



# Case Study: Retirement of Highly Erodible Slope



The spruce trees that were planted have had a high survival rate.

Barb and Bernie Smith have lived on their property outside of London since the 1980s. They own a 43 acre farm on a corn, soybean and wheat rotation.

## Concerns:

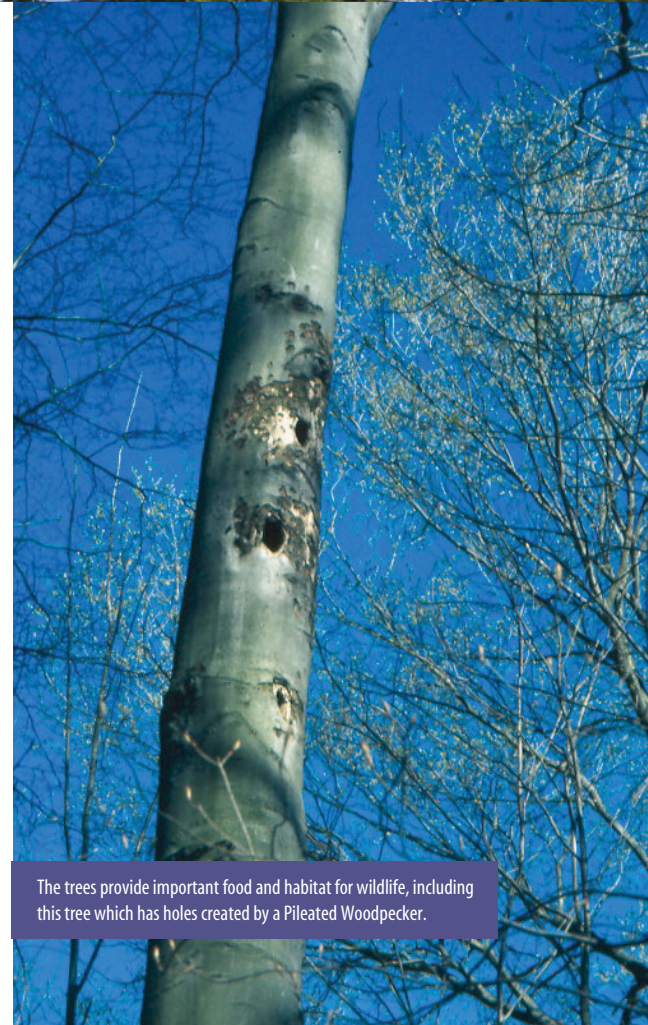
When the Smiths bought the property, they continued to farm the land as it had been farmed for ages. Barb became concerned with an area of the field that was prone to erosion due to a steep slope (9-15%). Loss of soil resulted in decreased agricultural productivity on this part of the land.

## Solution:

In 1994, Barb decided to retire the area of the field with the steep slope by planting trees.

## Benefits:

Taking the sloped land out of agricultural production and planting it with trees has reduced the loss of soil, as the tree roots increase slope stability. The trees also have the added benefit of enhancing wildlife habitat.



The trees provide important food and habitat for wildlife, including this tree which has holes created by a Pileated Woodpecker.

# Project Timeline:

**Fall 1993** – The planting site was prepared by mowing the existing vegetation, planting a cover crop and delineating the tree planting area with stakes.

**Spring 1994** - Trees were machine planted by the Upper Thames River Conservation Authority (UTRCA).



## Maintenance:

In spring 1994, UTRCA **sprayed herbicide** around seedlings to limit competition by weeds and grasses. To further limit competition, Barb **mowed** between the trees for six years. **Rodent bait stations** were used to deter mice, voles and rabbits for the first five years, to protect the trees against girdling which can damage or kill trees. Barb continues to **monitor** the trees.

## Tree species planted on Barb's land:

White Ash  
White Cedar  
Red Oak

Norway Spruce  
White Spruce  
Black Walnut

## By the numbers:

7.5 acres retired from agricultural production

5800 trees planted

## Additional BMPs:

An erosion control berm was constructed on the Smith property to slow the flow of water moving downslope from their field onto a neighbour's field. There is also a windbreak on the property which aids in reducing wind erosion.

