



Friends of the Central Experimental Farm

Summer 2021 Newsletter

Volume 33 No. 3

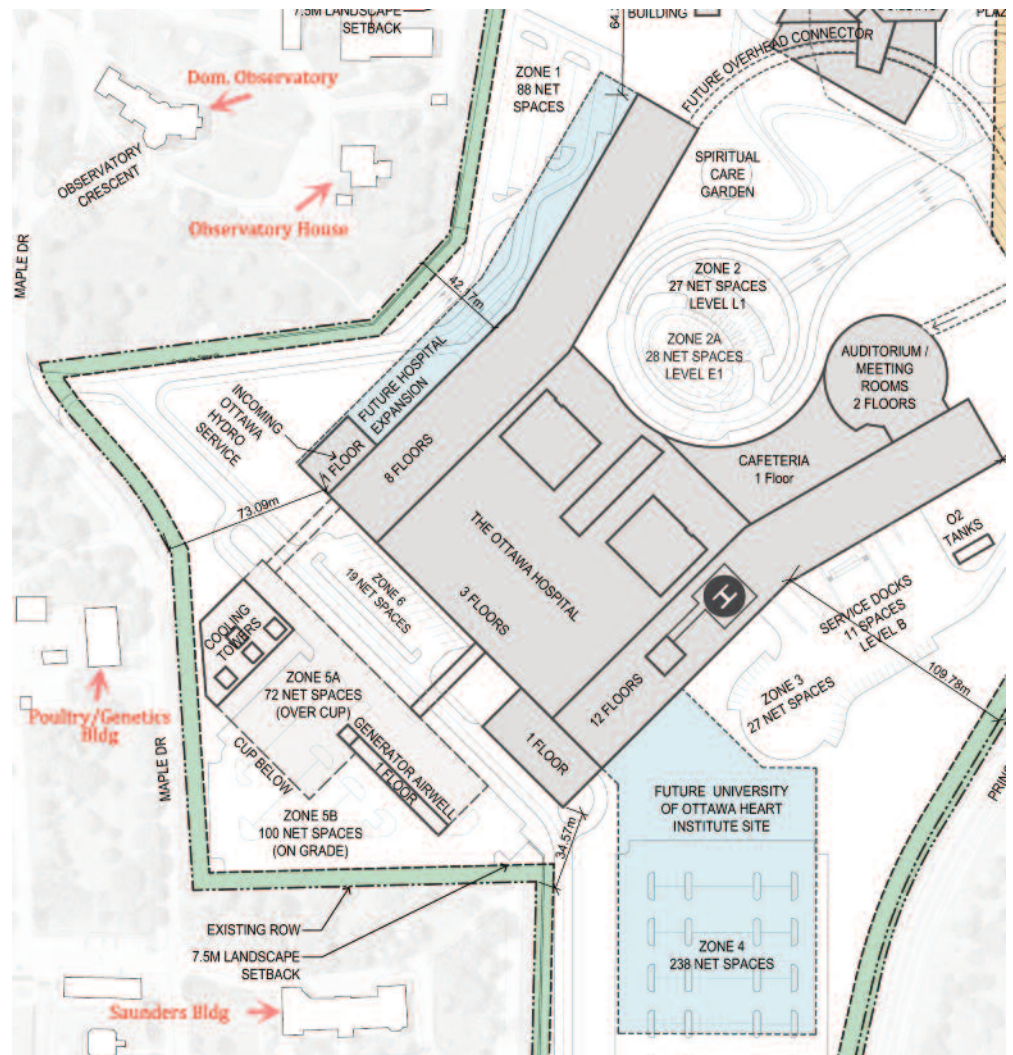
The Farm and the Hospital— What We Need to Know

The Friends of the Central Experimental Farm (CEF) have always supported the building of a new hospital to cope with growing demands and the many problems associated with the old Civic campus. It was a shock when the site selected for the new hospital turned out to be part of the Farm. This space is a treasure, given its connection to the Arboretum and the woodlands across Prince of Wales. The pandemic has underlined how important such a large green space is to a population that needs fresh air, exercise, and a place to find relief from stress.

While the plan for the hospital implies that it will occupy just a small portion of the northeast corner of the Farm, it is evident that it will cover a much bigger area than indicated in early conceptual drawings. It will be much larger than the footprint of the former Sir John Carling Building, and include a portion of the Farm's historic core.

The Friends have had major concerns over the notion of building a new hospital on grounds of the CEF. We did not agree that it was appropriate to build it on the research fields nor to build it on the grounds of the national historic site. But we realize that it is going to happen, so now we are responding to the proposed plan for the new hospital.

The latest design details for the new 2.5 million square foot Civic campus of the Ottawa Hospital were unveiled in early May. The \$2.8 billion development is planned to begin in 2024 and open in 2028 but work on the site is commencing immediately. The demolition of the old Sir John Carling Annex has begun and will continue to



Master Site Plan, May 7, 2021, p. 4 (Detail. Building names added)

The planned hospital dwarfs nearby heritage buildings in this detail from the Master Site Plan Drawing. Compare the footprint of the William Saunders Building (its outline is in the lower left centre) with that of the planned hospital. And, the Saunders building is two storeys high; the hospital's south tower is to be 12 levels. At the rear of the hospital, adjacent to Maple Drive and the rear of Saunders, is the Central Utility Plant and 172 parking spaces.

Project application documents are now available at Ottawa City website
["https://devapps.ottawa.ca/en/applications/D07-12-21-0059/details"](https://devapps.ottawa.ca/en/applications/D07-12-21-0059/details)

Continued on Page 2

the end of November 2021. Next year work will begin on the parking facilities.

What We Need to Know About the Proposal

1. Greenspace vs hardscaping - The proposed amount of greenspace around the new hospital site has significantly decreased and hardscaping has increased from earlier conceptual plans. The Environmental Impact Statement describes the site as being 20% hardscaped. In the proposed site development, over half of the site will be hardscaped. This means a mostly permeable treed area will be turned into a mostly impervious landscape, with its adverse effects on storm water, air quality and the heating/cooling of outdoor space. What we need to know is how the remaining greenspace (and the green roof) will be designed so that the public will still be able to receive the environmental and health benefits that the Farm bestows; and how continuity with the neighbouring green features of the Farm and its wildlife will be achieved.

2. Use of roads and traffic patterns - The use of Maple Drive by emergency vehicles will change the way the road is used to serve the CEF. Other roads, including the NCC Driveway, Winding Lane, and the remaining portion of Birch Drive, are likely to be affected as well. There is also concern that Prince of Wales Drive may have to be widened and could lose its appeal as a scenic driveway through the Farm. What we need to know is how traffic will be controlled to protect the integrity of the Farm.

3. Boundaries with the CEF - There is concern with the large proposed buildings and servicing equipment that are being placed close to the boundaries with the Farm. The heating/cooling plant will be underground, but how will it affect the surrounding area? Impacts on adjacent buildings include noise, light, and shadow effects, as well as a radically altered landscape. The new structures will not only change the appearance and views of the Farm, their positioning could lead to further encroachments in the future. What we need to know is how an effective buffer will be provided between the site and the Farm for protection, noise reduction, delineation of boundaries, and preservation of this National Historic Site.

4. Car access and spillover - The proposed parkade which will elevate Queen Juliana Park by over 10 metres will be supplemented by surface parking spaces all around the site. According to the Transportation Impact Statement, "The key finding from the parking demand analysis was that the 3,099 parking space supply would only be considered



Looking east from Maple Drive to Birch Drive and the historic hedge collection, 2021.

R. Hinchcliff



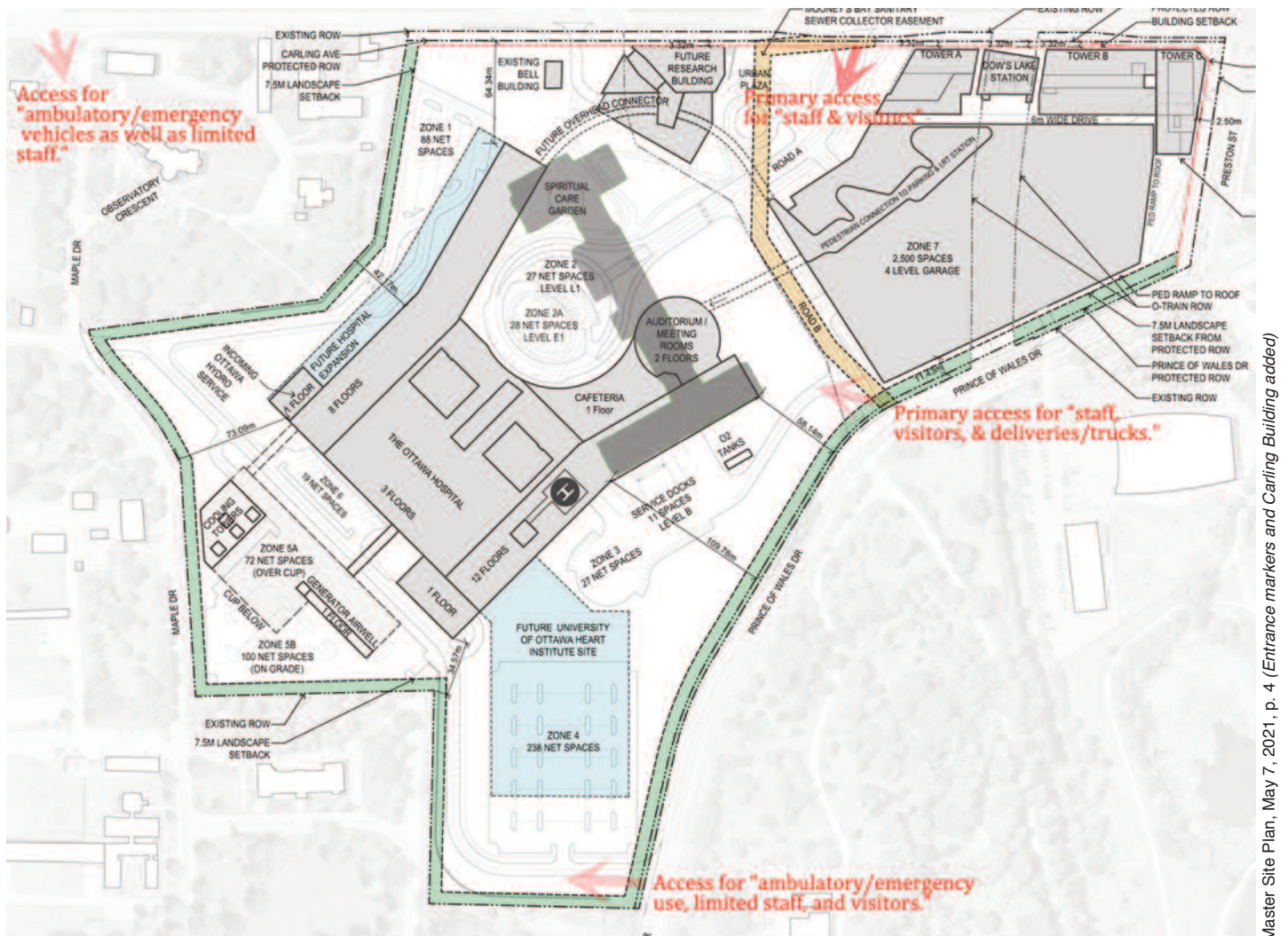
This Master Plan conceptual drawing shows the rear of the hospital, looking northeast from Maple Drive, across the current site of the tennis courts and historic hedges. Not shown in the foreground will be 172 parking spaces, and adjacent to Maple Drive will be the central utility plant, "depressed into the landscape."

Master Site Plan, May 7, 2021, p. 12

adequate if TOH was accepting of the 0.70 parking space to vehicle trip ratio currently exhibited at the Civic Campus. However, this outcome may not be desirable considering the parking shortfall being experienced at the existing campus, and concerns with long waitlists for staff and inadequate on-site parking for the public." The parking situation could be relieved if more people use transit, but this will depend on how well the LRT and bus stations are integrated into the campus design. What we need to know is how hospital users can be diverted from taking up parking spots all over the already-crowded CEF, as well as on neighbouring streets. Will there be shuttle service from other parking facilities as well, and if so, who will provide this service?

5. Preservation of Heritage Trees and other Plantings - There is concern about the number of heritage trees and other plantings that will be removed as a result of the hospital construction. The Tree Conservation Report contained in the plans states: "Based on the results of the tree inventory, a total of 680 trees will be removed with 312 of them being distinctive trees." A review of Appendices C and D of this report show that there are additional numbers of multi-stemmed trees, shrubs and hedges that will be removed.

While a number of trees in the southern part of the Tree Conservation Report survey are shown as being retained, many of these are not actually on the hospital site and therefore their status is not the choice of the hospital. Mitigation measures are necessary not just to replace the trees being taken, but



The area covered by the hospital will be much larger than the footprint of the former Sir John Carling Building (in dark grey) and will include a portion of the Farm's historic core. The light grey area to the right is the proposed parkade. Entrances are noted, as specified in the *Transportation Impact Assessment and Mobility Study*, pp. 58-60.

The City of Ottawa is gathering public input from its posted documents. Information on the Master Plan is available at <https://engage.ottawa.ca/the-ottawa-hospital-master-plan> There is also ongoing review by NCC and Parks Canada. So there is an opportunity for you to be heard.

also to help buffer the CEF from the hospital buildings and parking lots.

It should also be noted that a tree's value is not just its species but also its cultivar type, which may not have been known or considered in the report. It's good that the historic crabapples along Prince of Wales are being retained, but of equal importance is what other trees are going to be planted in those areas. What we need to know is what and how newly-planted trees will be integrated into the plan, whether they'll be properly planted and cared for, and how all of the different trees will relate to each other.

6. **Monitoring and Mitigation** - There is concern about the effects of the construction

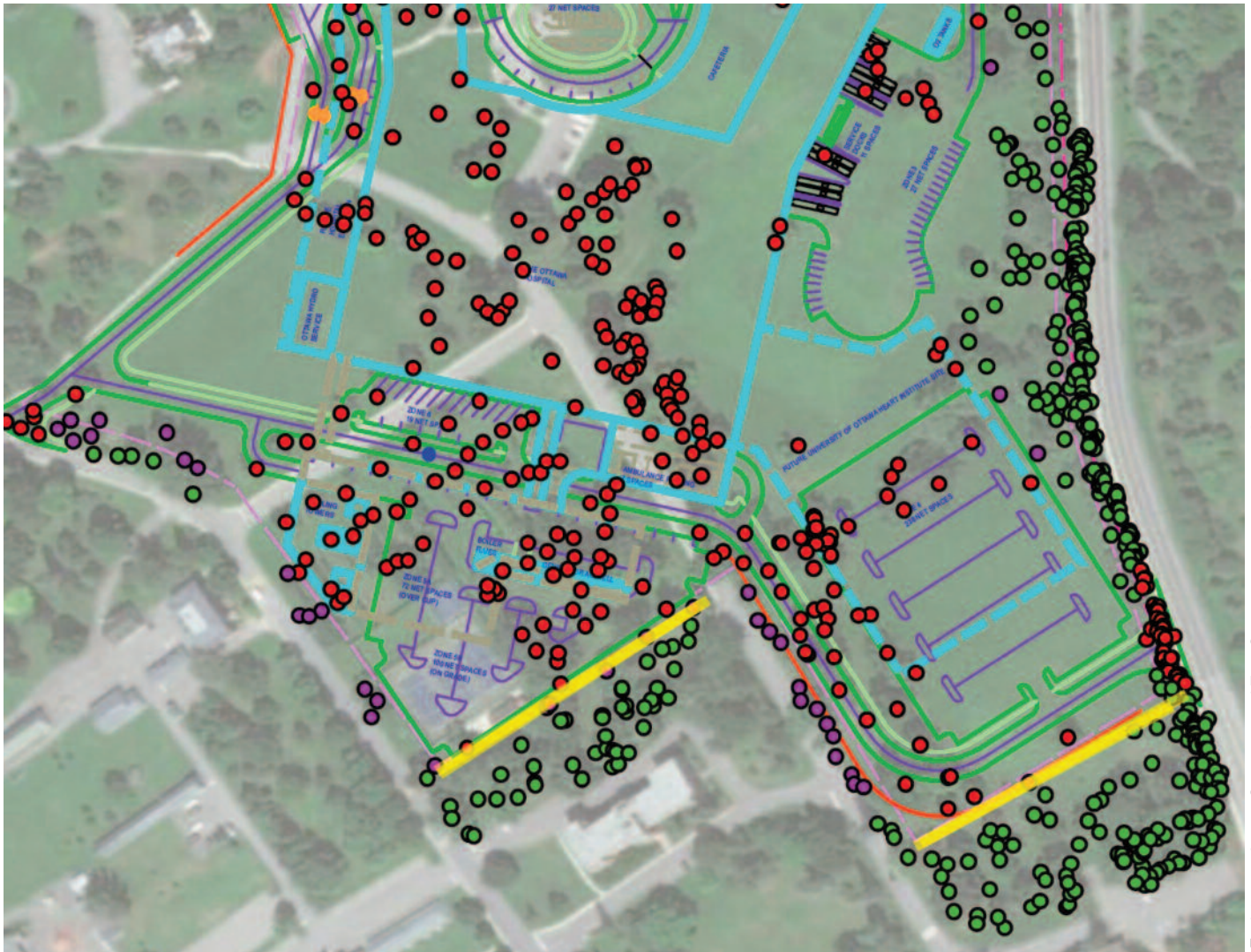
on the Farm and what mitigation measures will be taken. Ongoing monitoring of effects on the health of trees and plantings, air quality—as befits an historical site—is required, from the very beginning of construction until well past the final stages of completion. The Cultural Heritage Impact Statement (p. 78 of the report) addresses a number of adverse impacts that need to be monitored and have potential mitigation, as do other planning assessment reports. What we need to know is how monitoring will be used to protect existing trees and to protect heritage buildings close to the site, and what mitigation measures will be taken to compensate for anticipated

adverse effects.

7. Integration - There is an opportunity here to integrate the hospital experience of patients, visitors and staff with the CEF. Design features could include items such as pathways that are accessible for the disabled, and shuttles to the Ornamental Gardens and other areas. What we need to know is how and where this integration is going to happen.

Board of Directors
Friends of the Farm
June 18, 2021

What We Need to Know ... *(continued from Page 3)*



Environment Impact Statement and Tree Conservation Report, Master Site Plan, Appendix C, Figure 1 (detail).

Tree Location Map (Detail) - Red removed, Green retained, Purple to be determined.

¹⁰Based on the results of the tree inventory, a total of 680 trees will be removed with 312 of them being distinctive trees.” (*Environment Impact Statement and Tree Conservation Report*, p. 14) A “distinctive tree” is one with a stem over 30 cm in diameter at breast height.

The yellow lines mark the southern boundaries of the hospital land. The trees marked green below them, at the bottom right and bottom centre, are not on hospital property and, thus, not subject to the hospital's choice. The historic Rosybloom crabapples along Prince of Wales Drive are to be retained, except for those at an entrance to the hospital at the bottom right.

Consider joining the Friends of the Farm!

Find our membership form on the website and pay by PayPal or send in a cheque:

www.friendsofthefarm.ca/become-a-member/

Benefits include discounts on Master Gardener lectures hosted by the Friends, one free adult admission per visit to the Canada Agriculture and Food Museum, quarterly printed newsletters by post, and monthly Farm Notes e-newsletters.

We also accept donations to support our activities and events, which also support the garden teams that maintain the cherished Ornamental Gardens. A variety of donations can be made through our webpage:

www.friendsofthefarm.ca/donations/.



Imagining a Healthy Place

Imagine a place where the air is clean and aromatic. A landscape that can remove black carbon out of the air, as well as troublesome, tiny particles that can cause serious diseases. A place that can act as a set of lungs for the city.

A place where the summer sun is deflected by tree leaves, lowering temperatures and taming heat waves, and where a rainstorm is intercepted by foliage and directed into the soil by roots so it doesn't overload storm conduits and basins; a place where wildlife is harboured and soil is conserved.

Picture a garden in its midst. Beds of flowering plants drawing people out of their homes and leading them to a pastime that relieves stress, burns calories, and

controls blood pressure while stretching and strengthening muscles and immune systems...and it feels good!

Add a panorama of cropland stretching beyond your field of vision. And a soothing stroll along a tree-lined path leading to a UNESCO World Heritage site. Or a face-to-face encounter with farm animals at a museum.

Add a pinch of history. Stories of colourful figures of Canada's past, great achievements in horticulture, and a collection of buildings that have served many purposes over the decades, ranging from star-watching to swine-raising.

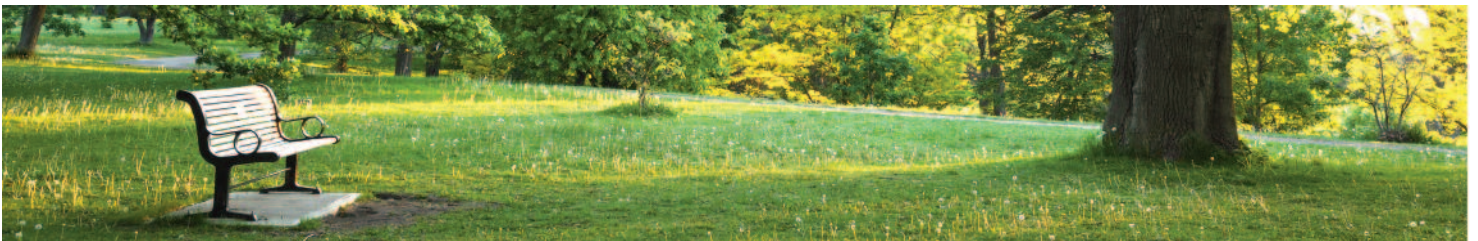
Now imagine that the same place is home to research on how to feed the world in years ahead. We know that farming will

have to be very different in the future. One reason for this is climate change, requiring a cutback in emissions of greenhouse gases. Another reason is the need to address practices that can affect human health and reduce biodiversity; e.g., use of hazardous chemicals. But the greatest need for a change to farming practice is the urgent requirement to figure out how to feed nearly 10 billion people in 2050. We'll need all the help we can get.

Is there a place that has all of these things? Try the Central Experimental Farm.

Eric Jones

President, Friends of the Farm.



Arboretum, Central Experimental Farm

Évoquer un lieu sain

Visualisez un endroit où l'air est sain et odorant. Un paysage où l'air ne recèle aucune trace de carbone ou de particules gênantes pouvant causer de graves maladies... Un endroit qui constitue les poumons de la ville...

Les attraits d'un tel espace... Le feuillage des arbres, une température plus fraîche et la canicule devenue plus supportable, tout contribue à adoucir la chaleur du soleil estival... Les feuilles qui font barrage à la pluie et l'acheminent vers les racines pour prévenir l'engorgement des conduits pluviaux... En fait, un endroit dédié à la protection de la faune et du sol...

Imaginez un jardin en son sein. Des massifs de fleurs attirent les gens à l'extérieur de leur maison et les guident vers un endroit propice à la détente qui aide à réduire le stress, brûler des calories et contrôler la tension artérielle tout renforçant à la fois le système musculaire et

le système immunitaire. Que de bienfaits!

Ajoutez à cela une vaste étendue de terres cultivées qui se déploient au-delà de notre champ de vision. Une promenade relaxante le long d'un sentier bordé d'arbres nous amène à un site de l'UNESCO sur le patrimoine mondial ou face à face avec des animaux d'élevage dont l'habitat est...un musée!

Un peu d'histoire si vous voulez bien... Découvrez celle de personnages colorés qui ont enrichi le passé du Canada, des réalisations impressionnantes d'ordre horticole et une série de bâtiments qui ont servi à différentes fins au cours des décennies, allant de l'observation des étoiles à l'élevage porcin.

Et maintenant, imaginez que ce même endroit abrite un centre de recherche qui se consacre à l'étude de moyens de subsistance pour la population mondiale dans les années à venir. Nous sommes

conscients que l'agriculture prendra une tournure bien différente dans les prochaines années. Il faudra avant tout tenir compte tenu du changement climatique et veiller à la réduction d'émissions des gaz à effet de serre. De plus, il conviendra de se pencher sur des pratiques susceptibles d'affecter la santé et de réduire la biodiversité, p. ex. dans l'utilisation de produits chimiques dangereux. Cependant, le plus grand besoin déterminant la modification de la pratique agricole consistera à définir en toute urgence comment nourrir environ 10 milliards de personnes en 2050. Nous nécessiterons toute l'aide à notre disposition.

Existe-t-il un endroit qui offre tous ces bienfaits? Jetez un coup d'œil du côté de la Ferme expérimentale centrale.

Eric Jones

Président, Les Amis de la Ferme.

Wellness Gardens: A Mental Tour of Their Multiple Virtues

By Edythe Falconer

What is a “wellness garden”? Who can benefit from all of this “wellness”? Humans, of course, along with the many other critters in any garden, some visible and some invisible.

The first thing that came to mind when I was asked to tackle this topic was my stricken uncle, in hospital and bedridden. His one bit of good fortune was having a room with a large window that looked out upon a beautiful garden. He couldn't move much, but he could enjoy the view as could my aunt and friends who visited. Sometimes he had the opportunity to be taken for a ride outdoors in his wheel chair. In the grounds he could get fresh air and see even more gardens, a large pond, and many trees and shrubs. The wellness promoted by these gardens was shared by all.

When plans for a new hospital in Ottawa to be built on the grounds of the Central Experimental Farm appeared in the newspaper, I began to imagine all sorts of possibilities, unlikely and otherwise. A roof-top garden that could be accessed not only by mobile patients but also those that needed assistance. It would have gorgeous views, lovely plants, fresh air, and very few mosquitoes. Or perhaps a roof-top produce garden that could supply the hospital's kitchen, and provide food for cafeteria staff and even visitors. Topping the hospital with multiple-use gardens and then surrounding the hospital with even more gardens would result in a wellness park for patients and visitors alike. I would class these imaginary gardens as wellness gardens.

To be completely eligible for the title of wellness garden, stimulation should be provided for all senses – including the variously understood sixth sense – that of intuition, speculation, and the magical.

Expanding upon all possibilities would sorely tax the space available in this newsletter. Ergo, here is a list of potential gardens that could be described as ones that promote wellness.

- One flower or tomato plant on the balcony of a lonely occupant in a high-rise building;
- Pots filled with flowers and vegetables – out on patios or brought inside for the winter;
- Any garden that requires the gardener or gardeners to get out and design, dig,



Edythe Falconer

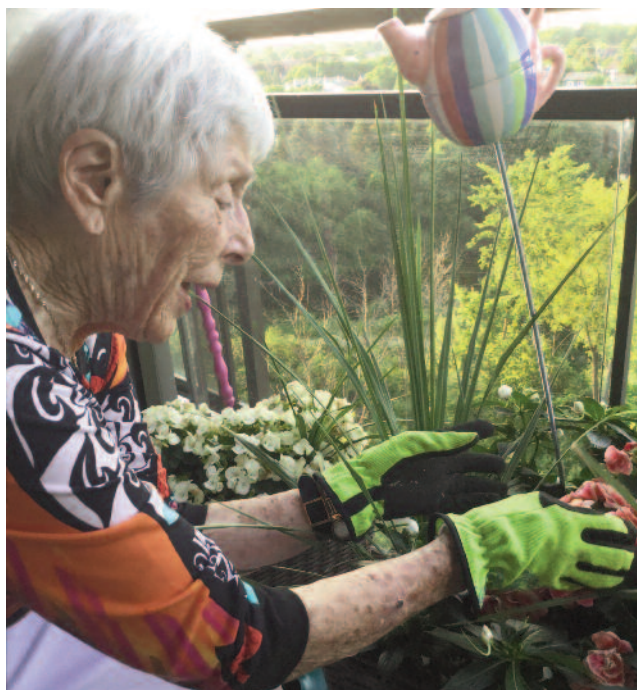
Edythe's Aunt Violet, “who always had gardens of her own, including front yard gardens full of flowers and edibles.”

weed, and generally maintain it, rain or shine;

- A garden designed in the mind when one cannot sleep (more effective than counting sheep);
- Gardens I scroll through in my photo file during the winter; a definite mood booster;
- Sharing plants with friends and/or making greenery donations to worthwhile causes;
- Community gardens;
- Gardens for pollinators and beneficial insects, and delightful birds;
- Gardens for children to play in;
- Gardens of nostalgia where one can muse over grandma's or grandpa's tree, or plant saplings for each child in the family; and,
- Gardens of education where we learn about our silent and immobile creatures, annual magic performed year after year.

Shortly after retirement I travelled to Saskatchewan to visit relatives. The farmstead

where I grew up was now part of a vast acreage of monocultural agriculture. I could not resist stopping at the laneway that had led into our yard. I spied a bit of blue peeking out of the soil. It was a single larkspur. How had it managed to survive? I was reminded of the English-style garden that my mother had been so proud of in my childhood days. There she taught me the



Julianne Labreche

Julianne Labreche's mother Theresa Labreche “at the age of 93 with her then new balcony garden.”

Wellness Gardens

... (continued from Page 6)

names of at least 28 plants. At that time, I could still recall their common names. I closed my eyes and remembered.

Coping with life during a pandemic has underlined the importance of gardens – places of relative safety; places to relax or play; places of beauty and bounty. Science has found that many plants help to purify indoor air, and also have a soothing effect upon us especially if we are isolating at home.

I have barely mentioned what is beneath our feet, quietly making healthy soil for healthy plants. Our gardens need to welcome not only us but also the organisms that till the soil and keep it arable for our lovely gardens. Wellness is for soil too.

So it can't be claimed that any one kind of garden is a wellness garden. All gardens, large and small, indoors and outdoors, in pots or in beds, are wellness gardens.

Edythe Falconer, master gardener, is a former leader of the Friends' heritage rose garden team.



CSTMC AGR-378

Iris border in the Ornamental Gardens at the Farm, circa 1920.

Upcoming Events

We are working on an exciting new event for the fall, COVID precautions permitted. Stay tuned!

Visit us often at www.friendsofthefarm.ca to see what we're up to. You can also visit our Facebook page for regular updates on what Friends of the Farm events are happening and when.

Our 2021 Arboretum tours are coming. Check the website for details.

For more information, email us at info@friendsofthefarm.ca, or call 613-230-3276.



The Friends of the Central Experimental Farm is a volunteer organization committed to the maintenance and protection of the Ornamental Gardens and the Arboretum of the Central Experimental Farm in Ottawa, Ontario, Canada.

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Food, Nutrition, and Health Beneficial Compounds, Part I

By Malcolm Morrison

(In this article, Dr. Morrison introduces us to the basics about food—what it is, how it is made and what it comprises. In his next article, he will write about compounds in food that are beneficial or detrimental to health.)

The corner stone of a healthy lifestyle has always been the availability of nutritious food and clean water. Hippocrates said it best: “Let food be thy medicine.” But what is nutritious food? Today we are awash with claims that you can achieve better nutrition, greater longevity, and improved vitality if only you eat a certain type of food, prepared a certain way. Even reading the nutritional data on the back of a granola bar can be confusing.

Canada’s new food guide promotes the consumption of fruits and vegetables, plant-based proteins, fish and lean meats, whole grains, and plant-based fats. It is a great place to start in building your own formula for a healthy diet. Nutrition is a science that people have studied for years and in a 1000-words, I can only scratch the surface. I have based this article on the nutritional ingredients list found on the back of our food products. Be warned, there is some chemistry and biology involved.

Food Basics

Food is made primarily from four main elements; carbon, hydrogen, oxygen, and nitrogen (C H O N). Photosynthesis in plants uses carbon dioxide (CO₂) from the air and water (H₂O) to create glucose, the first simple sugar (C₆H₁₂O₆). Breaking down and rearranging the elements in glucose gives us complex sugars and starches, or as they are collectively known, the carbohydrates, as well as fats.

Carbs

Our bodies burn carbohydrates and fats through respiration, to produce the energy that we use for motion, breathing, thinking, and everything else we do. When carbon and hydrogen bonds are broken, energy is released, much in the same way as burning gasoline (a hydrocarbon) releases energy in our cars. Sugars and carbohydrates contain lots of carbon and hydrogen atoms—so carbs are important! Unfortunately, when we

consume too many of them, the body stores the excess energy as a fat. We count calories and wear watches that add up our steps in order to ensure that we balance the number of energy units we consume with those that we burn.

Fats – the Bad and the Good

Fats and oils are a subject of major concern in achieving a healthy diet. Fats are made from long chains of carbon (C) molecules that have hydrogen (H) and oxygen (O) bound to them. The longer the carbon chain, the more liquid the fat is at room temperature. Butter, an animal fat, has many short-chain fats and is solid at room temperature. Animal fats are considered more harmful to your health because they have a higher concentration of saturated fats, which can increase blood cholesterol. Saturated fats occur when there are no double-bonded carbon molecules in the chain and the fat is completely saturated with hydrogen atoms. A monounsaturated fat has one double-bonded carbon in the chain, therefore one less hydrogen atom. Polyunsaturated fats have more than one double-bonded carbon in the fat chain. We should consume about 25 to 35 % of our daily caloric intake from fats (~ 40 to 70 g) and only 10 % should come from saturated fats.

Trans-fats, banned in Canada since 2018, raise blood cholesterol, which may result in heart disease. These fats are the bi-product of an industrial process used to solidify fats that were normally liquid at room temperature. Trans fats are popular in the food service industry because they are easy to use, long-lasting, and inexpensive to produce, and continue to be utilized in some countries.

Omega-3 fats have the first double-bonded carbon at the third carbon in the chain

while Omega-6 fats have it at the 6th carbon. Omega-3 fats come from oily fish, flaxseeds, walnuts, and certain vegetable oils, and since they contain less cholesterol, may prevent the risk of heart disease and strokes. Most vegetable oils are rich in Omega-6 fats which have also been shown to reduce the risk of heart disease.

Amino Acids

When nitrogen (N) is added to the breakdown products of simple sugars, an amino acid is formed. There are 22 amino acids in total, nine of which are referred to as essential amino acids because our bodies can’t make them and so we must get them from food. Amino acids are used to make proteins and enzymes. Proteins are used for many things in our bodies, from carrying oxygen in the blood in the form of hemoglobin to building muscles, skin, and bones. Enzymes are the substances that make things happen in the body. There are thousands of different types of enzymes and they function in everything from digestion to breathing and pathogen control.

Vitamins, Minerals, and Fiber

Vitamins are organic compounds that improve the function of processes in our body, protect cells from damage, or mediate the creation and breakdown of



Canada Food Guide illustration.

Food, Nutrition, and Health Compounds ... (continued from Page 8)

Ingredients: Steel cut oats.
May contain: Wheat.

Nutrition Facts

Per 1/4 cup (40 g)

Calories 160	% Daily Value*
Fat 3 g	4 %
Saturates 0.5 g	3 %
+ Trans 0 g	
Carbohydrate 29 g	
Fibre 4 g	14 %
Sugars 0 g	0 %
Protein 5 g	
Cholesterol 0 mg	
Sodium 15 mg	1 %
Potassium 125 mg	3 %
Calcium 20 mg	2 %
Iron 1.5 mg	8 %

*5% or less is a little,
15% or more is a lot

Nutrition facts for steel cut oats.

compounds. Like amino acids, we can produce certain vitamins in our bodies, e.g., vitamin D, while others, like vitamin C, we must get from food sources. There are 13 essential vitamins, some fat- and others water-soluble.

Minerals are inorganic compounds we obtain from food. Generally, a well-balanced diet should supply a person with the amounts of minerals they need to be healthy. Sometimes, mineral supplements can be needed if they are not obtained from the diet. Minerals are divided into macro-minerals and micro-minerals, depending on the amount required for a healthy diet. There are 13 to 16 micro-minerals and 7 macro-minerals.

Finally, there is dietary fiber, which until recently was thought to be simply an aid in relieving constipation. Fiber has been found to reduce cholesterol, balance blood sugar levels, aid in weight loss, and can even reduce the risks of colorectal cancer. Maintaining a healthy gut microbiome may rely on the consumption of dietary fiber. Fruits, vegetables, whole grains, pulse crops, nuts, and seeds are good sources of fiber.

So now when you flip over the box to read the nutritional

facts you may know more about the ingredients you are putting into your mouth. The links below will provide you with some stepping stones for nutritional exploration. As you search the web, be sure to choose reputable sites, check with more than one source, and use common sense. In my next article, I will focus on health-beneficial compounds such as anti-oxidants as well as detrimental ones such as heavy metals.

Dr Malcolm Morrison is an Oilseed Physiologist at the Ottawa Research and Development Centre, Agriculture and Agri-Food Canada. He has been with the department since 1984 and has worked on all major Canadian field crops during his career. Malcolm Morrison grew up on an Agriculture Canada research station in southern Manitoba, where his father was the Director.



health.harvard.edu

Canada Food Guide: <https://food-guide.canada.ca/en/>

Fats: <https://www.nhs.uk/live-well/eat-well/different-fats-nutrition/>

Vitamins: <https://www.medicalnewstoday.com/articles/195878#l-soluble-in-fat-vs-water>

Minerals: <https://www.uofmhealth.org/health-library/ta3912>

Fiber: <https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/fiber/art-20043983>

Master Gardener Lecture Series

Two Master Gardener lectures are left in our 2021 series. Due to COVID, these lectures have gone online. Pre-registration is required to obtain the link to the Zoom presentation.

See <http://www.friendsofthefarm.ca/fcef-annual-events/master-gardener-lectures/> for more information. Individual talks: \$8 for Friends of the Farm members, \$10 for others.

September 14 - **Another Gardening Year Behind Us** with Mary Shearman Reid.

September 28 - **A Garden for the Birds** with Julianne Labreche.

Forest Bathing and Mindful Writing for Self-Care

By Lori Rosove

Dealing with our scattered thoughts may be challenging on any day, but being over a year into a pandemic can add an extra layer of clutter. Forest bathing and mindful writing can be great tools to help you declutter your mind and feel a little calmer, clear-minded, and rejuvenated.

Forest Bathing

Forest bathing, known as *shinrin-yoku*, a term coined in Japan in the '80s, refers to spending time in natural surroundings where we use our senses to focus on what is happening around us. There are tremendous physiological and psychological health-giving benefits from forest bathing, including a strengthened immune system, lowered blood pressure and heart rate, improved sleep and digestion, and increased feelings of relaxation and positivity. There is long-standing recognition by many cultures of the importance of the natural world to human well-being.

I discovered forest bathing a few years ago when I signed up for a noon-time event to get some warm summer air and sunshine. I had always found walking in a quiet natural space to be calming and rejuvenating, but I hadn't given much thought as to why this was happening. I hoped this program would explain a bit more. I must admit, as we were being led through parts of Fletcher Wildlife Garden, my curiosity got the best of me, and I wandered off to discover this lovely enchanted space. Although I didn't complete the session, it did lead me to explore forest bathing in more detail and complete formal certification.

Fortunately, the benefits of forest bathing can be attained whether you're deep in the forest or simply spending time in a park, garden, or even a cluster of trees on your street. The key is to focus on using your senses to take in the nourishment that nature offers.

Mindful writing

Mindful writing helps us to understand what we're thinking and ultimately can promote good decision-making. It provides an opportunity to dig deep into our

thoughts to release stress, gain clarity, feel in control, and increase self-awareness. There is a powerful mind-writing tool called freewriting that guides one, through prompts, to write continuously for a set period of time without concern for sentence structure, grammar, or censorship. Freewriting allows us to reveal the truth and understand our thinking.

Mindful writing is not focused on the actual writing, but more so on the outcome of the writing. This means that you do not have to be a writer, nor have any interest in writing; just an ability to literally write.

Writing has always been important to me, and I possess a personal and professional interest in its psychological benefits. A decade ago, I began researching aspects of therapeutic writing. I set out to answer questions such as: Does it work? How does it work? and How well does it work? Throughout this research, I continually thought about designing a program that would allow people to use writing to deeply explore their thinking.

When I wasn't writing, I was taking walks into natural spaces. I honestly cannot recall the moment when I thought to combine mindful writing with forest bathing, but I can say that it provides a very



R. Hinchcliff

Fletcher Wildlife Garden

special wellness experience. Doing both with a guide allows you to focus deeply on the activity without thinking about what to do next. This allows you to immerse deeply in both activities and gain maximum benefit.

Lori Rosove is a volunteer with the Friends of the Farm. A writing instructor and registered social worker, she has combined her passion for nature with her knowledge in mindful writing to design unique wellness experiences at Fletcher Wildlife Gardens and Mer Bleue Forest. Information on the program, plus schedule and registration details, is available at www.treesandbreathe.com.

Horticultural Therapy: Wellness in the Garden

By Sarah Shapiro



Sarah and William H. engaging with William's favourite plant, Rose 'Navy Lady'.

Horticultural Therapy (HT) and Therapeutic Horticulture (TH) use interactions with nature, gardening, as well as horticultural activities to improve the overall well-being of an individual, group, or a specific population. Both practices are rooted in the concept of sensory immersion. HT is facilitated by a trained horticultural therapist who uses therapeutic goals and assessment procedures that are clinically documented within a treatment plan. TH may be facilitated by a horticultural therapist or another trained professional who supports the same program objectives, but may or may not include

documentation.

The Canadian healthcare system is shifting from a medical model toward one that includes more holistic, comprehensive care. Horticultural Therapists can be invaluable in building the kind of interdisciplinary team that supports a comprehensive model of healthcare. I know first hand how HT and TH help those in long-term care increase their mental well-being and physical activity. These therapies can also offer a sense of purpose, foster feelings of usefulness, provide activities to look forward to, prevent boredom, and reduce loneliness and social isolation. Horticultural therapy is about more than the activity or the final product. It is about the therapeutic process of learning, talking, doing, reflecting, and using one's senses to pay heed to the environment.

Sensory Stimulation

At the Perley and Rideau Veterans' Health Centre where I am employed as a Horticultural Therapist, I offer HT and TH programs for seniors, including those who have mental health and physical challenges, others with dementia, many veterans, and some who are facing the end of life. I have developed programs that introduce a range of sensory stimulations. For instance, we use aromatic plants, herbs, and essential oils to cook, bake, and preserve what we grow in the garden. Natural health products, botanical crafts, flower arrangements, and nature-related projects are produced for year-round events and celebrations such as an annual plant and craft sale.

We may use peppermint for alertness, lavender for relaxation, and citrus for energizing and happiness. Studies have shown two varieties of basil (*Ocimum americanum* and *O. tenuiflorum*) are anti-inflammatory and contain acetic acid which can aid in the management of arthritis and bone health, help slow down aging, and provide pain relief.

Activities in Nature

Sessions that promote wellness take place in our therapeutic courtyard gardens, at our duck pond and apple orchard, in the surrounding grounds, and indoors in activity rooms and residents' rooms. Residents maintain annuals, herbs, and vegetables in raised beds and pots. After harvesting, we discuss the plants' histories and our own experiences with eating and growing them. Perennials and shrubs are situated at ground level and are cared for by myself and volunteers. HT groups typically consist of three to eight residents but may involve more, depending on volunteer involvement and scheduling. Other activities can include:

- taking sensory garden tours;
- creating nature sensory trays;
- designing nature scavenger hunts to engage with biodiversity in the garden, e.g., observing birds, insects, butterflies, and pollinators; and,
- collecting nature materials to use for a variety of activities.

We also create nature poems, songs, stories and make and play nature word and board games, including "Wildcraft" and "Find a Friend Gardening Bingo." Residents win nature prizes that were made in previous sessions.



One of the courtyard gardens where the Horticultural Therapy program takes place.

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Connected, Balanced, Grounded

Mindfulness, affirmations, and visualizations (for example, imagining our legs as roots that extend into the earth) are some of the ways to keep the residents, volunteers, and staff connected, balanced, and grounded. Other complementary therapies can be incorporated, especially yoga, meditation, energy healing, sound and crystal healing, herbalism, and the emotional freedom technique of "tapping". This is based on the combined principles of ancient Chinese acupressure and modern psychology. Tapping on meridian points on the body sends a calming signal to the brain.

Since becoming aware of HT and TH in 2014, I have been immersed in the field, and became a Registered Horticultural Therapist (HTR) in 2021 through the Canadian Horticultural Therapy Association. One of the things that helps me achieve success as a therapist is my own experience using HT to help with chronic pain, anxiety, stress, a learning disability, feelings of being overwhelmed, and fears associated with my sexual orientation.

Some of my earliest memories include gardening with my family and gathering pine cones, rocks, and natural materials. I would then engage with others to explore my magical findings. I may have subconsciously known the benefits of being in nature and connecting with the natural world, and understood that plants have healing properties. I believe that connecting with nature enhanced my ability to memorize, focus, and think clearly, thus improving my grades, confidence, and self-esteem.

I have always been drawn to trees and to pine trees in particular. I love their scent, the feeling of their sap and needles, the sound of them dancing in the wind, the taste of pine nuts, the sensation of chewing on their resin, and the sight of them snow-draped. I always ask permission to approach them. Their "answers" can manifest as a feeling, a vision, an action, or a combination of these. A "yes" for me is generally registered as a feeling of openness in my heart and lightness in my body. A "no" can be conveyed by a tightness in my chest or gut.

Science-based, Holistic Therapy



A fall sensory tray made by a resident in Sarah's Horticultural Therapy program .



Spring garden clean-up by residents Howard D. and Frank S., 2021.

What I intuitively knew as a child that I needed was reinforced so many years later in my horticultural therapy training. Being around pine trees may actually help with learning disabilities. Diana Beresford-Kroeger, an author, medical biochemist, and botanist who has been a significant influence on me, provides scientific evidence in her peer-reviewed books and in the Wild Hope for a new Humanity series. In the blog found at <https://treesisters.org/blog/how-trees-can-heal-us>, she claims that a 15-minute walk under trees can provide a 30-day boost to your immune system. "You will come out from that area far . . . healthier than when you went in. And if you happen to be a child with some learning problems . . . it stabilizes your ability to concentrate. And what it does is like a very . . . mild anesthetic of the whole of your entire communication system. And you come out of that area and you have a greater IQ."

Drawing on my life experience has made me a better therapist and helps me deliver better healthcare through both science-based and holistic therapies. I believe that Horticultural Therapy is an essential part of any interdisciplinary treatment model.

Sarah is a Registered Horticultural Therapist. Her upcoming project entails collaborating with a social enterprise business which will aim to bring Horticultural Therapy, nature-based educational programs, and team building to the community. When it is launched this September, Sarah's role will be that of lead Horticultural Therapist. Her Horticultural Therapy Facebook and Instagram accounts can be found at:

<https://www.facebook.com/gardenwiththeplantlady/>

<https://www.instagram.com/gardenwiththeplantlady/>

Sarah is also an active member of the Friends of the Farm.