SRS Placement Report: Testing the SWT Natural Capital Standard on an Existing Site

Clifton Esteban

Background

I did my placement with the University's Social Responsibility and Sustainability Department (SRS) from February 5 to March 2. I worked with Matthew Lawson (Matt) and Elizabeth van der Meer (Liz), with Liz serving as my immediate supervisor. We discussed our requirements and goals before finalizing the placement details.

My project revolved around a tool called the Natural Capital Standard for Green Infrastructure (NCSGI) which is made by the Scottish Wildlife Trust (SWT). My two main tasks were to conduct a pilot study using the tool and give feedback about it afterwards. The pilot study was to be conducted at the Pollock Halls.

Throughout the project I spoke with members from the Scottish Wildlife Trust, SRS, Estates Department, and EDINA.

Goals

This project is beneficial for SRS to measure the amount of green spaces as this allows them to make more informed decisions on initiatives relating to the environment (climate change, climate policies, health and wellbeing). Using a tool based on an internationally-recognized method opens up new ways to benchmark against efforts from other universities.

This project is beneficial for the SWT as this serves as the pilot test for the NCSGI tool. The SWT continues to look for spaces where the tool can be used so they can gather more feedback about it.

This project is fascinating to me because I get the opportunity to play a part in promoting a sense of health and wellbeing within the university. Through a measurement tool such as this, I get to encourage the university to increase the number of green spaces, which I believe will lead to a better environment for its members altogether.

Timeline

Date	Activity
Feb 5	Placement Start
Feb 5 - 9	Scoping, planning

Feb 12	Meeting with Liz
Feb 13	Meeting with Liz and Jonathan Long from Estates
Feb 15	Visit Pollock Halls with Liz, Jonathan and Dave Chavasse
Feb 16 - 21	Scoring
Feb 21	Meeting with Liz
Feb 23	Meeting with Guy McGarva from EDINA
Feb 24 - Mar 1	Feedbacking
Mar 2	Placement End

Process

1. I learned about the NCSGI tool by studying the NCSGI information document (October 2018) written by the authors from the Scottish Wildlife Trust and through a meeting with Hebe Carus. The meeting helped provide more context about the history of the tool. The tool is meant for estate planning but can be used for existing sites, and the latter is what I did.
2. I visited Pollock Halls with the team to locate green and blue spaces listed on the tool. We used an enlarged map of Pollock Halls printed out by Jonathan and Dave from Estates. We spent around 30 minutes seated down, familiarizing ourselves with the map and making approximations about the areas. Then we spent around an hour walking around the vicinity to look at the blue and green spaces, noting where they are located and listing them down. Liz and I took photos.
3. I had to measure the actual size of the blue and green spaces. I didn't have enough time and resources to do it physically via the measuring wheel so I used the digital map on DigiMap. I gained access to it via Guy McGarva of EDINA.
4. As soon as I had the measurements for all the green/blue spaces and the types of green/blue spaces, I inserted all the data into the tool.
5. I met with Guy and showed him how I used DigiMap for this project. He recommended other features that could make the work more efficient and accurate. We played around with Aerial Roam, ArcGIS and OS Greenspace. We imported and exported Shapefiles.

Comments

1. The Natural Capital Standard Score that I got for Pollock Halls is around 0.27. I must say however that this is a very rough estimate. Because of the time limitation, I wasn't able to be thorough with my measurements and classifications.
2. The people I worked with were easy to reach (digitally and physically). It helped speed things up as I gathered more data throughout the placement period.
3. Connections with my course

a. Learning to differentiate green and blue spaces (i.e. trees, meadows, shrubs, concrete, flowers), similar to a bog survey we did at Ecology and Field Studies, a course we did after the placement
b. Looking at Pollock Halls as a space with multiple users (faculty and staff) and stakeholders (decision makers, government) is reminiscent of Interpreting the Landscape, where we looked at the connecting between the physical, cultural and social aspects of spaces. I also get to uncover parts of its history (i.e. Pollock Halls has no new buildings except one), study architectural and structural features (i.e. no SUDs), and find out why spaces are the way are.
c. Connection between green spaces and health

Conclusions

Findings	Recommendations for future use
There are too many categories to look out for	Re-classify the items and use less categories. For example, items can be under these five main categories: ● Trees 　○ High BDV 　○ Low BDV 　○ More than 10 　○ Less than 10 ● Grassland 　○ Grassland (wild) 　○ Grassland (amenity) 　○ Hedgerow 　○ Shrub bed ● Gardens 　○ Community garden 　○ Green roof 　○ Vertical greening ● Water ● Sealed Areas 　○ Permeable paving 　○ Concrete areas
Items can be codified	Codify the tool items into A1, B1, C1, and so on. This makes it more convenient for annotations, rather than using the full names of the items. For example:

A significant amount of knowledge about blue and green and blue spaces is necessary to use the tool	Training from SWT

Team up with key people familiar with the local plants (i.e. Estates Department, botanists, residents) |
| Instructions can be simplified further | Step 1: Scoping, where the team sits down to map out spaces and does a walk through of the entire area (can be repeated)

Step 2: Categorizing, the team categorizes the spaces according to the GI tool

Step 3: Scoring, the team measures the spaces, computes for scores using the data collected from Step 1 and 2 |
| Time spent in the outdoors must be considered. Although digital maps provide a significant amount of data, a physical walk through around the area is still needed to check for ground truth. | Carry a large, updated, high-resolution version of the map that can be freely annotated.

Consider the weather. Wear clothing appropriate for the length of time spent outdoors.

Consider the seasons when locating plants.

Take a walk-through video as visual aid |
| Some items need clarification | 1. How do we account for multiple floors in a building?
2. How do we account for areas with mixed native and non-native plants?
3. What should be done if the item cannot be identified? |
| External stakeholders play a large | For future University of Edinburgh projects, work with |

part (i.e. Estates, mapping team, etc.)	EDINA and obtain MasterMap data. This data can be imported into DigiMap (probably Aerial Roam) and annotations can be made from there. This helps reveal the boundaries of the existing maps. Note that UK map datasets are updated every six weeks If larger spaces are to be measured in the future, download bigger and more specific datasets through the 'Data Download' feature of DigiMap and use that instead.
The tool can also be used in the planning process (i.e. infrastructure hasn't been built yet)	Conduct a briefing on how to use the tool and how to Survey blue and green infrastructure (i.e. training) can for future users of the tool. Create an online database (i.e. Google Sheets, Forms) for users to be able to upload scores from different locations. This is a more efficient way to track data and uncover trends. Have a checklist or a "kit" that future users can refer to. Include simple steps and categories for guidance.

Clifton Esteban
2018