Taking the LEED in Portland

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Located in Oregon on the US west coast, the Port of Portland has been building expertise in brownfield redevelopment, air and water quality projects, waste minimisation, clean energy and leadership in energy and environmental design, or LEED certification. From its headquarters building to its three airports, four marine terminals and five industrial properties, the 'greening' of the port is reflective of the community in which it operates.

Welcome to Portlandia

You can bet that whenever there's a list of the most sustainable or environmentally conscious cities, Portland, Oregon will be included somewhere near the top. It has earned national recognition as the 'greenest city,' 'most eco-friendly city,' and 'America's top bike-friendly city' – and for good reason.

Although it is only the 23rd largest metropolitan area in the US with approximately 2.2 million people, Portland repeatedly pushes the envelope and sets the standard for what it means to be green. From its network of pedestrian trails and bike paths, to its light rail and streetcar connections, its ever growing number of electric vehicles and charging stations, even the way Portlanders get around town reflects an ethos. This community walks the talk.

The ethos is also exhibited in the proliferation of LEED certified buildings around town. Even the Rose Garden Arena, home to the Portland Trailblazers NBA franchise, was the first major league sports facility to earn LEED Gold status. And they're not the only ones blazing a trail when it comes to large-scale LEED facilities in Portland.

Setting the platinum standard

According to Forbes magazine, the Port of Portland's LEED Platinum headquarters building is among the world's most high-tech green buildings. The structure is representative of an organisation dedicated to proving that old school industry can use new school techniques to walk with a smaller carbon footprint. It is a showcase for sustainable building practices from environmental, as well as social and economic standpoints.

The three-story office building sits atop a seven-story, long-term parking garage. State-of-the-art green technologies include a Living Machine® system that treats wastewater onsite by mimicking natural tidal wetland processes, eco-roofs to capture storm water and a geo-exchange system to provide ground source heating and cooling.

During construction, the port minimised construction waste, selected rapidly renewable or recycled materials and products, and sourced products and services locally whenever possible. The building even incorporates old ballast stones in a walkway and timbers from an old pier in the building's woodwork. Construction provided training opportunities for apprentices and work for numerous small companies including minority and female-owned businesses.

The work has paid off. Features like daylighting, window glazing, fixed exterior shading, water-efficient fixtures and eco-roofs are saving energy, water and money. The building's water-efficient features decrease water usage by 75 per cent. The parking garage and headquarters building also meet energy star rating requirements. The port estimates that the building uses 36 per cent less energy than a typical building of its size, and the garage uses 78 per cent less energy than a typical similar size garage. The electricity it does use is 100 per cent renewable, and the US Environmental Protection Agency recently recognised the port as a top 10 renewable power purchaser among local governments nationwide.

"It was important to us that the building provide value to our customers and reflect Portland and Oregon's commitment to sustainability, including consideration of how our choices affect the environment, the work force and the community we serve," said Bill Wyatt, port executive director.

Positive influence

Perhaps most impressive is the daily influence the building has had on how the port's employees work together as an organisation. Collaboration and productivity has improved as interaction between co-workers is encouraged by the open office design. Dedicated recycling stations and the tracking of garbage versus recyclable materials is reducing the waste stream and cutting disposal costs.

It is a healthier environment as well, with low volatile organic compounds (VOCs), low impact cleaning products and options for employees to stay fit through expanded exercise and commute options. Natural light makes for a better work environment while reducing energy consumption. The building serves as a model for green building design as the port provides tours and conducts outreach to the design and educational communities.

"Our headquarters shows how important some of the subtle aspects of good building design are to creating a great work environment," said Greg Sparks, project development manager for the port. "A high performance building doesn't require a sacrifice in the real purpose of a building, which is to create a space for people to work."

Model tenant goes for gold

The port encourages solutions that are both good for business and good for the environment. By integrating porous asphalt, shore side power and ultra-low sulphur diesel into its operations, the port sets an example that its tenants follow. One of the first port tenants to

Photo courtesy of Port of Portland

Awarded LEED platinum certification in May 2011, the Port of Portland's headquarters building serves as a showcase for innovation

attain LEED certification was Toyota Logistics Services (TLS).

Toyota has maintained auto import operations at the Port of Portland since 1971. During its first 15 years of operations, volumes increased more than tenfold, making Portland Toyota's largest auto import port in the US. Today, TLS has a ground lease at terminal four to process imported Toyota, Scion and Lexus vehicles at a 101,000 square foot vehicle distribution centre.

In 2004, a two-year, US$40 million project – approximately US$30 million of which was invested by Toyota – served as the cornerstone for redevelopment of the port's terminal four. Acknowledging Portland's commitment to social responsibility and environmental quality, key components of the TLS vehicle distribution centre and its surrounds were designed to reduce the facility's environmental footprint. This emphasis was also consistent with Toyota's earth charter, which calls for 'growth that is in harmony with the environment.'

When constructed, it was one of the first industrial facilities to earn LEED Gold certification – a feat that was achieved without increasing the construction budget or schedule. The facility has a 95 per cent recycling rate, and it was also the first industrial site in the nation to earn Salmon-Safe certification.

"These certifications are much more than just plaques on the wall," said Chris Davis, who manages the TLS vehicle distribution centre. "They represent our dedication to challenging ourselves and our processes to do better every day."

Earning the silver

When constructed in 2009, the Rivergate Corporate Centre III building was the first of six buildings in a 2.4 million square foot project spanning 113 acres. Built on property leased from the port, the building earned LEED Silver certification, a somewhat unique accomplishment for such a large-scale industrial facility. At the time, it was rumoured to be the largest LEED Silver certified industrial building in America.

The 573,420 square foot building is located in the heart of the Rivergate Industrial District near the port's container terminal, and it is ideally situated and designed for import/export and distribution users. It houses distribution centres for Colgate Palmolive and United Stationers. The property is located within a designated Foreign Trade Zone, as well as the Portland Enterprise Zone, which offers property tax abatement for qualified companies.

Following suit, an adjacent building was constructed on port property in 2011 to house auto parts distribution, a service training centre and regional offices for Subaru of America, Inc. That 413,000 square foot facility also achieved LEED Silver certification.

"The goal for this site was to attract users that will potentially utilise other port services and generate additional marine container business," said Mr Wyatt.

Potential at port properties

The port has become increasingly active in the acquisition and redevelopment of industrial properties, looking to brownfield redevelopment opportunities and creative strategies to attract traded sector investment to the region. It is fast earning a reputation for having expertise in bringing 'difficult-to-develop' properties to market.

Port commissioners voted in 2004 to purchase the largest remaining zoned industrial property within Portland's urban growth boundary. The 700 acre site was the home of a primary aluminium reduction facility for 60 years, but it had been idled since the summer of 2002. The property is a superfund site, and the facility's soils were cleaned up to acceptable risk-based standards for industrial use by Alcoa in 2006. Monitoring and treatment of legacy groundwater contamination at the site is ongoing. To date, the redevelopment effort has involved the US Environmental Protection Agency, the Oregon Department of Environmental Quality, Business Oregon and the cities of Troutdale and Fairview.

Approximately half of the site was set aside for recreation, wetlands and natural spaces, including a multiuse trail constructed along nearly two miles of the perimeter. The other 366 acres are scheduled for development within three phases and a total of 11 lots. The port constructed the related utilities and infrastructure needed to support the first phase of development.

In October 2010, FedEx Ground began full scale operations at the first facility within the new industrial park. The state-of-the-art, 447,000 square foot regional distribution hub is located on 77 acres and supports a workforce of 800. The company was awarded the Oregon Brownfield Award for its work in revitalising the site in 2010, and the project earned the top national Phoenix Award for brownfield redevelopment in 2011.

This success has led the port to prioritise sustainable development and green infrastructure opportunities at its other properties, including its newest acquisition – Gresham Vista Business Park. The port acquired the 221 acre site in adjacent Gresham, Oregon from LSI Logic Corp. for US$26.5 million. It has promising potential as a home for clean tech, manufacturing, food processing, logistics and other traded sector companies. The vision is to develop the 11 lots as an eco-industrial park, where tenants can leverage symbiotic efficiencies by co-locating.

A matter of perspective

Oregon's economy was historically based on timber and agriculture, and while it still depends heavily on natural resources and farming, the economy has evolved. Today, Oregon is home to sportswear powerhouses including Columbia Sportswear, Keen and Nike's world headquarters as well as high technology giants like Intel, Oracle, Facebook, Google and Amazon to name a few.

Just as the economy has evolved, so too have the port's environmental and sustainability policies, helping guide decisions on key projects and initiatives. The port is dedicated to proving that industry doesn't have to be a dirty word by innovating and integrating best practices for construction and operations. Since the results are often replicable, the playing field is ripe for continual improvement. Most of all, it has become clear that the industry is evolving beyond business versus the environment. It doesn't have to be either/or. In many cases, creative solutions are proving beneficial for both.

ABOUT THE AUTHOR

Josh Thomas is marketing and media relations manager at the Port of Portland on the US West Coast. He has a Masters in public administration from Portland State University, and a Bachelors degree in journalism from the University of Oregon. During his 17 years in the field of public relations, he has held lead communications roles within the Oregon Legislature, municipal government, and the Federal Emergency Management Agency during a placement for Hurricane Katrina response.

ABOUT THE PORT

Established in 1891 by the Oregon Legislature, the **Port of Portland** owns four marine terminals, three airports (Portland International, Hillsboro and Troutdale) and five industrial parks. The mission of the Port is to enhance the region's economy and quality of life by providing efficient cargo and air passenger access to national and global markets.

ENQUIRIES

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