



# FACT SHEET

## The Land Use-GHG Connection

### *How can land use decisions impact GHG emissions?*

Land use is a key driver of GHG emissions, and shifting land use patterns is one of the most effective ways to reduce a community's carbon footprint. Recent studies have quantified the land use-GHG emission relationship – offering strong evidence that the physical arrangement of roads, buildings, and land use types directly influence GHG emissions.

### *Clustered and complete communities*

Clustered and complete community form – including mixed residential-commercial uses, increased densities in appropriate locations, and road network connectivity – can reduce residents' need to drive while at the same time increasing the convenience and viability of alternative forms of transportation. A land use study on Salt Spring Island found that GHG emissions would be 22 percent lower than the baseline if residences were clustered around the village cores.

### *Building Design*

Community design and land use can also substantially lessen residential and commercial building energy consumption through smaller living spaces, shared walls, and district energy systems. Per capita energy consumption and GHG emissions are 2 – 2.5 times higher in low density development. Ongoing changes to the BC Building Code are addressing more energy and water efficient features within buildings.

### *Green Infrastructure*

The GHG impact of green infrastructure and landscaping has been less extensively studied; however, this aspect of land use represents another important opportunity for emissions reductions. For example, green infrastructure – including shade trees over buildings and roads for natural summer cooling, retention of forest cover, trees and greenery that insulates and breaks wind flow during the winter, green roofs, and community green spaces – can further reduce building energy use and act as carbon sinks.

### *Land Use Authority in the Islands Trust Area*

In the Islands Trust Area, only Local Trust Committees (LTCs) have the authority to control land use. This authority is defined by the *Islands Trust Act* and the *Local Government Act*, and includes the power over official community plan policies, settlement patterns, density, zoning, parking requirements, and screening and landscaping. Bill 27 amended the *Local Government Act* to expand the authority of LTCs to use land use planning to increase energy efficiency and reduce greenhouse gas emissions.

