

Validation Report: Price Park and Greensboro Greenway,  
Greensboro, North Carolina

General Verification Information	
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## Validation Summary

The Price Park and Greenway sites form a project with 253 trees located in the City of Greensboro, which will eventually generate carbon offsets for the uses of Duke University and Elon University. This validation report, the initial project verification performed by American University, the peer institution, seeks to address this project's compliance with the Duke Carbon Offsets Initiative (DCOI) Urban Forestry Protocol 2.1 to utilize the generated credits to offset scope 3 emissions. The validation analyzes this project alone utilizing the DCOI Validation Checklist 1.1 as a guide. The project was analyzed for compliance with the Permanence, Additionality, Verifiability, Enforceability, and Real (PAVER) requirements, and was ultimately validated.

The verification findings confirmed that the trees were cared for following an acceptable timeline with great conditions of maintenance, yielding an appropriate number of offsets per the calculations in the Project Description Document or PDD. One discrepancy that has since been resolved through correspondence with Urban Offsets, can be found in the Permanence, Verifiable, and Site Visit sections. The verifiers who visited the sight were unable to locate 25 trees with the Fulcrum Application (GPS System). This may be attributed to the general lack of precision of GPS systems. However, the site visitors failed to access hard-copy, raw data inventory files that confirm the location of trees before their visit. Urban Offsets has responded to these comments claiming that the trees could be found if re-visited with this information. Other minor uncertainties have been accounted for throughout the verification process. The following report incorporates comments and corrections made to the writing of the original student verifiers.

## Eligibility Conditions

This site is located within an Urban Area, as defined by the most recent publication of the US Census Report. The Census Bureau identifies areas with 50,000 people or more as Urban Areas, therefore, Greensboro is an urban area. An electronic file that identifies the project boundaries is included in the PDD. Neither of the project sites were previously used to harvest lumber, and the project does not follow a harvest event. A partial end-of-life plan is in place on pg. 38 of the Woodland Management Plan, if "determined to be hazardous," these trees can be removed by the Planning Director. It is incomplete considering it does not designate any intended use for the trees once they have been removed.

The project commencement date normally signifies the early stages of project planning. Ideally, this project's commencement date should be the day of contract signing. However, due to delays in distributing documents amongst actors involved, the contracts were signed after the terms were agreed upon and the trees were planted. Because of these delays, the commencement date is chosen conservatively to be the day of the tree planting: February 24<sup>th</sup>, 2017. This date is found on pg. 8 of the PDD and is supported by the registry, (<https://registry.urbanoffsets.co/project/projectview?projectIdKey=0d2760b2-455c-45e7-824e-b337c208fcc2>). The project was submitted to the Offset Network registry. The registry confirms that the project was created in the spring of 2017 on its timeline (<https://registry.urbanoffsets.co/project/projectview?projectIdKey=0d2760b2-455c-45e7-824e-b337c208fcc2>). Following the planting, the initial project inventory was completed in

March 2017, according to pg. 11 of the PDD. Judson Clinton, the Greensboro City Arborist, performed the initial project inventory of the trees in Price Park.

After a review of urban tree policies from Greensboro (<https://www.greensboro-nc.gov/departments/planning/learn-more-about/trees-and-urban-forestry>), it is determined that there are no legally binding mandates that would include the reductions and removals included in the calculation of the project's impact. Additionally, the city of Greensboro acknowledges that this project is not the result of regulation compliance, and that the project will generate surplus emissions reductions beyond locally required levels. The PDD confirms that the project internally performed a full inventory using the Fulcrum data collection application. Raw data files containing dates for the time of logging for each tree were also received. Every fifth year after the 2018 verifications are complete, monitoring will occur to assure that annual standards will be met. The project maintainers anticipate maintenance will be needed until 2056, which is the termination date according to pg. 10 of the PDD.

## **Permanence**

The Landscaping and Tree Conservation Manual of Greensboro (July, 2010) serves as the management plan for this project. This comprehensive urban forestry management plan is ecologically relevant and species specific, as seen through its classifications of species and approval of species seen on pg. 55-72. The plan contains provisions for pruning on pg. 24. No specific provisions for watering in times of high heat or drought were found in the manual. However, provisions of this sort are not necessary considering that the species is native and can withstand high heat of the region. On pg. 39-40, specific instructions for activities allowed in the critical root zone are detailed. Although there are no specific provisions for pests, detailed provisions for dead or unhealthy trees, as well as their replacement rate, can be found on pg. 38 of the manual and with reference to section 30-5-5.5 of the city's ordinances and Table 5-2 on pg. 48.

The project risk is appropriately calculated and can be seen on pg. 15-17 of the PDD. In the PDD, the US Forest Service Carbon Calculator is used to determine the amount of carbon credits allotted. The buffer pool contribution being made is appropriate and separated from the available project credits. There may be reason to deviate from the standard 15% contribution of the generated credits. This conclusion is drawn due to difficulty in locating some of the trees planted during the site visit and the observation that some of the trees along the Greenway seemed to be in poor health. However, this conclusion may be incorrect because of the technical difficulties using the mapping system. It is recommended that the Fulcrum app locations be corrected by Urban Offsets for future verifications. This may be done during the next full inventory event.

## **Additional**

No laws, regulations, statutes, or court orders bind this project to planting trees in the same manner as the UTP Project. No explanation of relevant required actions is provided. The project operator attested via signature within the PDD to the validity of this statement. The tree planting

organization was willing to sign an agreement that states they would not reduce the level of tree maintenance for non-project trees or reduce effort to plant new trees (the primary sources of ‘project leakage’) by maintaining efforts to pursue and obtain historical/baseline tree planting funding. Aside from information on funds raised for project use, no additional expense reports were found to determine the baseline budget before the creation of this project. It is recommended that budgetary information be compiled for future use. According to pg. 13 of the PDD, there are no barriers to standard planting but there is a large economic barrier, as trees can only be planted and maintained with proper funding. Other than the significant barrier due to limited resources, such as staff and funding, there were no social or political barriers discussed in the PDD or discovered through interviews with those involved in the project. To support this claim, it is important to note that the bulk of the work of planting was done with the help of volunteers from Elon and that the funding came from Greensboro Beautiful, a nonprofit, 501(c)3 organization that funds and supports community enhancement projects and programs (<http://www.greensborobeautiful.org/about/index.php>).

## **Verifiable**

The project monitoring is occurring according to contractual agreements. This monitoring schedule aligns with the DCOI Urban Forestry Protocol. The initial full inventory occurred on March 20, 2017, performed by Judson Clinton. The annual monitoring includes the information required by the protocol. Detailed monitoring notes are available in Fulcrum. Although the tree locations were often incorrectly placed in the app due to GPS issues, the inventory data found in raw data files account for the trees that could not be properly identified in the site visit of the verification process. Some of the trees in Price Park were not located in the site evaluation or clarified in interviews with Judson. However, these trees have been recorded and attempts to locate them can be made to correct the longitude and latitude. It is recommended that these data points be corrected by the project manager. Sampling was unnecessary for the verification process because it was feasible to directly identify each individual tree in Price Park and the Greensboro Greenway location. Nonetheless, sampling would be appropriate across both sites and would be in line with the DCOI Protocol recommendations.

## **Enforceable**

The credit ownership is clearly defined in the project contracts. The first buyer, Elon University, referred to as “Buyer 1” on pg. 17 of the PDD, will receive 333 Verified Emission Reductions (VERs) and Duke University will receive 334 VERs. Offset credits are not currently being banked. There is no evidence that multiple parties are or will be claiming the same credits.

## **Real**

The estimate of the project's impact is conservative, legitimate, and reproducible. The sources used to estimate growth rates are clearly stated on pg. 15-17 of the PDD. The calculations use the US Forest Service Carbon Calculator and the tree species, DBH, and height, which is in line with DCOI protocol. This source is in good standing with academic and professional communities. The calculations of project impact are clear and transparent, and can be found on pg. 15-17 of the PDD. These calculations were reviewed by the verifiers by reading over the calculation explanation and checking the numbers themselves through a consultation of the US Forest Service Carbon Calculator site and guide (<https://www.fs.usda.gov/ccrc/tools/tree-carbon-calculator-ctcc>). A typo in the PDD was reported to Urban Offsets. These calculations were performed again by inputting one of the trees types, for example, the Southern Magnolia, in the USFS calculator, finding that the species yields 2.81 carbon offsets per tree over 40 years which is consistent with the numbers found in the PDD. This number was multiplied by the total number of trees of this type, four in this case, to find that they sequestered 11.24, consistent with numbers in the PDD. The project details and data will be made public after peer validation. These details will be available to the public at: <https://registry.urbanoffsets.co/project/projectview?projectIdKey=0d2760b2-455c-45e7-824e-b337c208fcc2>

## **Co-Benefits of Urban Tree Plantings**

The co-benefits of this project are assessed on pg. 17 of the PDD. This project offers educational opportunities through the peer verification and validation process and by serving as living laboratory for the universities involved and any student in the surrounding school districts. The social engagement and equity co-benefits are achieved through the engagement with local volunteer groups to assist the expert tree planters. The project has co-benefits that contribute to environmental health and conservation efforts because of the positive health and conservation benefits that trees provide such as reductions in airborne illnesses, reduction in effects of urban heat islands, and reductions in storm-water runoff. Partnerships are cultivated through the peer university validation verification process and through business connections made by urban offsets.

Further analysis revealed that there are certainly identifiable co-benefits to this project upon visual inspection and in conducting interviews. Several times while at the Price Park location, locals stopped us in our evaluations to tell us how much they loved the trees, and how much they added to the experience of the park and local library. This also happened with a person jogging on the Greenway, who commented that the trees made the experience much more enjoyable. An initial visual inspection of both sites would seem to see the trees helping combat soil erosion, as well.

## **Interview Questions for Project Participants**

The Urban Tree Planting (UTP) Operator, Urban Offsets, were not interviewed originally. A transcript of an interview with project maintainer, Judson Clinton, is attached in the appendix. Judson and the Greensboro City Arborists, and Greensboro Beautiful are the Urban Tree Planting Maintainers and Owners. He was interviewed a second time via email because some suggested questions were not posed to him at first. Additionally, Leanna Grondy with Urban Offsets was interviewed as the Operator after the first compilation of the validation report was completed. Summaries of these interviews, and the interviewee's contact information is as follows and more detailed notes about these interviews can be found in the appendix.

Judson Clinton, City Arborist  
Planning Department  
City of Greensboro  
336-373-2150  
[Judson.clinton@greensboro-nc.gov](mailto:Judson.clinton@greensboro-nc.gov)

Judson Clinton, who represents the Urban Tree Maintainer/Owner, claimed that the tree maintenance is done by the field operations department care for trees per the maintenance plan. Pruning is only necessary for structure during the juvenile stage after the establishment in order to maximize aboveground biomass. There is no irrigation plan but the maintenance plan is being followed. Any deceased tree will be replaced between October and April. Project monitoring is conducted per the PDD. As of now, the buffer pool has not been utilized, but will be if needed. The sampling of trees would be random but because the project is vaguely small, there is no sampling needed.

Leanna Grondy  
Project Manager  
Urban Offsets  
336-337-0720  
[leanna@urbanoffsets.co](mailto:leanna@urbanoffsets.co)

Leanna Grondy, who represents the Urban Tree Operator as a part of Urban Offsets, detailed that no project reversals have been made and that the buffer pool has not been used as of the beginning of the project. Grondy explained that Urban Offsets has a process in place for buffer pool use and replenishing trees in the population. The tree monitoring, in this case, is not done by the Operator but instead by the Maintainer/Owner. This monitoring is explained in correspondence with Clinton.

## Site Visit

The site visit was undertaken in early March 2018 and data from this inventory can be found in the Fulcrum App on a secondary layer. Throughout this verification, the student verifiers were unaware of the raw data log that contained the original inputs or that they had access to a hard-copy map that marked where trees had been planted. Due to this confusion and difficulties with the GPS system, they were unable to locate around 25 trees across both Greensboro sites. The verifiers noted that some trees were not physically present at any location on site but that this may be due to GPS confusion and not accessing raw-data files. A full inventory in line with the DCOI Urban Forestry

Protocol Guidelines was performed. The trees were in excellent condition, with very few trees having minor concerns. A few of the trees on the Greenway seemed to be in poor health, but were noted in the Fulcrum App as being in distress, and were receiving extra treatment. A few trees had mild leans, and a few had minor crown damage from recent storms. However, none of the leaning or slightly damaged trees seemed to be distressed, and most had notes about future treatments and improvements in the Fulcrum App. Overall, the management plan is being implemented with high success.

## **Validation Statement**

Across the two plantings in Greensboro, at Price Park and the Greensboro Greenway, the final Project Description Document lists an expected 253 trees. Approximately 10% of these trees were not located specifically upon site visits in early March, all missing from the Price Park location. All trees listed in the Fulcrum app for the Greensboro Greenway were confirmed. We do not believe that all 25 trees are truly missing from Price Park, and that about half exist on site, however, difficulty with Fulcrum GPS made it incredibly difficult to locate specific trees, mostly River Birch and Carpe Myrtle trees, at the Price Park location. However, at least 6 trees were not located at all, after a thorough search. It is important to note that the raw data files mentioned throughout this report were not accessed before our site visit, which attributes some of these missing points to our error and difficulties with the GPS system. This might not be a serious issue, as the PDD states that a buffer pool of 15% was designated, but it is worth noting, as at least a few of the trees listed in Fulcrum did not exist at the Price Park location. It is recommended that the locations of all trees are corrected during the next full inventory.

The report concludes that this project fulfills the PAVER requirements. Other than the confusions in locating trees upon the site visit, the report demonstrates that the trees will be adequately cared for through the robust and well-followed maintenance plan. The site visit allowed us to observe the excellent health of the trees at these sites. The calculations determining the impact of the project were confirmed and the PDD mentions the multiple co-benefits that the project will yield from educational benefits to improving partnerships. Additionally, the project demonstrated a detailed timeline with purposeful and achievable expected dates for future inventories. The project, if continuously maintained to the extent observed, will thrive, benefiting the local community and generating offsets as planned.

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**Megan Litke**

**Director of Sustainability Programs, American University**

## **Appendices**

Include any interview transcripts, notes or email correspondence, as well as any supplemental information relevant to the verification report within separate appendices in this template document.

## **Notes from Interview with Judson Clinton**

Judson Clinton Interview



4/10/2018 at 2:00 PM

*When and how did you become involved in the project?*

2015 Fall, Shawn brought him in.

*How were the locations for the plantings chosen? Was this you or Urban Offsets?*

Both, with input from arborists in the city of Greensboro and Shawn.

*Who determined the species chosen for the project?*

Judson and the city team of arborists.

*Maintenance? Are both sites being maintained by the same people? Do you record if trees have been removed?*

Field operations work on Greenway maintenance and have direct access at the library at Price Park, but the library is maintained by parks and rec. Replacement goes directly to field operations, and the Piedmont Land Conservancy has a maintenance plan in place.

*There were a few missing Swamp Chestnuts at the library- did the trees die? What about the missing or poorly marked red oaks?*

He was not sure but will look into it. He told old me it was very possible that the GPS was affected by cloud cover.

*There was damage to some of the trunks of trees at the plantings closest to the library- animal? Does it threaten the health of the trees?*

Possibly, but he will investigate, because parks and rec hadn't reported it yet.

*There were dying holly trees on beltway- is there a replacement plan?*

There is a replacement plan in place (unspecified details).

*Did you choose the Fulcrum app? Have you liked working with it?*

The app is functional, but GPS is iffy. No receiver that gets used, so that can be difficult. Fixing errors is also a challenge, but he has a positive view of it.

*How involved has Urban Offsets been? Is there an official maintenance plan in place?*

There has been frequent correspondence, and local office contact. There is a maintenance plan, but it is rough.

*Anything else you think my team should be aware of for this project, or anything critical to keep in mind if we undertake out own?*

Once the plants on the ground, the excitement wears off. The city is your desk, so there is a lot involved here. There are stakes and straps, and maintenance in place, and more being worked on.

## **Email from Judson Clinton**

Responses in Judson Clinton Email

6/21/2018 at 1:36 PM

*1. Is there a pruning plan (or scheduled regular tree pruning)?*

- Trees will be pruned only as necessary for structure during juvenile stage after establishment. The objective will be to maximize aboveground biomass.

2. *Is there a maintenance plan or specific management in practice to care for young trees?*

- Trees are maintained and watered by our Field operations and parks and recreation departments. Work orders are generated when specific work is needed.

3. *Is there an irrigation plan tailored for new trees? (If it uses irrigation devices, are they regularly checked for breaks and leaks?)*

- No irrigation

4. *How often does a member of the urban tree planting team assess the health of trees? Is this data recorded?*

- Project monitoring is conducted in two phases, full inventory and annual surveys, that repeat every 5 years and data is recorded

5. *If the site maintenance team identifies a tree as deceased, what steps are taken?*

Notify urban offsets and replaced between October/April

6. *How are tree issues reported? How might the public report an issue with a tree?*

Through city services

*Part Two: 1. Have there been project reversals identified?*

No

2. *Has the project needed to utilize the buffer pool?*

No

3. *If this buffer pool needs to be accessed, what steps will be taken regarding the associated accounting changes?*

Would be through urban offsets and Greensboro beautiful

4. *Do you assess if tree monitoring follows the DCOI Urban Forestry Protocol?*

Yes

5. *Can you describe your tree sampling methods?*

With the size of the two projects, we are able to complete a full inventory

With additional projects in the future, random sampling will be utilized as described in DCOI Urban Forestry Protocol.

## **Email from Leanna Grondy**

Responses in Leanna Grondy Email

6/20/2018 at 2:52 PM

1. *Have there been project reversals identified?*

- None that Urban Offsets has been made aware of.

2. *Has the project needed to utilize the carbon offsets buffer pool?*

- Not as of June 20th, 2018.

3. *If this buffer pool needs to be accessed, what steps will the organization take regarding the associated accounting changes?*

- Urban Offsets would need to quantify the amount and verify the buffer covers this amount. Next, we would issue an amendment to the agreements established between both the VERU's purchaser and the tree supplier. Then we would adjust our inventory and associated credit numbers. Finally, we would issue documents to the purchasers for their records i.e. credit letter, certificates and signed contract amendments. Following these steps, Urban Offsets would need to determine if the buffer pool would need to be replenished through new tree plantings.

4. *Do you assess if tree monitoring follows the DCOI Urban Forestry Protocol?*

- No, that's not our role.

5. *Can you describe your tree sampling methods?*

- Tree sampling methodology is outlined in the DCOI protocol.

## **4. Urban Offsets' Shawn Gagne's comments on the validation report**

Price Park and Greenway project comments:

Tree count appears to be off. Judson needs to confirm the count.

Overall verification structural comments:

Reports could use a section at the beginning that identifies all names mentioned in the report along with their organization and title.

Reports could use a summary table of actions at the end of each report. The table could include items that should be reviewed/fixed before next verification and items that should be checked at next verification. For example, items that keep the project out of compliance should be in this table to help others act to correct those errors.

All changes made to PDD's, contracts, inventories, etc.. should be reported on a changelog that stays with the verification report.

It might benefit verifiers if a single dedicated GPS device was made available for all regional verification events. This would control for errors created using multiple platforms.

DCOI - How flexible do you want to be wrt city tree management being out of step with the DCOI protocol requirements? It seems this was a common issue (minor) throughout all 4 reports.