



The Built Green Home at Suncadia www.thebuiltgreenhome.com			COMPARISON Green Custom versus Conventional Custom Home			
<p>The Built Green™ Home at Suncadia is a custom home that highlights the fiscal benefits, as well as the environmental and health benefits, of utilizing "green" materials and building techniques. The King County Solid Waste Division (Washington State) provides this comparison of the environmentally-friendly features of this home against comparable conventional materials to show estimated cost increases or decreases of these green products as well as their potential benefits.</p>			 Built Green Program www.builtgreen.net		 King County, WA, Green Tools www.greentools.us	
PRODUCT or ITEM	COMPANY	WEBSITE	R = Recycled or Salvaged % L = Locally Produced I = Indoor Air Quality E = Energy Efficient C = Conserves Water D = Durable S = Sustainable Harvest A = Aesthetics	COST + Green = more - Green = less • No difference	LIFE-TIME SAVINGS	ENVIRONMENTAL ADVANTAGES OF GREEN PRODUCTS & BUILDER'S COMMENTS (BOLD)
EXTERIOR SITE						
Trees milled on-site	CMI Homes milled trees on-site for various uses	http://www.cmihomes.com/	100% R, L	N/A	N	Saves on transportation costs and associated air pollution. No pesticide impact from wood to water tables. Excellent feel good factor. Historical reference to site. Size and quantity of logs will determine cost effectiveness. Mill needs to be close to site, or have a portable mill, to be cost effective. Should have eight weeks drying time for logs before use.
Landscaping Timber	CMI Homes milled trees on-site	http://www.cmihomes.com/	100% R, L	N/A	N	Saves on transportation costs and associated air pollution. No pesticide impact from wood to water tables. Excellent feel good factor. Historical reference to site. Size and quantity of logs will determine cost effectiveness. Mill needs to be close to site, or have a portable mill, to be cost effective. Should have eight weeks drying time for logs before use.
Stone veneer retaining wall	Montana Rockworks	http://www.montanarockworks.com/	D	33% more than cultured stone, 40% less than full dimension stone.	Y	Much lighter weight of this green product lowers the transportation costs. More sustainable than cultured stone alternative. True 90 degree corners look like natural stone. Non-green cultured stone's color will fade over time, and is not as long-lasting or as durable.
Native plants			L, C	•	Y	Native plants will not require pesticides, fertilizers or irrigation. Will help to counter invasive species.
Drought tolerant landscaping			L, C	•	Y	No need for irrigation. Drought tolerant plants will save on water usage.
Topsoil retained	CMI Homes stockpiled topsoil for reuse	http://www.cmihomes.com/	L, E, C - Saves on use of water for irrigation	-	N	Transportation costs and associated air pollution associated with bringing in topsoil was eliminated. Also, soil export costs were eliminated and the native seeds in the soil will quickly bring back native seeds and plants.
Driveway pavers	Eco-Stone provided by Mutual Materials	http://www.mutualmaterials.com/default.asp	L, C, D	N/A	N	Eliminates the need and cost for a drainage system. A truly pervious surface. Water retention capabilities of the land are retained. Water perks into the ground naturally. Also, this is an attractive paving alternative. Installs like traditional pavers but requires additional aggregate layer subgrade. Requires heavier aggregate between pavers. Requires some upkeep to keep fine material from filling up the voids in the aggregate. Costs are less than some, equal to some, and more than others.

Patio pavers	Mutual Materials	http://www.mutualmaterials.com/default.asp	L, C, D	N/A	N	Eliminates the need and cost for a drainage system. A truly pervious surface. Water retention capabilities of the land are retained. Water perks into the ground naturally. Also, this is an attractive paving alternative. Installs like traditional pavers but requires additional aggregate layer subgrade. Requires heavier aggregate between pavers. Requires some upkeep to keep fine material from filling up the voids in the aggregate. Costs are less than some, equal to some, and more than others.
Low impact development	Associated Earth Sciences, Inc.	http://www.aesgeo.com/	L, E, C	-	N/A	Large infrastructure required to handle storm water when it is not handled naturally.
EXTERIOR & BUILDING ENVELOPE						
Stone veneer siding	Montana Rockworks	http://www.montanarockworks.com/	E, D, L	33% more than cultured stone, 40% less than full dimension stone.	Y	Much lighter weight of this green product lowers the transportation costs. Heavier products are subject to specific design considerations to bear the load. More sustainable than cultured stone alternative. True 90 degree corners look like natural stone. Non-green cultured stone's color will fade over time, and is not as long-lasting or as durable.
House wrap	DuPont Tyvek	http://www.tyvek.com	E, I	●	N	Cost-effective house wrap. Allows building to be dried in prior to siding. Allows house to breathe, increases protection from wind and weather.
Cedar siding	NW Siding & Prefinishing	http://www.nw-siding.com/	L, D	●	Y	Weather resistant sustainable product. Prefinished siding produces superior finish because it is applied in a controlled environment. Siding can be installed in any weather conditions without damaging the material. No need to allow field drying time prior to applying it. Cedar siding is long-lasting if it is maintained.
Metal roof			R, E, D	●	Y	50-year life. Completely recyclable. Lower maintenance costs.
Windows	JELD-WEN provided by Vander Hoek Windows & Doors	http://www.jeld-wen.com/	L, E	●	Y	Energy efficient. Patented lumber treating process. Lower maintenance and more weather resistant due to the metal aluminum exterior. Manufacturing an integral rigid aluminum nail finish. Plastic protection film installed on the glass.
Patio doors	JELD-WEN provided by Vander Hoek Windows & Doors	http://www.jeld-wen.com/	L, E	●	Y	Energy efficient. Patented lumber treating process. Lower maintenance and more weather resistant due to the metal aluminum exterior. Manufacturing an integral rigid aluminum nail finish. Plastic protection film installed on the glass.
Porch timbers	CMI Homes milled from trees on-site	http://www.cmihomes.com/	R, S, L, D	N/A	N	Saves on transportation costs and associated air pollution. No pesticide impact from wood to water tables. Excellent feel good factor. Historical reference to site. Size and quantity of logs will determine cost effectiveness. Mill needs to be close to site, or have a portable mill, to be cost effective. Should have eight weeks drying time for logs before use.
Insulated Concrete Forms (ICFs)	ARXX Building Products provided by Glacier Northwest	http://www.arxxbuild.com/	L, I, E	+	Y	Very clean installation. Much less physical strain on installers. No stripping, cleaning, and transporting form panels. No need to insulate crawlspace and basement walls. Prevents mold growth in walls. Extremely strong and energy efficient. Interior and exterior finishes can be installed directly to the form web supports. Disadvantage: need to coat the exposed foam at outside face above grade. Very long-lasting, energy-efficient, sustainable product. Increased "R" value.
Spray foam insulation	Icynene	http://www.icynene.com/	I, E	+	Y	Much more costly than traditional fiberglass but performs much better. Stops air flow through the wall which in turn greatly reduces the chance of mold and improves indoor air quality. Immediate cash in the homeowners pocket from energy savings on both the heating and cooling side. Gives the tightness of a SIPS panel but has the advantage of being able to run all the utilities inside the exterior wall cavity.

Sealed insulated crawl space	CMI Homes	http://www.cmihomes.com/	I, E	+	N/A	Energy efficient and improves indoor air health. Prevents mold.
Site lighting - Light Fixtures	Rejuvenation	http://www.rejuvenation.com/	L, E	N/A	N/A	Custom glass product, recyclable glass. Lighting control lowers energy consumption. There are issues with energy star lighting in this house. Fluorescents burning out in the house and custom home owners want dimmable features (not yet available in fluorescents).
Site lighting - Light Fixtures	Inland Lighting	http://www.inlandlighting.com/home.htm	L, E	N/A	N/A	Custom glass product, recyclable glass. Lighting control lowers energy consumption. There are issues with energy star lighting in this house. Fluorescents burning out in the house and custom home owners want dimmable features (not yet available in fluorescents).
Site lighting - Light Fixtures	Alexander Lighting	http://www.alexanderlighting.com/	L, E	N/A	N/A	Custom glass product, recyclable glass. Lighting control lowers energy consumption. There are issues with energy star lighting in this house. Fluorescents burning out in the house and custom home owners want dimmable features (not yet available in fluorescents).
FSC-certified decking	Tigerwood provided by Environmental Home Center	http://www.environmentalhomecenter.com/home.shtml	Certified by the Forest Stewardship Council as sustainably harvested, naturally rot resistant; renewable resource	●	Y	Compared to plastic composites this is all natural; compared to other woods, many are from clear-cut forests or from newer less durable plantation-grown trees. No pesticide impact to water tables. Addresses social equity issues. Good price. Beautiful. Very similar to ironwood. Needed to pre-drill it so opted to dowel plug every screw for aesthetics. Tigerwood has twice the life expectancy of cedar therefore reducing installation costs as well as replacement costs.
Engineered lumber	Plywood Supply	http://www.plywoodsupply.com/	R, D, L and saves virgin timber by using scrap or waste wood pieces	●	Y	Conventional products increase demand of large diameter wood. Superior quality, strong product. Good product performance --resistant to shrinkage and twisting. Increased Life Expectancy
INTERIOR SYSTEMS						
Geothermal heat pump	Earthheat	http://www.earthheat.com/	L, E - Reduces energy up to 70%	10-50% higher install cost; 5 to 10 year payback; high long-term savings.	Y	Uses a completely renewable energy source. Electric heat pump in conjunction with ground loops. Installation is expensive but product has 50 year warranty and decreases energy use substantially over product life.
Furnace	Hi-Velocity provided by Energy Saving Products	http://www.hi-velocity.com/north_america.html	E	+	N	Decreased energy use over life of product. Back-up heat source. Very efficient and much more complete air exchange/circulation in the house.
Radiant floor heating	Thermal Supply	http://www.thermalsupply.com/	E	N/A	N/A	Maintains heat. Energy efficient.
Hydronic pump control	Hydronic Control Panels		C, E	N/A	N/A	Energy efficient. High velocity system that supports radiant flooring and anything hydronic in the house. Pre-manufactured and tested thus saves on installation costs.
Air purifier	Sun Pure Filters/Ultra Sun Technologies	http://www.ultrasun.com/	I	N/A	N/A	High energy efficiency. Not in a standard home. Supports a healthy home. Cleans all return air going through the furnace. Kills bacteria. System must be cleaned every six months.
Heat recovery ventilator	Fantech provided by Cascade Products	http://www.fantech.net/	I	+	N/A	Energy efficient.
Tankless water heaters	Rinnai provided by Cascade Products	http://www.foreverhotwater.com/index.shtml	E, C	+	Y	Energy efficient, space efficient.
Hot water recirculating	Metlund On-Demand Recirculating Hot Water Control Switch	http://www.gothotwater.com/	E, C	N/A	Y	Energy efficient, space efficient.
Home automation	The Music Room, a division of ProComm	http://www.pro-comm-online.com/	E	N/A	N/A	Energy efficient, space efficient.
Gas fireplace	Fireside Hearth & Home	http://www.firesideusa.com/builder/firesideSolutions/index.asp	E, I	N/A	N/A	Saves energy by using controls to heat only when necessary. Traditional wood fireplaces often leak soot and fumes into the home.

INTERIOR FIXTURES						
Caroma dual-flush toilet	Caroma provided by the Environmental Home Center	http://www.caromatoilets.com/	C - The half-flush uses half the water (0.8 gallons per flush) of the full flush (1.6 gallons per flush)	N/A	Y	Saves water. Most conventional toilets use full water flush for liquids and solids, therefore using more water than the dual flush models.
Toto dual-flush toilet	Toto provided by Builders Hardware & Supply	www.totousa.com http://www.builders-hardware.com/	C - The half-flush uses half the water (0.8 gallons per flush) of the full flush (1.6 gallons per flush)	N/A	Y	Saves water. Most conventional toilets use full water flush for liquids and solids, therefore using more water than the dual flush models.
Granite sink - Stone Forest Sink	Stone Forest provided by Builders Hardware & Supply	http://www.builders-hardware.com/	D	N/A	N/A	Durable, long-lasting, biodegradable custom home product.
Copper sink - guest bath	Handmade in Mexico of recycled copper, provided by Environmental Home Center	http://www.environmentalhomecenter.com/	100% R - Made from 99% recycled copper, also Fair Trade Federation business	N/A	N/A	Durable, long-lasting custom home product. Low environmental impact in manufacturing supports triple bottom line (economy, environment & social equity) with fair trade labor.
Bronze sink	Builders Hardware & Supply	http://www.builders-hardware.com/	100% R, D	N/A	N/A	Durable, long-lasting custom home product.
Copper sink	Native Trails provided by Builders Hardware & Supply	http://www.nativetrails.net/index.htm	100% R, D	N/A	N/A	Durable, long-lasting custom home product.
Copper bathtub	Builders Hardware & Supply	http://www.builders-hardware.com/	100% R, D	N/A	N/A	Durable, long-lasting custom home product.
Handmade glass light fixture	Alexander Lighting	http://www.alexanderlighting.com/	L, E	N/A	N/A	Custom glass product, recyclable glass.
Compact Fluorescent Lighting	Sea Gull Lighting provided by Alexander Lighting	http://www.alexanderlighting.com/	E	+	Y	Energy efficient, extended lifecycle
APPLIANCES						
Dishwasher	Kitchen Aid appliances by Whirlpool Corporation	http://www.whirlpool.com/home.jsp	E - Uses 25% less energy than federal guidelines, C, Energy Star-rated	●	Y	Energy efficient. Supports the green appliance market.
Refrigerator	Kitchen Aid appliances by Whirlpool Corporation	http://www.whirlpool.com/home.jsp	E - Uses 15% less energy than federal guidelines, C, Energy Star-rated	●	Y	Energy efficient. Supports the green appliance market.
Gas Stove	Kitchen Aid appliances by Whirlpool Corporation	http://www.whirlpool.com/home.jsp	E - Energy Star-Rated	●	Y	Energy efficient. Supports the green appliance market.
Microwave	Kitchen Aid appliances by Whirlpool Corporation	http://www.whirlpool.com/home.jsp	N/A	●	N	No Environmental Advantage
Clothes Dryer	Kitchen Aid appliances by Whirlpool Corporation	http://www.whirlpool.com/home.jsp	E - Energy Star-Rated	●	Y	Energy efficient. Supports the green appliance market.
Clothes Washer	Kitchen Aid appliances by Whirlpool Corporation	http://www.whirlpool.com/home.jsp	E - Uses 50% less energy than federal guidelines; C - Uses 50% less water than conventional clothes washers, Energy Star-Rated; Clothes need less dryer	●	Y	Energy efficient and saves water. Supports the green appliance market.
Central vacuum	Beam Central Vacuum Systems	http://www.beamvac.com/	I	N/A	N/A	Decreases dust, pollution and allergens in the home.

INTERIOR FINISHES						
Natural stone fireplace	Montana Rockworks	http://www.montanarockworks.com/	D	-	Y	Much lighter weight of this green product lowers the transportation costs. More sustainable than cultured stone alternative. True 90 degree corners look like natural stone. Non-green cultured stone's color will fade over time, and is not as long lasting or as durable.
Recycled glass countertop - kitchen	IceStone provided by Ambiente Tile	http://www.ambientetile.com/	R - 75% recycled glass in a cement mix	●	N	Decreased demand for raw materials. Comparable to granite.
Composite countertop - bathroom	Produced by Squak Mountain Stone, supplied by the Environmental Home Center	http://www.squakmountainstone.com/	R, L, I, D	●	N	Decreased demand for raw materials. King County Link-Up Partner, Manufacturer offsets carbon emissions from cement manufacturing by purchasing Green Tags from the utility, recycled paper sourced from developmentally disabled adults
Concrete countertop - bathroom	RAS Contracting Corporation	http://www.rascontracting.com/	L, I	●	N	Decreased demand for raw materials.
FSC-Certified Formaldehyde-free wood cabinets - kitchen	Manufactured by Neil Kelly, purchased at Environmental Home Center	http://www.neilkelly.com/	L, I	●	N	Supports healthy indoor air quality. No toxic materials used - formaldehyde-free. No VOC adhesives. Forest Stewardship Council (FSC)-Certified wood produced in an environmentally responsible, socially beneficial, and economically viable way.
FSC-Certified Formaldehyde-free wood window seats - great room	Manufactured by Neil Kelly, purchased at Environmental Home Center	http://www.neilkelly.com/	L, I	●	N	Supports healthy indoor air quality. No toxic materials used - formaldehyde-free. No VOC adhesives. Forest Stewardship Council (FSC)-Certified wood produced in an environmentally responsible, socially beneficial, and economically viable way.
FSC-Certified Formaldehyde-free wood window seats - dining room	Manufactured by Neil Kelly, purchased at Environmental Home Center	http://www.neilkelly.com/	L, I	●	N	Supports healthy indoor air quality. No toxic materials used - formaldehyde-free. No VOC adhesives. Forest Stewardship Council (FSC)-Certified wood produced in an environmentally responsible, socially beneficial, and economically viable way.
FSC-Certified Formaldehyde-free wood cabinets - master bedroom	Manufactured by Neil Kelly, purchased at Environmental Home Center	http://www.neilkelly.com/	L, I	●	N	Supports healthy indoor air quality. No toxic materials used - formaldehyde-free. No VOC adhesives. Forest Stewardship Council (FSC)-Certified wood produced in an environmentally responsible, socially beneficial, and economically viable way.
Alder cabinets - throughout home	Pacific Crest Cabinets	http://www.pacificcrestcabinets.com/	L	●	N	Supports healthy indoor air quality. Low-VOC adhesives.
Alder bookshelves	Pacific Crest Cabinets	http://www.pacificcrestcabinets.com/	L	●	N	Supports healthy indoor air quality. Low-VOC adhesives.
Reclaimed timber fireplace mantel	CMI Homes milled trees on-site	http://www.cmihomes.com/	100% R, L	+	N/A	Saves on transportation costs and associated air pollution. No pesticide impact from wood to water tables. Excellent feel good factor. Historical reference to site. Size and quantity of logs will determine cost effectiveness. Mill needs to be close to site, or have a portable mill, to be cost effective. Should have eight weeks drying time for logs before use.
Earth plaster walls	Manufactured by American Clay Earth Plaster Walls, purchased at Environmental Home Center	http://www.americanclay.com/	R, I	+	Y	Supports healthy indoor air quality. No VOC adhesives. Hand applied process. Precolored -no paint necessary.
Low-VOC paint	Horizon by Rodda Paint	http://www.rodmapaint.com/	I	●	N	Supports healthy indoor air quality. Low-VOC paint. Workability is not as great.
Glass mosaic - loft	Acappella Design	http://www.acappelladesign.com/	L, A	N/A	N/A	Specifically for custom projects. Zero waste - recycled all scrap glass into other projects.
Recycled glass tile	Oceanside Tile provided by Ambiente Tile	http://www.ambientetile.com/	R - up to 85% recycled glass	●	N	Recycled glass uses less energy for manufacturing than new glass and reduces landfill.

Recycled glass tile	Interstyle Ceramic & Glass Ltd.	http://www.interstyle.bc.ca/glass.html	L	●	N	Recycled glass uses less energy for manufacturing than new glass and reduces landfill.
INTERIOR FLOORING						
Cork planks	Vida Cork Plank Flooring provided by the Environmental Home Center	http://www.environmentalhomecenter.com/shop.mv?CatCode=PRODUCT&ProdCode=CORK PLANK	S, I, D	+	N	Non-toxic, sustainable product made from bark of the cork oak tree. Tree is harvested but goes on living supporting millions of acres of forested land from becoming deforested.
FSC-certified Teak	Toucan Teak	http://www.toucanteak.com/index.html	S, I	+	N	Prefinished, low-VOC flooring. Supports healthy indoor air quality. Forest Stewardship Council (FSC)-Certified wood produced in an environmentally responsible, socially beneficial, and economically viable way.
FSC-certified Australian chestnut flooring	EcoTimber provided by the Environmental Home Center	http://www.environmentalhomecenter.com/home.shtml	I, D, S	+	N	Prefinished, low-VOC flooring. Supports healthy indoor air quality. Forest Stewardship Council (FSC)-Certified wood produced in an environmentally responsible, socially beneficial, and economically viable way.
Slate Floor	Ambiente Tile	http://www.ambientetile.com	I, D	+	Y	Durable, long-lasting material. No maintenance required. Mold-free.
Slate and bronze tile "rug" entry	Ambiente Tile	http://www.ambientetile.com	I, D	N/A	N/A	Durable, long-lasting material. No maintenance required. Mold-free.
Eco-terrazzo tile	Norberry Tile	http://www.norberrytile.com/	R - 80% recycled	●	N	Reduces demand for raw material. Made of recycled material.
Ceramic tile	Bought from Dal Tile	http://www.daltile.com/	R - 50% recycled	●	N	Reduces demand for raw material. Made of recycled material.
Recycled glass tile	Debris Tile provided by the Environmental Home Center & Norberry Tile	http://www.norberrytile.com/	R - 40% recycled, D	●	N	Reduces demand for raw material. Made of recycled material.
Terra Green glass tile	Terra Green Ceramics	http://www.terragreenceramics.com/	R - 50% recycled	●	N	Recycled glass uses less energy for manufacturing than new glass and reduces landfill.
Concrete tile	Smith-Laredo tile, provided by Ambiente Tile	http://www.smith-laredo.com/	D, I	●	N	Durable, long-lasting product with low manufacturing cost.
CERTIFICATIONS						
Built Green Five-Star Home	Built Green	www.builtgreen.net	E - 30%	N/A	Y	Energy efficient home. Homes at this certificate level are verified to have met the many criteria of Built Green. 30% More energy efficient than a typical new home
Energy Star Home	ENERGY STAR Homes Northwest	www.northwestenergystar.com	E - 15% More energy efficient than a typical new home in Washington	N/A	Y	Energy efficient home. Homes are independently verified to meet strict energy efficient standards.
Energy Star Certified Appliances & Lighting	ENERGY STAR	www.energystar.gov		N/A	Y	Energy efficient home. Homes are independently verified to meet strict energy efficient standards.
FSC Certified Wood	Forest Stewardship Council	www.fscus.org	Forestry practiced in an environmentally responsible, socially beneficial, and economically viable way	N/A	N	Chain-of-Custody ensures that wood has been grown, harvested, and handled in a sustainable way throughout the process.
Green Seal Certified Paint	Green Seal	www.greenseal.org	Independently tested and certified as low volatile organic compounds (VOCs), containing no harmful chemical components, and is resistant to mold and mildew	N/A	N	Certification assures that the product has met certain low levels of VOCs and other potential air pollutants.