under Old Mill Road. There is an obvious sewer pipeline in the stream channel, with a manhole cover at least three feet above the water level. The following observations are divided into five distinct areas: Squaw Run stream channel and banks, floodplain, upland forest, tributary/waterfall, and pond.

Squaw Run Stream Channel and Banks:
Squaw run is highly channelized through the Hardie property, having been pushed to the eastern side. There is a narrow strip of "successional" vegetation typical of floodplains and streambanks in Western Pennsylvania. This area is highly modified and is not represented in the Pennsylvania Plant Community Classification as a natural floodplain community; however, the great majority of overstory and understory species are native. We can refer to this as a "Successional Floodplain Forest." Boxelder (*Acer negundo*), black cherry (*Prunus serotina*), black walnut (Juglans nigra), and hawthorns (*Crataegus* spp.) make up the majority of three species on this narrow strip of natural vegetation along the stream. The understory is quite invaded – bush honeysuckle (Lonicera morrowii/L. maackii), multiflora rose (*Rosa multiflora),* and privet (*Ligustrum* spp.) are common in the understory. Wingstem (*Verbesina alternifolia*) is a common herbaceous species. Other invasive plants include garlic mustard (*Alliaria petiolata*), pachysandra (*Pachysandra* sp.), the ubiquitous Japanese stiltgrass (*Microstegium vimineum*) and the very problematic lesser celandine (*Ficaria verna*). There is very little streambank on the eastern side as the landscape rises steeply on the eastern side of the creek.

The stream bottom is slate – having eroded completely down to bedrock. The cut-bank, nearly three to four feet high in places is a result intense channelization, having been forced to one side of the valley to maximize the pasture area and make room for the pond, barn, and residence. To the north, the riparian forest extends further onto the floodplain to the west.

Floodplain
The description of the floodplain includes all of the flat area of the Squaw Run valley bottom, not only what was provided on the survey map as "floodplain"- most likely the FEMA floodplain. This area is almost completely anthropogenic (human-created), having been converted to pasture and residential area from native floodplain forest, and includes an impoundment (described in a different section). The stream channel and wooded stream bank is artificially restricted to the eastern side of the pastures, which start at the entrance of the property off Old Mill Road and extend to the southern end of the property. Two pastures are present on the property, situated north and south of the farm pond. Both appear to be managed as typical hay fields and have supported horses in the not to distance past. A dilapidated barn is centrally located on the property, between the two fields. The flat pastures are above the official FEMA floodplain, and the survey suggests that these areas, despite being part of the historical floodplain valley, do not experience flooding except in the most intense floods. A deep soil pit would most likely have exhibited indicators of hydric soil at depth (below the plow-layer), along with bands of creek cobble and/or shale bedrock similar to that of the stream channel, but the soil that is on this area has been greatly altered. Upland shrub and tree species are scattered around the flat Squaw Run Valley, however, these are primarily invasive non-natives and weedy upland species, described in Squaw Run Stream Chanel section above. The field are kept open and maintained by annual mowing/haying.

Upland forest
Upland forest makes up the majority of the western side of the Hardie property, west of the entrance road off Old Mill Road and behind the residence. The forest is typical of western Pennsylvania, composed of red oak (*Quercus rubra*), sugar maple (*Acer saccharum*), red maple (*A. rubrum*), American beech (*Fagus grandifolia*), white oak (*Q. alba*). Scattered Norway maple (A. platanoides) are present, along with the occasional invasive shrub species described in previous sections. The trees are large and the presence of the beech indicates that this steeply sloping forested area has not been cleared for extensive periods of time. While not "old growth" this forested area could be considered native to the region and of a high quality – especially for a developed area in Allegheny County. The forest is typical for the Western Allegheny Plateau ecoregion and described as a Tuliptree – Beech – Maple Forest and Dry Oak – Mixed Hardwood Forest in the Pennsylvania Plant Community Classification. These two forests are often found together with the Dry Oak – Mixed Hardwood Forest situated on upper slopes and the dry crests of the plateau and the Tuliptree – Beech – Maple Forests more commonly found on the mid to lower slopes.

A large power line right is situated on eastern edge of the forest, on the low slope above the floodplain terrace/field area. Black raspberry (*Rubus allegheniensis*) and blackberry (*R. occidentalis*) are prevalent within this powerline ROW.

Tributary/waterfall

A small tributary stream and significant 15+foot waterfall flows through a deep cove on the western portion of the property and into an artificial channel behind the residence. The tributary is shaded by large trees hanging over from the upland forest, with the addition of eastern hemlock (*Tsuga canadensis*). Christmas fern (*Polystichum acrostichoides*) and intermediate wood fern (*Dryopteris intermedia*) were observed in the understory during the survey. The surrounding forest is primarily species of the Hemlock Northern Hardwood Forest type, typically found in the northern counties and mountains of Pennsylvania, but restricted to deep, shaded coves in Western Allegheny Plateau. The channel bottom is slate, and channel walls steep and highly erodible. The mouth of the tributary opens up into the back yard of the residence, where the soil is extremely saturated, although ponded water was not present. The stream channel rather than existing as a broad delta-like wetland before entering the main stream of Squaw Run, is artificially channelized to maximize the area of the yard and residence.
There are several piles of debris in the stream channel of the tributary. A large pile of wires is located right below the waterfall.

Pond

There is a small farm pond situated on the northern 1/3 of the property, on a higher floodplain terrace, between the two pasture areas. Water is impounded, and most likely fed by the tributary stream. The pond is heavily silted in and looks to have a significant nutrient input, suggested by the prevalence of algae. There is no direct inlet, but water must be controlled through a plumbing system.

RECOMMENDATIONS

Upland Forest

1. Maintain forest cover. Control invasive plants – especially Norway maple.
2. Plant native shrub and small tree species under power line within the ROW.
3. Control Japanese stiltgrass, bush honeysuckle, and other non-native plants within the ROW. Consider building a small hiking trail through this area to bring hikers/dog walkers into the forest
4. Remove garbage/wires from the area behind residence, especially the large bundle of wire below the waterfall.

Floodplain/Pond/Squaw Run Channel

1. Restore floodplain of Squaw Run, which means reconnecting the whole valley bottom to the Squaw Run channel and could be extremely time consuming, labor intensive, and expensive. However, this action will result in significant downstream benefits (flood control/abatement), and stormwater management. Perhaps the floodplain on the area south of the pond and residence would be a better choice for floodplain restoration.
2. Drain/remove pond and reconnect tributary stream to Squaw Run, to flow through a restored tributary delta within the floodplain valley.
3. Remove all structures.
4. Plant native floodplain vegetation as described in the PA Natural Heritage Programs plant community classification. See "Sycamore Floodplain Forest" for list of appropriate plant species and ecological conditions. http://www.naturalheritage.state.pa.us/Community.aspx?=16025

APPENDIX H - PA DCNR INCIDENT REPORT FORM

6000-FM-SP0008 Rev. 12/2003 — INCIDENT REPORT — DCNR

PENNSYLVANIA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES – BUREAU OF STATE PARKS			1. Report Number	
2. Region	3. Park #	4. Park Name	5. Location of Incident	6. UCR Code
7. Incident (List)		8. Date Occurred (MM/DD/YY) / /	9. Time Occurred	10. Day
11. I.R.S. Code ☐ V.C. ☐ C.C. ☐ P.R. ☐ Game ☐ Fish ☐ Other _____				12. Section #
13. In the box before each name, enter the appropriate letter. V – Victim, W – Witness, A – Accused, S – Suspect, C – Complainant, O – Other (explain below). Place additional name(s) in the narrative.				
☐	13. Name	14. Date of Birth (MM/DD/YY) / /	15. Phone ( ) -	16. Sex (choose one)
	17. Address	18. City	19. State	20. Zip - / 21. Race
☐	13. Name	14. Date of Birth (MM/DD/YY) / /	15. Phone ( ) -	16. Sex (choose one)
	17. Address	18. City	19. State	20. Zip - / 21. Race
22. Received By ---- Name		23. Date (MM/DD/YY) / /	24. Time	25. How Received? ☐ Person ☐ Phone ☐ Other _____
26. Attachments ☐ Yes ☐ No Type: _____ Number _____				27. Investigation Complete? ☐ Yes ☐ No
28. Investigated By: (Signature and Date)		29. Approval (Signature and Date)		
30. Narrative: **Refer to Management Manual Section 1200.390 Instructions.**				

APPENDIX I - TRAIL ASSESSMENT FORM

Trail Assessment Form

Trail Name _____ *Begin Segment* _____ identified by mileposts ☐
Location _____ *End Segment* _____ or coordinates ☐
County _____ Total Trail Length _____ Segment Length _____
Conducted by _____ *Date* _____

page 12 of 3

Designed Use ☐ Hike / Pedestrian ☐ Bike ☐ Mountain Bike ☐ Equestrian
☐ Cross Country Ski ☐ Snowshoe ☐ ATV ☐ Snowmobile
☐ Others, _____

Level of Difficulty ☐ Easiest ☐ More Difficult ☐ Most Difficult

Trailheads & Access Points *Name* _____ *Location* _____ identified by milepost ☐
Latitude N _____ or coordinates ☐
Longitude W _____

Notes

Trail Tread / Surface *Condition* ☐ Good ☐ Fair ☐ Poor ☐ Needs Improvement
Materials _____ *Average Width* _____, min. _____, max. _____
Grade ____% *Cross Slope* ____%

Notes

Drainage ☐ Drains properly ☐ Draining onto or across trail surface
☐ Water staying on trail ☐ Needs drainage structure

Bridges and Culverts ☐ Good ☐ Fair ☐ Poor ☐ Cleanout

Dips ☐ Good ☐ Fair ☐ Poor ☐ Cleanout

Notes

Road / Railroad Crossings
Condition ☐ Good ☐ Fair ☐ Poor ☐ Needs improvement
Sight Lines ☐ Good ☐ Fair ☐ Need to prune ☐ Unsafe
Accessible (Note Exceptions) _____

Notes

Trail Assessment Form

Trail Name _____ *Begin Segment* _____ identified by mileposts ☐
Location _____ *End Segment* _____ or coordinates ☐
County _____ Total Trail Length _____ Segment Length _____
Conducted by _____ *Date* _____

Adjacent Land Uses (Check all that apply)
☐ Forest ☐ Farm ☐ Residential ☐ Commercial ☐ Industrial ☐ Encroachment

Notes

Historical and Other Structures
Condition ☐ Good ☐ Fair ☐ Poor ☐ Needs Improvement
☐ Needs to be replaced ☐ Needs to be cleared out

Notes

Signage (includes trailhead and reassurance markings, blazes, etc.)

Blaze / Marking Color or Style _____

Overall Condition	☐ Good	☐ Fair	☐ Lacking	☐ Needs Maintenance
Regulatory	☐ Good	☐ Fair	☐ Lacking	☐ Needs Maintenance
Wayfinding	☐ Good	☐ Fair	☐ Lacking	☐ Needs Maintenance
Interpretive	☐ Good	☐ Fair	☐ Lacking	☐ Needs Maintenance
Wooden / Routed	☐ Good	☐ Fair	☐ Lacking	☐ Needs Maintenance
Reassurance Markings	☐ Good	☐ Fair	☐ Lacking	☐ Needs Maintenance
Intersections	☐ Good	☐ Fair	☐ Lacking	☐ Needs Maintenance
Pavement Markings	☐ Good	☐ Fair	☐ Lacking	☐ Needs Maintenance
Others (fiberglass, etc.)		☐ Good	☐ Fair ☐ Lacking	☐ Needs Maintenance

Replace Signs:

Notes

Trail Assessment Form

Trail Name _____ *Begin Segment* _____ identified by mileposts ☐
Location _____ *End Segment* _____ or coordinates ☐
County _____ Total Trail Length _____ Segment Length _____
Conducted by _____ *Date* _____

Other Notes and Summary

Please return this form to

_____

_____

APPENDIX J - PARK RULES & REGULATIONS

Chapter 241

PARKS AND RECREATION

§ 241-1. Rules and regulations.

The following rules and regulations are hereby established for the management and protection of all Borough parkland:

A. All parks and parkland of the Borough shall be open daily to the public between sunrise and one hour after sunset. Dogs shall be permitted only in certain parks (as specified below) and only between dawn and dusk. No person, other than authorized employees of the Borough, shall be in any park area from one hour after sunset to sunrise.

B. No person shall injure, deface, remove, cut or damage any of the trees, plants, shrubs, turf, buildings, structures or fixtures therein or any other property of the Borough located within a park area. No equipment shall be left in such a location as to inhibit the use of the park area by others.

C. No person shall conduct himself within a park so as to annoy other persons using the park for lawful purposes or any other residents of the Borough.

D. No person shall dispose of any litter on park grounds except by disposing of same in receptacles designated for this purpose. Litter in excess of what will fit in a closed receptacle shall be removed by the users of the park. In areas where dog walking is permitted, dog owners/ walkers shall pick up all feces and properly dispose of same in trash receptacles.

E. No person shall injure, destroy, deface, alter or remove any notice, rule or regulation posted at any place within any park area.

F. No person shall set or maintain any fire within any park area.

G. No person shall bring any alcoholic beverage into any park area, either for his/her own use or for the use of any other persons.

H. Beverages in glass bottles are prohibited in park areas.

I. No motorized vehicles, other than Borough equipment, shall be permitted in any park other than on designated parking areas.

J. Gambling or games of chance, drunkenness, disorderly or indecent conduct and profane or offensive language are prohibited.

K. No person shall wash, clean, polish, grease, lubricate or otherwise make repairs to any motor vehicle in any park area, except that emergency repairs of a minor nature may be made.

L. No group of 20 or more persons shall use McCahill Park without first having obtained a permit from the Borough. Playing fields shall not be used for sports such as football, rugby or soccer when the ground is wet and the turf may be damaged.

M. On all public property and all streets in the Borough, dogs shall be limited to a maximum of two dogs per individual, which must at all times be on and under control of a leash, except as otherwise expressly provided herein. However, no dogs shall be permitted in any Borough park other than Riding Meadow Park, Old Squaw Trail, and Lockhart Trail. Horseback riding is permitted within all parkland except the Trillium Trail and McCahill Park. The following park-specific restrictions shall apply to dogs, which must, whether on or off leash, be under the control of their owner or handler and must neither disturb nor harm any person or animal:

(1) Riding Meadow Park and Old Squaw Trail. Dogs may be off leash between dawn and dusk.

(2) Lockhart Trail. Dogs may be off leash between dawn and 11:00 a.m. and between 4:00 p.m. and dusk, except that, on the northerly portion of such Trail, from its intersection with the northerly line of Trillium Lane to a point 740 feet to the east of such intersection, and on the westerly portion of such Trail, from its intersection with the southerly line of Trillium Lane to a point 780 feet to the south of such intersection (both measured along the said Trail), dogs must be leashed at all times. In addition, on said northerly portion of such Trail, from the first such point of intersection to a point 430 feet to the east of such intersection, dogs must be kept on the fifty-foot private road right-of-way, the center line of which is essentially the dividing line between property of the Trillium Homeowners' Association and property now or formerly of Gordon Davison et ux., which private road is shown on the plan of the Kyne Subdivision, Plan Book Volume 175, pages 47-50, in the Recorder's Office of Allegheny County, Pennsylvania.

N. No firearms of any nature, including air guns, nor any archery equipment shall be carried or used within any park area except with the prior approval of the Fox Chapel Police Department in conjunction with the Borough's Wildlife Management Program.

O. Anyone using the parks or parkland shall observe all posted parking restrictions.

P. Any activity which generates parking in excess of that available at the site must make alternate parking/busing/carpooling arrangements. Due to parking limitations at McCahill Park, use of that park shall at all times be limited to a maximum of two activities at any one time. The Borough also reserves the right to preclude the simultaneous use of McCahill Park by specific organizations when it is felt that such dual

use might create parking or other problems. Groups having a valid use permit shall have priority over any group not having a permit.

Q. Permits to reserve one or both of the fields at McCahill Park will be issued on a first-come, first-served basis beginning January 1 of each year. (Only one baseball field per league may be reserved with each permit. No permits will be issued to scheduled leagues for use of McCahill Park after 3:00 p.m. on Saturdays or anytime on Sundays.) Applications must be made on forms provided by the Borough. The issuance of any such permit is conditioned upon strict adherence to these rules and regulations, and any violation hereof shall be cause for revoking the permit. The Borough also reserves the right to refuse to issue a permit or to revoke a permit without cause.

R. Subject to ratification by Borough Council, the Park Commission of the Borough of Fox Chapel is hereby empowered to promulgate and post such procedures, rules and regulations as it may deem necessary for the use of all parkland.

§ 241-2. Violations and penalties.[1]

Any person who violates or permits a violation of this chapter shall, upon conviction in a summary proceeding under the Pennsylvania Rules of Criminal Procedure, be guilty of a summary offense and shall be punishable by a fine of not more than $1,000, plus court costs and reasonable attorneys' fees incurred by the Borough in the enforcement proceedings. Upon judgment against any person by summary conviction, or by proceedings by summons on default of the payment of the fine or penalty imposed and the costs, the defendant may be sentenced and committed to the Allegheny County correctional facility for a period not exceeding 30 days. Each day that such violation exists shall constitute a separate offense, and each section of this chapter that is violated shall also constitute a separate offense. In addition to or in lieu of enforcement under this section, the Borough may enforce this chapter in equity in the Court of Common Pleas of Allegheny County.

1. **Editor's Note: Amended at time of adoption of Code (see Ch. 1, General Provisions, Art. I).**