

## **Greenpoint-Williamsburg Rezoning EIS**

### **CHAPTER 20: CONSTRUCTION IMPACTS**

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#### **A. INTRODUCTION**

This chapter assesses the potential impacts of the construction of buildings and parkland expected to result from the proposed zoning changes and other land use actions on sites in the Greenpoint-Williamsburg action area. The following sections discuss the potential impacts resulting from the construction of the projected development sites as described in the reasonable worst case development scenario (RWCDs) presented in Chapter 1, “Project Description.” Construction impacts, although temporary, can include disruptive and noticeable effects of a project. Determination of their significance and need for mitigation is generally based on the duration and magnitude of the impacts. Construction impacts are usually important when construction activity could affect traffic conditions, archaeological resources, the integrity of historic resources, community noise patterns, and air quality conditions.

Elements of the proposed action include zoning map and text amendments, street demapping and park mapping. The proposed action would result in the construction of new multi-unit residential buildings, with some ground-floor retail, and the conversion of some existing buildings that are primarily vacant or occupied with industrial and commercial uses to residential use. As described in other chapters of this EIS, the anticipated developments are expected to be medium density at upland sites, and medium to higher density along the waterfront, with building heights of up to 350 feet along the waterfront and up to 80 feet in the upland areas of the proposed action area. In addition, the proposed action also includes mapping of a new waterfront park, which would be constructed on approximately 27.8 acres in Scenario A and 15.9 acres in Scenario B.

The 76 projected development sites, including approximately 51 sites where new construction is projected (including the park site and two sites where new construction is projected in addition to some conversion), would be completed in the 10 years following the adoption of the proposed action. In addition, there are 264 potential development sites considered less likely to be developed over the 10-year analysis period, but which are considered potential sites for future development.

Because the proposed action could result in construction-related impacts, this EIS provides an assessment of the existing and future conditions with and without the proposed action. The following is a discussion of the potential effects associated with the construction related activities, including traffic, air quality, noise, archaeological resources, historic resources, natural resources, and hazardous materials.

#### **B. CONSTRUCTION SCHEDULE AND ACTIVITIES**

The proposed action is not intended to facilitate any specific development; as such, the reasonable worst case development scenario presented in Chapter 1, “Project Description,” does not describe which of the sites would be developed first or assume a particular sequence of development. However, it is assumed that construction of all projected development sites would likely be completed by 2013. While market

considerations will determine the demand for residential development, it is reasonable to assume that a number of the projected development sites may be under construction at the same time. However, given the wide geographic distribution of the projected development sites, this is not expected to result in a clustering of construction activity at any given location at any one time within the proposed action area.

Construction activities would normally take place Monday through Friday, although the delivery/installation of certain critical equipment could occur on weekend days. Construction staging would most likely occur on the projected and potential development sites themselves and may, in some cases, extend within portions of sidewalks, and curb and travel lanes of public streets adjacent to the construction sites. Any sidewalk or street closures require the approval of the New York City Department of Transportation's Office of Construction Management and Coordination (NYCDOT-OCMC), the entity that insures critical arteries are not interrupted, especially in peak travel periods.

Builders would be required to plan and carry out noise and dust control measures during construction. In addition, there would be requirements for street crossing and entrance barriers, protective scaffolding, and strict compliance with all applicable construction safety measures. There are also NYCDEP/NYSDEC construction requirements, especially near the waterfront, as discussed in the "Natural Resources" section below.

Following is a general outline of typical scheduling for the projected development sites. It should be noted however that the duration and extent of new construction activities would vary based on which site is being developed. Also, for conversion sites, the construction process is much simpler and shorter in duration.

- Months 1-4: Site clearance, excavation, and foundation. The first 4 months of construction would entail site clearance; digging, pile-driving, pile capping, and excavation for the foundation; dewatering (to the extent required), and reinforcing and pouring of the foundation. Typical equipment used for these activities would include excavators, backhoes, tractors, pile-drivers, hammers, and cranes. Trucks would arrive at the site with pre-mixed concrete and other building materials, and would remove any excavated material and construction debris.
- Months 5-10: Erection of the superstructure and underground parking foundation, where applicable. Once the foundations have been completed, the construction of the building's steel framework parking lots ramp and decking would take place. This process involves the installation of beams, columns and decking, and would require the use of cranes, derricks, hoists, and welding equipment.
- Months 11-24: Façade and roof construction, mechanical installation, interior and finishing work. This would include the assembly of exterior walls and cladding; installation of heating, ventilation and air conditioning (HVAC) equipment and ductwork; installation and checking of elevator, utility, and life safety systems; and work on interior walls and finishes. During these activities, hoists and cranes would continue to be used, and trucks would remain in use for material supply and construction waste removal.

## C. POTENTIAL IMPACTS DURING CONSTRUCTION

### Historic Resources

#### *Archaeological Resources*

As described in Chapter 7, “Historic Resources,” and in Appendix B, the “Phase I Archaeological Assessment Report,” 14 projected development sites and 50 potential development sites include lots which have been determined to be sensitive for nineteenth century archaeological resources, mostly cisterns and privies. Resources which may exist within portions of the development sites where new construction could occur, absent prior disturbance, would likely be destroyed by action-induced development. This would constitute a significant adverse impact. No mitigation measures would be feasible, because the area to be rezoned is privately-owned. Private ownership of the land would prevent the City from conducting or requiring an archaeological testing program to test for potential archaeological remains, or from mandating the preservation or documentation of such remains, should they exist. Consequently, the impact would remain unmitigated.

#### *Architectural Resources*

As also discussed in more detail in Chapter 7, “Historic Resources,” any new construction taking place on Site 102 which would be adjacent to the Russian Orthodox Cathedral, has the potential to cause damage to this historic building from ground-borne construction vibrations. Although any future development on this site pursuant to the proposed zoning would be as-of-right, the City has procedures for avoidance of damage to historic structures from adjacent construction. Therefore, this historic structure would be protected, by ensuring that adjacent development projected as a result of the proposed action adheres to all applicable construction guidelines and follows the applicable laws and regulations.

Should the former Northside Savings Bank building or the former Williamsburg Trust Company building (which are adjacent to potential development sites 291 and 334 and 335, respectively), or the Austin-Nicols Warehouse at 184 Kent Avenue (which is adjacent to potential development Site 222) become designated as historic resources prior to approval of the proposed action, they would also be subject to the construction protection procedures discussed above. If they are not designated however, they would not be subject to the above construction protection procedures, and may therefore be adversely impacted by adjacent development resulting from the proposed action. However, potential development Site 334 would entail conversion of an existing building, and would therefore be unlikely to result in any vibration impacts on any adjacent resources. Site 335 is also adjacent to the Williamsburg Trust Company building. However, site 335 is projected to be developed with a new residential building under both No-Action and With-Action conditions, pursuant to a granted BSA variance, and therefore no new construction-related impacts would occur at this site as a result of the proposed action.

It is not anticipated that construction induced by the proposed action would have any adverse physical impacts on any other historic resources in the area, as no other resources abut any of the projected or potential development sites.

## Natural Resources

The proposed action would result in the rehabilitation and improvement of approximately 5,000 linear feet of shoreline that is presently bulkhead/riprap. These improvements would occur as part of the development of each new residential and mixed use building along the waterfront. There are no site specific details for each waterfront site with respect to the installation of new shoreline improvements. However, it would be expected that at each site there would be:

- An engineering assessment of existing bulkhead/riprap conditions and a determination as to the need for such improvements;
- Installation of new shoreline structures, as necessary;
- Creation of a public access promenade and landscaping as part of the Greenpoint-Williamsburg Waterfront Access Plan.

Assuming a reasonable worst case, that each linear foot of waterfront would need to be improved at the development sites, it would not be expected that these potential shoreline improvements would result in significant natural resource impacts for the following reasons:

- The wetlands along the proposed action area are low-quality habitats. For example, there are no known submerged aquatic vegetation (SAV) habitats along the water's edge of the study area. Therefore, no moderate to high-quality wetland environments would be impacted.
- Any impacts to water quality would be temporary and are likely to be confined. It is not expected that any of these developments would place fill in the river or build over the river (e.g., new piers or docks). Rather, there would be the repair and replacement of existing shoreline protection structures. The impacts of such activities are temporary and are typically not significant.
- Any impacts to aquatic resources that are present along the existing shoreline or benthos (e.g., algae, crustaceans) would not be significant due to the generally degraded quality of existing habitats. In addition, the types of species that would be impacted are likely to recolonize once the new structure is in place. Likewise, impacts on primary organisms should be short-term or minimal.
- Essential Fish Habitat (EFH) species that are expected in the study area would not be impacted. No primary or secondary habitats for these species would be affected. In addition, in-water activities are expected to be minimal, with little impact on bottom habitats or the ability of these species to migrate along the river, since no major in-water structures are proposed (the majority of the EFH species are identified as transients).

Shoreline improvements under the proposed action would include landscape zones (e.g., trees, shrubs and groundcover) that would provide habitat for migratory species and songbirds, as well as other wildlife. This is a positive impact of the proposed action.

In examining these potential impacts it is important to note that it is likely that each waterfront development site would be subject to its own permitting requirements (e.g., ACOE Section 10 or DEC Tidal Wetlands and Protection of Waters Permits). As part of that permitting process, additional site design details would be prepared and more detailed site-specific environmental impacts would be addressed. However, based on the assumptions above (e.g., no major filling or dredging, no structures out over the water), it is concluded that the proposed action could move forward without resulting in any significant direct or indirect impacts. In addition, the permitting process for each waterfront site would involve coordination with natural resource and permit agencies in order to comply with regulations for obtaining the required permit approvals for construction or rehabilitation activities along the shoreline. It is expected that this review process would also minimize impacts to the extent practicable.

Moreover, stormwater discharges from certain construction activities to waters of the United States are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York's State Pollutant Discharge Elimination System (SPDES) is a NPDES-approved program with permits issued in accordance with the Environmental Conservation Law. Discharges of Pollutants to all other "Waters of New York State" such as groundwaters are also unlawful unless they are authorized by a SPDES permit.

Coverage for such activities can be obtained under the NYSDEC SPDES General Permit For Stormwater Discharges for Construction Activity by submitting a Notice of Intent (NOI) to the department. Prior to the submission of an NOI, a Stormwater Pollution Prevention Plan (SWPPP) must have been completed, that complies with all requirements of the general permit.

A Stormwater Pollution Prevention Plan (SWPPP) is developed prior to construction activities at each site, prior to the initiation of activities requiring coverage under a SPDES permit. The SWPPP identifies potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges. In addition, the SWPPP describes and ensures the implementation of practices which would be used to reduce the pollutants in stormwater discharges and to assure compliance with the terms and conditions of a SPDES permit. All SWPPPs must include erosion and sediment controls.

SWPPPs must present fully designed and engineered stormwater management practices with all necessary maps, plans and construction drawings. With these procedures, no construction period impacts from stormwater discharges would be anticipated.

## **Hazardous Materials**

As described in Chapter 11, "Hazardous Materials," with the exception of Site 211 (which is proposed to be mapped as park and acquired by the City), all of the projected and potential developments would be mapped with Environmental (E) designations. As also discussed in Chapter 11, "Hazardous Materials," A Phase I Environmental Site Assessment was prepared for Site 211, which indicated that the site had a history that included use as an oil refinery and later bulk petroleum storage, a manufactured gas plant and a rail yard. Testing on this site has confirmed the presence of contaminants consistent with the cited historic use of the site. Therefore, as part of the property acquisition process associated with the proposed park mapping, the City would ensure that all appropriate testing at the proposed park site is completed, and that all necessary remediation measures would be undertaken, as necessary, following acquisition and prior to construction.

Any site that has been (E)-designated would require that the fee owner of the site conduct a testing and sampling protocol, and develop a remediation plan, where appropriate, to the satisfaction of the New York City Department of Environmental Protection (NYCDEP) before the issuance of a building permit by the Department of Buildings (pursuant to Section 11-15 Zoning Resolution - Environmental Requirements). The (E) designation also includes mandatory construction-related health and safety plans which must be approved by the NYCDEP. The scope of a Phase II Site Investigation is dependent on the nature of the recognized environmental conditions. Any recognized environmental condition should be adequately addressed or considered before further development of a Site.

Demolition of interiors, portions of buildings or entire buildings are regulated by the NYC Building Department requiring abatement of asbestos prior to any intrusive construction activities including demolition. OSHA regulates construction activities to prevent excessive exposure of workers to

contaminants in the building materials including lead in paint. New York State Solid Waste regulations control where demolition debris and contaminated materials associated with construction are handled and disposed. Adherence to these existing regulations would prevent impacts from development activities at any of the projected and potential development sites in the proposed action area.

With the requirements of the (E) designation on development sites, there would be no impact from the potential presence of contaminated materials.

On Site 211, the development of a park could take place either prior to the remediation of this site for the oil and residuals from the Manufactured Gas Plant (MGP) or after this remediation is complete. If the park is constructed after the remediation is complete, there would be no contamination remaining that would be disturbed by the park construction and no construction impacts. If the park is constructed prior to complete remediation of the site, the work would need to be performed under a Health and Safety Plan (HASP) to minimize the potential for exposure of the site workers or the public from exposure to the contaminants being remediated.

For the oil storage facility at the north end of this site, decommissioning of the current oil storage tanks is required by the Major Petroleum Storage license under which this facility operated. The Major Petroleum Storage Regulations, 17 NYCRR Part 30, and 6NYCRR Part 610 require that upon closure of a Major Petroleum Storage Site, that any soil or groundwater contamination be remediated to the satisfaction of the New York State Department of Environmental Conservation. The obligation for this petroleum contamination is the license holder, Bayside Oil Company. This remediation would occur as part of the site closure including the demolition of the oil tanks which would have to be performed prior to park construction.

The MGP site remediation is the responsibility of Keyspan but could be delayed to after construction of the park because the contamination of concern is coal tar which is heavier than water and tends to be found at the bedrock interface. The park could be constructed under a HASP to protect workers and the public from exposure to hazardous chemicals during earth work including excavation and grading. Remediation of the deep contamination could be performed from off-site or, when the remediation plans are complete, by closure of a portion of the park during the remediation with restoration performed after completion of the remediation.

Other portions of the park at the south may require removal of isolated areas of contamination. This would be performed under a HASP either before park construction or as part of the park construction.

All of the remediation of Site 211 would be performed under the purview of the NYSDEC and/or the New York City Department of Environmental Protection (NYCDEP) under a HASP minimizing the potential for impacts to site workers or the adjacent neighborhoods. The remediation requirements would be performed to be protective of the end use as a park.

The construction of the park either before completion of remediation or after remediation would be performed under a HASP. No significant environmental impacts from this construction would occur from this work.

## **Traffic and Parking**

The proposed action would result in residential development with ground-floor neighborhood retail space over a 10-year period, anticipated in newly constructed and existing converted buildings. These developments would replace existing uses on the development sites, including industrial/manufacturing/warehouse space, vehicle and open storage uses, automotive uses, vacant buildings and vacant land. Construction of the projected developments anticipated to result from the proposed action would generate trips resulting from arriving and departing construction workers, movement of materials and equipment, and removal of construction waste. Construction would probably occur between 7 AM and 4 PM. Construction workers would typically arrive before the typical AM peak commuter period and depart before the PM peak hour, and would therefore not represent a substantial increment during the area's peak travel periods. Truck movements would typically be spread throughout the day on weekdays, and would generally occur between the hours of 7:00 AM and 4:30 PM. Wherever possible, the scheduling of deliveries and other construction activities would take place during off-peak travel hours.

Construction activities may result in short-term disruption of both traffic and pedestrian movements at the development sites. This would occur primarily due to the temporary loss of curbside lanes from the staging of equipment and the movement of materials to and from the site. Additionally, construction would at times result in temporary closings of sidewalks adjacent to the sites.

These conditions would be temporary and not result in significant adverse impacts on traffic and transportation conditions. NYCDOT-OCMC issues permits for any street/sidewalk closures after evaluation of traffic and pedestrian conditions.

Construction workers would use both public transportation and private automobile. Parking is typically done off-site for the larger development sites, and at curbside in the vicinity of the smaller ones. These curbside spaces are typically available as area residents use their autos to travel to work and elsewhere, and are vacated by construction workers in the afternoon before resident demand increases after the typical workday.

## **Air Quality**

Possible impacts on local air quality during construction of the projected development sites include:

- Fugitive dust (particulate) emissions from land clearing operations; and
- Mobile source emissions, including hydrocarbons, nitrogen oxide, and carbon monoxide.

### ***Fugitive Emissions***

Fugitive dust emissions could occur from land clearing, excavation, hauling, dumping, spreading, grading, compaction, wind erosion, and traffic over unpaved areas. Actual quantities of emissions depend on the extent and nature of the land clearing operations, the type of equipment employed, the physical characteristics of the underlying soil, the speed at which construction vehicles are operated, and the type of fugitive dust control methods employed. The U.S. Environmental Protection Agency (EPA) has suggested, in general, an overall emission rate of about 1.2 tons of particulate matter per acre per month of active construction from all phases of land clearing operations with no fugitive dust control measures. However, this is a national estimate and actual emissions would vary widely depending on many factors, including the intensity and type of land clearing operations. Much of the fugitive dust generated by

construction activities consists of relatively large-size particles, which are expected to settle within a short distance from the construction site and to not significantly impact nearby buildings or people. All appropriate fugitive dust control measures—including watering of exposed areas and dust covers for trucks—would be employed during construction of the projected and potential development sites.

### ***Mobile Source Emissions***

Mobile source emissions may result from the operation of construction equipment, trucks delivering materials and removing debris, workers' private vehicles, or occasional disruptions in traffic near the construction site. Localized increases in mobile source emissions would be minimized by following standard traffic maintenance requirements, such as:

- Construction requiring temporary street closings would be performed during off-peak hours wherever possible;
- The existing number of traffic lanes would be maintained to the maximum extent possible; and
- Idling of delivery trucks or other equipment would not be permitted during unloading or other inactive times.

### **Noise**

Impacts on noise levels during construction of the projected and potential development sites would include noise and vibration from the operation of construction equipment. The severity of impacts from these noise sources would depend on the noise characteristics of the equipment and activities involved, the construction schedule, and the distance to potentially sensitive noise receptors. Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, as well as the distance from the construction site (see Table 20-1). Noise caused by construction activities would vary widely, depending on the phase of construction—land clearing and excavations, foundation and capping, erection of structural steel, construction of exterior walls, etc.—and the specific task being undertaken.

Increased noise levels caused by construction activities can be expected to be most significant during the early phases of construction. The most significant noise source associated with the construction equipment would be the use of pile-drivers. This noise would be intrusive and would be heard by the employees at surrounding businesses and the residents that live within several blocks of the projected and potential development sites. However, the use of pile-driving equipment would be most likely to occur at the waterfront sites, where there are generally fewer noise sensitive receptors in the area. Increases in noise levels caused by delivery trucks and other construction vehicles would not be significant. Small increases in noise levels are expected to be found near a few defined truck routes and the streets in the immediate vicinity of the projected and potential development sites.

Construction noise is regulated by the New York City Noise Control Code and by EPA noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards; that, except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7 AM and 6 PM; and that construction material be handled and transported in such a manner as not to create unnecessary noise. These regulations would be carefully followed. In addition, appropriate low-noise emission level equipment and operational procedures would be used. Compliance with noise control measures would be ensured by directives to the construction contractor.



**TABLE 20-1**  
**Typical Noise Emission Levels for Construction Equipment**

Equipment Item	Noise Level at 50 ft. (dBA)
Air Compressor	81
Asphalt Spreader (paver)	89
Asphalt Truck	88
Backhoe	85
Bulldozer	87
Compactor	80
Concrete Plant	83 <sup>1</sup>
Concrete Spreader	89
Concrete Mixer	85
Concrete Vibrator	76
Crane (derrick)	88
Delivery Truck	88
Diamond Saw	90 <sup>2</sup>
Dredge	88
Dump Truck	88
Front End Loader	84
Gas-driven Vibro-compactor	76
Hoist	76
Jackhammer (Paving Breaker)	88
Line Drill	98
Motor Crane	83
Extractor	101
Pump	76
Roller	80
Shovel	82
Truck	88
<b>Notes:</b> 1 Wood, E.W. and A.R. Thompson, <i>Sound Level Survey, Concrete Batch Plant: Limerick Generating Station</i> , Bolt Beranek and Newman, Inc., Report 2825, Cambridge, MA, May 1974. 2 New York State Department of Environmental Conservation, <i>Construction Noise Survey</i> , Report No. NC-P2, Albany, NY, April 1974. <b>Sources:</b> Patterson, W.N., R.A. Ely, and S.M. Swanson, <i>Regulation of Construction Activity Noise</i> , Bolt Beranek and Newman, Inc., Report 2887, for the Environmental Protection Agency, Washington, D.C., November 1974. Except for footnoted items.	

## Conclusions

Construction-related activities resulting from the proposed action are not expected to have any significant adverse impacts on natural resources, architectural resources, traffic, air quality, noise, or hazardous materials conditions as a result of the proposed action. Construction does have the potential for adverse impacts on archaeological resources. However, as discussed previously in this chapter, such impacts cannot be mitigated because the projected development sites are privately owned and could be redeveloped with or without the proposed action. Refer to Chapter 22, “Mitigation,” and Chapter 24, “Unavoidable Adverse Impacts.” Moreover, the construction process in New York City is highly regulated to ensure that construction period impacts are eliminated or minimized. The construction process requires consultation and coordination with a number of City and/or State agencies, including NYC Department of Buildings (DOB), NYCDOT, NYCDEP, and NYSDEC (where applicable), among others.