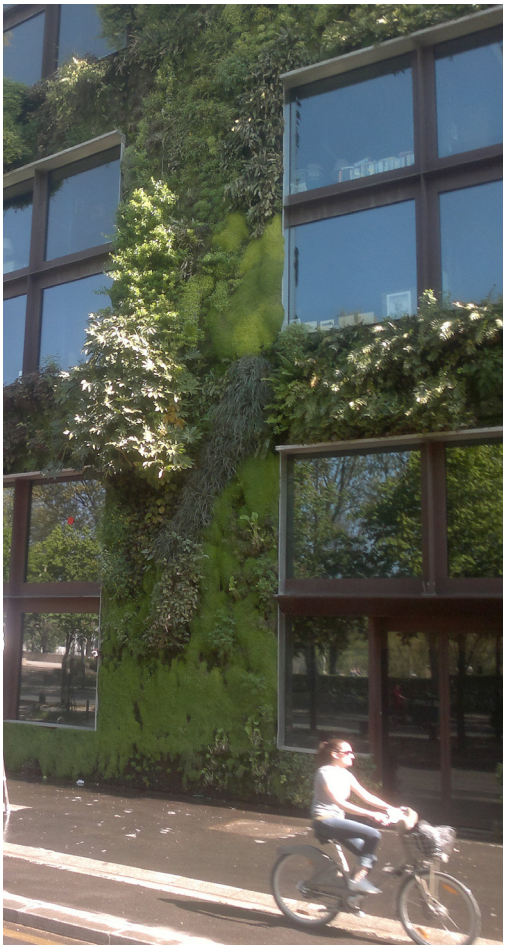

Environmental Sustainability and Performance

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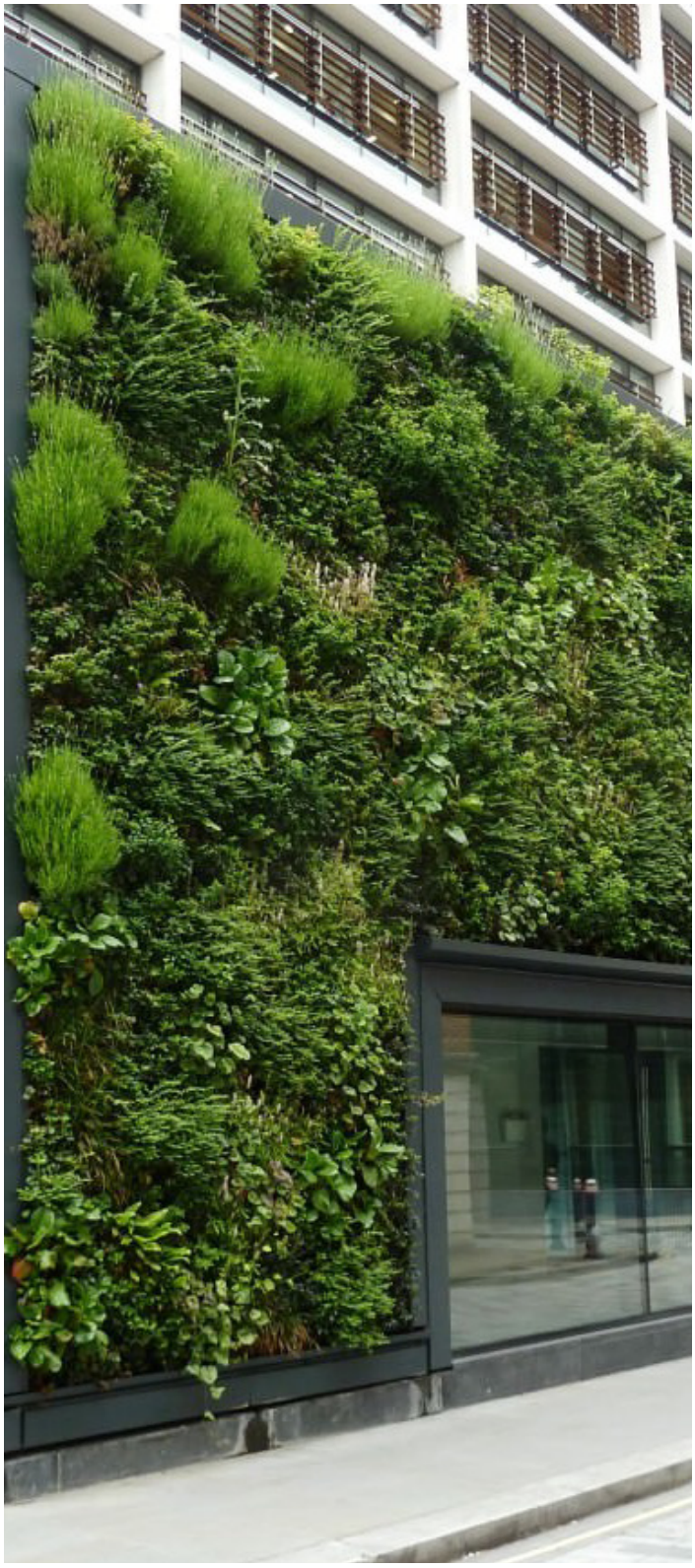
ENVIRONMENTAL SUSTAINABILITY AND PERFORMANCE



Sustainable design is not so much a collection of technologies, but rather the integration of the built environment into the natural ecosystem. The Plan supports redevelopment of a site impacted by historic rail yard operations by using innovative techniques and environmental requirements to achieve innovative outcomes in sustainability. North Potomac Yard will demonstrate environmental leadership through the following strategies to ensure that the redevelopment of the Plan area enhances the natural environment and quality of life, and improves environmental performance with new development.

The goal of the Plan is to prioritize strategies and implement sustainable approaches and technologies for the entire site.

"My interest is in the future, because I am going to spend the rest of my life there."
-Charles Kettering

A. Mixed-use development:

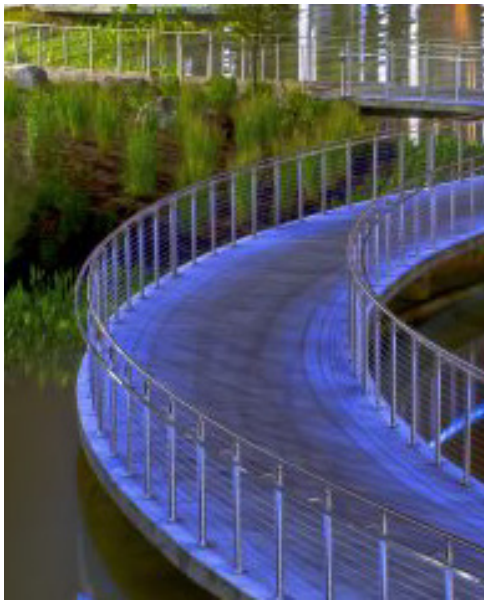
The Plan provides a balance of office, residential, and retail to maximize walkability and transit use. Creating a walkable mixed-use community with easy access to the Potomac Yard Metro Station, Metroway, local bus service and pedestrian and bicycle networks will reduce the amount of single-occupancy vehicle trips and greenhouse gas (GHG) emissions.

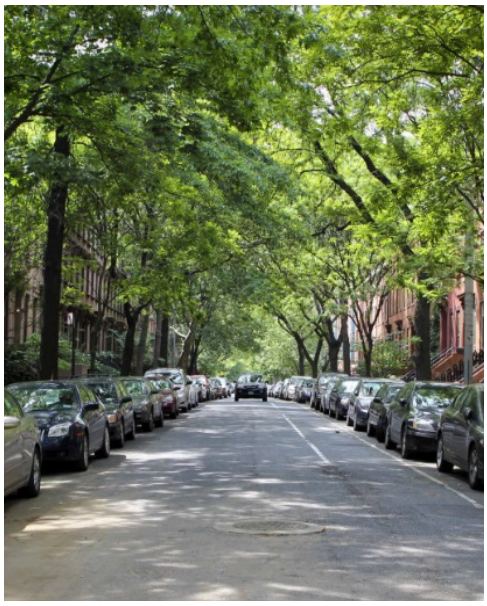
B. District-wide sustainability measures:

The intent of the Plan is to encourage district-wide sustainability measures that will be integrated in a coordinated and comprehensive manner supporting the City's environmental goal of new construction to be carbon neutral by 2040. These measures will be identified as part of an Environmental Sustainability Master Plan (ESMP) , and will include, but are not limited to, green buildings, open spaces, stormwater management, energy and water efficiency, conservation measures, and use of renewable resources and emerging technologies. The Plan recommends strategies to evaluate district or neighborhood sustainability through certification approaches such as LEED-ND Silver or comparable.

C. Energy Utilization, Conservation, and Building Design:

In addition to district-wide strategies, the Plan also recommends sustainability enhancements to individual buildings, particularly in energy use and stormwater. By transforming the built environment to be more energy-efficient and climate-friendly, the buildings in North Potomac Yard can reduce their carbon footprint. Buildings should incorporate effective use of energy utilization and conservation methods including but not limited to: lighting efficiency, electric vehicle charging stations, reduction in water resources, as well as other green infrastructure/technologies.





D. Green roofs:

New development will be required to provide green roofs. Green roofs have the potential to provide amenity space for building users; reduce heat (by adding thermal mass and thermal resistance value); reduce cooling (evaporative cooling) loads on buildings; reduce the urban heat island effect; increase the life span of the roof; reduce stormwater runoff; filter airborne pollutants and CO2 out of the air; filter pollutants, nutrients and heavy metals out of rainwater; and increase wildlife habitats in an urban area.

E. Stormwater Management, Green Infrastructure, and Natural Vegetation:

Stormwater management is required to be integrated as part of the street and open space design to improve the site's hydrology to reduce runoff, improve water quality, and provide residents and visitors opportunities to participate in the natural processes of their environment.

F. Water conservation:

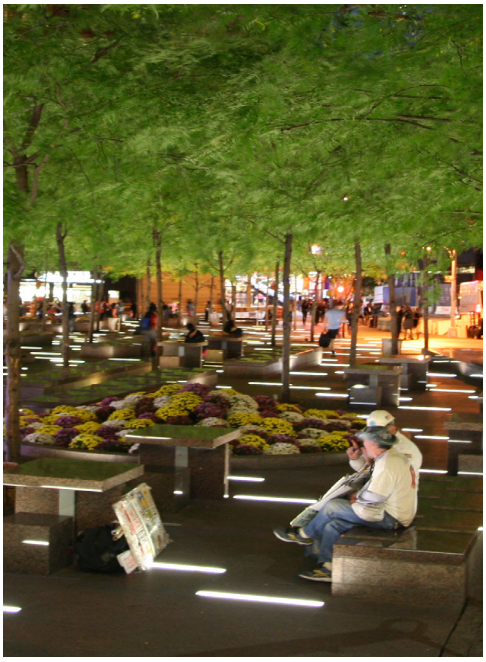
Rainwater collection systems, natural irrigation, and greywater recycling are encouraged, and green roofs are required to help conserve energy and limit potable water usage.

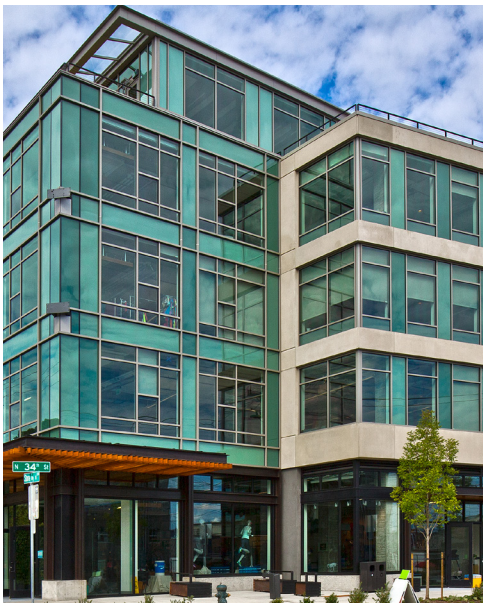
G. Open space network:

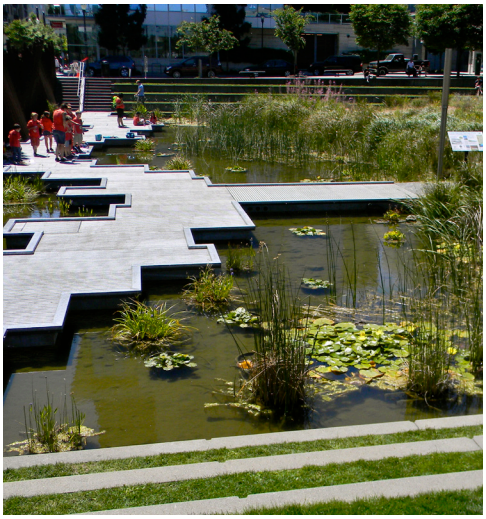
An interconnected park and greenway system will provide residents, employees, and visitors access to local and regional active and passive recreation amenities. Sustainable design of parks and open spaces can include pervious materials and native landscaping in addition to providing crown coverage and tree canopy to this area of the City.

H. Native plants:

The use of native plant species and water-efficient landscaping limits the need of fertilization and conserves water.







I. Designing for Longevity:

Quality built forms that create timeless buildings which are also designed for longevity will encourage reuse rather than replacement and account for life cycle analysis.

The Plan recommends the submission of an Environmental Sustainability Master Plan (ESMP) as part of the submission of the first development special use permit (DSUP), which will identify strategies to implement the phased recommendations on a plan-area wide basis. The ESMP should integrate long-term progressive goals in successive phases, with the ultimate goal of carbon neutrality for the entire Plan area. The phasing should anticipate a 20 to 30 year build-out of North Potomac Yard and the evolution of sustainability requirements and technology during that period. The Plan encourages the creative use of technology and design to incorporate green infrastructure and sustainable design into buildings, structures, open spaces, and environment. The ESMP will be updated with the submission of subsequent DSUPs to meet the plan objectives and ensure the area continues to utilize progressive and new technologies for environmental performance and sustainability.

Environmental Sustainability & Performance Recommendations:

Environmental Leadership

1. North Potomac Yard should strive to achieve carbon neutrality by 2040.
2. Provide a mix of land uses, and a transit-oriented development as part of the redevelopment of the Plan area.
3. Explore the possibility of community gardens so that residents and visitors could have access to edible and non-edible plantings. Community gardens also offer a unique educational opportunity.

Reduce Energy Use

4. Explore a minimum of LEED Silver or comparable, or the City's green building standards and requirements, whichever is greater. In addition, new buildings will comply with the Environmental Action Plan (EAP), as implemented through City policies. Energy consumption/utilization and stormwater should be prioritized in the certification for the buildings.
5. Encourage the use of alternative energy sources including but not limited to solar and wind power throughout the Plan area.
6. Integrate the use of natural daylighting in all proposed buildings.

District – Wide Sustainability Measures

7. Require the submission of an Environmental Sustainability Master Plan as part of the submission of the first development special use permit (DSUP) that demonstrates the compliance with the goals and recommendations of the Plan and identifies short-term, mid-term and long-term strategies to achieve the goal of district-wide sustainability measures. The Plan should be updated with each subsequent block(s) and/or building(s) to show how the project achieves the Plan's goals.
8. Require plan area-wide sustainability through LEED-ND Silver or comparable.
9. Require the provision of green roofs for new development.
10. Provide an integrated network of open space, which incorporates environmental components as part of its design.
11. Design new development to prioritize travel by pedestrians, bikes and transit and minimize the need for car use.
12. Design parking garages to accommodate electric vehicle charging stations.
13. Provide affordable housing within ½ mile of Metro Station.

Reduce Stormwater Runoff – Water Conservation

14. Require minimum quantities of green roof and/or solar power generation on building roofs.
15. Encourage reuse of captured rainwater.
16. Require stormwater management, and if feasible, recaptured water, to be integrated as part of the street, open space, and proposed buildings design.
17. Encourage water conservation using sustainable methods such as ultra-low and/or low flow plumbing fixtures.
18. Use native plant species and water-efficient landscaping.

Design for Longevity

19. Design buildings for long-term aesthetic appeal and flexibility for future changes in use.
20. Utilize quality building materials that consider the long term life cycle of the building.
21. Maintain a walkable small block network of streets and sidewalks for pedestrians; avoid super blocks.