

CLIENT Wakefield Beach Homes **DESIGN ARCHITECTS** Helliwell + Smith / Blue Sky Architecture, West Vancouver **ARCHITECT OF RECORD** Teryl Mullock Architect Ltd., Gibsons, BC **LANDSCAPE DESIGN** Forma Design Inc., North Vancouver **PLANNING CONSULTANT** Development Planning Strategies, Subiaco, WA **STRUCTURAL ENGINEER** Chiu Hippmann, Vancouver **CIVIL ENGINEER** C.J. Anderson Civil Engineering Inc., Whistler, BC **ELECTRICAL | MECHANICAL ENGINEER** Stantec, West Vancouver **ENVELOPE ENGINEERS** Aqua-Coast Engineering Ltd., Surrey, BC **INTERIOR DESIGN** Mobius Architecture, Sechelt, BC **CONSTRUCTION** Wakefield Home Builders Inc., Sechelt, BC **PHOTOS** David Delnea, Christina Symons [photo 3]



Wakefield Beach Houses

Development combines density and conservation

Retirement and recreation homes now flank most of the coastal roads in south-western British Columbia and demand is increasing. Environmentally, the typical linear, low density form of subdivision has little to recommend it, as it squanders precious waterfront land, negatively impacts or destroys often delicate shoreline ecosystems, and compromises public access to beaches and inter-tidal areas.



BO HELLIWELL >> Despite these obvious drawbacks, such development continues apace on both Vancouver Island and the Lower Mainland coast. In this project on BC's Sunshine Coast we worked in concert with Lance Sparling, a remarkable first-time developer, to offer a more environmentally responsible alternative.

The beautiful five acre site outside of Sechelt offered a range of new possibilities. Our immediate concerns were for the most efficient utilization of the land, respect for its natural attributes and the achievement of an architectural form and expression closely connected to the region and site. We also believed that by achieving these goals we

CURVED ROOFS EVOKE THE ROLLING OCEAN BREAKERS. THE DEVELOPMENT USES GEOTHERMAL HEATING AND COOLING, HIGH PERFORMANCE WINDOWS, SOLAR-POWERED STREET LIGHTING, AND WATER CONSERVING PLUMBING FIXTURES [1]. ALL 46 UNITS FACE SOUTH FOR OCEAN VIEWS AND PASSIVE SOLAR HEATING [2].



Site plan

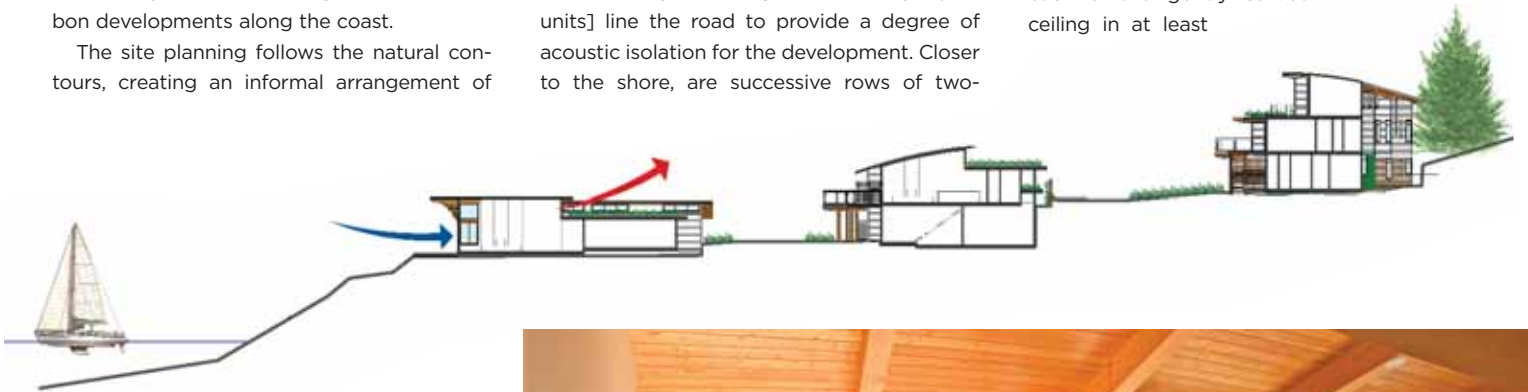
could create or at least support the sense of community that is so lacking in the usual ribbon developments along the coast.

The site planning follows the natural contours, creating an informal arrangement of

buildings closely related to the surrounding land. The larger buildings [three-storey triplex units] line the road to provide a degree of acoustic isolation for the development. Closer to the shore, are successive rows of two-

storey duplex units [staggered in plan to ensure each unit has a view of the ocean] and a scattering of single storey-detached homes. The 46 units range in size from 1200 to 1800sf, and achieve an overall density of nine units per acre – about four times the density of traditional strip development.

The curved roofs are a formal device that works on many levels. Externally, they relieve the rectilinear terraced geometry of the buildings and evoke the rolling breakers of the ocean beyond. Internally, they give each unit a gently curved ceiling in at least



Section through site

MATERIALS

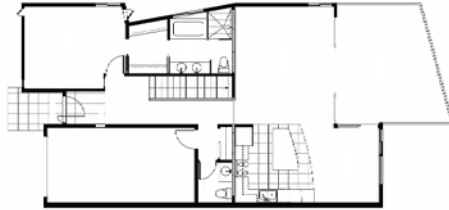
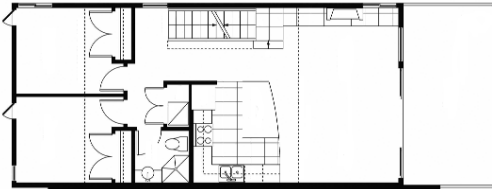
Exterior

- Fibre cement siding and #1 Blue Label grade cedar shingles, stained using Broda Coatings; Soprema waterproofing membranes with green and metal roofs, energy-efficient windows; solar powered street lighting

Interior

- Standard frame construction with lumber, timber and prefabricated insulated wall panels by Viceroy Building Systems Ltd., prefinished maple flooring, and water-conserving fixtures, geothermal heating system





Elevations and floor plans

Triplex

Duplex

Beach House

one space, and soften the views across the site by providing prospects of planted surfaces that change with the seasons. The exposed wood ceilings of these curved forms are made possible by the use of 'upside-down' construction in which the insulation is installed on top of rather than underneath the roof decking.

The green roofs, which also appear on many of the flat areas, add to the natural habitat, reduce heat build up and retain water during periods of rain. The stepped and staggered

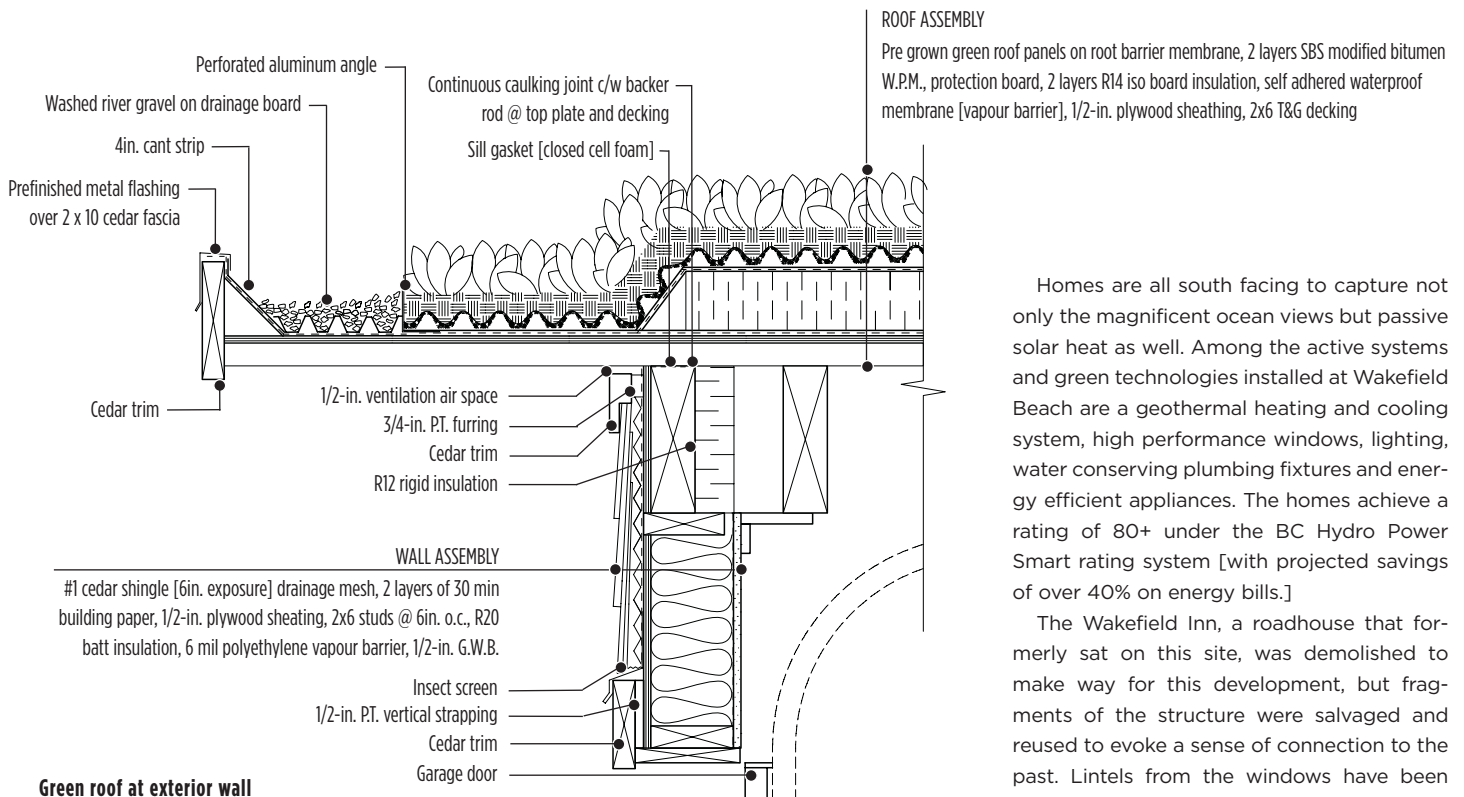
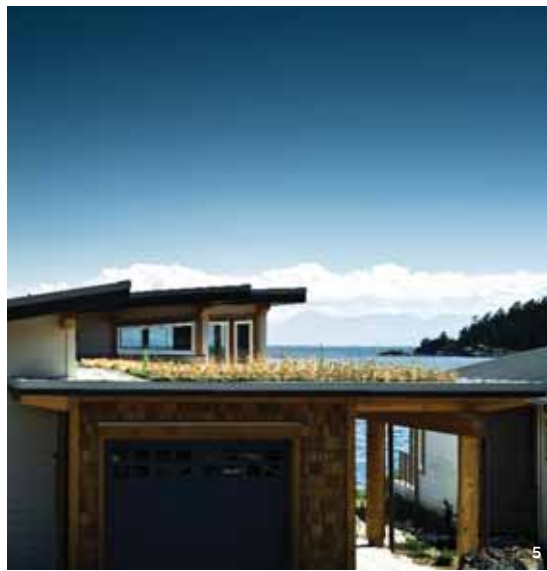
geometry of the buildings ensures that all units look out onto these green areas, reinforcing the visual connection to the surrounding environment.

80% of the site is soft surface [permeable pavers and laneway with no curbs]. Throughout the site, zone-appropriate planting, including grasses, wild flowers, green roofs and indigenous landscaping, eliminates the need for irrigation, even in the driest summer months.

BEACH HOUSE INTERIOR: EVERY UNIT HAS AT LEAST ONE SPACE WITH A CURVED ROOF AND EXPOSED WOOD CEILING [MADE POSSIBLE BY INSTALLING THE INSULATION ABOVE THE DECKING -SEE DETAIL FOLLOWING PAGE]. EXTERNALLY THE CURVED ROOFS RELIEVE THE OTHERWISE RECTILINEAR GEOMETRY OF THE TERRACED FORMS [3]. EVEN WITH A FOUR-TIMES AVERAGE DENSITY OF NINE UNITS PER ACRE, EACH UNIT HAS A VIEW OF THE OCEAN [4].



GREEN ROOFS ON THE FLAT AREAS OF THE ROOFS ADD TO THE NATURAL HABITAT, REDUCE HEAT BUILD UP AND RETAIN WATER DURING PERIODS OF RAIN [5]. AS AN ALTERNATIVE TO THE TYPICAL LOW DENSITY, LINEAR FORM OF SUBDIVISION THAT SQUANDERS PRECIOUS WATERFRONT, WAKEFIELD BEACH STROVE FOR THE MOST EFFICIENT UTILIZATION OF THE LAND, RESPECT FOR ITS NATURAL ATTRIBUTES, AN ARCHITECTURAL FORM CONNECTED TO THE REGION, AND CREATION OF A SENSE OF COMMUNITY [6]. UNITS ARE SET BACK FROM THE WATER TO PRESERVE THE NATURAL FEATURES AND OPENNESS OF THE BEACH [7].



Green roof at exterior wall

Homes are all south facing to capture not only the magnificent ocean views but passive solar heat as well. Among the active systems and green technologies installed at Wakefield Beach are a geothermal heating and cooling system, high performance windows, lighting, water conserving plumbing fixtures and energy efficient appliances. The homes achieve a rating of 80+ under the BC Hydro Power Smart rating system [with projected savings of over 40% on energy bills.]

The Wakefield Inn, a roadhouse that formerly sat on this site, was demolished to make way for this development, but fragments of the structure were salvaged and reused to evoke a sense of connection to the past. Lintels from the windows have been refashioned as fireplace mantles, and the original entrance doors have been preserved and now mark the starting point of the oceanfront trail.

Despite being on the outskirts of town, the development itself is pedestrian oriented, and homes are set back from the water to preserve the beach as an open space for the community. Both the market and the local planning department have reacted favourably to this project, and the developer is actively involved in other projects to further his experiments into sustainable living. ◀

BO HELLIWELL IS A PARTNER IN HELLIWELL + SMITH - BLUE SKY ARCHITECTURE IN WEST VANCOUVER

