

Eblana Communal Living Sustainability Oriented Mission

Eblana Communal Living has been designed to provide our tenant with high quality indoor environment and to operate on low utility costs, while helping to preserve the environment for future generations. The building was designed to pursue certification by the U.S. Green Building Council, a non-profit organization recognizing the highest levels of green building performance through its LEED™ (Leadership in Energy and Environmental Design) for New Construction Rating System (LEED NC™), Version 4. LEED certification verifies that a building project has adhered to rigorous consensus-based standards for sustainable design.

The LEED certification program is the leading international program for sustainable building design and construction, which is being used in over 170 countries. LEED guides projects to save money, conserve energy, reduce water consumption and drive innovation. Through a rigorous, documented process that relies on performance and measurement, LEED rewards and validates best-in-class building strategies and practices.

LEEDv4 New Construction Rating System

LEED-NC is a voluntary, point-based system consisting of nine categories:

1. Integrative Process
2. Location and Transportation
3. Sustainable Sites
4. Water Efficiency
5. Energy & Atmosphere
6. Materials & Resources
7. Indoor Environmental Quality
8. Innovation & Design Process
9. Regional Priority



Projects may receive certification under LEED NC by meeting prerequisites and earning credit points, with ratings of Certified, Silver, Gold, and Platinum available depending on the number of points earned. A project must acquire 40 points to achieve the minimum certification level.

Eblana is targeting LEED Gold Certification upon completion of the certification process.

Certification Levels:

Certified	40-49 points
Silver	50- points
Gold	60-79 points
Platinum	80 points and above



LEED incorporation to Eblana Communal Living



LOCATION AND TRANSPORTATION: The Location and Transportation (LT) category rewards thoughtful decisions about building location, with credits that encourage compact development, alternative transportation, and connection with amenities, such as restaurants and parks

Eblana is located in Dún Laoghaire, on a brownfield site. The project scope includes demolition of the existing building (Christian Brothers School). This location choice of developing in a dense and connected community helps to reduce the environmental impacts of developing on environmentally sensitive lands as well as contribute to Dún Laoghaire's revitalisation.

Eblana is within 130m of the Dún Laoghaire DART station and bus stops. The building offers very limited on-site parking, including a Go-Car parking space and an EV charging station, fully supporting public, active and clean transportation. The tenants and employees are encouraged to use their bikes and offered safe bike racks within the building.



SUSTAINABLE SITES: The Sustainable Sites (SS) section promotes responsible, innovative, and practical site design strategies that are sensitive to plants, wildlife, and water and air quality. The category also mitigates some of the negative effects buildings have on the local and regional environment.

Prior to Eblana, the site comprised a contaminated building structure. Existing structure was demolished, making sure the waste was sent to recycling facilities and the site was remediated from hazardous materials. The project implemented a construction activity pollution plan to reduce pollution from construction activities by controlling soil erosion, waterway sedimentation, and airborne dust to protect the neighbouring properties, local rainwater systems and the site itself via continuous monitoring and protection measure during construction.

To minimize effects on microclimates and human and wildlife habitats, Eblana installed materials that reject solar heat gain on the roof, terraces and the site.



WATER EFFICIENCY: The Water Efficiency (WE) section addresses water holistically, looking at indoor use, outdoor use, specialized uses, and metering. The section is based on an "efficiency first" approach to water conservation.

Eblana chose a selection of efficient plumbing fittings, fixtures, and equipment to reduce indoor water consumption – without compromising the experience. With this strategy the building targets 40% water reduction. With selection of native and adaptive species, and smart irrigation technologies, Eblana targets to reduce its irrigation demand more than 50%.



ENERGY AND ATMOSPHERE: The Energy and Atmosphere (EA) category approaches energy from a holistic perspective, addressing energy use reduction, energy-efficient design strategies, and renewable energy sources.

Eblana is designed to reduce the environmental and economic harms of excessive energy use by achieving a high level of energy efficiency for the building and its systems. Together with energy efficient mechanical design and equipment choices, LED lighting systems and PV panels on the roof, the building targets at least 35% energy cost saving.

Eblana integrated commissioning process to verify the project's design goals and objectives are met and that the building systems are performing as intended. Going one step further with enhanced commissioning, further oversight and verification policies are incorporated for ongoing quality building control and operations.

Eblana also does not include chlorofluorocarbon (CFC)-based refrigerants to reduce stratospheric ozone depletion and support early compliance with the Montreal Protocol while minimizing direct contributions to climate change.



MATERIALS AND RESOURCES: The Materials and Resources (MR) credit category focuses on minimizing the embodied energy and other impacts associated with the extraction, processing, transport, maintenance, and disposal of building materials.

Eblana incorporates a waste storage and recyclable collection scheme to reduce the waste that is generated by building occupants and hauled to and disposed of in landfills. By diverting recyclable waste from landfills, buildings help convert recyclables into new products, reducing demand for virgin materials. During construction, construction and demolition waste is diverted from landfills and incineration facilities by recovering, reusing and recycling.

Eblana installed products and materials with life-cycle information is available and that have environmentally, economically, and socially preferable life-cycle impacts. Over their lifetimes, materials have local, regional, and global environmental effects. Some occur during the harvest, extraction, manufacture, and transportation of materials; others involve construction and operations; still others take place at demolition and disposal. A life-cycle assessment (LCA) examines as many of these environmental effects as possible.



INDOOR AIR QUALITY: The Indoor Environmental Quality (EQ) category rewards decisions made by project teams about indoor air quality and thermal, visual, and acoustic comfort. Green buildings with good indoor environmental quality protect the health and comfort of building occupants.

Proper design and operation of a ventilation system is essential for supporting indoor air quality and plays a fundamental role in creating healthy buildings. Eblana restricted building materials and products with high VOC content in order to help mitigate associated exposure and health hazards.

Indoor air quality was protected during construction as well, through a combination of strategies such as envelope protection, moisture and dust management, filter replacement, air flush and proper equipment selection.

Eblana creates indoor thermal and acoustic environments that provides comfortable thermal conditions to the majority of people in support of their health and well-being. The indoor thermal environment is ranked as one of the strongest contributing factors to overall human satisfaction in the built environment. Controlling the thermal environment substantially impacts a building's energy footprint as well.

Acoustically, Eblana designed to facilitate comfortable interior noise levels by introducing the specific performance thresholds for background noise levels within specified locations as attributed by internal and external noise sources. When exposure to noise is reduced, occupants are less susceptible to distraction, overall stress and potential health risk.



INNOVATION: Sustainable design strategies and measures are constantly evolving and improving. New technologies are continually introduced to the marketplace, and up-to-date scientific research influences building design strategies. The purpose of this LEED category is to recognize projects for innovative building features and sustainable building practices and strategies.

Eblana included all LED lighting to the design to establish and maintain a toxic material source reduction program to reduce the amount of mercury brought onto the building site.

Going further from the indoor acoustical requirements, Eblana ensures to reduce environmental noise from the building to help mitigate sleep disturbance and general annoyance of the surrounding community.

Finally, Eblana incorporated a green building education scheme. A comprehensive signage program is built into the building's spaces to educate the occupants, guests and visitors of the benefits of green buildings.