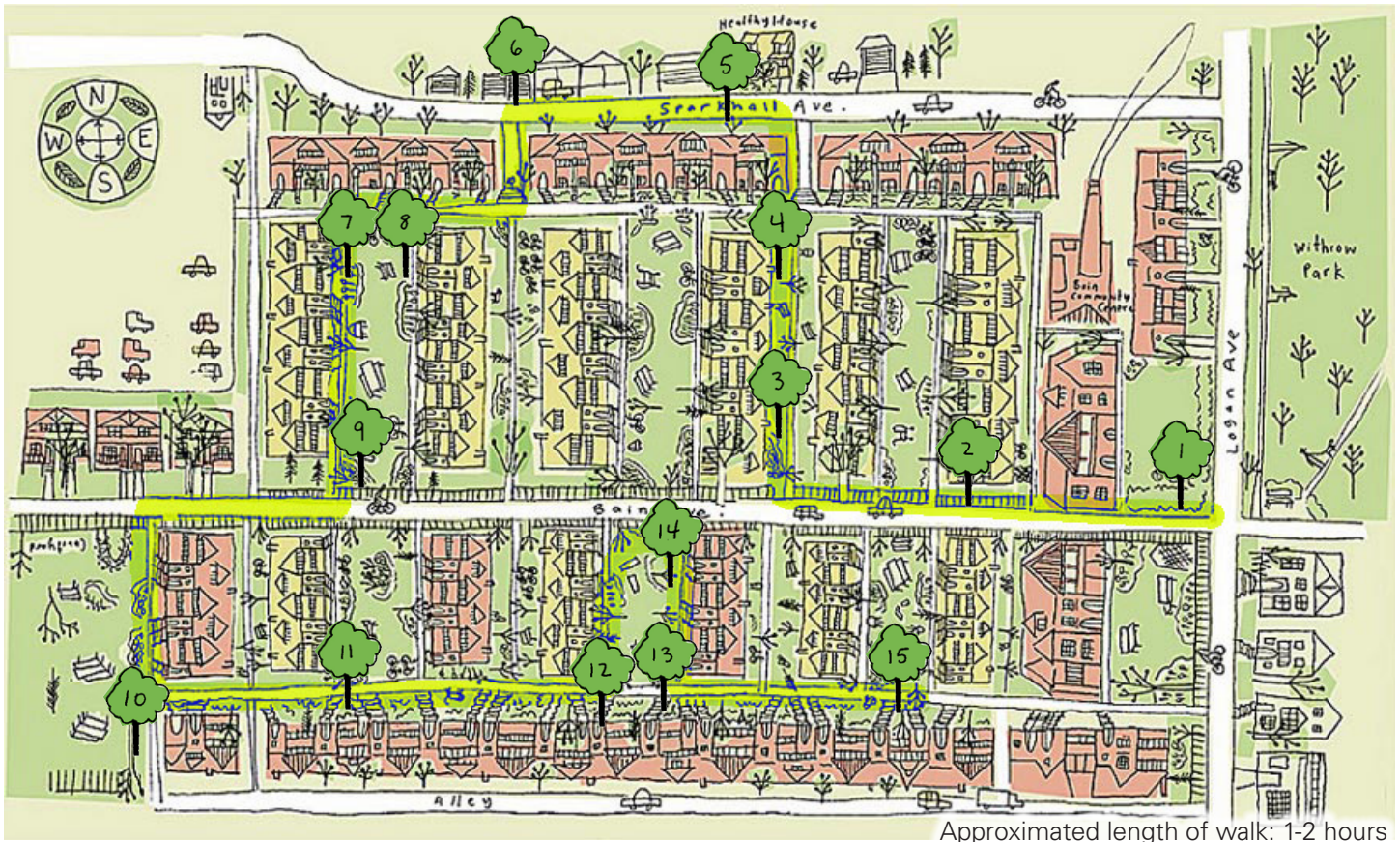




**The Bain Co-operative** is a charming enclave of low-rise buildings, nestled in the heart of Riverdale. The apartments, originally named Riverdale Courts, were built between 1913 and 1925 by the Toronto Housing Authority, an organization of local philanthropists, businessmen and politicians. The Bain was designed in the Arts and Crafts style by Ralph Eden Smith, an architect of numerous churches, libraries and private homes throughout the city. The layout of the property was greatly influenced by the Garden City movement, which began in England as a response to the over-crowded and unhealthy conditions of working-class housing. A key concept of the movement was the inclusion of green space into urban areas through proper site planning.

Walking along the narrow sidewalks that connect the property's many courtyards, it's easy to feel as though you have stepped into an earlier time. Flowers spill onto sidewalks, cats lounge on stairways, clotheslines arch from balcony to balcony, and grand trees tower above. Yards are small, and residents share the common spaces. Much of the Bain's appeal is in the colourful gardens that grace the courtyards, a result of the hard work of committed members. The success of their work cannot be overstated considering that for the first seven decades, the courtyards were almost entirely grass with only the occasional tree. It is its eccentricity, enlivened by its human, animal, and plant residents that make the Bain such an inviting place to live and visit.

Note: The Bain Co-op is a private property and people are invited to view trees from the street only. However, there will be several guided walks throughout the year. Look for the dates posted on the LEAF, Lost Rivers or Bain Websites. These walks will also be advertised in Now Magazine and Planet Friendly.

#### Contributors

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## White pine memories

In courtyard on Northwest corner of Logan Ave. and Bain Ave.



In the center of the courtyard just northwest of the intersection is a white pine (*Pinus strobus*) planted by Norman McKinney, a resident of the Bain Co-op, in 1992. White pines were once common features in this area. Growing to heights of over 150 feet they created a super canopy above the oaks, beeches and hemlocks of the forest below. Early settlers cut down the big white pines to use their wood to build ships for the British navy.

The tree in this courtyard has a yellow hue, caused by a condition called chlorosis, a deficiency of the chemical chlorophyll that gives trees their green appearance. This is likely because the tree is not able to take up enough iron and manganese from the soil, nutrients necessary to keep the tree healthy.



## The silent sentinels

Lining the north side of Bain Ave.

Standing along Bain Avenue like giant sentinels are a row of 5 London plane trees (*Platanus X acerifolia*). Some of the largest in the city, these trees were planted as part of the original landscaping when the apartments were constructed in the early 20th century, making them nearly a century old. The London plane tree is a hybrid between the Oriental Plane (*Platanus orientalis*) and the American sycamore (*Platanus occidentalis*). One of this tree's most defining characteristics is its multicoloured bark, which results from it peeling off in plates as a form of continuous renewal. This aids the tree's resistance to airborne pollution by preventing the pores from becoming clogged. The canopies of these London planes spread over 70 feet cooling the street, apartments and people below. The beauty of the London plane has inspired strong emotions: for instance, Handel dedicated his famous song Largo to the tree.



## Towering Carolina poplar

North of Bain Ave. in the centre of the third courtyard



Reaching nearly 100 feet into the sky, dwarfing the buildings below, this Carolina poplar (*Populus x canadensis*) is one of the tallest trees in the area. It is unusual to see a poplar growing in a residential neighbourhood as it is often feared that their extensive root systems will damage underground pipes and sidewalks. While no damage appears to have occurred here, it can be expected that the roots of this tree are just below the lawn throughout this entire courtyard and extend down to Bain Avenue. A second poplar that stood directly beside this tree and was nearly as large was recently removed because it was dying. Local residents counted the growth rings of the cut tree and found it to be 80 years old. The tree that was cut down is going to be replaced by a new sugar maple planted by LEAF.



## Staghorn sumac with tire

**North of Bain Ave. on the west side of the third courtyard**

Update: the tree for this stop was cut down in July because residents feared, perhaps unreasonably, that the tree would spread and damage the building's foundation.

At the end of the courtyard near the corner of the west building is Staghorn sumac (*Rhus typhina*), named for its distinctive branching pattern and stout woolly twigs that resemble a deer's antlers in velvet. Sumacs are native to the area and once grew on the sides of the nearby Don River bluffs. The bluffs are now gone, the sandy soil carted away over a century ago to be used for mortar and brick. Of note is the rubber tire around the tree's base. If not removed soon, it will eventually kill the tree. Trees transport nutrients and water from their roots to their leaves in small channels just under their bark. As this tree's trunk grows wider each year, the tire will eventually cut into the bark restricting the flow through these pipes. Staghorn sumacs have useful medicinal properties. The bright red fruit are a rich source of vitamin C and make a refreshing juice mixed with mint and maple syrup. Though attractive, they are not the best choice for small urban gardens because they clone and spread quickly.



## The Healthy House

**Standing alone on the north side of Sparkhall Ave.**



This unique looking building is called the healthy house. It was designed by architect Martin Leihebbber in 1991 and was the winning entry in the healthy housing design competition. The goal of the competition was to build a house suitable for the Canadian climate that is environmentally sustainable, healthy for its occupants, and affordable.

The large solar panels on the front generate electricity that can be stored for later use. They also shade the house, further reducing energy demands. Rainfall collected on the roof provides the home's water supply. Water is recycled by a purification system that mimics the natural path rain follows when it passes through the ground to a spring. As a result, water consumption is 90 percent less than the average household. The healthy house is a compelling example of the alternatives to traditional home construction. Unfortunately, since its creation over a decade ago few other homes like it have been built.

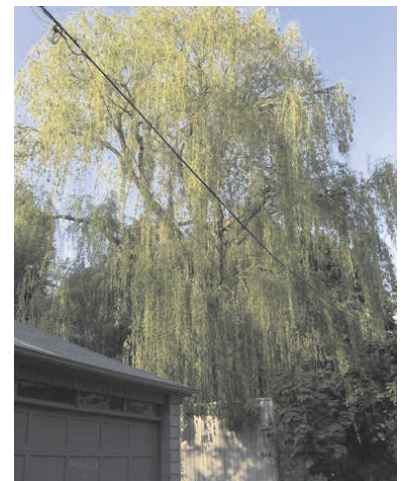


## Golden weeping willow

**In a rear yard north of Sparkhall Lane**

The golden weeping willow is a fast growing tree that is easily identified by its bright yellow twigs and long, graceful branches that sweep towards the ground. The branches are extremely flexible, allowing the tree to absorb heavy winds dispersing their forces and reducing the strain on the trunk and stems. Willows are water-demanding, with a tree of this size able to take up more than a 1000 litres on a warm summer's day.

Before this area was developed at the turn of the last century it was a marshy low-land fed by a stream that ran down from the north around Hampton Avenue. All streams in the area were channeled into sewers at the time of development but the groundwater still flows as it did, providing the searching roots of this tree with the water it requires to grow.





## The uninvited guests

North of Bain Ave. in the last courtyard



A grouping of three mature black locusts (*Robinia pseudoacacia*) grace the edges of this courtyard. Black locusts are not native to this region, but are considered naturalized, meaning they are able to reproduce themselves and thrive. These three trees are likely relatives, their parent an older tree somewhere else in the neighbourhood. As seeds, they were blown here by the wind coming to rest up against a fence or under a hedge that at one time lined the edge of the sidewalk. The seeds germinated and took root, being close to the building they were not cut by lawnmowers allowing them to grow into mature trees. They have made this courtyard their home ever since.

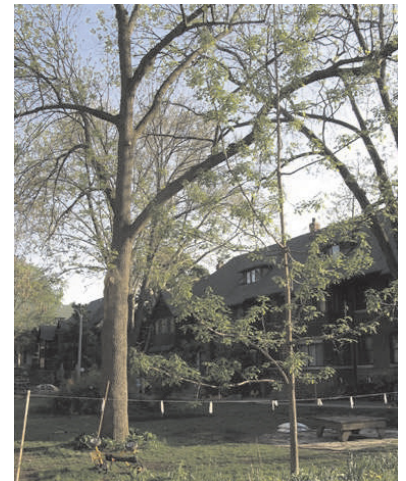


## The next generation

North of Bain Ave. in the center of the last courtyard

This is a healthy young red oak (*Quercus rubra*) planted in 1997, through LEAF's subsidized tree planting program. The red oak is a native tree, ranging from east of Lake Superior to Nova Scotia, which can reach 90 feet in height and live to be over 200 years old. This is a beautiful specimen with a straight trunk, well-spaced branches and healthy leaves.

Although there are already large trees in this courtyard, this tree was planted because the others are getting old and will eventually die. Planting young trees below the canopies of mature ones ensures there will be a continuity of tree cover. As trees take years to grow, waiting for a mature tree to die before replanting means there will be a gap of many years with no shades.



## Norway maple – More dangerous than it looks

North of Bain Ave. near the road in the last courtyard



This is a stately Norway maple (*Acer platanoides*) with a beautiful spreading canopy. While not native, Norway maples have been planted extensively in Toronto for the past 100 years because they have an attractive form, are fast growing and tolerate harsh urban conditions. However, Norway maples bring with them problems. They are prolific seed producers. The winged samaras, which look like little helicopter blades in the wind, can be carried great distances, sometimes coming to rest in nearby forested ravines. The seed easily germinate. The many trees that result grow quickly, often faster than the native plants they have invaded upon. They have extensive root systems that soak up water and large leaves that darkly shade the ground below. The native trees and plants have trouble competing with the Norway maples for light, water and nutrients, often dying off as a result. This poses a serious threat to the ecological integrity of Toronto's few remaining natural areas, prompting some experts to call for a complete ban on the planting of these trees.



## A wind-seeded Siberian elm grows up

**South of Bain Ave. in the rear of the last courtyard**

In the southern end of this courtyard is a Siberian elm (*Ulmus pumila*), with a long straight trunk and canopy that reaches over 70 feet into the air. The Siberian elm is an exotic species, originating from northeastern Asia. Rarely grown as trees, Siberian elms were introduced to this country to be used as planting materials for hedges. As saplings they were planted tightly in rows and then trimmed with shears.

Many such hedges were planted as landscape features when the Bain was built. In time, the trees that made up these hedges produced seeds that were blown by the wind into the open soil of nearby flowerbeds. This tree likely grew from one of those seeds, but instead of being trimmed as a hedge it was left to assume its natural form.

An unintended benefit of this volunteer tree is that its large canopy shades the roof of the apartments below keeping them cool during the summer months reducing the need for costly air conditioning.



## Bigger is not always better

**Looking east down the pathway between the apartments south of Bain Ave.**



Looking down the length of this path gives you a clear sense of what it is that makes the Bain apartments unique: buildings are so close together that if residents were to lean out their windows they could nearly touch hands. Yet, rather than feel cramped and confined, this compact design creates a cozy, warm environment. The children's toys left about, flowerbeds teeming with colourful plants and lazy cats meandering throughout all contribute to a safe, welcoming feel. A feeling that big is not always better, and that when well-designed, high-density housing presents a healthy way to live.



## American elm against the wall

**South of the pathway that runs east in front of the apartments**

This large American elm (*Ulmus americana*) was not planted. As a seed it blew up against the foundation of the building and began to grow. It is likely the progeny of a giant white elm that once grew in the alleyway between Logan and Hampton. That tree is now gone, a victim of Dutch Elm disease that in the early 1960's swept through the city killing most of the old elms that lined the streets. This one too will likely succumb to the disease, which is spread by the elm bark beetle. Once inadvertently deposited under the elm's bark by the beetle the cells of the disease feed off the sweet sap, rapidly dividing, which quickly blocks the xylem tubes that transport nutrients and water up to the leaves, eventually starving the tree.





## Pagoda dogwood

Just north of the pathway a few steps east of the elm in stop 12



A small tree native to the forests of southern Ontario, the pagoda dogwood (*Cornus alternifolia*) prefers shady conditions and grows below the cover of larger trees. It is so named because its tiered branching form resembles the pagoda temples of Asia. The branches spread out flat to allow the tree's leaves to absorb as many of the sunlight flecks that reach the forest floor as possible.

Dagmar Baur, a resident of Bain and an avid gardener brought this tree here from a private forest near Barrie, with permission from the owner. She planted it in 1992 and it has been happily growing ever since. If you look closely at the bark you will notice scratches. These are the results of cats scraping their claws on the bark. Dagmar, in an attempt to protect the tree, has placed sticks around it to keep the frisky cats at bay.



## The travelling redbud

In the same courtyard as stops 12 and 13 but near Bain Ave.

This redbud (*Cercis canadensis*) has been around. It was first planted over 15 years ago in the garden of the Ecology House, and environmental education centre on Madison Avenue in downtown Toronto. When the centre was closed down a few years back the garden was to be torn up. David Orisini, a landscape architect, recognized the value of the little tree and saved it from the bulldozers by digging it out of the ground and moving it to a flowerbed at the Body Shop head office, another of his design projects. But the tree did not fare well there, most of its branches dying back nearly to the ground. So David moved it again, this time giving it to his friend Dagmar Baur, a resident of the Bain and a talented gardener. Dagmar planted the tree in this courtyard and nursed it back to health. It is now a lovely specimen, providing a shady place to sit, and every spring producing thousands of tiny pink flowers that line its gracefully arching branches.



## One man's weed...

Just south of the pathway that runs east between the apartments



This large Manitoba maple (*Acer negundo*) has character. Jutting out from the edge of the sidewalk at an abrupt angle it seems that it could tip at any moment. But closer inspection indicates this tree has been growing on an angle for many years. Manitoba maples are often referred to as weed trees because of their tendency to aggressively grow almost anywhere, presenting a nuisance to property owners. They are opportunistic trees, with long slender stems that will twist and turn as they search out sunlight, often giving individual trees a scraggly unbalanced appearance. These natural characteristics usually make Manitoba maples undesirable urban landscape trees, but can also produce individual trees of whimsy. Not every tree need to be straight to have value. This particular tree is a favourite of local cats because they can easily climb into its canopy by way of its leaning trunk.