

A 'Green' House in the Burgh

By John Thurston and Lorie Boucher

After several years of sitting vacant, the lot at 94A Crichton Street is finally having a house built on it. About seven years ago, the lot was severed from 96 Crichton, variances were granted and an initial design passed by the Heritage Committee, but that development did not go ahead.

We discovered the property in the spring of 2007 and immediately knew it would be perfect for us. Its proximity to the Byward market meant we could both walk to work, and the 15-minute drive to skiing, hiking and canoeing in Gatineau Park couldn't be beat. The size of the lot — just 26 by 77 feet — was another attraction in that we wanted to keep our footprint small. **Building on an infill lot met not only our principles, but those articulated in the city's Official Plan and Environmental Strategy.** With visions of a two-minute portage from our home to the Rideau River dancing in our heads, we happily signed on the dotted line.

We hired **Vert Design**, a green architectural design and planning firm, to design our new home. Because our lot falls within NE's Heritage Conservation District, they faced the creative challenge of **designing a compact infill home that respects the scale and character of houses** in the neighbourhood, while still giving us adequate floorspace, and integrating modern, efficient and sustainable building materials. Our intrepid green building team, **Botan Construction**, decided that they would brave the snowiest winter in almost 40 years to bring the design to life.

The front of our house will have two stories, and the back will rise to three. The gabled steel roof on the front echoes the visual pattern of our neighbours, while almost three quarters of the flat roof at the rear will be planted with vegetation — a green roof that will add extra



Sketch of the front streetscape of the new house going up in the vacant lot at 94A Crichton. The front will have two stories and the back will rise to three. The gabled steel roof is designed to echo the visual pattern of the neighbouring homes.

insulation and reduce stormwater runoff. A rooftop patio on the remaining quarter of the flat roof, along with other decking at the rear of the house, will provide us some open-air space when weather permits.

Apart from the location, footprint, and green roof, we took care in choosing materials to minimize our environmental impact. The house will be finished partly in brick and partly in fibre-cement siding. The

foundation is built with insulated concrete form blocks that will stabilize the interior temperature and bring up the R-values of the basement. We chose spray-in, soya-based foam insulation for its unbeatable airtightness and low-e, argon-filled windows to absorb and reflect the heat,

Skylights and as many windows as the building code would allow will bring natural light and ventilation into every floor. Adhesives, paints and caulking with low or no volatile organic compounds, sustainable lumber, a water-conserving rain-barrel, native landscaping, and energy-efficient appliances will help us further reduce our impact.

As you can tell, we're excited about how the systems we have designed into our home will function. As of the time of writing, we're still struggling with the logistics — banks, insurance, the city, suppliers, contractors, subcontractors — but can still see the light that will flood our new home. When spring finally arrives, that light should be shining more brightly and we will welcome all our new neighbours to share in it.

depending on the time of year.

With such high resistance values in our envelope, we will not need air conditioning and our heating needs will be significantly reduced, although not entirely eliminated. Until we save up our loonies for a geothermal system, we will have a high-efficiency gas boiler. Heat will be distributed through a radiant in-floor system covered by a synthetic, light-weight concrete.