

**Public Works Yard Aggregate Pile**  
**Public Meeting**  
**10/18/16**

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## Introduction:

- **Town of Fairfield has processed aggregate material on southwest portion of Public Works property for several decades**
- **Activities with the most recent contractor (Julian Enterprises, beginning May 2013) have created visual, noise, traffic, and environmental concerns**
- **Importing & processing of material to blend with Public Works spoils has created an untenable impact on our neighbors**

## Introduction - Review of 6/23/16 & 10/5/16 Meetings

Town historically used land on Richard White Way (formerly One Rod Highway) for municipal purposes

Landscape Berm to provide barrier to south & west

Slopes to an elevation of 45', 10' high fence to elevation of 55'

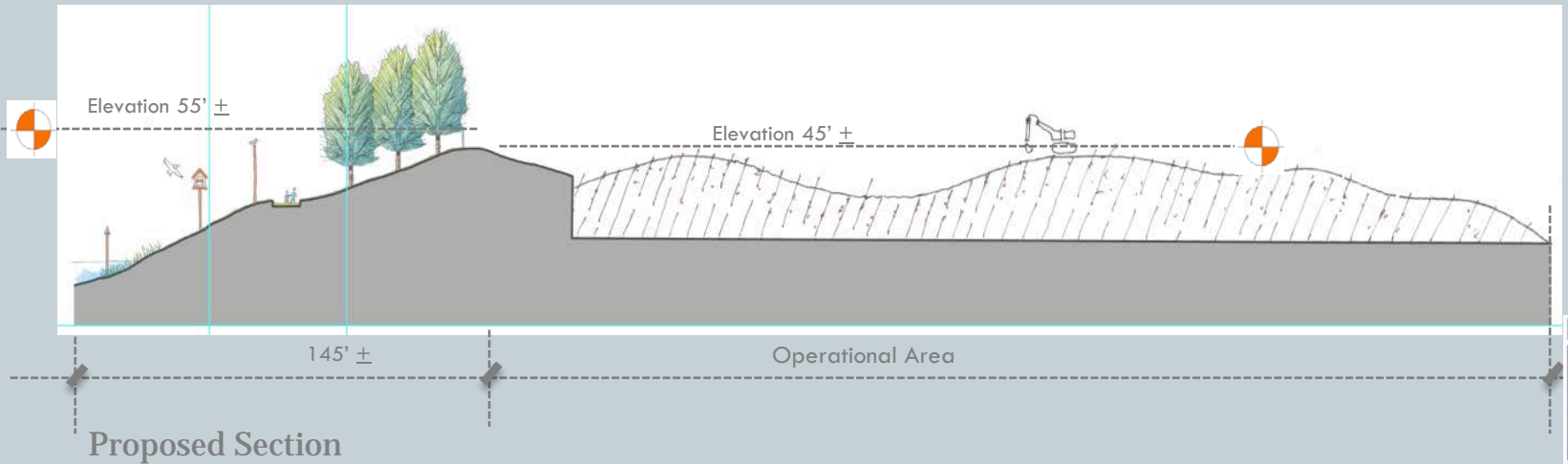
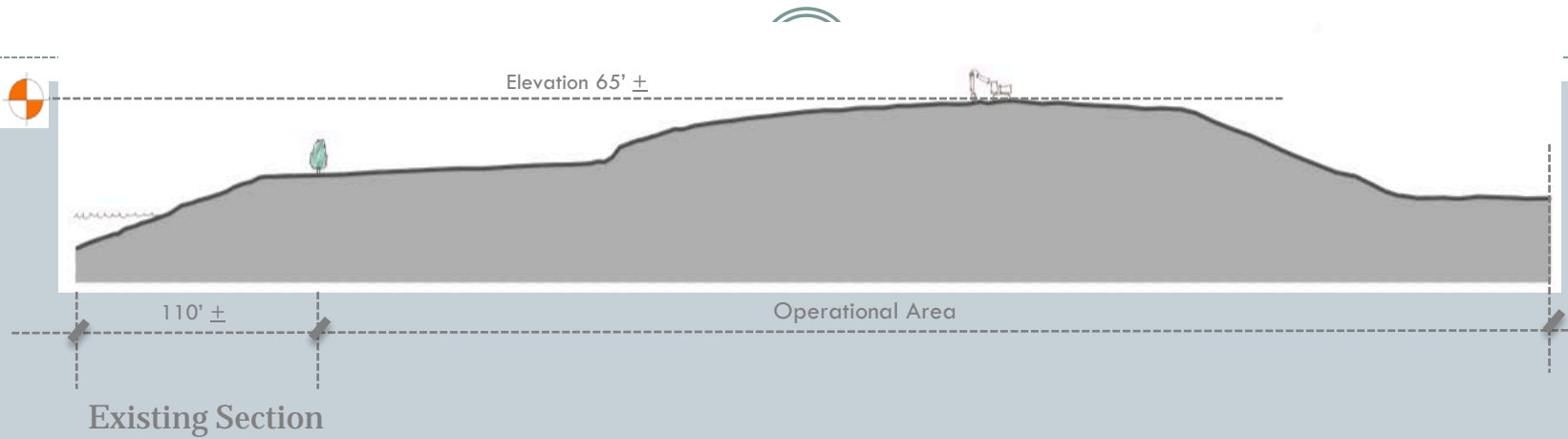
Slopes to be loamed, seeded, and plantings

Water runoff over vegetated slope

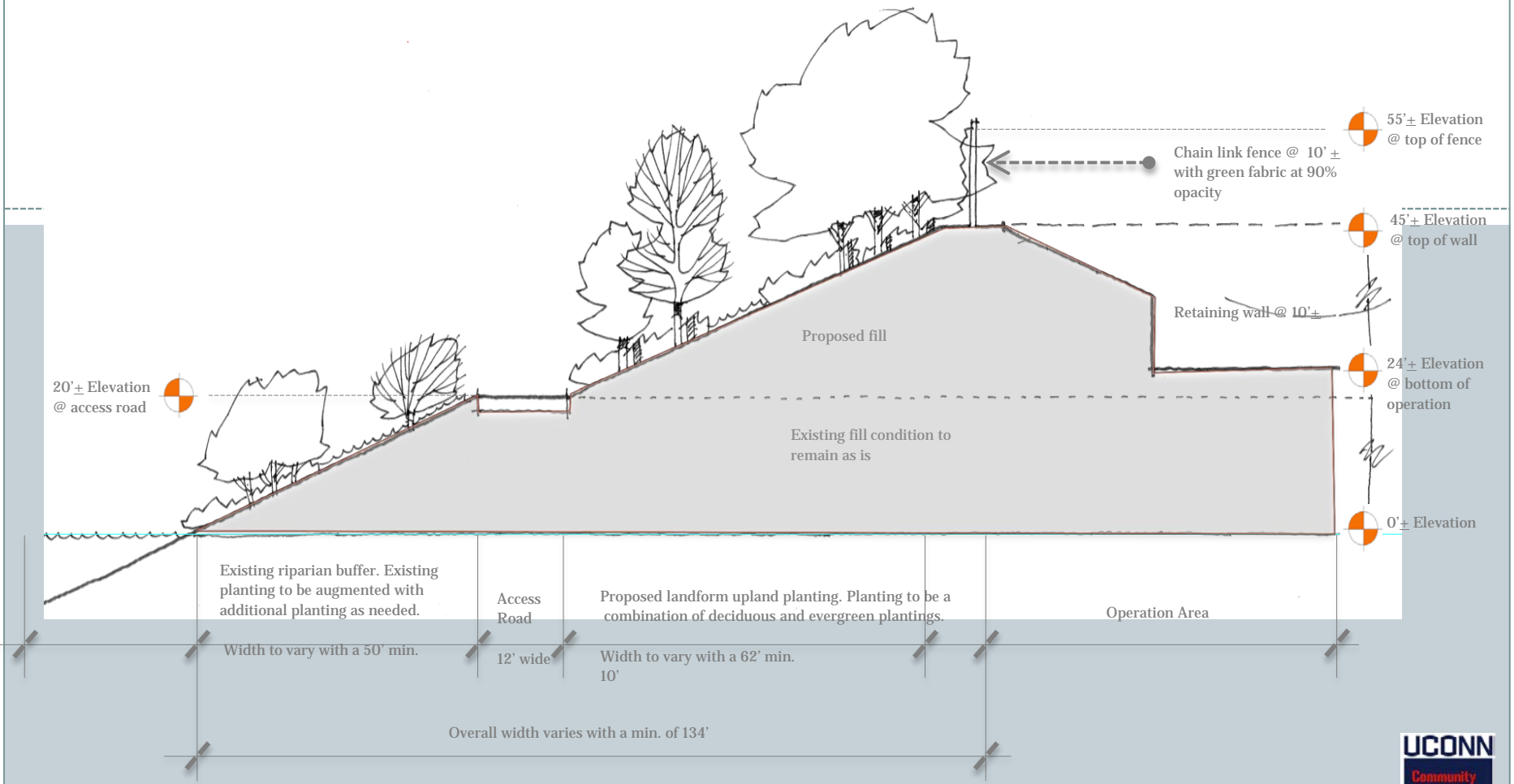
Interior drainage controlled & managed through storm drainage structures

Criteria for material to be used as part of berm to be approved by CT DEEP WEED

# 4. Preliminary Ideas – Cross Section



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## Operations

To 12/15/16:

Julian agreement ends 12/15/16. It will not be renewed

Julian will continue to process material and export until that time

8 weeks at 5,000 tons/week = 40,000 tons (28,500 cubic yards) yet to be removed

Town overseeing operations though Public Works personnel at Julian Scale, review of Julian reports, video camera, coordinate with Police Traffic Unit

LEP (Logical Environmental)

Examining pile weekly for contaminants.

Testing monthly and when suspect soils observed

Focus on new areas of pile as they are exposed

## Operations Post 12/15/16

The pile will not be eliminated by the 12/15/16 date; there will be material remaining on the site.

Town will continue to engage Logical Environmental to examine and test remaining pile

Stormwater Permit and responsibilities will revert back to the Town on 12/ 15/16

Julian has 30 days to demobilize equipment, scale, and trailer - to be completed 1/15/17



Environmental: General Background – Not Site Specific

**Human health risk assessment (HHRA)** methodologies have been developed by the U.S. Environmental Protection Agency (EPA ) & conducted in accordance with the four-step paradigm for human health risk assessments developed by EPA.

These steps are:

Data Evaluation and Hazard Identification – **What hazards are present**

Dose-Response Assessment – **What are the intensity, frequency and duration of an exposure.**

Exposure Assessment – **What is the probability of an exposure to a hazard at a given dose- response**

Risk Characterization – **How acceptable or unacceptable are various scenarios**

## Environmental: General Background – Not Site Specific

Each way that humans can contact compounds in environmental media is called an “exposure pathway”. An exposure pathway is complete if all four of the following conditions are met:

- There is a source of the compound (e.g., fill material);
- There is a mechanism by which the compound can be released or transported to an environmental medium (e.g., volatilization from fill material to the air);
- Humans are present at a location where the compound has been released or transported (e.g., the athletic fields overlying the fill material); and
- Humans have some sort of contact with the environmental medium containing the compound (e.g., inhaling air containing the compound or touching soil containing the compound).

## Environmental: General Background – Not Site Specific

The concept of “acceptable” **risk** has evolved over the years from the realization that achieving “zero” risk is not possible. Risk is present in any situation and absolute safety is generally an unachievable goal given that we all face many risks each day and that acceptable risks must, by necessity, be integrated into the strategic planning for a given site and activity. Risk can be defined as the likelihood (or probability) that exposure to a hazard will lead to some type of harm.

- A **hazard** is present when materials or situations have the ability to cause harm or another adverse effect. Examples of hazards are traffic, lightning, ingredients in household cleaning products and other commonly-used materials, and X-rays and other medical imaging procedures.
- An **exposure** is a situation where a hazard can impact or influence a receptor (humans, wildlife, or plants). Examples of exposures are crossing the street (potential for being struck by moving vehicle), using household or other products (potential dermal contact with hazardous chemicals), or filling up a car with gasoline (potential inhalation of carcinogenic fumes).

## **Aggregate Recycling Yard – Available Data**

1) There is a **source of the compound:**

Compounds found to be present are those related to dust and to asphalt containing materials (pavement).

These include silica in sand dust, and asphalt constituents, primarily extractable total petroleum hydrocarbons (ETPH) and a group of typically four to six polynuclear aromatic hydrocarbons (PNAs).

Asphalt tar is what is left from crude oil after kerosene, gasoline, diesel/heating oil, and other compounds are extracted.

Tests have been run for other chemical compounds, including PCBs, pesticides/herbicides, and volatile organic compounds (found in solvents used in automotive, dry cleaning, and industrial applications). Analyses were also run for heavy metals, and none were found above typical background concentrations.

## **Aggregate Recycling Yard – Available Data**

2) There is a **mechanism by which the compound can be released or transported to an environmental medium:**

Mechanisms include off-site transport with dust particles, and sediment transport by rainfall/erosion.

Dust testing has been completed for particulates at another site operated by the current site operator using similar equipment and operational methods.

Concentrations of the above compounds were not present above applicable US Occupational Health & Safety (OSHA) permissible exposure levels (PELs).

Water samples have been collected from the adjacent pond outlet into the tidal estuary during outgoing tide events and have been analyzed for ETPH and metals. None have been detected in the water samples above laboratory analytical minimum detection levels.

## **Further Environmental Investigations:**

Sampling of stormwater and pond water discharges will continue on a quarterly basis.

Installation of groundwater monitoring wells to be installed upon acceptance of a plan by the DEEP WEED

Other material inspection & testing by Logical Environmental

To be determined in conjunction with DEEP WEED:

- Location, depth, and construction of groundwater monitoring wells
- Parameters to be tested, and the frequency and duration of the groundwater monitoring program.

**OSPREY ENVIRONMENTAL ENGINEERING, LLC**

## Environmental –

Met with David McKeegan of WEED on 9/28/16  
(CT DEEP Waste Engineering & Enforcement Division)

Plans to be submitted to CT DEEP WEED for Landfill Closure Plan approval

In conjunction with Landscaped Berm

Surfaces designed to avoid water percolation into core

Consolidated soils in place for years create a barrier over the MSW  
(municipal solid waste)

CT DEEP expected to have comments regarding Coast Area Management and Stormwater Permit

Plans submitted to Town P&Z, Conservation, and CT DEEP

## Landscape Berm & Landfill Closure Construction

Construction to begin after obtaining of approvals

LEP will examine loads to be used in berm, to meet CT DEEP WEED standards

30,000 CY + of material to be consumed by the construction of berm.

Budget amount \$79k using operating budget, no special appropriation

Use mostly existing Public Works employees and equipment

Monitoring wells installation – cost to be determined



## Financial

RFP issued in May 2013

Contractor performs work based on the non-Town revenue produced from the operations

Incentive to the Town of RFP had four components:

1. To obtain a reduction of the pile at no cost to the Town
2. To provide a means for disposing of our spoils at no cost
3. Town to purchase aggregates at below market rates
4. Obtain a rental amount

## Reduction of the pile

Based on the original size, a million dollar plus capital expense to haul and dispose of the pile has thus far been avoided

At conclusion of the Julian agreement, topographic survey will determine how much reduction was achieved

Can be measured versus historical topographic maps

## Disposal of Spoils

### Cost Savings

Public Works Department has dumped approximately 21,900 tons of spoils over length of contract. Paying to haul & dispose:

21,900 tons x 1/3 x (\$50 to \$80)/ ton = range of \$361,000 to \$578,000

### Future Costs

Assume Public Works spoils is 6,000 tons

4,000 tons is asphalt, concrete, fill, rock, will still need to be brought to the site. I will assume this amount is.

2,000 tons are catch basins and drainage outlet cleanings, and road sweepings.

Range of \$50 - \$80 per ton for hauling and disposal – annual cost \$100,000 - \$160,000.

## Purchasing of Aggregates

Cost Savings –Town has obtained \$82,929.10 worth of product at 40% of the market value

Saving of \$124,393.65, approximately \$41,464.55 per year

Future Costs – The Town can produce material. Value is 4,000 tons/yr. x \$5/ton = \$20,000/year. Does not account for Town labor & equipment

## Rental Amount

Financial Benefit – Rental payment of \$9,000 per year to the Town as per the bid amount in the RFP

Future Benefits– the Town will not receive any rental income after the current agreement ends

## Future Public Works Operations -

Town generates material through:

Road projects, sidewalk work, parking lots, town buildings & grounds, parks, athletic fields, and beaches, road sweeping, cleaning of storm drainage systems

Maintain separate spoils piles of concrete, asphalt, general fill, sweeping, topsoil, clay, etc. Town may need to crush material

Re-used in appropriate locations where possible, as soon as possible

Unacceptable spoils possibly hauled and disposed out of Town (street sweeping, catch basin cleaning, drainage outlets)

## **F. Future**

**Timeline – See handout**

**Harvest New England – The Towns agreement for the wood chipping operations ends on 6/30/17. Provides opportunity for evaluation of alternatives**

**Fire Training Center – This facility is currently under construction. Town is currently designing a flood control dike around facility to an elevation of approximately 17 feet.**

**Comprehensive Plan – Effort to be determined by Conservation**

**Thank you**

**Questions?**