Staff Report

Report prepared by Town of Chapel Hill Staff
June 7, 2019

I. Summary

This report contains updated recommendations to address coal combustion products (CCPs) that were placed at the Police Station property before the Town acquired it in the early 1980s. The report also includes a timeline of the property's use, and the Town's recent efforts to investigate current site conditions, develop options for remediation, assess risk, and consider possible future re-use.

II. Possible Interim Remedial Measures

We anticipate that a new Municipal Services Center will house the Town's police department within the next 2-3 years. The Town's consultants have identified the measures described below as steps to begin addressing CCPs on the lower portion of the property (the land closest to Bolin Creek). These measures and associated costs have been updated since the May 15, 2019 Council Budget Work Session[1] to include: (1) clean-up of contaminated soils near the creek; (2) silt fencing installation and repair to minimize erosion from the embankment; and (3) hydroseeding[2] to help stabilize and cover exposed areas of CCPs along the embankment.

The Town's risk assessment consultant, Duncklee & Dunham, recommends that the Town implement these interim measures (for more details, see Preliminary Risk Evaluation[3]). With proper management and maintenance, the consultant expects these measures will significantly reduce the risk profile for the site for a 3-5 year period until final remedial options can be designed and a final remedy selected. More permanent measures can be implemented once the police department is relocated to a different property and a future use of the site is identified.

Our preliminary risk calculations are based on very conservative assumptions that can be improved with site-specific user data. To inform our consultant's risk calculations, we also plan to survey recreational users to better understand how often they visit this segment of the trail, and for how long.

The revised budget for this work is $246,000, which is lower than the original recommended budget of $315,000. The estimated costs are reduced because the consultant recommends that we test hydroseeding (rather than erosion control matting) in order to help stabilize the embankment, cover exposed areas of CCPs and minimize erosion.

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[1] https://chapelhill.legistar.com/LegislationDetail.aspx?ID=3945215&GUID=7BFEEC8B-CB27-4B64-945D-DA02C1A7DC2D&Options=&Search=

[2] Hydroseeding is the process of adding a concentrated liquid of seed, mulch and nutrients to quickly establish grass or another vegetative cover.

[3] https://www.townofchapelhill.org/home/showdocument?id=42895

These are steps the Town will take to implement interim remedial measures:

a) Soil Removal and Backfill

Remove deposits of CCPs and contaminated soil in the areas next to the trail and the creek (see green areas on map below). This work includes the removal of approximately 6-12" of CCPs and contaminated soil. The materials will be transported to a facility that is permitted to receive them. For the purpose of evaluating post-removal risks, soil samples will be collected after CCPs and contaminated soils are removed. We will then have clean soil brought in to replace the amount that was removed.

b) Additional Signage along Trail

Place additional signs along the existing Bolin Creek Greenway trail segment—and at both ends—to help keep recreational users on the path while clean-up, management and ongoing sampling activities occur. We are also exploring the possibility of placing large stones on either side of the trail to deter people from leaving the path.

c) *Additional Silt Fencing for Erosion Control*

Repair existing silt fence (see orange dashed lines on the map below) and add additional silt fencing to help control erosion from the embankment (see blue dashed line on map below). Currently, there are two layers of silt fencing on the site – one at the base of the embankment and another at the base of a black chain link fence that separates the Bolin Creek Greenway from the embankment. The silt fencing would be monitored and repaired as needed.

d) Polling of Trail Users for Frequency and Duration Information

Conduct a survey of greenway users to acquire new site-specific data for how often and how long someone visits the portion of the trail located on the police station property. This data, in combination with the latest rounds of sampling from the site, will be used to update the risk calculations for the property.

e) Limit Embankment Disturbance

Hydroseed the areas of the embankment where CCPs are currently exposed (see the pink areas on the map below). Hydroseeding is the process of adding a concentrated liquid of seed, mulch, and nutrients to quickly establish grass or another vegetative cover. The goal of this measure is to reduce the likelihood of CCP erosion and further contamination of the soils next to the trail and the creek. Due to the steep slope of the embankment, our consultants recommend that we evaluate this technique by first testing a small area.

f) Periodic Inspections and Sampling

Conduct periodic inspections and sampling of the area while both the interim measures and Bolin Creek Greenway connector projects are underway. This is a contingency measure to help identify any migration of CCPs while this work is being completed.

g) Post-Construction Sampling and Risk Assessment Update

After the measures above have been implemented, take additional samples of the soil removal/replacement areas to verify that no additional contaminants have been deposited from the embankment. This information will also be used to update the risk assessment.

III. Timeline

The timeline below provides an overview of how the private property was used before the Town purchased it. The chart also describes the activities the Town has taken more recently to investigate current site conditions in coordination with the North Carolina Department of Environmental Quality (DEQ). The history of the property prior to Town ownership was pieced together by the Town's Environmental Engineer, Hart & Hickman.

Timeline	Description
1950s to early 1960s	Property initially used as a borrow pit – an area where material was dug up for use at other locations, usually for construction
Mid-1960s to mid-1970s	Property then used as a fill site where construction debris was deposited, followed by the placement of coal combustion products (CCPs) on top of the construction debris for structural fill
Early 1980s	Town acquires property and builds a police station that is still in use today
2013	As part of a process to explore a new home for the police department, the Town conducts a site assessment and begins working with DEQ to investigate and share information about the condition of the property
2015 - 2017	Town works with Environmental Engineering consultant and DEQ to complete Phase 1 and Phase 2 remedial site investigations to understand CCP locations and amounts
2018	Town explores remedial cost options and possible future uses for the property; Council asks staff to work with a toxicologist to assess the risks associated with a range of remediation options and future uses.
2019	Town hires Duncklee & Dunham to perform a Human Health and Ecological Risk Assessment. This work includes a review of the information and data gathered to date, as well as additional sampling and a review of all proposed remediation options. A report will be issued in July.

Staff maintains a project web page[4] for more information about project activities, reports and communication.

IV. Proposed Next Steps

With support from Council, our next steps are to:

- Place additional signage to keep trail users on the path
- Implement the interim remedial measures described above
- Complete the Bolin Creek Trail MLK Jr. Blvd underpass and connector
- Conduct periodic inspections and sampling
- Perform post-construction sampling
- Generate report to update human health risk assessment and include ecological risk assessment
- Communicate regularly with the Council and the community about the activities listed above

We expect trail construction and remediation work to begin this summer and to be completed by the fall. We will inform the Council of any changes to this schedule.

Although we don't anticipate this being the case, should the costs associated with the steps above exceed the revised cost estimate, staff will return to Council with a proposal to add additional resources using fund balance.

V. Attachments

1. Site map of proposed interim remedial measures with location of CCPs

2. Revised statement of work and cost estimate for interim remedial measures

[4] https://www.townofchapelhill.org/town-hall/news-events/current-issues/coal-ash-disposal-site-remediation-project

Proposed Interim Remedial Measures with Coal Combustion Products (CCPs) Location and Cover Evaluation