

The background image shows an aerial view of the Neptune Terminals industrial facility in Vancouver, Canada. The facility is located on a peninsula, with large coal storage piles and processing equipment in the center. A railway line runs along the northern edge, and several ships are docked at the port area. In the background, there are residential neighborhoods, green trees, and mountains under a clear blue sky.

**Neptune Terminals Dust Suppression System Upgrade**

Port of Vancouver Permit Application # 16-072

**View and Shade Impact Analysis**

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## **1.0 Introduction**

Neptune Terminals is applying for a permit to install an upgraded Dust Suppression System to improve the dust suppression on our coal system under Project Permit Application 16-072. Neptune currently has dust suppression in the coal system, but would like to take the opportunity to perform upgrades at the soonest available opportunity in order to bring the system up to the best in class environmental protection possible. Neptune currently has twelve spray poles, and in this project ten of them will be removed and replaced with thirteen upgraded poles with optimized heights and locations. Five of the new poles will be taller than the existing poles and the remaining eight upgraded poles will be the same height as existing.

In this study, it will be shown that there are minimal view impacts and no shade impacts to the surrounding community as a result of this project.

## **2.0 Applicability**

The Port of Vancouver has classified this project as a Category C due to the increased spray pole height, and therefore this project requires a view and shade impact analysis.

## **3.0 Objectives**

The objectives of a view and shade impact study are as follows:

- a) Where Port related developments are proposed in areas within close proximity to residential or public areas, the developments should take into account the potential view and shade impacts they may have on the surrounding communities
- b) Where possible, developments should avoid or provide mitigations to lessen the view and shade impacts to the surrounding community
- c) Where both private and public views may be impacted, maintaining or mitigating impacts to public viewpoints are considered a priority

## **4.0 Guidelines**

Port of Vancouver's Guidelines on view and shade impact shall be used as a framework for this section in order to address any view or shade impact concerns that may arise as a result of the Dust Suppression Upgrade Project.

### **4.1 General Considerations**

The Dust Suppression Upgrade Project was designed to provide the best in class dust suppression for our coal pile area. The view impact from the community or surrounding areas was not taken into consideration as Neptune's highest priority is reducing or eliminating the migration of coal dust from our site into the surrounding areas. In order to get the best possible dust suppression system based on the best available technology, the five tower sprays will have to be higher than the existing spray poles. This

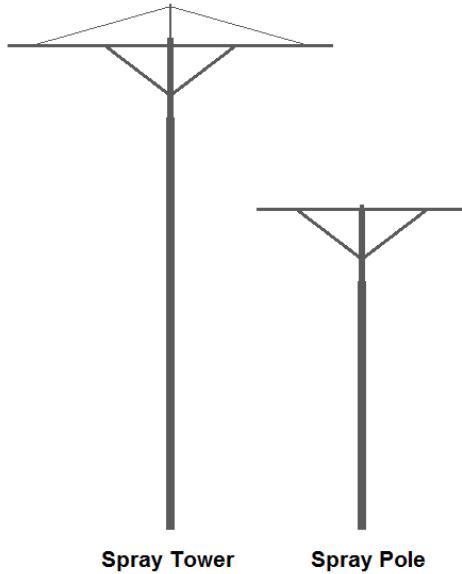
will ensure greater coverage of mist on the coal piles, which prevents dust from being carried away on the wind. As mentioned in the introduction, five of the new spray poles will be taller than the existing poles, and this is in order to get the highest possible coverage of our coal pile due to the direction and speed of the prevailing winds.

Unfortunately due to the location of the site and the surrounding roads, there is no screening possible that can further mitigate this view impact. However the view is already mitigated from most public locations due to either the trees between 3<sup>rd</sup> and 4<sup>th</sup> streets, the slope of the hill, or the residential houses that are already blocking the view down to Neptune. See Vantage Points 2, 3, and 4 for examples of the Neptune site being only partially visible from public areas.

#### **4.2 View and Shade Impact Analysis**

The views of Neptune Terminals as seen from public spaces can all be seen in the following pages of Section 5. Neptune is primarily visible from Low Level Road and the new Spirit Trail. It is also partially visible from the lane between East 3<sup>rd</sup> and 4<sup>th</sup> streets and Cloverly Park.

The new spray poles and spray towers do introduce a new view impact especially from the low level road and spirit trail areas (Vantage Point 1). The difference between spray poles and spray towers is shown in schematic form in Figure 1.



**Figure 1: Spray Tower vs. Spray Pole**

From Vantage Point 1, three new spray towers along our sheds can be seen in the middle and the left of the image, and the two new spray towers at the other end of the yard can be seen on the right side of the image. The new spray poles are also shown on this rendering, but they are the same height as the existing poles and they do not produce any new view impacts from this vantage point. The spray towers are higher than our existing sheds, which is the primary view impact from this project. However it can be seen that the towers are a similar height as the cranes on the ships, which can be seen in the

background behind the sheds, so the new view impacts will be minimal. The towers at the other end of the yard are similar in height to the new stacker reclaimer (the big machine shown in turquoise) so the view impacts there are minimal as well.

The next vantage point is the lane between 3<sup>rd</sup> and 4<sup>th</sup> streets. From this vantage point a similar result can be seen that although the new towers are higher, the view impact is minimal.

Vantage points 3 and 4 are included to show that there is not a good view of Neptune from these other public locations, so there will be no view impact from further up the hill. We were not able to find any more public spaces from which Neptune was clearly visible so the impacts on the community of this project should be very minimal.

Vantage point 5 is included at the request of the Port of Vancouver as there were not many public spaces with a clear view of Neptune Terminals. This photo was taken with a drone flying over Clovery Park tennis courts. This vantage point shows clearly the placement of all of the proposed towers but it must be emphasized that this view is not available to anyone at ground level.

There is no shade impact on the community as a result of this project because all of Neptune's site elevation is below the surrounding public and community areas.

#### **4.3 Alternative Siting Analysis**

Alternative siting is not possible in this project. The spray poles are needed for dust suppression for our coal yard, so they must be next to the coal stockpiles. The locations and heights have been chosen as to be most effective for dust suppression given our site layout and the prevailing wind patterns.

## **5.0 Vantage Points and Renderings**

This view study consists of views and renderings from five different vantage points. Vantage Points 1 through 4 are the view of Neptune Terminals as depicted from the community at eye level. However as discussed, since a view of the whole site was not available from the community, the Port of Vancouver requested that a drone photograph be taken with renderings, and this photo can be seen in Vantage Point 5. Descriptions of the different locations follow, with the pictures and renderings on subsequent pages.

Note that other than the below vantage points, there were no other locations within the surrounding community that Neptune Terminals was found to be visible from ground level on public property.

### **VANTAGE POINT #1**

This photo was taken from the 3<sup>rd</sup> street bike / pedestrian overpass that was completed as part of the low level road project. This overpass is part of North Vancouver's Spirit Trail. From this point, all of Neptune can be seen, and this was the best location to depict all of the poles as they will be seen from eye level. The five taller tower sprays are all visible, however please note that they are not much higher than the ship's cranes in the back, or the existing stacker reclaimer.

### **VANTAGE POINT #2**

This photo was taken from the lane between 3<sup>rd</sup> and 4<sup>th</sup> streets. From this point, there are trees in the way that block much of the view of Neptune Terminals, however the new spray poles are shown where possible.

### **VANTAGE POINT #3**

This photo was taken from the old Lucas Centre on Cloverly Street. From this point, only the very tops of the potash shed roofs are visible, and none of the coal yard is visible so there are no view impacts from this location.

### **VANTAGE POINT #4**

This photo was taken from Cloverly Park on Cloverly Street. From this point, only the very tops of the potash shed roofs are visible, and none of the coal yard is visible so there are no view impacts from this location.

### **VANTAGE POINT #5**

This is the only photo taken by a drone that depicts the new dust suppression system. This vantage point was requested by the Port of Vancouver in order to depict the entire site and upgraded dust suppression system in one photograph. Please note that this view is only possible from a drone or plane/helicopter and is not visible from the ground so it is not an accurate depiction of the community perspective, but it helps to illustrate the scope of the project.



**VANTAGE POINT #3**  
Old Lucas Centre

**VANTAGE POINT #2**  
Lane between 3rd & 4th St

**VANTAGE POINT #4**  
Cloverly Park

**VANTAGE POINT #5**  
Cloverly Park Tennis Courts  
(Drone captured image above eye level)

**VANTAGE POINT #1**  
3rd St. bike / pedestrian overpass

**PROJECT LOCATION**

## VANTAGE POINT #1: SPIRIT TRAIL PEDESTRIAN OVERPASS



## VANTAGE POINT #2: LANE BETWEEN 3rd AND 4th STREETS



## VANTAGE POINT #3: OLD LUCAS CENTRE ON CLOVERLY STREET



## VANTAGE POINT #4: CLOVERLY PARK



## VANTAGE POINT #5: DRONE PHOTO ABOVE CLOVERLY TENNIS COURTS

