

**W**est Vancouver's progressive and strong policy stance on environmental protection and sustainability will be respected by FNDA Architecture. Our goal will be to provide an energy efficient and responsible home through the use of resource and environmentally friendly construction practices and products.

Building Cladding:

#### **LEED aspects of Alucobond - Alucobond Paint Process**

The North American facility is among the top national performers in terms of emissions control and has been chosen as a benchmark in setting more stringent EPA standards. The painting process used in producing Alucobond and Alucobond Plus is called coil coating. During this process, 99.9% of all fugitive volatile organic compounds (VOCs) are captured. Excess paint is recovered and used to cover the non-visible side of Alucobond, so no excess paint is burned as waste. All solvents used to clean the machinery are collected and used again.

#### **Alucobond Waste Minimization**

All excess polyethylene core material is recycled back into the manufacturing process and all scrap aluminum is sent back to aluminum processing plants for recycling. In addition, 3A Composites saves landfill space by donating like materials to a variety of charitable organizations and school systems.

#### **Alucobond Recoverability**

Alucobond is fully recoverable. The polyethylene in its core is one of the most energy-efficient materials to recycle and can be reheated and reused indefinitely. The aluminum that comprises its skins is also one of the most recycled resources in the world. In fact, the aluminum used to manufacture Alucobond already contains, on average, nearly 85% recycled material - an attribute that can help earn points towards LEED® certification.

#### **Alucobond may help contribute up to two points within the LEED Materials and Resources section.**

MR Credit 4.1 awards one point if the sum of the post-consumer recycled content, plus one-half of the post-industrial content, constitutes at least 10% of the total value of the materials in the project.

MR Credit 4.2 awards an additional point if the total value is at least 20%. The percentage by weight of recycled aluminum content for 4mm Alucobond is 26%.

**BC Granite:**  
Using locally available and indigenous materials has several advantages for sustainability:

- 1- reduction of energy costs related to transportation
- 2 - reduction of material costs due to reduced transportation costs
- 3 - support of local businesses and resource bases

stone material is aesthetically pleasing eliminating the need for constant refinishing and sealing. Stone provides excellent thermal mass with it's properties for passive solar heating

#### **Roofing:**

SBS membrane roofing system- ie Soprema  
company statement regarding their principles of sustainable roof design:

Energy conservation, durability, consumption of raw materials and waste reduction should guide the design and specification of the roof assembly. Energy conservation not only relates to insulation, but to continuity of the air/vapour barrier at the roof and wall junction, durability relates to design, material selection and good initial installation for longevity and thus waste reduction.

\* note - due to the nature of the design the upper level deck areas will be accessible. The actual amount of roof area is approximately 35% of the floor plate and utilizing high emissivity roofing will reduce almost all and any heat islands.

#### **Glazing:**

Utilize Energy Star compliant thermally broken windows with low E glass

#### **Insulation:**

HFC free formulated 100% water blown recycled material foam insulation to meet and/or exceed BCBC insulation R value requirements.

## Sustainable Design continued:

### **Mechanical / Electrical:**

On demand hot water systems and energy star compliant appliances such as efficient clothes washer and dishwasher. Incorporate water conserving fixtures, shower heads faucets and dual flush low flow toilets.

A heat recovery system (HRS) will be utilized along with programmable thermostats. Supplementary cooling to be natural ventilation by use of operable windows and sliding doors.

While electric baseboards are the primary form of heating for the existing units the redesigned structure will look at the use of an electric radiant floor heating system supplemented by a heat pump and/or a hot water on demand radiant floor heating with a tie into a solar heated water system. FNDA will work with and consult Engineers for the most effective means available for Heating and Air Conditioning that meet current energy efficient standards.

Future design will incorporate roof space for potential future solar panels and connectivity by Mechanical / Electrical consultants if feasible. Solar panel locations are shown on the roof plan drawing A2.3.

### **Storm Water Management:**

As this project is a reconstruction utilizing the main floor structure a Storm Water management plan will not be necessary. FNDA will consult with the city to address any concerns and work to remedy a solution if requested or required.

Roof top gardens will be in the form of planter boxes within the suites rooftop accessible areas and will be provided with appropriate drainage. Completed Geotechnical report confirms that proposed design will be sufficient and not require any modifications or strengthening of existing base structure.

A stepped glass canopy providing continuous coverage along Bellevue avenue will collect water and tie into municipal storm system that will be designed at the Building Permit application stage

### **Construction Waste Management:**

Utilize recycling area for collection and separation of recyclable materials as well as salvage useable lumber and trim where feasible. work to initiate a waste management with the express purpose of reducing construction waste. Explore the feasibility of salvaging demolished material and reusing for new construction along with "rapidly renewable" building materials where practical.

### **Environmental Air Quality:**

Specify only low emitting adhesives, paints, coatings and floor covering systems. Building orientation maximizes natural daylight exposure to the interior and allows excellent natural ventilation. No cfc utilizing materials or equipment to be used.

### **Exterior Lighting:**

Accent lighting will be incorporated along the breezeway in a manner to respect the "night sky" philosophy, provide aesthetic definition to the structure and meet code requirements for vision lighting.

### **Cladding Colour:** re 'white panels'

While it was not a directive by the DRC, it was to be taken under advisement as a maintenance issue for the owners of the building that an alternate shade be considered. the original "Bone White" exterior cladding has been replaced with "Alabaster Cool". Material board includes the new sample which is less white than the originally specified ' Bone White'