

## DATA SHEET

# Dutch Quality and the LEED Green Building Rating System



### LEED Green Building Certification Levels

LEED Certified	26 – 32 points
Silver Level	33 – 38 points
Gold Level	39 – 51 points
Platinum Level	52 – 69 points

The point distribution over the six areas of concentration is as follows:

<u>Category</u>	<u>Available Points / Points where DO can Contribute</u>	
Sustainable Sites	14	1
Water Efficiency	5	-
Energy and Atmosphere	17	2
Materials and Resources	13	8
Indoor Environmental Quality	15	1
Innovation and Design	5	4
Total Possible Points	69	16

The use of Dutch Quality Stone adhered veneer in building designs can contribute to obtaining credits towards LEED Green Building certification. The Leadership in Energy and Environmental Design (LEED) system was designed by the United States Green Building Council (USGBC) to evaluate building design and construction on how it effects the environment. The LEED rating system has six areas of concentration; Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, and Innovation and Design Process. Projects obtain credits in these areas to achieve certification. A building becomes certified after receiving a minimum of 26 credits from the USGBC.



**What is Dutch Quality Stone adhered veneer?**

Amish craftsmanship is revered throughout the world and our stone production facilities are located in the heart of one of the biggest Amish communities in America. This goes a long way toward explaining why Dutch Quality Stone products have become an industry leader in quality and consistency.

We have combined fine craftsmanship with high production techniques. The result is a stunning collection of fine veneer stones readily available for on-time shipment to our dealer network.



The following sections briefly describe how Dutch Quality adhered stone veneers can contribute to earning LEED points in each of the LEED credit categories.

**Sustainable Site Credit – Development Density**

Developing an urban lot in lieu of an undeveloped Greenfield area can earn the project one point towards certification. Adhered manufactured stone veneers enable designs that take advantage of small, irregularly shaped lots, where access and open area are often at a premium. Dutch Quality’s veneer, because of its relatively small modular size and weight does not require large equipment for delivery or placement, nor are large staging areas required for construction.

**Energy and Atmosphere Credit – Optimize Energy Performance**

The intent here is to improve energy efficiency above baseline prerequisites (ASHRAE 90.1 – 2004, ref. 3) in the LEED system. Energy savings attributable to thermal mass and lightweight concrete density construction contribute to this goal when used in conjunction with passive solar heating and/or ventilation cooling. Dutch Quality’s stone veneer provides effective thermal storage. The walls will remain warm or cool long after the heat or air conditioning has shut off. This in turn can effectively: reduce heating and cooling loads; improve occupant comfort by moderating indoor temperature swings; and shift peak heating and cooling loads to off-peak hours.

One to 10 points can be awarded for energy cost savings (beyond the minimum requirements in ASHRAE 90.1) of 10.5% to 42% for new buildings and 3.5% to 35% for existing buildings. Note that for the purposes of this credit, savings attributable to the building thermal envelope are cumulative, and so are added to savings from high efficiency HVAC, heat recovery equipment, day lighting, etc. Thus all incremental improvements contribute toward project certification.

**Materials & Resources – Building Reuse**

The purpose of the building reuse credit is to extend the life of the existing building stock thereby conserving resources and reducing waste and the environmental impacts of new construction. Credits are earned when developers maintain the majority of an existing building’s structure and shell. This credit is often obtainable when renovating buildings with adhered stone veneer since it is an exceptionally durable material with a life cycle longer than many other building envelope products and provides the opportunity to refurbish the building should the building use or function change rather than tear down and start new.

This is worth 1 point if 75% of the existing building structure/shell is left in place and 2 points if 95% is left in place. Measurements are based on square footages of walls, ceilings, and floors.

**Materials & Resources – Construction Waste Management**

This credit encourages project constructors to divert demolition debris from landfills and incinerators. It is awarded based on recycling or salvaging at least 50% of construction waste. Measurements are made either by weight or volume. Stone veneer can be recycled into aggregate for other concrete products, pipe bedding, or construction fill. This credit is obtainable either when buildings with stone veneer are demolished or, in new construction when saw-cut scraps and broken pieces are crushed and reused. In addition intact and unused veneer units can be redirected to other projects or donated to charitable organizations such as Habit for Humanity.

This credit is worth 1 point if 50% of the construction, demolition and land clearing waste are recycled or salvaged and 2 points for 75%.

**Materials & Resources Credit – Materials Reuse**

This credit encourages the reuse of salvaged materials on the project, such as crushed stone veneer, and it awards 1 point if the value of all reused materials is at least 5% of the total value of materials on the project. It awards 2 points at the 10% threshold. Note that the same materials cannot be claimed for both the construction waste management credit and the materials reuse credit.

**Materials & Resources Credit – Recycled Content**

The use of building products with recycled content can earn the project 1 or 2 LEED points. The requirements of the credit state: “use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% of the total value of materials on the project.” This will earn 1 point. If the total constitutes at least 20% it will earn 2 points. Dutch Quality uses Haydite expanded lightweight fines that are 100% recycled pre-consumer materials.

**Materials & Resources Credit – Regional Materials**

Using materials and products that are extracted and manufactured within the region support the use of indigenous resources and thereby reduce environmental impacts of transportation. The LEED requirement is for a minimum of 10% of building materials be extracted, processed & manufactured within a radius of 500 miles on a cost basis. The credit is worth 1 point. An additional 1 point is earned if 20% of the regionally manufactured materials are extracted, harvested or recovered within 500 miles.



**Innovation and Design Process**

The intent of the credit is to provide design teams with an incentive to go beyond the LEED requirements and award points for innovative strategies not specifically addressed in the LEED rating system. Examples that may qualify are: substantially exceeding the building energy performance criteria, or including characteristics not directly referenced by LEED, such as acoustic performance and life cycle analysis of materials used. To earn up to 4 points the design team must submit the intent of the proposed credit; the proposed requirement for compliance; submittals to demonstrate that compliance; and the design approach used to meet the requirements.

Potential contributions of Dutch Quality’s adhered stone veneer include:

- decreased life cycle environmental impacts due to lightweight stone veneer’s low embodied energy compared to products such as steel and aluminum and to the product’s long life, durability and low maintenance needs;
- improvements to indoor air quality by eliminating the need to paint or adhere finishes to the product. This reduces volatile organic compounds (VOC’s) that can be released into indoor air;
- improvements to indoor air quality due to the reduced potential for mold growth;
- increased acoustic performance; and
- increased fire safety.



Dutch Quality Stone veneer is manufactured at facilities that have many environmental awareness programs in place. Dutch Quality Stone strives to reduce its overall carbon footprint whenever possible by using low power demand lighting, busing, 90+% of its employees to and from work, and minimizing energy usage. Reduction of air pollution, water pollution, and solid wastes are a priority. Recycling of waste streams in the manufacturing process is a priority.

Dutch Quality Stone veneer is an environmentally friendly product that is very versatile. The use of our lightweight veneer units can contribute towards obtaining credits in many of the areas outlined by the LEED Green Building Rating System and can contribute to your project achieving certification.