

# Earth Overhead: Sustainable Design from the Top Down

Close up of a mature roof sod.



DCD studio with 900 sq ft sod roof  
- one of the first in Cowichan

Efficiency is the thing these days, and not only in terms of that dreaded heating bill. Looking back to fundamental principles of recycle, reuse and attempting to understand the life cycle of materials in our home and work environments is now de rigeur for any builder worth his salt.

Or perhaps we should say, worth his sod.

But are sod roofs, or 'green' roofs (as they are called when plants grow from their earthen heights) a new concept? Not really. "Similar materials were used centuries ago in rural Scandinavian architecture," says local design builder David Coulson. "In that case, with sod laid down over a naturally waterproof birch bark base layer."

Then, as now, the insulating

properties of the dense sod covering were a great asset. But green roof benefits don't stop at savings. Green roofs provide a sound barrier, a cooling solution to the Urban Heat Island effect and improved air quality. When used in conjunction with rain chains, they manage storm water runoff in an aesthetically playful way, easing the burden on local drainage systems.

Energy savings (for heat and A/C) are estimated at 25% and going green is believed to extend the lifespan of your roof by up to 3 times what it would otherwise be. With the added garden real estate the rooftop provides, fresh herbs and other culinary helpers only sweeten the deal.

The sod roof on Cowichan's David Coulson Design studio does exactly that, absorbing

rainfall and gently directing it to wide overhangs filled with drainage rock, through which rainwater percolates to the rain chains and into the planters and gardens below. Coulson says the modern sod roof underlay (taking over from the birch bark of Viking

times) consists of, "a 2-ply bituminous membrane, a recycled plastic dimpled membrane, and a covering sheet of commercial-grade landscape fabric." All set to begin planting, which he intends to do this spring.

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