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### Exploring Sustainability Through Campus Landscapes

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# Exploring Sustainability Through Campus Landscapes

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## ABSTRACT

Having a positive sense of place, or respect and appreciation for one's surroundings, can foster a stewardship role necessary to combat current social and environmental issues. Individuals with a positive perception of their environment and community will more likely develop an interest in protecting its assets and improving its shortcomings. Our project focuses on Bucknell's landscapes to encourage engagement between the audience and the outside environment, with the hopes of building this sense of stewardship while simultaneously discussing sustainability and avenues for positive change.

The objective of this project is to create a walking tour to promote teaching and learning about sustainability through the experience of Bucknell's campus landscapes. The tour is meant to educate faculty, students, and community members about the complex histories of campus locations by encouraging them to visit the selected sites in person, and reflect upon their degrees of sustainability.



## METHODS

Our project began with a preliminary list of 15 sites considered to have high-value potential for teaching and learning about sustainable landscapes. We conducted research, primarily through Bucknell publications and archives, on the sites. During the course of this research, we determined that some sites originally included on our list did not fit the goals for our walking tour while other sites not originally included did. We removed and added several sites to end with 26 sites total. We created a comprehensive description for each, including the site's history and relationship to sustainability.

To benchmark and inspire the framework and content of our map, we researched similar walking tours created by other universities. Interviews with various Bucknell faculty and staff were also conducted to acquire more information on specific sites and feedback on walking tour logistics. Interviewees were asked questions regarding place-based experiential education and their opinions on the map's content, forms of presentation, and integration into their courses. We coded each of the interviews by identifying and quantifying reoccurring key words and interests regarding the map's structure, content, and presentation.

## CASE STUDIES

The two walking tours that had the most influence on the walking tour we developed were created by Emory University and the University of Washington.

- The Emory University walking tour is meant to be a collection of sites at which visitors can reflect on urbanization and the need for environmental awareness. Inspired by this goal, we also tried to include sites on our tour that would allow users to reflect on the current state of sustainability at Bucknell and opportunities to improve. We also found the information pamphlet developed by Emory to be extremely effective, and plan to develop a similar pamphlet for our own tour.
- The walking tour created by the University of Washington includes an excellent example of an interactive map. The map separates the different aspects of sustainability that you can see on the tour – built environments, environmental groups, natural environments, sustainable dining, waste diversion, transportation, and other initiatives. The website also directs to their environmental history campus tour, which explores how the social, physical, and cultural landscape came to be. The interactive website that will eventually be developed for our tour will be inspired by Washington's website.

## INTERVIEW RESULTS

Based on our analysis of the interviews, we got the following helpful feedback which we will incorporate into the future development of our tour:

### Presentation

The interviewees largely expressed an interest in a tour that could be conducted within a single class period, and would be virtually-accessible and interactive—mainly taking shape as a multi-layer map or within an app-interface, like Ready, Set, Fit!™. The division of the campus' sustainable sites into themed layers would allow for more comprehensive, interest-specific, and timely walks. They also conveyed interests in a guide-lead tour and audible format to supplement the virtual version.

*"It will make students see things that they wouldn't have seen at all; things they would have seen but wouldn't have recognized as part of the landscape of sustainability"* –Humanities Professor

### Place-based studies

The vast majority of professors interviewed currently utilize spaces beyond the traditional classroom as a means of incorporating experiential-education within their course work. They spoke to the benefits of place-based studies as a more impactful and insightful avenue of education for the students, and many expressed an interest in utilizing the map's content as another method to expand beyond the conventional classroom.

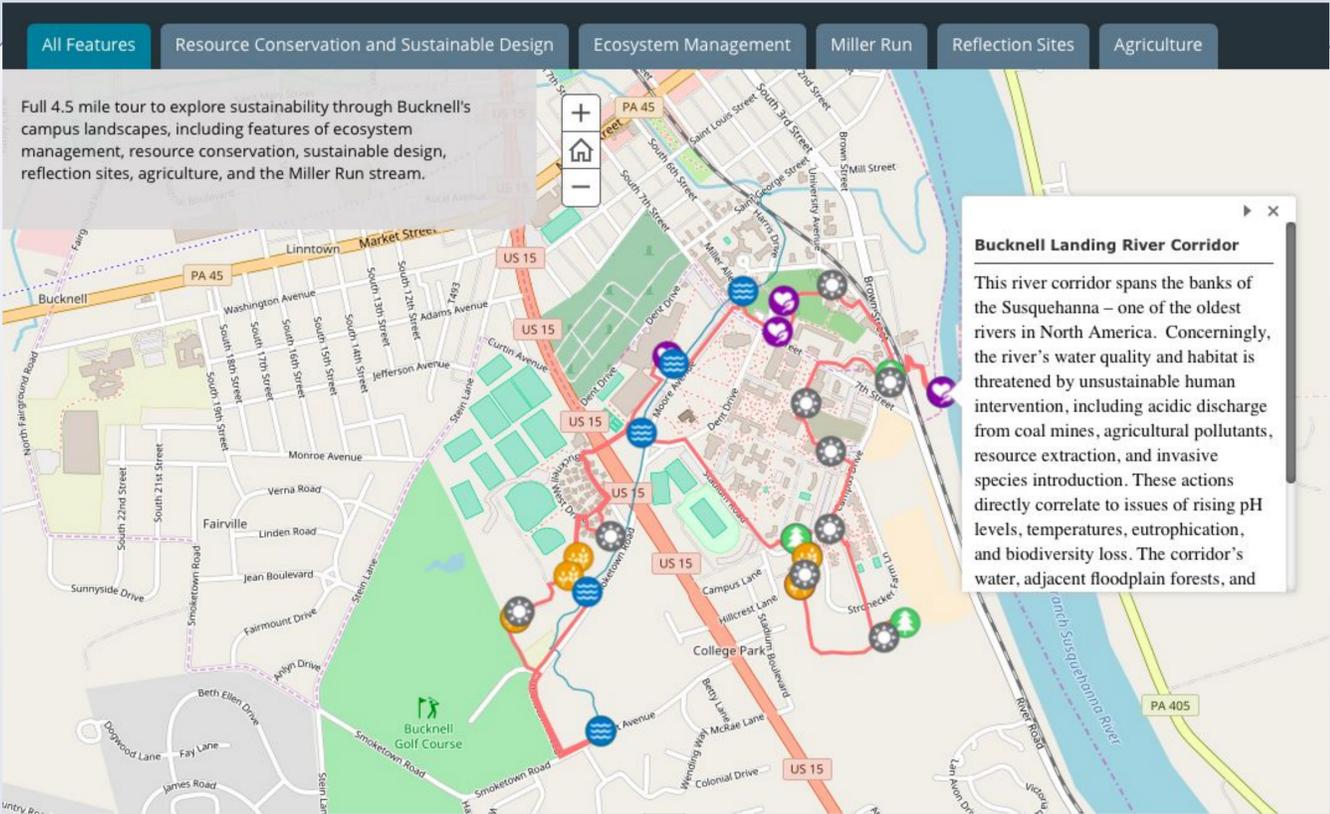
*"When you go out into a real place, especially a place outside... just the fact that [the students] are present in a different location means that they have the ability to sensory interact with everything that's there... they're outside and they're indirectly impacted by the fresh air and the nature... that's energizing them emotionally, physically, spiritually, and sensorially"* –Engineering Professor

### Holistic Presentation of Sustainability

Some interviewees emphasized that the map must hold a broad and inclusive interpretation of sustainability at the forefront of its purpose, as it may fall prey to exclusively promoting messages of environmental consciousness to unintentionally exclude the social and economic elements of sustainability.

## FINAL PRODUCTS

- Multi-layer ArcGIS Online map
- Ready, Set, Fit!™ walking tour route
- Analyzed compilation of the seven professor-interest interviews



## LIST OF SITES

- Bucknell Center for Sustainability & the Environment (BCSE) Gardens
- Living Greenhouse
- Energy Hill
- Bucknell Farm (planned)
- South Campus Stormwater Ponds
- Monarch Waystation
- Bioswale
- Academic West Rain Gardens
- Dana Green Roof Module
- American Chestnut Restoration
- Walter C. Geiger Physical Plant
- River Corridor
- Bison Bikes
- Bucknell Arboretum
- Seven Generations Sculpture
- Miller Run – Art Building Section
- Miller Run – KLARC Section
- Peace Tree
- Solar Mod
- Miller Run – Gerhard Fieldhouse Section
- Burpee Research Greenhouse
- Art Barn Dairy
- Miller Run – Art Barn Section
- Tree Nursery
- Compost Windrows
- Miller Run – Restoration Site



## FUTURE WORK

Feedback from the interviews will be incorporated into the development of the website and pamphlet. The tour will likely be separated into several shorter tours based on location or theme or class period length. Future additions and research for the project include the incorporation of physical signs or QR codes for each site, an interior spaces layer to the interactive map, and an archival website to link the map to for more in-depth backgrounds on each of the map sites with accompanying materials to support curriculum development.



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