NORWALK POWER ECONOMIC IMPACT ANALYSIS

CITY OF NORWALK

Tighe&Bond
Consulting Engineers
Environmental Specialists

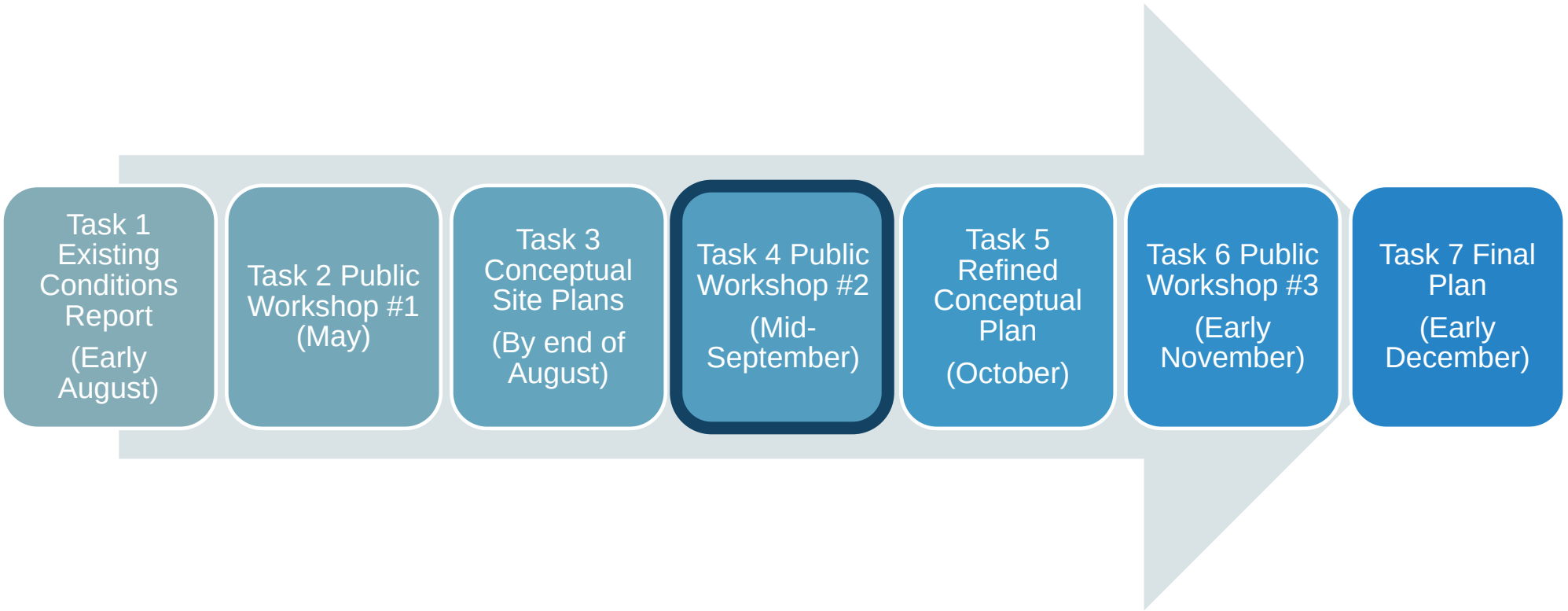
NINIGRET PARTNERS

FITZGERALD & HALLIDAY, INC.
Innovative Planning, Better Communities

AGENDA

- Project schedule
- Site overview
- Summary of development constraints
- Review reuse scenarios
- Review findings of visual impact analysis
- Breakout sessions
- Next steps

PROJECT SCHEDULE



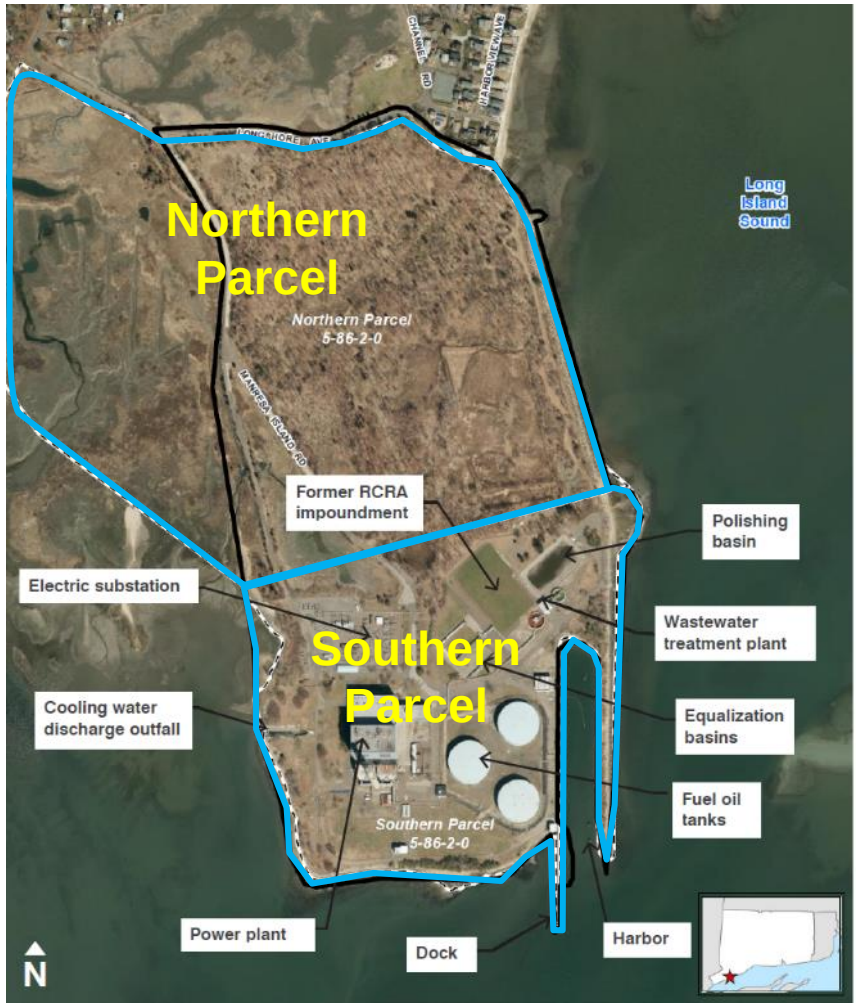
MANRESA ISLAND OVERVIEW

- In 1999 NRG Energy purchased the plant from CL&P for $58.7 million
- In 2012 the property was almost completely underwater during Hurricane Sandy
- Power plant was closed in June 2013
- No reuse of the site is currently planned

GENERAL SITE INFORMATION

Site Consists of Two Properties

- Northern Parcel:
  Wooded, Wetlands and Marsh
- Southern Parcel:
  Former Power Plant Area



GENERAL SITE INFORMATION

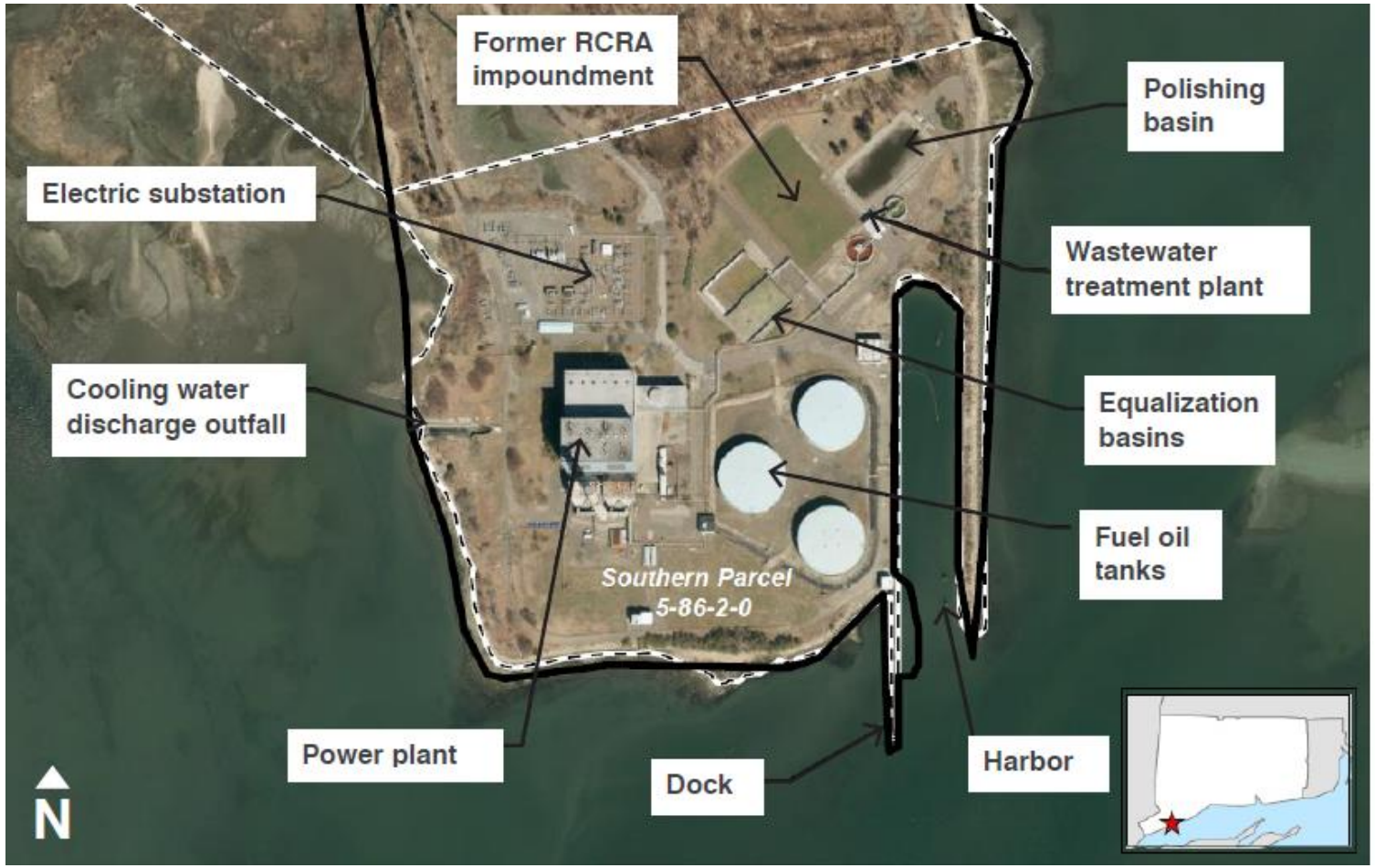
Northern Parcel

- 92 Acres
- Densely Wooded, Wetlands (freshwater and intertidal)
- Area of Historic Filling

GENERAL SITE INFORMATION

Southern Parcel

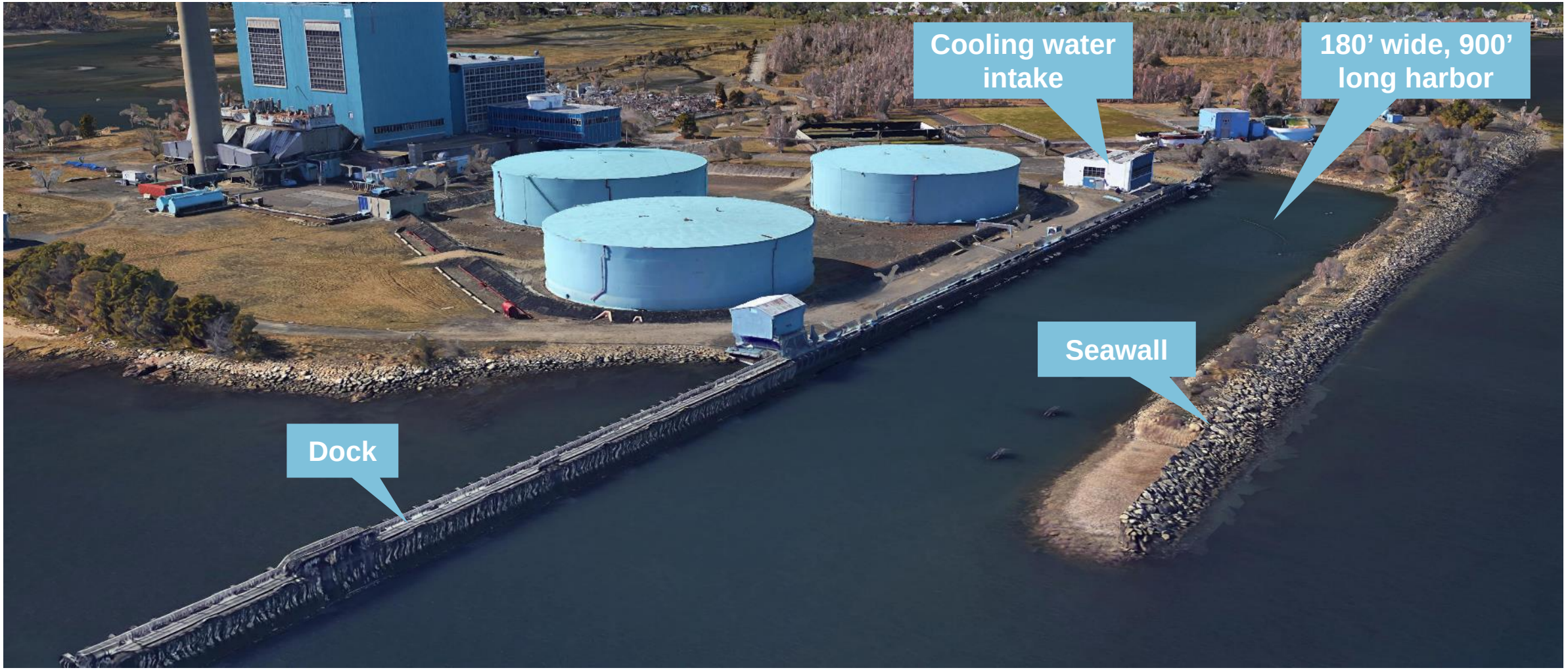
- 33 Acres
- Power Plant, Oil Tank Farm, Wastewater Treatment Plant and Associated Basins, Subsurface Cooling Water Structures, Harbor and Dock (Inactive)
- Active Electrical Substation



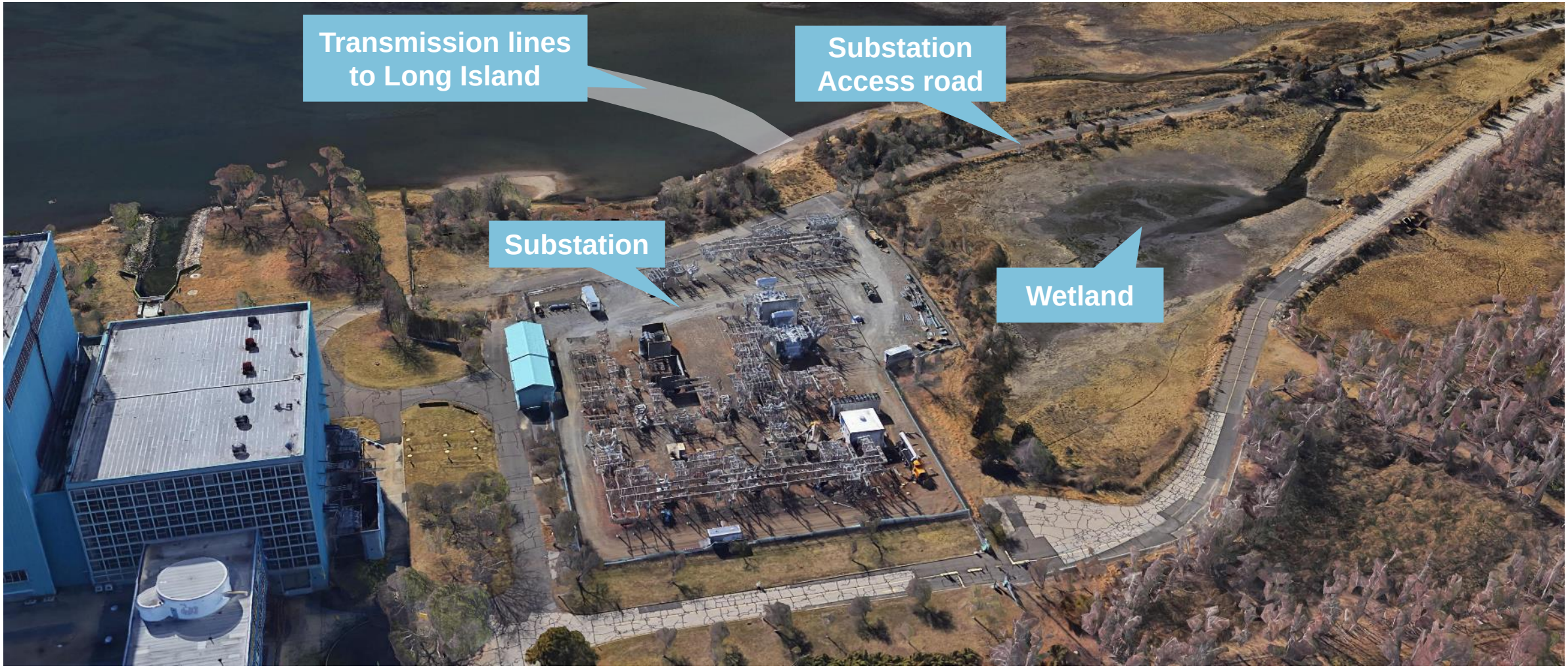
SITE FEATURES: POWER PLANT

SITE FEATURES: TANK FARM

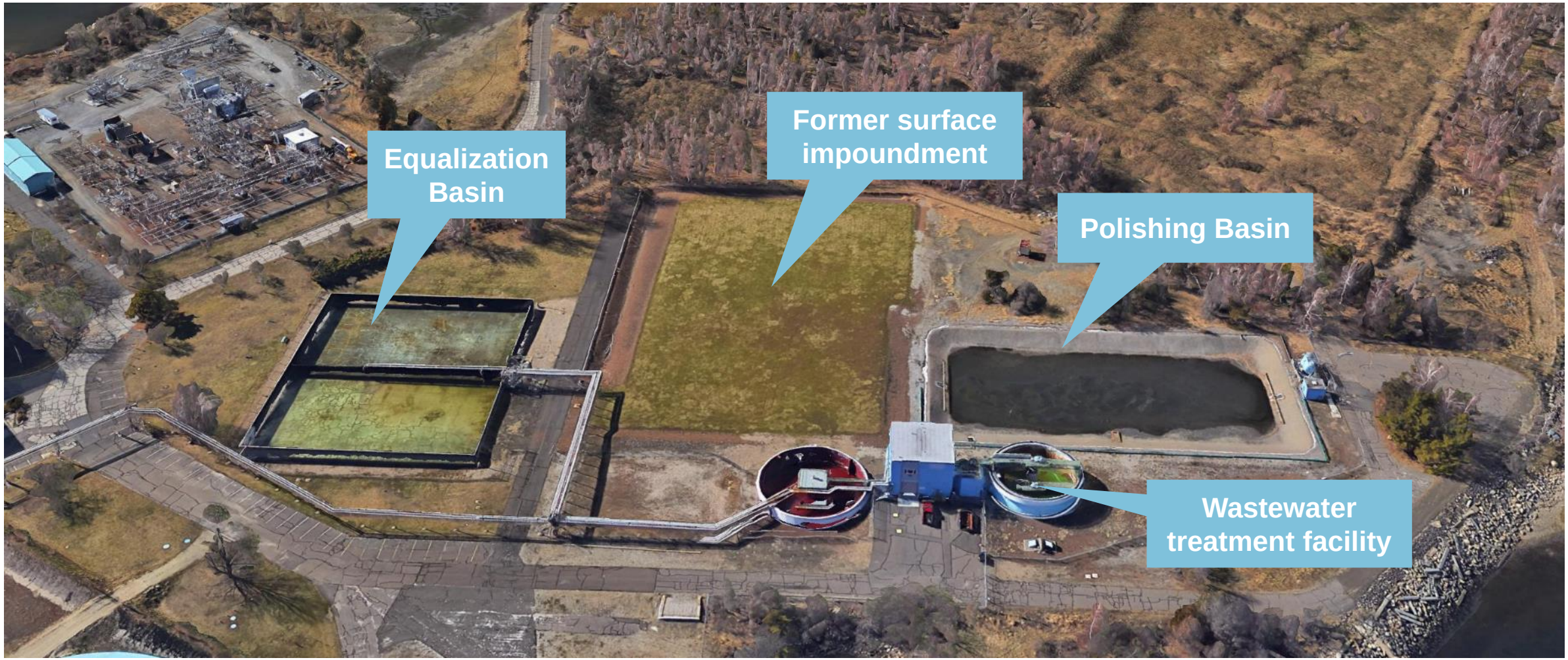
SITE FEATURES: HARBOR



SITE FEATURES: ELECTRICAL SUBSTATION

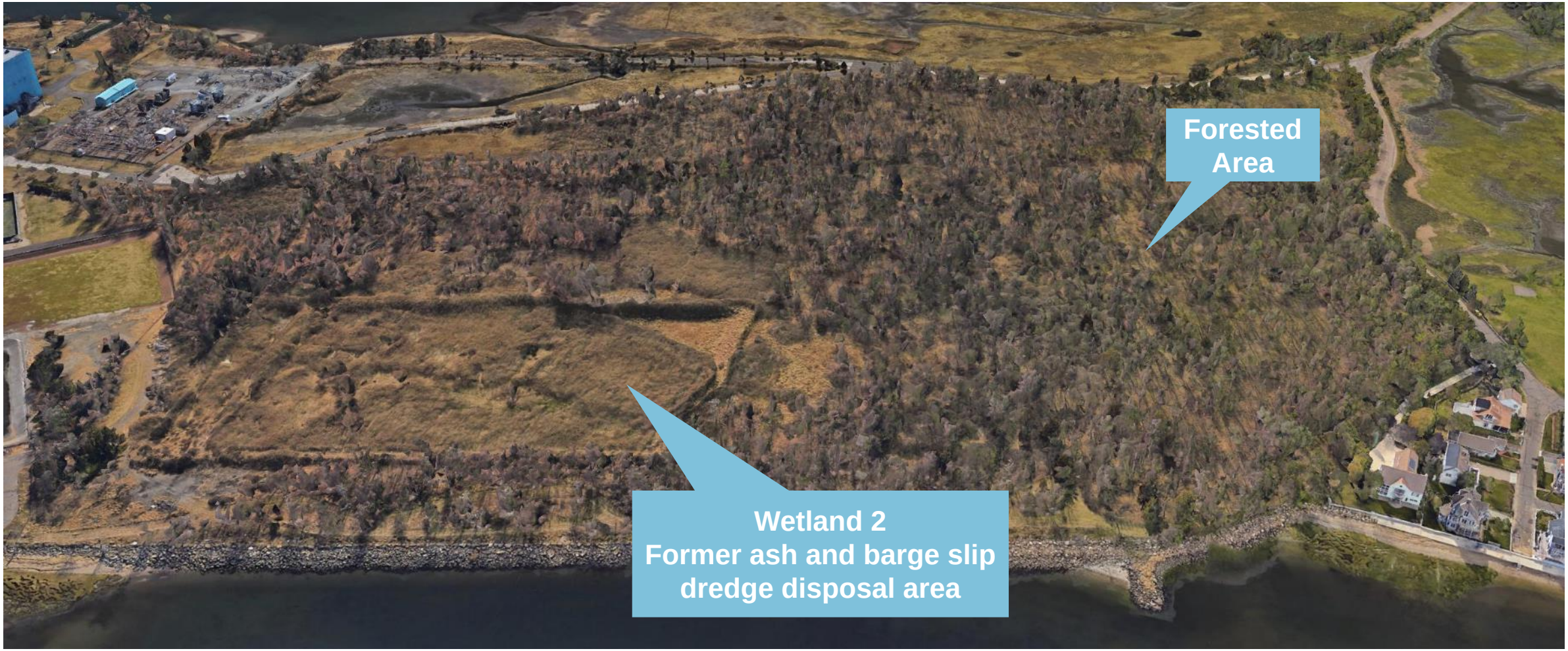


SITE FEATURES: WASTEWATER TREATMENT BASINS



SITE FEATURES: WETLANDS

SITE FEATURES: FORESTED AREA

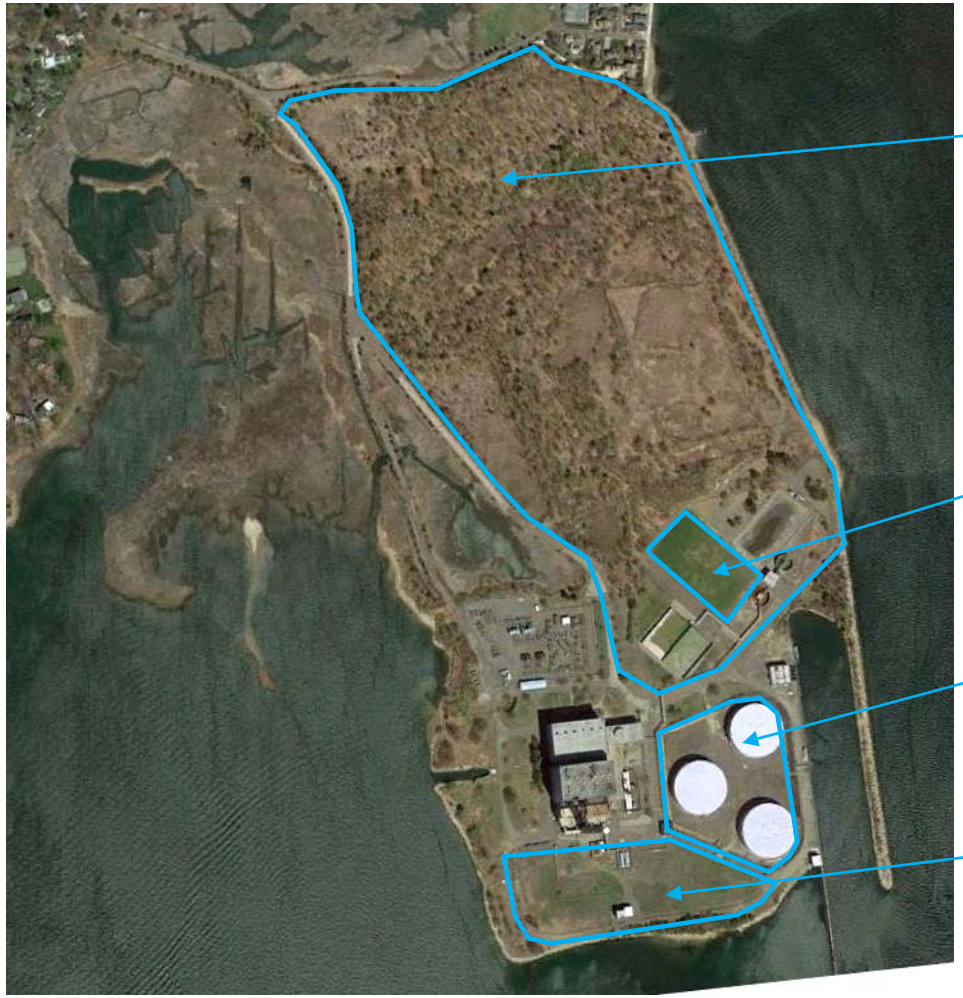


DEVELOPMENT CONSTRAINTS

- Contamination and cost of remediation
- Electrical substation
- Flood and coastal zone
- Limited access to site
- Limited infrastructure
- Zoning
- Fiscal impact
- Public opinion

Photo Credit: Geoffrey Steadman

DEVELOPMENT CONSTRAINT: CONTAMINATION



Coal ash fill: arsenic, beryllium, thallium, nickel contamination in both soil and groundwater

Former surface impoundment arsenic, beryllium, cadmium, chloride, lead, nickel groundwater contamination

Tank farm: arsenic contamination in soil, zinc contamination in groundwater

Former coal storage site: arsenic contamination in soil

AREAS OF ENVIRONMENTAL CONCERN (AOCs) AND AREAS REQUIRING REMEDIATION

Areas of Environmental Concern (AOCs)

- AOC-1: Former Ash Disposal Area
- AOC-2: Former Gasoline UST
- AOC-3: Fuel Oil Tank Farm
- AOC-4: Coal Storage Area
- AOC-5: Former Fuel Oil USTs
- AOC-6: Int. Comb./Blowdown UST
- AOC-7 Existing Septic Leach field
- AOC-8 Former Septic Leach field
- AOC-9: Electrical Equipment
- AOC-10: Former RCRA Impoundment
- AOC-11: Long Island Sound Sediment
- AOC-12: Container Storage Area

REGULATORY SUMMARY

- Site is enrolled in the Connecticut Department of Energy and Environmental Protection (CT DEEP) Property Transfer Program as a result of transfer of property from CL&P to NRG in 1999
  - *When transferring an establishment where there has been a release of a hazardous waste or a hazardous substance, the party signing the Property Transfer Form certification agrees to investigate the parcel and remediate pollution caused by any release of a hazardous waste or hazardous substance from the establishment.*
- The CTDEEP/ USEPA have been addressing investigations and remedial activities under a Combined Program (Property Transfer Program/ RCRA Closure) since 2006

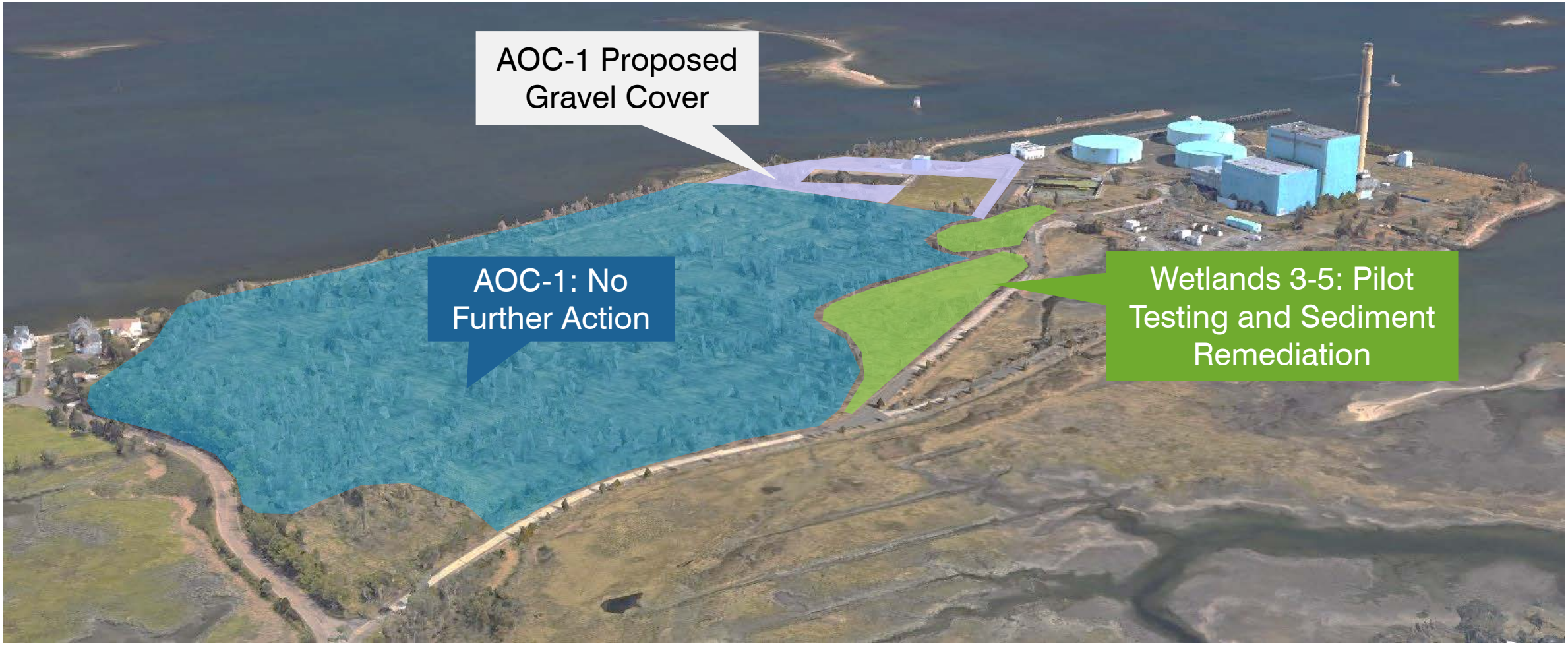
SITE REMEDIATION RELATED ACTIVITIES

- Site Remedial Planning and Activities: 2010-Current
  - 2009: Limited Remedial Action Plan, to remove isolated areas of sediments
  - 2011: Preliminary Technical Impracticability Assessment for Groundwater
  - 2013: Engineering Control Submittal
  - 2013: Site Specific Industrial/Commercial Direct Exposure Criteria Request
  - 2017: Ongoing Sediment Backfill Pilot Test (Wetlands W-5 and W-4)
  - Post-2017: Full Scale Sediment Remediation

CURRENT PROPOSED REMEDIAL APPROACH: ENGINEERED CONTROL

- **Industrial/Commercial Use Restriction**
- Will cost approximately $500,000 (does not include wetlands remediation)
- Contact Barriers Installation (i.e., soil and gravel)
- Power Plant Structures/Features Remain
- Inspection, Maintenance and Monitoring Plan
- Financial Assurance
- Public Notice is required
- Fencing and signs to limit trespassing
- No remediation of AOC-1 Wooded Area

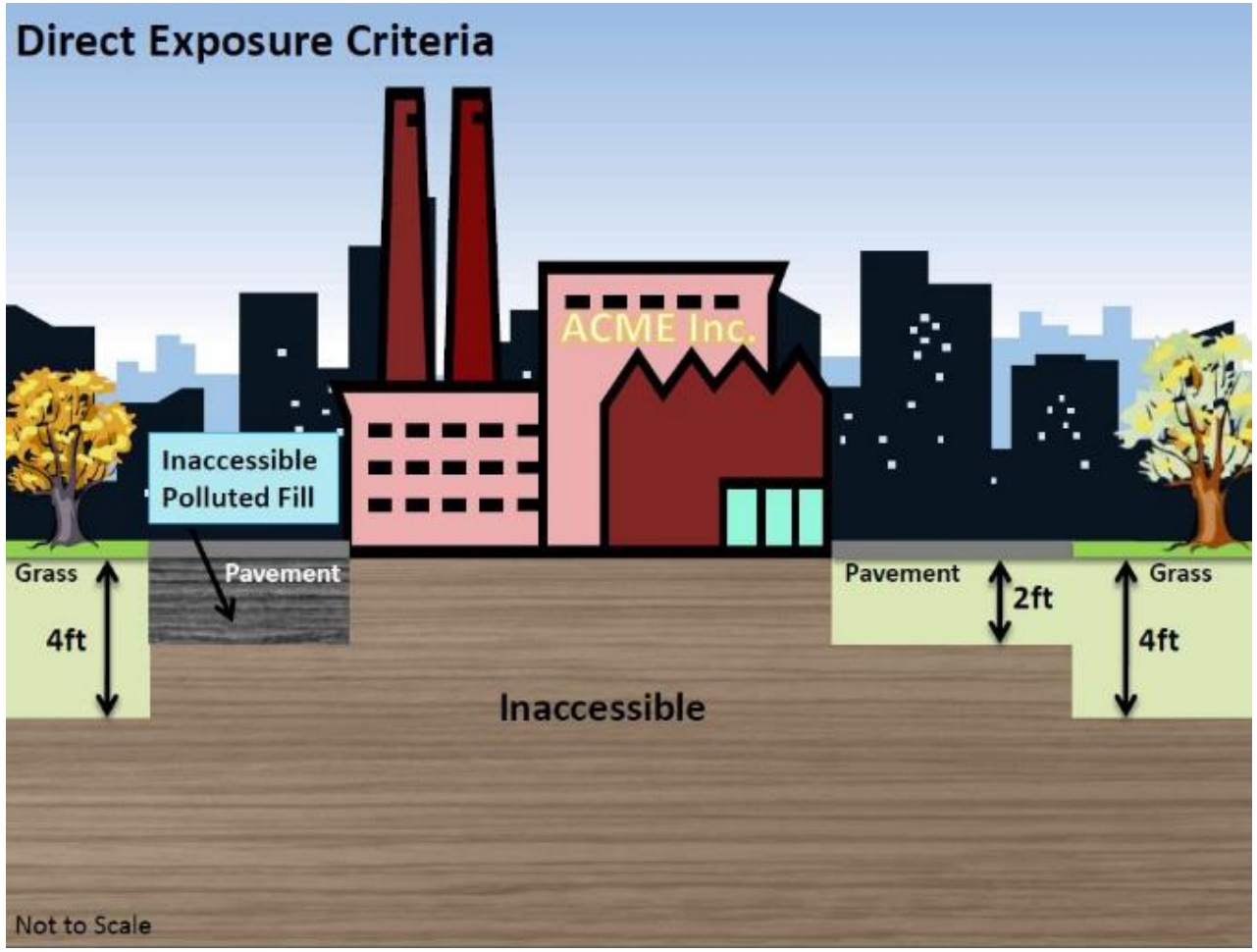
CURRENT REMEDIAL APPROACH
(AOC-1 COAL ASH DISPOSAL AREA AND WETLANDS 3-5)



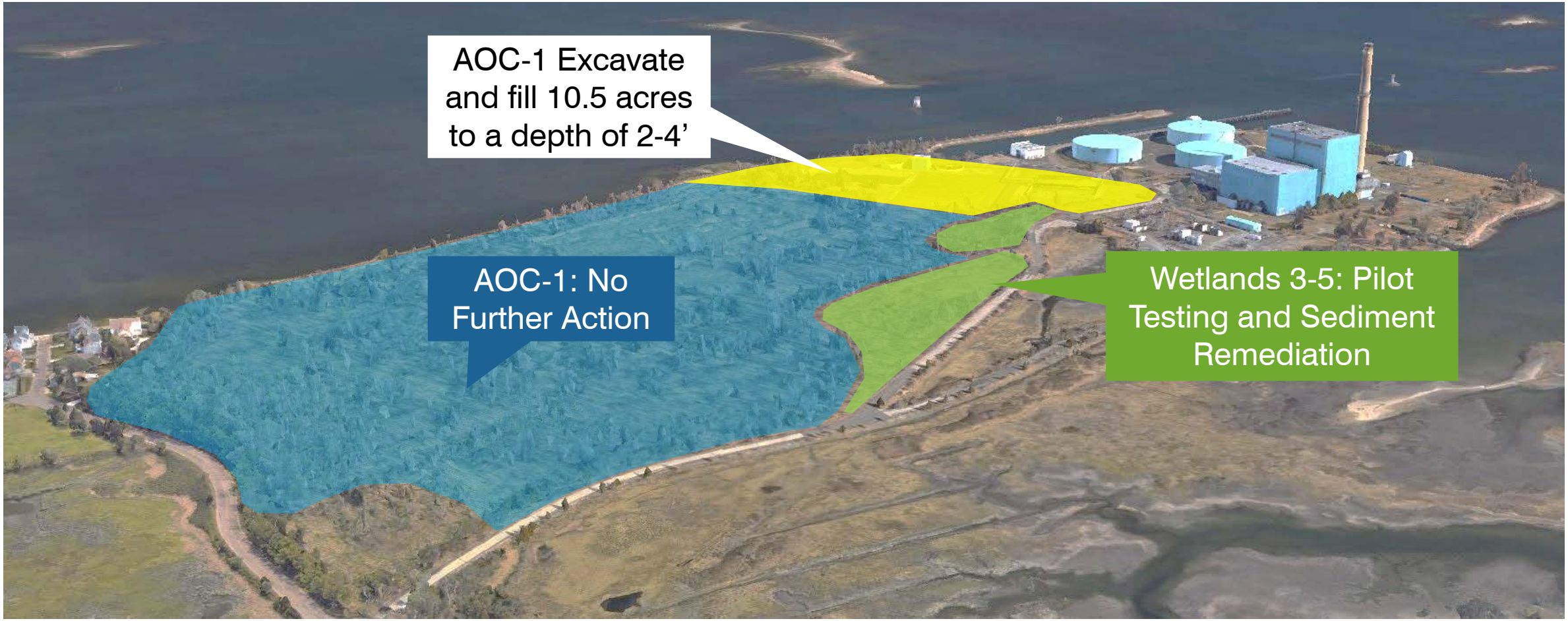
CURRENT REMEDIAL APPROACH
(AOC-4 FORMER COAL STORAGE AREA)

MORE EXTENSIVE REMEDIATION WOULD BE NECESSARY TO SUPPORT NON-INDUSTRIAL/COMMERCIAL USES

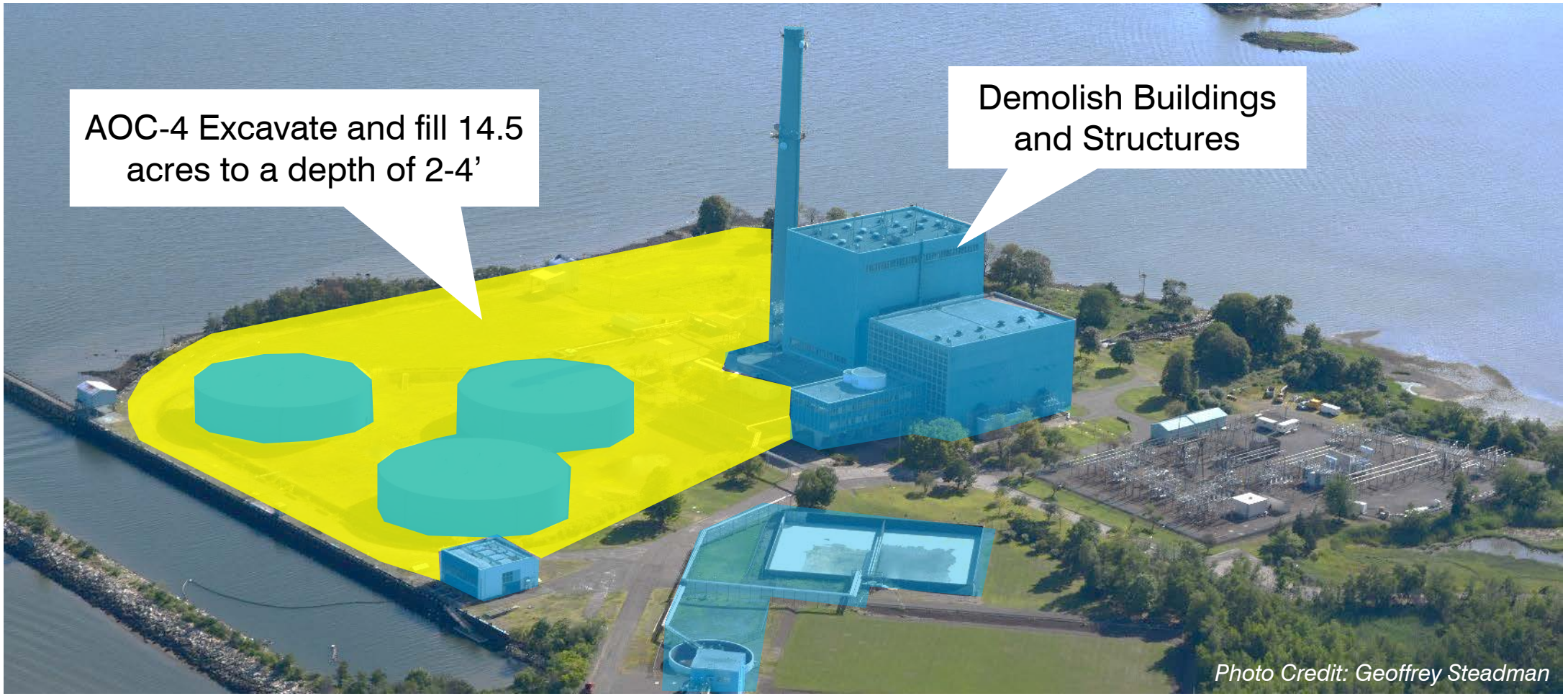
- Residential development of the site, or a comparable use that places people in direct contact with soils, would require more extensive remediation.
- Contaminated soils must be excavated and/or covered to a depth of 4 feet in landscaped areas and 2 feet in areas covered by pavement.
- Demolition of power plant structures could require remediation of soils currently below those structures.



POTENTIAL REMEDIAL APPROACH: EXCAVATION
(AOC-1 COAL ASH DISPOSAL AREA AND WETLANDS 3-5)



POTENTIAL REMEDIAL APPROACH: EXCAVATION
(AOC-4 FORMER COAL STORAGE AREA)



DEVELOPMENT CONSTRAINT: COST OF REMEDIATION

- The 2013 Engineered Control Submittal stated the following estimates for remediation of two areas of the site:
  - The cost of remediating 22 acres of AOC-1 via excavation and off-site disposal of soil was estimated to be $19.7 million. (represents less than half of total area)
  - The cost of remediating 11.5 acres of AOC-4 via excavation and off-site disposal of soil was estimated to be $11.3 million. (excludes tank farm area)
- Based upon these cost estimates, we assume a soil remediation cost of $1 million per acre*.

**Actual cost of remediation could vary significantly from these estimates due to multiple unknown factors*

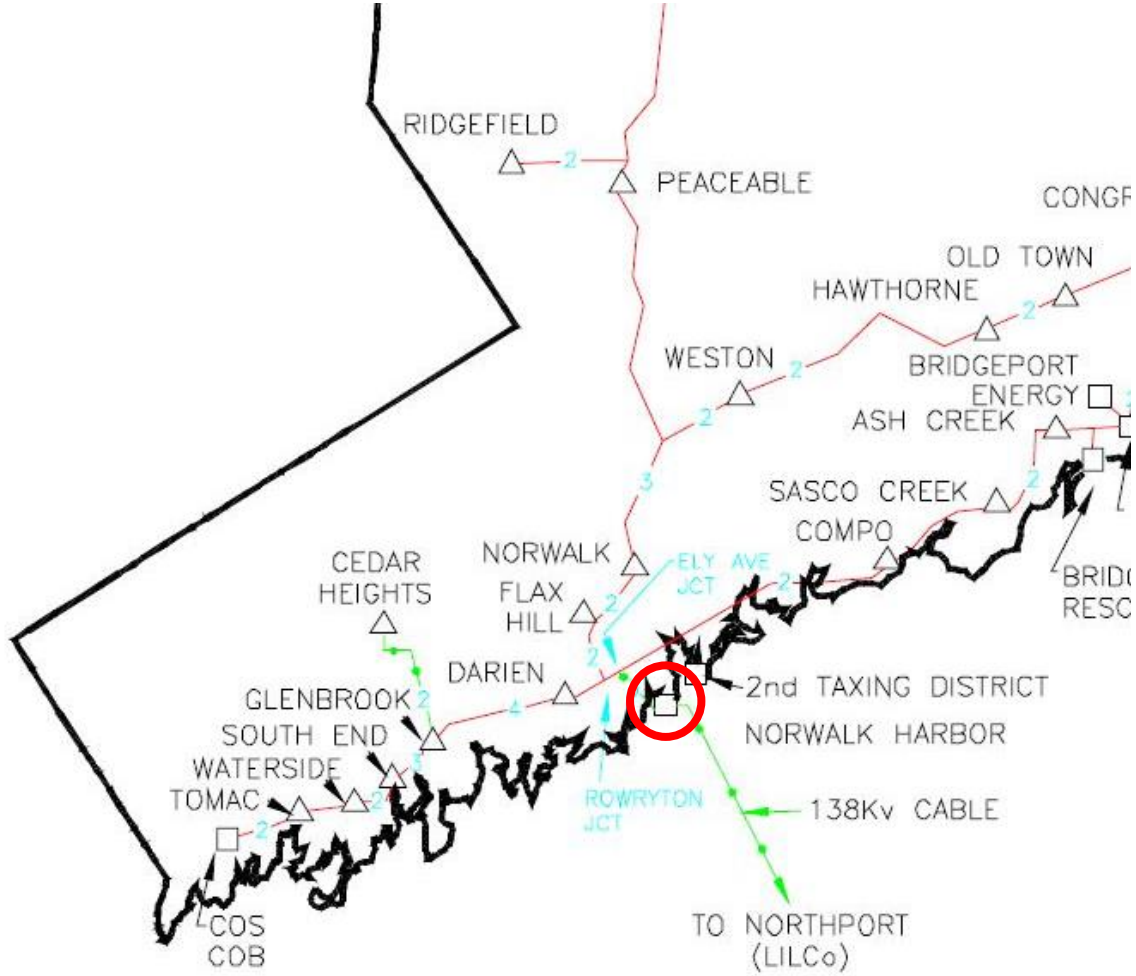
DEVELOPMENT CONSTRAINT: COST OF REMEDIATION

	$ 6-9 million	Demolition of buildings and structures
	$ 10.5 million	Excavation/fill of 10.5 acres of soils at AOC-1
	$ 14.5 million	Excavation/fill of 14.5 acres of soils at AOC-4
+	**$ 1.8 million**	Remediation of Wetlands 3-5
	$ 32.8-35.8 million*	Total estimated cost of remediation

**Actual cost of remediation could vary significantly from these estimates due to multiple unknown factors*

DEVELOPMENT CONSTRAINT: ELECTRICAL SUBSTATION

- The electrical sub-station is critical infrastructure for the northeast power grid, connecting to Connecticut's only Cross-Sound cable to Long Island.
- The station occupies approximately 5 acres on the southern parcel and would need to be screened from adjacent development



DEVELOPMENT CONSTRAINT: ELECTRICAL SUBSTATION

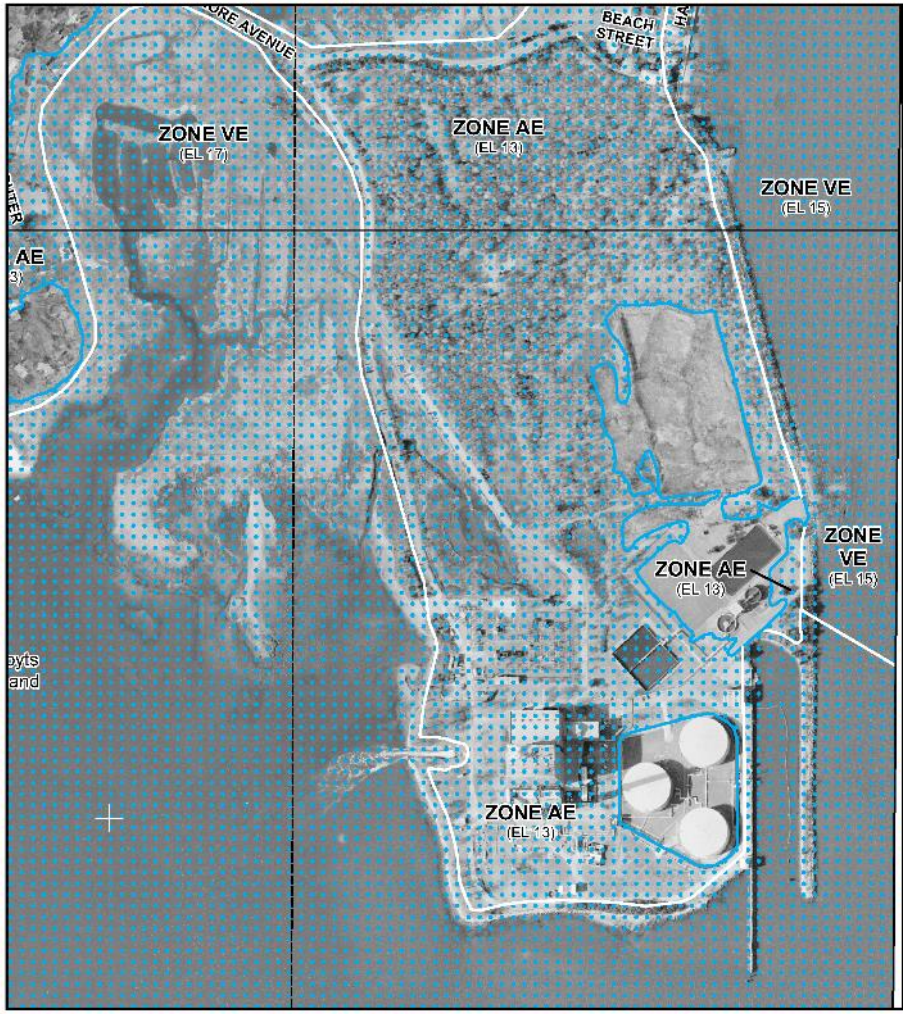
- There are multiple examples of residential development in proximity of electrical substations, but there may be a slight negative effect on property values.

Cos Cob, Greenwich

Ash Creek, Bridgeport

DEVELOPMENT CONSTRAINT: FLOOD AND COASTAL ZONE

- Most of site is covered by zone VE or AE (1% annual chance of flooding/100 year flood zone)
- The flood zone elevation ranges from 13 to 17 feet, but most of the southern parcel is approximately 10 feet in elevation
- Residential development would need to be elevated above the floodplain: 3 to 7 feet above existing grades
- Development on the site would be subject to coastal zone review

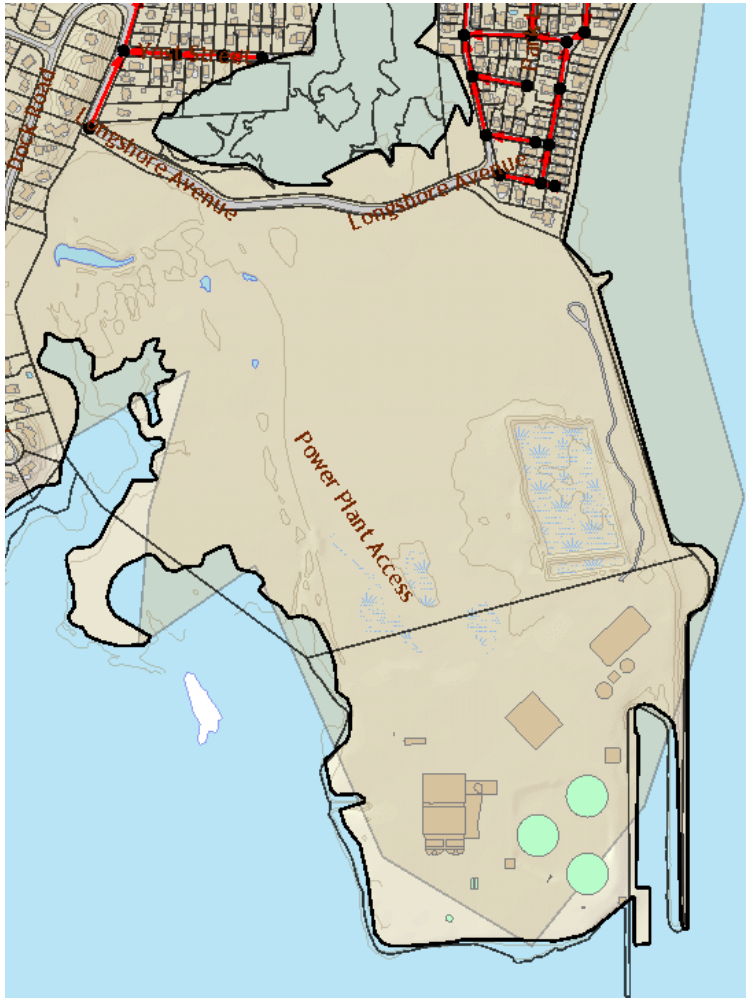


DEVELOPMENT CONSTRAINT: ACCESS

- The site is only accessible via one route (Woodward/ Longshore Avenues)
- The roadways are narrow local roadways and are primarily residential
- This site is 0.75 miles from an arterial or collector roadway, 1.5 miles from rail transit and 2.0 miles from I-95

DEVELOPMENT CONSTRAINT: UTILITY INFRASTRUCTURE

- There are no sewer facilities on the site
- Sewer mains are located 0.5 miles north of southern parcel
- Gas transmission line is approximately 3 miles north of the site



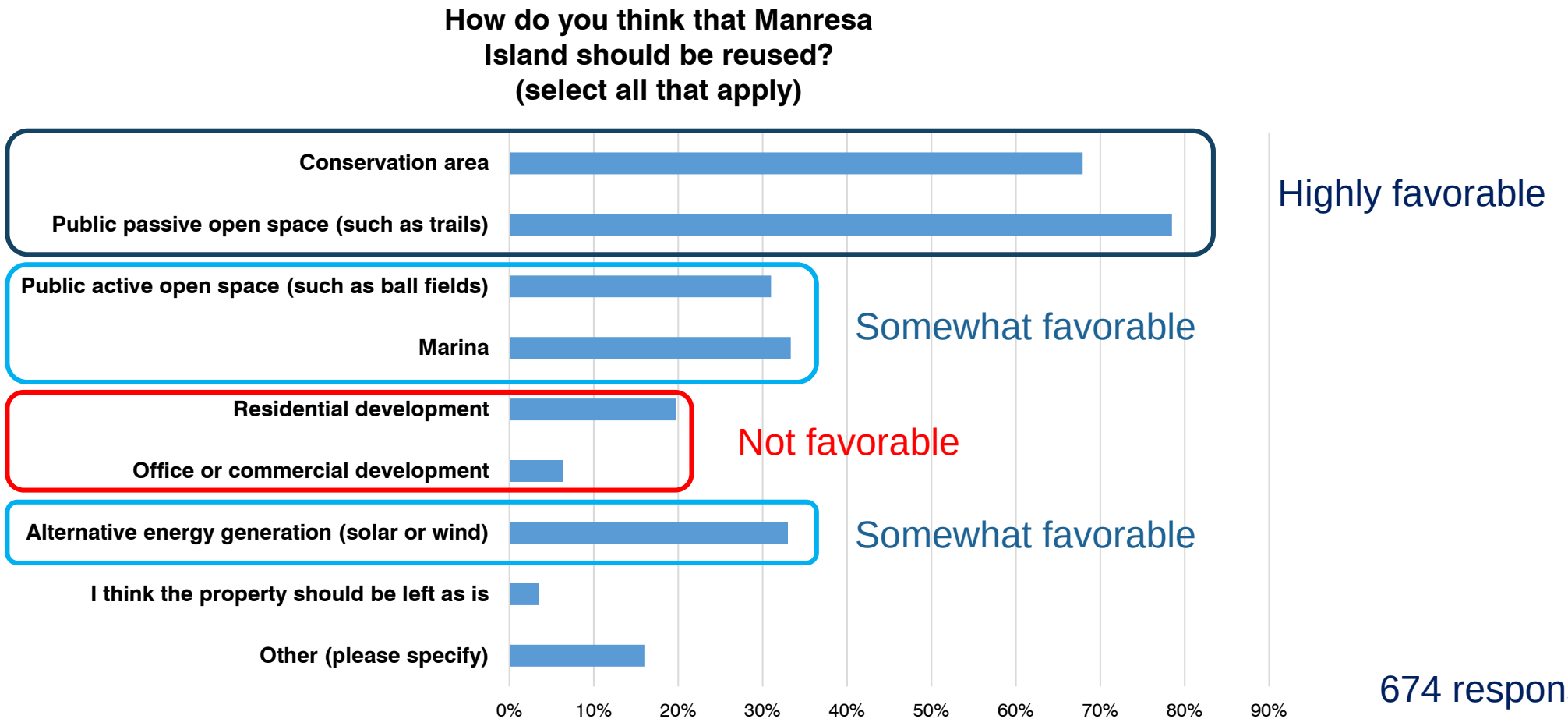
DEVELOPMENT CONSTRAINT: ZONING

- The current zoning (B Residence District) allows only single family residential development by right
- Planned residential development and limited institutional uses such as nursing homes or educational facilities are allowed by special permit
- Commercial and industrial uses are not permitted, with the exception of a utility use by special permit

DEVELOPMENT CONSTRAINT: FISCAL IMPACT

- The 2017 assessed value of **land and structures** of the southern parcel, which includes the power plant, is $22,575,661. This is 0.189% of Norwalk's grand list.
- This generates **$565,000** in property tax revenue per year ($6.38 per capita).
- A transfer of the property to a non-profit entity would result in a loss of property tax revenue that would likely require an increase in the City mill rate to replace the lost revenue.

DEVELOPMENT CONSTRAINT: PUBLIC OPINION



674 responses

REUSE SCENARIOS

Based upon the first workshop and at the direction of the steering committee, FHI was directed to explore the following reuse scenarios:

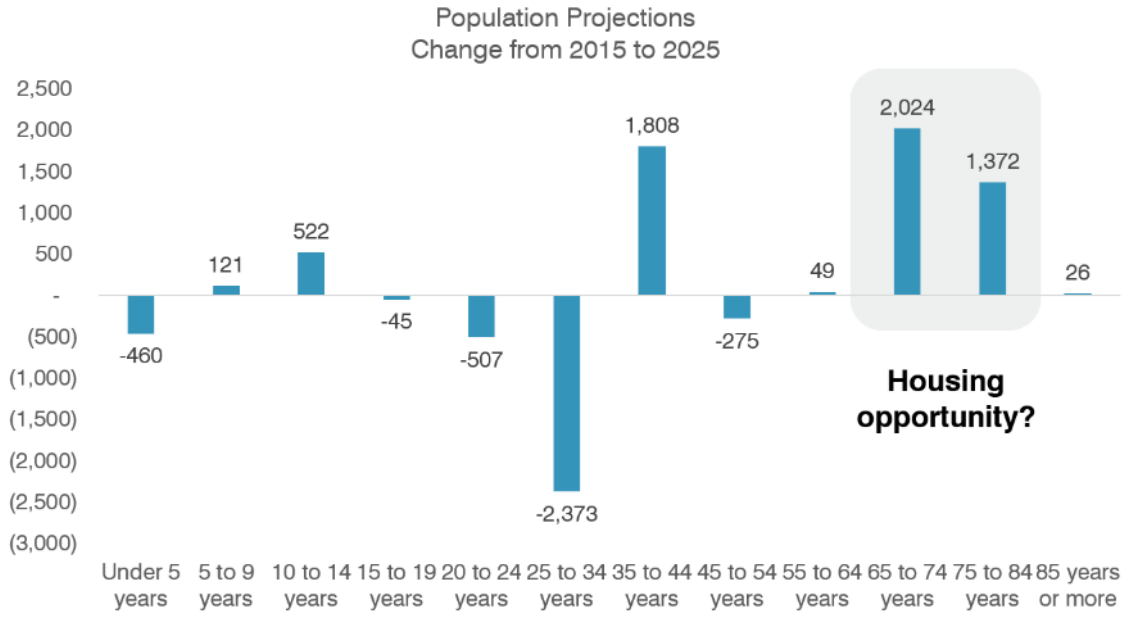
- Tear-down with passive open space
- Solar farm
- Resort and/or marina
- Low density/high value housing
- Mid to high density housing

REUSE SCENARIOS

- Reuse options represent a “build-out” of what could fit on the site
- The concepts assume remediation of the site to support the use
- The concepts are geometrically feasible, but may not be feasible from a financial or environmental basis.
- Tax revenue implications are based upon valuations of comparable development types in Norwalk. Actual appraised value of development and tax revenue could be negatively impacted by site conditions and perceptions associated with historic use of site.

MARKET CONDITIONS

- Based on market trends and conditions **residential development** is the most likely driver of reuse of this property, however…
- This analysis does not preclude a curated, targeted development either as a build to suit office situation or some other unique development idea brought forth by a developer



PASSIVE OPEN SPACE

View from Outer Road

PASSIVE OPEN SPACE

Potential view from Outer Road

PASSIVE OPEN SPACE

- Potential for 1+ mile of pathways
- Restoration areas could include meadows and forest
- Would not generate property taxes if held by City of non-profit entity

Visual Impact	Traffic Impact	Ecolog-ical Benefit	Allowed by Zoning	Anticipated Public Support	Property Tax Revenue Impact	Remed-iation Cost
Low	Low	High	Yes	High	Negative	Moderate

SOLAR FARM

Comparable: East Lyme 23 acre, 5 Megawatt/hour solar field

SOLAR FARM

- The property could accommodate a 20 acre 4.3 MWh field (6.8 GW/year- would power approximately 600 homes)
- Would produce $1.5 million per year of electricity (at $0.222 per KWh)
- Solar field would not be readily visible from surrounding properties
- Solar farm equipment is exempt from local property taxes (CT General Statutes, Chapter 203, Section 12-81(57))

Visual Impact	Traffic Impact	Ecolog-ical Benefit	Allowed by Zoning	Anticipated Public Support	Property Tax Revenue Impact	Remed-iation Cost
Low	Low	Moderate	Special Permit	Moderate	Negative	Low

MARINA

Comparable: Norwalk Shore and Country Club and Norwalk Cove Marina: 26 acres total

MARINA

- 64 boat slips and 16 acre boat yard could be accommodated
- Club house or resort building could be located on southwestern corner of site
- Could generate over $500,000 per year in property tax revenue, roughly equivalent to existing tax revenue
  - *Tax revenue implications are based upon valuations of comparable development types in Norwalk. Actual appraised value of development and tax revenue could be negatively impacted by site conditions and perceptions associated with historic use of site.*

Visual Impact	Traffic Impact	Ecolog-ical Benefit	Allowed by Zoning	Anticipated Public Support	Property Tax Revenue Impact	Remed-iation Cost
Moderate	Moderate	Low	No	Moderate	Neutral	Moderate

LOW DENSITY/ HIGH VALUE RESIDENTIAL DEVELOPMENT

Comparable: Woodland Road, Norwalk

LOW DENSITY/ HIGH VALUE RESIDENTIAL DEVELOPMENT

- 11 two to four acre parcels
- Could generate approximately $600,000 per year in property tax revenue, which would fully replace existing tax revenue from site
  - *Tax revenue implications are based upon valuations of comparable development types in Norwalk. Actual appraised value of development and tax revenue could be negatively impacted by site conditions and perceptions associated with historic use of site.*

Visual Impact	Traffic Impact	Ecolog-ical Benefit	Allowed by Zoning	Anticipated Public Support	Property Tax Revenue Impact	Remed-iation Cost
Moderate	Low	Low	Yes	Low	Neutral	High

MEDIUM DENSITY RESIDENTIAL DEVELOPMENT

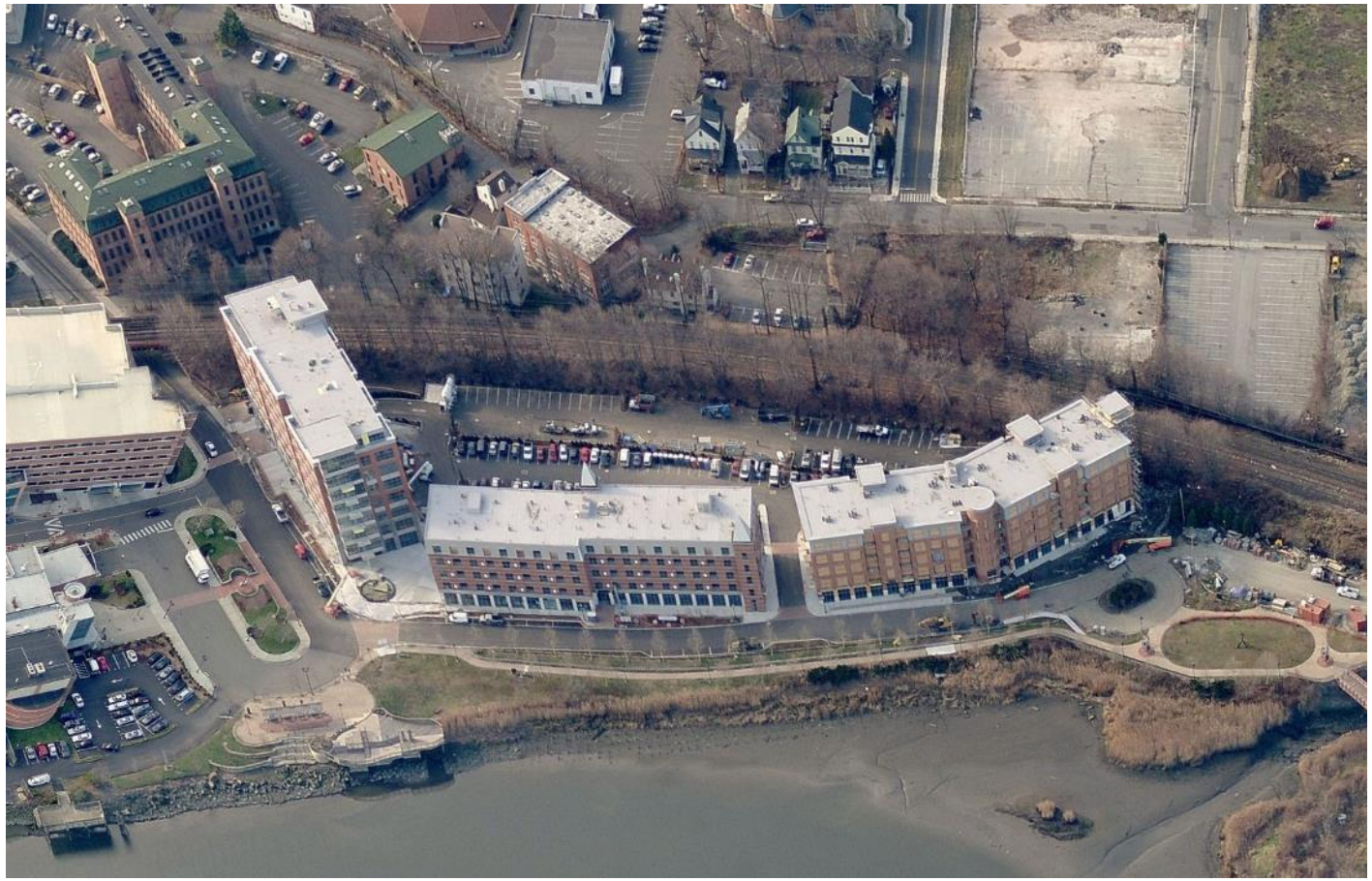
Comparable: Harborview Avenue, Norwalk

MEDIUM DENSITY RESIDENTIAL DEVELOPMENT

- 68 parcels: 33 at water's edge, 35 inland
- Parcel size between 1/4 and 3/4 acre
- Could generate up to $1.4 million in tax revenue per year, a 240% increase over existing tax revenues
  - *Tax revenue implications are based upon valuations of comparable development types in Norwalk. Actual appraised value of development and tax revenue could be negatively impacted by site conditions and perceptions associated with historic use of site.*

Visual Impact	Traffic Impact	Ecolog-ical Benefit	Allowed by Zoning	Anticipated Public Support	Property Tax Revenue Impact	Remed-iation Cost
Moderate	Moderate	Low	Yes	Low	Positive	High

HIGH DENSITY/MID-RISE RESIDENTIAL DEVELOPMENT



The Maritime, Norwalk: 61 condos in one building, 136 apartments in two buildings, 4 acre site

HIGH DENSITY/MID-RISE RESIDENTIAL DEVELOPMENT

- (4) six story buildings with 100 residential units in each building- total of 400 residential units
- 1 million sf of floor space
- Assessed value could be as high as $500,000 per unit for a total assessed value of up to $200 million which would generate up to $5 million in tax revenue per year
  - *Tax revenue implications are based upon valuations of comparable development types in Norwalk. Actual appraised value of development and tax revenue could be negatively impacted by site conditions and perceptions associated with historic use of site.*

Visual Impact	Traffic Impact	Ecolog-ical Benefit	Allowed by Zoning	Anticipated Public Support	Property Tax Revenue Impact	Remed-iation Cost
High	High	Low	No	Low	Positive	High

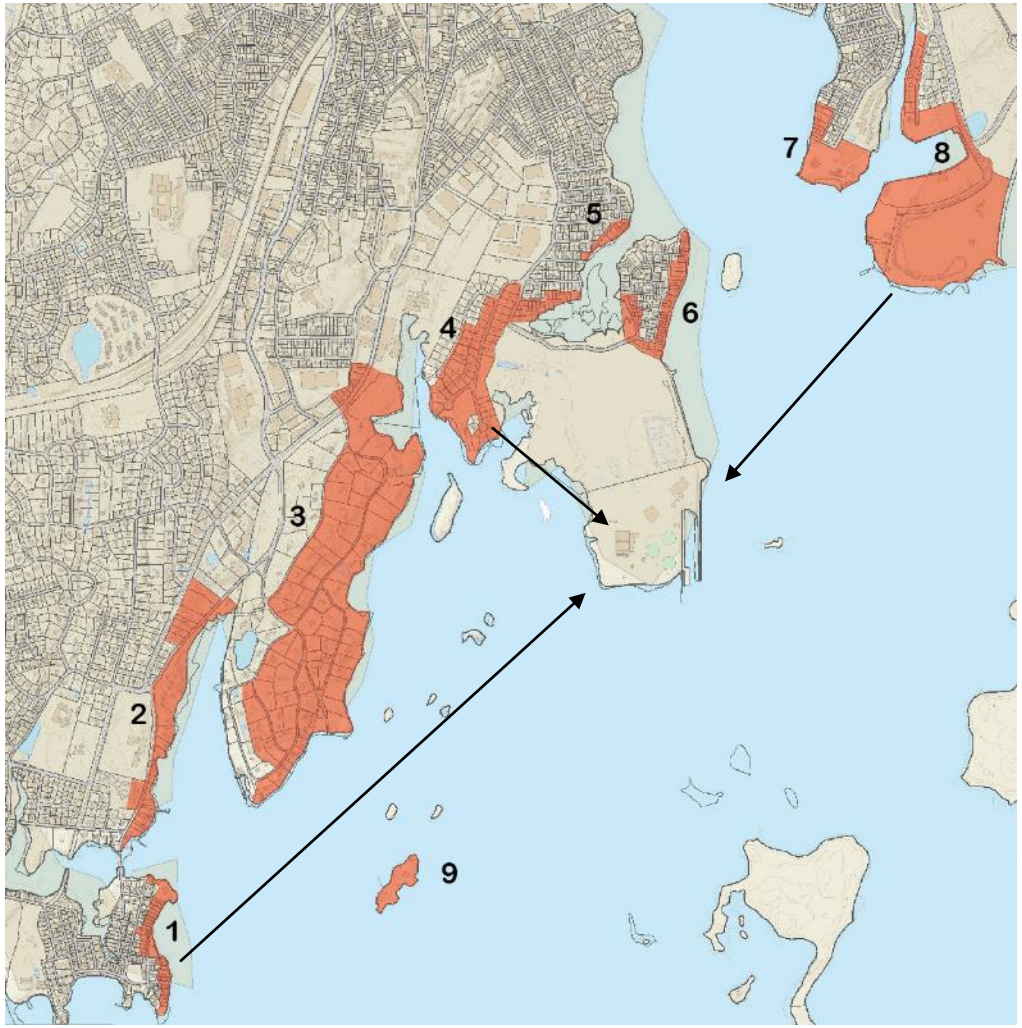
HIGH DENSITY/MID-RISE RESIDENTIAL DEVELOPMENT

Potential View from Outer Road

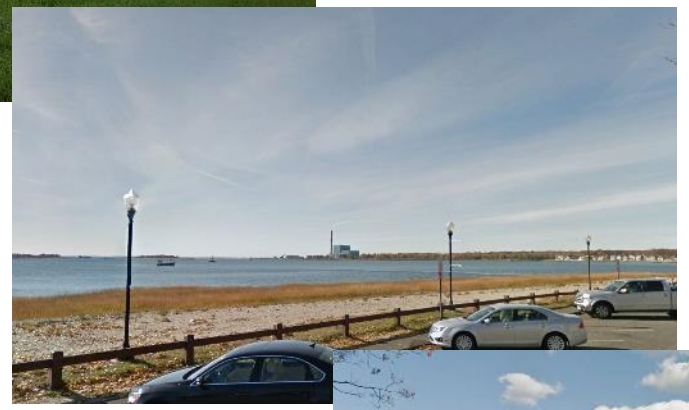
EVALUATION MATRIX

Reuse Scenario	Visual Impact	Traffic Impact	Ecological Benefit	Allowed by Zoning	Anticipated Public Support	Property Tax Revenue Impact	Remediation Cost
Passive open space	Low	Low	High	Yes	High	Negative	Moderate
Solar Farm	Low	Low	Moderate	Special Permit	Moderate	Negative	Low
Marina	Moderate	Moderate	Low	No	Moderate	Neutral	Moderate
Low Density Residential	Moderate	Low	Low	Yes	Low	Neutral	High
Medium Density Residential	Moderate	Moderate	Low	Yes	Low	Positive	High
High Density Residential	High	High	Low	No	Low	Positive	High

VISUAL IMPACT

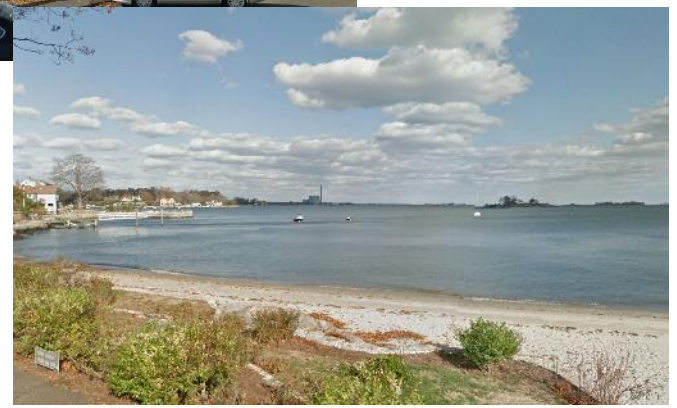


View From Area 4
(Outer Road)

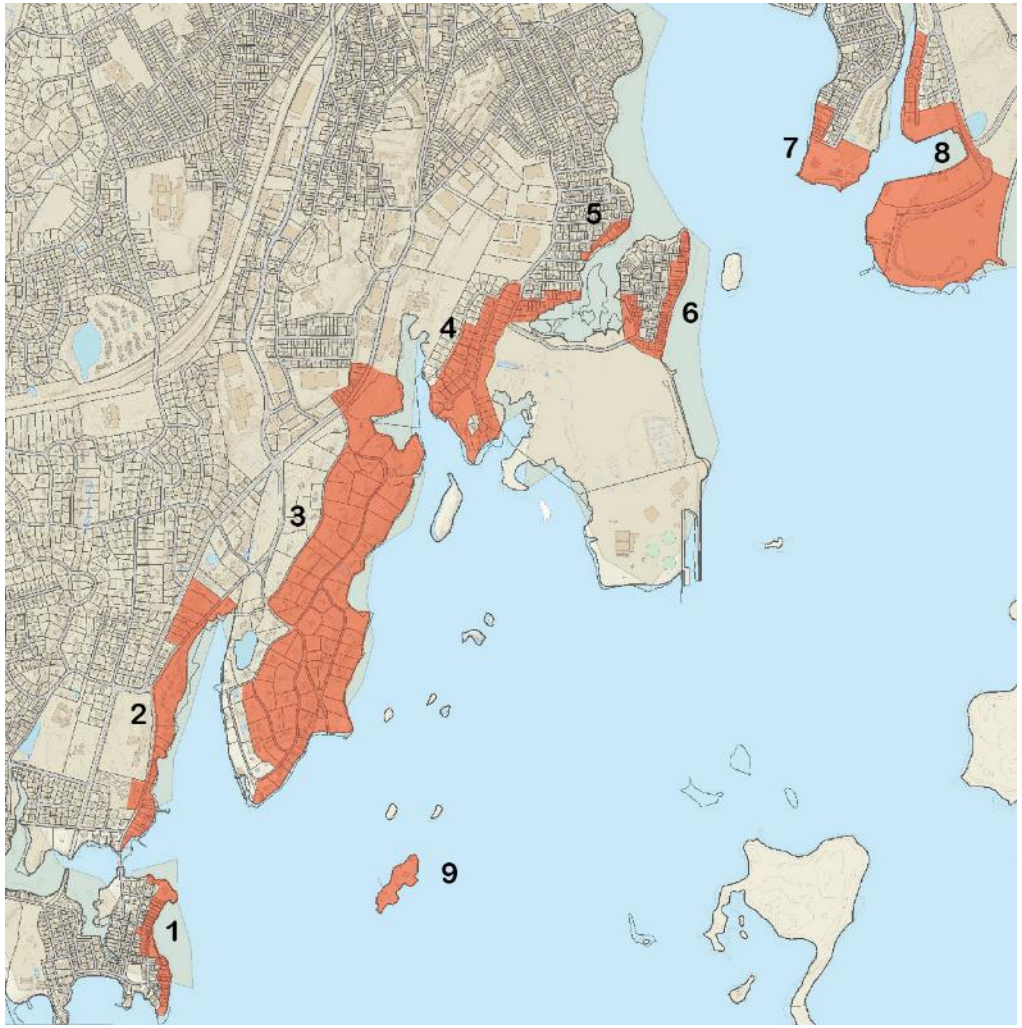


View From Area 8
(Calf Pasture Beach)

View From Area 1
(Bell Island)

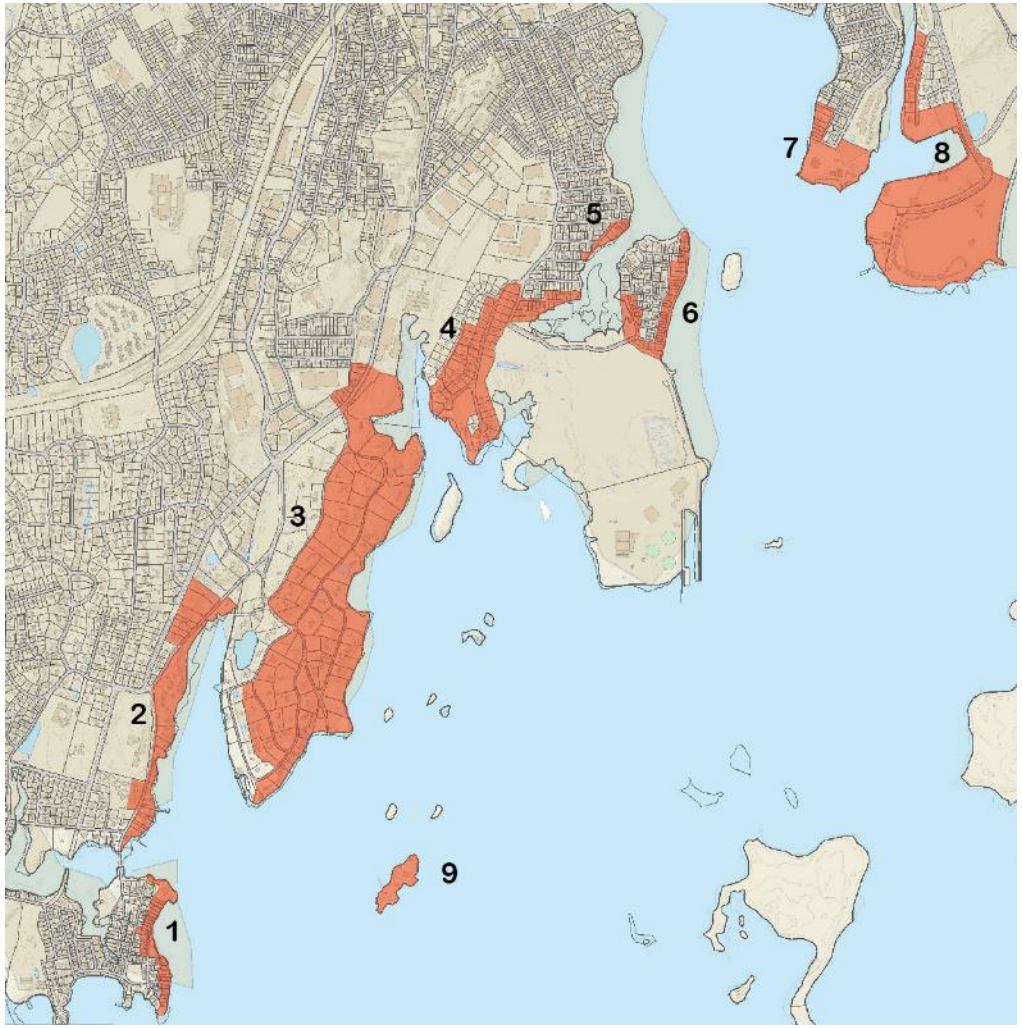


VISUAL IMPACT



- 288 properties have a view of the Manresa power plant and/or smokestack
- The total assessed value of those properties is $467,780,489 and they currently generate $11,902,207 per year in property taxes

VISUAL IMPACT



If assessed property values are increased by the removal of the power plant, additional tax revenue could be generated at the following rates:

Increase	Tax Revenue	Revenue Increase
5%	$12,497,317	$595,110
10%	$13,092,427	$1,190,221
15%	$13,687,538	$1,785,331
20%	$14,282,648	$2,380,441

BREAK OUT SESSION

- Divide into groups of 6 to 10 people
- Identify pros and cons of each development scenario
- Spend 5 minutes on each scenario, 30 minutes total
- Report back when complete

PASSIVE OPEN SPACE

Pros | Cons

SOLAR FARM

Pros | Cons

MARINA

Pros | Cons

LOW DENSITY RESIDENTIAL

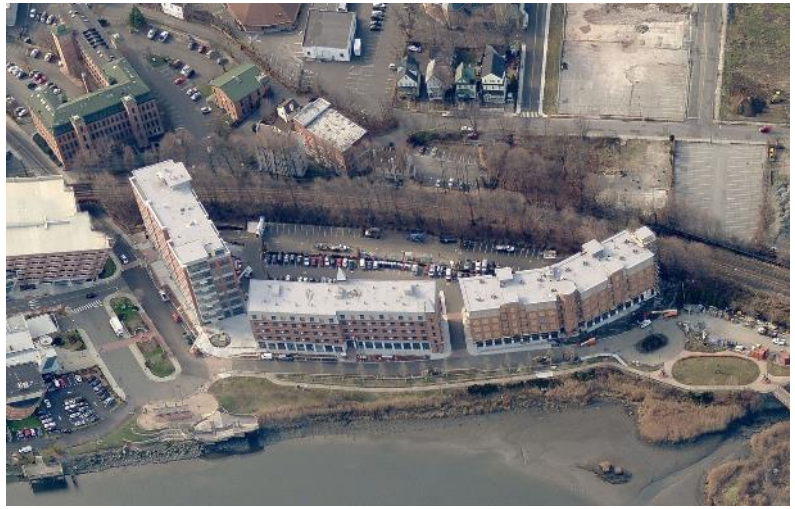
Pros | Cons

MEDIUM DENSITY RESIDENTIAL

Pros | Cons

MARINA

Pros | Cons



BREAK OUT SESSION FINDINGS

- Please briefly report back on your findings
- Identify unique pros and cons that have not yet been identified

NEXT STEPS

- Refine and develop concepts in response to this workshop
- Additional market study and feasibility analysis
- Final presentation anticipated in early December